

# GeniusPro & Lightpalette

## Software Version v2.8.4

# Operator's Manual

Last updated on 13th July 2004

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While every endeavour is made to ensure the accuracy of information contained in this document, Strand Lighting will not be held responsible for any inaccuracies, errors or omissions.

### Additional software features on version v2.8.4

- Catalyst fixture uses CMY rather than RGB to better fit normal usage.

### Additional software features on version v2.8.3

- Increased number of attributes from 99 to 126. See fixture.lib for new attribute names.  
- Add Channel Partitioning mode of LIVE which applies channel partitioning only when on the Live display.

### Additional software features on version v2.8.2

- SMPTE event playback now reliable when events are only a few frames apart.  
- Channel update of a range of groups when in group preview no longer sets the destination group text to that of the source group.

### Additional software features on version v2.8.1

- Reporter ignores dimmer Circuit Ids greater than the patch size.  
- FLASH/BUMP up/down uses channel partition groups when SOLOing.  
- Loading a cue onto the X playback triggers running any Auto Moves or Auto Preheats that are required.

### Additional software features on version v2.8.0

- Show channels fading to zero in multipart tracked XF/AF cues.  
- TRACKBACK tracks back through zero attribute levels.  
- ASCII In supports multi byte commands to allow all keys/faders/wheels to be used.  
- Show 'Network!' warning in status window when a SN node goes offline. Clear the warning by viewing Network Diagnostics.

### Additional software features on version v2.7.7

- Always display the channel control lcd soft key menu on the main display.  
- Recording a new cue in Preview loads that cue onto the X playback when in Light Palette mode so the next GO will run the cue.  
- @ on an empty command line highlights the channel labels of those channels about to be set to a level.  
- GOTO cue \* now shows channel fade up/down colours with respect to the previous cue rather than with respect to the previous output level.

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Note: Adjust Frames to show six selection buttons and for readability

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## Introduction

This section introduces GeniusPro and Lightpalette and includes important topics with which the user should be familiar before using these instructions. Particular attention should be paid to 'Console Differences' which explains the differences between the Strand Lighting console models, highlights operational differences between older and newer consoles and points out mechanical and functional differences between models.

GeniusPro and Lightpalette Operating Software are control software products for Strand Lighting's 24-submaster 520 and 520i lighting control consoles, for the 30 submaster 430, 530 and 530i consoles, for the 54 submaster 550 and 550i consoles, for the 510i rack-mounted show control/backup unit and for the new 300 series consoles and the 310 show controller.

GeniusPro and Lightpalette software is copyright Strand Lighting Ltd. 1994 to 2001. All rights reserved. The software is supplied under the terms of , and may only be used with, the License Agreement.

This version of software should be loaded on all consoles, PCs and remote consoles to take advantage of improvements. Load both Operating Software and Networker & Utilities software. Refer to [Upgrading Your Console Software](#)

The following topics are covered in this section:

- [Introducing GeniusPro and Lightpalette](#)
- [Console RAM Memory](#)
- [Console Differences](#)
- [Conventions Used in This Document](#)
- [Configuring European Keyboards](#)
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## Introducing GeniusPro and Lightpalette

Strand's lighting control consoles with GeniusPro and Lightpalette software offer you the flexibility to choose and upgrade your console software, including the basic operating software, through an integral floppy disk drive.

This flexibility lets you update when you need to without having to buy new hardware. The maximum number of channels and attributes

- Add channel 'trackback' syntax: [chan list] @ TRACKBACK [TRACK | QONLY] lev \*. TRACKBACK is SHIFT TRACK. This command tracks back changes to the source cue that set the level. TRACKBACK can be used wherever TRACK or QONLY are currently used.
- Show tracked intensity zeros always in multi part cues.
- [chan list] UPDATE CUE cue @ COPYFROM chan \* ensures new changes are put in the first part.

#### Additional software features on version v2.7.6

- Backup of deleted showfile on 300 console is now called backup.ssf rather than showfile.bk0
- Show 'SB' as the cue type for soft blocked tracked cues.
- [chan list] @ GROUP g \* updates current group so [chan list] @ GROUP NEXT/LAST works as expected by using group g as the base for the next/last.

#### Additional software features on version v2.7.5

- Fix problem whereby Main & Backup wouldn't sync when a remote console was logged on.
- [chan list] UPDATE CUE [cue range] @ + lev \* no longer masters up zero levels to lev.
- [chan list] UPDATE CHANSIN CUE [cue range] @ lev \* no longer sets zero levels to lev.
- UNDO now acts on all channel lists including those made from groups & cues.
- On show load & console startup ensure network connections to SN nodes are re-established.

#### Additional software features on version v2.7.4

- Adjusting cue times on Output no longer removes redundant tracking changes.
- @ OFF \* on a XF/AF cue when in non tracking mode sets the intensity channel only to zero.

#### Additional software features on version v2.7.3

- Speed up printing.
- Starting an effect via a cue now sets the effect fade up/down times from the cue fade times.
- [chan list] @ OFF \* on any part of a XF/AF cue when in tracking sets the channel(s) to the previous cue value - previously this only worked when on the first part.
- Super submaster text is loaded correctly from disk when those submasters have been remapped due to the show having been saved on a console with a different number of submasters.
- Number of Attribute Filters has been increased to 12.

#### Additional software features on version v2.7.2

- After using fixture channels ensure rotary attributes are valid on next channel control selection.
- xConnect Login no longer stops the hand held remotes from working.
- Stopping an effect that isn't running does not load that effect onto the playback.
- Completed effect step attributes show preset focus group information.
- Effect stop after cycles with a zero fade down time stops with the last step levels.
- 16bit attributes follow cue & effect fade time profiles.
- Default for Cue Sheet Macros is now Main Console as this is most useful to most users.
- Same cue loaded in X playback preview after a Main/Backup sync.
- Current Cue set to the X playback stage cue (last to complete)

available depends on the hardware performance, and is different for various consoles. Please contact Strand Lighting for specifics.

All application software, with the exception of the **Server** software is supplied as standard on all consoles.

The **CommuniquéPro** software is used to add SMPTE, MIDI, MIDI Show Control, DMX input, external submasters, serial, and other means of communication. The **Tracker** software supports advanced facilities for automated fixture control including additional types of attributes (for instance, pan and tilt), preset focus groups, and fixture libraries. The **Networker** software provides remote video, remote DMX via Ethernet, and access to all SN node ports. **Console Reporter** is an add-on software package used to monitor and report temperature, electronic status and system and load information for all SV Series dimmers. This facility allows the user to know the status of all lamps on a rig and to record rack-based backup cues simply and easily. Other software can be easily added as it is developed.

Regardless of your level of lighting knowledge, this complete family of software lets you grow as your experience increases, or start at a significantly higher level, all as economically as possible.

Refer to [Product Specification](#) for full list of all software features available on 300 and 500 series control consoles.

Software updates and manuals are available on the internet at <http://www.strandlighting.com/>. FTP (File Transfer) browsers may also be used. The internet address is 193.129.67.250. Some of the download items require a user name and password to be entered.

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## Console RAM Memory

The i version now requires at least 32Mbytes of RAM installed in the console or PC. The non-i version still operates in 8Mbytes or more. The more memory, the faster the console executes commands (although mux outputs always transmit at the normal rate). Up to 64Mbytes of RAM is supported in consoles fitted with new CS electronics or in the PC. Refer to [Console Differences](#). See also [Fitting RAM memory](#)

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## Password Registration

If your current version of Operating Software is earlier than version 2.0, you will need to re-register your console and PC, if fitted with a CS card or dongle, in order to use this release. Refer to [Upgrading Your Console Software](#)

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## Console Differences

This section covers the following topics:

after a Main/Backup sync.

- X playback shows running wait time in all display formats.

#### **Additional software features on version v2.7.1**

- Dimmer fault log shows current faults in red & subsided faults in yellow.
- Dimmer fault log Clear clears subsided faults only, use Shift Clear to clear the whole log.
- Current Cue set to the X playback preview cue after a Main/Backup sync.

#### **Additional software features on version v2.7.0**

- Add syntax for moving attributes around in part cues as per existing '[chan list] \*' syntax:  
[chan list] SOFTBLOCK \* move intensity & attribute channels  
[chan list] @ SOFTBLOCK \* move intensity & attribute channels  
[chan list] @ATT SOFTBLOCK \* move attribute channels only  
[chan list] @ATT attfilter SOFTBLOCK \* move just attfilter attribute channels  
[chan list] @ INTS/ATTS\_ONLY SOFTBLOCK \* move just intensity/attribute channels
- Channel control actions work when setting automodded levels in preview with automod On.
- Show running Auto Move & Auto Preheat cues on X playback when in Cue Sheet order.
- Auto Move & Auto Preheat cues on X playback show in different colours to avoid confusion with 'real' cues.
- Add '@ Q-Only/Track Level' syntax to range cue update when in single digit mode.
- Do not affect attribute values on range update syntax: [chan list] UPDATE CUE a THRU b @ Lev \*
- Cue range automod update applies changes Q-Only/Track when in a tracking mode.
- Ensure valid channels on [chan list] REMDIM syntax.

#### **Additional software features on version v2.6.15**

- Stop net backoff problems when multiple remote users connected via WiFi networks.

#### **Additional software features on version v2.6.14**

- Support xConnect text keys.

#### **Additional software features on version v2.6.13**

- Support xConnect Login/Monitor connections.
- Backup 300 with SMPTE card but no panels connected correctly tracks keys from Main 300 command panel.

#### **Additional software features on version v2.6.11**

- MIDI tracking backup improvements. A backup only processes midi when in sync or when in control. If Main & Backup both have MIDI ports then each use their own port. This requires a MIDI cable to the IN port of Main & then another cable from the THRU port of Main to the IN port of Backup. If Main has MIDI but Backup does not then both use the Mains (as in previous sw versions). If Main has no MIDI then regardless of what the Backup has no MIDI is processed. MIDI via a SN node always works. MIDI is only output by the console that is currently in control.
- Consoles that have no Grand Masters & use submasters in GM mode no longer flash output levels when recording in submaster preview.
- Restore Grand Master to full after submaster no longer set in GM mode.
- Power up channel levels restore correctly if levels grandmaster/

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### **Model Numbers and Processor Speed**

Over recent years, Strand Lighting have improved the performance and ability of the hardware and software associated with their range of lighting control consoles. Since most of the functions described in this manual are software-based, many of the new functions developed in recent years can be added to older consoles simply by updating the software, albeit that some of the newer functions will not operate as efficiently on older consoles, as they were designed to run on newer and faster processors.

#### **Models 300**

These consoles are designed on a modular basis using S bus network protocol and a Pentium processor. The standard memory console comprises a processor unit, a command module and a submaster module comprising 24 submaster faders. Channel fader sections, comprising 24 faders can be physically connected to the control surface, up to a maximum of 168 faders (6 additional fader modules). LCD monitor modules are also available for use in place of the standard VGA monitors and are provided as standard on Memory 400 and 600 models.

#### **Model 310**

The 310 Show Controller/Backup Unit is designed primarily to serve the lighting requirements of the themed environment market and to operate over a network as a backup unit to a main console. The unit is similar to the Processor Unit of the 300 series consoles, but includes an operator interface, comprising a touch screen. Refer to (refer to [510i/310 Show Controller/ Backup Unit](#)).

#### **Models 430, 530 and 530i (30 Submaster Faders)**

These consoles are similar in style and have the same mechanical features. The difference between the consoles is the type, and speed of the processor used in the motherboard as follows:

- 430 Consoles - 486 Processor or Pentium Processor
- 530 Consoles - Pentium Processor
- 530i Consoles - Pentium Pro or Pentium II Processor

#### **Models 550 and 550i (54 Submaster Faders)**

Again, these models are similar and have the same mechanical features. The difference is the type and speed of the processor used in the motherboard as follows:

- 550 Consoles - Pentium Processor
- 550i Consoles - Pentium Pro or Pentium II Processor

#### **Models 520 and 520i (24 Submaster Faders)**

Again, these models are similar and have the same mechanical features. The difference is the type and speed of the processor used in the motherboard as follows:

- 520 Consoles - Pentium Processor
- 520i Consoles - Pentium Pro or Pentium II Processor



inhibited.

- Multipart Cue Update AutoMod puts automodded channels into correct part.
- Initialise macros to keys not available on console control surface or PC keyboard. SP2 - CHANSTEP, SP3 - ODD, SP4 - EVEN.
- Environment variables FORCENETON & FORCENETOFF can be used to bypass neton/off.bat packet driver loading/unloading. Use these on PIII & above processors.
- CI offline editor supports up to 6000 intensity channels. Use 'max\_intensity\_channels' in 220node.cfg to limit to target console.
- Network DMX can be sent over a routed network to a particular IP address by using net\_dmx\_slot\_range\_1/2/3/4\_addr in 220node.cfg.
- Each Console Setup network DMX slot range can now cover whole patch to ensure when using PREVIEW mode all users can preview all slots.
- Preserve preset group information on Live after controlling cue has been deleted & on update of submaster with its fader at zero.

#### Additional software features on version v2.6.8

- Submaster bump mode now includes latch options.
- Changing cue delay time or incrementing up/down times no longer affects attribute time.
- [chan list] @ LIVE in group preview uses correct levels if live channels currently at preset positions.
- When saving show to floppy disk static network dmx is refreshed.

#### Additional software features on version v2.6.7

- Trying to run more than 12 effects via cues correctly gives error message on 300 consoles.
- Ensure current cue set to live on return to live screen when field editing another cue in preview.

#### Additional software features on version v2.6.6

- Version numbering scheme slightly changed to replace the trailing build letter with a number (v2.6.6 would be v2.6f in the previous scheme).
- [chan list] UPDATE GROUP n \* & UPDATE GROUP n \*, will update group n & apply group n to the updated channels whilst keeping any active channel control intact.
- After remote printing free network connection to allow other consoles to print.
- Rotary window shows correct attribute labels & values after using channel control in preview.
- Change of atc page keeps current intensity level when atc page does not control the intensity level.
- When using channel control with a single attribute, level shown on wheel bar.
- Special groups show remote console name, user name & main console name as remote:user@main to match status window.

#### Additional software features on version v2.6e

- To save 300 disk space a backup file per show is no longer saved, instead a single backup file backup.ssf is saved per directory.
- At startup & after show load restore the GM fade times.
- Add PB n CUT/GO/STOPBACK syntax.
- CHANSTEP now supports 1..999 steps.
- Automatically scroll the X playback cue sheet to show next 3 cues to run.
- Support added for the R140 wired hand held remote.
- Refresh display after Default Patch.
- Patch & channel delete operations faster.
- No longer lose control of channels after channel delete/renumber.
- Show channels going to zero in a XF/AF as green zeros rather

#### Model 510i (Show Controller)

This is a rack-mounted lighting controller designed primarily to serve the lighting requirements of the themed environment market and to operate over a network as a backup unit to a main console. This controller runs the same operating and application software as the other consoles, however the user interface is completely different (refer to [510i/310 Show Controller/Backup Unit](#)). The 510i is only available with the latest Pentium Processor.

#### Features Available with 500 Series New Electronic Sub-System

All 500 series consoles are now fitted with the latest Pentium Processor and a new-style electronic sub-system enabling additional features that were not possible with previous, slower processors. You can check if your console is fitted with the new electronics by checking the position of the Ethernet Port on the rear of the console, which, on consoles fitted with new electronics is fitted on the same panel as the DMX AUX ports, rather than being an optional expansion card (although a second network card can be fitted in addition to the built-in port). The new electronics provide the following additional facilities:

- Built-in Ethernet Ports (no built-in ports on old electronics)
- Handheld remotes can be connected to any AUX port (AUX 3 only for old electronics)
- All 4 DMX ports are supported. DMX 4 is of opposite gender to the others for use as a DMX input, although it can be set as a fourth output (DMX 3 is available as an input with old electronics).
- New SMPTE input port, accessible via the Audio connector.

#### 520 Series Differences

Apart from the number of submaster faders, the 520 and 520i have a number of mechanical differences from the other consoles as follows:

- 520 and 520i does not have an On/Off button and Stop button at the top of the console. An On/Off switch is fitted at the rear of the console.
- 520 and 520i does not have Grandmaster faders. You can assign submasters as [Grandmasters faders](#)
- 520 and 520i does not have a separate Rate Wheel (the Level Wheel doubles as a Rate Wheel)
- 520 and 520i does not have a centre LCD
- 520 and 520i has only four centre softkeys
- 520 and 520i has 14 direct macro keys rather than 7.
- 520 and 520i has the floppy disk drive fitted below the front of the console.

#### 520 Series LCD Softkeys

520 series consoles have no centre LCD. The soft menus which pop

than blank.

#### Additional software features on version v2.6d

- MIDI fully working on all console types & via SN100/102 nodes.
- PRESET Channel Display format shows preset group names correctly.
- SHIFT key can be remapped via 220map.cfg.
- Remote login of 300 desk does not steal submasters away from Main.
- Remote logged in desks use correct Russian font when Russian selected as the language in setup.
- Remote desk status window shows both Remote & Main console names.

#### Additional software features on version v2.6c

- Archive load of cue retains redundant used bit information.
- Full tracking backup the the mouse is now supported.

#### Additional software features on version v2.6b

- Cue range update can now Track changes within the range, with the next cue after the range changed Cue Only.
- Tracking set ON: UPDATE CUE a THRU c CUE ONLY \*
- Tracking set THIS CUE ONLY: UPDATE CUE a THRU c TRACK \*
- UNBLOCK now works correctly for multipart cues & when in cue only mode.
- Shape generation now smoothly fades when using 16bit Pan/Tilt attributes.
- chan @ + lev \*, chan @ - lev \*, chan REMDIM only marks channel as used if level has changed.
- chan @ . sets PanSpeed & TiltSpeed to stop (50%) when on the Live display.
- chan @ GROUP/CUE \* now command line fills group/cue number.
- CUE q TIME up/dn \* now sets attribute time to up time.
- Login of new user on Main uses new user Access Rights settings.
- Effect playback window screen refresh tidy up.
- PS/2 mouse now works on Login display.
- NEXT/LAST & X playback Up/Down keys scroll Cue Sheet mode X playback display.
- Channel control of 16bit attributes always now give full range of control.

#### Additional software features on version v2.6a

- Problems archive loading of setup from shows pre v2.6 fixed.

#### Additional software features on version v2.6

- Shape generation attributes now:  
.91=PPProfile, .92=TProfile, .93=PSize, .94=TSize,  
.95=PSpeed, .96=TSpeed, .97=PPhase, .98=TPhase, .99=PTRotate
- Update of single Part Cue leaves other parts untouched.

#### Additional software features on version v2c6

- SMPTE RESET TIME sets internal clock to current time, SHIFT RESET TIME sets to 0 as before. Use key remapping to get RESET TIME key without the shift.
- v2a6 220HTPRECORD & 220PREVIEWLIVE replaced by User Setup options "GM Affects Record" & "Preview Follows Live".
- Inhib subs @ 0 set correctly at startup.
- chan @ATT Filter ggg NEXT/LAST
- CI build now supports up to 256Mb of RAM.
- CUE n [THRU m] UNBLOCK \* (UNBLOCK is SHIFT SOFTBLOCK)
- Special Shape groups are autocreated.

up on the centre LCD on other consoles for **[BUMP MODE]**, **[FX TIME]** etc. use the right LCD on 520 series consoles.

**[CUE]**, **[GROUP]** and **[SUB]** no longer pop up **{INTS ONLY}** and **{ATTS ONLY}** soft keys on 520 series consoles. To access these keys, press the **[REC MODE]** key when required during **[CUE]**, **[GROUP]** and **[SUB]** commands.

### 300 Series Differences

A special version of the GeniusPro/Lightpalette operating software and the application software packages has been developed to run on 300 series consoles. While all of the functionality available on the 500 series consoles is also available on 300 series consoles, a number of keys on the 500 series consoles are omitted from the 300 series consoles. Specifically the **[REC TIME]** **[SUB PAGE]** **[BUMP MODE]** **[FX SEL]**, **[FX DIR]**, **[FX TIME]** and **[FX LOAD]** keys are not available on the 300 series consoles. The 300 series consoles have an intellimouse in place of the trackball and rotaries and have only one LCD display.

It should be emphasised, unless specifically stated otherwise, that all software functions described in this manual are available within all consoles. Where keys are omitted, there are other methods of achieving the same result, e.g., [Edit Mode](#), by using an ASCII [Keyboard and PC Emulation Template](#), by [creating a macro](#) to simulate the key function, or by key remapping.

**Note:** *The Strand logo key on 300 Series Consoles is equivalent to the **[SHIFT]** key on 500 Series consoles.*

Differences in operation between 500 and 300 series consoles are explained at the appropriate points in this manual

The functions performed by the trackball on a 500 series console can be performed on a 300 series console using the Microsoft Intellimouse Trackball connected to the PS2 or COM ports on the command module/processor unit. When a mouse, or trackball is not available, the functions can be performed using the navigation keys on a standard ASCII keyboard connected to the keyboard connection on the processor unit, or to the PS2 port on the back of the command module.

For details on how to control moving lights using a Microsoft Intellimouse Trackball, refer to [Mouse Control of Features](#)

### Panel Configuration (300 Series Consoles)

When you purchase a 300 Series console, the configuration of the fader modules supplied is set at the factory. The maximum number of fader panels is 7, so if you have 5 fader panels and a command module in your system. the fader panels are numbered in the 220node.cfg file as **fd1** to **fd5**.

If you purchase additional fader panels and connect them to the system, or you remove one or more fader panels, you must reset the panel configuration.

### Additional software features on version v2b6

- UPDATE now works with Effect Step levels. Optional leading channel list is supported. By default effect update assumes Chansln. eg  
[chan list] UPDATE FX 1.1 \*  
[chan list] UPDATE FX 1.1 THRU 1.78 \*
- [chan list] UPDATE FX 1 \* Updates all steps of Fx 1
- Attribute Filter of Position now includes the Shape attributes. User attribute filter replaced by Shape attribute filter.  
[chan list] @ATT Shape . \* sets all shape attributes of zero/off.
- Attribute Select syntax added to enable individual attributes to be changed without affecting the 'current' selection.  
ATTRIB\_SELECT Att @ATT Level [\*] (ATTRIB\_SELECT = SHIFT @ATT)
- Channel Step syntax added.  
Chan THRU Chan [ODD | EVEN | STEP n | ON | OFF] @ Level [\*]  
GROUP n [ODD | EVEN | STEP n | ON | OFF] @ Level [\*]  
ODD/EVEN/STEP not available from keyboard so need to use key remapping (220map.cfg) to assign the functions eg:  
520\_PK\_5, CHANSTEP,  
520\_PK\_6, ODD,  
520\_PK\_7, EVEN,
- Thru off syntax added:  
Chan THRU OFF Chan @ Level [\*]  
SHIFT ON is now OFF rather than FULL (use @ @ for FULL).
- Channel level range (fanning) syntax added:  
[chan list] @RANGE Level THRU Level [\*] (@RANGE = SHIFT @)
- SHIFT USER is macro 999.

### Additional software features on version v2a6

- Preview: @ LIVE does not set used bit if value the same.
- Access Rights - can not run FXs if not allowed to do playback.
- PREVIEW XREF CUE 1 PREVIEW jumps to correct cue.
- Remap of last Sub Bump key no longer sticks on.
- UPDATE AMOD CUE a THRU b puts the 'new' light the correct part.
- 'chan@level QONLY' in parts of cues >p1 sets the used bit correctly in the next cue.
- If chan.1 unpatched - chan summary no longer shows all attributes as unpatched.
- Option to allow record/update pre Inhibit subs & grand masters.
- Option to not have separate Preview cue, on entry to preview use 'current' cue.
- Password number of Attributes increased on CI build of sw:  
300 & non I consoles - as before:  
(300 has 600 Int limit, non i has 1500 int limit)  
Ints Atts  
25 1  
50..75 50  
100 100  
125 125  
150..175 150  
200..225 200  
250..375 250  
400..775 400  
800..1500 500  
i consoles:  
(6000 Int limit)  
Ints Atts  
25..1000 25..1000 (Same number as Ints)  
1025..3000 1050..5000 (1000 + (2 \* (Ints - 1000)))  
3025..6000 4075..2000 (Int + Att == 8000)
- Add new Shape generation attributes.

To reset the panel configuration after adding or removing fader panels, proceed as follows:

- With all panels connected to the command module, press **<REPORT> {ADV SETUP}** then **{PANEL SETUP}**. This will cause each fader panel to display its fader number by illuminating the number of LEDs in red on the left-hand side of the top row of the fader panel according to its fader number (1 - 7). For instance, fader number 3 will illuminate three LEDs.
- You can change the fader panel number by pressing one of the first 7 bump keys on the top row of the fader panel. For instance, to change a fader panel to Fader 3, press the third bump key from the left on the top row
- Once you have reset the panel configuration, you must press **{SAVE}** to save the new panel configuration. After pressing **{SAVE}** you will require to shutdown and restart the console.
- If you have removed one or more fader panels, you must clear the configuration by pressing **{CLEAR}**. This will extinguish all the LEDs and reset all faders in the 220node.cfg file to 00.
- You can then set the panel fader numbers using the bump keys as previously described.
- Press **{SAVE}** and shutdown and restart the console..

To leave the 'Orders' Menu, press the **{BACK}** softkey.

## Conventions Used in This Document

The following conventions are used throughout this document.

**[CUE]** The console keys. This example shows the key labelled CUE.  
**<SETUP>** The display keys. These are above the right LCD on the console and are shown in italics to distinguish them from other keys with the same name. (The LCDs are the three small display areas across the centre of the console.)

**{BACK}** The console soft keys; these are the row of 4 or 6 unmarked keys whose function can change depending on what you are doing. This example shows the soft key labelled BACK.

**wheel** Level Wheel movement.

**trackball** Trackball movement.

**fader** Fader movement.

**Bump 1** A submaster bump button.

*Direct Entry 1 Digit* A channel level entry in Direct Entry 1 Digit format.

*Direct Entry 2 Digit* A channel level entry in Direct Entry 2 Digit format.

*Command Line* A channel level entry in Command Line format.

**#** Used in syntax or field descriptions as a place holder for a number. The # symbol is never actually entered

### Important Note:

**Throughout this manual, references to trackball should be taken as a generic term covering the series 500 trackball or Intellimouse Trackball.**

**The Strand Logo key on 300 Series consoles is equivalent to the [SHIFT] key on 500 Series consoles. References to the [SHIFT] key in this manual apply equally to the Strand Logo key.**

**Additional software features on version v2.5k**

- PS/2 mouse now reliable on all consoles. After changing in User Setup need to wait 2 seconds before mouse will operate.
- 510i P3 key working again.
- Fix startup delay on 300 consoles when network set to on.

**Additional software features on version v2.5e**

- Tracked cues with zero level in non first part load correctly.
- Channels In Use printout corrected.

**Additional software features on version v2.5d**

- Only active channels set via HandHeldRemote are ignored on Update except if it is the HHR doing the updating in which case they are used. Previous HHR selections are Updated. In this way all 'red' channels are updated.

**Additional software features on version v2.5c**

- DMX level of 1 is now shown as 1% rather than 0%.
- Channel control channels at 0% are now added when updating into non tracking cues, groups & submasters. Use CHANSIN to stop new channels from being added.
- Support iPAQ WiFi hand held remote.
- Attribute names have changed to better reflect their use. See fixture.lib for details.

**Additional software features on version v2.5b**

- PS/2 mouse support added for 300 consoles.
- RECORD & UPDATE now use levels after applying Grandmasters & Inhibitive Submasters. REC-SUBS uses levels before.

**Additional software features on version v2.5a**

- After CLR channels can no longer be reselected using @ key. PLUS & MINUS still work though.
- i.e. (Direct 1 digit) 1 @ 5 CLR @ 6 Now doesn't work
- 1 @ 5 CLR + 2 @ 6 Still works
- Preview selection retained (cue/sub/group/effect):
- CUE q CUE\_PREVIEW Display cue q on preview
- CUE CUE\_PREVIEW Display 'current' cue in preview
- CUE\_PREVIEW Display last previewed cue
- Leds on 300 display selection keys correct.
- Can now select show 5 from the Login display.
- Ensure network DMX & Video is not processed if destined for a different subnet.
- Cue Summary display shows part channel information (zero counts are shown as blank)
- Attribute values > dmx 250 always record/update correctly.
- Recording/updating Cue QOnly correctly preserves the following multi part cue block info. All new channels are added to the first part.
- Can now delete the highest channel number in the show.
- RELOADx1/2 recreates a tracking cue as per CUE q LOADx1/2.
- Channels set via HandHeldRemote are not Updated - only channels set via console channel control are updated (unless of course a leading channel list is specified).
- Loading cues from disk when in a Tracking mode load QOnly to ensure loaded cue state preserved.
- Mouse controls all attributes in preview. Left/Right buttons are used for Minus/Plus when on an edit field & to change to the previous/next attribute when a channel is selected.
- Shift RemDim on output rem dim's but excludes subs - as LP90
- 300 DMX output disabled if tracking backup & not in control.
- After Cue Copy the X playback last recorded cue is updated.

**The [ @ATT ] key (500 Series consoles) is equivalent to the [ ATTRIB ] key on 300 Series consoles. This manual refers to [ @ATT ]**

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## Configuring European Keyboards

The console is configured at the factory for the US ASCII keyboard. You need to configure keyboards for other locales.

Refer to [Country Keyboard Support](#)

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## Technical Assistance

The console requires a minimum of maintenance and servicing. If equipment fails to operate properly upon installation, or under normal load and temperature conditions, and basic troubleshooting procedures are not effective, please contact your nearest Strand Authorised Service Centre or Strand Lighting Field Service at the office serving your area.

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**Additional software features on version v2.5**

- Show disk free amount on Archive Display for benefit of 300 users. Show ??? for disk free of remote file server.
- When entering multiple attributes of the same channel can now just press '.' to recall current channel number.  
chan.2 + .3 + .5 THRU .9 - .7 @ \*
- After a Cue Update the X playbacks are correctly reloaded to reflect those changes.
- After a Cue Record the next cue is loaded into the X playback so the next GOx1/2 runs the next cue in the cue sheet.
- Group number plus group text is now show on TRACKER PRESET display when in preset mode (SHIFT DISPLAY\_GROUP).
- Special Macros (P1, LCD1 etc) show their name on macro printout.
- Tracked channels at zero are shown in multipart cues.
- FX\_STOP now puts the selected effect playback to the previous playback to allow further FX\_STOPs to quickly stop running effects
- When setting 16bit attributes the Least Significant Byte is set to 0, unless setting to full then the LSB is set to full also.
- Default number of frames is now 0 when patching attributes greater than .2(colour), when patching .2 the setup default is still used. This allows the attribute name to be displayed on the patch screen & makes the setup item now purely a default colour frame.
- @ COPYFROM now copies preset group information rather than the level information  
chan @ COPYFROM chan @ FULL \* New syntax to copy level information (ie how the old @ copyfrom worked)
- Channel control wheeling in preview as set in User Setup:  
OFF (wheel) & SHIFT+(wheel) scroll only  
ON (wheel) masters channels, SHIFT+(wheel) scrolls  
SHIFT+WHEEL (wheel) scrolls, SHIFT+(wheel) masters channels
- Channel range update fully supports presets & attribute filters  
chans UPDATE CUE cue [THRU cue] FROM TEXT floor TEXT @ TEXT ceiling TEXT @ATT Position \*  
chans UPDATE CUE cue [THRU cue] FROM GROUP grpA @ grpB @ATT Colour Position \*
- Set channels in one preset group to another preset group  
chans FROM TEXT floor TEXT @ TEXT ceiling TEXT @ATT Position \*  
chans FROM [@] GROUP grpA @ grpB @ATT Colour Position \*  
NB FROM key is not directly available so to record into empty USER key:  
MACRO\_DISPLAY CUE USER FROM MACRO MACRO
- DOWN% & UP% added to Cue/Sub/Group preview lcd menus  
This has meant RENUM & FROM are no longer available from cue preview, as such:  
FROM cueno RENUM \* Use CUE 0 FROM cueno RENUM \*  
RENUM RENUM Use CUE 0 THRU 999.9 RENUM \*  
The old syntaxs still work in case they are in macros.
- Renumbering cues no longer loses preset group information.
- Automod improvements:  
- now supports Attribute filters eg  
chan AUTOMOD\_FROM chan @ATT Position \*  
chan AUTOMOD\_FROM chan @ lev @ATT Position \*  
chan AUTOMOD\_FROM chan @ATT Position @ lev \*
- now can use to swap channels eg  
chanA AUTOMOD\_FROM chanB \*  
chanB AUTOMOD\_FROM chanA \*
- attributes correctly automod & don't do "apply only if source > dest val"
- automodding individual attributes no longer sets whole destination channel as used
- automodding of presets now works & copies over the preset group information. If an @ level is specified then the level is used.  
chanA AUTOMOD\_FROM chanB \* Copy over preset info

updates to this manual, please contact your nearest Strand Lighting office.

## Safety Warning

This equipment is designed to operate from the mains electricity supply and contains voltages which, if touched, may cause death or injury. It should only be operated in accordance with these instructions and for the purpose of a lighting control system. Do not open the 500 Series consoles. There are no user serviceable parts inside. The console configuration can be changed, as described in the Installation manual for the 300 Series consoles. Before attempting to reconfigure the consoles, ensure that the mains supply is isolated and that the mains plug is removed. Avoid spilling liquid on the console. If this should happen, switch the console off immediately.

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chanA AUTOMOD\_FROM chanB @ FULL \* Copy over level info  
 - To help avoid an accidental level changes in preview pressing \* on an empty command line no longer selects all channels. This now only works on Output.  
 - SHIFT LOADx1 (on an empty command line) reloads the cue in X playback 1 thereby removing any modifications done whilst in playback preview. Likewise SHIFT LOADx2 reloads the cue in X playback 2. (SHIFT LOADx1 used to be LOADx2)  
 - Current cue number & text shown on prompt line of output display.  
 - Attribute fade colours are now correct on output  
 - On output when updating (with a leading channel list) a preset focus group, after the update those channels get set to the preset focus group position.  
 - [chan list] UPDATE GROUP [INTS\_ONLY | ATTS\_ONLY | @ATT filter] \* On output updates channels into the preset group they were previously set to. Using channel control reapplies those channels to the preset groups. Can use the CONTROL display format to view what preset group the channel will get recorded into. Dark gray indicates channel was at this position.  
 - Now now set a cue/sub/group text comment when updating eg chanlist UPDATE GROUP group TEXT text \*  
 - When submaster bump key is config'd as Mac pressing that bump key runs the macro number of that submaster plus 100, pressing SHIFT + bump key runs the macro of that submaster plus 300. SubBump12 runs macro 112, SHIFT+SubBump12 it runs Macro 312. When the submaster bump key is not config'd as Mac SHIFT +SubBump still is the short cut way to edit that submaster in preview.  
 - 220node.cfg field\_lock\_mode  
 Set to 0 to disable the preview field locking. ie on entry to a preview screen the fields will not be locked out (yellow).  
 - DMX Ports 1 & 2 default to DMX OUT.  
 - Effect List display added.  
 - On X playback expanded cue sheet format the AttTime is displayed.  
 - On all X playback formats a cue is marked running (in red) if either the int or att fades are still running.  
 - Last of multiple running MF's are shown correctly on X playback history section.  
 - All attributes can now be 16bit. fixture.lib has the details but basically you need to create a fixture with an attribute of xAA (AA = 2..99) which is the least significant 8 bits of the 16bit number. You can only patch 16bit attribute by using a fixture - you cannot patch a 16bit attribute directly in syntax. Throughout the console you only need to specify AA & it will include all 16bits. When using the rotaries to wheel the value you can use coarse mode as per the trackball to speed up the wheeling (press the middle trackball button while moving the rotary). Attributes 56..59 are no longer used & you cannot select these any more. Loading an old show with these attributes present gets automatically converted to the new attributes.  
 - X playback partitioning now has 3 modes: OFF, X1/X2, USER  
 OFF As per v2.5 sw ie all playbacks common to all users  
 X1/X2 As per v2.5 sw ie all playbacks common to all users  
 X1 only uses channels in X1 group, X2 only if in X2 group  
 USER New mode. Playbacks are different for each user & only the channels in that users partition can be used. In this mode there is no splitting of channels between X1 & X2  
 - LIVE LIVE now keeps the same channel position when swapping between tracker & non tracker channel display formats.  
 - UPDATE supports CHANSIN & ADDALL modifiers. Leading channel list of update always adds these channels unless CHANSIN is specified. Cue defaults to addall, sub & group default to ChansIn.  
 - Channels are marked in cyan after an update - LP only.

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- Cue sheet jumps to entered cue only after whole cue number has been entered.
- If halfway though entering a command SHIFT CLR clears the commands line (nothing new), now the current cue will be set as the cue on stage (yellow cue).
- On return to output the current cue will be set as the cue on stage (yellow cue). This previously was only done if LP.
- Channel control selection is preserved after Record & Update - GP only.
- Preset groups numbers > 250 are printed correctly.
- Midi Show Control Rx can be enabled without having to enable the Midi Channel.
- Reporting to/from multiple dimmer racks is now reliable. Only AUX1 & 2 supported, AUX3 supported removed as too unreliable.
- Reporting from a 300 console added.
- DMX update period has been increased (or is that decreased) to 25mSec (was 30mSec) for better moving light control. D54/AMX remains at 30mSec.
- IoFtp has new command SETDRIVES to allow servers to restrict what drives are displayed by logged in consoles. By using this & the subst command only a single directory on a server can be seen by logged in consoles.  
eg: mkdir c:\shows  
subst r: c:\shows  
ioftp32 setdrives 131072 interactive
- When viewing channels using the Tracker & TrackerPreset display can now specify what attributes are shown & in what order. See atcpage.lib for more details.  
eg: to show just the most significant 8bits use X1 > 99  
put the least significant data at the end X1 > 99, x1 > 99
- Range editing:  
eg: CUE 1 > 5 TIME 5 \* ,  
SUB 1 > 6 TEXT fred \* ,  
CUE 10 > 20 MACRO 6 \*  
CUE 1 > 10 TIME + 0.1 \* or CUE 1 > 10 TIME - 1 \* etc etc  
The above syntax only changes the first part of a cue as this matches current logic.  
ie CUE 1 > 3 TIME 5 \* is the same as doing CUE 1 TIME 5 \* CUE 2 TIME 5 \* CUE 3 TIME 5 \* as now.
- Relative time changes. eg CUE n TIME + 0.1 \* Adds 0.1 Second to the currently recorded time of cue n. Can use + or - to adjust the time of an existing cue. If used when re-recording a new cue the relative change is with respect to the default cue time. Relative times supported for subs & effects also.
- Attribute times can now be specified using // syntax (@ATT TIME still supported).  
eg to set just the attribute time use TIME // aa \*  
to set up & att time only use TIME uu // aa \*
- Added command line 'chans @ lev HOLD \*' syntax.
- When in preview 'chans @ LIVE \*' set those channels to the current live output level.  
@ LIVE can be used with attribute filters also - chans @ATT Position LIVE \*
- Tracking backup: Backup now allowed to TakeCtrl if booted up & has never seen Main.
- When logged into Main as a remote desk A: shown on Archive screen is the remote desks A: not the Mains desks A:.
- WYSIWYG now supports as standard listening to ShowNet DMX. CN disk includes lxstrand.dll which is required for this to work. Need to use regedit to add the path to lxstrand.dll:  
[HKEY\_LOCAL\_MACHINE\Software\CAST Lighting Limited \Protocol Manager\Strand Shownet]  
File = c:\program files\Strand\lxstrand.dll
- SMPTE/MIDI card:  
The SMPTE/MIDI card needs a fast SBus. This requires a single

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processor in the 300 brain to be upgraded.  
 Need MYCSM v5.2 (or later) code in the SMPTE/MIDI card.  
 Need MYCPN v5.2 (or later) code in brain slot 2.  
 Brain slot 2 is labelled U44. It is the second most processor from the left when viewed from the front & top.  
 Issue 6 & before boards (PCB 1125/Issue Ref 2091):  
 The SMPTE/MIDI card is plugged to the connector for the show controller lcd (PL2) rather than the SMPTE/MIDI connector (PL1).  
 Issue 7 & above boards (PCB 1125/Issue Ref 2091):  
 The SMPTE/MIDI card is plugged to the PL1 connector which is closest to the midi card.  
 This means you cannot use SBus2 (bottom right SBus connector when viewed from the back of console) for normal panel connections.  
 This means you cannot fit a video card in the middle PCI slot & connect a TFT display to it. Normal VGA output is ok.

- [Introduction of 310 Show Controller](#)
- Changes to Update syntax for [Submasters](#) and [Groups](#)
- Update from Live Introduced for [Cues](#), [Submasters](#), [Groups](#) and [Effects](#)

#### **Additional software features on version v2.4**

- [300 Series consoles](#)
- [One and Two-Scene Preset](#)
- [Auto-Mod](#)
- [Profile Learn](#)
- [Fading in Intensity and Attribute Channels in Time](#)
- [Hundredth of a Second Time Resolution](#)
- [Macros increased to 3000](#)
- [PS2 Mouse Supported](#)
- [Handheld Remotes Fire Macros HHM1 to HHM4](#)
- [A4 Oversize Macro Tablet Supported](#)
- [Pan and Tilt Locked Indicator added to Status Window](#)
- [Range Patching Supports Reverse Channel Range](#)
- [Grandmasters \(GM1, GM2\) as Submaster Function Option](#)
- Change Update Procedure to include all channels, except with CHANS IN. [Submasters](#) and [Cues](#)

#### **Additional software features on version v2.3**

- [Edit Field Protection](#)
- [Mouse Functions](#)
- [Gang Loading of Subs](#)
- [Channels in Show Display Format Option](#)
- [New Channel](#), [Cue](#) and [Dimmer Summary Screens](#)
- [Simplified System Report Screen](#)
- [Cue Sheet Macros](#)
- [New Copy Patch Menu](#) and [Range Patching](#)
- [Preset Focus Groups increased to 750](#)
- [New Report, Setup, Access Rights and Exit Menu Structure](#)
- [Changed Function of Setup Key](#)
- [A4 and A3 Macro Tablet](#)
- [New Playback Partitioning Function](#)
- [Key, Wheel and VGA Remapping](#)
- [SN Node Priority and HTP Patching](#)

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# GeniusPro & Lightpalette

Software Version v2.8.4

## Operator's Manual

Last updated on 13th July 2004

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### Additional software features on version v2.8.4

- Catalyst fixture uses CMY rather than RGB to better fit normal usage.

### Additional software features on version v2.8.3

- Increased number of attributes from 99 to 126. See fixture.lib for new attribute names.
- Add Channel Partitioning mode of LIVE which applies channel partitioning only when on the Live display.

### Additional software features on version v2.8.2

- SMPTE event playback now reliable when events are only a few frames apart.
- Channel update of a range of groups when in group preview no longer sets the destination group text to that of the source group.

### Additional software features on version v2.8.1

- Reporter ignores dimmer Circuit Ids greater than the patch size.
- FLASH/BUMP up/down uses channel partition groups when SOLOing.
- Loading a cue onto the X playback triggers running any Auto Moves or Auto Preheats that are required.

### Additional software features on version v2.8.0

- Show channels fading to zero in multipart tracked XF/AF cues.
- TRACKBACK tracks back through zero attribute levels.
- ASCII In supports multi byte commands to allow all keys/faders/wheels to be used.
- Show 'Network!' warning in status window when a SN node goes offline. Clear the warning by viewing Network Diagnostics.

### Additional software features on version v2.7.7



- Always display the channel control lcd soft key menu on the main display.
- Recording a new cue in Preview loads that cue onto the X playback when in Light Palette mode so the next GO will run the cue.
- @ on an empty command line highlights the channel labels of those channels about to be set to a level.
- GOTO cue \* now shows channel fade up/down colours with respect to the previous cue rather than with respect to the previous output level.
- Add channel 'trackback' syntax: [chan list] @ TRACKBACK [TRACK | QONLY] lev \*. TRACKBACK is SHIFT TRACK. This command tracks back changes to the source cue that set the level. TRACKBACK can be used wherever TRACK or QONLY are currently used.
- Show tracked intensity zeros always in multi part cues.
- [chan list] UPDATE CUE cue @ COPYFROM chan \* ensures new changes are put in the first part.

### **Additional software features on version v2.7.6**

- Backup of deleted showfile on 300 console is now called backup.ssf rather than showfile.bk0
- Show 'SB' as the cue type for soft blocked tracked cues.
- [chan list] @ GROUP g \* updates current group so [chan list] @ GROUP NEXT/LAST works as expected by using group g as the base for the next/last.

### **Additional software features on version v2.7.5**

- Fix problem whereby Main & Backup wouldn't sync when a remote console was logged on.
- [chan list] UPDATE CUE [cue range] @ + lev \* no longer masters up zero levels to lev.
- [chan list] UPDATE CHANSIN CUE [cue range] @ lev \* no longer sets zero levels to lev.
- UNDO now acts on all channel lists including those made from groups & cues.
- On show load & console startup ensure network connections to SN nodes are re-established.

### **Additional software features on version v2.7.4**

- Adjusting cue times on Output no longer removes redundant tracking changes.
- @ OFF \* on a XF/AF cue when in non tracking mode sets the intensity channel only to zero.

### **Additional software features on version v2.7.3**

- Speed up printing.
- Starting an effect via a cue now sets the effect fade up/down times from the cue fade times.
- [chan list] @ OFF \* on any part of a XF/AF cue when in tracking sets the channel(s) to the previous cue value - previously this only worked when on the first part.
- Super submaster text is loaded correctly from disk when those submasters have been remapped due to the show having been saved on a console with a different number of submasters.
- Number of Attribute Filters has been increased to 12.

### **Additional software features on version v2.7.2**

- After using fixture channels ensure rotary attributes are valid on next channel control selection.
- xConnect Login no longer stops the hand held remotes from working.
- Stopping an effect that isn't running does not load that effect onto the playback.
- Completed effect step attributes show preset focus group information.
- Effect stop after cycles with a zero fade down time stops with the last step levels.

- 16bit attributes follow cue & effect fade time profiles.
- Default for Cue Sheet Macros is now Main Console as this is most useful to most users.
- Same cue loaded in X playback preview after a Main/Backup sync.
- Current Cue set to the X playback stage cue (last to complete) after a Main/Backup sync.
- X playback shows running wait time in all display formats.

### **Additional software features on version v2.7.1**

- Dimmer fault log shows current faults in red & subsided faults in yellow.
- Dimmer fault log Clear clears subsided faults only, use Shift Clear to clear the whole log.
- Current Cue set to the X playback preview cue after a Main/Backup sync.

### **Additional software features on version v2.7.0**

- Add syntax for moving attributes around in part cues as per existing '[chan list] \*' syntax:  
[chan list] SOFTBLOCK \* move intensity & attribute channels  
[chan list] @ SOFTBLOCK \* move intensity & attribute channels  
[chan list] @ATT SOFTBLOCK \* move attribute channels only  
[chan list] @ATT attfilter SOFTBLOCK \* move just attfilter attribute channels  
[chan list] @ INTS/ATTS\_ONLY SOFTBLOCK \* move just intensity/attribute channels
- Channel control actions work when setting automodded levels in preview with automod On.
- Show running Auto Move & Auto Preheat cues on X playback when in Cue Sheet order.
- Auto Move & Auto Preheat cues on X playback show in different colours to avoid confusion with 'real' cues.
- Add '@ Q-Only/Track Level' syntax to range cue update when in single digit mode.
- Do not affect attribute values on range update syntax: [chan list] UPDATE CUE a THRU b @ Lev \*
- Cue range automod update applies changes Q-Only/Track when in a tracking mode.
- Ensure valid channels on [chan list] REMDIM syntax.

### **Additional software features on version v2.6.15**

- Stop net backoff problems when multiple remote users connected via WiFi networks.

### **Additional software features on version v2.6.14**

- Support xConnect text keys.

### **Additional software features on version v2.6.13**

- Support xConnect Login/Monitor connections.
- Backup 300 with SMPTE card but no panels connected correctly tracks keys from Main 300 command panel.

### **Additional software features on version v2.6.11**

- MIDI tracking backup improvements. A backup only processes midi when in sync or when in control. If Main & Backup both have MIDI ports then each use their own port. This requires a MIDI cable to the IN port of Main & then another cable from the THRU port of Main to the IN port of Backup. If Main has MIDI but Backup does not then both use the Mains (as in previous sw versions). If Main has no MIDI then regardless of what the Backup has no MIDI is processed. MIDI via a SN node always works. MIDI is only output by the console that is currently in control.

- Consoles that have no Grand Masters & use submasters in GM mode no longer flash output levels when recording in submaster preview.
- Restore Grand Master to full after submaster no longer set in GM mode.
- Power up channel levels restore correctly if levels grandmaster/inhibited.
- Multipart Cue Update AutoMod puts automodded channels into correct part.
- Initialise macros to keys not available on console control surface or PC keyboard. SP2 - CHANSTEP, SP3 - ODD, SP4 - EVEN.
- Environment variables FORCENETON & FORCENETOFF can be used to bypass neton/off.bat packet driver loading/unloading. Use these on PIII & above processors.
- Cl offline editor supports up to 6000 intensity channels. Use 'max\_intensity\_channels' in 220node.cfg to limit to target console.
- Network DMX can be sent over a routed network to a particular IP address by using net\_dmx\_slot\_range\_1/2/3/4\_addr in 220node.cfg.
- Each Console Setup network DMX slot range can now cover whole patch to ensure when using PREVIEW mode all users can preview all slots.
- Preserve preset group information on Live after controlling cue has been deleted & on update of submaster with its fader at zero.

#### **Additional software features on version v2.6.8**

- Submaster bump mode now includes latch options.
- Changing cue delay time or incrementing up/down times no longer affects attribute time.
- [chan list] @ LIVE in group preview uses correct levels if live channels currently at preset positions.
- When saving show to floppy disk static network dmx is refreshed.

#### **Additional software features on version v2.6.7**

- Trying to run more than 12 effects via cues correctly gives error message on 300 consoles.
- Ensure current cue set to live on return to live screen when field editing another cue in preview.

#### **Additional software features on version v2.6.6**

- Version numbering scheme slightly changed to replace the trailing build letter with a number (v2.6.6 would be v2.6f in the previous scheme).
- [chan list] UPDATE GROUP n \* & UPDATE GROUP n \*, will update group n & apply group n to the updated channels whilst keeping any active channel control intact.
- After remote printing free network connection to allow other consoles to print.
- Rotary window shows correct attribute labels & values after using channel control in preview.
- Change of atc page keeps current intensity level when atc page does not control the intensity level.
- When using channel control with a single attribute, level shown on wheel bar.
- Special groups show remote console name, user name & main console name as remote:user@main to match status window.

#### **Additional software features on version v2.6e**

- To save 300 disk space a backup file per show is no longer saved, instead a single backup file backup.ssf is saved per directory.
- At startup & after show load restore the GM fade times.
- Add PB n CUT/GO/STOPBACK syntax.
- CHANSTEP now supports 1..999 steps.

- Automatically scroll the X playback cue sheet to show next 3 cues to run.
- Support added for the R140 wired hand held remote.
- Refresh display after Default Patch.
- Patch & channel delete operations faster.
- No longer lose control of channels after channel delete/renumber.
- Show channels going to zero in a XF/AF as green zeros rather than blank.

### **Additional software features on version v2.6d**

- MIDI fully working on all console types & via SN100/102 nodes.
- PRESET Channel Display format shows preset group names correctly.
- SHIFT key can be remapped via 220map.cfg.
- Remote login of 300 desk does not steal submasters away from Main.
- Remote logged in desks use correct Russian font when Russian selected as the language in setup.
- Remote desk status window shows both Remote & Main console names.

### **Additional software features on version v2.6c**

- Archive load of cue retains redundant used bit information.
- Full tracking backup the the mouse is now supported.

### **Additional software features on version v2.6b**

- Cue range update can now Track changes within the range, with the next cue after the range changed Cue Only.

Tracking set ON: UPDATE CUE a THRU c CUE ONLY \*

Tracking set THIS CUE ONLY: UPDATE CUE a THRU c TRACK \*

- UNBLOCK now works correctly for multipart cues & when in cue only mode.
- Shape generation now smoothly fades when using 16bit Pan/Tilt attributes.
- chan @ + lev \*, chan @ - lev \*, chan REMDIM only marks channel as used if level has changed.
- chan @ . sets PanSpeed & TiltSpeed to stop (50%) when on the Live display.
- chan @ GROUP/CUE \* now command line fills group/cue number.
- CUE q TIME up/dn \* now sets attribute time to up time.
- Login of new user on Main uses new user Access Rights settings.
- Effect playback window screen refresh tidy up.
- PS/2 mouse now works on Login display.
- NEXT/LAST & X playback Up/Down keys scroll Cue Sheet mode X playback display.
- Channel control of 16bit attributes always now give full range of control.

### **Additional software features on version v2.6a**

- Problems archive loading of setup from shows pre v2.6 fixed.

### **Additional software features on version v2.6**

- Shape generation attributes now:  
.91=PProfile, .92=TProfile, .93=PSize, .94=TSize,  
.95=PSpeed, .96=TSpeed, .97=PPhase, .98=TPhase, .99=PTRotate
- Update of single Part Cue leaves other parts untouched.



### Additional software features on version v2c6

- SMPTE RESET TIME sets internal clock to current time, SHIFT RESET TIME sets to 0 as before. Use key remapping to get RESET TIME key without the shift.
- v2a6 220HTPRECORD & 220PREVIEWLIVE replaced by User Setup options "GM Affects Record" & "Preview Follows Live".
- Inhib subs @ 0 set correctly at startup.
- chan @ATT Filter ggg NEXT/LAST
- CI build now supports up to 256Mb of RAM.
- CUE n [THRU m] UNBLOCK \* (UNBLOCK is SHIFT SOFTBLOCK)
- Special Shape groups are autocreated.

### Additional software features on version v2b6

- UPDATE now works with Effect Step levels. Optional leading channel list is supported. By default effect update assumes ChansIn. eg  
[chan list] UPDATE FX 1.1 \*  
[chan list] UPDATE FX 1.1 THRU 1.78 \*  
[chan list] UPDATE FX 1 \* Updates all steps of Fx 1
- Attribute Filter of Position now includes the Shape attributes. User attribute filter replaced by Shape attribute filter.  
[chan list] @ATT Shape . \* sets all shape attributes of zero/off.
- Attribute Select syntax added to enable individual attributes to be changed without affecting the 'current' selection.  
ATTRIB\_SELECT Att @ATT Level [\*] (ATTRIB\_SELECT = SHIFT @ATT)
- Channel Step syntax added.  
Chan THRU Chan [ODD | EVEN | STEP n | ON | OFF] @ Level [\*]  
GROUP n [ODD | EVEN | STEP n | ON | OFF] @ Level [\*]  
ODD/EVEN/STEP not available from keyboard so need to use key remapping (220map.cfg) to assign the functions eg:  
520\_PK\_5, CHANSTEP,  
520\_PK\_6, ODD,  
520\_PK\_7, EVEN,
- Thru off syntax added:  
Chan THRU OFF Chan @ Level [\*]  
SHIFT ON is now OFF rather than FULL (use @ @ for FULL).
- Channel level range (fanning) syntax added:  
[chan list] @RANGE Level THRU Level [\*] (@RANGE = SHIFT @)
- SHIFT USER is macro 999.

### Additional software features on version v2a6

- Preview: @ LIVE does not set used bit if value the same.
- Access Rights - can not run FXs if not allowed to do playback.
- PREVIEW XREF CUE 1 PREVIEW jumps to correct cue.
- Remap of last Sub Bump key no longer sticks on.
- UPDATE AMOD CUE a THRU b puts the 'new' light the correct part.
- 'chan@level QONLY' in parts of cues >p1 sets the used bit correctly in the next cue.
- If chan.1 unpatched - chan summary no longer shows all attributes as unpatched.

- Option to allow record/update pre Inhibit subs & grand masters.
- Option to not have separate Preview cue, on entry to preview use 'current' cue.
- Password number of Attributes increased on CI build of sw:  
300 & non I consoles - as before:  
(300 has 600 Int limit, non i has 1500 int limit)

Ints Atts

25 1

50..75 50

100 100

125 125

150..175 150

200..225 200

250..375 250

400..775 400

800..1500 500

i consoles:

(6000 Int limit)

Ints Atts

25..1000 25..1000 (Same number as Ints)

1025..3000 1050..5000 (1000 + (2 \* (Ints - 1000)))

3025..6000 4075..2000 (Int + Att == 8000)

- Add new Shape generation attributes.

### **Additional software features on version v2.5k**

- PS/2 mouse now reliable on all consoles. After changing in User Setup need to wait 2 seconds before mouse will operate.
- 510i P3 key working again.
- Fix startup delay on 300 consoles when network set to on.

### **Additional software features on version v2.5e**

- Tracked cues with zero level in non first part load correctly.
- Channels In Use printout corrected.

### **Additional software features on version v2.5d**

- Only active channels set via HandHeldRemote are ignored on Update except if it is the HHR doing the updating in which case they are used. Previous HHR selections are Updated. In this way all 'red' channels are updated.

### **Additional software features on version v2.5c**

- DMX level of 1 is now shown as 1% rather than 0%.
- Channel control channels at 0% are now added when updating into non tracking cues, groups & submasters. Use CHANSIN to stop new channels from being added.
- Support iPAQ WiFi hand held remote.
- Attribute names have changed to better reflect their use. See fixture.lib for details.

### **Additional software features on version v2.5b**

- PS/2 mouse support added for 300 consoles.
- RECORD & UPDATE now use levels after applying Grandmasters & Inhibitive Submasters. REC-SUBS uses levels before.

### **Additional software features on version v2.5a**

- After CLR channels can no longer be reselected using @ key. PLUS & MINUS still work though.  
i.e. (Direct 1 digit) 1 @ 5 CLR @ 6 Now doesn't work  
1 @ 5 CLR + 2 @ 6 Still works
- Preview selection retained (cue/sub/group/effect):  
CUE q CUE\_PREVIEW Display cue q on preview  
CUE CUE\_PREVIEW Display 'current' cue in preview  
CUE\_PREVIEW Display last previewed cue
- Leds on 300 display selection keys correct.
- Can now select show 5 from the Login display.
- Ensure network DMX & Video is not processed if destined for a different subnet.
- Cue Summary display shows part channel information (zero counts are shown as blank)
- Attribute values > dmx 250 always record/update correctly.
- Recording/updating Cue QOnly correctly preserves the following multi part cue block info. All new channels are added to the first part.
- Can now delete the highest channel number in the show.
- RELOADx1/2 recreates a tracking cue as per CUE q LOADx1/2.
- Channels set via HandHeldRemote are not Updated - only channels set via console channel control are updated (unless of course a leading channel list is specified).
- Loading cues from disk when in a Tracking mode load QOnly to ensure loaded cue state preserved.
- Mouse controls all attributes in preview. Left/Right buttons are used for Minus/Plus when on an edit field & to change to the previous/next attribute when a channel is selected.
- Shift RemDim on output rem dim's but excludes subs - as LP90
- 300 DMX output disabled if tracking backup & not in control.
- After Cue Copy the X playback last recorded cue is updated.

### **Additional software features on version v2.5**

- Show disk free amount on Archive Display for benefit of 300 users. Show ??? for disk free of remote file server.
- When entering multiple attributes of the same channel can now just press '.' to recall current channel number.  
chan.2 + .3 + .5 THRU .9 - .7 @ \*
- After a Cue Update the X playbacks are correctly reloaded to reflect those changes.
- After a Cue Record the next cue is loaded into the X playback so the next GOx1/2 runs the next cue in the cue sheet.
- Group number plus group text is now show on TRACKER PRESET display when in preset mode (SHIFT DISPLAY\_GROUP).
- Special Macros (P1, LCD1 etc) show their name on macro printout.
- Tracked channels at zero are shown in multipart cues.
- FX\_STOP now puts the selected effect playback to the previous playback to allow further FX\_STOPs to quickly stop running effects
- When setting 16bit attributes the Least Significant Byte is set to 0, unless setting to full then the LSB

is set to full also.

- Default number of frames is now 0 when patching attributes greater than .2(colour), when patching .2 the setup default is still used. This allows the attribute name to be displayed on the patch screen & makes the setup item now purely a default colour frame.

- @ COPYFROM now copies preset group information rather than the level information  
chan @ COPYFROM chan @ FULL \* New syntax to copy level information (ie how the old @ copyfrom worked)

- Channel control wheeling in preview as set in User Setup:

OFF (wheel) & SHIFT+(wheel) scroll only

ON (wheel) masters channels, SHIFT+(wheel) scrolls

SHIFT+WHEEL (wheel) scrolls, SHIFT+(wheel) masters channels

- Channel range update fully supports presets & attribute filters

chans UPDATE CUE cue [THRU cue] FROM TEXT floor TEXT @ TEXT ceiling TEXT @ATT Position

\*

chans UPDATE CUE cue [THRU cue] FROM GROUP grpA @ grpB @ATT Colour Position \*

- Set channels in one preset group to another preset group

chans FROM TEXT floor TEXT @ TEXT ceiling TEXT @ATT Position \*

chans FROM [@] GROUP grpA @ grpB @ATT Colour Position \*

NB FROM key is not directly available so to record into empty USER key:

MACRO\_DISPLAY CUE USER FROM MACRO MACRO

- DOWN% & UP% added to Cue/Sub/Group preview lcd menus

This has meant RENUM & FROM are no longer available from cue preview, as such:

FROM cueno RENUM \* Use CUE 0 FROM cueno RENUM \*

RENUM RENUM Use CUE 0 THRU 999.9 RENUM \*

The old syntaxs still work in case they are in macros.

- Renumbering cues no longer loses preset group information.

- Automod improvements:

- now supports Attribute filters eg

chan AUTOMOD\_FROM chan @ATT Position \*

chan AUTOMOD\_FROM chan @ lev @ATT Position \*

chan AUTOMOD\_FROM chan @ATT Position @ lev \*

- now can use to swap channels eg

chanA AUTOMOD\_FROM chanB \*

chanB AUTOMOD\_FROM chanA \*

- attributes correctly automod & don't do "apply only if source > dest val"

- automodding individual attributes no longer sets whole destination channel as used

- automodding of presets now works & copies over the preset group information. If an @ level is specified then the level is used.

chanA AUTOMOD\_FROM chanB \* Copy over preset info

chanA AUTOMOD\_FROM chanB @ FULL \* Copy over level info

- To help avoid an accidental level changes in preview pressing \* on an empty command line no longer selects all channels. This now only works on Output.

- SHIFT LOADx1 (on an empty command line) reloads the cue in X playback 1 thereby removing any modifications done whilst in playback preview. Likewise SHIFT LOADx2 reloads the cue in X playback 2. (SHIFT LOADx1 used to be LOADx2)

- Current cue number & text shown on prompt line of output display.

- Attribute fade colours are now correct on output



- On output when updating (with a leading channel list) a preset focus group, after the update those channels get set to the preset focus group position.
- [chan list] UPDATE GROUP [INTS\_ONLY | ATTS\_ONLY | @ATT filter] \* On output updates channels into the preset group they were previously set to. Using channel control reapplies those channels to the preset groups. Can use the CONTROL display format to view what preset group the channel will get recorded into. Dark gray indicates channel was at this position.
- Now now set a cue/sub/group text comment when updating eg  
chanlist UPDATE GROUP group TEXT text \*
- When submaster bump key is config'd as Mac pressing that bump key runs the macro number of that submaster plus 100, pressing SHIFT + bump key runs the macro of that submaster plus 300. SubBump12 runs macro 112, SHIFT+SubBump12 it runs Macro 312. When the submaster bump key is not config'd as Mac SHIFT+SubBump still is the short cut way to edit that submaster in preview.
- 220node.cfg field\_lock\_mode  
Set to 0 to disable the preview field locking. ie on entry to a preview screen the fields will not be locked out (yellow).
- DMX Ports 1 & 2 default to DMX OUT.
- Effect List display added.
- On X playback expanded cue sheet format the AttTime is displayed.
- On all X playback formats a cue is marked running (in red) if either the int or att fades are still running.
- Last of multiple running MF's are shown correctly on X playback history section.
- All attributes can now be 16bit. fixture.lib has the details but basically you need to create a fixture with an attribute of xAA (AA = 2..99) which is the least significant 8 bits of the 16bit number. You can only patch 16bit attribute by using a fixture - you cannot patch a 16bit attribute directly in syntax. Throughout the console you only need to specify AA & it will include all 16bits. When using the rotaries to wheel the value you can use coarse mode as per the trackball to speed up the wheeling (press the middle trackball button while moving the rotary). Attributes 56..59 are no longer used & you cannot select these any more. Loading an old show with these attributes present gets automatically converted to the new attributes.
- X playback partitioning now has 3 modes: OFF, X1/X2, USER  
OFF As per v2.5 sw ie all playbacks common to all users  
X1/X2 As per v2.5 sw ie all playbacks common to all users  
X1 only uses channels in X1 group, X2 only if in X2 group  
USER New mode. Playbacks are different for each user & only the channels in that users partition can be used. In this mode there is no splitting of channels between X1 & X2
- LIVE LIVE now keeps the same channel position when swapping between tracker & non tracker channel display formats.
- UPDATE supports CHANSIN & ADDALL modifiers. Leading channel list of update always adds these channels unless CHANSIN is specified. Cue defaults to addall, sub & group default to ChansIn.
- Channels are marked in cyan after an update - LP only.
- Cue sheet jumps to entered cue only after whole cue number has been entered.
- If halfway though entering a command SHIFT CLR clears the commands line (nothing new), now the current cue will be set as the cue on stage (yellow cue).
- On return to output the current cue will be set as the cue on stage (yellow cue). This previously was only done if LP.
- Channel control selection is preserved after Record & Update - GP only.

- Preset groups numbers > 250 are printed correctly.
- Midi Show Control Rx can be enabled without having to enable the Midi Channel.
- Reporting to/from multiple dimmer racks is now reliable. Only AUX1 & 2 supported, AUX3 supported removed as too unreliable.
- Reporting from a 300 console added.
- DMX update period has been increased (or is that decreased) to 25mSec (was 30mSec) for better moving light control. D54/AMX remains at 30mSec.
- IoFtp has new command SETDRIVES to allow servers to restrict what drives are displayed by logged in consoles. By using this & the subst command only a single directory on a server can be seen by logged in consoles.

eg: mkdir c:\shows

subst r: c:\shows

ioftp32 setdrives 131072 interactive

- When viewing channels using the Tracker & TrackerPreset display can now specify what attributes are shown & in what order. See atcpage.lib for more details.

eg: to show just the most significant 8bits use X1 > 99

put the least significant data at the end X1 > 99, x1 > 99

- Range editing:

eg: CUE 1 > 5 TIME 5 \*

SUB 1 > 6 TEXT fred \*

CUE 10 > 20 MACRO 6 \*

CUE 1 > 10 TIME + 0.1 \* or CUE 1 > 10 TIME - 1 \* etc etc

The above syntax only changes the first part of a cue as this matches current logic.

ie CUE 1 > 3 TIME 5 \* is the same as doing CUE 1 TIME 5 \* CUE 2 TIME 5 \* CUE 3 TIME 5 \* as now.

- Relative time changes. eg CUE n TIME + 0.1 \* Adds 0.1 Second to the currently recorded time of cue n. Can use + or - to adjust the time of an existing cue. If used when re-recording a new cue the relative change is with respect to the default cue time. Relative times supported for subs & effects also.

- Attribute times can now be specified using // syntax (@ATT TIME still supported).

eg to set just the attribute time use TIME // aa \*

to set up & att time only use TIME uu // aa \*

- Added command line 'chans @ lev HOLD \*' syntax.

- When in preview 'chans @ LIVE \*' set those channels to the current live output level.

@ LIVE can be used with attribute filters also - chans @ATT Position LIVE \*

- Tracking backup: Backup now allowed to TakeCtrl if booted up & has never seen Main.

- When logged into Main as a remote desk A: shown on Archive screen is the remote desks A: not the Mains desks A:.

- WYSIWYG now supports as standard listening to ShowNet DMX.

CN disk includes lxstrand.dll which is required for this to work.

Need to use regedit to add the path to lxstrand.dll:

[HKEY\_LOCAL\_MACHINE\Software\CAST Lighting Limited

\Protocol Manager\Strand Shownet]

File = c:\program files\Strand\lxstrand.dll

- SMPTE/MIDI card:

The SMPTE/MIDI card needs a fast SBus. This requires a single processor in the 300 brain to be upgraded.

Need MYCSM v5.2 (or later) code in the SMPTE/MIDI card.

Need MYCPN v5.2 (or later) code in brain slot 2.

Brain slot 2 is labelled U44. It is the second most processor from the left when viewed from the front & top.

Issue 6 & before boards (PCB 1125/Issue Ref 2091):

The SMPTE/MIDI card is plugged to the connector for the show controller lcd (PL2) rather than the SMPTE/MIDI connector (PL1).

Issue 7 & above boards (PCB 1125/Issue Ref 2091):

The SMPTE/MIDI card is plugged to the PL1 connector which is closest to the midi card.

This means you cannot use SBus2 (bottom right SBus connector when viewed from the back of console) for normal panel connections.

This means you cannot fit a video card in the middle PCI slot & connect a TFT display to it. Normal VGA output is ok.

- [Introduction of 310 Show Controller](#)

- Changes to Update syntax for [Submasters](#) and [Groups](#)

- Update from Live Introduced for [Cues](#), [Submasters](#), [Groups](#) and [Effects](#)

### **Additional software features on version v2.4**

- [300 Series consoles](#)

- [One and Two-Scene Preset](#)

- [Auto-Mod](#)

- [Profile Learn](#)

- [Fading in Intensity and Attribute Channels in Time](#)

- [Hundredth of a Second Time Resolution](#)

- [Macros increased to 3000](#)

- [PS2 Mouse Supported](#)

- [Handheld Remotes Fire Macros HHM1 to HHM4](#)

- [A4 Oversize Macro Tablet Supported](#)

- [Pan and Tilt Locked Indicator added to Status Window](#)

- [Range Patching Supports Reverse Channel Range](#)

- [Grandmasters \(GM1, GM2\) as Submaster Function Option](#)

- Change Update Procedure to include all channels, except with CHANS IN. [Submasters](#) and [Cues](#)

### **Additional software features on version v2.3**

- [Edit Field Protection](#)

- [Mouse Functions](#)

- [Gang Loading of Subs](#)

- [Channels in Show Display Format Option](#)

- [New Channel, Cue and Dimmer Summary Screens](#)

- [Simplified System Report Screen](#)

- [Cue Sheet Macros](#)

- [New Copy Patch Menu](#) and [Range Patching](#)

- [Preset Focus Groups increased to 750](#)

- [New Report, Setup, Access Rights and Exit Menu Structure](#)
  - [Changed Function of Setup Key](#)
  - [A4 and A3 Macro Tablet](#)
  - [New Playback Partitioning Function](#)
  - [Key, Wheel and VGA Remapping](#)
  - [SN Node Priority and HTP Patching](#)
-

## The 510 i and 310 Show Controller/Backup Unit

The 510i is a 19 inch, rack-mounted unit and the 310 may be desk, wall or 19inch rack-mounted. Both units are designed to match the lighting needs of the themed environment market, where the requirement is for repetitive playback of shows controlled by one of the following:

- SMPTE Audio or Video Timecodes
- MIDI Show Controller
- 48 Contact Closure Inputs
- Internal Clock
- Manual Playback

The 510i and 310 also supports playback of shows recorded on GSX and LBX. The creation of a light show based on SMPTE time-stamped events and MIDI Show Control is described in CommuniquéPro Software [SMPTE Time Code Events](#)

In addition, since the software configuration of applications and channel capacity of the 510i and 310 is identical to the other 500 and 300 Series consoles, the 510i, or 310 can serve as a compact and cost effective tracking backup unit for a main 500 or 300 series lighting control console, Refer to [Tracking Backup](#) (Networker)

The 501i and 310 runs on the same GeniusPro or Lightpalette operating software as the 500 and 300 Series consoles.

This section describes the operating features applicable to the 510i and 310. It contains the following topics:

- [User Interface](#)
- [Macro Display and Menu](#)
- [Submaster Display and Menu](#)
- [Browse Display and Menu](#)
- [Event Display and Menu](#)
- [Playbacks Display and Menu](#)
- [Backup Display](#)
- [Setup Display and Menu](#)
- [Error Line](#)
- [Off-Line Editing](#)
- [Submaster Macro Inputs](#)

## User Interface

The front panel controls of the 510i provide the minimum user interface required to operate all the GeniusPro, Lightpalette, CommuniquéPro and Networker playback functions. Access to the full software functionality (in particular, show set-up, editing and saving) is only possible using an external keyboard and video display or a remote control unit.

The 310 Show Controller incorporates a touch screen LCD display, incorporating the keys on the 510i in the form of on-screen touch softkeys.

The 510i LCD display on the front panel, provides all the displays and associated softkeys necessary to control the playback functions of the system. The Macro display is shown at startup., however, the operator can select other menus using the **[DISPLAY]** key (or **DISPLAY** touch key on the 310) to cycle through the various menus as follows:

**MACRO, SUBS, BROWSE, EVENT, PLAYBACK, BACKUP, SETUP** and back to **MACRO**, etc.

Entry to the displayed Macro LCD menu is achieved using the key combination **[SHIFT][DISPLAY]**.

***Note:** The SHIFT touch key on the 310 is set to toggle between On and Off. It is therefore not necessary to hold down the SHIFT key when selecting 'Shift' function. However it is necessary to press the SHIFT key again to deselect the function.*

A **[STOP SHOW]** pushbutton (**Red button on the 310**) is provided to enable the operator to stop the pre-programmed lighting show and apply a pre-defined safe lighting condition. On the 510i, this panel button is protected from accidental operation by a hinged cover. On both the 510i and 310, the illuminated button will flash when selected. The operation of the button is mapped to macro 997 as well as the 500 Series console STOP key function.. The LED in the **[STOP SHOW]** button will flash if any Stop key mode is selected, e.g., ' **BLACKOUT** ', ' **STOP ATTS** ' or ' **ST ATTS+BO** ' .

During playback, the operator can prevent any unauthorised use of the panel pushbuttons (except **[STOP SHOW]**) by means of a **[DISABLE KEYS]** keyswitch with removable key. When locked, the condition is displayed on the panel LCD, the keyswitch LED (510i only) is illuminated and the LCD dims.

Fourteen panel buttons, when operated with or without the **[SHIFT]** key depressed, will apply one of 28 pre-set macro conditions, **[P1-P14]**, or **[SHIFT] [P1-P14]**. These macros can be triggered directly using the panel buttons, or from the Macro Display LCD. The **[USER]** key is mapped to macro 998. The **[CLR]** key clears the last command.

***Note:** The P1 to P14 (SP1 to SP14) keys, together with the SHIFT and DISPLAY keys are shown on all screens of the 310 Show Controller. Where text labels are assigned by the user to the P (or S) keys, the text labels are shown in place of the P or S number on all displays of the 310.*



## Macro Display and Menu

The 510i and 310 Macro Display and Menu enables viewing and play back of sequences of commands previously recorded using a Series 300, 430, 500, LBX or GSX console. Up to 2000 macros (0-1999) may have been recorded. (Refer to [Macros](#))

Up to eight macros can be displayed at one time on the LCD display, the currently selected macro identified with the marker > after the macro number. Pressing **[SHIFT][DISPLAY]** will enter the Macro Screen.

Individual macros can be selected from the macro display and run using the softkeys, as follows:

**{LAST}** Selects the previous macro in the macro list.

**{NEXT}** Selects the next macro in the macro list

**{MACRO-100}** Subtract 100 from the current macro number (if applicable) and display as the current macro.

**{MACRO+100}** Add 100 to the current macro number (if applicable) and display as the current macro.

**{FIRST MACRO}** Selects the first macro as current.

**{RUN}** Runs the selected macro.

While the **[SHIFT]** key is depressed (or toggled On - 310), an alternative set of LCD softkeys is displayed, as follows:

**{LAST 8}** Displays the previous eight macros.

**{NEXT 8}** Displays the next eight macros

**{MACRO-100}** As before

**{MACRO+100}** As before

**{FIRST MACRO}** As before

**{RUN}** As before

**Note:** Macros 951 to 964 and 971 to 984 are reserved for the fourteen macro keys on the 510i panel and 310 on-screen softkeys. Pressing **[P1]** to **[P14]** selects and runs macros 951 to 964 respectively. Pressing **[SHIFT] [P1]** to **[P14]** selects SP1 to SP14 and runs macros 971 to 984 respectively. All 28 macros can be selected and run from the macro display as described above. Pressing the **[USER]** button on the panel, applies macro 998. Pressing the **[STOP SHOW]** button runs macro 997.

---

## Submasters Display and Menu

The 510i and 310 Submaster Display and Menu enables viewing and play back of up to 54 submasters previously recorded using a Series 500, or Series 300 console). The display shows eight subs at a time from the currently selected sub page and displays the sub number, level, text and associated

macro against each sub. The currently selected sub is identified by a > marker after the sub number. Using the LCD softkeys, the operator can scan through the six pages of subs, select a sub from the displayed page and increment, decrement, or bump the sub level as follows:

- {LAST}** Moves the marker to the previous sub on the page.
- {NEXT}** Moves the marker to the next sub on the page
- {PAGE +}** Increments the sub pages, e.g., 1>2>3>4>5>6>1, etc.
- {DOWN %}** Decrements the level of the currently selected sub by 5%.
- {UP %}** Increments the level of the currently selected sub by 5%.
- {BUMP SUB}** Bumps the currently selected sub.

While the **[SHIFT]** key is depressed (or toggled On - 310), an alternative set of softkeys is displayed as follows:

- {LAST 8}** Displays the previous eight subs on the selected page.
- {NEXT 8}** Displays the next eight subs on the selected page.
- {PAGE -}** Decrements the sub pages, e.g., 6.5.4.3.2.1.6, etc.
- {TO 0%}** Sets level of currently selected sub to 0%.
- {TO 100%}** Sets level of currently selected sub to 100%.
- {BUMP SUB}** Bumps the currently selected sub.

## Browse Display and Menu

The Browse Display and Menu lists all light shows stored within the 510i or 310 hard disk, or floppy disk (or server if used) and enables the operator to browse through the list of shows either on the hard disk, or floppy disk (or server), to load a show for playback, or to copy a show between disks and/or directories. This menu is also used in conjunction with the floppy disk drive to load new operating software.

This section covers the following topics

- [Loading a Show](#)
- [Copying a Show](#)
- [Loading Operating Software](#)

## Loading a Show

To load a show from floppy or hard drive, use the **{LAST}** and **{NEXT}** softkeys to position the > marker alongside the drive field (A:) or the hard drive field (C:) and press **{SELECT}**. Press the **{LAST}** or **{NEXT}** softkey to position the marker alongside the Directory field and press the **{SELECT}** softkey

until the required directory is displayed.

The drive and directory is shown on the top line of the display and the shows contained in the selected drive/directory are listed below. To load a show from the show list, use the **{LAST}** or **{NEXT}** keys to move the > marker to the required show and press **{SELECT}**. A Show Load prompt and confirm message will appear. Pressing **{SELECT}** again will load the show.

The show files on the disk on the disk browser are identified by their show name and date and time of recording. Alternatively, the operator can browse long lists of shows by holding down the **[SHIFT]** key (or toggling the key On - 310) and using the **{LAST 4}** or **{NEXT 4}** softkeys to display shows 4 at a time.

---

## Copying a Show

To copy a show, firstly move the > marker as described above using the **{NEXT}**, **{LAST}** and **{SELECT}** keys. When the marker is on the required show, press the **{COPY SHOW}** key. The menu title will change on the LCD display to ' Copy Menu' . The copy function is active when this menu title is present. In response to a prompt message, use the **{NEXT}**, **{LAST}** and **{SELECT}** keys to select destination disk and directory. The destination path is shown on the LCD display. If the path displayed is correct, press the **{COPY SHOW}** key again to confirm the copy command. Pressing the **[CLR]** key at any time during the copy process will return to the Browse menu.

---

## Loading Operating Software

To load new operating software, insert the floppy disk in the disk drive and select the **{SOFT LOAD}** softkey. A software load prompt and confirm message is displayed. Pressing the **{SOFT LOAD}** softkey again will load the operating software from the floppy disk.

---

## Event Display and Menu

The 510i and 310 is designed to operate in conjunction with an externally applied SMPTE time code, however, in the absence of a SMPTE time code, the operator can enable an internal clock to control the show events. When the external SMPTE clock is selected and running, the internal SMPTE clock is automatically synchronised to it.

This Event Display and Menu enables the operator to select the source of timing of show events and

displays each event and programmed event time in sequence as the light show progresses.

A < marker indicates the next event to trigger and a \* marker indicates the last event triggered.

Select **{EXT.CLK}** to apply an external SMTE time code input via the 3-pin Audio XLR outlet.

Select **{INT.CLK}** to apply the internal time code clock.

The status of the timing source and SMPTE time is displayed on the LCD as EXTERNAL, OVERRIDE (internal clock taken over),

NO CLOCK (external clock absent), INTERNAL or PAUSE).

**Note:** *The time code source must be set to SMPTE at the Show Setup display before the internal or external clock can be used.*

This section covers the following topics:

- [Time Format](#)
- [Setting/Resetting the Internal Clock](#)
- [Stepping the Light Show Timing](#)

## Time Format

The time format for the internal clock is in the same format as the SMPTE input time code and is set at Show Setup:

Form: HH:MM:SS:FF where

HH = Hours (0-23)

MM = Minutes (0-59)

SS = Seconds (0-59)

FF = Frames per second (0-24, 0-25, 0-30 drop or 0-30 non-drop)

## Setting/Resetting the Internal Clock

When the clock is INTERNAL or \*PAUSED\*, the **{SET CLOCK}** softkey may be used to display alternative softkeys used to increment, decrement or reset the internal clock, as follows:

**{+HH}** Add one hour to the internal clock time.

**{+MM}** Add one minute to the internal clock time.

**{+SS}** Add one second to the internal clock time.

**{+FF}** Add one frame to the internal clock time.

**{+5FF}** Add 5 frames to the internal clock time.

**{BACK}** Return to the Events Display and Menu.

**[SHIFT] {-HH}** Subtract one hour from the internal clock time.

**[SHIFT] {-MM}** Subtract one minute from internal clock time.

**[SHIFT] {-FF}** Subtract one frame from the internal clock time.

**[SHIFT] {-5FF}** Subtract 5 frames from the internal clock time.

**[SHIFT] {RESET TIME}**. Reset internal clock to 00:00:00:00

## Stepping the Light Show Timing

Selecting **{PAUSE CLOCK}** stops the internal or external clock at the time of the displayed event.

Pressing **{STEP}** will manually trigger the next event. Alternatively, with **{PAUSE CLOCK}** selected the operator may move the < marker to a different event using the **[SHIFT]** key and the softkeys displayed on the Event List, as follows:

**{LAST}** Sets the < marker and clock time to the last event.

**{NEXT}** Sets the < marker and clock time to the next event.

**{BEGIN LIST}** Sets the < marker and clock time to the first event on the list.

**{END LIST}** Sets the marker and clock time to the last event on the list.

The following softkeys clear any incomplete commands

**{UNBUMP ALL}** Unbumps any bumped submasters.

**{STOP FX}** Stops all running effects

## Playback Display and Menu

The layout and content of the Playback Display is determined by the options selected on the setup screen and the individual cue levels and properties attributed to each cue when first recorded using the lighting control console.

The 510i and 310 panels are designed as show playback units and do not provide direct editing facilities for cues without the aid of an external video display and keyboard or remote control.

The Cues and X Playback menu on the 510i and 310 panels are intended to provide the operator with the facility to view the cue list, to select and load individual cues and to run the cue, or cue sequence on demand.

The display shows the cue list for X1 or X2. A > marker, shown to the left of the cue number identifies the current cue. The percentage completion of the last run cue is also displayed. The next cue to run is indicated with a < marker after the cue number. The last cue is identified by a ' \* ' after the cue number.

The softkeys on the LCD display enable the operator to select and run cues as follows:

**Note:** Pressing the **[SHIFT]** key will toggle between X1 Playback and X2 Playback (if a dual playback mode is selected in the Show Setup). All key actions apply to the playback displayed on the LCD, i.e., X1 or X2.

**{LAST}** Selects the previous cue on the displayed cue sheet as the cue to be loaded

**{NEXT}** Selects the next cue on the displayed cue sheet as the cue to be loaded.

**{LOAD}** Loads a selected cue into the X Playback and resets any loops to their original loop count. This action has no effect on the output until the **{GO}** softkey is pressed.

**{STOP/BACK}** Press once to stop the current cue. Press again to move to the previous cue.

**{GO TO CUE 0}** Selects cue 0 (Blackout)

**{GO}** Runs the current cue.

## Backup Display

This display is applicable when the 510i, or 310 is used to provide tracking backup to a 500, or 300 Series Lighting Control Console using an Ethernet network. (Refer to [Tracking Backup](#) (Networker))

The 510i and 310 Backup LCD displays the following network information:

**Networker:** On

**Mode:** As specified by 220node.cfg

**This Node:** ' Net name' , ' node number'

**Backup node:** ' Net name' . ' node number' .

**Status:** As current network status.

For information on backup commands, refer to '[Backup Commands](#)' (Networker)

## Setup Display and Menu

The Setup Display and menu shows the current software version, the unit serial number, the software applications loaded and the number of submasters detected. The display also shows the backlight and contrast settings for the panel LCD display.

The following softkeys are displayed.

**{CONTR DOWN}** Decreases the LCD contrast

**{CONTR UP}** Increases the LCD contrast

**{BACKLIT DOWN}** Decreases the LCD backlight brightness

**{BACKLIT UP}** Increases the LCD backlight brightness



**{SHUTDOWN}** Displays warning/confirm message. Press **{SHUTDOWN}** to shut down the system or the **[CLR]** key to cancel.

---

## Error Line

Text, that would appear on the error line of a 500 Series, or 310 video monitor is displayed on the 510i, or 310 LCD display. Pressing the **[CLR]** button cancels the error message.

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## Off Line Editor

The 510i and 310 incorporates the GeniusPro and Lightpalette Off-line Editor and PC Software, providing full emulation of the 500 Series, or 300 Series console operating software on a standard PC.

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## Submaster Macro Inputs

Forty-eight submaster macro inputs are provided via four 25-pin female D type sockets on the back of the 510i panel. Twenty-four submaster macro inputs are provided via two 25-pin D-type sockets on the back of the 310 panel. These inputs provide simple On/Off logic switching and are designed to act functionally as individual submaster bump buttons. Each input can be used to trigger a macro or an effect.

To use these inputs to trigger macros, their corresponding submasters must either have the bump field set to **Mac** (Macro) (recommended), or have an external submaster assigned in the **Ext** field.

Each of the 48 (24) submaster macro inputs consist of a signal/ground pair on adjacent pins of a D type connector. The required number of contact closure devices are coupled to the connector(s) using twisted pair cables. It is recommended to use 24AWG twisted pair wires for each contact. CAT5 UTP cable is suitable.

### 510i an 310

<b>Sub 1-12 macros</b>	Pins 1 to 12	Submaster 1 to 12 macros
	Pins 13 to 25	Ground

	Pins 1 to 12	Submaster 13 to 24 macros
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<b>Sub 13-24 macro</b>	Pins 13 to 25	Ground
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### 510i only

<b>Sub 25-36 macros</b>	Pins 1 to 12	Submasters 25 to 36 macros
	Pins 13 to 25	Ground

<b>Sub 37-48 macros</b>	Pins 1 to 12	Submaster 37 to 48 macros
	Pins 13 to 25	Ground

**Note:** *In order to ensure safety and integrity of operation, installation of submaster macro inputs should only be undertaken by a competent and experienced electrician. Shielded cable may be required in areas of exceptional electrical noise.*

*Each of the 48/24 submaster macro inputs consist of a signal/ground pair on adjacent pins of a D type connector. The required number of contact closure devices are coupled to the connector(s) using twisted pair cables. It is recommended to use 24AWG twisted pair wires for each contact. CAT5 UTP cable is suitable.*

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## CommuniquePro (Cont)

[See Also: CommuniquePro](#)

### ASCII Remote Control Output

CommuniquePro can be configured to transmit any ASCII string of up to 24 characters to an RS232 or RS485 port whenever a macro is executed (manually or by running a cue or submaster).

To configure, set the [Macro Trigger Output](#) field in the Console Setup Screen to On and set the associated Net Node, Port, Baud and Config fields.

Select a macro and enter macro text using the external keyboard, starting with ! (exclamation mark) followed by the ASCII text string to be output. The text string is output from the assigned port whenever the macro is executed either manually or by running a cue or submaster to which the macro is assigned. For further information on setting up and assigning macros, refer to [Macros](#)

**Note:** *The exclamation mark is not output*

For example,

**[MACRO] [1] [TEXT] !GO [\*]**

Outputs the ASCII text string **GO** whenever macro 1 is executed.

If a macro text label starts with the '!' character, all characters following it are output from the Macro Trigger Output port.

This allows any RS232 device to be controlled either manually or from the cue sheet. For example, if a cue is to send the command 'ABC' to another device, connect it to a macro whose text label is '!ABC'. The keys in the macro are not sent.

To connect a 430 or 530 COM1 port to a GSX RS232 port, you need a 9-pin DIN lead (female-female) with this wiring:

Pin Pin  
 2-----3  
 3-----2  
 5-----5

---

## ASCII Remote Go Output

CommuniquePro can be configured to send 'GO' commands to external devices using RS232 or RS485. The format of these commands is identical to that supported by Strand Lighting's Light Palette 90 and Gemini 2+ control consoles. Typical applications might be:

- Controlling other consoles (from other vendors)
- Controlling projectors or other AV equipment

To configure, set the [GO Key Output](#) field in the Console Setup Screen to On and set the associated Net Node, Port, Baud and Config fields.

**Note:** *Strand Lighting's Light Palette 90 and Gemini 2+ control consoles accept Go input commands at 4800 baud, 8 bit with 1 stop bit and no parity.*

To run Cue 2 pressing GO

Character O/P	>	\$	2	A
ASCII O/P	3E	24	32	41

numbers are hexadecimal

To run Cue 3.1 pressing GO

Character O/P	>	\$	3	.	1	A
ASCII O/P	3E	24	32	41	31	41

numbers are hexadecimal

**Note:** You can test the GO KEY OUTPUT by connecting a DESIGNERS Handheld unit to the specified Aux Port.

## ASCII Remote Control Input

The ASCII Remote Control facility allows most facilities of the console to be remotely controlled using a serial, RS232 or RS485, communications protocol. The controlling equipment could be any computer (PC or Mac) or a dedicated show controller. You must program the controlling equipment to only send messages to the console that it can understand.

### Setting up for ASCII Remote Control

To configure, go to the Communications window in the Console Setup screen. At the ASCII Remote Input Port field select the Port. Make sure that the ports setting (baud rate, start, stop bits) match the sending equipment.

Connect the controlling equipment to the selected port at the back of your console using a serial cable.

Refer to [Console Connectors](#) for details of the port pinouts. Make sure you understand the wiring of your cable, to avoid damage to your console or other equipment. Program your controlling equipment to generate the following codes:

Normal	Macro	Dec	Hex	ASCII
CUT		13	0D	(CR)
GO		32	20	(Space)
RECNO SUBS		49	31	1
RECORD	UNDOREC	50	32	2
RECTIME	UNDORECTIME	51	33	3
STOP_BACK		52	34	4
DISPLAY		54	36	6
F1		55	37	7
F2		56	38	8

F3		57	39	9
ATCOL	UNDOATCOL	65	41	A
TIME		66	42	B
NEXT		67	43	C
LAST	LASTCMD	68	44	D
ON	FULL	69	45	E
THRU	THRUON	70	46	F
FX	FXUPDATE	71	47	G
7		72	48	H
8		73	49	I
9		74	4A	J
PLUS	NEXT	75	4B	K
SUB	UPDATESUB	76	4C	L
4		77	4D	M
5		78	4E	N
6		79	4F	O
MINUS	LAST	80	50	P
CUE	UPDATECUE	81	51	Q
1		82	52	R
2		83	53	S
3		84	54	T
AT	UNDOAT	85	55	U
MACRO		86	56	V
0		87	57	W
.		88	58	X
CLR	CLRCMD	89	59	Y
ENTER		90	5A	Z

## Extended multi-byte ASCII commands sent to Console



0xF8 (MIDI key type + 0x80) key

0xF8 0x80 fader (level / 2)

e.g. LIVE key would be 0xF8 0x84 0x22

e.g. Submaster 15 @ 50% would be 0xF8 0x80 0x0F 0x40

## Extended multi-byte ASCII commands sent to last Hand Held Remote

0xF9 (MIDI key type + 0x80) key

Refer to [MIDI Messages](#) for details of the MIDI key type codes.

---

## SMPTE Time code events

This function is designed to match the lighting control needs of 'themed environments', where the requirement is for the playback of lighting shows synchronised to SMPTE audio or video time codes. The purpose of this CommuniquePro function is to create a light show comprising SMPTE time-stamped events for use with the new electronics of 500 Series consoles, or a [510i Show Controller](#). The sequence of events is based on previously defined cues, effects, macros and submasters as described for GeniusPro and Lightpalette.

This section covers the following topics:

- [Event List](#)
- [Time Code Format and Synchronisation](#)
- [Event List Menu](#)
- [Inserting and Deleting Events](#)
- [Editing Event Labels, Cues and Commands](#)
- [Selecting Events for Time Editing](#)
- [Editing Timecodes](#)
- [Moving or Copying Events with Time Edit Commands](#)
- [Searching for Events Using Time Edit Commands](#)
- [Timecode Event Playback Screen](#)
- [Setting the Event Playback Start and Stop Time](#)
- [Setting/Resetting the Internal SMPTE Clock](#)
- [Stepping the Light Show Timing](#)

- [Changes in SMPTE External Clock Input](#)
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## Event List

The Time Code Events feature is available when the **[MORE]**, button is pressed and the **{EVENT LIST}** softkey is selected to display the Event List.

Up to 3000 events can be recorded against one light show, enabling triggering of up to 2000 cues and 2000 macros. The list shows the time code when each event will be triggered, together with an event label and optional cue and command references.

Use the level wheel to scan through the complete Event List one page at a time and the trackball to position the > marker over a particular event.

The Event List also shows the current state of the external/ internal SMPTE clock (EXTERNAL, OVERRIDE, NO CLOCK, INTERNAL or PAUSED) and the start and stop times of the event playback.

---

## Time Code Format and Synchronisation

The format of the external and internal SMPTE clock is as follows:

**HH:MM:SS:FF** where

**HH** = Hours (0-23)

**MM** =Minutes (0-59)

**SS** = Seconds (0-59)

**FF** = Frames per second (0-23, 0-24, 0-29 drop or 0-29 non-drop)

When the external SMPTE time code is running, the internal clock is automatically synchronized to it.

---

## Event List Menu

The Event List menu is displayed on the right-hand LCD and shows the range of events selected for time editing in the Event List.

If only one event is selected in the Event List the FIRST and LAST event numbers are the same. If no selection has been made in the Edit Times menu, FIRST and LAST are shown as 0, with the time code set at 00:00:00:00. Duplicate event times are shown with a trailing letter, e.g., 11:22:33:44a followed by 11:22:33:44b.

The following softkeys are available on the Event List Menu:

**{DELETE EVENT}** Refer to Inserting and Deleting Events

**{INSERT EVENT}** Refer to Inserting and Deleting Events

**{RECORD CLOCK}** Applies the current time to a selected event or creates a new event with the current time, if no event is selected

**{LEARN EVENT}** Records cues and commands in real time and stores the SMPTE timecode for each event. Press again to cancel.

**{EDIT TIMES}** Changes to Edit Times Menu

**{PLAYBACK}** Changes to Timecode Event Playback Menu.

## Inserting and Deleting Events

Events can be inserted in, or deleted from the Event List using the **{INSERT EVENT}** or **{DELETE EVENT}** softkeys on the Event List Menu.

**{DELETE EVENT}** Deletes the currently marked event on the Event List and renumbers all following events.

**# {DELETE EVENT} [\*] or # [THRU] # {DELETE EVENT} [\*]**

deletes a specific event or range of events. This action requires confirmation.

**{INSERT EVENT}** Inserts an event, at the current event time, after the currently marked event on the Event List and renumbers all following events.

**# {INSERT EVENT} [\*]**

inserts the specified number of events.

Events are inserted at the currently marked event timecode. The inserted event is identified as having a duplicate timecode by a trailing letter, e.g., a,b, etc.). A maximum of nine duplicates are permitted for each timecode.

## Editing Event Labels, Cues and Commands

Event labels, cues and commands on the Event List can be added/edited as shown in the following examples

**[TEXT] <up to 25 characters> [\*]**

Adds text to the currently marked event.

**[TEXT] [\*]**

Clears text from the currently marked event

**# [TEXT] <up to 25 characters> [\*]**

Adds text to the specified event number.

**# [TEXT] [\*]**

Clears text from the specified event number.

**# [CUE] [1] [0] [0] [.] [2] [\*]**

Assigns cue 100.2 to the specified event number.

**# [CUE] [\*]**

Clears cue from the specified event number.

**[CUE] [2] [.] [2] [\*]**

Adds cue 2.2 to currently marked event

**[CUE] [\*]**

Clears cue from currently marked event number.

The following examples show how to assign commands to events. The command is automatically assigned to the first non-assigned command (CMD1 or CMD2), or will overwrite if already assigned.

**# [FX] [1] [\*]**

Assigns effect 1 start to the specified event number.

**# [FX] [-] [1] [\*]**

Assigns effect 1 stop to specified event number.

**# [FX] [\*]**

Clears effect start.

**# [SUB] [2] [4] [\*]**

Assigns sub 24 bump up to the specified event number.

**# [SUB] [-] [2] [4] [\*]**

Assigns sub 24 bump down to the specified event.

**# [SUB] [\*]**

Clears bump up command.

**# [MACRO] [2] [0] [0] [\*]**

Assign macro 200 to the specified event number.

**# [MACRO] [\*]**

Clears all macro commands in the specified event number.

## Selecting Events for Time Editing

Events in the Event List can be selected for time editing as shown in the following examples:

**[1] [\*]** Select event number 1 for time editing. Displays > marker against event 1. Sets FIRST and LAST on Event List LCD to 1

**[2] [THRU] [5] [\*]** Selects and highlights event range 2 to 5 for time editing. Sets FIRST on Event List Menu to 2 and LAST to 5.

**[CLR]** Cancels time editing event selection. Sets FIRST and LAST on Event List LCD to 0. Clears highlights.

---

## Editing Timecodes

The Edit Times menu is accessed from the Event List Menu by selecting the **{EDIT TIMES}** softkey. This menu is used to edit the time codes in the Event List.

Softkeys on the Edit Times Menu allow the event time codes of selected events to be set or edited as follows:

**{+HH}** Adds one hour to all selected timecodes.

**{+MM}** Adds one minute to all selected timecodes.

**{+SS}** Adds one second to all selected timecodes.

**{+FF}** Adds one frame to all selected timecodes.

**{+5FF}** Adds five frames to all selected timecodes

**{BACK}** Returns to the Event List LCD menu.

When the **[SHIFT]** key is pressed the above keys change to decrement keys.

Pressing the **[TIME]** key when the Edit Times Menu is displayed will display the word TIMECODE on the command line and changes the softkeys on the Edit Times Menu or Event List menu to the following:

**{:}** Used as timecode field separator.

**{MOVE TO}** Used to move the starting time of a range of timecodes.

**{COPY TO}** Used to copy a range of events and specify a new starting timecode.

**{START}** Used to set the playback start time

**{STOP}** Used to set the playback stop time

The following examples show the use of the command line and **[TIME]** key to edit timecodes in the event list.

Key entry: **[1] [THRU] [3] [TIME] [1] {:} [2] {:} [3] {:} [4] [\*]**

Action: Sets event times 1 to 3 to 01:02:03:04

Key entry: **[TIME] [1] {:} [\*]**

Action: Sets event times 1 to 3 to 01:?:?:?:?? (MM,SS,FF unchanged)

Key entry: **[TIME] {:} [2] [\*]**

Action: Sets event times 1 to 3 to ??:02:?:?? (HH,SS,FF unchanged)

Key Entry: **[TIME] {:} {:} {:} [4] [\*]**

Action: Set event times 1 to 3 to ??:?:?:04 (HH,MM,SS unchanged)

---

## Moving or Copying Events With Time Edit Commands

This facility enables a block of events to be moved to a new start time, or repeated at a specific point in the show.

If other events are timed to occur within the time range of the moved or copied block of events, they are merged together. If events occur at exactly the same time, they are set as duplicates (magenta background and trailing letter a,b)

The following examples show moving and copying event blocks

Key Entry: **[2] [THRU] [5] [TIME] {MOVE TO} [1] {:} [2] {:} [3] {:} [4] [\*]**

Action: Moves events 2 to 5 to a new starting time of 01:02:03:04. The original time span of the event range is preserved.

Key Entry: **[2] [THRU] [5] [TIME] {COPY TO} [1] {:} [2] {:} [3] {:} [4] [\*]**

Action: Copies events 2 to 5 and repeats the events at the starting time of 01:02:03:04. The original time span of the event range is preserved.

## Searching for Events Using Time Edit Commands

You can use the time edit command to search for the occurrence of an event at a specified time using the **[GOTO]** and **[TIME]** keys as follows:

Key Entry: **[GOTO] [TIME] [2] {:} [3] {:} [4] [\*]**

Action: Select event timed to occur at exactly 02:03:04:05. Marker > positioned on event in Event List.

If no event is timed to occur at the selected time, the next highest timed event is selected. If no events are timed to occur at, or after the selected time, the last event is displayed.

## Timecode Event Playback Screen

The Timecode Events Playback Screen is part of the Live display and is shown when the **{PLAYBACK}** softkey is selected on the Events List Menu . The window, which may be displayed as a full screen, or together with the X Playbacks Screen, shows the same data as the Event List, but shows the current status of the timecode playback. The last actioned event is shown highlighted. The screen will automatically scroll to continuously display at least the current and next event.

The window also shows the current time, source and status for the selected clock (internal or external), as follows:

**CLOCK:** The current SMPTE time (internal or external)

**EXTERNAL:** External SMPTE clock controlling events.

**OVERRIDE:** Internal clock taken over control due to failure of external clock. (Clock Override



enabled in Show Setup Screen)

**NO CLOCK:** Internal clock unable to take control due to Clock Override being disabled in Show Setup Screen.

**INTERNAL:** Internal SMPTE clock controlling events.

**\*PAUSED\*:** Clock paused when {PAUSE CLOCK} softkey is pressed.

**nnf:** Frames per second. 24f, 25f, 30df (drop) or 30f (non-drop). This value is set in the Frame Rate field of the Timecode Options window in the Show Setup Screen.

**SMPTE:** Clock Type. (SMPTE or OFF). The SMPTE clock is selected as OFF or SMPTE in the Source field of the Timecode Options in the Show Setup Screen

**START:** Timecode that clock must reach before playback is started.

**STOP:** Timecode after which clock ceases to play events.

**Note:** *The time code source must be set to SMPTE at the Show Setup display before the internal or external clock can be used.*

## Setting the Event Playback Start and Stop Time

The following examples show how to set the event playback start and stop times. Playback start and stop times can be entered for the complete show, or can be set to the times of specific events, or a range of events as shown in the following examples:

Key Entry: [TIME] {START} {:} {:} [1] [\*]

Action: Sets playback start time to 00:00:01:00

Key Entry: [TIME] {STOP} [2] [0] {:} [0] {:} [0] {:} [0] [\*]

Action: Sets playback stop time to 20:00:00:00

Key Entry: [1] [TIME] {START} [\*]

Action: Sets playback start time to event 1 time

Key Entry: [1] [THRU] [3] [TIME] {START} [\*]

Action: Sets playback start and stop times to event 1 to 3 times.

(Pressing the {STOP} softkey instead of the {START} softkey will have the same effect as above.)

Key Entry: [TIME] {STOP} [\*]

Action: Sets playback stop time to 23:59:59:29

## Setting/Resetting the Internal SMPTE Clock

When the clock is INTERNAL or \*PAUSED\*, the {SET CLOCK} softkey may be used to display alternative softkeys used to increment, decrement or reset the internal clock. As follows:  
**{+HH}** Add one hour to the internal clock time.

- {+MM}** Add one minute to the internal clock time.
- {+SS}** Add one second to the internal clock time.
- {+FF}** Add one frame to the internal clock time.
- {+5FF}** Add 5 frames to the internal clock time.
- {BACK}** Return to the Events List.
- [SHIFT] + {-HH}** Subtract one hour from the internal clock time.
- [SHIFT] + {-MM}** Subtract one minute from internal clock time.
- [SHIFT] + {-FF}** Subtract one frame from the internal clock time.
- [SHIFT] + {-5FF}** Subtract 5 frames from the internal clock time.
- [SHIFT] + {RESET TIME}** Reset internal clock to 00:00:00:00

With the Timecode Event Playback Window displayed, pressing the **[TIME]** key allows the internal SMPTE clock to be set manually, as follows:

**[TIME] [2] [:] [3] [:] [4] [:] [5] [\*]** Sets clock to 2:3:4:5

---

## Stepping the Light Show Timing

Selecting **{PAUSE CLOCK}** stops the internal or external clock at the time of the last triggered event. Pressing **{STEP}** will manually trigger the next event and select the following event ready for the next **{STEP}**. Alternatively, with **{PAUSE CLOCK}** selected the operator may move the < marker to a different event using the **[SHIFT]** key and the softkeys displayed on the Timecode Event Playback Menu, as follows:

- {LAST}** Sets the < marker and clock time to the last event.
- {NEXT}** Sets the < marker and clock time to the next event.
- {BEGIN LIST}** Sets the < marker and clock time to the first event on the list.
- {END LIST}** Sets the marker and clock time to the last event on the list.

The following softkeys clear any incomplete commands:

- {UNBUMP ALL}** Unbumps any bumped submasters.
  - {STOP FX}** Stops all running effects
- 

## Changes in External SMPTE Clock Input

If the external clock stops and then restarts, or jumps to more than one second forward or back from the next expected time code, the following actions are taken:

The next event due to trigger is changed to be the one at, or after the new time code. If tracking is enabled at setup, the event prior to the new time is triggered to set the same lighting state as if that event had been reached before the time code interruption. If tracking is

disabled, the prior event is not triggered. Cues and effects run from events triggered in this way are run using the setup Cut time, not their recorded time, i.e., as if by CUE n CUT or GOTO n \*.

[See Also: CommuniquePro](#)

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# CommuniquéPro

**See Also:** [CommuniquéPro Continued](#)

CommuniquéPro is a standard software package for Strand Lighting's 500 Series Consoles and GeniusPro or Lightpalette Operating software. It provides the following communication features:

The following topics are covered in this section:

- [External Submasters](#)
- [DMX In](#)
- [MIDI](#)
- [ASCII Remote Control Output](#)
- [ASCII Remote Go Output](#)
- [ASCII Remote Control Input](#)
- [SMPTE Time Code Events](#)
- [Audio Input Macro](#)

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## External Submasters

Up to 12 Submasters can be remotely controlled by external faders or a manual desk such as Strand Lighting's LX. If the Submasters have been configured as macro triggers, then only an external volt-free switch contact is required since a +10v supply pin is provided on the [Remote Analog](#) Input connector. This facility could be used to allow a stage manager to control house lights, or to trigger any macro, or to run a cue remotely.

This section includes the following topics:

- [Setting Up External Submasters](#)
- [Setting Up an External Submaster as a Macro Trigger](#)

---

## Setting Up External Submasters

To set up External Submasters, go to the SUBMASTER screen by pressing the **[SUB]** screen key.

Set the Submaster **Ext**(ernal) field as follows:

1. Use the trackball to move to the **Ext** field of the Submaster to change.
2. Use the wheel (or the **[+]** or **[-]** keys) to change its value (1 - 12 or OFF).

External Submasters are not indicated in the Submaster window of the LIVE screen.

On the Console Setup Screen screen, external Submasters can have their top level adjusted by an [External Subs Scaling](#) factor between 80% and 120%. Scaling allows you to compensate for any variations in signal levels between your console and the external equipment to which you are connected.

External Submaster fader levels are combined with the console Submaster fader levels on a HTP (Highest Takes Precedence) basis.

---

## Setting Up External Submasters as a Macro Trigger

If a Submaster has been configured as a macro trigger, then only an external volt-free switch contact (such as MIDI, RS232, RS485, audio; perhaps a 'click' track, or via an approved digital input card) is required since a +10v supply pin is provided on the Analogue Input connector. This facility could be used to allow a stage manager to control house lights, or to trigger any macro, or to run a cue remotely.

To set up, go to the SUBMASTER screen and set the relevant Submaster Ext field the same as for External Submasters.

1. **[SUB]** Go to SUBMASTER screen
2. Press **[SHIFT]** and move the trackball or mouse
3. Use the trackball to move to the Ext field of the Submaster to change
4. Use the wheel or the **[+]** or **[-]** keys select the external channel, 1 - 12 or OFF
5. Next, set the Macro field to the macro number you wish to associate with this external Submaster.
6. Use the trackball to move to the Macro field of the Submaster.
7. Use the wheel or the **[+]** or **[-]** keys or enter the number to change it to the macro number.

The selected macro will be run whenever either the remote or console submaster faders move off 0.

---

## DMX In

This is one of the console's most powerful communication features and allows an external DMX source, for instance an FX desk, to be combined with the existing console dimmer patch.

DMX IN has two operating modes which can be used together:

**DMX In Dimmer Mode** patches the incoming DMX levels to outgoing DMX via the dimmer patch. A user selectable Submaster fader can master these dimmer levels. They cannot be recorded and are not visible on the LIVE screen. [first 512 dimmers only].

**Channel Mode** uses the incoming DMX levels as the contents of a user selectable Submaster. A user selectable Submaster fader can master these channel levels. The levels are visible on the LIVE screen when they are active and are recordable. [max. 512 channels]

This section covers the following topics:

- o [Setting Up DMX In Submasters](#)
  - o [Patching DMX In Dimmers](#)
  - o [Using DMX In Dimmers](#)
  - o [Using DMX In Channels](#)
- 

### Setting Up DMX In Submasters

Set the [DMX](#) field in the Console Setup Screen to DMX IN.

*Note: Only the last available DMX connector can optionally input 512 signals if it is not outputting signals.*

Select the SUBMASTER screen by pressing the **[SUB]** screen key.  
Set the Submaster Function to DMX DIMR or DMX CHAN as follows:

1. Use the trackball to move to the Function field of the Submaster to change.
2. Use the wheel or the **[+]** or **[-]** keys to change it to DMX DIMR or DMX CHAN.

The Submaster window of the LIVE screen indicates DMX In Submasters by a C (DMX Channel) or D (DMX Dimmer). No channel levels need be entered for DMX IN Submasters.

---

## Patching DMX In Dimmers

To patch DMX IN Dimmers go to the PATCH screen by pressing the **[PATCH]** screen key.

DMX IN Dimmers are identified on the display by a trailing D (e.g. 1D, 2D, 50D) and are displayed in magenta.

To change the default use one of the following commands:

**sel [@] [+] # [\*]**

This patches the output to the DMX Input Channel. The default Scaling is used if this is not currently patched to a DMX Input Channel otherwise it is left unchanged.

**[1] [THRU] [1] [0] [@] [+] [5] [THRU] [1] [4] [\*]**

Patches output 1 to 10 to DMX Input Channel 5 to 14, scaling unchanged.

**sel [@] [+] # [@] [\*]**

This patches the output to the DMX Input Channel; default Scaling is always used, as defined in Setup.

**[1] [@] [+] [5] [@] [\*]**

Patches output 1 to DMX Input Channel 5 with default scaling.

**sel [@] [+] # [@] # [\*]**

This patches the output to the DMX Input Channel with the specified Scaling.

**[1] [@] [+] [5] [@] [7] [5] [\*]**

Patches output 1 to DMX Input Channel 5 with 75% scaling.

**sel [@] [@] # [\*]**

The existing patch is unchanged but the DMX Input Channel is used with the specified Scaling.

**[1] [@] [@] [7] [5] [\*]**

Patch is unchanged but is set to DMX Input with 75% Scaling.

## Using DMX In Dimmers

Once you have configured a Submaster as DMX IN and set up the patch, connect your DMX source to the DMX IN port and push the Submaster fader up.

You won't be able to see any changes in the LIVE screen, as dimmer levels are not displayed. Look at the lights being driven by your console; those patched to the external source will be controlled by it and the levels mastered by the Submaster fader.

---

## Using DMX In Channels

Once you have selected a DMX Channel Submaster, simply connect your DMX source to the DMX IN port and push the Submaster fader up. You will see the DMX IN Channels on the LIVE screen in white. Changes in the incoming levels will be displayed on the LIVE screen and mastered by the Submaster fader.

The DMX Channel Submaster can then be used just like other Submasters, except that any channels defined in the submaster memory are ignored.

---

## MIDI

This feature allows show playback to be controlled from a MIDI show controller. MIDI is used to link equipment with a MIDI interface together.

Communiq Pro support different parts of the MIDI Specification to achieve different degrees of remote control for console functions.

Full information on MIDI can be obtained from:

The International MIDI Association (IMA),  
23634 Emelita Street,  
Woodland Hills,  
CA 91367 USA.



This section covers the following topics:

- [Controlling Effects Using MIDI](#)
  - [MIDI Show Control](#)
  - [MIDI Keys and Faders](#)
  - [MIDI Note](#)
  - [MIDI Message](#)
  - [MIDI Trigger Macro](#)
- 

## Controlling Effects Using MIDI

MIDI sends time information to keep equipment in synchronisation with each other, often referred to as tempo. A master device, normally a sequencer or keyboard, sends out these timing signals at regular intervals. Speed up the tempo and more signals are sent, reduce the tempo and fewer signals are sent.

CommuniquéPro can receive these timing signals and use the frequency at which they are received to control the speed of a running Effect.

The Effect [Step Control](#) must be set to MIDI. The number of timing signals received before the effect steps are advanced can be adjusted on the effect playback by adjusting the MIDI RATIO supermaster fader.

CommuniquéPro also receives two additional MIDI timing commands: STOP which halts the effect and START which continues running the effect. A MIDI device normally sends out these commands when the tempo is stopped or started.

---

## MIDI Show Control

MIDI Show Control (MSC) is a sub-set of the MIDI Specification dedicated to controlling show equipment.

CommuniquéPro currently supports the recommended Minimum Set which is defined as a 'Simple Controlled Device; no time code; basic data only'. More specifically:

**GO** Acts as a normal GO button and resumes a fade after it has been stopped.

**RESUME** Starts the next cue; it does not resume the previous fade.

**GO CUE #.#** Go cue, where #.# is a specific cue (same as **CUE #.# GO**).

**STOP** Stops the current fade.

**FIRE #** Runs user macro # (# from 0 to 127).

**LOAD #.#** Loads the X playback with cue #.#.

**ALL\_OFF** Blackout on.

**RESTORE** Blackout off.

**RESET & GO\_OFF** Go Cue 0.

**Note:** All playback actions take effect only on X playback 1.

MSC output is activated when the MSC ID Tx option in the MIDI Window in the Show Setup Screen is set to a value between 0 and 127. If the MSC ID Tx is OFF no MSC messages are transmitted. Received MSC messages are only accepted if the MSC ID Rx matches the received message ID or the MSC ID is set to 127 (All Call).

**Note:** Midi Show Control GO\_OFF does not run cue 0. Instead use MSC RESET instead. Also, Midi Show Control does not support playback 2. Instead fire a macro containing the GOX2 key.

---

## MIDI Keys And Faders

All key and fader changes are transmitted via MIDI OUT and received via MIDI IN simultaneously. This will allow a second desk to be used as a full backup unit or as a slave unit. It will also allow all key presses and fader movements to be recorded on a sequencer in real time and played back in real time, in particular, the recording and playback of Cues, Effects and Submasters.

The Channel option in the MIDI Window in the Show Setup Screen will select the MIDI channel on which to receive and transmit the key and faders on. When OFF, no key or fader events will be received or transmitted across MIDI.

The Fader and Key Controller selections (between 1 and 4) select which MIDI General Purpose Controller is used to transmit and receive keys and faders. For tracking backup and slaving, the controller numbers must be different. The Mode determines if all keys and faders are sent (BACKUP) or if only a subset are sent (SLAVE).

---

## MIDI Note

The Midi Note On and Note Off commands are received and used to flash Submasters or

channels.

The Notes field in the MIDI window of the SHOW SETUP screen can be set as follows.

**OFF** Any received Note On or Note Off is ignored.

**FADERS** The Note number matches faders 1 to 12.

**SUBS** All Note On/Off messages will cause a Submaster to be flashed.

ssed) of the MIDI note message is acted upon. When Velocity is **OFF**, any velocity greater than 0 is treated as full on, and 0 is off. When Velocity is **ON** the velocity determines the

The Velocity option determines if the velocity (strength at which a key is deprelevel to which the bump key is flashed: press a key hard the level is high, press a key lightly and the level is low.

## MIDI Messages

This section is for experienced MIDI programmers only.

### Control Change

Consists of two General Purpose Controllers, 1 for faders the other for keys. General Purpose Controller 1 MSB (Controller 10h) and LSB (controller 30h) is used for faders and General Purpose Controller 2 MSB (Controller 11h) and LSB (controller 31h) is used for keys.

Message Bytes	Lighting Event	Dir
Bn 10 01 30 xx ... Bn 10 78 30 xx	Channel/Submaster Fader 1...120	r,t
Bn 10 79 30 xx	X1 Up Fader	r,t
Bn 10 7A 30 xx	X1 Down Fader	r,t
Bn 10 7B 30 xx	X2 Up Fader	r,t
Bn 10 7C 30 xx	X2 Down Fader	r,t
Bn 10 7D 30 xx	Grand Master 1 Fader	r,t
Bn 10 7E 30 xx	Grand Master 2 Fader	r,t
Bn 10 7F 30 xx	undefined	-
Bn 11 00 31 xx	MIDI Beat Event	r,t
Bn 11 01 31 xx	MIDI Trigger Event	r,t
Bn 11 02 31 xx	Bump Key	r,t
Bn 11 03 31 xx	Bump Key Up	r,t

Bn 11 04 31 xx	C-Key	r,t
Bn 11 05 31 xx	C-Key Up	r,t
Bn 11 06 31 xx	MIDI Macro Event	r,t
Bn 11 07 31 xx	Wheel Up	r,t
Bn 11 08 31 xx	Wheel Down	r,t
Bn 11 09 31 xx	Reserved - MSC Go Next Q	r,t
Bn 11 0A 31 xx	Reserved - MSC Go Q	r,t
Bn 11 0B 31 xx	Reserved - MSC Stop	r,t
Bn 11 0C 31 xx	Reserved - MSC Load Next Q	r,t
Bn 11 0D 31 xx	Reserved - MSC Load Q	r,t
Bn 11 0E 31 xx	Reserved - MSC Raw	r,t
Bn 11 0F 31 xx	XF Flash	r,t
Bn 11 10 31 xx	Blackout	r,t
Bn 11 11 31 xx	Flash Solo	r,t
Bn 11 12 31 xx	Off Latch	r,t
Bn 11 13 31 xx	X Man Time	r,t
Bn 11 14 31 xx	AB Man Time	r,t
Bn 11 15 31 xx	KA-Key	r,t
Bn 11 16 31 xx	KA-Key Up	r,t
Bn 11 17 31 xx	KS-Key	r,t
Bn 11 18 31 xx	KS-Key Up	r,t
Bn 11 19 31 xx	Trackerball X Left	r,t
Bn 11 1A 31 xx	Trackerball X Right	r,t
Bn 11 1B 31 xx	Trackerball Y Up	r,t
Bn 11 1C 31 xx	Trackerball Y Down	r,t
Bn 11 1D 31 xx	Rotary 1 Up	r,t
Bn 11 1E 31 xx	Rotary 1 Down	r,t
Bn 11 1F 31 xx	Rotary 2 Up	r,t
Bn 11 20 31 xx	Rotary 2 Down	r,t
Bn 11 21 31 xx	Rotary 3 Up	r,t
Bn 11 22 31 xx	Rotary 3 Down	r,t
Bn 11 23 31 xx	Rotary 4 Up	r,t
Bn 11 24 31 xx	Rotary 4 Down	r,t
Bn 11 25 31 xx	PB Wheel Up	r,t
Bn 11 26 31 xx	PB Wheel Down	r,t

Bn 11 27 31 xx	Reserved Colour keys	r,t
Bn 11 28 31 xx	Reserved MTC	r,t
Bn 11 29 31 xx	KT-Key	r,t
Bn 11 2A 31 xx	KT-Key Up	r,t
Bn 11 2B 31 xx	KM-Key	r,t
Bn 11 2C 31 xx	KM-Key Up	r,t
Bn 11 2D 31 xx	Reserved	r,t
Bn 11 2E 31 xx	KEM-Key	r,t
Bn 11 2F 31 xx	KEM-Key Up	r,t
Bn 11 30 31 xx	External Fader	r,t
Bn 11 7A 31 xx	M-Bump Key	r,t
Bn 11 7B 31 xx	M-Bump Key Up	r,t
Bn 30 xx	LSB of Fader Events (see above)	
Bn 31 xx	LSB of Misc Events (see above)	

### C-Key/C-Key Up codes:

01	SAVE	02	DELAY
03	WAIT	04	DEFAULT_PATCH
05	ATNON	06	RENUM
07	DELETE	08	CLEAR_SUB
09	CLEAR_FX	0A	BUMP_UP
0B	BUMP_DOWN	0C	BUMP_REL
0D	AT_PATCH	0E	AT_FRAME
0F	DEFAULT	10	DELCHAN
11	DELMACRO	12	WHL_PAGE_DOWN
13	WHL_PAGE_UP	14	SOLO_REL
15	SHIFT_PC	16	CLEAR_LOG
17	BUMP	18	LEARN
19	DELETECUE	1A	DELETEGROUP
1B	DELETELAW	1C	OPER_LOAD
1D	APPL_LOAD	1E	SYNC
1F	TEST	20	DISPLAY
21	USER	22	LIVE
23	PC_EXIT	24	PRINT_STOP
25	PRINT_START	26	CLEAR

27	PC_LCD	28	CUE_LEFT
29	CUE_RIGHT	2A	ENTER
2B	PLUS	2C	EDIT
2D	MINUS	2E	DOT
2F	SLASH	30	0
31	1	32	2
33	3	34	4
35	5	36	6
37	7	38	8
39	9	3A	REC_TIME
3B	REC_NO_SUBS	3C	THRU_ON
3D	FORMAT	3E	THRU
3F	HELP	40	AT
41	AT_COL	42	BLACKOUT
43	CUE	44	DIMMER
45	HELP_BACKUP	46	FX
47	GROUP	48	HOLD
49	REM_DIM	4A	REC_MODE
4B	STOP_BACKX2	4C	LAST
4D	MACRO	4E	NEXT
4F	ON	50	PB
51	SUB_PAGE	52	RECORD
53	SUB	54	TIME
55	CUTX2	56	UNDO
57	BUMP_MODE	58	LOADX2
59	DISK_LOAD	5A	FULL
5B	F1	5C	F2
5D	F3	5E	F4
5F	F5	60	F6
61	LOADA	62	LOADB
63	CLR	64	FXDIR
65	FXSTEP	66	FLASH_SOLO
67	GOX1	68	FX1
69	FX2	6A	FX3
6B	STOP_BACKX1	6C	OFF_LATCH
6D	FXAUDIO_MIDI	6E	X_MAN_TIME
6F	DISPLAY_PC	70	XGO_STOP

71	AB_MAN_TIME	72	RATE
73	SHIFT	74	FXTYPE
75	CUTX1	76	FXFADE_TIME
77	FXSTEP_TIME	78	LOADX1
79	XFFLASH	7A	XFSPARE
7B	CURSOR_LEFT	7C	CURSOR_UP
7D	CURSOR_RIGHT	7E	CURSOR_DOWN
7F	CLEAR_DIAG		

**KA-Key/KA-Key Up codes:**

01	LCD1_F1	02	LCD1_F2
03	LCD1_F3	04	LCD1_F4
05	LCD1_F5	06	LCD1_F6
07	LCD2_F1	08	LCD2_F2
09	LCD2_F3	0A	LCD2_F4
0B	LCD2_F5	0C	LCD2_F6
0D	P1	0E	P2
0F	P3	10	P4
11	P5	12	P6
13	P7	14	ORDER
15	REPORT_DISPLAY	16	MORE_DISPLAY
17	MACRO_DISPLAY	18	SETUP_DISPLAY
19	ARCHIVE_DISPLAY	1A	FX_DISPLAY
1B	PATCH_DISPLAY	1C	GROUP_DISPLAY
1D	OUTPUT_DISPLAY	1E	SUB_DISPLAY
1F	CUE_DISPLAY	20	LAST_SCREEN
21	SHUT_DOWN	22	LAW_DISPLAY
23	LAW_INSERT_POINT	24	LAW_DELETE_POINT
25	FXSTART	26	FXSTOP
27	FXSELBACK	28	GOTO
29	FXPAUSE	2A	FXSEL
2B	FXTIME	2C	FXLOAD
2D	WHL_CC_SEL	2E	BUMP_11
2F	BUMP_12	30	BUMP_10
31	BUMP_1	32	BUMP_2
33	BUMP_3	34	BUMP_4

35	BUMP_5	36	BUMP_6
37	BUMP_7	38	BUMP_8
39	BUMP_9	3A	PAGE_UP
3B	FADER_BASE_PAGE	3C	X1_DOWN
3D	FADER_CD_IN_UP_SELECT	3E	FADER_CD_OUT_DOWN_SELECT
3F	X2_UP	40	AT_ATT
41	FADER_A_SELECT	42	FADER_B_SELECT
43	FADER_C_SELECT	44	FADER_D_SELECT
45	ENTER_WHEEL_SELECT	46	FADER_FLASH_SELECT
47	GOX2	48	FADER_GM2_SELECT
49	FADER_X1_IN_UP_SELECT	4A	FADER_X2_IN_UP_SELECT
4B	DOTOUTPUT	4C	WHEEL_PB_SELECT
4D	FADER_MIDI_SELECT	4E	FADER_X2_OUT_DOWN_SELECT
4F	FADER_X1_OUT_DOWN_SELECT	50	PROFILE
51	COPYPATCH	52	510LOCK
53	510LOCK_BACKUP	54	TEXT
55	UPDATE	56	FADER_GM1_SELECT
57	CLEAN_ATTTS	58	FADER_FX_SELECT
59	CLOCKTIME	5A	FADER_AUDIO_SELECT
5B	WHEEL_UP	5C	PAGE_DOWN
5D	WHEEL_DOWN	5E	TRACKBALL_LEFT
5F	TRACKBALL_MIDDLE	60	TRACKBALL_RIGHT
61	TRACKBALL_FINE_ON	62	TRACKBALL_FINE_OFF
63	P8	64	P9
65	P10	66	P11
67	P12	68	P13
69	P14	6A	ROTARY_1_SELECT
6B	ROTARY_2_SELECT	6C	ROTARY_3_SELECT
6D	ROTARY_4_SELECT	6E	DIMMER_FILTER
6F	SM1_SELECT	70	SM2_SELECT
71	SM3_SELECT	72	SM4_SELECT
73	SM5_SELECT	74	SM6_SELECT
75	SM7_SELECT	76	SM8_SELECT
77	SM9_SELECT	78	SM10_SELECT
79	SM11_SELECT	7A	SM12_SELECT
7B	ATT_PAGE_PREV	7C	X2_DOWN
7D	ATT_PAGE_NEXT	7E	X1_UP



7F BLOCK

**KS-Key/KS-Key Up codes:**

01	FX_AUTO	02	FX_AUDIO
03	FX_MIDI	04	FX_MAN
05	PLUS_1	06	LEVEL_ONLY
07	ATTR_ONLY	08	PART
09	MINUS_10_PERCENT	0A	PLUS_10_PERCENT
0B	DMX	0C	DMX_CHAN
0D	DMX_DIM	0E	KEYS_LATCH
0F	KEYS_ON	10	OFF
11	FLASH	12	SOLO
13	FLASH_SOLO	14	UPDATE_PART
15	UPDATE_ALL	16	CROSS_FADE
17	STA_TIME_DATE	18	LINK
19	LOOP	1A	RENUM_FROM
1B	FX_LOHI	1C	FX_NEXT
1D	FX_STOP	1E	FX_CTRL
1F	FX_LEVEL	20	TRACK
21	THIS_Q_ONLY	22	FORWARD
23	REVERSE	24	BOUNCE
25	RANDOM_DIR	26	CHASE
27	BUILD	28	NORMAL
29	INVERT	2A	RANDOM
2B	NORM_INVERT	2C	INV_NORMAL
2D	MOVE_FADE	2E	ALL_FADE
2F	DIAG_SCREEN_TOGGLE	30	PLUS_6
31	MINUS_6	32	MINUS_1
33	SEL_FIRST	34	SEL_LAST
35	UNPATCH	36	ENABLE
37	MAN_FADE_X1	38	MAN_FADE_X2
39	RATE_X1	3A	RATE_X2
3B	RATE_UP_X1	3C	RATE_UP_X2
3D	RATE_DOWN_X1	3E	RATE_DOWN_X2
3F	UNRATE_X1	40	UNRATE_X2
41	AUTO_X1	42	AUTO_X2

43	MAN_TIME_X1	44	MAN_TIME_X2
45	SEQ_ON_X1	46	SEQ_ON_X2
47	SEQ_OFF_X1	48	SEQ_OFF_X2
49	INSTANT_X1	4A	INSTANT_X2
4B	KEYS_OFF	4C	ATT_PAGE_1
4D	ATT_PAGE_2	4E	ATT_PAGE_3
4F	ATT_PAGE_4	50	ATT_PAGE_5
51	ATT_PAGE_6	52	ATT_COL
53	ATT_PAN	54	ATT_TILT
55	ATT_IRIS	56	ATT_FOCUS
57	ATT_PRISM	58	ATT_GOBO
59	ATT_RGOBO	5A	NOTES_CUT
5B	NOTES_COPY	5C	NOTES_DISPLAY
5D	NOTES_PASTE	5E	NOTES_SAVE
5F	FIXTURE_LOAD	60	ATCPAGE_LOAD
61	SUP_SUB	62	SUP_FLASH
63	SUP_FX	64	SUP_AUDIO
65	SUP_MIDI	66	SUP_SLIGHT
67	SUB_NORMAL	68	SUB_INHIBIT
69	SUB_INDEP	6A	SUB_SUPER
6B	SUB_DMX	6C	SUB_EXT
6D	SUB_LOAD	6E	SUB_FUNC
6F	STEP_TIME	70	STEP_IDO
71	INSERT	72	NET_NODE_LINK_UNLINK
73	CHANS_IN	74	NET_NODE_ENABLE
75	NET_NODE_DISABLE	76	NET_CLEAR_COUNTS
77	RENUM_CHAN	78	COPY_FROM
79	AT_6K12K	7A	AT_FIXTURE
7B	INVERT_PAN	7C	INVERT_TILT
7D	SWAP_PAN/TILT	7E	README_LOAD
7F	NETCFG_LOAD		

**KM-Key/KM-Key Up codes:**

01	KEYCFG_LOAD	02	PRINT_LOG
03	PRINT_NOTES	04	SET_DISK
05	CHANGE_DIRECTORY	06	COPY_SHOW

07	DELETE_SHOW	08	PRINT_SCREEN
09	MAKE_DIRECTORY	0A	TEXT_DIRECTORY
0B	TEXT_SHOW	0C	TEXT_FILE
0D	TIMECODE	0E	SUB_EXCLUSIVE
0F	HELP_LAST	10	HELP_NEXT
11	HELP_INDEX	12	HELP_END
13	GIVE_SYNC	14	TAKE_SYNC
15	GIVE_CTRL	16	TAKE_CTRL
17	RESET_DESK	18	BREAK_SYNC
19	RSM1_SELECT	1A	RSM2_SELECT
1B	RSM3_SELECT	1C	RSM4_SELECT
1D	RSM5_SELECT	1E	RSM6_SELECT
1F	RSM7_SELECT	20	RSM8_SELECT
21	RSM9_SELECT	22	RSM10_SELECT
23	RSM11_SELECT	24	RSM12_SELECT
25	LOGIN	26	QUIT
27	SAVE_SETUP	28	BACKUP_COMMANDS
29	NCUE	2A	NSUB
2B	NFX	2C	NGROUP
2D	APPEND_STEP	2E	QUICK_GIVE_SYNC
2F	QUICK_TAKE_SYNC	30	XREF_CHAN
31	ATT_FILTER_1	32	ATT_FILTER_2
33	ATT_FILTER_3	34	ATT_FILTER_4
35	ATT_FILTER_5	36	ATT_FILTER_6
37	SUMMARY	38	DIM_AT_CHAN
39	DIM_BACKUP	3A	APP_SAVE_PASSWORD
3B	DIM_HI_DC	3C	DIM_OLOAD
3D	DIM_OHEAT	3E	DIM_OP_ERR
3F	DIM_L_LIM	40	DIM_TRIP
41	STOP_SHOW	42	DIM_CONFIG_LOAD
43	DIM_CLR	44	DIM_RE_SYNC
45	DIM_L_LEARN	46	DIM_RACK
47	ORDER_CHAN	48	LOADS_ON
49	LOADS_OFF	4A	PRINT_DIM_LOG
4B	LAST_8	4C	NEXT_8
4D	NEXT_4	4E	LAST_4
4F	MACRO_PLUS_100	50	MACRO_MINUS_100

51	MACRO_RUN	52	SUB_PAGE_PLUS
53	SUB_PAGE_MINUS	54	SUB_DOWN_PERCENT
55	SUB_UP_PERCENT	56	SUB_BUMP
57	510_SELECT	58	LOAD_X1
59	LOAD_X2	5A	GOTO_0_X1
5B	GOTO_0_X2	5C	CONTRAST_UP
5D	CONTRAST_DOWN	5E	BACKLIGHT_UP
5F	BACKLIGHT_DOWN	60	EVENT_STEP
61	PAUSE_CLOCK	62	INTERNAL_CLOCK
63	TO_BEGIN_LIST	64	TO_END_LIST
65	UNBUMP_ALL	66	STOP_ALL_FX
67	HH_PLUS	68	HH_MINUS
69	MM_PLUS	6A	MM_MINUS
6B	SS_PLUS	6C	SS_MINUS
6D	FF_PLUS	6E	FF_MINUS
6F	5_FF_PLUS	70	5_FF_MINUS
71	RESET_TIME	72	MACRO_FIRST
73	SUB_TO_0_PERCENT	74	SUB_TO_100_PERCENT
75	EXTERNAL_CLOCK	76	EVENT_DELETE
77	EVENT_INSERT	78	EVENT_RECORD
79	EVENT_COLON	7A	EVENT_MOVE
7B	EVENT_COPY	7C	EVENT_START
7D	EVENT_STOP	7E	EVENT_DISPLAY
7F	EVENT_LEARN		

**KEM-Key/KEM-Key Up codes:**

01	MOVEPATCH	02	SWAPPATCH
03	HELP_CONTENTS	04	HELP_GLOSSARY
05	HELP_HOME	06	AUTOMOD_DISPLAY
07	AUTOMOD_CLEAR	08	AUTOMOD_FROM
09	AUTOMOD_ON	0A	AUTOMOD_UPDATE
0B	AUTOMOD_SOURCE	0C	AUTOMOD_DEST
0D	PBX1_MODE	0E	PBX2_MODE
0F	HELP_QUICK	10	HELP_LINKS
11	AUTOMOD_OFF	12	ATTRIB
13	OFF	14	FX_RATE

15	PAUSE	16	EXIT_RESTART
17	VLCD_KEY1	18	VLCD_KEY2
19	VLCD_KEY3	1A	VLCD_KEY4
1B	VLCD_KEY5	1C	VLCD_KEY6
1D	VLCD_KEY7	1E	VLCD_KEY8
1F	VLCD_KEY9	20	VLCD_KEY10
21	VLCD_KEY11	22	VLCD_KEY12
23	VLCD_KEY13	24	VLCD_KEY14
25	VLCD_KEY15	26	VLCD_KEY16
27	VLCD_KEY17	28	VLCD_KEY18
29	VLCD_KEY19	2A	VLCD_KEY20
2B	VLCD_KEY21	2C	VLCD_KEY22
2D	VLCD_KEY23	2E	VLCD_KEY24
2F	VLCD_KEY25	30	VLCD_KEY26
31	VLCD_KEY27	32	VLCD_KEY28
33	VLCD_KEY29	34	VLCD_KEY30
35	VLCD_KEY31	36	VLCD_KEY32
37	VLCD_KEY33	38	VLCD_KEY34
39	VLCD_KEY35	3A	VLCD_KEY36
3B	VLCD_KEY37	3C	VLCD_KEY38
3D	VLCD_KEY39	3E	VLCD_KEY40
3F	VLCD_KEY41	40	VLCD_KEY42
41	VLCD_KEY43	42	VLCD_KEY44
43	VLCD_KEY45	44	VLCD_KEY46
45	VLCD_KEY47	46	VLCD_KEY48
47	MODEX1_1SCN_24SUB	48	MODEX1_2SCN_24SUB
49	MODEX1_1SCN_0SUB	4A	MODEX1_2SCN_0SUB
4B	SUB_GM1	4C	SUB_GM2
4D	QUIT	4E	PANEL_RESCAN_CONFIG
4F	PANEL_SAVE_CONFIG	50	ADD_ALL
51	NEW_FEATURES	52	FXLIST_DISPLAY
53	DB_REQ_KEY1	54	DB_REQ_KEY2
55	DB_REQ_KEY3	56	DB_REQ_KEY4
57	DB_REQ_KEY5	58	DB_REQ_KEY6
59	FADER	5A	WHEEL
5B	QUERY	5C	LEVEL_INFO
5D	ODD	5E	EVEN

5F	CHANNEL_STEP	60	ADD_SHAPE_CHANS
61	ATCPAGE	62	ATCPAGEDELETE
63	FIXTURE	64	FIXTUREDELETE
65	EVENT	66	AUTOMOD
67	PATCH	68	EVCMD
69	CUETYPE	6A	CUECMD
6B	FXMODE	6C	ATT_FILTER_7
6D	ATT_FILTER_8	6E	ATT_FILTER_9
6F	ATT_FILTER_10	70	ATT_FILTER_11
71	ATT_FILTER_12	72	TRACKBACK
73		74	
75		76	
77		78	
79		7A	
7B		7C	
7D		7E	
7F			

**KT-Key/KT-Key Up codes:**

Text keys use standard ASCII character set.

**Note Off:**

8n nn xx	bump key nn release	r
----------	---------------------	---

**Note Off:**

9n nn xx	xx = 00 bump key nn release xx > 0 bump key nn press	r
----------	---	---

**Polyphonic Key Pressure:**

	undefined	-
--	-----------	---

**Program Change/Channel**

## Pressure/Pitch Bend:

	undefined	-
--	-----------	---

## System Common Messages:

F0	Start of Exclusive (see below)	r,t
F1 xx	Midi Time Code	n
F2 xx xx	Song Position Pointer	n
F3 xx	Song Select	n
F6	Tune Request	n
F7	End of Exclusive (see below)	r,t

## System Exclusive:

### Midi Show Control (MSC):

id = MSC ID: 00...6f, 7F - All Call

cf = MSC Command Format: 01 - Lighting, 7F - All Call

dd = Up to 5 bytes of optional data specifying cue number

tt = Up to 10 bytes of optional data specifying cue number and fade time

mm = macro number

F0 7F id 02 cf 01 F7	GO CUE (Hit GO key)	r
F0 7F id 02 cf 01 dd F7	GO CUE ## (Load and GO)	r
F0 7F id 02 cf 02 F7	STOP CUE (Hit STOP key)	r
F0 7F id 02 cf 03 F7	RESUME CUE (Hit GO key)	r
F0 7F id 02 cf 04 tt F7	TIMED GO CUE (Load and GO + time)	n
F0 7F id 02 cf 05 dd F7	LOAD CUE ## (Load)	r
F0 7F id 02 cf 06 — F7	SET	n
F0 7F id 02 cf 07 mm F7	FIRE (Run macro)	r
F0 7F id 02 cf 08 F7	ALL OFF (Blackout on)	r
F0 7F id 02 cf 09 F7	RESTORE (Blackout off)	r
F0 7F id 02 cf 0a F7	RESET (Stop then Load first Cue)	r
F0 7F id 02 cf 0b F7	GO OFF CUE (Load cue 0)	r

## Strand System Exclusive:

Strand Lighting ID = 00 20 01

ch = Channel number

pp = Product code: 01 - MX, 02 - GSX, 03 - LBX, 04 - 430, 05 - 530

ff = Function code: 00 - configuration, 01 - synchronisation

nn = Channel capacity (127 maximum)

mm = Model Mask: 01 - Genius, 02 - Kaleidoscope, 04 - Communiq 

F0 00 20 01 ch pp 00 nn mm	F7GSX nn Channel Genius	r,t
----------------------------	-------------------------	-----

### System Real Time Messages:

F8	Timing Clock, for stepping effects	r
F9	undefined	-
FA	Start Clock, for stepping effects	r
FB	Continue Clock, for stepping effects	r
FC	Stop Clock, for stepping effects	r
FD	undefined	-
FE	Active Sensing (Break in comms)	r
FF	System Reset	

### MIDI Trigger Macro

Communiq Pro also supports a user definable MIDI trigger facility that can be programmed to run a macro when a user specified message of up to three bytes is received.

To configure, go to the MIDI window in the Show Setup Screen. In the MIDI Trigger Macro field enter the number of the macro that is to be triggered. In the MIDI Trigger Bytes field enter the three trigger byte values [in decimal] you require.

When Macro is OFF or all three bytes are OFF, no triggers occur. When a trigger is received the specified macro will be executed.

Bytes set to OFF are ignored, so triggers of from 1 to 3 bytes can be used.

### Audio Input Macro



CommuniquéPro also supports triggering of a predefined macro number when the amplitude of the audio input exceeds a threshold determined by the setting of an [Audio Threshold Supermaster](#). The macro number is set in the [Audio Input Macro](#) field of the Communications Window of the Console Setup Screen.

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**See Also:** [CommuniquéPro Continued](#)

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## Console Connectors

<u>500 Series Consoles</u>	<u>300 Series Processor Unit</u>
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<ul style="list-style-type: none"> <li>• <a href="#">AUX 1, 2 and 3</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">AUX 1 and 2</a></li> </ul>
<ul style="list-style-type: none"> <li>• <a href="#">AMX</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Sbus 1-4</a></li> </ul>
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<ul style="list-style-type: none"> <li>• <a href="#">Printer Port</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">VGA</a></li> </ul>
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	<b><u>300 Series Modules</u></b>

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### DMX female 5 pin XLR

Pin	Description
Pin 1	Ground
Pin 2	Data -
Pin 3	Data +
Pin 4	No connection
Pin 5	No connection

DMX512, input or output, up to 512 channels.

### AUX female 6 pin XLR

Pin	Description
Pin 1	Ground
Pin 2	+10VDC, 100mA
Pin 3	Data +
Pin 4	Data -
Pin 5	RS-232 - transmit data
Pin 6	RS-232 - receive data

Auxiliary class 1, up to 19200 baud.

There are 3 AUX ports, each port having a line termination switch (ON = 'Terminated' for the last item on the daisy chain).

**AMX male 4 pin XLR**

Pin	Description
Pin 1	Ground (display)
Pin 2	Clock +
Pin 3	Data
Pin 4	Clock -

AMX192 analog 5 volt output with 192 channels.

---

**D54 female 3 pin XLR**

Pin	Description
Pin 1	Ground (display)
Pin 2	No connection
Pin 3	Data

D54 analog 5 volt output with up to 384 channels.

---

**Audio female 3 pin XLR**

Pin	Description
Pin 1	Ground
Pin 2	Audio +
Pin 3	Audio -

Mono balanced audio input, dynamic range 10mV - 10v.

---

**Remote Analog female 15 pin D-type**

Pin	Description
Pin 1	Remote input 1
Pin 2	Remote input 2
Pin 3	Remote input 3

Pin 4	Remote input 4
Pin 5	Remote input 5
Pin 6	Remote input 6
Pin 7	Remote input 7
Pin 8	Remote input 8
Pin 9	Remote input 9
Pin 10	Remote input 10
Pin 11	Remote input 11
Pin 12	Remote input 12
Pin 13	Ground
Pin 14	Ground
Pin 15	+10 VDC, 25mA

Analog 0-10V remote fader or switch inputs, which can be supplied from the current-limited source at pin 10, or from an external 10VDC source

## MIDI male 5 pin DIN

Pin	Description
Pin 1	Not connected
Pin 2	Ground
Pin 3	Not connected
Pin 4	Data +
Pin 5	Data -

Asynchronous serial, 1 start bit, 8 data bits, 1 stop bit, no parity, 31250 baud.

## Printer Port female 25 pin D-type

Pin	Description
Pin 1	Strobe
Pin 2	Data 0
Pin 3	Data 1
Pin 4	Data 2
Pin 5	Data 3
Pin 6	Data 4

Pin 7	Data 5
Pin 8	Data 6
Pin 9	Data 7
Pin 10	Ack
Pin 11	Busy
Pin 12	Paper end
Pin 13	Selected
Pin 14	Auto feed
Pin 15	Error
Pin 16	Init
Pin 17	Select in
Pin 18-25	Ground

Normal and extended Centronics parallel port modes (LPT1).

---

### Serial Ports 1 & 2 male 9 pin D-type

Pin	Description
Pin 1	Data carrier detect
Pin 2	Receive data
Pin 3	Transmit data
Pin 4	Data terminal ready
Pin 5	Ground
Pin 6	Data set ready
Pin 7	Request to send
Pin 8	Clear to send
Pin 9	Ring indicator

General purpose RS232, baud rates 1200 to 38400 (COM1 port and COM port 2).

---

### VGA female 15 pin high density D-type

Pin	Description
Pin 1	Analog Red 0-0.7V
Pin 2	Analog Green 0-0.7V

Pin 3	Analog Blue 0-0.7V
Pin 4	No connection
Pin 5	Self Test
Pin 6	Red ground
Pin 7	Green ground
Pin 8	Blue ground
Pin 9	No connection (key)
Pin 10	Ground
Pin 11	Ground
Pin 12	No connection
Pin 13	H sync (TTL)
Pin 14	V sync (TTL)
Pin 15	No connection

640x480 pixels, 16 colours, 60Hz refresh. This port is compatible with both VGA and SVGA monitors. Port 1 is the main console display output, Port 2 is the additional channels display output in Dual VGA mode.

---

## PS2 Ports

Pin	Description
Pin 1	Data
Pin 2	No connection
Pin 3	Ground
Pin 4	+5V DC
Pin 5	Clock
Pin 6	No connection

---

## COM1 and COM2

Pin	Description
Pin 1	Carrier Detect

Pin 2	Receive Data
Pin 3	Transmit Data
Pin 4	Data Terminal Ready
Pin 5	Signal Ground
Pin 6	Data Set Ready
Pin 7	Request to Send
Pin 8	Clear to Send
Pin 9	Ring indicator

## Ethernet 10BT - RJ45

Pin	Description
1	Data + Tx
2	Data - Tx
3	Data + Rx
4	Data - Rx
5	Not connected
6	Not connected
7	Not connected
8	Not connected

## Submaster Macro Inputs

<b>Sub 1-12 macros</b>	Pins 1 to 12	Submaster 1 to 12 macros
	Pins 13 to 25	Ground
<b>Sub 13-24 macro</b>	Pins 1 to 12	Submaster 13 to 24 macros
	Pins 13 to 25	Ground
	Pins 1 to 12	Submasters 25 to 36 macros



<b>Sub 25-36 macros</b>	Pins 13 to 25	Ground
<b>Sub 37-48 macros</b>	Pins 1 to 12	Submaster 37 to 48 macros
	Pins 13 to 25	Ground

## 300 Series Consoles

---

### DMX female 5 pin XLR

<b>Pin</b>	<b>Description</b>
Pin 1	Ground
Pin 2	Data -
Pin 3	Data +
Pin 4	No connection
Pin 5	No connection

---

### AUX female 6 pin XLR

<b>Pin</b>	<b>Description</b>
Pin 1	Ground
Pin 2	+10VDC, 100mA
Pin 3	Data +
Pin 4	Data -
Pin 5	RS-232 - transmit data
Pin 6	RS-232 - receive data

---

### Sbus RJ45

<b>Pin</b>	<b>Description</b>
Pin 1	Data + (channel A)

Pin 2	Data - (channel A)
Pin 3	Data + (channel B)
Pin 4	+ 24 VDC
Pin 5	+ 24 VDC
Pin 6	Data - (channel B)
Pin 7	Ground
Pin 8	Ground

## Parallel Printer 25 Pin D Type Socket

Pin	Description
Pin 1	Strobe
Pin 2	Data 0
Pin 3	Data 1
Pin 4	Data 2
Pin 5	Data 3
Pin 6	Data 4
Pin 7	Data 5
Pin 8	Data 6
Pin 9	Data 7
Pin 10	Ack
Pin 11	Busy
Pin 12	Paper end
Pin 13	Selected
Pin 14	Auto feed
Pin 15	Error
Pin 16	Init
Pin 17	Select in
Pin 18-25	Ground

## COM1

Pin	Description
-----	-------------

Pin 1	Carrier Detect
Pin 2	Receive Data
Pin 3	Transmit Data
Pin 4	Data Terminal Ready
Pin 5	Signal Ground
Pin 6	Data Set Ready
Pin 7	Request to Send
Pin 8	Clear to Send
Pin 9	Ring indicator

---

## PS2 Mouse

Pin	Description
Pin 1	Data
Pin 2	No connection
Pin 3	Ground
Pin 4	+5V DC
Pin 5	Clock
Pin 6	No connection

---

## PS2 Keyboard

Pin	Description
Pin 1	Data
Pin 2	No connection
Pin 3	Ground
Pin 4	+5V DC
Pin 5	Clock

Pin 6	No connection
-------	---------------

## VGA female 15 pin high density D-type

Pin	Description
Pin 1	Analog Red 0-0.7V
Pin 2	Analog Green 0-0.7V
Pin 3	Analog Blue 0-0.7V
Pin 4	No connection
Pin 5	Self Test
Pin 6	Red ground
Pin 7	Green ground
Pin 8	Blue ground
Pin 9	No connection (key)
Pin 10	Ground
Pin 11	Ground
Pin 12	No connection
Pin 13	H sync (TTL)
Pin 14	V sync (TTL)
Pin 15	No connection

640x480 pixels, 16 colours, 60Hz refresh. This port is compatible with both VGA and SVGA monitors. Port 1 is the main console display output, Port 2 is the additional channels display output in Dual VGA mode.

## TFT Panellink

Pin	Description
Pin 1	TX1 +
Pin 2	TX1 -
Pin 3	GND
Pin 4	GND
Pin 5	TXC +
Pin 6	TXC -

Pin 7	GND
Pin 8	+ 5V
Pin 9	+ 24V
Pin 10	GND
Pin 11	TX2 +
Pin 12	TX2 -
Pin 13	GND
Pin 14	GND
Pin 15	TX0 +
Pin 16	TX0 -
Pin 17	+5V
Pin 18	GND
Pin 19	Sbus Data -
Pin 20	Sbus data +

---

## SMPTE Input

Pin	Description
Pin 1	GND
Pin 2	Audio +
Pin 3	Audio -

---

## MIDI male 5 pin DIN

Pin	Description
Pin 1	Not connected
Pin 2	Ground
Pin 3	Not connected
Pin 4	Data +
Pin 5	Data -

---

**Submaster macros1-24**

<b>Sub 1-12 macros</b>	Pins 1 to 12	Submaster 1 to 12 macros
	Pins 13 to 25	Ground
<b>Sub 13-24 macro</b>	Pins 1 to 12	Submaster 13 to 24 macros
	Pins 13 to 25	Ground

---

**300 Series Modules****Sbus RJ45**

<b>Pin</b>	<b>Description</b>
Pin 1	Data + (channel A)
Pin 2	Data - (channel A)
Pin 3	Data + (channel B)
Pin 4	+ 24 VDC
Pin 5	+ 24 VDC
Pin 6	Data - (channel B)
Pin 7	Ground
Pin 8	Ground

---

**Serial port**

<b>Pin</b>	<b>Description</b>
Pin 1	No connection
Pin 2	Receive Data
Pin 3	Transmit Data
Pin 4	+5 VDC

Pin 5	Signal Ground
Pin 6	No connection
Pin 7	Request to Send
Pin 8	No connection
Pin 9	No connection

---

## PS/2 port

Pin	Description
Pin 1	Data
Pin 2	No connection
Pin 3	Ground
Pin 4	+5V DC
Pin 5	Clock
Pin 6	No connection

---

## TFT Panellink

Pin	Description
Pin 1	RX0 -
Pin 2	RX0 +
Pin 3	GND
Pin 4	GND
Pin 5	RX2 -
Pin 6	RX2 +
Pin 7	Sbus data +
Pin 8	Sbus data -
Pin 9	+24V

Pin 10	GND
Pin 11	RXC -
Pin 12	RXC +
Pin 13	GND
Pin 14	GND
Pin 15	RX1-
Pin 16	RX1 +
Pin 17	+5V
Pin 18	GND
Pin 19	+5V
Pin 20	GND

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---



## The Console Setup Screen

The Console Setup screen is displayed when you press the **[REPORT]** key followed by the **{ADV SETUP}** softkey, then the **{CONSOL SETUP}** softkey. This display lets you control how the console communicates with other devices to which it is connected.

Use the trackball to move between fields. Change values by using **[+]** and **[-]** or the Level Wheel, or by typing in numbers where appropriate. Choices available for the currently selected field appear at the bottom of the display, with the currently selected choice highlighted as white on a red background.

Only items shown in green text can be modified. Yellow text indicates items that are not available with the current system configuration.

When a field is selected, you can apply the default value for the field by pressing the **{DEFLT}** softkey. The default value in some fields is dependant on the setting of the GENIUSPRO/PALETTE field in the Console Window.

To select the first field in the Setup display press **[\*]**.

8:32:28 24/01/99 **CONSOLE SETUP** \*No Title GM=FL/FL

Output Connections				Network				
	Start	End	Scaling %	Networker				
DM54/AMX	D54 OUT	___1	100	Net Video Slot	ON			
					OFF			
	Start	End	Net Slot	NET1	OFF	___1	2048	2048
DMX1	DMX OUT	___1	512	NET2	OFF	___1	2048	2048
DMX2	OFF	___513	1024	NET3	OFF	___1	2048	4097
DMX3	OFF	___1025	1536	NET4	OFF	___1	2048	6145
DMX4	OFF	___1537	2048					

Communications						
Reporter			Net Node	Port	Baud	Config Address
Handheld Remote	1	OFF	LOCAL	OFF	9K6	8-N-1 ___0__0
Handheld Remote	2	OFF	LOCAL	OFF	9K6	8-N-1 ___0__0
Handheld Remote	3	OFF	LOCAL	OFF	9K6	8-N-1 ___0__0
Handheld Remote	4	OFF	LOCAL	OFF	9K6	8-N-1 ___0__0
ASCII Remote Input		OFF	LOCAL	OFF	9K6	8-N-1
GO Key Output		OFF	LOCAL	OFF	9K6	8-N-1
Macro Trigger Output		OFF	LOCAL	OFF	9K6	8-N-1
Remote Test		OFF		OFF	9K6	8-N-1
Remote Trigger Macro		OFF	LOCAL	OFF	9K6	8-N-1
Audio Input Macro		OFF				

External Submasters					
External			External		
External 1	___1	LOCAL	External 5	___5	LOCAL
External 2	___2	LOCAL	External 6	___6	LOCAL
External 3	___3	LOCAL	External 7	___7	LOCAL
External 4	___4	LOCAL	External 8	___8	LOCAL
			External 9	___9	LOCAL
			External 10	___10	LOCAL
			External 11	___11	LOCAL
			External 12	___12	LOCAL

OFF | AMX OUT | D54 OUT

SETUP: \*  
Select item to edit

**Note:** The above screen shows the options available on 300/500 Series consoles fitted with an Intel Pentium II or Pentium Pro (i Range) processor. Where options are not available on your console, they are omitted from the Console Setup Screen.

The fields within the four windows of the Console Setup Screen are described under the window title as follows:

- [Output Connections Window](#)
- [Network Window](#)
- [Communications Window](#)
- [External Submasters Window](#)

## Output Connections Window

The Output Connections window is in the Console Setup Screen, and lets you configure the output connectors on the rear panel of the console. The DMX connectors are output-only in the standard software. However, the last available DMX connector (DMX2, DMX3 or DMX4, depending on the console) can be configured for input or output if the CommuniquéPro software is loaded. For more

information refer to [CommuniquéPro](#). The AMX and D54 connectors on 500 Series Consoles are output only and can be configured as AMX192 or D54 outputs.

The following fields are described in this section:

- [D54/AMX](#)
- [DMX 1 - 4](#)

---

### **D54/AMX (500 Series Consoles only)**

This enables the AMX (192 channels) or D54 (384 channels) output connector on the rear panel. The AMX192 and D54 outputs cannot be assigned output numbers higher than the number of console outputs (2048). Since AMX192 always transmits 192 channels, it cannot have a Start value higher than 1857. Since D54 can transmit a “short” frame, it can have start values as high as 2048.

**D54/AMX** Sets the output protocol for the analog multiplex output. Can be **OFF** (default), **AMX OUT**, or **D54 OUT**.

**Start** The starting output number from the patch that is mapped to the analog multiplex connector (default 1). Can be **1** to **2048** if the output type is **D54 OUT** or **1** to **1152** if the output type is **AMX OUT**.

**Scaling** Scaling factor for all levels sent to the AMX or D54 output. Adjusts the levels up or down and can be set from **80** to **120** (default **100**).

---

### **DMX 1 - 4**

This configures the DMX outputs (DMX1, DMX2, DMX3 and DMX4 connectors on the rear panel).

**Note:** *The number of DMX connectors available depends on the type of console.*

Each connector can be set for up to 512 outputs. The last available DMX connector (DMX 2, DMX3 or DMX4, depending on the type of console) can optionally input 512 signals if it is not outputting signals.

**DMX1** through **DMX4** (default is **DMX OUT** for DMX1 and **OFF** for the others). This sets the output to **OFF** or **DMX OUT**. (DMX3 can also be set to **DMX IN** with the [CommuniquéPro](#) software)

**Start** and **End** (default is **1, 512 / 513, 1024 / 1025, 1536**). The range of output numbers from the Patch that is mapped to the connector from **1** to **4096**. The maximum between each Start and End is **512** outputs.

---

## **Network Window**

The Network window is in the Console Setup display, and lets you configure the outputs that the console is sending to the network. The ShowNet system uses SN1xx series network adapters to convert the network output signals to DMX. These outputs require a network adapter and the

Networker software. Although newer consoles come with the network adapter installed, older consoles need to have one installed to take advantage of ShowNet features. For more information refer to [Networker](#)

The following fields are described in this section:

- [Networker On/Off](#)
- [Networker Video Slot](#)
- [NET 1 - NET 4](#)

---

### **Networker On/Off**

Controls whether the Networker software features are enabled. This is only used when the Networker software is loaded. For more information refer to [Networker](#)

Its value is **OFF** (default) or **ON**.

***Note:** Do not turn this on without first consulting the [Networker](#). Turning on an improperly connected system may significantly slow console operations.*

---

### **Network Video Slot**

Controls whether the network video slot is enabled, and its slot number (from 1 to 8). This is only used when the Networker software is loaded. For more information refer to [Networker](#)

Its value is **OFF** (default) or **ON**.

***Note:** Do not turn this on without first consulting the [Networker](#). Turning on an improperly connected system may significantly slow console operations.*

---

### **NET1 through NET4**

This configures the network DMX outputs. Since the console has only 4 active DMX connectors but up to 4096 outputs, the most common use of these is to use the network for the additional outputs.

**NET1** through **NET4** (default is DMX|OUT for NET1 and OFF for the rest).

**Start** and **End** (default is 1, 512 / 513, 1024 / 1025, 1536). The range of output numbers from the Patch that is mapped to the connector from 1 to 4096. The maximum between each **Start** and **End** is **512** outputs.

---

### **Communications Window**

The Communications window is in the Console Setup display, and lets you configure the external communications ports.

For information on the network features of these options, and before attempting to select any non **LOCAL** net node, please refer to [Networker](#)

The following fields are described in this section:

- [Reporter On/Off](#)
- [Handheld Remote Communications Setup](#)
- [ASCII Remote Input](#)
- [GO Key Output](#)
- [Macro Trigger Output](#)
- [Remote Test](#)
- [Audio Input Macro \(500 Series Consoles Only\)](#)
- [Remote Trigger Macro \(500 Series Consoles Only\)](#)
- [Trigger Bytes \(500 Series Consoles Only\)](#)

---

### ***Reporter On/Off***

Sets the status and the serial port that the Reporter is connected to and is only used when the CommuniquéPro software is loaded. It cannot be set to the same port as the Handheld Remote. For more information refer to [Console Reporter](#)

---

### ***Handheld Remote Communications Setup***

On 500 Series Consoles fitted with Intel Pentium II or Intel Pentium Pro processors (i Series), all three AUX ports can be used to connect handheld remotes. All other consoles support either one or two handheld remotes. The number of handheld remotes that can be used with your console is shown on the Console Setup Screen.

Set the type of handheld remote for the appropriate AUX port. This can be **OFF**, **DESIGNERS REMOTE**, **R120 WIRED**, **R130 WIRED**, **R120 RADIO**, or **R130 RADIO**. The other fields 'Net Node', 'Port', 'Baud' and 'Config Address' enable you to set up the communication details for each handheld remote.

For more information on connecting a handheld remote refer to [Handheld Remotes](#)

---

### ***ASCII Remote Input***

Sets the status and the serial port that the ASCII Remote is connected to and is only used when the

Communiq Pro software is loaded. It cannot be set to the same port as the Handheld Remote. For more information refer to [Communiq Pro](#)

---

### ***GO Key Output***

Sets the status and the serial port that the GO Key output is connected to and is only used when the Communiq Pro software is loaded. It cannot be set to the same port as the Handheld Remote. For more information refer to [ASCII Remote Go Output](#)

---

### ***Macro Trigger Output***

Sets the status of the serial port that the macro trigger output is connected to and is only used when the Communiq Pro software is loaded. For more information refer to [ASCII Remote Control Output](#)

---

### ***Remote Test***

This is only used for factory testing and should always be set **OFF**.

---

### ***Audio Input Macro***

Sets the macro that will be run from the audio bass beat and is only used when the Communiq Pro software is loaded. For more information refer to [Audio Input Macro](#)

---

### ***Remote Trigger Macro***

The macro that will be run from the Remote Control Input and is only used when the Communiq Pro software is loaded. For more information refer to [ASCII Remote Control Input](#)

---

### ***Trigger Bytes***

These three fields are only used when the Communiq Pro software is loaded. Refer to [MIDI Trigger Macro](#) for more detail.

---

## **External Submasters Window**

The External Submasters window is in the Console Setup display, and lets you configure which internal submasters are run by the external submasters. The node address of up to 12 external submasters can be set in this window. In addition a scaling factor of between 80 and 120% can be

applied to compensate for variations in signal levels between the console and the external equipment.

This functionality is only available with the [CommuniquéPro](#) software loaded. See the [CommuniquéPro](#) for more detail.

For information on the network features of this option please refer to the [Networker](#).

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---



## Networker

Networker is a standard software package for Strand Lighting's 500 Series Consoles and GeniusPro or Lightpalette Operating software. It uses an Ethernet network to provide the following features:-

- **Tracking Backup** - Tracks state and changes from one console to another. Backup console will automatically take over running the show when the main console fails.
- **Remote Consoles** - Multiple consoles can operate together on the same show.
- **Remote Video** - Distributes console video information over the network to SN network nodes.
- **Remote DMX** - Distributes DMX data over the network to SN network nodes.
- **Remote Handhelds** - Use Remote port on SN100 and SN102 network nodes to connect handheld remotes.
- **Remote Faders** - Use Analogue port on SN100 and SN102 network nodes to connect remote faders or to use the faders fitted to the SN100.
- **Remote MIDI** - Use MIDI ports on SN100 and SN102 to extend the range of your MIDI connections.

This section covers the following topics:

- [Network Port Selection](#)
- [Node Addresses](#)
- [Broadcast Communication](#)
- [Point to Point Communication](#)
- [Default IP Addresses](#)
- [220node.cfg Network Configuration File](#)
- [SN10X Configuration File Format](#)
- [Network Node Configuration File Example](#)
- [SN10X Node Self Test Software](#)
- [Preserving Configuration Files](#)
- [Network DMX](#)
- [Network Video](#)
- [Tracking Backup](#)
- [Remote Consoles](#)
- [Remote Ports](#)

---

## Network Port Selection

Consoles with newer electronics have built-in Ethernet ports, rather than use a plug-in card. By default,



the RJ-45 port (phone-style) is enabled. To enable the BNC port instead, an empty flag file needs to be present in the operating software directory. To do this, add this line to the file USERINIT.BAT in that directory:

```
ECHO > BNC_IF.FLG
```

To change the port selection on the plug-in 3Com card, use the EtherDisk floppy supplied with the card, and run the **3c5x9cfg.exe** utility.

---

## Node Addresses

All consoles, nodes and PCs on the network have individual Internet Protocol (IP) addresses. IP address are expressed as a series of four three digit numbers separated by periods, for example.

**192.168.000.069**

Typically the first three sets of numbers (determined by the Net Mask) identify the network and the last set of numbers identifies the device on that network.

Network Address	Device Address
192.168.000	.069
192.168.000	.068

---

## Broadcast Communication

For broadcast communication, used for DMX and Video distribution only, IP addresses are not used and you need not configure each device with a unique address.

---

## Point to Point Communication

For point to point communication, used for Tracking Backup, Multi-Console, Server and ShowNet configuration, IP addresses are used and MUST be unique otherwise there will be an address conflict and the network will fail. For advanced diagnostic and maintenance purposes unique addresses are also required.

---

## Default IP Addresses

Strand equipment is supplied from the factory with the following IP addresses:-

Equipment Type	IP Address	Net Mask
File Server (PC)	192.168.000.66	255.255.255.0
Backup (console or PC)	192.168.000.67	255.255.255.0
Main (console or PC)	192.168.000.68	255.255.255.0
Remote (console or PC)	192.168.000.69	255.255.255.0
SN100/102/103/104 Node	192.168.000.70	255.255.255.0

You can use these default addresses unless:-

- You intend to use multiple MAIN, REMOTE or BACKUP consoles or PCs on the same network.
- You intend to use ShowNet configuration software - in which case all SN10X node addresses must be unique.

---

## 220node.cfg Network Configuration File

The 220node.cfg network configuration file is present on all nodes, consoles and PCs. You can edit it using the DOS EDIT command to change many aspects of Networker operation. This is a sample 220node.cfg file from an 530 Console

```
# Copyright (c) Strand Lighting Ltd 1994-2000
# All rights reserved.
#
# Networker node configuration file
#
# @(#)220node.cfg 79.2
```

```
#
# Configures this node for the Strand ShowNet network.
#
# You can edit this file, but be aware that the system
# may rewrite it when new software is installed.
#
# You can add comment lines starting with #, or change
# the order of the lines.
#
# To find out how to upgrade SN node software over the
# network, see the file SW2ALL.BAT on the SN software disk.
#

# Address, name & type of this node on the network (user edited)
# my_nodeaddr = xxx.xxx.xxx.xxx Must be unique for each node.
# my_nodetype = (300/425/430/510/520/530/550/520i/530i/550i/
#               SN100/SN102/SN103/SN104/IOFTP
#               # DESIGNER_PC/BACKUP_PC/CS_PC/NET_MON)
# my_nodename is 8 characters max. Must be unique for each node.
my_nodeaddr = 192.168.0.70
my_nodetype = 530
my_nodename = denise

# Panelid (user - and system-edited)
panelid_fdr = 00-00-00-00
panelid_2fdr = 00-00-00-00
panelid_3fdr = 00-00-00-00
panelid_4fdr = 00-00-00-00
panelid_5fdr = 00-00-00-00
panelid_6fdr = 00.00.00.00
panelid_7fdr = 00-00-00-00
panelid_1cc = 00-00-00-00
panelid_smpte = 00-00-00-00
panelid_1vlcd = 00-00-00-00
panelid_2vlcd = 00-00-00-00
panelid_3lcd = 00-00-00-00
panelid_4lcd = 00-00-00-00
panelid_shlcd = 00-00-00-00

# TCP/IP Netmask: (user-edited)
netmask = 255.255.255.0

# TCP/IP Gateway: (user -edited)
gateway = 0. 0. 0. 0.
```

```
# File server IP address: (user-edited)
# 0.0.0.0. means file server not used
# Used by consoles and PCs to locate the file server
file_server_addr = 192.168.11.215

# IP address of main console to connect to: (user-edited)
# Used by backup and remote consoles to locate the main console
console_addr = 192.168.11.20

# Disable or enable the login display: (user-edited)
# The Server application needs to be installed for this to work
# 0 (disable) or 1 (enable)
login_display = 1

# Disable or enable console outputs: (user - and system-edited)
# Offline means all local and network DMX and handhelds are off
# 0 (offline) or 1 (online)
on_line = 1

# Define how this node starts up: (user- and system-edited)
# 0 (remoete) or 1 (backup) or 2 (main console)
backup_mode = 2

# Defines how CLR & SHIFT CLR operate (user-edited)
# 0 (clr deletes single key, shift clr deletes whole command line)
# 1 (clr deletes whole command line, shift clr deletes single key)
clr_mode = 0

# Numberof show to load at start up: (iser- and system - edited)
# 0 (current show) or 1 -> 5 (listed in <user_name>.usr file)
user_show = 0

# Name of last logged in user: (user- and system-edited)
# up to 8 characters, no spaces
user_name =

# Password of last logged in user: (user- and syststem-edited)
user_pw =

#
# End of File
#
```

## DMX PRIORITY ON SN10x NODES

What is PRIORITY?

In a lighting situation where there is more than one control desk, both may be sending out NET DMX to the same DMX PORT on the node. If this is the case, the user can specify which control desk the node takes the CHANNEL level from, i.e., who has PRIORITY. This is done in the 220NODE.CFG file of the node.

Priority is setup as follows:-

PORT	START	END	NET SLOT	PRIORITY	HTP
DMX = 1	1	100	1000	1	
DMX = 1	1	100	2000	2	

This means that if the node receives DMX data on both NETSLOT 1000 and NETSLOT 2000, then the node will use the levels from NETSLOT 1000. This is because 1 is the highest priority. If the node stops receiving DMX data from NETSLOT 1000 then it will use the levels from NETSLOT 2000.

What is HTP?

HTP or **H**ighest **T**akes **P**recedence means that if two consoles are transmitting NET DMX to the same DMX PORT on the node, the highest channel level will be displayed.

PRIORITY VALUES

1 = HIGHEST, 3 = LOWEST.

If one instance of a DMX PORT is set to HTP, then all instances of that DMX PORT are HTP.

HTP supercedes PRIORITY.

## SN10X Configuration File Format

The configuration file c:\220node.cfg on the SN10X is responsible for configuring all aspects of the SN10X's operation. Each of the fields in the file will now be described.

In the configuration file, lines preceded by a '#' character are comments, these lines are ignored.

The Strand Networker networking software may need to address a specific node on a network. The Internet address is the means by which the software can uniquely identify each unit on a network. The Internet address of an SN100 is specified by the my\_nodeaddr keyword in the 220node.cfg file.

All the devices on a network must have a unique Internet address. Once software is installed on an SN100, it will contain a default 220node.cfg configuration file. This default config file has an address of 192.168.000.70 stored in it. If an installation requires multiple SN100's on a network, it is imperative that they all have unique internet addresses.

The NETMASK is the subnet mask, which is fixed and should not be changed, this NETMASK allows

for 252 units on this subnet.

The format of the Internet address is:- AAA.BBB.CCC.DDD

where AAA, BBB, CCC and DDD are decimal number between 0 and 255. with the subnet mask shown and the default Internet address, suitable Internet addresses can be formed as follows:-

**192.168.000.XXX** where XXX cannot be 0, or 255.

In a system that contains 5 SN10X's (for example) a suitable Internet configuration would be :-

Node	Internet address
SN100 (a)	192.168.000.70
SN100 (b)	192.168.00.71
SN100 (c)	192.168.00.72
SN100 (d)	192.168.000.73
SN100 (e)	192.168.00.74

DMX data input and output is controlled by the use of the DMX keyword. The DMX keyword has the following syntax,

DMX = Port Type Start End Slot

where,

Port is either 1, 2, 3 or 4.

Type specifies whether the Port is IN, OUT or OFF.

**IN** specifies that DMX data coming in on the specified Port should be placed on the network at the specified global network slot, the first and last dimmers sent out from the incoming DMX frame are specified by the **START** and **END** numbers. The **START** and **END** numbers must be between 1 and 512.

**OUT** specifies that DMX data coming in on the network at the specified global network channel offset, will be sent out of the DMX Port specified. The first and last dimmers sent out for the outgoing DMX frame are specified by the **START** and **END** numbers.

**OFF** Specifies that this port is not being used for DMX

Field Name	Description
my_nodeaddr	IP of this device
my_nodetype	Type of device - see comment for list.
my_nodename	Name of this device - 8 characters maximum
netmask	Net mask - for advanced use - use default.

console_addr	IP of main console for use by backup or remote consoles
file_server_addr	IP of file server

## Networker Node Configuration File

The following is an example of a typical net node configuration file for an SN102

```
#
# Copyright (c) Strand Lighting Ltd 1994-98.
# All rights reserved.
#
# Networker node configuration file
#
# @(#)220node.cfg 70.1
#
# Configures this node for the Strand ShowNet network.
#
# You can edit this file, but be aware that the system
# may rewrite it when new software is installed.
#
# You can add comment lines starting with #, or change
# the order of the lines.
#
# To find out how to upgrade SN node software over the
# network, see the file SW2ALL.BAT on the SN software disk.
#
# Address, name & type of this node on the network
# my_nodeaddr = xxx.xxx.xxx.xxx Must be unique for each node.
#
# my_nodetype = (300/430/520/530/550/520i/530i/550i/SN100/SN102/SN104/
# DESIGNER_PC/BACKUP_PC/CS_PC/NET_MON)
# my_nodename is 8 characters max. Must be unique for each node.
my_nodeaddr = 192.168.11.218
my_nodetype = sn102
my_nodename = juliette

# TCP/IP Netmask
netmask = 255.255.255.0

# TCP/IP Gateway
```

```
gateway = 0. 0. 0. 0
```

```
#
# Port 1..4
# Directn in, out, off Set to off when used as aux.
# Start 1..512) Specifies range within the 512
# End 1..512 ) DMX channels.
# NetSlot 1..18432 Start network DMX slot.
# Priority blank, 1..3 Up to 3 priorities can be specified
# per channel, the highest priority
# active channel will be used.
# HTP blank, htp Set to htp to HighestTakesPrecedence
# up to 3 active priority channels
#
# A channel is 'active' if it has been seen on the network within
# the past 30 seconds.
# Multiple DMX = lines are used to set up multiple priorities or to
# configure sub ranges of DMX channels.
# DMX = Port Directn Start End NetSlot Priority HTP
DMX = 1 out 1 512 1
DMX = 2 out 1 512 1
DMX = 3 out 1 512 1025
DMX = 4 out 1 512 1537
#
# Configuration end
```

---

## SN10X Node Self Test Software

SN10X nodes are supplied with comprehensive built-in test software which verifies correct operation at power up. If a fault should be detected a message will appear on the VGA1 monitor and the Fader LEDs will flash. Contact your dealer or Strand service department for more information.

Service engineers can access the built in diagnostics as follows, using a PC keyboard and the supplied adapter :-

1. Press Ctrl-X to exit from the application and return to DOS.
2. Restart the application in test mode by typing 220os /TEST in the c:\220os directory and follow the on-screen prompts.
3. The optional command line switches /MASTER and /SLAVE can be used with the /TEST switch to perform back-to-back Ethernet tests with two SN10X Nodes.



---

## Preserving Configuration Files

When installing a new release, the existing 220NODE.CFG file gets overwritten with a default config file supplied in the install disk or the remote install compressed file. The installation utility will first copy the existing 220NODE.CFG to 220NODE.OLD in the same directory before overwriting it. This provides a mechanism for re-instating the old configuration file via the batch file RECOVER.BAT which the user supplies in the C:\220OS directory. As described above, the install utility will look for the batch file RECOVER.BAT and run it if it exists at the end of the installation process.

As a minimum, the RECOVER.BAT file should contain the following:-

**copy 220NODE.OLD 220NODE.CFG /v /y**

If the old config file is not re-instated, then the result of loading the new release on all SN10Xs, will be that they will all have the same IP address and therefore create confusion in the consoles and pc's running the ioftpxxx programs.

The batch file RECOVER.BAT can be easily copied to the SN100 and SN102 as they contain a floppy drive. However, the only method for the SN104 is to download it via the IOFTPxxx program. The procedure for doing it is as follows:-

1. Determine the node name or IP address of the SN104.
2. Create the batch file locally on the PC which you will use to run the IOFTPxxx program.

Assuming that the file is in the directory from which you will run IOFTPxxx, run the following:-

**IOFTPxxx LOGIN nodename PUT RECOVER.BAT . LOGOUT QUIT**

---

## Network DMX

**Note:** Network DMX uses Broadcast communication in which IP addresses are not used.

First in the Network section of the Console Setup Screen set Networker to ON.

Then set the NET1..4 Network DMX ports to OUT. This outputs console DMX to the network in 4 ranges, often called Universes if they are 512 bytes long.

Range defaults for 430, 520, 530 and 550:

Start	End	Slot
1	512	1
513	1024	513
1025	1536	1025

1537	2048	1537
------	------	------

Range defaults for 510i, 520i, 530i and 550i (fitted with Pentium Pro processors):

Start	End	Slot
1	1024	1
1025	2048	2049
2049	3072	2049
3073	4096	3073

The Start address is the number of the first Output (see Output in Patch, synonymous with Dimmer) which is output on the Network DMX port.

The End address is the number of the last Output (see Output in Patch, synonymous with Dimmer) which is output on the Network DMX port.

The Slot address is the starting point in the network DMX slot range of 1 to 18432 where the **DMX OUT** port range is broadcast to. If more than one console broadcasts to the same net slots, then unwanted light flicker will occur. The **NET1..4** connections may be set to **OFF**, **DMX OUT**, **PREVIEW** or **DMX IN**.

Once enabled, output of Network DMX is immediate.

If the **NET4** port is set to **IN**, then the Start and End addresses refer not to Output numbers on the patch display, but to the magenta input numbers, if they are patched. The Slot address sets the point in the network DMX slot range from where the .DMX IN range is received.

## Network Video

**Note:** Network Video uses Broadcast communication in which IP addresses are not used.

First in the Network section of the Console Setup Screen set Networker to ON.

Then set the NET Video Slot address to 1. This outputs the console's first screen in Net Video Slot 1, second screen in Net Video Slot 2 and so on.

If there are multiple main consoles on the same network it may be necessary to set a NET Video Slot number other than 1 to avoid conflicts.

Once enabled, output of Network Video is immediate.

# Tracking Backup

**Note:** *Tracking Backup uses Point to Point communications in which IP addresses are used and MUST be unique.*

This section covers the following topics:

- [Overview of Tracking Backup](#)
  - [Configuration for Tracking Backup](#)
  - [Tracking Backup Status](#)
  - [Tracking Backup Commands](#)
  - [Shifted Backup Commands](#)
  - [Testing Backup Takeover](#)
  - [Console Lock on Backup](#)
- 

## Overview of Tracking Backup

Tracking Backup allows 2 consoles/PCs running identical configurations of GeniusPro or Lightpalette to work together as main and backup consoles/PCs for added security of operation.

### Notes

1. *'Identical configurations' means that main and backup should be registered with the same applications and number of channels. If the backup is a PC, this requires that it should have a serial numbered dongle (available since version 2.0 software) which enables the PC to be registered with a password just like a console.*
2. *Any two types of console can be used as a main/backup pair, but non-i consoles may not be able to have enough channels.*
3. *Backup PCs do not need to be fitted with dual VGA cards, because video screen modes track correctly without them.*

During normal operation the main desk runs the show (is in control) and generates wired or network DMX to drive the lights. The backup console will be in exactly the same state as the main console (in synchronization (sync)) and will execute all commands the main console executes (tracking) but will not output DMX (or other information). Should the main console fail or become disconnected from the backup console the backup console will take control of the show and start to output DMX levels. This change over happens in a matter of a few seconds during which the lighting levels are maintained.

But first, in order to get the backup into sync, the operator of the main console must give sync to the

backup. This can take a minute or so and would normally be done when the console is first powered on.

When disconnected the main and backup console can both run different shows provided they are configured not to output network DMX or video to the same slots at the same time and cause a conflict.

The status of the backup (and main) is always displayed in a small window under the wheel bar.

---

## Configuration for Tracking Backup.

You can use consoles or PCs as main or backup consoles.

To guarantee tracking, both main and backup must have identical passwords (number of channels, applications loaded). This now also applies to PCs, now that PC dongles are registered with channels and applications.

*Note: PCs no longer need to have a dual VGA card.*

A PC used for backup should also have its number of submasters set to match those of the main. This can be done by creating a file called USERINIT.BAT in the backup PC program directory with a line according to the main console type:

If the main is a 520, the line should be:

**SET 220NUMSUBS=24**

If the main is a 530:

**SET 220NUMSUBS=30**

If the main is a 550:

**SET 220NUMSUBS=54**

This file does not need editing after installing new software. (Never edit the AUTOEXEC.BAT or CONFIG.SYS files - these are recreated when new software is installed.)

A backup console with a different number of submasters to the main also needs 220NUMSUBS setting to match the main.

You must have a floppy disk in main and backup drives if you use disk archive operations which access the floppy, or you will lose sync.

Ensure that the same version of the operating software is installed on the main and backup.

Edit main 220NODE.CFG file in addition to the general settings:

**on\_line = 1**  
**backup\_mode = 2**

Edit backup 220NODE.CFG file in addition to the general settings:

**on\_line = 1**  
**backup\_mode = 1**  
**console\_addr = 192.168.0.aaa**

aaa must match my\_nodeaddr of the main console

### **Start main console**

1. Power up, or run 'os' from c:\220os at DOS. If you are using the login display, enter OnLine=YES, Mode=MAIN, Main=LOCAL.
2. Press F1 to log in. The default admin user password is blank.
3. Start backup console or PC
4. Power up, or run 'os' from c:\220os at DOS. If you are using the login display, enter OnLine=YES, Mode=BACKUP, Main= Console1. Both consoles should then show 'Main Ok Backup Ok No Sync'.

### **To Achieve Sync**

On Main or Backup, at the Backup Commands menu (under the More key, or Alt R on the alpha keyboard), press M Give Sync or M Take Sync (main give sync to backup, or main take sync from backup). The console giving sync saves the current show, the shows file is transferred, and the other console loads the show file. Both consoles should then show 'Main Active In Sync'.

### **Demonstrate Backup Taking Over**

Disconnect the main console from the network. After a few seconds, backup shows 'Backup in control no sync'. Main will show 'Backup Gone Offline'.

### **Resync Main After Backup Has Taken Over**

Reconnect main and do Main Take Sync. (You need to power any remote console or PC down and up again to ensure it tracks again to main and backup.)

### **Shutdown From Main**

Only allowed when not in sync - use the backup command Break Sync first. Use Shutdown on main console only to return to DOS. (A warning is given if remote users are logged in.)

## Tracking Backup Status

Tracking backup status is displayed on the levels screen under the wheel bar. States are the same on main and backup except for:-

M - Seen on Main only.

B - Seen on Backup only.

Backup Active No Sync		Backup has taken control because main has disappeared.
Backup Active In Sync	M	Backup controlling lights.
Backup Gone Offline		Backup Gone Offline Main cannot see backup any more.
Backup Offline Show Bad?	M	Backup died giving sync to main, so main's show may be incomplete.
Main OK Backup OK No Sync		Both on line, not yet sync'd.
Sync Break Connect		Break sync command in progress.
Sync Connect To Backup		Main is connecting to backup during sync.
Main Active In Sync		Main controlling lights.
Main Not Found	B	Backup has started and can't find main.
Main Gone Offline	B	Backup can't see main any more.
Main Active No Backup	M	Main is starting up and has not yet found backup.

Sync Connect To Main		Backup is connecting to main during sync.
Sync Backup Loading		Main giving sync.
Sync Backup Saving		Main taking sync.
Sync Main Loading		Main taking sync.
Sync Main Saving		Main giving sync.
Sync Transfer To Backup		Main giving sync.
Sync Transfer To Main		Main taking sync.

---

## Backup Commands

Backup commands are available if both main and backup powered up with the state Main OK Backup OK No Sync displayed. If states such as Main (or Backup) Gone Offline, or Main (or Backup) Not Found are displayed, these commands are not available.

Backup commands are accessed by pressing **[MORE]{BACKUP CMDS}** , revealing the following set of soft keys:-

**{M GIVE SYNC}**, **{M TAKE SYNC}**, **{M GIVE CTRL}**, **{M TAKE CTRL}**, **{BREAK SYNC}** and **{RESET DESK}**

### **{M GIVE SYNC}**

Main give sync to backup: the current show is transferred to the backup and only the main's outputs are enabled.

State sequence:

- Sync Transfer To Backup
- Sync Backup Loading (if the sync fails for any reason here, see Shifted Backup commands below)
- Sync Connect To Backup
- Sync Connect To Main
- Main Active In Sync.

### **{M TAKE SYNC}**

Main take sync from backup: the current show is transferred from the backup and only the main's outputs are enabled.

State sequence:

- Sync Transfer To Main
- Sync Main Loading (if the sync fails for any reason here, see Shifted Backup commands below)
- Sync Connect To Backup
- Sync Connect To Main
- Main Active In Sync

### **{M GIVE CTRL}**

Main give control to backup: the main's outputs are disabled and the backup's outputs are enabled.

New state:

- Backup Active In Sync

### **{M TAKE CTRL}**

Main take control from backup: the main's outputs are enabled and the backup's outputs are disabled.

New state

- Main Active In Sync

### **{BREAK SYNC}**

Break sync: the tracking connection between main and backup is broken, which is necessary in order to shut down either console. Only the main's outputs are enabled.

New state:

- Main Ok Backup Ok No Sync

### **{RESET DESK}**

Reset Desk resets many console parameters to power-up defaults. It is run automatically at the end of the Give/Take Sync commands, but is available manually here.

---

## **Shifted Backup Commands**

Two other commands are available, by holding down the **[SHIFT]** key first.

### **{M GIVE SYNC}**

Quick Main Give Sync To Backup. Main and backup are connected without the show data or console



state being transferred. Only available in the Main OK, Backup OK, No Sync state.

State sequence:

- Sync Connect To Backup
- Sync Connect To Main
- Main Active In Sync

### **{M TAKE SYNC}**

Quick Main Take Sync From Backup. Main and backup are connected without the show data or console state being transferred. Only available in the Backup Active No Sync state (i.e. when the backup has taken control automatically, and the main has now restarted).

State sequence:

- Sync Connect To Backup
- Sync Connect To Main
- Main Active In Sync

**Note:** Give or Take Sync may occasionally fail after the sync show has loaded on the destination machine, with the message 'Sync Failed - please try again'. If this happens, use **[SHIFT] [M TAKE SYNC]** to do a quick sync without transferring the show file.

To get main back in control after backup has taken over, use **[SHIFT] [M TAKE SYNC]** to do a quick sync without transferring the show.

---

## **Testing Backup Takeover**

Once main and backup are in sync, you can use the Main Give Control to test that the backup outputs are working. Use Main Take Control to restore main's outputs.

To test automatic backup takeover when in sync, switch off the main or disconnect its network cable. After the network timeout period expires (several seconds), the backup state changes to Backup Active No Sync, and its outputs are enabled.

When the main is powered up again or reconnected, its state also changes to Backup Active No Sync, and its outputs stay disabled.

To restore control to main at this point, you can do Main Take Sync at either console, which will transfer the show as well (in case any changes were made while main was off). If no show changes were made, you can hold SHIFT down while pressing Main Take Sync, which does a quick sync (ie. no show transfer).

---

## Console Lock On Backup

Normally the backup console controls are active when in sync. Commands entered on the backup are echoed back to the main so both consoles stay in sync. To prevent the controls on the backup console being accidentally pressed they can be locked out by pressing the keys **[SHIFT][HELP]** together. Use **[SHIFT][HELP]** again to toggle the console lock off. On the 510i show controller, turn the keyswitch to the locked position and remove the key.

---

## Remote Consoles

**Note:** Remote Consoles use Point to Point communications in which IP addresses are used and *MUST* be unique.

Remote Console/PC allows one Main and several Remote consoles to work together on the same show file at the same time. The main and remote need not have the same configuration of software or hardware. Each console/PC user has their own command line and screen but shares the same show (cues, groups, effects, etc.).

The main console and all remote consoles and PCs must have Operating Software and Networker Utilities software of the same version loaded. Networker Utilities software is loaded using the same Archive menu sequence as for Operating Software. In addition, you can load the Server application to use the Login display, with its easy mode change and login facilities. Without Server, you need to force remote mode without using the login display as described below.

The following topics are covered in this section:

- [Remote Console Configuration](#)
- [Setting Remote Console Mode Without Using the Login Display](#)
- [Using Remote Console Submasters](#)
- [Remote Console Status](#)
- [Remote Console Controls](#)
- [Channel Partitioning](#)
- [Viewing Other User's Displays](#)

---

## Remote Console Configuration

You can use consoles or PCs as main or backup consoles.

Ensure that the same version of the operating software are installed on both main and remote. Ensure that Networker & Utilities is loaded on both main and remote.

Ensure that the main and remote console 220node.cfg files are setup as shown below. My\_nodeaddr needs to be unique for both consoles. Edit main 220node.cfg

```
my_nodeaddr = 192.168.000.68  
my_nodetype = 530 (console type)  
my_nodename = main  
on_line =1  
# IP address of main console to connect to (user-edited)  
console_addr = 192.168.000.68  
  
# Define how this node starts up: (user- and system-edited)  
0 (remote) or 1 (backup) or 2 (main console)  
  
backup_mode = 2
```

Edit the remote 220node.cfg

```
my_nodeaddr = 192.168.000.69  
my_nodetype = 530 (console type)  
my_nodename = remote  
  
# IP address of main console to connect to (user-edited)  
  
console_addr = 192.168.000.68  
  
# Define how this node starts up: (user- and system-edited)  
# 0 (remote) or 1 (backup) or 2 (main console)  
  
backup_mode = 0
```

---

## Setting Remote Console Mode Without Using The Login Display

If a console is to always start as a remote logged in to a particular main console, edit 220NODE.CFG like this:

```
login_display = 0  
console_addr = 192.168.0.68  
(or whatever the main console's address is)  
backup_mode = 0
```

Other fixed startup modes are:

main: **backup\_mode = 2**

backup: **backup\_mode = 1**

---

## Using Remote Console Submasters

When a remote console logs in, its submaster faders control the same submasters as the faders on the main console. For a fader to take control of a submaster, it must be moved to match the position of the fader on the other console which currently controls the submaster.

The faders on a remote console can also be used to control submasters 31-54 on a 530 main console, or 25-54 on a 520 main console. To do this, add the line

**set 220numsubs=54**

in the file USERINIT.BAT on the 530 or 520, and set the submaster layout setup field to “25-36 & 37-48” on the remote console.

---

## Remote Console Status

The node name of each console, together with the name of the main console which the remote is logged into, is displayed on most screens below the wheel bar.

---

## Remote Console Controls

Control interaction between main and remote is summarized below:-

Control	Mode
Command Line	separate
Channel Controls	separate
Screens	separate
Macro Execution	separate
Cue Playbacks	shared
Fx Playbacks	shared
Submasters	shared (unless submaster layout setup is changed)
Grandmasters	shared

Supermasters

shared

---

## Channel Partitioning

This is an important productivity aid to help users of main and remote consoles work together more easily. It allows channels to be assigned to only one or other user for all channel control and record operations. So one user could plot moving light cues while the other plots dimmer cues, without recording or changing the other's channels.

To enable channel partitioning, define the contents of each user's channel partition group, and enable [Channel Partitioning](#) in the Show Setup Screen. When partitioning is enabled, no channel can be assigned to both users at the same time. When you add a channel to a partition group, it is automatically removed from the other partition groups.

---

## Viewing Other Users' Displays

At main or remote consoles, you can view the current display of the other console by pressing **[SHIFT] [MORE]** together. To return to your local display, press **[SHIFT] [MORE]** again. The status display below the wheel bar shows which console display is selected.

---

## Remote Ports

Using the NET NODE field of the Console Setup Screen, you can reassign local console ports to be connected to corresponding ports on an SN100 or SN102.

### Remote Handheld:

Connecting a handheld remote to the remote connector on an SN100 or SN102 means you have to set the Net Node field of [Handheld Remote Communications Setup](#) in the Console Setup Screen to the name of the SN node. Only COM2 is valid for the port.

### Notes:

1. *Older SN100's remote connectors were not wired correctly. Contact Strand Service if your SN100 remote connector does not work.*
2. *Some SN102's remote connectors were not wired for output. If your handheld keys work when connected to an SN102 but the display does not update, contact Strand Service.*

### **Remote Printing:**

You can specify the NET NODE name of another PC or SN100/102 at the [Printer Setup](#) in the Archive Print display.

***Note:** Do not send very long printouts to SN nodes, as they have limited file buffer memory. Not all the printout may print correctly.*

### **Remote Analogue Input:**

The Analogue connector on an SN100 or SN102 may be used by setting the NET NODE fields of the [External Submasters Window](#) on the Console Setup Screen. Each external submaster may be set to a different NET NODE if required. Remember to also assign external submasters and their contents at the submaster display.

### **Remote ASCII Input:**

This NET NODE can be set to any SN100 or SN102 COM1 or COM2 port. Remote GO key output (which sends a message whenever GO is pressed) and remote macro trigger output (which sends the contents of the text string of the text label of any macro which starts with “!”) are similar.

### **Remote MIDI:**

SN100 and SN102 MIDI ports can be used instead of local ports.

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---

## Show Setup Screen

The Show Setup screen is displayed when you press the **[REPORT]** key followed by the **{ADV SETUP}** softkey, then the **{SHOW SETUP}** softkey. This display lets you control how values relating to show control (such as cue tracking and channel partitioning) are handled.

Use the trackball, mouse or the cursor keys on the PC keyboard to move between fields. Change values by using **[+]** and **[-]** or the Level Wheel, or by typing in numbers where appropriate. Choices available for the currently selected field appear at the bottom of the display, with the currently selected choice highlighted as white on a red background.

Only items shown in green text can be modified. Yellow text indicates items that are not available with the current system configuration.

When a field is selected, you can apply the default value for the field by pressing the **{DEFLT}** softkey. The default value in some fields is dependant on the setting of the GENIUSPRO/PALETTE field in the Console Window.

To select the first field in the Setup display press **[\*]**.

8:32:28 24/06/98 **SHOW SETUP** \*No Title GM=FL/FL

### Show Details

Cue Tracking **ON**

Playbacks **SINGLE**

Fade/Delay

Auto Move While Dark **OFF 1 /1**

Auto Preheat **OFF 1 /1**

Power-up Restore **ON**

Power-up Macro **OFF**

GM 1 Fade Up/Down **0 /0**

GM 2 Fade Up/Down **0 /0**

Channel Partitioning **OFF**

Playback Partitioning **OFF**

Handheld Remotes Mode

1	<b>Full Enabled</b>
2	<b>Full Enabled</b>
3	<b>Full Enabled</b>
4	<b>Full Enabled</b>

Cue Sheet Macros **Last Handheld**

### MIDI

Channel, Mode **OFF BACKUP**

Net Node **LOCAL**

Fader, Key Controller **1 2**

Notes, Velocity **OFF OFF**

Trigger Macro **OFF OFF**

Trigger Bytes **OFF OFF OFF**

MSC ID Rx, Tx **OFF OFF**

### Timecode Options

Source **OFF**

Frame Rate **25 frames**

Clock Override **OFF**

SMPTE Net Node **LOCAL**

MIDI Net Node **LOCAL**

### Patch

Default Scale % **100**

Default Frame **30**

Default N-Dim % **80**

### Console Time

Time Display **24-HOUR**

Date Display **DD/MM/YY**

Set Time HH:MM **12:17**

Set Date DD/MM/YY **10/08/1998**

### At Time Macros

MTWTFSS	Start	Time/Date	Interval	Stop	Time/Date	Trig Macro
<del>-----</del>		<b>OFF OFF</b>	<b>OFF</b>		<b>OFF OFF</b>	<b>OFF</b>
<del>-----</del>		<b>OFF OFF</b>	<b>OFF</b>		<b>OFF OFF</b>	<b>OFF</b>
<del>-----</del>		<b>OFF OFF</b>	<b>OFF</b>		<b>OFF OFF</b>	<b>OFF</b>
<del>-----</del>		<b>OFF OFF</b>	<b>OFF</b>		<b>OFF OFF</b>	<b>OFF</b>

**OFF** | **ON** | **THIS CUE ONLY**

**SETUP: \***

The fields within the six windows of the Show Setup Screen are described under the window title as follows:

- [Show Details Window](#)
- [MIDI Window](#)
- [Timecode Options Window](#)
- [Patch Window](#)
- [Console Time Window](#)
- [At Time Macros Window](#)

## The Show Details Window

The Show Details window is in the Show Setup display, and lets you configure how shows are



recorded and run.

The fields within the Show Details Window are described as follows:

- [Cue Tracking](#)
  - [Playback Modes](#)
  - [Auto Move While Dark](#)
  - [Auto Move Fade Delay](#)
  - [Auto Preheat](#)
  - [Auto Preheat Fade Delay](#)
  - [Power Up Restore](#)
  - [Power Up Macro](#)
  - [GM1 Fade Up/Down](#)
  - [GM2 Fade Up/Down](#)
  - [Channel Partitioning](#)
  - [Playback Partitioning](#)
  - [Handheld Remote](#)
  - [Cue Sheet Macros](#)
- 

### ***Cue Tracking***

Controls tracking when recording cues.

Its value is **OFF** (GeniusPro Default), **ON** (Lightpalette Default), or **THIS CUE ONLY**.

For an explanation of Cue Tracking, refer to [Level Tracking](#)

---

### ***Playbacks***

Controls the number of X Playbacks and their mode.

**SINGLE** (default) Single cue sheet position for the X1 Playback. Only the X1 Playback is enabled.

**SPLIT SINGLE** Single cue sheet position. Both the X1 Playback and the X2 Playback are enabled.

Intensity and attribute levels from playbacks are combined on a latest takes precedence basis.

**DUAL LTP** Separate cue sheet positions. Both the X1 Playback and the X2 Playback are enabled.

Intensity and attribute levels from playbacks are combined on a latest action takes precedence basis.

**DUAL HTP** Separate cue sheet positions. Both the X1 Playback and the X2 Playback are enabled.

Intensity levels from playbacks are combined on a highest takes precedence basis. Attribute levels are

combined on a latest takes precedence basis.

---

### ***Auto Move While Dark***

When **ON**, scrollers and other moving fixtures move to new positions at the end of a cue while the fixtures are dark.

Its value is **OFF** (default) or **ON**.

The console looks ahead to the next cue to see which fixtures (if any) have attribute changes, and makes the attribute change while those fixtures are still dark. You can set the speed for the change in the Fade field and the delay in the Delay field to the right of this field.

---

### ***Auto Move Fade/Delay***

Sets the speed for the auto move (Fade) and the delay between the end of the last cue and when the auto move will start.

The default values are **1/1**

---

### ***Auto Preheat***

When **ON**, channels with intensities higher in the next cue than in the \*Preheat group (999.5) are faded to the levels in the \*Preheat group when a cue is loaded. This lets you “preheat” large wattage fixtures so that they fade up smoothly.

Its value is **OFF** (default) or **ON**.

---

### ***Auto Preheat Fade/Delay***

Sets the speed for the fade to the preheat level and the delay between the end of the last cue and when the preheat fade starts. You can set the speed for the fade in the **Fade** field and the delay in the **Delay** field to the right of this field.

The default values are **1/1**.

---

### ***Power Up Restore***

At power up, this restores the output channels to the levels that were present in the Live display when the console was powered off. Otherwise, the console output levels are all set to 0% at power up.

Its value is **OFF** or **ON** (default).

---

### ***Power Up Macro***

Sets the macro which is run when the console is switched on. If the macro does not exist, this is ignored.

**OFF** (default) There is no macro.

# The macro number from 0 to 1999 to run.

---

### ***GM 1 Fade Up/Down***

The fade time for Grandmaster 1. The up and down times are separate fields. They can be any value between 0 and 59 minutes 59 seconds, and are initially set to **0/0**. Times below one minute can be specified in tenths of a second.

---

### ***GM 2 Fade/Up/Down***

The fade time for Grandmaster 2. The up and down times are separate fields. They can be any value between 0 and 59 minutes 59 seconds, and are initially set to **0/0**. Times below one minute can be specified in tenths of a second.

---

### ***Channel Partitioning***

Determines whether or not channel partitioning is active. When channel partitioning is on, only one of the logged in consoles can control each channel in the system. Channels controlled by each console are determined by groups 998.1 (console channels), 998.2 (console 2 channels), 998.3 (console 3 channels), etc. These groups are mutually exclusive. Setting a channel in one group removes it from the other groups.

Its value is **OFF** (the default) or **ON**.

---

### ***Playback Partitioning***

Determines whether or not playback partitioning is active. When playback partitioning is on, Channels controlled by each X Playback are determined by groups 999.3 and 999.4. By default, both groups are set to permit control of all channels by both groups. However, when the Group display is selected, the user can set a channel, or range of channels for either or both groups to 0 , such that the deselected channels are not controlled by the particular X Playback.

Its value is **OFF** (the default) or **ON**.

---

### ***Handheld Remote***

These fields determine what each of the handheld remotes are allowed to do.

**Mem Lock** The handheld remote can control channels and play back cues but cannot record anything.

**PB Lock** The handheld remote can control channels and record cues and other memory items, but cannot play back cues or effects.

**Mem+PB Lock** The handheld remote can control channels but cannot record or playback cues.

**MemLock <900** The handheld remote can control channels and play back cues and effects, but can only record cues with numbers 900 and higher.

**Full Enabled** The handheld remote is fully functional (the default).

---

### ***Cue Sheet Macros***

This is the general term given to macros which can be triggered indirectly, rather than by direct macro keys or commands. Sources include: Cue sheet, timecode events, 510i and 310 bump inputs and local fader control, MIDI, external submasters, audio input, remote trigger, and optional macro tablet.

The Cue Sheet Macros setup item determines the command line on which these macros run. When set to **LAST HANDHELD**, these macros run on the last available handheld to prevent console command lines and displays from being affected. When set to **MAIN CONSOLE**, these macros run on the main console to enable screen operations to be carried out by these macros.

---

### **The MIDI Window**

The MIDI window is in the Show Setup display, and lets you configure the external MIDI communications ports. These settings are only used when the **CommuniquéPro** software is loaded. For more information refer to [CommuniquéPro](#)

---

### **The Timecode Options Window**

The Timecode Options window is in the Show Setup display, and lets you configure the way the console reads SMPTE and MIDI time codes. These settings are only used when the **CommuniquéPro** software is loaded. For more information refer to [CommuniquéPro](#)

## The Patch Window

The Patch window is in the Show Setup display, and lets you set defaults used during patching. To learn how to set up the show patches refer to [Patches](#)

This section describes the following fields:

- [Default Scale %](#)
- [Default Frame](#)
- [Default Non-Dim %](#)

---

### ***Default Scale %***

The default scaling (from 1 to 200) when patching an intensity or DMX input channel. Initially set to **100**.

---

### ***Default Frame***

The default maximum number of frames (from 2 to 100) when patching an attribute channel. Initially set to **10**.

---

### ***Default N-DIM %***

The default threshold (from 0 to 100) when patching a non-dim channel. Initially set to **80**

---

## The Console Time Window

The Console Time window is in the Show Setup display, and lets you set the time and date and configure how it is displayed at the top of all displays.

The following fields are described in this section:

- [Time Display](#)
  - [Date Display](#)
  - [Set Time](#)
  - [Set Date](#)
- 

### ***Time Display***

Sets the way that the time is displayed.

The default value for GeniusPro is **24 HOUR**

The default for Lightpalette is **12 HOUR**

**24 HOUR** Time is displayed in 24 hour format.

**AM/PM** Time is displayed in 12 hour format with trailing AM or PM.

---

### ***Date Display***

Sets the way that the date is displayed.

The default value for GeniusPro is **DD/MM/YY**

The default for Lightpalette is **MM/DD/YY**

**DD/MM/YY** Date is displayed in day/month/year format.

**MM/DD/YY** Date is displayed in month/day/year format

---

### ***Set Time***

Changes the time. It must always be entered in 24 hour format where 0 is midnight, 12: 00 is midday and 23: 59 is 1 minute before midnight. The **{DEFLT}** key has no effect here. You cannot enter seconds or tenths of seconds in this field.

# The hours and minutes as a 1 to 4 digit number where 0 is 00: 00 and 2359 is 23: 59.

---

### ***Set Date***

Changes the date. This is split into 2 separate fields. The first must always be entered in day/month format, the second is the year. The **{DEFLT}** key has no effect here.

# The day and month as a 4 digit number from 0101 (1st January) to 3112 (31st December). The first digit can be omitted if it is 0 (101 is the same as 0101).

# The year as a 4 digit number from 1981 to 2099.

---

### **The At Time Macros Window**

The At Time Macros window is at the bottom of the Show Setup display, and lets you configure up to 4 macros to automatically run at predetermined times. Each of these can be configured to start at a particular time and date or day of the week. Optionally, they can also run periodically until a stop time.

Macros are run on the weekdays specified, from the start time and date to the stop time and date.

To run a macro once, enter a start time and start date, set a stop time and stop date for after the macro will be complete, and set the interval to **OFF**.

To run a macro every day at specific times forever set the start time. Leave start date, interval, stop

time, and stop date set to **OFF**.

To run a macro every day at specific times for a specific length of time, enter a start time and date, and set the stop time and stop date to when you want the macro stopped. Leave interval set to **OFF**.

To run a macro at specific intervals forever, enter a start time and date, set the interval to the time you want between repeats, and set the stop time and stop date to **OFF**.

To run a macro at specific intervals for a specific length of time, enter a start time and date, set the interval to the time you want between repeats, and set the stop time and stop date to when you want the macro stopped.

To run a macro only on specific days of the week during the times you have set above, uncheck the days of the week on which you don't want it to run.

## **MTWTFSS**

The day of the week (or days) on which the macro will run. The value is tick (default) if enabled or \_ if disabled. The macro will be run each enabled weekday at the start time.

## **Start Time**

The time of day to start the macro in 24 hour format. Can be **OFF** (the default) or any four digit time value (0 is midnight, 1200 is midday and 2359 is 1 minute before midnight). If this is set to **OFF** the macro is started at midnight on the date specified in the **Start/DATE** field.

## **Start DATE**

The date and month to start the macro. Can be **OFF** (the default) or any four digit date/month number from 0101 (1st January) to 3112 (31st December). The first digit can be omitted if it is 0 (101 is the same as 0101). If this is set to **OFF** the macro is started today at the time specified in the **Start Time** field.

## **Interval**

The time between repetitions of the macro. Can be **OFF** (the default) or any four digit time value between 0 and 23 hours, 59 minutes (2400). To run the macro once, set this to **OFF**. To run the macro repeatedly between the **Start Time/Date** and the **Stop Time/Date**, enter the time desired between repeats. To run the macro repeatedly forever, set a number in this field and set the **Stop Time** and **Stop Date** fields to **OFF**.

## **StopTime**

The time of day to stop the macro in 24 hour format. Can be **OFF** (the default) or any four digit time value (0 is midnight, 1200 is midday and 2359 is 1 minute before midnight). If this is set to **OFF** the macro is stopped at midnight on the date specified in the **Start Date** field.

## **Stop Date**

The date and month to stop the macro. Can be **OFF** (the default) or any four digit date/month number from 0101 (1st January) to 3112 (31st December). The first digit can be omitted if it is 0 (101 is the same as 0101). If this is set to **OFF** the macro is stopped today at the time specified in the **Start Time** field.

## **Macro**

The macro to run at the specified times. Can be OFF or any existing macro number from 0 to 2999.

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# Recording Cues

**see also**

[Running Cues](#)

[X Playbacks](#)

This section describes how to set up and record the levels and properties of individual cues and cue parts. To show the Cue Sheet press the **<PREVIEW>** key. The following topics are covered:

- [Cue and Part Numbering](#)
- [Recording Cue Levels](#)
- [Recording Cue Properties](#)

---

## Cue and Part Numbering

All cues, can comprise up to 12 parts numbered from 1 to 12. Each cue consists of a minimum of 1 part (e.g., Cue 1 Part 1, Cue 3.2 part 12, etc). If a part number is not specified using the **{PART}** softkey (**[PART]** hardkey on 300 Series consoles) when recording a cue, part 1 is automatically assumed. When a cue is run, all parts of the cue are run together. For the maximum number of cues, refer to [Product Specification](#)

If you initially record whole number cues only, you can use a decimal cue number (for instance 3.5) to insert extra cues between whole numbers. You can insert decimal cues .1 through .9 between any two consecutively numbered cues. Entering a . 0 is optional in a cue number and is the same as if omitted (cue 1 is the same as cue 1.0). Examples of cues (in cue sheet order) are:

0.1  
1 (first full numbered cue - same as 1.0).  
1.1  
1.3  
2  
100  
999.9 (last possible cue).

When a cue is run, all of its parts are run together. If you record a channel in a cue part that has already been recorded in another part of the same cue, the new level (latest recorded level) is used for the channel. Cue wait times, macros, links/loops and commands apply only to the cue as a whole, but separate delay times and profiles can be used on each part. If a cue is referenced without specifying a part, part 1 is assumed.

Cross Fade, Block, and All Fade cues can only have one part (numbered 1) since otherwise all parts would have all channels and the last one would over-ride all previous parts. Parts are always Move Fades (GeniusPro) or Tracking Cues (Lightpalette)

---

## Recording Cue Levels

**[RECORD] [\*]** records the levels (intensity levels and attribute levels) on the current display into the current cue.

**[CUE] # [RECORD] [RECORD]** (*Direct Digit Modes*)

**[RECORD] [CUE] # [\*]** (*Command Line Mode*)

Records the levels on the current display (the Live, Cue/Preview, Group, Effect, or Submaster display) into the specified cue. For information on setting intensity and attribute levels, refer to [Working With Channel Levels](#) . For examples of recording, refer to [Basic Recording](#).

**Note:** . When you set channel levels in the Preview display with [Cue Tracking](#) on, you can set them off (**chans [@] {OFF} [\*]**) or set them to zero (**chans [@] [0] [\*]**). When set off, levels track through from previous cues. When set to 0, levels are forced to zero in the cue. Thus you can set levels off in a Cross Fade (Blocking Cue) to make individual channels track through the cue, or at zero in a Move Fade (Tracking Cue) to block individual channels. When you record from the Live display with the [Cue Tracking](#) field in the Show Setup display set ON, channels at zero are set to zero level in the cue only if they change from the previous cue. Otherwise they are recorded Off and channel levels can track through from the previous cue in later editing

- For GeniusPro, recording a new cue sets it as a Cross Fade when Tracking is off or a Move Fade when Tracking is on unless otherwise specified. Recording over an existing cue does not change the fade type unless you explicitly change it.
- For Lightpalette, All new cues are Tracking Cues unless you explicitly specify that they should be Block Cues or All Fade Cues. Recording over an existing cue does not change the cue type unless you explicitly change it.

- Recording a cue blind (in the Cue/Preview display) does not affect the console output. The cue needs to be loaded and run for the new levels to appear on stage.
- The default wait, fade and delay times are assigned to new cues unless you specify values for them in the record command. The defaults for these values are given by the Cue Fade, Cue Delay, and Cue Wait fields in the [The Default Times Window](#) of the User Setup display.
- Recording over an existing cue leaves these values alone unless you explicitly change them.
- Recording a new cue sets it with no links, loops, macro, or effect. Recording over an existing cue leaves these values alone unless you explicitly change them.
- The last recorded cue appears at the bottom of the X Playback window if the [Show Last Recorded Cue](#) field in the User Setup display is ON.
- You can record just the intensities or just the attributes to a cue by adding **{INTS ONLY}** or **{ATTS ONLY}** to the command line before **[RECORD]**, e.g.,

**[CUE] [1] [0] {INTS ONLY} [RECORD]** - Direct Digit  
**[RECORD] [CUE] [1] [0] {ATTS ONLY} [\*]** - Command Line

**Note:** For 520 and 300 Series Consoles, you must include the **{REC MODE}** key in the command in order to display the **{INTS ONLY}** and **{ATTS ONLY}** softkeys, e.g.,

**[CUE] [1] [0] [REC MODE] {INTS ONLY} [RECORD]** - Direct Digit  
**[RECORD] [CUE] [1] [0] [REC MODE] {ATTS ONLY} [\*]** - Command Line

## Recording Cue Properties

Cues have the following properties that can be specified when recording, or edited later:

- [Fade Time](#)
- [Delay Time](#)
- [Wait Time](#)
- [Assigning Fade Profiles](#)
- [Assigning Fade Times to Attributes](#)
- [Assigning Fade Profiles to Attributes](#)
- [Assigning an Effect](#)
- [Assigning a Macro](#)
- [Links, Subroutines and Loops](#)
- [Fade Types \(Cue Types\)](#)

- [Creating a New Cue](#)
- [Copying an Existing Cue](#)
- [Level Tracking](#)
- [Recording a Text Label](#)

## Fade Times

Each cue has up and down fade times that are used when the cue is run. You can enter fade values from one hundredth of a second to 59 minutes and 59 seconds , as shown in the table.

Key Entry	Shown as	Value
0.01	0.01	One hundredth of a second
0.1	0.1	One tenth of a second
1	1	One second
10	10	Ten seconds
100	1:00	One minute
1000	10:00	Ten minutes
1025	10:25	Ten minutes twenty five seconds
5959	59:59	Fifty nine minutes, fifty nine seconds

The fade times control the time for the cue to fade to 100% of its recorded levels. You can split fade times into the time it takes increasing levels to reach their new settings (the up fade time), and the time it takes decreasing levels to reach their new settings ( the down fade time). In cues with parts, each part can have its own fade and delay times, but the wait time applies to the whole cue and is taken from part 1.

**cue [TIME] # [RECORD]** (*Direct 1 and 2 Digit*)

**[RECORD] cue [TIME] # [\*]** (*Command Line*)

Records the levels on the current display into the specified cue, and assigns a fade time.If the cue already exists, an overrecord message gives you the chance to cancel the recording. Press **[RECORD] [\*]** again to record over the cue or **[CLR]** or **[UNDO]** to cancel the operation.

**cue [TIME] {OFF/MAN} [RECORD]** (*Direct 1 and 2 Digit*)

**[RECORD] cue [TIME] {OFF/MAN} [\*]** (*Command Line*)

Records the levels on the current display into the specified cue, and makes the cue into a manual fade. If the cue already exists, an overrecord message gives

you the chance to cancel the recording. Press **[RECORD] [\*]** again to record over the cue or **[CLR]** or **[UNDO]** to cancel the operation.

For examples of setting fade time, refer to [Recording Levels and Properties](#)

See also [Assigning Fade Times to Attributes](#)

## Delay Times

Each cue has up and down delay times and a wait time which are used when the cue is run. These can be set to values from one hundredth of a second to 59 minutes and 59 seconds as shown for [Fade Times](#)

Delay times are used to delay the start of a fade from when you press **[GO]**. You can split delay times into the time until the channels whose levels are increasing start to fade (the up delay time), and the time until the channels whose levels are decreasing start to fade (the down delay time).

In cues with parts, each part can have its own fade and delay times, but the wait time applies to the whole cue and is taken from part 1.

**cue [DELAY] # [RECORD]** *(Direct 1 and 2 Digit)*

**[RECORD] cue [DELAY] # [\*]** *(Command Line)*

records the levels on the current display into the specified cue, and records a delay time. If the cue already exists, an overrecord message gives you the chance to cancel the recording. Press **[RECORD] [\*]** again to record over the cue or **[CLR]** or **[UNDO]** to cancel the operation.

If you only enter one number for time, it is used for both the up and down delay times. To enter separate up and down delay times, use **[/]** to separate the two numbers. The first number becomes the up delay time and the second number becomes the down delay time.

Separate delay times can be assigned to each cue part. To delete an assigned delay time, omit the time value.

**[CUE] [1] [DELAY] [4] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [DELAY] [4] [\*]** *Command Line*

Records levels into cue 1 and assigns up and down delay times of 4 seconds.

**[CUE] [1] [DELAY] [4] [/] [2] [\*]** Direct 1 and 2 Digit

**[RECORD] [CUE] [1] [DELAY] [4] [/] [2] [\*]** Command Line

Records levels into cue 1 and assigns an up delay time of 4 seconds and a down delay time of 2 seconds.

**[CUE] [1] [DELAY] [/] [2] [RECORD]** Direct 1 and 2 Digit

**[RECORD] [CUE] [1] [DELAY] [/] [2] [\*]** Command Line

Records levels into cue 1 and assigns a 2 second delay for down fades. Sets the delay time for the up fade to the default time, or leaves it as is if over-recording

**[CUE] [1] [DELAY] [4] [/] [RECORD]** Direct 1 and 2 Digit

**[RECORD] [CUE] [1] [DELAY] [4] [/] [\*]** Command Line

Records levels into cue 1 and assigns a 4 second delay for up fades. Sets the delay time for the down fade to the default time, or leaves it as is if over-recording.

**cue [DELAY] # [\*]** changes the delay time of the specified cue without changing recorded levels. You do not get an overrecord warning with this command if the cue exists.

If the specified cue doesn't exist, creates a new cue with no levels but with the specified delay times. If you only enter one number for time, it is used for both the up and down delay times. To enter separate up and down delay times, use [/] to separate the two numbers. The first number becomes the up delay time and the second number becomes the down delay time.

**[CUE] [1] [DELAY] [\*]** All Modes

Resets cue 1 delay time to the non-split default delay time in the User Setup Screen [Cue Delay Up/Down](#) field.

**[CUE] [1] [DELAY] [4] [\*]** All Modes

Changes cue 1 up and down delay times to 4 seconds without changing any levels.

**[CUE] [1] [DELAY] [4] [/] [2] [\*]** All Modes

Changes cue 1 up delay time to 4 seconds and its down delay time to 2 seconds without changing any levels.

**[CUE] [1] [DELAY] [/] [2] [\*]** All Modes

Changes cue 1 down delay time to 2 seconds without changing any levels. The up delay time is set to the time in the User Setup Screen [Cue Delay Up](#) field if this is a new cue or left as it is if over-recording.

**[CUE] [1] [DELAY] [4] [/] [\*]** All Modes

Changes cue 1 up delay time to 4 seconds without changing any levels. The

down delay time is set to the time in the User Setup Screen [Cue Delay Down](#) field if this is a new cue or left as it is if over-recording.

---

## Wait Time

Each cue has a wait time which is used when the cue is run. These can be set to values from one hundredth of a second to 59 minutes and 59 seconds as shown for [Fade Times](#) .

When a cue's wait time is set, the next cue in sequence will start automatically the set time after the start of the cue. If the wait time is zero, the next cue starts at the same time as the cue with the zero wait time. If the wait time is off the next cue will not run automatically.

In cues with parts, each part can have its own fade and delay times, but the wait time applies to the whole cue and is the same for each part of the cue.

### **cue [WAIT] # [RECORD]**

#### **[RECORD] cue [WAIT] # [\*]**

Records the levels on the Live display into the specified cue, and assigns a wait time to it. If the cue already exists, an overrecord message gives you the chance to cancel the recording. Press **[RECORD] [\*]** again to record over the cue or **[CLR]** or **[UNDO]** to cancel the operation. The wait time cannot be split. In multi-part cues, only the wait time in the first part is used. To delete an assigned wait time, omit the time value.

#### **[CUE] [1] [WAIT] [4] [RECORD]** *Direct 1 and 2 Digit*

#### **[RECORD] [CUE] [1] [WAIT] [4] [\*]** *Command Line*

Records cue 1 with levels and a wait time of 4 seconds. **cue [WAIT] # [\*]** changes the wait time of the specified cue without changing recorded levels. If the cue doesn't exist, creates a new cue with no levels but with the specified wait time. You do not get an overrecord warning with this command if the cue exists.

#### **[CUE] [1] [WAIT] [\*]** *All Modes*

Resets cue 1 wait time to the setting of the [Cue Wait](#) field in the User Setup Screen (Default = OFF)

#### **[CUE] [1] [WAIT] [4] [\*]** *All Modes*

Changes the cue 1 wait time to 4 seconds without changing any levels.

---



## Assigning Fade Profiles

Profiles let you change the fade characteristics of cues.

You can assign a profile to the cue, or assign separate profiles to the up fade and down fade.

**cue [PROFILE] # [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] cue [PROFILE] # [\*]** *Command Line*

Records the levels on the current display into the specified cue and assigns a fade profile to it. If the cue already exists, an overrecord message gives you the chance to cancel the recording. Press **[RECORD] [\*]** again to record over the cue or **[CLR]** or **[UNDO]** to cancel the operation. For information on how to create and edit profiles, refer to [Profiles](#).

If you only enter one fade profile number, it is used for both the up and down fades. To enter separate up and down fade profiles, use **[/]** to separate the two numbers. The first number becomes the up fade profile and the second number becomes the down fade profile.

Separate fade profiles can be assigned to each cue part. To delete an assigned fade profile, omit the fade profile number. Separate fade profiles can be assigned to each cue part. To delete an assigned fade profile, omit the fade profile number.

**[CUE] [1] [PROFILE] [3] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [PROFILE] [3] [\*]** *Command Line*

Records levels into cue 1 and assigns fade profile 3 to both the up and down fades.

**[CUE] [1] [PROFILE] [3] [/] [1] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [PROFILE] [3] [/] [1] [\*]** *Command Line*

Records levels into cue 1 and assigns fade profile 3 to the up fade and fade profile 1 to the down fade.

**[CUE] [1] [PROFILE] [/] [1] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [PROFILE] [/] [1] [\*]** *Command Line*

Records levels into cue 1 and assigns fade profile 1 to the down fade. The up fade profile is set to 0 if this is a new cue, or left as it is if over-recording.

**[CUE] [1] [PROFILE] [3] [/] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [PROFILE] [3] [/] [\*]** *Command Line*

Records levels into cue 1 and assigns fade profile 3 to the up fade. The down fade profile is set to 0 if this is a new cue, or left as it is if over-recording.

**[CUE] [1] [PROFILE] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [PROFILE] [\*]** *Command Line*

Records levels in cue 1 and deletes any assigned fade profiles.



**cue [PROFILE] # [\*]** changes the fade profile assigned to the specified cue without changing recorded levels. If the cue doesn't exist, this command creates a new cue with no levels but with the specified fade profile assignment. You do not get an overrecord warning with this command if the cue exists.

**[CUE] [1] [PROFILE] [\*]** *All Modes*

Deletes the fade profile assigned to cue 1 without changing recorded levels.

**[CUE] [1] [PROFILE] [2] [\*]** *All Modes*

Changes the up and down fade profiles assigned to cue 1 to fade profile 2 without changing recorded levels.

**[CUE] [1] [PROFILE] [4] [/] [2] [\*]** *All Modes*

Changes the up fade profile assigned to cue 1 to fade profile 4 and the down fade profile to fade profile 2 without changing recorded levels.

**[CUE] [1] [PROFILE] [/] [2] [\*]** *All Modes*

Changes the down fade profile assigned to cue 1 to fade profile 2 without changing recorded levels. Does not change the up fade profile.

**[CUE] [1] [PROFILE] [2] [/] [\*]** *All Modes*

Changes the up fade profile assigned to cue 1 to fade profile 2 without changing recorded levels. Does not change the down fade profile.

See also [Assigning Fade Profiles to Attributes](#)

## Assigning Fade Times to Attributes

You can assign a fade time to the attribute change for the cue. This can be set to values from one hundredth of a second to 59 minutes and 59 seconds as shown for [Fade Times](#) .

**cue [@ATT] [TIME] # [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] cue [@ATT] [TIME] # [\*]** *Command Line*

Records the levels on the current display into the specified cue, and assigns an attribute fade time. If the cue already exists, an overrecord message gives you the chance to cancel the recording. Press **[RECORD] [\*]** again to record over the cue or **[CLR]** or **[UNDO]** to cancel the operation.

**[CUE] [1] [@ATT] [TIME] [4] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [@ATT] [TIME] [4] [\*]** *Command Line*

Records levels into cue 1 and assigns an attribute fade time of 4 seconds.

**cue [@ATT] [TIME] # [\*]** changes the fade time assigned to the specified cue's

attributes without changing recorded levels. If the cue doesn't exist, this command creates a new cue with no levels but with the specified attribute fade time assigned. You do not get an overrecord warning with this command if the cue exists.

**[CUE] [1] [@ATT] [TIME] [5] [\*]** *All Modes*

Changes the attribute fade time for cue 1 to 5 seconds without changing any levels or other cue properties.

See also [Fade Time](#)

## Assigning Fade Profiles to Attributes

You can assign a profile to the attribute change for the cue.

**[RECORD] cue [@ATT] [PROFILE] # [RECORD] [\*]** records the levels on the current display into the specified cue and assigns a fade profile for attribute changes in the cue. If the cue already exists, an overrecord message gives you the chance to cancel the recording. To rerecord the cue, press **[RECORD] [\*]** again. To cancel the recording, press **[CLR]** or **[UNDO]**. For information on creating and editing profiles, refer to [Profiles](#)

Separate fade profiles can be assigned to each cue part for attributes. To delete an assigned fade profile, omit the fade profile number.

**[CUE] [1] [@ATT] [PROFILE] [3] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [@ATT] [PROFILE] [3] [\*]** *Command Line*

Records levels into cue 1 and assigns fade profile 3 to the attributes.

**[CUE] [1] [@ATT] [PROFILE] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [@ATT] [PROFILE] [\*]** *Command Line*

Records levels into cue 1 and deletes any fade profile assigned to attributes.

**cue [@ATT] [PROFILE] # [\*]** changes the fade profile assigned to the specified cue's attributes without changing recorded levels. If the cue doesn't exist this command creates a new cue with no levels but with the specified fade profile assignment. You do not get an overrecord warning with this command if the cue exists.

**[CUE] [1] [@ATT] [PROFILE] [\*]** *All Modes*

Deletes the fade profile assigned to cue 1 attributes without changing recorded levels.

See also [Assigning Fade Profiles](#)

---

## Assigning an Effect

**[RECORD] cue [FX] # [RECORD] [\*]** records the levels on the Live display into the specified cue and assigns an effect to it. If the effect number is positive the cue starts the effect. If the effect number is negative the cue stops the effect. If the cue exists, an overrecord message gives you the chance to cancel the recording. To rerecord the cue, press **[RECORD] [\*]** again. To cancel the recording, press **[CLR]** or **[UNDO]**.

For GeniusPro, effects run by cues are stopped if you use **[CUE]# [CUT]** or **[CUE] # [GO]** except in Move Fade cues. To go to a new cue without stopping these effects, use **[CUE] # [GO]** if the cue is a Move Fade, or **CUE # [LOAD] [GO]** for any fade.

For Lightpalette, Effects run by cues are stopped if you use **[GOTO] {CUE} # [\*]**. To go to a new cue without stopping these effects, use **[LOAD] [CUE] # [\*] [GO]**

The effect starts (positive effect number) or stops (negative effect number) when you run the cue. The up fade time of the cue overrides the fade up time of a starting effect. The down fade time of the cue overrides the fade down time of a stopping effect. To delete an assigned effect, omit the effect number.

**[CUE] [1] [FX] [2] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [FX] [2] [\*]** *Command Line*

Records levels into cue 1 and assigns effect 2 start to it.

**[CUE] [2] [FX] [-] [2] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [2] [FX] [-] [2] [\*]** *Command Line*

Records levels into cue 2 and assigns effect 2 stop to it.

**[CUE] [1] [FX] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [FX] [\*]** *Command Line*

Records levels into cue 1 and deletes any assigned effect.

**cue [FX] # [\*]** changes the effect start or stop assigned to the specified cue without changing recorded levels. If the cue doesn't exist, creates a new cue with no levels but with the specified effect assignment. You do not get an overrecord warning with this command if the cue exists.

**[CUE] [1] [FX] [\*]** *All Modes*

Deletes the effect assigned to cue 1 without changing recorded levels.

**[CUE] [1] [FX] [3] [\*] All Modes**

Changes the effect assigned to cue 1 to effect 3 start without changing recorded levels.

**[CUE] [2] [FX] [-] [3] [\*] All Modes**

Changes the effect assigned to cue 1 to effect 3 stop without changing recorded levels.

## Assigning a Macro

**[RECORD] cue [MACRO] # [RECORD] [\*]** records the levels on the Live display into the specified cue and assigns a macro to it. If the cue already exists, an overrecord message gives you the chance to cancel the recording. To rerecord the cue, press **[RECORD] [\*]** again. To cancel the recording, press **[CLR]** or **[UNDO]**.

When the cue is run the macro is automatically started. To delete an assigned macro, omit the macro number.

**[CUE] [1] [MACRO] [3] [RECORD] Direct 1 and 2 Digit****[RECORD] [CUE] [1] [MACRO] [3] [\*] Command Line**

Records levels into cue 1 and assigns Macro 3 to it.

**[CUE] [1] [MACRO] [RECORD] Direct 1 and 2 Digit****[RECORD] [CUE] [1] [MACRO] [\*] Command Line**

Records levels into cue 1 and deletes any assigned macro.

**cue [MACRO] # [\*]** changes the macro assigned to the specified cue without changing recorded levels. If the cue doesn't exist, creates a new cue with no levels but with the specified macro assignment. You do not get an overrecord warning with this command if the cue exists.

**[CUE] [1] [MACRO] [\*] All Modes**

Deletes the macro assigned to cue 1 without changing recorded levels.

**[CUE] [1] [MACRO] [2] [\*] All Modes**

Changes the macro assigned to cue 1 to macro 2 without changing recorded levels.

## Links, Subroutines, and Loops

Normally, cues are run sequentially from the beginning of the cue sheet to the end. Links,

loops, and subroutines can be used to run cues out of sequence. These can only be applied to the first part of a cue.

**Links:** Links are used to jump to any cue in the cue sheet. Cues then run sequentially from that cue. Their most common usage is as part of a loop (discussed later) or to rearrange cues without having to rerecord a number of cues.

For example, assume that we have already recorded cues 1 through 20. The director changes the order of some characters entering, making it so that you need to run cues 7, 8, and 9 before you run cues 5 and 6. Of course, you can simply rerecord the cues to put them in the correct order. However, depending on the complexity of the cues, this could be time consuming. The alternative is to set the Link property in cue 4 to 7, the Link property of cue 9 to 5, and the Link property of cue 6 to 10. The cues will now run as 3, 4, 7, 8, 9, 5, 6, 10, 11... One of the links in this sequence actually goes backwards in the cue sheet. This is OK, as long as you create a way to get yourself out of an infinite loop, which we did in this case by linking cue 6 to cue 10.

In order to terminate linked cues in a chain, set the link field in the last cue to **Rtrn**. This will force an end to the cue sheet and will not start any more cues until you explicitly reload it.

**cue {LINK} # [RECORD] Direct 1 and 2 Digit**

**[RECORD] cue {LINK} # [\*] Command Line**

Records the levels from the current display into the specified cue and assigns a link to it. If the cue already exists, an overrecord message gives you the chance to cancel the recording. To rerecord the cue, press **[RECORD] [\*]** again. To cancel the recording, press **[CLR]** or **[UNDO]**.

**[CUE] [1] {LINK} [1] [0] [5] [RECORD] Direct 1 and 2 Digit**

**[RECORD] [CUE] [1] {LINK} [1] [0] [5] [\*] Command Line**

Records levels into cue 1 and sets the cue to link to cue 105. If you run cues in normal order, cue 105 will now be the next cue after cue 1.

**cue {LINK} # [\*]** changes the link assigned to the specified cue without changing recorded levels. If the cue does not exist, this command creates a new cue with no levels but with the specified link assignment. You do not get an overrecord warning with this command. To delete an existing link, omit the linked cue number.

**[CUE] [1] {LINK} [1] [0] [6] [\*] All Modes**

Changes cue 1 so it links to cue 106.

**[CUE] [1] {LINK} [\*] All Modes**

Deletes the link assigned to cue 1 without changing recorded levels.

**Subroutines:** Subroutines let you link to a series of cues in another part of the cue sheet. They consist of a forward link from a “calling” cue to the first cue in the series, and a value of **Rtrn** for the Link property in the last cue in the series. You must set the Loop property of the calling cue to at least 1 if you want the subroutine to return. If you set it to zero, the playback will stop once it reaches the last cue in the subroutine (the one with the Link property set to Rtrn). Once called, when the subroutine returns it starts the cue after the calling cue. You can call subroutines from more than one place in the cue sheet.

For example, suppose that you have a series of 4 cues that need to run each of 12 times that a certain character appears. You could copy the series of cues 12 times. This is time consuming and takes up 48 cues worth of memory in the console. Or you could record the 4 cues in series with high cue numbers (for instance, 800, 801, 802, and 803) to keep them out of the way of your normal cue sheet numbers, and turn this series into a subroutine by setting the Link property of the last cue (803 in this case) to Rtrn. Now you can call these cues from as many places as you want. If you set the Link property of cue 2 to 800 (the start of the subroutine) and the Link property of cue 15 to 800, and the Loop properties of both of these cues to 1, then your cues will proceed as follows: 1, 2, 800, 801, 802, 803, 3...14, 15, 800, 801, 802, 803, 16... Wherever you want these four cues, you just link the cue before them to cue 800 with a Loop property of 1.

**cue {LINK} [.] [\*]** changes the link assigned to the specified cue to a Rtrn value without changing recorded levels. If the cue does not exist, this command creates a new cue with no levels but with a Rtrn link value. You do not get an overrecord warning with this command. To delete an existing link, omit the [.]

**[CUE] [1] {LINK} [.] [\*]** *All Modes*

Changes cue 1 link value to Rtrn.

**[CUE] [1] {LINK} [\*]** *All Modes*

Deletes the link assigned to cue 1 without changing recorded levels.

**Loops:** Loops are special cases of links and subroutines that let you go through a series of cues a fixed number of times. For instance, suppose you need to go through cues 6, 7, 8, and 9 three times and then proceed with the rest of the cue sheet. You can set the Link property in cue 9 to 6, then set the Loop property in cue 9 to 3. In this example the loop will pass through cue 9 three times. If you start at cue 5 you get 5, 6, 7, 8, 9, 5, 6, 7, 8, 9, 5, 6, 7, 8, 9, 5, 6, 7, 8, 9, 10. You actually go through all of the cues 4 times. If you use **[GOTO] [CUE] [9]** to get to cue 9 and then start, you are already in cue 9 the first time so the sequence goes 6, 7, 8, 9, 6,

7, 8, 9, 6, 7, 8, 9, 10. In this case you only go through the cue sequence 3 times.

**Note:** If you link back to a cue with its Loop property set to 0 (the default) the loop will continue forever.

Now assume that you have a series of cues that you need to call from many places in the show, but the series needs to run more than once. In this case, you want to set up a subroutine loop. Set up a subroutine as described above but set the Loop property of the calling cue to the number of times you need the sequence to repeat. If necessary, you can have a different number of repetitions each time you call the subroutine.

**Note:** In general, if you want to create a loop with a series of cues only once, use a linked loop, but if you want to use the loop multiple times during the show, create a subroutine loop.

Loops can be nested up to 4 levels, which means you can have loops within loops. If you explicitly load a playback, all loop counts are cleared so that when you run the sequence again it will run the loops the correct number of times.

**cue {LOOP} # [RECORD]** Direct 1 and 2 Digit

**[RECORD] cue {LOOP} # [\*]** Command Line

Records the levels from the current display into the specified cue and assigns a loop count to it. If the cue already exists, an overrecord message gives you the chance to cancel the recording. To rerecord the cue, press **[RECORD] [\*]** again.

To cancel the recording, press **[CLR]** or **[UNDO]**.

**[CUE] [9] {LOOP} [5] [RECORD]** Direct 1 and 2 Digit

**[RECORD] [CUE] [9] {LOOP} [5] [\*]** Command Line

Records levels into cue 9 and sets the cue loop count to 5. For looping subroutines, put the loop count in the calling cue. For standard loops, put the loop count in the last cue of the loop.

**cue {LOOP} # [\*]** changes the loop count assigned to the specified cue without changing recorded levels. If the cue does not exist, this command creates a new cue with no levels but with the specified loop count. You do not get an overrecord warning with this command. To delete an existing loop count, omit the loop count.

**[CUE] [9] {LOOP} [6] [\*]** All Modes

Changes the cue 9 loop count to 6.

**[CUE] [9] {LOOP} [\*]** All Modes

Deletes the loop count assigned to cue 9 without changing recorded levels.

With dual playbacks, each playback keeps track of loops separately. There are a number of error conditions with Loops. If any of these occur, the playback will not run any more cues until explicitly reloaded.

- A cue is linked to a non existent cue.
- A loop is nested more than 4 levels. This can happen if loops call themselves, since this will nest infinitely.
- A subroutine return is linked to another cue.
- A cue is looped to a cue assigned to the other playback in one of the dual playback modes.

Within the above restrictions, links and loops can be intermixed and used in any way.

**Note:** Remember that you can also record cues as effect steps. You may be able to implement some of your loops as effects, thus effectively increasing the number of looping levels in a cue sequence.

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## Fade (Cue) Types

When you are initially setting up cues, you simply change the levels as necessary for each lighting state and then record the cue. When you start running cues, or go back to make changes or add new cues, you need to know how the console treats unchanging levels.

Unless explicitly overridden, GeniusPro records all cues as Cross Fades ([Cue Tracking](#) field in Show Setup Screen Off - Default). With Cue Tracking On, GeniusPro records all new cues as Move Fades (shown as blank in Cue Type field). To record a cue which only changes the channel levels that change in the cue, you must record a Move Fade cue.

Unless explicitly overridden, Lightpalette records all cues as Tracking Cues (shown as blank in Cue Type field).

**Note:** Cue Tracking cannot be set to Off when using Lightpalette)

See also [Level Tracking](#)



**Move Fades (MF): - GeniusPro Only.** A Move Fade remembers only the channels for which levels change. All other channels are not remembered. Levels set in a cue track through subsequent cues until they come to a cue which explicitly sets those levels. You can play up to 128 Move Fades at once between the two playbacks. Cues with separate up and down fades count as two fades for this total. Running more than 128 cues stops the oldest running cue.

When you use **[GOTO]**, **[CUT]**, or **[LOAD]**, if you have tracking off, only the channels that move in the target cue will change levels. If you have tracking on, the channel levels are adjusted as though you took all of the cues leading up to the specified cue.

Move Fades are abbreviated as **MF** on displays, unless Cue Tracking is On, in which case they are shown as blank.

**Cross Fade: - GeniusPro Only.** A cross fade remembers levels for all channels, and forces all cue levels to the recorded levels. A blank channel level is equivalent to a zero level. If you go back and record a new channel on in cue 4 that was never used before (channel levels in all cues are zero), it is only on in that one cue, and then it is forced back to zero. If you change a Move Fade to a Cross Fade, you can change it back to a true Move Fade by changing the fade type. Channels that were tracking before you changed to a Cross Fade will now track again.

Cross Fades are abbreviated as **XF** on displays, and are the same as Hard Block Cues.

**All Fades (AF): - GeniusPro and Lightpalette.** An All Fade is the same as a Cross Fade except that when it runs it is combined with other output sources on a latest takes precedence basis (that is, it fades all channels on all playbacks). It is only useful when the [Playback](#) mode in the Show Setp Screen is set to Dual HTP mode. Otherwise it is the same as a Cross Fade

All Fades are abbreviated as **AF** on displays.

**Tracking Cues: - Lightpalette Only.** When cues are recorded, only the levels that changed in the cue are remembered. If you change a level in a cue, and that cue level wasn't changed for the rest of the show, the new level will now "track" through the entire show. By default, Lightpalette records all cues as Tracking Cues.

To avoid surprises resulting from tracking (particularly in blackouts) you can record a Soft

Block Cue or a Hard Block cue, or change a tracking cue into a Soft Block Cue or Hard Block Cue.

You can use the **{TRACK THRU}** soft key to change a Soft Block Cue or Hard Block Cue back into a Tracking cue.

### **Soft Block Cues:- GeniusPro and Lightpalette**

Soft Block Cues record explicit levels for every channel in the system, so that any changes made to cues before the cue will track only up to the cue. You can set individual channels to tracking by explicitly setting them off (use # [ @ ] [\*] or # [ @ ] {OFF} [\*] in the Cue/Preview display). Once set to off, channels in a Soft Block Cue will continue to track changes in previous cues.

Soft Block Cues show all zero levels with an explicit zero in the Cue/Preview display. Channel levels are white because they are set in the cue, not tracking from the previous cue.

In GeniusPro, selecting the **{BLOCK CUE}** softkey sets the cue as a soft block cue (shown as MF (Move Fade) in the Cue Type Field)

### **Hard Block Cues: - Lightpalette Only**

Hard Block Cues record explicit levels for every channel in the system, so that any changes made to cues before the cue will track only up to the cue. You can force individual channels to track changes in previous cues by explicitly setting them off (use # [ @ ] [\*] or # [ @ ] {OFF} [\*] in the Cue/Preview display). ). However, unlike Soft Block Cues, once the selected channels are matched to the previous cue they are once again blocked. The next time you change a channel in a previous cue, it will again be blocked by the cue. To allow tracking through a Hard Block Cue you need to change it into a Soft Block Cue or a Tracking cue.

Hard Block Cues show all zero levels with an explicit zero in the Cue/Preview display. Channel levels are white because they are set in the cue, not tracking from the previous cue.

## **Creating a New Cue**

Unless otherwise specified, a new cue is always recorded as a cross fade if tracking is off or a Move Fade if [Cue Tracking](#) is on.

Note: When Cue Tracking is on MF (Move Fade) is not displayed in the Type field if a new cue is created or a cue is specified as Move Fade using the **{MOVE FADE}** softkey.

**cue [\*] [\*]** creates a new cue with all fields set to the default value.

### **Cue Tracking Off - GeniusPro Only (GeniusPro Default)**

**[CUE] [2] [6] [\*] [\*]**

Creates a new cue numbered 26 as a Cross Fade cue(XF). All other fields are set to default values.

**[CUE] [2] [7] {MOVE FADE} [\*] [\*]**

Creates a new cue numbered 27 as a Move Fade cue (MF). All other fields are set to default values.

**[CUE] [2] [8] {ALL FADE} [\*] [\*]**

Creates a new cue numbered 28 as an All Fade cue (AF). All other fields are set to default values.

**[CUE] [2] [9] (BLOCK CUE) [\*] [\*]**

Creates a new cue numbered 29 as a Soft Block Cue (MF). All other fields are set to default values.

**Cue Tracking On or This Cue Only - GeniusPro or Lightpalette****GeniusPro****[CUE] [2] [6] [\*] [\*]**

Creates a new cue numbered 26 as a Move Fade (Blank). All other fields are set to default values.

**[CUE] [2] [7] {ALL FADE} [\*] [\*]**

Creates a new cue numbered 27 as an All Fade cue (AF). All other fields are set to default values.

**[CUE] [2] [8] {CROSS FADE} [\*] [\*]**

Creates a new cue numbered 28 as a Cross Fade cue (XF). All other fields are set to default values.

**[CUE] [2] [9] (BLOCK CUE) [\*] [\*]**

Creates a new cue numbered 29 as a Block Cue (blank). All other fields are set to default values.

**Lightpalette****[CUE] [2] [6] [\*] [\*]**

Creates a new cue numbered 26 as a Tracking cue (blank). All other fields are set to default values.

**[CUE] [2] [7] {HARD BLOCK} [\*] [\*]**

Creates a new cue numbered 27 as a Hard Block cue (BL). All other fields are set to default values.

**[CUE] [2] [8] {SOFT BLOCK} [\*] [\*]**

Creates a new cue numbered 28 as a Soft Block cue (blank). All other fields are set to default values.

**[CUE] [2] [9] (ALL FADE) [\*] [\*]**

Creates a new cue numbered 29 as an All Fade Cue (AF). All other fields are set to default values.

---

## Copying an Existing Cue

With the Cue Spreadsheet Screen displayed and the cursor positioned alongside an existing cue, you can create a new cue based on the details of the existing cue as shown:

### **Cue Tracking Off - GeniusPro Only (GeniusPro Default)**

#### **[CUE] [3] [0] [RECORD]**

Creates a new cue numbered 30 and copies the field values of the cue alongside the cursor position.

#### **[CUE] [3] [1] {ALL FADE} [RECORD]**

Creates a new cue numbered 31, changes the Cue Type to All Fade (AF) and copies the field values of the cue alongside the cursor position.

#### **[CUE] [3] [2] {BLOCK CUE} [RECORD]**

Creates a new cue numbered 32, changes the Cue Type to Soft Block Cue (MF) and copies the field values of the cue alongside the cursor position.

### **Cue Tracking On or This Cue Only - GeniusPro or Lightpalette**

#### **GeniusPro**

#### **[CUE] [2] [6] [RECORD]**

Creates a new cue numbered 26 and copies the field values of the cue alongside the cursor position.

#### **[CUE] [2] [7] {ALL FADE} [RECORD]**

Creates a new cue numbered 27, changes the Cue Type to All Fade (AF) and copies the field values of the cue alongside the cursor position.

#### **[CUE] [2] [8] {CROSS FADE} [RECORD]**

Creates a new cue numbered 28, changes the Cue Type to Cross Fade (XF) and copies the field values of the cue alongside the cursor position.

#### **[CUE] [2] [9] (BLOCK CUE) [RECORD]**

Creates a new cue numbered 29, changes the Cue Type to Soft Block Cue (blank) and copies the field values of the cue alongside the cursor position.

**Note:** Cue parts cannot be All Fade

#### **Lightpalette**

#### **[CUE] [2] [6] [RECORD]**

Creates a new cue numbered 26 as a Tracking cue (blank) and copies the field values of the cue alongside the cursor position.

**[CUE] [2] [7] {HARD BLOCK} [RECORD]**

Creates a new cue numbered 27, changes the Cue Type to Hard Block (BL) and copies the field values of the cue alongside the cursor position.

**[CUE] [2] [8] {SOFT BLOCK} [RECORD]**

Creates a new cue numbered 28, changes the Cue Type to Soft Block (BL) and copies the field values of the cue alongside the cursor position.

**[CUE] [2] [9] (ALL FADE) [RECORD]**

Creates a new cue numbered 29, changes the Cue Type to Soft Block (BL) and copies the field values of the cue alongside the cursor position.

When in the Live Screen or any of the Preview Screens (Cue, Group, Effect or Sub) you can copy the levels of a cue to another cue using the **{COPY FROM}** softkey, e.g.,

**[CUE] [5] [@] {COPY FROM} [CUE] [2]**

You can expose the record mode soft keys at any time by using the **[REC MODE]** key. This key is a toggle, and switches the centre LCD (consoles with 3 LCD displays) or the left LCD (consoles with 2 LCD displays) or the LCD (Consoles with one LCD) between its normal display and the record mode soft keys.

## Level Tracking

Since Cross Fades and All Fades (Block Cues) record all channels, whether they change or not, to change levels in a series of Cross Fades or All Fades (Block Cues) you must re-record each one of the cues.

Move Fades (Tracking Cues), on the other hand, are easy to modify. When the [Cue Tracking](#) field in the Show Setup Screen is set ON (Lightpalette default) all level changes track through subsequent cues to wherever the channel level is next changed. Also when Cue Tracking is set to ON all cues are automatically recorded as Move Fades (Tracking Cues) unless another type is explicitly selected. If you want to avoid level tracking when you subsequently modify cues, you can set the Cue Tracking field to **THIS CUE ONLY**. In this mode level changes are recorded into one cue and do not track through to subsequent cues.

For GeniusPro, when the Cue Tracking field is set to OFF (GeniusPro default) cues are recorded as Cross Fades unless explicitly recorded as another type.

The **[Q ONLY/TRACK]** key changes the state of the Cue Tracking field from **ON** to **THIS CUE ONLY** or from **THIS CUE ONLY** to **ON** for a single cue.  
**[CUE] [1] [Q ONLY/TRACK] [RECORD]** *Direct 1 and 2 Digit*  
**[RECORD] [CUE] [1] [Q ONLY/TRACK] [\*]** *Command Line*  
Records cue 1 with altered tracking state as described above.

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## Recording a Text Label

You can record a text label (caption) with each cue to help identify the cue.

**[CUE] # [TEXT] text [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] # [TEXT] text [\*]** *Command Line*

Records levels on the current display into the specified cue and assigns a text string (caption) to it.

**[CUE] # [TEXT] text [\*]** changes the text string (caption) assigned to a cue without changing recorded levels.

Refer to [Basic Recording](#) for examples.

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## Running Cues

### see also:

[Recording Cues](#)

[X Playback](#)

This section contains the following topics:

- [The Current Cue](#)
- [Running Timed Cues](#)
- [Running Manual Cues](#)
- [Loading a Cue](#)
- [Loading a Cue with Overrides](#)
- [Changing Cue Direction](#)
- [Jumping Directly to a Cue](#)
- [Using the Rate/Level Wheel to Change Fade Progress \(500 Series Consoles\)](#)
- [Using the Level Wheel to Change Fade Progress \(300 Series Consoles\)](#)
- [Cue Fade Progress in Manual Time](#)
- [Updating and adding to Cues](#)
- [Updating Cues from the Live Screen](#)
- [Changing Cues Temporarily](#)
- [Fading Cues with the Level Wheel](#)
- [Viewing and Editing Cues](#)

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## The Current Cue

The CUE field in the right LCD shows the current cue. This is the last cue which has been referenced. It can be used in a cue selection.

All cue recording commands act on a single cue part. When you press **[CUE]**, the soft keys change to include **{PART}** which lets you select one of the cue parts. **[PART]** is a hard key on 300 Series consoles.

If you do not include a cue part, part 1 is assumed for a new cue and the current part is assumed for an existing cue.

A cursor (>) shows the current cue. This is the cue that will be recorded if you use recording commands and do not specify a cue number. It is also the cue that will appear when you press <PREVIEW> to see the Preview display and LCD menu.

- When you record a new cue the cursor moves to the newly recorded cue.
- When you load a cue onto a playback, the cursor moves to the loaded cue.
- When you shift into the live display the cursor moves to the last completed cue or, if a cue is in progress, to the cue in progress.
- When you press [GO] or [STOP BACK] the cursor moves to the cue in progress.
- When you press [NEXT] or [LAST] with no channels selected, or B or C on the playbacks, the cursor moves to the next or last existing cue. The cursor ( > ) on screen next to the cue number shows the current cue.

With dual playbacks, each playback has its own current cue.

The examples shown immediately below are command segments you can use to select a cue number. You can then use combinations of these command segments to replace cue where it appears in full command descriptions.

***Note:** Since the following examples form only part of a command, they are not related to channel control mode and the final [\*], where appropriate, is not shown.*

[CUE] {PART} # specifies the current cue with a specific part number.

[CUE] Specifies the current cue part 1.

[CUE] {PART} [2] Specifies the current cue part 2.

[CUE] [CUE] # Specifies the current cue with a specific part number.

[CUE] [CUE] [2] Specifies the current cue part 2.

[CUE] # {PART} # Specifies a specific cue.

[CUE] [1] Specifies cue 1 part 1.

[CUE] [1] {PART} [2] Specifies cue 1 part 2.

[CUE] [1] [.] [2] {PART} [3] Specifies cue 1.2 part 3.

[CUE] [NEXT] {PART} # specifies the next cue after the current cue. If the current cue is the highest cue number, this specifies the lowest cue number.

[CUE] [NEXT] Specifies the cue part 1 after the current cue.

[CUE] [NEXT] {PART} [2] Specifies the cue part 2 after the current cue.

[CUE] [LAST] {PART} # Specifies the previous cue before the current cue. If the current cue is the lowest cue number, this specifies the highest cue number.

[CUE] [LAST] Specifies the cue part 1 before the current cue.

[CUE] [LAST] {PART} [3] Specifies the cue part 1 before the current cue.



## The Blackout Cue

The first cue in the cue sheet is called the blackout cue and is numbered cue 0. This is an All Fade cue with all intensity levels and times of 0; it does not affect attributes. It cannot be modified or deleted.

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## Cue Colours (GeniusPro)

Cue fields are green except when they become the next cue. The last recorded cue is shown at the bottom in all red if [Show Last Recorded Cue](#) is **ON** in the User Setup Screen

When no cues are running, cue fields in the next cue are yellow. The wait, delay and fade times and fade progress of cues are white while a cue is running.

---

## Cue Colours (Lightpalette)

Cue fields are dark cyan, and become bright cyan when the cue is loaded. The last recorded cue is shown at the bottom in all green if [Show Last Recorded Cue](#) is ON in the Setup display.

When no cues are running, cue fields in the current cue are yellow if [X Playback Colours](#) is set to LIGHT PALETTE in the User Setup display, or black on a yellow bar if X Playback Colours is set to LIGHT PALETTE INVERT.

The cue is red (LIGHT PALETTE) or on a red bar (LIGHT PALETTE INVERT) while a cue is running, and the wait, delay and fade times and fade progress of the cue are white.

---

## Cue Properties (GeniusPro)

Each cue has a number of properties, which are displayed in the Live display State screen. When the [X Playback Format](#) field in the User Setup Screen is **SPREAD SHEET**, the property associated with each display field is indicated by the title line. When the X Playback Format field is **EXPANDED** or **EXPANDED - FADE TIME** the fields are labelled to their left. The GeniusPro default setting for the X Playback Format field is **SPREAD SHEET**.

<b>X</b>	The playback that will run this cue. If there is no playback number the cue will be assigned to the next available playback.
<b>Cue</b>	The recorded cue number.
<b>P</b>	The cue part (1 to 12) if it is a Move Fade. Otherwise blank.
<b>Type</b>	The type of recorded cue when Tracking is off. When Tracking is on, cue type is not shown.
	<b>XF</b> Cross Fade (default)
	<b>AF</b> All Fade
	<b>MF</b> Move Fade
<b>Up/Down</b>	The split fade times. If not split, only the up fade time is shown. Fade times can be from one hundredth of a second to 59 minutes and 59 seconds as shown for <a href="#">Fade Times</a> or manual (off).
<b>Time</b>	The way in which fade progress and remaining time is shown depends on the <a href="#">X Playback Format</a> field in the User Setup display
<b>Wait</b>	The wait time. Blank if the wait time is off. While a cue is running, the remaining wait time appears under this value. The colour indicates its state.
<b>Delay</b>	The cue split delay times. If not split only the up fade delay is shown. Blank if there are no delays. Shows initial delay times before a cue is run, the time remaining in the delay while a cue is running, and the original delays again when the fade completes. The colour indicates their state.
<b>Link</b>	Used for cue linking and looping:
	<b>(blank)</b> There is no link.
	<b>#</b> The number of the cue that will be run after this cue if the loop count is not exhausted.
	<b>Rtrn</b> This is a loop return cue and marks the end
<b>Loop</b>	For cues linked to previous cues, indicates how many time the loop will pass through this cue. For cues linked to the start of a subroutine indicates how many times to run the subroutine. Zero means continuous looping. Ignored if Link is blank.
<b>Cmd</b>	A macro to be run or an effect to start or stop. This is one of the following:
	<b>(blank)</b> No macro or effect.
	<b>M #</b> Run the macro. Refer to <a href="#">Product Specification</a> for number of macros

<b>F #</b>	Start the effect numbered. Refer to <a href="#">Product Specification</a> for number of effects
<b>f #</b>	Stop the effect. Refer to <a href="#">Product Specification</a> for number of effects
<b>Profile</b>	The assigned Up/Down profile. You can assign separate profiles for the up and down fades.

**Note:** The text label (caption) assigned to the cue is shown at the far right end of the second line of cue information, without a field label.

## Cue Properties (Lightpalette)

Each cue has a number of properties, which are displayed in the Live display State screen. When the [X Playback Format](#) field in the User Setup Screen is **SPREAD SHEET**, the property associated with each display field is indicated by the title line. When the X Playback Format field is **EXPANDED** or **EXPANDED - FADE TIME** the fields are labelled to their left. The Lightpalette default setting for the X Playback Format field is **EXPANDED**.

<b>Q</b>	The recorded cue number.
<b>P</b>	The cue part (1 to 12) if it is a Tracking Cue. Otherwise blank.
<b>Time</b>	The split fade times. If not split, only the up fade time is shown. Fade times can be from one hundredth of a second to 59 minutes and 59 seconds as shown for <a href="#">Fade Times</a> or manual (off). The way in which fade progress and remaining time is shown depends on the <a href="#">X Playback Format</a> field in the User Setup display.
<b>Wait</b>	The wait time. Blank if the wait time is off. While a cue is running, the remaining wait time appears under this value. The colour indicates its state.
<b>Delay</b>	The cue split delay times. If not split only the up fade delay is shown. Blank if there are no delays. Shows initial delay times before a cue is run, the time remaining in the delay while a cue is running, and the original delays again when the fade completes. The colour indicates their state.
<b>Link</b>	Used for cue linking and looping:

<b>(blank)</b>	There is no link.
<b>Q#</b>	The number of the cue that will be run after this cue if the loop count is not exhausted.
<b>Rtrn</b>	This is a loop return cue and marks the end
<b>Loop</b>	For cues linked to previous cues, indicates how many time the loop will pass through this cue. For cues linked to the start of a subroutine, indicates how many times to run the subroutine. Zero means continuous looping. Ignored if Link is blank.
<b>Macro #</b>	Run the macro. Refer to <a href="#">Product Specification</a> for number of macros
<b>FXGo #</b>	Start the effect. Refer to <a href="#">Product Specification</a> for number of effects
<b>FXStop #</b>	Stop the effect. Refer to <a href="#">Product Specification</a> for number of effects
<b>Playback</b>	The playback that will run this cue. If the label isn't showing the cue will be assigned to the next available playback.
<b>Profile</b>	The assigned Up/Down profile. You can assign separate profiles for the up and down fades.
<b>Att Prof</b>	The profile assigned to attributes.

**Note:** The text label (caption) assigned to the cue is shown at the far right end of the first line of cue information, without a field label.

## Running Timed Cues

On power-up, each playback is positioned on the cue which was the current cue when you shut down the console. Press **[GO]** to run the next cue and automatically load the cue after that, once fading is complete. The **[GO]** button light flashes while the cue is fading, but not during any delay or wait time. The light is on if a cue is loaded for playback, otherwise the light is off.

If there are any stopped or reversing cues, pressing **[GO]** restarts those cues running forwards. Continuously pressing **[GO]** will step sequentially through the cue sheet.

Running timed cues will sequence through the cue sheet, taking account of link and loop cues. When the end of the cue sheet is reached, the playback is cleared and no more cues can be run until the playback is reloaded.

**Note:** *A link to a non existent cue (or any other link/loop error) will also clear the playback.*

Cues do not have to complete before another cue is run. However a maximum of (refer to [Product Specification](#) for number of simultaneous fades) can be run where each cue part counts as a fade and split cues and parts count as 2 fades.

**Note:** *(GeniusPro) Running a Cross/All Fade immediately steals channels from all previous Cross/All or Move Fades.*

**Note:** *(Lightpalette) Running a Block Cue immediately steals channels from all previous Move Fades.*

---

## Running Manual Cues

Manual cues are sequenced and loaded by the X playbacks the same as timed cues, except that the playback will not actually run the cue.

1. Press **[GO]** to load the manual cue.
2. Make sure that the fader is not in Rate mode by pressing **{UNRATE}** if required (500 Series Consoles only).
3. Move the playback faders all the way to the bottom (0).
4. Move the playback faders up to fade the cue in. You can start the two faders at different times and move them at different rates if required.

---

## Loading a Cue

If you need to run cues out of their normal cue sheet order, you can load a cue onto the X Playback.

Individual cue parts cannot be loaded.

If the cue does not exist, a warning is given and the command is ignored. Loading a cue resets any loops to their initial loop count.

**[CUE] # [LOAD]** *Direct 1 and 2 Digit*

**[LOAD] [CUE] # [\*]** *Command Line*

Loads a cue into the playback. This does not affect the output until you press **[GO]** to run the cue. To load the current cue, omit the cue number. The CUE field in the right LCD shows the current cue.

**[CUE] [LOAD]** *Direct 1 and 2 Digit*

**[LOAD] [CUE] [\*]** *Command Line*

Loads the current cue into the playback.

**[CUE] [1] [.] [2] [LOAD]** *Direct 1 and 2 Digit*

**[LOAD] [CUE] [1] [.] [2] [\*]** *Command Line*

Loads cue 1.2 into the playback.

**[LOAD] [1] [.] [2] [\*]** *All Modes*

Loads cue 1.2 into the playback (the **[CUE]** key is assumed).

**[CUE] # [GO]** Loads and runs the cue. It is equivalent to **[CUE] # [LOAD]** followed by **[GO]**.

**[CUE] [GO]** *All Modes*

Loads and runs the current cue.

**[CUE] [1] [.] [2] [GO]** *All Modes*

Loads and runs cue 1.2.

## Loading a Cue With Overrides

The cue times, links, and profiles can be temporarily overridden when loading the cue using the same syntax as when recording the cue. In addition, you can load any cue as a Move Fade (Tracking Cue) regardless of how it was recorded. This does not permanently change the properties of the cue.

**[CUE] [TIME] [2] [/] [3] {DELAY} [/] [4] {WAIT} [5] [LOAD]** *Direct 1 and 2 Digit*

**[LOAD] [CUE] [TIME] [2] [/] [3] {DELAY} [/] [4] [WAIT] [5] [\*]** *Command Line*

Loads the current cue into the playback with up and down fade times of 2 and 3 seconds, down delay time of 4 seconds and wait time of 5 seconds.

**[CUE] [+ ] [2] [LOAD]** *Direct 1 and 2 Digit*

Loads cue 2 into the playback and forces it to be a Move Fade (GeniusPro).

**[LOAD] [CUE] [2] [PB] [2] [\*] [GO]** *Command Line*

Loads cue 2 into playback 2 irrespective of load type.

## Changing Cue Direction

Running cues can be stopped and then cut backwards. The backwards cut time is given by the [X Back, Cut](#) field in the User Setup display, or by the playback faders if you are in Manual Time mode. When cutting backwards, the previous cue in the cue sheet is always cut to, rather than the previously run cue.

To stop any forward running cues, press **[STOP/BACK]**. A second press cuts stopped cues backwards to the previous cue. If there are no running or stopped cues, the first press cuts backwards to the previous cue.

While there are cue fades which are stopped or cutting, the **[GO]** light flashes.

---

## Jumping Directly to a Cue

Normally a cue waits and then delays and finally fades to completion. When going to or cutting to a cue, wait and delay times are ignored and the fade time is taken from the [X Back, Cut](#) field in the Default Times window of the User Setup Screen

**[CUT]** has the same effect as **[GO]** if there are stopped or reversing cues. The stopped or reversing cues are restarted forwards. Otherwise it cuts to the next unrun cue. Unlike **[GO]**, if you are on the last cue in the cue sheet and you press **[CUT]**, it cuts to the first cue in the cue sheet.

### **[CUT]** All Modes

Cuts to the next unrun cue.

**[CUE] # [CUT]** or **[GOTO] [CUE] # [\*]** cuts to the specified cue. If the cue does not exist, a warning is given and the command is ignored. To cut to the current cue (shown in the Live LCD Menu), omit the cue number. These commands force the cue to its correct final state for intensity levels and attribute levels regardless of the current Tracking setting.

**Note:** *Delay times and assigned effects and macros are ignored.*

### **[CUE] [CUT]** Direct 1 and 2 Digit

### **[GOTO] [\*]** All Modes

### **[GOTO] [CUE] [\*]** All Modes

Cuts to the current cue.

**[CUE] [1] [.] [2] [CUT]** *Direct 1 and 2 Digit*

**[GOTO] [1] [.] [2] [\*]** *All Modes*

**[GOTO] [CUE] [1] [.] [2] [\*]** *All Modes*

Cuts to cue 1.2.

For GeniusPro, you can temporarily override the default Cut time when cutting to a cue by using the same syntax as when recording the cue. This has no effect on the recorded cue. This is the same as the equivalent **[GO]** command except that any delay times are ignored.

**[CUE] [TIME] [2] [/] [3] [CUT]** *Direct 1 and 2 Digit (GeniusPro)*

Cuts to current cue with up and down fade times of 2 and 3 seconds.

**[GOTO] [CUE] # [PB] # [\*]** cuts to the specified cue and runs it on the specified playback.

**[GOTO] [CUE] [5] [PB] [2] [\*]** *Direct 1 and 2 Digit*

Cuts to cue 5 on playback 2.

### **GeniusPro**

Effects run by cues are stopped if you use **[CUE] # [CUT]** or **[CUE] # [GO]**. To go to a new cue without stopping these effects, use **[CUE] # [LOAD] [GO]** for any fade, or **[CUE] # [GO]** if the cue is a Move Fade.

### **Lightpalette**

Effects run by cues are stopped if you use **[GOTO] [CUE] # [\*]** or **[CUE] # [GO]**. To go to a new cue without stopping these effects, use **[LOAD] [CUE] # [\*] [GO]**.

## **Using the Rate/Level Wheel to Change Fade Progress (500 Series Consoles)**

Normally cue fades progress automatically. However, you can use the Rate Wheel to change the fade progress of all currently running cues or parts on either X playback, or change the rate of a single running cue or cue part.

On consoles with two wheels, the Rate Wheel is next to the X playbacks. Do not confuse it with the Level Wheel. On consoles with only one wheel, the single wheel is the Level Wheel normally, and the Rate Wheel while rate functions are active.

To put all fades on a playback under Rate Wheel control, press the **{RATE}** softkey above the appropriate playback. The left LCD changes to **{UNRATE}**, **{UPRATE}** and **{DOWNRATE}**.

**{UPRATE}** and **{DOWNRATE}** are toggle keys, so that you can control the up fade rate, the down



fade rate, or both. When you first press **{RATE}**, both are highlighted.

Changing the current fade rate does not change the recorded fade time for any cues or parts. Rather, it changes the time remaining for cues that are running when you press **{RATE}**. If there is more than one cue or cue part running when you press **{RATE}**, the Rate Wheel changes their fade rates proportionally.

The Rate Wheel loses control of fades when all fades are completed, or when a new fade is started.

To move the cursor ( > ) up or down and select a single cue or part for Rate Wheel control, press **up** or **down**. When you are controlling only one cue, to return to controlling all of the running cues or parts, press **{UNRATE} {RATE}**.

To toggle the up fade rate control between on and off, press **{UPRATE}**. When there is a bar above this soft key, the Rate Wheel changes the fade time of channels which are fading up.

To toggle the down fade rate control between on and off, press **{DOWN RATE}**. When there is a bar above this soft key, the Rate Wheel changes the fade time of channels which are fading down.

To return the fader to normal functioning, press **{UNRATE}**. Changes you made with the Rate Wheel still apply to running cues or parts, but the Rate Wheel no longer controls any fades.

## Using the Level Wheel to Change Fade Progress (300 Series Consoles)

Normally cue fades progress automatically. However, you can use the Level Wheel to change the fade progress of all currently running cues or parts on either X playback, or change the rate of a single running cue or cue part.

To put all fades on a playback under Rate Wheel control, press the appropriate **[RATE]** key. Both **[RATE]** keys are toggle keys which set the status of the rate control for either X playback and operate as follows:

First Press	Up and Down Fade	Both UP and DN LEDs illuminated
Second Press	Up only Fade	UP only LED illuminated
Third Press	Down only Fade	DN only LED illuminated
Fourth Press	Unrate	Both UP and DN LEDs extinguished

Selecting Up rate, Down rate or both automatically changes the level wheel to a rate wheel while the rate function is selected. Set the fade progress for Up or Down fade progress or both, then press the

appropriate **[RATE]** key to end the rate adjustment and return the wheel to the normal level function.

Changing the current fade rate does not change the recorded fade time for any cues or parts. Rather, it changes the time remaining for cues that are running when you press **[RATE]**. If there is more than one cue or cue part running when you press **[RATE]**, the Level Wheel changes their fade rates proportionally.

The Level Wheel loses control of fades when all fades are completed, or when a new fade is started.

Rate changes you made with the Level Wheel still apply to running cues or parts, but the Level Wheel no longer controls any fades.

---

## Cue Fade Progress in Manual Time

Normally cue fades progress automatically. Manual Time takes the fade times of all currently running cues and the next cue on the Playback from the time fader. The next cue is adjusted to the exact value of the time fader, and the currently running cues are adjusted proportionally to their current percent on completion. The up and down times can be controlled separately.

Any new cues automatically come under control of the fader and take their time from the time controls.

To change the playback faders into time controls, press **{MAN TIME}** over the playback. The LCD changes to **{AUTO}**, **{INST}** and **{MAN FADE}** in this mode. The time for the fade will now be taken from the playback faders acting as time controls. The scales for time are on the outside of the two faders and are marked from 0 to infinity

To instantly complete a fade, press **{INST}**.

To return to normal mode where the fades continue automatically, press **{AUTO}**. Changes made while you were in Manual Time mode remain on the fader but all new cues will be run using their recorded times.

---

## Updating and Adding To Cues

**[UPDATE] cue # [\*]** changes levels in the specified cues as necessary based on channels that have been modified including channels that are not already in the cues. Channels that are off in the selection are removed from the cues. The cues must already exist.

Note: The **[UPDATE]** command for cues defaults to updating all channels, including channels that are not already in the cue. **[UPDATE] cue # [\*]** is the same as **[UPDATE] {ADD ALL} cue # [\*]**. When updating a cue to include all channels, it is therefore not necessary to include the **{ADD ALL}** softkey in the syntax.

**[UPDATE] [CUE] [1] [\*]** *All Modes*

Records all channels that have been modified live into cue 1 including channels that are not already in the cue.

**[SUB] [7] [\*] [UPDATE] [CUE] [1] [\*]** *All Modes*

First selects all of the channels in submaster 7, then records their levels in cue 1, including channels that are not already in cue 1.

**[UPDATE] {CHANS IN} cue [\*]** changes levels in the specified cues as necessary based on channels that have been modified ignoring channels that are not already in the cues. Channels that are off in the selection are removed from the cues. The cues must already exist.

**[UPDATE] {CHANS IN} [CUE] [1] [\*]** *All Modes*

Records all channels that have been modified live into cue 1, ignoring channels that are not already in the cue.

**[SUB] [7] [\*] [UPDATE] {CHANS IN} [CUE] [1] [\*]** *All Modes*

First selects all of the channels in submaster 7, then records their levels in cue 1, ignoring channels that are not already in the cue.

**chan [UPDATE] cue [\*]** changes levels of the specified channels in the specified cues to match the current Levels screen. Adds channels that are not already in the cues. Channels that are off in the selection are removed from the cues. The cues must already exist.

**[1] [THRU] [5] [UPDATE] [CUE] [1] [\*]** *All Modes*

Changes channel 1 through 5 levels in cue 1, adding channels that are not already in the cue.

**[1] [THRU] [5] [UPDATE] [CUE] [1] [THRU] [4] [\*]** *All Modes*

Changes channel 1 through 5 levels in cues 1 through 4, adding channels that are not already in the cues.

**Note:** To clear the changed indicator and set red channel levels back to cyan, press **[SHIFT] [CLEAR]**

---

## Updating Cues from the Live Screen

When in one of the two Cue Preview screens (Cue Sheet or X Ref) you can update cues according to the levels in the Live Screen (on stage) using the syntax **chans** **[@]** **[LIVE]**. This syntax will set the selected channel levels into currently highlighted cue in the Preview Screen, including channels not already in the cue. Alternatively, you can update only the channels in the cue using the syntax **cue** **[@]** **[LIVE]**.

**[1]** **[THRU]** **[5]** **[@]** **[LIVE]** *Direct Action Modes*

**[1]** **[THRU]** **[5]** **[@]** **[LIVE]** **[\*]** *Command Line Mode*

Sets the levels of channels 1 to 5 in the currently selected cue to the levels in the Live Screen (levels on stage). If any of the channels are not already in the cue, they are added to the cue.

**[CUE]** **[1]** **[@]** **[LIVE]** *Direct Action modes*

**[CUE]** **[1]** **[@]** **[LIVE]** **[\*]** *Command Line Mode*

Selects the channels in cue 1 and sets them according to the levels in the Live Screen (on stage)

## Changing Cues Temporarily

You can change levels and properties for the next cue temporarily by using the Playback display. These changes are not recorded in the cue, so the next time you run it the recorded properties and levels will be used. This does not modify the current cue (the cue with > next to it). It modifies the cue currently loaded and ready for playback when you press **[GO]**.

**[PB]** **#** **[\*]** opens the Playback display for the specified playback so that you can modify the next cue. Press **[LIVE]** to return to the Live display.

**[PB]** **[1]** **[\*]**

Opens the Playback display for X Playback 1. You can now change properties or levels for the next cue that will be run on the playback. Changes you make in this display are temporary, and are not recorded into the cue.

## Fading Cues with the Level Wheel

You can use the Level Wheel to fade individual cues in and out without putting them on an X playback

thereby disrupting the remainder of the cue flow.

**[CUE] [+] # wheel** fades the specified cue on. Levels are combined on a highest takes precedence basis with cue and effects playbacks and submasters. Channel levels increase as you move the Level Wheel up (away from you).

**[CUE] [-] # wheel** fades all channels from the specified cue off. Channel levels decrease as you move the Level Wheel up (away from you).

---

## Viewing and Editing Cues

Once you have recorded cues, you can view and edit them in the Preview display. You can also use the Preview display to create new cues.

***Note:** Changing levels while in this display changes the recorded levels in the current cue without a record command and without warning you.*

---

## The Preview Display

To show the Preview display press **<PREVIEW>** in the Display keypad.

The Preview display Levels screen shows the recorded channel levels (intensity levels and attribute levels) of the current cue. The Levels screen background is grey rather than black to show that levels changed in this display are not being changed live. To change output levels you must be in the Live display.

The Preview display State screen shows the recorded cues. The current cue is shown in the CUE field on the right LCD, and also has a cursor (>) next to it in the Preview display State screen.

To move between cues, use **[NEXT]** and **[LAST]** or the Up or Down keys over the X playback. The cursor (>) follows the current cue

## Cue Sheet Mode

8:32:28 24/01/99 >> **CUE SHEET 1** \*No Title GM=FL/FL

0126 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 0150  
50 50 50 50 FL

0151 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 0175

0176 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 0200

0201 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 0225

0226 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 0250

X Cue	P	Type	Up/Down	Delay	Wait	Link	Loop	Cmd
1		AF	5					
2		XF	MAN/MAN					
3		XF	5					
4		XF	5					

Wheel

v2a3

Net On  
Main  
denise  
User  
admin  
Main  
Active  
NoBackup

**CUE 1:**  
Select a cue or part, then SHIFT + TRACKBALL to edit an item

### Cue Preview Screen - Cue Sheet Mode - GeniusPro

The Preview display State screen shows a page of cues and their associated fields. The current cue is highlighted with a red background.

The title bar shows the date and time, display name, show name, and grandmaster status. The date and time format can be set in the Console Time window of the second Setup display State screen. The show name is preceded by an asterisk (\*) when changes have been made to the show since you last saved it.

The Wheel window at the right shows the position within the cue sheet. The number shows the index of the current cue. For example the first, second, and third cues have index 1, 2, and 3. The index is independent of the cue number.

If no cues have been recorded, the cue sheet automatically records cue 1 as a cross fade with no levels and default fade and delay times.



To go directly to a cue, press **[CUE] # [\*]** where # is the cue number. If the cue does not exist, you will be warned that you are creating a new item. Press **[\*]** again to create the new cue, or **[CLR]** or **[UNDO]** to cancel the command.

8:32:28 24/01/99 **PREVIEW 1** \*No Title GM=FL/FL

0101	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	0120
52	52	52	52	50	50	42	42	45	80	80	80	60	10	10	30	40	40	40	60
0021	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	0140
80	40	24	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0041	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	0160
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00161	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	0180
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0181	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	0200
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

X Playbacks - Tracking On

Q	0	AF Time	0
>Q	1	AF Time	5
Q	2	BL Time	0 % MAN/MAN 0%
Q	3	BL Time	5
Q	4	BL Time	5

Wheel

v2a3

Net On  
Main  
denise  
User  
admin  
Main  
Active  
NoBackup

**CUE 1**  
Select a cue or part, then SHIFT + TRACKBALL to edit an item

1	2	3	4	5	SPREAD	6
DELETED	RENUM	FROM	PART	SHEET	XREF	

Cue Preview Screen - Cue Sheet Mode - Lightpalette

### Spread Sheet Mode

To show the main cue editing screen, press **{SPREAD SHEET}** to switch to Spread Sheet mode.

8:32:28 24/01/99 >> **CUE SHEET 1** \*No Title GM=FL/FL

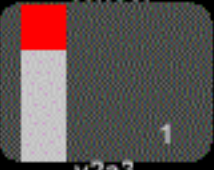
0126 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 0150  
 50 50 50 50 FL

0151 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 0175

0176 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 0200

0201 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 0225

0226 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 0250

X Cue	P	Type	Up/Down Profile	Att Profile	Delay	Wait Text	Link	Loop	Cmd	Wheel
> 1	1	XF	5/5 _0/_0	5	0/0	OFF	_0	_0	_0	 v2a3 Net On Main denise User admin Main Active NoBackup
1.5	1	XF	6/3 _0/_0	5	0/0	10.5	_0	_0	_0	
2	1	XF	5/5 0/	5	0/0	OFF	_0	_0	_0	
30	1	XF	5/5 5	5	0/0	OFF	_0	_0	_0	

**CUE 1:**  
 Select a cue or part, then SHIFT + TRACKBALL to edit an item

**Cue Preview Screen - Spread Sheet Mode - GeniusPro**



8:32:28 24/01/99 **PREVIEW 1** \*No Title GM=FL/FL

```

0101 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 0120
52 52 52 52 50 50 42 42 45 80 80 80 60 10 10 30 40 40 40 60

0021 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 0140
80 40 24 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0041 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 0160
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

00161 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 0180
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0181 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 0200
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

```

X Cue	P	Type	Up/Down Profile	Att Profile	Delay	Wait Text	Link	Loop	Cmd
-> 1	1	AF	5/5 0/0	5 0	0/0	OFF	__0	__0	__0
- 2	1	BL	MAN/MAN 0/0	0 0	0/0	OFF	__0	__0	__0
- 3	1		5/5 0/0	5 0	0/0	OFF	__0	__0	__0
- 4	1	BL	5/5 0/0	5 0	0/0	OFF	__0	__0	__0

**Wheel**

v2a3

Net On  
Main  
denise  
User  
admin  
Main  
Active  
NoBackup

**CUE 1:**  
Select a cue or part, then SHIFT + TRACKBALL to edit an item

1 2 3 4 5 CUE 6  
DELETE RENUM FROM PART SHEET XREF

### Cue Preview Screen - Spread Sheet Mode - GeniusPro

The Preview display State screen shows a page of cues and their associated fields. The current cue is highlighted with a red background.

The title bar shows the date and time, display name, show name, and grandmaster status. The date and time format can be set in the Console Time window of the second Setup display State screen. The show name is preceded by an asterisk (\*) when changes have been made to the show since you last saved it.

The Wheel window at the right shows the position within the cue sheet. The number shows the index of the current cue. For example the first, second, and third cues have index 1, 2, and 3. The index is independent of the cue number.

If no cues have been recorded, the cue sheet automatically records cue 1 as a cross fade with no levels and default fade and delay times.

To go directly to a cue, press **[CUE] # [\*]** where # is the cue number. If the cue does not exist, you will be warned that you are creating a new item. Press [\*] again to create the new cue, or **[CLR]** or **[UNDO]** to cancel the command.

To move between existing cues, move the Trackball to any field in the cue you want to edit. Levels for the highlighted cue will be displayed on the Levels screen, but to edit these levels you will need to highlight the cue number. You can also use **[NEXT]**, **[LAST]**, or the **up** or **down** keys to change cues if the highlight is on the cue number.

## The Cue XRef display

When you are in the Preview display you can choose to have channel levels displayed in the cross reference format rather than the standard Levels screen format.

To show the Cue XRef display press **<PREVIEW>** in the Display keypad and then the **{X REF}** soft key. This automatically puts the State screen into Spread Sheet mode.

8:32:28 24/01/99 CUE XREF 1 \*No Title GM=FL/FL

0001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 0018

1 50 50 50 50 FL

X Cue	P	Type	Up/Down Profile	Att Profile	Delay	Wait Text	Link	Loop	Cnd
> 1	1	XF	5/5	5	0/0	OFF	_0	_0	_0

Net On  
Main: denise  
User: admin  
Active  
NoBackup

CUE 1:  
Select a cue or part, then SHIFT + TRACKBALL to edit an item

## Cue XRef Screen - GeniusPro





### Cue XRef Screen - Lightpalette

The **{XREF}** softkey changes the Channel Levels Screen to display a cross reference between channels and cues. When you press the **{XREF}** softkey to display the Cue X Ref screen, a set of softkeys are available enabling you to move the display **{LEFT}** and **{RIGHT}** to display all the channels in a particular cue. Alternatively, you can move the display to show a specific channel by entering the channel number and pressing the **{CHAN}** softkey.

To move to new cues if there is more than one page of cues, use the trackball, or **[PAGE UP]** and **[PAGE DOWN]**.

To go directly to a cue, press **[CUE] # [\*]** where # is the cue number. If the cue does not exist, you will be warned that you are creating a new item. Press **[\*]** again to create the new cue, or **[CLR]** or **[UNDO]** to cancel the command. You can also go directly to a cue part using the **{PART}** softkey.

The Cue XRef Display Levels screen shows 18 channels at time of up to 28 cues. Although this display only shows a few channels at a time, it lets you easily see how channels are being used in successive cues.

You can make changes to cues while in this display just like you would in the standard Preview display.

**Note:** *If, when using channel [\*] to select a channel on a new page records an unwanted zero in move fade cues use channel the {CHAN} softkey.*

---

## Levels Screen Colours

Channel levels in the Levels Screen have different colours depending on the cue type and the level itself.

**green** The intensity level is lower than the previous cue.

**magenta** The intensity level is higher than the previous cue.

**blue** The attribute level is changed from the previous cue.

**white** The intensity level is fixed. (Tracking On). The intensity or attribute level is fixed. (Tracking Off).

**cyan** The intensity or attribute level is the same as the previous cue. (Tracking On)

**grey** The intensity or attribute level is the same as the previous cue. (Tracking Off)

**white on grey** The attribute level is fixed. (Tracking Off)

---

## State Screen Fields

Fields on the Preview display State screen show the current values for cue properties. The fields in this display are the same as in the X Playback window of the Live display with the following addition.

**Note:** *The fields in the Cue Sheet version of the State screen are identical to the fields in the Live Screen. You cannot see the attribute time and attribute profile (GeniusPro) from the Cue Sheet version, though you can modify them.*

**Att Profile:** *The assigned attribute time and profile (one on each cue line).*

---

## Creating a New Cue

To switch to the Preview display and create a new cue, press **<PREVIEW> [CUE] # [\*]** where **#** is the new cue number.

To create a new cue while you are in the Preview display, press **[CUE] # [\*]** where **#** is the new cue number.

You will be warned that you are creating a new item. Press **[\*]** again to create and display the new cue or **[CLR]** or **[UNDO]** to cancel the command.

---

## Viewing Cue Channel

To show the recorded levels of a cue in the Levels display, select the required cue.

For a Move Fade (Tracking Cue), channels which are off are shown with a blank level; channels which are on at 0 are shown with a level of 0. For a cross fade, both of these are shown as blank and treated as a level of 0 since all channels are used in the fade.

---

## Editing Cue Channels

First select the cue and ensure that the highlight is on the cue number. Use the Channel Control commands (for example **[1] [@] [1] [\*]**, **[CUE] [1] [@] [5] [\*]**) to set channel levels. once you set channel levels in this display, they are automatically recorded. The Level Wheel and some soft keys cannot be used to change levels in the Preview display.

**Note:** When you set channel levels in the Preview display with Tracking on, you can set them off (**chans [@] {OFF} [\*]**) or set them to zero (**chans [@] [0] [\*]**). When set off, levels track through from previous cues. When set to 0, levels are forced to zero in the cue. You can set levels off in a Cross Fade (Blocking Cue) to make individual channels track through the cue, or at zero in a Move Fade (Tracking Cue) to block individual channels. When you record from the Live display with Tracking on, channels at zero are set to zero level in the cue only if they change from the previous cue. Otherwise they are recorded off and channel levels track through from the previous cue.

---

## Setting Channel Tracking Status

Normally any channels you record into a cue take on the channel tracking status currently set in the

[Cue Tracking](#) field of the Show Details window of the Show Setup Screen. You can change the tracking status of channels as you set their levels by using the **[Q ONLY/TRACK]** key.

If Cue Tracking is set to **ON** the selected channel levels will be changed only in the current cue. If Cue Tracking is set to **OFF** or **THIS CUE ONLY**, the selected channel levels will be changed in the current cue and track through subsequent cues to where the channel levels are next set.

**[1] [+] [5] [@] [Q ONLY/TRACK] [5]** *Direct 1 and 2 Digit*

**[1] [+] [5] [@] [Q ONLY/TRACK] [5] [\*]** *Command Line*

Sets channels 1 and 5 to 50% and changes the set tracking state for those channels only.

## Deleting Cues

Cues can be deleted from the Preview display. This is a good way to delete cues if you are only going to delete a few. To learn how to delete all cues or a range of cues from the Archive display refer to 'Clear Operations' in the [Archive Screen](#).

**{DELETE}** This soft key appears on the LCD Preview menu and deletes the cue parts. Either a single part or a single THRU range can be specified. If you do not specify a part number, part 1 is deleted. This can be used with **[+]**, **[-]**, and **[THRU]** keys.

**{DELETE} {DELETE}** *Direct 1 and 2 Digit*

**{DELETE} [\*] [\*]** *Command Line*

Deletes the current cue part 1.

**[CUE] [1] {DELETE} {DELETE}** *Direct 1 and 2 Digit*

**{DELETE} [1] [\*] [\*]** *Command Line*

Deletes cue 1 part 1.

**[CUE] [1] [PART] [2] {DELETE} {DELETE}** *Direct 1 and 2 Digit*

**{DELETE} [1] [PART] [2] [\*] [\*]** *Command Line*

Deletes cue 1 part 2.

**[CUE] [1] [THRU] [3] {DELETE} {DELETE}** *Direct 1 and 2 Digit*

**{DELETE} [1] [THRU] [3] [\*] [\*]** *Command Line*

Deletes cues 1 part 1 to cue 3 part 1

## Renumbering Cues

Renumbering changes the cue numbers so that they start at 1 and increase in increments of 1; that is 1, 2, 3... cue parts are also renumbered similarly. Decimal point cues are changed to whole number cues but the order of cues remains the same. You can renumber the whole cue sheet or specify a start cue for renumbering. Link properties in the cues are updated to reflect the new cue numbers.

**{RENUM}** renumbers all cues starting at cue 1.

**{RENUM} {RENUM}** *All Modes*

Renumbers all cues (two key presses).

**[CUE] # {FROM} # {RENUM}{RENUM}** renumbers all cues starting with the cue specified, to new numbers starting with the From number specified.

**[CUE] [5] {FROM} [4] [0] {RENUM} {RENUM}** *All Modes*

Renumbers all cues starting at cue 5. Cue 5 will now be numbered cue 40, and subsequent cues will be numbered accordingly.

**Note:** After renumbering cues, you can still insert cues as necessary using numbers after a decimal point, e.g., 3.5.

---

## Copying from a Cue

You can record submasters, cues, groups, and effect steps while you are in the Preview display. The syntax is the same as for recording from the Live display. The highlight must be on the cue number (the CUE field).

Using recording commands while you are in the Preview display copies the Preview display levels to the target submaster, cue, group, or effect step. For example, if the current cue is 1, then **[SUB] [2] [RECORD]** will copy the levels from cue 1 into submaster 2. This also lets you copy cues. For example, **[CUE] [2] [RECORD]** copies the levels from cue 1 into cue 2.

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# X Playbacks

## See Also

[Recording Cues](#)

[Running Cues](#)

The X Playbacks function lets you automatically or manually fade between recorded lighting states, called cues, which contain intensity and/or attribute levels with associated fade, delay and wait times, profiles, and other attributes.

There are 2 X playbacks, labelled X1 and X2, each with its own keys and sliders. The console can be configured to use one or both of these. Each X playback runs cues in order from the cue sheet by fading from one cue to the next unless you explicitly load a cue out of order. By default, cue ordering is by cue number, but you can change the cue ordering by using links, subroutines, and loops. In this section, playback is used to mean one of the X playbacks

This section covers the following topics:

- [Assigning Cues to X Playbacks](#)
- [Playback Mode](#)
- [The X Playback Window \(GeniusPro\)](#)
- [The X Playback Window \(Lightpalette\)](#)
- [Using the X Playbacks](#)
- [X Playback in Manual Fade Mode](#)

---

## Assigning Cues to Playbacks

Normally, cues can be run on either playback. They can however be assigned to a particular one. The other playback will then treat the cue as if it does not exist.

**cue [PB] # [RECORD] [\*]** - Direct Digit  
**[RECORD] cue [PB] # [\*]** - Command Line

Records the levels on the current display into the specified cue and assigns the cue to the specified playback. If the cue already exists, an overrecord message gives you the chance to cancel the recording. To rerecord the cue, press **[RECORD] [\*]** again. To cancel the recording, press **[CLR]** or **[UNDO]**.



In multi-part cues, only the playback set in part 1 is used. If the console is set for two playbacks, cues will only run on their assigned playback. If the console is set for a single playback this assignment has no effect. To delete a playback assignment, omit the playback number.

**[CUE] [1] [PB] [2] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [PB] [2] [\*]** *Command Line*

Records levels into cue 1 and assigns it to Playback 2.

**[CUE] [1] [PB] [RECORD]** *Direct 1 and 2 Digit*

**[RECORD] [CUE] [1] [PB] [\*]** *Command Line*

Records levels into cue 1 and deletes any assignment.

**cue [PB] # [\*]** changes the playback that the specified cue is assigned to without changing recorded levels. If the cue doesn't exist and the command is confirmed, creates a new cue with no levels but with the specified playback assignment. You do not get an overrecord warning with this command if the cue exists

**[CUE] [1] [PB] [\*]** *All Modes*

Deletes the cue 1 playback assignment without changing any levels.

**[CUE] [1] [PB] [2] [\*]** *All Modes*

Changes the cue 1 playback assignment to playback 2 without changing any levels.

## Playback Mode

The [Playback Modes](#) field in the Show Details window on the Show Setup Screen configures the number of playbacks and the playback mode.

**SINGLE:** There is only one position in the cue sheet. Playback assignments in the cue sheet are ignored, and all cues are run on the X1 Playback.

**SPLIT SINGLE:** There is only one position in the cue sheet, which is advanced by running cues on either Playback. Playback assignments in the cue sheet are ignored.

**Note:** Series 300 consoles do not support Split Single Mode.

**DUAL LTP:** There are two independent positions (one for each playback) in the cue sheet. Outputs of the two playbacks are combined on a latest takes precedence basis. For example, with cues numbered 1, 2, 3 etc., running three cues on Playback 1 would run cues 1, 2 and 3. Then running two cues on Playback 2 would also run cues 1 and 2, stealing the channels in common with Playback 1, since latest takes precedence.

**DUAL HTP:** There are two independent positions (one for each playback) within the cue sheet. The outputs of the playbacks are combined on a highest takes precedence basis.

---

## The X Playback Window (GeniusPro)

The X Playback window on the Live display State screen shows the position within the cue sheet for each of the playbacks. To show the Live display, press **<LIVE>**. If the default Live display does not show the X Playback window, hold down **[SHIFT]** and press **<LIVE>** repeatedly until it appears.

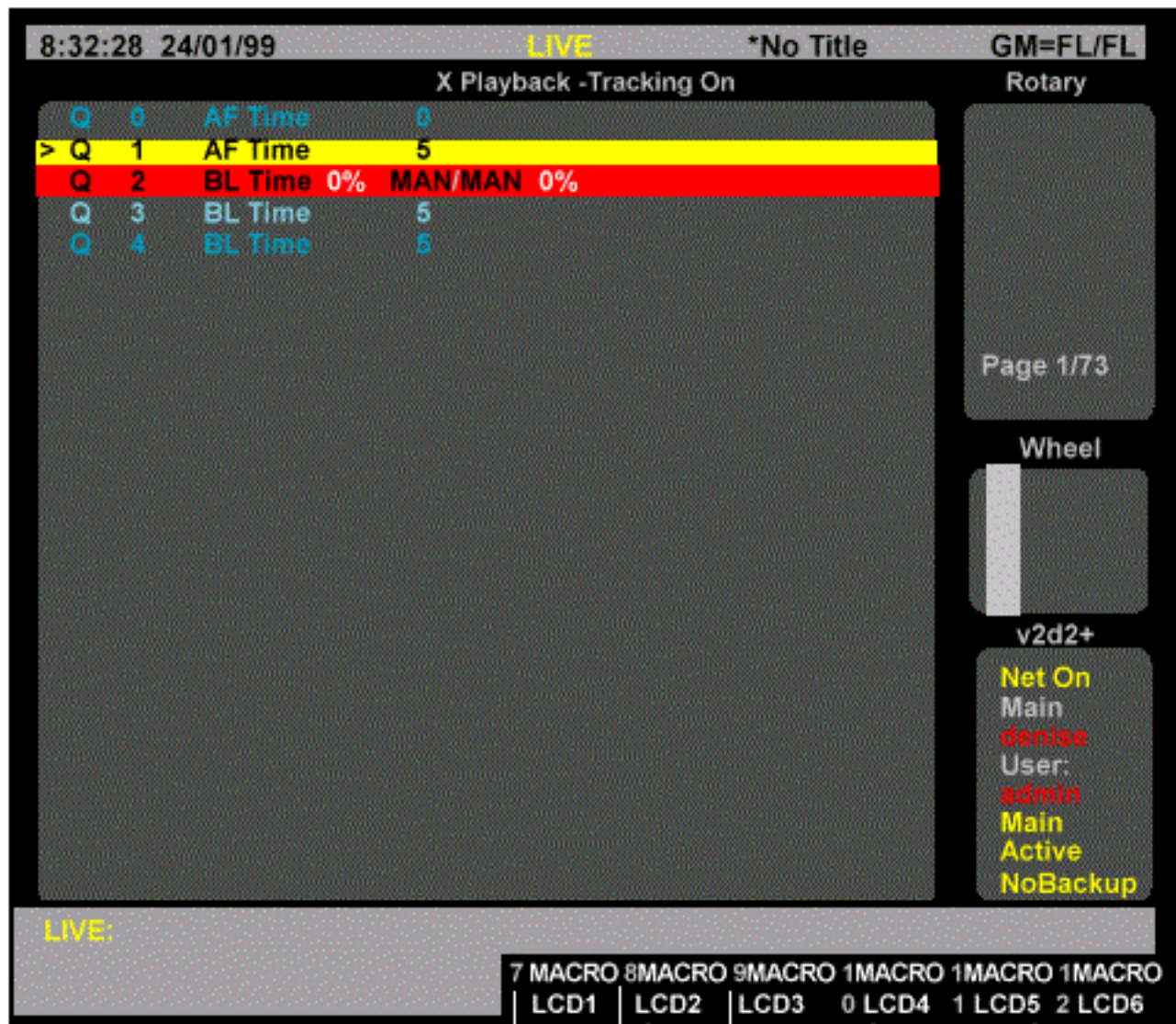


This window is mainly used when running the playback. Each playback has a title line followed by completed or currently running cues. This is followed by a blank line and then all unrun cues. The last recorded cue is shown at the bottom in all red. This disappears when the console is switched off and on again, or when it is disabled in the User Setup Screen by turning the [Show Last Recorded Cue](#) field to **OFF**.

## The X Playback Window (Lightpalette)

The X Playback window on the Live display State screen shows the position within the cue sheet for each of the playbacks. To show the Live display, press **<LIVE>**. If the default Live display does not show the X Playback window, hold down **[SHIFT]** and press **<LIVE>** repeatedly until it appears.





This window is mainly used when running the playback. Each playback has a title line followed by a list of all recorded cues. A yellow bar across the screen shows the last cue completed. Cues in progress are shown with a red bar across the screen. You can disable the yellow and red bars across the screen in the User Setup display by changing the [X Playback Colours](#) field in the User Setup Screen to something besides **LIGHT PALETTE INVERT**.

## Using the X Playbacks

Each playback has its own keys and soft keys and two sliders which are used to load, run and control cues. When the [Playback Modes](#) field in the Show Setup screen is set to **SINGLE**, only the left hand set of controls (Playback X1) can be used. When it is set to **SPLIT SINGLE** (not applicable to 300 series consoles), either set of controls can be used. When it is set to **DUAL HTP** or **DUAL LTP**, the left set is Playback X1 and the right set is Playback X2. There is also a Rate Wheel which can be used by either playback to control fade times.

The playbacks can be used from any display.

The X Playbacks window in the Live display State screen and the left LCD show the current state of each of the playbacks.

---

## X Playback LCD

The X Playback LCD shows the current cue being run and the wait, delay or fade time for each playback. This information is duplicated from the Live display. In addition, the LCD shows the current playback mode as selected by the soft keys below the LCD. If the cue is fading it shows **AUTO FADING**, **MAN TIMING**, or **MAN FADING**. If the cue has completed it shows **AUTO**, **MAN TIME**, or **MAN FADING**. If the cue is stopped it shows **STOPPED**, **MAN TIME STOP**, or **MAN FADE STOP**.

---

## X Playback in Manual Fade Mode

To change the playback to Manual Fade mode, press **{MAN FADE}**.

Normally cue fades progress automatically. Manual Fade takes the current fade progress from the progress faders for the last fade on the playback. The scale for fade progress is between the two playback faders, and is marked from 0% to 100%. The left fader controls up fades and the right fader controls down fades.

Going to Manual Fade mode stops the fades. The fader must be moved to 0, then moved to pick up the current position of the cue after which it moves the progress between 0% and 100%.

When the fade reaches 100% the fader loses control of it. Moving both faders to 0% then starts the next cue running. Any cue wait or delay times are ignored. This automatic sequencing can be turned off.

To change to Manual Fade mode, press **{MAN FADE}** above the playback. The up and down fade progresses are controlled by the faders. The LCD changes to **{AUTO}**, **{MAN TIME}** and **{SEQ}**.

To toggle automatic sequencing of manually faded cues, press **{SEQ}**. When automatic sequencing is enabled, a bar appears over the soft key.

To return the faders to automatic fade mode, press **{AUTO}**. New cues will use their recorded fade times and will be automatically sequenced.

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## User Setup Screen

This display lets you control how the console operates and displays information. The User Setup screen is displayed when you press the **[REPORT]** key followed by the **{ADV SETUP}** softkey, then the **{USER SETUP}** softkey. The User Setup Screen may also be accessed by pressing the **[SETUP]** key. This key permits access to only the Setup Screen. Three softkeys are available at this point.

**{DEFAULT}** Sets the highlighted field to the factory default. In certain fields, the default setting is dependant on the setting of the GENIUSPRO/PALETTE field.

**{BACK}** Returns to the previous display

**{MEMORY LOCK}** Refer to [Locking the Console Memory](#)

The screenshot shows the User Setup Screen with the following content:

8:32:28 24/06/98 **USER SETUP** \*No Title GM=FL/FL

Control Modes		Default Times	
ChannelControlMode	<b>DIRECT 1 DIGIT</b>	xBack,Cut	0 /0
CC Auto Hold Mode	OFF	CueFadeUp/Down	5 /5
ON Level%	100	CueDelayUp/Down	0 /0
UP DOWN%	5	CueWait	OFF
Wheel Mastering	SHAFT	Fx Step	0.5
Wheel Sensitivity	FAST	FxStepIn/Dwell/Out	0 /OFF /0
Stop Key	BLACKOUT	FxUp/Down	0.5 /0.5
		UndoTime	2

Display Options		Console	
Display Language	ENGLISH	Number Screens	1
Channel Display	GENIUS+	LCD Contr, Backlit	4 ...50
Smart Channel Display	TRACKER	Goosneck Bright	100
Auto Channel Page	ON	Buzzer Volume	ON
Channel Formatting	OFF	Macro Tablet	OFF
Live Screen Layout	PB + SUBS	- Mode	MACRO
X Playback Colours	GENIUSPRO	- Net Node, Port	LOCAL OFF
X Playback Order	HISTORY+QUESHEET	Mouse	
X Playback Format	SPREAD SHEET	- Net Node, Port	LOCAL OFF
Show Last Recorded Cue	ON	Console Keys Layout	Q ONLY KEY
Screen Menus	OFF	Submaster Layout	DEFAULT
		GENIUSPRO/PALETTE	DEFAULT

COMMAND LINE    **DIRECT1DIGIT**    DIRECT2DIGITS

SETUP: \*

The fields within the four windows of the User Setup Screen are described under the window title as follows:

- [Control Modes Window](#)

- [Display Options Window](#)
  - [Default Times Window](#)
  - [Console Window](#)
- 

## Control Modes Window

The Control Modes window is in the User Setup display, and lets you configure how channels are controlled.

The fields within the Control Modes Window are described as follows:

- [Channel Control Mode](#)
  - [CC Auto Hold Mode](#)
  - [On Level %](#)
  - [Up/Down %](#)
  - [Wheel Mastering](#)
  - [Wheel Sensitivity](#)
  - [Stop Key](#)
- 

## Channel Control Mode

Controls the channel command syntax accepted by the console.

Its value is **COMMAND LINE**, **DIRECT 1 DIGIT**, or **DIRECT 2 DIGIT**.

**COMMAND LINE** (Lightpalette Default) Commands are mainly only carried out after you press **[\*]**, although it is sometimes not required. In general, the syntax is action first, then object (for instance, **[RECORD][CUE][1][\*]**).

Channel levels are entered as a single digit number which represents a multiple of 10% or a double digit number which lets you enter fractions of 10%.

**[1][@][0][2][\*]** sets channel 1 to 2%.

**[1][@][3][\*]** sets channel 1 to 30%.

**[1][@][4][5][\*]** sets channel 1 to 45%.

**DIRECT 1 DIGIT** (GeniusPro Default) Commands are carried out as soon as they are fully entered although the **[\*]** key is required for some commands. In general, the syntax is object first, then action (for instance, **[CUE][1][RECORD]**).

Channel levels are entered as a single digit number which represents a multiple of 10%. This can be followed by . and a second digit for fractions of 10%.

**[1][@][0][.][2]** sets channel 1 to 2%.

**[1][@][3]** sets channel 1 to 30%.



**[1][@][4][.][5]** sets channel 1 to 45%

**DIRECT 2 DIGIT** Commands are carried out as soon as they are fully entered although the **[\*]** key is required for some commands. In general, the syntax is object first, then action (for instance, **[CUE][1][RECORD]**).

Channel levels are entered as a two digit number.

**[1][@][0][2]** sets channel 1 to 2%.

**[1][@][3][0]** sets channel 1 to 30%.

**[1][@][4][5]** sets channel 1 to 45%.

---

### **CC Auto Hold Mode**

When **ON** (Lightpalette Default), channels cannot be “stolen” from the Channel Control by cues, subs, and effects. When **OFF** (GeniusPro Default), running a cue or effect, or changing a submaster level, will steal channels from the Channel Control.

Note: In Lightpalette mode, if a handheld or remote console selects a channel and then Autohold is switched off, the channel cannot be stolen back by the main console. Switch Autohold back on, select and deselect the channel using the handheld or remote console, then switch Autohold off. **[SHIFT][CLR]** can then steal the channels.

---

### **On Level %**

Sets the default on level for use by the Channel Control **{ON}** command. Levels set in the \*On group (993.1) or the \*On Handheld group (993.2) are used if they exist. This number is used for any channel that is not set in these groups. For further information, refer to [Groups](#)

# A number from 0 to 100 (default 100) setting the on level.

---

### **Up/Down %**

Sets the percent level change that the **{UP%}** and **{DOWN%}** softkeys represent.

# A number from 0 to 100 (default 5) giving the percent level change when the **{UP%}** or **{DOWN%}** keys are used.

## ***Wheel Mastering***

Controls the way that the Level Wheel masters channels.

Its value can be **SHAFT** (GeniusPro Default) or **PROPORTIONAL** (Lightpalette Default)

**SHAFT** When you move the Level Wheel, the selected levels move up or down by the same amount. For example, with two channels at 10% and 40%, wheeling by 10% will increase these to 20% and 50% respectively.

**PROPORTION** Each channel with a level moves up or down by an amount proportional to its level. For example, with two channels at 10% and 40%, wheeling by 50% will increase these to 15% and 60%; that is, each level is increased by half as much again. Channels in the selection that are set to zero move up 2% with a 50% increase in other channel levels.

---

## ***Wheel Sensitivity***

Controls the sensitivity of the Level Wheel

The value can be **SLOW**, **MEDIUM** (default), or **FAST**.

---

## ***Stop Key***

Controls the function of the **[STOP]** key at the top of the console.

**OFF** (default) The key is disabled.

**BLACKOUT** Sets all intensities to 0% at the first press and restores them at the second press. Attributes are unaffected.

**STOP ATTS** Stops all attribute fades while intensity fades continue. Pressing it again re-enables attribute fades when the next cue or effect is run or Channel Control action is taken.

---

## **Display Options Window**

The Display Options window is in the User Setup display, and lets you see how level and state information appear in the various displays..

The fields within the Display Options Window are described as follows:

- [Display Language](#)
- [Channel Display](#)
- [Smart Channel Display](#)
- [Auto Channel Page](#)

- [Channel Formatting](#)
  - [Live Screen Layout](#)
  - [X Playback Colours](#)
  - [X Playback Order](#)
  - [X Playback Format](#)
  - [Show Last Recorded Cue](#)
  - [Screen Menus](#)
- 

### ***Display Language***

Sets the language used for the display and LCD displays.

Its value is **ENGLISH** (default), **FRANCAIS** (French), **DEUTSCH** (German), **ITALIANO** (Italian), **ESPANOL** (Spanish), **SVENSKA** (Swedish), **NEDERLANDS** (Dutch), or **RUSSIAN**. For further information on setting the display language, refer to [Country Keyboard Support](#)

---

### ***Channel Display***

Controls the way that levels are shown on the Levels display.

The Channel Display field can be set to **CONTROL**, **GENIUS**, **GEMINI**, **GALAXY**, **LP+**, **LP100+** (the Lightpalette default), **GENIUS+** (the GeniusPro default), **GALAXY+**, or **PRESET**.

This layout is modified by the [Channel Formatting](#) field and the [Smart Channel Display](#) field depending on how you are using channels in cues and what channels are currently selected.

**Note:** *The following assumes that the Number of Screens is set to 2*

**CONTROL:** Row order, 10 channels per row. 100 channels per page. Intensity channels and attribute channels are shown in order from left to right down the display. Each row consists of 3 lines; the intensity channel number, and attribute channel number (if applicable), followed by the last control function to have controlled the channel (Channel Control - e.g., CC1, Cue and X Playback number - Q 1, Effect - e.g., FX, Submaster and Submaster Page - e.g., S 1) followed by the the intensity (or attribute) level.

10:39:38		27/1/99		>>		LIVE		*No Title		GM=FL/FL	
0001	0001.2	0002	0002.2	0003	0003.2	0004	0004.2	0005	0005.2		
Q 2	Q 2	Q 2	Q 2	CC 1	CC 1	CC 1	CC 1				
50	0	30	0	FL	3	60	4				
0006	0006.2	0007	0007.2	0008	0008.2	0009	0009.2	0010	0010.2		
		Q 2	Q 2								
		20	0								
0011	0011.2	0012	0012.2	0013	0013.2	0014	0014.2	0015	0015.2		
		CC 1	CC 1	CC 1	CC 1						
		60	8	30	1						
0021	0021.2	0022	0022.2	0023	0023.2	0024	0024.2	0025	0025.2		
0026	0026.2	0027	0027.2	0028	0028.2	0029	0029.2	0030	0030.2		
0031	0031.2	0032	0032.2	0033	0033.2	0034	0034.2	0035	0035.2		
0036	0036.2	0037	0037.2	0038	0038.2	0039	0039.2	0040	0040.2		
0041	0041.2	0042	0042.2	0043	0043.2	0044	0044.2	0045	0045.2		
0046	0047	0048	0049	0050	0051	0052	0053	0054	0055		
Q 2	Q 2	Q 2	Q 2								
0	0	0	0								
LIVE *											

**GENIUS:** Row order, 25 channels per row, 250 channels per page. Channels are shown in order from left to right down the display. Each row consists of 3 lines; the channel number below which is the level and then a blank line. Attribute levels are not shown. Where the channel numbers are not sequential, two consecutive columns will be used to show a single channel number (for example 4000 4100 4200 4300).

10:39:38		27/1/99		>>		LIVE		*No Title		GM=FL/FL															
0001	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	0025	
	FL		FL		80		40				20	20	20												
0026	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	0050	
0051	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	0075	
							40	40	40	40	40	40	40												
0076	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	0100	
0101	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	0125	
0126	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	0150	
0151	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	0175	
0176	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	0200	
0201	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	0225	
0226	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	0250	
LIVE *																									

**GEMINI:** Row order, 10 channels per row, 300 channels per page. Channels are shown in order from left to right down the display. Each row consists of 1 line; the channel number is shown before each level. Attribute levels are not shown.

10:39:38 27/1/99		>>		LIVE		*No Title		GM=FL/FL		
1:	FL	2:	3:	4:	5:	6:	7:	8:	9:	10:
11:	12:	13:	14:	15:	16:	17:	18:	19:	20:	
21:	22:	23:	24:	25:	26:	27:	28:	29:	30:	
31:	32:	33:	34:	35:	36:	37:	38:	39:	40:	
41:	42:	43:	44:	45:	46:	47:	48:	49:	50:	
51:	52:	53:	54:	55:	56:	57:	58:	59:	60:	
61:	62:	63:	64:	65:	66:	67:	68:	69:	70:	
71:	72:	73:	74:	75:	76:	77:	78:	79:	80:	
81:	82:	83:	84:	85:	86:	87:	88:	89:	90:	
91:	92:	93:	94:	95:	96:	97:	98:	99:	100:	
101:	102: 40	103: 40	104: 40	105: 40	106:	107:	108:	109:	110:	
111:	112:	113:	114:	115:	116:	117:	118:	119:	120:	
121:	122:	123:	124:	125:	126:	127:	128:	129:	130:	
131:	132:	133:	134:	135:	136:	137:	138:	139:	140:	
141:	142:	143:	144:	145:	146:	147:	148:	149:	150:	
151:	152:	153:	154:	155:	156:	157:	158:	159:	160:	
161:	162:	163:	164:	165:	166:	167:	168:	168:	170:	
171:	172:	173:	174:	175:	176:	177:	178:	179:	180:	
181:	182:	183:	184:	185:	186:	187:	188:	189:	190:	
191:	192:	193:	194:	195:	196:	197:	198:	199:	200:	
201:	202:	203:	204:	205:	206:	207:	208:	209:	210:	
211:	212:	213:	214:	215:	216:	217:	218:	219:	220:	
221:	222:	223:	224:	225:	226:	227:	228:	229:	230:	
231:	232:	233:	234:	235:	236:	237:	238:	239:	240:	
241:	242:	243:	244:	245:	246:	247:	248:	249:	250:	
251:	252:	253:	254:	255:	256:	257:	258:	259:	260:	
261:	262:	263:	264:	265:	266:	267:	268:	269:	270:	
271:	272:	273:	274:	275:	276:	277:	278:	279:	280:	
281:	282:	283:	284:	285:	286:	287:	288:	289:	290:	
291:	292:	293:	294:	295:	296:	297:	298:	299:	300:	

LIVE \*

**GALAXY:** Column order, 30 channels per column, 300 channels per page. channels are shown in order from top to bottom across the display. Each row consists of the channel number followed by the level. Attribute levels are not shown.



10:39:38		27/1/99		>>		LIVE		*No Title		GM=FL/FL	
1:	FL 31:	61:	91:	121:	151:	181:	211:	241:	271:		
2:	32:	62:	92:	122:	152:	182:	212:	242:	272:		
3:	33:	63:	93:	123:	153:	183:	213:	243:	273:		
4:	34:	64:	94:	124:	154:	184:	214:	244:	274:		
5:	35:	65:	95:	125:	155:	185:	215:	245:	275:		
6:	36:	66:	96:	126:	156:	186:	216:	246:	276:		
7:	37:	67:	97:	127:	157:	187:	217:	247:	277:		
8:	38:	68:	98:	128:	158:	188:	218:	248:	278:		
9:	39:	69:	99:	129:	159:	189:	219:	249:	279:		
10:	40:	70:	100:	130:	160:	190:	220:	250:	280:		
11:	41:	71:	101: 40	131:	161:	191:	221:	251:	281:		
12:	42:	72:	102: 40	132:	162:	192:	222:	252:	282:		
13:	43:	73:	103: 40	133:	163:	193:	223:	253:	283:		
14:	44:	74:	104: 40	134:	164:	194:	224:	254:	284:		
15:	45:	75:	105: 40	135:	165:	195:	225:	255:	285:		
16:	46:	76:	106:	136:	166:	196:	226:	256:	286:		
17:	47:	77:	107:	137:	167:	197:	227:	257:	287:		
18:	48:	78:	108:	138:	168:	198:	228:	258:	288:		
19:	49:	79:	109:	139:	169:	199:	229:	259:	289:		
20:	50:	80:	110:	140:	170:	200:	230:	260:	290:		
21:	51:	81:	111:	141:	171:	201:	231:	261:	291:		
22:	52:	82:	112:	142:	172:	202:	232:	262:	292:		
23:	53:	83:	113:	143:	173:	203:	233:	263:	293:		
24:	54:	84:	114:	144:	174:	204:	234:	264:	294:		
25:	55:	85:	115:	145:	175:	205:	235:	265:	295:		
26:	56:	86:	116:	146:	176:	206:	236:	266:	296:		
27:	57:	87:	117:	147:	177:	207:	237:	267:	297:		
28:	58:	88:	118:	148:	178:	208:	238:	268:	298:		
29:	59:	89:	119:	149:	179:	209:	239:	269:	299:		
30:	60:	90:	120:	150:	180:	210:	240:	270:	300:		

LIVE \*

**LP+** : Row order, 20 channels per row, 200 channels per page. The same as LP100+ except that more channels are shown. If the channel has both an intensity and an attribute then both are shown.

10:39:38		27/1/99		>>		LIVE		*No Title		GM=FL/FL										
0001	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	0020	
	80	80	80	80			40	30	10											
		3																		
0021	22	23	24	25	26	27	28	29	30	31	32	33	34	35	3	37	3	3	0040	
0040	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	57	58	59	0060
					40	40	40	40	40	40	40									
0061	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	0080	
0081	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	0100	
0101	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	0120	
0121	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	0140	
0141	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	0160	
0161	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	0180	
0181	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	0200	
LIVE *																				

**LP100+:** (Lightpalette Default) Row order, 20 channels per row, 100 channels per page. The same as LP+ except that fewer channels are shown. If the channel has both an intensity and an attribute then both are shown.



10:39:38		27/1/99		>>		LIVE		*No Title		GM=FL/FL										
0001	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	0020	
	80	80	80	80			40	30	10											
		3																		
0021	22	23	24	25	26	27	28	29	30	31	32	33	34	35	3	37	3	3	0040	
0040	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	57	58	59	0060
					40	40	40	40	40	40	40									
0061	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	0080	
0081	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	0100	
LIVE *																				

**GENIUS+** (GeniusPro Default) Row order, 25 channels per row, 250 channels per page. Same as GENIUS except that attribute levels are shown in the blank line below intensity levels. If the channel has both an intensity and an attribute then both are shown.

10:39:38		27/1/99		>>		LIVE		*No Title		GM=FL/FL														
0001	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	0025
	FL		FL		80		40		20	20	20													
	0		0		2				2	2	2													
0026	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	0050
0051	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	0075
							40	40	40	40	40	40	40											
							3	2	2	3			2											
0076	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	0100
0101	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	0125
0126	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	0150
0151	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	0175
0176	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	0200
0201	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	0225
0226	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	0250
LIVE *																								

**GALAXY+:** Column order, 30 channels per column, 180 channels per page. Galaxy + is the same as GALAXY except that if the channel has both an intensity and an attribute then both are shown.

10:39:38 27/1/99		>>		LIVE	*No Title	GM=FL/FL
1:	80: 3	31:	61:	91:	121:	151:
2:	80: 3	32:	62:	92:	122:	152:
3:	80: 2	34:	64:	94:	124:	154:
5:	80:	35:	65:	95:	125:	155:
6:	30:	36:	66:	96:	126:	156:
7:	30: 2	37:	67:	97:	127:	157:
8:	20:	38:	68:	98:	128:	158:
9:		39:	69:	99:	129:	159:
10:		40:	70:	100:	130:	160:
11:		41:	71:	101: 40: 4	131:	161:
12:		42:	72:	102: 40:	132:	162:
13:		43:	73:	103: 40: 2	133:	163:
14:		44:	74:	104: 40:	134:	164:
15:		45:	75:	105: 40: 2	135:	165:
16:		46:	76:	106:	136:	166:
17:		47:	77:	107:	137:	167:
18:		48:	78:	108:	138:	168:
19:		49:	79:	109:	139:	169:
20:		50:	80:	110:	140:	170:
21:		51:	81:	111:	141:	171:
22:		52:	82:	112:	142:	172:
23:		53:	83:	113:	143:	173:
24:		54:	84:	114:	144:	174:
25:		55:	85:	115:	145:	175:
26:		56:	86:	116:	146:	176:
27:		57:	87:	117:	147:	177:
28:		58:	88:	118:	148:	178:
29:		59:	89:	119:	149:	179:
30:		60:	90:	120:	150:	180:

LIVE \*

**PRESET:** Shows the name of the preset focus group, rather than the level, on completed fades.

10:39:38		27/1/99		>>		LIVE		*No Title		GM=FL/FL	
0001	0002	0003	0004	0005	0006	0007	0008	0009	0010		
80	80	80	80	Group 1	Group 1	Group 1	Group 1	Group 1	Group 1		
	3										
0021	0022	0023	0024	0025	0026	0027	0028	0029	0030		
40	40	40	40								
0031	0032	0033	0034	0035	0036	0037	0038	0039	0040		
		90	10		30	Group 2	Group 2	Group 2	Group 2		
0041	0042	0043	0044	0045	0046	0047	0048	0049	0050		
0051	0052	0053	0054	0055	0056	0057	0058	0059	0060		
0061	0062	0063	0064	0065	0066	0067	0068	0069	0070		
0071	0072	0073	0074	0075	0076	0077	0078	0079	0080		
0081	0082	0083	0084	0085	0086	0087	0088	0089	0090		
0091	0092	0093	0094	0095	0096	0097	0098	0099	0100		
LIVE *											

### Smart Channel Display

The **TRACKER** options are only used when the Tracker software is loaded, refer to [Smart Channel Display](#), Tracker Software for more details.

### Auto Channel Page

When **ON** (the default), setting a channel level automatically pages the display to show the channel, or in the case of the Patch display in output order, to show the output. When **OFF**, there is no automatic paging. Its value is **OFF** or **ON**.

## ***Channel Formatting***

Controls whether or not all channels will be shown on screen. When all channels are not shown, discontinuities in the channel listing are shown with “|”. Its value is **OFF** (default), **AUTO**, **COMPACT**, **DISPLAY GROUP**, or **CHANNELS IN USE**.

**OFF:** All defined channels (whether or not they are patched) are shown on screen.

**COMPACT:** Shows channels that are on or moved to zero at the last Channel Control or X playback action. Channels that moved to zero at the last action disappear at the next action.

**DISPLAY GROUP:** Only channels defined in the special Display group (group 994.1) are shown on screen. This lets you pick just the channels you want displayed.

**AUTO:** Only channels that are actually being used in a show are shown on screen. This lets you show a lot more channels on screen, but the channels shown change as you add or subtract channels from submasters, cues, groups, and effects. When this feature is on, the Display group is automatically updated to include channels as they are used in the current show.

**CHANNELS IN SHOW** Automatically displays the channels used in all cues, submasters and effects (not groups or macros) in the current show. When selected, the displayed channels will be updated whenever any of the current cues, submasters or effects are changed or deleted, or when a show file is loaded.

---

## ***Live Screen Layout***

Configures what is shown in the default Live display State screen. The default value for GeniusPro is **PB+SUBS**. The default for Lightpalette is **PB**.

**PB:** The Live screen includes the X Playbacks windows only (Lightpalette default).

**SUBS:** The Live screen includes the Submasters window only.

**FX:** The Live screen includes the Effects window only.

**PB+SUBS:** The Live screen includes the X Playback windows and the Submasters window. (GeniusPro default)

**PB+FX:** The Live screen includes the X Playback windows and the Effects window.

**PB+SUBS+FX:** The Live screen includes the X Playback windows, the Submasters window, and the Effects window.

**EVENT:** The Live screen includes the Event window only.

**PB+EVENT:** The Live screen includes the X Playback windows and the Event window.

**PB+EVENT+FX:** The Live screen includes the X Playback windows, the Event window and the Effects window.

*Note: The Live display can also be changed to the other formats by pressing **[SHIFT][LIVE]**.*

Repeatedly pressing **[LIVE]** while holding down **[SHIFT]** cycles through the Live display formats.

---

### ***X Playback Colours***

Sets the colours used in the X Playback window of the Live display. Its value is **GENIUSPRO** (based on GeniusPro displays), **LIGHTPALETTE** (based on the original Lightpalette displays), or **LIGHTPALETTE INVERT** (Lightpalette displays with a yellow bar across the X Playback window for the current cue). The default value for GeniusPro is **GENIUSPRO**. The default for Lightpalette is **LIGHTPALETTE INVERT**.

---

### ***X Playback Order***

Sets how cues will be displayed in the X Playback window of the State display. It can be set to **HISTORY + CUE SHEET** (GeniusPro Default) or **CUE SHEET** (Lightpalette Default)

The cue sheet section shows the cues as they are recorded. The history section (when shown) shows the cues in the order they were executed, and shows the executed times rather than the recorded times.

---

### ***X Playback Format***

Sets how cues will be displayed in the X Playback window of the State display. It can be set to **SPREAD SHEET** (GeniusPro Default), **EXPANDED** (Lightpalette Default), or **EXPANDED - FADE TIME**.

**SPREAD SHEET** setting displays a heading bar in the X playback windows of the Live display, and shows all values below the appropriate heading. During a fade, the recorded fade time is replaced by the number of seconds left in the fade, and the percentage complete is shown to the left of this.

**EXPANDED** setting displays no heading bar in the X playback windows of the Live display, but puts the type of value (for instance Time) next to the value. During a fade the recorded fade time remains and the number of seconds remaining in the fade is shown to the left of this.

**EXPANDED - FADE TIME** setting displays no heading bar in the X playback windows of the Live display, but puts the type of value (for instance Time) next to the value. During a fade, the recorded fade time is replaced by the number of seconds left in the fade, and the percentage

complete is shown to the left of this.

---

### **Show Last Recorded Cue**

When **ON** (GeniusPro Default), the last recorded cue is shown at the bottom of the X Playback window of the State display. When **OFF** (Lightpalette Default), the last recorded cue is not shown.

---

### **Screen Menus**

When **ON** (Lightpalette Default), the centre LCD menu and the right LCD menu (2 Sceens) are shown at the bottom of the State screen and Levels screen respectively. When **OFF** (GeniusPro Default)), they are not shown

---

### **Default Times Window**

The Default Times window is in the User Setup display, and lets you set the default times for recording or running cues and effects.

The fields within the Default Times Window are described as follows:

- [X Back, Cut](#)
  - [Cue Fade Up/Down](#)
  - [Cue Delay Up/Down](#)
  - [Cue Wait](#)
  - [FX Step](#)
  - [FX Step In/Dwell/Out](#)
  - [FX Up/Down](#)
  - [Undo Time](#)
- 

### **X Back, Cut**

The default times when going back to a cue in the X Playback using **[STOP/BACK]**, and cutting to a cue in an X playback using **[CUT]** (two separate values). They can be any value between 0 and 59 minutes 59 seconds, and are initially set to **0/0**. Times below one minute can be specified in the range 0.1 to 59 seconds.

---

### ***Cue Fade Up/Down***

The default up and down fade times recorded in a newly created cue. The up and down times are separate fields. They can be any value between 0 and 59 minutes 59 seconds, and are initially set to **5/5** seconds. Times below one minute can be specified in the range 0.1 to 59 seconds.

---

### ***Cue Delay Up/Down***

The default up and down delay times recorded in a newly created cue. The up and down times are separate fields. They can be any value between 0 and 59 minutes 59 seconds, and are initially set to **5/5**. Times below one minute can be specified in the range 0.1 to 59 seconds.

---

### ***Cue Wait***

The default wait time recorded in a newly created cue. It can be **OFF** or any value between 0 and 59 minutes 59 seconds, and is initially set to **OFF**. Times below one minute can be specified in the range 0.1 to 59 seconds.

---

### ***FX Step***

The default step time recorded in a newly created effect step. It can be any value between 0 and 5 minutes 0 seconds, and is initially set to 0.50.1. Times below one minute can be specified in the range 0.1 to 59 seconds.

---

### ***FX Step In/Dwell/Out***

The default In, Dwell, and Out times for a newly created effect step (three separate values). They can be any value between 0 and 5 minutes 0 seconds, and are initially set to **0/OFF/0**. Times below one minute can be specified in the range 0.1 to 59 seconds.

---

### ***FX Up/Down***

The default up and down fade times for a newly created effect. The up and down times are separate fields. They can be any value between 0 and 5 minutes 0 seconds, and are initially set to **0.5/0.5**. Times below one minute can be specified in the range 0.1 to 59 seconds.

---



## **Undo Time**

The time for an undo action to complete. It can be any value between 0 and 59 minutes 59 seconds, and is initially set to **2**. Times below one minute can be specified in the range 0.1 to 59 seconds.

---

## **Console Window**

The Console window is in the User Setup display, and lets you configure the displays, LCD, buzzer and other miscellaneous functions.

The fields within the Console Window are described as follows:

- [Number of Screens](#)
- [LCD Contrast/Backlight](#)
- [Gooseneck Brightness](#)
- [Buzzer Volume](#)
- [Macro Tablet](#)
- [Mouse](#)
- [Console Keys Layout](#)
- [Submaster Layout](#)
- [GeniusPro, Lightpalette, Default](#)

---

## **Number Screens**

Sets the number of console screens. Can be **1**, **2** (default), **3**, or **4**.

**Note:** *All consoles can support one or two video monitors in the standard configuration and up to four monitors with an optional video card fitted.*

---

## **LCD Contr, Backlt**

The first field changes the contrast on all three LCD's (2 on a 520). Use the Level Wheel to adjust this for the best display contrast.

# A number from 1 to 100 (default 4) giving maximum to minimum contrast.

The second field changes the backlight brightness on all three LCD's. Use the Level Wheel to adjust this for the best visibility.

# A number from 1 to 100 (default 50) giving maximum to minimum brightness.

---

### ***Goosneck Bright (not available on 300 Series Consoles)***

Sets the brightness of the console gooseneck lights.

# A number from 1 to 100 (default 100) giving maximum to minimum brightness

---

### ***Buzzer Volume***

Enables or disables the buzzer which is used to signal errors. Its value is **OFF** or **ON** (default).

---

### ***Macro Tablet***

Sets the optional macro tablet to **OFF** (default), **INTUOS A4**, **INTUOS A4 OS** or **INTUOS A3**. Setting this field to **INTUOS A4**, **INTUOS A4 OS** or **INTUOS A3** enables the use of the **A4**, **A4 Oversize** or **A3** macro tablet to activate preset macros. If set to **INTUOS A4**, **INTUOS A4 OS** or **INTUOS A3**, the Port, must be set **OFF**, **COM1** or **COM2**. **NET NODE** identifies the network node to which the Macro tablet is connected and may be Local (default) or the network node name. The A4, A\$ Oversize or A3 macro graphic tablet software can be used only when the CommuniquéPro software is installed. (For further information, refer to [Macro Tablet](#))

The Mode option provides the facility to set up the macro grid on an A4, A4 Oversize or A3 Macro Tablet as shown below:

<b>Macro Tablet</b>	<b>Mode</b>	<b>Grid</b>
INTUOS A4	MACRO (LOW)	20 x 10
INTUOS A4	MACRO (MED)	20 x 20
INTUOS A4	MACRO (HIGH)	40 x 20
INTUOS A4 OS	MACRO (LOW)	20 x 16
INTUOS A4 OS	MACRO (MED)	20 x 32
INTUOS A4 OS	MACRO (HIGH)	40 x 32
INTUOS A3	MACRO (LOW)	20 x 20
INTUOS A3	MACRO (MED)	20 x 40
INTUOS A3	MACRO (HIGH)	40 x 40

---

## **Mouse**

If a mouse is installed, the **NET NODE** and **PORT** field must be set. The **NET NODE** may be set to **LOCAL** (Default) or the Net Node Name. The **PORT** field can be set to **OFF** (default) **COM1** or **COM2**. The software also supports a PS2 mouse.

---

## **Console Keys Layout**

Sets the keyboard layout for the console. Some keys have been moved, and the Q-Only/Track key added to the Record Keypad since the original version of the console. You can disable the Q-Only/Track key by setting this field to **NO Q\_ONLY KEY**. For information on the function of the Q-Only/Tracking key, refer to [Level Tracking](#)

Its value is **Q\_ONLY KEY** (default) or **NO Q\_ONLY KEY**.

---

## **Submaster Layout**

'Submaster Layout' is used when a 530/520 logs into a 550 console (or a console with 54 submasters set via the environment variable 220NUMSUBS). It allows the 530/520 to have its submasters appear as 1..24 or as 25..48. This allows 2 remote consoles to have their 'own' range of submasters.

---

## **GENIUSPRO/PALETTE**

Determines whether default settings in the Setup display will be determined by your password, or will be default GeniusPro or Lightpalette settings. Changing this setting changes the settings immediately.

**DEFAULT** The defaults in the Setup display are determined by your password (whether you bought GeniusPro or Lightpalette operating software).

**LIGHT PALETTE** The defaults in the Setup display are changed to Lightpalette settings.

**GENIUSPRO** The defaults in the Setup display are changed to GeniusPro settings.

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## The Setup Key

When the **[SETUP]** key is pressed, the User Setup Screen is displayed and the Setup menu is shown on the right-hand LCD.

This section covers the following topics:

- [Changing the User Setup](#)
- [Locking the Console Memory](#)

---

## Changing the User Setup

The User Setup Screen determines the way that the console operates and displays information.

Use the trackball, the cursor keys on the PC keyboard, or the console cursor keys on 300 Series consoles to move between fields. Change values by using **[+]** and **[-]** or the Level Wheel, or by typing in numbers where appropriate. Choices available for the currently selected field appear at the bottom of the display, with the currently selected choice highlighted as white on a red background.

Only items shown in green text can be modified. Yellow text indicates items that are not available with the current system configuration.

When a field is selected, you can apply the default value for the field by pressing the **{DEFLT}** softkey. The default value in some fields is dependant on the setting of the GENIUSPRO/PALETTE field in the Console Window.

To select the first field in the Setup display press **[\*]**.

To close the UserSetup Screen and return to the previously displayed screen, press the **{BACK}** softkey.

Refer to [User Setup Screen](#) for further information regarding the various windows and fields of this screen.

## Locking the Console Memory

When the memory is locked, you cannot record anything, or change anything that is already recorded. You can, however, play back cues, effects and macros in any order in manual or auto mode. Channel control operations and the movement of submasters is also permitted when the memory is locked. This is generally used after a show has been plotted to ensure that accidental changes are not made.

**[REPORT] {ADV SETUP} {ACCESS RIGHTS} {MEMORY LOCK} [3] [1] [7] [1] [\*]**

**[REPORT] {ADV SETUP} {ACCESS RIGHTS} {MEMORY LOCK} [3] [1] [7] [1] [\*]**

toggles the memory state between locked and unlocked. This code is the same for all consoles.

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## Groups

Groups are used to store sets of levels which can be used later as building blocks, but which do not show up on the cue sheet. The only way to get group information to the console output is to call up group levels as part of a channel command and show them in the Live display, or to record them in a submaster, cue, or effect.

The following topics are covered in this section:

- [Predefined Groups](#)
- [The Current Group](#)
- [Recording Group Levels](#)
- [Recording Group Properties](#)
- [Using Referenced Groups](#)
- [Viewing and Editing Groups](#)
- [Updating and Adding to Groups](#)
- [Updating Groups from the Live Screen](#)
- [The Group Display](#)
- [Creating a New Group](#)
- [Viewing Group Channel Levels](#)
- [Editing Group Levels](#)
- [Deleting Groups](#)
- [Copying Levels from a Group](#)

---

## Predefined Groups

There are several predefined groups that provide levels for console components. You can also call them up and use them like any other group if necessary. These are:

- Group 993.1 - \*ON console
- Group 993.2 - \*ON 2
- Group 993.3 - \*ON 3
- Group 993.6 - \*ON Handheld
- Group 994.1 - \*Display console
- Group 994.1 - \*Display 2
- Group 994.1 - \*Display 3
- Group 998.1 - \*Partition console
- Group 998.2 - \*Partition 2

- Group 998.3 - \*Partition 3
- Group 999.1 - \*Grand Master 1
- Group 999.2 - \*Grand Master 2
- Group 999.3 - \*X Playback 1
- Group 999.4 - \*X Playback 2
- Group 999.5 - \*Preheat

### **ON console**

Controls the ON level for channels controlled from the main console. All channels are initially off (blank level). If a channel has a level in this group, the ON level is taken from the group. If not, the ON level is taken from the [On Level %](#) field in the User Setup Screen

### **ON 2 & ON 3**

Controls the ON level for channels controlled from the remote consoles. All channels are initially off (blank level). If a channel has a level in this group, the ON level is taken from the group. If not, the ON level is taken from the [On Level %](#) field in the User Setup Screen

### **ON Handheld**

Controls the ON level for channels controlled from the handheld remote. All channels are initially off (blank level). If a channel has a level in this submaster, the ON level for the handheld remote is taken from the submaster. If not, the ON level is taken from the [On Level %](#) field in the User Setup Screen

### **Display console**

Controls what channels will be shown on the main console level displays if the [Channel Formatting](#) field in the User Setup Screen is set to DISPLAY GROUP. All channels are initially set to FL, and can only be set to off and FL. If a channel has no level in this group, it will not show on any of the Levels screens (including the Group display). If channel formatting is set to AUTO, channels are added to the display groups as they are used. This is an easy way to automatically create a display group based on channels actually used in the show.

### **Display 2 & Display 3**

Controls what channels will be shown on the remote console level displays if the [Channel Formatting](#) field in the User Setup Screen is set to DISPLAYGROUP. All channels are initially set to FL, and can only be set to off and FL. If a channel has no level in this group, it will not show on any of the Levels screens (including the Group display). If channel formatting is set to AUTO, channels are added to the display groups as they are used. This is an easy way to automatically create a display group based on channels actually used in the show.

### **Partition Console, Partition 2 & Partition 3**

Determines what channels will be controlled by each console if the [Channel Partitioning](#) field in the Show Details window of the Show Setup Screen is set to ON. All channels are initially set to their

maximum setting in the Console Channels group and off in the other groups. Channels can only be set to their minimum or maximum levels. Setting a channel to a non-zero value in one group sets it to its maximum level and removes it from its previous group. Regardless of which console is generating level data, all information is recorded in the main console.

### Grand Master 1

Channels with levels in this group are controlled by Grand Master 1. All channels are initially set to FL, and can only be set to off and FL. For channels that overlap with Grand Master 2, the lower of the two output levels is used.

### Grand Master 2

Channels with levels in this group are controlled by Grand Master 2. All channels are initially set to FL, and can only be set to off and FL. For channels that overlap with Grand Master 1, the lower of the two output levels is used.

### X Playback 1

Channels with levels in this group are controlled by X Playback 1. All channels are initially set to FL, and can only be set to off and FL. For channels that overlap with X Playback 2, the higher of the two output levels will be used. X Playback 1

### X Playback 2

Channels with levels in this group are controlled by X Playback 1. All channels are initially set to FL, and can only be set to off and FL. For channels that overlap with X Playback 1, the higher of the two output levels will be used.

### Preheat

Controls the preheat level for channels if the [Auto Preheat](#) field in the Show Setup Screen is set to ON. All channels are initially off (blank level). Preheat levels for all channels are taken from this group.

---

## The Current Group

The current group is the last group which has been referenced in the Group display or recorded from another display. It is shown in the right LCD, and can be used in a group selection or in group recording.

All group recording commands act on a single group which is shown by # in the command description. If you do not enter a group number, the current group is used. You can use **[NEXT]** and **[LAST]** instead of # to select a group relative to the current group.

**[GROUP]** Specifies the current group.

**[GROUP] [1]** Specifies group 1.

**[GROUP] [NEXT]** If the current group is group 3, this specifies group 4. If the current group is the highest group number, this specifies the lowest group number.

**[GROUP] [LAST]** If the current group is group 3, then this specifies group 2. If the current group is the lowest group number, this specifies the highest group number.



---

## Recording Group Levels

**[GROUP]** records the levels (intensity levels and attribute levels) on the current display into the current group.

**[GROUP] #** records the levels on the current display (the Live, Cue/Preview, Group, Effect, or Submaster display) into the specified group. For information on how to set intensity and attribute levels, refer to [Working with Channel Levels](#) and [Basic Recording](#) for examples of recording.

Groups can be numbered from 1 to 999.9, and you can have up to 1000 groups in a show.

You can record just intensities or just attributes to a group by adding **{INTS ONLY}** or **{ATTS ONLY}** to the command line.

In preset focus terms, Attributes are only active if their levels are shown as bright white on the Group display. To record a group from a selection with no Intensities you must include a channel list before the Group Record command, e.g.

```
[1] [THRU] [3] [@] [GROUP] [5]
```

---

## Recording Group Properties

Groups have only one property which can be specified when recording or edited later. You can record a text label (caption) with each group to help identify the group (see Recording Levels and Properties in [Basic Recording](#)).

---

## Using Referenced Groups

You can record intensities and attributes in groups 1 through 750 and then use these groups in cues, effect steps, and submasters as reference groups (sometimes called preset focus groups). Channels inserted into cues, effect steps, and submasters using reference groups are automatically updated in the recorded item when you update the group. This lets you reference the group in multiple locations and then change the referenced values only in one place to update the entire show.

**chans [@] [GROUP # [\*]** sets intensities and attributes for the selected channels to the levels set in the specified group. The cue, effect step, or submaster then takes levels for the selected channels from the group, so if you change the group the recorded item will also change.

```
[1] [THRU] [4] [@] [GROUP] [1] [2] [3] [*]
```

Sets channels 1 through 4 intensities and attributes to the levels set in group 123.

**chans [@] [GROUP] # {INTS ONLY} [\*]** sets intensities only for the selected channels to the levels

set in the specified group. The cue, effect step, or submaster then takes levels for the selected channels from the group, so if you change the group the recorded item will also change.

**[1] [THRU] [4] [@]GROUP [3] {INTS ONLY} [\*]**

Sets channels 1 through 4 intensities only to the levels set in group 3.

**chan [@] [GROUP] # {ATTS ONLY} [\*]** sets attributes only for the selected channels to the levels set in the specified group. The cue, effect step, or submaster then takes levels for the selected channels from the group, so if you change the group the recorded item will also change.

**[1] [THRU] [3] [@] [GROUP] [5] {ATTS ONLY} [\*]**

Sets channels 1 through 3 attributes only to the levels set in group 5. This command requires a

Pentium processor (or better) and the Tracker software. For additional information, refer to [Tracker](#)

[Software](#)

## Viewing and Editing Groups

Once you have recorded groups, you can view and edit them in the Group display. You can also use the Group display to create new groups.

***Note:** Changing levels while in this display changes the recorded levels in the current group without a record command and without warning you.*

## Updating and Adding to Groups

**[UPDATE] [GROUP] # [\*]** changes levels in the specified group as necessary based on channels that have been modified live (red or purple channels on the Live display). This command excludes channels that are not already in the group, and channels that have been removed from the modified list by using **[SHIFT] [CLR]**.

Note: When using groups the **[UPDATE]** key is set to default to update only channels already in the group. Pressing the **[UPDATE]** key as part of a group command syntax, e.g., **[UPDATE] [GROUP] # [\*]** is the same as entering **[UPDATE] {CHANS IN} [GROUP] # [\*]**. So when updating a group to include only changes in channels already in the group, there is no need to use the **{CHANS IN}** softkey. The **{CHANS IN}** softkey is used, as necessary, when updating cues.

Channels that are off in the selection will be removed from the group.

**[UPDATE] [GROUP] [1] [\*]** (All Modes)

Updates levels that have been modified in group 1, excluding levels of channels that were not already in the group.

**[GROUP] [7] [\*] [UPDATE] [GROUP] [1] [\*]** (All Modes)

First selects all of the channels in group 7, then updates their levels in group 1, excluding levels of channels that were not already in the submaster.

Including the **{ADD ALL}** softkey in the update command includes level changes in channels that are not already in the group.

**[UPDATE]{ADD ALL} [GROUP] # [\*]** (All Modes)

Updates levels in the specified group for channels that have been modified. Includes modified channels that are not already in the group, and channels that have been removed from the modified list by using **[SHIFT] [CLR]**. Channels that are off in the selection will be removed from the group.

**[UPDATE]{ADD ALL} [GROUP] [1] [\*]** (All Modes)

Updates all channels that have been modified in group 1, including channels that are not already in group 1.

**[GROUP] [7] [\*] [UPDATE] {ADD ALL} [GROUP] [1] [\*]** (All Modes)

First selects all of the channels in group 7, then records their levels in group 1, including channels that are not already in the group 7.

**chan [UPDATE] [GROUP] # [\*]** updates levels of the specified channels in the specified group to match the current Levels screen for the selected channels, regardless of whether or not they have been modified. Excludes channels that are not already in the group, regardless of whether or not they have been modified. Channels that are off in the selection will be removed from the group.

You can use the following command to record a selection of channels (rather than all channels) into a new group.

**[1] [THRU] [5] [UPDATE] [GROUP] [\*]** (All Modes)

Changes channel 1 through 5 levels in group 1, excluding channels that are not already in the group.

## Updating Groups from the Live Screen

When in Group screen you can update groups according to the levels in the Live Screen (on stage) using the syntax **chans [@] [LIVE]**. This syntax will set the selected channel levels into currently highlighted Group in the Group Screen, including channels not already in the Group. Alternatively, you

can update only the channels in the Group using the syntax **Group** [**@**] [**LIVE**].

**[1] [THRU] [5] [ @] [LIVE]** Direct Action Modes

**[1] [THRU] [5] [ @] [LIVE] [\*]** Command Line Mode

Sets the levels of channels 1 to 5 in the currently selected Group to the levels in the Live Screen (levels on stage). If any of the channels are not already in the Group, they are added to the group.

**[GROUP] [1] [ @] [LIVE]** Direct Action modes

**[GROUP] [1] [ @] [LIVE] [\*]** Command Line Mode

Selects the channels in Group 1 and sets them according to the levels in the Live Screen (on stage)

---

## The Group Display

To show the Group display press **[GROUP]** in the Display keypad (not **[GROUP]** in the Levels keypad).

8:32:28 24/06/98 >>
GROUP 1
\* No Title
GM=FL/FL

0001 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 0025  
FL FL FL FL FL

0026 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 0050

0051 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 0075

0076 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 0100

0101 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 0125

Group	Text	Wheel
1	*House Lights	1
2	*A1S2	
3	*A1S3	
4	*A1S4	
5	*A1S5	
6	*A2S1	
7	*A2S2	
8	*A2S3	
9	*A2S4	
10	*A3S1	
11	*A3S2	
993.1	*ON console1	
993.2	*ON 2	

**GROUP 1**

Select a group, then SHIFT + TRACKBALL to edit an item

Wheel

v2a3

**Net On**

Main: denise

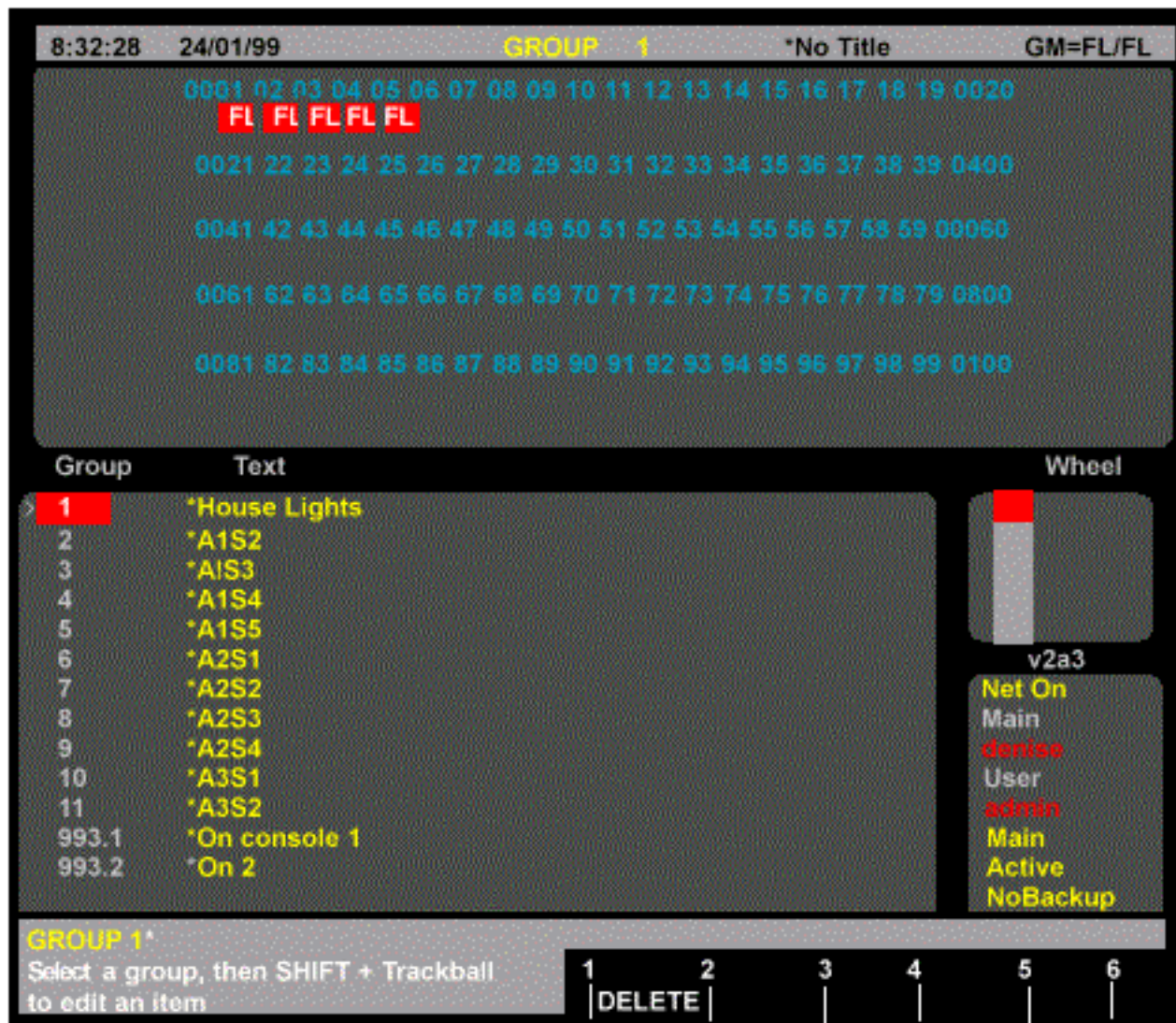
User: admin

Main: Active

Main: NoBackup

## Group Screen - GeniusPro





## Group Screen - Lightpalette

The Group display Levels screen shows the recorded channel levels (intensity levels and attribute levels) of the current group. The Levels screen background is grey rather than black to show that levels changed in this display are not being changed live. The Group display State screen shows a page of groups and their associated fields. The current group is highlighted with a red background.

The Wheel window at the right indicates the position within the current submasters. The number shows the index of the current group. For example the first, second, and third groups have index 1, 2, and 3. The index is independent of the group number. The only editable group property is Text, which is shown in the Text field of the Group display State screen. This property lets you attach a text label (caption) to the group for easy recognition.

To go directly to a group, press **[GROUP] # [\*]** where # is the group. If the group does not exist, you will be warned that you are creating a new item. Press **[\*]** again to create the new group, or **[CLR]** or

**[UNDO]** to cancel the command.

To move between existing groups, move the Trackball to any field in the group you want to edit. Levels for the highlighted group will be displayed on the Levels screen, but to edit these levels you will need to highlight the group number. You can also use **[NEXT]** or **[LAST]** to change groups if the highlight is on the group number.

You can also page through the group list by using the Level Wheel.

---

## Creating a New Group

To switch to the Group display and create a new group, press **<GROUP> [GROUP] # [\*]** where **#** is the new group number.

To create a new group while you are in the Group display, press **[GROUP] # [\*]** where **#** is the new group number.

You will be warned that you are creating a new item. Press **[\*]** again to create and display the new group or **[CLR]** or **[UNDO]** to cancel the command.

The **<GROUP>** display key is at the top of the console. Do not confuse it with the lower **[GROUP]** key.

---

## Viewing Group Channel Levels

To view the recorded levels in a group, select the required group. The levels are then shown in the Levels screen. Channels which are off are shown with a blank level. Channels which are on At 0 are shown with a level of 0.

---

## Editing Group Levels

Once you have selected the required group, highlight the group number (the Group field), select channels and modify them using the same commands as for channel control, for example **[1] [@] [1]**, **[CUE] [1] [@] [5]** and so on. The Level Wheel cannot be used to change levels while you are in the Group display.

---

## Deleting Groups

Groups can be deleted from the Group display. This is a good way to delete groups if you are only going to delete a few. To learn how to delete all groups or a range of groups refer to [Clear Operations](#) in the Archive Screen

To delete a group, press **{DELETE} # [\*]**.

**{DELETE} [\*] [\*]**

Deletes the current group.

**[GROUP] [6] {DELETE} {DELETE}**

**{DELETE} [6] [\*] [\*]**

Deletes group 6

---

## Copying Levels From a Group

You can record submasters, cues, groups, and effect steps while you are in the Group display by copying the group levels. The highlight must be on the group number (the Group field).

Using recording commands while you are in the Group display copies the Group display levels to the target submaster, cue, group, or effect step. For example, if the current group is 1, then **[CUE] [2] [RECORD]** will copy the levels from group 1 into cue 2. This also allows groups to be copied. For example **[GROUP] [4] [RECORD]** will copy the levels from group 1 into group 4.

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## Working with Channel Levels

The Channel Control is used to manually select and modify channel levels to record submasters, cues, groups, and effects, or for overriding the recorded show. The Main Console, Remote Consoles, and Handheld Remotes have separate channel controls and operate independently of each other on a latest takes precedence basis. Using remote consoles requires the Networker software. See the [Networker Software](#) for more details.

A channel can have an intensity, an intensity plus attributes, or just attributes. Once a channel is selected in the Live display, you can change the intensity with the Level Wheel and the attributes with the Trackball and the rotary controls. In other displays you can control the intensity and all attributes, but not at the same time.

If the [CC Auto Hold Mode](#) field in the User Setup Screen is set to **OFF** (GeniusPro default) and you select channels using the channel controls, they are stolen from effects, submasters (except independent submasters and effects) or X playbacks which are controlling those channels. Effects set for latest takes precedence instead of independent operation steal back channels only when a new effect is run. Submasters steal back channels when the fader is moved off 0 or a bump button is pressed. X playbacks steal when a new cue is run. When **ON** (Lightpalette Default), channels cannot be “stolen” from the Channel Control by cues, subs, and effects. Or you can return to the state before channel changes by pressing **[UNDO] [\*]**

The Channel Control also lets you modify cues, submasters, effects steps, and groups blind, though the Level Wheel.

The syntax used to enter command in the command line is determined by the setting of the Channel Control Mode field in the User Setup Screen. To change the Channel Control Mode, press **[SETUP]** and select the Channel Control Mode. For further information on Channel Control Modes refer to [Channel Control Mode](#)

This section contains the following topics:

- [Editing the Command Line](#)
- [Setting up the Channel Levels Window](#)
- [Channel Status Identification](#)
- [Channel Type Identification](#)
- [Selecting Channels](#)
- [Channel Selection List](#)
- [Current Channel Selection](#)

- [Extending the Current Channel Selection](#)
  - [Selecting the Next or Last Channel](#)
  - [Clearing the Current Selection](#)
  - [Setting Levels with the Keypad](#)
  - [Using Recorded Items in Channel Lists](#)
  - [Attribute Groups](#)
  - [Attribute Filters](#)
  - [Referenced Groups](#)
  - [Using the Level Wheel](#)
  - [Setting Attribute Levels](#)
  - [Setting DMX Levels](#)
  - [Copying Channel Levels](#)
  - [Undoing Level Changes](#)
  - [Holding Channels on the Channel Control](#)
  - [Restoring Playback Levels](#)
  - [Flashing Channel Levels](#)
  - [Bumping Channel Levels](#)
  - [Channel Check](#)
  - [Changing Levels in Preview \(Blind\) Display](#)
  - [Fading in Intensity Channels in Time](#)
  - [Fading in Attribute Channels in Time](#)
- 

## Editing the Command Line

At any time before a command on the command line is complete, you can move back through the command line to correct it.

**[CLR]** Clears the last entered key when a command is being entered. If no command is being entered this has no effect except in the **Live** display when it clears the current channel selection.

**[SHIFT] [CLR]** Clears the complete command line when a command is being entered. If no command is being entered it has no effect.

---





## Setting Up the Channel Levels Window

The layout of the Channel Levels Window is determined by the setting of the [Channel Display](#), [Smart Channel Display](#) and [Channel Formatting](#) fields within the User Setup Screen.















- The **Channel Display** field sets the Strand console type that the Channel Levels window will mimic.
  - The **Smart Channel** field, sets the format of the display to show all attributes of a fixture.
  - The **Channel Formatting** field controls whether or not all channels will be shown on screen. 'Hidden' channels are indicated in the channel listing with 'I'
    - When set to **OFF**, all defined channels are shown.
    - When set to **COMPACT**, only channels that are on, or moved to zero at the last Channel Control or X Playback action, are shown.
    - When set to **DISPLAY GROUP**, only channels defined in the special Display Group (Group 994.1) are shown.
    - When set to **AUTO**, only channels that have been used are shown. The Display Group is automatically updated to include channels as they are used.
    - When set to **CHANNELS IN USE** Automatically displays the channels used in all cues, submasters and effects (not groups or macros). When selected, the displayed channels will be updated whenever any of the current cues, submasters or effects are changed or deleted, or when a show file is loaded.
- 

## Channel Status Identification

The levels in the Live screen use colours to indicate channel status, as follows:

- **blank**: Show channels that are off
-  **white on red**: Shows intensities controlled by the console channel control. To remove the channels from channel control press **[CLR]**.
-  **white on magenta**: Shows intensity channels controlled by the handheld remote channel control. To remove the channels from channel control press **[CLR]**. Channel levels turn red to indicate they have been changed
-  **red on black**: Shows channels changed by a channel control but no longer actively controlled. To clear this indicator, press **[SHIFT] [CLR]**
-  **magenta on black**: Shows an intensity channel controlled by an X Playback that is

fading up.

-  **green on black:** Shows an intensity channel controlled by an X Playback that is fading down.
-  **blue on black:** Shows an attribute channel controlled by an X Playback that is fading up or down.
-  **cyan on black:** Shows channels controlled by a stopped X Playback.
-  **yellow on black:** Shows channels controlled by a submasters.
-  **white on grey:** shows channels controlled by an effect playback.
-  **red on grey:** Shows unselected channels on Hold. Only the channel control can change its level.
-  **black on red:** Shows selected channels on Hold.
-  **yellow on red:** Shows channels mastered by inhibitive submasters.
-  **black on yellow:** Shows channels mastered by exclusive submasters
-  **white on black:** Shows DMX CHAN input levels. DMX CHAN inputs require [CommuniquePro Software](#).
-  **white on green:** Shows an intensity controlled by a remote control.
-  **Dark grey box:** Channel that has been Auto Preheated. When function is enabled by setting [Auto Preheat](#) in Show Setup Screen to ON and a value set in [Preheat Group](#) 999.5.
-  **Cyan on dark grey:** Attributes that have been automatically moved while dark. When function is enabled by setting [Auto Move While Dark](#) in Show Setup Screen to On.
-  **Black on grey:** Shows channels held by a stopped X Playback

---

## Channel Type Identification

The channel numbers in the Channel Levels window also use colours to indicate what type of channels they are, as follows:

- **32**cyan or **32**bright white shows channels with intensity but no attribute.
- **32**magenta shows channels with a non-dim intensity, which may also have an attribute.
- **32**light grey shows channels with an attribute which may also have an intensity.
- **32**dark grey shows a channel with no dimmers patched to it.

## Notes

1. If the [Console Reporter](#) software is installed and a fault occurs on a patched dimmer, the channel number is displayed on a red foreground.
2. The indicator colours used are different in other displays.

---

## Selecting Channels

The Channel Control acts on a set of channels called the current selection. This can be one or more channels, each of which can include both attributes and intensities. The current selection can be set or modified using the keyboard to set the channel levels, using the level wheel to adjust the intensity level. Alternatively, the Live Menu softkeys can be used to set the intensities of the selected channels to full, or increase or decrease the levels by a preset percentage, or to flash or bump the channels.

---

## Channel Selection Lists

Selection lists consist of elements, modifiers, and operators. Elements can be channels, cues, groups, effect steps, or submasters. If you specify a cue, group, effect step, or submaster you are specifying all of the channels recorded in that item, and the level you specify in the command sets the level of all the channels.

- The modifiers are **[NEXT]** and **[LAST]**.
- The operators are **[+]**, **[-]**, **[THRU]** and **{THRU ON}**

If you start a selection list with an element, any existing selection from the Channel Control you are using (channels with red or magenta background) is cancelled and an entirely new

selection list is started for the Channel Control. If you start a selection list with the **[+]** or **[-]** modifiers, the new elements are simply added or subtracted from any existing selection for the Channel Control. (see also [Extending the Current Selection](#)). If there is no current selection, starting a selection list with **[+]** or **[-]** will cause an error.

The examples shown immediately below are command segments you can use to create your channel lists. You can then use combinations of these command segments to replace chans where it appears in full command descriptions.

- **[+]** Adds elements to the channel list.
- **[1] [+]** **[3]** Adds channels 1 and 3 to the channel list.
- **[SUB] [1] [+]** **[SUB] [2]** Adds channels recorded in submasters 1 and 2 to the channel list.
- **[SUB] [1] [+]** **[2]** Adds channels recorded in submasters 1, plus channel 2, to the channel list.
- **[CUE] [1] [PART] [2] [+]** **[SUB] [1]** Adds channels recorded in cue 1, part 2, plus channels recorded in submaster 1, to the channel list.

**[-]** removes elements from the channels that are already on the channel list. Since all command processing is from left to right, you can specify a large range, then subtract a range from the currently listed channels, and then add back one or two channels in the range you subtracted.

- **[1] [THRU] [3] [-]** **[2]** Adds channels 1 and 3 to the channel list.
- **[SUB] [1] [THRU] [3] [-]** **[2]** Adds channels recorded in submasters 1 through 3, minus channel 2, to the channel list.
- **[THRU]** specifies a range of elements to the channel list. This has a higher priority than **[+]** and **[-]**.
- **[1] [THRU] [3]**
- **[3] [THRU] [1]** Adds channels 1, 2, and 3 to the channel list.
- **[1] [THRU] [LAST]** Puts all channels on the channel list.
- **[SUB] [1] [THRU] [3]** Adds channels recorded in submasters 1 through 3 to the channel list.
- **[1] [THRU] [2] [+]** **[6] [THRU] [7]**
- **[1] [THRU] [7] [-]** **[3] [THRU] [5]** Adds channels 1, 2, 6, and 7 to the channel list. This shows the higher priority of **[THRU]**.

**{THRU ON}** only adds channels which are on (have levels above 0) to the channel list. **{THRU ON}** is a soft key on the LCD Live menu. It has a higher priority than **[+]** and **[-]** and the same priority as **[THRU]**. You cannot only use **{THRU ON}** to specify a range of channels, not a range of cues, groups, effect steps, or submasters.

- **[1] {THRU ON} [3]** Adds channels 1, 2, and 3 to the channel list if they are on **[NEXT]** and **[LAST]** can be used when selecting a cue, group, effect step, or submaster to select the item after or before the current cue, group, effect step, or submaster. The current cue, group, effect step, and submaster are shown on the right LCD.
- **[SUB] [NEXT]** Adds channels recorded in the submaster after the current submaster to the channel list.
- **[CUE] [LAST]** Adds channels recorded in the submaster before the current submaster to the channel list.

**{THRU ON}** is most often used to adjust the level of all lights that are on in a given cue. The designer may require all on light to be increased (or decreased by, say 5%). This is easily achieved by the commands **[GOTO] [CUE] #** and **# [THRU] # {THRU ON} {UP%}** or **{DOWN %}** (the Up and Down % value is set in the Up Down % field of the User Setup Screen

## Current Channel Selection

The Channel Control only modifies channels in the current selection. The channels in the current selection are shown on the Live display with a red background (white text). (see also [Extending the Current Selection](#)) To select channels you specify the selection as shown above and then press **[\*]**.

- **chan [\*]** makes the specified channels the current selection
- **[1] [+] [2] [\*]** Select channels 1 and 2 at their current levels.
- **[\*]** makes all channels which are on (those above 0 or on At 0) the current selection. This is the same as **[1] {THRU ON} [9] [9] [9] [9] [\*]**
- **[\*]** Select all on channels.

## Extending the Current Channel Selection

- **[+]chan [\*]** or **[-] chan [\*]** add or subtract channels from an already existing channel selection.
- **[+] [4] [THRU] [9] [\*]** Adds channel 4 through 9 to the existing channel selection.
- **[-] [4] [5] [\*]** Subtracts channel 45 from the existing channel selection.

**Note:** Providing a channel list has been selected since the console was last switched on, the list is held in memory until a new list is created to replace it. You can therefore add or subtract channels from the current list, even though the Live Screen Channel Display is blank. Pressing the **[+]** or **[-]** keys will restore the last channel list and allow you to add or subtract channels from the selection.

---

## Selecting the Next or Last Channel

The CHAN field on the right LCD shows the current channel. This is the final channel listed when making a selection.

- The **[NEXT]** and **[LAST]** keys make the channel after or before the current channel of the same type (intensity or attribute) the current selection. When controlling channels, these buttons are most commonly used for channel checks by setting the first desired channel to **Full** and then using **[NEXT]** and **[LAST]** to step through the channels.
  - **[NEXT]** selects the channel after the highest numbered channel in the current selection.
  - **[1] [THRU] [3] [\*] Wheel [NEXT]** Selects channels 1, 2, 3, adjusts them to the desired level, and then selects the next intensity channel (channel 4 in this case).
  - **[1] {THRU ON} [3] [NEXT]** Selects the next intensity channel after channel 3 regardless of whether channel 3 is on.
  - **[LAST]** selects the channel before the lowest numbered channel in the current selection.
  - **[1] [THRU] [3] [@ATT] [\*] [LAST]** Selects attribute channels 1, 2, 3 then selects the previous attribute channel (e.g. channel 2 if this has attributes). Another **[LAST]** selects the previous attribute channel (e.g. channel 1 if this has attributes).
- 

## Clearing the current selection

The current selection can be cleared so that no channels are selected. The Channel Control will then have no effect.

**[CLR]** removes all channels from the selection list. When a command is being entered, **[CLR]** instead deletes the last key entry.

---



## Setting Levels With the Keypad

Channel levels can be set directly from the command line by using the Levels keypad to select channels and specify levels.

**chans** [**@**] **#** [**\***] selects the listed channels and sets their intensity levels to the specified **#** level. To set levels for the current selection, omit **chans**.

[1] [**@**] [0] [.] [1] Direct 1 Digit

[1] [**@**] [0] [1] Direct 2 Digit

[1] [**@**] [0] [1] [**\***] Command Line

Makes channel 1 the current selection and sets its level to 1%.

[1] [**+**] [3] [**@**] [1] Direct 1 Digit

[1] [**+**] [3] [**@**] [1] [**\***] Direct 2 Digit

[1] [**+**] [3] [**@**] [1] [**\***] Command Line

Selects channels 1 and 3 and sets their levels to 10%.

[**@**] [1] [.] [1] Direct 1 Digit

[**@**] [1] [1] Direct 2 Digit

[**@**] [1] [1] [**\***] Command Line

Changes the levels of the current selection to 11%.

**chans** [**@**] [**+**] **#** [**\***] selects the listed channels and increases their intensity levels by the specified **#** level. To set levels for the current selection, omit **chans**.

[1] [**@**] [**+**] [1] Direct 1 Digit

[1] [**@**] [**+**] [1] [0] Direct 2 Digit

[1] [**@**] [**+**] [1] [**\***] Command Line

Makes channel 1 the current selection and increases its level by 10%. For example, a channel at 55% would go to 65%. Any levels over 100% are limited at 100%.

[**@**] [**+**] [1] [.] [1] Direct 1 Digit

[**@**] [**+**] [1] [.] [1] Direct 2 Digit

[**@**] [**+**] [1] [1] [**\***] Command Line

The existing current selection is unchanged but their levels are increased by 11%.

**chans** [**@**] [**-**]**#** [**\***] selects the listed channels and decreases their intensity levels by the specified **#** level. To set levels for the current selection, omit **chans**.

[1] [**@**] [**-**] [1] Direct 1 Digit

[1] [**@**] [**-**] [1] [0] Direct 2 Digit

[1] [**@**] [**-**] [1] [**\***] Command Line

Makes channel 1 the current selection and decreases its level by 10%. For example, a channel at 55% would go to 45%. Any levels under 0% are limited at 0.

**[@] [-] [0] [.] [1] Direct 1 Digit**

**[@] [-] [0] [1] Direct 2 Digit**

**[@] [-] [0] [1] [\*] Command Line**

The existing current selection is unchanged but their levels are decreased by 1%

**chans {UP%}** selects the listed channels and increases their intensity levels by the percentage set in the [Up/Down %](#) field in the User Setup Screen Control Modes window. The default is 5%, and will be used in examples. To set levels for the current selection, omit chans.

**[1] {UP%} Command Line**

Makes channel 1 the current selection and increases its level by 5%. For example, a channel at 55% would go to 60%. Any levels over 100% are limited at 100%. **{UP%}** appears on the LCD Live menu.

**chans {DOWN%}** selects the listed channels and decreases their intensity levels by the percentage set in the [Up/Down %](#) field in the User Setup Screen Control Modes window. The default is 5%, and will be used in examples. To set levels for the current selection, omit chans.

**[1] {DOWN%} Command Line**

Makes channel 1 the current selection and decreases its level by 5%. For example, a channel at 55% would go to 50%. Any levels under 0% are limited at 0%. **{DOWN%}** appears on the LCD Live menu.

**chan {FULL}** or **chan [@] {FULL} [\*]** selects the listed channels and sets their intensity levels to Full (100%). To set the current selection to Full, omit chans.

**[1] {FULL} All Modes**

**[1] [@] {FULL} Direct 2 Digit**

**[1] [@] {FULL} [\*] Command Line**

Makes channel 1 the current selection and sets its level to Full. The **[1] {FULL}** syntax only works in the Live display.

**{FULL}** The existing current selection is unchanged but their levels are set to Full. **{FULL}** appears on the LCD Live menu. This only works in the Live display

**chans [ON]** or **chans [@] [ON] [\*]** selects the listed channels and sets their intensity levels to the on level. The on level is set by the [On Level %](#) field in the User Setup Screen (initially 100%) or the ON Level group (group 993.1). The ON Level group takes precedence over the ON Level % field. For further information, refer to [Groups](#). To set levels for the current selection to the on level, omit chans.

**[1] [ON] All Modes**

**[1] [@] [ON] Direct 2 Digit**

**[1] [@] [ON] [\*] Command Line**

Makes channel 1 the current selection and sets its level to the on level. **[ON]** The existing current selection is unchanged but their levels are set to the on level.

**chans** [**@**] [**\***] or **chans** [**@**] [**.**] [**\***] or **chans** [**@**] {**OFF**} [**\***] selects the listed channels and sets their intensity levels to off. To set levels for the current selection to off, omit chans.

[1] [**@**] [**\***] All Modes

[1] [**@**] [**.**] Direct 1 and 2 Digit

[1] [**@**] [**SHIFT**] Direct 1 and 2 Digit

[1] [**@**] [**.**] [**\***] Command Line

[1] [**@**] {**OFF**} [**\***] Command Line Makes channel 1 the current selection and sets its level off.

**Note:** *If you use this command in the Live display when Tracking is on, it sets channel levels to zero. If you record these channels, a zero level is recorded in the cue only if levels changed from previous cues. Otherwise off is recorded in the cue, and levels track through from the previous cue. If you use this command in the Cue/Preview display, the channels appear at their levels from the previous cue since turning a channel off (rather than setting it to zero) makes it track.*

**chans** [**@**] [**0**] [**\***] selects the listed channels and sets their intensity levels to zero. To set levels for the current selection to zero, omit chans.

[1] [**@**] [**0**] Direct 1 Digit

[1] [**@**] [**0**] [**0**] Direct 2 Digit

[1] [**@**] [**0**] [**\***] Command Line

Makes channel 1 the current selection and sets its level on at 0.

**Note:** *If you use this command in the Live display when Tracking is on, it sets channel levels to zero. If you record these channels, a zero level is recorded in the cue only if levels changed from previous cues. Otherwise off is recorded in the cue, and levels track through from the previous cue. If you use this command in the Cue/Preview display the channels are forced to zero and tracking for those channels is blocked at the cue*

**chans** [**REM DIM**] selects the listed channels and sets all other intensity channels to 0%. If the selected intensity channels are all at 0, they are set to the on level as set in the Setup display.

This feature is useful if a designer wants to check the focus of one or more lights. By selecting the light(s) to be checked and pressing [**REMDIM**], the selection is immediately set to the On value (default 100%) with all other lights switched off.

### **[1] [REMDIM] *All Modes***

Makes channel 1 the current selection and sets all other channels to 0%.

### **[REM DIM] [REM DIM] *All Modes***

If a current selection exists, its channels are unchanged and all others are set to 0%. If there is no current selection, all channels are set to 0% after a second press of the key. This is a very useful way to achieve a blackout.

---

## **Fading in Intensity Channels in Time**

You can set a channel selection to reach the set levels over a period of time using the **[TIME]** key as shown.

**[1] [THRU] [3] [TIME] [5] [@] [5]** Set channels 1 to 3 inclusive from current level to 50% over a period of 5 seconds. (Direct Action Modes). Time must be specified as 2-digit for Direct 2 Digit Mode.

**[1] [THU] [3] [@] [5] [TIME] [5] [\*]** Set channels 1 to 3 inclusive from current level to 50% over a period of 5 seconds. (Command Line Mode).

---

## **Fading In Attribute Channel Levels in Time**

You can fade in attribute channel levels in the same way as for intensity channels.

**[1] [.] [3] [TIME] [5] [@] [5]** Moves the channel 1 luminair pan to position 5 over a period of 5 seconds. (Direct Digit Modes)

**[1] [.] [3] [@] [5] [TIME] [5] [\*]** Moves the channel 1 luminair pan to position 5 over a period of 5 seconds. (Command Line Mode)

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## Working with Channel Levels (Cont)

### Using Recorded Items in Channel Lists

Intensity and attribute levels for the current selection can be set from cues, groups, effect steps and submasters by using these recorded items in the channel selection lists.

- **element** [**@**] **#**[\*] selects the channels in the recorded element and sets them to the levels recorded, scaled by **#**. **element** can be a cue, group, effect step or submaster. For instance, if you include submaster 1 in a list that ends in [**@**] **[8]** [**\***], all channels in the submaster will be selected along with any other channels specified in the selection, and channel levels for the submaster channels will be set to 80% of their value in the submaster.

[SUB] [1] [**@**] [2] Direct 1 Digit

[SUB] [1] [**@**] [2] [0] Direct 2 Digit

[SUB] [1] [**@**] [2] [**\***] Command Line

Selects the channels in submaster 1 and sets their levels to 20% of their submaster 1 values.

[SUB] [1] [**+**] [5] [THRU] [9] [**@**] [2] Direct 1 Digit

[SUB] [1] [**+**] [5] [THRU] [9] [**@**] [2] [0] Direct 2 Digit

[SUB] [1] [**+**] [5] [THRU] [9] [**@**] [2] [**\***] Command Line

Selects the channels in submaster 1 plus channels 5 through 9, sets channel 5 through 9 levels to 20%, and sets submaster 1 channel levels to 20% of their submaster 1 values.

- **element** [**\***] [**@**] **#** [**\***] selects the channels in a recorded element and sets them to a fixed level regardless of the recorded levels.

[SUB] [1] [**\***] [**@**] [2] Direct 1 Digit

[SUB] [1] [**\***] [**@**] [2] [0] Direct 2 Digit

[SUB] [1] [**\***] [**@**] [2] [**\***] Command Line

Selects the channels in submaster 1 and sets their levels to 20%.

[SUB] [1] [**\***] [**+**] [5] [THRU] [9] [**@**] [2] Direct 1 Digit

[SUB] [1] [**\***] [**+**] [5] [THRU] [9] [**@**] [2] [0] Direct 2 Digit

[SUB] [1] [**\***] [**\***] [**+**] [5] [THRU] [9] [**@**] [2] [**\***] Command Line

Selects the channels in submaster 1. Then adds channel 5 through 8 to the selection and sets them to 20%. Submaster 1 channels remain at their original levels.

ISUB] [1] [**\***] [**+**] [5] [THRU] [9] [**\***] [**@**] [2] Direct 1 Digit

[SUB] [1] [**\***] [**+**] [5] [THRU] [9] [**\***] [**@**] [2] [0] Direct 2 Digit

**[SUB] [1] [\*] [\*] [+] [5] [THRU] [9] [\*] [@] [2] [\*]** *Command Line*

Selects the channels in submaster 1. Then adds channel 5 through 8 to the selection. Then sets all selected channel levels to 20%.

If you specify a range of recorded elements with overlapping channels, the channels are set to the highest level they are in any of the elements.

**[CUE] [1] [THRU] [3] [@] {FULL} [\*]** *All Modes*

Sets channels recorded in any one or more of the three cues to the highest level they are in any of the cues. If there is an overlap between channels from a recorded element and explicit channels, the explicit channel level is used.

**[SUB] [1] [+] [9] [@] [5]** *Direct 1 Digit*

**[SUB] [1] [+] [9] [@] [5] [0]** *Direct 2 Digit*

**[SUB] [1] [+] [9] [@] [5] [\*]** *Command Line*

Sets submaster 1 channels to 50% of the levels recorded in the submaster and then sets channel 9 to 50% (explicit channels override submaster data).

## Attribute Groups [This feature was superceded by Attribute Filters from version 2.2 onwards](#)

The **[@ATT]** key can let you quickly access groups numbered in the 800 range. Although these groups can contain intensities as well as attribute levels, they were primarily intended for use in quickly setting attributes for fixtures that have multiple attributes.

- **chan [@ATT] [@ATT]###[\*]** sets intensities and attributes for the selected channels to the levels set in group 8###.#. If you use fewer than three numbers for specifying the group the console assumes leading zeros.

**[1] [THRU] [4] [@ATT] [1] [2] [3] [\*]**

Sets intensities and attributes for channels 1 through 4 to the levels set in group 812.3.

This is equivalent to the command **[1] [THRU] [4] [@] [GROUP] [8] [1] [2] [.] [3] [\*]**

**[1] [@ATT] [1] [\*]**

Sets channel 1 intensities and attributes to the levels set in group 800.1.

**[1] [+] [5] [@ATT] [1] [0] [\*]**

Sets intensities and attributes for channels 1 and 5 to the levels set in group 801.0.

## Referenced Groups

If you have the Tracker software you can use groups 1 through 750 as referenced groups (sometimes called 'preset focus' groups). When you use a group as a referenced group, this

group is linked to the cue, effect step, or submaster into which it is recorded, and changes made in the group are automatically made to the cue, effect step, or submaster. For more information about referenced groups, refer to [Referenced Groups \(Preset Focus\)](#) Tracker Software

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## Attribute Filters

You can use the Attribute Filters feature to quickly set the levels of selected functions for fixtures with multiple attributes using referenced groups. (Refer to [Attribute Filters](#))

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## Using the Level Wheel

If you are in the Live display, moving the Level Wheel masters the intensity levels in the current selection up or down. The way in which channels are mastered depends on the [Wheel Mastering](#) field in the User Setup Screen. Its value can be SHAFT or PROPORTIONAL.

SHAFT mastering is the default for GeniusPro and PROPORTIONAL mastering is the default for Lightpalette

The [Wheel Sensitivity](#) can also be set up in the User Setup Screen.

Levels cannot be wheeled over 100% (or below 0%) but they will retain their relative proportions until you clear the selection, so that if you wheel them down again the original proportions will reappear. For example, with two channels at 10% and 40%, these can both be wheeled up to 100% and then back down to 10% and 40%.

**chans** [**@**] **wheel** selects the listed channels and lets you master them up or down by the Level Wheel. To master the current selection, omit **chans**. The [**@**] is optional. This is the same as **chans** [**\***] followed by **wheel**

- **[1] [+]** **[2] wheel** *All Modes*  
Makes channels 1 and 2 the current selection and wheels their levels from their current values.
  - **wheel**. The existing current selection is unchanged but their levels are wheeled.
-



## Setting Attribute Levels

Channels can have 2 attributes (intensity and colour) in the standard operating software for GeniusPro. You can set intensities using the **[@]** key, and colours using the **[@ATT]** key. By following **[@ATT]** with one of the soft keys that appear in the right LCD, you can set attribute levels for other fixture attributes if you have the Tracker software installed in the console.

You can also access an attribute directly by appending a decimal point and the attribute number to the channel number. Channel intensity is attribute 1 and colour is attribute 2, so these can be accessed by specifying channel 1 or 1.1 for intensity, and channel 1.2 for colour.

For the purposes of this section, it is assumed that the Tracker software is not installed, so “attribute” generally means “colour.” For details on other fixture attributes, refer to [Tracker Software](#).

The following comments apply to setting attribute levels in general.

- The only attribute available without Tracker software is scroller colour (attribute 2).
- The grandmasters (if fitted) only control intensity levels.
- The Level Wheel and the **[ON]** and **[REM DIM]** keys only affect intensity channels unless you use a decimal number to address an attribute. When you do this the specified attribute is assigned to the Level Wheel.
- The maximum value for an attribute is set in the patch and is generally less than 100. If you set a value that exceeds the maximum, the maximum value is used. The default maximum value for attributes is 10 but can be changed in the Setup display.
- Use the rotaries and the Trackball or mouse to control attributes unless you addressed the attribute using its decimal channel number. Colour (attribute 2) is on the top rotary. If you have the Tracker software you can use the left and right hand unlabelled keys above the Trackball, or the left and right-hand mouse buttons to page through fixture attributes so that you can control the desired attribute.
- If you have the Tracker software you can use the centre unlabelled key above the Trackball to show the attribute page names in the Right LCD and go directly to the desired attribute page.
- If the entry mode is Direct 1 Digit, then attribute levels above 9 cannot be entered. However the level can be increased above 9 by using **[+]**, for example if channel 1 is an attribute at 8 then **[1] [@ATT] [+] [6]** will set it to 14.
- **chans [@ATT] # [\*]** makes the specified channels the current selection and sets their colour. To set colour on the current selection, omit chans.

**[SUB] [1] [@ATT] [2] *Direct 1 Digit***

**[SUB] [1] [@ATT] [0] [2] *Direct 2 Digit***

**[SUB] [1] [@ATT] [2] [\*] *Command Line***

Makes the channels in submaster 1 the current selection and sets them to colour frame

2. Channels without colour attributes are selected but not changed.

- **chan [.] att [@] # [\*]** makes the specified channels the current selection and sets the specified attribute.

[1] [.] [2] [THRU] [5] [.] [2] [@ATT] [2] Direct 1 Digit

[1] [.] [2] [THRU] [5] [.] [2] [@ATT] [0] [2] Direct 2 Digit

[1] [.] [2] [THRU] [5] [.] [2] [@ATT] [2] [\*] Command Line

Makes channels 1 through 5 the current selection and sets them to colour frame 2.

Channels without colour attributes are selected but not changed.

**Note:** When using [THRU] for a list specifying a single attribute you only need to specify the attribute once. Thus, [1] [.] [2] [THRU] [5] [.] [2] and [1] [.] [2] [THRU] [5] and [1] [THRU] [5] [.] [2] all access the colour attribute in channels 1 through 5.

[1] [.] [2] [+] [5] [.] [2] [@ATT] [4] Direct 1 Digit

[1] [.] [2] [+] [5] [.] [2] [@ATT] [0] [4] Direct 2 Digit

[1] [.] [2] [+] [5] [.] [2] [@ATT] [4] [\*] Command Line

Makes channels 1 and 5 the current selection and sets them to colour frame 4.

Channels without colour attributes are selected but not changed.

**Note:** When using + for a list specifying attributes you need to explicitly enter the decimal point and an attribute number for each channel.

[1] [.] [2] [THRU] [5] [.] [4] [@ATT] [4] Direct 1 Digit

[1] [.] [2] [THRU] [5] [.] [4] [@ATT] [0] [4] Direct 2 Digit

[1] [.] [2] [THRU] [5] [.] [4] [@ATT] [4] [\*] Command Line

Makes attributes 2, 3, and 4 in channels 1 through 5 the current selection and sets them to 4.

- **chans [@ATT] type # [\*]** makes the specified channels the current selection and sets the selected attribute levels. To set attribute levels on the current selection, omit chans. When you press [@ATT] the Right LCD shows attribute names. To select attributes other than colour, press the appropriate key after you press [@ATT].

[1] [THRU] [5] [@ATT] {IRIS} [2] Direct 1 Digit

[1] [THRU] [5] [@ATT] {IRIS} [0] [2] Direct 2 Digit

[1] [THRU] [5] [@ATT] {IRIS} [2] [\*] Command Line

Makes channels 1 through 5 the current selection and sets their iris attribute levels to 20%. Channels without iris attributes are selected but not changed.

[SUB] [1] [@ATT] {IRIS} [2] Direct 1 Digit

[SUB] [1] [@ATT] {IRIS} [0] [2] Direct 2 Digit

[SUB] [1] [@ATT] {IRIS} [2] [\*] Command Line

Makes the channels in submaster 1 the current selection and sets their iris attribute levels to 20%. Channels without iris attributes are selected but not changed.

- **chans [@ATT] [NEXT]** makes the specified channels the current selection and

increases their attribute levels by 1. To increase attribute levels on the current selection, omit chans

**[1] [@ATT] [NEXT] Direct 1 and 2 Digit**

**[1] [@ATT] [NEXT] [\*] Command Line**

Makes channel 1 the current selection and increases its attribute level by 1. For example, if it was at 3 it is set to 4.

**[@ATT] [NEXT] All Modes**

Increases attribute levels of the current selection by 1.

- **chans [@ATT] [LAST]** makes the specified channels the current selection and decreases their attribute levels by 1. To decrease attribute levels on the current selection, omit chans.

**[1] [@ATT] [LAST] Direct 1 and 2 Digit**

**[1] [@ATT] [LAST] [\*] Command Line**

Makes channel 1 the current selection and decreases its attribute level by 1. For example, if it was at 4 it is set to 3.

**[@ATT] [LAST] All Modes**

Decreases attribute levels of the current selection by 1.

## Setting DMX Levels

Normally channel levels are set from 0% to 100%. However, the actual DMX level is an 8 bit number ranging from 0 to 255. The **{DMX}** soft key lets you set channel levels and attributes to exact DMX levels if necessary. For attributes you must use the **chan [.] att** format to specify the attributes you want to change. The **[@ATT]** key does not let you set channels to DMX levels.

Setting actual DMX levels gives you more precise control over the levels you set. The display will show the nearest standard (00 to FL) level rather than the exact DMX level you set.

- **chan [.] att [@] {ENABLE}{DMX} # [\*]** makes the selected channels or attributes the current selection and sets their levels to the specified DMX level. To set the current selection, omit chans.

**[1] [THRU] [3] [@] {DMX} [1] [2] [8] [\*] All Modes**

Sets the intensity for channels 1, 2, and 3 to DMX level 128 (50%). The display will show 50.

**[1] [.] [2] [+] [2] [.] [2] [@] {DMX} [5] [6] [\*] All Modes**

Sets the colour attribute for channels 1 and 3 to DMX level 56. The display will show the frame number, which is 2 if the maximum number of frames for the attribute is 10.

## Copying Channel Levels

The intensity and attribute levels can be copied from one channel to one or more other channels. This is most useful with the Tracker software where each channel can have multiple attributes.

- **chans** [**@**] **{COPY FROM}** # [**\***] makes the selected channels the current selection and sets their attribute levels from the channel given by #. To set the current selection, omit chans.

**[1] [THRU] [3] [**@**] **{COPY FROM}** [5] [**\***] *All Modes***

Sets the intensity and attributes in channels 1, 2, and 3 to the same level as in channel 5.

## Undoing Level Changes

You can undo the last command that used [**@**] [**@ATT**] **{FULL}** [**REM DIM**] [**ON**] or **wheel**. This also clears the current selection.

**[UNDO] [**\***] *All Modes***

Undoes the last intensity or attribute set command.

**[UNDO] [**@**] *All Modes***

Undoes the last intensity set command.

**[UNDO] [**@ATT**] *All Modes***

Undoes the last attribute set command.

## Holding Channels on the Channel Control

You can hold channels on the Channel Control so that they cannot be stolen by cues, effects, or submasters. Held channels are not necessarily being actively controlled by the Channel Control. While channels are being held, you can select and change other channels, record cues, etc.

- **chan** [**HOLD**] [**\***] assigns the selected channels to the channel control exclusively. The channels are assigned to the channel control until you release them using [**SHIFT**] [**HOLD**] [**\***]. Channels on hold are shown with a grey background.

**[1] [+] [5] [HOLD] [\*] All Modes**

Selects channels 1 and 5, and puts them on hold. Until you make another channel selection these channels are active on the Channel Control. If you make other channel selections, these channels are no longer actively controlled, but are still held by the Channel Control.

- **chan [SHIFT] [HOLD] [\*]** releases the selected channels from the Channel Control hold. The channels are considered changed, and appear with red levels.

**[1] [SHIFT] [HOLD] [\*] All Modes**

Releases channels 1 from Channel Control hold. If there are any other channels on hold, they are not released.

**[SHIFT] [HOLD] [\*] All Modes**

Releases all channels from Channel Control hold.

See also [CC Autohold Mode](#)

Note: In Lightpalette mode, if a handheld or remote console selects a channel and then Autoholds is switched off, the channel cannot be stolen back by the main console. Switch Autohold back on, select and deselect the channel using the handheld or remote console, then switch Autohold off. [SHIFT] [CLR] can then steal the channels.

## Restoring Playback Levels

You can restore channels that have been changed by the Channel Control to their current X playback, effect playback, or submaster fader levels (or zero if no cue, submaster, or effect is controlling them). This affects both intensities and attributes.

- **[UNDO] [\*]** deselects and restores all currently selected channels which have been changed by the Channel Control (red background). The fade time for this change is set in the Setup display Undo Time field. **chans [UNDO]** deselects and restores the specified channels which have been changed by the Channel Control (red background). This is a two second fade.

**[2] [THRU] [5] [UNDO] All Modes**

Restores all channels from 2 through 5 which have been changed by the Channel Control, whether or not they are selected. This is a two second fade.

## Flashing Channel Levels

The current selection can be temporarily set to the Flash level or off (0%) without affecting other channels.

The Flash Level is set by the Flash Supermaster which is above the FLASH SUPER label in the centre LCD (consoles with 3 LCD displays) or on submaster 20 (consoles with 2 LCD displays) when you first turn the console on. You can change the Flash Supermaster to another fader or eliminate it altogether by changing the Function properties of the submaster faders involved. If there is no Flash Supermaster, the Flash level is always 100%. For further information on Submaster Functions, refer to [Submasters](#). Series 300 Consoles do not have a Flash Supermaster. However, any one of the submasters can be set to a Flash Supermaster.

- **chans {FLASH }** makes the selected channels the current selection and sets their levels to the Flash level while you hold **{FLASH }**. To flash the current selection, omit **chans**. **{FLASH }** is a soft key on the LCD Live menu.  
**[1] [+]** **[2] {FLASH}** *All Modes*  
 Makes channels 1 and 2 the current selection and sets their levels to the Flash level while you hold **{FLASH }**
- **{FLASH }** Sets the levels of the current selection to the Flash level while you hold **{FLASH }**.
- **chans [SHIFT] {FLASH }** is the same as **{FLASH }** except that the levels are temporarily set off.  
**[1] [+]** **[2] [SHIFT]** *All Modes*  
 Makes channels 1 and 2 the current selection and sets their levels to 0 while you hold **{FLASH }**  
**[SHIFT] {FLASH }** *All Modes*  
 Sets the levels of the current selection to 0 while you hold **[SHIFT] {FLASH }**

---

## Bumping Channel Levels

You can use the **{BUMP}** soft key to bump the current channel selection in the mode set by the **[BUMP MODE]** key. This is different from the bump modes set for each submaster. For further information on setting up separate bump modes for each submaster, refer to [Submasters](#).

**Note:** The **[BUMP MODE]** key is not fitted on 300 Series consoles. However, if it is required to change the setting from the default 'Flash' mode, this key can be simulated using the capital V key on the external keypad.

Press **[BUMP MODE]** to see the current setting. These appear in the centre LCD (consoles with 3 LCD displays) or left LCD (consoles with 2 LCD displays) as labels above the soft keys, or on the LCD of 300 Series consoles.

Press **[BUMP MODE]** again to return to normal operation.

The right three soft keys **{KEYS ON}**, **{KEYS OFF}**, **{KEYS LATCH}** determine the operation of the submaster bump keys and have no effect on the **{BUMP}** softkey

The left three soft keys (**{FLASH}**, **{SOLO}**, **{FLASH + SOLO}**) determine what happens when you press the **{BUMP}** soft key. A bar above the label shows the current mode. Pressing one of these three soft keys changes the mode.

### **{FLASH}**

Pressing **{BUMP}** sets the selected channels to the level set by the Flash Supermaster, which is normally above the FLASH SUPER label in the centre LCD (consoles with 3 LCD displays) or on submaster 20 (consoles with 2 LCD displays). You can change the Flash Supermaster to another fader or eliminate it altogether by changing the Function properties of the submaster faders involved (refer to [Submaster](#)). If there is no Flash Supermaster, the bump level is always 100%.

### **{SOLO}**

Pressing **{BUMP}** does not effect the selected channels. All other (non-bumped) channels, as well as effects, cues, and submasters are set to zero. The Flash Supermaster is ignored.

### **{FLASH + SOLO}**

Pressing **{BUMP}** sets the selected channels to the level set by the Flash Supermaster. All other (non-bumped) channels, as well as effects, cues, and submasters, are set to zero.

**chans {BUMP}** selects the listed channels and bumps their levels to the level of the Flash Supermaster while you hold **{BUMP}**. Releasing **{BUMP}** restores the previous levels. To bump the current selection, omit chan. **{BUMP}** is a soft key on the LCD Live menu.

### **[1] [+] [2] {BUMP}** *All Modes*

Selects channels 1 and 2 and bumps their levels.

### **{BUMP}** *All Modes*

Leaves the existing selection unchanged but bumps its levels.

## Channel Check

Using **[NEXT]** and **[LAST]** you can easily run through all of your channels to make sure that fixtures controlled by them are working.

1. Press **[GOTO] [0] [\*]** to go to a blackout.
2. Move all submasters to 0 (zero) and stop all effect playbacks.
3. Make sure that the supermasters and grandmasters are at full.
4. Press **[1] {FULL}** to turn channel 1 on at full, or set the channel to any other convenient level for testing fixtures.
5. Press **[NEXT]** to go to the next channel or **[LAST]** to go to the previous channel until you have completed your channel check. For GeniusPro, each channel in turn will be selected without changing its level. For Lightpalette, each channel in turn will be set to full, then returned to its original level when you go to the next channel

---

## Changing Levels in Preview (Blind) Displays

When you are in a preview (Blind) display (the Cue/Preview, Submaster, Effect, and Group displays), changing a level automatically records it into the currently displayed item.

You can use Channel Control commands (for example **[1] [@] [1] [\*]**, **[CUE] [1] [@] [5] [\*]** ) to set and record channel levels. Some of the soft keys and the Level Wheel are not available in preview (Blind) displays. Otherwise the syntax for changing recorded levels is the same from all locations

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## Tracker Software

Tracker is a standard software package for Strand Lighting' s Consoles using GeniusPro or Lightpalette Operating software and provides the following features:

- Intelligent Control of any DMX Moving Light.
- Pan & Tilt on the trackball or mouse.
- Rotary Control and mouse control of attributes. Up to 99 pages of rotary control assignments.
- Continuous (e.g. Pan) or Discrete Attributes (e.g. frame).
- True 16 Bit DMX fades for Pan and Tilt.
- Copy, move and swap levels and attributes between channels.
- Attribute Display Formats.
- Automatic Display Format Switching.
- Patch All Attributes of one fixture to a single channel.
- Fixture Library for easy patching.
- Auto-Move-When-Dark removes the need to record Mark cues and have consoles automatically reposition lights while dark ready for next cue (Not available on 430 consoles).
- Preset Focus Positions allow you to record cues, submaster and effects as links to focus positions (groups). Subsequent changes to the focus positions are automatically linked into the referencing cue, submaster and effect. (Only available on Pentium-based consoles).
- Colour Palettes allow a library of colour assignments to be created and applied to scrollers or moving lights by name.

This section covers the following topics:

- [Attributes](#)
- [Tracker Displays](#)
- [Channel Control Syntax](#)
- [Patching Attributes](#)
- [Recording and Playback](#)
- [Referenced Groups \(Preset Focus\)](#)
- [Colour Palettes](#)
- [Attribute Filters](#)
- [Updating Attribute Filters from the Live Screen](#)
- [Fixture Library List](#)

---

## Attributes

This section introduces the concept of attributes and how they are used with Tracker.

The following topics are covered in this section:

- [What Are Attributes?](#)
- [Using Attributes](#)
- [Trackerball Keys](#)
- [Rotary Controls](#)
- [Mouse Control Features](#)

Refer to [Product Specification](#) for information on maximum attribute channels.

---

## What Are Attributes?

Today's moving fixtures have a much greater control requirement than varying the lamp intensity. They typically now have movement control (pan and tilt), focus, iris, colour wheel, cyan-magenta-yellow colour mixing, gobos - and often more.

A traditional control console will allocate one control channel (and hence one DMX address) to each of these fixture parameters, and each channel has to be individually set or wheeled to a level to achieve the required position and look. Quite a laborious process, and quite a job for the operator to keep track of all those channel numbers.

The Tracker approach is radically different: instead of upwards of a dozen channels per fixture, only one is required - with all the fixture parameters as attributes of the main control channel. For example, a moving fixture patched to control channel 1 has its colour wheel controlled as attribute 2, pan as attribute 3, tilt as attribute 4 - and so on. These attributes are referred to as channel 1.2, channel 1.3, channel 1.4 etc. The fixture's lamp is always attribute 1, or channel 1.1. In this way, with one channel per fixture, the complexities of a rig full of fixtures become much more manageable, without limiting functionality.

---

## Using Attributes

Attributes can be accessed directly using the decimal channel notation, e.g.:

**[1] [@] [5] [\*]**

Sets intensity 'attribute' to 50%

**[1] [.] [2] [@] [8] [\*]**

Sets colour attribute to frame 8

Each of these places the named attribute on the wheel for fine control. However, the real ease of use comes with the rotary controls:

**[1] [\*]**

Places channel 1 and its attributes on the rotary controls.

The default ordering of the rotary controls is:

- 1.1 intensity wheel
- 1.2 colour rotary 1 (top)
- 1.3 pan track ball (sideways movement)
- 1.4 tilt track ball (up & down movement)

The rotaries are even more flexible in that they can be 'paged' through all remaining attributes of the selected fixture using the keys above the trackball.

Not all fixtures use all attributes, and only the attributes which the selected fixture supports are placed under rotary control.

*Note: A 'fixture' may comprise two completely separate devices, namely a luminaire and a scroller, at two completely separate DMX addresses. They can still be controlled as one fixture.*

A library of fixtures is held on the console's hard disk and is read at power up. It is used during patch operations, which is where fixtures are assigned to control channels.

---

## Trackball Keys

The three keys located above the trackball are used as follows to manipulate channel attributes in a current selection:

Left: Select Last attribute page.

Middle: Hold down, while moving the trackball or rotaries, to put trackball or rotaries in Coarse movement mode. Release to put back into default Fine movement mode. See also [Mouse Control of Features](#)

Right: Select Next attribute page.

Middle + Left: Toggle Lock X trackball movement. When locked moving the trackball left/right will have no effect. When X movement has been locked, the Pan attribute will be displayed in Grey. A 'Pan Locked' warning is also displayed on the Status Window.

Middle + Right: Toggle Lock Y trackball movement. When locked moving the trackball up/down will have no effect. When Y movement has been locked, the Tilt attribute will be displayed in Grey. A 'Tilt Locked' warning is also displayed on the Status Window.

You can lock pan and tilt functions simultaneously.

**Note:** *If the trackball doesn't appear to work in either the left/right or ,up/down direction, it is likely that the movement is locked. Try toggling the lock state as described above.*

---

## Rotary Controls

There are four rotary controls located on the right-hand side of the console. These are referred to as R1 (top), R2, R3 and R4 (bottom) and are colour coded as follows (same colour used on screen):-

R1	White
R2	Blue
R3	Red
R4	Magenta

These are used to master the attribute currently assigned to that control. Clockwise increases the attribute value, anti-clockwise decreases the value. They are continuous controls without end stops.

By default, the R1 rotary is permanently assigned to attribute 2 (colour), while R2, R3, and R4 are assigned to the attributes in the current attribute page as set by the left and right trackball keys (see above). These defaults can be changed by modifying the ATC page library. Refer to [Fixture Library List](#).

**Note:** Sticky backed coloured dots are supplied with the console. They should be placed in the appropriate indents on the rotary controls as per above table..

## Mouse Control of Features

GeniusPro and Lightpalette software supports a range of mice and trackballs, including the 'intelli' type mouse and trackball, to mimic the trackball, trackball softkeys and rotaries on the 500 series consoles. Any of the mouse options can be used with either 500 or 300 series consoles for the control of attributes and to mimic the other functions of the trackball, e.g., moving the highlight on the setup screens, scrolling the help screens and activating help hyperlinks. PS2 mice should be plugged into the PS2 port and serial mice should be plugged into one of the COM ports, unless the mouse is dual function (i.e., PS2/Serial)

### Supported Mice

Microsoft or Logitech 2-button PS2 or serial mouse  
 Microsoft or Logitech 3-button PS2 or serial mouse  
 Microsoft Intellimouse or Intellitrackball or Logitech equivalents.

**Important Note: When using a PS2 mouse, the mouse must be plugged into the PS2 port before you switch on the console, otherwise, the mouse will not work.**

**Using an intellimouse, or intellitrackball to control moving lights.**

- The ball of an intellimouse or intellitrackball performs the pan and tilt functions.
- Moving the ball in a horizontal plane to the right increases the pan value, while moving the ball in a horizontal plane to the left decreases the pan value. Similarly, moving the ball in a vertical plane away from you increases the tilt value and moving the ball in a vertical plane towards you reduces the tilt value.
- Pressing the wheel button and left mouse button lock the tilt function and pressing the wheel button and right mouse button locks the pan function. A warning is displayed in the Status Window when either Pan or Tilt, or both are locked.
- Turning the intellimouse or intellitrackball wheel selects the attribute as indicated by an arrow to the right of the attribute.
- Turning the wheel, while holding the wheel button depressed applies the course adjustment mode.

Limited functionality is can be provided with a two, or three button mouse, as described below.

The two-button mouse ball performs the X and Y functions of the 500 series trackball (pan and tilt). The left and right buttons step forwards and backwards through the attributes of the selected fixture as indicated by an arrow to the right of the attribute. Further pressing the left or right buttons when the arrow is on the last or first attribute will display the last or next ATC page respectively.

On a three-button mouse, pressing the centre button and moving the mouse left or right changes the value of the selected attribute. Pressing the middle button and left button together will lock the tilt function and pressing the middle button and right button together will lock the pan function.

---

## Tracker Displays

This section describes the displays which are used by the Tracker application and covers the following topics:

- [Smart Channel Display](#)
- [Rotary Controls Window \(Live Display - State Screen\)](#)

---

### Smart Channel Display

The [Smart Channel Display](#) field in the User Setup Screen sets a display format that the console automatically switches to, when a channel with attributes is selected. The available options are OFF, TRACKER and TRACKER PRESET.

With the Smart Channel Display field set to TRACKER, and channels with attributes selected, the

display automatically changes to show the attribute values. This display shows 20 channels across the screen. The number of rows is dependent on the number of attributes on the displayed channels.

With the Smart Channel Display field set to TRACKER PRESET, and channels with attributes selected, the display automatically changes to show the attribute values. However, this display includes the Preset Group text of any preset group controlling one or more of the attributes of a fixture.

If no attributes are selected, or the Smart Channel Display field is set to OFF, the display shows to the default format as set by the [Channel Display Format](#) field in the User Setup Screen.

To make reading channel displays easier, the attribute screen labels are coloured to show which controls they are assigned to.

Screen Background	Screen Foreground	Attribute Controller
Red	White	Wheel
Yellow	Black	Trackball
Grey	White	Rotary 1 (White)
Grey	Blue	Rotary 2 (Blue)
Grey	Red	Rotary 3 (Red)
Grey	Magenta	Rotary 4 (Magenta)
Dark Grey	Grey	Not currently under rotary control, but in current section

---

## Rotary Controls Window (Live Display - State Screen)



10:39:38 27/1/99 >> **LIVE** \*No Title GM=FL/FL

X Playback Rotary

X Cue	P	Type	Up/Down	Delay	Wait	Link	Loop	Cmd
0		AF	0					
> 1		XF	5					

1288 CMYR Hyperbeam

Pan 6  
Tilt 8

Colour 0+3  
Iris 6  
Prism 1-4  
Colour 0+2

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[Page 1] Submasters

Sub	% Text	Sub	% Text	Sub	% Text
1		13		25	M FL
2		14		26	L FL
3		15		27	F FL
4		16		28	D FL
5		17		29	A 94
6		18		30	R FL
7		19			
8		20			
9		21			
10		22			
11		23			
12		24			

Wheel

@0

v2.3

Net On  
Main  
denise  
User  
admin  
Main  
Active  
NoBackup

**LIVE**

The Rotary Control window is located at the top right hand side of the **[LIVE]** display (dual VGA only). This window is used to display the attributes that are currently being controlled by the trackball and rotary controls. Continuous attributes (those patched with a zero frame count) are displayed as DMX values 0 - 255. Examples of continuous attributes are Pan, Tilt, Iris, CMY etc.

Discrete attributes (those patched with a non-zero frame count) are displayed as frame numbers plus frame adjustment.

Examples of discrete attributes are Colour, Gobo, Prism etc.

An example sequence of displayed discrete values might be:

1 Frame 1 fully in front of lamp.

1+1 Predominantly Frame 1 plus 10% of Frame 2.

1+2 Predominantly Frame 1 plus 20% of Frame 2.

1+3 Predominantly Frame 1 plus 30% of Frame 2.

1+4 Predominantly Frame 1 plus 40% of Frame 2.

1+5 50% Frame 1 plus 50% of Frame 2 (split colour).

2-4 Predominantly Frame 2 with 40% of Frame 1.

2-3 Predominantly Frame 2 with 30% of Frame 1.

2-2 Predominantly Frame 2 with 20% of Frame 1.

2-1 Predominantly Frame 2 with 10% of Frame 1.  
 2 Frame 2 fully in front of lamp.  
 2+1 etc.

---

## Channel Control Syntax

Tracker extends existing intensity and colour Channel Control syntaxes. All syntaxes are listed in the Command Summary mode. The following Control Operations are covered in this section:

- o [Controlling Intensity and Attributes](#)
  - o [Copying Channel Attributes](#)
- 

## Controlling Intensity and Attributes

Examples:

**[1] [@] [3] [\*]**

Chan 1 Intensity to 30%

**[1] [@ATT] [5] [\*]**

Channel 1 Colour (Attribute 2) to frame 5

**[1] [.] [2] [@] [5] [\*]**

Chan 1 Colour (Attribute 2) to frame 5

**[1] [.] [8] [@] [5] [\*]**

Chan 1 Gobo (Attribute 8) to frame 5

**[1] [.] [3] [@] [6] [\*]**

Chan 1 Pan (Attribute 3) to 60%

**[1] [.] [2] [0] [@] {DMX} [2] [5] [0] [\*]**

Chan 1 Reset (Attribute 20) to DMX 250

**[1] [THRU] [5] [@] [4]**

Chans 1 Through 5 Intensity at 40%

**[1] [THRU] [5] [@ATT] [2] [\*]**

Chans 1 Through 5 Colour (Attribute 2) to frame 2

**[1] [THRU] [5] [.] [2] [@] [[2] [\*]**

Chans 1 Through 5 Colour (Attribute 2) to frame 2

**[1] [THRU] [5] [.] [5] [@ATT] [3] [\*]**

Chans 1 through 5 Iris (Attribute 5) to 30%

---



## Copying Channel Attributes

The **{COPY FROM}** soft key on the **[\*]** key menu allows some or all of one channel's attribute levels to be copied to one or more channels. This is very useful for copying all of one fixture's settings to one or more other fixtures.

Select the channel to copy from:

**chan** **[@]** **{COPY FROM}** **#** copies all attribute values of channel **#** to the selected channel(s).

e.g.

**[1] [THRU] [5] [@] {COPY FROM} [1] [0] [\*]**

Copy all attribute values from channel 10 to channels 1 to 5

**[1] [THRU] [5] [.] [2] [@] {COPY FROM} [1] [0] [\*]**

Copy colour only.

## Patching Attributes

This section describes how Attributes are patched to Outputs (DMX) from the **[PATCH]** screen and covers the following topics:

- [Patching Attributes to a Single Channel](#)
- [Fixture Libraries](#)
- [The Copy Patch Menu](#)
- [Range Patching](#)

### Patching Attributes To a Single Channel

Patching attribute channels is the same as 'normal' intensity patching except that the attribute number must be specified.

From the **[PATCH]** screen.

**[1] [0] [0] [@] [4] [.] [3] [\*]**

Patch Output 100 to Channel 4 Attribute 3 (Pan)

**[9] [9] [@] [4] [.] [4] [\*]**

Patch Output 99 to Channel 4 Attribute 4 (Tilt)

To invert an attribute (i.e. 0% = 255 DMX output to 100% = 0 DMX output) use a '-' before the scaling or frame number. e.g.

**[1] [1] [0]@] [5] [@] [-] [0] [\*]**

Patch Dimmer 110 to Channel 5 (Intensity) and flip output.

**[1] [@] [3] [.] [3] [@] [-] [0] [\*]**

Patch Output 1 to Channel 3 Attribute 3 (Pan) as continuous and flip output.

By a combination of swapping Pan & Tilt and inverting or not, any orientation of fixture can be set so Pan left/right always pans left/right across stage and tilt moves up/down stage.

Continuous attributes (0 entered as frame count) display as 0 - FL on the output screen and as DMX values (0 - 255) on the rotary window.

## Patching Fixtures

When complete fixtures are patched using the **{@ FIXTURE}** softkey the attribute channels used are shown in blue on the Patch Screen, with the function of each attribute channel shown in blue below the channel number. If the patch display is in 'Output Order' the name of the fixture is shown in white above the channel numbers. Changes to the standard fixture, e.g. Inverting Pan, are displayed in cyan. Pan and Tilt can also be swapped and/or inverted on a fixture.

**[3] [@] [5] {@FIXTURE} [2] [1] [\*]**

Patch output 3 channel 5 to fixture 21.

**[2] [0] {@FIXTURE} [2] [3] [\*]**

Patch output 20 to fixture 23 using output 20s current channel.

**[3] {@FIXTURE} [NEXT] . . [NEXT] . . [\*]**

Browse fixture names on command line and patch output 3 to selected fixture.

**[3] {@FIXTURE} [LAST] . . [LAST] . . [\*]**

Browse fixture names on command line, and patch output 3 to selected fixture.

**[3] [@] [5] {@FIXTURE} [2] [1] {SWAP P + TILT} [\*]**

Patch output 3 channel 5 to fixture 21, swap Pan and Tilt for the fixture.

**[3] {@FIXTURE} [2] [1] {INVERT PAN} [\*]**

Patch output 3 to fixture 21, invert Pan.

**[3] {@FIXTURE} [2] [1] {INVERT TILT} [\*]**

Patch output 3 to fixture 21, invert Tilt.

**[3] {@FIXTURE} {INVERT TILT} [\*]**

Inverts Tilt on the fixture patched to output 3.

To delete a patched fixture, ensure that the patch display is in output order, then patch a blank fixture starting with the same output number, e.g.,

**[3] {@FIXTURE} [\*]**

Unpatches the fixture patched to output 3.

To default the range back to the original mapping, enter the range of outputs used by the unpatched fixture and press **{DEFLT}**, e.g.,

**[3] [THRU] [1] [1] {DEFLT}**

Note that the only other way to unpatch a fixture is to default the whole patch (press **{DEFLT}** twice)

8:32:28 24/01/99		OUTPUT ORDERED PATCH 1				*No Title			GM=FL/F		
O/P	1:1	PALS Pirouette 4			5.2	PALS Pirouette 16				Status	
CHN	1.3	1.4	1.6	1.17	5.3	5.57	5.4	5.59	Intensity		
	Pan	Tilt	Focus	Speed	Pan	PanFine	Tilt	TiltFin	Total	350	
O/P	9	10	PALS Pirouette Colour			15	16.4			InUse	350
CHN	5.6	5.12	11.3	11.4	11.6	11.17	11.2	16.3	Free	0	
	Pan	Tilt	Pan	Tilt	Focus	Speed	Colour	Pan	Attribute		
O/P	PALS Pirouette 16 Colour				22:35	22	23.5		1288	Total	230
CHN	16.57	16.4	16.59	16.6	16.17	16.2	23.20	23	InUse	22	
	PanFine	Tilt	TiltFin	Focus	Speed	Colour	Reset		Free	175	
O/P	DMR Hyperbeam			27	28	29	30	31	Rate	1	
CHN	23.2	23.44	23.11	23.12	23.13	23.8	23.9	23.23	Edit	1	
	Colour	Colour2	Cyan	Magenta	Yellow	Gobo	RGobo	Index	Wheel		
O/P	33	34	35	36	37	38	39	40		40	
CHN	23.6	23.5	23.7	23.3	23.4	23.17	23.18	40		1	
	Focus	Iris	Prism	Pan	Tilt	Speed	Speed 2				
O/P	41:6	1200KR	Hyperbeam		45	46	47	48			
CHN	41.20	41	41.2	41.8	41.9	41.23	41.6	41.5			
	Reset		Colour	Gobo	RGobo	Index	Focus	Iris			
O/P	49	50	51	52	53	54.7	200 Hyperbea				
CHN	41.7	41.3	41.4	41.17	41.18	54.20	54	54.2			
	Prism	Pan	Tilt	Speed	Speed 2	Reset		Colour			

**OUTPUT ORDERED PATCH 1:**  
Select patch for Level, Colour and Non-Din channels

## The Copy Patch Menu

Pressing **{COPY SWAP}** from the Set Patch menu displays the Copy Patch menu with softkeys **{COPY PATCH}**, **{MOVE PATCH}** and **{SWAP PATCH}**. These softkeys enable output attributes or fixtures to be copied, moved or swapped within, or between the Live or Edit Patch.

- [Copying Patch Information](#)
- [Moving Patch Information](#)
- [Swapping Patch Information](#)

## Copying Patch Information

Press **{SET}** from the LCD Patch Menu to display the LCD Set Patch Menu. Press **{COPY/SWAP}** to display the Copy Patch Menu.

### ***Copying Attributes***

Enter the output number (or range of outputs), of the attribute(s) to be copied, followed by the **{COPY PATCH}** softkey and the output number (or first output number), where the attribute(s) has to be copied, then **[\*]**. A confirmation is requested after each command. Press **[\*]** again.

**[1] {COPY PATCH} [1] [0] [\*]**

Copies attribute on output 1 to output 10

**[1] [THRU] [10] {COPY PATCH} [1] [1] [\*]**

Copies attributes on outputs 1 to 10 to outputs 11 to 20.

Press **{BACK}** to return to the LCD Set Patch Menu.

### ***Copying Fixtures***

Enter the first output number (or range of outputs) of the fixture(s) to be copied, followed by the **{COPY PATCH}** softkey and the first output number where the fixture has to be copied to, then **[\*]**. A confirmation is requested after each command. Press **[\*]** again.

**[2] [2] {COPY PATCH} {4} [4] [\*]**

Copies the fixture starting on output 22 to start on output 44.

**[2] [2] [THRU] [5] [2] {COPY PATCH} [5] [4] [\*]**

Copies the fixtures patched to outputs 22 to 52 to start on output 54.

Press **{BACK}** to return to the LCD Set Patch Menu.

### ***Copying Patch Screens***

You can copy the entire contents of Patch 1 to Live Patch 2.

**{COPY PATCH}** confirmation required **{COPY PATCH}**

Press **{BACK}** to return to the LCD Set Patch Menu.

## **Moving Patch Information**

Press **{SET}** from the LCD Patch Menu to display the LCD Set Patch Menu. Press **{COPY SWAP}** to display the Copy Patch Menu.

### ***Moving Attributes***

Enter the output number, or range of outputs, of the attribute to be copied, followed by the **{MOVE PATCH}** softkey and the output number where the attribute(s) has to be moved to, then **[\*]**.

A confirmation is requested after each command. Press **[\*]** again.

**[1] {MOVE PATCH} [1] [0] [@PATCH] [2] [\*]**

Moves attribute on output 1 to output 10 on Patch 2

**[1] [THRU] [10] {MOVE PATCH} [1] [1] [\*]**

Moves attributes on outputs 1 to 10 to outputs 11 to 20.

Press **{BACK}** to return to the LCD Set Patch Menu.

### ***Moving Fixtures***

Enter the first output number of the attribute to be copied, followed by the **{MOVE PATCH}** softkey and the first output number where the fixture has to be copied, then **[\*]**.

**[2] [2] {MOVE PATCH} {4} [4] [\*]**

Moves the fixture starting on output 22 to start on output 44.

**[2] [2] [THRU] [5] [2] {MOVE PATCH} [5] [4] [\*]**

Moves the fixtures patched to outputs 22 to 52 to start on output 54.

Press **{BACK}** to return to the LCD Set Patch Menu.

## **Swapping Patch Information**

Press **{SET}** from the LCD Patch Menu to display the LCD Set Patch Menu. Press **{COPY SWAP}** to display the Copy Patch Menu.

### ***Swapping Attributes***

Enter the output number, or range of outputs, of the attribute(s) to be swapped, followed by the **{SWAP PATCH}** softkey and first output number of the attribute to be swapped with, then **[\*]**. A confirmation is requested after each command. Press **[\*]** again.

**[1] {SWAP PATCH} [1] [0] [\*]**

Swaps attributes on output 1 and 10

**[1] [THRU] [8] {SWAP PATCH} [1] [7] [\*]**

Swaps attributes on outputs 1 to 8 with attributes on the eight outputs starting on output 17.

Press **{BACK}** to return to the LCD Patch menu.

### ***Swapping Fixtures***

The position of individual fixture, or a range of fixture can be swapped by entering the outputs used by the fixture to be swapped and the first output used by the fixture that it has to be swapped with.

**Note:** *The fixture, or range of fixtures, using the most number of outputs must be entered first.*

Enter the output number, or range of outputs, of the fixtures(s) to be swapped, followed by the **{SWAP PATCH}** softkey and first output number of the fixture, or range of fixtures, to be swapped with, then **[\*]**.

A confirmation is requested after each command. Press **[\*]** again.

**[2] [5] [THRU] [3] [0] {SWAP PATCH} [9] [\*]**

Swaps a fixture patched to outputs 25 through 30 with the same fixture patched to outputs 9 through 12.

***Note:** The required number of outputs must be available in the 'swap to' position, otherwise, the swap cannot take place and an invalid range error message displayed. If say, an eight output fixture is being swapped with a six output fixture, all eight outputs will be swapped, including any attributes on the other two outputs.*

## Range Patching

Multiple patching of channels and fixtures is achieved as follows:

**[1] [THRU] [5] [@] [1] [0] [THRU] [1] [4]**

Patches channels 10 - 14 to outputs 1 - 5

**[1] [THRU] [5] [@] [1] [4] [THRU] [1] [0]**

Patches channels 14 - 10 to outputs 1 - 5

**[1] [THRU] [2] [0] [@] [4] [THRU] [8] {@FIXTURE} [1]**

Patches outputs 1 to 20 to channels 1 to 8 and patches fixture 1 to each patch.

**[1] [THRU] [2] [0] [@] [8] [THRU] [4] {A FIXTURE} [1]**

Patches outputs 1 to 20 to channels 8 to 1 and patches fixture 1 to each patch

## Deleting Attribute Channels

The configured maximum number of attribute and intensity channels is displayed in the Patch Status window. This window also shows the number of channels in use and the number free. If the quota of attributes has been used up and more are required, one of two things can be done:

From the Patch Display, delete unused attribute channels using the CHAN DELETE syntax. e.g.

**{CHAN} [1] [.] [2] [THRU] [1] [.] [9] [9] {DELETE CHAN} {DELETE CHAN} {BACK}**

or:

From the Patch Display, delete unused intensity channels using the CHAN DELETE syntax. e.g. **{CHAN} [1] [0] [0] [THRU] [1] [9] [9] {DELETE CHAN} {DELETE CHAN} {BACK}**

**Note:** Deleted intensity channels may be used as attribute channels, but deleted attribute channels cannot be used as intensity channels.

---

## Recording and Playback

The recording and playback of attribute channels is exactly the same as for intensity channels. Refer to [Basic Recording](#) and [Recording Cues](#)

Because attribute channels are treated differently, there are a few things to be aware of when working with attributes. These are explained in the following topics

- [Attributes in Cues](#)
  - [Attributes in Submasters](#)
  - [Attributes LTP - Intensities HTP](#)
  - [Auto Move While Dark](#)
- 

### Attributes In Cues

Cues have separate fade times for intensities and attributes. Attributes can be recorded and edited in Cues in exactly the same way as intensities.

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### Attributes In Submasters

Submasters have separate fade times for intensities and attributes. If the submaster contains both intensities and attributes then the fader will continuously master the intensities, but the attributes will fade in the attribute fade time starting at the point when the fader handle is moved off the zero position.

If a submaster consists only of attributes then the submaster fader will continuously master the attributes.

---

### Attributes LTP - Intensities HTP

Attributes work on a LTP (Latest Takes Precedence) basis. This is different to intensities which work on a HTP (Highest Takes Precedence) basis. The following example will help clarify this:

At the **[PATCH]** display, create a colour attribute for channel 1 by patching to output 2:-  
**[2] [@] [1].] [2] [\*]**

On the **[LIVE]** display, follow this sequence:-

**[1] [@] [6] [@ATT] [7] [\*]**

Channel 1 intensity 60%, colour frame 7.

**[SUB] [1] [RECORD]**

Record submaster 1.

**[1] [@] [4] [@ATT] [2] [\*]**

Channel 1 intensity 40%, colour frame 2.

**[CUE] [1] [RECORD]**

Record cue 1.

This has recorded Submaster 1 and Cue 1 each with different intensity and attribute values for channel 1.

Next, move Submaster 1 to zero then to full. Notice how only the intensity level is being mastered, the attribute value having snapped to frame 7 when the submaster was moved off zero (the default attribute fade time being zero).

Now run Cue 1. Notice that the attribute value has faded to the new position of 2, but the intensity value has not changed. This is because the intensity level HTP' d, and so did not change because the submaster intensity was higher than the cue, but the attribute level LTP' d.

## Auto Move When Dark

Auto Move When Dark (AMWD) is a time saving feature that automatically moves attributes (colour, pan, tilt, etc.) to the next required position when the light is dark.

AMWD may eliminate or reduce the need to record and maintain Mark cues (cues ,that move attributes with the light dark).

AMWD is enabled in the Show Setup Screen screen option by setting [Auto Move While Dark](#) to ON and entering the required Fade and Delay times.

The Fade time is the time for all attributes to fade in all AMWD fades.

The Delay time is the time after all parts of a normal cue fade have complete before an AMWD fade starts.

**Note:** AMWD Fade and Delay times are set per show not per fade. AMWD fades are not recorded and do not appear in the cue sheet. However they can be seen as running fades (grayed out) on some output formats. If an attribute has not completed moving when the next cue starts the attribute will fade to the next recorded position in the cue attribute fade time (often zero).



For an attribute to Auto Move the following must be true:-

- AMWD must be enabled.
- The intensity of the channel on stage must be zero
- The intensity of the channel in the next cue must be non zero.
- The attribute value in the next cue must differ from the current value on stage.

AMWD can be overridden on a cue by cue basis by setting non-zero intensity values, 1% is sufficient to disable AMWD. Any Manual recorded Mark cues (cues that move attributes with the intensity off) will still be executed as normal.

## Referenced Groups (Preset Focus)

**Note:** *Preset Groups is only available with Tracker on Pentium based consoles. 486 based consoles do not support this feature.*

Preset allows individual channels or attributes in Cues, Effects and Submasters to be recorded as links to the same intensity or attribute in one of 750 groups (Groups 1..750). On playback the values of the intensities and/or attributes are obtained from the Group they are linked to, instead of being obtained for the Cue, Submaster or Effect they are recorded in. This lookup is done each and every time the Cue, Submaster or Effect is replayed. Thus if the value of an intensity or attribute in a Group is changed, every Cue, Effect or Submaster that uses this Group will play back the linked channel with the new value.

When used to record focus positions (pan and tilt) this facility is referred to as **Preset Focus**.

The following example shows how to set up Preset (or Referenced) groups; in this instance, Preset Focus.

1. Press **<SETUP>** and set Smart Channel Display to TRACKER PRESET
2. Press **<PATCH>** and patch a fixture as follows:  
**[1] {@FIXTURE} [5] [\*]** (All Modes)
3. Press **<LIVE>** and press **[1] [\*]** to show the Smart Channel display
4. Use the trackball, or mouse to set the Pan and Tilt attribute to 50%, or enter  
**[1] [.] [3] [@] [5]** (Direct 1 Digit Mode) or **[1] [.] [3] [@] [5] [0]** (Direct 2 Digit Mode) or **[1] [.] [3] [@] [5] [\*]** (Command Line Mode) and  
**[1] [.] [4] [@] [5]** (Direct 1 Digit Mode) or **[1] [.] [4] [@] [5] [0]** (Direct 2 Digit Mode) or **[1] [.] [4] [@] [5] [\*]** (Command Line Mode)
5. Press **[GROUP] [1] {ATTS ONLY} [RECORD]** (Direct Entry Modes) or **[RECORD] [GROUP] [1] {ATTS ONLY} [\*]** (Command Line Mode)

6. Press **[GROUP] [1] [TEXT] Focus 1 [\*]** (All Modes), entering the group text label from the external keyboard.
7. Press **[1] [@] [GROUP] [1] [\*]** (All Modes). All attributes of channel 1 are displayed with the group text name 'Focus'.

**Note:** Any cues, submasters and effects that are recorded when the group name is displayed on the live screen, are linked to that group. Any changes made to the group levels are reflected in the cue, submaster or effect.

8. Press **[CUE] [1] [RECORD]** (Direct Entry Modes) or **[RECORD] [CUE] [1] [\*]** (Command Line Mode)
9. Press **<CUE/PREVIEW>** to display the Cue Sheet. Note that the level of all attributes are shown as 'Focus'
10. Press **<GROUP>** to display the Group Screen. The levels are shown at their set values. Change the level of Pan and Tilt 80% by entering the following commands:  
**[1] [.] [3] [@] [8]** (Direct 1 Digit Mode) or **[1] [.] [3] [@] [8] [0]** (Direct 2 Digit Mode) or **[1] [.] [3] [@] [8] [\*]** (Command Line Mode) and  
**[1] [.] [4] [@] [8]** (Direct 1 Digit Mode) or **[1] [.] [4] [@] [8] [0]** (Direct 2 Digit Mode) or **[1] [.] [4] [@] [8] [\*]** (Command Line Mode).
11. Press **<LIVE>** to show the Live Screen.
12. Press **[CUE] [1] [LOAD] [GO]** (All Modes). You will see the Pan and Tilt Attributes fading up to 80%, then showing 'Focus'. The word 'Focus' for pan and tilt are displayed in blue, rather than cyan, to indicate that the levels have been changed.

## Colour Palettes

Colour Palettes are another application of the Preset mechanism used by Preset Focus. Instead of recording Pan and Tilt positions use any of the first 750 groups to record colours, either gel number or CMY position for mixing units or a combination of both. Give the groups meaningful text names such as BLUE, GREEN, L802, F324. When plotting, assign colours using the **[1] [@] [GROUP] [TEXT]blue [\*]** syntax. The Preset display format can be used to see the colour names (group text) on live and preview screens. You need an external keyboard connected to do this.

## Attribute Filters

The decimal notation used to identify the many attributes associated with fixtures with multiple attributes is shown in the ATC page. This page also provides the facility to set up a series of six filter softkeys (F1 to F6). The softkey functions, displayed on the LCD display when the **[@ ATT]** key is pressed, is dependent on the F1 to F6 titles, shown in square brackets in the ATC Page. You can edit the ATC page to change the softkey titles or the attributes associated with the softkey functions.

To edit the ATC Page softkey functions and attribute channels, press **<MORE> {NOTES DISP} {LOAD FILES} [ATC PAGE]**. You can edit the ATC functions and attribute channels using the notes editor.

By default, the attribute filter softkeys are set to Position (F1), Colour (F2), Beam (F3), Focus (F4), Shutter (F5) and User (F6)

Selecting one, or more, of the softkeys selects the levels recorded in the referenced group associated with all of the function attributes relevant to the particular fixture.

Attribute filters is similar to Preset Focus, except that when a fixture within a referenced group is set to the group level, you can use the **[@ATT]** key and use one or more softkey to select only the particular functions that you wish to set to the recorded reference group value, e.g.

**[2] [5] [@ATT] {POSITION} {COLOUR} [1]**

Sets only the position and colour attributes of the fixture on channel 25 to the levels recorded in the referenced group (Group 1)

## Updating Attribute Filters from the Live Screen

When in the Group Screen and with one of the referenced groups highlighted, you can update the referenced group from the Live Screen using the syntax chans **[@ATT] Attribute Filter Softkey [LIVE]**

**[5] [0] [@ATT] {POSITION} [LIVE] *Direct Action Modes***

**[5] [0] [@ATT] {POSITION} [LIVE] [\*] *Command Line Mode***

The positional attributes of the current referenced group is updated to the current live (on stage) position of the fixture on channel 50

## Fixture Library List

The fixture library defines the fixture codes used by the **{@FIXTURE}** command on the **[PATCH]** screen. The fixture library is updated from time to time by Strand. If you have a new fixture you wish to add, please contact your nearest Strand Lighting office. The Fixture will be added to the standard fixture list. Alternatively, you can edit the Fixture Library file which is read when the console is started or the fixture library changed.

Fixtures can be modified, or new ones added, by modifying the file **FIXTURE.LIB** (Fixture Library) with the console notes editor.

**Warning:** *Installing new Operating Software or entering a new password will overwrite the changes you have made to the **FIXTURE** file. The old file will be saved as **FIXTURE.OLD**. Any modifications you have been made should be edited into to the new file, otherwise you can rename the **.OLD** file to **.LIB** thereby using your old file in full. See also [Site Configuration Files](#)*

The fixture library file is composed of several sections, one for each fixture type. Each section starts with a unique fixture number hFixture followed by the fixture name. Each successive line in the section describes one DMX address for the fixture. Each DMX line starts with the attribute number hAtt which describes what this DMX byte controls, see ATCPAGE.LIB for list. The remainder of each DMX line provides parameters which describe how this attribute is used by the fixture, for example whether it is a continuous or stepped control, and which profile, if any, to apply to the attribute.

[hFixture] [FixtureName]

hAtt, Steps, Ndim, Max, Min, hProfile... etc.

hAtt, Steps, Ndim, Max, Min, hProfile

**hFixture** Fixture Number (1 .. 99)

**FixtureName** Fixture Name for each DMX address used:

**hAtt** Attribute number (1 .. 99)

**Steps** Number of Steps/Frames (0 =continuous)

**Ndim** Non-dim threshold (0 .. 255)

**Scale** Maximum DMX output value (0 ..255) (Scaling factor 255 = 100%)

**Min** Minimum DMX output value (0 .. 255) (if Max < Min, attribute is inverted.)

**hProfile** Profile/Law number

Lines starting with # are comment lines and are not processed. The Fixture Library file is read when the console is started or the fixture library changed. The file is updated when a show is loaded that has different fixture assignments.

For further information, refer to [Tracker Library Files](#)

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# Product Specifications

## General

- [300 Series 24/48 Manual Memory Console](#)
- [300 Series 48/96 Manual/Memory Console](#)
- [300 Series Memory 125 Console](#)
- [300 Series Memory 250 Console](#)
- [300 Series Memory 400 Console](#)
- [300 Series Memory 600 Console](#)
- [300 Series 120 Submaster Console](#)
- [520 Console](#)
- [530i Console](#)
- [550i Console](#)

## 300 Series Consoles

### Model 24/48 Manual/Memory

- Intensity Channels = 50
- Attribute Channels = 50
- Submasters = 24
- VGA Monitors as Standard = 1\*
- DMX Outputs = 1024/1536\*\*\*
- No.of Subs/Super/G'Masters = 24
- Sub Pages = 4
- Cues = 600
- Cue P/Backs = 2
- Max Simult. Fades = 100
- Macros = 3000
- Groups = 500
- Preset Focus Groups = 500
- Effects = 300
- Effect Steps/Effect = 99
- Max Effect Steps = 1500
- Effect Playbacks = 12
- Profiles = 99
- SMPTE Events = 2000
- Patches = 1
- Atts/Channel = 99
- Fixture Library = 99

- Handheld Remotes = 2
- No. of Show File Backups = 1
- Remote Video = 9

## **Model 48/96 Manual/Memory**

- Intensity Channels = 100
- Attribute Channels = 100
- VGA Monitors as Standard = 1\*
- DMX Outputs = 1024/1536\*\*\*
- No.of Subs/Super/G'Masters = 24
- Sub Pages = 4
- Cues = 600
- Cue P/Backs = 2
- Max Simult. Fades = 100
- Macros = 3000
- Groups = 500
- Preset Focus Groups = 500
- Effects = 300
- Effect Steps/Effect = 99
- Max Effect Steps = 1500
- Effect Playbacks = 12
- Profiles = 99
- SMPTE Events = 2000
- Patches = 1
- Atts/Channel = 99
- Fixture Library = 99
- Handheld Remotes = 2
- Remote Video = 9
- No. of Show File Backups = 1

## **Memory 125**

- Intensity Channels = 125
- Attribute Channels = 125
- VGA Monitors as Standard = 1\*
- DMX Outputs = 1024/1536\*\*\*
- No.of Subs/Super/G'Masters = 24
- Sub Pages = 4
- Cues = 600

- Cue P/Backs = 2
- Max Simult. Fades = 100
- Macros = 3000
- Groups = 500
- Preset Focus Groups = 500
- Effects = 300
- Effect Steps/Effect = 99
- Max Effect Steps = 1500
- Effect Playbacks = 12
- Profiles = 99
- SMPTE Events = 2000
- Patches = 1
- Atts/Channel = 99
- Fixture Library = 99
- Handheld Remotes = 2
- Remote Video = 9
- No. of Show File Backups = 1

## Memory 250

- Intensity Channels = 250
- Attribute Channels = 250
- VGA Monitors as Standard = 1\*
- DMX Outputs = 1024/1536\*\*\*
- No. of Subs/Super/G'Masters = 24
- Sub Pages = 4
- Cues = 600
- Cue P/Backs = 2
- Max Simult. Fades = 100
- Macros = 3000
- Groups = 500
- Preset Focus Groups = 500
- Effects = 300
- Effect Steps/Effect = 99
- Max Effect Steps = 1500
- Effect Playbacks = 12
- Profiles = 99
- SMPTE Events = 2000
- Patches = 1
- Atts/Channel = 99
- Fixture Library = 99

- Handheld Remotes = 2
- Remote Video = 9
- No. of Show File Backups = 1

## Memory 400

- Intensity Channels = 400
- Attribute Channels = 400
- VGA Monitors as Standard = 2\*
- DMX Outputs = 1024/1536\*\*\*
- No.of Subs/Super/G'Masters = 24
- Sub Pages = 4
- Cues = 600
- Cue P/Backs = 2
- Max Simult. Fades = 100
- Macros = 3000
- Groups = 500
- Preset Focus Groups = 500
- Effects = 300
- Effect Steps/Effect = 99
- Max Effect Steps = 1500
- Effect Playbacks = 12
- Profiles = 99
- SMPTE Events = 2000
- Patches = 1
- Atts/Channel = 99
- Fixture Library = 99
- Handheld Remotes = 2
- Remote Video = 9
- No. of Show File Backups = 1

## Memory 600

- Intensity Channels = 600
- Attribute Channels = 400
- VGA Monitors as Standard = 2\*
- DMX Outputs = 1024/1536\*\*\*
- No.of Subs/Super/G'Masters = 24
- Sub Pages = 4



- Cues = 600
- Cue P/Backs = 2
- Max Simult. Fades = 100
- Macros = 3000
- Groups = 500
- Preset Focus Groups = 500
- Effects = 300
- Effect Steps/Effect = 99
- Max Effect Steps = 1500
- Effect Playbacks = 12
- Profiles = 99
- SMPTE Events = 2000
- Patches = 1
- Atts/Channel = 99
- Fixture Library = 99
- Handheld Remotes = 2
- Remote Video = 9
- No. of Show File Backups = 1

## **120 Submaster**

- Intensity Channels = 600
- Attribute Channels = 400
- VGA Monitors as Standard = 2\*
- DMX Outputs = 1024/1536\*\*\*
- No.of Subs/Super/G'Masters = 120
- Sub Pages = 4
- Cues = 600
- Cue P/Backs = 2
- Max Simult. Fades = 100
- Macros = 3000
- Groups = 500
- Preset Focus Groups = 500
- Effects = 300
- Effect Steps/Effect = 99
- Max Effect Steps = 1500
- Effect Playbacks = 12
- Profiles = 50
- SMPTE Events = 2000
- Patches = 1
- Atts/Channel = 99

- Fixture Library = 99
- Handheld Remotes = 2
- Remote Video = 9
- No. of Show File Backups = 1

## **500 Series Consoles**

### **520 Console**

- Intensity Channels = 200
- Attribute Channels = 200
- VGA Monitors as Standard = 2\*
- DMX Outputs = 1024/1536\*\*\*
- No. of Subs/Super/G'Masters = 24
- Sub Pages = 6
- Cues = 2000
- Cue P/Backs = 2
- Max Simult. Fades = 200
- Macros = 3000
- Groups = 1000
- Preset Focus Groups = 750
- Effects = 600
- Effect Steps/Effect = 99
- Max Effect Steps = 14850
- Effect Playbacks = 30
- Profiles = 99
- SMPTE Events = 3000
- Patches = 2
- Atts/Channel = 99
- Fixture Library = 99
- Handheld Remotes = 4
- Remote Video = 9
- No. of Show File Backups = 10

### **520i Series Console**

- Intensity Channels = 250 or 350

- Attribute Channels = 250
- VGA Monitors as Standard = 2\*
- DMX Outputs = 1024/1536\*\*\*
- No.of Subs/Super/G'Masters = 24
- Sub Pages = 6
- Cues = 2000
- Cue P/Backs = 2
- Max Simult. Fades = 200
- Macros = 3000
- Groups = 1000
- Preset Focus Groups = 750
- Effects = 600
- Effect Steps/Effect = 99
- Max Effect Steps = 14850
- Effect Playbacks = 30
- Profiles = 99
- SMPTE Events = 3000
- Patches = 2
- Atts/Channel = 99
- Fixture Library = 99
- Handheld Remotes = 4
- Remote Video = 9
- No. of Show File Backups = 10

## **530i Console**

- Intensity Channels = 350 or 800
- Attribute Channels = 250 or 500
- VGA Monitors as Standard = 2\*
- DMX Outputs = 1024/1536\*\*\*
- No.of Subs/Super/G'Masters = 24/6/2
- Sub Pages = 6
- Cues = 2000
- Cue P/Backs = 2
- Max Simult. Fades = 200
- Macros = 3000
- Groups = 1000
- Preset Focus Groups = 750
- Effects = 600
- Effect Steps/Effect = 99
- Max Effect Steps = 14850
- Effect Playbacks = 30

- Profiles = 99
- SMPTE Events = 3000
- Patches = 2
- Atts/Channel = 99
- Fixture Library = 99
- Handheld Remotes = 4
- Remote Video = 9
- No. of Show File Backups = 10

## 550i Consoles

- Intensity Channels = 800 or 2000 or 6000
- Attribute Channels = 400 or 500 or 2000
- VGA Monitors as Standard = 2\*
- DMX Outputs = 1024/1536\*\*\*
- No. of Subs/Super/G'Masters = 48/ 6/ 2
- Sub Pages = 6
- Cues = 2000
- Cue P/Backs = 2
- Max Simult. Fades = 200
- Macros = 3000
- Groups = 1000
- Preset Focus Groups = 750
- Effects = 600
- Effect Steps/Effect = 99
- Max Effect Steps = 14850
- Effect Playbacks = 30
- Profiles = 99
- SMPTE Events = 3000
- Patches = 2
- Atts/Channel = 99
- Fixture Library = 99
- Handheld Remotes = 4
- Remote Video = 9
- No. of Show File Backups = 10

## Notes:

\*All consoles have the ability to use two VGA monitors as standard. All consoles can use either 3 or 4 VGA monitors, with an optional additional dual VGA card.

\*\*Additional channels can be purchased in lots of 50 or 200 intensity channels, up to the maximum of 600 (300 Series) and 6000 (500 Series).

\*\*\* The maximum number of DMX outputs using Networker software and the maximum number of network slots

## Number of Attribute Channels Available

The number of attribute channels available on your console is dependent on the number of intensity channels purchased.

Consoles with a 486 processor are limited to 350 Intensity channels (250 Attribute channels). The maximum number of channels supported currently is 6000 intensity channels hence 2000 attribute channels.

Intensity Channels	Attribute Channels
2000 or more	2000
1900	1500
1800	1250
1700	1000
1600	750
800	500
600	400
400	400
250	250
200	200
150	150
125	125
100	100
50	50

**Note:** Intensity channels can be used as attribute channels, but not vice-versa.

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# Basic Recording

Cues, groups, effects, and submasters are the four item types in which you can store intensity and attribute levels. In addition, each item type has properties that you can set. This section discusses recording channel levels and text for cues, groups, effects, and submasters, and recording up and down fade times for cues, effects and submasters.

This chapter contains the following topics:

- [Recording Levels and Properties](#)
  - [Changing Properties Without Recording Levels](#)
  - [Editing in a Preview \(Blind\) Display](#)
  - [Copying from a Preview \(Blind\) Display](#)
- 

## Recording Levels and Properties

You can record levels and properties into cues, groups, effects, and submasters from the Live, Cue/Preview, Group, Effect, or Submaster displays. Levels are always taken from the current display and recorded into the item type specified by one of the selection keys (**[SUB]**, **[CUE]**, **[GROUP]**, or **[FX]**). In this section, type is used to mean one of the selection keys.

The general format for recording levels and properties is:  
**type # properties {RECORD}**

Properties that are not listed in the command are recorded at default values for new items, and remain unchanged when you are re-recording. If the specified item has already been recorded, an overrecord message gives you the chance to cancel the recording. Press again to rerecord, or **[CLR]** or **[UNDO]** to cancel the command.

If you do not enter an item type, cue is assumed. The **[CUE]** key in all of the examples below is optional.

Recording clears the current selection from the Channel Control

The following records the intensity and attribute levels on the current display into the specified cue, group, effect step, or submaster. For submasters, levels are recorded into the current page.

**[SUB] [1] [RECORD]** Direct 1 Digit and Direct 2 Digit

**[RECORD] [SUB] [1] [\*]** Command Line

Records current display levels into submaster 1.

**[CUE] [3] [4] [RECORD]** Direct 1 Digit and Direct 2 Digit

**[RECORD] [3] [4] [\*]** Command Line

Records current display levels into cue 34.

**[FX] [1] [.] [2] [RECORD]** Direct 1 Digit and Direct 2 Digit

**[RECORD] [FX] [1] [.] [2] [\*]** Command Line

Records current display levels into effect 1 step 2.

## Recording Only Intensities or Attributes

You can record only the intensities or only the attributes to a cue, group, or submaster by adding **{INTS ONLY}** or **{ATTS ONLY}** to the command line.

When you record with **{INTS ONLY}** all attribute information is erased. When you record with **{ATTS ONLY}** all intensity information is erased and (for Lightpalette only) channels are set to Cue Tracking.

**[GROUP] {INTS ONLY} [RECORD]** Direct 1 Digit and Direct 2 Digit

**[RECORD] [GROUP] {INTS ONLY} [\*]** Command Line

Records the current group with intensity levels and erases attribute levels.

**[SUB] [1] {ATTS ONLY} [RECORD]** Direct 1 Digit and Direct 2 Digit

**[RECORD] [SUB] [1] {ATTS ONLY}[\*]** Command Line

Records the sub 1 with attribute levels and erases intensity levels.

**[CUE] [1] {INTS ONLY} [RECORD]** Direct 1 Digit and Direct 2 Digit

**[RECORD] [CUE] [1] {INTS ONLY}[\*]** Command Line

**[GROUP] [1] {ATTS ONLY} [RECORD]** Direct 1 Digit and Direct 2 Digit

**[RECORD] [GROUP] [1] {ATTS ONLY} [\*]** Command Line

Records group 1 with attribute levels and erases intensity levels.



**Note:** When recording cues on 300 Series and 520 consoles the **[REC MODE]** key is used to display the Cue Type options and the **{INTS ONLY}** and **{ATTS ONLY}** softkeys on the LCD display. To record cues with **{INTS ONLY}** or **{ATTS ONLY}** when using a 520 or 300 Series console, you must therefore include the **[REC MODE]** key in the command as follows:

**[CUE] [1] [REC MODE] {INTS ONLY} [RECORD]** *Direct 1 Digit and Direct 2 Digit (520 and 300 Consoles only)*

**[RECORD] [CUE] [1] [REC MODE] {INTS ONLY}[\*]** *Command Line (520 and 300 Consoles only)*

Records cue 1 with intensity levels and erases attribute levels.

## Recording Without Submasters and Effects

If you are in the Live display, you can use type # to record the console output levels minus any levels being provided by submasters and effects. This command does not work from any of the preview displays.

**[SUB] [1] [REC SUB]** *All Modes*

Records submaster 1 without submasters and effects.

**Note:** For 300 consoles, use **[SHIFT] [RECORD]** in place of **[REC SUB]**.

**[SHIFT] [RECORD]** is the same as **[REC SUB]** on 500 series consoles.

## Recording Specific Channels

You can specify the channels you want to record in a cue, group, effect step, or submaster. This is done by prefixing any of the commands above with the channel selection to record. The **[+]**, **[-]**, **[THRU]**, and **{THRU ON}** are used to select the channels to record.

**chan [SUB] [2]** records the currently selected channels into the submaster without changing any other recorded levels.

**[1] [SUB] [2] [RECORD]** *Direct 1 Digit and Direct 2 Digit*

**[1] [RECORD] [SUB] [2] [\*]** *Command Line*

Records channel 1 levels into submaster 2 without changing any other recorded levels.

**[1] [+] [3] [THRU] [5] [SUB] [2] [RECORD]** *Direct 1 Digit and Direct 2 Digit*

**[1] [+] [3] [THRU] [5] [REC SUB] [SUB] [2] [\*]** *Command Line*

Records channels 1, 3, 4, and 5 levels into submaster 2 without effects and submasters,

and without changing any other recorded levels.

---

## Recording Text Labels

You can use the Record command to record levels and properties to a new or existing cue. You can record more than one property at a time when recording cues, groups, effects, or submasters. The order of the properties in the command does not matter, but you can use each property only once per command.

The following records levels on the current display into a cue, group, or submaster and assigns a text string (caption) to it. For effects, the levels are recorded into the specified step, and the text is assigned to the effect as a whole. For submasters the text applies to all pages.

To delete an assigned text string, omit the text.

**[CUE] [1] [TEXT] [H] [E] [L] [L] [O] [RECORD] *Direct 1 Digit and Direct 2 Digit***  
**[RECORD] [CUE] [1] [TEXT] [H] [E] [L] [L] [O] [\*] *Command Line***

Records levels and the text string "HELLO" into cue 1.

**[SUB] [1] [TEXT] [RECORD] [RECORD] *Direct 1 Digit and Direct 2 Digit***  
**[RECORD] [SUB] [1] [TEXT] [\*] [\*] *Command Line***

Records levels into submaster 1 and deletes any assigned text string.

---

## Recording Fade Times

The following records levels on the current display into the specified cue, effect step, or submaster and assigns a fade time to the item. You cannot record fade times in groups.

For effects, the times you record are for the effect fade up and fade down times, not for step times. For submasters, fade times are recorded into the current page.

If you only enter one number for time, it is used for both the up and down fade times. To enter separate up and down fade times, use **[/]** to separate the two numbers. The first number becomes the up fade time and the second number becomes the down fade time. To delete an

assigned time, omit the time value.

You can enter fade values from one hundredth of a second to 59 minutes and 59 seconds , as shown in the table.

Range	Value
0.01 - 59.99	Hundredth of a second
0.1 - 59.9	Tenth of a second
1 - 59	Seconds
1:00 - 59:59	Minutes/Seconds

**Note:** When setting times associated with effect steps, e.g., step times, In/Dwell/Out times and attribute fade times the maximum time that can be entered is 5 minutes (e.g., enter 500)

For cues, you can also record a manual fade time using the **{OFF/MAN}** key. Cues recorded with a manual fade time are loaded to the X Playback when you press **[GO]**, but must be faded using the X Playback faders. Manual fade times apply to both the up and down fade times.

**[SUB] [1] [TIME] [4] [RECORD]** Direct 1 Digit and Direct 2 Digit  
**[RECORD] [SUB] [1] [TIME] [4] [\*]** Command Line

Records levels and up and down fade times of 4 seconds into submaster 1.

**[SUB] [1] [TIME] [1] [4] [2] [RECORD]** Direct 1 Digit and Direct 2 Digit

**[RECORD] [SUB] [1] [TIME] [1] [4] [2] [\*]** Command Line

Records levels and up and down fade time of 1 min 42 secs into submaster 1

**[CUE] [1] [TIME] [4] [/] [2] [RECORD]** Direct 1 Digit and Direct 2 Digit

**[RECORD] [CUE] [1] [TIME] [4] [/] [2] [\*]** Command Line

Records levels, an up fade time of 4 seconds, and a down fade time of 2 seconds into cue 1.

**[FX] [1] [.] [2] [TIME] [/] [2] [RECORD]** Direct 1 Digit and Direct 2 Digit

**[RECORD] [FX] [1] [.] [2] [TIME] [/] [2] [\*]** Command Line

Records levels into effect 1 step 2. Assigns a 2 second down fade time to effect 1. Sets the up fade time to the default if the effect is cleared or has never been recorded, or leaves it as it is, if over-

recorded.

**[CUE] [1] [TIME] [4] [/] [RECORD] Direct 1 Digit and Direct 2 Digit**  
**[RECORD] [CUE] [1] [TIME] [4] [/] [\*] Command Line**

Records levels and a 4 second up fade time into cue 1. Sets the down fade time to the default if the cue has never been recorded, or leaves it as is if overrecording.

**[CUE] [1] [TIME] {OFF/MAN}[RECORD] Direct 1 Digit and Direct 2 Digit**

**[RECORD] [CUE] [1] [TIME] {OFF/MAN}[\*] Command Line**

Records levels and a manual fade time into cue 1. The manual fade time applies to both the up and down fade times.

The following records levels on the current display into the specified cue, effect step, or submaster and assigns a fade time to the item. You cannot record fade times in groups.

**[SUB] [4] [@ATT] [TIME] [5] [RECORD] Direct 1 Digit and Direct 2 Digit**

**[RECORD] [SUB] [4] [@ATT] [TIME] [5] [\*] Command Line**

Records levels and a 5 second colour attribute fade time to submaster 4.

**[CUE] [1] [@ATT] [TIME] [4] [RECORD] Direct 1 Digit and Direct 2 Digit**

**[RECORD] [CUE] [1] [@ATT] [TIME] [4] [\*] Command Line**

Records levels and a 4 second colour attribute fade time into cue 1.

**[FX] [1] [.] [2] [@ATT] [TIME] [2] [RECORD] Direct 1 Digit and Direct 2 Digit**

**[RECORD] [FX] [1] [.] [2] [@ATT] [TIME] [2] [\*] Command Line**

Records levels into effect 1 step 2. Assigns a 2 second colour attribute fade time to effect 1.

## Undoing Record

The last record command can be undone. This restores the last recorded cue, group, effect, or submaster to its previous state.

**[UNDO] [RECORD], [UNDO] [REC SUB] and [UNDO] [REC TIME]**  
 all undo the last record command regardless of how it was recorded.

Note: The **[REC TIME]** key is not available on 300 series consoles

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## Changing Properties Without Recording Levels

You can change properties in any of the preview screens by holding down the **[SHIFT]** key and moving the rollball to change the fields from non-editable (yellow) to editable (green). You can then change individual field values by moving the highlight to the required field using the rollball and changing the field value using the level wheel, **[+]** or **[-]** keys, or by entering a numerical value (where applicable) from the keypad.

Alternatively, you can change item properties from the command line without changing any levels. The general command format for doing this is:

**type # properties \***

Properties that are not listed in the command remain unchanged. You do not get an overrecord warning with this command if the item exists. You can use these commands to change the properties of existing items, and to create new items without recording any intensities or attributes. Confirmation is required when cues are created.

You can use these commands to change properties for existing items in another preview (blind) display, but you cannot use this syntax to create an item in another preview (blind) display.

From anywhere,

**[CUE] [1] [2] [TIME] [4] [\*]** *All Modes*

**[CUE] [1] [2] [TIME] [[4] [REC TIME]** *All Modes*

will change the cue 12 up and down fade times if cue 12 exists, but will result in an error message if cue 12 does not exist.

If you do not enter an item type and number before the **[TIME]** key, cue is assumed. Entering **[TIME] # [\*]** will change the fade time to the entered value in the current cue.

Changing properties clears the current selection from the Channel Control.

**type # [TIME] # [\*]** changes the fade time of a submaster, cue, group, or effect without changing recorded levels.

### **[CUE] [1] [TIME] [\*] All Modes**

Sets cue 1 fade time to the manual fade up and down (**MAN/MAN**)

### **[CUE] [1] [TIME] [4] [\*] All Modes**

Changes cue 1 up and down fade times to 4 seconds without changing any levels.

### **[SUB] [1] [TIME] [4] [/] [2] [\*] All Modes**

Changes submaster 1 up fade time to 4 seconds and its down fade time to 2 seconds without changing any levels.

### **[FX] [1] [TIME] [/] [2] [\*] All Modes**

Changes the effect 1 down fade time to 2 seconds without recording new levels. Does not change the up fade time.

### **[CUE] [TIME] [4] [/] [\*] All Modes**

Changes the current cue up fade time to 4 seconds without recording new levels. Does not change the down fade.

---

## **Editing In a Preview (Blind) Display**

When you are in a blind display (the Submaster, Preview, Group, and Effect displays), changing a level or property automatically records it into the currently displayed item Preview, Group, or Effect

### **Changing Channel Levels**

You can use Channel Control commands (for example **[1] [@] [1]**, **[CUE] [1] [@] [5]**) to set and record channel levels. Some of the soft keys and the Level Wheel are not available in preview (blind) displays. Otherwise the syntax for recording is the same from all locations.

### **Changing Properties**

Properties for setup, cues, submasters, effects, and groups can be changed by editing property fields in the State screen of the appropriate display.

To select a field, use the Trackball to move the highlight to the field.

To reset a field in the Effect Screen press **{DEFLT}**.

---

## **Copying From a Preview (Blind) Display**

You can record submasters, cues, groups, and effect steps while you are in the Submaster, Preview, Group, or Effect displays. This takes the currently displayed levels and records them into another item. The destination item can be of any type.

Using recording commands while you are in a preview (blind) display copies the display levels to the target submaster, cue, group, or effect step. For example, if you are in the Submaster display and the current submaster is 1, then **[CUE] [2] [RECORD]** (Direct Entry Mode) or **[RECORD] [CUE] [2] [\*]** (Command Line) will copy the levels from submaster 1 into cue 2.

To learn how to copy a submaster to another submaster page, refer to 'Copying Levels from a Submaster' in [Submasters](#)

Recording clears the current selection from the Channel Control.

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## Submasters and Channel Faders

Submaster faders let you manually fade in a lighting state, called a submaster, which can have both intensity and attribute levels with an associated fade time.

**Note:** *Although the terms are often used interchangeably, a submaster is different from a submaster fader. A submaster fader is the physical device on which you play a submaster. Since there are 6 submaster pages for 500 Series consoles and 5 pages for 300 Series consoles, there are actually 6 and 5 submasters for each fader, respectively.*

The following topics are covered in this section:

- [Channel Faders](#)
- [Submaster Pages](#)
- [The Current Submaster](#)
- [Recording Submaster Levels](#)
- [Recording Submaster Properties](#)
- [Using Submaster Faders](#)
- [Gang Loading of Subs](#)
- [The Submaster Window](#)
- [Viewing and Editing Submasters](#)
- [One and Two-Scene Preset](#)

---

### Channel Faders

A channel fader is a fader that controls the level of one channel only and is used extensively in [One and Two-Scene Preset](#) mode. On 500 series consoles, all faders are submaster faders with all the features described in this section of the manual.. You can also use the submasters as channel faders as described in One and Two Scene Preset mode.

300 series consoles are designed on a modular basis. The basic 300 series building block comprises an external 'processor' unit, a command module and a 24-way fader module configured as submasters. Additional fader panels can be physically and electronically coupled to the basic unit to provide additional channel faders for use with one and two-scene preset.

**Note:** If you add or subtract fader panels from a 300 Series console, you must reconfigure the



numbering of the fader panels , as described in the [Introduction](#) section of this manual

All faders on 500 series consoles are configured as submaster faders, but can be used as channel faders (refer to [One and Two-Scene Preset](#))

---

## Submaster Pages

There are either five or six submaster pages (depending on the model), each with its own separate set of recorded submasters. The Live display and Submaster display keep track of the current submaster page separately, and the submaster faders take their data from the Live display. By changing to a different page when you go to the Submaster display, you can edit submasters without changing the data loaded on the faders.

**Note:** *The 120 Submaster version of the 300 Series console has only one page of submaster page.*

Changing the current Live display submaster page reloads the submaster faders with new levels and fade times, and changes the Submaster display submaster page to match.

**Note:** *Changing the current Live display submaster page does not change the submaster output until it is reloaded by moving the fader to 0 (or 10 for inhibitive submasters).*

When you record to or from a submaster while in the Submaster display you are recording to or from the current page of the Submaster display. When you record to or from a submaster while in any other display you are recording to or from the current page of the Live display. The current page number is shown at the top of the Submasters window on the State screen.

### **[SUB] [+]**

Changes the current page to the next page. For example, if at page 3, this will change to page 4. At the end page, this changes to the first page.

### **[SUB] [-]**

Changes the current page to the previous page. For example, if at page 3, this will change to page 2. At the first page, this changes to the end page.

### **[SUB PAGE] [2] - (500 series consoles only)**

Changes the current page directly to page 2.

---

## The Current Submaster

The last referenced submaster is known as the current submaster. It can be used in submaster selection.

All submaster recording commands act on a single submaster which is shown by # in the command description. If you do not enter a submaster number, the current submaster is used. You can also use **[NEXT]** and **[LAST]** to select a submaster relative to the current submaster.

**[SUB]** Specifies the current submaster.

**[SUB] [1]** Specifies submaster 1.

**[SUB] [NEXT]** If the current submaster is submaster 3, then this specifies submaster 4. If the current submaster is the highest submaster number, this specifies submaster 1.

**[SUB] [LAST]** If the current submaster is submaster 3, then this specifies submaster 2. If the current submaster is submaster 1, this specifies the highest submaster number.

---

## Recording Submaster Levels

**[SUB] # [RECORD]** (*Direct 1 Digit and Direct 2 Digit*)

**[RECORD] [SUB] # [\*]** (*Command Line*)

Records the levels on the current display (the Live, Cue/Preview, Group, Effect, or Submaster display) into the currently specified submaster page. For information on setting intensity and attribute levels, refer to [Working with Channel Levels](#), and [Basic Recording](#) for examples of recording.

You can record just the intensities or just the attributes to a submaster by adding **{INTS ONLY}** or **{ATTS ONLY}** to the command line .

Before recording a submaster, make sure that you are in the correct submaster page. Recording is always done to the current page.

Recording a submaster immediately reloads it, so if the submaster fader is up, the levels appear at the console output immediately.

---

## Recording Submaster Properties

The only properties that can be specified for submasters separately on each submaster page are the text, the up and down fade times, and the attribute fade time. All other properties are common to all submaster pages.

The following topics are covered in this section

- [Setting Submaster Properties](#)

- [Fade Times](#)
  - [Fader Properties](#)
  - [Submaster Functions](#)
  - [Assigning Effects and Macros](#)
  - [External Faders](#)
  - [Submaster Bump Mode](#)
  - [Text Labels](#)
  - [Updating and Adding to Submasters](#)
  - [Updating Submasters from the Live Screen](#)
  - [Quick Recording](#)
- 

## Setting Submaster Properties

Submaster properties can be set from the command line using the console keypad. Alternatively, the properties can be set by holding down the **[SHIFT]** key and moving the trackball, to change the edit fields from yellow (non-editable) to green (editable), then positioning the highlight over the field to be set and using the level wheel or **[+]** or **[-]** keys to change the value. Values for the Up/Down and ATT fields can be entered directly from the keyboard. Press **[\*]** to cancel edit mode.

---

## Fade Times

Each submaster has intensity up and down fade times and a single attribute fade time which is used for attribute changes. When you move the fader from 0 to 10, the levels fade in over a period given by the up fade time. Conversely, moving the fader from 10 to 0 will fade the levels out over a period given by the down fade time. If the up and/or fade time is set to 0 the fade up and/or fade down time is dependent on the speed of mechanical movement of the submaster fader.

If the fader is only partly moved, the fade period depends on the amount the fader is moved. For example, with a fade time of 8 seconds, moving the fader from 2 to 7 (half of its travel) will give a fade period of 4 seconds and then moving it to 9 (quarter of its travel) will give a fade period of 2 seconds.

You can enter fade values from one hundredth of a second to 59 minutes and 59 seconds , as shown in the table.

Key Entry	Shown as	Value
0.01	0.01	One hundredth of a second

0.1	0.1	One tenth of a second
1	1	1 second
10	10	10 seconds
59	59	59 seconds
100	1:00	1 minute
125	1:25	1 minute 25 seconds
5959	59:59	59 minutes, 59 seconds

These times are also used by the bump buttons.

The fade times can be different for each submaster page. Changing the page changes the submaster fader times.

**[SUB] # [TIME] # [RECORD] [\*]** (*Direct 1 Digit and Direct 2 Digit*)

**[RECORD] [SUB] # [TIME] # [\*]** (*Command Line Mode*)

records levels on the current display and a fade time into the specified submaster.

**[SUB] # [TIME] # [\*]** *All Modes*

changes the submaster fade time without changing recorded levels.

**[SUB] # [@ATT] [TIME] # [RECORD] [\*]** (*Direct 1 Digit and Direct 2 Digit*)

**[RECORD] [SUB] # [@ATT] [TIME] # [\*]** (*Command Line Mode*)

records levels on the current display and an attribute fade time into the specified submaster.

**[SUB] # [@ATT] [TIME] # [\*]** (*All Modes*)

changes the submaster attribute fade time without changing recorded levels.

For specific examples, please see [Recording Levels and Properties](#) in Basic Recording.

---

## Fader Properties

Submaster faders have the following properties that can be specified when recording, or edited later:

- Submaster Functions
- Assigning Effects and Macros
- External Faders
- Submaster Bump Mode

- Text

These properties are associated with the fader and not the submaster, so they are common across all submaster pages.

---

## Submaster Function

When a submaster number is set to a function, that function applies to the submaster on all submaster pages. The same submaster cannot have different functions on different submaster pages.

Each submaster fader can have one of several functions. The submaster function is initially set to Normal for all submasters. You can eliminate or move any supermaster, and change submaster functions for other submaster faders as needed.

Submaster functions are one of the following values:

- [Pileon Submaster \(Normal\)](#)
- [Independent Submaster \(Indep\)](#)
- [Exclusive Submaster \(Exclusive\)](#)
- [Inhibitive Submaster \(Inhibit\)](#)
- [Sound to Light Submaster \(S/Light\)](#) (500 Series Consoles only)
- [DMX Channel Submaster \(DMX Chan\)](#)
- [DMX Dimmer Submaster \(DMX DMNR\)](#)
- [Submaster Supermaster \(Sub Super\)](#)
- [Effects Supermaster \(FX Super\)](#)
- [Flash Supermaster \(Flash SPR\)](#)
- [Grandmasters \(GM1, GM2\)](#)
- [Audio Threshold Supermaster \(AUDO THR\)](#) (500 Series Consoles only)
- [Midi Ratio Supermaster \(MIDI RATI\)](#)

---

### **NORMAL** (Pileon submaster) - Default

Submaster intensities are combined with effects, playbacks, and other submasters on a highest takes precedence basis. Attributes are combined on a latest takes precedence basis. Selecting a channel with the Channel Control steals it from the submaster.

### **INDEP** (Independent submaster)

Submaster intensities are combined with effects, playbacks, and other submasters on a highest takes precedence basis. Attributes are combined on a latest takes precedence basis. Submaster channels

can not be stolen by the Channel Control, but the Channel Control can increase the channel intensity over the submaster level. Once you decrease the channel level to below the submaster level, the submaster level will take over again.

### **EXCLUSIVE** (Exclusive submaster)

Submaster intensities are as recorded in the submaster and modified by the submaster fader, the Submaster Supermaster, and the grand master. They are not changed when cues or effects run, when other submasters are changed, or when channel control is used on the same channels. If the same channel is used in two exclusive submasters, the last submaster to move off zero steals that channel.

### **INHIBIT** (Inhibitive submaster)

Acting like a grandmaster fader, the submaster fader masters all output channels that have any intensity recorded in the submaster. Channels with only attributes recorded in the submaster are ignored. Channels under control of an inhibitive submaster appear on the Levels screen with yellow text on a red background if they have a level, or as a red block with no text when they are at zero. You can use the Channel Control to bring channel levels up to the current level of the submaster. Multiple inhibitive submasters which control the same output channels are combined on a lowest takes precedence basis.

### **S/LIGHT** (Sound To Light Submaster) - 500 Series Consoles only

Submaster intensities are combined with effects, playbacks, and other submasters on a highest takes precedence basis. Attributes are combined on a latest takes precedence basis. The local submaster controls the maximum level of sound to light, and the external Audio Input controls the level of the submaster up to that maximum. Submaster channels can be stolen by the Channel Control. This facility is only available with the [CommuniquéPro Software](#). For more information see [CommuniquéPro Software](#). Only one submaster can be a Sound To Light Submaster.

### **DMX CHAN** (DMX Channel Submaster)

The DMX input signals become levels for channels 1-512 in the submaster, and are combined with effects, playbacks, and other submasters on a highest takes precedence basis. The local submaster controls the level of the DMX input. Recorded submaster levels are ignored. Submaster channels can be stolen by the Channel Control. This facility is only available with the [CommuniquéPro Software](#). For more information see [CommuniquéPro Software](#). Only one submaster can be a DMX Channel Submaster.

### **DMX DIMR** (DMX Dimmer Submaster)

The local submaster controls the level of the DMX input, and thus the levels of any dimmers patched to DMX inputs. Recorded submaster levels are ignored. Only one submaster can be a DMX Dimmer Submaster. This facility is only available with the [CommuniquéPro Software](#). For more information see [CommuniquéPro Software](#). Only one submaster can be a DMX Dimmer Submaster.

### **SUB SUPER** (Submaster Supermaster)

The submaster fader controls the level of all submasters. Channels are controlled by individual submasters, which are in turn controlled by the Submaster Supermaster. Only one submaster can be the Submaster Supermaster. If no submasters are assigned as the Submaster Supermaster, all

submasters can be controlled between 0 and 10.

### **FX SUPER** (Effect Supermaster)

The submaster fader controls the overall level of all effects. Channels are controlled by the effects, which are in turn mastered by the Effect Supermaster. Recorded submaster levels are ignored. Only one submaster can be the Effect Supermaster. If no submasters are assigned as the Effect Supermaster, all effects run at their recorded levels.

### **FLASH SPR** (Flash Supermaster)

The submaster fader controls the level for bumps and flashes. Only one submaster can be the Flash Supermaster. If no submaster is assigned as the Flash Supermaster, channels and submasters always flash to Full.

### **GM1, GM2** (Grandmaster 1 and 2)

530 and 550 consoles are supplied with two grandmaster faders, while, 520 consoles and consoles in the 300 series have no dedicated grandmaster faders. You can, however, select one submaster fader (GM1) to perform the function of a grandmaster fader (300 series consoles), or two submaster faders (500 series consoles) to perform the function of grandmaster fader GM1 and GM2.

### **AUDIO THR** (Audio Threshold Supermaster) - 500 Series Consoles only

The submaster fader controls the sensitivity of the Audio Input. The Audio Input can be used to control the stepping of an effect. Recorded submaster levels are ignored. This facility is only available with the CommuniquéPro Software. For more information see [CommuniquéPro Software](#). Only one submaster can be the Audio Threshold Supermaster.

### **MIDI RATI** (Midi Ratio Supermaster)

The submaster fader sets the number of MIDI sync pulses which the effect must count before it will move to the next step. Recorded submaster levels are ignored. This facility is only available with the CommuniquéPro software. For more information see [CommuniquéPro Software](#). Only one submaster can be the Midi Ratio Supermaster.

To set the submaster function in the Submaster display, press **<SUB>** to see the Submaster display and then change the Function field for the appropriate submaster.

**[SUB] # function [RECORD]** records levels on the current display into the specified submaster and changes the submaster function.

**[SUB] # function [\*]** changes the function of the specified submaster without changing recorded levels.

The key sequences represented by function are:

Pileon submaster **{SUB FUNC} {NORMAL}**

Independent submaster **{SUB FUNC} {INDEP}**

Exclusive submaster **{SUB FUNC} {EXCLUS}**

Inhibitive submaster **{SUB FUNC} {INHIB}**  
 Sound To Light Submaster **{SUB FUNC} {SUPER I/P} {SOUND LIGHT}**  
 DMX Channel Submaster **{SUB FUNC} {SUPER I/P} {DMX IN CHAN}**  
 DMX Dimmer Submaster **{SUB FUNC} {SUPER I/P} {DMX IN DIMMER}**  
 Submaster Supermaster **{SUB FUNC} {SUPER} {SUB SUPER}**  
 Effect Supermaster **{SUB FUNC} {SUPER} {FX SUPER}**  
 Flash Supermaster **{SUB FUNC} {SUPER} {FLASH SUPER}**  
 Audio Threshold Supermaster **{SUB FUNC} {SUPER I/P} {AUDIO THRESH}**  
 Midi Ratio Supermaster **{SUB FUNC} {SUPER I/P} {MIDI RATIO}**  
 Grandmaster 1 **{SUB FUNC} {GM 1}**  
 Grandmaster 2 **{SUB FUNC} {GM 2}** (500 Series consoles only)

---

## Assigning Effects and Macros

Both a macro and an effect can be associated with a submaster fader, so that when the fader is reloaded it automatically runs the macro and/or effect. The macro and effect are the same for all submaster pages. When an effect or macro is assigned to a submaster fader, the fader controls the levels of the channels running in the effect or macro, together with channels recorded in the submaster.

**[SUB] # [FX] # [RECORD]** (*Direct 1 Digit and Direct 2 Digit*)

**[RECORD] [SUB] # [FX] # [\*]** (*Command Line*)

Records levels on the current display into the specified submaster and assigns an effect to it. If the submaster has already been recorded, an overrecord message gives you the chance to cancel the recording. To rerecord the submaster, press **[RECORD]** again. To cancel the recording, press **[CLR]** or **[UNDO]**. When the submaster is moved up from zero the effect is automatically started. To delete an assigned effect, rerecord omitting the effect number.

**[SUB] [1] [FX] [2] [RECORD]** (*Direct 1 Digit and Direct 2 Digit*)

**[RECORD] [SUB] [1] [FX] [2] [\*]** (*Command Line*)

Records levels into submaster 1 and assigns effect 2 to it.

**[SUB] [1] [FX] [RECORD]** (*Direct 1 Digit and Direct 2 Digit*)

**[RECORD] [SUB] [1] [FX] [\*]** (*Command Line*)

Records levels into submaster 1 and deletes any assigned effect

**[SUB] # [FX] # [\*]** changes the effect assigned to the specified submaster without changing recorded levels. You do not get an overrecord warning with this command if the submaster exists.

**[SUB] [1] [FX] [\*]** (*All Modes*)

Deletes the effect assigned to submaster 1 without changing any levels.



**[SUB] [1] [FX] [2] [\*]** *(All Modes)*

Changes the effect assigned to submaster 1 to effect 2 without changing any levels.

**[SUB] # [MACRO] #** records levels on the current display into the specified submaster and assigns a macro to it. If the submaster has already been recorded, an overrecord message gives you the chance to cancel the recording. To rerecord the submaster, press **[RECORD] [\*]** again. To cancel the recording, press **[CLR]** or **[UNDO]**. When the submaster is moved up from zero the macro is automatically started. To delete an assigned macro, omit the macro number.

**[SUB] [1] [MACRO] [3] [RECORD]** *(Direct 1 Digit and Direct 2 Digit)***[RECORD] [SUB] [1] [MACRO] [3] [\*]** *(Command Line)*

Records levels into submaster 1 and assigns Macro 3 to it.

**[SUB] [1] [MACRO] [RECORD]** *(Direct 1 Digit and Direct 2 Digit)***[RECORD] [SUB] [1] [MACRO] [\*]** *(Command Line)*

Records levels into submaster 1 and deletes any assigned macro.

**[SUB] # [MACRO] # [\*]** changes the macro assigned to the specified submaster without changing recorded levels. You do not get an overrecord warning with this command if the submaster exists.

**[SUB] [1] [MACRO] [\*]** *(All Modes)*

Deletes the macro assigned to submaster 1 without changing any levels.

**[SUB] [1] [MACRO] [2] [\*]** *(All Modes)*

Changes the macro assigned to submaster 1 to macro 2 without changing any levels.

## External Faders

The numbered submaster fader normally controls the submaster or supermaster directly. However, each submaster can be set to use one of the 12 analog inputs from the REMOTE connector, in which case the fader level is combined with the analog input level on a highest takes precedence basis. Each analog input can only be used once.

## Submaster Bump Modes

You can record a bump mode for each individual submaster. To record a bump mode you must be in the Submaster display. To change the bump mode, press **[SUB]** to see the submaster display, and hold down the **[SHIFT]** key and move the trackball to change to edit mode. Select the Bump field for the appropriate submaster and use the **[+]** or **[-]** keys or the level wheel to change the bump mode. All submasters are initially set to Flash mode.

**Off** Pressing the bump button does nothing.

**Flash** (Flash) Pressing the bump button is same as moving the submaster fader to 10. The output is set to the level of the Flash Supermaster.

**Solo** (Solo) Pressing the bump button leaves the output of the submaster the same. All other (non-bumped) submasters, as well as effects, cues, and the Channel Control, are set to zero. The Flash Supermaster is ignored.

**F+S** (Flash plus Solo) Pressing the bump button is same as moving the submaster fader to 10. The output is set to the level of the Flash Supermaster. All other (non-bumped) submasters, as well as effects, cues, and the Channel Control, are set to zero.

**Mac** Disables the bump button's flash and solo operation and instead allows it to trigger the macro with the same number as the bump button (not the macro assigned to the bump button)

The submaster bump buttons are also controlled by the **{KEYS LATCH}** soft key accessed using the **[BUMP MODE]** key. This softkey appears in the centre LCD (consoles with 3 LCD displays) or right LCD (consoles with 2 LCD displays) as labels above the soft keys. The setting of the this softkey determines the operation of the submaster bump keys and the operation of the **{BUMP}** softkey on the channel control display. The other softkeys, **{FLASH}**, **{SOLO}** and **{FLASH + SOLO}**, control the action of the **{BUMP}** softkey on the channel control display and have no effect on the submaster bump keys. For information on setting the action of the channel control **{BUMP}** softkey, refer to [Bumping Channel Levels](#)

Press this key to view the current setting. A bar above the label shows the current mode. Press **[BUMP MODE]** again to return to normal operation.

For consoles without a **[BUMP MODE]** key, refer to [Console Differences](#)

The **{KEYS LATCH}** softkey can only be selected when the **{FLASH}** softkey is also selected. In **{SOLO}** or **{FLASH + SOLO}** modes, the **{KEYS LATCH}** is automatically disabled. The **{KEYS ON}** and **{KEYS OFF}** soft keys have effect on the Submaster bump keys. When **{KEYS LATCH}** is selected, pressing and releasing the submaster bump keys bumps the levels until the bump button is pressed again.

**{KEYS LATCH}** When selected, pressing and releasing a submaster bump key bump the levels until

the bump button is pressed again.

**{KEYS ON}** While the bump button is pressed, the channel levels are bumped. Releasing the bump button releases the bump.

**{KEYS OFF}** The bump buttons are disabled.

---

## Text Labels

You can record a text label (caption) with each submaster to help identify the submaster. The submaster text label is entered using the external keypad.

**[SUB] # [TEXT] text [RECORD]** records levels on the current display into the specified submaster and assigns a text label (caption) to it.

**[SUB] # [TEXT] text [\*]** changes the text label (caption) assigned to a submaster without changing recorded levels.

For examples, refer to [Recording Levels and Properties](#) in Basic Recording.

---

## Updating and Adding to Submasters

**[UPDATE] [SUB] # [\*]** changes levels in the specified submaster as necessary based on channels that have been modified live (red or purple channels on the Live display). This command excludes channels that are not already in the submaster, and channels that have been removed from the modified list by using **[SHIFT] [CLR]**.

**Note:** When using submasters the **[UPDATE]** key is set to default to update only channels already in the submaster. Pressing the **[UPDATE]** key as part of a submaster command syntax, e.g., **[UPDATE] [SUB] # [\*]** is the same as entering **[UPDATE] {CHANS IN} [SUB] # [\*]**. So when updating a submaster to include only changes in channels already in the submaster, there is no need to use the **{CHANS IN}** softkey. The **{CHANS IN}** softkey is used, as necessary, when updating cues.

Channels that are off in the selection will be removed from the submaster.

**[UPDATE] [SUB] [1] [\*]** (All Modes)

Updates levels that have been modified in submaster 1, excluding levels of

channels that were not already in the submaster.

**[SUB] [7] [\*] [UPDATE] [SUB] [1] [\*]** (*All Modes*)

First selects all of the channels in submaster 7, then updates their levels in submaster 1, excluding levels of channels that were not already in the submaster.

Including the **{ADD ALL}** softkey in the update command includes level changes in channels that are not already in the submaster.

**[UPDATE]{ADD ALL} [SUB] # [\*]** (*All Modes*)

Updates levels in the specified submaster for channels that have been modified. Includes modified channels that are not already in the submaster, and channels that have been removed from the modified list by using **[SHIFT] [CLR]**. Channels that are off in the selection will be removed from the submaster.

**[UPDATE]{ADD ALL} [SUB] [1] [\*]** (*All Modes*)

Updates all channels that have been modified in submaster 1, including channels that are not already in submaster 1.

**[SUB] [7] [\*] [UPDATE] {ADD ALL} [SUB] [1] [\*]** (*All Modes*)

First selects all of the channels in submaster 7, then records their levels in submaster 1, including channels that are not already in the submaster 7.

**chan [UPDATE] [SUB] # [\*]** updates levels of the specified channels in the specified submasters to match the current Levels screen for the selected channels, regardless of whether or not they have been modified. Excludes channels that are not already in the submaster, regardless of whether or not they have been modified. Channels that are off in the selection will be removed from the submaster.

**[1] [THRU] [5] [UPDATE] [SUB] [\*]** (*All Modes*)

Changes channel 1 through 5 levels in submaster 1, excluding channels that are not already in the submaster. If the submaster fader is not at 0 then the updated levels are adjusted to avoid output bumps. For example, if the submaster fader is at 50% and a channel level of 10% (from the output) is updated, the level recorded into the submaster is actually 20% so that the submaster output is 10%. The maximum level that can be recorded into the submaster is 100% so output bumps can still occur with a low fader and high levels.

**Note:** To clear the changed indicator and set red channel levels back to cyan, press **[SHIFT] [CLR]**.

## Updating Submasters from the Live Screen

When in the Submaster Screen, you can update the current submaster in accordance with levels in the Live Screen using the syntax **chans** **[@]** **[LIVE]**

**[1]** **[THRU]** **[5]** **[@]** **[LIVE]** *Direct Action Modes*

**[1]** **[THRU]** **[5]** **[@]** **[LIVE]** **[\*]** *Command Line Mode*

Updates channels 1 to 5 in the currently selected submaster in the Submaster Screen according to the levels in the Live Screen. If any of the channels are not already in the submaster, they are added to the submaster

Alternatively, you can update the value of only the channels already in the submaster screen in accordance with the levels in the Live Screen using the syntax **[SUB]** **[@]** **[LIVE]**

**[SUB]** **[1]** **[@]** **[LIVE]** *Direct Action Modes*

**[SUB]** **[1]** **[@]** **[LIVE]** **[\*]** *Command Line Mode*

Selects the channels in submaster 1 and updates them to the values in the Live Screen.

## Quick Recording

Pressing the bump button for a submaster (this is below the submaster fader) is a quick way of recording a submaster. This does not actually bump the submaster.

**[SUB]** **Sub 1 button** Records submaster 1. This is the same as **[SUB]** **[1]** **[RECORD]**

**chan**, **[SUB]** **Sub 1 button** Adds the specified channels to the submaster and sets their levels to match the current Levels screen.

**[1]** **[THRU]** **[5]** **Sub 1 button** *(All Modes)*

Adds channels 1 through 5 to submaster 1 and sets their levels to the levels on the current Levels screen. If the channels are already in the submaster the levels are changed to match the current Levels screen.

**chan** **[SUB]** **[-]** **Sub 1 button** Deletes the specified channels from the submaster (sets their levels off).

**[4]** **[+]** **[5]** **[SUB]** **[-]** **Sub button 1** *(All Modes)*

Deletes channels 4 and 5 from submaster 1 and returns the current Levels screen to it's levels without the submaster

---

## Using Submaster Faders

Each submaster is controlled by a submaster fader and the bump button below the fader. Refer to the [Product Specification](#) for number of submasters

Each submaster fader has two lights to show submaster status. A Submaster Supermaster controls the levels of all submasters. The submaster faders and bump buttons can be used from any display. They have no effect on the output if the submaster has no recorded levels (intensities or attributes). The Submasters window at the bottom of the Live display State screen shows the current state of the submasters.

***Note:** If you experience occasional flicker on the output from submaster channels, this is due to a hardware problem to do with submaster scanning. Contact Strand Service for console fix.*

---

## Gang Loading of Subs

A sequence of cues, effects or groups to be loaded simultaneously to a sequence of subs, e.g., Enter the range of cues, effects or groups using the **[THRU]** key, then press the bump key for the first sub in the range. The number of subs required is assigned automatically.

**[CUE] [1] [THRU] [1] [2] Sub Bump Button 1** (*All Modes*)

loads cues 1 through 12 in Subs 1 through 12

**[FX] [1] [THRU] [3] Sub Bump Button 13** (*All Modes*)

loads effects 1 through 3 in Subs 13 through 16

**[GROUP] [1] [THRU] [6] Sub Bump Button 19** (*All Modes*)

loads groups 1 through 6 in Subs 19 through 24

Re-assigning cues, subs or Groups to Subs already assigned will automatically overwrite the original assignment.

---

## The Submasters Window

The Submasters window in the Live display shows the current state of the submasters and is used to show submaster fader status. If the State screen does not show the Submasters window, go to the User Setup Screen and change the Live Screen Layout value to **PB+SUBS** or **SUBS**. Then press **[LIVE]** to show the Live display.

10:39:38 27/1/99 >> LIVE \*No Title GM=FL/FL

0001 02030405060708091011121314 151617181920212223240025

002627282930313233343536373839 404142434445464748490050

005152535455565758596061626364 656667686970717273740075

007677787980818283848586878889 909192939495969798990100

010102030405060708091011121314 151617181920212223240125

X Playback - This Cue Only

X Cue	P	Type	Up/Down	Delay	Wait	Link	Loop	Cmd
0		RF	0					
> 1		XF	5					

[Page 1] Submasters

Sub	% Text	Sub	%Text	Sub	% Text	Sub	% Text
1	Q1	7	G1	13	R 0	19	Net On
2	Q2	8	FX1	14		20	Main
3	Q3	9		15		21	denise
4		10		16		22	User
5		11		17		23	admin
6		12		18		24	Main
							Active
							NoBackup

LIVE:

Wheel

v2.2a

**Current Page** The current submaster page is shown on the title bar of the Submasters window

**Submaster Number** Each submaster is identified by its number (1 to 24, 1 to 30, 1 to 54, or 1 to 120 depending on the console). The colour of this number shows the state of the submaster:

**blue** The submaster has no recorded channels and so has no effect on the console output.

**white** The submaster has recorded channels but is not contributing to the output.

**yellow** The submaster has recorded channels and is contributing to the output.

**green background** The submaster fader is adding channels from a submaster on a different page than the current page. This happens if the fader is set higher than 0 when the current page is changed (or less than 10 for an inhibitive submaster). The green background disappears when the submaster reloads.

**Submaster Function** The submaster function is shown beside each submaster number. This reflects the Function field in the Submaster display.

- (blank)** Pileon mode.
- i** Independent mode.
- e** Exclusive mode.
- I** Inhibitive mode.
- S** Sound To Light mode.
- C** DMX Channel Supermaster.
- M** Submaster Supermaster.
- L** Flash Supermaster.
- G** Grandmaster
- F** Effect Supermaster.
- D** DMX Dimmer Supermaster.
- A** Audio Threshold Supermaster.
- R** MIDI Ratio Supermaster.

**Submaster Fader Level** The current fader level of each submaster is shown beside the submaster number after the mode. This ranges from 0 to 99 or FL for 100%, and shows the level as it fades, not just the fader position.

---

## Viewing and Editing Submasters

You can view and edit submasters and supermasters in the Submaster display.

**Note:** *Changing levels while in this display changes the recorded levels in the current submaster without a record command and without warning you.*

The following topics are covered in this section:

- [The Submaster Screen](#)
- [The State Screen](#)
- [Viewing Submaster Channel Levels](#)
- [Editing Submaster Channel Levels](#)
- [Clearing Submasters](#)
- [Copying Levels from a Submaster](#)



## The Submaster Screen

To show the Submaster screen press **[SUB]** in the Display keypad (not **[SUB]** in the Levels keypad). The Submaster display State screen shows a page of submasters and their associated fields. The current submaster number is highlighted with a red background. The current page is shown at the top of this window.

The screenshot displays the Submaster screen interface. At the top, the title bar shows the date and time (8:32:28 24/06/98), the display name (SUBMASTER 7), the show name (\*No Title), and the grandmaster status (GM=FL/FL). Below the title bar is a grid of submaster numbers from 0001 to 0100. The current submaster, 7, is highlighted with a red background. Below the grid is a table of submaster details for submaster 7, including Sub Text, Bump, Up/Down, Att, FX, Ext, Mac, Function, and Wheel. The Wheel window on the right shows the current submaster number (7) and the version (v2.2a). Below the table is a prompt: SUBMASTER 1: Select submaster, then edit an item or set channels.

Sub Text	[Page 1]	Bump	Up/Down	Att	FX	Ext	Mac	Function	Wheel
1		Solo	10/5	2	3	10	3	INDEP	
2		Mac	5/6	4	6	5	7	INHIBIT	
3		F+S	3/3	3	4	4	2	EXCLUSIVE	
4		OFF	3/7	4	5	6	2	S/LIGHT	
5		OFF	9/6	0	OFF	OFF	OFF	DMX CHAN	
6		Mac	3/3	4	1	2	4	NORMAL	
7		Fish	2/7	3	7	OFF	OFF	NORMAL	
8		Fish	0/0	0	OFF	OFF	OFF	NORMAL	
9		Fish	0/0	0	OFF	OFF	OFF	NORMAL	
10		Fish	0/0	0	OFF	OFF	OFF	NORMAL	
11		Fish	0/0	0	OFF	OFF	OFF	NORMAL	
12		Fish	0/0	0	OFF	OFF	OFF	NORMAL	
13		Fish	0/0	0	OFF	OFF	OFF	NORMAL	
14		Fish	0/0	0	OFF	OFF	OFF	NORMAL	

**SUBMASTER 1:**  
Select submaster, then edit an item or set channels

The title bar shows the date and time, display name, show name, and grandmaster status. The date and time format can be set in the [Console Time Window](#) of the Show Setup Screen. The show name is preceded by an asterisk (\*) when changes have been made to the show since you last saved it.

The Wheel window at the right shows the position within the submasters, with the current submaster number next to it.

Before viewing or editing submasters, make sure that you are in the correct page. When you first open the Submaster display, you get the current Live display Submaster page.

The page number is shown at the top of the Submasters window, and can be changed while you are in the Submaster display without changing the current page in the Live display. Once you go back to the Live display the current page in the Submaster display is set to match.

To change the current submaster page, use **[SUB] [+]**, **[SUB] [-]**, or **[SUB PAGE] #**. The highlight must be on the submaster number (the SUB field).

To go directly to a submaster, press **[SUB] # [\*]** where **#** is the submaster number.

**Note:** On consoles without a **[SUB PAGE]** key, refer to [Console Differences](#)

To move between submasters, move the Trackball to any field in the submaster. Levels for the highlighted submaster will be displayed on the Levels screen. To edit these levels you will need to highlight the submaster number.

You can also use **[NEXT]** and **[LAST]** to change submasters if the highlight is on the submaster number.

---

## State Screen

Fields on the Submaster display State screen show the current values for submaster properties. To learn more about these properties refer to [Recording Submaster Properties](#) and [Fader Properties](#)

The fields are shown below.

### SUB

The number of the submaster These are fixed and cannot be changed.(Refer to the [Product Specification](#) for number of submasters). See also, [One and Two-Scene Preset](#)

### TEXT

The text label (caption) attached to this submaster.

### Up/Down

The intensity up and down fade times. Can be from one hundredth of a second to 59 minutes and 59 seconds

### Att

Attribute fade times. The same time is used for both up and down fades. Can be from one hundredth of a second to 59 minutes and 59 seconds

### Fx

OFF if no effect is associated with this submaster. Otherwise the effect number to start when the submaster is moved off zero.

**Ext**

OFF if no external fader is used. Otherwise the analog input number which is combined with this fader on a highest takes precedence basis.

**Mac**

OFF if no macro is associated with this submaster. Otherwise the macro number of the macro to run when the submaster is moved off zero.

**Function**

Controls how the submaster is used. For further information about supermasters and other submaster functions refer to [Submaster Functions](#)

**Bump**

Controls the submaster bump mode. Refer to [Submaster Bump Mode](#)

---

## Viewing Submaster Channel Levels

To view the recorded levels in a submaster, select the required submaster. The levels are then shown on the Levels screen. Only submasters set to Normal, Independent, Exclusive, Inhibitive, or Sound To Light functions use the channel levels. Channel levels are ignored in other submaster modes.

Channels which are off are shown with a blank level. Channels which are on at 0 are shown with a level of 0. For Inhibitive mode, intensity channels with levels (including on At 0) are inhibited and attribute channels or channels which are off are ignored. For Normal, Independent, and Exclusive modes, on At 0 and off are treated as a level of 0.

---

## Editing Submaster Channel Levels

Once you have selected the required submaster and put the highlight on the submaster number (the SUB field), you can select channels and modify them using the same commands as for channel control, for example **[1] [@] [1]**, **[CUE] [1] [@] [5]** and so on. The Level Wheel cannot be used to change levels.

If a submaster is referenced in a channel command (for example **[SUB] [1] [@]**) then the submaster from the current page in the Submaster display is used. This lets you copy submaster levels on the

same page.

---

## Clearing Submasters

To clear a submaster, set all intensity levels and attribute levels for the submaster off, or highlight the submaster number (the SUB field) in the State screen and use **{CLEAR}**. For information about clearing all submasters or a range of submasters from the Archive display refer to [Clear Operations](#) in the Archive Screen.

### **{CLEAR}**

This soft key appears on the right LCD Submaster menu. Press **{CLEAR}** twice, a message appears to let you cancel. To clear the submaster, press **{CLEAR}** again. To cancel, press **[CLR]** or **[UNDO]**.

Using **{CLEAR}** sets all intensity levels and attribute levels in the selected submaster to 0, clears any macro or external fader, and sets the submaster mode to Normal. **{CLEAR}** can be used with a single submaster or with a **[THRU]** range.

**{CLEAR} [\*] [\*]** (*All Modes*)

Clears the current submaster.

**[SUB] [1] {CLEAR} [\*]** (*All Modes*)

Clears submaster 1.

**[SUB] [1] [THRU] [3] {CLEAR} [\*]** (*All Modes*)

Clears submasters 1, 2, and 3.

---

## Copying Levels from a Submaster

You can record submasters, cues, groups, and effect steps while you are in the Submaster display. The highlight must be on the submaster number (the SUB field).

Using record commands while you are in the Submaster display copies the Submaster display levels to the target submaster, cue, group, or effect step. For example, if the current submaster is 1, then **[RECORD] [CUE] [2] [\*]** (Command Line), or **[CUE] [2] [RECORD]** (Direct Entry) will copy the levels from submaster 1 into cue 2.

Submasters are recorded into the current submaster page of the Submaster display. You cannot copy submasters between pages. Since submasters are recorded into the current submaster page of the Submaster display, this copies the submaster to a different submaster in the same submaster page. There is no direct way to copy a submaster to another page. You can copy submasters to another page indirectly by following the steps below, which use the Live display to record the contents of page 1



submaster 1 into page 3 submaster 4.

Go to the Live display and make sure all channels are off.

Press **[SUB PAGE] [1] [\*]** to set the initial submaster page.

Press **[SUB] [1] [@] {FULL} [\*]** to set the submaster levels in the current display.

Press **[SUB PAGE] [3] [\*]** to change the submaster page. (for 300 series consoles, the **[SUB PAGE]** key can be simulated using the 'V' key on an ASCII keyboard)

Press **[SUB] [4] [RECORD]** (Direct Entry Mode), or **[RECORD] [SUB] [4] [\*]** (Command Line Mode) to record the new submaster.

**Note:** On consoles without a **[SUB PAGE]** key, refer to [Console Differences](#)

## One and Two-Scene Preset

All 300 and 500 series control desks can be set up to operate as a conventional single, or two scene preset lighting desk, with or without a submaster bank.

300 series control desks are provided with two **[PB MODE]** keys, which are used to set the functions of the two X Playback faders. 500 series consoles have no PB Mode key. The keyboard equivalents are Ctrl A and Ctrl B. The options are as follows:

Pressing the appropriate **[PB MODE]** key (300 Series Consoles) or Ctrl A/Ctrl B (500 Series Consoles) will display the following LCD softkey menu for the playback.

**Note:** You must press the appropriate **[PB MODE]** key, or Ctrl A/Ctrl B to return to Live mode after you have selected the playback mode.

### X2 Playback

**{AUTO FADE}** GeniusPro/Lightpalette normal operating mode (refer to X Playbacks section).

**{MAN FADE}** GeniusPro/Lightpalette manual operating mode (refer to X Playbacks section)

### X1 Playback

**{1 SCENE 24 SUB}** where the maximum faders is the number of faders less 24

**{2 SCENE 24 SUB}** where the maximum faders per scene is the number of faders less 24 divided by 2

**{1 SCENE 0 SUB}** where the maximum faders is the total number of faders.

**{2 SCENE 0 SUB}** where the maximum faders per scene is the number of faders divided by 2.

**{AUTO FADE}** GeniusPro/Lightpalette normal operating mode (refer to X Playbacks section).

**{MAN FADE}** GeniusPro/Lightpalette manual operating mode (refer to X Playbacks section)

The selected preset mode for X1 Playback is shown in the submaster window of the Live Screen.

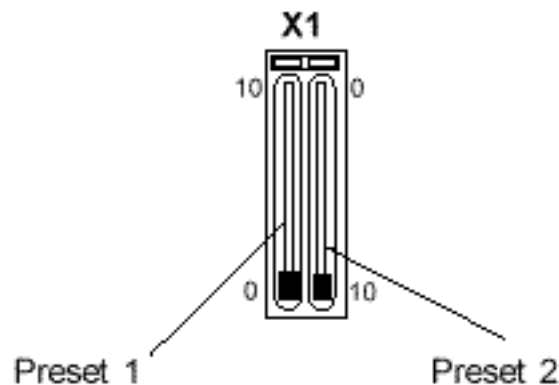
Submaster faders dedicated to channel faders are shown in black.

**Note:** For 530 and 550 series consoles, the six supersubmaster faders are not included in the faders available for single scene or two-scene preset.

The single-scene presets offer a larger channel capacity using the Auto Hold feature to set up a blind scene as in a normal 2-scene preset desk. Channel faders always correspond numerically to the lowest numbered faders.

## Single-Scene Preset

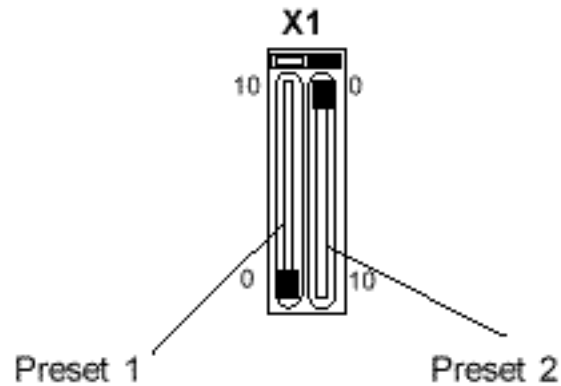
Single Scene Preset uses the Auto Hold feature of the X Playback faders, as shown in the following example:



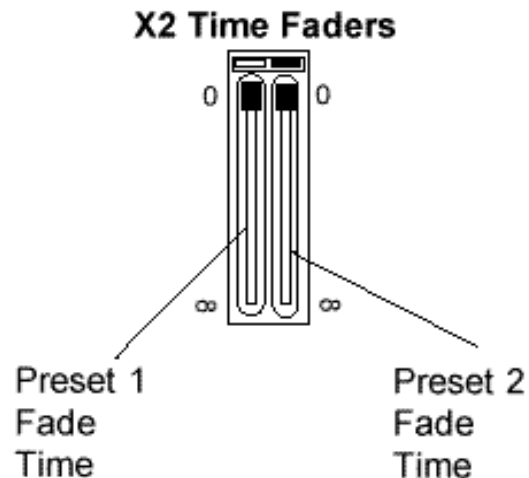
1. Ensure that the 1 and 2 Preset master faders are completely in the home position (as shown) and that all channel faders are at zero.
2. For the purposes of the example, ensure that the time faders are set to zero in order to see the instantaneous response when cross fading.
3. Set faders 1 through 4 to 8 (80%)
4. Move the Preset 1 and Preset 2 faders together to the top. Scene 1 fades in on stage.
5. Move Preset 2 down to zero to hold the scene in memory (on stage)
6. Move Preset 1 down to start to set the next scene.
7. Set faders 1 through 2 to zero, fader 3 to full, fader 4 to 5 (50%) and faders 5 through 6 to 8 (80%)
8. Move the 1 and 2 Preset faders back up to the top position. This crossfades between scene 2 and the live scene on the preset faders.

**Note:** The Preset Faders will only 'pick up' and gain control of the channel faders after they have been moved to the zero (fully down) position. When a scene is on stage, you can modify the scene by moving the channel faders (including adding/removing channels). When the scene is held, by moving Preset 2 to zero, you can add channels to the scene, and increase the levels of existing channels, but you cannot decrease the levels of existing channels, or remove existing channels.

## Two-Scene Preset



When set to Two Scene Preset Mode, half of the channel faders are controlled by the Preset 1 fader and the other half by Preset 2 fader. Similarly, the fade times for each scene are controlled by the time faders. A dipless cross fade between scene 1 and scene 2 is achieved by moving both Preset Faders together. Scene 1 is indicated on 300 Series consoles by a red LED. Scene two is indicated by a green LED. Both scenes are indicated by green LEDs on 500 Series consoles.



You can set the fade time between 0 and 59min, 59 secs for Preset 1 and Preset 2 using the X2 faders on 500 Series consoles or the separate time faders on 300 Series consoles. When set to zero, the fade time is governed by the rate at which the Preset 1 and Preset 2 faders are moved manually. When set to a value greater than zero, the fade time for each Preset Fader is the individual fade times set by the time faders.

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## Introduction

This section introduces GeniusPro and Lightpalette and includes important topics with which the user should be familiar before using these instructions. Particular attention should be paid to 'Console Differences' which explains the differences between the Strand Lighting console models, highlights operational differences between older and newer consoles and points out mechanical and functional differences between models.

GeniusPro and Lightpalette Operating Software are control software products for Strand Lighting's 24-submaster 520 and 520i lighting control consoles, for the 30 submaster 430, 530 and 530i consoles, for the 54 submaster 550 and 550i consoles, for the 510i rack-mounted show control/backup unit and for the new 300 series consoles and the 310 show controller.

GeniusPro and Lightpalette software is copyright Strand Lighting Ltd. 1994 to 2001. All rights reserved. The software is supplied under the terms of , and may only be used with, the License Agreement.

This version of software should be loaded on all consoles, PCs and remote consoles to take advantage of improvements. Load both Operating Software and Networker & Utilities software. Refer to [Upgrading Your Console Software](#)

The following topics are covered in this section:

- [Introducing GeniusPro and Lightpalette](#)
- [Console RAM Memory](#)
- [Console Differences](#)
- [Conventions Used in This Document](#)
- [Configuring European Keyboards](#)
- [Technical Assistance](#)
- [Safety Warning](#)
- [DOS License Agreement](#)

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## **Introducing GeniusPro and Lightpalette**

Strand's lighting control consoles with GeniusPro and Lightpalette software offer you the flexibility to choose and upgrade your console software, including the basic operating software, through an integral floppy disk drive.

This flexibility lets you update when you need to without having to buy new hardware. The maximum number of channels and attributes available depends on the hardware performance, and is different for various consoles. Please contact Strand Lighting for specifics.

All application software, with the exception of the **Server** software is supplied as standard on all consoles.

The **CommuniquéPro** software is used to add SMPTE, MIDI, MIDI Show Control, DMX input, external submasters, serial, and other means of communication. The **Tracker** software supports advanced facilities for automated fixture control including additional types of attributes (for instance, pan and tilt), preset focus groups, and fixture libraries. The **Networker** software provides remote video, remote DMX via Ethernet, and access to all SN node ports. **Console Reporter** is an add-on software package used to monitor and report temperature, electronic status and system and load information for all SV Series dimmers. This facility allows the user to know the status of all lamps on a rig and to record rack-based backup cues simply and easily. Other software can be easily added as it is developed.

Regardless of your level of lighting knowledge, this complete family of software lets you grow as your experience increases, or start at a significantly higher level, all as economically as possible.

Refer to [Product Specification](#) for full list of all software features available on 300 and 500 series control consoles.

Software updates and manuals are available on the internet at <http://www.strandlighting.com/>. FTP (File Transfer) browsers may also be used. The internet address is 193.129.67.250. Some of the download items require a user name and password to be entered.

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## Console RAM Memory

The i version now requires at least 32Mbytes of RAM installed in the console or PC. The non-i version still operates in 8Mbytes or more. The more memory, the faster the console executes commands (although mux outputs always transmit at the normal rate). Up to 64Mbytes of RAM is supported in consoles fitted with new CS electronics or in the PC. Refer to [Console Differences](#). See also [Fitting RAM memory](#)

---

## Password Registration

If your current version of Operating Software is earlier than version 2.0, you will need to re-register your console and PC, if fitted with a CS card or dongle, in order to use this release. Refer to [Upgrading Your Console Software](#)

## Console Differences

This section covers the following topics:

- [Model Numbers and Processor Speed](#)
  - [Features Available with New Electronics](#)
  - [520 Series Differences](#)
  - [300 Series Differences](#)
- 

### Model Numbers and Processor Speed

Over recent years, Strand Lighting have improved the performance and ability of the hardware and software associated with their range of lighting control consoles. Since most of the functions described in this manual are software-based, many of the new functions developed in recent years can be added to older consoles simply by updating the software, albeit that some of the newer functions will not operate as efficiently on older consoles, as they were designed to run on newer and faster processors.

#### Models 300

These consoles are designed on a modular basis using S bus network protocol and a Pentium processor. The standard memory console comprises a processor unit, a command module and a submaster module comprising 24 submaster faders. Channel fader sections, comprising 24 faders can be physically connected to the control surface, up to a maximum of 168 faders (6 additional fader modules). LCD monitor modules are also available for use in place of the standard VGA monitors and are provided as standard on Memory 400 and 600 models.

#### Model 310

The 310 Show Controller/Backup Unit is designed primarily to serve the lighting requirements of the themed environment market and to operate over a network as a backup unit to a main console. The unit is similar to the Processor Unit of the 300 series consoles, but includes an operator interface, comprising a touch screen. Refer to ([refer to 510i/310 Show Controller/ Backup Unit](#)).

#### Models 430, 530 and 530i (30 Submaster Faders)

These consoles are similar in style and have the same mechanical features. The difference between the consoles is the type, and speed of the processor used in the motherboard as follows:

- 430 Consoles - 486 Processor or Pentium Processor
- 530 Consoles - Pentium Processor

- 530i Consoles - Pentium Pro or Pentium II Processor

### Models **550** and **550i** (54 Submaster Faders)

Again, these models are similar and have the same mechanical features. The difference is the type and speed of the processor used in the motherboard as follows:

- 550 Consoles - Pentium Processor
- 550i Consoles - Pentium Pro or Pentium II Processor

### Models **520** and **520i** (24 Submaster Faders)

Again, these models are similar and have the same mechanical features. The difference is the type and speed of the processor used in the motherboard as follows:

- 520 Consoles - Pentium Processor
- 520i Consoles - Pentium Pro or Pentium II Processor

### Model **510i** (Show Controller)

This is a rack-mounted lighting controller designed primarily to serve the lighting requirements of the themed environment market and to operate over a network as a backup unit to a main console. This controller runs the same operating and application software as the other consoles, however the user interface is completely different (refer to [510i/310 Show Controller/Backup Unit](#)). The 510i is only available with the latest Pentium Processor.

---

## **Features Available with 500 Series New Electronic Sub-System**

All 500 series consoles are now fitted with the latest Pentium Processor and a new-style electronic sub-system enabling additional features that were not possible with previous, slower processors. You can check if your console is fitted with the new electronics by checking the position of the Ethernet Port on the rear of the console, which, on consoles fitted with new electronics is fitted on the same panel as the DMX AUX ports, rather than being an optional expansion card (although a second network card can be fitted in addition to the built-in port). The new electronics provide the following additional facilities:

- Built-in Ethernet Ports (no built-in ports on old electronics)
- Handheld remotes can be connected to any AUX port (AUX 3 only for old electronics)
- All 4 DMX ports are supported. DMX 4 is of opposite gender to the others for use as a DMX input, although it can be set as a fourth output (DMX 3 is available as an input with old electronics).
- New SMPTE input port, accessible via the Audio connector.

## 520 Series Differences

Apart from the number of submaster faders, the 520 and 520i have a number of mechanical differences from the other consoles as follows:

- 520 and 520i does not have an On/Off button and Stop button at the top of the console. An On/Off switch is fitted at the rear of the console.
  - 520 and 520i does not have Grandmaster faders. You can assign submasters as [Grandmasters faders](#)
  - 520 and 520i does not have a separate Rate Wheel (the Level Wheel doubles as a Rate Wheel)
  - 520 and 520i does not have a centre LCD
  - 520 and 520i has only four centre softkeys
  - 520 and 520i has 14 direct macro keys rather than 7.
  - 520 and 520i has the floppy disk drive fitted below the front of the console.
- 

## 520 Series LCD Softkeys

520 series consoles have no centre LCD. The soft menus which pop up on the centre LCD on other consoles for **[BUMP MODE]**, **[FX TIME]** etc. use the right LCD on 520 series consoles.

**[CUE]**, **[GROUP]** and **[SUB]** no longer pop up **{INTS ONLY}** and **{ATTS ONLY}** soft keys on 520 series consoles. To access these keys, press the **[REC MODE]** key when required during **[CUE]**, **[GROUP]** and **[SUB]** commands.

---

## 300 Series Differences

A special version of the GeniusPro/Lightpalette operating software and the application software packages has been developed to run on 300 series consoles. While all of the functionality available on the 500 series consoles is also available on 300 series consoles, a number of keys on the 500 series consoles are omitted from the 300 series consoles. Specifically the **[REC TIME]** **[SUB PAGE]** **[BUMP MODE]** **[FX SEL]**, **[FX DIR]**, **[FX TIME]** and **[FX LOAD]** keys are not available on the 300 series consoles. The 300 series consoles have an intellimouse in place of the trackball and rotaries and have only one LCD display.

It should be emphasised, unless specifically stated otherwise, that all software functions described in this manual are available within all consoles. Where keys are omitted, there are other methods of achieving the same result, e.g., [Edit Mode](#), by using an ASCII [Keyboard and PC Emulation Template](#), by [creating a macro](#) to simulate the key function, or by key remapping.

**Note:** *The Strand logo key on 300 Series Consoles is equivalent to the [SHIFT] key on 500 Series consoles.*

Differences in operation between 500 and 300 series consoles are explained at the appropriate points in this manual

The functions performed by the trackball on a 500 series console can be performed on a 300 series console using the Microsoft Intellimouse Trackball connected to the PS2 or COM ports on the command module/processor unit. When a mouse, or trackball is not available, the functions can be performed using the navigation keys on a standard ASCII keyboard connected to the keyboard connection on the processor unit, or to the PS2 port on the back of the command module.

For details on how to control moving lights using a Microsoft Intellimouse Trackball, refer to [Mouse Control of Features](#)

## **Panel Configuration (300 Series Consoles)**

When you purchase a 300 Series console, the configuration of the fader modules supplied is set at the factory. The maximum number of fader panels is 7, so if you have 5 fader panels and a command module in your system. the fader panels are numbered in the 220node.cfg file as **fdr1** to **fdr 5**.

If you purchase additional fader panels and connect them to the system, or you remove one or more fader panels, you must reset the panel configuration.

To reset the panel configuration after adding or removing fader panels, proceed as follows:

- With all panels connected to the command module, press **<REPORT> {ADV SETUP}** then **{PANEL SETUP}**. This will cause each fader panel to display its fader number by illuminating the number of LEDs in red on the left-hand side of the top row of the fader panel according to its fader number (1 - 7). For instance, fader number 3 will illuminate three LEDs.
- You can change the fader panel number by pressing one of the first 7 bump keys on the on the top row of the fader panel. For instance, to change a fader panel to Fader 3, press the third bump key from the left on the top row
- Once you have reset the panel configuration, you must press **{SAVE}** to save the new panel configuration. After pressing **{SAVE}** you will require to shutdown and restart the console.
- If you have removed one or more fader panels, you must clear the configuration by pressing **{CLEAR}**. This will extinguish all the LEDs and reset all faders in the 220node.cfg file to 00.
- You can then set the panel fader numbers using the bump keys as previously described.
- Press **{SAVE}** and shutdown and restart the console..

To leave the 'Orders' Menu, press the **{BACK}** softkey.

## Conventions Used in This Document

The following conventions are used throughout this document.

**[CUE]** The console keys. This example shows the key labelled CUE.

**<SETUP>** The display keys. These are above the right LCD on the console and are shown in italics to distinguish them from other keys with the same name. (The LCDs are the three small display areas across the centre of the console.)

**{BACK}** The console soft keys; these are the row of 4 or 6 unmarked keys whose function can change depending on what you are doing. This example shows the soft key labelled BACK.

**wheel** Level Wheel movement.

**trackball** Trackball movement.

**fader** Fader movement.

**Bump 1** A submaster bump button.

*Direct Entry 1 Digit* A channel level entry in Direct Entry 1 Digit format.

*Direct Entry 2 Digit* A channel level entry in Direct Entry 2 Digit format.

*Command Line* A channel level entry in Command Line format.

**#** Used in syntax or field descriptions as a place holder for a number. The # symbol is never actually entered

### Important Note:

**Throughout this manual, references to trackball should be taken as a generic term covering the series 500 trackball or Intellimouse Trackball.**

**The Strand Logo key on 300 Series consoles is equivalent to the [SHIFT] key on 500 Series consoles. References to the [SHIFT] key in this manual apply equally to the Strand Logo key.**

**The [@ATT] key (500 Series consoles) is equivalent to the [ATTRIB] key on 300 Series consoles. This manual refers to [@ATT]**

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## Configuring European Keyboards

The console is configured at the factory for the US ASCII keyboard. You need to configure keyboards for other locales.

Refer to [Country Keyboard Support](#)



## Technical Assistance

The console requires a minimum of maintenance and servicing.

If equipment fails to operate properly upon installation, or under normal load and temperature conditions, and basic troubleshooting procedures are not effective, please contact your nearest Strand Authorised Service Centre or Strand Lighting Field Service at the office serving your area.

For technical questions regarding setup, operation, or maintenance of this equipment, please contact your nearest Strand Authorised Service Centre or the Strand Lighting Field Service office serving your area.

For purchase of upgrades, accessories, peripherals or documentation, please contact your nearest Strand Authorised Service Centre or the Strand Lighting office serving your area.

For comments regarding equipment functions and possible improvements, or for comments on these instructions, please write to the Strand Lighting office serving your area.

You can access the Strand Lighting World Wide Web site at <http://www.strandlighting.com/>

Addresses for all of the Strand Lighting offices are as shown:

Phone numbers do not include country code or other international access data.

**Asia:** 7th Floor, Corporation Sq, 8 Lam Lok St, Kowloon Bay, Kowloon, Hong Kong Tel: 757 3033 Fax: 757 1767

**Canada:** 2430 Lucknow Dr., Unit 15, Mississauga, Ontario L5S 1V3 Canada Tel: 905 677 7130 Fax: 905 677 6859

**Germany:** Ullsteinstrasse 114-142, 12109 Berlin Tel: 004930 707 9510 Fax: 004930 707 95199

**Italy:** Via delle Gardenie 33 (Pontia Vecchia KM 33,400), 00040 Pomezia-Roma, Italy Tel: 6914 7123 Fax: 6914 7136

**U.K.:** Strand Lighting Ltd. Mitchelston Industrial Estate, Kirkcaldy, Fife KY1 3LY, Scotland. Tel 01592 652333 Fax 01592 653528

**U.S.A Service & Support** 800 4 STRAND (800 478 7263)

**U.S.A.:** 18111 South Santa Fe Ave., Rancho Dominguez, CA 90221 USA Tel: 310 637 7500 Fax: .310 632 5519

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## Safety Warning

This equipment is designed to operate from the mains electricity supply and contains voltages which, if touched, may cause death or injury. It should only be operated in accordance with these instructions



and for the purpose of a lighting control system.

Do not open the 500 Series consoles. There are no user serviceable parts inside. The console configuration can be changed, as described in the Installation manual for the 300 Series consoles. Before attempting to reconfigure the consoles, ensure that the mains supply is isolated and that the mains plug is removed.

Avoid spilling liquid on the console. If this should happen, switch the console off immediately.

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## U.S. GOVERNMENT RESTRICTED RIGHTS

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## Loading Software

Your Strand Lighting Control System is software-based to allow you to upgrade and add capabilities as new, or enhanced programs are introduced. Some software products include a security registration feature that ensures that you have received a reliable, supported and legal copy of the program. Your completed registration will also enable us to keep you informed of all the latest advances in the programs you have purchased.

The following topics are covered in this section:

- [Pre-Installed Software](#)
- [Upgrading Your Console Software](#)
- [Adding Additional Channels or Applications to Version 2.2 or Later Software](#)
- [Adding Additional Channels or Applications to Version 2.1 or Earlier Software](#)
- [Checking the Software Version Number](#)
- [Files Included on CD](#)

---

### Pre-Installed Software

If you have purchased a new lighting control console, the operating software is pre-installed and configured so that you can use your system immediately. In order that we can provide you with an efficient software support service, it is important that you register the software. Please complete the Software Registration Form supplied and return it to Strand Lighting.

---

### Upgrading Your Console Software

**Note:** Due to new installation file names, you can only upgrade the operating software to version 2.4a if version 2.3f is already installed on your console. To obtain version 2.3f operating software, refer to the Strand Internet site on <http://www.strandlighting.com/> or obtain the software from the 2.4a CD.

To verify the integrity of the operating software, run the crccheck utility from DOS., e.g.,

```
>A:
>CRCCHECK
```

'[5] files checked' is displayed if all files are OK

If you received the operating software by e-mail, or from the Strand Web Site, copy them to DOS floppy disk (high density, 1.44Mb) and run crccheck from DOS to verify before installing.

If you are upgrading your console software, please proceed as follows:

1. If you are using SN10X nodes, install the 'Networker for SN10X' software as described in [Networker for SN10X Software Installation](#). If not, proceed to step 3.
2. Wait for software to install and for the SN10X nodes to initialize.
3. Turn on your console and wait for it to initialize.
4. Insert disk entitled 'Operating Software' and press **<ARCHIVE> {SOFT} {LOAD SOFT} {LOAD} [LOAD]**
5. Wait for software to install and for console to initialize.
6. Insert disk entitled 'Networker & Utilities' and press **<ARCHIVE> {SOFT} {LOAD SOFT} {LOAD} {LOAD}**
7. Wait for software to install and for console to initialize.
8. Insert disk entitled 'Console Help Files' and press **<ARCHIVE> {SOFT} {LOAD SOFT} (LOAD){LOAD}**
9. Complete the Software Registration Form supplied and return it to Strand Lighting.

**Note:** If you are upgrading software that is older than V2.0, refer to [Upgrading Old Software](#)

---

## Adding Additional Channels or Applications to a Console using an Upgrade Disk

If you are adding additional channels, or adding optional applications to your console and software version 2.2, or later is already installed, please proceed as follows:

1. Turn on your console and wait for it to initialize.
2. Insert upgrade disk and press **<ARCHIVE> {SOFT} {LOAD SOFT} {LOAD SOFT}**
3. Write the date and the serial number of the console on the disk. This disk now contains a record of your console configuration and password in electronic form and should be

stored in a safe place.

4. Insert a blank formatted disk in the floppy drive and press **<ARCHIVE>{SOFT}{SAVE PASSW}{SAVE}{SAVE}** to save the password.
5. Complete the Software Registration Form supplied and return it to Strand Lighting.

**Note:** *Version 2.2, or later software and some software products, that include a security device (dongle) do not require a unique security number, however, the software should be registered to ensure that details of upgrades are received.*

---

## Adding Additional Channels or Applications to a Console by Entering a Password from the Keypad

1. Complete the Software Registration Form supplied and return it to Strand Lighting. Your registration will be verified and a password issued to you.
  2. Turn on your console and wait for it to initialize.
  3. Press **<ARCHIVE>{SOFT}{PASSW}** and enter your password number with no spaces or other keys. Press **[\*]**. This process will enable the software upgrade.
  4. Insert a blank formatted disk in the floppy drive and press **<ARCHIVE>{SOFT}{SAVE PASSW}{SAVE}{SAVE}** to save the password.
  5. Press **<ARCHIVE>{SOFT}{SAVE PASSW}{SAVE}{SAVE}**. This process will save the password to the upgrade floppy disk, thereby enabling the upgrade software to be reinstalled on the console if it become necessary.
- 

## Checking the Software Version Number

To see what operating software version is installed in your console, and which options are currently enabled:

Press **<REPORT>** to show the System Report display.

The **APPLICATION** field shows the applications installed. For example **GENPRO COMPRO TRK REP NET SVR** shows that GeniusPro software is installed and the CommuniquePro, Tracker, Reporter, Networker and Server application software is installed. The **OS/Channels** field shows the operating software version number and the number of channels.

If the floppy disk version number is greater than the installed version number, you should update the software by following the steps in [Upgrading Your Console Software](#)

---

## Files Included on Disk

GeniusPro and Lightpalette operating software is issued on CD. The files are contained in the Software directory as shown.

Common Files (File checksums can be found in C:\220os\crcfile.crc)

**crccheck.exe** Checksum testing utility

**crcfile.crc** Contains checksums for the other files

**licence.txt** Software licence agreement

**release .txt** Release notes.

GeniusPro and Lightpalette Files 500 series (non i)

**c5instal.exe** installation utility

**c5instal.z** install file

GeniusPro and Lightpalette files 500 series (i)

**ciinstal.exe** installation utility

**ciinstal.z** install file

GeniusPro and Lightpalette files (300 series)

**c3instal.exe** installation utility

**c3instal.z** install file

Help Files

**hcinstal.exe** GeniusPro/Lightpalette help utility

**hcinstal.z** GeniusPro/Lightpalett instal file

Remote console Networker & Utilities files:

**cninstal.exe** Networker & Utilities installation utility

**cninstal.z** Networker & Utilities install file

SN Node software is included and used to upgrade SN10X nodes for use with GeniusPro and Lightpalette software, (refer to [Networker for SN10X Software Installation](#))

When loading new operating software, the disks **must** be installed in the following order:

1. Networker for SN10X (if SN10X nodes are being used)
2. Operating Software
3. Networker & Utilities
4. Console Help



See also [Installing Lightpalette or GeniusPro Software on PC](#) and [Showport Software Installation](#) and [Shownet Software Installation](#) and [Loading Server Software](#)

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---

# Networker for SN10X Software Installation

## **Notes:**

1. *Networker for SN10X software comes pre-loaded on all SN100, SN102, SN103 and SN104 nodes*
2. *You should upgrade your SN10x nodes to at least version 2.3 software before installing version 2.4 software on your console.*
3. *There is now an easier way to download new SN Networker software over the network from a DO console or PC. Refer to the file SW2ALL>BAT supplied on the Networker Utilities disk or the Networker for SN100 disk.*

This section covers the following topics:

- [Displaying the Current Version Number](#)
- [Floppy Disk Installation](#)
- [Remote Installation](#)
- [Remote Installation from an SN100/SN102](#)
- [Remote Install from a PC](#)
- [Assigning New IP Addresses](#)

---

## **Displaying Current Version Number**

The version of the current Networker software is displayed on the 'no DMX/video activity' dialog box on the SN100 & SN102. It is displayed at startup and can be forced onto the screen by temporarily removing the node from the network by disconnecting the network cable.

Networker Version 2.4

Software Build: Mon dd Year

Hardware Platform: SN10x

Node Name: SN100\_1

Node Address: ddd.ddd.ddd.ddd.ddd

Ethernet Address: dd:dd:dd:dd:dd:dd

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=====

Warning: No Dmx Activity  
DMX Output Suppressed

Connect a single SN104, SN103 node to a ShowNet network and use IOFTPDOS or IOFTP32 to determine the software version number for these nodes. The 'who' command displays the software version of each node.

---

## Floppy Disk Installation

Only possible on the SN100 and SN102 nodes; the other Networker models are supplied without floppy disk drives, see next section for install instructions for those units. The disk to use is the Networker Operating Software disk included in console operating software packages. If you received the installation files by E-Mail, copy them to a DOS floppy disk (high density, 1.44Mb) and make it bootable using the following DOS command:

**>SYS C: A:**

Assuming that your PC's system files are in drive C: and the floppy drive is named A:. New releases supplied by Strand on floppy disk are already bootable. Then to verify the integrity of the installation disk, run the crccheck utility from DOS as follows:

**>A:**

**>CRCCHECK**

To preserve the 220NODE.CFG configuration file, you can create a file called RECOVER.BAT on a PC, then copy it to a floppy disk for copying to the C:\220OS directory on the Networker. When ready to do this, you must connect a keyboard and monitor to the Networker, power the unit up, then press Ctrl and X to get back to DOS. The file should contain:

**COPY 220NODE.OLD 220NODE.CFG /V /Y**

If you are upgrading a Networker which contains a release earlier than Beta 2v0, then you may need to manually create a new 220NODE.CFG as the format has changed. In that case delete the batch file RECOVER.BAT, make a temporary copy so that DMX in/out info and the IP address can be transferred to the default 220NODE.CFG which is created as part of the installation process. Then the latest software can be installed by inserting the release disk in the floppy drive and rebooting the Networker by either typing CTRL, ALT & DEL keys on the keyboard simultaneously or pressing the recessed RESET switch using a pen.

On completion of installation, you will be prompted to reset the SN10X again so that the new

software can be operational.

---

## Remote Installation

Download is achieved using one of the following ioftp programs supplied on the installation disk:

IOFTPDOS.EXE  
IOFTP32.EXE  
SW2ALL.BAT

Along with appropriate packet drivers or Windows based TCP/IP protocol stacks. The IOFTP program used must be the same software version as on the SN10X node being downloaded to.

**Note:** *Network compatibility between different versions is not guaranteed.*

Remote download is possible on all SN10Xs which are installed with software releases Beta 2v0 and later. It is NOT possible to do a remote download on SN10Xs with production release 1.5 nor maintenance release 1.55. In those cases, only a [floppy disk installation](#) is possible

You will require a PC with an Ethernet network card, or use an existing SN100 or SN102 which already come supplied with networking capability.

1. Go to DOS at the console and make a new directory C:\SN100. If it already exists, delete its contents
2. In C:\SN100, edit the SW2ALL.BAT
3. Change REM CALL SW2NODE Nodename ORipAddress1 to:  
CALL SW2NODE sn100\_1  
CALL SW2NODE sn100\_2, etc  
where 'sn100\_1 and SN100\_2 are the network names of your SN nodes as defined in their 220node.cfg files, or as seen using the IOFTPDOS WHO command.
4. If the node to be downloaded to is running v2.0 software, create a file called 220node.cfg in the C:\SN100 directory containing:  
my\_nodeaddr = 193.195.164.99  
my\_nodetype = 10FTP  
my\_nodename = 10FTP
5. Make sure that the first 3 numbers match those of the node addresses. (This step is unnecessary if the node is running v2.1 or later)
6. Run SW2ALL

## Remote Install from an SN100/SN102

Ensure that the latest release is installed in the SN100/SN102

Type CTRL-X to abort from the Networker program back to DOS

Determine the IP address of the Networker you wish to update or the node name. Assume this value to be 'nodeid'.

Then type the following at the DOS prompt

```
COPY A:\REMSETUP.* D:\
IOFTPDOS LOGIN nodeid PUT d:\remsetup.z d:\remsetup.z
IOFTPDOS LOGIN nodeid PUT d:\remsetup.ins
c:\220os\install.bat
```

Then wait for at least 5 minutes, to ensure that the software has been installed in the remote unit.

## Remote Install from a PC

1. Ensure that the console has both Operating Software and Networker Utilities version 2.1 or later. All node types can be downloaded to - they are all referred to here as SN100.
2. Go to DOS at the console, and make a new directory C:\SN100. If it already exists, delete its contents.
3. Copy the SN100 Operating Software floppy to C:\SN100
4. In C:\SN100, edit the file SW2ALL.BAT as follows:
 

```
Change
REM CALL SW2NODE NodenameORipAddress1
to
CALL SW2NODE sn100_1
CALL SW2NODE sn100_2
etc, where 'sn100_1' and 'sn100_2' are the network names of your SN nodes, as
defined in their 220node.cfg files, or as seen using the IOFTPDOS WHO
command.
```
5. If the node to be downloaded to is running v2.0 software, create a file called 220NODE.CFG in the C:\SN100 directory, containing:
 

```
my_nodeaddr = 193.195.164.99
my_nodetype = IOFTP
my_nodename = IOFTP
```
6. Make sure the first 3 numbers match those of the node addresses. (You don't need to do this step if the node has v2.1 or later.)
7. Run SW2ALL
8. A message saying Installation Successful appears on the PC

9. The node will then take 5 minutes to install the new software.
- 

## Assigning New IP Addresses

All Networkers shipped from factory have the same default IP address which is 192.168.021.70 and a node name of 'sn100\_1'. This means that for a system with more than one Networker, unique IP addresses have to be assigned. (Note that, the IP address may also have been defaulted by the installation program, if the file recover.bat was not created by the user in the C:\220OS directory of the Networker).

The unique IP address assignment can be achieved easily in a SN100/SN102 by editing the file 220NODE.CFG appropriately. You will need a screen and keyboard connected to it, and a floppy disk with an editor program. You can make such a disk by copying the files EDIT.COM and QBASIC.EXE from the DOS directory on a console or PC.

However, a SN104 cannot have a video or keyboard attached, and therefore the following special procedure **MUST** be followed when assigning a unique address.

1. Disconnect all Networkers from the network except the one to be reconfigured, and a PC or SN100/102 on which to run IOFTPDOS or IOFTP32.
2. Create a file called 220NODE.SN and modify it appropriately.

**Note: if you call your file 220NODE.CFG then you will overwrite the config file for the IOFTP program!!!**

3. Create a file called INSTALL.BAT and let it contain a single line as follows:

### **COLDBOOT**

4. Download the config file using the following

```
IOFTPxxx LOGIN SN100_1 PUT 220NODE.SN 220NODE.CFG  
LOGOUT
```

5. Download the install batch file using the following

```
IOFTPxxx LOGIN SN100_1 PUT INSTALL.BAT . LOGOUT
```

6. Wait for up to a minute for the new values in the new downloaded 220node.cfg to take effect.
7. Connect the next Networker back onto the network and follow steps 2 through 6.

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# Additional Information

This section covers the following topics:

- [Notes on Upgrading Old Software](#)
  - [Tracking Backup Notes](#)
  - [Fitting RAM Memory](#)
  - [Macro Trigger Card](#)
  - [Tracker Library Files](#)
  - [Site Configuration Files](#)
  - [DOS Utilities](#)
  - [DOS Environment Variables](#)
  - [Country Keyboard Support](#)
  - [Changing the HTML Help Files](#)
- 

## Notes on Upgrading Old Software

If your current version of operating software is earlier than 2.0, you need to re-register your console, and PC, if fitted with a CS card or dongle, in order to use release 2.4.

**Important Note:** *If you are installing over software which is older than 2v0, you must delete 220NET.CFG files, and edit 220NODE.CFG files on all consoles and SN100s to match the format in 220NODE.NEW supplied with the new software. If you forget to change these, consoles may not start, and backup PCs may not have control of their keyboard.*

### Editing the 220NODE.CFG Network Configuration File

All devices used on the ShowNet network must have the following defined:

**nodeaddr = 192.168.0.aaa**

These are the four decimal numbers of the IP address.

aaa can be 1 to 254

**nodetype = 530**

For example - see the list of types in the file (See also 220TYPEASCFG environment variable)



## **hostname = abcdefgh**

Any name up to 8 characters, no spaces or punctuation

## **netmask = 255.255.255.0**

Usually this does not need changing.

## **CREATE <nodename>.CON FILE**

This is the console setup defaults file. You can create one for each console and PC by copying CONSOLE.NEW which is installed with the software. So for console1, create CONSOLE1.CON at DOS by doing:

## **copy CONSOLE.NEW CONSOLE1.CON**

---

## **Problems Starting the Software**

If the console freezes or gives errors over the startup screen. In the unlikely event of the show data becoming corrupt, the console can be completely cleared down by either deleting all the DAT files using 220 CLEAN.BAT, or by clearing the Whole Show and setup together at the Archive clear display.

To get to DOS during start up, press Ctrl and Break together as soon as the start up screen appears. Enter Y at the prompt 'Terminate Batch Job' (Y/N)

---

## **Fitting RAM Memory**

Software version 2.2 and later require more than 16Mb of RAM (memory) for the 'i' software version to run. The non-'i' version 2.2 operating software will still run in 8Mb of RAM. All consoles have at least 8Mb, but a few early 'i' consoles had 16Mb. To see how much memory your console has, watch the screen messages at powerup (eg '8192 kbytes tested ok' indicates 8Mbytes installed).

If you have only 4Mb in a non-'i', or 16Mb on an i console, you must upgrade to at least 8Mb (old electronics) or 16Mb (new electronics) or 32Mb for i consoles BEFORE installing this version of software. Strand Service (or your supplier) will upgrade your console - contact them for details.

You can run the non-'i' software version in an 'i' console which only has 16Mb of RAM.

Older non-'i' consoles cannot be fitted with more than 8Mbytes, but all newer consoles (with the built-in network connectors) can be fitted with up to 32Mbytes (non-Pentium Pro or - Pentium II) or 64Mbytes (Pentium Pro or Pentium II). Fitting more memory improves performance in all areas of operation

---

## Macro Trigger Card

An optional digital input card can now be used as a macro trigger device. The card is RS part number 192-0056, and is enabled by setting a DOS variable `MACRO_CARD_IO_BASE` to the IO base address of the card, which should be 310. The card's jumpers should be set to this address too. Invalid IO addresses cause the card to be ignored. The card is also ignored if the variable is not set, which is the normal case; only special purpose systems need this card.

The card has 16 data lines which are used as follows:

Line 1-8: macro number 1-255, binary encoded

Line 16: data active strobe which causes the console to read Lines 0-7

Line 9-15: direct trigger to macros 9-15, ignoring strobe

See below for more details of DOS variables.

---

## Tracker Library Files

The console software uses some text files on disk when it starts up, to read in Tracker library information.

You can edit these files at the Notes display or with the DOS EDIT command to meet your own requirements, and the changes you make will take effect at the next startup. The files are in the program directory, normally `c:\220os`.

Files you can edit:

`FIXTURE.LIB` The Fixture library, used in `@FIXTURE` patching

`ATCPAGE.LIB` The Attribute Controller Page library, used to group attributes into pages for the trackball keys. If the console can not read `ATCPAGE.LIB`, it uses a single default page with 1 intensity and 1 colour.

**FIXTURE.BAK** A backup of FIXTURE.LIB made by the Notes editor.

**ATCPAGE.BAK** A backup of ATCPAGE.LIB made by the Notes editor.

Files installed when new Operating Software is loaded:

**FIXTURE.NEW** The release version, used to reset FIXTURE.LIB when Fixtures are cleared (extra fixtures you inserted in .LIB are retained)

**ATCPAGE.NEW** The release version, used to reset ATCPAGE.LIB when Setup is cleared (extra pages you inserted in .LIB are NOT retained)

**FIXTURE.LIB** A copy of FIXTURE.NEW

**ATCPAGE.LIB** A copy of ATCPAGE.NEW

**FIXTURE.OLD** Your old FIXTURE.LIB file from the previous version

**ATCPAGE.OLD** Your old ATCPAGE.LIB file from the previous version

The .LIB files are saved inside show files (the ATC pages are part of Setup), and are also updated when a show is loaded or cleared.

If you lose the .new files, you can get them back by re-installing the software.

All comment lines are moved to the top of the files when these files are updated after clearing or loading a show, and when the Notes editor is used.

You can preserve your .LIB files through software installation by copying them from .OLD's using RECOVER.BAT.

---

## Site Configuration Files

**OS.BAT** This is NOT a site configuration file! If you edit this file, your changes will be lost when you install new software. Instead, edit files starting with USER, which OS.BAT runs for you if they exist. They are all optional - the software will run without them.

**USEREXEC.BAT** (optional) At every startup, the console AUTOEXEC.BAT file looks for a file called USEREXEC.BAT, and if it exists it is run. This file is not installed with the software - you provide it yourself. You can use it to log on to a network file server; install your keyboard language support; set DOS environment variables such as 220maxmem; or anything else required at startup.

**USERINIT.BAT** (optional) Every time the console is started from DOS using OS, GENIUSP or LIGHTP, USERINIT.BAT is run if it is there. Use it to set environment variables, or to force a console to log in as a remote to another main by adding the line 'ECHO. > REMOTE.CFG'

**RECOVER.BAT** (recommended) After new Operating Software is installed, the RECOVER.BAT batch file is run if it exists. Again, you provide it; if it is not there, the console restarts as normal. You can use it to copy back your customised fixture library (which is normally renamed to FIXTURE.OLD during installation) and your network configuration files. The batch file could look like this:

```
COPY FIXTURE.OLD FIXTURE.LIB /Y
COPY ATCPAGE.OLD ATCPAGE.LIB /Y
COPY 220NODE.OLD 220NODE.CFG /Y
```

Note that installing software at DOS does NOT run RECOVER.BAT.

---

## DOS Utilities

**220CLEAN.BAT** This is a useful tool for cleaning up the console's hard disk. You are advised to save your current show before running it. Run it by typing 220CLEAN, and it prompts you if you want to:

- Check and display the console's PC resources
- Delete the working files used to hold the current show. This is useful if you are experiencing erratic or unusual operation.
- Check AND FIX any hard disk corruption. You may need to reload the Operating Software if errors appear.
- Defragment the hard disk, which may result in a significant increase in console speed after this is done.
- Check AND FIX any hard disk corruption caused by defragmentation
- Check that the Operating Software files are correctly installed You may need to reload the Operating Software if errors appear.

**NETON** Loads the packet driver for the console network interface. Do this before running **IOFTPDOS**.

**NETOFF** Unloads the network card packet driver. Do this after running **IOFTPDOS** and before restarting the Operating Software.

**OS** Starts the Operating Software from DOS.

**LIGHTP/GENIUSP** Starts the Off Line Editor software from DOS.

## DOS Environment Variables

DOS environment variables are used to configure the operating software for special site or test requirements. They are usually defined in **USERINIT.BAT** so that they are preserved when new software is installed.

To set a variable to a value, the batch file command format is:

### **SET VARIABLE=VALUE**

To clear a variable, the batch file command format is

### **SET VARIABLE=**

All these variables are normally absent.

### Variable Values Use

**220NUMSUBS 24, 30, 54 or 120** Forces a different number of submasters than detected at startup

**220MAXMEM 10..255** Limits the number of read (1 page = 16k) cache pages allocated at startup, to free up memory for other programs

**MACRO\_CARD\_IO\_BASE 310** Sets io base address for the macro trigger card (if fitted)

**220KEYBOARD US, UK, FR** Set the type of the external GR, RU or SV keyboard in use on the console Two letter codes are those used by the keyb DOS program

See "Country Keyboard Support" below.

**AUTOTEST 1 or x** (absent) Remote Test only:

**1**=when COM1 or COM2 set to Remote Test, all control events are echoed to the test port.

**1**=Network drives ignored

**x**=Events not echoed. This is normal case for MIDI operation, where MIDI in events must not be echoed to MIDI out port

**x**=Network drives recognised

**220TRACE** any value. If defined, enables tracking state tracing to btrace.log

**FORCENETON** any value. If defined, bypass normal packet driver loading in neton.bat & run the command defined by this variable.

**FORCENETOFF** any value. If defined, bypass normal packet driver unloading in netoff.bat & run the command defined by this variable.

**220TYPEASCFG** any value If defined, prevents the Console (v2b2 and later) node type defined in 220NODE.CFG being overridden by the node type derived from the CS type. (Only valid if CS present)

## Country Keyboard Support

From software version 2.1 onwards the console has increased support of country-specific keyboards. This requires both the installation of the correct keyb DOS program and the setting of the environment variable **220KEYBOARD**.

### Running on DOS

Add one of the following sets of 3 lines to your **USEREXEC.BAT** file in the operating software directory:

#### France:

```
c:\dos\mode CON CODEPAGE PREPARE=((437) C:\DOS\EGA.CPI)
c:\dos\keyb fr, 437, c:\dos\keyboard.sys
set 220KEYBOARD=fr
```

#### Belgium:

```
c:\dos\mode CON CODEPAGE PREPARE=((850) C:\DOS\EGA.CPI)
c:\dos\keyb be, 850, c:\dos\keyboard.sys
set 220KEYBOARD=be
```

#### Germany:

```
c:\dos\mode CON CODEPAGE PREPARE=((437) C:\DOS\EGA.CPI)
c:\dos\keyb gr, 437, c:\dos\keyboard.sys
set 220KEYBOARD=gr
```

#### Sweden:

```
c:\dos\mode CON CODEPAGE PREPARE=((437) C:\DOS\EGA.CPI)
c:\dos\keyb sv, 437, c:\dos\keyboard.sys
set 220KEYBOARD=sv
```

#### United Kingdom:

```
c:\dos\mode CON CODEPAGE PREPARE=((437) C:\DOS\EGA.CPI)
c:\dos\keyb uk, 437, c:\dos\keyboard.sys
set 220KEYBOARD=uk
```

#### United States:

```
c:\dos\mode CON CODEPAGE PREPARE=((437) C:\DOS\EGA.CPI)
c:\dos\keyb us, 437, c:\dos\keyboard.sys
set 220KEYBOARD=us
```

Russia:

```
c:\dos\mode CON CODEPAGE PREPARE=((437) C:\DOS\EGA.CPI)
```

```
c:\dos\keyb uk, 437, c:\dos\keyboard.sys
```

```
set 220KEYBOARD=ru
```

Note: To toggle between Russian and English character sets start up the console and press both SHIFT keys simultaneously. The cursor will change between the different character sets.

**Running on Windows 95**

Country-specific keyboard handling is dependent on the WIN95 configuration. Please refer to the WIN95 manual/help. You must also add the line setting the 220KEYBOARD environment variable to the USERINIT.BAT file. e.g.

```
set 220KEYBOARD=fr
```

***Note:** The above examples assume that DOS is installed in the directory "c:\dos" if it isn't, you must substitute the correct DOS path name in your USEREXEC.BAT file.*

## Changing the HTML Help Files

The .htm files in the help.eng, help.ger etc. directories under the operating software directory are in HTML format. They can be edited using Internet Assistant for Microsoft Word or another HTML editor, bearing the following points in mind:

\* Required at top of file: (so that European characters display correctly)

```
<HTML>
```

```
<HEAD>
```

```
<META HTTP-EQUIV="Content-Type" CONTENT="text/html; charset=ISO-8859-1">
```

\* Colour controls:

```
<H1>Heading level 1 appears as YELLOW text</H1>
```

```
<H2>Heading level 2 appears as GREEN text</H2>
```

```
<B>Bold appears as RED text</B>
```

```
<I>Italic appears as MAGENTA text</I>
```

\* Anchor names: (points to jump to)

eg. Anchor name is "Index", screen line says "Help Index":

**<H1><A NAME="Index">H</A>elp Index</H1>**

\* Anchor references:

(up to 9 per screen, automatically labelled with [1] to [9] coloured red on grey, meaning press the [1] key for the first reference, [2] for the second, etc.) eg. to jump to anchor "setup" in the file "setup.htm":

**<A HREF="setup.htm">setup</A>**

\* Required at foot of file:

**</BODY>**

**</HTML>**

---

## **Converting German Galaxy Files to Strand Show Files**

To transfer shows from a German Galaxy, you can connect Galaxy's printer port to Com1 or 2 on a PC, use Windows Terminal, or Hyperterminal to capture the printout to a file and run a QBASIC program called gal2alq.bas (available from Strand Service) to produce a Strand Show File. For more details, refer to Strand Service.



## Offline Editor & PC Software

GeniusPro and Lightpalette Off-line Editor and PC Backup Software provide full emulations of the console Operating Software on a standard PC.

Off-Line Editor provides the following facilities :-

- Read and Write show files.
- Generate Printouts.
- Edit Cues, Groups, Patch, Effects, Submasters.
- Preview on screen all recorded elements of show.

PC Backup Software provides the following :

- Link to Ethernet network using the supplied Network Card and Networker software.
- Operate as Tracking Backup to a main console or PC.
- Operate a Designer's Remote to a main console or PC with independent command line and screens.
- Provide standalone PC Show Controller use network for DMX distribution SN series nodes.

The following topics are covered in this section:

- [Prerequisites](#)
- [Installing the Offline Editor Software](#)
  - [Installing Offline Editor Using DOS 3.1 or later](#)
  - [Installing Offline Editor Using Windows9X](#)
- [Installing the Backup PC Kit](#)
  - [Installing the Ethernet Card](#)
  - [Configuring the Ethernet Card](#)
  - [Installing the Dongle](#)
  - [Installing the Backup PC Software from DOS](#)
  - [Installing the Backup PC Software from Windows 9X](#)
  - [Installing the Networker & Utilities Software Using DOS 3.1 or Later](#)
  - [Installing the Networker & Utilities Software Using Windows 9x](#)
- [Installing the Help File Using DOS 3.1 or Later](#)
- [Installing the Help File Using Windows 9X](#)
- [Running the Software \(Offline Editor or Backup PC\)](#)

- [Notes on Running Offline Editor or Backup PC Software](#)
  - [Designer Keypad](#)
  - [Keyboard Map](#)
- 

## Prerequisites

Before starting please check you have the following :-  
For Off-Line Editor and PC Software.

- Standard VGA display or Strand Dual VGA Card
- DOS 3.1 or later (or Windows 95/98)
- 32Mb RAM recommended
- 10 M Free Hard Disk Space
- 580k Free Conventional Memory
- Minimum 486 PC (DX) for use with a 430 console only
- Minimum Pentium processor-based PC for use with a 520, 530, 550 or 300 console
- Minimum PentiumPro or Pentium II PC or use with consoles running 'i' software (520i, 530i or 550i)

For PC Software only.

- Spare ISA slot for network card (Supplied)
- Standard Parallel Port for dongle (Supplied)

### **Notes:**

*The OLE/Backup PC software will NOT run under Windows 3.x or Windows NT but will run under Windows 9x*

*To run the OLE/Backup PC software using DOS, HIMEM.SYS must be loaded. If it is not, an error message "32rtm error: Couldn't initialise DPMS32VM.OVL" will be given when running the software. To install HIMEM.SYS, add the line "DEVICE=HIMEM.SYS" at the top of the file C:\CONFIG.SYS.*

*The OLE/Backup PC software does not change the DOS PATH to include its install directory. Edit the PATH= line in the file C:\AUTOEXEC.BAT to include the software directory specified if required.*

*The OLE/Backup PC software will not run on a PC with a 3-COM network card connected to a*

*standard PC network. The PC must be taken off the network before running the OLE. If the network card is not a 3-COM card it may be run on the PC network.*

---

## Installing the Offline Editor Software

### Installing Offline Editor Using DOS 3.1 or Later

1. The following procedures assume that the software is being installed from floppy drive A: to drive C:
2. Insert the appropriate operating software disk in the floppy disk drive and type:  
**A:C5INSTAL<Enter>** for non i 400 or 500 Series consoles, or  
**A:CIINSTAL<Enter>** for 500i Series consoles, or  
**A:C3INSTAL<Enter>** for 300 Series consoles
3. You will be given a choice of platform, e.g.,  
3 300 Series  
4 400 Series  
5 500 Series  
B Backup PC  
O Offline Editor  
F File Server
4. To install the Offline Editor software, type **O**
5. Specify either GeniusPro or Lightpalette installation by typing **g** or **i**. This should match the console software type.
6. You will be prompted to enter a destination path for the Offline Editor software. By default, the software will be installed in **C:\geniusp** or **C:\lightp**. Enter a destination directory name of 8 characters or less, or accept the default destination by pressing **<Enter>**.
7. You will be prompted to enter a destination path for the show files. By default, the show files will be stored in C:\shows. Enter a destination path, or accept the default location by pressing **<Enter>**.
8. The Strand Lighting licence agreement is displayed on screen. Press any key to scroll the display.
9. If you agree with the terms of the licence, press **Y**, or press **N** to terminate the installation.
10. The Offline Editor software will install on your PC. This may take some time.
11. If the installation was successful, 'Instal Successful' is displayed on screen.
12. Type **CD geniusp<Enter>** or **CD lightp<Enter>** to open the appropriate directory.
13. Type **geniusp <Enter>** or **lightp <Enter>** to run the Offline Editor
14. Close the Offline Editor and return to DOS to install the help file, press **Ctrl F12**, followed by **F2** three times.

15. Install the Help file as described under [Installing the Help file under DOS 3.1 or Later](#)
  16. Repeat step 12 and 13 to run the Offline Editor.
  17. Refer to the [Keyboard Map](#) or to the template at the back of the Operator Guide to simulate the console keys using the PC keyboard.
- 

## Installing Offline Editor Using Windows 9X

1. The following procedures assume that the software is being installed from floppy drive A: to drive C:
2. Open the **A:** drive window and double click on the installation icon, as follows  
**C5INSTAL<Enter>** for non i 400 or 500 Series consoles, or  
**CIINSTAL<Enter>** for 500i Series consoles, or  
**C3INSTAL<Enter>** for 300 Series consoles)
3. You will be given a choice of platform, e.g.,  
3 300 Series  
4 400 Series  
5 500 Series  
B Backup PC  
O Offline Editor  
F File Server
4. To install the Offline Editor software, type **O**
5. Specify either GeniusPro or Lightpalette installation by typing **g** or **i**. This should match the console software type.
6. You will be prompted to enter a destination path for the Offline Editor software. By default, the software will be installed in **C:\geniusp** or **C:\lightp**. Enter a destination directory name of 8 characters or less, or accept the default destination by pressing **<Enter>**.
7. You will be prompted to enter a destination path for the show files. By default, the show files will be stored in C:\shows. Enter a destination path, or accept the default location by pressing **<Enter>**.
8. The Strand Lighting licence agreement is displayed on screen. Press any key to scroll the display.
9. If you agree with the terms of the licence, press **Y**, or press **N** to terminate the installation.
10. The Offline Editor software will install on your PC.
11. If the installation was successful, 'Instal Successful' is displayed on screen.
12. Open Windows Explorer and locate the Offline Editor filename geniusp or lightp (or the alternative name allocated in step 6).
13. If the default filename was used a shortcut (**gp\_95** or **lp\_95**) is available within the directory. Drag the shortcut to the desktop, or cut/paste to another location. You can

rename the shortcut to as required. You can now run the software by double-clicking on the shortcut icon.

14. If you used a different name in step 6, locate the shortcut **gp\_95** or **lp\_95** and use the right mouse button and select **Properties**. Select the 'Program' tab and change the 'Cmd Line' and 'Working Directory' to match the alternative location.
15. Alternatively, you can run the Offline Editor software by double clicking on the **geniusp.exe** or **lightp.exe** files in the geniusp or lightp directory, or alternative location.
16. Close the Offline Editor and return to the desktop to instal the Helpfile, press **Ctrl F12**, followed by **F2** three times.
17. Instal the Help file, as described under [Installing the Help file under Windows 9X](#)
18. Double click on the shortcut or the **geniusp.bat/lightp.bat** to run the Offline Editor software
19. Refer to the [Keyboard Map](#) or to the template at the back of the Operator Guide to simulate the console keys using the PC keyboard.

## Installing the Backup PC Kit

PC Software is supplied with a 100 channel application disk and a Networker Application disk. You must register these disks with Strand's Software Registration Centre and load the password with the dongle connected. The dongle is then programmed with the password facilities. If the dongle is disconnected, the PC software becomes the OffLine Editor, with maximum channels and other facilities but no Networker.

### Installing the Ethernet Card (PC Software only)

Install the supplied Ethernet card in your desktop PC following the instructions supplied with the card. This procedure should only be carried out by qualified personnel. If in doubt please refer to your dealer/supplier or Strand Service to arrange installation by qualified personnel.

### Configuring the Ethernet Card (PC Software only)

For PC Software configure the Ethernet card as :-

Parameter	Settings	Note

I/O Base Address	300h	
Interrupt	10	
Ethernet Port	RJ45 or BNC	
Plug and Play BIOS	OFF	This must be turned off

To change the defaults or run the Ethernet card self test software, follow these instructions :-

1. Power up the PC.
2. From the DOS prompt run the 3C5X9CFG.EXE program supplied on a floppy disk with the network card.
3. Using the on screen menus change the parameters as shown.
4. Select the test option and ensure that all tests pass.
5. Exit from the network card configuration utility.
6. Power down the PC.
7. When configured and tested, connect the Ethernet card to the network

---

### Installing the Dongle (PC Software only)

For PC Software plug the supplied dongle into the parallel port of the PC. Applications are registered to the Dongle Security Number stored inside the dongle and marked on the outside of the dongle. The number will be composed of 6 groups of 3 digits between 0 and 255; e.g. 001 002 003 002 003 004. Dongles can be moved between PCs and when plugged into consoles are used instead of the internal Console Security Number.

---

### Installing the Backup PC Software from DOS

1. The following procedures assume that the software is being installed from floppy drive A: to drive C:
2. Insert the appropriate operating software disk in the floppy disk drive and type:  
**A:C5INSTAL<Enter>** for non i 400 or 500 Series consoles, or  
**A:CIINSTAL<Enter>** for 500i Series consoles, or  
**A:C3INSTAL<Enter>** for 300 Series consoles)
3. You will be given a choice of platform, e.g.,
  - 3 300 Series
  - 4 400 Series
  - 5 500 Series

B Backup PC  
 O Offline Editor  
 F File Server

4. Press **B** to install the Backup PC Software
5. Specify either GeniusPro or Lightpalette installation by typing **g** or **i**. This should match the console software type.
6. You will be prompted to enter a destination path for the Backup PC software. By default, the software will be installed in **C:\geniusp** or **C:\lightp**. Enter a destination directory name of 8 characters or less, or accept the default destination by pressing **<Enter>**.
7. You will be prompted to enter a destination path for the show files. By default, the show files will be stored in C:\shows. Enter a destination path, or accept the default location by pressing **<Enter>**.
8. The Strand Lighting licence agreement is displayed on screen. Press any key to scroll the display.
9. If you agree with the terms of the licence, press **Y**, or press **N** to terminate the installation.
10. The Backup PC software will install on your PC. This may take some time.
11. If the installation was successful, 'Instal Successful' is displayed on screen.
12. Type **CD\geniusp** or **CD\lightp** as appropriate. If you have elected to save the operating software in another directory, type the name of the directory in place of geniuspro or lightpalette.
13. Type **geniusp<Enter>** or **lightp<Enter>** to run the software.
14. Type **Ctrl F12**, followed by **F2** three times to return to DOS.
15. You must now proceed to install the Networker & Utilities software from the disk supplied. (Refer to [Installing the Networker and Utilities Software Using DOS 3.1 or Later](#)) and [Installing the Help file under DOS 3.1 or later](#))

## Installing the Backup PC Software from Windows 9X

1. The following procedures assume that the software is being installed from floppy drive A: to drive C:
2. Open the **A:** drive window and double click on the installation icon, as follows  
**C5INSTAL<Enter>** for non i 400 or 500 Series consoles, or  
**CIINSTAL<Enter>** for 500i Series consoles, or  
**C3INSTAL<Enter>** for 300 Series consoles)
3. You will be given a choice of platform, e.g.,
  - 3 300 Series
  - 4 400 Series
  - 5 500 Series
  - B Backup PC



- O Offline Editor
  - F File Server
4. To install the Offline Editor software, type **O**
  5. Specify either GeniusPro or Lightpalette installation by typing **g** or **i**. This should match the console software type.
  6. You will be prompted to enter a destination path for the Backup PC software. By default, the software will be installed in **C:\geniusp** or **C:\lightp**. Enter a destination directory name of 8 characters or less, or accept the default destination by pressing **<Enter>**.
  7. You will be prompted to enter a destination path for the show files. By default, the show files will be stored in C:\shows. Enter a destination path, or accept the default location by pressing **<Enter>**.
  8. The Strand Lighting licence agreement is displayed on screen. Press any key to scroll the display.
  9. If you agree with the terms of the licence, press **Y**, or press **N** to terminate the installation.
  10. The Backup PC software will install on your PC.
  11. If the installation was successful, 'Instal Successful' is displayed on screen.
  12. Open Windows Explorer and locate the Backup PC filename geniusp or lightp (or the alternative name allocated in step 6).
  13. If the default filename was used a shortcut (**gp\_95** or **lp\_95**) is available within the directory. Drag the shortcut to the desktop, or cut/paste to another location. Rename the shortcut to 'Offline Editor'. You can now run the software by double-clicking on the shortcut icon.
  14. If you used a different name in step 6, locate the shortcut **gp\_95** or **lp\_95** and use the right mouse button and select **Properties**. Select the 'Program' tab and change the 'Cmd Line' and 'Working Directory' to match the alternative location.
  15. Alternatively, you can run the Backup PC software by double clicking on the **geniusp.bat** or **lightp.bat** files in the geniusp or lightp directory, or alternative location.
  16. Press **Ctrl F12**, followed by **F2** three times to return to the desktop.
  17. You must now proceed to install the Networker & Utilities software from the disk supplied. (Refer to [Installing the Networker and Utilities Software Under DOS 3.1 or Later](#) and [Installing the Help File under Windows 9X](#)).
- 

## Installing the Networker & Utilities Software Using DOS 3.1 or later

1. Insert the disk **CNINSTAL** in the floppy drive and type **A:CNINSTAL** to install Networker & Utilities software.
2. You will be given a choice of platform, e.g.,
  - 3 300 Series
  - 4 400 Series



- 5 500 Series
  - B Backup PC
  - O Offline Editor
  - F File Server
3. Press **B** to install the Backup PC Software
  4. Specify either GeniusPro or Lightpalette installation by typing **g** or **i**. This should match the console software type.
  5. You will be prompted to enter a destination path for the Backup PC software. By default, the software will be installed in **C:\geniusp** or **C:\lightp**. Enter a destination directory name of 8 characters or less, or accept the default destination by pressing **<Enter>**.
  6. You will be prompted to enter a destination path for the show files. By default, the show files will be stored in C:\shows. Enter a destination path, or accept the default location by pressing **<Enter>**.
  7. The Strand Lighting licence agreement is displayed on screen. Press any key to scroll the display.
  8. If you agree with the terms of the licence, press **Y**, or press **N** to terminate the installation.
  9. The Networker software will install on your PC.
  10. If the installation was successful, 'Instal Successful' is displayed on screen.
  11. Press **Ctrl F12**, followed by **F2** three times to return to DOS
  12. Proceed to install the Help file as described under Installing Help under DOS 3.1 or later

If the DOS installation fails, try disabling SHARE or SMARTDRV lines in the PC's AUTOEXEC.BAT file. You can enable them again after installation.

**WARNING:** You should disable Norton Commander because it can cause hard disk corruption when running operating software on a PC.

---

## Installing the Networker & Utilities Software from Windows 9X

1. Insert the Networker & Utilities disk in the floppy drive
2. Open the **A:** drive window and double click on the installation icon, as follows  
**C5INSTAL<Enter>** for non i 400 or 500 Series consoles, or  
**CIINSTAL<Enter>** for 500i Series consoles, or  
**C3INSTAL<Enter>** for 300 Series consoles)
3. You will be given a choice of platform, e.g.,
  - 3 300 Series
  - 4 400 Series
  - 5 500 Series
  - B Backup PC

- O Offline Editor
  - F File Server
4. Press **B** to install the backup PC software
  5. Specify either GeniusPro or Lightpalette installation by typing **g** or **i**. This should match the console software type.
  6. You will be prompted to enter a destination path for the Backup PC software. By default, the software will be installed in **C:\geniusp** or **C:\lightp**. Enter a destination directory name of 8 characters or less, or accept the default destination by pressing **<Enter>**.
  7. You will be prompted to enter a destination path for the show files. By default, the show files will be stored in C:\shows. Enter a destination path, or accept the default location by pressing **<Enter>**.
  8. The Strand Lighting licence agreement is displayed on screen. Press any key to scroll the display.
  9. If you agree with the terms of the licence, press **Y**, or press **N** to terminate the installation.
  10. The Networker software will install on your PC.
  11. If the installation was successful, 'Instal Successful' is displayed on screen.
  12. Press **Ctrl F12**, followed by **F2** three times to return to the desktop.
  13. Proceed to install the Help file as described under Installing Help under DOS 3.1 or later
- 

## Installing the Help File Using DOS 3.1 or Later

1. Insert the disk **HCINSTAL** in the floppy drive and type **A:HCINSTAL** to install the help file
2. You will be given a choice of platform, e.g.,
  - 3 300 Series
  - 4 400 Series
  - 5 500 Series
  - B Backup PC
  - O Offline Editor
  - F File Server
3. Press **O** to install the Off-Line Editor or **B** to install the Backup PC Software
4. Specify either GeniusPro or Lightpalette installation by typing **g** or **i**. This should match the console software type.
5. You will be prompted to enter a destination path for the Off-Line Editor or Backup PC software. By default, the software will be installed in **C:\geniusp** or **C:\lightp**. Enter a destination directory name of 8 characters or less, or accept the default destination by pressing **<Enter>**.
6. You will be prompted to enter a destination path for the show files. By default, the show files will be stored in C:\shows. Enter a destination path, or accept the default location by

- pressing **<Enter>**.
7. The Strand Lighting licence agreement is displayed on screen. Press any key to scroll the display.
  8. If you agree with the terms of the licence, press **Y**, or press **N** to terminate the installation.
  9. The Help file will install on your PC.
  10. If the installation was successful, 'Instal Successful' is displayed on screen.
- 

## Installing the Help File Using Window 9x

1. Insert the help disk in the floppy drive
  2. Open the **A:** drive window and double click on the installation icon. **HCINSTAL**
  3. You will be given a choice of platform, e.g.,
    - 3 300 Series
    - 4 400 Series
    - 5 500 Series
    - B Backup PC
    - O Offline Editor
    - F File Server
  4. Press O to instal the Offline Editor or B to install the backup PC software
  5. Specify either GeniusPro or Lightpalette installation by typing **g** or **i**. This should match the console software type.
  6. You will be prompted to enter a destination path for the Backup PC software. By default, the software will be installed in **C:\geniusp** or **C:\lightp**. Enter a destination directory name of 8 characters or less, or accept the default destination by pressing **<Enter>**.
  7. You will be prompted to enter a destination path for the show files. By default, the show files will be stored in C:\shows. Enter a destination path, or accept the default location by pressing **<Enter>**.
  8. The Strand Lighting licence agreement is displayed on screen. Press any key to scroll the display.
  9. If you agree with the terms of the licence, press **Y**, or press **N** to terminate the installation.
  10. The Help file will install on your PC.
  11. If the installation was successful, 'Instal Successful' is displayed on screen.
- 

## Running the Software (Offline Editor or Backup PC)

In DOS, type **cd \geniusp** or **cd\lightp <return>** to open the directory, then type **geniusp** or

**lightp <return>** (for GeniusPro software) or **lightp <return>** (for Lightpalette software)

In Window 9X double click on the shortcut or open Windows Explorer and double click on **geniusp.exe**, or **lightp.exe** in the **geniusp** or **lightp** directory.

**Note:** *The dongle will allocate 100 channels to the software. You will require to upgrade the number of channels according to the number of channels purchased with the Backup PC Kit. Refer to [Adding Additional Channels or Applications to Version 2.2 or Later Software](#) or [Adding Additional Channels or Applications to Version 2.1 or Earlier Software](#)*

To simulate the console keys and controls, refer to [Keyboard Map](#) or use the appropriate template at the back of the Operator's Manual.

Before using the PC to backup a console, the [Networker On/Off](#) field in the The Network Window of the Console Screen must be set to ON. Refer also to [Tracking Backup](#) in the Networker section of this manual.

---

## Notes on Running Offline Editor and PC Software

1. If you run the software with Networker in a Windows DOS box, you need to run: **WINPKT 0x7e** before starting Windows, so that the interrupt service routine in the packet driver remains at a fixed address. This is assuming that the packet driver has been attached to the 0x7e software interrupt vector (normal case in os.bat). WINPKT is a Windows utility, located in your Windows mdirectory. If you can't find it, you can download a copy from Strands Web Site (<http://www.strandlight.com/>).
2. If you run the software under Windows 9X, and other applications complain that they are short of memory, you can reduce the amount of memory which the program uses by changing the DOS environment variable 220maxmem in userinit.bat, for example: **set 220maxmem=64** This sets the number of 16k memory pages the program uses for its read cache. The program will allocate up to 256 pages (4 Mbytes) for fastest operation, but this total can be reduced to as low as 11 pages, with some performance reduction. The above example restricts the read cache to 1 Mbyte.
3. It is best to run in full screen mode, otherwise certain screen font characters and colours are incorrect in a reduced DOS box, although the software runs correctly.
4. When running the software, you may get an error message saying you do not have enough memory. You must have at least 16M bytes of ram fitted in your PC to run the software. However if you are running **smartdrv**, it may use up too much memory, giving

you insufficient memory to run the software. The smartdrv command line may need editing to free more memory. The smartdrv command: **SMARTDRV /S** tells you how much memory is used by smartdrv. The command smartdrv in your autoexec.bat file will need modifying to change the maximum memory used. If you have 2 numbers at the end of the smartdrv command in your AUTOEXEC.BAT file, modify them to give the correct amount of memory required for the application. If you don't have these numbers, then smartdrv will use its default values which may be too large. Change the command line to add the two numbers to the end. A typical command line for an 8M byte PC allocates 1500 kbytes as follows: **C:\DOS\SMARTDRV 1500 150**

5. To run the OLE/Backup PC software, **HIMEM.SYS** must be loaded. If it is not, an error message "32rtm error: Couldn't initialize DPMI32VM.OVL" will be given when running the software. To install **HIMEM.SYS**, add the line "**DEVICE=HIMEM.SYS**" at the top of the file **C:\CONFIG.SYS** using the EDIT command at DOS.
6. The OLE/Backup PC software does not change the DOS PATH to include its install directory. Edit the PATH= line in the file **C:\AUTOEXEC.BAT** to include the software directory specified if required.
7. The Properties (right mouse button) of the gp\_95 or lp\_95 shortcut icon can be used to fix problems. Persistent problems when running the shortcut icons can be fixed by running exclusively in MSDOS mode. To do this, bring up the shortcut Properties, select the Program tab and then the advanced button, and set MSDOS mode. This causes Win95/98 to exit automatically when the shortcut is run, and to restart when you exit the program.
8. The OLE/Backup PC software will not run on a PC with a 3-COM network card connected to a non-Strand PC network. The PC must be booted off the network before running the OLE. If the network card is not a 3-COM card it may be run on the PC network
9. The OLE/Backup PC software will not run under Windows 3.x or Windows NT, but will run under Windows 95 and Windows 98..
10. The backup PC software only works with 3-COM network cards connected to a lighting network.
11. Ensure that the network configuration protocol is set up correctly in the Settings/Control Panel/Network Protocol of Windows 95/98 . You should see an item marked TCP/IP, and also a 3COM item if you are using the 3COM 3c5x9 Etherlink III card. Under TCP/IP properties, you need to specify the same IP address you set in your 220NODE.CFG file, together with a subnet mask value of 255.255.255.0. All other TCP/IP settings should be off, default or blank. The 3COM settings should show a TCP/IP binding.
12. When running the software, you may get an error message saying you do not have enough memory. You must have 16Mb or more of RAM in your PC to run the software, and more than 32Mb of RAM to run the 'i' software version. If the program exits with exit code 1-99, or reports a memory error, then you need to reduce the memory used by DOS. Things to check include ram disks, disk caches (eg smartdrv), and TSR programs.
13. Currently, PCs with no maths coprocessor (e.g., 486SX) do not run the software correctly. 386, 286 and 86 processors are also not suitable.

14.

Strand Lighting cannot guarantee correct networking operation under all Win9x setup conditions.

---

## Designer's Keypad

The Designer's Keypad is supplied pre-programmed and can be used with Off-Line Editor or PC Software. The Designer Keypad provides direct simulation of the main console keys and controls.

A standard PC keyboard can be used at the same time as the Designer's Keypad by plugging the Designer's Keypad into the PC keyboard port and plugging the PC Keyboard into the Pass-Thru connector on the rear of the Designer's Keypad.

---

## Keyboard Map

### Select

Channel	digits
Cue	C or c
Cue Part	P
Group	G
Submaster	S
Fx	F
Dimmer	D

### Record

Record	R
Rec Time	:
Rec Sub	;
Rec Mode	J
Q-Only/Track	Q

### Channel Control

Next	N
Last	L
Thru	>
ThruOn	<
*	enter
+	+
-	-
@	@ or ‘
@ Att (Attrib)	A
On	O
Full	Ctrl F
Off	Ctrl O
Rem-Dim	I
Undo	Z
Clr	backspace
User	!
Wheel Up	Home
Wheel Down	End

### Effects Playbacks

Fx Dir	alt 9
Fx Sel	alt 8
Fx Type	alt 7
Fx Time (Fx Rate)	alt 6
Fx Pause	alt 5
Fx Load	alt 4
Fx Stop	alt 3
Fx Go	alt 2
FX Step	alt 1
FX Go / Stop	alt 0

### Display Select

More	alt R
Preview Screen	ctrl F2
Sub Screen	ctrl F3

Live Screen	ctrl F4
Group Screen	ctrl F5
Patch Screen	ctrl F6
Fx Screen	ctrl F7
Archive Screen	ctrl F8
Setup Screen	ctrl F9
Macro Screen	ctrl F10
Profile Screen	ctrl F11
Report Screens	ctrl F12
Help	ctrl F1
Page Up	PgUp
Page Down	PgDn
Last Screen	Space

### Other

Time	T
Wait	W
Delay	E
Profile	p
Text	Tab
PB	alt P
Goto	Y
Hold	H
Update	U
Sub Page	K
Bump Mode	V
Stop/Blackout	B
Macro	M
Shift	s
Show Soft Keys	alt ESC



Exit Program	ctrl X
--------------	--------

### P Keys

P1	ctrl Q
P2	ctrl W
P3	ctrl E
P4	ctrl R
P5	ctrl T
P6	ctrl Y
P7	ctrl U

Playbacks	PB 1	PB 2
Go	g	ctrl G
Load	x	X
Stop Back	k	alt K
Cut	u	alt U
^	ctrl Home	ctrl Page Up
v	ctrl end	ctrl Page Down
Mode	ctrl A	ctrl B
Rate	r	o

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## Showport File Conversion

The Showport file conversion tool runs on a PC under DOS. It can also be run in a DOS box in Windows 3.1, NT and 95. Showport converts show files between the following formats:

This Showport File Conversion utility is intended to be used to translate show files from any manufacturers lighting console to/from Strand lighting consoles. It also allows output of data in database file formats for subsequent off-line analysis.

It only runs under Windows 9X or Windows NT and converts show files between the following formats:

Ascii Light Cues  
Strand Show Files  
Comma Separated Values

The following topics are covered in this section:

- [Showport Software Installation](#)
- [Running Showport Software](#)
- [Showport File Formats](#)

---

## Showport Software Installation

Showport software is available as part of the GeniusPro or Lightpalette Networker Utilities Disk.

To complete the installation of Showport, you must exit GeniusPro or Lightpalette (to DOS) and do the following:-  
Create a directory:

**mkdir c:\showport**

Move to directory:

## **cd c:\showport**

Copy showport install file to directory. **zip\_sh.exe** is found in the operating software directory after installation of the Networker Utilities.

**copy zip\_sh.exe c:\showport\zip\_sh.exe**

Expand zip file

## **zip\_sh**

Select language help file and copy to showport help file, e.g.,

**copy english.msg showport.msg**

After installation, read the RELEASE2.TXT in the operating software directory for further important notes on PC configuration.

If the DOS installation fails, try disabling SHARE or SMARTDRV lines in the PCs AUTOEXEC.BAT file. You can enable them again after installation.

**WARNING:** You should disable Norton Commander because it can cause hard disk corruption when running operating software on the PC.

---

## **Running Showport Software**

Once ShowPort is running, you will be faced with a dialog box with several fields. The fields show:

- The current directory. This will change as you use the mouse/keyboard in the directory listing to move around the selected disk drive.
- A list of files to translate from. You may select one file, or several files for simultaneous translation.
- A list of subdirectories in the current directory. You can select a new directory or disk drive by double clicking on it.
- A drop down box to select the file type to translate from. Click on the arrow to select a new type. Note that you are unable to translate between files of the same type.

- Another drop down box to select the file type to translate to.
- A progress bar to show how the conversion is progressing. The progress bar will go from 0 to 100% during reading and then from 0 to 100% during writing.
- A log window to show the status of the conversion.
- The Convert button should be clicked to start conversion. While converting, this button changes to an Abort button which may be clicked to stop conversion.

## ShowPort File Formats

- **Strand Show File** (file extension: .ssf). This format is proprietary to Strand Lighting Ltd. and will not be discussed here.
- **Ascii Light Cues format** (file extension: .alq)

This format is the USITT ASCII Text representation for lighting console data and conforms to version 3.0 (March 1992) of the standard. ShowPort implements several manufacturer specific keywords for Strand Lighting consoles.

The manufacturer and console records are as follows:

Manufactuer Strand  
Console GENIUSPLUS

The manufacturer specific keywords are as follows:

SET \$Title xyz Set Show title = xyz  
 CLEAR \$Effects  
 CLEAR \$Profiles  
 \$Profile nn Profile Number  
 \$\$Curve 0@0 5@12 Profile setting Input level@OutputLevel  
 \$PatchAttr pp 1.3<<11=100 Patch an attribute channel to a dimmer@scale value  
 on page pp  
 \$PatchXtra pp Extra patch data for fixtures (moving lights) on page pp  
 \$\$Attr 1.99 HFF Used to define attribute levels in cues, groups effects etc.  
 \$\$Blocked Used before channel lists in cues to show that these channels  
 are blocked in a cue. \$\$Tracking Used for tracking consoles.  
 \$\$Profile up/dn Set profile(s) for a cue  
 \$\$Remote nn Run remote cue  
 \$\$Macro nn Set macro run by a cue

\$\$LoopCount nn          Repeat count for links  
 \$\$BumpInd  
 \$\$Bumpout  
 \$\$BumpQuickLoad  
 \$\$DimmerNames  
 \$\$DimmerProfiles  
 \$\$Dimmer6K  
 \$\$Inhibit  
  
 \$\$LoadEffect  
 \$\$LoadGroup  
 \$\$NoBump  
 \$\$OverRange  
 \$\$SplitFader  
 \$\$PrFocus  
 \$Effect nn            Define an effect  
 \$\$Alternate  
 \$\$Bounce  
 \$\$Build  
 \$\$Negative  
 \$\$Random  
 \$\$LevRandom  
 \$\$Reverse  
 \$\$Step  
 \$\$Time  
 \$\$Steptime nn        Step time for steps  
 \$\$High nn            High value for steps  
 \$\$Low nn            Low value for steps  
 \$\$In nn            In time for steps  
 \$\$Dwell nn         Dwell time for steps  
 \$\$Out nn            Out time for steps  
 \$\$InDwellOut  
 \$\$Control

- **Comma separated value** (file extension: .csv)

Comma seperated value files are intended to be compatible with most spreadsheet packages. Processing can be performed on show data using a speadsheet, and the results can be converted back into a console-specific format or ascii light cues format.

The data are stored in several separate .csv files, which reside in a single directory. The filename you specify to ShowPort is actually the name of this directory.

Each file in the directory represents a different part of the show file. The first line contains the column headings as text strings, and the following lines contain the corresponding data.

The files generated are:

cue1ist.csv

Cue Part Text UpTime UpDelay DownTime DownDelay Wait CrossFade  
Link LoopCount ProfileUp ProfileDn Remote Effect Macro SplitFader  
cuelev.csv

Cue Part Channel Level Blocked Preset

grplist.csv

Group Text

grplev.csv

Group Channel Level Preset

sublist.csv

Submaster Text TimeUp TimeDown BumpInD BumpOut BumpQuickLoad  
BumpNone OverRange Effect Group Macro Inhibit

sublev.csv

Submaster Channel Level Preset

fxlist.csv

Effect Text LevelType EffectType Direction Steptime Up Dwell Down Lo High  
fxlev.csv

Effect Step Channel Level Preset

fxstep.csv

Effect Step Steptime Up Dwell Down Lo High

patch.csv

Patch Mux Channel Min Max Profile 6k/12k Fixture

Threshold Steps MuxIn SwapPanTilt InvPan InvTilt First Last

Notes about the representation of values:

- Channel numbers are whole numbers except if channel attributes are used when they are a decimal number with the decimal part denoting the attribute number.
- Channel levels are in the range 0-255 decimal so that maximum accuracy is available.
- Submaster numbers are shown as Sub . Page
- Effect steps are shown as Fx . Step
- Patch number are shown as Dimmer . Page

- Some special numbers are used to denote special flags in some fields:
- A wait value of -2 denotes no wait time
- An effect value of -2 denotes no effect for a cue
- A macro value of -2 denotes no macro for a cue

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# Shownet Configuration Software

ShowNet configuration software runs on a PC running Windows NT or 95 and compatible network software. ShowNet manages the patching of DMX information across a ShowNet network between SN series nodes and/or 500 series consoles running Networker software. Multiple patches can be edited off-line, stored on the PC hard disk, printed and downloaded to the nodes as required.

ShowNet does not download patch information to consoles or PCs.

The following topics are covered in this section:

- [Shownet Software Installation](#)
- [Windows Network Configuration](#)
- [Running Shownet Software](#)
- [Pop-Up Speed Menu](#)
- [Editing the Shownet Configuration](#)
- [Shownet Command Buttons](#)

---

## ShowNet Software Installation

To install ShowNet software on your Windows NT or 95 PC place the first ShowNet disk in the floppy drive and select :-

**START | RUN | A:SETUP.EXE**

Follow the on screen prompts for further instructions.

Once installed you will be able to run ShowNet software but you must also install and configure your PC network adapter before you can download patch information to nodes.

*Note: Some new PCs and laptops are shipped with a network component called "OSB supplement for USB". This needs to be uninstalled for the ioftp32 networker utility to work. This utility is needed for Shownet to be able to download node configuration files.*

---

## Windows Network Configuration

You must install and configure your PC network adapter before you can download patch information to nodes. ShowNet uses standard PC network adapters and the network drivers supplied with Windows NT and 95 to download configurations to SN nodes. Configure as follows :-



1. Install the Ethernet adapter card in you PC. Any 10baseT or 10base2 adapter which is supported by Windows NT or 95 can be used. See adapter and/or PC documentation for full instructions.
  2. Configure Windows1 to run TCP/IP over you Ethernet adapter. For Windows 95 Network Setup install the appropriate Adapter and the TCP/IP Protocol. Configure the TPC/IP Protocol with your chosen IP address. See your Windows documentation or help for more for full instructions.
- 

## Running ShowNet Software

To run ShowNet either :-

- Select ShowNet from your Windows Start menu.
- Click on the ShowNet icon from Windows Explorer.
- Select Start Run and enter c:\ShowNet\ShowNet.
- Type Start c:\ShowNet\ShowNet from a DOS
- 

Any Windows network drivers which provide a standard WINSOCK interfaces and use the TCP/IP protocol can be used.

**Sites:** SortDown Name

Name	Description	Modified:	User	Date	IP Mask

**Nodes:** SortDown Name

Name	Type	IP Address

**Universes:** SortDown Name

Name	Start	Length	End

**Patches:** SortDown Name

Name	Description	Download:	User	Date	Last	Mod

**Ports:** SortDown NodeName, ShowBy Universe

Node Name	Type Name	Port #	Universe Name	Offset	DMX IN

Download  
Failure Log  
Print  
Exit

Right click for Quick menu, ESC to undo edits

Form View NUM

## Pop-Up Speed Menu

The right hand mouse button pops-up a context sensitive speed menu. Options which cannot be selected are greyed out. Options usually act on the selected field and are:-

Menu Option	Description
New	Creates new Site, Node, Universe or Patch.
Clone	Copies current Site, Node, Universe or Patch to new one.
Delete	Deletes current Site, Node, Universe or Patch.
Find	Pop-up find dialogue box.
Sort Up	Sorts current field in ascending order.
Sort Down	Sorts current field in descending order.
Show All	Shows all ports on all nodes in Ports - window only.

Cut	Copies current field to clipboard and deletes.
Copy	Copies current field to clipboard.
Paste	Pastes from clipboard to current field.

---

## Editing the Shownet Configuration

ShowNet configuration information is entered, displayed and manipulated through a series of windows shown below:

- [Shownet Sites Window](#)
  - [Shownet Nodes Window](#)
  - [Shownet Universes Window](#)
  - [Shownet Patches Window](#)
  - [Shownet Ports Window](#)
- 

### Shownet Sites Window

This window contains information relating to one single installation of nodes and/or consoles. All the configuration information for each site is stored in a separate file named SITE.MDB in the ShowNet directory. These files can be archived or moved to other PCs as required. This window also indicates when and by whom a site configuration was last changed.

Each site is the collection of all nodes, universes, patches and ports on the rest of the screen. The same site can have alternative definitions if you like - just create a new site name and start again.

---

### Shownet Nodes Window

This window contains a list of all the nodes (SN nodes or 500 series consoles or PCs) connected to the network in the current site. Each node must have a unique name and unique IP address. Node types can be selected from a pick list.

---

### Shownet Universes Window

This window contains a list of all the universes configured for the current site. Each universe is a subset of the available network DMX range of slots (DMX addresses), which is currently 4096 in ShowNet.

Universes allow you to give meaningful names to DMX ranges which you go on to assign to node ports in the Ports window.

The ShowNet slot at which the universe begins is set by the Start value, and the number of DMX addresses in each universe is set by the Length value.

## Shownet Patches Window

Each site can have several patches, each of which consists of the universe to port assignments shown in the Ports window. The contents of the Ports window belong to the currently selected Patch.

Patches are a way of allowing for alternative mappings of universes to ports, using the same set of universes and ports in the current site.

## Shownet Ports Window

This window contains a list of universe to port assignments for the current site & patch. The window usually displays all the ports on the current node if a node is selected OR all the ports to which a universe is patched if a universe is selected. The Show All option on the right mouse click quick menu can be activated whilst in the Ports windows to display all ports on all nodes.

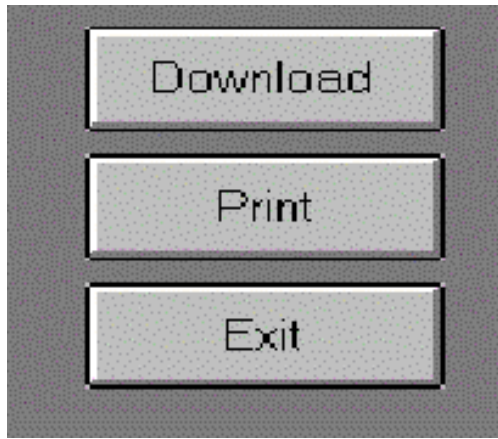
The Source tick box determines whether the port is an input or output. The Offset value (normally 1) determines the first DMX address at the port where the universe is output or input from. For example, if the 200-slot universe SCROLLERS starts at net slot 700 and it is mapped to port SN100\_1 with an offset of 10, the resulting SN node configuration file could contain the lines:

# DMX	= Port	Direction(in/ out)	Start	End	NetSlot
DMX	= 1	out	10	209	700

The first 9 addresses making up the physical DMX frame would still be output from the port but would contain zero levels. An offset of 1 would give instead:

# DMX	= Port	Direction(in/ out)	Start	End	NetSlot
DMX	= 1	out	1	200	700

## Shownet Command Buttons



Download to SN nodes only	Downloads currently selected patch across network to one node or to all nodes, set in a dialogue box which appears when Download is selected. An entry field allows you to select a specific node, or to leave it blank if all nodes are to be downloaded. Progress is indicated as each node is accessed and status reported.
Print	Print preview using current settings, sorts etc.
Exit	Exits program.

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## Server Software

The optional file server application provides a central place on the ShowNet network to store show files, user login configuration files, Networker configuration files, archive copies of operating software - in fact anything you like. You can use any console or PC on the network as the file server, although many people use a PC (DOS or Win9X or NT) which can be fitted with a tape drive or other backup device for added security.

Controlling user access to the file server is another issue in some sites, and using a PC running NT means that the security features of NT can be used to prevent unauthorised users from making unwanted changes to the file server.

Another feature that Server provides is a central place on the network to direct all archive printing operations.

**Note:** *File Server uses Point to Point communications in which IP addresses are used and MUST be unique.*

The following topics are covered in this section:

- [Loading the Server Password Disk](#)
- [Setting Up a File Server](#)
- [User Logins](#)
- [Integrating File Server and Logins](#)

---

### Loading the Server Password Disk

The Server Password Disk is Used to Enable Communication between a console on a network and the file server and to provide User Logins. Before installing the Server Password disk, check that the Server Software is already installed on the console. Press **<REPORT>** and check the configuration window at the bottom of the screen. The word NET should appear on the list of applications.

1. Insert Server disk and press **<ARCHIVE> {SOFT} {LOAD SOFT} {LOAD SOFT}**
2. Write the date and the serial number of the console on the disk. This disk now contains a record of your console configuration and password in electronic form and should be stored in a safe

place.

3. Insert a blank formatted disk in the floppy drive and press **<ARCHIVE>{SOFT}{SAVE PASSW}{SAVE}{SAVE}** to save the password.

Complete the Software Registration Form supplied and return it to Strand Lighting.

---

## Setting Up a File Server

This section covers the following topics:

- [Creating a Standalone File Server Using a PC](#)
  - [Loading Networker & Utilities on a PC using DOS 3.1, or later](#)
  - [Windows 95/NT PC Server](#)
  - [Configuring a File Server](#)
  - [Operating a File Server](#)
  - [Accessing a File Server](#)
- 

### Creating a Standalone File Server Using a PC

For a minimal installation only Networker & Utilities need be loaded. In this case, it is the ioftp family of programs which provide all standalone file server functionality.

---

### Loading Networker & Utilities on a PC using DOS 3.1 or Later

To create a standalone file server on a DOS PCs, assuming that the PC is fitted with a standard Ethernet card (3COM Etherlink III), proceed as follows:

1. Insert the Networker and Utilities Disk in the floppy drive and type **A:CNINSTAL (above version 2.3f)**
2. You will be given a choice of platform, e.g.,
  - 3 300 Series
  - 4 400 Series
  - 5 500 Series
  - B Backup PC

- O Offline Editor
  - F File Server
  - 3. To install the File Server, type **F I**
  - 4. If the installation program detects that operating software is present, it will prompt you to load into the same directory. If not, you can specify any directory.
  - 5. The Strand Lighting licence agreement is displayed on screen. Press any key to scroll the display.
  - 6. If you agree with the terms of the licence, press **Y**, or press **N** to terminate the installation.
  - 7. The File Server software will install on your PC.
  - 8. If the installation was successful, 'Instal Successful' is displayed on screen.
  - 9. To run the file server, type the following in order:  
**CALL NETON**  
**IOFTPDOS**
  - 10. To exit the file server type
  - 11. **EXIT**  
**CALL NETOFF**
- These can be packaged in a batch file for convenience.

**Note:** *If you have a different Ethernet card, the packet driver software which NETON loads may not work: you will have to provide another packet driver. This should work if it conforms to the standard packet driver software interface, but Strand Lighting can not guarantee its performance.*

---

## Win95/NT PC Server

Making a standalone server on a Win95 or NT PC is not as simple as running the above DOS commands in a DOS box - it won't work. You need to follow the steps under [Windows Network Configuration](#) in the ShowNet Configuration Software In short:

1. If you have not yet configured your Ethernet card under Win9X/NT, follow the supplier's instructions for doing so.
2. Add this line to the end of your AUTOEXEC.BAT startup file:

### **WINPKT 0x7e**

Then restart Windows.

3. Insert the Networker and Utilities Disk in the floppy drive and open the 3 1/2" floppy A: window in Windows Explorer, or Windows NT Explorer. Double click on **CNINSTAL.exe (above version 2.3f)**
4. You will be given a choice of platform, e.g.,
  - 3 300 Series
  - 4 400 Series
  - 5 500 Series
  - B Backup PC



O Offline Editor

F File Server

5. To install the File Server, type **F**
  6. If the installation program detects that operating software is present, it will prompt you to load into the same directory. If not, you can specify any directory.
  7. The Strand Lighting licence agreement is displayed on screen. Press any key to scroll the display.
  8. If you agree with the terms of the licence, press **Y**, or press **N** to terminate the installation.
  9. The File Server software will install on your PC.
  10. If the installation was successful, 'Instal Successful' is displayed on screen.
  11. Using Windows Explorer, or WindowsNT Explorer to locate **IOFTP32.EXE** (loaded as part of Networker Utilities), and using the right mouse button, create a shortcut to it on the desktop.
  12. Double-click on the shortcut and you should see a command window with the IOFTP> prompt. If it disappears quickly, the network card could not be accessed. Contact Strand Lighting for assistance.
- 

## Configuring A File Server

The ioftp programs use the 220NODE.CFG file to set its network address, in the same way as consoles and PCs:

```
my_nodeaddr = 192.168.021.66
```

```
my_nodetype = ioftp
```

```
my_nodename = server
```

All consoles and PCs on the ShowNet network which access the file server must name the file server IP address in their own 220NODE.CFG files:

```
file_server_addr = 192.168.021.66
```

To disable file server access at any time, restore this line to its factory default:

```
file_server_addr = 0.0.0.0
```

---

## Operating A File Server

You must first create the directory structure you require to hold your show files, and any other file types you intend to store.

Next, run IOFTPDOS (DOS) or IOFTP32 (Win9x/NT) as described above. Once you can see the #IOFTP# prompt, the file server is working and is ready to be accessed by other ShowNet devices. To check that other ShowNet devices are on line and available, use the WHO command, which gives a similar display to Network Diagnostics at a console:

```
#IOFTP# who
```

NODE_ADDRESS	NODE_NAME	TYPE	STATUS	ETHERNET_ADDRESS	VERSION
192.168.021.66	server	BK_PC	On-Line	00:20:AF:C9:95:A5	2.4
192.168.021.68	console1	550	On-Line	00:20:AF:C9:95:A5	2.4
192.168.021.69	console2	520	On-Line	00:20:AF:C9:95:A5	2.4

```
#IOFTP#
```

---

## Accessing a File Server

All consoles and PCs which have been configured to access the server can view the server's disk drives as easily as viewing their own. Simply go to the Archive display by pressing the Archive key. The file server appears as another drive below the local floppy (A:) and hard (C:) drives.

If the server drive is not visible, try going back to the Live display then reselecting Archive. If it is still not visible, check Network Diagnostics to see if the file server device is there. To connect to the server drive, go to the Browse menu, move the selection bar to the server drive and press \*. After a few seconds, the file server becomes the current drive. Show can be saved to and loaded from the server in the same way as with local drives.

---

## User Logins

One user needs to be responsible for maintaining other users' logins and access rights: this is the administrator. This is the user which is preconfigured with Server software, and is named 'admin' with no password set (although you may prefer to define one!).

Admin is like any other user, and is set with all access rights enabled (as indeed any user can be), but is recognised for special treatment by the software. This includes being allowed to edit any user's access rights at Access Rights setup. More than one admin user can be logged in at the same time.

The following topics are covered in this section:

- [Configuring Logins](#)
- [Configuring Access Rights](#)
- [Console Access Rights](#)
- [Login Display](#)
- [Logging In Without Using the Login Display](#)
- [Seeing Who Else is Logged In](#)
- [Exit Softkey](#)

---

## Configuring Logins

Each user must be named, using up to 8 alpha-numeric characters. This forms the basis of the user configuration file. The admin user's file is called ADMIN.USR, and is supplied with the operating software. You can use this file as a template for all users. The act of creating a new user is simply one of copying ADMIN.USR to, say, FRED.USR.

The user file contains five sections:

1. Password
2. Access rights
3. User setup preferences
4. Last-used show file names
5. Channel partition group

You can edit the password, access rights and partition group channels as required, but a new user can log in if no editing is done; you can change these settings at any time. You can set the initial User Setup values if you like, but the software will rewrite this section when the user logs out. Do not edit the last-used show section - the software does this for you.

Each line in the file starting with # is a comment, and is ignored by the software. The other lines are of the form

## TOKEN = VALUE

Do not change the TOKEN names. If you do, an error ('User file token is invalid') will appear in the status log every time that user logs in. You can change the VALUE however. If you leave the value blank, the existing value for that token in the console will be used; a blank password means that none needs be entered.

It is recommended that all users' access rights are explicitly set, to avoid inheriting too many or too few rights from the previous logged-in user. To find out what user setup values are used in the file, experiment by saving user setup when logging out, and look at the file each time.

---

## Configuring Access Rights

Each user's access rights are defined in their user file. This example shows all access rights enabled; to disable any one, replace the 1 with a 0:

**acc\_record = 1** Can record from Live.

**acc\_patch\_fix = 1** Can patch new fixtures (requires Tracker).

**acc\_spec\_grps = 1** Can change special groups (display, partition, etc).

**acc\_stp\_user = 1** Can change User Setup.

**acc\_stp\_show = 1** Can change Show Setup.

**acc\_stp\_cons = 1** Can change Console Setup.

**acc\_cons\_mode = 1** Can change console mode at the login display.

**acc\_printer = 1** Can use the printer.

**acc\_show\_loc = 1** Can save or delete shows on local disk drives.

**acc\_show\_svr = 1** Can save or delete shows on the server disk drives.

**acc\_chan\_ctrl = 1** Can use channel control to set levels.

**acc\_playback = 1** Can run cues on the X playbacks.

---

## Console Access Rights

Each console as well as each user has a login configuration file. This allows physical consoles to have particular rights, irrespective of who logs in. For example, a designer's console may have all channel control disabled.

Console files are in the same format as .USR files: they are called .CON files instead. The name should match the ShowNet node name defined in the 220NODE.CFG file. The console called MAIN will need a file called MAIN.CON. A default file is installed with the operating software to act as a template: its name is CONSOLE.CON. This file is used if no specific .CON files are created. You can create a .CON file for each console and PC by copying CONSOLE.NEW, which is created with the software.

To set up a new console's access rights, copy the CONSOLE.NEW file to <node name>.CON, and edit the access rights as required. Note that there is no password line, as consoles don't log in with passwords. User access rights are combined with console access rights at login time as follows (the combination of the current user and console is always shown at the Access Rights setup display):

### **COPY CONSOLE.NEW CONSOLE1.CON**

**Note:** *If either user or console access rights disable a feature, then the feature is disabled. A feature is only enabled if both user and console access rights enable it.*

The other sections of the console file are ignored if user logins are enabled: the settings are taken from the user file instead. If user logins are disabled, and the Server application is installed, then the settings in this file are used.

## **Login Display**

The login display is enabled by first editing the 220NODE.CFG file:

```
login_display = 1
```

The login display provides user login validation, mode changing (easier than editing 220NODE.CFG), and quick re-loading of the user's last-saved show. When all entries have been made, pressing the LOGIN soft key accepts them. If any entries cannot be accepted (eg. incorrect password), an error message is displayed and the screen stays displays. Otherwise, the console Live display appears.

**User name:** chosen from a list of all the .USR files found in the program directory.

**Password:** must match the entry in the user's .USR file. If this entry is blank, nothing has to be typed.

**Mode:** available modes are MAIN, OFFLINE, BACKUP and REMOTE

MAIN The console starts with outputs active, and can accept logins from other consoles or PCs

OFFLINE The console start with all outputs disabled, but the file server can still be accessed. In all other respects, the console behaves as an Offline Editor (except that networking is enabled, but no network video or mux is transmitted).

BACKUP The console will associate itself with the main console chosen elsewhere on the screen. This console's status is shown in yellow, and must display as on-line for the backup console to connect to it.

REMOTE The console will log in as a remote console to the main console chosen elsewhere on the screen. This console's status must display as on-line, and there must be room for another user to log in, otherwise this console's login will be refused. The user will share the show currently loaded in the selected main console.

**Main console:** this selects a console from those detected on the ShowNet network, for connection in Backup and Remote modes. There is no need to define this list anywhere - the system detects it for

you.

**Show to load:** a value of 0 will not load a show when the LOGIN soft key is pressed. A value of 1 to 5 will select the show of that number from the list at the bottom of the screen, which are the shows that the user last saved. This is a quick way of returning to work on your last show -but remember that any show already in the main console you are logging in to will be replaced by this new show, so all users need to agree on the use of this facility. The initial values for these fields come from the 220NODE.CFG file.

---

## Logging In Without Using The Login Display

If you want to start a console with one user's settings, you can disable the login display and specify a user name and optional password by editing the 220NODE.CFG file:

```
login_display = 0
user_name = fred
user_pw = letmein
```

---

## Seeing Who Else Is Logged In

To find out who else is logged in to the main console you are using, you can look at Network Diagnostics (via the soft key at the REPORT display). The logged-in users are coded C1 (always the main console), C2, C3 etc (other remotes), and are marked with their user and node names in 'user@node' format.

You can also press SHIFT and MORE together to look at the next user's current display. The console is identified on the display panel under the wheel bar. Keep pressing [**SHIFT**] [**MORE**] to get back to your own display.

---

## The Exit Soft Key

When the login display is disabled in 220NODE.CFG, pressing the **{EXIT}** soft key at the Report Menu display results in a prompt to press it again to confirm shutting down the console.

When the login display is enabled in 220NODE.CFG, pressing the EXIT key provides a range of softkeys as follows:

**{LOGOUT}** Takes you back to the login display

**{SHUT DOWN}** Shuts the console down and returns to DOS

**{SAVE SETUP}** If you have changed your User Setup, you are prompted to save it by pressing this soft key. If you do, your User Setup preferences will be restored at your next login. If you do not, your

User Setup changes will be lost. Other Setup screens are not affected by this.

**{SAVE SHOW}** If you have changed any other show data, you are prompted to save the show by pressing this soft key. If you do, the show file for the current working show will be updated. If you do not, the working show remains in the console (in the .DAT files) until it is changed or replaced with an other show, but its show file will not have been updated.

If you are shutting down a main console which still has other users logged in, you are warned that you will log them out too

---

## Integrating File Server and Logins

If you have a file server, you can take advantage of the centralisation and security it offers to help manage your user and console configuration files. This is particularly important if your network has several consoles or PCs. Automatic downloading of configuration files over the network itself beats walking round with floppy disks!

First, set up directories on the file server to hold all your .USR and .CON files. Then modify, or create the USERINIT.BAT file in all the consoles to automatically download their own .CON file and all .USR files when they start up, as in the following examples.

Let's say that your server has these directories:

**c:\ioftp** Where ioftpdos or ioftp32 has been installed

**c:\users** Where all your .USR files are kept

**c:\consoles** Where all your .CON files are kept

Assuming that the server's node name is SERVER, add these lines to console MAIN's USERINIT.BAT file:

**CALL NETON**

**IOFTPDOS login SERVER cd c:\users get \*.usr .cd c:\consoles get main.con .**

**CALL NETOFF**

This procedure will download all user login files and console main's login file every time the operating software starts. Remember that all .USR files must be present on all consoles and PCs which support logins, but each one only needs its own .CON file.

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## Macros

Macros let you record and then play back a regularly used sequence of commands. For example, you could record a macro with the commands to load and then run a particular cue. Running this macro will then replay all of these commands. Macros can be recorded from any display and then played back using a macro playback key or a macro playback command, or by assigning the macro to a cue or submaster. Once recorded, they can be viewed and edited in the Macro display.

With the optional A4 or A3 macro tablet, you can activate up to 1600 macros using a pen or pointing device on a macro button grid placed on a Wacom Intuos or Concept 2012 A4 graphic tablet. There are up to 3000 macros numbered 0 to 2999. Each macro can contain up to 120 keys. Most keys can be recorded into a macro. Trackball movements can also be recorded, but you cannot use the wheels, faders and rotaries within a macro. You must use the numeric keypad to enter numbers. A macro cannot call another macro.

This chapter contains the following topics:

- [Macro Properties](#)
- [Pre-Assigned Macros](#)
- [Learning a Macro](#)
- [Deleting a Macro](#)
- [Running a Macro Manually](#)
- [Running a Macro Automatically](#)
- [Viewing Macros](#)
- [Creating a New Macro](#)
- [Editing Macros](#)
- [Macro Tablet](#)

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## Macro Properties

Macros have only one property which can be specified when recording or edited later. You can record a text label (caption) with each macro to help identify the macro.

In the text label for a macro, any text after an exclamation point will be sent to the Macro Trigger Output port if you have the CommuniquéPro software, the [Macro Trigger Output](#) field in the Console Setup Screen is set to On and the associated Net Node, Port, Baud and Config fields are set up correctly. Refer to [ASCII Remote Control Output](#)



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## Pre-Assigned Macros

There are up to 3000 macros numbered 0 to 2999. Macros 951 to 964 are reserved as macros P1 to P14. You can access these macros directly using **[P1]** through **[P14]**, or through the numeric keypad as macros 951 to 964.

Macros 971 to 984 are reserved as macros SP1 to SP14. You can access these macros directly using **[SHIFT] [P1]** through **[SHIFT] [P14]**, or through the numeric keypad as macros 971 to 984.

Keys **[P8]** through **[P14]** and **[SHIFT] [P8]** through **[SHIFT] [P14]**, are available only on 520 and 300 series consoles. However you can access these macros from the keyboard on 530 and 550 consoles using 958 to 964 and 978 to 984 respectively.

Macros 991 to 996 are reserved as macros LCD1 to LCD6. You can access these macros directly through the centre LCD buttons (or the first four through the four centre unlabelled keys in consoles with only 2 LCD displays), or through the numeric keypad as macros 991 to 996.

Macro 998 is reserved for the USER macro. You can access this macro directly using **[USER]**, or through the numeric keypad as macro 998.

Macro 999 is reserved for the SUSR macro. You can access this macro directly using **[SHIFT] [USER]**, or through the numeric keypad as macro 999.

Macros 891 to 894 are reserved as HHM1 to HHM4, for the function keys F1 to F4 on [R120](#), [R130](#) Remote Handheld Units. HHM1 to HHM3 only can be fired from F1 to F3 on a [Designer's](#) Remote Hand-Held units.

The twelve keys on the front of a 300 Series LCD Monitor are used to fire preset macros. The number of LCD monitors fitted is detected by the software and the preset macros reserved as follows:

- 1 LCD Monitor - 12 macros numbered 901 - 912 V1 - V12
- 2 LCD Monitors - 24 macros numbered 901 - 924 V1 - V24
- 3 LCD Monitors - 36 macros numbered 901 - 936 V1 - V36
- 4 LCD Monitors - 48 macros numbered 901- 948 V1 - V48

Note: after loading from a pre version 2.0 show file, the macro key macros may go to the wrong place as follows:

- Original P1-7 (macros 991-997) becomes LCD1-6 and 997
- Original LCD1-6 (macros 981 -986) becomes SP11-14, 985, 986
- Original SP1-7 (macros 971-977) remain the same
- Original USER (998) remains the same.

To overcome this problem, load the whole show, then clear macros 971-997 at the Archive Clear display, then load macros 981-986 starting from 991 and macros 991-997 starting from 951.

---

## Learning a Macro

Before a Macro can be used it must first be recorded. You can record a macro from any display by using the Learn command, or you can record or edit a macro from the Macros display.

This section shows how to use the Learn command to record a macro. Before you start recording a macro, make sure that you are in the display from which you want to play back the macro. Or make sure that the first keystroke puts you into the correct display. This is particularly important if soft keys are used in the macro since these will generally have a different effect if the macro is played in another display.

**[MACRO] # {LEARN} {LEARN} or key {LEARN} {LEARN}**

(key represents the actual LCD key, P key, or User key).

This starts recording the specified macro.

**Note:** **[MACRO]** is at the bottom of the console. Do not confuse this with **[MACRO]** in the display keypad. **{LEARN}** is a soft key which appears when you press **[MACRO]**.

Press the keys you want to record into the macro. To finish the macro recording, press **[MACRO] [MACRO]** .

While the macro is being recorded the display prompt shows 'MACRO LEARN' in flashing red as a reminder.

**Note:** The macro actions will be carried out while recording is in progress. Up to 120 keys can be recorded in a macro; recording automatically finishes if this limit is reached.

**[MACRO] [2] [4] {LEARN} [CUE] [2] [0] [GO] [MACRO] [MACRO]**

Records Macro 24 to run cue 20.

**Note:** Macros containing **[SHIFT]** get stuck in shift mode, as if the key is held down permanently, e.g., **[CUE][ [SHIFT] [NEXT] [RECORD]**. In order to overcome this problem, add another **[SHIFT]** key after the key on which it operates, e.g., **[CUE] [SHIFT] [NEXT] [SHIFT] [RECORD]**

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## Deleting a Macro

Macros can be deleted from any display. This is a good way to delete macros if you are only going to delete a few. For information on how to delete all macros or a range of macros from the Archive display refer to [Clear Operations](#)

### **[MACRO] # {DELETE}** *All Modes*

This deletes the specified macro. You will be prompted to press the **{DELETE}** key a second time to confirm the deletion. **{DELETE}** is a soft key which appears when you press **[MACRO]** .

### **[MACRO] [2] [4] {DELETE} {DELETE}** *All Modes*

Deletes macro 24.

---

## Running a Macro Manually

Recorded macros can be started manually, linked to a submaster, or cue, run at console power-up or run at a preset time. Macros cannot be run while you are in the macro display, but they can be run from any other display.

### **[MACRO] # [\*]**

This runs the specified macro.

### **[MACRO] [2] [4] [\*]** *All Modes*

Runs Macro 24.

If the macro does not exist you will get a warning beep. Any errors encountered while a macro is running are ignored, but the remainder of the macro will still run.

### **[P1] through [P14]**

Shortcuts for macros 951... 964. Pressing these runs the macro the same as using **[MACRO] # [\*]**.

### **[P1]**

Runs macro 951 (P1)

**Note:** **[P8] through [P14]**, and therefore the associated macros, are available only on 510 and 520 series consoles.

### **[SHIFT] [P1] through [SHIFT] [P14]**

Shortcuts for macros 971... 984. Pressing these runs the macro the same as using **[MACRO] # [\*]**.

### **[SHIFT] [P1]**

Runs macro 971 (macro SP1).

**Note:** **[SHIFT] [P8]** through **[SHIFT] [P14]**, and therefore the associated macros, are available only on 510 and 520 series consoles.

**[MACRO 982]** etc

The soft keys under the centre LCD are shortcuts for macros 991... 996. Pressing these runs the macro the same as using **[MACRO] # [\*]**.

**{MACRO 982}**

Runs macro 982 (macro LCD2).

**[USER]**

Shortcut for macro 998. Pressing it runs macro 998 the same as using **[MACRO] [9] [9] [8] [\*]**.

**[USER]**

Runs Macro 998 (macro USER).

---

## Running a Macro Automatically

You can start macros with cues by assigning the macro to a cue. To learn how to assign macros to cues, refer to [Assigning a Macro](#).

You can control macros with submasters by assigning the macro to a submaster. Moving the submaster away from zero starts the macro. To learn how to assign macros to submasters, turn to [Assigning Effects and Macros](#).

A macro can be configured to run automatically at power up. To learn how to run a macro at power up, refer to [Power Up Macro](#) in the Show Setup Screen. A macro can be run at a certain time of days. There can be up to 4 At Time macros, which are configured in the [At Time Macros Window](#) of the Show Setup Screen.

When a macro runs automatically, it uses a command line as determined by [Cue Sheet Macros](#) in the Show Setup Screen. **MAIN CONSOLE** runs it on the main console command line, to allow screen editing operations. **LAST HANDHELD** runs it on the last available handheld command line, when console command lines and displays must not be changed.

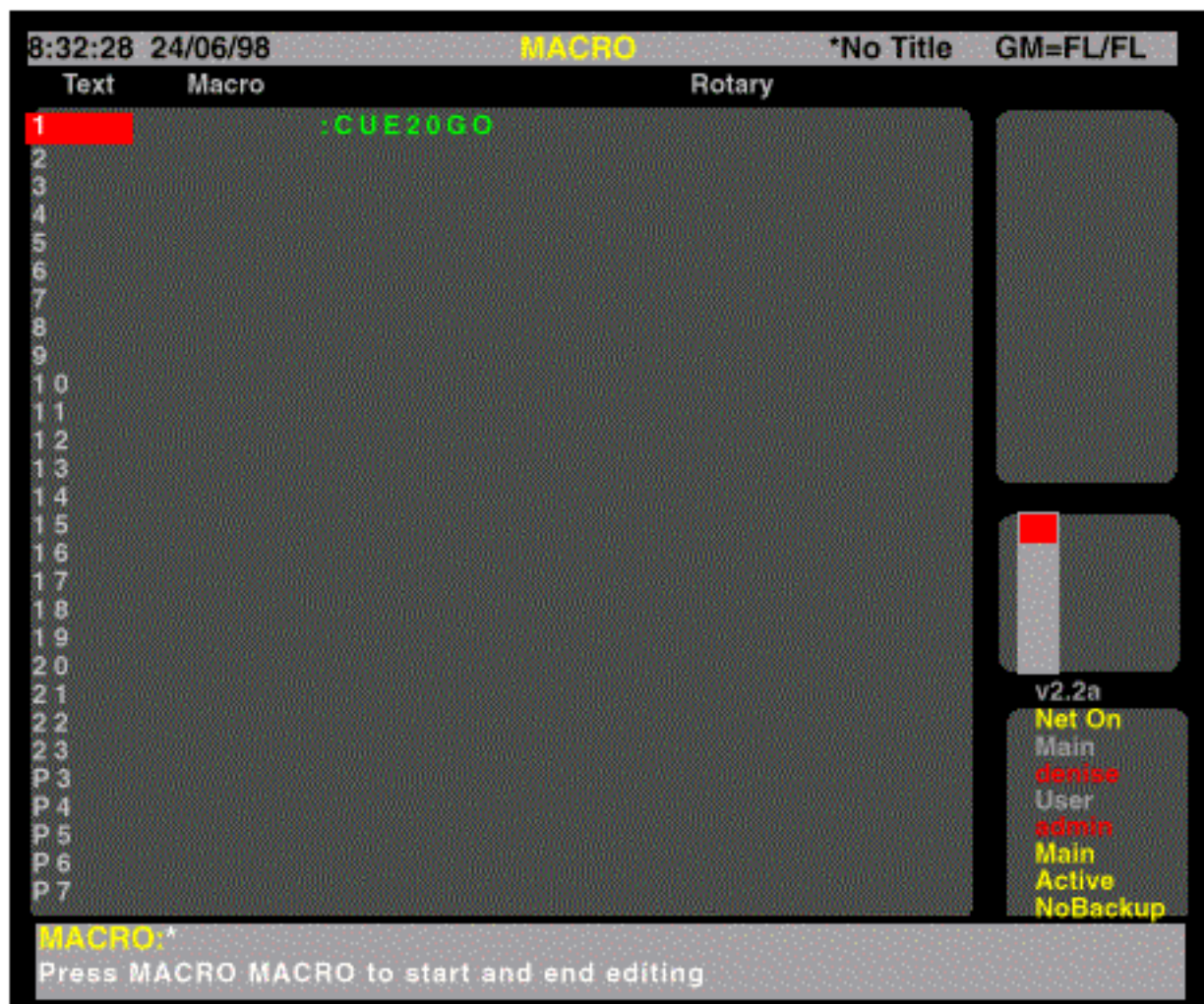
---

## Viewing Macros

You can view and edit macros in the Macro display. To show the Macro display press **[MACRO]** in the Display keypad (not **[MACRO]** in the Levels keypad).

The Macro display Levels screen is the same as the Live display and is not used by macros.

The Macro display State screen shows the contents of the macros. The current macro is highlighted with a red background. There is one macro per line, and the left hand side identifies the macro.



# The macro number from 0 to 1999

P1 through P14

**[P1]** through **[P14]** key macros (same as macro 951... 964).

SP1 through SP14

**[SHIFT] [P1]** through **[SHIFT] [P14]** key macros (same as macro 971... 997).

LCD1 through LCD6

Middle LCD key macros (same as macro 991... 996). On 510 and 520 series consoles there are only 4 keys, associated with LCD1 through LCD4, and they are located over the Record keypad.

USER

**[USER]** key macro (same as macro 998).

The title bar shows the date and time, display name, show name, and grandmaster status. The date and time format can be set in the Console Time window of the Show Setup Screen. The show name is preceded by an asterisk (\*) when changes have been made to the show since you last saved it.

The Wheel window at the right shows the position within the macros. The number shows the index of the current macro, for example the first, second, and third macro (even if their numbers are 1, 971, and 982) have indexes 1, 2, and 3. The index is independent of the macro number.

When the console is first powered up or the whole show is cleared, the SP2-SP7, P1 to P7, and USER macros (macro numbers 972... 977, 991... 997, and 998) are present but with no contents.

To go directly to a macro, press **[MACRO] # [\*]** where # is the macro number. If the macro does not exist, you will be warned that you are creating a new item. Press **[\*]** again to create the new macro, or **[CLR]** or **[UNDO]** to cancel the command. To move between existing macros, use the Trackball.

## Creating a New Macro

To create a new macro while you are in the Macro display, press **[MACRO] # [\*]** where # is the new macro number. You will be warned that you are creating a new item. Press **[\*]** again to create and display the new macro or **[CLR]** or **[UNDO]** to cancel the command.

To switch to the Macro display and create a new macro, press **[MACRO] [MACRO] # [\*]** where # is the new macro number. You will be warned that you are creating a new item. Press **[\*]** again to create and display the new macro or **[CLR]** or **[UNDO]** to cancel the command.

The **[MACRO]** display key is at the top of the console. Do not confuse it with the lower **[MACRO]** key. Creating a macro automatically puts it into edit mode.

## Editing Macros

The macro contents are shown in red as the macro is being edited.

**[MACRO] [MACRO]** puts the macro into editing mode. To start editing, select the macro with the Trackball and then press **[MACRO] [MACRO]**.

**[MACRO] # [\*]**, **[P1]** or **[SHIFT] [P1]** or **[USER]** selects an existing macro and starts editing (you don't have to press **[MACRO] [MACRO]**). If the macro does not exist, it creates the macro and starts editing. Once the macro is in editing mode, keys, and Trackball movements, are recorded onto the end of the current contents.

To stop recording, press **[MACRO] [MACRO]**

**Note:** *The actions will not be carried out while editing. You can record up to 120 keys in a macro. Editing automatically finishes if this limit is reached.*

**[MACRO] [2] [4] [\*] [CUE] [2] [0] [GO] [MACRO] [MACRO]**



This adds the keystrokes into macro 24 that will run cue 20.

**[CLR]** deletes the last key while editing the macro. This key cannot be recorded into the macro while editing it although it can be recorded by **[MACRO] # {LEARN}**.

## Macro Tablet

This section covers the following topics:

- [Setting Up the Macro Tablet](#)
- [Using the Macro Tablet](#)
- [Fitting the Macro Tablet Template](#)
- [Defining, Learning, Editing and Deleting Macro Tablet Macros](#)

### Setting Up the Macro Tablet

A Wacom Intuos A4 A4 Oversize or A3 graphic tablet can be used with the main console, or a net node on the COM1 or COM2 port.

When the [Macro Tablet](#) field of the User Setup Screen is set to INTUOUS A4 INTUOUS A4 OS or INTUOUS A3 and the PORT field set to COM1 or COM2, you can define macros and activate them from a A4 or A3 macro tablet overlay.

A number of different standard overlays are available on the version 2.4 CD. The overlay to use depends on the setting of the MACRO TABLET and MODE fields of the User Setup Screen, as follows.

Macro Tablet	Mode	Grid to Use	No. of Macros
INTUOS	MACRO (LOW)	20 x 10	200
INTUOS	MACRO (MED)	20 x 20	400
INTUOS	MACRO (HIGH)	40 x 20	800
CONCEPT A4	MACRO (LOW)	20 x 10	200
CONCEPT A4	MACRO (MED)	20 x 20	400
CONCEPT A4	MACRO (HIGH)	40 x 20	800
INTUOS A4 OS	MACRO (LOW)	20 x 16	320
INTUOS A4 OS	MACRO (MED)	20 x 32	640

INTUOS A4 OS	MACRO (HIGH)	40 x 32	1280
INTUOS A3	MACRO (LOW)	20 x 20	400
INTUOS A3	MACRO (MED)	20 x 40	800
INTUOS A3	MACRO (HIGH)	40 x 40	1600

## Fitting the Macro Tablet Template

1. Insert template under protective screen.
2. The top of the template should align with the bottom of the Graphic Tablet "Quick Point Area".
3. The top markers on the template should align with the markers on screen.
4. This gives left/right alignment only.
5. Let the template and protective screen drop down
6. The crosshair markers in the lower section of the screen should align with the template, although some fine adjustment may be required.

---

## Using the Macro Tablet

The top left macro button on all macro tablet overlays is pre-defined as Macro number 1001. All other macro tablet buttons are pre-defined in rows from left to right, so the bottom right macro button on a 1600 macro overlay is Macro 2600.

You can activate each macro simply by touching the macro button using the macro tablet pen, or pointing device. This is the same as pressing the **[MACRO]** button on the console, followed by the macro number.

---

## Defining, Learning, Editing and Deleting Macro Tablet Macros

Macros assigned to the macro tablet are defined, learned, edited and deleted in the same way as macros assigned to the console. Refer to instructions contained in this section.

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## R120 Handheld Remote



This section refers to the following remote handhelds for use with the Strand 300, 400 and 500 series consoles using GeniusPro or Lightpalette software:

Part Number	Description	Contents
66129	Wired Remote UK/EU	Wired Remote
66126	Radio Remote UK	418 MHz for UK (MPT 1340) Battery Charger - 230v 13 AMP PSU
66124	Base Station UK	418 MHz for UK (MPT 1340) Base Station Cable
66127	Radio Remote EU	433.92 MHz for Europe (ETS 300- 220) Battery Charger - 230v Euro PSU
66123	Base Station EU	433.92 MHz for Europe (ETS 300-220) Base Station Cable

- All parts require Operating Software V1.4 or later. Please contact your dealer or Strand if you do not have this software.
- Check with local licensing authority before using radio units outside licence exempt areas.

This section covers the following topics:

- [Installing and Configuring the R120 Handheld Remote](#)

- [Operating the R120 Handheld Remote](#)
- 

## Installing and Configuring the R120 Handheld Remote

This section describes the installation and configuration of the following:

- [Installing the R120 Wired Remote](#)
  - [Installing the R120 Radio Base](#)
  - [Installing the R120 Radio Handheld Remote](#)
  - [R120 Base Pinouts](#)
- 

### Installing the R120 Wired Remote

1. Plug wired remote into console Aux port (only AUX3 is allowed on older consoles).
  2. At Operating Software setup screen set “Handheld Remote” to “R120 Wired” and set the port that the handheld remote is plugged into.
  3. Display will illuminate and keys become active.
  4. Channels under remote control will be displayed in purple on console screens.
  5. Simultaneously press and hold “.” and “\*” keys (2 bottom right keys) to adjust display contrast using up and down keys.
- 

### Installing the R120 Radio Base

1. Plug radio base station into console Aux port (only AUX3 is allowed on older consoles).
  2. Red power LED on base will illuminate.
  3. At the Console Setup screen [Handheld Remote Communications Setup](#) set “Handheld Remote” to “R120 Radio” and set the Net Node, Port, Baud and Configuration Address.
  4. Green TX LED will flash approximately once per second.
- 

### Installing the R120 Radio Handheld Remote

1. Connect radio handheld to power supply for 12 hours to achieve full charge.
2. Press "On" key (top right) to power up handheld unit.
3. Display should illuminate and keys become active.
4. Handheld will display " Unit Address n" for approximately 3 seconds. Change the unit address to match the address set at the console by pressing number keys 1 to 8 within first 3 seconds. Adjust display contrast using up and down keys.
5. Unit address and contrast can be changed at any time by simultaneously pressing and holding "." and "\*" keys (2 bottom right keys).
6. Channels under remote control will be displayed in purple on console screens.
7. Unit auto powers down after a period of inactivity or can be manually powered down by simultaneously pressing and holding "." and "\*" keys (2 bottom right keys) then pressing "On" key (top right).
8. Unit will "beep" every 3 seconds when battery power is low and recharge required.

## R120 Base Pinouts

6 pin XLR male	RS232 Signal Name
Pin 1	Ground & Screen
Pin 2	+10V Power Input
Pin 3	N/C
Pin 4	N/C
Pin 5	RX [data to base/handheld]
Pin 6	TX [data from base/handheld]

## Operating the R120 Handheld Remote

Examples of basic operation when in Single Digit Direct Entry mode are given below. For further details regarding specific commands, refer to the appropriate section in the Table of Contents or Index.

### Level Setting

[1][@][5] Direct 1 Digit  
 [1][@][50][\*] Command Line  
 channel 1 at 50%

[2][+][9][@][4] Direct 1 Digit  
 [2][+][9][@][4][0][\*] Command Line  
 channels 2 & 9 at 40%

**[9][THRU][1][2][@][4]** Direct 1 Digit  
**[9][THRU][1][2][@][4][0][\*]** Command Line  
 channels 9 thru 12 at 40%

**[@][5]** Direct 1 Digit  
**[@][5][0][\*]** Command Line  
 set 50 %

**[ON]** All Modes  
 set on level

**[FULL]** All Modes  
 set 100% level

**Up** All Modes  
 increase level

**Down** All Modes  
 decrease level

**[NEXT]** All Modes  
 next channel if channel currently selected else next cue

**[LAST]** All Modes  
 last channel if channel currently selected else last cue

**[REM-DIM]** All Modes  
 selected channels to on level and all other channels off

## Recording & Playback

**[REC][CUE][1][\*]** All Modes  
 record cue 1

**[CUT][CUE][1][\*]** All Modes  
 cut to cue 1

**[GO]** All Modes  
 run next cue

## Function Keys [F1] to [F4]

The functions of keys **[F1]** to **[F4]** are determined by a combination of the **[F5] SHIFT** softkey and the **[F1] MODE** softkey, which is available when the **[F5] SHIFT** softkey is selected. There are three Live Menus and one Patch Menu which are toggled using the **[F1] [F5]** key combination. One of the Live menus enables you to fire the pre-assigned macros **HMM1**, **HMM2**, **HMM3** and **HMM4** (refer to [Pre-Assigned Macros](#)). The combination of the **[F5] SHIFT** and **[F1] MODE** softkey allows you to access the additional softkeys in Live or Patch mode.

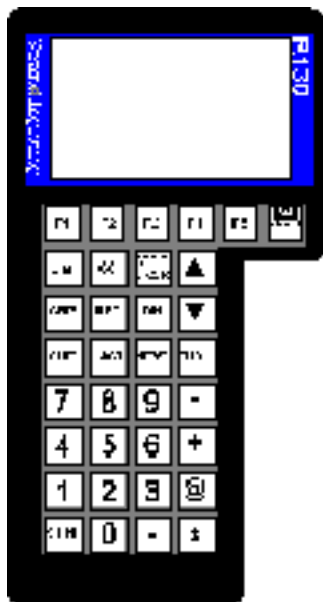
**[F2] PROF, [F3] GROUP, [F4] DELAY**

**[F1] GOTO, [F2] DIMMER, [F3] WAIT**

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## R130 Handheld Remote



This section refers to the following remote handhelds for use with the Strand 300, 400 and 500 series consoles and GeniusPro or Lightpalette software:

Part Number	Description	Contents
66128	Wired Remote NA	Wired Remote
66125	Radio Remote NA	902-928 Mhz for USA (FCC License exempt} Battery Charger - 120v PSU Belt Holster, Wrist Strap
66121	Base Station NA	902-928 Mhz for USA (FCC License exempt} Battery Eliminator - 120v PSU Base Station Cable

- All parts require Operating Software V1.4 or later. Please contact your dealer or Strand if you do not have this software.
- Check with local licensing authority before using radio units outside licence exempt areas.

This section covers the following topics:

- [Installing and Configuring the R130 Handheld Remote](#)
- [Operating the R130 Handheld Remote](#)

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## Installing and Configuring the R130 Handheld Remote

This section describes the installation and configuration of the following:

- [Installing the R130 Wired Remote](#)
  - [Installing the R130 Radio Handheld Remote](#)
  - [Installing the R130 Radio Base](#)
  - [R130 Base Pinouts](#)
- 

## Installing the R130 Wired Remote

1. Plug wired remote into console Aux port (only AUX3 is allowed on older consoles).
  2. At Console Setup screen, [Handheld Remote Communications Setup](#) set “Handheld Remote” to “R130 Wired”, and set the Net Node, Port, Baud Rate and Configuration Address.
  3. Display will illuminate and keys become active.
  4. Channels under remote control will be displayed in purple on console screens.
- 

## Installing the R130 Radio Handheld Remote

1. Remove rear cover from handheld by loosening two Phillips screws and connect re-chargeable battery pack. Replace cover.
2. Connect radio handheld to power supply for 12 hours to achieve full charge.
3. Press “On” key (top right) to power up handheld unit and hold down “CLR” (bottom left) & “\*” (bottom right) keys as unit powers up to gain access to setup menus.
4. Using setup menu set COMS as follows :-

Radio Channel: 4 (default)  
Radio Sub-Channel: 1 (default)  
Internal Radio Sn: xxxxxxxx (can't change this - write it down)  
Destination Sn: xxxxxxxx (read from label on base station)  
Display Serial Errors: No (default)  
Aud Serial Errors: No (default)  
Support XON/XOFF: No (default)  
Exit & Store Changes: Yes

5. Press “On” key (top right) twice to power down unit.
-



## Installing the R130 Radio Base

1. Write down serial number of base station xxxxxxxx - you will need it later.
2. Connect PSU to base station & red power LED will illuminate.
3. Plug radio base station into console Aux port (only AUX3 is allowed on older consoles).
4. At Console Setup screen, [Handheld Remote Communications Setup](#), set "Handheld Remote" to "R130 Radio" and set and set the Net Node, Port, Baud Rate. Set the configuration address (8 digit number, up to 4 digits In the left field and 4 digits in the right field) to "Internal Radio Sn" previously recorded.

## R130 Base Pinouts

6 pin XLR male	RS232 Signal Name
Pin 1	Ground & Screen
Pin 2	+10V Power Input
Pin 3	N/C
Pin 4	N/C
Pin 5	RX [data to base/handheld]
Pin 6	TX [data from base/handheld]

## Operating the R130 Handheld Remote

Examples of basic operation when in Single Digit Direct Entry mode are given below. For further details regarding specific commands, refer to the appropriate section in the Table of Contents or Index.

### Level Setting

**[1][@][5]** *Direct 1 Digit*

**[1][@][50][\*]** *Command Line*

channel 1 at 50%

**[2][+][9][@][4]** *Direct 1 Digit*

**[2][+][9][@][4][0][\*]** *Command Line*

channels 2 & 9 at 40%

**[9][THRU][1][2][@][4]** *Direct 1 Digit*

**[9][THRU][1][2][@][4][0][\*]** *Command Line*

channels 9 thru 12 at 40%

**[@][5]** Direct 1 Digit

**[@][5][0][\*]** Command Line

set 50 %

**[ON]** All Modes

set on level

**[FULL]** All Modes

set 100% level

**Up** All Modes

increase level

**Down** All Modes

decrease level

**[NEXT]** All Modes

next channel if channel currently selected else next cue

**[LAST]** All Modes

last channel if channel currently selected else last cue

**[REM-DIM]** All Modes

selected channels to on level and all other channels off

## Function Keys [F1] to [F4]

The functions of keys [F1] to [F4] are determined by a combination of the [F5] **SHIFT** softkey and the [F1] **MODE** softkey, which is available when the [F5] **SHIFT** softkey is selected. There are three Live Menus and one Patch Menu which are toggled using the [F1] [F5] key combination. One of the Live menus enables you to fire the pre-assigned macros **HHM1**, **HHM2**, **HHM3** and **HHM4** (refer to [Pre-Assigned Macros](#)). The combination of the [F5] **SHIFT** and [F1] **MODE** softkey allows you to access the additional softkeys in Live or Patch mode.

**[F2] PROF, [F3] GROUP, [F4] DELAY**

**[F1] GOTO, [F2] DIMMER, [F3] WAIT**

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## Designer's Remote



This section refers to the Designer's Remote for use with the Strand 300, 400, and 500 series consoles and GeniusPro or Lightpalette software:

### Installing the Designer's Remote

Plug wired remote into console Aux port (only AUX3 is allowed on older consoles).

At Console Setup Screen set "Handheld Remote" to DESIGNERS and set the Net Node, Port, Config and Address for the remote. (Refer to [Handheld Remote Communications Setup](#))

1. Display will illuminate and keys become active.
2. Channels under remote control will be displayed in purple on console screens.
3. To alter the display contrast use the thumbwheel on the right-hand side of the unit.

---

### Operating the Designer's Remote

Operation of the Designer's Handheld Remote uses the same syntax as the command line on the main console. A few examples of commands when the console is set to Command Line mode are shown below.

Refer to Alternative keys to use the alternative function for keys having a function, in blue, above the main key function in grey.

**Note:** From Version 2.4, the F1 to F4 keys on all handhelds will fire pre-assigned macros HHM1 to HHM4 (Refer to [Pre-Assigned Macros](#))

## ***Setting Levels***

### **1 @ 5 \***

Set channel 1 to 50%

### **2 + 9 @ 4.5 \***

Set channels 2 and 9 to 45%.

### **9 THRU 12 @ 4 \***

Set channels 9 through 12 to 40%

### **@ 5 \***

Set current selection to 50%

### **ON**

Set current selection to ON level

### **FULL**

Set current selection to 100%

▲ Increase level(s) of the current selection.

▼ Decrease level(s) of the current selection.

### **NEXT**

Next channel if a channel is selected, otherwise next cue.

### **LAST**

Last channel if a channel is selected, otherwise last cue.

### **REM-DIM**

Set current selection to On and turn all other channels Off.

## ***Recording & Playback***

### **RECORD CUE 1 \***

Record current levels into cue 1.

### **GO**

Run the next cue on X PLAYBACK 1.

---

## **Alternative Keys (using 0 (SHIFT))**

### **1 \* 0 @FULL**

Sets channel 1 to Full

### **1 @ 5 0 UPDATE CUE 6 \***

Updates channel 1 at 50% in cue 6 (Direct Digit 1 mode only)

**1 @ 50 0 UPDATE CUE 6 \***

Updates channel 1 at 50% in cue 6 (Direct Digit 2 mode only)

**1 @ 50 \* 0 UPDATE CUE 6 \***

---

## Function Keys [F1] to [F3]

On an empty command line, the functions of keys [F1] to [F3] are determined by a combination of the [0] SHIFT key and the [DISPLAY] key which alternates between additional function softkeys and softkeys which will fire the pre-assigned macros **HHM1**, **HHM2** and **HHM3** (refer to [Pre-Assigned Macros](#)) The combination of the [0], [DISPLAY] and [F1] **MODE** softkey allows you to access the additional softkeys in Live or Patch mode.

[F2] PROF, [F3] GROUP,

[F1] GOTO, [F2] DIMMER, [F3] WAIT

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---

## The Archive Screen

The Archive Screen is divided into two windows.

- [The Archive Selection Window](#)
- [The Show List Window](#)

8:32:28 24/06/98 **ARCHIVE** \*No Title GM=FL/FL

**Archive Selection**

SELECT	PAGE	FIRST	LAST	NUMBER FROM
<input checked="" type="checkbox"/> Patch	ALL	1	2348	FROM
<input type="checkbox"/> Cues		0.1	999.9	0.1
<input type="checkbox"/> Groups		1	999.9	1
<input type="checkbox"/> Effects		1	600	1
<input type="checkbox"/> Macros		0	999	0
<input type="checkbox"/> Profiles		1	99	1
<input type="checkbox"/> Events		1	3000	
<input type="checkbox"/> Submasters	ALL	1	30	
<input type="checkbox"/> Fixtures		1	99	
<input type="checkbox"/> ATC Pages		1	99	
<input type="checkbox"/> Setup		USER	CONSOLE	

WHOLE SHOW

**Floppy Disk A:1**

Show	Cues	Date	Time	Filename	Backups
(A:)					
(C:)					

Current Show (Show to Save):  
No Title  
01/02/99 14:10

Show to Load/Copy/Delete/Restore:  
(.ssf)

v2d2+  
Net On  
Main  
Denise  
User  
admin  
Main  
Active  
NoBackup

**ARCHIVE**  
Select for Archive using + and - keys

### The Archive Selection Window

The Archive Selection window controls the parts of the show that are loaded, printed or cleared. Saving a show always saves all show information.

To select a field, use the Trackball to move the red cursor to the field and use the Level Wheel, or **[+]**, or **[-]** to enable it (put a tick mark next to it) or disable it (clear the tick mark). Type the desired numbers in the **FIRST**, **LAST**, and **NUMBER FROM** fields.

**Whole Show:** This includes the patch, cues, submasters, effects, fixtures, and macros. It does not include the Report Log or Setup.

**Patch:** The two patches as configured in the Patch display (Only one patch on 300 Series consoles).

**Cues:** The recorded cues from the Cue/Preview display. A cue range can be specified so that you can load a partial show. Initially this is from 0.1 to 999.9 and selects all cues with their parts.

**FIRST:** The first cue in the range from 0.1 to 999.9. Initially set to 0.1.

**LAST:** The last cue in the range from 0.1 to 999.9. Initially set to 999.9.

**NUMBER FROM:** Renumbers the specified range of cues starting with this number. This lets you load cues from other shows without erasing the same numbered cues in the current show.

**Groups:** The recorded groups from the Group display. A group range can be specified. Initially this is from 1 to 999.9 and selects all groups.

**FIRST:** The first group in the range from 1 to 999.9. Initially set to 1.

**LAST:** The last group in the range from 1 to 999.9. Initially set to 999.9.

**NUMBER FROM:** Renumbers the specified range of groups starting with this number. This lets you load groups from other shows without erasing the same numbered groups in the current show.

**Effects:** The recorded effects from the Effect display. An effect range can be specified. Initially this is from 1 to 600 and selects all effects. Individual effect steps cannot be specified, only whole effects with all their steps.

**FIRST:** The first effect in the range from 1 to 600. Initially set to 1.

**LAST:** The last effect in the range from 1 to 600. Initially set to 600.

**NUMBER FROM:** Renumbers the specified range of effects starting with this number. This lets you load effects from other shows without erasing the same numbered effects in the current show.

**Submasters:** All pages of the recorded submasters from the Submaster display. A submaster range can be specified. Initially this is from 1 to the highest submaster number for the console, and selects all submasters. Individual submaster pages cannot be specified. If you select all submasters, the last 6 submasters in the recorded show will appear as the last 6 submasters on your console, regardless of how many submasters there were on the console that saved the show.

**FIRST:** The first submaster in the range from 1 to the highest submaster number for the console. Initially set to 1.

**LAST:** The last submaster in the range from 1 to the highest submaster number for the console. Initially set to the highest submaster number for the console

**Profiles:** The recorded profiles from the Profile display. A profile range can be specified. Initially this is from 1 to 99 and selects all profiles.

**FIRST:** The first profile in the range from 1 to 99. Initially set to 1.

**LAST:** The last profile in the range from 1 to 99. Initially set to 99.

**NUMBER FROM** Renumbers the specified range of profiles starting with this number. This lets you load profiles from other shows without erasing the same numbered profiles in the current show.

**Macros:** The recorded macros from the Macros display. A macro range can be specified. Initially this is from 0 to 2999 and selects all macros.

**FIRST:** The first macro in the range from 0 to 999. Initially set to 0.

**LAST:** The last macro in the range from 0 to 999. Initially set to 999.

**NUMBER FROM:** Renumbers the specified range of macros starting with this number. This lets you load macros from other shows without erasing the same numbered macros in the current show.

**Fixtures:** The fixtures from the Patch display. A fixture range can be specified. Initially this is from 1 to 99 and selects all fixtures.

**FIRST:** The first fixture in the range from 1 to 99. Initially set to 1.

**LAST:** The last fixture in the range from 1 to 99. Initially set to 99.

**Auto Mod:** Automod pairs from the Auto Mod Screen. You must select the complete Auto Mod Screen

**Setup:** The configuration from the Setup Screens.

---

## The Show List Window

The show list appears at the bottom of the Archive display when you press **[ARCHIVE]**. To move the highlight to the show list, press **{BROWSE FILES}**

To move the highlight back to the Archive Selection window, press **{BACK}**.



8:32:28 24/01/99 **ARCHIVE** \*No Title GM=FL/FL

Archive Selection

SELECT	PAGE	FIRST	LAST	NUMBER
✓ Patch	ALL	_1	2048	FROM
• Cues		_0.1	999.9	_0.1
• Groups		_1	999.9	_1
• Effects		_1	600	_1
• Macros		_0	999	_0
• Profiles		_1	_99	_1
• Events		_1	3000	
• Submasters	ALL	_1	_30	
• Fixtures		_1	_99	
• ATC Pages		_1	_99	
• Setup		USER	CONSOLE	

WHOLE SHOW

**Local Disk** C:\shows\

Show	Cues	Date	Time	Filename	Backups
>(A:)					
(C:)					
[.]					
[1]					
show1	6	13/01/99	15:42	show1	✓
show2	78	09/7/99	12:24	show2	✓

Current Show (Show to Save): No Title Show to Load/Copy/Delete/Restore: Disk Directory

**ARCHIVE:**  
Use trackball and press \* to select (disk), [directory] or file

v2d2+  
Net On  
Main  
danise  
User  
admin  
Main  
Active  
NoBackup

The following show list data is displayed:

**Local Disk:** The current drive and directory when it is on the internal hard disk drive. This is the drive and directory to which the currently loaded show will be saved

**Server Disk:** The current drive and directory when it is on the server hard disk drive. Only available if the Server application software is installed and properly configured.

**Floppy Disk:** The current drive and directory when it is the floppy disk.

**Current Show (Show to Save):** Show currently loaded in console.

**Show to Load/Copy/Delete/Restore:** The file name and address of the show selected to Load/Copy/Delete or Restore.

The following data is displayed for each show.

**Show:** The show name.

**Cues:** The number of cues in the show.

**Date:** The date the show was last saved.

**Time:** The time of day the show was last saved

**Filename:** The file name of the show on the disk. All shows are saved with a .ssf extension.

**Backups:** Shows whether any backup copies are stored on the disk.

You can access all software, disk, printing and clearing operations from one of the Archive displays.

Pressing **[ARCHIVE]** brings up the LCD Archive menu. This shows the soft keys **{SAVE SHOW}**, **{LOAD SHOW}**, **{BROWSE FILES}**, **{PRINT}**, **{CLR}** and **{SOFT}**.

The section covers the following topics:

- [Software Operations](#)
  - [Disk Operations](#)
  - [Print Operations](#)
  - [Clear Operations](#)
- 

## Software Operations

Press **[ARCHIVE]** **{SOFT}** to show the LCD Software menu. This is used to load new operating and application software and to password enable the application software.

Operating Software is the GeniusPro and Lightpalette operating system. Application software is any optional software which runs on the operating software, e.g., CommuniquePro, Tracker, Server, Networker, Shownet, Showport and PC Software.

In this display the LCD changes to the Software menu with a number of soft keys. **{SAVE PASSW}**, **{ENTER PASSW}**, **{LOAD SOFT}** and **{BACK}**.

**{BACK}** sends you back to the LCD Archive menu.

The following topics are covered in this section:

- [Password Operations](#)
  - [Loading Operating Software](#)
  - [Loading Application Software](#)
- 

## Password Operations

**{SAVE PASSWORD}** Allows you to save the application password to floppy disk. When you press the **{SAVE PASSW}** softkey, you will be prompted to insert a formatted floppy disk in the disk drive and to press the **{SAVE}** softkey on the Password LCD Menu. For information on formatting a floppy disk, refer to [Formatting a Floppy Disk](#).

**{ENTER PASSWORD}** Entering the password enables application software. A registration form is included with the application software. Complete this including your console serial number and fax it to the Software Registration Centre at Strand Lighting UK, who will verify it and issue your password.

To find the console serial number, press **[REPORT]** and look at the CONS field in the [System Report Screen](#) Configuration window.

This password is unique to your console with its application software and is not transferable. Keep a record of your password. If you change the password for additional application software, entering the old password will revert to the previous configuration.

**{ENTER PASSW}** lets you enter the password. If you are not already in the Software menu, press **[ARCHIVE] {SOFT}**.

Type in the supplied password number with no spaces or other keys then press **[\*]**. If the password is entered incorrectly a Password 'Please Re-enter' message appears. To cancel the operation, press **{BACK}**.

Once entered, the password cannot be displayed again.

**Note:** A new password is sometimes rejected with incorrect *ILLEGAL CONSOLE* error. If this happens, press the **[\*]** key before entering the password digits.

---

## Loading Software

The operating software is pre-loaded at manufacture. You will need to update this software if new versions are released. For further information on how to load the operating software refer to [Loading Software](#).

The OS field in the [System Report Screen](#) Configuration window shows the operating software that is currently loaded on the console. To show this field, press **[REPORT]**.

**Note:** Show files from version 2.4 software cannot be loaded into previous software versions. You must load this version of software into the console before loading the show.

---

## Loading Application Software

You will need to load application software if you are loading additional application software (e. g., Server Software) or if you are adding channels to your console. For information on how to load application software refer to [Adding Additional Channels or Applications](#)

After you enter a password, or if the 21 day period ends, this method of loading application software will not work. Refer to [Password Operations](#) for information on how to enter and save the password.

The APPL field in the [System Report Screen](#) Configuration window shows the application software currently loaded on the console. To show this field, press **[REPORT]**

---

## Disk Operations

Each time you make changes to your show they are stored in an internal hard disk drive (drive C:, the local disk), so that when you turn your console on the data is still there.

You can also save copies of a show to a floppy disk for later retrieval. You can store up to 200 shows in any one local disk directory, and can store one show per floppy disk .If the Server application software is installed you will also be able to save shows to a file server. For more information refer to [Server Software](#).

When you save to the local disk, the console automatically saves any existing version of the show as a backup copy. It will save the last 10 versions of the show as backup copies so that you can easily go back to previous versions if necessary.

**Note:** *When you save a show, all data including Setup information is saved, regardless of what you check in the Archive display.*

The following topics are covered in this section:

- [Why Save a Show?](#)
- [Storing Floppy Disks](#)
- [Naming the Show](#)
- [Changing the Current Drive and Directory](#)
- [Saving a Show](#)
- [Loading a Show](#)
- [Restoring or Deleting a Backup Copy of the Show](#)
- [Local Disk Functions](#)

## Why Save the Show?

It's important to save your show frequently, both to restore a show if it is lost due to disaster or equipment failure, and to retrieve information from previous versions of a show if necessary.

- Save the show to the local disk several times during a recording session. This automatically saves up to 10 backup copies of the show, and it's as simple as pressing **[ARCHIVE] {SAVE SHOW} {SAVE SHOW}** .
  - Save each different show in your current repertory with a different name.
  - Save the show you are working on to a floppy disk at the end of each recording session. Rotate floppy disks each day so that you have a record of several days sessions.
  - Save archive copies at the end of a show so that you can reproduce it at some later date if necessary.
- 

## Storing Floppy Disks

Floppy disks are your ultimate backup and archiving medium. A few precautions will ensure that the backup is there when and if you need it.

- Store floppy disks away from the console, even in a different building if possible, so that they are not damaged if the console is damaged by some external cause (fire, pipes bursting, etc.).
  - Don't store floppy disks near large magnetic sources, such as the outputs and power transformers.
  - Don't store floppy disks where there will be extreme fluctuations in temperature and/or humidity.
  - Don't leave floppy disks where they may be exposed to direct sunlight.
  - If you archive the show for future use, make at least two copies and store them in different locations.
  - Floppy disks are not rated as an archival medium, which means that they have a lifetime rating of less than 10 years. For important shows, make new copies of the show after each season of use, even if no changes were made to the show.
- 

## Naming the Show

Before you store your show, you should name it so that you can easily identify it when you need to load it back into the console.

Press **[ARCHIVE]** to see the Archive display. Ensure that the required disk (local or floppy) is highlighted in red and that the correct directory is shown to the right of the highlighted disk. If you require to change directories or create a new directory, refer to [Changing the Current Drive or Directory](#) before naming the show. Type **[TEXT] show name [\*]** entering the show name from the external keyboard. To clear a name, type **[TEXT] [\*]**.

The name you set here will appear at the very top of each screen, to the right of the display name.

Now that you have set up the show name, you can save the show as described below.

---

## Saving a Show

When you save a show, the current show is saved in the current drive and directory. All data, including the setup, is saved.

Before you save a show, ensure that the correct disk and directory that the show will be saved into is shown in the **Local Disk/Floppy Disk** field above the show list. If you require to change the drive or directory, proceed as described below, before saving the show.

To save a show to the current drive and directory, press **[ARCHIVE]** to display the Archive Screen, if it is not already displayed then press **{SAVE SHOW}** and press **{SAVE SHOW}** to confirm action or **[CLR]** or **[UNDO]** to cancel.

**Note: Some show files are too big to fit on the floppy disk. At DOS, use the msbackup command to create a compressed backup of the file on a new floppy. Select the show file as the file to backup, and do a full backup. You must use msbackup to restore the file from floppy. Or you can connect a ZIP drive to the parallel printer port, and add the necessary device driver line to the USEREXEC.BAT file (not AUTOEXEC.BAT).**

---

## Changing the Current Drive and Directory

Shows are always saved to the current drive and directory. The first time you turn on the console the current drive is set to Floppy Disk (drive A:) if there is a disk in the floppy disk drive. Otherwise it is set to Local Disk. The console saves to the current drive and directory setting when you shut down and tries to use the same drive or directory when you turn the

console on again.

If the current drive was set to Floppy Disk when you shut down, and there is no disk in the floppy disk drive when you turn the console on again and open the Archive display, the current drive is reset to the last local disk directory you used.

1. Press **[ARCHIVE] {BROWSE FILES}** to get to the LCD Browse menu. This menu lets you select where you want the console to save shows to and load, copy, delete, and restore shows from.
2. Use the Trackball or mouse to highlight a drive or directory. To change to the parent directory of the current directory, highlight **[..]**.

Press **[\*]** to select the drive or directory. The new drive and directory appear in the **Local Disk/ Floppy Disk** field above the show list.

Before saving a show to a different drive or directory, set up the required drive and directory as follows:

1. Press **[ARCHIVE] {BROWSE FILES}** to see the LCD Browse menu.
2. Switch to the drive and directory that you want to save to, as described above.
3. Press **{BACK}** to return to the LCD Archive menu.
4. Name the show, if it is a new show (refer to [Naming the Show](#))
5. Press **{SAVE SHOW}** to request the save. You will be asked to confirm this action.
6. Press **{SAVE SHOW}** to save the show or **[CLR]** or **[UNDO]** to cancel the operation.

Now that you have set up the show name and the destination, you can use **[ARCHIVE] {SAVE SHOW} {SAVE SHOW}** to save the show periodically to the default drive.

**Note:** *When you save a show, all data including Setup information is saved, regardless of what you check in the Archive display.*

---

## Loading a Show

You can store and load shows from floppy disk or local disk. Storing a show on floppy disk is a good way to transfer shows between consoles or store a copy in another location.

**Note:** **Show files from this version of operating software cannot be loaded into previous versions. Before loading the software, ensure that version 2.4 software is loaded in the**



**console or PC.**

Storing a show on the local disk is also a convenient and quick way to save and retrieve shows that you use often. If you are running shows in repertory you can easily retrieve the correct show for the day.

To load a show proceed as follows:

1. Press **[ARCHIVE]** to get to the LCD Archive menu.
2. If you don't want to load the whole show, use **[-]** to turn the **WHOLE SHOW** field off. Then use the Trackball or mouse to highlight each item you want to load and use **[+]** to turn its **SELECT** field on. Type the desired numbers in the **FIRST**, **LAST**, and **NUMBER FROM** fields as described under [The Archive Selection Window](#).
3. Press **{BROWSE FILES}** to get to the LCD Browse menu.
4. Switch to the drive and directory containing the show you want to load as described under [Changing the Current Drive and Directory](#) .
5. Use the Trackball to highlight the show.
6. Press **[\*]** to request the load. You will be asked to confirm this action.
7. Press **[\*]** again to load the show or **[CLR]** or **[UNDO]** to cancel the operation.

Once you load a show, if you don't change the current drive and directory you can use **[ARCHIVE] {SAVE SHOW} {SAVE SHOW}** to save the show periodically to the same drive and directory.

---

## Restoring or Deleting a Backup Copy of the Show

Each time you save the show to the local disk it makes a backup copy of the show. The console automatically saves the last 10 copies of the show. (Only one backup is saved for 300 Series consoles). You can restore, or delete a particular backup copy of a show as follows:

1. Press **[ARCHIVE]** to get to the LCD Archive menu.
2. If you don't want to load the whole show, use **[-]** to turn the **WHOLE SHOW** field off. Then use the Trackball, or mouse to highlight each item you want to load and use **[+]** to turn its **SELECT** field on. Type the desired numbers in the **FIRST**, **LAST**, and **NUMBER FROM** fields, as described under [The Archive Selection Window](#). You cannot delete parts of a show.
3. Press **{BROWSE FILES}** to get to the LCD Browse menu.
4. Switch to the drive and directory containing the show you want to restore, as described under [Changing the Current Drive and Directory](#) .
5. Use the Trackball, or mouse to highlight show name.
6. Press **{BACKUP VIEW}** to see a list of backup copies for the selected show.
7. Use the Trackball, or mouse to highlight the backup version you want to load or delete.



8. Press **{LOAD BACKUP}** to request the load, or **{DELETE}** to delete the backup version. You will be asked to confirm this action.
9. Press **{LOAD BACKUP}** again to load the backup or **{DELETE}** again to delete the backup copy, or **[CLR]** or **[UNDO]** to cancel the operation.
10. The selected backup copy of the show will be loaded/deleted. Depending on the size of the show, loading the show may take some time.

**Note:** *Once you load a show, if you don't change the current drive and directory you can use **[ARCHIVE] {SAVE SHOW}** **{SAVE SHOW}** to save the show periodically to the same drive and directory.*

---

## Local Disk Functions

Although shows are saved by default to the “shows” directory on the local disk, you can add directories, change them for saving shows, and delete directories and shows as needed to help you organize your shows.

You can have up to 200 directories on your local disk, and can save up to 200 shows per directory, depending on the capacity of the local disk and the size of your shows. Remember that each backup copy of a show counts as one copy of the show.

The console already has a directory on the local disk called “Shows,” where the shows are most commonly stored.

The topics covered in this section are as follows:

- [Creating a Local Disk Directory](#)
  - [Copy a Show](#)
  - [Delete a Show from the Local Disk](#)
  - [Delete a Local Disk Directory](#)
  - [Formatting a Floppy Disk](#)
  - [Write Protecting the Floppy Disk](#)
- 

## Create a Local Disk Directory

You can create a subdirectory within the current directory by using the **{MAKE DIR}** key. You may want to do this to help organize your show database and save similar shows in separate directories.

Press **[ARCHIVE] {BROWSE FILES}** to get to the LCD Browse menu.

1. If you want to create a subdirectory in a directory other than the current directory, change to the desired directory.
  2. Press **{MAKE DIR}**.
  3. Type the new directory name from the external keyboard. It must follow standard MS/PC-DOS 8.3 file name rules, i.e., up to 8 alphanumeric characters and \_ (underscore), e.g., show\_12 (Do not use spaces, dots or the following characters (\* ? - \ /)
  4. Press ENTER on the keyboard. You will be asked to confirm this action.
  5. Press ENTER on the keyboard to create the new directory or **[CLR]** or **[UNDO]** to cancel the operation.
- 

## Copy a Show

You can copy a show from any drive or directory to any other drive or directory. This feature lets you copy files directly between two locations without the need to load them as the current show.

1. Press **[ARCHIVE] {BROWSE FILES}** to get to the LCD Browse menu.
  2. Switch to the drive and directory containing the show you want to copy as described under [Changing the Current Drive and Directory](#).
  3. Use the Trackball or mouse to highlight the show.
  4. Press **{COPY SHOW}** to request the copy. You will be asked to select a destination directory.
  5. Select the destination drive and directory, or create a new directory as described under [Create a Local Disk Directory](#).
  6. Ensure that the name of the target disk and directory is displayed alongside the highlighted field LOCAL DISK or FLOPPY DISK.
  7. Press **{COPY SHOW}**
  8. You will be asked to confirm this action. Press **{COPY SHOW}** again to copy the show to the selected directory or **[CLR]** or **[UNDO]** to cancel the operation.
- 

## Delete a Show from the Local Disk

You can delete a show from the local disk by using the **{DELETE}** key. This deletes the show and all of its backups. You may wish to copy the show to a floppy disk before you delete it from the local disk.

1. Press **[ARCHIVE] {BROWSE FILES}** to get to the LCD Browse menu.

2. Switch to the drive and directory containing the show you want to delete, as described under [Changing the Current Drive and Directory](#)..
  3. Use the Trackball, or mouse to highlight the show.
  4. Press **{DELETE}** to request the delete. You will be asked to confirm this action.
  5. Press **{DELETE}** to delete the show or **[CLR]** or **[UNDO]** to cancel the operation.
- 

## Delete a Local Disk Directory

You can delete a directory on the local disk by using the **{DELETE}** key. The directory must be empty before you can delete it.

1. Press **[ARCHIVE] {BROWSE}** to get to the LCD Browse menu.
  2. Switch to the directory you want to delete and make sure all shows in it are deleted. You may wish to copy the shows to floppy disk before deleting them.
  3. Switch to the parent directory of the directory you want to delete, as described under [Changing the Current Drive and Directory](#)...
  4. Use the Trackball, or mouse to highlight the directory you want to delete.
  5. Press **{DELETE}** to request the delete. You will be asked to confirm this action.
  6. Press **{DELETE}** to delete the directory or **[CLR]** or **[UNDO]** to cancel the operation.
  7. If a message is displayed saying that the directory is not empty, there may be backup copies of the show that have not been deleted. Refer to [Restoring or Deleting a Backup Copy of the Show](#) to delete all backup copies, then reselect the directory and press **{DELETE} {DELETE}**
- 

## Formatting a Floppy Disk

Before using a floppy disk, it must be formatted. To save time you can use preformatted floppy disks compatible with MS/PC-DOS (either 720Kb or 1.44Mb disks). If you need to format your own floppy disks, follow the procedure below, which formats a 1.44Mb disk. You cannot format a 720Kb disk with on this console, though you can use pre-formatted 720Kb disks.

**Note:** *This procedure will erase any data already on the floppy disk.*

1. Press **[ARCHIVE] {BROWSE FILES}** to get to the LCD Browse menu.
2. Insert the floppy disk.
3. Press **{FORMAT FLOPPY}** to request formatting. You will be asked to confirm this action.

4. Press **{FORMAT FLOPPY}** to start the format operation or **[CLR]** or **[UNDO]** to cancel the operation.

A progress indicator appears while the console is formatting the disk.

---

## Write Protecting the Floppy Disk

After saving, the floppy disk can be write protected by moving the write protect tab so that the hole is open. This stops it being accidentally formatted or overwritten by another save.

---

## Print Operations

The Print display lets you configure your printer and print show information. Although you can use the Print Screen macro **[SHIFT] [P1]** to print the current contents of all screens (1 screen per page), the archive print functions are provided for printing whole cues and shows.

Pressing **[ARCHIVE] {{PRINT}}** shows the Print display and the LCD Print menu.

```

8:32:28 24/01/989          PRINT          *No Title          GM=FL/FL
Archive Selection
  ✓ SELECT          PAGE          FIRST          LAST          NUMBER
  Patch            ALL            _1            2048          FROM
  Cues              _0.1          999.9          _0.1
  Groups            _1            999.9          _1
  Effects           _1            600            _1
  WHOLESHOW Macros         _0            999            _0
  Profiles          _1            99             _1
  Events            _1            3000           _1
  Submasters        ALL            _1            30
  Fixtures          _1            99             _1
  ATC Pages         _1            99             _1
  Setup             USER          CONSOLE
  Channels In Use   _0.1          999.9 (Cue Range)
  Channels Not In Use _0.1          999.9 (Cue Range)

Print Option Setup
  ✓ Print Channels
  ✓ Add Attributes
  Level Changes Only
  1 Item per Page
  New Line at Channel Break
  Landscape

Printer Setup
Type          ASCII OUT
Paper Size    A4           Printing to:
Port          LPT1         LPT1
Net Node      LOCAL        Press STOP to DEFAULT

v2d2+
Net On
Main
denise
User
admin
Main
Active
NoBackup

PRINT:
Select for printing using + and - keys

```

To select a field, use the Trackball to move the red cursor to the field and use the Level Wheel, or **[+]** , or **[-]** keys to change the field value.

The following topics are covered in this section:

- [Printer Setup](#)
- [Printing](#)

## Printer Set

### Type

**EPSON FX:** An Epson FX or compatible printer.

**IBM PRO:** An IBM Proprinter or compatible printer.

**HP DESKJET:** A Hewlett-Packard DeskJet or LaserJet printer or compatible.

**HP COLR DJ:** A Hewlett-Packard Colour DeskJet printer or compatible. Prints colours as they

appear on screen.

**ASCII OUT (default):** Text only. This can be selected if the printer is none of the above.

### Paper Size

**A4 (default):** (210mm x 297mm)

**8.5" x 11"** (216mm x 279mm)

**8.5" x 12"** German

**A3 (297mm x 420mm)**

**8.5" x 14"** U.S. legal size

**14.5" x 11"** Computer fanfold paper (132 column)

**11" x 17"** U.S. tabloid (B) size

### Port

Sets the parallel port that the printer is connected to.

**LPT1 (default)** Printer connected to the first parallel port. This is marked PRINTER on the rear of the console.

**FILE** Will print to a file on the local disk. The file is put in the SHOW subdirectory, and its name is based on the current show name with a .txt extension.

### Net Node

Sets the location of the printer to Local or the specified Network Node

**Local** (Default) The main console

**Network Node Name** Alternative printer location

## Printing

From the Print display you can print all or part of the show by pressing the **{PRINT SHOW}** softkey. In addition, by using **{DIMMER LOG}**, **{STATUS LOG}** or **{NOTES}** you can print the contents of the Dimmer Log or the Status Log, or the Notes pages.

Since the default printer is ASCII, you should be able to print without selecting a specific printer. However, for the best possible printouts with your printer, you should set the printer type first.

1. Press **[ARCHIVE] {PRINT}** to show the Print display.
2. Use the Trackball, or mouse to highlight the Type field in the Printer Setup window.

3. Use the Wheel to select a printer type compatible with the printer connected to your system. If you are not sure which printer type will work best, try printing few cues with each printer setting.
4. If you are printing a show, select the parts of the show to print from the Archive Selection window, or select **Whole Show**. Use the Trackball, or mouse, to move the red highlight and **[+]** or **[-]** to select or clear the parts to load. Type the desired numbers in the FIRST, LAST, and NUMBER FROM fields.
5. Select the channels you want to print. You can select a range of channels in use and a range of channels not in use that you want to print. Channels in use are channels that are used in any cue, group, effect, or submaster, not just channels in cues, and includes intensity and attribute channels.
6. Select the printing options you want. Press **{PRINT SHOW}**, **{DIMMER LOG}**, **{STATUS LOG}** or **{NOTES}** to start printing.
7. To cancel printing while it is in progress, press **{STOP}**. To go back to the LCD Archive menu press **{BACK}**.

While the console is printing, a Print Operation % Complete message shows printing progress from 0% to 100%.

**{PRINT SHOW}** prints all of the items you checked in the Archive Selection window. Printing options available for this print mode are:

Print Channels Includes channel levels for each item.

Add Attributes lets you print channel attributes as well as intensities.

Level Changes Only prints only items with changes in them.

1 Item per Page makes sure that each new item printed starts at the top of a page. Leaving this off conserves paper if you are printing the whole show.

New Line at Channel Break (otherwise | ) puts the start of each new channel range (after some channels were skipped) on a new line. This is normally off, and an upright bar is used to indicate skipped channels.

Landscape (otherwise Portrait) lets you change the direction of printing on the page. It is normally off, in which case all printing is in portrait orientation.

---

## Clear Operations

Pressing **[ARCHIVE] {CLR}** displays the Archive Selection window in the State screen and the LCD Clear menu. This lets you clear all or part of the show.

**Note:** *You cannot undo a clear operation. If the show needs to be used again, make sure that it is saved onto local disk or floppy disk before clearing it. For information on how to save refer*



to [Saving a Show.](#)

8:32:28 24/01/989 **CLEAR** \*No Title GM=FL/FL

Archive Selection

SELECT	PAGE	FIRST	LAST	NUMBER
✓ Patch	ALL	_1	2048	FROM
- Cues		_0.1	999.9	_0.1
- Groups		_1	999.9	_1
- Effects		_1	800	_1
WHOLESHOW - Macros		_0	999	_0
- Profiles		_1	_99	_1
- Events	_1	3000		
- Submasters	ALL	_1	_30	
- Fixtures		_1	-99	
- ATC Pages		_1	-99	
- Setup		USER	CONSOLE	

v2a3

Net On  
Backup  
denise  
User  
admin  
Main  
Active  
NoBackup

**CLEAR:**  
Select for clearing using + or - keys (Whole Show + Setup for full reset)

1. If you are not already in the Clear menu, press **[ARCHIVE] {CLR}**.
2. From the Archive Selection window in the State screen, select the parts of the show to clear, or select Whole Show. Use the Trackball, or mouse, to move the red highlight and **[+]** or **[-]** to select or clear the parts to clear.
3. Press **{CLEAR}**. A message appears that the clear is about to be done.
4. Press **{CLEAR}** to clear the selected items or **{BACK}** to cancel the operation.

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## Report Displays

Entering a channel number, cue number (or cue part) or dimmer number prior to pressing the **[REPORT]** key will display the Channel, Cue or Dimmer Summary Report for the channel, cue or dimmer number entered.

Pressing the **[REPORT]** key without pressing any other keys will display the System Report Screen and the System Report Menu on the right-hand LCD providing softkey access to all other reports and functions listed below.

The System Diagnostic Menu and associated displays are designed for use by a technician during fault-finding and system testing and do not contain any user information.

This chapter contains the following topics:

- [The Channel Summary Screen](#)
- [The Cue Summary Screen](#)
- [The Dimmer Summary Screen](#)
- [The System Report Menu](#)
- [The System Report Screen](#)
- [Advanced Setup Menu](#)
- [Setting Access Rights](#)
- [The Dimmer Log Screen](#)
- [The System Diagnostic Menu](#)
- [Exit and System Shutdown](#)

---

## The Channel Summary Screen

Command Syntax

- (a) **[1][REPORT]** No attribute specified.  
(b) **[1].[3][REPORT]** Attribute specified

The channel summary screen shows the following information for the channel or channel attribute specified and is updated once per second:

8:32:28 24/01/99		SUMMARY		*No Title		GM=FL/FL	
<b>Patch</b>							
CHANNEL 1, 200 Hyperbeam							
Attributes 1 2>4 7 9 17 18 20							
Intensity							
Outputs In Patch 1 1 2 3>9							
<b>Show</b>							
Up Moves	0 cues	Last Move					
Down Moves	0 cues	Next Move					
Redundant Moves	0 cues	Used In		NONE			
Sub, Fx Moves	0, 0	Highest Cue Level		NONE			
		Lowest Cue Level		NONE			
<b>Control</b>							
	Level	60					
	Preset Group	NONE					
	Controlled By	CHANNEL CONTROL					
	Special Groups	GM1 GM2 X1 X2 DISPLAY					
	Channel Partitioning	PARTITIONING OFF					
<b>SUMMARY:</b>							

**Channel**

The name of the fixture to which the channel is patched

**Attributes**

- (a) A list of attributes on the channel
- (b) Name of attribute

**Patched to Outputs**

- (a) A list of outputs patched to all attributes
- (b) Output patched to specified attribute.

**Level**

- (a) The current channel intensity and the preset group if controlling all or part of the channel.
- (b) Attribute level % or frames

### ***Last Move***

The last cue on stage that changed the specified channel and its intensity or attribute level change.

- (a) Intensity change (%)
- (b) Attribute change, (% or frames)

### ***Next Move***

The next cue on stage to change the current cue together with its intensity, or attribute level.

- (a) Intensity change (%)
- (b) Attribute change, (% or frames)

### ***Used in Cues***

The first and last cues having an effect on the selected channel.

### ***Cue Moves Up***

The total number of cross fade and movefade cues that increase the level of the channel.

- (a) Total cues which change intensity or attributes.
- (b) Total cues that change specified attribute.

### ***Cue Moves Down***

The total number of cross fade and movefade cues that decrease the level of the channel.

- (a) Total cues which change intensity or attributes.
- (b) Total cues that change specified attribute.

### ***Controlled By***

**X PLAYBACK, FX PLAYBACK, SUBMASTER** or **CHANNEL CONTROL**, followed by user@node, **HAND HELD** or blank, if not controlled.

### ***Hold Status***

Whether the channel or channel attribute is held, autoheld or not held

### ***Active in Special Groups***

List of special groups that specify the channel. **GM1, GM2, X1, X2, ON, PREHEAT, DISPLAY** or **NONE**

### ***Channel Partitioning***

The name of the channel partitioning group specifying the channel as user@node, or **NONE** or **PARTITIONING OFF**.

---

## **The Cue Summary Screen**

### **Command Syntax**



- (a) **[CUE] [REPORT]** No cue or part specified; uses current cue  
 (b) **[CUE] [1] [2] [3] [.] [4] [REPORT]** No Part specified. Cue 0 is allowed.  
 (c) **[CUE] [1] [PART] [2] [REPORT]** Part specified.

8:32:28 24/01/99		SUMMARY		*No Title		GM=FL/FL	
<b>Playback</b>							
CUE 1				Status X1: READY			
<b>Cue</b>							
X Playback	0	Intensities Moving Up/Down					
Wait Time	0	Intensities Set But Unchanged					
Link to Cue	NONE	Attributes Moving					
Loop Count		Attributes Set But Unchanged					
Fade Type	MOVEFADE						
<b>Part</b>							
Part 1							
Up/Down Delay	1:00/40	Command	None				
Up/Down Fade	3:20/3:20	Attribute Fade	2:40/2:40				
Up/Down Profile	0/0	Attribute Profile	0/0				
<b>SUMMARY: *</b>							

The cue summary screen shows the following information for the cue or cue part specified and is updated once per second:

### **Cue**

- (a), (b) Cue number.  
 (c) Cue and part number

### **Status**

**NOT PRESENT** if not recorded, or **AUTO FADING** or **MAN FADING** if on X playback, or **CURRENT** if just completed, or **COMPLETE** if before current cue, or **NOT RUN** if after the current cue.

### **Used in Time Code Events**

- (a), (b) List of events that use the cue, or **NONE**.

(c) Blank

**Parts Recorded**

List of parts. This acts as a heading for those data items that cover the cue as a whole.

(a), (b) List of all parts in cue

(c) Blank

**Playback**

Playback assignment

(a), (b) **1, 2, ANY**

(c) Blank

**Wait Time**

(a), (b) Times in seconds, or blank if playback is in manual fade mode.

(c) Blank

**Link to Cue**

(a), (b) Cue number

(c) Blank

**Loop Count**

(a), (b) Loop count

(c) Blank

**Intensities Moving Up/Down**

Total intensities moving up/down in this cue.

**Intensities Set but Unchanged**

Total intensities set to the same level as the last cue.

**Attributes Moving Up/Down**

Total attributes moving in this cue

**Attributes Set but Unchanged**

Total attributes set to same level as previous cue

**Part 1**

Acts as a heading for the part-specific data items

(a), (b) Data for first part

(c) Data for selected part

**Fade Type**

(a), (b), (c) if part 1 - **CROSSFADE, MOVEFADE, ALLFADE**

(c) if not part 1 - **MOVEFADE**

### ***Up/Down Delay***

(a), (b) Delay times in seconds, or **MAN/MAN** if playback is in manual fade mode.  
(c) Blank

### ***Up/Down Profile***

Profile numbers, or **DEFAULT** if none assigned

### ***Command***

**MACRO #, FX START #, FX STOP #, or NONE**

### ***Attribute Fade***

Fade time in seconds, or **MAN/MAN** if playback is in manual fade mode.

### ***Attribute Profile***

Profile number or **DEFAULT** if none assigned.

---

## **The Dimmer Summary Screen**

The dimmer summary report shows the following information for the dimmer specified and is updated once per second.

When one or more faults occur on a patched dimmer, a one or two line error message will be displayed on all screens as shown in the following example. Unpatched dimmers are ignored.

**Fault on Output 1234: Load Error, 200W, expected 500W**

Only the last fault is displayed. In order to view any other faults, the operator must press the **[REPORT]** key and **{DIMMER LOG}** softkey to access the Dimmer Log screen.

8:32:28 24/06/98		SUMMARY		^No Title		GM=FL/FL	
Output		19					
Patched to channel		4.2 Colour					
Nondim		NO					
Threshold		NONE					
Scaling		10					
Profile		NONE					
Filter(s)		NONE					
Rack, Dimmer		NONE					
Node		NONE					
Learned Load		NONE					
Fault(s)		NONE					

**SUMMARY:**

**Output**

Shows the specified output

**Patched to Channel**

Specifies the channel number to which the dimmer is patched.

**Nondim**

Indicates whether or not the output is set to non-dim

**Threshold**

Shows the threshold setting for the specified output.

**Scaling**

Show the scaling set for the selected dimmer.

**Profile**

Shows the output profile for the selected dimmer (if any)

**Filter(s)**

Shows fault conditions filtered out by the Console Reporter filter function.

### ***Rack, Dimmer***

Shows the dimmer rack associated with the selected dimmer.

### ***Node***

Shows the node number associated with the selected dimmer. Only applicable if Networker software is installed.

### ***Learned Load***

Shows the learned load for the specified dimmer (if any).

### ***Fault(s)***

Shows the number of faults on the specified dimmer (if any)

---

## **The System Report Menu**

Pressing the **[REPORT]** key will display the System Report screen and display the System Report Menu on the right-hand LCD display.

The System Report Menu softkeys provide access to the Setup Screens, Dimmer Log, System Diagnostics screens and to the Exit function softkeys.

---

## **The System Report Screen**



8:32:28 24/06/98		SYSTEM REPORT			*No Title	GM=FL/FL
<b>System Status</b>					<b>Status</b>	
	<b>USED</b>	<b>FREE</b>	<b>TOTAL</b>	<b>Intensity</b>		
Cue Parts	1	1999	2000	Total	350	
Groups	12	988	1000	InUse	350	
Effect Steps	0	14850	14850	Free	0	
Macros	22	1978	2000	<b>Attribute</b>		
Profiles	2	97	99	Total	250	
Events	0	3000	3000	InUse	8	
				Free	242	
Local Print Jobs	NONE			Live	1	
				Edit	1	
					<b>CPU Type</b>	
					80486	
<b>Network Configuration</b>						
Node Name	denise			v2.2a+		
Node Address	192.168. 11.214			Net Off		
Sub Net Mask	255.255.255. 0					
<b>Configuration</b>						
CONS	000 000 000 104 221 089					
OS	v2d2+ BETA S/W Jan 25 1999 10:07:21					
APPL	GENPRO 350 COMPRO TRK REP NET SVR					
<b>SYSTEM REPORT: *</b>						
System Status						

This screen is displayed when the **[REPORT]** key is pressed.

The System Status window shows the current show status (such as number of cue parts, groups, Effect Steps, Macros, Profiles and Event in use).

If a print out is initiated, a print job will be listed until it is completed. For information about the use of this display when the Networker option is configured refer to [Networker](#).

The Network Configuration window in the System Status display shows the network setup information for this console. This information is only relevant when the optional Networker software is loaded. Please refer to [Networker](#) for more details.

The Configuration window in the System Status display shows the loaded operating software version number and date, together with the application software installed.

**CONS**

The console serial number. This is used when filling out the registration form for software.

**OS**

The GeniusPro/Lightpalette version number. The format of this is **# [.] #** , for example 2.3. A trailing character is used to indicate minor versions, for example 2.2c. Beta testing versions have a character instead of the period, for example 2b3.

**APPL**

This lists the application software loaded. one or more of these are generally listed. If this is blank, no application software is loaded.

**GENPRO #** The GeniusPro software is loaded. # shows the number of channels.

**COMPRO** The optional CommuniquéPro software is loaded.

**TRK** The optional Tracker software is loaded.

**NET** The optional Networker software is loaded.

**REP** The optional Reporter software is loaded.

**SVR** The optional Server software is loaded.

Others may be shown as new software is developed and loaded.

**[1][@][0][2]** sets channel 1 to 2%.

**[1][@][3][0]** sets channel 1 to 30%.

**[1][@][4][5]** sets channel 1 to 45%.

---

## Setting Access Rights

The Access Rights Screen lets you set the access rights for the current console and user and is only used when the Server software is loaded.

The Access Rights Screen lets you set the access rights for the current console and user and is only used when the Server software is loaded.

To show the Access Rights window, press **[REPORT][ADV SETUP]{ACCESS RIGHTS}**. For help on changing values in this screen,

This display is only available to the Admin User as described under [User Logins](#) in the Server Software Section.



8:32:28 24/01/989		ACCESS RIGHTS		*No Title		GM=FL/FL	
User Access Rights							
User	<b>admin</b>						
Recording	<b>YES</b>	Setup - User	<b>YES</b>	Show Files			
		- Show	<b>YES</b>	- Local		<b>YES</b>	
		- Console	<b>YES</b>	- File Server		<b>YES</b>	
Patch & Fixtures	<b>YES</b>	Console Mode	<b>YES</b>	Channel/Dimmer Control		<b>YES</b>	
Special Groups	<b>YES</b>	Printer	<b>YES</b>	Playbacks		<b>YES</b>	
Console Access Rights							
Console	<b>Genise</b>						
Recording	<b>YES</b>	Setup - User	<b>YES</b>	Show Files			
		- Show	<b>YES</b>	- Local		<b>YES</b>	
		- Console	<b>YES</b>	- File Server		<b>YES</b>	
Patch & Fixtures	<b>YES</b>	Console Mode	<b>YES</b>	Channel /Dimmer Control		<b>YES</b>	
Special Groups	<b>YES</b>	Printer	<b>YES</b>	Playbacks		<b>YES</b>	
Combined User & Console Access Rights							
Recording	<b>YES</b>	Setup - User	<b>YES</b>	Show Files			
		- Show	<b>YES</b>	- Local		<b>YES</b>	
		- Console	<b>YES</b>	- File Server		<b>YES</b>	
Patch & Fixtures	<b>YES</b>	Console Mode	<b>YES</b>	Channel /Dimmer Control		<b>YES</b>	
Special Groups	<b>YES</b>	Printer	<b>YES</b>	Playbacks		<b>YES</b>	
<b>SETUP</b>							
Select item to edit							

The Access Rights Screen is divided into three windows:

- [User Access Rights Window](#)
- [Console Access Rights Window](#)
- [Combined User and Access Rights Window](#)

## User Access Rights

This window allows the Admin User to check the User Access Rights for the user who is logged on. The display shows the user name and the preset access rights for various aspects of the system as follows:

**Recording:** Access to record Cues, Effects, Groups, etc. **YES** or **NO**

**Patch and Fixtures:** Access to patch channels and attributes. **YES** or **NO**

**Special Groups:** Access to change special groups. **YES** or **NO**

**Setup:** Access to change the setup values for User, Show and Console Setup Screens. Individual access rights for each setup screen may be set as required. **YES** or **NO**

**Console Mode:****Printer:**

**Show Files:** Access to show files on the local console or on the file server. Individual rights can be set for local and server files. **YES** or **NO**.

**Channel/Dimmer Controls:** Access to change the channel levels and dimmer controls. **YES** or **NO**

**Playbacks:** Access to run the X Playbacks **YES** or **NO**

---

**Console Access Rights**

This window allows the Admin User to check the access rights of the logged on user to operate the consoles on the network. By selecting the consoles on the network using the Console field, the Admin User can set the access rights for various aspects of the system, as described above, for each console on the network. If access rights for particular aspects of the system have been set to NO, the Admin User cannot permit access to this function on any of the consoles on the network.

While a user may have access to all aspects of the lighting system, the Admin User can restrict the access rights to particular consoles within the network.

---

**Combined User and Console Access Rights**

This window allows the Admin User to check the access rights of the logged on user to use the various control aspects of each console on the network. By selecting the console on the Console Field of the Console Access Rights window, the access permitted by the combination of User Access Rights and Console Access Rights is shown on the Combined User and Console Access Rights window.

Selecting the **{ACCESS RIGHT}** softkey displays a **{MEMORY LOCK}** softkey and a **{BACK}** softkey to return to the previous LCD display. For further information on locking the console memory see below.

---

**The System Diagnostics Menu**

Pressing the **{SYSTEM DIAG}** softkey from the System Report LCD menu, provides access to the Status Log, the Network Diagnostic display and the Internal Diagnostic display. A **{BACK}** softkey returns to the previous LCD menu. These screens are intended for use by a technician

and provide no user data.

- [The Status Log](#)
- [The Network Diagnostics Screen](#)
- [The Internal Diagnostic Screen](#)

## The Status Log

The Status Log is intended for use by a technician and does not provide any user data. The softkeys **{CLEAR}** and **{TIME/DATE/N}** on the Status Log LCD menu should only be used by a technician. Press **{BACK}** to return to the previous LCD menu. To print the Status Log display, press **[ARCHIVE]{PRINT}{PRINT LOG}**.

Time	Source	Description	Diagnostics
093226	System	System Data Cleared	
093226	System	New Operating SW Ver	
093226	Operating Software	gdauX 2572	0 0 0
105112	Setup	Value(s) defaulted	LCD Cntr
105112	Setup	Value(s) defaulted	LCD Back 1
105112	Setup	Value(s) defaulted	# Screen
105112	Setup	Value(s) defaulted	Chan Disp
105112	Setup	Value(s) defaulted	Smart ChD
105112	Setup	Value(s) defaulted	Sub Scale
105112	Setup	Value(s) defaulted	AMX Scale
105112	Setup	Value(s) defaulted	D54 SCALE
105112	Setup	Value(s) defaulted	Col Frame
105112	Setup	Value(s) defaulted	Non Thrsh
105112	Setup	Value(s) defaulted	Z32 Data
105112	Setup	Value(s) defaulted	Z32 Stop
105112	Setup	Value(s) defaulted	DMXCh Sub
105112	Setup	Value(s) defaulted	Audio Sub
105112	Setup	Value(s) defaulted	DMXDimSub
105112	Setup	Value(s) defaulted	MIDI Chan
105112	Setup	Value(s) defaulted	FMode 1
105112	Setup	Value(s) defaulted	MIDI FdGP
105112	Setup	Value(s) defaulted	MIDI KyGP
105112	Setup	Value(s) defaulted	CS IRQ
105112	Setup	Value(s) defaulted	DE 1 IRQ
105112	Setup	Value(s) defaulted	DE 2 IRQ
105112	Setup	Value(s) defaulted	AMux Star
105112	Setup	Value(s) defaulted	AMux End
105112	Setup	Value(s) defaulted	DMux Star
105112	Setup	Value(s) defaulted	DMux End

**STATUS LOG**  
Select status log page using the wheel

8:32:28 24/01/99      **STATUS LOG**      \*No Title      GM=FL/FL

v2d2+  
Net Off  
Main  
console1  
User:  
admin  
Main  
Acive  
NoBackup

## The Network Diagnostics Screens

Two different Network Diagnostics screens, selectable by a **{CHANGE VIEW}** softkey provide a technician with network addresses and status information and provide the facility to enable or



disable network nodes using the **{ENABLE}** and **{DISABLE}** softkeys, or to clear the event counter using the **{CLEAR COUNTS}** softkey. For information on the contents of the Network Diagnostic display please refer to the [Networker Software](#).

8:32:28 24/01/99 NETWORK DIAGNOSTICS \*No Title GM=FL/FL

Node Address	Node Name	Type	Link	Status	Node Status	User	Status
>192.168. 11.214	denise	430	OK		On Line	C1 admin	

Power on time 09:06:47

Ethernet address 00:20:AF:C9:95:A5 v2.2a+

Wheel

v2.2a+

Net Off  
Main  
console1  
User:  
admin  
Main  
Acive  
NoBackup

NETWORK DIAGNOSTICS: \*  
Network diagnostic counters and tests





8:32:28 24/01/99		INTERNAL DIAGNOSTICS		*No Title		GM=FL/FL	
Description	Count	Min	Max	Description	Count	Min	Max
MIDI Beat	0	----	0	MIDI Parity Error	0	----	0
MIDI Framing Error	0	----	0	MIDI Overrun	0	----	0
MIDI Buffer Full	0	----	0	COMs Trigger	0	----	0
AUDIO Trigger	0	----	0	MIDI Trigger	0	----	0
NET DMX Packets sent	0	----	0	NET DMX Packets Rcvd	0	----	0
NET Init Error	0	----	0	Net Other Error	0	----	0
ADC Overrun	0	----	0	enScan Loops/Cycle	16	0	28
enNetScan Loops/Cycle	12	0	24	DeLc Overrun	0	-----	0
DeLc Sched Blocked	262	1	262	Sched Length in mSec	30	30	30
De Overruns Limited	0	----	0	Lc Overruns Limited	0	----	0
DeLc Callbacks Lost	0	----	0	DeLc Callbacks Depth	0	----	0
DeLc Callbacks	0	----	0	Cycles Since Start	>64	1	>64
DISKQ Full	0	----	0	DISKQ Depth	0	----	0
PRINTQ Full	0	----	0	PRINTQ Depth	0	----	0
FPRINTQ Full	0	----	0	FPRINTQ Depth	0	----	0
CONSQ Full	0	----	0	CONSQ Depth	0	----	0
TERMQ Full	0	----	0	TERMQ Depth	0	----	0
LCDSKQ Full	0	----	0	LCDSKQ Depth	0	----	0
LCDSKQ Disk Read	0	----	0	LCDSKQ Write	0	----	0
LCDSKQ Cache Full	0	----	0	LCDSKQ Cache Wait	0	----	0
Channel Int/Att Full	0	----	0	HHR Checksum Error	0	----	0
COM1 MSR Change	0	----	0	COM1 Parity Error	0	----	0
COM1 Framing Error	0	----	0	COM1 Unknown Error	0	----	0
COM2 MSR Change	0	----	0	COM2 Parity Error	0	----	0
COM2 Framing Error	0	----	0	COM2 Overrun	0	----	0
Cs kB free	20			CPU Type	4	CsIntTemp	25
DprEvt/Cb	0			NetBuf	0	CacheMax/Rd/Wr	03382/0106/020
IPC	0						

**INTERNAL DIAGNOSTICS**  
System diagnostics counters and tests

## Exit and System Shutdown

**Important Note: You must always shut down the console using the correct procedure described below. Do not shut down by simply switching off the console or isolating the mains supply.**

Before shutting down the console, you should make sure that you have saved the current show by pressing **<ARCHIVE>{SAVE SHOW} {SAVE SHOW}**. To shut down, press **<REPORT> {EXIT} {SHUTDOWN}**. If you have not saved the show or the setup, a warning will appear on screen. If you wish to save the setup or the show, press **{SAVE SETUP}** or **{SAVE SHOW}**. Press **{SHUTDOWN}** again to shutdown the console. On 300 Series consoles, the shutdown display will be shown, then the console will be shut down automatically. On 500 Series consoles, the shutdown display will be shown telling you that you may now shutdown the console. In the latter case, shut down the console using the On/Off button on the console (530 and 550 consoles only) or the mains On/Off switch on the back of the console (520 consoles).



**Note:** *If you have a 530 or 550 console with an On/Off switch on the back of the console, make sure that this switch is left in the On position.*

You can shutdown and restart the console using the **{EXIT & RESTR}** softkey

### **Server Software Installed**

If the optional Server software is installed and User Logins are enabled, you can log out as the current user by pressing **{LOGOUT} {LOGOUT}** which will display the LOGIN Screen giving you the opportunity to either shutdown the console using the **{SHUTDOWN}** softkey or for another user to login using the **{LOG IN}** softkey. Refer to [Server Software](#).

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## Advanced Setup Menu

Pressing the **{ADV SETUP}** softkey from the System Report Menu displays the Setup LCD menu and provides access to the setup screens and to the [Access Rights Screen](#). A **{BACK}** softkey returns to the System Report Menu.

The Setup displays, are used to configure the operation of the console and installed software. There are three Setup displays available through the **{ADV SETUP}** softkey:

- [User Setup](#)
- [Show Setup Screen](#)
- [Console Setup Screen](#)

Each Setup display is divided into several windows, each with several fields. You can change all of the fields in the Setup displays except the fields displayed in yellow.

Choices available for the currently selected field appear at the bottom of the display, with the currently selected choice highlighted.

Pressing the **{DEFAULT}** softkey will apply the factory default to the highlighted field, dependant on the setting of the **GENIUSPRO/LIGHTPALETTE** field.

Use the Trackball or mouse to move between fields. Change values by using **[+]** and **[-]** or the Level Wheel, or by typing in numbers where appropriate.

Only items shown in green text can be modified. Yellow text indicates items that are not available with the current system configuration.

Some fields, on the Console Setup display, cannot be changed while the main and backup consoles are in sync. These will be yellow while in sync and green when not in sync.

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## Console Reporter

Console Reporter is a standard software package for use with Strand's 500 and 300 Series consoles and GeniusPro and Lightpalette software. It is used to monitor and report temperature, electronic status and system and load information for all SV Series dimmers. This facility allows the user to know the status of all lamps on a rig and to record rack-based backup cues simply and easily.

The following topics are covered in this section:

- [Setting Up the Rack Configuration](#)
- [Dimmer Fault Reporting](#)
- [Dimmer Command Menu](#)
- [Dimmer Log Screen](#)
- [Output Filter Display](#)
- [Recording a Dimmer Backup Scene](#)

---

## Setting Up the Rack Configuration

The configuration of the dimmer racks is set up in a file called '220RACK.CFG' which can be edited. The file 220RACK.CFG determines the configuration of each dimmer rack, and must be edited for each console:

To set up and edit the Reporter Rack Configuration file, press the **<MORE>** key and select the **{NOTES DISP}** soft key to display the Notes Menu, then select **{LOAD FILE}** then **{CONF FILES}** and **{RACK CONFIG}**.

The user can setup and edit the rack configuration file, (220RACK.CFG) using the Notes editor to set up the rack

```
RACK=RACK_NUM ADDR PORT NODE
```

where

RACK\_NUM = 1 to 99

ADDR = SMX rack processor address 1 to 250

PORT = COM1, COM2, 4AUX1, 4AUX2, 4AUX3

NODE = IP address of SN10x (xxx.xxx.xxx.xxx).

A node address of 0.0.0.0. is interpreted as the local console.

At start up, Reporter will automatically interrogate all configured racks to determine the mapping between rack and dimmer id to console output. This configuration is used when reporting any subsequent dimmer faults.

---

## Dimmer Fault Reporting

The optional software, if enabled by the password, may be toggled On or Off in the [Reporter On/Off](#) field of the Communications window of the Console Setup Screen

**Note:** Reporter may be used in conjunction with Networker by setting Networker 'On' in the Console Setup Display (refer to [Networker Software](#))

When one or more faults occur on a patched dimmer, a one or two line error message will be displayed on all screens as shown in the following example. Unpatched dimmers are ignored.

### **Fault on Output 1234: Load Error, 200W, expected 500W**

Only the last fault is displayed. In order to view any other faults, the operator must press the **[REPORT]** key and **{DIMMER LOG}** softkey to access the Dimmer Log screen.

In addition, in order to draw the operator's attention to the fault condition, the word Dimmer! is displayed in red on the top line of the Status screen.

The error message is removed from the current display on the next key press, however, the Dimmer ! warning remains on the Status screen until the operator enters the Dimmer Log screen.

**Note:** When the Channel Screen is displayed, and one or more dimmer faults exist, the channel number to which the faulty dimmer is patched will be highlighted in red.

---

## Dimmer Command Menu

Pressing the **[DIMMER]** key will display the Dimmer softkey menu as follows:

**Note:** The **[DIMMER]** menu can be selected from any display except Setup, Archive, Notes, Report and Help.

**{RE-PATCH}** Re-patches all dimmers patched to each channel (or range) specified on the command

line. (Refer to [Direct Output Control](#))

**{UN-PATCH}** Un-patches all dimmers patched to each channel (or range) specified on the command line. (Refer to [Direct Output Control](#))

**{AT CHAN}** Specifies that the number following in the command line is a channel number rather than a dimmer number.

**Note:** The **{AT CHAN}** softkey enables the operator to address dimmer command line entries to channels patched to dimmers, without knowing the dimmer numbers.

**{BACKUP}** Enables a dimmer backup scene to be recorded. In the event of a major failure, the dimmer backup condition can then be set manually at the dimmer rack. The following examples show how to set a backup scene for a dimmer rack.

**[RECORD] [DIMMER] {BACKUP} [8] [\*]** (*Command line*)

**[DIMMER] {BACKUP} [8] [RECORD]** (*Direct digit*)

Records backup scene 8 for all racks. (1-99 recordable)

**[RECORD] [DIMMER] {BACKUP} [8] [TIME] [5]\*** (*Command line*)

**[DIMMER] {BACKUP} [8] [TIME] [5] [RECORD]** (*Direct digit*)

Records backup scene 8 and sets fade time of 5 seconds.

**[GOTO] [DIMMER] {BACKUP}#[\*]**

Instructs all dimmer racks to fade the backup scene # in the recorded fade time. (1-99 user recordable, 0 = blackout, 254 = fully on)

**dimmer{FILTER}** Displays a softkey menu enabling the operator to determine which fault types will be displayed on the Dimmer Filter display.

**Note:** The commands shown below are used to set up the format of the Dimmer Filter display. No action is taken until the **{DIMMER FILT}** softkey is selected from the Dimmer Log screen.

**{HIGH DC} {OVERLOAD} {OVERHEAT} {OUTPUT ERROR} {LOAD LIMIT} {TRIP}**

**Note:** By default, the filter status of all fault types is Off, e.g., no filtering, or all fault conditions displayed on the Dimmer Filter display. When one or more of the above softkey commands are included in the command line, the fault type is inhibited from the Dimmer Filter display. To re-instate a fault type, include the command **[-]** before the softkey, as shown.

**[DIMMER] [2] [3] [4] [5] {FILTER} {OVERLOAD} {OVERHEAT} [-] {HIGH DC} [\*]**

Sets Overload and Overheat filter On (not displayed) and resets the High DC filter Off (displayed) for faults on dimmer number 2345

**[DIMMER] [AT CHAN] [2] [THRU] [5] {FILTER} {OUTPUT LIMIT} {LOAD LIMIT} [\*]**

Sets Output Limit and Load Limit filter On (not displayed) for faults on dimmers patched to channels 2 to 5.

**[DIMMER] [2] [3] [4] [5] [THRU] [2] [3] [5] [0] [SHIFT] [FILTER] [\*]**

Sets all filters of dimmers 2345 to 2350 to On (all fault displays inhibited in range)

**[DIMMER] [1] [FILTER] [\*]**

Sets all filters of dimmer 1 to Off, such that all fault conditions on dimmer 1 are displayed.

**[DIMMER] [2] [3] [4] [5] [REPORT]**

Shows the summary display for dimmer 2345.

**[DIMMER] [AT CHAN] [1] [2] [3] [4] [REPORT]**

Shows the summary display for the first dimmer patched to channel 1234.

*Note: Dimmer Filter settings cannot be printed*

---

## Dimmer Log Screen

Pressing the **[REPORT]** key and the **{DIMMER LOG}** softkey will display the Dimmer Log screen comprising a scrolling display showing a maximum of 200 date stamped fault reports in chronological order. The log is automatically updated.

8:32:28 24/06/98 DIMMER LOG \*No Title GM=FL/FL

Date	Time	O/P	Rack Dimmer	Description
Rack Status				
				Online Fault Offline

Wheel

v2d2+

Net Off  
Main  
console1  
User:  
admin  
Main  
Active  
NoBackup

**DIMMER LOG: \***  
Select dimmer log page using the wheel

The log shows the date and time that each fault occurred, the rack and dimmer number and a description of the fault. The lower portion of the screen shows a map of all configured racks (max. 99) colour-coded as follows to show their status:

- **Green:** Online
- **Red:** Fault on rack, or on one or more of its dimmers
- **Grey:** Offline
- **(Blank):** Not configured
- **Yellow:** Console is trying to find rack

If a rack number is flashing, at least one dimmer in that rack is load learning.

**{CLEAR}** Clears all logged faults, e.g., **{CLEAR} [\*]** (command mode) or **{CLEAR} {CLEAR}** (direct action). Confirmation is required.

**{RE-SYNC}** Re-synchronizes dimmer log to current rack status. E.g., **{RE-SYNC} [\*]** (command mode) or **{RE-SYNC} {RE-SYNC}** (direct action)

**{LEARN LOAD}** Used as part of command line as follows:

**{LEARN LOAD} {RACK} [#] [#] [\*] [\*]**

Learns load on specified rack number

**{LEARN LOAD} [DIMMER] [#] [#] [#] [#] [\*] [\*]**

Learns load on specified dimmer number

**{LEARN LOAD} [DIMMER] {AT CHAN} [#] [#] [#] [#] [\*] [\*]**

Learns load at specified channel number.

**{LEARN LOAD} [DIMMER] {AT CHAN} [#] [#] [#] [#] [\*] [\*]**

Learns loads on all dimmers on the specified channel number.

**{RACK}** Allows selection of Rack, as above.

**{OUTPUT FILT}** Displays Output Filter screen

**{BACK}** Returns to previous menu

## Output Filter Display

You can filter out particular fault conditions, such that Reporter will ignore the filtered fault for the output specified. By default, all dimmer faults are reported.

You can filter out fault reporting using the **[DIMMER]** key to display the Dimmer Softkey Menu and the **{FILTER}** softkey to display the Dimmer Filter Softkey Menu. Using the softkeys as part of a command, enables you to filter out specific fault conditions for an output or range of outputs. The following filter softkeys are available:

**{HIGH DC} {OVERLOAD} {OVERHEAT} {OUTPUT ERROR} {LOAD LIMIT} {TRIP}**

The following shows examples of the filter function:

**[DIMMER] [6] {FILTER} {OUTPUT ERROR} [\*]**

Filter out any output fault reports for output 6 (All Modes)

**[DIMMER] [1] [THRU] [5] {FILTER} {HIGH DC} {OVERHEAT} [\*]**

Filters out any high DC fault and overheat reports for outputs 1 to 5 (All Modes).

**[DIMMER] [6] [SHIFT] {FILTER} [\*]**

Inhibits all reporting for output 6 (All Modes)

**[DIMMER] [6] {FILTER} [\*]**

Removes all filters from output 6 (All Modes)



Note: Alternatively, you can remove some of the filters from an output, while retaining others, by using the [-] key, as shown:

**[DIMMER] [6] {FILTER} [-] {LOAD LIMIT} [\*]**

Removes the load limit filter from output 6 (All Modes)

Pressing <REPORT> {DIMMER LOG} {OUTPUT FILT} shows the *Output Filter* screen. This screen shows a list of fault types that have been filtered out for particular outputs. The output numbers are listed down the left-hand column and filtered out faults for each output are indicated by a yellow tick under the particular fault type.

---

## Recording a Dimmer Backup Scene

This Reporter feature enables a backup scene to be recorded. In the event of a major failure, the dimmer backup scene can then be set manually from the dimmer rack. Up to 99 different backup scenes can be recorded. The following examples show how to set a backup scene for a dimmer rack:

**[DIMMER] {BACKUP} [8] [RECORD]**

Records the dimmer backup scene 8 for all racks (Direct Action Mode)

**[RECORD] [DIMMER] {BACKUP} [8] [\*]**

Records dimmer backup scene 8 for all racks (Command Line Mode)

You can also record a backup fade time within a backup command, as shown:

**[DIMMER] {BACKUP} [8] [TIME] [5] [RECORD]**

Records dimmer backup scene 8 and sets a fade time of 5 seconds (Direct Action Mode)

**[RECORD] [DIMMER] {BACKUP} [8] [TIME] [5] [\*]**

Records dimmer backup scene 8 and set a fade time of 5 seconds (Command Line Mode)

**[GOTO] [DIMMER] {BACKUP} [8] [\*]**

Instructs all dimmer racks to fade to the backup scene 8 in the recorded fade time (All Modes)

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## Direct Output Control

This section describes how to directly control outputs (dimmers). An output can control any device capable of taking an AMX192, D54 (500 Series Consoles only) or DMX512 signal and translating it into a command, including scrollers and other moving light fixtures. The outputs from the patch system can be further manipulated within this console by DMX signal assignment (see [Output Connections Window](#) of the Console Setup Screen), and again at the input of many dimmer racks.

Each output is normally patched to a channel so that the output follows the channel level. You can use the **[DIMMER]** key to unpatch the output from the channel and set its output to a fixed level. While any output(s) are unpatched, the command prompt includes OUTPUTS UNPATCHED. You can easily repatch the outputs so that they follow their channel settings. You can use the **[DIMMER]** key in any display except Setup, Archive, Notes, Report, and Help.

This chapter contains the following topics:

- [The Current Output Selection](#)
- [Setting Levels](#)
- [Setting DMX Levels](#)
- [Repatching](#)

---

## The Current Output Selection

Most output commands act on a selection of 1 or more outputs. The examples shown immediately below are output selections that you can use to replace out where it appears in full command descriptions. Outputs are not actually selected until you press **[@]** to end the output list.

Outputs can be specified as output numbers (0 to 4096 on 500 Series or 2048 on 300 Series) or in Universe.Dmx format. In Universe.Dmx format, each output connector has its own number from 1 to 8 (1 to 4 on 300 Series consoles) and each signal from the connector has its own number from 1 to 512. The two numbers are used together, so that the 123<sup>rd</sup> output from the 3<sup>rd</sup> DMX connector is addressed as 3.123. DMX connectors 1 through 4 are output from the console. The remainder of the DMX connectors are output from network nodes.

**Note:** Since these examples are only part of a command, they do not have a concluding **[\*]** key.

**[\*]** puts the specified output on the output list.

**[DIMMER] [1]** Puts output 1 on the output list.

**[DIMMER] [1] [.] [6]**

Puts output 6 on the output list.

**# [+] #** puts the listed outputs to the output list.

**[DIMMER] [1] [+] [3]**

Puts outputs 1 and 3 on the output list.

**[DIMMER] [3] [.] [4] [6] [+] [3] [.] [5] [6]**

Puts outputs 1070 and 1080 on the output list.

**# THRU #** puts a range of outputs to the output list.

**[DIMMER] [1] [THRU] [3] or [DIMMER] [3] [THRU] [1]**

Puts outputs 1, 2, and 3 on the output list.

**[DIMMER] [2] [.] [4] [THRU] [5] [1] [8] or**

**[DIMMER] [5] [1] [6] [THRU] [2] [.] [6]**

Puts outputs 516 through 518 on the output list.

**# [-] #** removes the listed outputs from the output list. It only removes outputs that are listed before it in the command.

**[DIMMER] [1] [THRU] [3] [-] [2]**

Puts outputs 1 and 3 on the output list.

**[DIMMER] [1] [THRU] [3] [-] [2] [+] [4]**

Puts outputs 1, 3, and 4 on the output list.

## Setting Levels

Output levels can be set directly from the command line. The level format depends on the Entry Mode. You cannot enter fractions of 10% (e.g. 5.1) in Direct 1 Digit entry mode. If you are in the Live or Patch display you can use the Level Wheel to change the selected dimmer levels until a new command or the **[CLR]** key deselects them.

**[DIMMER] out [\*] or out {UNPATCH}** selects the outputs. If already unpatched (i.e. set

by the Output Control) they remain at their unpatched level. Otherwise (if patched) they are unpatched and initially set to the level of the channel they are being unpatched from.

**[DIMMER] [1] [+] [2] [\*]** *All Modes*

**[DIMMER] [1] [THRU] [2] {UNPATCH}** *All Modes*

Outputs 1 and 2 become the current selection and are unpatched.

**[DIMMER] out [@] #** selects the listed outputs and sets their levels to # .

**[DIMMER] [1] [@] [1]** *Direct 1 Digit*

**[DIMMER] [1] [@] [0] [1]** *Direct 2 Digit*

**[DIMMER] [1] [@] [1] [\*]** *Command Line*

Makes output 1 the current selection and sets its level to 1%. This cannot be done in Direct 1 Digit entry mode.

**[DIMMER] [1] [+] [3] [@] [1]** *Direct 1 Digit*

**[DIMMER] [1] [+] [3] [@] [1] [0]** *Direct 2 Digit*

**[DIMMER] [1] [+] [3] [@] [1] [\*]** *Command Line*

Makes outputs 1 and 3 the current selection and sets their levels to 10%.

**[DIMMER] out [@] {FULL} [\*]** selects the listed outputs and sets their levels to Full (100%). {FULL} is a soft key on the LCD Patch menu. It appears after you press [@].

**[DIMMER] [1] [@] {FULL} [\*]** *All Modes*

Makes channel 1 the current selection and sets its level to Full.

**[DIMMER] [1] [+] [3] [@] [\*]** *All Modes*

Makes channels 1 and 3 the current selection and sets their levels to off.

## Setting DMX Levels

Normally, output levels are set from 0% to 100%. However, the actual DMX level is an 8 bit number ranging from 0 to 255. The **{DMX}** soft key lets you set output levels to exact DMX levels if necessary.

Setting actual DMX levels gives you more precise control over the levels you set. The display will show the nearest standard (00 to FL) level rather than the exact DMX level you set.

**[DIMMER] out [@] {DMX}#** selects the specified channels and sets their levels to the specified output where # is 0 to 255.

**[DIMMER] [1] [@] {DMX} [0] [1] [2]** *Direct 1 and 2 Digit*

**[DIMMER] [1] [ @ ] {DMX} [1] [2] [\*] Command Line**

Makes Output 1 the current selection and sets its level to 12 (about 4%, i.e. 12/255).

---

## Repatching

An output can be patched back so that it uses the channel level again.

**[DIMMER] out {REPATCH}**, or **[DIMMER] out [DIMMER]** repatches the selected outputs to use the channel level. To repatch all previously patched outputs, omit **out**. **{REPATCH}** is a soft key on the LCD Patch menu.

**[DIMMER] [1] [DIMMER] All Modes**

**[DIMMER] [1] {REPATCH} All Modes**

Repatches Output 1.

**[DIMMER] [DIMMER] All Modes**

**[DIMMER] {REPATCH} All Modes**

Repatches all outputs

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## Common Features

The following topics are covered in this section:

- [Live Screen](#)
  - [Locking the Console Faders and Keys](#)
  - [Locking the Console Memory](#)
  - [Error Messages](#)
  - [Edit Field Protection](#)
  - [Mouse Functions](#)
- 

### **Live Screen**

This section describes the Live Screen and various windows and other indications which may be displayed when the <**LIVE**> key is pressed. It should be noted that the exact layout of the Live Screen is dependent on the optional software and hardware installed on your system and the system setup.

This section covers the following topics:

- [Live Screen Format](#)
  - [Live LCD Menu](#)
  - [Title Bar](#)
- 

### **Live Screen Format**

10:39:38 27/1/99 >>
LIVE
\*No Title
GM=FL/FL

0001 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 0025

0026 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 0050

0051 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 0075

0076 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 0100

0101 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 0125

X Playback - This Cue Only

X Cue	P	Type	Up/Down	Delay	Wait	Link	Loop	Cmd
0		AF	0					
> 1		XF	5					

Wheel

v2.2a

Net On

Main

denise

User

admin

Main

Active

NoBackup

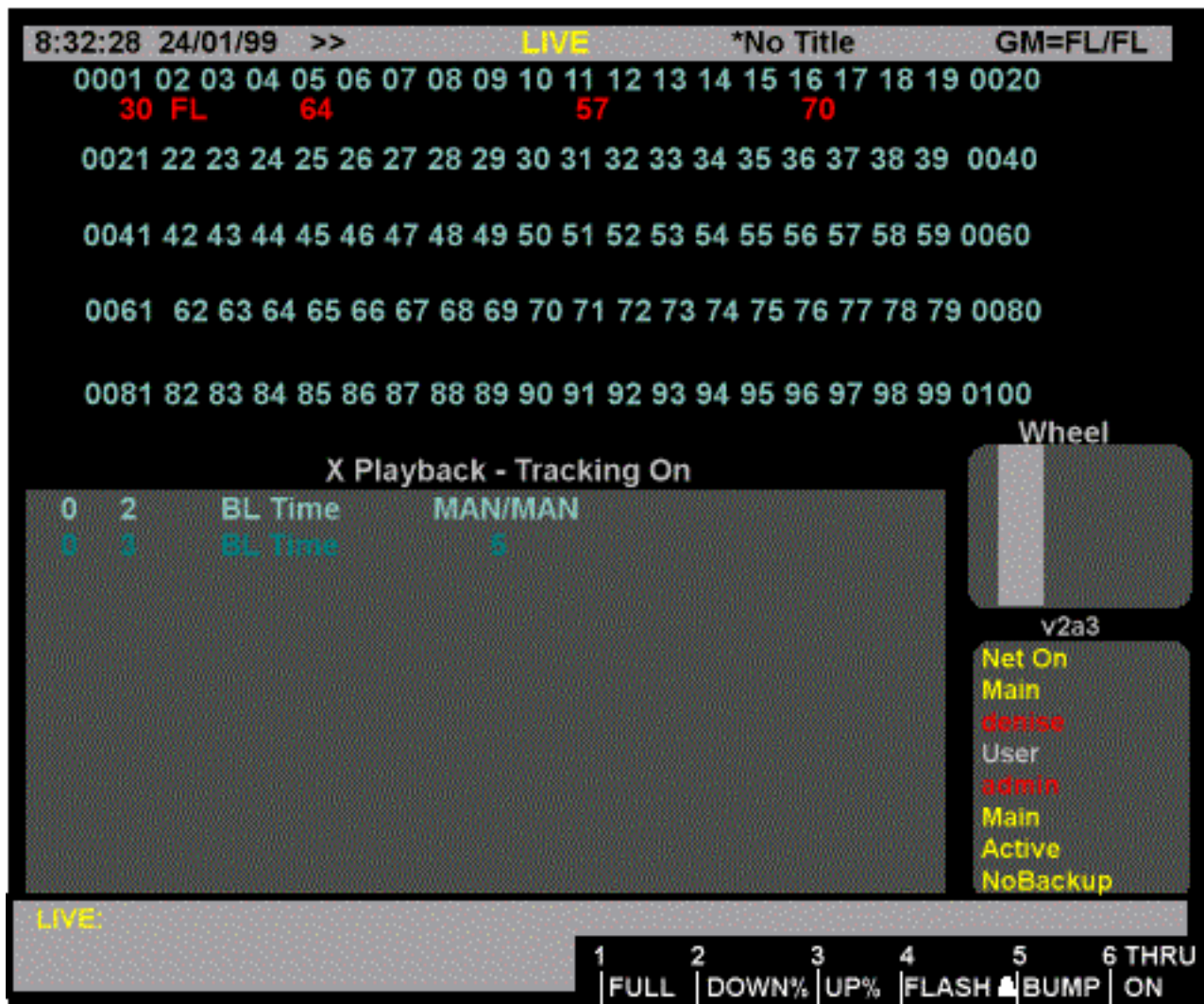
[Page 1] Submasters

Sub	% Text	Sub	%Text	Sub	% Text	Sub	% Text
1	*Q1	7	*G1	13	R 0	19	
2	*Q2	8	*FX1	14		20	
3	*Q3	9		15		21	
4		10		16		22	
5		11		17		23	
6		12		18		24	

LIVE:

Live Screen Format - GeniusPro, Single Screen, Live Screen Layout set to PB+SUBS





### Live Screen Format - Lightpalette, Single Screen, Live Screen Layout set to PB

The layout of the Live Screen is dependent on the number of video displays (1, 2, 3, or 4) connected to your system and the selection of the Live Screen Layout options. To select the number of screens adjust the [Number of Screens](#) field of the 'Console' window in the 'User Setup' screen. To select one of the live screen layout options adjust the [Live Screen Layout](#) field of the 'Console' window in the 'User Setup' screen

For information on number of screens on 500 and 300 series consoles, refer to [Number of Screens](#)

The layout of the channels on the Live Screen Channel Levels Screen (or window) is also determined by the setting of the [Channel Display](#), [Smart Channel Display](#) and [Channel Formatting](#) field of the 'Display Options' window on the 'User Setup' screen.

Depending on the setup and number of screens, the Live Screen(s) will display either a single function, or multiple functions as shown below.

**Note:** Holding down the **[SHIFT]** key and pressing the **<LIVE>** key will toggle the Live display to the next screen format shown below for the number of screens. Also, holding down the **[SHIFT]** key and pressing the **[LAST SCREEN]** key will swap screens 1 and 2 if the Number of Screens field in the User Setup Screen is set to 2, 3 or 4.

The following shows the live screen layout for 1, 2, 3 and 4 screen systems.

### **Single Screen:**

Channel Levels + X Playback(s)  
Channel Levels + Submasters  
Channel Levels + Effects  
Channel Levels + X Playback(s) + Effects  
Channel Levels + X Playback(s) + Submasters + Effects  
Channel Levels + Events  
Channel Levels + X Playback(s) + Events  
Channel Levels + X Playback(s) + Events + Effects

### **Two Screens**

#### **Screen 1 /Screen 2**

X Playback(s) / Channel Levels  
Submasters / Channel Levels  
Effects / Channel Levels  
X Playback(s) + Submasters / Channel Levels  
X Playback(s) + Submasters + Effects / Channel Levels  
Events / Channel Levels  
X Playback(s) + Events / Channel Levels  
X Playback(s) + Events + Effects / Channel Levels

### **Three Screens**

#### **Screen 1 /Screen 2 /Screen 3**

X Playback(s) / Channel Levels / Channel Levels  
Submasters / Channel Levels / Channel Levels  
Effects / Channel Levels / Channel Levels  
X Playback(s) + Submasters / Channel Levels / Channel Levels  
X Playback(s) + Submasters + Effects / Channel Levels / Channel Levels  
Events / Channel Levels / Channel Levels  
X Playback(s) + Events / Channel Levels / Channel Levels  
X Playback(s) + Events + Effects / Channel Levels / Channel Levels

### **Four Screens**

#### **Screen 1 Screen 2 Screen 3 Screen 4**

X Playback(s) / Channel Levels / Channel Levels / Channel Levels  
Submasters / Channel Levels / Channel Levels / Channel Levels

Effects / Channel Levels / Channel Levels / Channel Levels  
 X Playback(s) + Submasters / Channel Levels / Channel Levels  
 X Playback(s) + Submasters + Effects / Channel Levels / Channel Levels  
 Events / Channel Levels / Channel Levels / Channel Levels  
 X Playback(s) + Events / Channel Levels / Channel Levels / Channel Levels  
 X Playback(s) + Events + Effects / Channel Levels / Channel Levels / Channel Levels

**Notes:**

1. The third and fourth screen only ever shows channel levels. The number of channels displayed on the channel display screen (s) depends on whether GeniusPro or Lightpalette are being used and on the setting of the Channel Display field in the User Setup Screen. Pressing **[PAGE UP]** or **[PAGE DOWN]** displays the next screen of channels.
2. When the **[CUE]**, **[GROUP]**, **[SUB]** or **[FX]** key is pressed, the 2nd, 3rd and 4th screen (if fitted) will display the preview screen for the selected function and show the Cue, Group, Sub or FX levels for each channel. The distribution of channels across three and four screen systems is as described above.
3. When the 'Playbacks' field in the 'Show Details' window of the 'Show Setup' Screen is set to 'Single', or 'Split Single'(not 300 series), only 'X Playback 1' window is shown. However, if the field is set to 'Dual LTP' or 'Dual HTP', both 'X Playback 1' and 'X Playback 2' windows are displayed on the Live Screen. For further information refer to the [Playbacks](#) in the Show Setup Screen
4. With the 'Tracker' software installed on a dual screen system, a 'Rotary' window is displayed on the Live Screen. The entries in this window show the attributes currently being controlled by the trackerball (the top two entries) and the four rotary controls to the right of the trackerball. For further information refer to [Tracker Software](#). (for 300 series, refer to [Mouse Control of Features](#))
5. The 'Wheel' window shows movements of the wheel for the selected channel(s) with the lowest intensity.

---

## Live LCD Menu

The Live Menu on the Channel Control LCD indicates the last Channel, Cue, Effect and Group to have been selected, together with the following softkeys. 300 Series consoles can support either one or two monitor. 300 Series 400 and 600 Memory consoles are supplied with two LCD monitor modules.

**{FULL}** Sets the currently selected channels to full on

**{DOWN%}{UP%}** Decreases/Increases the intensity of the specified channel(s) by the percentage set in the [Up/Down %](#) field of the 'Control Modes' window of the 'User Setup' screen. The default value is 5%.

**{FLASH }** Flashes the currently selected channel(s). Refer to [Flashing Channel Levels](#)

**{BUMP}** Bumps the currently selected channels. Refer to [Bumping Channel Levels](#)

**{THRU ON}** Used to select a channel range including only channels whose intensity level is greater than 0. Refer to [Channel Selection List](#)

---

## Title Bar

During initialisation (for about 15 secs) the applications available on the console are flashed on the title bar at the top of each screen. After initialisation, the title bar shows the 'Current Time and Date', the current 'Show Name' and the setting of the 'Grandmaster Fader(s)'. The date and time can be set in the [Console Window](#) of the Show Setup Screen. The show name is preceded with an asterisk if changes have been made to the show since it was last saved.

On consoles without fixed submaster faders, you have the option of setting any one (300 Series consoles) or two (520 Consoles) submasters as grandmaster 1(GM1) or grandmaster 2 (GM2). If no submasters are set as grandmasters, the software automatically set the grandmaster level to full (FL)

## Memory and Console Locked Indicator

When the memory has been locked **Memory Locked** is shown on a red background on the screen header. In order to avoid accidental changes to a show, you can lock the console faders and keys. The right LCD shows **Locked** in the upper right corner when the console keys and faders are locked, The Live Display also shows **Console Locked** with a red background at the top of the screen when the console keys and faders are locked. When a show has been recorded, the memory can be locked to ensure that accidental changes cannot be made. For further information, refer to [Locking the Console Faders and Keys](#) and [Locking the Console Memory](#)

## Save Indicator

Show data is held on the system internal hard disk (the local disk). When recording or updating cues, effect steps, submasters, etc., data is automatically saved to the local disk. The / symbol between grandmaster levels changes to a flashing magenta box to indicate that automatic saving is taking place.

---

## Locking the Console Faders and Keys

In order to avoid accidental changes to a show, you can lock the console faders and keys. The right LCD shows LOCKED in the upper right corner when the console keys and faders are locked, or when memory is locked (see below)

The display also shows CONSOLE LOCKED in yellow with a red background on the title bar on the top of all screens when the console keys and faders are locked or when the console and memory are locked.

**[SHIFT]<HELP>** toggles the console keyboard and fader state between locked and unlocked.

## 510i and 310 Show Controllers

**[DISABLE]** keylock switches the console keyboard and fader state between locked and unlocked.

---

## Error Messages

If the [Buzzer Volume](#) is set to ON in the User Setup Screen, the console beeps and displays an error message below the Command Line if entries do not fit with the current syntax, or values are out of range. The console also beeps and posts a message on screen if an entry needs to be confirmed or cancelled. To confirm the action you usually press the same key again or press **[\*]**. To cancel the action, press **[CLR]** or **[UNDO]**.

*Note: If the optional 'Console Reporter' software is installed and a fault has occurred on a patched dimmer, the fault condition is displayed on all screens below the command line. For further information on dimmer fault reports refer to [Console Reporter](#)*

---

## Edit Field Protection

An edit field protection feature prevents accidentally changing existing settings when carrying out channel control operations. This feature affects the Cue, Sub, Macro, X Playback and Group screens.

When the user enters any of these screen by pressing the appropriate key all editable fields are displayed in yellow (non -editable) and the trackball can only be used to scroll up and down the list of Cues, Subs, Macros, etc. Similarly, when the Fx screen is displayed, The trackball will only scroll the existing effects, or effect steps using the **{EDIT STEPS}** **{EDIT FX}** softkeys. All existing effect properties are displayed in yellow.

The user can still perform all channel control functions and create and record new Cues, Subs, Macros, Effects and Effect Steps.

When the **[SHIFT]** key is held pressed while moving the trackball, all fields in the current display become green (editable)

Pressing the **[\*]** key returns to the edit field protection mode.

---

## Mouse Functions

GeniusPro and Lightpalette software supports a range of mice and trackballs, including the 'intelli' type mouse and trackball, to mimic the trackball, trackball softkeys and rotaries on the 500 series consoles. Any of the mouse options can be used with either 500 or 300 series consoles for the control of

attributes and to mimic the other functions of the trackball, e.g., moving the highlight on the setup screens, scrolling the help screens and activating help hyperlinks. PS2 mice should be plugged into the PS2 port and serial mice should be plugged into one of the COM ports, unless the mouse is dual function (i.e., PS2/Serial). On the 300 Series consoles, the intellitrackball may be connected to the PS2 port on the Processor unit or on the command module. Alternatively, the intellitrackball may be plugged into either the COM1 port on the processor unit, or the COM2 port on the command module using the appropriate adaptor.

**Important Note: Throughout this manual, references to trackball should be taken as a generic term covering the series 500 trackball or the trackball of a two or three button or 'Intelli' type mouse or trackball. In the event of a mouse/trackball not being available or inoperable, all the functions performed by the trackball/mouse can be simulated using the four navigation keys on a PC keyboard connected to the console, or, on 300 Series consoles by pressing [SHIFT] [0] to enter cursor lock mode and using the arrow keys on the console keypad.**

**When you initially connect a mouse to a 300 Series console, the mouse will not operate until you set the Mouse Net Node and Port fields in the User Setup Screen. To do this, press <SETUP> then press [SHIFT] [0] to enter cursor lock mode. You can then use the cursor keys on the console keypad to highlight the Net Node and Port fields and the [+] or [-] keys to set the options.**

## **Supported Mice**

Microsoft or Logitech 2-button PS2 or serial mouse  
Microsoft or Logitech 3-button PS2 or serial mouse  
Microsoft Intellimouse or Intellitrackball or Logitech equivalents.

**Important Note: When using a PS2 mouse, the mouse must be plugged into the PS2 port before you switch on the console, otherwise, the mouse will not work.**

When in any of the Setup Screens, the screen highlight will move left and right, or up and down according to the X and Y movement of the mouse ball.

When in the Help Screen, moving the mouse through the Y axis will scroll the help screen up or down. Pressing the left mouse button will activate the help hyperlinks.

For information on using the mouse to control moving lights, refer to [Mouse Control of Features](#)

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# Profiles

Profiles let you change the fade characteristics of cues, effects, and outputs. For cues you can assign profiles separately to the up fade, down fade, and attribute fade times. For effects the profile applies to the fade up and fade down times of the effect (not an effect step). You can modify the fade characteristics of a fixture intensity by attaching a profile to the intensity output for the fixture, and modify the movement characteristics of the fixture by attaching profiles to appropriate attribute outputs.

You can modify profiles in 1% or 5% increments graphically or through the command line, or with DMX values (0-255) through the command line. When you are editing with 256 step resolution the points are displayed as coordinates rather than as a graph.

Profiles can be recorded, viewed, and edited only from the Profile display. Once recorded, they can be attached to cues , effects or outputs.

This section shows you how to create the profiles, and contains the following topics:

- [Profile Properties](#)
- [Predefined Profiles](#)
- [Viewing and Editing Profiles](#)
- [Profile Learn](#)
  - [Viewing and Editing Learned Profiles](#)
  - [Stopping the Learn Process](#)
  - [Assigning Profiles](#)
  - [Undoing a Profile](#)

---

## Profile Properties

Profiles have only one property which can be specified when recording or edited later. You can record a text label (caption) with each profile to help identify the profile.

---

## Predefined Profiles

There are 2 predefined profiles. These are:

- Profile 98 - S Curve
- Profile 99 - Square

**Note:** You cannot delete, or edit the predefined profiles

---

## Viewing and Editing Profiles

You can view and edit profiles in the Profile display. Since you must be in the Profile display to define profiles and to change their characteristics, there is no difference between editing and recording profiles.

This section covers the following topics:

- [The Profile Display](#)
  - [The Current Profile](#)
  - [Creating Profiles](#)
  - [Using End Editing](#)
  - [Using DMX Values for Points](#)
  - [Using Graph Editing](#)
  - [Deleting a Profile](#)
- 

### The Profile Display

The Profile Display To show the Profile display press **[MORE]** in the Display keypad and then press **{PROF DISP}**. To view a specific profile, use **[NEXT]**, **[LAST]** , **profile # [\*]** , or the Trackball, or mouse to highlight the profile number.

The Levels screen still shows the Live display when the State screen is in the Profile display. You cannot change channel levels with any of the channel control commands. However, you can use the submaster faders, X playbacks, and effect playbacks to change channels levels and record the results into submasters, cues, groups, or effect steps.

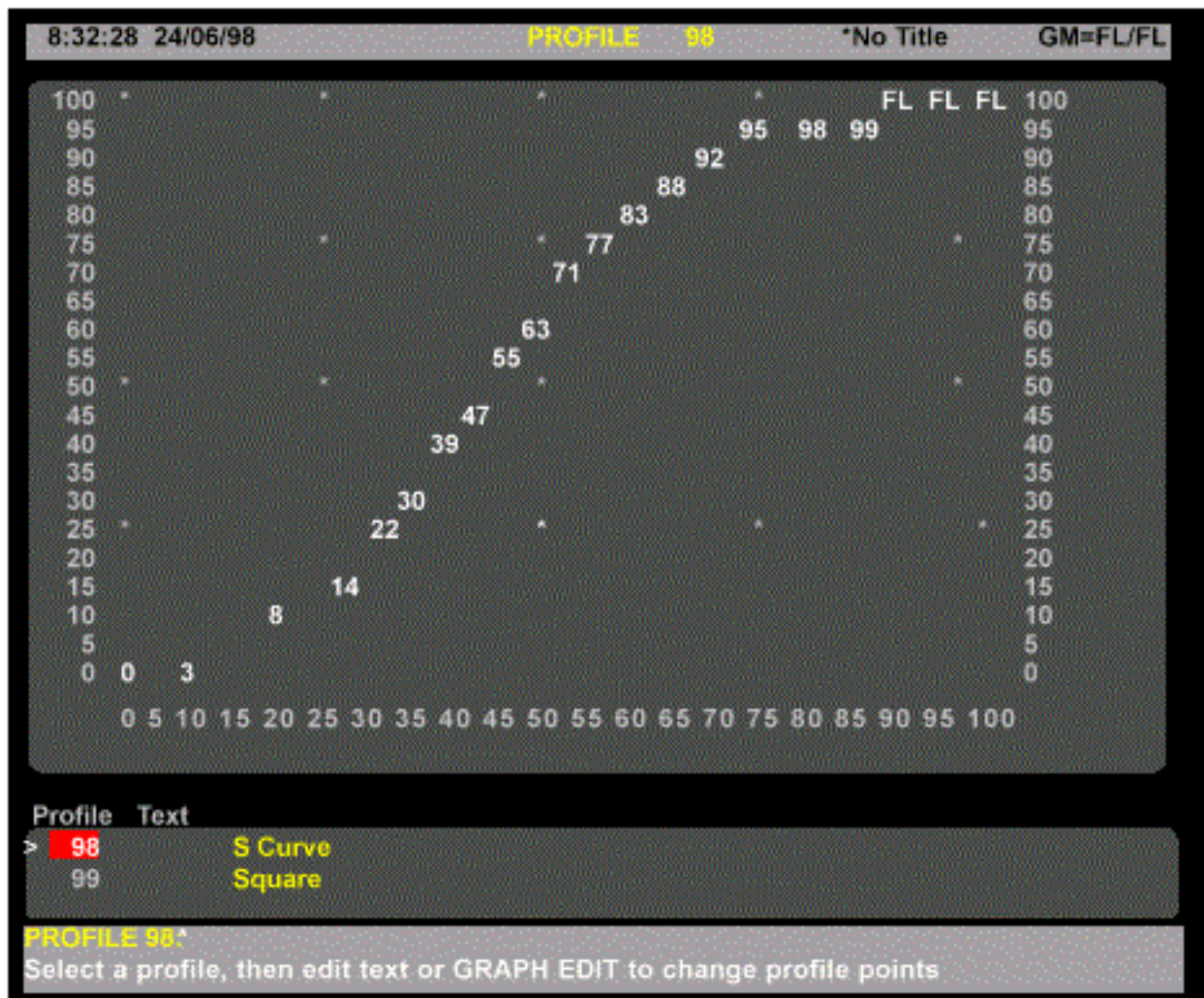


The title bar shows the date and time, display name, show name, and grandmaster status. The date and time format can be set in the Console Time window of the second Setup display State screen. The show name is preceded by an asterisk (\*) when changes have been made to the show since you last saved it.

The profile graph is scaled in percentage and shows profile processor input levels across the bottom and output levels up the side. When you create a new profile it starts as a linear curve (0% in = 0% out, 50% in = 50% out, etc.).

## The Current Profile

The current profile is shown with a highlight on the State screen. To change the current profile, use **[NEXT]**, **[LAST]**, or the Trackball or mouse to move the highlight to the appropriate profile. The highlight must be on the profile number (the Profile field) to change the current profile. You must be in the Profile display before you can use the Trackball, or mouse to change the current profile.



## Creating Profiles

To create a new profile, you must enter a non-used profile number. This will create a profile with a linear profile which can then be edited using end editing, graph editing or a combination of the two.

**[PROFILE] # [\*]** Creates a profile, if it does not exist, or makes **profile #** the current profile.

**[PROFILE] [1] [\*]**

Makes profile 1 the current profile if you are already in the Profile display. Creates profile 1 if it doesn't exist.

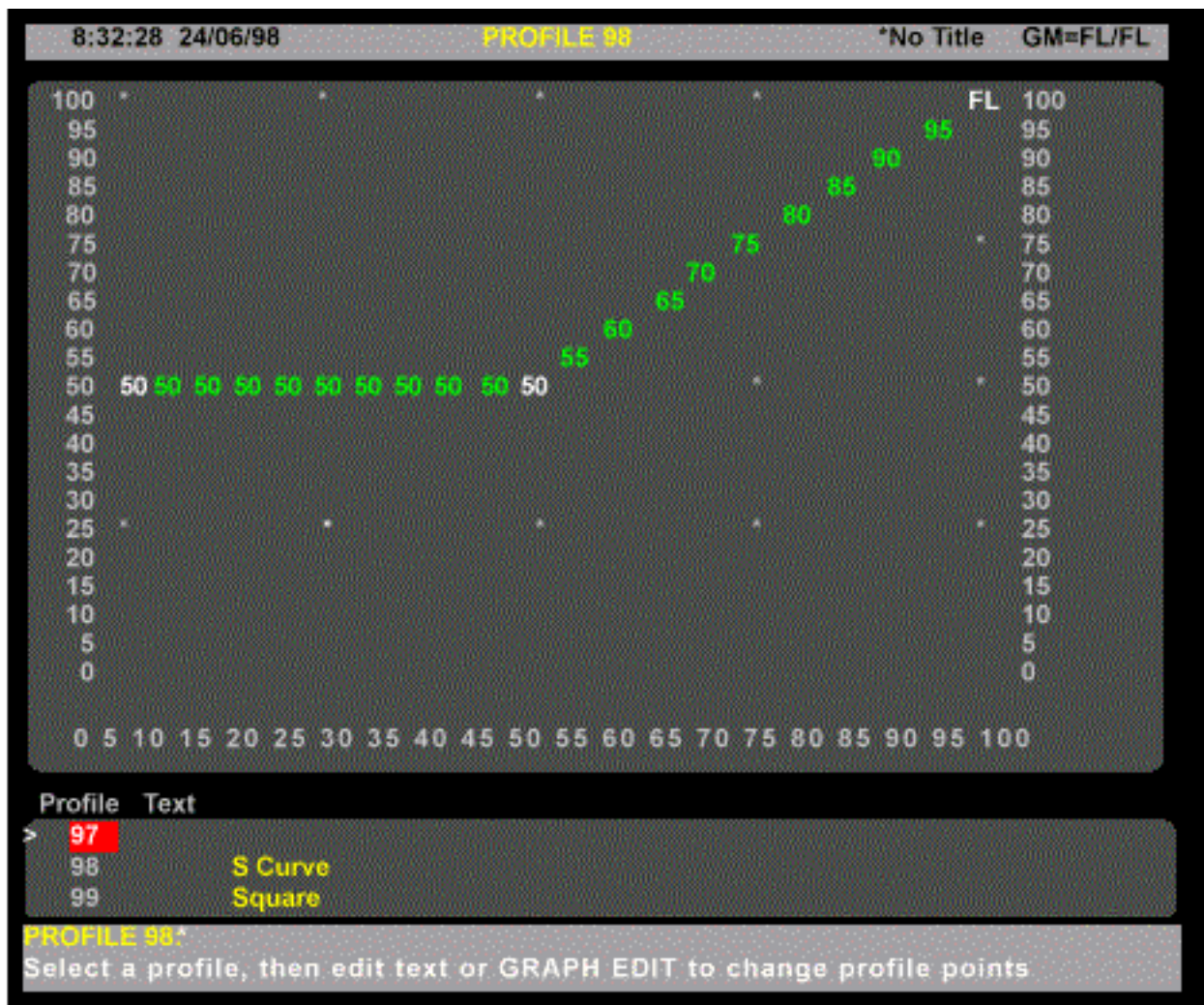
**[MORE] {PROF DISP} [PROFILE] [1] [\*]**

Switches to the Profile display and makes profile 1 the current profile. Creates profile 1 if it does not already exist.

---

## Using End Editing

End editing is primarily designed for setting the ends of the profile curve, but you can also specify the value of any point on the curve.



Each end point, and any point you add, is an anchor point for a section of the curve and is shown in white rather than green.

When you add a point, the curve is redrawn so that there is a straight line between the new point and the nearest anchor point(s).

**point [ @ ] level [ \* ]** sets an anchor point specified by point to the level specified by level. Anchor points are shown in white. All other points in the profile are calculated to create straight lines between adjacent anchor points.

**[ 0 ] [ @ ] [ 5 ] [ \* ]**

Sets the level for the start of the fade (zero input) to 50% of the profile processor input level. This may not be 50% of maximum intensity for a fixture, since there are multiple factors that can modify the channel or output level before the profile is applied. At this time, the only anchor points in the profile are the two ends. All other points are calculated between these two points.

**[ 5 ] [ 0 ] [ @ ] [ 5 ] [ \* ]**

Sets the level for the centre of the fade (50% input) to 50% of the profile processor input level. The profile now has three anchor points. All other points in the profile are calculated to create straight lines between these anchor points.



**point** [**@**] [**\***] clears the anchor point specified by point. The cleared anchor point is shown in green again, and all interim points are calculated to create straight lines between the remaining anchor points.

**[5] [0] [0] [0] [**@**] [**\***]**

Clears the anchor point at the 50% input level. There are only two anchor points remaining (the end points), and the remaining points are calculated to create a straight line between these points.

## Using DMX values for Points

You can specify points and levels using DMX values rather than percent value. This lets you specify more precise curves than is possible with percent values.

**point** [**@**] **{DMX}** **level** [**\***] sets the anchor point specified by point to the DMX level specified by level. The anchor point can be from 0 to 100 while the level can be from 0 to 255. The display will show the nearest percent level for the specified DMX level, but the system will use the DMX level.

**[1] [0] [0] [**@**] **{DMX}** [3] [0] [**\***]**

Sets the 10% point to a DMX level of 30. This shows on screen as 12%. **{DMX}** **point #** **{DMX}** **level #** [**\***] sets the anchor point specified by point to the DMX level specified by level. Both numbers can be any number from 0 to 255. Unlike the syntax for specifying points by percent, there is no [**@**] used in this command.

Since the graph view can only display 100 points and 100 levels, once you specify a point using this method for a profile, the graph view is replaced with a point list and the Graph Editing function is no longer available for that profile.

**{DMX}** [2] [3] **{DMX}** [4] [0] [**\***]

Sets the point represented by the DMX value of 23 to a DMX level of 40. The State screen switches to a point list rather than the standard profile graph.

**{DMX}** [2] [3] [**\***]

Clears the above command

## Using Graph Editing

Graph editing lets you use the trackball or mouse to highlight where you want to place an anchor point and then insert the point. You can move the end points this way, and easily add

more points.

Each end point, and any point you add, is an anchor point for a section of the curve and is shown in white rather than green. When you add a point, the curve is redrawn so that there is a straight line between the new point and the nearest anchor point(s).

**trackerball or mouse {INSERT POINT} {INSERT POINT}** sets an anchor point in the profile. Anchor points are shown in white. All other points in the profile are calculated to create straight lines between adjacent anchor points.

**trackerball or mouse** Highlights the location for the new point. The trackball or mouse moves the highlight in 5% steps. To change point values in 1% steps, use **[+]** and **[-]**.

**{INSERT POINT} {INSERT POINT}** Inserts the point and recalculates all points between the end points and the new anchor point

**{DELETE POINT} {DELETE POINT}** deletes an anchor point in the profile. The profile is recalculated so that there is a straight line between the anchor points on either side of the deleted point. You cannot delete end points. They are always anchor points.

**trackerball or mouse** Highlights the point you wish to delete.

**{DELETE POINT} {DELETE POINT}** Deletes the point and recalculates all points between the two anchor points that were adjacent to it.

## Deleting a Profile

Profiles can be deleted in the Profile display. This is a good way to delete profiles if you are only going to delete a few. For information on deleting all profiles or a range of profiles from the Archive display refer to [Clear Operations](#) in the Archive Screen

**[PROFILE] # {DELETE PROF} [DELETE PROF]** or

**[PROFILE] # {DELETE PROF} [\*]** or

Select profile with trackball, mouse, or **[NEXT]** or **[LAST]** keys, then **[DELETE PROF]**  
**{DELETE PROF}**

Deletes the selected specified profile.

## Profile Learn

You can create fade profiles for up, down and attribute fades by selecting one of the two X Playbacks, selecting a profile number and pressing the **{LEARN}** softkey on the Profile LCD Menu, followed by **[\*]**. Running the next cue by pressing **[GO X1]** or **[GO X2]** or moving the appropriate X Playback fader off zero will start the profile learn process.

**Note:** A profile 'learned' in this way is not permanently assigned to the cue. It is only used once, when the **[GO X1]** or **[GO X2]** key is pressed.

Movement of the X Playback fader, including the Up and Down Fade Time and all movements of the fader when not on zero or 100% are used to calculate the fade profiles.

**Note:** During learning, the Status Window will show **PROFILE LEARN** in flashing white text on a red background. The Playback LCD on 500 Series consoles will show the profile numbers being learned and the VGA title bar in the Profile Screen will show **PROFILE PP LEARNING**. **[PB] {PROFILE} [5] [PB] [1] {LEARN} [\*]** Learns intensity and attribute profiles on X Playback 1 (All Modes) . Where 5 is the Upfade profile and attribute fade, and 5 + 1 is the Downfade profile.

**[PB] {PROFILE} [6] [/] [7] [PB] [2] {LEARN} [\*]** Learns intensity profiles on X Playback 2 (All Modes). Where 6 is the Upfade profile, 7 is the Downfade and the attribute fade is not affected.

**Note:** If Playbacks field in the Show Setup Screen is set to Single, or Split Single and Playback 2 is selected. An error message is generated.

**[PB] {PROFILE} [/] [3] [PB] [1] {LEARN} [\*]** Learns intensity profile on X Playback 1 (All Modes). Where 3 is the Downfade profile and the Upfade and attribute profiles are unaffected.

---

## Viewing and Editing Learned Profiles.

When you have created the profile(s), you can view and edit them in the Profile Display using End Editing only, as previously described.

---

## Stopping the Learn Process

You can stop an active learn on either playback as shown:

**[PB] [2] [PROFILE] [PROFILE]**

---

## Assigning Profiles

You can assign the same profile, or different profiles to the up fade and attribute fades and to down fades, as follows:

**[CUE] [8] [PROFILE] [6] [/] [7] [LOAD]** Assigns the following profiles to Cue 8. Profile 6 to the Upfade, profile 7 to the down fade and uses any attribute fades, if already assigned. Loads to X1 or X2 Playback as selected. (Direct Action Modes)

**[LOAD] [CUE] [8] [PROFILE] [6] [/] [7] [\*]** As above for Command Line Mode

**[CUE] [6] [@ATT] [PROFILE] [4] [LOAD]** Assigns profile 4 to the attribute fade profile of cue 6 and loads to X1 or X2 Playback as selected. (Direct Action Modes)

**[LOAD] [CUE] [6] [@ATT] [PROFILE] [4] [\*]** As above for Command Line Mode

---

## Undoing a Profile

You can undo the learn action using the **[UNDO]** key. This will restore the profile field in the cue to the state before the learn took place.

**[UNDO] [PROFILE]** Undoes the last profile learn action

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# Patches

This section describes the patch system, which lets you set which channels control which console outputs.

Patching sets up the channel that controls each console output. For intensity channels, these outputs usually control dimmers or non-dims, which in turn control fixture intensity. For attribute channels, these outputs usually control scrollers, which in turn control fixture colour.

Each channel can have an intensity, an attribute or both, so a dimmer and a scroller can both be patched to the same channel. The Live display shows both the intensity and the attribute levels for each channel.

**The Tracker software allows multiple attributes per channel. For information on how to patch multiple attributes and complete fixtures, refer to [Tracker Software](#).**

An output can control any device capable of taking an AMX192, D54 (500 Series only) or DMX512 signal and translating it into a command, including scrollers and other moving light fixtures. The outputs from the patch system can be further manipulated within the console by DMX signal assignment (refer to [Output Connections Window](#) of the Console Setup Screen) and again at the input of many dimmer racks.

There are 2 Patches available (1 only on 300 Series consoles), called patch 1 and patch 2. The patch that is currently being used by the output is called the live patch. The patch currently being edited is called the edit patch. You can set either patch to be the live patch and either patch to be the edit patch. If you set the live and edit patch to the same number, changes you make will show immediately on stage. If you set the live and edit patches to be different, changes you make in the patch will not show on stage.

The following topics are covered in this section:

- [Output Properties](#)
- [The Patch Display](#)
- [Selecting Outputs](#)
- [Changing Live and Edit Patches](#)
- [The Copy Patch Menu](#)
- [Changing the Output Numbering Style](#)
- [Customising the Patch Display](#)
- [Deleting Channels](#)
- [Deleting Unpatched Attributes](#)
- [Renumbering Channels](#)
- [Default Patching](#)
- [Clearing Default Patching](#)



- [Patching Channel Intensities](#)
  - [Patching Double Width Outputs](#)
  - [Assigning Output Profiles](#)
  - [Patching Channel Attributes](#)
  - [Patching Non-Dims](#)
  - [Patching DMX In](#)
  - [Unpatching](#)
- 

## Output Properties

Outputs have the following editable properties, which can be specified when patching or edited later.

- [Output Type](#)
  - [Output Profile](#)
  - [Scaling Value](#)
- 

## Types

Each output can be set to one of several types.

**Unpatched** No channel number. The output is not patched to any channel and so its output is always 0. (see [Unpatching](#))

**Intensity** The channel number is white (or yellow if it is not a one-to-one patch) and the output is grey in Channel Order. In Output order, the Output is white and the channel number is grey (or yellow if it is not a one-to-one patch). The intensity output is patched to a channel intensity. The output has a Scaling Factor (shown in grey below the channel number) which modifies the basic channel level and can range from 0% to 200%. A value of 100% has no effect, a value of 0% disables the output (its value is always 0). For example with a level of 80% on the Live display, scaling of 50% would cause an output of 40%. Scaling values over 100% cause the output to reach its full intensity faster than other outputs. For instance, if the scaling is 150% the output will be at 75% when the channel it is patched to is still at 50%. When the channel is at 67% the output reaches full intensity. Its intensity will not increase as the channel intensity increases above 67% If no scaling factor is set, the default scaling factor is assumed.

Scaling of 100% is not displayed on the patch screen. (see [Patching Channel Intensities](#)) The default scaling is set in the [Default Scale %](#) field of the Patch Window of the Show Setup Screen. Its default is 100%.

**NonDim** The channel number is white in Channel Order or grey in Output Order (or yellow if it is not a one-to-one patch). The non-dim output is patched to a channel intensity or attribute. It has a threshold (in magenta below the channel number) which is the level at which the output turns on or off. For example, if a non-dim has a threshold of 60%, channel levels from 0% to 60% will give an output of 0% and levels from 61% to 100% have an output of 100%. (see [Patching Non-Dims](#))

**Basic Attribute** The channel number is yellow. The output is patched to the basic attribute (colour) of a channel. It has a maximum frame number (in green below the channel number) which is the full value for the attribute, and can range from 1 to 100. (see [Patching Channel Attributes](#))

**Tracker Attribute** The channel number is blue. The output is patched to an attribute controlled by the Tracker Software (see [Patching Attributes](#)).

**DMX In** The channel number is Magenta and has a trailing letter 'D'. The output is patched directly to a DMX input channel. This is only used when the CommuniquéPro software is installed. For additional information refer to [DMX IN](#) CommuniquéPro Software.

---

## Profiles

Each output can have a profile assigned to it. This lets you change the fade characteristics of individual outputs if necessary. You may need to do this because you are using several different types of dimmers whose dimming characteristics don't match, because the output is actually controlling a fixture attribute that needs a non-linear "fade," or because you need an output for a particular special effect, etc. For further information refer to [Profiles](#).

---

## Scaling Value

Each output has a scaling value assigned. The meaning of the scaling value depends on the type of output.

**Unpatched** There is no scaling value.

**Intensity** Scales the intensity as provided by the channel that the output is patched to.

Refer to [Patching Channel Intensities](#)

**Non-dim** The scaling value is the threshold for the non-dim. Any channel level above the threshold forces the output to Full. Any value below the threshold forces the output to 0 (zero). Refer to [Patching Non-Dims](#)

**Attribute** The scaling value is the maximum frame number. Refer to [Patching Attributes](#)

## The Patch Display

The screenshot shows the 'Patch Display' interface. At the top, it displays the time '13:02:08', date '21/01/99', and the title 'OUTPUT ORDERED PATCH 2 \* No Title GM=FL/'. The main area is a grid of 56 outputs (O/P) and 56 channels (CHN), arranged in 7 rows of 8 columns. The first row shows O/P 1-8 and CHN 1-8. The second row shows O/P 9-16 and CHN 9-16. The third row shows O/P 17-24 and CHN 17-24. The fourth row shows O/P 25-32 and CHN 25-32. The fifth row shows O/P 33-40 and CHN 33-49. The sixth row shows O/P 41-48 and CHN 41-48. The seventh row shows O/P 49-56 and CHN 49-55. To the right of the grid is a 'Status' panel with the following information:

Status	
Intensity	
Total	350
InUse	350
Free	0
Attributes	
Total	250
InUse	1
Free	249
Live	1
Edit	2

Below the status panel is a 'Wheel' control, which is a vertical bar with a red segment at the top and a '1' at the bottom. Below the wheel is the text 'v2.2a'. At the bottom right, there is a 'Net On' panel with the following text:

```
Net On
Main
denise
User
admin
Main
Active
NoBackup
```

At the bottom of the screen, there is a yellow bar with the text 'OUTPUT ORDERED PATCH 2: Set new Live or Edit patch'.

To show the Patch display, press **<PATCH>**. This display lets you view and edit the show patch and is also used when controlling outputs directly. This section shows how to set up the show patch. To learn how to configure the outputs on the rear of the console, refer to [The Output Connections Window](#) of the Console Setup Screen. For further information on controlling outputs from other displays, refer to [Direct Output Control](#).

The Levels Screen is not used for patching and is disabled.

The State screen shows the relationship between each output and each channel and can be displayed in output order or channel order (see [Customising the Patch Display](#)). You can use the Level Wheel to scroll the display and show outputs that are on other pages. The current page number is shown at the bottom of the Wheel window.

When set to 'Output Order' the outputs are shown in white. Channels are shown in grey (or yellow if not a 1:1 patch). When set to 'Channel Order' the outputs are shown in grey and channels are shown in white (or yellow if not a 1:1 patch)

The first two rows show the relationship between the output and channel numbers as follows:

**O/P** The output number. Double width outputs have a grey background.

**CHN** The channel or DMX input channel that the output is patched to. When displayed in yellow indicates that it is not a 1 to 1 patch (the output number is not the same as the channel number).

**(blank)** The output is unpatched.

**# (grey, white or yellow)** The intensity channel that the output is patched to. This is the channel number that appears in all of the Levels displays. Shown in grey (Output Order) or white (Channel Order) to indicate a one-to-one patch or yellow if it is not a one-to-one patch.

**#.2 (yellow)** The output is patched to attribute 2 (colour) and is shown in yellow to indicate it is not a 1 to 1 patch. The standard attribute (colour) is shown with a .2 after the channel number. Other attributes use other numbers following the channel number. To use any attributes except colour you need the [Tracker Software](#).

**#D (magenta)** Indicates that the output is patched to a DMX input channel. This can only be used when the CommuniquéPro Software is installed. For additional information refer to [DMX IN](#) CommuniquéPro Software.

(3rd row) The scaling, threshold, or maximum frame number followed by the profile assigned to the output, if any (see [Scaling Value](#)). To reduce screen clutter, scaling values of 100% (default) are not shown on the display. The profile (refer to [Assigning Output Profiles](#)) is red unless it is for an attribute controlled by the Tracker Software (refer to [Patching Attributes](#)), in which case it is cyan.

**(blank)** The item is unpatched.

**# (grey)** The intensity scaling (intensity outputs)

**# (green)** The maximum frame number (attribute outputs).

**# (red)** Profile number assigned to attribute (if applicable)

**# (cyan)** Profile for attributes controlled by the Tracker software.(refer to [Patching](#)

### Attributes)

**# N (magenta)** The non-dim threshold (non-dims).

**# (red background)** The output level of an output under direct control. To learn how to control outputs directly from other displays refer to [Direct Output Control](#)

The Status window at the top right gives information on the intensity and attribute channels as follows:

### **Intensity Channels**

**Total** The total number of intensity channels available. This depends on the number of installed channels.

**In Use** The number of intensity channels currently created. Patching to a previously unused intensity channel increases this value.

**Free** The number of unused intensity channels. Deleting an intensity channel increases this value.

### **Attribute Channels**

**Total** The total number of attribute channels available. This depends on the number of installed channels.

**In Use** The number of attribute channels currently created. Patching to a previously unused intensity channel increases this value.

**Free** The number of unused attribute channels. Deleting an attribute channel increases this value.

### **Output Numbers (500 Series Consoles)**

A 500 Series console can control 2048 outputs, in four banks of 512, through the four DMX ports. In addition, using Networker Software, the outputs can be sent via the network. The network has 4096 virtual outputs. The 2048 console outputs can be assigned to different ranges of the 4096 virtual outputs. This could, for example, allow two consoles to each control half of the network system (e.g. one console for moving lights, the other for conventional lights) without interfering with each other.

Outputs can be specified and/or displayed as output numbers, 0 to 4096 (or in Universe.Dmx format). In Universe.Dmx format, each output connector has its own number from 1 to 8 and each signal from the connector has its own number from 1 to 512. The two numbers are used together, so that the 123 rd output from the 3rd DMX connector is addressed as 3.123. DMX connectors 1 through 4 are output from the console. The remainder of the DMX connectors must be on the network.

### **Output Numbers (300 Series Consoles)**

A 300 Series console can control 1024 outputs, in two banks of 512, through the two DMX

ports. In addition, using Networker Software, the outputs can be sent via the network. The network has 2048 virtual outputs. The 1024 console outputs can be assigned to different ranges of the 2048 virtual outputs. This could, for example, allow two consoles to each control half of the network system (e.g., one console for moving lights, the other for conventional lights) without interfering with each other.

Outputs can be specified and/or displayed as output numbers, 0 to 2048 (or in Universe.DMX format). In Universe.Dmx format, each output has its own number 1 to 4 and each signal from the connector has its own number from 1 to 512. The two numbers are used together, so that the 123<sup>rd</sup> output from the 2<sup>nd</sup> DMX connector is addressed as 2.123. The two DMX connectors are output from the console. The remainder of the DMX connectors must be on the network.

The patch does not directly configure the mapping of output numbers to the output multiplex signals. For further information on setting up the console output to patch output mapping refer to [Output Connections Window](#) of the Console Setup Screen.

## Channel Numbers

Refer to [Product Specification](#) for number of intensity and attribute channels.

You can increase the number of attribute channels beyond the purchased maximum by deleting intensity channels and assigning them as attribute channels.

Channel attributes are specified by a decimal point as follows using channel 10 as an example:

**10** channel 10 intensity

**10.1** channel 10 intensity (displayed as 10).

**10.2** channel 10 attribute.

The standard software allows one attribute (colour) per channel. The Tracker software lets you specify multiple attributes per channel (attribute numbers .2 to .99).

The default patch numbers channels from 1 to the number of channels purchased and assigns them only intensities. To use a new channel number and assign it an intensity you must first delete a channel with intensity. This will delete the levels of that channel in all cues, submasters, effects and patches. Patching to the new channel number will then create a new channel. For further information on deleting channels refer to [Deleting Channels](#).

**Note:** *Deleting a channel is different from unpatching. Deleting removes the channel from all channel displays and removes all its recorded levels. Unpatching only removes the association between the channel and the output. Channel levels are preserved so that if it is repatched to*

*the same or another output, the previous levels reappear.*

The number of free and used channels is shown in the Status Window of the Patch Screen.

---

## Selecting Outputs

Most patch commands act on a selection of 1 or more outputs. Outputs can be specified in standard output number format, where outputs are numbered from 1 to the maximum number available, or in Universe.Dmx format. The two formats can be used interchangeably, and can be used in the same command.

The examples shown immediately below are commands you can use to create the output list before patching them to a channel. You can use these commands to replace **out** where it appears in full command descriptions. Outputs are not actually selected until you press **[@]** to end the selection list.

*Note: Since these examples are only part of a command, the **[\*]** key. (where applicable). is not shown.*

These selections will only work in the Patch display. **#** puts the specified output on the output list.

**[1]** Puts output 1 on the output list.

**[1] [.] [6]** Puts output 6 on the output list.

**[+] #** adds the specified output to the output list.

**[1] [+] [3]** Puts outputs 1 and 3 on the output list.

**[3] [.] [4] [6] [+] [3] [.] [5] [6]**

Puts outputs 1070 and 1080 on the output list.

**# [THRU]** adds a range of outputs to the output list.

**[1] [THRU] [3] or [3] [THRU] [1]**

Puts outputs 1, 2, and 3 on the output list.

**[2] [.] [4] [THRU] [5] [1] [8] or [5] [1] [6] [THRU] [2] [.] [6]**

Puts outputs 516 through 518 on the output list.

**[-] #** removes an output from the output list. It only removes outputs that are already in the list.

**[1] [THRU] [3] [-] [2]**

Puts outputs 1 and 3 on the output list.

**[1] [THRU] [3] [-] [2] [+] [4]**

Puts outputs 1, 3, and 4 on the output list.



## Changing Live and Edit Patches (500 Series Consoles only)

There are 2 separate show patches. The Patch display always shows the Edit Patch. You can edit one patch while the other is live. The current Live Patch and Edit Patch numbers are shown in the top left corner of the LCD Patch menu and on the bottom of the Status Window of the Patch Screen..

To change the Live Patch:

1. Press **{SET}** on the LCD Patch menu to show the LCD Set Patch menu.
2. Press **{LIVE=}**. You will be asked to confirm this action.
3. Press **{LIVE=}** . It can take several seconds for the Live Patch to change.
4. Press **{BACK}** to return to the LCD Patch menu.

To change the Edit Patch:

1. Press **{SET}** on the LCD Patch menu to show the LCD Set Patch menu.
  2. Press **{EDIT=}**.
  3. Press **{BACK}** to return to the LCD Patch menu.
- 

## The Copy Patch Menu

Pressing **{COPY/SWAP}** from the Set Patch menu displays the Copy Patch menu with softkeys **{COPY PATCH}**, **{MOVE PATCH}** and **{SWAP PATCH}**. These softkeys enable output attributes or fixtures to be copied, moved or swapped within, or between the Live or Edit Patch.

- [Copying Patch Information](#)
  - [Moving Patch Information](#)
  - [Swapping Patch Information](#)
-



## Copying Patch Information

Press **{SET}** from the LCD Patch Menu to display the LCD Set Patch Menu. Press **{COPY/SWAP}** to display the Copy Patch Menu.

### Copying Attributes

Enter the output number (or range of outputs), of the attribute(s) to be copied, followed by the **{COPY PATCH}** softkey and the output number (or first output number), where the attribute(s) has to be copied, then **[\*]**. A confirmation is requested after each command. Press **[\*]** again.

**[1] {COPY PATCH} [1] [0] [\*]**

Copies attribute 1 to output 10

**[1] [THRU] [10] {COPY PATCH} [1] [1] [\*]**

Copies attributes on outputs 1 to 10 to outputs 11 to 20.

Press **{BACK}** to return to the LCD Set Patch Menu.

### Copying Fixtures

Enter the first output number (or range of outputs) of the fixture(s) to be copied, followed by the **{COPY PATCH}** softkey and the first output number where the fixture has to be copied to, then **[\*]**. A confirmation is requested after each command. Press **[\*]** again.

**[2] [2] {COPY PATCH} {4} [4] [\*]**

Copies the fixture starting on output 22 to start on output 44.

**[2] [2] [THRU] [5] [2] {COPY PATCH} [5] [4] [\*]**

Copies the fixtures patched to outputs 22 to 52 to start on output 54.

Press **{BACK}** to return to the LCD Set Patch Menu.

### Copying Patch Screens

You can copy the entire contents of Edit Patch Screen to Live Patch screen.

Press **{SET}** from the LCD Patch Menu to display the LCD Set Patch Menu. Press **{COPY/SWAP}** to display the Copy Patch Menu.

Press **{COPY PATCH}** confirmation required **{COPY PATCH}**

The contents of the Edit Patch are copied to the Live patch

Press **{BACK}** to return to the LCD Set Patch Menu.

## Moving Patch Information

Press **{SET}** from the LCD Patch Menu to display the LCD Set Patch Menu. Press **{COPY/SWAP}** to display the Copy Patch Menu.

### *Moving Attributes*

Enter the output number, or range of outputs, of the attribute to be copied, followed by the **{MOVE PATCH}** softkey and the output number where the attribute(s) has to be moved to, then **[\*]**.

A confirmation is requested after each command. Press **[\*]** again.

**[1] {MOVE PATCH} [1] [0] [@PATCH] [2] [\*]**

Moves attribute 1 to output 10 on the non-edit patch screen.

**[1] [THRU] [10] {MOVE PATCH} [1] [1] [\*]**

Moves attributes on outputs 1 to 10 to outputs 11 to 20.

Press **{BACK}** to return to the LCD Set Patch Menu.

### *Moving Fixtures*

Enter the first output number of the attribute to be copied, followed by the **{MOVE PATCH}** softkey and the first output number where the fixture has to be copied, then **[\*]**.

**[2] [2] {MOVE PATCH} {4} [4] [\*]**

Moves the fixture starting on output 22 to start on output 44.

**[2] [2] [THRU] [5] [2] {MOVE PATCH} [5] [4] [\*]**

Moves the fixtures patched to outputs 22 to 52 to start on output 54.

Press **{BACK}** to return to the LCD Set Patch Menu.

## Swapping Patch Information

### *Swapping Attributes*

Press **{SET}** from the LCD Patch Menu to display the LCD Set Patch Menu. Press **{COPY/SWAP}** to display the Copy Patch Menu, then enter the output number, or range of outputs, of the attribute(s) to be swapped, followed by the **{SWAP PATCH}** softkey and first output number of the attribute to be swapped with, then **[\*]**. A confirmation is requested after each

command. Press **[\*]** again.

**[1] {SWAP PATCH} [1] [0] [\*]**

Swaps attributes on output 1 and 10

**[1] [THRU] [8] {SWAP PATCH} [1] [7] [\*]**

Swaps attributes on outputs 1 to 8 with attributes on the eight outputs starting on output 17.

Press **{BACK}** to return to the LCD Patch menu.

### **Swapping Fixtures**

The position of individual fixtures, or a range of fixtures can be swapped by entering the outputs used by the fixture to be swapped and the first output used by the fixture that it has to be swapped with.

***Note:** The fixture, or range of fixtures, using the most number of outputs must be entered first.*

Press **{SET} {COPY/SWAP}** to display the Copy Patch Menu, then enter the output number, or range of outputs, of the fixture(s) to be swapped, followed by the **{SWAP PATCH}** softkey and first output number of the fixture, or range of fixtures, to be swapped with, then **[\*]**. A confirmation is requested after each command. Press **[\*]** again.

The following example assumes that a PALS Piouette 16 is patched to outputs 25 through 28 and a PALS Pirouette is patched to outputs 9 through 12

**[2] [5] [THRU] [3] [0] {SWAP PATCH} [9] [\*]**

Swaps a PALS Pirouette 16, patched to outputs 25 through 30 with a PALS Pirouette, patched to outputs 9 through 12.

Press **{BACK}** to return to the LCD Patch menu.

***Note:** The required number of outputs must be available in the 'swap to' position, otherwise, the swap cannot take place and an invalid range error message displayed. If say, an eight output fixture is being swapped with a six output fixture, all eight outputs will be swapped, including any attributes on the other two outputs.*

---

## **Changing the Output Numbering Style**

To change the Patch display between showing standard output numbers and showing output numbers in Universe.Dmx format, press **{DMX OUTPUT}**

1. Press **{SET}** on the LCD Patch menu to show the LCD Set Patch menu.
2. Press **{DMX OUTPUT}**. If the patch previously showed standard output numbers, these change to Universe.Dmx format. If output numbers were shown in Universe.Dmx format, they will now be shown as standard output numbers.
3. Press **{BACK}** to return to the LCD Patch menu.

**Note:** Regardless of how the output numbers are displayed on the Patch Screen, you can mix and match formats in your output selection commands.

---

## Customising the Patch Display

You can customise the Patch Display to show threshold data or load data in Output order or Channel order

1. Press **{SET}** on the LCD Patch menu to show the LCD Set Patch menu.
2. Press **{SET DISP}** to show the Set Patch menu.
3. Press **{OUTPUT ORDER}** to show the Patch display in output order.
4. Press **{CHAN ORDER}** to show the Patch display in channel order.
5. Press **{LOADS ON}** to display Learned Loads for outputs or channels.
6. Press **{LOADS OFF}** to display Threshold values for outputs or channels.
7. Press **{BACK}** to return to the LCD Patch menu.

Only outputs patched to an intensity channel with a learned load will display load values. Refer to [Console Reporter](#)

---

## Deleting Channels

Deleting an intensity or attribute channel increases the number of free channels of that type. This is necessary if you want to create a new channel number but there are no free channels. You can delete channels from the LCD Channel menu which is a submenu on the LCD Patch menu. Press **{CHAN}** to show this menu. The **{BACK}** soft key returns you to the LCD Patch menu.

**chan {DELETE CHAN}** This deletes the channel(s), including levels from all cues, submasters and effects. If this is currently used in a cue or patch you will be prompted to press the **{DELETE CHAN}** key a second time to confirm the deletion.

**Note:** *Submasters and effects are not checked for channel usage.*

Deleting can sometimes take a considerable time (over a minute). The command prompt shows a message while the delete is being processed.

**[1] {DELETE CHAN} {DELETE CHAN} *All Modes***

Deletes channel 1 completely (intensity and attributes)

**[1] [.] [1] {DELETE CHAN} {DELETE CHAN} *All Modes***

Deletes channel 1 intensity.

**[1] [.] [2] {DELETE CHAN} {DELETE CHAN} *All Modes***

Deletes channel 1 attribute.

**[3] [THRU] [5] {DELETE CHAN} {DELETE CHAN} *All Modes***

Deletes channels 3, 4, and 5 completely (intensity and attributes).

After you are finished deleting channels, press **{BACK}** to return to the LCD Patch menu.

**Note:** A line is shown on the Live Screen to indicate that intensity channels have been deleted. You can now assign the deleted intensity channel(s) to attribute channel(s)

## Deleting Unpatched Attributes

Unpatched attributes, resulting from deleting a patched fixture can be removed using the **{CHAN}** softkey to display the Channel Menu, then the **{CLEAN ATTS}** softkey, thereby freeing the attributes for use elsewhere.

The **{CLEAN ATTS}** softkey can be used to remove unpatched attributes from the entire patch screen, or from a particular output, or range of outputs. You will be required to press the **{CLEAN ATTS}** softkey a second time to confirm the action.

**[1] [THRU] [1] [0] {CLEAN ATTS} [\*]**

Deletes unpatched attributes from outputs 1 to 10. If any of the unpatched attributes are contained in a Cue or Group, confirmation is required before deletion.

The **{BACK}** soft key returns you to the LCD Patch menu.

## Renumbering Channels

After you have deleted channels you may wish to renumber all of the channels so that you don't have any gaps in channel numbers.

1. If you are not already in the LCD Channel menu, press **{CHAN}** to show the menu.
  2. Select the channel to renumber and press **{RENUM CHAN}**.
  3. Enter the new channel number.
  4. Press **[\*]** to renumber the channels or **[CLR]** or **[UNDO]** to cancel the operation.
  5. Repeat as necessary.
- 

## Default Patching

You can set any output, list of outputs, or all outputs back to the default patch with default scaling.

**out {DEFLT}** sets the default patch. **{DEFLT}** is a soft key on the LCD Patch menu.

**[1] [THRU] [3] {DEFLT} *All Modes***

Sets output 1, 2, and 3 to the default patch. If any of these default channels have been deleted they will be re-created. If there are no free channels, the command will fail.

**{DEFLT} {DEFLT} *All Modes***

Defaults the whole patch. This re-creates all the default channels and deletes all other channels. This may take considerable time if many channels need to be deleted.

---

## Clearing Default Patching

You may wish to start patching with no outputs assigned to channels, instead of the default 1:1 patch. You can clear individual patches, groups of patches, individual universes or the complete patch, as follows:

**[1] [THRU] [1] [0] [@ [\*]** (All Modes)

Clears default patch on channels 1 to 10

**[1] [THRU] [5] [1] [2] [@ [\*]** (All modes)

Clears default patch on first universe

**[1] [THRU] [2] [0] [4] [8] [@] [\*]** (All Modes)

Clears defaults on entire patch

## Patching Channel Intensities

Outputs can be patched to a channel intensity. If the channel's intensity does not exist, it is first created. The scaling for the intensity is also set. If you do not specify scaling, the default (from the Default Scale % field in the [Show Setup Screen](#)) is used.

An intensity channel is identified by the channel number by itself or followed by 1.

**Note:** *Each output can have its own scaling, even if more than one output is patched to the same channel.*

**out [@] chan [\*]** patches the output to the channel's intensity. If the channel is not patched, the default scaling is used. Otherwise scaling is left unchanged.

**[1] [@] [5] [\*]** All Modes

**[1] [@] [5] [.] [1] [\*]** All Modes

Patches output 1 to channel 5 intensity.

**out [@] chan [@] [\*]** patches the output with default scaling to the channel intensity.

**[1] [THRU] [1] [0] [@] [5] [@] [\*]** All Modes

**[1] [THRU] [1] [0] [@] [5] [.] [1] [@] [\*]** All Modes

Patches outputs 1 through 10 with default scaling to channel 5 intensity .

**out [@] chan [@] # [\*]** patches the output to the channel's intensity with the specified scaling.

**[1] [@] [5] [@] [7] [5] [\*]** All Modes

**[1] [@] [5] [.] [1] [@] [7] [5] [\*]** All Modes

Patches output 1 with 75% scaling to channel 5 intensity .

**out [@] [@] [\*]** changes the output to use the default scaling without changing any other aspect of the patch.

**[1] [THRU] [5] [@] [@] [\*]** All Modes

Changes output 1 through 5 scaling to the default.

**out [@] [@] # [\*]** changes the output to use the specified scaling without changing any other aspect of the patch.

**[1] [THRU] [5] [@] [@] [1] [5] [0] [\*]** All Modes

Sets output 1 through 5 scaling to 150%.

## Patching Double Width Outputs

Some analog multiplexed dimmer systems have double width dimmer modules which take two consecutive output signals (for example, Strand's CD80 dimmers, which take single width 2.4K or 6K dimmers or double width 12K dimmers). These can be handled by unpatching the unused output or patching both outputs to the same channel. For example if outputs 3 and 4 control a double width dimmer then we might patch as follows (the output addresses are also shown, assuming the default AMX mapping in the Setup display):

<b>Output</b>	1	2	3	4	5	6	...
<b>Channel</b>	1	2	3		4	5	...
<b>DMX output</b>	1	2	3		5	6	...

Outputs 5 onwards need to be changed from their default 1 to 1 patch. The alternative is to define output 3 as a double width output in which case it will automatically take two output addresses. The same patch would then appear as a default 1 to 1 patch as follows:

<b>Output</b>	1	2	3	4	5	6	...
<b>Channel</b>	1	2	3	4	5	6	...
<b>DMX output</b>	1	2	3	5	6	7	...

You must be very careful using this facility since outputs 4...are really outputs 5... (since they are actually mapped to output address 5...). In addition, the last output is now ignored since its number is now one larger.

**out {@6k12k} [\*]** changes a normal output to a double width output or a double width output to a normal output. Double width outputs are shown on the Patch display State screen as a grey bar.

**[1] {@6k12k} [\*] *All Modes***

Toggles output 1 between normal and double width.

---

## Assigning Output Profiles

Any output can have a profile assigned to it. Profiles let you change the fade characteristics of the output. You cannot assign a profile to a non-dim output.



Since profiles set here are assigned to outputs rather than channels, you can use them to compensate for dimmers with different output curves, fixtures with different specifications for colour frame start and stop location, gel strings that have stretched, and other output related differences.

**out [PROFILE] # [\*]** assigns the profile # to the selected outputs. All other output information is left as is. The profile number appears in red next to the scaling or maximum frame value.

**[1] [PROFILE] [5] [\*] *All Modes***

Assigns profile 5 to output 1.

**out [@] # [\*] out [PROFILE] # [\*]** assigns outputs to a channel and then assigns a profile to the outputs. You cannot patch an output and assign a profile in a single command. You can assign one profile to many outputs in a single command. The profile number appears in magenta next to the scaling or maximum frame value.

**[2] [1] [THRU] [2] [5] [@] [3] [\*] [2] [1] [THRU] [2] [5] [PROFILE] [5] [\*] *All Modes***

Patches outputs 21 through 25 to channel 3 and then assigns profile 5 to the outputs.

## Patching Channel Attributes

The output can be patched to a channel attribute. If the attribute does not exist, it is first created. The maximum frame for the attribute is also set. If the maximum frame is not specified, the default from the [Default Frame](#) field in the Show Setup Screen is used. The maximum frame number cannot be changed if more than one output is patched to the same channel attribute. All except one output must be unpatched before changing the maximum frame number.

**Note:** *Frame numbers start at 0 (zero). This means that a scroller with 16 frames has frames numbered from 0 to 15, and should have a maximum frame number of 15.*

A channel can have both attribute and intensity non-dim parts. This is done by setting two separate outputs to the same channel; one as an intensity (.1) non-dim and another as an attribute (.2) non-dim.

An attribute part of a channel is identified by the channel number followed by .2 (the Tracker software controls up to 99 attributes per channel). For advanced attribute patching, refer to [Tracker Software](#).

**out [@] # [.] [2]** or **out [@ATT] #** patches the output to the channel attribute. If the output is not patched, the default maximum frame is used. Otherwise the maximum frame is left

unchanged.

**[1] [@] [5] [.] [2] [\*] All Modes**

**[1] [@ATT] [5] [\*] All Modes**

Patches output 1 to channel 5 attribute 2 (colour).

**out [@] # [.] [2] [@]** or **out [@ATT] # [@]** patches the output with the default maximum frame to the channel attribute.

**[1] [@] [5] [.] [2] [@] [\*] All Modes**

**[1] [@ATT] [5] [@ATT] [\*] All Modes**

Patches output 1 with the default maximum frame to channel 5 colour attribute.

**out [@] # [.] [2] [@] #** or **out [@ATT] # [@ATT]** patches the output with the specified maximum frame to the channel attribute.

**[1] [@] [5] [.] [2] [@] [2] [0] [\*] All Modes**

**[1] [@ATT] [5] [@ATT] [2] [0] [\*] All Modes**

Patches output 1 with a maximum frame of 20 to the channel 5 colour attribute.

**out [@ATT] [@ATT]** sets the default maximum frame for the output without changing the existing patch.

**[1] [THRU] [5] [@ATT] [@ATT] [\*] All Modes**

Changes outputs 1 to 5 to use the default maximum frame.

**out [@ATT] [@ATT] #** sets the channel attribute to the specified maximum frame without changing the existing patch.

**[1] [@ATT] [@ATT] [2] [0] [\*] All Modes**

Sets channel 1 attribute to a maximum frame of 20.

## Patching Non-Dims

You can patch an output to a channel, set the output as a non-dim, and set its threshold. If you omit the threshold, the default threshold from the [Default Non-Dim %](#) field in the Show Setup Screen is used. You can patch outputs as non-dims to intensity channels with a single command, but it requires two commands to patch an output as a non-dim to an attribute channel. **{@NON}** is a soft key on the LCD Patch menu. **out {@NON} # [\*]** patches the output as a non-dim to the selected channel. It sets the threshold to the default if the output is not a non-dim, or leaves the threshold alone if the output is already a non-dim.

**[1] {@NON} [5] [\*] All Modes**

Patches output 1 as a non-dim to channel 5 intensity.

**out {@NON} # {@NON}** patches the output as a non-dim to the selected channel intensity and sets the threshold to the default threshold.

**[1] {@NON} [5] {@NON} [\*] *All Modes***

Patches output 1 as a non-dim with the default threshold to channel 5 intensity.

**out {@NON} # {@NON} thold [\*]** patches the output as a non-dim to the selected channel intensity and sets the threshold to the specified value.

**[1] {@NON} [5] {@NON} [4] [0] [\*] *All Modes***

Patches output 1 as a non-dim with a threshold of 40% to channel 5 intensity.

**out {@NON} {@NON} [\*]** changes the output to a non-dim with the default threshold without changing the channel it is patched to.

**[1] [THRU] [5] {@NON} {@NON} [\*] *All Modes***

Changes outputs 1 to 5 to non-dims with the default threshold.

**out [ {@NON} {@NON} thold [\*]** sets the outputs to non-dim with the specified threshold without changing the channels they are patched to.

**[1] {@NON} {@NON} [8] [0] [\*] *All Modes***

Sets output 1 to non-dim with an 80% threshold.

**out [ @ ] # [ . ] [ 2 ] [\*]** or **out [ @ATT ] # [\*]** patches the output(s) to the channel attribute.

**out [ {@NON} {@NON} thold [\*]** can then set the output(s) to non-dim with the specified threshold without changing the channels they are patched to.

**[2] [0] [0] [1] [ @ATT ] [6] [\*] [2] [0] [0] [1] {@NON} {@NON} [9] [0] [\*] *All Modes***

Assigns output 2001 to the channel 6 colour attribute and then makes output 2001 into a non-dim with an 90% threshold.

**[2] [0] [0] [2] [ @ ] [6] [ . ] [4] [\*] [2] [0] [0] [2] {@NON} {@NON} [\*] *All Modes***

Assigns output 2002 to attribute #4 of channel 6 and then makes the output into a non-dim with the default threshold.

**[2] [0] [0] [1] {@NON} {@NON} [5] [0] [\*] *All Modes***

Changes non-dim threshold for output 2001 to 50% without changing the channel it is patched to.

## Patching DMX In

If you have the CommuniquéPro software, you can patch outputs to a DMX input channel and set their scaling. If you omit the scaling, the console uses the default (from the [Default Scale %](#) field in the Show Setup Screen). Refer to [Patching DMX In Dimmers](#) - CommuniquePro

## Unpatching

An output can be unpatched, in which case it has a level of 0 (zero).

**out** [**@**] [**\***], **out** [**@ATT**] [**\***], and **out** {**@NON**} [**\***] unpatch the selected output(s) regardless of whether they are currently an intensity or attribute etc.

[1] [**@**] [**\***] *All Modes*

[1] [**@ATT**] [**\***] *All Modes*

[1] {**@NON**} [**\***] *All Modes*

Unpatches output 1

An output is automatically unpatched if you use the [**DIMMER**] key to directly set a level on it from either the Live display or from a preview display.

To set an output level directly, press [**DIMMER**] # [**@**] level [**\***].

To repatch all outputs controlled this way, press [**DIMMER**] {**RE-PATCH**}.

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---

## Handheld Remotes

Consoles with operating software version 1.4 or later can host several types of handheld remotes, as listed below.

- [Designer's Remote](#)
- [R120 wired remote](#)
- [R120 radio remote for UK \(UK license exempt\)](#)
- [R120 radio remote for EU \(EU license exempt, except UK\)](#)
- [R130 wired remote](#)
- [R130 radio remote \(US FCC license exempt\)](#)
- 

Each handheld remote has a keypad for entering commands and an LCD display for command line feedback.

Channels under remote control will be shown in purple on console screens.

**Note:** From Version 2.4, the F1 to F4 keys on all handhelds will fire pre-assigned macros HHM1 to HHM4 (HHM1 to HHM3 on Designer's Remote) (Refer to [Pre-Assigned Macros](#)

## Effects

Effect playbacks are used to run repeated sets of lighting states, called effects. Each lighting state in an effect has a set of intensity and attribute levels and is called an effect step. The effect playbacks let you run effects in a variety of ways to give different chase, build, and random output levels. (Refer to the [Product Specification](#) for number of effect playbacks)

**Note:** The **[FX SEL]**, **[FX DIR]**, **[FX TIME]** and **[FX LOAD]** keys are omitted from 300 Series consoles. If you are a 300 Series console user and require to use the functions controlled by these keys, use an external keyboard, in conjunction with the keyboard template at the back of this manual to simulate the keys, or use [Edit Mode](#)

This chapter contains the following topics:

- [The Current Effect Step](#)
- [Recording Effect Step Levels](#)
- [Recording Effect Properties](#)
- [Recording Effect Step Properties](#)
- [Using Effect Playbacks](#)
- [Using Effects in Cues and Subs](#)
- [Viewing and Editing Effects](#)

---

## The Current Effect Step

The current effect step is shown in the FX field on the LCD. This is the last step which has been referenced and can be used in a step selection. All step recording commands act on a single step which is shown in the command descriptions below. The **[+]**, **[-]**, **[THRU]**, and **{THRU ON}** keys cannot be used in a step selection.

The examples shown immediately below are effect step selections that you can use to replace steps where they appears in full command descriptions.

**Note:** *Since these examples are only part of a command, they do not show a concluding **[\*]** key.*

**[FX] # [.] #** selects the specified effect and step. If the effect number is missing, the current effect is used. The step number must always be present.

**[FX] [1] [.] [2]**

Selects effect 1 step 2.

**[FX] [.] [9]**

Selects current effect step 9. For example, if the current effect step is 1.2 then this will select 1.9.

**[FX] [SHIFT] [NEXT]** selects the next step after the current step. This cannot be used if the current step is 99.

**[FX] [NEXT]**

When recording effects, selects the next step after the current step. For example, if the current effect step is 1.2 then this will select 1.3.

**[FX] [SHIFT] [LAST]**

selects the previous step to the current step. This cannot be used if the current step is 1.

**[FX] [LAST]**

When recording effects, selects the previous step to the current step. For example, if the current effect step is 1.2 then this will select 1.1.

## Recording Effect Steps Levels

**[FX] # [RECORD]** (*Direct 1 Digit and Direct 2 Digit*)

**[RECORD] [FX] # [\*]** (*Command Line*)

Records the levels on the current display (the Live, Cue/Preview, Group, Effect, or Submaster display) into the current effect step. Refer to [Working With Channel Levels](#) for information on how to set intensity and attribute levels, and [Basic Recording](#) for examples of recording.

Refer to the [Product Specification](#) for the number of effects, number of effect steps per effect and the total number of effect steps for your console. Effects are numbered with the effect number and the effect step number .1 to .99 (e.g., 1.25). Recording an effect does not change the output until the playback is reloaded.

When you record a new step in an existing effect its values are set using the Step Defaults values for the effect. If this is the first step of a new effect, the Step Default values for the effect are first set from the FX Step, FXStep In/Dwell/Out, and FXUp/Down fields in the Setup display, and then the step values are set from these Step Default values.

The **{APPEND FXSTEP}** soft key, which appears when you switch to the Effect display, appends a

new step to the current effect and switches you to the new step in the Effect display. The new step has default values for step time, in, dwell, and out times, attribute fade time, low and high settings, and scaling. It has no assigned levels. You cannot create a new effect using this command.

---

## Recording Effect Properties

Effects have the following properties that can be specified when recording, or edited later:

- [Effect Text](#)
- [Effect Type](#)
- [Effect Direction](#)
- [Effect Fade Times](#)
- [Effect Mode](#)
- [Effect Level](#)
- [Next Fx](#)
- [Assigning Fade Profiles to Effects](#)
- [Stop After Field](#)
- [Step Control Field](#)
- [Step Default Values Field](#)

These properties apply to the whole effect, not to individual steps. Effect step properties are discussed later in this section

### **Edit Mode**

You can record or edit the effect properties using keyboard command as described in the following paragraphs. Alternatively, you can set up and edit the overall effect properties and the effect step properties while in the Effect Screen by holding down the **[SHIFT]** key and moving the trackball to change the fields from non-edit mode (yellow) to edit mode (green). In edit mode, you can highlight a field and set its value using the level wheel or the **[+]** or **[-]** key, or by entering a numerical value from the keypad, as appropriate. To return the the non-edit mode, press **[\*]**

---

## Recording Effect Text

You can record a text label (caption) with each effect to help identify the effect.



**[FX] # [TEXT] text [\*]** changes the text string (caption) assigned to an effect without changing recorded levels.

For examples, refer to [Basic Recording](#)

---

## Recording Effect Type

Effects can be either chases or builds. You can control this property from the Effects display or by pressing **[FX TYPE]** and selecting the appropriate option from the appropriate LCD menu.

**[FX] [1] [FX TYPE] {CHASE} [\*]**

Sets FX 1 type to chase

**[FX] [1] [FX TYPE] {BUILD} [\*]**

Sets FX 1 type to build

### Chase

Only one step is high at a time and steps are played sequentially according to direction property. As each step runs, its levels go high and all other levels in the effect go low.

### Build

One step at a time goes high, but previous steps are not sent low. Once all of the steps are high, they are all sent low and the build starts again.

---

## Recording Effect Direction

The effect can be set to run in one of four directions, as listed below. You can control this property from the Effects display or by pressing **[FX DIR]** and selecting the appropriate option from the LCD display

**Note:** On consoles without an **[FX DIR]** key, you require to set up this field using edit mode, as described above.

**[FX] [1] [FX DIR] {FWD} [\* ]**

Sets FX 1 direction to forward

**[FX] [1] [FX DIR] {REV} [\* ]**

Sets FX 1 direction to reverse

**[FX] [1] [FX DIR] {BOUNCE} [\* ]**

Sets FX 1 direction to bounce

**[FX] [1] [FX DIR] {RANDOM} [\* ]**

Sets FX 1 direction to random

**Forward**

The effect steps are played sequentially from the lowest step number to the highest step number and are then repeated from the first step number.

**Reverse**

The effect steps are played sequentially from the highest step number to the lowest step number and are then repeated from the highest step number.

**Bounce**

The effect steps are played sequentially from the lowest step number to the highest step number, and then from the highest step number back to the lowest step number. Steps are then repeated in the same sequence.

**Random**

Steps are played randomly. All steps are played once before a new random sequence is started.

**Effect Fade Times**

You can enter fade values from one hundredth of a second to 59.59 seconds, as shown in the table. Values of less than one second can be set in hundredths of a second.

Key Entry	Shown as	Value
0.01	0.01	One hundredth of a second.
.0.1	0.1	One tenth of a second
1	1	One second
10	10	Ten seconds
100	1:00	One minute
1000	10:00	Ten Minutes
5959	59:59	Fifty nine minutes 59 seconds.

When the effect is run or stopped on the playback (instead of by a cue or submaster), the effect levels are faded up and down over this period of time. The default fade times are 0.5 seconds.

When you run the effect the console output fades to its full level over the time in the Fade Up field. When you stop an effect the console output fades out over the time in the Fade Dn field. once the down fade is complete the effect stops and is unloaded from the playback.

If you run an effect from a cue or submaster the effect fade in and fade out times are those assigned to the cue or submaster, the Fade Up and Fade Dn fields in the effect are ignored.

**Note:** This does not control the fade time of individual steps. It applies to the effect as a whole. The In/Dwell/Out fields control the time required to fade steps in and out.

These options can be set in edit mode using the trackball select the field and the level wheel or **[+]** or **[-]** keys to select the option, or the numeric keypad to enter a fade time. Alternatively, you can use the command line as shown in the following examples:

**[FX] [1] [TIME] [0] [.] [0] [1] [\*]**

Sets FX 1 overall intensity fade in/out times to 0.01sec.

**[FX] [1] [TIME] [3] [/] [2] [\*]**

Sets FX 1 overall intensity fade in/out times to 3 and 2 secs respectively.

**[FX] [1] [TIME] [3] [/] [\*]**

Sets FX 1 overall intensity fade in time to 3sec.

**[FX] [1] [TIME] [/] [2] [\*]**

Sets FX 1 overall intensity fade out time to 2sec.

**[FX] [1] [.] [2] [TIME] {STEP TIME} [.] [3] [\*]**

Sets FX1 step 2 Step Time to 0.3 sec.

**[FX] [1] [.] [2] [TIME] {STEP I/D/O} [\*]**

Sets FX 1 step fade times for step 2 to in = 0, dwell = OFF, out = 0.

**[FX] [1] [.] [2] [TIME] {STEP I/D/O} [.] [2] [/] [.] [3] [/] [.] [2] [\*]**

Sets FX 1 step fade times for step 2 only to in = 0.2, dwell = 0.3, out = 0.2.

**[FX] [1] [.] [2] [TIME] {STEP I/D/O} [.] [2] [/] [/] [.] [2] [\*]**

Sets FX 1 step fade times for step 2 to in = 0.2, out = 0.2.

Alternatively, you can vary the fade rate by pressing **[FX TIME]**, selecting **{FADE RATE}** and using the Rate Wheel (or Level Wheel on consoles without a rate wheel) to increase or decrease the fade time.

---

## Effect Mode

The Mode property controls how the effect combines with other effects and with the other playbacks and faders. This property can only be changed from the Effects display in edit mode using the trackerball to select the field and the level wheel or **[+]** or **[-]** keys to change the option. It is initially set to indHTP.

### indHTP

Independent Highest Takes Precedence mode combines the effect with all other output sources on a highest takes precedence basis. If you use any other output source to set a channel level higher than the low effect setting for the channel, but lower than the high effect setting for the channel, the channel will switch between the other output source level and the high effect setting.

### LTP

Latest Takes Precedence mode lets other effects, cues, and the Channel Control steal channels from the effect. When you select a channel, its current state (high or low) is frozen and the channel is assigned to the Channel Control. Its level then follows the Channel Control (not the effect) until you reload and restart the effect.

---

## Effect Level

The Level property determines how the effect channel levels are interpreted. This property can only be changed from the Effects display, and is initially set to NORMAL.

### NORMAL

Channels in active steps are set high and channels in inactive steps are set low.

### NEGATIVE

Channels in active steps are set low and channels in inactive steps are set high.

### NRM NEG (Normal Negative)

Levels start as Normal and then alternate between Negative and Normal for each successive effect cycle.

### NEG NRM (Negative Normal)

Levels start as Negative and then alternate between Normal and Negative for each successive effect cycle.

### RANDOM

Steps are randomly set to any level between the high and low levels.

These options can be set in edit mode using the trackball select the field and the level wheel or **[+]** or **[-]** keys to select the option, or using the command line as shown in the following examples:

**[FX] [1] {LEVEL} [NORMAL] [\*]**

Sets FX 1 intensity type for all steps to Normal

**[FX] [1] {LEVEL} [NEGATIVE] [\*]**

Sets FX 1 intensity type for all steps to Negative

**[FX] [1] {LEVEL} [NORM/NEG] [\*]**

Sets FX 1 intensity type for all steps to Normal/Negative

**[FX] [1] {LEVEL} [NEG/NORM] [\*]**

Sets FX 1 intensity type for all steps to Negative/Normal

**[FX] [1] {LEVEL} [RANDOM] [\*]**

Sets FX 1 intensity type for all steps to Random

**Next Fx**

You can have a new effect automatically start at the end of any effects for which the Stop After property is set to Time or Cycles. The Next Fx property determines whether a new effect is started, and what the new effect number is. This property can only be changed from the Effects display, and is initially set to OFF. You can set the Next Fx to be any other effect number or OFF.

This field can be set using the in edit mode using the trackball to select the field and the level wheel or **[+]** or **[-]** keys to select the option. Alternatively, the field can be set using the command line as shown in the following example:

**[FX] [1]{NEXT FX} [2] [\*]**

Sets FX 1 follow-on FX to Fx 2

**Assigning Fade Profiles to Effects**

The Profile property lets you assign a profile to the fade up and fade down times. The profile applies to both the fade up and the fade down. To learn how to create a profile, refer to [Profiles](#)

This field can be set in edit mode using the trackball to select the field and the level wheel or **[+]** or **[-]** keys to select the option. Alternatively, the field can be set using the command line as shown in the following example:

**[FX] [1] [PROFILE] [3] [\*]**

Sets FX 1 overall fade profiles to 3

---

## Stop After

The Stop After property determines what happens when you press **[FX STOP]**. This property can only be changed from the Effects display, and is initially set to **FX STOP**.

### FX STOP

The effect stops and is unloaded when you press **[FX STOP]** for its effect playback.

### FX LOAD

The effect is not unloaded until another effect is loaded onto the same effect playback. The effect is only paused when you press **[FX STOP]**. You can then press **[FX GO]** to restart the effect.

### LAST STEP

When you press **[FX STOP]**, the effect continues to run normally until it reaches the last effect step. It then fades out and stops in the time specified by the Fade Dn field (or cue or submaster time).

### CYCLES

The effect stops after the number of cycles specified in the Cycles field.

### TIME

The effect stops after the amount of time specified in the Time field. You can enter values in the range 0.01 seconds to 59.59 seconds (refer to [Effect Fade Times](#))

This field can be set in edit mode using the trackball to select the field and the level wheel or **[+]** or **[-]** keys to select the option. Alternatively, the field can be set using the command line as shown in the following examples:

**[FX] [1] {STOP AFTER} [FXLOAD] [\*]**

Sets FX 1 to stop only after next Fx loaded

**[FX] [1] {STOP AFTER} [1] [2] [\*]**

Sets FX 1 to stop after 12 complete cycles

**[FX] [1] {STOP AFTER}[TIME] [1] [2] [\*]**

Sets FX 1 to stop after 12 seconds

**[FX] [1] {STOP AFTER} [SUB] [\*]**

Sets FX 1 to stop when the submaster fader it is attached to is brought to 0%

**[FX] [1] {STOP AFTER} [.] [\*]**

Sets FX 1 to stop when the last step is run after the FXSTOP key is pressed

## Step Control

The Step Control determines how the console knows when to take the next effect step. This property can only be changed from the Effects display, and is initially set to TIMED.

### TIMED

The effect playback takes stepping cues from the timer, which uses the Step Time settings for each step.

### MANUAL

The effect playback takes stepping cues from the **[FX STEP]** button.

### MIDI

The effect playback takes stepping cues from the MIDI input. This option requires the CommuniquéPro software. Refer to [CommuniquéPro Software](#) for more information.

### AUDIO (500 Series Consoles only)

The effect playback takes stepping cues from the base track of the Audio input. This option requires the CommuniquéPro software. Refer to [CommuniquéPro Software](#) for more information.

This field can be set in edit mode using the trackball to select the field and the level wheel or **[+]** or **[-]** keys to select the option. Alternatively, the field can be set using the command line as shown in the following examples:

**[FX] [1] {STEP CTR} {TIMED} [\*]**

Sets FX 1 step control to Timed

**[FX] [1] {STEP CTR} {MANUAL} [\*]**

Sets FX 1 step control to Manual

**[FX] [1] {STEP CTR} {MIDI} [\*]**

Sets FX 1 step control to MIDI

**[FX] [1] {STEP CTR} {AUDIO} [\*]**

Sets FX 1 step control to Audio

---

## Step Default Values

Step Default Values are the values initially set for the effect step properties. When you create a new step, these values are applied. You can change values for any individual step if required. Changing the default value changes the value for the property in all steps where it has not been specifically overridden. Step properties at their default values are shown in black text. Step properties that have been overridden are shown in green text. You can set default values for all of the step properties.

---

## Recording Effect Step Properties

Individual effect steps have the following properties that can be specified when recording, or edited later:

- [Step Time Field](#)
- [In, Dwell, and Out Times Field](#)
- [Attribute Fade Time Field](#)
- [Low and High Scaling Field](#)

These properties apply to each effect step individually. Effects as a whole also have properties, including the default values for steps.

When you create a step, all step properties take on the values set in the Step Defaults for the effect. These defaults are set from the [The Default Times Window](#) of the User Setup Screen when you create the effect. All step values that you don't change will automatically track the Step Defaults values. Step properties that you have modified in the step will not change when you change the Step Defaults, even if you reset them to the current Step Defaults value.

To set a property back to its "default" (black text), use the trackball to highlight it and then press **{DEFLT}**

---



## Step Time

The step time controls the time from the start of a step until the next step is activated. Step time can be “default” (black text) or any value between 0.01 and 5 minutes, and is initially set to the value of the [FX Step](#) field of the Default Times window of the User Setup Screen. Times below one second can be specified in hundredths of a second.

This field can be set in edit mode using the trackball to select the field and the level wheel or **[+]** or **[-]** keys to select the option. Alternatively, the field can be set using the command line as shown in the following example:

```
[FX] [1] [.] [2] [TIME] {STEP TIME} [.] [3] [*]
Sets FX1 step 2 Step Time to 0.3sec.
```

## In, Dwell, and Out Times

The in, dwell, and out times determine the actual length of each step (time from when the step is activated until it is deactivated) rather than the time until the next step. The total length of a step is the sum of these three values. The sum of these values does not need to equal the step time, making it possible to have steps that overlap with the next step, or have a distinct gap between them and the next step.

The In property is the time from when the step starts until the channel levels are at the high level. In time can be “default” (black text) or any value between 0.01 and 5 minutes, and is initially set to the value of the [FX Step In/Dwell/Out](#) field of the Default Times of the User Setup Screen. Times below one second can be specified in hundredths of a second

The Dwell property is the time that an activated step will remain in its high state. Dwell time can be “default” (black text), OFF (Dwell time = Step time), or any value between 0.01 and 5 minutes, and is initially set to the value of the In field of the Step Defaults. Times below one minute can be specified in hundredths of a minute.

The Out property is the time from when the dwell time ends until the channel levels are at the low level. Out time can be “default” (black text) or any value between 0.01 and 5 minutes, and is initially set to the value of the Out field of the Step Defaults. Times below one minute can be specified in hundredths of a minute

This field can be set using the trackball to select the field and the level wheel or **[+]** or **[-]** keys to select the option. Alternatively, the field can be set using the command line as shown in the following

examples:

**[FX] [1] [.] [2] [TIME] {STEP I/D/O} [.] [2] [/] [.] [3] [/] [.] [2] [\*]**

Sets FX 1 step fade times for step 2 only to in = 0.2, dwell = 0.3, out = 0.2.

**[FX] [1] [.2] [TIME] {STEP I/D/O} [.] [2] [/] [/] [.] [2] [\*]**

Sets FX 1 step fade times for step 2 to in = 0.2, out = 0.2.

**[FX] [1] [.] [2] [TIME] {STEP I/D/O} [/] {OFF/MAN} [\*]**

Sets FX 1 step fade times for step 2 to dwell = OFF

## Attribute Fade Time

The attribute fade time controls the time it takes to change fixture attributes if there is a change on the same fixture between two steps of an effect. Attribute fade time can be “default” (black text) or any value between 0.01 and 5 minutes, and is initially set to the value of the [FX Up/Down](#) field of the Default Times of the User Setup Screen. Times below one minute can be specified hundredths of a minute.

This field can be set using the rollball or mouse to select the field and the level wheel or **[+]** or **[-]** keys to select the option. Alternatively, the field can be set using the command line as shown in the following examples:

**[FX] [1] [.] [2] [@ATT] [TIME] [\*]**

Sets FX 1 overall attribute fade in time for step 2 to 0s

**[FX] [1] [.] [2] [@ATT] [TIME] [3] [\*]**

Sets FX 1 overall attribute fade in time for step 2 to 3s

## Low and High Scaling

Effect steps are either high or low. The actual levels represented by high and low states are controlled by the Level and Low/ High Scaling fields and by the channel levels set in the effect.

The Low and High Scaling properties for steps scale the channel levels set in each step. These numbers can be “default” (black text) or a percentage (0-100), and modify all channel levels in the specified step.

High Scaling sets the percentage of channel level to use for the “on” part of the effect step. Low Scaling sets the percentage of channel level to use for the “off” part of the effect step.

To set the low level at 10% of the recorded channel levels, set it to 10. If you have a channel at FL, the actual output level for the channel when it is “off” will be 10%. If you have a channel at 80%, the actual output level for the channel when it is off will be 8%.

The Low Scaling property is initially set to the value you set in the Low field of the Step Defaults for the effect. The High scaling property is initially set to the value you set in the High field of the Step Defaults for the effect.

This field can be set using the rollball or mouse to select the field and the level wheel or **[+]** or **[-]** keys to select the option. Alternatively, the field can be set using the command line as shown in the following examples:

**[FX] [1] [.] [2] {LO/HI LEVEL} [\*]**

Sets FX 1 low and high levels for step 2 to 0% and 100%

**[FX] [1] [.] [2] {LO/HI LEVEL} [4] [\*]**

Sets FX 1 low level only for step 2 to 40%

**[FX] [1] [.] [2] {LO/HI LEVEL} [4] [/] [8] [\*]**

Sets FX 1 low and high levels for step 2 to 40% and 80%

**[FX] [1] [.] [2] {LO/HI LEVEL} [/] [1] [0] [0] [\*]**

Sets FX 1 high level only for step 2 to 100%

---

## Using Effect Playbacks

The Effect Keypad provides keys for controlling the effect playbacks. The Effect Supermaster (if one is assigned) masters the levels of all effects regardless of whether they are being played on an effect playback or played from a cue or submaster. (Refer to the [Product Specification](#) for number of effect playbacks on your console)

This section covers the following topics:

- [The Effects Window](#)
  - [The Effect Supermaster](#)
  - [Effect Playback Selection](#)
  - [The Current Playback](#)
  - [Loading an Effect](#)
  - [Running an Effect](#)
  - [Pausing an Effect](#)
  - [Stepping an Effect](#)
  - [Changing Effect Times While Effect is Running](#)
  - [Changing Effect Types](#)
  - [Changing Effect Direction](#)
  - [Updating Effects](#)
  - [Updating Effects from the Live Screen](#)
  - [Unloading an Effect](#)
- 

## The Effects Window

The Effects window in the Live display State screen shows the current state of the effects and is used when running effects playbacks. To show the Live display press **[LIVE]** . If the Live display State screen does not show the Effects window shown below, go to the Setup display and change the Live Screen Layout field to FX, PB+FX, or PB+SUBS+FX. Then press **[LIVE]** to show the Live display.

8:32:28 24/01/99 >> **LIVE** \* No Title GM=FL/FL

001 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 0025  
 50 50 50 50 50 4 4 4 4 4 4 4 FL FL FL FL FL FL FL 87 80 65 55 45

0026 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 0050  
 13 13 13 13 13 13

0051 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 0075

0076 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 0100

0101 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 0125

Pb	Fx.Step	Type	Dir	Effects	Fade Time	StepT	Stop	Next	Sub Text
1	2.5	BUILD	FWD		2/2	1	AT 0		
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

Wheel

v2.2a

Net On

Main

denise

User

admin

Main

Active

NoBackup

NoBackup

LIVE:

## The Live Screen - Effects Window - GeniusPro

8:32:28 24/01/99 >> LIVE \* No Title GM=FL/FL

0001 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 0020  
 4 4 4 4 4 4 4 FL FL FL FL FL FL FL 87 80

0021 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 0040

0041 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 0060

0061 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 0080

0081 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 0100

Pb	Fx.Step	Type	Dir	Fade	Time	StepT	Stop	Next	Sub Text
1	2.5	BUILD FWD		2/2		1	AT 0		
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

Wheel

v2.2a  
 Net On  
 Main  
 denise  
 User  
 admin  
 Main  
 Active  
 NoBackup  
 NoBackup

LIVE:

### The Live Screen - Effects Window - Lightpalette

Fields in the Effects window of the Live display State screen show the current values for effect and step properties. The property associated with each display field is indicated by the title line. The values for these fields are described in more detail above, and are set to the recorded effect values when you load the effect into an effect playback. You cannot edit any of these fields, though some can be modified by using keys in the Effect keypad. If you modify an effect while it is running and wish to save the changes, press **[UPDATE] [FX] # [\*]** where **#** is the effect number (without the step number).

**Pb** Shows each Playback (Refer to [Product Specification](#) for number of Effect Playbacks on your console)). Its colour shows the state of the Playback:

**white on grey** This is the current playback.

**blue** The playback is unloaded (empty).

**green** The playback is loaded and is not the current playback.

**yellow** The playback is running or paused and is not the current playback.

**Fx** Shows the effect loaded onto the playback. Its colour shows the state of the playback:

**(blank)** The playback is unloaded (empty).

**green** The playback is loaded.



**yellow** The playback is running.

**flashing yellow** The playback is paused.

**Step** Shows the effect step which is currently running. The colour is the same as for the effect number above.

**Type** Shows the effect type, which can be CHASE or BUILD. You can change this property while the effect is running by pressing **[FX TYPE]** and then selecting the appropriate soft key.

**Dir** Shows the effect direction, which can be FWD (Forward), REV (Reverse), BNC (Bounce), or RND (Random). You can change this property while the effect is running by pressing **[FX DIR]** and then selecting the appropriate soft key

**Fade Time** The up and down fade time for starting and stopping the effect. You can change these properties while the effect is running by pressing **[FX TIME]**, pressing **{FADE RATE}**, and then increasing or decreasing the times using the Rate Wheel. (500 Series only)

**StepT** The step time for the current step.

**Stop** Shows how the effect is to be stopped. This can be AT 0 (on Fx stop), blank (on Fx load), LAST (on last step), XXXs (after XXX seconds), or XXXX (after XXXX cycles). You cannot change this property while the effect is running.

**Next** Shows the effect to be started when this effect is stopped (if any). This property only takes effect if you set the Stop After property to TIMER or CYCLES in the Effect display. You cannot change this property while the effect is running.

**Sub** Shows the submaster to which the effect is attached (if any). You cannot change this property while the effect is running.

**Text** Shows the text label (caption) associated with the effect (if any). You cannot change this property while the effect is running.

## The Effect Supermaster

All effect output levels are mastered by the Effect Supermaster if one is assigned. Moving the Effect Supermaster to 0 stops any effects from contributing to the output. Moving it to 10 puts the full effect levels onto the output. The Effect Supermaster is normally one of the last 6 submasters. You can change it to another fader or eliminate it altogether by changing the Function properties of the submaster faders involved. If there is no Effect Supermaster, its level is set to 100%.

To learn about the submaster function property refer to [Submasters and Channel Faders](#)

## Effect Playback Selection

All effect playback commands act on a single playback. The selection can be the current playback, an effect number, a playback number or a combined effect and playback number, in the following format:

**[FX] fx# [PB] pb#**

If you leave out **fx#**, the current effect is assumed.

If you leave out **pb#** and the specified effect is not loaded, the next available playback is used. If you don't include **pb#** and the specified effect is loaded, the effect playback on which it is loaded is assumed. If you don't include **pb#** and multiple copies of the effect are loaded, the lowest numbered effect playback on which the effect is running is assumed.

**Note:** *Since these examples are only part of a command, they do not have concluding [\*] key.*

The **[+]**, **[-]**, **[THRU]**, **{THRU ON}**, **[LAST]**, and **[NEXT]** keys cannot be used in an effect playback selection.

The examples shown immediately below are effect playback selections that you can use to replace **fx** where it appears in full command descriptions.

**Note:** To load and run an effect on a 300 Series console, press **[FX] # [FX GO]**. This will load the effect on the next available effect playback and start the effect running. To load an effect without running the effect, you can simulate the **[FX LOAD]** key using the ACII key command (**Alt 4**)

**[FX] # [FX LOAD]** *(Direct 1 and Direct 2 Digit)*

**[FX LOAD] [FX] # [\*]** *(Command Line)*

Specifies the effect number to load on the next available effect playback. If the effect is already loaded, it reloads it onto the same playback. If the effect is loaded on multiple playbacks, it reloads it onto the lowest numbered of these playbacks. If the effect does not exist or all playbacks are loaded, the command is ignored.

**[FX] [1] [FX LOAD]** *(Direct 1 and Direct 2 Digit)*

**[FX LOAD] [FX] [1] [\*]** *(Command Line)*

If effect 1 is already loaded, selects that Playback. Otherwise, selects the first unloaded playback (if any) and loads it with effect 1 (if recorded).

**[FX] # [PB] # [FX LOAD]** *(Direct 1 and Direct 2 Digit)*

**[FX LOAD] [FX] # [PB] #[\*]** *(Command Line)*

Specifies an effect and a playback to load. If the effect does not exist, the command is ignored.

**[FX] [1] [PB] [2] [FX LOAD]** *(Direct 1 and Direct 2 Digit)*

**[FX LOAD] [FX] [1] [PB] [2] [\*]** *(Command Line)*

If effect 1 is already loaded on Playback 2, selects it. Otherwise selects Playback 2 and loads it with effect 1 (if recorded).

**[FX] [PB] # [FX LOAD]** *(Direct 1 and Direct 2 Digit)*



**[FX LOAD] [FX] [PB] #[\*]** (*Command Line*)

Selects the specified playback. If there is no effect loaded in it, the command is ignored.

**[FX] [PB] [2] [FX LOAD]  
[FX LOAD] [FX] [PB] [2]**

Selects Playback 2.

## The Current Playback

All commands can apply to the current playback. Only one Playback can be the current playback. This playback is shown in white on grey in the Effects window. The current playback is different from the current effect which is shown in the LCD.

**[FX SEL]** selects the next higher numbered playback as the current playback. (If necessary, use **Alt 8** on the PC keyboard to simulate the **[FX SEL]** key for 300 Series consoles. )

**[FX SEL]** *All Modes*

Selects the next higher numbered playback as the current playback. For example, if the current playback is 3, pressing **[FX SEL]** selects playback 4. Another press selects playback 5. At the highest numbered playback, pressing **[FX SEL]** selects playback 1.

**[FX] # [PB] # [\*]** selects the specified playback as the current playback

**[SHIFT] [FX SEL]** *All Modes*

Selects the next lower numbered playback as the current playback.

**[SHIFT] [FX SEL]** *All Modes*

Selects the next lower numbered playback as the current playback. For example, if the current playback is 5, pressing **[SHIFT] [FX SEL]** selects playback 4. Another press selects playback 3. At playback 1, pressing **[SHIFT] [FX SEL]** selects the highest numbered playback.

**[FX] # [FX SEL]**

Selects the lowest numbered playback on which the specified effect is loaded, or if the effect is not yet loaded, selects the next available playback and loads the effect. If the effect does not exist, the command is ignored.

**[FX] [1] [FX SEL]** *All Modes*

If effect 1 is already loaded, selects that Playback as the current playback. Otherwise, selects the first unloaded Play back and loads it with effect 1 (if recorded).

**[FX] # [PB] # [FX SEL]**

Loads the specified (or current) effect onto the specified playback.

**[FX] [PB] [1] [FX SEL]** *All Modes*

If the current effect is already loaded on playback 1, selects it as the current playback. Otherwise selects playback 1 and loads it with the current effect.

**[FX] [1] [PB] [2] [FX SEL]** *All Modes*

If effect 1 is already loaded on playback 2, selects it as the current playback. Otherwise selects playback 2 and loads it with effect 1 (if recorded).

---

## Loading an Effect

An effect can be loaded onto one or more of the effect playbacks. After loading, the playback is stopped and set to step 0 where it does not contribute to the output. Any previous effect on this playback is unloaded. Other commands will also load the effect if it is not already loaded. (Use **Alt 4** on an ASCII keyboard if it is necessary to simulate the **[FX LOAD]** key when using a 300 series console).

**[FX] # [FX LOAD]** *(Direct 1 and Direct 2 Digit)*

**[FX LOAD] [FX] # [\*]** *(Command Line)*

loads an effect onto a playback. This command is ignored if the specified effect does not exist.

**[FX] [1] [FX LOAD]** *(Direct 1 and Direct 2 Digit)*

**[FX LOAD] [FX] [1] [\*]** *(Command Line)*

If effect 1 is already loaded, selects that playback then re-loads it. Otherwise selects the first unloaded playback and loads it with effect 1 (if recorded).

**[FX] [PB] [2] [FX LOAD]** *(Direct 1 and Direct 2 Digit)*

**[FX LOAD] [FX] [PB] [2] [\*]** *(Command Line)*

Loads playback 2 with the current effect.

**[FX] [1] [PB] [2] [FX LOAD]** *(Direct 1 and Direct 2 Digit)*

**[FX LOAD] [FX] [1] [PB] [2] [\*]** *(Command Line)*

Loads playback 2 with the effect 1.

---

## Running an Effect

Once an effect is loaded on a playback, it can be started, then paused and started again. When the effect is started, the levels fade in over the time recorded into the effect. Stopping an effect fades the levels out over the recorded time and then unloads the effect. The effect continues to run until it is unloaded. The Effects window shows the current effect (whether or not it is running) with a white on grey playback number. Loaded but not started effects are shown with green text for the step number, step time, and stop setting. Running effects are shown by yellow text for the step number, step time, and stop setting. Paused effects are shown by flashing yellow text for the step number.

**[FX GO]** starts the current playback if there is an effect loaded on it.

**[FX] # [PB] # [FX GO]** loads the specified (or current) effect onto the specified playback and starts it.

**[FX] [1] [FX GO]** *All Modes*

If effect 1 is already loaded, this selects that playback then starts it. Otherwise it selects the first unloaded Playback (if any), loads it with effect 1 (if recorded) and starts it.

**[FX] [PB] [2] [FX GO]** *All Modes*

Loads the current effect onto playback 2 and starts it.

**[FX] [1] [PB] [2] [FX GO]** *All Modes*

Loads effect 1 onto playback 2 and starts it.

Effects can also be run from cues (refer to [Assigning an Effect](#) in Cues and X Playbacks) or from submasters (see [Assigning Effects and Macros](#) in 'Submasters').

---

## Pausing an Effect

An effect can be paused; this stops any more steps running but it does not stop any fade in or fade out caused by **[FX GO]**, and does not unload the effect. The step number in the Effects window will remain fixed while the effect is paused. This command is ignored if the playback has not been started or has nothing loaded on it. Paused effects are shown by flashing yellow text for the FX Step field.

Press **[FX PAUSE]** to pause a running effect. Press **[FX PAUSE]** again to resume running the effect.

**[FX] # [PB] # [FX PAUSE]** pauses the specified playback.

**[FX] [1] [FX PAUSE]** *All Modes*

If effect 1 is already loaded, selects that playback then pauses or restarts it. If effect 1 has never been started and paused, this command is ignored. If effect 1 is not loaded, selects the first unloaded playback (if any) and loads it with effect 1 (if recorded).

**[FX] [PB] [2] [FX PAUSE]** *All Modes*

If playback 2 is loaded, selects the playback and then pauses or restarts it. If the playback is not loaded, loads the current effect onto the playback.

**[FX] [1] [PB] [2] [FX PAUSE]** *All Modes*

If effect 1 is loaded on playback 2, selects then pauses or releases it. If effect 1 is not loaded on playback 2, selects playback 2 and loads it with effect 1 (if recorded).

---

## Stepping an Effect

You can step through an effect manually by setting the Step Control field in the Effects display to MANUAL and then loading the effect.

To step the effect to the next step, make sure the desired playback is the current playback and press **[FX STEP]** each time you want to move to the next step

## Changing Effect Times while Effect is Running

The fade and step times are recorded in the effect, but can be changed while the effect is running.

To change the fade time of an effect press **[FX TIME]** then press **{FADE RATE}** and use the Rate Wheel on consoles with two wheels or the Level Wheel on consoles with one wheel to increase or decrease the fade time. Both the up and down fade time will be changed.

To change the step time of an effect press **[FX TIME]** then press **{STEP RATE}** and use the Rate Wheel to increase or decrease the step time. This changes the step time for all steps proportionally.

**Note:** Effect times on 300 Series consoles are changed from the Effect Screen using edit mode. If it is necessary to simulate the **[FX TIME]** key, use the **Alt 6** keys on a PC keyboard.

---

## Changing Effect Type While Effect is Running

The effect type is recorded in the effect, but you can change it while the effect is running. The bottom line in the Effects window shows the effect type for the current playback.

To change the effect type, press **[FX TYPE]** and then press the desired type **{CHASE}** or **{BUILD}**

**Note:** Effect type on 300 Series consoles is changed from the Effect Screen using edit mode. If it is necessary to simulate the **[FX TYPE]** key, use the **Alt 7** keys on a PC keyboard

---

## Changing Effect Direction While Effect is Running

The effect direction is recorded in the effect, but you can change it while the effect is running. The bottom line in the Effects window shows the effect type for the current playback.

To change the effect direction, press **[FX DIR]** and then press the desired direction (**{FWD}**, **{REV}**, **{BOUNCE}**, or **{RANDOM}**).

**Note:** Effect direction on 300 Series consoles is changed from the Effect Screen using edit mode. If it is necessary to simulate the **[FX DIR]** key, use the **Alt 9** keys on a PC keyboard.

---

## Updating Effects

The effect default step time, direction, and type can be updated from a currently running effect once you have made changes using the effect playback buttons. Updating an effect does not update channel levels in steps, or other properties that you cannot access through the effect playback buttons. The effect must be loaded and running with the changes when you do the update.

**[UPDATE] [TIME] [FX] # [\*]** updates the effect default step, in, dwell, and out times as scaled by the Rate (or Level) Wheel, and the step direction and type from the playback currently running this effect. The effect levels and other effect properties are not changed.

**[UPDATE] [TIME] [FX] [1] [\*]** Updates times from the Playback in effect 1.

**Note:** *You cannot update individual steps of an effect. If the default step time was overridden in a step, the step time for that step will not be updated.*

**Note:** **[UPDATE] [FX] n [RECORD]** does not update levels or step times recorded in individual steps which override the default times. In this case, re-record the effect.

---

## Updating Effects from the Live Screen

When in the Effects Screen, with **{EDIT STEPS}** selected, you can update an effect step, in accordance with the levels in the Live Screen using the syntax **chans [@] [LIVE]**

**[1] [THRU] [5] [@] [LIVE]** Direct Action Modes

**[1] [THRU] [5] [@] [LIVE] [\*]** Command Line Mode

Updates the levels of channels 1 to 5 in the current effect step to the levels in the Live Screen (on stage). If any of the selected channels are not already in the effect step, they are added to the effect step.

You can record the complete current stage lighting scene in the current effect step using the syntax:

**[1] [THRU] [LAST] [@] [LIVE]** Direct Action Modes

**[1] [THRU] [LAST] [@] [LIVE] [\*]** Command Line Mode

---

## Stopping and Unloading an Effect

You can stop and unload an effect from any playback using the **[FX STOP]** key as shown:

**[FX] [1] [PB] [2] [FX STOP]** Direct Entry 1 and 2 Digit

**[FX STOP] [FX] [1] [PB] [2] [\*]** Command Line

You can also stop and unload all effects from all playbacks using the syntax:

**[FX] [0] [FX GO]** All Modes

The following alternative commands apply to 500 series consoles.

**[FX] [0] [PB] [2] [FX LOAD]** Direct Entry 1 and 2 Digit

**[FX LOAD] [0] [PB] [2] [\*]** Command Line

Selects playback 2 and unloads the effect from it (if any).

**[FX] [0] [FX LOAD]** Direct Entry 1 and 2 Digit

**[FX LOAD] [0] [\*]** Command Line

Unloads all effects from all playbacks.

**[FX LOAD] [0] [PB] [2] [\*]** Direct Entry 1 and 2 Digit

Selects playback 2 and unloads the effect from it (if any)..

## Using Effects in Cues and Subs

You can control effects with cues by assigning the effect to one cue for starting and a different cue for stopping. For information on assigning effects to cues, turn to [Assigning an Effect](#) in Recording Cues

**Note:** *Stopping an effect from a cue with zero fadeout time sometimes causes the effect to step on one more step after being stopped. Use a 2-part cue with a 0.1s delay between parts. The earlier part stopping the effect and the later part setting the required cue level.*

You can control effects with submasters by assigning the effect to a submaster. Moving the submaster away from zero starts the effect and moving it back to zero stops the effect.

## Viewing and Editing Effects

Once you have recorded effects, you can view and edit them in the Effect display. You can also use the Effect display to create new effects.

The following topics are covered in this section:

- [The Effect Display](#)
  - [Effect Setting Fields](#)
  - [Fx Step Fields](#)
  - [Creating a New Effect](#)
  - [Assigning Fade Times to Effects](#)
  - [Assigning Profiles to Effects](#)
  - [Creating Effect Steps](#)
  - [Viewing Step Channel Levels](#)
  - [Editing Step Channel Levels](#)
  - [Deleting Effect Steps](#)
  - [Copying Levels from an Effect Step](#)
- 

## The Effect Display

To show the Effect display press **<FX>** in the display keypad (not **[FX]** in the Levels keypad).

**Note:** *Changing levels while in this display records the changes into the current effect step without requiring a record command.*

8:32:28 24/01/99 >>
**EFFECT STEP 2.1**
\*No Title
GM=FL/FL

```

0001 02 03 04 05 06 07 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 0025
 60 60 60 60 60
0026 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 0050
0051 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 0075
0076 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 0100
0101 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 0125
        
```

**Effect Settings and Step Defaults**

**Wheel**

FX	2	Text			
Type	BUILD	Level	NEGATIV	Fade Up	2
Dir	FWD	NextFX	OFF	Fade Dn	
Mode	IndHTP			Profile	_0
Step Defaults:					
	0.5	0/ OFF/ 0	0.5	_0	100

Fx Step	Time	In/Dwell/Out	Att	Low/High Scaling
➤ 2.1	1	1/ 2/1	2	_5 _55
2.2	1	1/ 2/1	2	_5 _60
2.3	1	1/ 2/1	2	_5 _80
2.4	1	1/ 2/1	2	_5 _90
2.5	1	1/ 2/1	2	_5 100

3

V2.a3

**Net On**  
Main: denise  
User: admin  
Main: Active  
NoBackup

**EFFECT STEP 2.1:**  
Select an effect, then SHIFT + TRACKBALL to edit an item

### The Effects Screen - GeniusPro



8:32:28 24/01/99 >> **EFFECT 2** \*No Title GM=FL/FL

```

0001 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 0020
  FL FL FL FL FL FL FL FL FL
0021 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 0040
      40 40 40 40 40 40
0041 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 0060
0061 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 0080
0081 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 0100

```

**Effects Settings and Step Defaults**

FX **2** Text  
 Type **CHASE** Level **NORMAL** Fade Up **0.5** Stop After **FX STOP**  
 Dir **FWD** Next Fx **OFF** Fade Dn **0.5** Cycles **0**  
 Mode **IndHTP** Profile **\_0** Time **0**  
 Step Defaults Step Control **TIMED**  
**0.5 0/ OFF/0 0 \_0 100**

**Wheel**

v2a3

FX Step	Time	In/Dwell/Out	Att	Low/High	Scaling
2.1	1	1/ 2/1	2	_5	_80
2.2	1	1/ 2/1	2	_5	_80
2.3	0.5	0/ OFF/0	0.5	_0	100

**Net On**  
**Main**  
**denise**  
**User**  
**admin**  
**Main**  
**Active**

**EFFECT 1:**  
 Select an effect, then SHIFT  
 TRACKBALL to edit an item

1	2	3 APPEND	4	5	6 EDIT
DELETE	DEFLT	STEP			STEP

## The Effects Screen - Lightpalette

The Effect display Levels screen shows the recorded channel levels (intensity levels and attribute levels) of the current effect step. The Levels screen background is grey rather than black to show that levels changed in this display are not being changed live. To change output levels using an effect you must load and play back the effect on an effect playback. In the Effect display State screen, the Effect Settings window shows the effect properties for the current effect and the FX Step window shows a page of steps and their associated properties. Use **{EDIT STEPS}** and **{EDIT FX}** to switch between these windows.

The title bar shows the date and time, display name, show name, and grandmaster status. The date and time format can be set in the Console Time window of the second Setup display State screen. The show name is preceded by an asterisk (\*) when changes have been made to the show since you last saved it.

The Wheel window at the right of the State screen indicates the position within the effect sheet. The

number shows the index of the current effect step, for example the first, second, third steps etc. have index 1, 2, 3 etc.; the index is independent of the step number.

To move between effects, highlight the FX field and use **[NEXT]** or **[LAST]**. To go directly to an effect step, press **[FX] # [\*]** where **#** is the effect step. If you don't specify a step number, step 1 will be highlighted. If the step does not exist, you will be warned that you are creating a new item. Press **[\*]** again to create the new step, or **[CLR]** or **[UNDO]** to cancel the command.

To change values in effect fields, hold down the **[SHIFT]** key and move the trackball to change from non-edit mode (green) to edit mode (yellow), then use the trackball to highlight the field to be edited. Edit the field using the wheel, or **[+]** or **[-]** key to change the field, or enter a value from the keypad, as appropriate. Press **[\*]** to return to the non-edit mode (green)

## Effect Setting Fields

Fields in the Effect display Effect Settings window show the current values for effect properties, and the Step Defaults. To change any of the effect properties:

1. Make sure that the highlight is in the upper part of the State display (press **{EDIT FX}** if it isn't).
2. Use the Trackball to move the highlight to the field you want to change.
3. Type a new value or use **[+]** and **[-]** to increment or decrement the value.
4. The new value is recorded when you move the highlighting out of the field.
5. To move between effects, use the Trackball to move the highlight to the FX field and then use **[NEXT]** and **[LAST]** to move between effects.

**FX** The number of the effect. Cannot be changed, but if you highlight it you can use **[NEXT]** and **[LAST]** to move between effects.

**Text** The text label (caption) associated with the effect.

**Type** The type of effect. Can be one of CHASE or BUILD.

**Dir** The direction of the effect. Can be one of FWD (forward), REV (reverse), BOUNCE, or RANDOM.

**Mode** The way in which the effect interacts with other output sources such as the X playbacks and submasters. Can be one of indHTP (Independent Highest Takes Precedence) or LTP (Latest Takes Precedence).

**Level** The way in which the high and low effect settings are interpreted. Can be one of NORMAL, NEGATIV, NEG|NRM, NRM|NEG, or RANDOM.

**Next Fx** The next effect to be started when this effect stops. Only applies to effects where the Stop After field is set to TIMED or CYCLES. Can be OFF or an effect number.

**Fade Up** The time it takes the effect to fade in after you press **[FX GO]**. Can be from 0 to 59 minutes, 59 seconds.

**Fade Dn** The time it takes the effect (not an effect step) to fade out after you press **[FX STOP]**. Can be from 0 to 59 minutes, 59 seconds.

**Profile** The profile assigned to the effect fade times. Applies to both the fade up and fade down times.

**Stop After** How the effect will be stopped. Can be one of FX STOP (on Fx stop), FX LOAD (on Fx load),

**LAST STEP** (on last step), TIME (after XXX seconds), or CYCLES (after XXX cycles). For CYCLES set the number of cycles in the Cycles field. For TIME set the time in the Time field.

**Step Control** The way steps are started. Can be one of TIMED, MANUAL, MIDI, or AUDIO.

**Step Defaults** The values that will be assigned to step properties when you create a step. These values can be changed if necessary after the step is created. Included fields for step time (Step TIME), step in, dwell, and out times (In/Dwell/Out), attribute fade time (Att), step low and high values (Low/High), and scaling (Scaling). Scaling is not implemented at this time.

## Effect Step Fields

Fields in the Effect display FX Step window show the current values for effect step properties. The property associated with each display field is indicated by the title line.

To change any of the effect step properties:

1. Make sure that the highlight is in the lower part of the State display (press **[EDIT STEPS]** if it isn't).
2. Use the Trackball to move the highlight to the field you want to change.
3. Type a new value or use **[+]** and **[-]** to increment or decrement the value. The new value is recorded when you move the highlighting out of the field.

To move between steps, use the Trackball to move the highlight to the FX Step field and then use **[NEXT]** and **[LAST]** to move between steps.

**FX Step** The number of the effect step. These are fixed and cannot be changed.

**Step Time** Step time for the step.

**In/Dwell/Out** The in, dwell, and out times for the step. The in time is the time from step start until the step is at its high setting. The dwell time is the time the step stays at its high setting. The out time is the time from the end of the dwell time until the step is back at its low setting.

**Att** The time it takes to change attribute levels once the step has started.

**Low/High** The low and high settings for the step. The high setting is the level that channels go to when a step is active with the Level field set to NORMAL.

**Scaling** Not implemented at this time.

## Creating a New Effect

To switch to the Effect display and create a new effect or step, press **<FX> [FX] # [\*]** where # is an unused effect or step number. To create a new effect or step while you are in the Effect display, press **[FX] # [\*]** where # is an unused effect or step number. You will be warned that you are creating a new item. Press [\*] again to create the new effect or step, or **[CLR]** or **[UNDO]** to cancel the command. If this is a new effect and you did not specify a step, step 1 is created automatically. The cursor is on the newly created step.

**Note:** The **<FX>** display key is at the top of the console. Do not confuse it with the lower **[FX]** key.

## Assigning Fade Times to Effects

**fx# [TIME] # [\*]** changes the fade time of the specified effect without changing recorded levels. If the effect doesn't exist, this command creates a new effect with no levels but with the specified fade times. You do not get an over-record warning with this command if the effect exists. If you only enter one number for time, it is used for both the up and down fade times. To enter separate up and down fade times, use **[/]** to separate the two numbers. The first number becomes the up fade time and the second number becomes the down fade time.

**[FX] [1] [TIME] [\*]** All Modes

Resets effect 1 fade time to the non-split default effect time in the Setup display FX|Up/Down field.

**[FX] [1] [TIME] [4] [\*]** All Modes

Changes effect 1 up and down fade times to 4 seconds without changing any levels.

**[FX] [1] [TIME] [4] [/] [2] [\*]** All Modes

Changes effect 1 up fade time to 4 seconds and its down fade time to 2 seconds without changing any levels.

**[FX] [1] [TIME] [/] [2] [\*]** *All Modes*

Changes effect 1 down fade time to 2 seconds without changing any levels. Sets the up fade time to the time in the Setup display FX|Up/ field if this is a new effect or leaves it as is if over-recording.

**F[FX] [1] [TIME] [4] [/] [\*]** *All Modes*

Changes effect 1 up fade time to 4 seconds without changing any levels. Sets the down fade time to the time in the Setup display FX|/Down field if this is a new effect or leaves it as is if over-recording.

## Assigning Profiles to Effects

**fx# [PROFILE] # [\*]** assigns a fade profile to the effect. Since no levels are changed, you get no rerecord warning with this command. To learn how to create and edit profiles refer to [Profiles](#) To delete an assigned fade profile, omit the fade profile number.

**[FX] [1] [PROFILE] [3] [\*]** *All Modes*

Assigns fade profile 3 to effect 1.

**[FX] [1] [PROFILE] [\*]** *All Modes*

Deletes any fade profile assigned to effect 1.

## Creating Effect Steps

To add a new effect step to the current effect, press **{APPEND FXSTEP}** when in the Effect display. This adds a new step to the current effect and puts the cursor on the newly created step. The new step has default values for step time, in, dwell, and out times, attribute fade time, low and high settings, and scaling. It has no assigned levels.

## Viewing Step Channel Levels

To view the recorded levels in a step:

If the cursor is in the Effect Settings window, press **{EDIT STEPS}** to put it on the first effect step number in the FX Step window.

If the cursor is in the FX Step window but not on the effect step number, use the Trackball to highlight

the step number rather than timing or level data.

Once the cursor is on the effect step number, use **[NEXT]** and **[LAST]** to move between steps and view channel levels.

---

## Editing Step Channel Levels

First select the step and ensure that the highlight is on the step number (the FX STEP field). The channels can then be selected and modified using the same commands as for Channel Control, for example **[1] [@] [1] [\*]**, **[SUB] [1] [@] [5] [\*]** and so on. The Level Wheel and some of the soft keys in the Channel Control cannot be used to change levels.

---

## Deleting Effect Steps

Steps can be deleted from the Effect display. This is a good way to delete effects if you are only going to delete a few. For information on how to delete all effects or a range of effects from the Archive display turn to [Clear Operations](#)

**{DELETE}** appears on the LCD Effect menu when you are in the Effect display and delete steps, either a single step or a single THRU range can be specified. The highlight must be on the step number. This can be used with **[+]**, **[-]**, and **[THRU]** keys.

**{DELETE} {DELETE}** *Direct Entry 1 and 2 Digit*

**{DELETE} [\*]** *Direct Entry 1 and 2 Digit*

**{DELETE} {DELETE} {DELETE}** *Command Line*

**{DELETE} [\*] [\*]** *Command Line*

Deletes the current step.

**[FX] [1] [.] [2] {DELETE} {DELETE}** *All Modes*

Deletes effect 1 step 2.

**[FX] [1] [.] [2] [THRU] [3] [.] [4] {DELETE} {DELETE}** *All Modes*

Deletes effect 1 step 2 through effect 3 step 4.

---

## Copying Levels From an Effect Step

You can record submasters, cues, groups, and effect steps while you are in the Effect display. The highlight must be on the step number (the FX STEP field).

Using recording commands while you are in the Effect display copies the Effect display levels to the target submaster, cue, group, or effect step. For example, if effect step 1.1 is highlighted in the Effects display, then entering **[SUB] [2] [RECORD]** will copy the levels from effect 1 step 1 into cue 2. This also allows steps to be copied from one step to another, for example, if the screen highlight is on effects 1, step 1, entering **[FX] [3] [.] [4] [RECORD]** will copy the levels from effect 1 step 1 into effect 3, step 4.

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---



## Auto-Mod

The following topics are covered in this section:

- [What is Automod](#)
  - [Using Auto-Mod](#)
  - [Customising the Auto-Mod Screen](#)
  - [Deleting Auto-Mod Channels](#)
  - [Updating the Show from the Auto-Mod Screen](#)
- 

### What is Auto-Mod?

If a lamp blows during a show you can set AutoMod to temporarily transfer control of the blown lamp (source) to drive another channel, or channels (destination). AutoMod allows you to apply a scaling factor to compensate for the difference in light intensity between the source and destination luminaires.

The AutoMod facility allows you to permanently update the show to incorporate any temporary settings made in Automod.

You can enter a maximum of 87 AutoMod pairs (Destination and Source) and include a scaling factor for each pairing of 10% to 90% (1-digit mode) 1 to 99% (2-digit mode)

When you set one or more channels to be replaced by another, the channels are replaced in all cues, subs, groups and effects during playback mode.

---

### Using Auto-Mod

The AutoMod Screen is displayed when you press <MORE> {AUTOMOD}. If there are no Automod instructions, the body of the screen will be blank.

The following examples show how to set up an AutoMod instruction:

**[8] {A-MOD FROM} [3] [\*]** Sets channel 8 to the current level of channel 3 on an htp basis and sets channel 3 to zero (All Modes)



**[8] {A-MOD FROM} [3] [@] [8] [\*]** Sets channel 3 to be replaced by channel 8 at 80% of its current level on an htp basis (Direct 1 Digit Mode)

**Note:** For Direct 2 Digit mode, 80% must be entered as 80.

**[8] {A-MOD FROM} [3] [THRU] [5] [\*]** Sets channels 3 to 5 to be replaced by channel 8 (All Modes)

**[6] [THRU] [8] {A-MOD FROM} [5] [\*]** Sets channel 5 to be replaced by channels 6 to 8 (All Modes)

**Note:** When a fixture is paired in automod, all associated attribute channels are automatically paired. You can also Automod individual intensity or attribute channels using the decimal notation, (e.g., **[3] [.] [1] {A-MOD FROM} [6] [.] [1] [\*]**).

You can Automod a channel to itself. This would provide the opportunity to apply a scaling factor to the channel

**[6] {A-MOD FROM} [6] [+] [3] [\*]** Sets the intensity of channel 6 up 30% Note: For Direct 2 Digit mode, 30% must be entered as 30.

When you have set up the Automod pairing, press {A-MOD ON}. A warning will appear (white on a magenta box) USING AUTOMOD while Automod is active. To reset the channels to normal operation, press {A-MOD OFF} to cancel Automod and clear the warning box.

---

## Customising the Auto-Mod Screen

The Automod Screen can order the display in Destination order (default) or Source order. Press the **{SOURCE ORDER}** softkey to display the paired channels in source order. Press the **{DEST ORDER}** softkey to return the display to destination order.

**Note:** where more than one destination channel is paired to a source channel and the display is in destination order, duplicate destination channels are shown in black. Similarly, if more than one source channel is paired to a destination channel and the display is in source order, the duplicate source channels are shown in black.

---

## Deleting Auto-Mod Channels

You can delete specified destination channels from the Automod Screen or delete all Automod pairing using the **{DELETE}** softkey, as shown:

**[3] {DELETE} [\*]** Deletes the destination channel 30 (All Modes)

**Note:** *Where only one destination channel is paired to one source channel, deleting the destination channel will clear the source channel from the display (source channel no longer paired in Automod). Where more than one destination channel is paired to a source channel and one of the destination channels is deleted, the remaining destination channel(s) will remain paired to the source channel. You cannot delete source channels from the Automod Screen.*

**{AUTOMOD FROM} [3] {DELETE} [\*]** Deletes source channel 3

**{DELETE} {DELETE}** Deletes all auto-mod entries from the Auto-Mod Screen

## Updating the Show from the Auto-Mod Screen

Automod channels shown on the Automod Screen will remain paired while in the USE AUTOMOD mode. Pressing the **{A-MOD OFF}** key will remove the Automod pairing from the show. You can permanently update cues, subs, groups or effects from the Live screen to incorporate the pairing set in the AutoMod Screen as shown:

**{UPDATE} {UPDATE A-MOD} [CUE] [1] [THRU] [8] [\*]** Updates cues 1 to 8 from the Auto-Mod Screen

**{UPDATE} {UPDATE A-MOD} [SUB] [2] [THRU] [4] [\*]** Updates submaster 2 to 4 from Auto- Mod Scéen

**{UPDATE} {UPDATE A-MOD} [GROUP] [3] [\*]** Updates group 3 from the Auto-Mod Screen

**{UPDATE} {UPDATE A-MOD} [FX] [5] [\*]** Updates effect 5 from the Auto-Mod Screen

## Using Automod with Moving Lights

Since all associated attribute channels and channels in all cues, subs, groups and effects are automatically paired, Auto-Mod can be used to considerable advantage when setting up moving lights. For instance, when the characteristics of a moving light have been set up for one light, you can pair its intensity and attribute values to other moving lights, and to itself. In this way, cues, subs, groups and effects using the same moving lights can be set with the minimum number of keystrokes. You can then decide to apply the settings to individual or ranges of cues, subs, groups and effects using the syntax described above.

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## Key, Wheel and VGA Remapping

Pressing **<MORE>** **{NOTES DISP}** **{LOAD FILES}** **{CONF FILES}** and **{MAP CONFIG}** softkeys from the allows the user to edit the configuration file **220map.cfg** and to assign alternative functions to the console keys and controls.

This facility, in its simplest form, allows the functionality of the keys on a 500 series control desk to be remapped within the control surface to suit specific user requirements.

The remapping facility also enables certain key groups, VGAs, rate wheels and other controls to be assigned to duplicate functionality and allows keys/wheels to be assigned to a separate user within the system, thereby creating a virtual remote console, within any 500, or 300 series control desk.

This section covers the following topics:

- [Loading the Map Configuration File](#)
- [Remapping Keys \(500 Series Consoles\)](#)
  - [Identifying Key Positions](#)
  - [Key Numbering](#)
  - [Alternative Key Expansion Board](#)
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  - [Key Remapping Examples](#)
- [Remapping Console Wheels, Rotaries and Trackball](#)
- [Console Identification](#)
- [Remapping VGA Screens](#)

---

### Loading the Map Configuration File

Press the **{MAP CONFIG}** softkey. The existing, or default Map Configuration file is displayed with full instructions on how to remap up to four alternative functions to each key and to remap the functions of the console playback and channel control wheels, rotaries, trackball and VDUs.

---

## Remapping Keys (500 Series Consoles)

### **Identifying Key Positions**

The syntax used to identify keys to be remapped is as follows:

**XXX\_YYY\_n**

where XXX is the console type (520, 530, 550)

YYY is the key type as shown below

n is the key number

<b>Key Type</b>	<b>Function</b>
CCK	Channel control key
ERK	Effect and Record keys (530 and 550 consoles only)
FX	Effect keys (520 consoles only)
RK	Record keys (520 consoles only)
DSK	Display keys
PK	P keys
PBK	Playback keys
TBK	Trackball keys
K	510 Show Controller keys (1-31)
BMP	Bump keys (520=1-24, 530=1-30, 550 = 1-54)

---

### **Key numbering**

### Key numbering

#### Channel Control Keys

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	

#### Effects and Record Keys (530/550)

1	2	3	4	5	6	
7	8	x9	10	11	12	13
14	15	x16	17	18	19	20
21	22	x23	24	25	26	27
28	29	x30	31	32	33	34
35	36	x37	38	39	40	41

#### Effect Keys (520)

1	2
3	4
5	6
7	8
9	10

#### Record Keys (520)

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

#### Display Select Keys

1	2	3	16
4	5	6	
7	8	9	
10	11	12	
13	14	15	

#### P Keys

1	8
2	9
3	10
4	11
5	12
6	13
7	14

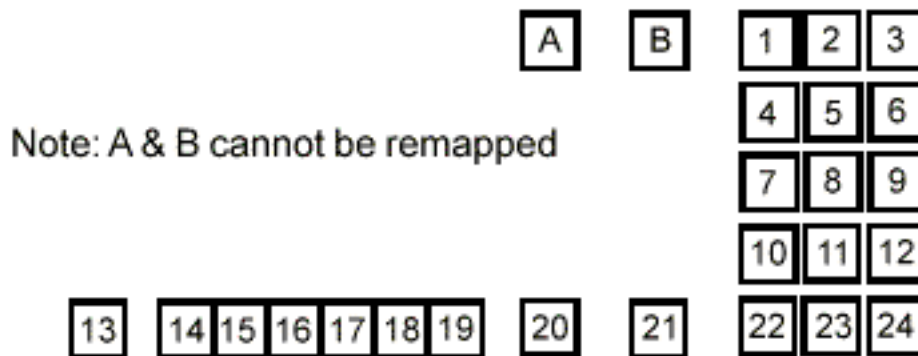
#### Playback Control Keys

1	2	3	4	5	6	
x7	8				9	x10
	11				12	
x13	x14				x15	x16
	17				18	
	19				20	
	21				22	
	23				24	

#### Trackball Keys

1	2	3
---	---	---

## 510 Keys



## Notes

1. Only keys listed in the Map Configuration File can be remapped.
2. Unlisted keys retain their original function.
3. Keys marked with an 'x' next to the number identify key positions that are currently unused.
4. To disable a key, set its function to NULL.
5. When keys are represented by two numbers (some double-width keys), only specify the lowest number on the key.
6. SHIFT key functions cannot be remapped. SHIFT key functions retain their original function.
7. A maximum of four functions can be assigned to a key, e.g., 'CUE 1 @ 2'. Each function should be separated with commas and a comma placed after the last function, e.g., CUE, 1, @, 2,

---

## Bump Keys

Bump keys are numbered from 1 to 54 and are identified as follows:

???\_BMK\_n

Where ??? is the console type and n is the bump key number

Note: 520 consoles have only 24 Faders/Bump Keys. 530 consoles have 30 and 550 consoles have 54.

---

## Alternative Key Expansion Board

This keyboard replaces faders 255 - 48 and bump keys 25 - 48 on a 550 console.

To enable this keyboard, the switches SW1 and SW2 on the back of the panel should be set to 4 and 3 respectively.

When remapping this keyboard the keys relate to Bump keys 25 to 48 as follows:

**550\_BMK\_??**. Where ?? is the number in the key layout below

46	48	47	46	45	44
41	43	42	41	40	39
36	38	37	36	35	34
31	33	32	31	30	29
27	28	25	27	25	26

## Remapping Keys (300 Series Consoles)

### Key Numbering

The syntax used to identify keys to be remapped is as follows:

**300\_KEY\_n**

where n is from 1 to 127 as shown in the diagrams below.

#### P Keys

1	2	3	4	5	6	7	9	10	11	12	13	14	15
---	---	---	---	---	---	---	---	----	----	----	----	----	----

#### FX Keys

16	17
31	32
46	47

#### Display Keys



19	20	21	22	23
34	35	36	37	38
49	50	51	52	53

### Function Keys

25	26	27	28
40	41	42	43
55	56	57	58

### Mode Keys

59	60
----	----

### X Playback Keys

69	70
80	81
91	92
102	103
113	117

### Select Keys

61	62
72	
83	
94	
105	
120	

### Channel Control Keys

63	64	65	66	67	68
74	75	76	77	78	79
85	86	87	88	89	90
96	97	98	99	100	101
107	108	109	110	111	112
122	123	124	125	127	

---

## Key Functions

Key values may be set to NULL (key disabled) or to one of the functions listed in 220map.cfg.

---

## Key Remapping Examples

The following examples show how to remap keys:

### **520\_PBK\_17, RECORD,**

Remap playback key 17 (LOAD X Playback 1) on a 520 console to operate as a RECORD key.

### **530\_FXK, NULL,**

Disables Effects key 1 (left-hand softkey) on 530 console.

### **530\_PK\_7, PB, 1, \*,**

Remaps tp P7 key on a 530 console to perform the function PB, 1 and \* .

### **300\_KEY\_9, BKEYS LATCH**

---

## Remapping Console Wheels, Rotaries and Trackball (500 Series)

In normal operation, Rate Wheel 1 is a Playback Rate Wheel and Rate Wheel 2 is a Channel Control Wheel. However, you can remap the functionality of the wheels as follows:

### **500\_PB\_WHL, CC,**

### **500\_CC\_WHL, PB,**

Reverses the functionality of the two console wheels on a 500 series console.

The following names are used to identify the rotary controls and the co-ordinates of the trackball:

**500\_ROTARY1\_WHL**  
**500\_ROTARY2\_WHL**  
**500\_ROTARY3\_WHL**  
**500\_ROTARY4\_WHL**  
**500\_TRACKBALL\_X**  
**500\_TRACKBALL\_Y**

It is possible to remap one rotary control to perform the functionality of another, however, it is unlikely that it would be desirable to reverse the X and Y co-ordinates of the trackball. The trackball cannot be remapped to perform the function of the rotaries or rate wheels, however, the rotaries can be remapped to perform the functions of the trackball.

---

## Console Identification

Each line of the Map Configuration file must contain the user identity of the console to which the mapping or remapping command refers. If this field is left blank or a '0' is entered, the command refers to the current console, which may be a main or remote console. If a '1' is entered, the command refers to the Main console. 2, 3, 4 or 5 in this field refers the commands to remote consoles 1, 2, 3 or 4.

Where one or more remote console is used in a network and Networker software is installed, the map file for the remote console must be renamed in the DOS command line in order to prevent problems associated with the order of log-ins of remotes.

The following DOS command line is entered:

**copy 220map.cfg 220map.xxx**

where xxx is the last three digits of the remote console's IP address. The map file can then be amended as necessary from the remote console as described above. When the **{MAP CONFIG}** softkey is selected from the remote console, the new map file **220map.xxx** is automatically loaded and the VGA configuration can be edited as previously described.

If the console control surface has been partitioned by remapping, all map configuration commands relating to the partitioned area must contain the same remote console number.

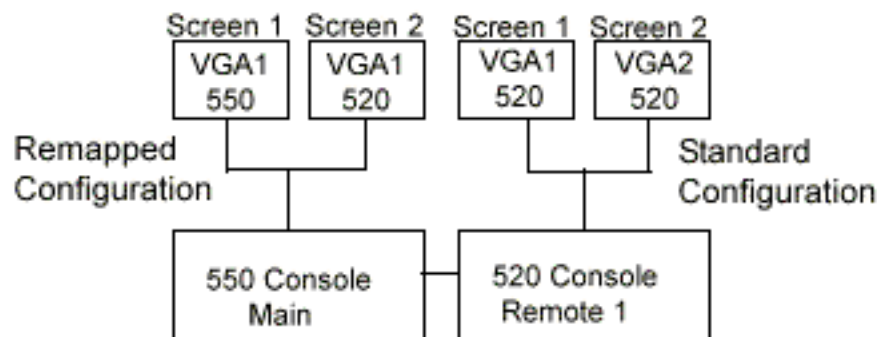
---

## Remapping VGA Screens

You can remap a console to view VGA screen outputs other than its own. This is an essential function where a console's control surface has been remapped to create a virtual remote console. In this case, the user must be able to view the functions carried out by the virtual remote console as well as the main console's functions.

It may also be desirable to view the functions carried out by a remote console connected to a network (*refer to [Network Video](#)*).

The maximum number of screens per console is four (fitted with Quad Video Card). The following example shows a 550 main console with two screen where the second screen has to be remapped to show the functions of VGA1 from a remote 520 console (Console 2) on VGA2.

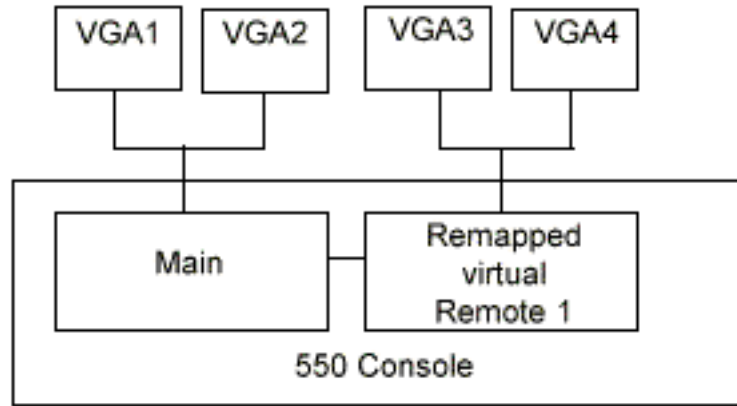


### Map Configuration File Command line

VGA Screen	Console to View	Screen to View
500_VGA2,	2,	1,

e.g., **500\_VGA2, 2, 1,**

The following example shows a 4-screen 550 main console whose control surface has been remapped to create a virtual console within the same console. The virtual console is referred to as remote 1. Two of the four screens require to be remapped to show the functions of the virtual remote.



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## Notes

Notes provides the user with the facility to type, edit and save notes, to access the 'Readme First' file containing release text about the software installed on the console and to load view and amend the [Attribute Control Page](#) (ATC Page), [Fixture Library](#) and the files associated with the [Network Configuration](#), [Key, Wheel and VDU Remapping configuration](#) and the [Console Reporter Rack Configuration](#)

This section covers the following topics:

- [Writing and Editing Notes](#)
  - [Loading Files](#)
  - [Viewing and Editing Configuration Files](#)
- 

### Writing and Editing Notes

The Notes Menu is accessed by pressing the **[MORE]** key and **{NOTES DISP}** softkey, which displays the Notes Page. This page, which is initially blank, provides the facility to type messages or notes using the external keyboard. The Notes Page operates like a normal text editor. When you come to the end of a line, the cursor will automatically move to a new line. Pressing the Return key will create a blank line. You can use the trackball or mouse to position the cursor for insertion or deletion, or you can use the keyboard left, right, up or down keys. To cut a line of text, position the cursor on the line and press the **{CUT LINE}** softkey. To copy a line, position the cursor on the line and press the **{COPY LINE}** softkey. You can paste a line of text which has been cut or copied by positioning the cursor on a blank line and pressing the **{PASTE LINE}** softkey. Once you have completed typing your note, you can save it to file by pressing the **{SAVE FILE}** softkey.

---

### Loading Files

The **{LOAD FILES}** softkey allows you to load any saved notes pages and, if you have the Tracker software installed, you can load and edit the ATC pages and Fixture Library (see [Fixture Library List](#)). It also provides a means of viewing the Readme First file to learn about

changes made when you install a new operating system or software. The softkeys available when you press **{LOAD FILES}** are **{NOTES PAGES}**, **{README FIRST}**, **{ATC PAGE}**, **{FIXT LIB}**, **{CONF FILES}** and **{BACK}**. The **{BACK}** softkey returns to the previous notes menu.

---

## Viewing and Editing Configuration Files

Pressing **{LOAD FILES}** and **{CONF FILES}** softkey allows you to edit the Network Configuration ([220node.cfg Network Configuration File](#)), the Map Configuration File ([220map.cfg Console Key. Wheel, VDU mapping configuration](#)), and the Rack Configuration File for console reporter ([220rack.cfg Reporter Rack Configuration File](#)). Softkeys available when you press the **{CONF FILES}** softkey are **{NET CONFIG}**, **{MAP CONFIG}**, **{RACK CONFIG}** and **{BACK}**. The **{BACK}** softkey returns to the previous notes menu.

### Notes:

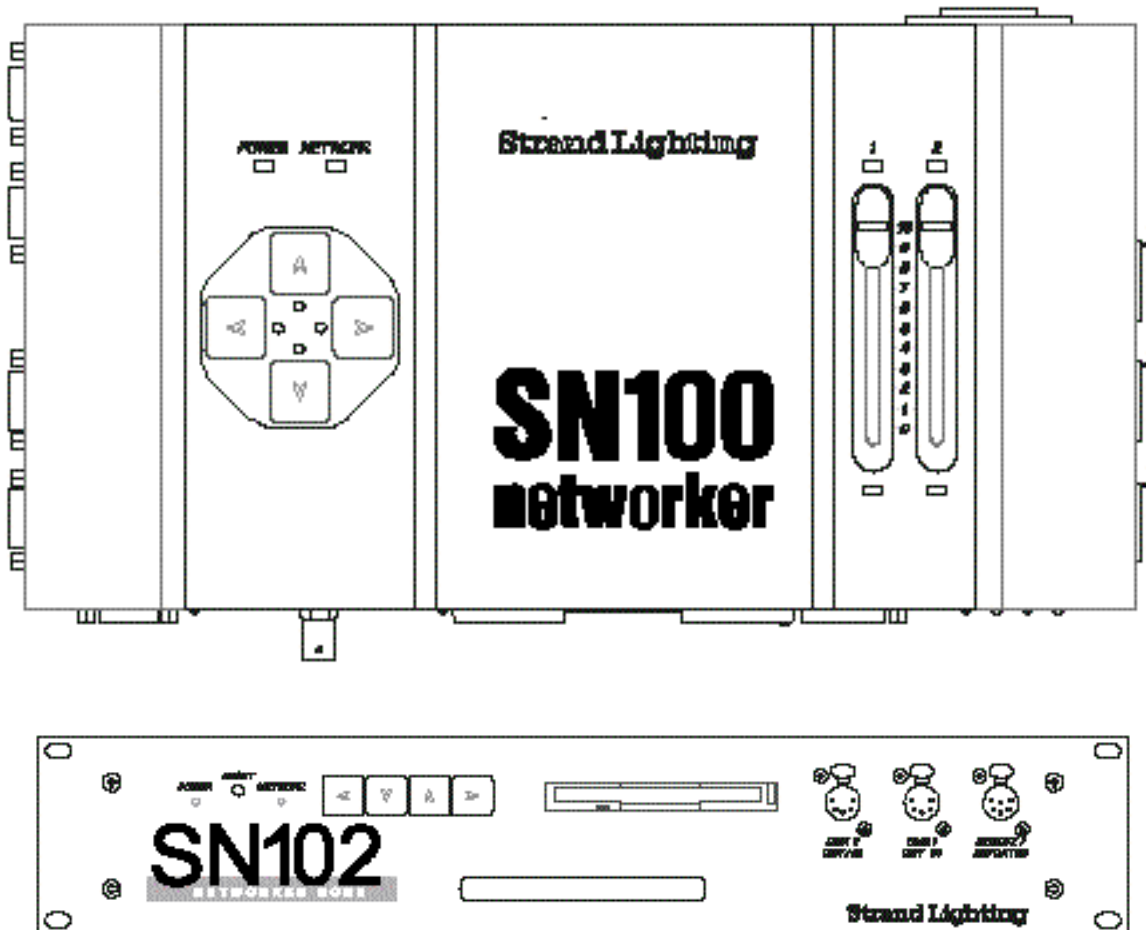
1. *Opening a new file automatically saves the file you are currently working on.*
2. *Changes to the Notes Pages, the ATC Page, the Fixture Library, the Map, Network and the Rack Configuration files are saved in a show file when the show is saved. New shows access the original Fixture Library ATC Page and configuration files until they are edited.*

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## SN100 and SN102 Network Nodes

The SN100 and SN102 are Ethernet lighting concentrators which provide lighting services remote from the console over Ethernet cable.



The following topics are covered in this section

- [SN100 and SN102 Safety](#)
- [SN100 & SN102 Controls and Displays](#)
- [SN100 Installation](#)
- [SN102 Installation](#)
- [SN100 and SN102 Interface List](#)

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## SN100 and SN102 Safety



SN100 and SN102 are designed and manufactured to comply with international safety standards IEC950, IEC65, UL1950, CS950 and are intended for use as part of a lighting control system. They must not be used for other purposes where there is a risk of injury to people.

SN100 SN102 and SN103 are mains (line) powered. They must not be used in any environment where they could come into contact with water or become damp. They contain no user serviceable parts inside. Refer to Strand or an authorized service agent for repair. The ventilation holes on either end of the nodes must not be obstructed.

---

## SN100 and SN102 Controls & Displays

The LEFT and RIGHT keypad buttons provide navigation through all the Network Video Slots. The UP button swaps the video sent to VGA Outputs 1 and 2.

The recessed push button marked TEST swaps between BNC and RJ45 Ethernet interfaces. LED's adjacent to each connector indicate which is active.

The SN100 faders are available as remote analogue inputs 11 and 12.

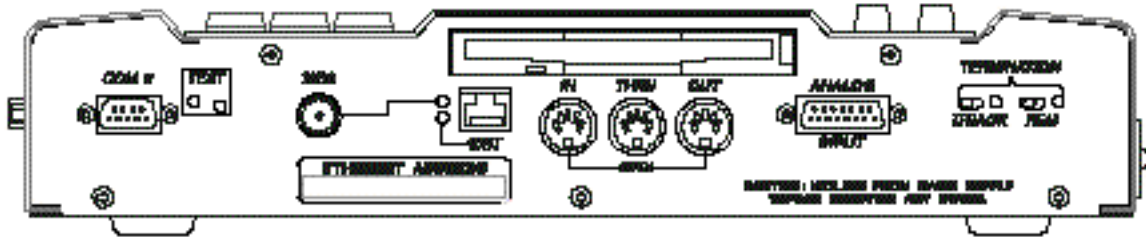
The NETWORK OK LED flickers when valid Ethernet information is being received. It flickers slowly when just video is received, and rapidly when network DMX or network DMX and video is present.

---

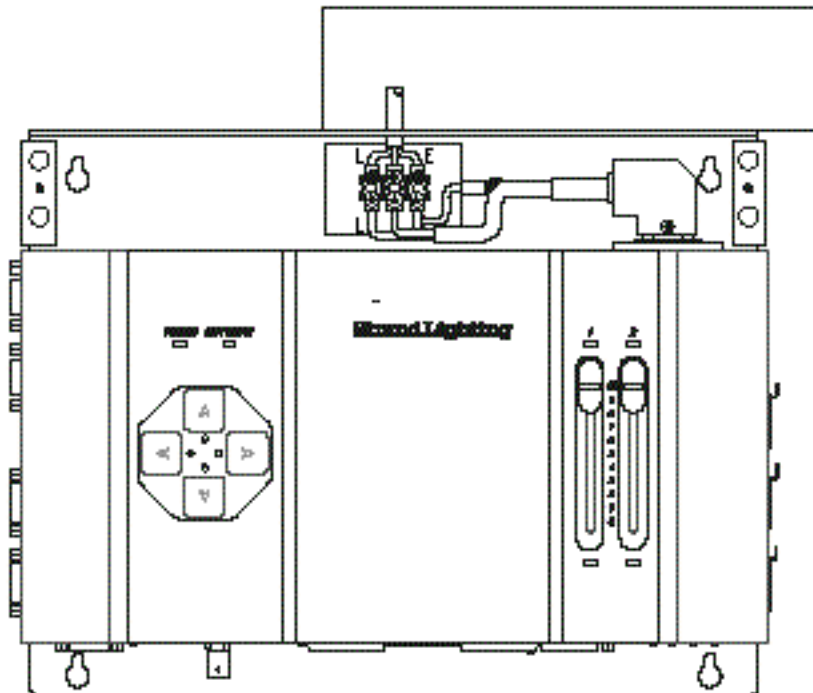
## SN100 Installation

The SN100 can be mounted in three configurations:-

- Table top
- On wall using bracket (supplied) and cover (supplied)
- In rigging with hook clamp (not supplied) & safety chain (not supplied) using bracket (supplied).



The SN100 has four rubber feet and can be used on any flat surface



By fitting the mounting plate (supplied) with the bolts (supplied) the SN100 can be screwed to any wall. Once secured to the wall mains (line) feed conduit may be connected to the mounting plate. A re-wireable plug and terminal strip are provided to which the incoming power should be connected. Once connections are made the cover plate should be refitted before applying power.

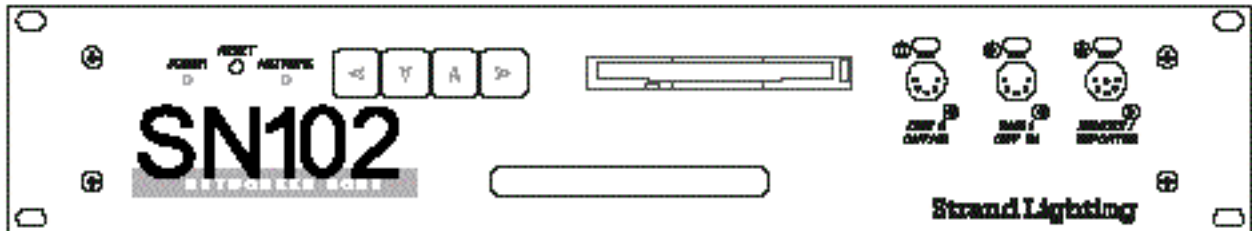
By fitting the mounting plate (supplied) with the bolts (supplied) and a hook clamp and safety chain (not supplied) the SN100 may be located in rigging. When used in this configuration make sure you fit a safety chain of adequate rating.

**Note:** If using the wall plate and supplying power by conduit, ensure the cover plate is fitted before applying power.

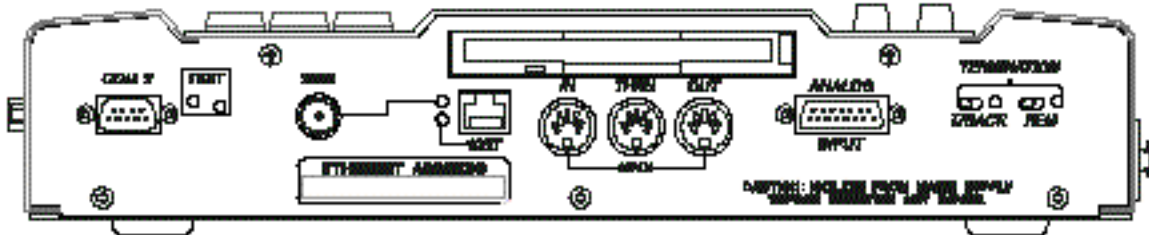
# SN102 Installation

The SN102 can be mounted in two configurations:-

- Table top
- 19" Rack Mount cabinet



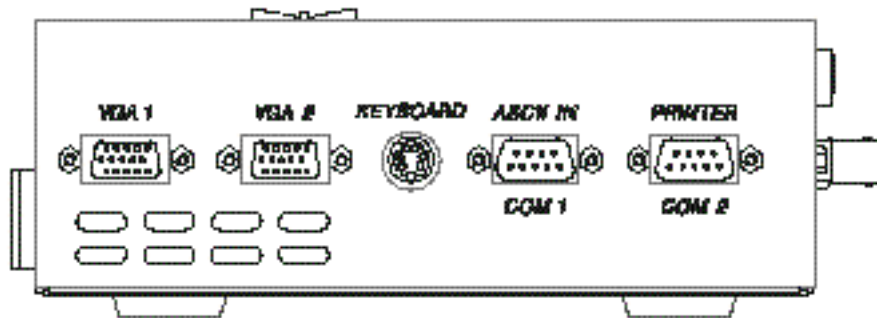
# SN100 and SN102 Connections



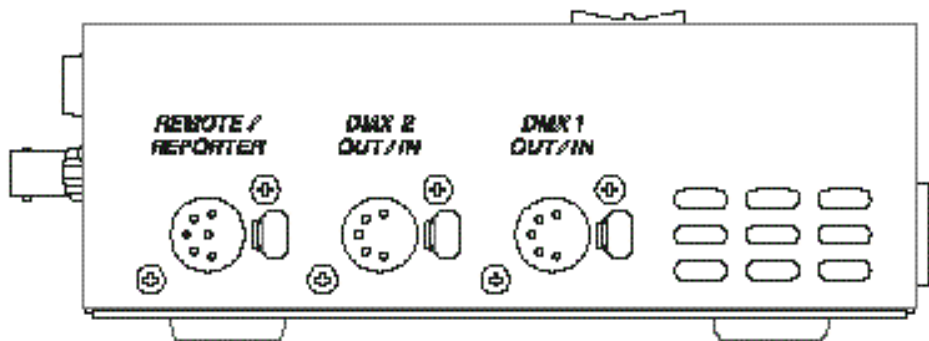
SN100 Front Connections



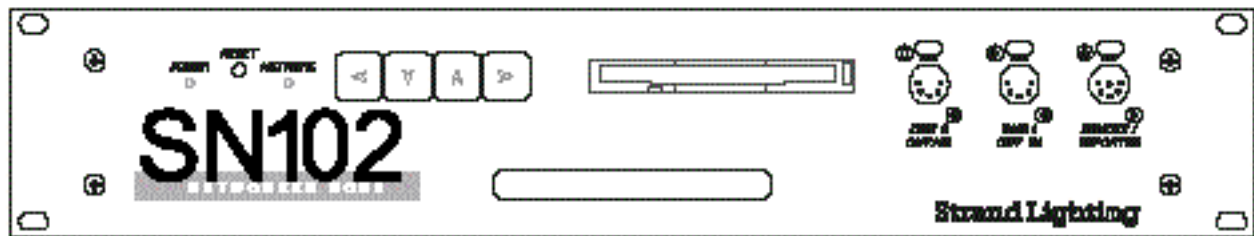
SN100 Rear Connections



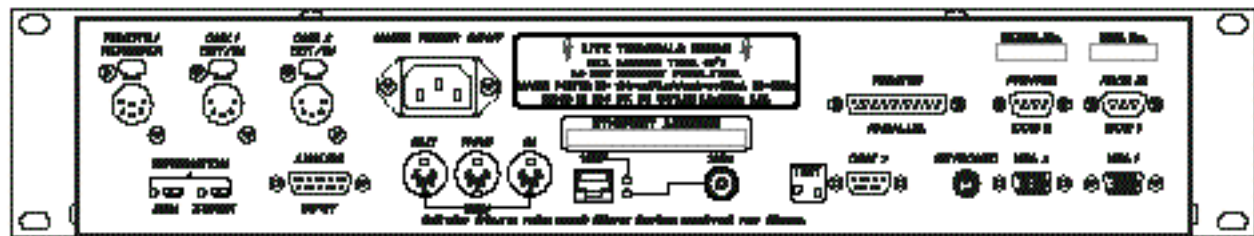
SN100 Right-side Connections



SN100 Left-side Connections



SN102 Front Connections



SN102 Rear Connections

## SN100 and SN102 Interface List

**Note:** Some SN100s do not work with handheld remotes. This is due to an old internal PCB revision (main board issue 1 /1; issue /2 is OK. An external link cable is available from Strand

*Service, or an internal link mod can be done to link COM2 connector pins 3 and 2 to remote connector pins 5 and 6.*

*Some SN102s do not update handheld displays from their remote ports, but the handheld keys work. This is due to a hardware fault caused by the omission of inductor L25 (near the COM1 connector). This can be fixed by soldering a wire link in place of the missing L25.*

<b>I/F</b>	<b>Name</b>	<b>Connector /Pin number on Unit</b>	<b>Signal/ Ref</b>	<b>Notes</b>
1	Power	6A IEC Plug 85..264v		Internal 2A Fuse only serviceable by trained personnel
		1	Live	
		2	Earth	
		3	Neutral	
2	Ethernet 10BaseT (twisted pair)	RJ45 Socket	ISO/IEC 8802- 3 1993 edition	The unit contains automatic receive polarity correction
		1	TD+	Twisted Pair TX data+
		2	TD-	Twisted Pair TX data-
		3	RD+	Twisted Pair RX data+
		6	RD-	Twisted Pair RX data-
		4,5,7,8	Not connected	
3	Ethernet 10Base2 (thinwire)	BNC Socket	SO/IEC 8802- 3 1993 edition	
		1	Net_data	Isolated BNC centre

		2	Net_return	Isolated BNC outer
4 & 15	DMX 1 & 2 in/out	5 Pin panel mounting XLR sockets	Strand Lighting Document 3X32478 issue 3.0 and USITT DMX512/1990	TX and RX at baud rates of t250k & 1k2 through 38k4
		1	DMXGND	
		2	DMXA/B-	RS485
		3	DMXA/B+	RS485
		4	TBACK-	RS485
		5	TBACK+	RS485
5	Remote/Reporter (RS232/RS485)	6 Pin panel mounting XLR socket		SMX, Async & Phantom Power. TX and RX at baud rates of 250k & 1k2 through 38k4.
		1	REMGND	
		2	AUX10V	RS485
		3	SMX+	RS485
		4	SMX-	RS485
		5	COM3OUT	RS485
		6	COM3IN	RS485
6,7	COM1-ASCII IN COM2-PRINTER (RS232)	9 pin D Type plug		Serial Ports from PC. TX and RX Baud rates of 1k2 thru 38k4
		1	DCD	
		2	RXD	
		3	TXD	
		4	DTR	

		5	GND	
		6	DSR	
		7	RTS	
		8	CTS	
		9	RI	
8	COM3 (RS232)	9 pin D Type plug	MIDI 1.0 Detailed spec. version 4.1. Jan 1989	Extra Serial Port
		1,4,6,7,8,9	N/C	
		2	RXD	
		3	TXD	
		5	GND	
9	MIDI IN	5 Pin DIN socket		MIDI input
		1,2,3	N/C	
		4	MIDI+	
		5	MIDI-	
10	MIDI THRU	5 Pin DIN socket		MIDI Through
		1,3	N/C	
		2	GND	
		4	MIDI+	
		5	MIDI-	
11	MIDI OUT	5 Pin DIN socket		MIDI output
		1,3	N/C	
		2	GND	
		4	MIDI+	
		5	MIDI-	

12	Keyboard	Mini 6 pin DIN Socket		The Keyboard interface is a PS/2 Style, but the keyboard must be AT compatible only (not auto-detect)
		1	Data	
		2	N/C	
		3	GND	
		4	+5V	
		5	CLOCK	
		6	N/C	
13 & 16	VGA1 & VGA2	15 Pin high density D type socket		640x480 to 800x600x256 colour
		1	Analog Red 0-0.7V	
		2	Analog Green 0-0.7V	
		3	Analog Blue 0-0.7V	
		4,9,12,15	No Connection	
		5	Self Test	
		6	Red Ground	
		7	Green Ground	
		8	Blue Ground	
		10,11	Ground	
		13	H Sync. (TTL)	
		14	V Sync. (TTL)	

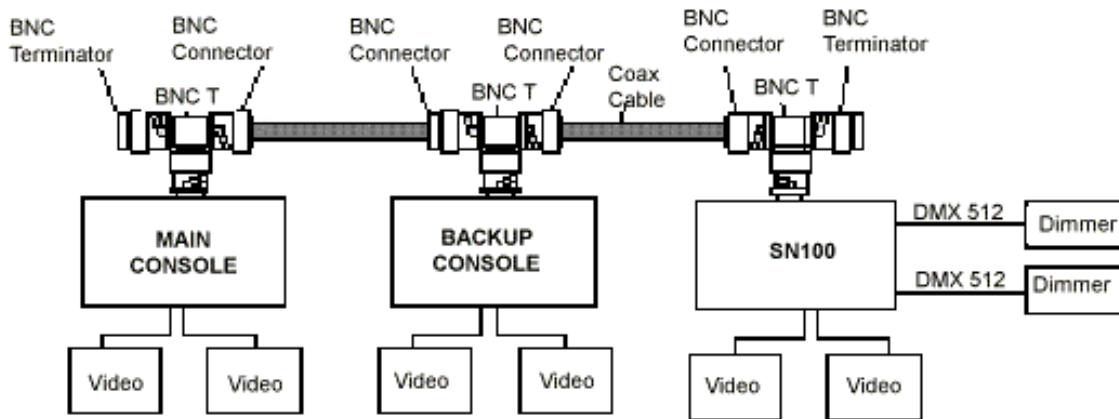


14	12 Analog input	15 Pin D type socket		Remote Faders with 10V supply
		1-12	REMIN1-12	
		13,14	GND	
		15	REM10V	10V +/-10% supply @ 25mA
15	Centronics Printer	25 Pin D type socket		
		1	Strobe	
		2	Data 0	
		3	Data 1	
		4	Data 2	
		5	Data 3	
		6	Data 4	
		7	Data 5	
		8	Data 6	
		9	Data 7	
		10	Ack	
		11	Busy	
		12	Paper end	
		13	Selected	
		14	Auto feed	
		15	Error	
		16	Init	
		17	Select in	
		18 - 25	Ground	

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## Ethernet Overview

Strand Lighting Ltd. recommends specifiers, installers and users follow the “Recommended Practice for Ethernet Cabling Systems in Entertainment Lighting Applications” published by the Entertainment Services and Technology Association (ESTA) . Copies of this document can be purchased from ESTA at 875 Sixth Avenue, Suite 2302, New York, NY 1001, Tel: +1 (212) 244 1505, Fax: +1 (212) 244 1501.



**Typical Small Network System**

ShowNet is comprised of the equipment that make up the nodes of a network and the cabling (inter-connects) between each node. An SN100 provides lighting services and the console can make use of these services by the use of the Ethernet cable separating the two nodes.

This section covers the following topics:

- [Cabling Systems](#)
- [Network Topology](#)
- [Ethernet Card Installation on Older Consoles](#)

---

## Cabling Systems

A cabling system is determined by the type of cable and the topology of the system. The cabling also decides the performance, installation cost, future expansion and in some cases the resilience of a network. The following cabling systems are discussed in this section:

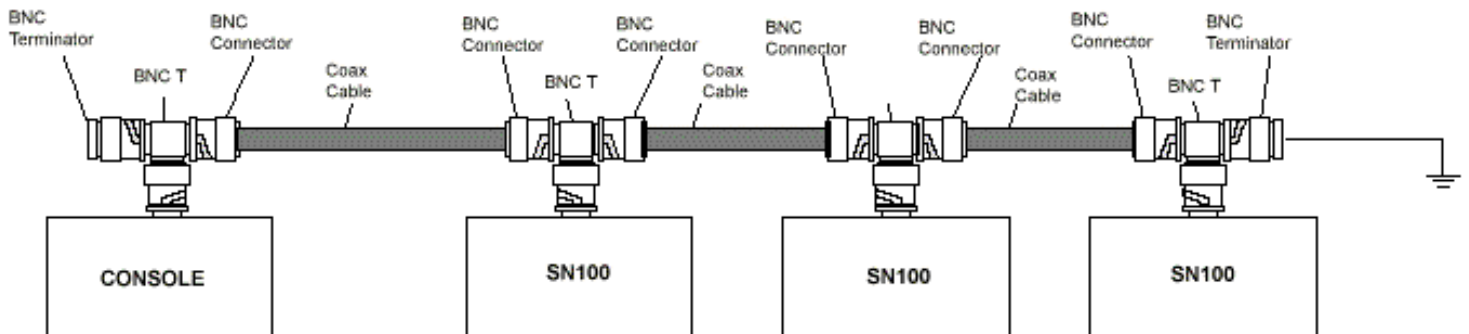
- [Thick Net](#)
- [Thin Net \(Thin Wire, 10BASE2, 10B2\) Backbone](#)
- [Thin Net \(Thin Wire, 10BASE1, 10B2\) Star](#)
- [Twisted Pair \(UTP 10BASET, 10BT\) Star](#)
- [Optical Fibre](#)

In addition, this section includes a [Comparison Table](#) showing the advantages and disadvantages of each system.

## Thick Net

This uses relatively expensive cable, requires transceivers and drop cables at every node and is now only used for long backbones as its maximum length is 500m (1,640ft). It is not recommended for Networker applications as Thin Net with repeaters or optical fibre provides a lower cost alternative where very long runs are required.

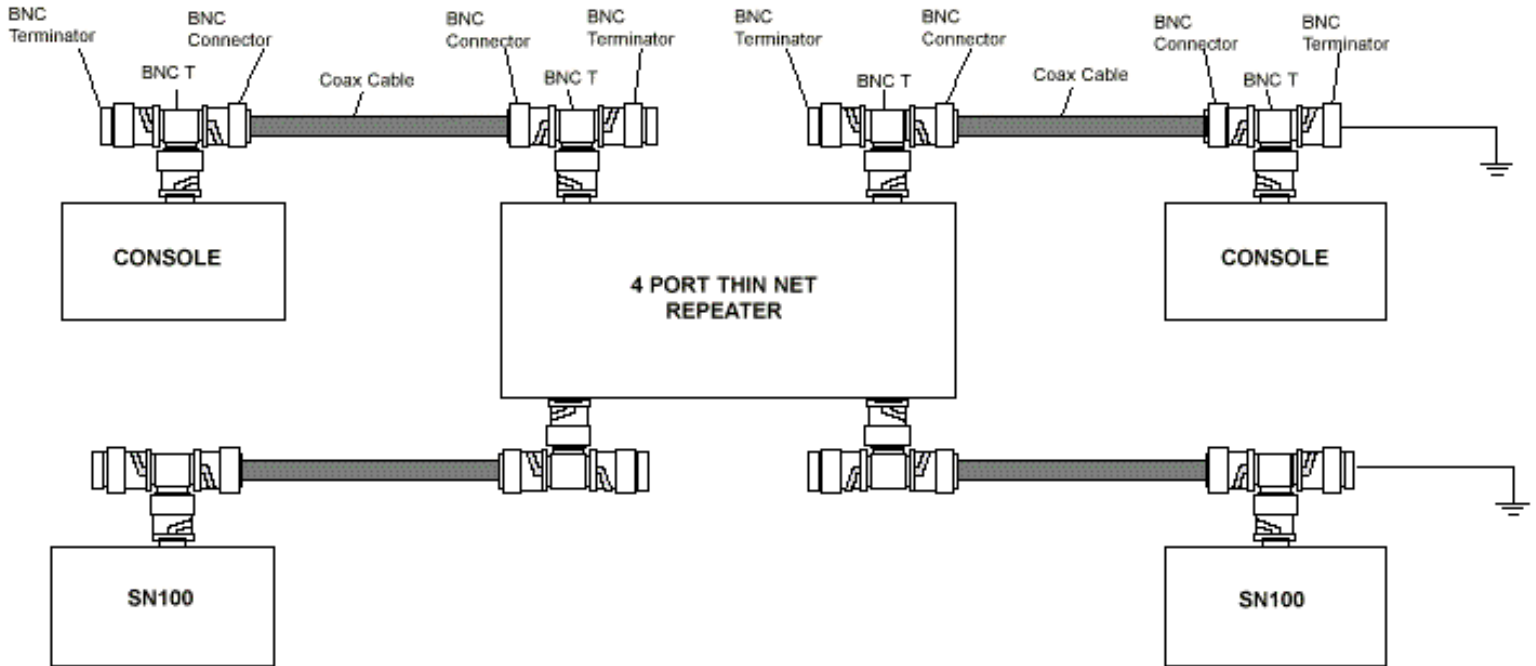
## Thin Net (Thin Wire, 10BASE2, 10B2) Backbone



This uses 50ohm coaxial cable with 50ohm BNC connectors in linear bus topology. The system must be configured with a single segment with nodes connected along the length and 50ohm BNC terminators at each end. Nodes are connected by BNC-T pieces which are generally connected directly to nodes. Each segment must be grounded at one end only. Spurs from the backbone to the nodes are not permitted. The maximum length of the backbone is 308m (607ft) with up to 30 nodes spaced at least 0.5m (1.5ft) apart. BNC connectors and cables are not very rugged and need to be handled with care. Removing a terminator or breaking the segment along any part of its length will stop all communications so this topology is not particularly secure.

This topology is generally only suitable for very small systems, those with no more than 2 nodes. It has the advantage over other topologies that the network does not require power ( for hubs etc.) to operate and when cable runs are very short, say from console to backup, this may be the cheapest and most reliable option.

## Thin Net (Thin Wire, 10BASE2, 10B2) Star



Again this uses 50ohm coaxial cable with 50ohm BNC connectors but in a star topology. At the centre of the star a partitioning repeater links the segments of the star together when they are operating correctly but isolates them if a fault should occur (such as an open circuit) improving fault immunity.

Each segment of the star must be treated as a separate Thin Net segment with 50ohm BNC connectors at each node and 50ohm BNC terminators at each end. Typically only one node would be connected on each segment for maximum fault immunity.

Nodes are connected by BNC-T pieces which are generally connected directly to nodes. Each spur must be grounded at one end only. Spurs from the segment to the nodes are not permitted. The maximum length of each segment is 185m (607ft) with up to 30 nodes per segment spaced at least 0.5m (1.5ft) apart.

BNC connectors and cables are not very rugged and need to be handled with care. Removing a terminator or breaking the segment along any part of its length will stop all communications on that segment only, so this topology is more secure than the Thin Net Backbone. This topology is best for larger systems, those with more than 2 nodes.

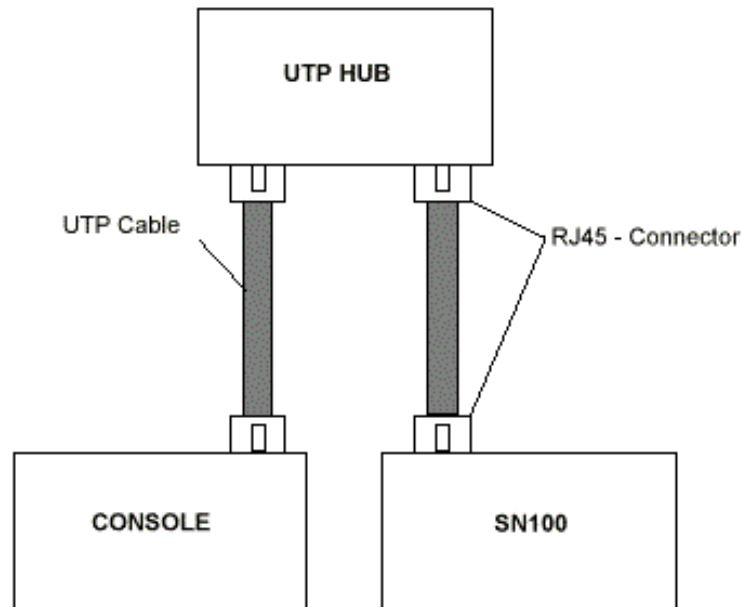
### Twisted Pair (UTP, 10BASET, 10BT) Star

This uses 4 pair Un-screened Twisted Pair (UTP) telecommunication cable. In order to guarantee reliable operation, the cable used should be either category 3,4 or 5, compliant with EIA/TIA568 spec. For the highest reliability and compatibility with future higher speed networks, category 5 cable is recommended.

Permanently installed twisted pair cabling should use solid-conductor cable as this is cheaper and has a higher performance, but should not be subjected to repeated bending or twisting.

Connections from fixed wiring should terminate in wall sockets, or patch panels, from which connections to consoles, SN100s or repeaters should be made via patch leads. These leads use multi-stranded wire for added flexibility.

A typical configuration for a star topology using UTP cable requires the use of a HUB, Repeater or Concentrator. At the centre of the star a hub links the segments of the star together when they are operating correctly but isolates them if a fault should occur (such as an open circuit) improving fault immunity.



Each segment of the star is a separate point to point twisted pair connection. If one branch of the star fails, only one node would be affected (except for the route from the console to the HUB). The maximum length of each twisted pair segment is 100m (330ft).

## Optical Fibre

Fibre Optic Ethernet systems have distinct cost and implementation disadvantages that limit their use as a direct inter node connection medium. However, fibre optic systems can provide a powerful backbone technology due to :

- Higher data handling capacity.
- Noise immunity
- Allow for 100mhz and higher data rates
- A segment can be up to 3000m in length
- Availability of Bridges, repeaters and routers

## Comparison Table

Description	Twisted Pair	Thin Net	Thick Net	AUI	Fibre
	Recommended	Recommended	Not Recommended	Not Recommended	Recommended for long runs
Cable	110 ohm UTP 22-26 AWG 2 pairs	RG-58A/U or RG-58C/U	50 Ohm Coax	External Transceiver Drop	50/125, 62.5/125 80/125, 100/140, micron core

Connector	8-pin RJ-45	BNC, isolated ground	N-Series, male	D-type 15 pin female	dual ST
Maximum Segment Length	100m (330ft)	185m (607ft) standard.	500m (1640 ft)	50m (165ft)	10BASE-FL 2.0 km (1.24 miles) FOIRL 1.0 km (0.62 miles)
Minimum Cable Length Between Nodes	0.6m (2ft)	0.5m (1.5ft)	2.5m (8.2ft)	0	0
Maximum Number of Nodes per Segment	2	30	100	2	2

## Twisted Pair Wiring

RJ-45 Pin	PDS/258A Wire Color	10BT (UTP)
1	T2 White-Orange stripe	Transmit+
2	R2 Orange-White stripe	Transmit-
3	T3 White-Green stripe	Receive+
4	R1 Blue-White stripe	
5	T1 White-Blue stripe	
6	R3 Green-White stripe	Receive-
7	T4 White-Brown stripe	
8	R4 Brown-White stripe	

## Network Topology

Ethernet network topology, as referred to in networking terms, is simply a map of how a system is or will be laid out. Depending on the type of equipment in an installation, the topology can be either a linear or star configuration, or a combination of the two. Each run of cable in a LAN is known as a segment, hence a LAN (Local Area Network) can be made up of one or more segments.

A linear network topology is one that is made up of directly interconnected segments, a node exists at each segment intersection. A star network topology is one where each node is connected to a central hub. The hub establishes, maintains and terminates all connections between the nodes. In a LAN, the hub is may be a workstation or in a larger multi-port network the hub is most likely to be a multiplexer.

If a segment in an installation is longer than the length allowed by Ethernet rules, a repeater must be used. A repeater is a device that connects two or more segments and mirrors whatever it sees on one segment to all the other attached segments. A partitioning repeater can recognize a fault on any of its segments and cease to reflect from that until the fault is rectified. This prevents wiring problems on one segment interfering with communications on other segments.

This section covers the following topics:

- o [Ethernet 4-3-2 Rule](#)

- [Ethernet Hubs](#)
  - [Ethernet Backbone](#)
  - [Typical Ethernet Configurations](#)
- 

## Ethernet 4-3-2 Rule

As a rule of thumb, when designing an Ethernet topology to achieve a reliable system you must follow the 4-3-2 Rule.

- In any LAN, there can be no more than four repeaters
  - In any thinnet LAN, only three segments can have active nodes. Other segments can only exist as extensions of the overall length of the LAN.
  - In any LAN, there can be no more than two repeaters between any two communicating nodes.
- 

## Ethernet Hubs

As stated earlier, a HUB forms the centre of a star topology network or cabling system. A multi-node UTP network of more than two nodes require a hub. Conceptually the node connections 'radiate' outward from a centrally located hub. By mixing hubs with thinnet or fibre optic backbones, network topologies with two or more 'stars' can be created.

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## Ethernet Backbone

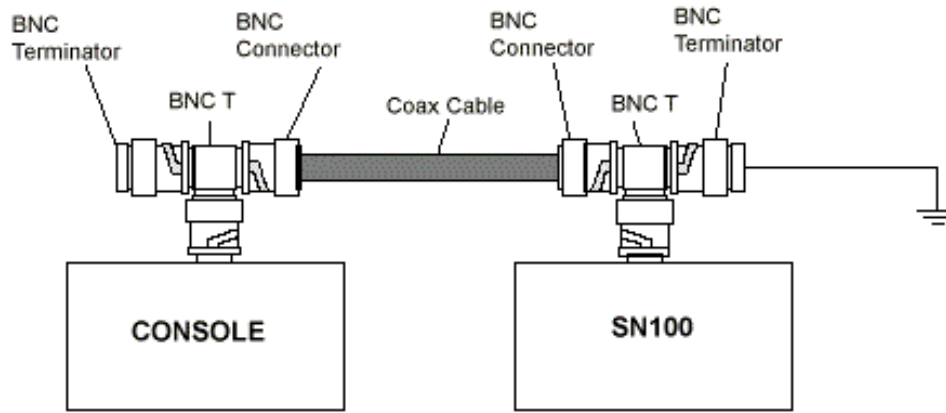
Backbone is a generic term for LAN or WAN (Wide Area Network) connectivity between subnetworks. Subnetworks are connected to the backbone via bridges and/or routers. The backbone acts as a communications trunk. In permanent installations, a backbone topology will provide for greater preconfigured connectivity, heavier total data traffic and greater expansion potential. A backbone can provide the basis of an Ethernet system. The backbone can be either a thinnet or fibre optic.

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## Typical Ethernet Configurations

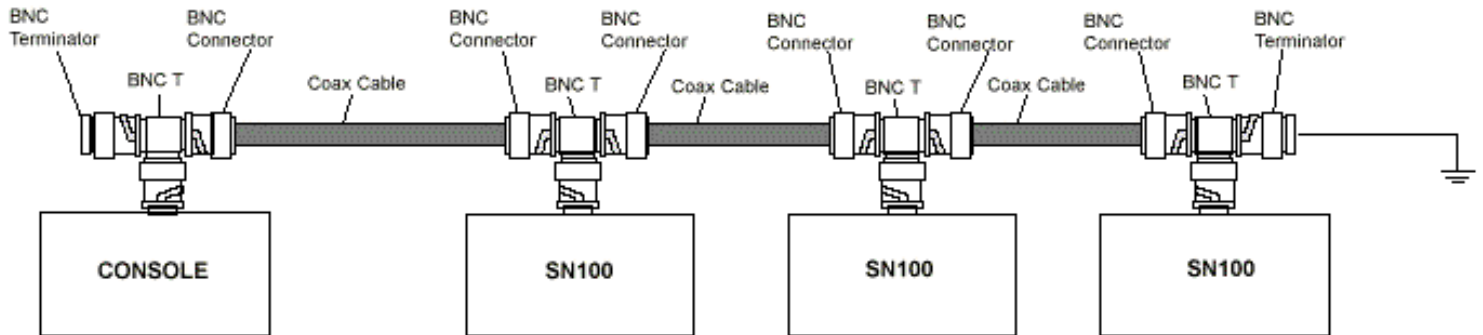
### Small system configuration

An example small system would contain a console and an SN100 connected by either a UTP or 10BASE-T cable. For a system consisting of just two nodes, a null HUB must be used. A system based on 50W coaxial cable the only additional hardware are the T-pieces and the 50W terminators.



### Medium size system configuration

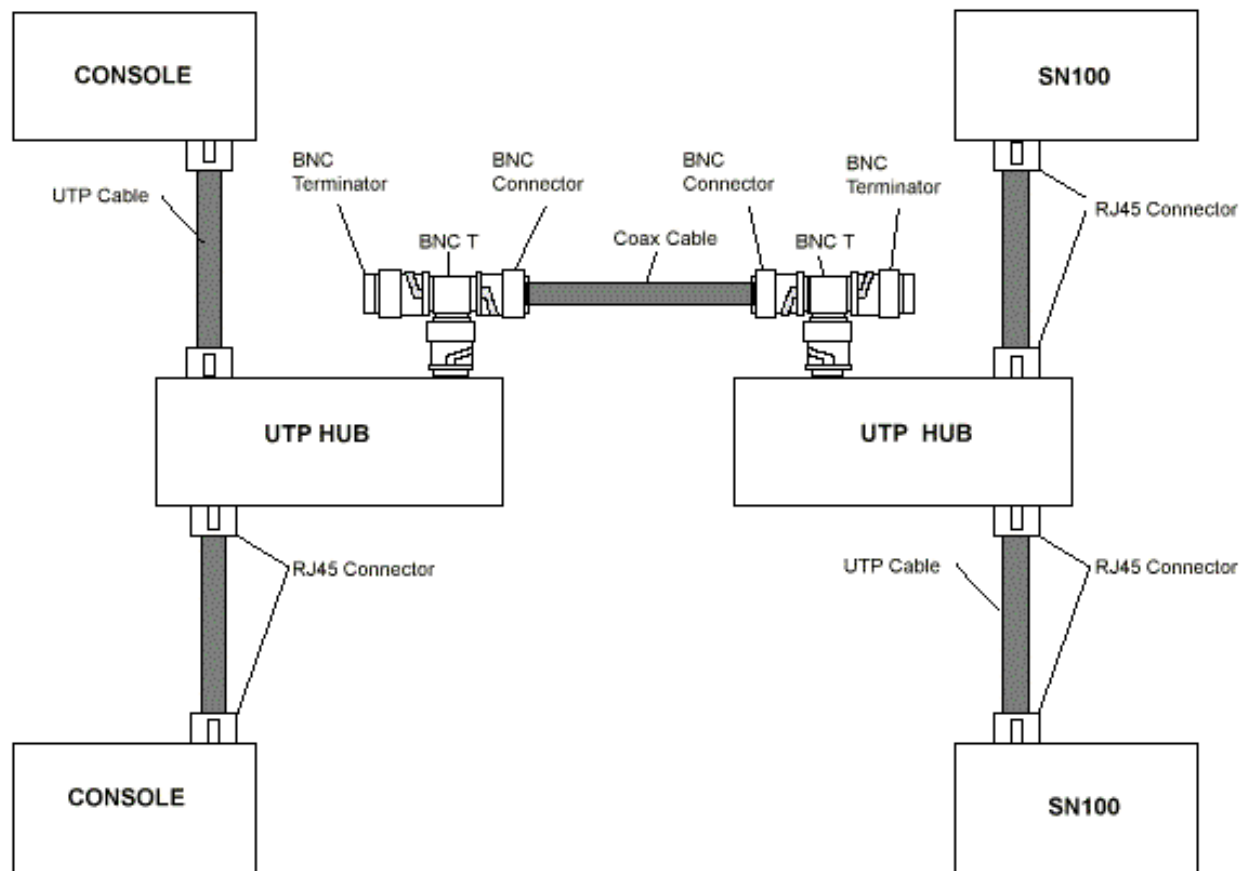
A medium sized configuration includes 3 or more nodes on the network. For a 10BASE-T installation the units can be simply daisy-chained together. A UTP based installation will require a hub from which the various nodes can take a tap.



### Large System

A Large LAN installation may contain one or more lighting consoles and remote video and DMX distribution nodes.





## Ethernet Card Installation on Older Consoles

Both 10baseT and 10base2 Ethernet ports are built into all new 500 Series Console, usually those with green soft keys. Older consoles, usually with purple soft keys, do not have Ethernet ports as standard and the following procedure should be carried out to install them.

Before you can use Networker software the network interface card supplied with Networker must be installed in your console.

***IMPORTANT This procedure should only be carried out by qualified personnel.***

If you have not been trained in Strand Console hardware ,support please refer to your dealer/supplier or Strand to arrange installation by qualified personnel.

1. Use an ESD protective workmat and wriststrap to ensure that the console and Ethernet card are not subjected to damaging electrostatic voltages.
2. Release the lid by loosening and removing the three large pan head screws in the base towards the front of the console. This can best be accomplished by positioning the console so that the front protrudes over the edge of a table.
3. Once the three screws are removed the top of the console can be gently raised. It is supported by gas struts - however take care whilst working inside that you do not lean on the lid or tip the console forward causing the lid to close.
4. Remove the blanking plate covering the aperture in the rear labelled Network Card, by removing the small pan

head screw on the top of the blanking plate inside the console.

5. Insert the network card into the now free slot ensuring it is correctly seated. Secure the card with the screw previously removed.
6. Configure the Ethernet Card as described below, then close the top of the console and secure it to the base with the three pan head screws on underside near the front.

## Configuring the Ethernet Card

Parameter	Settings	Note
I/O Base Address	300h	
Interrupt	10	
Ethernet Port	BNC, RJ45, AUI	
Plug and Play BIOS	OFF	This must be turned off

To change the defaults or run the Ethernet card self test software, follow these instructions :-

1. Make sure you have a PC keyboard connected to the console.
2. Power up the console.
3. Exit from the startup sequence with CTRL-BREAK or from the operating software with CTRL-X.
4. Run the 3C5X9CFG.EXE program supplied on a floppy disk with the network card.
5. Using the on screen menus change the parameters as desired.
6. Select the test option and ensure that all tests pass.
7. Exit from the network card configuration utility.
8. Power down the console.

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## The More Key

The **[MORE]** key is used to provide access to the following console function available via the LCD softkey menu

- [Profile Display](#)
- [Notes Display](#)
- [Backup Commands](#)
- [Event List](#)
- [Auto Mod](#)

Select a topic from the above for further information

## SN103 and SN104 Network Nodes



The SN103 and SN104 are Ethernet lighting concentrators which provide lighting services remote from the console over Ethernet cable. SN103 is mains powered and SN104 is 48VDC powered. In all other respects they are identical.

### SN103 and SN104 Interface List

I/F	Name	Connector / Pin number on Unit	Signal/ Ref	Notes
	Ethernet 10BaseT (twisted pair)	RJ45 Socket	ISO/IEC 8802-3 1993 edition	The unit contains automatic receive polarity correction
		1	TD+	Twisted Pair TX data+
		2	TD-	Twisted Pair TX data-
		3	RD+	Twisted Pair RX data+
		6	RD-	Twisted Pair RX data-
		4,5,7,8	Not connected	
	DMX 1, 2, 3 & 4 in/out	5 Pin panel mounting XLR sockets	Strand Lighting Document 3X32478 issue 3.0 and USITT DMX512/1990	TX and RX at baud rates of 250k
		1	DMXGND	
		2	DMXA/B-	RS485
		3	DMXA/B+	RS485
		4	TBACK-	RS485
		5	TBACK+	RS485

On both SN103 and SN104, the DMX4 connector can be replaced by a 6-pin XLR connector assembly to allow a handheld remote to be connected instead. The connector assembly is wired as follows:

8-Way Molex Header	6-Way XLR Socket
pins 1 & 8	pin 1
pin 2	pin 2
pin 3	pin 3
pin 4	pin 4
pin 5	pin 5
pin 6	pin 6

pin 7 - n/c

Connect the 8-way Molex to PL8 in SN103/4 (not PL7, which is DMX4).

**Note:** The SN103/104 220node.cfg file must also have DMX4 set to Off

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## Quick Reference Guide

This document describes GeniusPro and Lightpalette commands in a series of examples. Both GeniusPro and Lightpalette support three Command Entry Modes:-

1. Command Line (Lightpalette default)
2. Direct Action One Digit (GeniusPro default)
3. Direct Action Two Digit

For further information, refer to [Command Modes](#)

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## More Commands

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- [Note Commands \(All Modes\)](#)
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## 510i and 310 Show Controller/Backup Unit

- [Panel Keys](#)
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- [Submaster LCD Display](#)
- [Browse LCD Display](#)
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## SMPTE Time Code Events

- [Event List - SMPTE Time Code Events](#)
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- [Timecode Event Playback - SMPTE Time Code Events](#)

## Setup

- [User Setup](#)
- [Show Setup](#)
- [Console Setup](#)

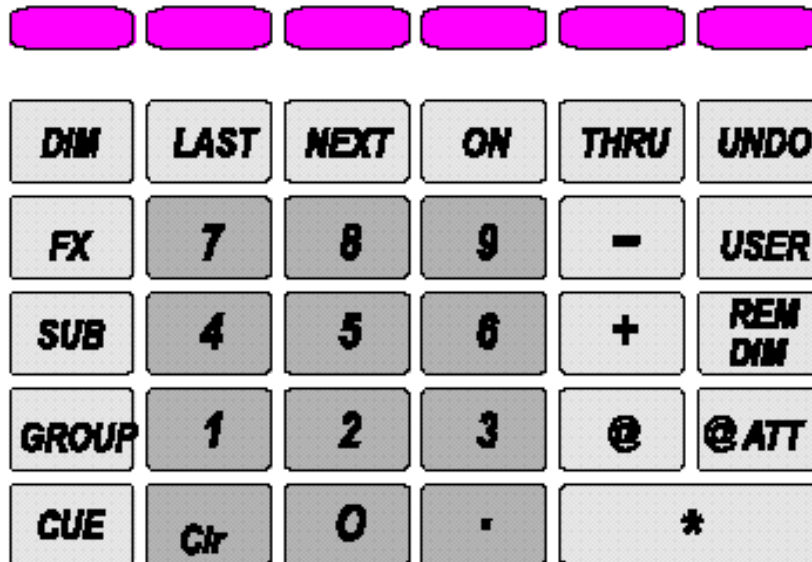
[Top of Page](#)

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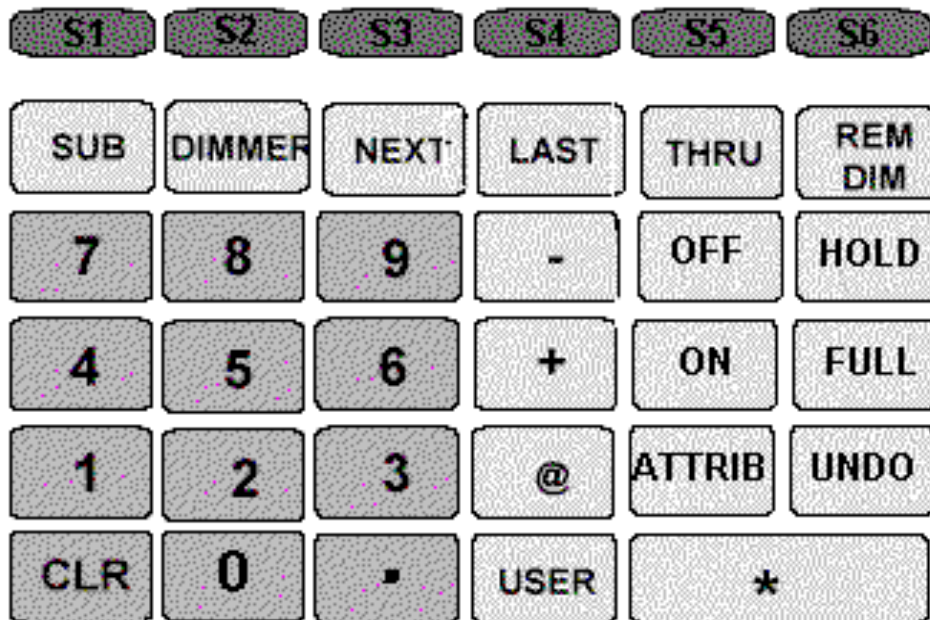
# General Commands

## Key Layout

### Channel Control Keys - 500 Series Consoles

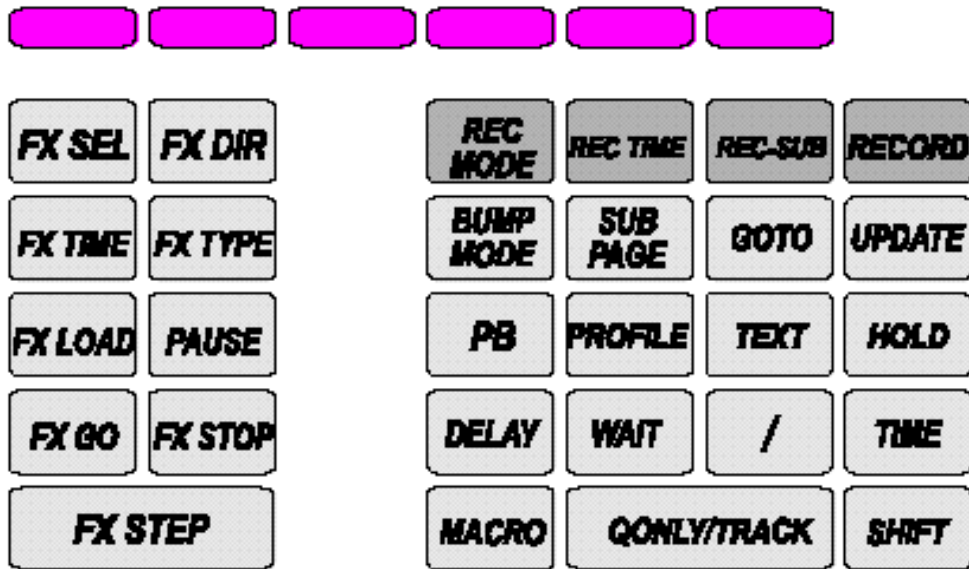


### Channel Control Keys - 300 Series Consoles

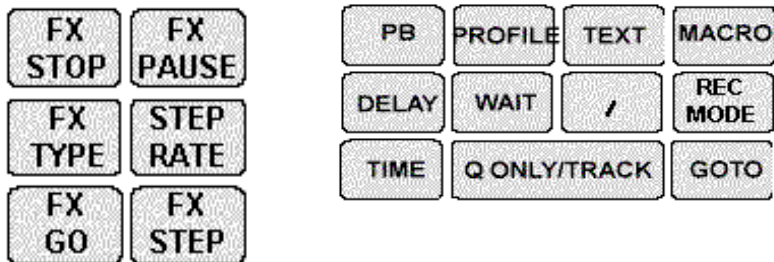


### Effect and Record Keys - 500 Series Consoles





## Effect and Function Keys - 300 Series Consoles



## Display Select Keys - 500 Series Consoles

Note: On older consoles for the European market, the **Preview** key was called **Cue** and the **Live** key was called **Output**.

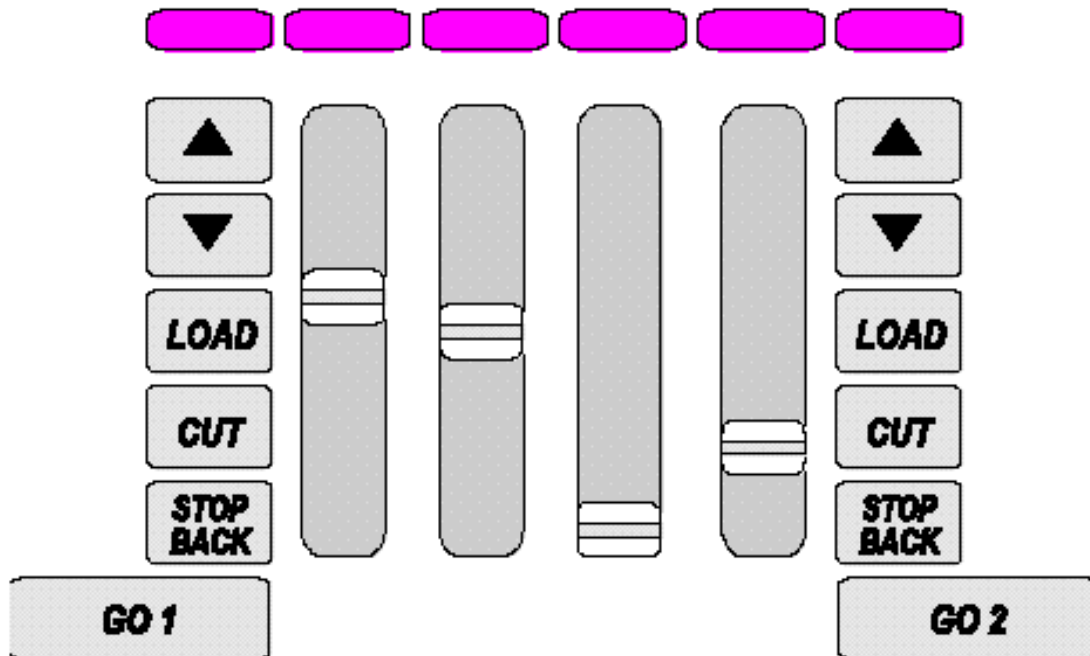


## Display Select Keys -300 Series Consoles

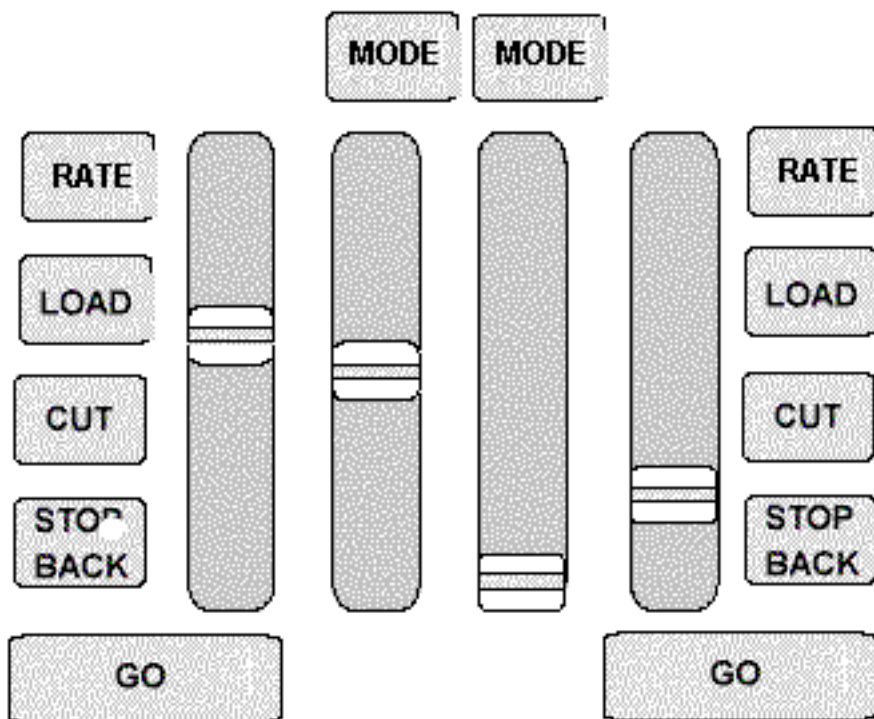


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## Playback Controls -500 Series Consoles



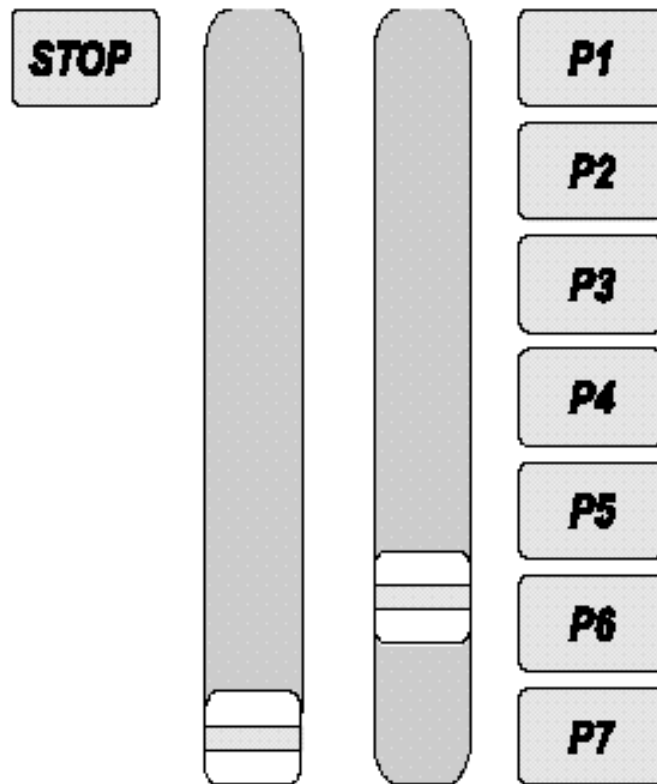
## Playback Controls - 300 Series Consoles



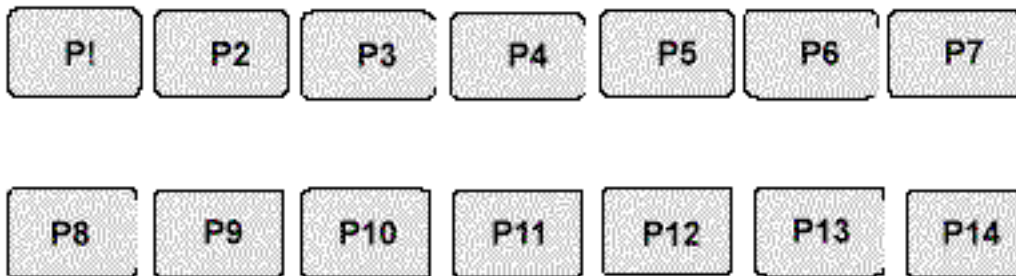
## Grandmaster, Stop and P Keys - 500 Series Consoles

**Note:** 520 and 520i does not have grand master or stop keys. 530 and 550 consoles have only

## 7 P-keys.



## P Keys - 300 Series Consoles



## Typographical Conventions

Convention	Meaning
{FULL}	Softkeys are shown in braces
<GROUP>	Display selection keys are shown in italic and in square brackets
[DIMMER]	All other keys are shown in square brackets

<b>IntChan</b>	Intensity Channel
<b>AttChan</b>	Attribute Channel

---

## VGA Commands (All Modes)

Key Sequence	Action
[SHIFT] [LIVE]	Select next Channel Display format; single/dual VGA unchanged
[SHIFT] [LAST SCREEN]	Swaps screen 1 and 2, or alternates between Live screen and State screen on single screen display.

---

## Console Lockout (All Modes)

Key Sequence	Action
[SHIFT] [HELP]	Toggle console lockout

---

## Memory Lock (All Modes)

Key Sequence	Action
[REPORT] {ADV SETUP} {ACCESS RIGHTS} {MEMORY LOCK}	Enter password [3] [1] [7] [1] then [*] to lock console memory. Repeat procedure to unlock

---

## Access Rights

Key Sequence	Action
--------------	--------

<b>[REPORT] {ADV SETUP} {ACCESS RIGHTS}</b>	Displays Access Rights Screen
Select fields using trackball	Use level wheel or [+] or [-] keys to set field value to YES or NO

## Next/Last Commands

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

<b>Key Sequence</b>	<b>Action</b>
	Descriptions of NEXT apply equally to LAST
<b>If channel selection:</b> <b>[NEXT]</b>	Restores each channel level, selects the next channel following each selected channel, and sets the level to the one just restored over
<b>If dimmer selection:</b> <b>[NEXT]</b>	Unpatches next dimmer, sets to 100%, repatches current dimmer
<b>[1] [NEXT]</b> (2 is displayed)	Selects channel 2 (or next available channel) on command line
<b>[CUE] [NEXT]</b> (next existing CUE is displayed)	Selects the next existing item
<b>[SUB] [NEXT]</b> (next existing SUB is displayed)	Selects the next existing item
<b>[FX] [NEXT]</b> (next existing FX step is displayed)	Selects the next existing item
<b>[GROUP] [NEXT]</b> (next existing GROUP is displayed)	Selects the next existing item
<b>[1] {@FIXTURE} [NEXT]</b> (next existing fixture is displayed)	Selects the next existing item
<b>[MACRO] [NEXT]</b> (next existing MACRO is displayed)	Selects the next existing item

<b>[FX] [SHIFT NEXT]</b> (current FX Step plus 1 is displayed)	Selects the next numeric step in the current effect. Useful for recording the next new step.
<b>CUE SHIFT NEXT</b> (current CUE plus 1 is displayed)	Selects the next numeric cue (similar for other types above). Useful for recording the next new cue.
<b>[@ATT] [NEXT]</b>	Increments the frame number for all selected channels
<b>[SHIFT] [NEXT]</b>	Next numeric item
<b>[SHIFT] [LAST]</b>	Last numeric item

---

## Undo Commands

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
<b>[1] [UNDO]</b>	All channel control changes to Chan 1 are faded out in Setup Undo time
<b>[1] [THRU] [5] [+] [7] [UNDO]</b>	All channel control changes to Chan 1>5 and 7 are faded out in Setup Undo Time
<b>[UNDO] [@]</b>	The IntChans before the last [@] are restored
<b>[UNDO] [@ATT]</b>	The AttChans before the last [@ATT] are restored
<b>[UNDO] [RECORD]</b>	Undo last <b>[RECORD]</b> on current display
<b>[UNDO] [REC TIME]</b>	Undo last <b>[REC TIME]</b> on current display

---

## Editing the Command Line (All Modes)

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
--------------	--------

[CLR]	Command line not empty: clear last key
[CLR]	Command line empty: clear current selection
[SHIFT] [CLR]	Command line not empty: clears whole command line
[SHIFT] [CLR]	Command line empty: steals control back from other consoles or handhelds.
[SHIFT] [*]	Command mode: Restore last command line for editing
[SHIFT] [*]	Direct mode: Repeat last command

## Selecting and Displaying Channels (All Modes)

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
[*]	Channels with levels > 0
[1]	Channel 1
[1][+][3]	Adds channels 1 and 3 to the channel list.
[1][THRU][3][-][2]	Adds channels 1 and 3 to the channel list.
[1][THRU][LAST]	Puts all channels on the channel list.
[1][THRU][2][+][6][THRU][7]	Adds channels 1, 2, 6, and 7 to the channel list
[1]{THRU ON}[3]	Adds channels 1, 2, and 3 to the channel list if they are on
[SHIFT] [THRU]	= {THRU ON}
[+][4][THRU][9]	Adds channel 4 through 9 to the existing channel selection.
[1][THRU][3][*] Wheel [NEXT]	Selects channels 1, 2, 3, adjusts them to the desired level, and then selects the next intensity channel (channel 4 in this case).
[1]{THRU ON}[3][NEXT]	Selects the next intensity channel after channel 3 regardless of whether channel 3 is on.



<b>[1][THRU][3][@ATT][*][LAST]</b>	Selects attribute channels 1, 2, 3 then selects the previous attribute channel (e. g. channel 2 if this has attributes)
<b>[4][.][5][THRU][7]</b>	Attribute channels 4.5, 5.5, 6.5, 7.5
<b>[3][.][3][THRU][4][.][4]</b>	Attribute channels 3.3, 3.4, 4.3, 4.4
<b>[UNDO] [*]</b>	Returns to state before channel changes
<b>[CLR]</b>	Clears the last entered key when a command is being entered
<b>[SHIFT] [CLR]</b>	Clears the complete command line when a command is being entered.
<b>[SHIFT] [PAGE UP]</b>	Select 1st Channel Display page
<b>[SHIFT] [PAGE DOWN]</b>	Select last Channel Display page

## Selecting Channels in Cues, Groups and Subs (All Modes)

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

<b>Key Sequence</b>	<b>Action</b>
<b>[CUE][1]</b>	Channels in cue 1
<b>[GROUP][9]</b>	Channels in group 9
<b>[SUB][1]</b>	Channels in submaster 1 in current page
<b>[CUE][1][+][SUB][2][+][GROUP][ 5]</b>	HTP Sum of channels in cue, submaster & group
<b>[GROUP][3][THRU][6]</b>	HTP Sum of channels in groups 3 to 6 inclusive

## Selecting Displays (All Modes)

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
<LAST SCREEN>	Toggle between current and previously selected display
<PREVIEW>	Go to cue preview display at currently live cue **
<CUE>	Go to cue preview display at currently live cue***
<GROUP>	Go to group preview display at current group
<SUB>	Go to submaster preview display at current submaster
<FX>	Go to Fx preview display at current Fx
[CUE] [1] <CUE>	Go to cue preview display Cue 1
[CUE] [1] [*]	Displays Cue 1 if already in Cue Preview Display
[GROUP] [1] <GROUP>	Go to group display at group 1
[GROUP] [1] [*]	Displays Group 1 if already in Group Display
[SUB] [1] <SUB>	Go to submaster display at sub 1
[SUB] [1] [*]	Displays Sub 1 if already in Sub Display
[FX] [1] <FX>	Go to Fx display at Fx 1
[FX] [1] [*]	Displays Fx 1 if already in Fx Display
[FX] [1] [.] [5] <FX>	Go to Fx display at Fx 1 step 5
[FX] [1] [.] [5] [*]	Displays Fx 1.5 if already in Fx Display
[NEXT]	
[LIVE] (formally [OUTPUT])	Displays current stage levels
[MORE] {NOTES DISP}	Shows last shown Notes Display
[MORE] {PROF DISP}	Go to profiles display.
[PROFILE] [1] [*]	Shows Profile 1 in Profile Display

---

## System Report

Key Sequence	Action
<REPORT>	Displays system report

---

## Channel Summary Display

Key Sequence	Action
[1] <REPORT>	Displays summary report for channel 1
[1] [.] [2] <REPORT>	Displays summary report for attribute channel

---

## Cue Summary Report

Key Sequence	Action
[CUE] <REPORT>	Displays summary report current cue
[CUE] [1] [2] [3] [.] [4] <REPORT>	Displays summary report cue 123.4
[CUE] [1] [PART] [2] <REPORT>	Displays summary report for cue 1, part 2

---

## Dimmer Summary Report

Key Sequence	Action
[DIMMER] [1] <REPORT>	Displays summary report for output 1

---

## Dimmer Log

Key Sequence	Action
<REPORT> {DIMMER LOG}	Displays Dimmer Log

---

## Status Log

Key Sequence	Action
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<b>&lt;REPORT&gt;{DIAG} {STATUS LOG}</b>	Displays Status Log
<b>{TIME/DATE/N}</b>	Alternates display between time, date and count
<b>{CLEAR}</b>	Clears Status Log

---

## Network Diagnostics

Key Sequence	Action
<b>&lt;REPORT&gt; {DIAG} {NET DIAG}</b>	Displays Network Diagnostics
<b>{CLEAR COUNTS}</b>	Clears the network diagnostic counters
<b>{ENABLE}</b>	Enables the selected network node
<b>{DISABLE}</b>	Disables the selected network node
<b>{CHANGE VIEW}</b>	Changes display to show other half of network diagnostics

---

## Internal Diagnostics

Key Sequence	Action
<b>&lt;REPORT&gt; {DIAG} {INT DIAG}</b>	Displays Internal Diagnostics
<b>{CLEAR}</b>	Clears all counters
<b>{TEST}</b>	Runs factory test software

---

## Viewing Help (All Modes)

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
<b>[HELP]</b>	Displays help text for current context
<b>{BACK}</b>	Returns to the previously displayed topic, if any.

<b>{FORWARD}</b>	Returns to previously viewed display if <b>{BACK}</b> was pressed.
<b>{LINKS}</b>	Displays the following link softkeys
<b>{USING HELP}</b>	Describes use of the help system
<b>{CONTENTS}</b>	Displays the Table of Contents with hyperlinks to more detailed topics
<b>{GLOSSARY}</b>	Displays the Glossary of Terms
<b>{INDEX}</b>	Displays the alphabetic index of topics.
<b>{QUICK REF}</b>	Displays this Quick Reference Guide
<b>{BACK}</b>	Returns to Context sensitive Help Menu

## Using Notes Commands (All Modes)

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

<b>Key Sequence</b>	<b>Action</b>
<b>&lt;MORE&gt; {PROF DISP}</b>	Displays Profile display
<b>{DELETE PROF}</b>	Deletes current profile
<b>{DMX}</b>	Used to enter DMX values in profile
<b>{GRAPH EDIT/END EDIT}</b>	Toggle key to switch between graph editing modes
<b>{INSERT POINT}</b>	Used to insert a point during end editing
<b>&lt;MORE&gt; {NOTES DISP}</b>	Displays last saved notes page

<b>trackball</b>	Move cursor around notes display
<b>[PAGE UP]</b>	Move up to next page
<b>[PAGE DOWN]</b>	Move down to next page
<b>{CUT LINE}</b>	Cut current line into paste buffer
<b>{COPY LINE}</b>	Copy current line into paste buffer
<b>{PASTE LINE}</b>	Copy paste buffer into file at current cursor position
<b>{SAVE FILE}</b>	Save current file
<b>{LOAD FILE}</b>	Load one of following files :-
- <b>{NOTES PAGES}</b>	Text notes pages (notes.txt)
- <b>{README FIRST}</b>	Read-me-first software issue notes (release.txt)
- <b>{ATC PAGE}</b>	Attribute Controller Page assignments (atcpage.lib)
- <b>{CONF FILES}</b>	Loads one of the following Configuration Files:
- <b>{NET CONFIG}</b>	Network Configuration ( <a href="#">220node.cfg</a> <a href="#">Network Configuration File</a> )
- <b>{MAP CONFIG}</b>	Map Configuration File ( <a href="#">220map.cfg</a> <a href="#">Console Key. Wheel, VDU mapping configuration</a> )
- <b>{RACK CONFIG}</b>	Console reporter ( <a href="#">220rack.cfg</a> <a href="#">Reporter Rack Configuration File</a> )
<b>&lt;MORE&gt; {BACKUP CMDS}</b>	Displays backup command softkeys used when backup console is connected to network (see <a href="#">Network Backup Commands</a> )

<MORE> {EVENT LIST}	Displays the Event List used to set up events and timecodes (see <a href="#">Event List - SMPTE Time Code Events</a> )
<MORE> {AUTO MOD}	Displays the Automod Screen (see <a href="#">Auto-Mod</a> )

---

## Exit and Login/ Logout Commands (All Modes)

Key Sequence	Action
{EXIT}	Softkey available when <REPORT> key is pressed. Pressing this key displays the shutdown menu.
{LOGIN}	Logs in the current user and displays the level and state screens
{LOGOUT}	Returns to the Login Screen
{SHUT DOWN} {SHUTDOWN}	Shuts the console down (300 Series Consoles). Displays shutdown screen (500 Series consoles)
{SAVE SETUP}	Saves any changes made to the User Setup screen
{SAVE SHOW}	Saves any changes made to the show in the current session.
{EXIT & RESTRT}	Exits the program and automatically restarts.

---

## Archive Operations (All Modes)

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
[ARCHIVE]	Displays Archive Screen

<b>trackball or mouse</b>	Moves cursor around Archive Selection Window
<b>level wheel or [+] or [-]</b>	Enable field at cursor (puts a check mark next to it) or disable it (clears the check mark).
<b>[TEXT] show name [*]</b>	Names current show according to show name entered from external keyboard.
<b>[TEXT] [*]</b>	Clears the current show name
<b>{SAVE SHOW}</b>	Saves the current show to the currently selected disk and directory. Confirmation required.
<b>{LOAD SHOW}</b>	Loads currently selected show
<b>{BROWSE FILES}</b>	Moves the highlight to the show list, enabling the following disk operations:
<b>- trackball or mouse and [*]</b>	Used to select floppy or local disk (press [*]), then, to move highlight up or down list of directories or files for currently selected disk Press [*] to select directory. Press [*] to load selected file. Select [..] to change the parent directory of the current directory.
<b>- {DELETE}</b>	Deletes the currently selected directory or file. This will delete all backup files. A directory cannot be deleted until all files and backups in the directory have been deleted.
<b>- {COPY SHOW}</b>	Selects file to be copied. Press again when directory has been highlighted to copy the show to the required destination.
<b>- {MAKE DIR}</b>	Creates new directory for currently selected disk with a directory name according to name entered from external keyboard.
<b>- {FORMAT FLOPPY}</b>	Formats 3 1/2" disk in floppy drive
<b>- {BACKUP VIEW}</b>	Lists backup copies for the selected show and provides the following backup file operations:
<b>- - - trackball or mouse</b>	Used to select backup file to be deleted or loaded.
<b>- - - {DELETE BACKUP}</b>	Deletes the currently selected backup file.



- - - {LOAD BACKUP}	Loads the currently selected backup file.
- {BACK}	Moves highlight back to Archive Selection Window
{PRINT}	Displays Print Menu and provides the following options:
- trackball or mouse	Moves cursor around Archive Selection, Print Option Setup and Printer Setup windows
- level wheel or [+] or [-]	Enable field at cursor (puts a check mark next to it) or disable it (clears the check mark).
- {PRINT SHOW}	Prints show to selected printer according to selection above.
- {DIMMER LOG}	Prints dimmer log. Requires reporter password.
- {STATUS LOG}	Prints status log. Requires Reporter password.
- {NOTES}	Prints currently saved notes pages
- {STOP}	Stops printing
- {BACK}	Returns to Archive Menu
{CLR}	Displays Clear Menu and provides the following options:
- trackball	Moves cursor around Archive Selection window
- level wheel or [+] or [-]	Enable field at cursor (puts a check mark next to it) or disable it (clears the check mark).
- {CLEAR}	Clears the whole show or parts of the show selected above.
- {CLEAR LOG}	Clears Reporter Dimmer and Status logs. Requires Reporter Password.
{SOFT}	Enables one of the following software operations:
- {SAVE PASSW},	Saves the application password to floppy disk
- {ENTER PASSWORD}	Entering the 36 digit password from the external keyboard and pressing 'Enter' enables application software

- <b>{LOAD SOFT}</b>	Loads operating or application software. Refer to <a href="#">Loading Software</a> or <a href="#">Adding Additional Channels or Applications</a>
----------------------	--

## Network Backup Commands

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
<i>[MORE]</i> <b>{BACKUP CMDS}</b>	Provides the following backup command softkeys:
- <b>{M GIVE SYNC}</b>	Main give sync to backup.
- <b>{M TAKE SYNC}</b>	Main give control to backup.
- <b>{M GIVE CTRL}</b>	Main take control from backup.
- <b>{M TAKE CTRL}</b>	Main take sync from backup.
- <b>{BREAK SYNC}</b>	Break sync.
- <b>[SHIFT] {M GIVE SYNC}</b>	Quick Give Sync when not already in sync. Connects main and backup for tracking without transferring show or console status.
- <b>[SHIFT] {M TAKE SYNC}</b>	Quick Take Sync when Backup has taken control. Connects main and backup for tracking without transferring show or console status.
- <b>{RESET DESK}</b>	Resets many console parameters to power-up defaults. It is run automatically at the end of the Give/Take Sync commands, but is available manually here.
<b>[SHIFT] [CLR]</b>	Steal control back from other consoles or handhelds, if command line clear.

## Events & Console Reporter

### Event List - SMPTE Time Code Events

Key Sequence	Action
[MORE] {EVENT LIST}	Displays the Event List
{DELETE EVENT}	Deletes the currently marked event on the Event List and renumbers all following events.
[3] {DELETE EVENT} [*]	Deletes the three events following the currently marked event on the Event List and renumbers all following events.
[5] [THRU] [7] {DELETE EVENT} [*]	Deletes events 5,6 and 6
{INSERT EVENT}	Inserts an event, at the current event time, after the currently marked event on the Event List and renumbers all following events.
[3] {INSERT EVENT} [*]	Inserts three events after the currently marked event on the Event List and renumbers all following events.
{RECORD CLOCK}	Applies the current time to a selected event or creates a new event with the current time, if no event is selected
{LEARN EVENT}	Records cues and commands in real time and stores the SMPTE timecode for each event. Press again to cancel.
{EDIT TIMES}	Changes to Edit Times Menu
{PLAYBACK}	Changes to Timecode Event Playback Menu.
[TEXT] hello [*]	Records text label for the current event
[TEXT] [*]	Removes text label from current event
[4] [TEXT] hello [*]	Records text label for event 4
[4] [TEXT] [*]	Removes text label from event 4
[8] [CUE] [1] [0] [0] [.] [2] [*]	Assigns cue 100.2 to event 8
[3] [CUE] [*]	Clears cue from event 3.
[CUE] [2] [.] [2] [*]	Adds cue 2.2 to currently marked event

[CUE] [*]	Clears cue from currently marked event number.
[6] [FX] [1] [*]	Assigns effect 1 start to event 6
[1] [0] [FX] [-] [1] [*]	Assigns effect 1 stop to event 10
[6] [FX] [*]	Clears effect start.
[1] [2] [SUB] [2] [4] [*]	Assigns sub 24 bump up to event 12
[1] [3] [SUB] [-] [2] [4] [*]	Assigns sub 24 bump down to the specified event.
[1] [2] [SUB] [*]	Clears bump up command.
[2] [5] [MACRO] [2] [0] [0] [*]	Assign macro 200 to event 25
[2] [5] [MACRO] [*]	Clears all macro commands in event 25
[1] [*]	Select event number 1 for time editing. Displays > marker against event 1. Sets FIRST and LAST on Event List LCD to 1
[2] [THRU] [5] [*]	Selects and highlights event range 2 to 5 for time editing. Sets FIRST on Event List Menu to 2 and LAST to 5.
[CLR]	Cancel time editing event selection. Sets FIRST and LAST on Event List LCD to 0. Clears highlights.

## Editing Event Times - SMPTE Time Code Events

Key Sequence	Action
{EDIT TIMES}	Changes LCD softkey menu to enable editing of event times
{+HH}	Adds one hour to all selected timecodes.
{+MM}	Adds one minute to all selected timecodes.
{+SS}	Adds one second to all selected timecodes.
{+FF}	Adds one frame to all selected timecodes.
{+5FF}	Adds five frames to all selected timecodes

[SHIFT] {-HH}	Subtracts one hour to all selected timecodes
[SHIFT] {-MM}	Subtracts one minute to all selected timecodes.
[SHIFT] {-SS}	Subtracts one second to all selected timecodes.
[SHIFT] {-FF}	Subtracts one frame to all selected timecodes
[SHIFT] {+5FF}	Subtracts five frames to all selected timecodes
[1] [THRU] [3] [TIME] [1] {:} [2] {:} [3] {:} [4] [*]	Sets event times 1 to 3 to 01:02:03:04
[1] [THRU] [3] [TIME] [1] {:} [*]	Sets event times 1 to 3 to 01:?:?:?:? (MM,SS,FF unchanged)
[1] [THRU] [3] [TIME] {:} [2] [*]	Sets event times 1 to 3 to ??:02:?:?:? (HH,SS,FF unchanged)
[1] [THRU] [3] [TIME] {:} {:} {:} [4] [*]	Set event times 1 to 3 to ??:?:?:04 (HH, MM,SS unchanged)
[2] [THRU] [5] [TIME] {MOVE TO} [1] {:} [2] {:} [3] {:} [4] [*]	Moves events 2 to 5 to a new starting time of 01:02:03:04. The original time span of the event range is preserved.
[2] [THRU] [5] [TIME] {COPY TO} [1] {:} [2] {:} [3] {:} [4] [*]	Copies events 2 to 5 and repeats the events at the starting time of 01:02:03:04. The original time span of the event range is preserved.
[GOTO] [TIME] [2] {:} [3] {:} [4] [*]	Select event timed to occur at exactly 02:03:04:05. Marker > positioned on event in Event List.
{BACK}	Returns to the Event List LCD menu.

## Timecode Event Playback - SMPTE Time Code Events

Key Sequence	Action
{PAUSE CLOCK}	Stops the internal or external clock at the time of the last triggered event
{STEP}	Manually triggers the next event and select the following event ready for the next {STEP}

<b>[SHIFT] {LAST}</b>	Sets the < marker and clock time to the last event
<b>[SHIFT] {NEXT}</b>	Sets the < marker and clock time to the next event.
<b>[SHIFT] {BEGIN LIST}</b>	Sets the < marker and clock time to the first event on the list.
<b>[SHIFT] {END LIST}</b>	Sets the marker and clock time to the last event on the list.
<b>[SHIFT] {UNBUMP ALL}</b>	Unbumps any bumped submasters.
<b>[SHIFT] {STOP FX}</b>	Stops all running effects
<b>[TIME] {START} {:} {:} [1] [*]</b>	Sets playback start time to 00:00:01:00
<b>[TIME] {STOP} [2] [0] {:} [0] {:} [0] {:} [0] [*]</b>	Sets playback stop time to 20:00:00:00
<b>[1] [TIME] {START} [*]</b>	Sets playback start time to event 1 time
<b>[1] [THRU] [3] [TIME] {START} [*]</b>	Sets playback start and stop times to event 1 to 3 times.
<b>[TIME] {STOP} [*]</b>	Sets playback stop time to 23:59:59:29
<b>{+HH}</b>	Add one hour to the internal clock time when clock is 'Internal' or 'Paused'
<b>{+MM}</b>	Add one minute to the internal clock time when clock is 'Internal' or 'Paused'
<b>{+SS}</b>	Add one second to the internal clock time when clock is 'Internal' or 'Paused'
<b>{+FF}</b>	Add one frame to the internal clock time when clock is 'Internal' or 'Paused'
<b>{+5FF}</b>	Add five frames to the internal clock time when clock is 'Internal' or 'Paused'
<b>[SHIFT] + {-HH}</b>	Subtracts one hour to the internal clock time when clock is 'Internal' or 'Paused'
<b>[SHIFT] + {-MM}</b>	Subtracts one minute to the internal clock time when clock is 'Internal' or 'Paused'
<b>[SHIFT] + {-FF}</b>	Subtracts one frame to the internal clock time when clock is 'Internal' or 'Paused'
<b>[SHIFT] + {-5FF}</b>	Subtracts five frames to the internal clock time when clock is 'Internal' or 'Paused'
<b>[SHIFT] + {RESET TIME}</b>	Reset internal clock to 00:00:00:00 when clock is 'Internal' or 'Paused'

[TIME] [2] [:] [3] [:] [4] [:] [5] [*]	Sets clock to 2:3:4:5
{BACK}	Return to the Events List.

## Console Reporter Commands (Command Line Mode)

Key Sequence	Action
[REPORT] {DIMMER LOG}	If Reporter is set to On in the Console Setup Screen, The Dimmer Log screen is displayed..
[REPORT] {DIMMER LOG} {CLEAR}	Clears all logged faults
[REPORT] {DIMMER LOG} {RE-SYNC}	Re-synchronizes dimmer log to current rack status.
[REPORT] {DIMMER LOG} {LEARN LOAD} {RACK} [2] [6] [*] [*]	Learns load on rack 26
[REPORT] {DIMMER LOG} {LEARN LOAD} [DIMMER] [2] [3] [4] [5] [*] [*]	Learns load on dimmer 2345
[REPORT] {DIMMER LOG} {LEARN LOAD} [DIMMER] [AT CHAN] [1] [2] [3] [4] [*] [*]	Learns load at channel 1234
[REPORT] {DIMMER LOG} {LEARN LOAD} [DIMMER] {AT CHAN} [1] [4] [5] [6] [*] [*]	Learns loads on all dimmers on the channel 1456.
[REPORT] {DIMMER LOG} {OUTPUT FILT}	Displays Output Filter screen
[DIMMER] [1] [REPORT]	Displays the individual summary report for dimmer 1
[DIMMER] {AT CHAN} [1] [2] [3] [4] [REPORT]	Shows the summary display for the first dimmer patched to channel 1234.
[RECORD] [DIMMER] {BACKUP} [8] [*]	Records backup scene 8 for all racks.(1-99 recordable)
[RECORD] [DIMMER] {BACKUP} [8] [TIME] [5]*	Records backup scene 8 and sets fade time of 5 seconds.

<b>[GOTO] [DIMMER] {BACKUP} [8] [*]</b>	Instructs all dimmer racks to fade the backup scene 8 in the recorded fade time. (1-99 user recordable, 0 = blackout, 254 = fully on)
<b>[DIMMER] [1] {FILTER} {HIGH DC} [*]</b>	Displays all dimmer faults for dimmer 1, except High DC Voltage
<b>[DIMMER] [1] [FILTER] [*]</b>	Sets all filters of dimmer 1 to Off, such that all fault conditions on dimmer 1 are displayed.
<b>[DIMMER] {AT CHAN} [2] [THRU] [5] {FILTER} {OUTPUT ERROR} {LOAD LIMIT} [*]</b>	Sets Output Error and Load Limit filter On (not displayed) for faults on dimmers patched to channels 2 to 5.
<b>[DIMMER] [2] [3] [4] [5] [THRU] [2] [3] [5] [0] [SHIFT] [FILTER] [*]</b>	Sets all filters of dimmers 2345 to 2350 to On (all fault displays inhibited in range)

## Console Reporter Commands (Direct Action Mode)

Key Sequence	Action
<b>[REPORT] {DIMMER LOG}</b>	If Reporter is set to On in the Console Setup Screen, The Dimmer Log screen is displayed..
<b>[REPORT] {DIMMER LOG} {CLEAR}</b>	Clears all logged faults
<b>[REPORT] {DIMMER LOG} {RE-SYNC}</b>	Re-synchronizes dimmer log to current rack status.
<b>[REPORT] {DIMMER LOG} {LEARN LOAD} {RACK} [2] [6] [*] [*]</b>	Learns load on rack 26
<b>[REPORT] {DIMMER LOG} {LEARN LOAD} [DIMMER] [2] [3] [4] [5] [*] [*]</b>	Learns load on dimmer 2345
<b>[REPORT] {DIMMER LOG} {LEARN LOAD} [DIMMER] [AT CHAN] [1] [2] [3] [4] [*] [*]</b>	Learns load at channel 1234
<b>[REPORT] {DIMMER LOG} {LEARN LOAD} [DIMMER] {AT CHAN} [1] [4] [5] [6] [*] [*]</b>	Learns loads on all dimmers on the channel 1456.



<b>[REPORT] {DIMMER LOG} {OUTPUT FILT}</b>	Displays Output Filter screen
<b>[DIMMER] [1] [REPORT]</b>	Displays the individual summary report for dimmer 1
<b>[DIMMER] {AT CHAN} [1] [2] [3] [4] [REPORT]</b>	Shows the summary display for the first dimmer patched to channel 1234.
<b>[DIMMER] {BACKUP} [8] [RECORD]</b>	Records backup scene 8 for all racks.(1-99 recordable)
<b>[DIMMER] {BACKUP} [8] [TIME] [5] [RECORD]</b>	Records backup scene 8 and sets fade time of 5 seconds.
<b>[GOTO] [DIMMER] {BACKUP} [8] [*]</b>	Instructs all dimmer racks to fade the backup scene 8 in the recorded fade time. (1-99 user recordable, 0 = blackout, 254 = fully on)
<b>[DIMMER] [1] {FILTER} {HIGH DC} [*]</b>	Displays all dimmer faults for dimmer 1, except High DC Voltage
<b>[DIMMER] [1] [FILTER] [*]</b>	Sets all filters of dimmer 1 to Off, such that all fault conditions on dimmer 1 are displayed.
<b>[DIMMER] {AT CHAN} [2] [THRU] [5] {FILTER} {OUTPUT ERROR} {LOAD LIMIT} [*]</b>	Sets Output Error and Load Limit filter On (not displayed) for faults on dimmers patched to channels 2 to 5.
<b>[DIMMER] [2] [3] [4] [5] [THRU] [2] [3] [5] [0] [SHIFT] [FILTER] [*]</b>	Sets all filters of dimmers 2345 to 2350 to On (all fault displays inhibited in range)

# Patching

(All Modes)

## Patching Dimmers

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

	<p>Commands only available at the Patch display. All commands start with output number (not channel), and end with * key. All single dimmers shown may also be dimmer lists.</p> <p>[@][<b>ATT</b>] or [<b>ATTRIB</b>] (GeniusPro) = [@][<b>COL</b>] (Genius)</p>
<b>Key Sequence</b>	<b>Action</b>
[1]{ <b>DEFLT</b> }	Default dimmer 1
[2][.][2]{ <b>DEFLT</b> }	Default dimmer 514 (universe.dimmer)
[1][+][4]{ <b>THRU</b> }[6]{ <b>DEFLT</b> }	Default dimmers 1, 4, 5 & 6.
{ <b>DEFLT</b> }{ <b>DEFLT</b> }	Default whole patch and delete all attributes
[1][@][2][@][1][0][0][*]	Patch dimmer 1 to Int Channel 2, scaling 100
[1][[@][2][@][*]	Patch dimmer 1 to Int Channel 2, default scaling
[1][@][2][*]	Patch dimmer 1 to Int Channel 2, keep scaling
[1][+][4][ <b>THRU</b> ][6][@][2][*]	Patch dimmers 1, 4, 5 & 6 to IntChannel 2, keep scaling
[1][@][+][2][*]	Patch dimmer 1 to DMX i/p channel 2, keep scaling
[1][@][@][2][0][0][*]	Set dimmer 1 scaling to 200%, keep channel
[1][@][@][-][1][0][0][*]	Set dimmer 1 scaling to -100% (inverted), keep channel
[1][@][@][*]	Default dimmer 1 scaling, keep channel
[1][@][*]	Unpatch dimmer 1

[1][@ATT][2][@ATT][1][0][*]	Patch dimmer 1 to AttChannel 2, max frame 10
[1][@ATT][2][@ATT][*]	Patch dimmer 1 to AttChannel 2, default max frame
[1][@ATT][2][*]	Patch dimmer 1 to AttChannel 2, keep max frame
[1][@ATT][@ATT ][1][0][*]	Set dimmer 1 max frame to 10, keep channel
[1][@ATT][@ATT][- ]1[0][*]	Set dimmer 1 max frame to -10 (inverted), keep channel
[1][@ATT][@ATT][*]	Default dimmer 1 max frame, keep channel
[1] [@ATT][*]	Unpatch dimmer 1
[1]{@NON}[2]{@NON}[1][*]	Patch dimmer 1 to channel 2, non-dim threshold 1%
[1]{ @NON}[2]{@NON}[*]	Patch dimmer 1 to channel 2, default non-dim threshold
[1]{@NON}[2][*]	Patch dimmer 1 to channel 2, keep non-dim threshold
[1][@NON][@NON][1][*]	Set dimmer 1 threshold to 1%, keep channel
[1][@NON][@NON][*]	Default dimmer 1 threshold, keep channel
[1][@NON][*]	Unpatch dimmer 1
[1][PROFILE][4][5][*]	Assign profile to dimmer 1 [or delete] Not after @NON
[1][@6K12K][*]	Sets dimmer 1 to be 6k12k dimmer, or reverts to normal if already 6k12k
[NEXT]	Moves to next page of Patch screen
[LAST]	Moves to last page of Patch screen

## Patching Fixtures

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action

[1] [@] [1][0] [@FIXTURE 20][* ]	Patch fixture 20 [to channel 10] starting at dimmer 1
[1] [@FIXTURE] [SWAP PAN+TILT] [*]	Swap pan and tilt in the fixture starting at dimmer 1
[1] [@FIXTURE] [INVERT PAN] [*]	Invert pan scaling in the fixture starting at dimmer 1
[1] [@FIXTURE] [INVERT TILT] [*]	Invert tilt scaling in the fixture starting at dimmer 1
[1] [@FIXTURE] [*]	Unpatch the fixture starting at dimmer 1*
[3] {@FIXTURE} [NEXT] .. [NEXT] .. [*]	Browse fixture names on command line and patch output 3 to selected fixture.
[3] {@FIXTURE} [LAST] .. [LAST] .. [*]	Browse fixture names on command line, and patch output 3 to selected fixture.

\*This is the only way to remove a fixture apart from defaulting the whole patch.

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## Changing Live and Edit Patch (not applicable to Series 300 Consoles)

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
<PATCH> {SET}{LIVE} {LIVE}	Changes the Live Patch from 1 to 2 or vice versa
<PATCH> {SET} {EDIT}	Changes Edit Patch from 1 to 2 or vice versa

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## Copying/Moving/Swapping Patch Information

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
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<b>&lt;PATCH&gt;{SET} {COPY/SWAP}[1 {COPY PATCH} [1] [0] [*]</b>	Copies attribute 1 to output 10
<b>&lt;PATCH&gt; {SET} {COPY/SWAP} [1 [THRU] [10] {COPY PATCH} [1] [1] [*]</b>	Copies attributes on outputs 1 to 10 to outputs 11 to 20.
<b>&lt;PATCH&gt; {SET} {COPY/SWAP} [2] [2] {COPY PATCH} {4} [4] [*]</b>	Copies the fixture starting on output 22 to start on output 44.
<b>&lt;PATCH&gt; {SET} {COPY/SWAP} [2] [2] [THRU] [5] [2] {COPY PATCH} [5] [4] [*]</b>	Copies the fixtures patched to outputs 22 to 52 to start on output 54.
<b>&lt;PATCH&gt; {SET} {COPY/SWAP} {COPY PATCH} {COPY PATCH}</b>	The contents of the Edit Patch are copied to the Live patch
<b>&lt;PATCH&gt; {SET} {COPY/SWAP} [1] {MOVE PATCH} [1] [0] [@PATCH] [2] [*]</b>	Moves attribute 1 to output 10 on the live patch screen.
<b>&lt;PATCH&gt; {SET} {COPY/SWAP}[1 [THRU] [10] {MOVE PATCH} [1] [1] [*]</b>	Moves attributes on outputs 1 to 10 to outputs 11 to 20.
<b>&lt;PATCH&gt; {SET} {COPY/SWAP} [1] [2] [2] {MOVE PATCH} {4} [4] [*]</b>	Moves the fixture starting on output 22 to start on output 44.
<b>&lt;PATCH&gt; {SET} {COPY/SWAP}[2] [2] [THRU] [5] [2] {MOVE PATCH} [5] [4] [*]</b>	Moves the fixtures patched to outputs 22 to 52 to start on output 54.
<b>&lt;PATCH&gt; {SET} {COPY/SWAP} [1] {SWAP PATCH} [1] [0] [*]</b>	Swaps attributes on output 1 and 10
<b>&lt;PATCH&gt; {SET} {COPY/SWAP} [1] [THRU] [8] {SWAP PATCH} [1] [7] [*]</b>	Swaps attributes on outputs 1 to 8 with attributes on the eight outputs starting on output 17.
<b>&lt;PATCH&gt;{SET} {COPY/SWAP} [2] [5] [THRU] [3] [0] {SWAP PATCH} [9] [*]</b>	Swaps fixture patched to outputs 25 through 30 with fixture patched to outputs 9 through 12.

## Range Patching

Key Sequence	Action
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[1] [THRU] [5] [@] [1] [0] [THRU] [1] [4]	Patches channels 10 - 14 to outputs 1 - 5
[1] [THRU] [5] [@] [1] [4] [THRU] [1] [0]	Patches channels 14 - 10 to outputs 1 - 5
[1] [THRU] [2] [0] [@] [4] [THRU] [8] { <b>@FIXTURE</b> } [1]	Patches outputs 1 to 20 to channels 1 to 8 and patches fixture 1 to each patch.
[1] [THRU] [2] [0] [@] [8] [THRU] [4] { <b>A FIXTURE</b> } [1]	Patches outputs 1 to 20 to channels 8 to 1 and patches fixture 1 to each patch

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## Customising the Patch Display

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
<PATCH> {SET} (DMX/OUTPUT)	Changes the Patch display between showing standard output numbers and showing output numbers in Universe. Dmx format
<PATCH> {SET} {SET DISP} {OUTPUT ORDER}	Show the Patch display in output order
<PATCH> {SET} {SET DISP} {CHAN ORDER}	Shows the Patch display in channel order.
<PATCH> {SET} {SET DISP} {LOADS ON}	Displays Learned Loads for outputs or channels.
<PATCH>{SET} {SET DISP} {LOADS OFF}	Displays Threshold values for outputs or channels.

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## Deleting Channels

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
<PATCH> {CHAN} [1] {DELETE CHAN} {DELETE CHAN}	Deletes channel 1 completely (intensity and attributes)
<PATCH> {CHAN} [1] [.] [1] {DELETE CHAN} {DELETE CHAN}	Deletes channel 1 intensity.
<PATCH> {CHAN} [1] [.] [2] {DELETE CHAN} {DELETE CHAN}	Deletes channel 1 attribute.
<PATCH> {CHAN} [3] [THRU] [5] {DELETE CHAN} {DELETE CHAN}	Deletes channels 3, 4, and 5 completely (intensity and attributes).
<PATCH> {CHAN} [1] [THRU] [1] [0] {CLEAN ATTS} [*]	Deletes unpatched attributes from outputs 1 to 10. If any of the unpatched attributes are contained in a Cue or Group, confirmation is required before deletion.

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## Renumbering Channels

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
<PATCH>{CHAN} [2] [6] {RENUM CHAN} [3] [6] [*]	Renumbers channel 26 to start at 36

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## Controlling Channels, Attributes and Dimmers

### Controlling Channel Levels (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
	<b>All actions which operate on a channel list can also work without a channel list on the current selection. Actions showing CUE also apply to SUB, FX, GROUP.</b>
[*]	All On IntChans are selected for wheeling (but not in cue preview)
[1] [*]	1 is selected for wheeling
[1] wheel [1] [@] wheel	1 is selected and wheeled
[1] [@] [1] [*]	1 to 10%
[1] [@] [1] [1] [*]	1 to 11%
[1] [@] [0] [1] [*]	1 to 1%
[1] [@] [0] [*]	1 on at 0%
[1] [@] [*]	1 off
[1] [@] [.] [*]	1 off
[1] [@] {OFF}	1 off
[UNDO] [@]	Removes command line after [@]. Retains channel selection
[SHIFT] [@]	= [UNDO] [@]
[1] [THRU] [1] [0] [@] [@]	1 >10 at full
[1] [THRU] [1] [0] [SHIFT] [ON]	1 >10 at full
[1] [@] [DMX] [1] [2] [8]	1 on at DMX level 128 (=50%)
[1] [UP%]	1 up by <a href="#">Up%</a> (amount defined in User Setup)
[1] [DOWN%]	1 down by <a href="#">Down %</a> (amount defined in User Setup)
[1] [@] {COPYFROM} [2] [*]	Copy channel 2 levels to channel 1, or to a list of channels if specified



[1] [@] {COPYFROM} {DMX}	Copy DMX In channel 1 level to channel 1, or copy a list of channels if specified, or copy the current selection channels, or copy all 512 DMX In channels if no selection
[1] [@] [2] [Q ONLY/TRACK] [*]	1 to 20%, for this cue only (only valid at cue preview display in track mode). Q ONLY/TRACK is valid in any [@] command.
[1] [@] [+] [20] [*]	1 up by 20% absolute
[1] [@] [-] [1] [1] [*]	1 down by 11% absolute
[1] [ON] [1] [@] [ON] [*]	Select IntChan 1, set to <a href="#">On Level %</a> set in User Setup Screen
[1] [OFF]	Select IntChan 1, set to zero
[3] {FULL} [3] [@] {FULL} [3] [SHIFT] [ON] [3] [@] {SHIFT} [ON]	Select IntChan 3, set to 100%
[1] [REMDIM] [1] [SHIFT] [-]	All IntChans except 1 are set to off. If 1 is off, it is set to <a href="#">On Level %</a> .
[1] [@] [5] [REMDIM]	Set IntChan 1 to 50% and set others to off in same command.
[REMDIM] [REMDIM]	If no selection, all IntChans are set to OFF (Blackout)
[1] {BUMP}	According to BUMP MODE key: IntChan 1 is soloed (most keys now locked out) or flashed to Flash Supermaster level, or both, until key released
[1] [SHIFT] [+]	<b>Toggle on:</b> IntChan 1 is soloed (most keys now locked out)
[SHIFT] [+]	<b>Toggle off:</b> All soloed IntChans go unsoloed (all keys re-enabled)
[SHIFT] [*]	Restore last command for edit
[1] {FLASH^}	IntChan 1 is flashed to Flash Supermaster level until key is released

<b>[1] [SHIFT] {FLASH^}</b>	IntChan 1 is flashed to 0% until key released
<b>[CUE] [1] [@] [2] [0] [*]</b>	IntChans from cue 1 at 20% of recorded levels plus recorded AttChans
<b>[CUE] [1] [@] [+] [2] [0] [*]</b>	IntChans from cue 1 at 120% of recorded levels plus recorded AttChans
<b>[CUE] [@] [-] [2] [0] [*]</b>	IntChans from current cue at 80% of recorded levels plus recorded AttChans
<b>[1] [+] [CUE] [1] [@] [2] [0] [*]</b>	IntChans from cue 1 at 20% of recorded levels, plus recorded AttChans, plus IntChan 1 at 20%, whether or not it is used in cue 1.
<b>[CUE] [1] [@] {FULL} [*]</b>	IntChans from cue 1 to their recorded levels plus recorded AttChans
<b>[CUE] [1] [THRU] [2] [@] {FULL} [*]</b>	HTP sum of recorded IntChans from cues 1 and 2 and LTP sets of AttChans
<b>[CUE] [1] [@] [*]</b>	IntChans from cue 1 go to off
<b>[CUE] [1] [@] {FULL} {INTS ONLY} [*]</b>	IntChans from cue 1 at recorded levels
<b>[1] [@] [GROUP] [9] {INTS ONLY} [*]</b>	Link IntChan 1 to group 9 (Groups 1 to 750)
<b>[1] [@] [TEXT] hello [TEXT] {INTS ONLY} [*]</b>	Link IntChan 1 to group with text label 'hello' (Groups 1 to 750)
<b>[1] [@] [GROUP] [TEXT] hello [TEXT INTS_ONLY] [*]</b>	Link IntChan 1 to group with text label 'hello' (Groups 1 to 750)
<b>[1] [@] {COPYFROM} [GROUP] [9] {INTS ONLY} [*]</b>	Copy IntChan 1 from group 9
<b>[1] [@] {COPYFROM} [TEXT] hello [TEXT] {INTS ONLY} [*]</b>	Copy IntChan 1 from group with text label 'hello' (Groups 1 to 750)
<b>[1] [@] {COPYFROM} [GROUP] [TEXT] hello [TEXT] {INTS ONLY} [*]</b>	Copy IntChan 1 from group with text label 'hello' (Groups 1 to 750)
<b>[1] [THRU] [5] [@] [GROUP] [2] {INTS ONLY} [*]</b>	Chans 1 > 5 Ints only copied from group 2

<b>[1] [THRU] [5] [@] [CUE] [2] {INTS ONLY} [*]</b>	Chans 1 > 5 Ints only copied from cue 2
<b>[CUE] [1] [*] [SUB] [1] [*] [GROUP] [1] [*]</b>	Select IntChans from (cue 1) at current levels
<b>[CUE] [1] wheel</b>	IntChans from cue 1 are wheeled using wheel mode from current levels to recorded levels, as recorded fade type
<b>[CUE] [+] [1] wheel</b>	IntChans in cue 1 are wheeled from current levels to levels recorded in cue 1 as a move fade.
<b>[CUE] [-] [1] wheel</b>	IntChans in cue 1 are wheeled from current levels to zero (dim fade 0)
<b>[+] [1]</b>	Add channel 1 to current selection
<b>[-] [1]</b>	Removed channel 1 from current selection
<b>[1] [HOLD]</b>	Holds channel 1
<b>[1] [SHIFT] [HOLD]</b>	Un-holds channel 1
<b>[SHIFT] [HOLD] [HOLD]</b>	(No channels selected) Un-holds all held channels

## Fading in Intensity Channels in Time

The following Command Line syntax examples are normally used with Lightpalette

<b>Key Sequence</b>	<b>Action</b>
<b>[1] [THU] [3] [@] [5] [TIME] [5] [*]</b>	Set channels 1 to 3 inclusive from current level to 50% over a period of 5 seconds.
<b>[3] [@] [5] [TIME] [*]</b>	Sets channels 3 from current level to 50% over a period determined by the setting of the Undo Time.

## Controlling Attributes (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
[2] [6] [@ATT] [7] [*]	AttChan 26 to frame 7
[2] [6] [@ATT] [+] [2] [*]	AttChan 26 moved on by 2 frames
[2] [6] [@ATT] [-] [3] [*]	AttChan 26 moved back by 3 frames
[2] [6] [@ATT] [SHIFT] [ON] [*]	AttChan 26 to maximum frame
[2] [6] ]@ATT] [.] [*]	AttChan 26 off at zero
[2] [6] [@ATT] [NEXT] [*]	AttChan 26 to next frame
[2] [6] [@ATT] [LAST] [*]	AttChan 26 to previous frame
[CUE] [1] [@ATT] [*]	AttChans in cue 1 off at zero
[CUE] [1] [@ATT] [2] [*]	AttChans used in cue 1 to frame 2
[CUE] [1] [@ATT] [+] [2] [*]	AttChans used in cue 1 to recorded frames plus 2
[CUE] [1] [@] {FULL} {ATTS ONLY} [*]	AttChans from cue 1 at recorded levels
[1] [@ATT] [2] [Q ONLY/TRACK] [*]	AttChan 1 to frame 2, for this cue only (only valid at cue sheet in track mode). Q_ONLY/TRACK is valid in any @ATT command.
[1] [@ATT] {COL} [2]	Chan 1 to colour attribute as defined in preset group 2 **
[1] [@ATT] {POSIT} [5] [*]	Chan 1 to Pan/Tilt position as defined in preset group 5 **
[1] [@ATT] {IRIS} [3] [*]	Chan 1 to iris as defined in preset group 3 **
[1] [@ATT] {FOCUS} [4] [*]	Chan 1 to focus as defined in preset group 4 **
[1] [@ATT] {PRISM} [3] [*]	Chan 1 to prism as defined in preset group 3 **
[1] [@ATT] {GOBO} [6] [*]	Chan 1gobo as defined in preset group 6 **
[1] [@ATT] {POSITION} [LIVE] [*]	In the Group Screen, updates current group, channel 1 to position in Live Screen (on stage)
[1] [@ATT] {COL} [LIVE] [*]	In the Group Screen, updates current group, channel 1 to the color in Live Screen (on stage)

<b>[1] [@ATT] {IRIS} [LIVE] [*]</b>	In the Group Screen, updates current group, channel 1 to the Iris setting in Live Screen (on stage)
<b>[1] [@ATT] {FOCUS} [LIVE] [*]</b>	In the Group Screen, updates current group, channel 1 to the Focus setting in Live Screen (on stage)
<b>[1] [@ATT] {PRISM} [LIVE] [*]</b>	In the Group Screen, updates current group, channel 1 to the Prism setting in Live Screen (on stage)
<b>[1] [@ATT] {GOBO} [LIVE] [*]</b>	In the Group Screen, updates current group, channel 1 to the Gobo setting in Live Screen (on stage)
<b>[1] [@] [GROUP] [9] {ATTS ONLY} [*]</b>	Link AttChan 1 to group 9 (Groups 1 to 750)
<b>[1] [@] [TEXT] hello {ATTS ONLY} [*]</b>	Link AttChan 1 to group with text label 'hello' (Groups 1 to 750)
<b>[1] [@] [GROUP] [TEXT] hello [TEXT] {ATTS ONLY} [*]</b>	Link AttChan 1 to group with text label 'hello' (Groups 1 to 750)
<b>[1] [@] {COPYFROM} [GROUP] [9] {ATTS ONLY} [*]</b>	Copy AttChan 1 from group 9
<b>[1] [@] {COPYFROM} [TEXT] hello [TEXT] {ATTS ONLY} [*]</b>	Copy AttChan 1 from group with text label 'hello' (Groups 1 to 750)
<b>[1] [@] {COPYFROM} [GROUP] [TEXT] hello [TEXT] {ATTS ONLY} [*]</b>	Copy AttChan 1 from group with text label 'hello' (Groups 1 to 750)
<b>[UNDO] [@ATT] [*]</b>	Udoes command after <b>[@ATT]</b>
<b>[SHIFT] [@ATT] [*]</b>	= <b>[UNDO] [@ATT]</b>

\*\* Refer to [Attribute Filters](#)

## Fading in Attribute Channels in Time

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
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[1] [.] [3] [@] [5] [TIME] [6] [*]	Moves the channel 1 luminaire pan to 60% over a period of 5 seconds.
[1] [.] [2] [@] [TIME] [5] [*]	Moves the channel 1 luminaire color to Frame 5 over a period determined by the setting of the Undo Time.

## Controlling Dimmers (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
	<b>Uses Setup channel control mode. Commands available from live output ordered patch screen.</b>
[DIMMER] [1] [@] [4] [*]	Dimmer 1 @ 40%
[DIMMER] [2] [.] [2] [@] [4] [*]	Dimmer 514 @ 40% (universe dimmer addressing)
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] [0] [*]	Dimmers @ 0%
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] {OFF} [*]	Dimmers at 0%
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] {DMX} [2] [5] [5] [*]	Dimmers @ 100%
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] [*]	Unpatch specified dimmers
[DIMMER] [1] {UNPATCH}	Unpatch dimmer 1
[DIMMER] [1] {REPATCH}	Repatch dimmer 1
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] [ON] [*]	Dimmers to <a href="#">On Level %</a>
[DIMMER] [1] [+] [2] [THRU] [9] [9] [ON]	Dimmers to <a href="#">On Level %</a>
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] {FULL} [*]	Dimmers @ 100%
[DIMMER] [1] [@] [*]	Select dimmer 1 at current levels

<b>[DIMMER] [1] wheel</b>	Select and wheel dimmer 1, but only at Output Ordered Patch display
<b>[DIMMER] [DIMMER] [DIMMER] [REPATCH]</b>	Repatch ALL dimmers (may take a few seconds)

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## Controlling Channel Levels, Attributes and Dimmers

### Controlling Channels Levels (Direct Action Modes)

Direct Action Single Digit	Direct Action Double Digit	Action
		All actions which operate on a channel list can also work without a channel list on the current selection. Actions showing CUE also apply to SUB, FX, GROUP
[*]	[*]	All On IntChans are selected for wheeling (not in preview)
[1] [*]	[1] [*]	1 is selected for wheeling
[1] wheel [1] [@] wheel	[1] wheel [1] [@] wheel	1 is selected and wheeled
[1] [@] [1]	[1] [@] [1] [0]	1 to 10%
[1] [@] [1] [.] [1]	[1] [@] [1] [1]	1 to 11%
[1] [@] [0] [.] [1]	[1] [@] [0] [1]	1 to 1%
[1] [@] [0]	[1] [@] [0] [0]	1 to 0%
[1] [@] [.]	[1] [@] [.]	1 off
[1] [@] [*]	[1] [@] [*]	1 off
[1] [@] {OFF}	[1] [@] {OFF}	1 off
[1] [THRU] [1] [0] [@] [@]	[1] [THRU] [1] [0] [@] [@]	1 >10 at full
[1] [THRU] [1] [0] [SHIFT] [ON]	[1] [THRU] [1] [0] [SHIFT] [ON]	1 >10 at full
[1] [@] {DMX}[1] [2] [8]	[1] [@] {DMX}[1] [2] [8]	1 on at DMX level 128 (=50%)
[1] {UP%}	[1] {UP%}	1 up by <a href="#">Up %</a> set in User Setup)
[1] {DOWN%}	[1] {DOWN%}	1 down by <a href="#">Down %</a> set in User Setup)



[1] [@] {COPYFROM} [2] [*]	[1] [@] {COPYFROM} [2] [*]	Copy channel 2 levels to channel 1, or to a list of channels if specified
[1] [@] {COPYFROM} {DMX}	[1] [@] {COPYFROM} {DMX}	Copy DMX In channel 1 level to channel 1, or copy a list of channels if specified, or copy the current selection channels, or copy all 512 DMX In channels if no selection
[1] [@] [Q ONLY/TRACK] [2]	[1] [@] [Q ONLY/TRACK] [2] [0]	1 to 20%, for this cue only (only valid at cue sheet in track mode). Q ONLY/TRACK is valid in any @ command.
[1] [@] [+] [2]	[1] [@] [+] [2] [0]	1 up by 20% absolute
[1] [@] [-] [1] [.] [1]	[1] [@] [-] [1] [1]	1 down by 11% absolute
[1] [ON] [1] [@] [ON]	[1] [ON] [1] [@] [ON]	Select IntChan 1, set to <a href="#">On Level %</a> set in User Setup
[3] {FULL} [3] [SHIFT] [ON]  [3] [@] {FULL} [3] [@] [SHIFT] [ON]	[3] {FULL} [3] [SHIFT] [ON]  [3] [@] {FULL} [3] [@] [SHIFT] [ON]	Select IntChan 3, set to 100%
[1] [REMDIM] [1] [SHIFT] [-]	[1] [REMDIM] [1] [SHIFT] [-]	All IntChans except 1 are set to off. If 1 is off, it is set to ON level.
[REMDIM] [REMDIM]	[REMDIM] [REMDIM]	If no selection, all IntChans are set to OFF.
[1] {BUMP}	[1] {BUMP}	According to BUMP MODE key: IntChan 1 is soloed (most keys now locked out) or flashed to Flash Supermaster level, or both, until key released
[1] [SHIFT] [+]	[1] [SHIFT] [+]	<b>Toggle on:</b> IntChan 1 is soloed (most keys now locked out)

[SHIFT] [+]	[SHIFT] [+]	<b>Toggle off:</b> All soloed IntChans go unsoloed (all keys re-enabled)
[SHIFT] [*]	[SHIFT] [*]	Repeats Last Command
[1] {FLASH^}	[1] {FLASH^}	IntChan 1 is flashed to Flash Supermaster level until key is released
[1] [SHIFT] {FLASH^}	[1] [SHIFT] {FLASH^}	IntChan 1 is flashed to 0% until key released
[CUE] [1] [@] [2]	[CUE] [1] [@] [2] [0]	IntChans from cue 1 at 20% of recorded levels plus recorded AttChans
[CUE] [1] [@] [+] [2]	[CUE] [1] [@] [+] [2] [0]	IntChans from cue 1 at 120% of recorded levels plus recorded AttChans
[CUE] [@] [-] [2]	[CUE] [@] [-] [2] [0]	IntChans from current cue at 80% of recorded levels plus recorded AttChans
[1] [+] [CUE] [1] [@] [2]	[1] [+] [CUE] [1] [@] [2] [0]	IntChans from cue 1 at 20% of recorded levels, plus recorded AttChans, plus IntChan 1 at 20%, whether or not it is used in cue 1.
[CUE] [1] [@] [FULL] or [CUE] [1] [@] [SHIFT] [ON]	[CUE] [1] [@] [FULL] or [CUE] [1] [@] [SHIFT] [ON]	IntChans from cue 1 to their recorded levels plus recorded AttChans
[CUE] [1] [THRU] [2] [@] [FULL]	[CUE] [1] [THRU] [2] [@] [FULL]	HTP sum of recorded IntChans from cues 1 and 2 and LTP sets of AttChans
[CUE] [1] [@] [*]	[CUE] [1] [@] [*]	IntChans from cue 1 go to off
[CUE] [1] [@] {INTS ONLY} {FULL}	[CUE] [1] [@] {INTS ONLY} {FULL}	IntChans from cue 1 at recorded levels
[1] [@] [GROUP] [9] {INTS ONLY} [*]	[1] [@] [GROUP] [9] {INTS ONLY} [*]	Link IntChan 1 to group 9 (Groups 1 to 750)

<b>[1] [@] [TEXT] hello [TEXT] {INTS ONLY} [*]</b>	<b>[1] [@] [TEXT] hello [TEXT] {INTS ONLY} [*]</b>	Link IntChan 1 to group with text label 'hello' (Groups 1 to 750)
<b>[1] [@] [GROUP] [TEXT] hello [TEXT] {INTS ONLY} [*]</b>	<b>[1] [@] [GROUP] [TEXT] hello [TEXT] {INTS ONLY} [*]</b>	Link IntChan 1 to group with text label 'hello' (Groups 1 to 750)
<b>[1] [@] {COPYFROM} [GROUP] [9] {INTS ONLY} [*]</b>	<b>[1] [@] {COPYFROM} [GROUP] [9] {INTS ONLY} [*]</b>	Copy IntChan 1 from group 9
<b>[1] [@] {COPYFROM} [TEXT] hello [TEXT] {INTS ONLY} [*]</b>	<b>[1] [@] {COPYFROM} [TEXT] hello [TEXT] {INTS ONLY} [*]</b>	Copy IntChan 1 from group with text label 'hello' (Groups 1 to 750)
<b>[1] [@] {COPYFROM} [GROUP] [TEXT] hello [TEXT] {INTS ONLY} [*]</b>	<b>[1] [@] {COPYFROM} [GROUP] [TEXT] hello [TEXT] {INTS ONLY} [*]</b>	Copy IntChan 1 from group with text label 'hello' (Groups 1 to 750)
<b>[1] [THRU] [5] [@] {INTS ONLY} [GROUP] [2] [*]</b>	<b>[1] [THRU] [5] [@] {INTS ONLY} [GROUP] [2] [*]</b>	Chans 1 > 5 Ints only copied from group 2
<b>[CUE] [1] [*] [SUB] [1] [*] [GROUP] [1] [*]</b>	<b>[CUE] [1] [*] [SUB] [1] [*] [GROUP] [1] [*]</b>	Select IntChans from cue 1 (sub 1 or group 1) at current levels
<b>[CUE] [1] wheel</b>	<b>[CUE] [1] wheel</b>	IntChans from cue 1 are wheeled using wheel mode from current levels to recorded levels, recorded fade type
<b>[CUE] [+] [1] wheel</b>	<b>[CUE] [+] [1] wheel</b>	IntChans in cue 1 are wheeled from current levels to levels recorded in cue 1, as a move fade (dim fade)
<b>[CUE] [-] [1] wheel</b>	<b>[CUE] [-] [1] wheel</b>	IntChans in cue 1 are wheeled from current levels to zero.
<b>[+] [1]</b>	<b>[+] [1]</b>	Add channel 1 to current selection
<b>[-] [1]</b>	<b>[-] [1]</b>	Remove channel 1 from current selection
<b>[1] [HOLD]</b>	<b>[1] [HOLD]</b>	Holds channel 1
<b>[1] [SHIFT] [HOLD]</b>	<b>[1] [SHIFT] [HOLD]</b>	Un-holds channel 1

[SHIFT] [HOLD] [HOLD]	[SHIFT] [HOLD] [HOLD]	(No channels selected) Un-holds all held channels
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## Fading in Intensity Channels in Time

The following Direct Action syntax examples are normally used with GeniusPro.

Direct Action Single Digit	Direct Action Double Digit	Action
[1] [THRU] [3] [TIME] [5] [@] [5]	[1] [THRU] [3] [TIME] [5] [@] [5] [0]	Set channels 1 to 3 inclusive from current level to 50% over a period of 5 seconds.
[3] [TIME] [@] [5]	[3] [TIME] [@] [5] [0]	Sets channels 3 from current level to 50% over a period determined by the setting of the Undo Time

## Controlling Attributes (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro.

Direct Action Single Digit	Direct Action Double Digit	Action
[2] [6] [@ATT] [7]	[2] [6] [@ATT] [0] [7]	AttChan 26 to frame 7 (Double digit frames not accessible, when in single digit mode except as maximum frame)
[2] [6] [@ATT] [+] [2]	[2] [6] [@ATT] [+] [0] [2]	AttChan 26 moved on by 2 frames
[2] [6] [@ATT] [-] [3]	[2] [6] [@ATT] [-] [0] [3]	AttChan 26 moved back by 3 frames

<b>[2] [6] [@ATT] [SHIFT] [ON]</b>	<b>[2] [6] [@ATT] [SHIFT] [ON]</b>	AttChan 26 to maximum frame
<b>[2] [6] [@ATT] [.]</b>	<b>[2] [6] [@ATT] [.]</b>	AttChan 26 off at zero
<b>[2] [6] [@ATT] [NEXT]</b>	<b>[2] [6] [@ATT] [NEXT]</b>	AttChan 26 to next frame
<b>[2] [6] [@ATT] [LAST]</b>	<b>[2] [6] [@ATT] [LAST]</b>	AttChan 26 to previous frame
<b>[CUE] [1] [@ATT] [*]</b>	<b>[CUE] [1] [@ATT] [*]</b>	AttChans in cue 1 off at zero
<b>[CUE] [1] [@ATT] [2]</b>	<b>[CUE] [1] [@ATT] [0] [2]</b>	AttChans used in cue 1 to frame 2
<b>[CUE] [1] [@ATT] [+] [2]</b>	<b>[CUE] [1] [@ATT] [+] [0] [2]</b>	AttChans used in cue 1 to recorded frames plus 2
<b>[CUE] [1] [@] {ATTS ONLY} {FULL}</b>	<b>[CUE] [1] [@] {ATTS ONLY} {FULL}</b>	AttChans from cue 1 at recorded levels
<b>[1] [@ATT] [Q ONLY/TRACK] [2]</b>	<b>[1] [@ATT] [Q ONLY/TRACK] [0] [2]</b>	AttChan 1 to frame 2, for this cue only (only valid at cue sheet in track mode). Q ONLY/TRACK is valid in any @ATT command.
<b>[1] [@ATT] {COL} [2]</b>	<b>[1] [@ATT] {COL} [2]</b>	Chan 1 colour to colour defined in preset group 2 **
<b>[1] [@ATT] {POSIT} [5]</b>	<b>[1] [@ATT] {POSIT} [5]</b>	Chan 1 pan and tilt to position defined in preset group 5 **
<b>[1] [@ATT] {IRIS} [3]</b>	<b>[1] [@ATT] {IRIS} [3]</b>	Chan 1 to iris as defined in preset group 3 **
<b>[1] [@ATT] {FOCUS} [4]</b>	<b>[1] [@ATT] {FOCUS} [4]</b>	Chan 1 to focus as defined in preset group 4 **
<b>[1] [@ATT] {PRISM} [3]</b>	<b>[1] [@ATT] {PRISM} [3]</b>	Chan 1 to prism as defined in preset group 3 **

<b>[1] [@ATT] {GOBO} [6]</b>	<b>[1] [@ATT] {GOBO} [6]</b>	Chan 1 to Gobo as defined in preset group 6
<b>[1] [@ATT] {COL} [LIVE]</b>	<b>[1] [@ATT] {COL} [LIVE]</b>	In the Group Screen, updates current group, channel 1 to the Color setting in Live Screen (on stage)
<b>[1] [@ATT] {POSIT} [LIVE]</b>	<b>[1] [@ATT] {POSIT} [LIVE]</b>	In the Group Screen, updates current group, channel 1 to the Position setting in Live Screen (on stage)
<b>[1] [@ATT] {IRIS} [LIVE]</b>	<b>[1] [@ATT] {IRIS} [LIVE]</b>	In the Group Screen, updates current group, channel 1 to the Iris setting in Live Screen (on stage)
<b>[1] [@ATT] {FOCUS} [LIVE]</b>	<b>[1] [@ATT] {FOCUS} [LIVE]</b>	In the Group Screen, updates current group, channel 1 to the Focus setting in Live Screen (on stage)
<b>[1] [@ATT] {PRISM} [LIVE]</b>	<b>[1] [@ATT] {PRISM} [LIVE]</b>	In the Group Screen, updates current group, channel 1 to the Prism setting in Live Screen (on stage)
<b>[1] [@ATT] {GOBO} [LIVE]</b>	<b>[1] [@ATT] {GOBO} [LIVE]</b>	In the Group Screen, updates current group, channel 1 to the Gobo setting in Live Screen (on stage)
<b>[1] [@] [GROUP] [9] {ATTS ONLY} [*]</b>	<b>[1] [@] [GROUP] [9] {ATTS ONLY} [*]</b>	Link AttChan 1 to group 9 (Groups 1 to 750)
<b>[1] [@] [TEXT] hello [TEXT] {ATTS ONLY} [*]</b>	<b>[1] [@] [TEXT] hello [TEXT] {ATTS ONLY} [*]</b>	Link AttChan 1 to group with text label 'hello' (Groups 1 to 750)
<b>[1] [@] [GROUP] [TEXT] hello [TEXT] {ATTS ONLY} [*]</b>	<b>[1] [@] [GROUP] [TEXT] hello [TEXT] {ATTS ONLY} [*]</b>	Link AttChan 1 to group with text label 'hello' (Groups 1 to 750)

[1] [@] {COPYFROM} [GROUP] [9] {ATTS ONLY} [*]	[1] [@] {COPYFROM} [GROUP] [9] {ATTS ONLY} [*]	Copy AttChan 1 from group 9
[1] [@] {COPYFROM} [TEXT] hello [TEXT] {ATTS ONLY} [*]	[1] [@] {COPYFROM} [TEXT] hello [TEXT] {ATTS ONLY} [*]	Copy AttChan 1 from group with text label 'hello' (Groups 1 to 750)
[UNDO] [@ATT]	[UNDO] [@ATT]	Udoes command after [@ATT]
[SHIFT] [@ATT] [*]	[SHIFT] [@ATT] [*]	= [UNDO] [@ATT]

\*\*Refer to [Attribute Filters](#)

## Fading in Attribute Channels in Time

The following Direct Action syntax examples are normally used with GeniusPro.

Direct Action Single Digit	Direct Action Double Digit	Action
[1] [.] [3] [TIME] [5] [@] [6]	[1] [.] [3] [TIME] [5] [@] [6] [0]	Moves the channel 1 luminaire pan to 60% over a period of 5 seconds.
[1] [.] [2] [TIME] [@] [5]	[1] [.] [2] [TIME] [@] [5] [0]	Moves the channel 1 luminaire color to frame 5 over a period determined by the setting of the Undo Time.

## Controlling Dimmers (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro

		<b>Uses Setup channel control mode. Commands available from live output screen.</b>
<b>Direct Action Single Digit</b>	<b>Direct Action Double Digit</b>	<b>Action</b>
[DIMMER] [1] [@] [4] [*]	[DIMMER] [1] [@] [4] [0] [*]	Dimmer 1 @ 40%
[DIMMER] [2] [.] [1] [@] [4] [*]	[DIMMER] [2] [.] [1] [@] [4] [0] [*]	Dimmer 514 @ 40% (universe.dimmer addressing)
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] [0] [0]	[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] [0] [0]	Dimmers @ 0
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] {DMX} [2] [5] [5]	[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] {DMX} [2] [5] [5]	Dimmers @ DMX 255 {100%}
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] [.]	[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] [.]	Unpatch dimmers
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] [*]	[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] [*]	Unpatch dimmers
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] {OFF}	[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] {OFF}	Unpatch dimmers
[DIMMER] [1] {UNPATCH}	[DIMMER] [1] {UNPATCH}	Unpatch dimmer 1
[DIMMER] [1] {REPATCH}	[DIMMER] [1] {REPATCH}	Repatch dimmer 1
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] [ON]	[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] [ON]	Dimmers to <a href="#">On Level %</a>
[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] {FULL}	[DIMMER] [1] [+] [2] [THRU] [9] [9] [@] {FULL}	Dimmers @ 100%
[DIMMER] [1] [@] [*]	[DIMMER] [1] [@] [*]	Select dimmer 1 at current levels
[DIMMER] [1] [@] [*] wheel	[DIMMER] [1] [@] [*] wheel	Selects dimmer 1 at current level and wheels level



<b>[DIMMER] [DIMMER]</b>	<b>[DIMMER] [DIMMER]</b>	Repatch ALL dimmers
<b>[DIMMER] {REPATCH}</b>	<b>[DIMMER] {REPATCH}</b>	Repatch ALL dimmers

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## Cues and X Playbacks

### (Command Line Mode)

#### Recording Cues (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
<b>[RECORD] [*]</b>	Records o/p to currently selected cue or part.
<b>[RECORD] [CUE] [*]</b>	Records o/p to currently selected cue
<b>[RECORD] [CUE] [1] [*]</b>	Records o/p to cue 1.
<b>[RECORD] [CUE] [1] {INTS ONLY} [*]</b>	Records cue 1 with intensity levels and erases attribute levels.(530 and 550 Consoles Only)
<b>[RECORD] [CUE] [1] {ATTS ONLY}[*]</b>	Records cue 1 with attribute levels and erases intensity levels. (530 and 550 Consoles Only)
<b>[RECORD] [CUE] [1] [REC MODE] {INTS ONLY} [*]</b>	Records cue 1 with intensity levels and erases attribute levels.(520 and 300 Series Consoles Only)
<b>[RECORD] [CUE] [1] [REC MODE] {ATTS ONLY}[*]</b>	Records cue 1 with attribute levels and erases intensity levels. (520 and 300 Series Consoles Only)
<b>[RECORD] [CUE] [1] {PART} [2] [*]</b>	Records selected edit cue part to cue 1 part 2
<b>[RECORD] [Q ONLY/TRACK] [*]</b>	Re-record current cue only/track
<b>[RECORD] [CUE] [1] {PART} [8] [*]</b>	Records cue 1 part 8 from o/p.
<b>[REC-SUB] [*]</b>	Records current cue excluding submaster and fx channels
<b>[REC-SUB] [CUE] [1] [*]</b>	Records cue 1 excluding submaster and fx channels

<b>[1] [+] [2] [THRU] [5] [RECORD] [*]</b>	Records chans 1+2 > 5 in current cue.
<b>[1] [RECORD] [CUE] [PART] [2] [*]</b>	Records chan 1 in part 2 of the current cue. If the channel is already in part 1, the change is moved to part 2.
<b>[1] [+] [2] [THRU] 5 RECORD [CUE] [1] [*]</b>	Records chans 1+2 > 5 in cue 1.
<b>[RECORD] [CUE] [1] [TIME] [4] [*]</b>	Records cue 1 with up/down fade times of 4sec.
<b>[RECORD] [CUE] [1] [0] [0] [TIME] [*] [*]</b>	Records empty cue 100 if cue 100 did not exist. On Live screen only
<b>[RECORD] [CUE] [1] [TIME] {OFF/MAN}[*]</b>	Records cue 1 with manual times
<b>[RECORD] [CUE] [1] [TIME] [4] [/] [5] [*]</b>	Records cue 1 with split fade times.
<b>[RECORD] [CUE] [1] [TIME] {DELAY} [4] [/] [5] [*]</b>	Records cue 1 with split delay times.
<b>[RECORD] [CUE] [1] [DELAY] [4] [/] [5] [*]</b>	Records cue 1 with split delay times.
<b>[RECORD] [CUE] [1] [TIME] {WAIT} [4] [*]</b>	Records cue 1 with wait time.
<b>[RECORD] [CUE] [1] [WAIT] [4] [*]</b>	Records cue 1 with wait time.
<b>[RECORD] [CUE] [1] [@ATT] [TIME] [4] [*]</b>	Records cue 1 with attribute fade time.
<b>[RECORD] [CUE] [1] {INTS ONLY} [*]</b>	Records cue 1 with intensity channels only.
<b>[RECORD] [CUE] 1 {ATTS ONLY} [*]</b>	Records cue 1 with attribute channels only.

<b>[RECORD] [CUE] 1 {ALL FADE} [*]</b>	Records cue 1 as a all fade cue
<b>[RECORD] [CUE] [1] {HARD BLOCK} [*]</b>	Records cue 1 as a hard block cue, channels cannot be released
<b>[RECORD] [CUE] [1] {TRACK THRU} [*]</b>	Records cue 1 and track thru changes then closes block
<b>[RECORD] [CUE] [1] {SOFT BLOCK}</b>	Records cue 1 as a soft block cue, channels can be released
<b>[RECORD] [CUE] [1] [Q ONLY/TRACK] [*]</b>	Records cue 1 with/without tracking.
<b>[RECORD] [CUE] [9] {LINK} [CUE] [1] [*]</b>	Records cue 9 linked to cue 1
<b>[RECORD] [CUE] [9] {LINK} [CUE] [. ] [*]</b>	Records cue 9 return from link.
<b>[RECORD] [CUE] [1] {LOOP} [2] [*]</b>	Records cue 1 with loopcount of 2
<b>[RECORD] [CUE] [1] [PB] [2] [*]</b>	Records cue 1 assigned to playback 2.
<b>[RECORD] [CUE] [1] [FX] [+] [4] [*]</b>	Records cue 1 to start effect 4.
<b>[RECORD] [CUE] [1] [FX] [-] [4] [*]</b>	Records cue 1 to stop effect 4.
<b>[RECORD] [CUE] [1] [MACRO] [6] [*]</b>	Records cue 1 to run macro 6.
<b>[RECORD] [CUE] [1] [TEXT] hello [*]</b>	Records cue 1 with text 'hello'.
<b>[RECORD] [CUE] [1] [PROFILE] [6] [*]</b>	Records cue 1 using profile 6 on up & down fades.
<b>[RECORD] [CUE] [1] [PROFILE] [6] [ / ] [7] [*]</b>	Records cue 1 using profile 6 on up fades and profile 7 on down fades.

[RECORD] [CUE] [1] [PB] [2] [*]	Records levels into cue 1 and assigns it to Playback 2.
[RECORD] [CUE] [1] [PB] [*]	Records levels into cue 1 and deletes any assignment.
[RECORD] [CUE] [1] [@ATT] [PROFILE] [6] [*]	Records cue 1 using profile 6 on attribute fades.
[UNDO] [RECORD]	Undo record command
[SHIFT] [RECORD]	= [REC-SUB]

Summary	
[RECORD] [CUE] [1] [PART 2] [record_option] [TIME [3 [ / 4]] [DELAY [5 [ / 6] [WAIT [7] [*]	<b>[record option]: One of these per command (all may be used in successive commands):</b> HARD BLOCK or SOFTBLOCK or ALL FADE or TRACK THRU or PLAYBACK [n] or MACRO [n] or FX [+] [n] or FX [-] [n] or LINK [n] or LOOP [n]

## Editing Cues (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
[SHIFT] Trackball movement	Changes fields in Preview displays from Yellow (non-editable) to Green (editable), enabling fields to be selected using the rollball (or mouse) and the level wheel, [+] or [-] keys or numeric keypad to set field values.
[*]	Returns fields in the Cue Preview displays to the non-editable mode (Yellow)
[CUE] [2] [*] [*]	Select cue 2 for edit, create if absent & copy levels from preceding cue (At cue preview edit display only)

[CUE] [CUE]	Selects Cue Part. Same as [CUE] {PART}
[DELETE] [*]	Delete selected cue or part
[DELETE] [2] [*]	Delete cue 2 if present (all parts)
[DELETE] [2] [PART] [3] [*]	Delete cue 2 part 3 if present
[DELETE] [2] [Q ONLY/TRACK] [*]	Delete cue 2 if present (all parts), to prevent channels tracking to the next cue
[DELETE] [1] [.] [1] [THRU] [1] [.] [3] [*]	Delete cues 1.1, 1.2 and 1.3 if present (all parts)
[CUE] [2] {FROM} [7] {RENUM} {RENUM}	Renumber cues 2 onwards [starting the new range from cue 7]
[CUE] [1] [.] {FROM} [7] {RENUM}	Renumber cues 1 onwards starting the new range from cue 7, keeping point cues
[CUE] [2] [@] {COPYFROM} [CUE] [1] [Q_ONLY/TRACK] [*] or [CUE] [1] [@] [CUE] [2] [*]	Copy cue 1 to cue 2, all parts, or rename cue 1 to 2 if no intervening cues

## Modifying Cues (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

	<b>Where TEXT value etc. is [omitted], the value is deleted from the cue. The current cue is used if the CUE number is [omitted].</b>
<b>Key Sequence</b>	<b>Action</b>
[CUE] [1] [TIME] [4] [*] [TIME] [4] [*]	Modify cue 1 up/down fade times
[CUE] [1] [DELAY] [4] [*] [DELAY] [4] [*]	Modify cue 1 up/down delay times

<b>[CUE] [1] [WAIT] [4] [*] [WAIT] [4] [*]</b>	Modify cue 1 wait time
<b>[CUE] [1] [TIME] {WAIT} [4] [*] [TIME] {WAIT} [4] [*]</b>	Modify cue 1 wait time
<b>[CUE] [1] {PART} [4] [TIME] [4] [*] {PART} [4] [TIME] [4] [*]</b>	Modify cue part fade time
<b>[CUE] [1] [TIME] [4] [/] [5] [*] [TIME] [4] [/] [5] [*]</b>	Modify cue split fade time
<b>[CUE] [1] [TIME] {DELAY} [4] [/] [5] [*] [TIME] {DELAY} [4] [/] [5] [*]</b>	Modify cue split delay time
<b>[CUE] [1] [@ATT] [TIME] [4] [*]</b>	Modify cue attribute fade time
<b>[CUE] [1] {SOFT BLOCK} [* ]</b>	Modify cue 1 to soft block cue.
<b>[CUE] [1] {TRACK THRU} [* ]</b>	Modify cue 1 to track through cue.
<b>[CUE] [1] {HARD BLOCK} [* ]</b>	Modify cue 1 to hard block cue.
<b>[CUE] [1] {ALL FADE} [* ]</b>	Modify cue 1 to all fade cue.
<b>[CUE] [4] {LINK} [CUE] [1] *</b>	Modify cue 4 as linked to cue 1
<b>[CUE] [1] {LINK} [CUE] [. ] [*]</b>	Modify cue 1 as return from link
<b>[CUE] [1] {LOOP} [2] [*]</b>	Modify cue 1 to loopcount of 2
<b>[CUE] [1] [PB] [2] [*]</b>	Modify cue playback assignment
<b>[CUE] [1] [FX] [-] [4] [*]</b>	Modify cue effect link, Fx + 4 = start, Fx - 4 = stop
<b>[CUE] [1] [MACRO] [6] [*]</b>	Modify cue macro link
<b>[CUE] [1] [TEXT] hello [*]</b>	Modify cue text annotation
<b>[CUE] [1] [PROFILE] [6] [/] [7] [*]</b>	Modify cue profile use
<b>[CUE] [1] [@ATT] [PROFILE] [5] [*]</b>	Modify cue attribute profile

## Using the Cue Playbacks (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
[GO]	Restart halted or reversed fade else run cue loaded into playback preview.
[CUT]	Run preview cue on X using Cut setup time
[STOP/BACK]	<b>1st press:</b> Stop all fades on X selected playback <b>2nd press:</b> Reverse previous fades to 0% complete <b>3rd press:</b> Reverse previous cue using <a href="#">X Back,Cut</a> Time in User Setup Screen
[GOTO] [*]	Rerun current cue on playback
[GOTO] [CUE] [6] [*]	Goto cue 6 in recorded times (no wait time or Fx or macro)
[GOTO] [CUE] [6] [TIME] [6] [/] [7] [*]	Goto cue 6 in these times (no wait time or Fx or macro)
[GOTO] [CUE] [6] [PB] [2] [*]	Goto cue 6 on playback 2 (no wait time or Fx or macro)
[LOAD] [CUE] [1] [*]	Load cue 1 on X Playback using recorded times
[LOAD] [CUE] [1] [TIME] [5] [*]	Load cue 1 on X Playback using these times
{RATE} (see below for 300 Series consoles)	Puts all fades on a playback under Rate (or Level) Wheel control
{UNRATE}	Removes all fades on a playback from Rate Wheel control
{UPRATE}	Sets the rate wheel to control the up fade rate when under rate wheel control
{DOWNRATE}	Sets the rate wheel to control the down fade rate when under rate wheel control

Rate control of cue fades using the level wheel - 300 Series Consoles only	
[RATE] key 1st Press	Up and Down Fade under level wheel control- Both LEDs illuminated
[RATE] key 2nd Press	Up only Fade - Up only LED illuminated



<b>[RATE]</b> key 3rd Press	Down only fade - Down only LED illuminated
<b>[RATE]</b> key 4th Press	Unrate - Both Up and Down LEDs extinguished

## Updating Cues (All Modes)

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	Action
	<b>Times and other settings are unchanged</b>
<b>[UPDATE] [*] [UPDATE] [CUE] [1] [*] [UPDATE] [1] [*]</b>	Changes levels in the current or specified cues as necessary based on channels that have been modified including channels that are not already in the cues. Channels that are off in the selection are removed from the cues. The cues must already exist.
<b>[SHIFT] [CUE]</b>	= <b>[UPDATE] [CUE]</b>
<b>[SUB] [7] [UPDATE] [CUE] [1] [*]</b>	First selects all of the channels in submaster 7, then records their levels in cue 1, including channels that are not already in cue 7.
<b>[UPDATE] {CHANS IN} [CUE] [1] [*]</b>	Records all channels that have been modified live into cue 1, ignoring channels that are not already in the cue.
<b>[SUB] [7] [*] [UPDATE] {CHANS IN} [CUE] [1] [*]</b>	First selects all of the channels in submaster 7, then records their levels in cue 1, ignoring channels that are not already in the cue.
<b>[1] [THRU] [5] [UPDATE] [CUE] [1] [*]</b>	Changes channel 1 through 5 levels in cue 1, adding channels that are not already in the cue.

<b>[1] [THRU] [5] [UPDATE] [CUE] [1] [THRU] [4] [*]</b>	Changes channel 1 through 5 levels in cues 1 through 4, adding channels that are not already in the cues.
<b>[2] [6] [THRU] [2] [8] [UPDATE] [CUE] [1] [THRU] [5] [*]</b>	Chans 26 > 28 are added to cues 1 > 5
<b>[2] [6] [THRU] [2] [8] [UPDATE] [CUE] [1] [THRU] [5] [@] [5] [*]</b>	Chans 26 thru 28 are added to cues 1 thru 5 at 50%
<b>[2] [6] [THRU] [2] [8] [UPDATE] [CUE] [1] [THRU] [5] [@] [*]</b>	Chans 26 thru 28 are removed from cues 1 thru 5
<b>[2] [6] [THRU] [2] [8] [UPDATE] [CUE] [1] [THRU] [5] {FROM} [5] [@] [6] [*]</b>	Chans 26 thru 28 in cues 1 thru 5 at 50% are set to 60%
<b>[1] [THRU] [5] [@] [LIVE] [*]</b>	When in Preview Screen will update the current cue to the levels of channels 1 to 5 in the Live Screen, adds channels not already in the cue
<b>[CUE] [1] [@] [LIVE] [*]</b>	When in Preview Screen Selects channels already in Cue 1 and updates their level to the level in the Live Screen

**Notes** To clear the “changed” indicator and set red channel levels back to cyan, press **[SHIFT] [CLEAR]**.

# Cues and X Playbacks

## (Direct Action Mode)

### Recording Cues (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
[RECORD]	Records o/p to currently selected cue or part.
[CUE] [RECORD]	Records o/p to currently selected cue
[CUE] [1] [RECORD]	Records o/p to cue 1.
[CUE] [1] {INTS ONLY} [RECORD]	Records cue 1 with intensity levels and erases attribute levels.(530 and 550 Consoles only)
[CUE] [1] {ATTS ONLY} [RECORD]	Records cue 1 with attribute levels and erases intensity levels.(530 and 550 Consoles only)
[CUE] [1] [REC MODE] {INTS ONLY} [RECORD]	Records cue 1 with intensity levels and erases attribute levels.(520 and 300 Series Consoles)
[CUE] [1] [REC MODE] {ATTS ONLY} [RECORD]	Records cue 1 with attribute levels and erases intensity levels.(520 and 300 Series Consoles)
[CUE] [1] [PART] [2] [RECORD]	Records selected edit cue part to cue 1 part 2
[CUE] [1] {PART} [8] [RECORD]	Records cue 1 part 8 from o/p.
[REC-SUB]	Records current cue excluding submaster and fx channels
[CUE] [1] [REC-SUB]	Records cue 1 excluding submaster and fx channels
[1] [+] [2] [THRU] [5] [CUE] [RECORD]	Records chans 1+2>5 in current cue.

<b>[1] [CUE] {PART} [2] [RECORD]</b>	Records chan 1 in part 2 of the current cue. If the channel is already in part 1, the change is moved to part 2.
<b>[1] [+] [2] [THRU] [5] [CUE] [1] [RECORD]</b>	Records chans 1+ 2 > 5 in cue 1.
<b>[CUE] [+] [1] [RECORD]</b>	Records cue 1 as a move if not Tracking else block fade
<b>[CUE] [1] [TIME] [4] [RECORD]</b>	Records cue 1 with up/down fade times of 4secs
<b>[CUE] [1] [0] [0] [TIME] [*] [*]</b>	Records empty cue 100 if cue 100 did not exist. On Live screen only
<b>[CUE] [1] [TIME] {OFF/MAN} [RECORD]</b>	Records cue 1 with manual times
<b>[CUE] [1] [TIME] [4] [/] [5] [RECORD]</b>	Records cue 1 with split fade times.
<b>[CUE] [1] [TIME] {DELAY} [4] [/] [5] [RECORD]</b>	Records cue 1 with split delay times.
<b>[CUE] [1] [TIME] {WAIT} [4] [RECORD]</b>	Records cue 1 with wait time.
<b>[CUE] [1] [WAIT] [4] [RECORD]</b>	Records cue 1 with wait time.
<b>[CUE] [1] [@ATT] [TIME] [4] [RECORD]</b>	Records cue 1 with attribute fade time.
<b>[CUE] [1] {INTS ONLY} [RECORD]</b>	Records cue 1 with intensity channels only.
<b>[CUE] [1] {ATTS ONLY} [RECORD]</b>	Records cue 1 with attribute channels only.
<b>[CUE] [1] {BLOCK CUE} [RECORD]</b>	Records cue 1 as block cue
<b>[CUE] [1] {MOVE FADE} [RECORD]</b>	Records cue 1 as move fade
<b>[CUE] [1] {CROSS FADE} [RECORD]</b>	Records cue 1 as cross fade
<b>[CUE] [1] {ALL FADE} [RECORD]</b>	Records cue 1 as all fade
<b>[CUE] [1] [Q ONLY/TRACK] [RECORD]</b>	Records cue 1 with/without tracking.

[CUE] [9] {LINK} [CUE] [1] [RECORD]	Records cue 9 linked to cue 1
[CUE] [9] {LINK} [CUE] [.] [RECORD]	Records cue 9 return from link.
[CUE] [1] [0] {LOOP} [2] [RECORD]	Records cue 1 with loop count of 2
[CUE] [1] [PB] [2] [RECORD]	Records cue 1 assigned to playback 2.
[CUE] [1] [FX] [+] [4] [RECORD]	Records cue 1 to start effect 4.
[CUE] [1] [FX] [-] [4] [RECORD]	Records cue 1 to stop effect 4.
[CUE] [1] [MACRO] [6] [RECORD]	Records cue 1 to run macro 6.
[CUE] [1] [TEXT] hello [RECORD]	Records cue 1 with text hello
[CUE] [1] [PROFILE] [6] [RECORD]	Records cue 1 using profile 6 on up & down fades
[CUE] [1] [PROFILE] [6] [/] [7] [RECORD]	Records cue 1 using profile 6 on up fades and profile 7 on down fades.
[CUE] [1] [PB] [2] [RECORD]	Records levels into cue 1 and assigns it to Playback 2.
[CUE] [1] [PB] [RECORD]	Records levels into cue 1 and deletes any assignment.
[UNDO] [RECORD]	Undo record command
[SHIFT] [RECORD]	= [REC-SUB]

Summary	
[CUE] [1] [PART 2] [record_option] [TIME] [3] [/] [4] [DELAY] [5] [/] [6] [WAIT] [7] [RECORD]	<b>record options:</b> One of these per command (all may be used in successive commands): BLOCK CUE, MOVE FADE, CROSS FADE, ALL FADE PLAYBACK [n], MACRO [n], FX [-] [n], LINK [n], LOOP [n]

## Editing Cues (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
[SHIFT] Trackball movement	Changes fields in Preview displays from Yellow (non-editable) to Green (editable), enabling fields to be selected using the rollball (or mouse) and the level wheel, [+] or [-] keys or numeric keypad to set field values.
[*]	Returns fields in the Cue Preview displays to the non-editable mode (Yellow)
[CUE] [1] [*]	Select cue 1 for edit, create if absent & copy levels from preceding cue (At cue preview edit display only)
[CUE] [CUE]	Selects Cue Part. Same as [CUE] {PART}
{DELETE}	Delete selected cue or part
[CUE] {DELETE}	Delete current cue (all parts)
[CUE] [2] {DELETE}	Delete cue 2 if present (all parts)
[CUE] [2] [PART] [3] {DELETE}	Delete cue 2 part 3 if present
[CUE] [2] [Q ONLY/TRACK] {DELETE}	Delete cue 2 if present (all parts), to prevent channels tracking to the next cue
[CUE] [1] [.] [1] [THRU] [1] [.] [3] {DELETE}	Delete cues 1.1, 1.2 and 1.3 if present (all parts)
{RENUM}	Renumber all cues
[CUE] [1] {FROM} [7] {RENUM}	Renumber cues 1 onwards [starting the new range from cue 7]
[CUE] [1] [.] {FROM} [7] {RENUM}	Renumber cues 1 onwards starting the new range from cue 7, keeping point cues
[CUE] [2] [@] {COPYFROM} [CUE] [1] [Q ONLY/TRACK] [*]	Copy cue 1 to cue 2, all parts, or rename cue 1 to cue 2 if no intervening cues.

## Modifying Cues (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
<p>[CUE] [1] [TIME] [4] [RECTIME]  [CUE] [1] [TIME] [4] [*]  [TIME] [4] *</p>	<p><b>Cue channels are not changed.</b>  <b>Where TEXT value etc. is omitted, the value is deleted from the cue or defaulted.</b>  <b>The current cue is used if the CUE number is omitted.</b></p> <p>Modify cue 1 up/down fade times</p>
<p>[CUE] [1] [DELAY] [4] [RECTIME]  [CUE] [1] [DELAY] [4] [*]  [DELAY] [4] [*]</p>	<p>Modify cue 1 up/down delay times</p>
<p>[CUE] [1] [WAIT] [4] [RECTIME]  [CUE] [1] [WAIT] [4] [*]  [WAIT] [4] *</p>	<p>Modify cue 1 wait time</p>
<p>[CUE] [1] {PART} [4] [TIME] [4]  [RECTIME]  or  [CUE] [1] {PART} [4] [TIME] [4] [*]</p>	<p>Modify cue part fade time</p>
<p>[CUE] [1] [TIME] [4] [/] [5]  [RECTIME]  or  [CUE] [1] [TIME] [4] [/] [5] [*]</p>	<p>Modify cue split fade time</p>
<p>[CUE] [1] [TIME] [DELAY]  [4] [/] [5] [RECTIME]  or  [CUE] [1] [TIME] [DELAY]  [4] [/] [5] [*]</p>	<p>Modify cue split delay time</p>

[CUE] [1] [TIME] [WAIT] [4] [RECTIME] or [CUE] [1] [TIME] [WAIT] [4] [*] or [CUE] [1] [TIME] [WAIT] {OFF/ MAN}	Modify cue wait time
[CUE] [1] [@ATT] [TIME] [4] [*]	Modify cue attribute fade time
[CUE] [1] {MOVE FADE} [*]	Modify cue 1 to move fade.
[CUE] [1] {CROSS FADE} [*]	Modify cue 1 to cross fade cue.
[CUE] [1] {BLOCK CUE} [*]	Modify cue 1 to blocking cue.
[CUE] [1] {ALL FADE} [*]	Modify cue 1 to all fade cue.
[CUE] [1] {LINK} [1] [*]	Modify cue 1 as linked to cue 1
[CUE] [1] {LINK} [CUE] [. ] [*]	Modify cue 1 as return from link
[CUE] [1] {LOOP} [2] [*]	Modify cue 1 to loop count of 2
[CUE] [1] [PB] [2] [*]	Modify cue playback assignment
[CUE] [1] [FX] [-] [4] [*]	Modify cue effect link
[CUE] [1] [MACRO] [6] [*]	Modify cue macro link
[CUE] [1] [TEXT] hello [*]	Modify cue text annotation
[CUE] [1] [PROFILE] [6] [/] [7] [*]	Modify cue profile use
[CUE] [1] [@ATT] [PROFILE] [5] [*]	Modify cue attribute profile

## Using the Cue Playbacks (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
[GO]	Restart halted or reversed fade, else, run cue loaded into playback preview.
[CUE] [0] [GO]	Cue 0 is a read-only cue and contains all Intensity Channels at zero level (AttChans unchanged).
[CUE] [1] [GO]	Load cue 1 on X, run using programmed times



[CUE] [1] [TIME] [5] [/] [6] [GO]	Load cue 1 using these split times, and run
[CUT]	Run preview cue on X using <a href="#">X Back, Cut</a> setup time
[STOP/BACK]	<b>1st press:</b> Stop all fades on X selected playback <b>2nd press:</b> Reverse previous fades to 0% complete <b>3rd press:</b> Reverse previous cue using <a href="#">X Back, Cut</a> setup time
[GOTO] [CUE] [6] [*]	Goto cue 6 in recorded times (no wait time or Fx or macro)
[GOTO] [CUE] [6] [TIME] [6] [/] [7] [*]	Goto cue 6 in these times (no wait time or Fx or macro)
[GOTO] [CUE] [6] [PB] [2] [*]	Goto cue 6 on playback 2 (no wait time or Fx or macro)
[CUE] [0] [CUT]	Run blackout cue on X Playback using <a href="#">X Back, Cut</a> setup time
[CUE] [1] [TIME] [5] [CUT]	Cut to cue 1 in these times (no wait time)
[LOAD]	Load current cue on X
[CUE] [1] [LOAD]	Load cue 1 on X Playback
[CUE] [1] [TIME] [5] [LOAD]	Load cue 1 on X using these times
{RATE} (See below for 300 Series Consoles)	Puts all fades on a playback under Rate Wheel control
{UNRATE}	Removes all fades on a playback from Rate Wheel control
{UPRATE}	Sets the rate wheel to control the up fade rate when under rate wheel control
{DOWNRATE}	Sets the rate wheel to control the down fade rate when under rate wheel control

Rate control of cue fades using the level wheel - 300 Series Consoles only

[RATE] key 1st Press	Up and Down Fade under level wheel control- Both LEDs illuminated
[RATE] key 2nd Press	Up only Fade - Up only LED illuminated
[RATE] key 3rd Press	Down only fade - Down only LED illuminated

[RATE] key 4th Press

Unrate - Both Up and Down LEDs  
extinguished

## Viewing Playback Previews (All Modes)

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence	
[PB] [1] [*]	View playback 1 preview
[PB] [2] [*]	View playback 2 preview

## Automod (All Modes)

### Setting Up Automod

Key Sequence	Action
[8] {A-MOD FROM} [3] [*]	Sets channel 3 at its current levels to be replaced by channel 8. (All Modes)
[8] {A-MOD FROM} [3] [@] [8] [*]	Sets channel 3 to be replaced by channel 8 at an absolute level of 80% on an htp basis (Direct 1 Digit Mode} For Direct 2 Digit mode, 80% must be entered as 80.
[8] {A-MOD FROM} [3] [THRU] [5] [*]	Sets channels 3 to 5 to be replaced by channel 8
[6] [THRU] [8] {A-MOD FROM} [5] [*]	Sets channel 5 to be replaced by channels 6 to 8 (All Modes }

**Note:** When an intensity channel is paired in automod, all associated attribute channels are automatically paired.

You can Automod a channel to itself. This would provide the opportunity to apply a scaling factor to the channel

Key Sequence	Action
[6] {A-MOD FROM} [6] [+] [3] [*]	Sets the intensity of channel 6 up 30% in all cues, subs, groups and effects. Note: For Direct 2 Digit mode, 30% must be entered as 80.

---

## Activating/De-activating AutoMod

Key Sequence	Action
{AUTOMOD ON}	Activates the AutoMod settings. 'Using <b>Automod</b> ' warning is displayed in Status Window
{AUTOMOD OFF}	If AutoMod is activated, pressing this key will return control to the normal pairing and remove the 'Using <b>AutoMod</b> ' warning.

---

## Customising the Auto-Mod Screen

Key Sequence	Action
{SOURCE ORDER}	Displays the paired channels in source order
{DEST ORDER}	Displays the paired channels in destination order

**Note:** where more than one destination channel is paired to a source channel and the display is in destination order, duplicate destination channels are shown in black. Similarly, if more than one source channel is paired to a destination channel and the display is in source order, the duplicate source channels are shown in black.

---

## Deleting Auto-Mod Channels

Key Sequence	Action
--------------	--------

[3] {DELETE} [*]	Deletes the destination channel 3 (All Modes)
{AUTOMOD FROM} [3] {DELETE} [*]	Deletes source channel 3
{DELETE} {DELETE}	Deletes all paired channels from the Auto-Mod Screen

**Note:** Where only one destination channel is paired to one source channel, deleting the destination channel will clear the source channel from the display (source channel no longer paired in automod). Where more than one destination channel is paired to a source channel and one of the destination channels is deleted, the remaining destination channel(s) will remain paired to the source channel. You cannot delete source channels from the Automod Screen.

## Updating the Show from the Auto-Mod Screen

You can permanently update cues, subs, groups or effects from the Live Screen to incorporate the pairing shown on the screen.

Key Sequence	Action
[UPDATE] {UPDATE AUTOMOD} [CUE] [1] [THRU] [8] [*]	Updates cues 1 to 8 from the Auto-Mod Screen
[UPDATE] {UPDATE AUTOMOD} [SUB] [2] [THRU] [4] [*]	Updates submaster 2 to 4 from Auto-Mod Screen
[UPDATE] {UPDATE AUTOMOD} [GROUP] [3] [*]	Updates group 3 from the Auto-Mod Screen
[UPDATE] {UPDATE AUTOMOD} [FX] [5] [*]	Updates effect 5 from the Auto-Mod Screen

## Effects

### (Command Line Mode)

#### Recording Effects (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
	<b>You can use these commands from just about any display</b>
<b>[RECORD] [FX] [1] [.] [1] [*]</b>	Records all chans from the current Levels screen into FX 1 Step 1 from any display.
<b>[RECORD] [FX] [.] [2] [*]</b>	Records all chans in current FX Step 2
<b>[RECORD] [FX] [SHIFT] [NEXT] [*]</b>	Records all chans in next numeric FX step
<b>[REC-SUB] [FX] [1] [.] [1] [*]</b> or <b>[SHIFT] [RECORD] {FX} [1] [.] [1] [*]</b> (300 Series Consoles)	Records non-submaster and fx chans in FX 1 Step 1
<b>[REC-SUB] [FX] [.] [2]</b> <b>[SHIFT] [RECORD] [FX] [.] [2]</b> (300 Series Consoles)	Records non-submaster and fx chans in current FX Step 2
<b>[DEFLT]</b>	Resets the selected edit field in the current step to use the whole-FX default
<b>[RECORD] [FX] [1] [.] [2] [TIME] {STEP TIME}[.] [3] [*]</b>	Records FX 1 step 2 with step time for that step of 0.3s
<b>[RECORD] [FX] [1] [.] [2] [TIME] {STEP/D/O}[.] [2] [/] [.] [2] [/] [.] [2] [*]</b>	Records FX 1 step 2 with step fade times of in = 0.2, dwell = 0.2, out = 0.2. Times omitted before each / are unchanged. All blank times after last / are defaulted.

[RECORD] [FX] [1] [.] [2] [@ATT] [TIME] [3] [*]	Records FX 1 step 2 with attribute fade in time of 3s
[RECORD] [FX] [1] [.] [2] {LO/HI LEVEL}[4] [0] [/] [8] [0] [*]	Records FX 1 step 2 with low level of 40% and high level of 80%.
[UNDO] [RECORD]	Undo record command
[SHIFT] [RECORD]	= [REC-SUB]

## Editing Effects (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

At Effects display:	Only edited at Fx sheet (with the selection bar on an Fx number).
<b>Key Sequence</b>	<b>Action</b>
[FX] [1] [.] [2] [*]	Select Fx 1 1st step [or step 2] for edit, create step if absent
[DELETE] [*] [*] [DELETE] [DELETE] [DELETE]	Delete selected step
[FX] [1] [.] [2] {DELETE} {DELETE}	Deletes effect 1 step 2.
[FX] [1] [.] [2] [THRU] [3] [.] [4] {DELETE} {DELETE}	Deletes effect 1 step 2 through effect 3 step 4.
{APPEND STEP}	Appends blank step after last step
[FX] [2] [@] {COPYFROM} [FX] [1] [*]	Copy all steps from effect 1 to effect 2
[DELETE] [1] [.] [2] [*]	Delete step 1.2 if present
[DELETE] [1] [.] [1] [THRU] [1] [.] [3] [*]	Delete steps 1.1, 1.2 and 1.3 if present
[DELETE] [.] [4] [*]	Delete step 4 in current Fx

## Modifying Effects (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

At Fx preview only:	<b>Step channels are unchanged. The FX or step number may be [omitted] to use the current FX. Where the TEXT etc. value is [omitted], it is deleted from the FX, or defaulted.</b>
Key Sequence	Action
[SHIFT] Trackball movement	Changes fields in Effect Preview displays from Yellow (non-editable) to Green (editable), enabling fields to be selected using the rollball (or mouse) and the level wheel, [+ ] or [- ] keys or numeric keypad to set field values.
[*]	Returns fields in the Effect Preview displays to the non-editable mode (Yellow)
[FX] [1] [TEXT] hello [*]	Sets FX 1 text to hello
[FX] [1] [PROFILE] [3] [*]	Sets FX 1 overall fade profiles to 3
[FX] [1]{NEXT FX} [2] [*]	Sets FX 1 follow-on FX to Fx 2
[FX] [1] {STEP CTR} {AUDIO} [*]	Sets FX 1 step control to Audio (500 Series Consoles only)
[FX] [1] {STEP CTR} {TIMED} [*]	Sets FX 1 step control to Timed
[FX] [1] {STEP CTR} {MIDI} [*]	Sets FX 1 step control to MIDI
[FX] [1] {STEP CTR} {MANUAL} [*]	Sets FX 1 step control to Manual
[FX] [1] [FX TYPE] {CHASE} [*] **	Sets FX 1 type to chase
[FX] [1] [FX TYPE] {BUILD} [*] **	Sets FX 1 type to build
[FX] [1] [FX DIR] {FWD} [*] **	Sets FX 1 direction to forward
[FX] [1] [FX DIR] {REV} [*] **	Sets FX 1 direction to reverse
[FX] [1] [FX DIR] {BOUNCE} [*] **	Sets FX 1 direction to bounce
[FX] [1] [FX DIR] {RANDOM} [*] **	Sets FX 1 direction to random
[FX] [1] {STOP AFTER} [FXLOAD] [*] **	Sets FX 1 to stop only after next Fx loaded

<b>[FX] [1] {STOP AFTER} [1] [2] [*]</b>	Sets FX 1 to stop after 12 complete cycles
<b>[FX] [1] {STOP AFTER}[TIME] [1] [2] [*]</b>	Sets FX 1 to stop after 12 seconds
<b>[FX] [1] {STOP AFTER} [SUB] [*]</b>	Sets FX 1 to stop when the submaster fader it is attached to is brought to 0%
<b>[FX] [1] {STOP AFTER} [.] [*]</b>	Sets FX 1 to stop when the last step is run after the FXSTOP key is pressed
<b>[FX] [1] {LEVEL} [RANDOM] [*]</b>	Sets FX 1 intensity type for all steps to Random
<b>[FX] [1] {LEVEL} [NORMAL] [*]</b>	Sets FX 1 intensity type for all steps to Normal
<b>[FX] [1] {LEVEL} [NEGATIVE] [*]</b>	Sets FX 1 intensity type for all steps to Negative
<b>[FX] [1] {LEVEL} [NORM/NEG] [*]</b>	Sets FX 1 intensity type for all steps to Normal/Negative
<b>[FX] [1] {LEVEL} [NEG/NORM] [*]</b>	Sets FX 1 intensity type for all steps to Negative/Normal
<b>[FX] [1] [TIME] [1] [*]</b>	Sets FX 1 overall intensity fade in/out times to 1s.
<b>[FX] [1] [TIME] [3] [/] [2] [*]</b>	Sets FX 1 overall intensity fade in/out times to 3 and 2secs respectively.
<b>[FX] [1] [TIME] [3] [/] [*]</b>	Sets FX 1 overall intensity fade in time to 3s.
<b>[FX] [1] [TIME] [/] [2] [*]</b>	Sets FX 1 overall intensity fade out time to 2s.
<b>[FX] [1] [.] [2] [TIME] {STEP TIME} [.] [3] [*]</b>	Sets FX1 step 2 Step Time to 0.3sec.
<b>[FX] [1] [.] [2] [TIME] {STEP I/D/O} [*]</b>	Sets FX 1 step fade times for step 2 to in = 0, dwell = OFF, out = 0.
<b>[FX] [1] [.] [2] [TIME] {STEP I/D/O} [.] [2] [/] [.] [3] [/] [.] [2] [*]</b>	Sets FX 1 step fade times for step 2 only to in = 0.2, dwell = 0.3, out = 0.2.
<b>[FX] [1] [.] [2] [TIME] {STEP I/D/O} [.] [2] [/] [/] [.] [2] [*]</b>	Sets FX 1 step fade times for step 2 to in = 0.2, out = 0.2.



[FX] [1] [.] [2] [TIME] {STEP I/D/O} [/] {OFF/MAN} [*]	Sets FX 1 step fade times for step 2 to dwell = OFF
[FX] [1] [.] [2] [@ATT] [TIME] [*]	Sets FX 1 overall attribute fade in time for step 2 to 0s
[FX] [1] [.] [2] [@ATT] [TIME] [3] [*]	Sets FX 1 overall attribute fade in time for step 2 to 3s
[FX] [1] [.] [2] {LO/HI LEVEL} [*]	Sets FX 1 low and high levels for step 2 to 0% and 100%
[FX] [1] [.] [2] {LO/HI LEVEL} [4] [*]	Sets FX 1 low level only for step 2 to 40%
[FX] [1] [.] [2] {LO/HI LEVEL} [4] [/] [8] [*]	Sets FX 1 low and high levels for step 2 to 40% and 80%
[FX] [1] [.] [2] {LO/HI LEVEL} [/] [1] [0] [0] [*]	Sets FX 1 high level only for step 2 to 100%

**Note:** The Effect Mode field on all consoles and actions caused by key sequences indicated with \*\* (300 Series Consoles) can only be changed using the trackball to select the field and the level wheel or [+ ] or [- ] keys to select the option.

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## Copying Levels from an Effect Step (Command Line Mode)

Key Sequence	Action
[RECORD] [SUB] [2] [*]	Records levels in current effect step to submaster 2
[RECORD] [CUE] [4] [*]	Records levels in current effect step to cue 4
[RECORD] [FX] [3] [.] [4] [*]	Records levels in current effect step to effect 3 step 4

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## Using the Effect Playbacks (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
<b>[FXSEL]</b> (500 Series Consoles only)	Select next Fx Pb
<b>[SHIFT] [FXSEL]</b> (500 Series Consoles only)	Select previous Fx Pb
<b>[FX GO]</b> <b>[FX STOP]</b>	Starts/Stops selected Pb and fades In/Out. Always starts from step 1
<b>[FX] [1] [FX GO]</b>	If effect 1 is already loaded, this selects that playback then starts it. Otherwise it selects the first unloaded Playback (if any), loads it with effect 1 and starts it.
<b>[FX] [1] [PB] [2] [FX GO]</b>	Loads effect 1 onto playback 2 and starts it.
<b>[FX] [PB] [2] [FX GO]</b>	Loads the current effect onto playback 2 and starts it.
<b>[FX PAUSE]</b>	Stops/restarts selected Pb without fading In/Out
<b>[FX] [1] [FX PAUSE]</b>	If effect 1 is already loaded, selects that playback then pauses or restarts it. If effect 1 has never been started and paused, this command is ignored. If effect 1 is not loaded, selects the first unloaded playback (if any) and loads it with effect 1
<b>[FX] [PB] [2] [FX PAUSE]</b>	If playback 2 is loaded, selects the playback and then pauses or restarts it. If the playback is not loaded, loads the current effect onto the playback.
<b>[FX] [1] [PB] [2] [FX PAUSE]</b>	If effect 1 is loaded on playback 2, selects then pauses or releases it. If effect 1 is not loaded on playback 2, selects playback 2 and loads it with effect 1
<b>[FX STEP]</b>	Manually moves to the next effect step, if the Step Control field is set to Manual.
<b>[FX TYPE]</b>	Selects next Fx Type (via soft menu)

<b>[FX DIR]</b>	Selects next Fx Direction (via soft menu)
<b>[FX TIME] {STEP RATE}</b> (500 Series Consoles only)	Adjusts step time on rate wheel.
<b>[FX TIME] {FX RATE}</b> (500 Series Consoles only)	Adjusts fade time on rate wheel.
<b>[FX LOAD] [FX] [0] [*]</b> (500 Series Consoles only)	Unload currently selected Fx PB
<b>[FX LOAD] [FX] [1] [*]</b> (500 Series Consoles only)	Load Fx 1 onto 1st free Fx Pb
<b>[FX LOAD] [PB] n [*]</b> (500 Series Consoles only)	Load current Fx onto Fx Pb n
<b>[FX SEL]</b> (500 Series Consoles only)	Selects the next higher numbered playback as the current playback.
<b>[SHIFT] [FX SEL]</b> (500 Series Consoles only)	Selects the next lower numbered playback as the current playback.
<b>[FX] [1] [FX SEL]</b> (500 Series Consoles only)	If effect 1 is already loaded, selects that Playback as the current playback. Otherwise, selects the first unloaded Playback and loads it with effect 1
<b>[FX] [PB] [1] [FX SEL]</b> (500 Series Consoles only)	If the current effect is already loaded on playback 1, selects it as the current playback. Otherwise selects playback 1 and loads it with the current effect.
<b>[FX] [1] [PB] [2] [FX SEL]</b> (500 Series Consoles only)	If effect 1 is already loaded on playback 2, selects it as the current playback. Otherwise selects playback 2 and loads it with effect 1

**Note:** To load and run an effect on a 300 Series console, press **[FX] # [FX GO]**. This will load the effect on the next available effect playback and start the effect running. To load an effect without running the effect, you can simulate the **[FX LOAD]** key using the PC key command (**Alt 4**)

## Updating Effects (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
[UPDATE] [TIME] [FX] [1] [*]	Updates FX 1 with playback times and types
[1] [THRU] [5] [@] [LIVE] [*]	Updates the levels of channels 1 to 5 in the current effect step to the levels in the Live Screen (on stage). If any of the selected channels are not already in the effect step, they are added to the effect step.

## Stopping and Unloading an Effect (Command Line Mode)

Key Sequence	Action
[FX LOAD] [0] [PB] [2] [*] (500 Series only)	Selects playback 2 and unloads the effect from it (if any).
[FX LOAD] [0] [*] [FX LOAD] [0] [FXGO] (500 Series only)	Unloads all effects from all playbacks.
[FX STOP] [FX] [1] [PB] [2] [*]	Stops and unloads effect 1 from Playback 2

You can also stop and unload all effects from all playbacks using the syntax:

**[FX] [0] [FX GO]** *All Modes*

The following alternative commands apply to 500 series consoles.

**[FX] [0] [PB] [2] [FX LOAD]** *Direct Entry 1 and 2 Digit*

**[FX LOAD] [0] [PB] [2] [\*]** *Command Line*

Selects playback 2 and unloads the effect from it (if any).

**[FX] [0] [FX LOAD]** *Direct Entry 1 and 2 Digit*

**[FX LOAD] [0] [\*] Command Line**

Unloads all effects from all playbacks.

**[FX LOAD] [0] [PB] [2] [\*] Direct Entry 1 and 2 Digit**

Selects playback 2 and unloads the effect from it (if any)..

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## Effects

### (Direct Action Modes)

#### Recording Effects (Direct Action Modes)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
[FX] [1] [.] [1] [RECORD]	Records all chans in FX 1 Step 1
[FX] [.] [2] [RECORD]	Records all chans in current FX Step 2
[FX] [SHIFT] [NEXT] [RECORD]	Records all chans in next numeric FX step
[FX] [1] [.] [1] [REC-SUB]	Records non-submaster and fx chans in FX 1 Step 1
[FX] [.] [2] [REC-SUB]	Records non-submaster and fx chans in current FX Step 2
[FX] [1] [.] [1] [RECORD]	Copies selected edit FX step to FX 1 Step 1 from Fx preview display.
[1] [+] [2] [@] [6] [FX] [1] [.] [2] [RECORD]	Records chans 1+2 @ 60% in FX 1 step 2
{DEFLT}	Resets the selected edit field in the current step to use the whole-FX default
[FX] [1] [.] [2] [TIME] {STEP TIME} [.] [3] [RECORD]	Records FX 1 step 2 with step time for that step of 0.3secs
[FX] [1] [.] [2] [TIME] {STEP I/D/O} [.] [2] [/] [.] [2] [/] [.] [2] [RECORD]	Records FX 1 step 2 with step fade times of in=0.2, dwell=0.2, out=0.2. Times omitted before each / are unchanged. All blank times after last / are defaulted.
[FX] [1] [.] [2] [@ATT] [TIME] [3] [RECORD]	Records FX 1 step 2 with attribute fade in time of 3secs
[FX] [1] [.] [2] {LO/HI LEVEL} [4] [/] [8] [RECORD]	Records FX 1 step 2 with low level of 40% and high level of 80%.
[UNDO] [RECORD]	Undo record command
[SHIFT] [RECORD]	= [REC-SUB]

## Editing Effects (Direct Action Modes)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

At Effect display	Only edited at Fx sheet (with the selection bar on an Fx number).
Key Sequence	Action
[FX] [1] [.] [2] [RECORD]	Copies the current step to effect 1 step 2.
[FX] [1] [.] [2] [*]	Select Fx 1 1st step [or step 2] for edit, create step if absent
{DELETE} {DELETE} {DELETE} [*]	Delete selected step
[FX] [1] [.] [2] {DELETE} {DELETE}	Deletes effect 1 step 2.
[FX] [1] [.] [2] [THRU] [3] [.] [4] {DELETE} {DELETE}	Deletes effect 1 step 2 through effect 3 step 4.
{APPEND STEP}	Insert blank after last step.
[FX] [2] [@] {COPY FROM} [FX] [1] [*]	Copy all steps from effect 1 to effect 2
[FX] [1] [.] [2] {DELETE}	Delete step 1.2 if present
[FX] [1] [.] [1] [THRU] [1] [.] [3] {DELETE}	Delete steps 1.1, 1.2 and 1.3 if present

## Modifying Effects (Direct Action Modes)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

	<b>Step channels are unchanged. The FX or step number may be omitted to use the current FX. Where the TEXT etc. value is omitted, it is deleted from the FX, or defaulted</b>
<b>Key Sequence</b>	<b>Action</b>
<b>[SHIFT] Trackball movement</b>	Changes fields in Effect Preview displays from Yellow (non-editable) to Green (editable), enabling fields to be selected using the rollball (or mouse) and the level wheel, <b>[+]</b> or <b>[-]</b> keys or numeric keypad to set field values.
<b>[*]</b>	Returns fields in the Effect Preview displays to the non-editable mode (Yellow)
<b>[FX] [1] [TEXT] hello [*]</b>	Sets FX 1 to text hello
<b>[FX] [1] [PROFILE] [3] [*]</b>	Sets FX 1 overall fade profiles to 3
<b>[FX] [1] {NEXT FX} [2] [*]</b>	Sets FX 1 follow-on FX to Fx 2
<b>[FX] [1] {STEP CTRL} {AUDIO} [*]</b>	Sets FX 1 step control to Audio
<b>[FX] [1] {STEP CONTROL} {TIMED} [*]</b>	Sets FX 1 step control to Timed
<b>[FX] [1] {STEP CONTROL} {MIDI} [*]</b>	Sets FX 1 step control to MIDI
<b>[FX] [1] {STEP CONTROL} {MANUAL} [*]</b>	Sets FX 1 step control to manual
<b>[FX] [1] [FX TYPE] {CHASE} [*] **</b>	Sets FX 1 type to chase .
<b>[FX] [1] [FX TYPE] {BUILD} [*] **</b>	Sets FX 1 type to build.
<b>[FX] [1] [FX DIR] {FWD} [*] **</b>	Sets FX 1 direction to forward.
<b>[FX] [1] [FX DIR] {REV} [*] **</b>	Sets FX 1 direction to reverse
<b>[FX] [1] [FX DIR] {BOUNCE} [*] **</b>	Sets FX 1 direction to bounce
<b>[FX] [1] [FX DIR] {RANDOM} [*] **</b>	Sets FX 1 direction to random
<b>[FX] [1] {STOP AFTER} [FXLOAD] [*] **</b>	Sets FX 1 to stop only after next Fx loaded
<b>[FX] [1] {STOP AFTER} [1] [2] [*]</b>	Sets FX 1 to stop after 12 complete cycles
<b>[FX] [1] {STOP AFTER} [TIME] [1] [2] [*]</b>	Sets FX 1 to stop after 12 seconds



<b>[FX] [1] {STOP AFTER} [SUB] [*]</b>	Sets FX 1 to stop when the submaster fader it is attached to is brought to 0%
<b>[FX] [1] {STOP AFTER}[.] [*]</b>	Sets FX 1 to stop when the last step is run after the FXSTOP key is pressed
<b>[FX] [1] {LEVEL} [RANDOM] [*]</b>	Sets FX 1 intensity type for all to Random
<b>[FX] [1] {LEVEL} {NORMAL} [*]</b>	Sets FX 1 intensity type for all to Normal.
<b>[FX] [1] {LEVEL} {NEGATIVE} [*]</b>	Sets FX 1 intensity type for all to Negative.
<b>[FX] [1] {LEVEL} {NORM NEG} [*]</b>	Sets FX 1 intensity type for all to Normal/Negative
<b>[FX][1] {LEVEL} {NEG NORM} [*]</b>	Sets FX 1 intensity type for all to Negative/Normal
<b>[FX] [1] [TIME] [1] [*]</b>	Sets FX 1 both overall intensity fade in/out times to 1sec.
<b>[FX] [1] [TIME] [3] [/] [2] [*]</b>	Sets FX 1 overall intensity fade in/out times to 3/2secs.
<b>[FX] [1] [TIME] [3] [/] [*]</b>	Sets FX 1 overall intensity fade in time to 3secs.
<b>[FX] [1] [TIME] [/] [2] [*]</b>	Sets FX 1 overall intensity fade out time to 2secs.
<b>[FX] [1] [.] [2] [TIME] {STEP TIME} [.] [3] [*]</b>	Sets FX 1.2 step time for step 2 to 0.3secs
<b>[FX] [1] [.] [2] [TIME] {STEP I/D/O} [*]</b>	Sets FX 1.2 step fade time for step 2 to in=0, dwell=forever, out=0.
<b>[FX] [1] [.] [2] [TIME] {STEP I/D/O} [.] [2] [/] [.] [3] [/] [.] [2] [*]</b>	Sets FX 1.2 step fade times for step 2 to in=0.2, dwell=0.3, out=0.2.
<b>[FX] [1] [.] [2] [TIME] {STEP I/D/O} [.] [2] [/] [/] [.] [2] [*]</b>	Sets FX 1.2 step fade times for step 2 to in=0.2, out=0.2.
<b>[FX] [1] [.] [2] [TIME] {STEP I/D/O} [*]</b>	Sets FX 1.2 step fade times to default value
<b>[FX] [1] [.] [2] [TIME] {STEP I/D/O} [.] [2] [/] [.] [2] [/] [.] [2] [*]</b>	Sets FX 1 step fade times for step 2 to in=0.2, dwell=0.2, out=0.2. Times omitted before each / are unchanged. All blank times after last / are defaulted
<b>[FX] [1] [.] [2] [@ATT] [TIME] [*]</b>	Sets FX 1 attribute fade in time for step 2 to 0sec

[FX] [1] [.] [2] [@ATT] [TIME] [3] [*]	Sets FX 1 attribute fade in time for step 2 to 3sec
[FX] [1] [.] [2] {LO/HI LEVEL} [*]	Sets FX 1 low and high levels for step 2 to 0% and 100%
[FX] [1] [.] [2] {LO/HI LEVEL} [4] [*]	Sets FX 1 low level only for step 2 to 40%
[FX] [1] [.] [2] {LO/HI LEVEL} [4] [/] [8] [*]	Sets FX 1 low and high levels for step 2 to 40% and 80%
[FX] [1] [.] [2] {LO/HI LEVEL} [/] [1] [0] [0] [*]	Sets FX 1 high level for step 2 to 100%

**Note:** The Effect Mode field (all consoles) and actions caused by key sequences indicated with \*\* (300 Series Consoles) can only be changed using the trackball to select the field and the level wheel or **[+]** or **[-]** keys to select the option.

## Copying Levels from an Effect Step (Direct Action Modes)

Key Sequence	Action
[SUB] [2] [RECORD]	Records levels in current effect step to submaster 2
[CUE] [4] [RECORD]	Records levels in current effect step to cue 4
[FX] [3] [.] [4] [RECORD]	Records levels in current effect step to effect 3 step 4

## Using the Effects Playbacks (Direct Action Modes)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
[FXSEL] (500 Series Consoles only)	Select next Fx Pb
[SHIFT] [FXSEL] (500 Series Consoles only)	Select previous Fx Pb

<b>[FXGO]</b>	Starts selected Pb and fades In/Out Always starts from step 1
<b>[FX STOP]</b>	Stops selected Pb and fades In/Out
<b>[FX] [1] [FX GO]</b>	If effect 1 is already loaded, this selects that playback then starts it. Otherwise it selects the first unloaded Playback (if any), loads it with effect 1 and starts it.
<b>[FX] [1] [PB] [2] [FX GO]</b>	Loads effect 1 onto playback 2 and starts it.
<b>[FX] [PB] [2] [FX GO]</b>	Loads the current effect onto playback 2 and starts it.
<b>[FXPAUSE]</b>	Stops/restarts selected Pb without fading In/Out
<b>[FX] [1] [FX PAUSE]</b>	If effect 1 is already loaded, selects that playback then pauses or restarts it. If effect 1 has never been started and paused, this command is ignored. If effect 1 is not loaded, selects the first unloaded playback (if any) and loads it with effect 1
<b>[FX] [PB] [2] [FX PAUSE]</b>	If playback 2 is loaded, selects the playback and then pauses or restarts it. If the playback is not loaded, loads the current effect onto the playback.
<b>[FX] [1] [PB] [2] [FX PAUSE]</b>	If effect 1 is loaded on playback 2, selects then pauses or releases it. If effect 1 is not loaded on playback 2, selects playback 2 and loads it with effect 1
<b>[FXSTEP]</b>	Steps selected Pb
<b>[FX TYPE]</b>	Selects next Fx Type (via soft menu)
<b>[FX DIR]</b> (500 Series Consoles only)	Selects next Fx Direction (via soft menu)
<b>[FX TIME] {STEP RATE}</b> (500 Series Consoles only)	Adjusts step time on rate wheel.
<b>[FX TIME] {FX RATE}</b> (500 Series Consoles only)	Adjusts fade time on rate wheel.
<b>[FX LOAD] [FX] [0] [*]</b> (500 Series Consoles only)	Unload currently selected Fx PB

<b>[FX LOAD] [FX] [1] [*]</b> (500 Series Consoles only)	Load Fx 1 onto 1st free Fx Pb
<b>[FX LOAD] [PB] n [*]</b> (500 Series Consoles only)	Load current Fx onto Fx Pb n
<b>[FX SEL]</b> (500 Series Consoles only)	Selects the next higher numbered playback as the current playback.
<b>[SHIFT] [FX SEL]</b> (500 Series Consoles only)	Selects the next lower numbered playback as the current playback.
<b>[FX] [1] [FX SEL]</b> (500 Series Consoles only)	If effect 1 is already loaded, selects that Playback as the current playback. Otherwise, selects the first unloaded Playback and loads it with effect 1
<b>[FX] [PB] [1] [FX SEL]</b> (500 Series Consoles only)	If the current effect is already loaded on playback 1, selects it as the current playback. Otherwise selects playback 1 and loads it with the current effect.
<b>[FX] [1] [PB] [2] [FX SEL]</b> (500 Series Consoles only)	If effect 1 is already loaded on playback 2, selects it as the current playback. Otherwise selects playback 2 and loads it with effect 1

**Note:** To load and run an effect on a 300 Series console, press **[FX] # [FX GO]**. This will load the effect on the next available effect playback and start the effect running. To load an effect without running the effect, you can simulate the **[FX LOAD]** key using the ACII key command (**Alt 4**)

## Unloading an Effect (Direct Action Mode Modes)

Key Sequence	Action
<b>[FX LOAD] [0] [PB] [2] [*]</b> (500 Series Consoles only)	Selects playback 2 and unloads the effect from it (if any).
<b>[FX LOAD] [0] [*]</b> <b>[FX LOAD] [0] [FXGO]</b> (500 Series Consoles only)	Unloads all effects from all playbacks.
<b>[FX] [1] [PB] [2] [FX STOP]</b>	Stops and unloads effect 1 from Playback 2

## Updating Effects (Direct Action Modes)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

<b>Key Sequence</b>	<b>Action</b>
<b>[UPDATE] [TIME] [FX] [1]</b>	Updates FX 1 with playback times and types
<b>[1] [THRU] [5] [@] [LIVE]</b>	Updates the levels of channels 1 to 5 in the current effect step to the levels in the Live Screen (on stage). If any of the selected channels are not already in the effect step, they are added to the effect step.

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## Groups

### (Command Line Mode)

#### Recording Groups (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
[RECORD] [GROUP] [*]	Records o/p to currently selected group
[RECORD] [GROUP] [1] [*]	Records o/p to group 1 from any display
[RECORD] [GROUP] [1] [*]	Records selected edit group to group 1 from group preview display.
[RECORD] [GROUP] {INTS ONLY} [*]	Records the current group with intensity levels and erases attribute levels.
[RECORD] [GROUP] {ATTS ONLY}[*]	Records the current group with attribute levels and erases intensity levels.
[1] [+] [2] [RECORD] [GROUP] [1] [*]	Records chans 1+ 2 in group 1.
[RECORD] [GROUP] [1] {INTS ONLY} [*]	Records group 1 with intensity channels only.
[RECORD] [GROUP] [1] {ATTS ONLY} [*]	Records group 1 with attribute channels only.
[RECORD] [GROUP] [1] [TEXT] hello [*]	Records group 1 with text 'hello'.
[UNDO] [RECORD]	Undo record command
[SHIFT] [RECORD]	= [REC-SUB]

---

#### Using Referenced Groups (All Modes)

Key Sequence	Action
[1] [THRU] [4] [@]GROUP [3] {INTS ONLY} [*]	Sets channels 1 through 4 intensities only to the levels set in group 3.
[1] [THRU] [3] [@] [GROUP] [5] {ATTS ONLY} [*]	Sets channels 1 through 3 attributes only to the levels set in group 5. This command requires a Pentium processor (or better) and the Tracker software.

## Editing Groups (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
[GROUP] [1] [*]	Select group 1 for edit, create if absent
[DELETE] [*]	Delete selected group
[DELETE] [2] [*]	Delete group 2 if present
[DELETE] [1] [.] [1] [THRU] [1] [.] [3] [*]	Delete groups 1.1, 1.2 and 1.3 if present
[GROUP] [2] [@] {COPYFROM} [GROUP] [1] [*]	Copy group 1 to group 2

## Modifying Groups (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

	<b>Group channels are not changed. Where the TEXT value is [omitted], it is deleted from the group.</b>
Key Sequence	Action

<b>[SHIFT] Trackball movement</b>	Changes text field in Group Preview display from Yellow (non-editable) to Green (editable), enabling text to be selected using the rollball (or mouse) and new text to be entered from the external keyboard
<b>[*]</b>	Returns the text field in the Group Preview display to the non-editable mode (Yellow)
<b>[GROUP] [1] [TEXT] hello [*]</b>	Set group text to hello

## Updating Groups (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
<b>[UPDATE] [GROUP] [1] [*]</b> <b>[SHIFT] [GROUP] [1] [*]</b>	Updates levels that have been modified in group 1, excluding levels of channels that were not already in the group
<b>[GROUP] [7] [*] [UPDATE]</b> <b>[GROUP] [1] [*]</b>	First selects all of the channels in group 7, then updates their levels in group 1, excluding levels of channels that were not already in the submaster.
<b>[UPDATE]{ADD ALL} [GROUP] [1]</b> <b>[*]</b>	First selects all of the channels in group 7, then records their levels in group 1, including channels that are not already in the group 7.
<b>[1] [THRU] [5] [UPDATE] [GROUP]</b> <b>[*]</b>	Changes channel 1 through 5 levels in group 1, excluding channels that are not already in the group



<b>[1] [THRU] [5] [@] [LIVE] [*]</b>	When in the Group Screen, sets the levels of channels 1 to 5 in the currently selected Group to the levels in the Live Screen (levels on stage). If any of the channels are not already in the Group, they are added to the group
<b>[GROUP] [1] [@] [LIVE] [*]</b>	When in the Group Screen, selects the channels in Group 1 and sets them according to the levels in the Live Screen (on stage)

---

## Groups

### (Direct Action Mode)

#### Recording Groups (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
<b>[GROUP] [RECORD]</b>	Records o/p to currently selected group
<b>[GROUP] [1] [RECORD]</b>	Records o/p to group 1 from any display
<b>[GROUP] [1] [RECORD]</b>	Records selected edit group to group 1 from group preview display.
<b>[GROUP] {INTS ONLY} [RECORD]</b>	Records the current group with intensity levels and erases attribute levels.
<b>[GROUP] {ATTS ONLY} [RECORD]</b>	Records the current group with attribute levels and erases intensity levels.
<b>[1] [+] [2] [GROUP] [1] [RECORD]</b>	Records chans 1+2 in group 1.
<b>[GROUP] [1] {INTS ONLY} [RECORD]</b>	Records group 1 with intensity channels only.
<b>[GROUP] [1] {ATTS ONLY} [RECORD]</b>	Records group 1 with attribute channels only.
<b>[GROUP] [1] [TEXT] hello [RECORD]</b>	Records group 1 with text 'hello'.
<b>[UNDO] [RECORD]</b>	Undo record command
<b>[SHIFT] [RECORD]</b>	= <b>[UNDO] [RECORD]</b>

#### Editing Groups (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to

## Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
[GROUP] [1] [*]	Select group 1 for edit, create if absent
{DELETE}	Delete selected group
[GROUP] [2] {DELETE}	Delete group 2 if present
[GROUP] [1] [.] [1] [THRU] [1] [.] [3] {DELETE}	Delete groups 1.1, 1.2 and 1.3 if present
[GROUP] [2] [@] {COPY FROM} [GROUP] [1] [*]	Copy group 1 to group 2

---

**Modifying Groups (Direct Action Mode)**

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
	<b>Group channels are not changed. Where the TEXT value is omitted, it is deleted from the group.</b>
[SHIFT] Rollball or Mouse movement	Changes text field in Group Preview display from Yellow (non-editable) to Green (editable), enabling text to be selected using the rollball (or mouse) and new text to be entered from the external keyboard
[*]	Returns the text field in the Group Preview display to the non-editable mode (Yellow)
[GROUP] [1] [TEXT] hello [*]	Set group text to hello

---

**Updating Groups (Direct Action Mode)**

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
<b>[UPDATE] [GROUP] [1] [*]</b> <b>[SHIFT] [GROUP] [1] [*]</b>	Updates levels that have been modified in group 1, excluding levels of channels that were not already in the group.
<b>[GROUP] [7] [*] [UPDATE]</b> <b>[GROUP] [1] [*]</b>	First selects all of the channels in group 7, then updates their levels in group 1, excluding levels of channels that were not already in the submaster.
<b>[UPDATE]{ADD ALL} [GROUP] [1]</b> <b>[*]</b>	Updates all channels that have been modified in group 1, including channels that are not already in group 1.
<b>[GROUP] [7] [*] [UPDATE] {ADD ALL}</b> <b>[GROUP] [1] [*]</b>	First selects all of the channels in group 7, then records their levels in group 1, including channels that are not already in the group 7.
<b>[1] [THRU] [5] [UPDATE] [GROUP]</b> <b>[*]</b>	Changes channel 1 through 5 levels in group 1, excluding channels that are not already in the group.
<b>[1] [THRU] [5] [@] [LIVE]</b>	Sets the levels of channels 1 to 5 in the currently selected Group to the levels in the Live Screen (levels on stage). If any of the channels are not already in the Group, they are added to the group.
<b>[GROUP] [1] [@] [LIVE]</b>	Selects the channels in Group 1 and sets them according to the levels in the Live Screen (on stage)

# Profiles and Macros

## Recording and Editing Profiles (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

<b>On any window:</b>	
<b>Key Sequence</b>	<b>Action</b>
[PROFILE] [1] [*]	Select profile 1 for edit, create if absent
[PROFILE] [1] [TEXT] hello [*]	Set profile text to 'hello'
[DELETE] [*]	Delete selected profile
[DELETE] [2] [*]	Delete profile 2 if present
[DELETE] [1] [THRU] [6] [*]	Delete profiles 1 thru 6 if present
[1] [5] [@] [2] [0] [*]	Add a new point at (x = 15%, y = 20%). If x = 15% already has a y value, the new value takes its place.
[1] [5] [@] {FULL}[*]	Add a new point at (x = 15%, y = 100%). If x = 15% already has a y value, the new value takes its place.
[1] [5] [@] {DMX}[2] [5] [5] [*]	Add a new point at (x=15%, y=255).
[1] [5] [@] [*]	Delete point at (x=15%)
{DMX} [5] [0] {DMX} [2] [5] [5] [*]	Add a new point at (x=50, y=255).
{DMX} [5] [0] [*]	Delete point at (x=50)
<b>At profile window:</b>	
{GRAPH EDIT}	Start graph-editing the selected profile with the track ball or mouse
<b>At graph window:</b>	
{END EDIT}	End graph-editing the selected profile
{INSERT POINT}	Insert a new point at the track ball or mouse cursor
{DELETE POINT}	Delete the nearest point to the track ball or mouse cursor
[RECORD] [PROFILE] [1] [*]	Records profile 1 using current profile points
[UNDO] [RECORD]	Undo record command
[SHIFT] [RECORD]	= [UNDO] [RECORD]
[+]	Increased selected point by 1%.

[-]	Decrease selected point by 1%.
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## Recording and Editing Profiles (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
<b>At any window:</b>	
[PROFILE] [1] [*]	Select profile 1 for edit, create if absent
[PROFILE] [1] [TEXT] hello [*]	Set profile text to hello
<b>At profile or graph window:</b>	
{DELETE PROF} [*]	Delete selected profile
{DELETE PROF} [2] [*]	Delete profile 2 if present
{DELETE PROF} [1] [THRU] [6] [*]	Delete profiles 1 thru 6 if present
[1] [5] [@] [2] [0]	Add a new point at (x=15%, y=20%). If x=15% already has a y value, the new value takes its place.
[1] [5] [@] {FULL}	Add a new point at (x=15%, y=100%). If x=15% already has a y value, the new value takes its place
[1] [5] [@] {DMX} [2] [5] [5] [*]	Add a new point at (x=15%, y=255).
[1] [5] [@] [*]	Delete point at (x=15%)
{DMX} [5] [0] {DMX} [2] [5] [5] [*]	Add a new point at (x=50, y=255).
{DMX} [5] [0] [*]	Delete point at (x=50)
<b>At profile window:</b>	
{GRAPH EDIT}	Start graph-editing the selected profile with the track ball, or mouse.
<b>At graph window:</b>	
{INSERT POINT}	Insert a new point at the track ball or mouse cursor
[+]	Increased selected point by 1%.
[-]	Decrease selected point by 1%.

{DELETE POINT}	Delete the nearest point to the track ball/ mouse cursor
[PROFILE] [1] [RECORD]	Records profile 1 using current profile points
[UNDO] [RECORD]	Undo record command
[SHIFT] [RECORD]	= [UNDO] [RECORD]
{END EDIT}	End graph-editing the selected profile

## Profile Learn

Key Sequence	Action
[PB] [PROFILE] [5] [PB] [1] {LEARN} [*]	Learns intensity and attribute profiles on X Playback 1 (All Modes) . Where 5 is the Upfade profile and attribute fade, and 5 + 1 is the Downfade profile.
[PB] {PROFILE} [6] [/] [7] [PB] [2] {LEARN} [*]	Learns intensity profiles on X Playback 2 (All Modes). Where 6 is the Upfade profile, 7 is the Downfade and the attribute fade is not affected.
[PB] {PROFILE} [/] [3] [PB] [1] {LEARN} [*]	Learns intensity profile on X Playback 1 (All Modes). Where 3 is the Downfade profile and the Upfade and attribute profiles are unaffected.

**Note:** If Playbacks field in the Show Setup Screen is set to Single, or Split Single and Playback 2 is selected. An error message is generated.

## Creating Macros (All Modes)

The following commands are common to Command Line and Direct Action modes for GeniusPro and Lightpalette.

Key Sequence

<b>In Live Display</b>	
[MACRO] [2] [4] {LEARN} [CUE] [2] [0] [GO] [MACRO] [MACRO]	Records Macro 24 to run cue 20.
<b>In Macro Display</b>	
[MACRO] [2] [4] [*] [*] [CUE] [2] [0] [GO] [MACRO] [MACRO]	Records Macro 24 to run cue 20

## Deleting Macros (All Modes)

Key Sequence	Action
[MACRO] [1] {DELETE} {DELETE}	Deletes macro 1
[MACRO] {DELETE} [*]	Deletes selected user macro at Macro Screen
[MACRO] [1] [THRU] [4] {DELETE} [*]	Deletes user macro 1 to 4.

## Running Macros (All Modes)

Key Sequence	Action
[MACRO] # [*]	Executes user macro where # is from 1 to 1999
[P1]	Runs Macro P1 (Macro 951)
[SHIFT] [P1]	Runs Macro SP1 (Macro 971)
[USER]	Runs User (Macro 998)
{LCD1} to {LCD6} {LCD1} to {LCD4} <u>on Series 520</u>	Executes macros LCD1 to LCD6 or selects macro for editing when in the Macro Screen. (Macros 991 to 996) (Macros 991 to 994 on 520 Series)

## Editing Macros (All Modes)

Key Sequence	Action
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<b>[MACRO] [MACRO]</b>	Ends recording current macro or selects current macro for edit when in the Macro Screen
<b>[MACRO] [1] [TEXT] text [*]</b>	Adds text to macro 1 where <b>text</b> is entered from the external keyboard. Omitting <b>text</b> removes any existing text.
<b>[MACRO] [MACRO] [1] [TEXT] text [*]</b>	Adds text and selects macro for edit at Macro Screen where <b>text</b> is entered from the external keyboard. Omitting <b>text</b> removes any existing text.

## Submasters

### (Command Line Mode)

#### Recording Submasters (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
[RECORD] [SUB] [1] [*]	Records sub 1
[RECORD] [SUB] [1] [*]	Copies selected edit sub to sub 1
[RECORD] [SUB] [1] {INTS ONLY}[*]	Records sub 1 with intensity channels only
[RECORD] [SUB] [1] {ATTS ONLY} [*]	Records sub 1 with attribute channels only
[RECORD] [SUB] [1] [TIME] [4] [/] [5] [*]	Records sub 1 with split fade times
[RECORD] [SUB] [1] [@ATT] [TIME] [6] [*]	Records sub 1 with attribute fade time
[RECORD] [SUB] [1] {EXT SUB} [6] [*]	Records sub 1 linked to external sub 6
[RECORD] [SUB] [1] {SUB FUNC} {NORMAL} [*]	Records sub 1 with function = Pileon (normal)
[RECORD] [SUB] [1] {SUB FUNC} {INHIB} [*]	Records sub 1 with function = inhibitive.
[RECORD] [SUB] [1] {SUB FUNC} {INDEP} [*]	Records sub 1 with function = independent.

<b>[RECORD] [SUB] [1] {SUB FUNC} {EXCLUS} [*]</b>	Records sub 1 with function = exclusive.
<b>[RECORD] [SUB] [1] {SUB FUNC} {SUPER} {SUB SUPER} [*]</b>	Records sub 1 with function = submaster supermaster.
<b>[RECORD] [SUB] [1] {SUB FUNC} {SUPER} {FLASH SUPER} [*]</b>	Records sub 1 with function = flash supermaster.
<b>[RECORD] [SUB] [1] {SUB FUNC} {SUPER}{FX SUPER} [*]</b>	Records sub 1 with function = effect supermaster.
<b>[RECORD] [SUB] [1] {SUB FUNC} {SUPER} {GM1} [*]</b>	Records sub 1 with function = Grandmaster 1
<b>[RECORD] [SUB] [1] {SUB FUNC} {SUPER} {GM2} [*]</b>	Records sub 1 with function = Grandmaster GM2 (not applicable to 300 Series Consoles)
<b>[RECORD] [SUB] [1] {SUB FUNC} {SUPER I/P} {DMX IN CHAN} [*]</b>	Records sub 1 with function = DMX Channel Submaster
<b>[RECORD] [SUB] [1] {SUB FUNC} {SUPER I/P} {DMX IN DIMMER} [*]</b>	Records sub 1 with function = DMX Dimmer Submaster
<b>[RECORD] [SUB] [1] {SUB FUNC} {SUPER I/P} {MIDI RATIO} [*]</b>	Records sub 1 with function = Midi Ratio Supermaster
<b>[RECORD] [SUB] [1] {SUB FUNC} {SUPER I/P} {AUDIO THRESH} [*]</b>	Records sub 1 with function = Audio Threshold Supermaster (not applicable to 300 Series Consoles)
<b>[RECORD] [SUB] [1] {SUB FUNC} {SUPER I/P}{SOUND LIGHT} [*]</b>	Records sub 1 with function = Sound to Light Submaster (not applicable to 300 Series Consoles)
<b>[RECORD] [SUB] [1] [MACRO] [6] [*]</b>	Records sub 1 linked to macro 6
<b>[RECORD] [SUB] [1] [FX] [4] [*]</b>	Records sub 1 linked to effect 4
<b>[RECORD] [SUB] [1] [TEXT] hello [*]</b>	Records sub 1 with text 'hello'
<b>[1] [+] [2] [RECORD] [SUB] [1] [*]</b>	Records chans 1+2 in sub 1
<b>[SUB] Bump Key</b>	Quick record submaster for that Bump key

<b>[1] [+] [2] [SUB] Bump Key</b>	Quick record submaster for that Bump key chans 1+2..
<b>[1] [+] [2] [SUB] [-] Bump key</b>	Deletes chans 1+2 from submaster for that Bump key
<b>[UNDO] [RECORD]</b>	Undo record command
<b>[SHIFT] [RECORD]</b>	= <b>[UNDO] [RECORD]</b>

## Editing Submasters (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

<b>Only edited at submasters display (with the selection bar on a submaster number).</b>	
<b>Key Sequence</b>	<b>Action</b>
<b>[SUB] [1] [*]</b>	Select sub 1 for edit
<b>[SHIFT] bump button</b>	Goes to submaster preview display.
<b>[CLEAR] [*]</b>	Clear selected submaster
<b>[CLEAR] [1] [*]</b>	Clear submaster 1
<b>[CLEAR] [1] [THRU] [3] [*]</b>	Clear submasters 1 to 3
<b>[SHIFT] Bump Key</b>	Select submaster preview for edit

## Modifying Submasters (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

<b>Key Sequence</b>	<b>Action</b>
<b>[SHIFT] Rollball or Mouse movement</b>	Changes fields in Sub Preview displays from Yellow (non-editable) to Green (editable), enabling fields to be selected using the rollball (or mouse) and the level wheel, <b>[+]</b> or <b>[-]</b> keys or numeric keypad to set field values.

[*]	Returns fields in the Sub Preview displays to the non-editable mode (Yellow)
With Edit fields Green as above highlight the Bump field of the required Sub number and adjust its value to <b>Flsh</b> , <b>F+S</b> , <b>OFF</b> , <b>Mac</b> or <b>Solo</b>	Sets the individual submaster bump key to: <b>Flsh</b> : Flashes the Sub channels to the level set by the Flash Supermaster (if any), or 100% <b>F+S</b> : As above. All other (non-bumped) channels are set to zero <b>OFF</b> : Sub Bump key has no effect. <b>Mac</b> : Triggers the macro with the same number as the bump button (not the macro assigned to the bump button) <b>Solo</b> : Sub channels unaffected. All other channels are set to zero
{KEYS LATCH}	Pressing the submaster bump keys to latch as described above until the sub bump button is pressed again. No effect if individual sub bump mode is set to OFF.
[SUB] [1] [TIME] [4] [/] [5] [*]	Sets sub 1 to split fade times
[SUB] [1] [@ATT] [TIME] [6] [*]	Sets sub 1 attribute fade time.
[SUB] [1] {EXT SUB} [6] [*]	Sets sub 1 link to external sub 6.
[SUB] [1] {FUNCTION} {SUB FUNC} {NORMAL} [*]	Sets sub 1 with function = Pileon (normal)
[SUB] [1] {FUNCTION} {SUB FUNC} {INHIBIT} [*]	Sets sub 1 with function = inhibitive
[SUB] [1] {FUNCTION} {SUB FUNC} {SUPER I/P} {DMX IN CHAN} [*]	Records sub 1 with function = DMX Channel Submaster
[SUB] [1] [MACRO] [6] [*]	Sets sub 1 linked to macro 6.
[SUB] [1] [FX] [4] [*]	Sets sub 1 linked to effect 4.
[SUB] [1] [TEXT] hello [*]	Sets sub 1 to text hello.
[SUB] [1] [UNDO]	Restore Sub 1's channels to fader control.

## Copying Levels from a Submaster (Command Line Mode)

	This procedure copies Sub 1 with levels set at full, from sub page 1 to sub 4 on sub page 3. In the live display with all channels off:
Key Sequence	Action
[SUB PAGE] [1] [*]	Sets the initial submaster page
[SUB] [1] [@] {FULL} [*]	Sets the submaster levels in the current display
[SUB PAGE] [3] [*]	Changes the submaster page
[RECORD][SUB] [4]	Record the new submaster

Key Sequence	Action
[RECORD] [CUE] [2]	Records the levels from the current submaster to cue 2.

## Selecting a Submaster Page (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action
[SUB] [+]	Select next submaster page
[SUB] [-]	Select last submaster page
[SUBPAGE] [4] [*]	Select submaster page 4 [Page 1 if omitted].

## Updating Submasters (Command Line Mode)

The following Command Line syntax examples are normally used with Lightpalette

Key Sequence	Action

<b>[UPDATE] [SUB] [2] [*]</b>	All o/p chans in sub 2 under channel control are updated, released from channel control and the sub rerun
<b>[SHIFT] [SUB]</b>	= <b>[UPDATE] [SUB]</b>
<b>[UPDATE] [SUB] Bump Key</b>	All o/p chans in sub n under channel control are updated, released from channel control and the sub rerun
<b>[1] [+] [2] [SUB] [-] Bump Key</b>	Remove chans 1 +2 from submaster leaving level on output.
<b>[UPDATE] [SUB] [1] [*]</b>	Records levels that have been modified live into submaster 1, excluding levels of channels that are not already in the submaster.
<b>[SUB] [7] [*] [UPDATE] [SUB] [1] [*]</b>	First selects all of the channels in submaster 7, then updates their levels in submaster 1, excluding levels of channels that are not already in the submaster.
<b>[UPDATE]{ADD ALL} [SUB] # [*]</b>	Changes levels in the specified submaster as necessary based on channels that have been modified live. Adds modified channels (that are not already in the submaster, and channels that have been removed from the modified list by using <b>[SHIFT] [CLR]</b> . Channels that are off in the selection will be removed from the submaster. The submaster fader must be set above zero. This command works only from the Live display.

**[1] [THRU] [5] [UPDATE] [SUB]  
[1] [\*]**

Changes channel 1 through 5 levels in submaster 1, excluding channels that are not already in the submaster. If the submaster fader is not at 0 then the updated levels are adjusted to avoid output bumps. For example, if the submaster fader is at 50% and a channel level of 10% (from the output) is updated to it, the level recorded into the submaster is actually 20% so that the submaster output is 10%. The maximum level that can be recorded into the submaster is 100% so output bumps can still occur with a low fader and high levels.

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## Gang Loading of Submasters (Command Line Mode)

Key Sequence	Action
<b>[CUE] [1] [THRU] [1] [2] Sub Bump Button 1</b>	Loads cues 1 through 12 in Subs 1 through 12
<b>[FX] [1] [THRU] [3] Sub Bump Button 13</b>	Loads effects 1 through 3 in Subs 13 through 16
<b>[GROUP] [1] [THRU] [6] Sub Bump Button 19</b>	Loads groups 1 through 6 in Subs 19 through 24

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## Submasters

### (Direct Action Mode)

#### Recording Submasters (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
[SUB] [1] [RECORD]	Records sub 1.
[SUB] [1] [RECORD]	Copies selected edit sub to sub 1.
[SUB] [1] {INTS ONLY} [RECORD]	Records sub 1 with intensity channels only.
[SUB] [1] {ATTS ONLY} [RECORD]	Records sub 1 with attribute channels only.
[SUB] [1] [TIME] [4] [/] [5] [RECORD]	Records sub 1 with split fade times.
[SUB] [1] [@ATT] [TIME] [6] [RECORD]	Records sub 1 with attribute fade time.
[SUB] [1] {EXT SUB} [6] [RECORD]	Records sub 1 linked to external sub 6.
[SUB] [1] {SUB FUNC} {NORMAL} [RECORD]	Records sub 1 with function = Pileon (normal)
[SUB] [1] {SUB FUNC} {INHIB} [RECORD]	Records sub 1 with function = inhibitive.
[SUB] [1] {SUB FUNC} {INDEP} [RECORD]	Records sub 1 with function = independent
[SUB] [1] {SUB FUNC} {EXCLUS} [RECORD]	Records sub 1 with function = exclusive.
[SUB] [1] {SUB FUNC} {SUPER} {SUB SUPER} [RECORD]	Records sub 1 with function = submaster supermaster.
[SUB] [1] {SUB FUNC} {SUPER} {FLASH SUPER} [RECORD]	Records sub 1 with function = flash supermaster.

<b>[SUB] [1] {SUB FUNC} {SUPER} {FX SUPER} [RECORD]</b>	Records sub 1 with function = effect supermaster.
<b>[SUB] [1] {SUB FUNC} {SUPER} {GM1} [RECORD]</b>	Records sub 1 with function = Grandmaster 1
<b>[SUB] [1] {SUB FUNC} {SUPER} {GM2} [RECORD]</b>	Records sub 1 with function = Grandmaster GM2 (not applicable to 300 Series Consoles)
<b>[SUB] [1] {SUB FUNC} {SUPER I/P} {DMX IN CHAN} [RECORD]</b>	Records sub 1 with function = DMX Dimmer Submaster
<b>[SUB] [1] {SUB FUNC} {SUPER DMX} {DMX IN CHAN} [RECORD]</b>	Records sub 1 with function = DMX channel submaster
<b>[SUB] [1] {SUB FUNC} {SUPER I/P} {DMX IN DIMMER} [RECORD]</b>	Records sub 1 with function = DMX Dimmer Submaster
<b>[SUB] [1] {SUB FUNC} {SUPER I/P} {MIDI RATIO} [RECORD]</b>	Records sub 1 with function = Midi Ratio Supermaster
<b>[SUB] [1] {SUB FUNC} {SUPER I/P} {AUDIO THRESH} [RECORD]</b>	Records sub 1 with function = Audio Threshold Supermaster (not applicable to 300 Series Consoles)
<b>[SUB] [1] {SUB FUNC} {SUPER I/P} {SOUND LIGHT} [RECORD]</b>	Records sub 1 with function = Audio Threshold Supermaster (not applicable to 300 Series Consoles)
<b>[SUB] [1] [MACRO] [6] [RECORD]</b>	Records sub 1 linked to macro 6.
<b>[SUB] [1] [FX] [4] [RECORD]</b>	Records sub 1 linked to effect 4.
<b>[SUB] [1] [TEXT] hello [RECORD]</b>	Records sub 1 with text 'hello'.
<b>[1] [+] [2] [SUB] [1] [RECORD]</b>	Records chans 1+2 in sub 1.
<b>[SUB] Bump key</b>	Quick record submaster for that Bump key.
<b>[1] [+] [2] [SUB] Bump key</b>	Quick record submaster for that Bump key chans 1+2..
<b>[1] [+] [2] [SUB] [-] Bump key</b>	Deletes chans 1 + 2 from submaster for that Bump key
<b>[UNDO] [RECORD]</b>	Undo record command
<b>[SHIFT] [RECORD]</b>	= <b>[UNDO] [RECORD]</b>

## Editing Submasters (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

	<b>Only edited at submasters display (with the selection bar on a submaster number).</b>
<b>Key Sequence</b>	<b>Action</b>
<b>[SUB] [1] [*]</b>	Select sub 1 for edit
<b>[SHIFT] bump button</b>	Goes to submaster preview display.
<b>{CLEAR}</b>	Clear selected submaster
<b>[SUB] [1] {CLEAR}</b>	Clear submaster 1
<b>[SUB] [1] [THRU] [3] {CLEAR}</b>	Clear submasters 1 to 3
<b>[SHIFT] Bump button</b>	Select submaster for editing

## Modifying Submasters (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

	<b>Submaster levels are unchanged. The submaster number may be omitted, in which case the current submaster is used. Where the TEXT etc. value is omitted, it is deleted from the submaster.</b>
<b>Key Sequence</b>	<b>Action</b>
<b>[SHIFT] Rollball or Mouse movement</b>	Changes fields in Sub Preview displays from Yellow (non-editable) to Green (editable), enabling fields to be selected using the rollball (or mouse) and the level wheel, [+] or [-] keys or numeric keypad to set field values.
<b>[*]</b>	Returns fields in the Sub Preview displays to the non-editable mode (Yellow)

<p>With Edit fields Green as above highlight the Bump field of the required Sub number and adjust its value to <b>Flash</b>, <b>F+S</b>, <b>OFF</b>, <b>Mac</b> or <b>Solo</b></p>	<p>Sets the individual submaster bump key to:  <b>Flash</b>: Flashes the Sub channels to the level set by the Flash Supermaster (if any), or 100%  <b>F+S</b>: As above. All other (non-bumped) channels are set to zero  <b>OFF</b>: Sub Bump key has no effect.  <b>Mac</b>: Triggers the macro with the same number as the bump button (not the macro assigned to the bump button)  <b>Solo</b>: Sub channels unaffected. All other channels are set to zero</p>
<p>{KEYS LATCH}</p>	<p>Pressing the submaster bump keys to latch as described above until the sub bump button is pressed again. No effect if individual sub bump mode is set to OFF.</p>
<p>[SUB] [1] [TIME] [4] [/] [5] [REC TIME] or [SUB] [1] [TIME] [4] [/] [5] [*]</p>	<p>Sets sub 1 to split fade times</p>
<p>[SUB] [1] [@ATT] [TIME] [6] [*]</p>	<p>Sets sub 1 attribute fade time.</p>
<p>[SUB] [1] {EXTSUB} [6] [*]</p>	<p>Sets sub 1 link to external sub 6.</p>
<p>[SUB] [1] {SUB FUNC} {NORMAL} [*]</p>	<p>Sets sub 1 with function = normal</p>
<p>[SUB] [1] {SUB FUNC} {INHIBIT} [*]</p>	<p>Sets sub 1 with function = inhibitive.</p>
<p>[SUB] [1] {SUB FUNC} {INDEP} [*]</p>	<p>Sets sub 1 with function = independent</p>
<p>[SUB] [1] {SUB FUNC} {EXCLUS} [*]</p>	<p>Sets sub 1 with function = exclusive</p>
<p>[SUB] [1] {SUB FUNC} {SUPER} [SUB SUPER] [*]</p>	<p>Sets sub 1 with function = submaster supermaster</p>
<p>[SUB] [1] {SUB FUNC} {SUPER} {FLASH SUPER} [*]</p>	<p>Sets sub 1 with function = flash supermaster</p>
<p>[SUB] [1] {SUB FUNC} {SUPER} {FX SUPER} [*]</p>	<p>Sets sub 1 with function = effect supermaster</p>
<p>[SUB] [1] {SUB FUNC} {SUPER} {MIDI RATIO} [*]</p>	<p>Sets sub 1 with function = MIDI Ratio supermaster</p>

[SUB] [1] {SUB FUNC} {SUPER} {AUDIO THRESH} [*]	Sets sub 1 with function = Audio threshold supermaster
[SUB] [1] {SUB FUNC} {SUPER} {SOUND LIGHT} [*]	Sets sub 1 with function = Sound to light supermaster
[SUB] [1] {SUB FUNC} {SUPER DMX} {DMX IN CHAN} [*]	Sets sub 1 with function = DMX channel submaster
[SUB] [1] {SUB FUNC} {SUPER I/P} {DMX IN DIMMER} [*]	Sets sub 1 with function = DMX dimmer submaster
[SUB] [1] [MACRO] [6] [*]	Sets sub 1 linked to macro 6.
[SUB] [1] [FX] [4] [*]	Sets sub 1 linked to effect 4.
[SUB] [1] [TEXT] hello [*]	Sets sub 1 to text 'hello'.
[SUB] [1] [UNDO]	Restore Sub 1 control.

## Copying Levels from a Submaster (Direct Action Mode)

	<b>This procedure copies Sub 1 with levels set at full, from sub page 1 to sub 4 on sub page 3. In the live display with all channels off:</b>
<b>Key Sequence</b>	<b>Action</b>
[SUB PAGE] [1] [*]	Sets the initial submaster page
[SUB] [1] [@] {FULL} [*]	Sets the submaster levels in the current display
[SUB PAGE] [3] [*]	Changes the submaster page
[SUB] [4] [RECORD]	Record the new submaster

<b>Key Sequence</b>	<b>Action</b>
[CUE] [2] [RECORD]	Records the levels from the current submaster to cue 2.

## Selecting Submaster Pages (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
[SUB] [+]	Select next submaster page
[SUB] [-]	Select last submaster page
[SUB PAGE] [4] [*]	Select submaster page 4 [Page 1 if page omitted].

## Updating Submasters (Direct Action Mode)

The following Direct Action syntax examples are normally used with GeniusPro and are common to Direct 1 Digit and Direct 2 Digit command modes

Key Sequence	Action
[UPDATE] [SUB] [2] [RECORD]	All o/p chans in sub 2 under channel control are updated, released from channel control and the sub rerun
[SHIFT] [SUB]	= [UPDATE] [SUB]
[UPDATE] [SUB] bump key	All o/p chans in sub n under channel control are updated, released from channel control and the sub rerun
[1] [+] [2] [UPDATE] [SUB] [2] [RECORD] or [1] [+] [2] [SHIFT] [SUB] [2] [RECORD]	Chans 1 & 2 are added to sub 2, released from channel control, and the sub rerun
[UPDATE] [SUB] [1] [*]	Records levels that have been modified live into submaster 1, including levels of channels that are not already in the submaster.
[SUB] [7] [*] [UPDATE] [SUB] [1] [*]	First selects all of the channels in submaster 7, then updates their levels in submaster 1, including levels of channels that are not already in the submaster.
[UPDATE]{ADD ALL} [SUB] [1] [*]	Updates all channels that have been modified in submaster 1, including channels that are not already in submaster 1.

<b>[SUB] [7] [*] [UPDATE] {ADD ALL} [SUB] [1] [*]</b>	First selects all of the channels in submaster 7, then records their levels in submaster 1, including channels that are not already in the submaster 7.
<b>[1] [THRU] [5] [UPDATE] [SUB] [*]</b>	Changes channel 1 through 5 levels in submaster 1, excluding channels that are not already in the submaster. If the submaster fader is not at 0 then the updated levels are adjusted to avoid output bumps. For example, if the submaster fader is at 50% and a channel level of 10% (from the output) is updated, the level recorded into the submaster is actually 20% so that the submaster output is 10%. The maximum level that can be recorded into the submaster is 100% so output bumps can still occur with a low fader and high levels.
<b>[1] [THRU] [5] [@] [LIVE]</b>	Updates channels 1 to 5 in the currently selected submaster in the Submaster Screen according to the levels in the Live Screen. If any of the channels are not already in the submaster, they are added to the submaster
<b>[SUB] [1] [@] [LIVE]</b>	Selects the channels in submaster 1 and updates them to the values in the Live Screen.

### Gang Loading of Subs (Direct Action Mode)

Key Sequence	Action
<b>[CUE] [1] [THRU] [1] [2] Sub Bump Button 1</b>	Loads cues 1 through 12 in Subs 1 through 12
<b>[FX] [1] [THRU] [3] Sub Bump Button 13</b>	Loads effects 1 through 3 in Subs 13 through 16
<b>[GROUP] [1] [THRU] [6] Sub Bump Button 19</b>	Loads groups 1 through 6 in Subs 19 through 24





## 510i and 310 Show Controller/Backup Unit Commands

### Panel keys - 510i Show Controller

**Note:** The 310 Show Controller/Backup Unit has the same functionality as the 510i. The 310 incorporates a touch screen LCD display with touch keys to perform the same function as the equivalent hard keys on the 510i Show Controller.

Key Sequence	Action
[DISPLAY]	Cycles through the LCD displays of MACRO, SUBS, BROWSE, EVENT, PLAYBACK, BACKUP, SETUP and back to MACRO, etc.
[SHIFT] [DISPLAY]	Enters the displayed Macro LCD menu
[STOP SHOW]	Stops the pre-programmed lighting show and applies a pre-defined safe lighting condition
[P1] - [P14]	Triggers macros 951 to 964
[SHIFT] [P1] - [P14]	Triggers macros 971 to 984
[USER]	Triggers macro 998
[CLR]	Clears the last command.

### Macro LCD Display

Key Sequence	Action
{LAST}	Selects the previous macro in the macro list
{NEXT}	Selects the next macro in the macro list
{MACRO-100}	Subtract 100 from the current macro number (if applicable) and display as the current macro
{MACRO+100}	Add 100 to the current macro number (if applicable) and display as the current macro
{FIRST MACRO}	Selects the first macro as current.
{RUN}	Runs the selected macro

[SHIFT] {LAST 8}	Displays the previous eight macros.
[SHIFT] {NEXT 8}	Displays the next eight macros

## Submaster LCD Display

Key Sequence	Action
{LAST}	Moves the marker to the previous sub on the page.
{NEXT}	Moves the marker to the next sub on the page
{PAGE +}	Increments the sub pages, e.g., 1>2>3>4>5>6>1, etc.
{DOWN %}	Decrements the level of the currently selected sub by 5%
{UP %}	Increments the level of the currently selected sub by 5%
{BUMP SUB}	Bumps the currently selected sub.
[SHIFT] {LAST 8}	Displays the previous eight subs on the selected page
[SHIFT] {NEXT 8}	Displays the next eight subs on the selected page.
[SHIFT] {PAGE -}	Decrements the sub pages, e.g., 6.5.4.3.2.1.6, etc.
[SHIFT] {TO 0%}	Sets level of currently selected sub to 0%
[SHIFT] {TO 100%}	Sets level of currently selected sub to 100%.

## Browse LCD Display

Key Sequence	Action
[LAST] [NEXT]	Used to position > at drive, directory and show to load or copy.

[SELECT]	Press to load or copy show
[SHIFT] {LAST 4}	Scans down 4 shows at a time
[SHIFT] {NEXT 4}	Scans up 4 shows at a time
{COPY SHOW}	Copies show . Press again when destination is highlighted >
{SOFT LOAD}	Loads operating software from floppy disk

## Event LCD Display

Key Sequence	Action
{EXT.CLK}	Applies an external SMTE time code input via the 3-pin Audio XLR outlet.
{INT.CLK}	Applies the internal time code clock.
{+HH}	Add one hour to the internal clock time.
{+MM}	Add one minute to the internal clock time.
{+SS}	Add one second to the internal clock time.
{+FF}	Add one frame to the internal clock time.
{+5FF}	Add 5 frames to the internal clock time.
[SHIFT] {-HH}	Subtract one hour from the internal clock time
[SHIFT] {-MM}	Subtract one minute from internal clock time.
[SHIFT] {-FF}	Subtract one frame from the internal clock time.
[SHIFT] {-5FF}	Subtract 5 frames from the internal clock time.
[SHIFT] {RESET TIME}	Reset internal clock to 00:00:00:00
{PAUSE CLOCK}	Stops the internal or external clock at the time of the displayed event
{STEP}	Manually triggers the next event after the clock is paused

[SHIFT] {LAST}	Sets the < marker and clock time to the last event.
[SHIFT] {NEXT}	Sets the < marker and clock time to the next event.
[SHIFT] {BEGIN LIST}	Sets the < marker and clock time to the first event on the list.
[SHIFT] {END LIST}	Sets the marker and clock time to the last event on the list.
{UNBUMP ALL}	Unbumps any bumped submasters.
{STOP FX}	Stops all running effects

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## Playback LCD Display

Key Sequence	Action
[SHIFT]	Toggles between X1 Playback and X2 Playback (if a dual playback mode is selected in the Show Setup)
{LAST}	Selects the previous cue on the displayed cue sheet as the cue to be loaded
{NEXT}	Selects the next cue on the displayed cue sheet as the cue to be loaded.
{LOAD}	Loads a selected cue into the X Playback and resets any loops to their original loop count. This action has no effect on the output until the {GO} softkey is pressed
{STOP/BACK}	Press once to stop the current cue. Press again to move to the previous cue.
{GO TO CUE 0}	Selects cue 0 (Blackout)
{GO}	Runs the current cue.

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## Setup LCD Display

Key Sequence	Action
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<b>{CONTR DOWN}</b>	Decreases the LCD contrast
<b>{CONTR UP}</b>	Increases the LCD contrast
<b>{BACKLT DOWN}</b>	Decreases the LCD backlight brightness
<b>{BACKLT UP}</b>	Increases the LCD backlight brightness
<b>{SHUTDOWN}</b>	Displays warning/confirm message. Press <b>{SHUTDOWN}</b> to shut down the system or the <b>[CLR]</b> key to cancel.

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## Setup Commands

### User Setup

Key Sequence	Action
<b>[SETUP]</b>	Display User Setup Screen
<b>[REPORT] {ADV SETUP} {USER SETUP}</b>	Display User Setup Screen

The User Setup is described under the main windows of the screen as follows:

- [Control Modes Window](#)
- [Display Options Window](#)
- [Default Times Window](#)
- [Console Window](#)

### Control Modes Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+]** **[-]** or wheel or set to factory default with **{DEFAULT}** soft key.

Function	Option/Range	Action/Example
<b>Channel Control Mode</b>	Command Line	<b>[1] [ @ ] [7] [*]</b> <b>[RECORD] [CUE] [1] [*]</b> etc.
	Direct 1 Digit	<b>[1] [ @ ] [7]</b> <b>[CUE] [1] [RECORD]</b> etc
	Direct 2 Digits	<b>[1] [ @ ] [7] [0]</b> <b>[CUE] [1] [RECORD]</b> etc.

<b>CC Auto Hold Mode</b>	On	Playbacks do not steal channels under active channel control.
	Off	Playbacks steal channels under active channel control.
<b>On Level %</b>	0..100	Level set when ON key is pressed
<b>UP DOWN %</b>	1..100	Percentage UP% and DOWN% soft keys master selection.
<b>Wheel Mastering</b>	Proportional	Levels increase/decrease in direct proportion to the wheel movement
	Shaft	As the level wheel is moved, levels increase/decrease in proportion to their existing level
<b>Wheel Sensitivity</b>	Slow Medium Fast	Sensitivity setting for level and rate wheel
<b>Stop Key</b>	OFF BLACKOUT STOP ATTS ST ATTS + BO	Action taken whe [STOP] key is pressed. Off Blackout Stop Attributes Moving Stop Attributes and Blackout

## Display Options Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+]** **[-]** or wheel or set to factory default with **{DEFAULT}** soft key.

<b>Function</b>	<b>Option/Range</b>	<b>Action/Example</b>
<b>Display Language</b>	English, Francais, Deutsch, Italiano, Espanol, Svenska, Nederlands, Russian	Select language

<b>Channel Display</b>	Genius Gemini Galaxy LP+ LP100+ Genius+ Galaxy+ Preset	250 channels in rows 300 channels in rows 300 channels in columns 200 channels & scrollers 100 channels & scrollers 250 channels & scrollers 210 channels & scrollers 100 channels & scrollers & preset group names
<b>Smart Channel Display</b>	OFF Tracker Tracker Preset	Format to use when selected channel has more attributes than will fit in Channel Display.
<b>Auto Channel Page</b>	ON or OFF	Change Display automatically to show selected channels
<b>Channel Formatting</b>	OFF	All channel shown.
	Auto	Automatically add used channels to display group.
	Compact	Just show channels on, under channel control or which faded to zero in last cue.
	Display Group	Just show channels in display group
	Chans in Show	Automatically displays the channels used in all cues, submasters and effects
<b>Live Screen layout</b>	PB SUBS PB + SUBS PB + FX PB + SUBS + FX EVENT PB + EVENT PB + EVENT + FX	Windows displayed on State screen.  Playback Submasters Playback + Submasters Playback + Effects Playback + Submasters + Effects Events Playback + Events Playbacks + Events + Effects



<b>X Playback Colours</b>	Lightpalette Lightpalette Invert GeniusPro	Colour for playback/cue sheet.
<b>X Playback Order</b>	Cue Sheet	Show cue sheet only (Lightpalette)
	History + Cue Sheet	Show cue sheet and completed fades (GeniusPro)
<b>X Playback Format</b>	Spread Sheet	Format playback/cue sheet as spread sheet in columns (GeniusPro)
	Expanded	Format playback/cue sheet across screen in rows and show fade progress as percentage
	Expanded - Fade Time	Format playback/cue sheet across screen in rows and show fade progress in seconds (Lightpalette)
<b>Show Last Recorded Cue</b>	Off, On	Show last recorded cue at bottom of playback/cue sheet window
<b>Screen Menus</b>	Off, On	Show LCD soft key menus on VDUs

## Default Times Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+]** **[-]** or wheel or set to factory default with **{DEFAULT}** soft key.

Function	Option/Range	Action/Example
<b>X Back, Cut</b>	0..59:59 and 0..59:59 seconds and minutes	<b>[BACK]</b> and <b>[CUT]</b> times.
<b>Cue Fade Up/Down</b>	0..59:59 seconds and minutes	Cue Fade Up/Down default times

<b>Cue Delay Up/Down</b>	0..59:59 second and minutes	Cue Delay Up/Down default times
<b>Cue Wait</b>	Off, 0..59:59 seconds and minutes	Cue Wait default time
<b>FX Step</b>	0..59:59 seconds and minutes	Fx step default time
<b>FX Step in/Dwell/Out</b>	0..5 minutes/ Off or 0..5 minutes/ 0..5 minutes	Fx Step in/Dwell/Out default times.
<b>Fx Up/Down</b>	0..59:59/0..59:59 seconds and minutes	Fx Up/Down default times
<b>Undo Time</b>	0..59:59 seconds and minutes	[UNDO] fade time

## Console Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+] [-]** or wheel or set to factory default with **{DEFAULT}** soft key.

<b>Function</b>	<b>Option/Range</b>	<b>Action/Example</b>
<b>Number Screens</b>	1..4	Number of video screens to drive. (3 or 4 need optional extra dual video card)
<b>LCD Contr</b>	1..100	Contrast setting for console LCDs
<b>LCD Backlt</b>	1..100	LCD backlight setting
<b>Gooseneck Bright</b>	0..100	Brightness of console goosneck lamp. Not applicable to 300 Series Consoles.
<b>Buzzer Volume</b>	Off, On	
<b>Macro Tablet</b>	Off, Intuos A4, Intuos A3	Size of Intuos graphic tablet used, or Off for none.
<b>Mode</b>	Low	20 x 10 grid - A4 20 x 20 grid - A3

	High	20 x 20 grid - A4 20 x 40 grid - A3
<b>Net Node</b>	Local or Node Name	Network location of graphic tablet
<b>Port</b>	Off, COM1 or COM 2	Port used for graphic tablet
<b>Mouse</b>		
<b>Net Node</b>	Local or Node Name	Network location of mouse
<b>Port</b>	Off, COM1 or COM 2	Port used for mouse
<b>Console Keys Layout</b>	Q Only Key, No Q Only Key	Q only key is disabled when set to No Q Only Key
<b>Submaster Layout</b>		Allows 2 remote consoles to have their 'own' range of submasters
<b>GeniusPro/Palette</b>	GeniusPro	Uses GeniusPro operating software
	Lightpalette	Uses Lightpalette operating software
	Default	Use password GeniusPro/ Lightpalette

## Show Setup

Key Sequence	Action
<i>[REPORT]</i> {ADV SETUP} {SHOW SETUP}	Display Show Setup Screen

The Show Setup is described under the main windows of the screen as follows:

- [Show Details Window](#)
- [MIDI Window](#)
- [Timecode Options Window](#)

- [Patch Window](#)
- [Console Time Window](#)
- [At Time Macros Window](#)

## Show Details Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+]** **[-]** or wheel or set to factory default with **{DEFAULT}** soft key.

Function	Option/Range	Action/Example
<b>Cue Tracking</b>	Off	Cues recorded as Cue Only X fades (GeniusPro Only)
	On	Tracking enabled
	This Cue Only	Tracking enabled but cues recorded as q-only by default.
<b>Playbacks</b>	Single	1 playback, 1 next cue
	Split Single	2 playbacks, 1 next cue
	Dual HTP	2 playbacks, 2 next cues, channels from playbacks combine on highest takes precedence basis
	Dual LTP	2 playbacks, 2 next cues, channels steal from other playback
<b>Auto Move When Dark (AMWD)</b>	Off, On	Automatically move scrollers and moving lights to next required position when dark on stage and used in next cue.
<b>Auto Move When Dark Fade</b>	0..30	Time for AMWD fade in seconds.
<b>Auto Move When Dark Delay</b>	0..30	Delay after end of last cue before AMWD fade starts in seconds.

<b>Auto Preheat</b>	Off, On	Automatically fade channels in preheat group to levels in preheat group when channels fade to dark on output and used in next cue.
<b>Auto Preheat Fade</b>	0..30	Time for preheat fade in seconds.
<b>Auto Preheat Delay</b>	0..30	Delay after end of last cue before preheat fade starts in seconds
<b>Power-up Restore</b>	Off, On	Restore stage state at start-up
<b>Power-up Macro</b>	Off, 1..1999	Run macro at power up
<b>GM 1 Fade Up/Down</b>	0..59:59/0..59:59 seconds and minutes	Grand master fade times.
<b>GM 2 Fade Up/Down</b>	0..59:59/0..59:59 seconds and minutes	Grand master fade times. Not applicable to 300 Series Consoles.
<b>Channel Partitioning</b>	Off..On	Assign channels to users as defined in User Groups for channel control, recording and playback.
<b>Playback Partitioning</b>	Off, On	When playback partitioning is on,. Channels controlled by each X Playback are determined by groups 999.3 and 999.4. By default, both groups are set to permit control of all channels by both groups. However, when the Group display is selected, the user can set a channel, or range of channels for either or both groups to 0 , such that the deselected channels are not controlled by the particular X Playback.

<b>HandHeld Remote 1</b> <b>HandHeld Remote 2</b> <b>HandHeld Remote 3</b> <b>HandHeld Remote 4</b>	MEMLOCK PBLOCK MEM & PBLOCK  MEMLOCK < 900  FULL ENABLED	Memory Locked Playback locked  Memory and Playback locked Memory < Cue 900 locked Fully enabled
<b>Cue Sheet Macros</b>	Last Handheld Main Console	Determines the command line on which cue sheet macros run

## MIDI Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+]** **[-]** or wheel or set to factory default with **{DEFAULT}** soft key.

Available with CommuniquéPro only.

Function	Option/Range	Action/Example
<b>Channel</b>	Off, 1..16	Channel to receive note on/off messages for bumping submasters
<b>Mode</b>	Backup, Slave	
<b>Net Node</b>	Local, node name	Location of port
<b>Fader Controller</b>	1..4	
<b>Key Controller</b>	1..4	
<b>Notes</b>	Off	Received note on/off ignored
	Subs	Received note on/off bump the submasters
	Faders	Received note on/off set the sub faders to 100% (note on) or 0% (note off)
<b>Velocity</b>	Off	Note velocity ignored.

	On	Mode = Sub bumped to velocity value. Mode = Fader fader set to velocity value
<b>Trigger Macro</b>	Off, 1..1999	Macro to run when MIDI trigger bytes received.
<b>Trigger Bytes</b>	Off, 0..FF	Bytes which cause MIDI trigger macro to run.
<b>MSC ID Rx</b>	Off, 0..127	MIDI Show Control Receive Identification
<b>MSC ID Tx</b>	Off, 0..127	MIDI Show Control Transmit Identification

## Timecode Options Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+]** **[-]** or wheel or set to factory default with **{DEFAULT}** soft key.

Function	Option/Range	Action/Example
<b>Source</b>	SMPTE, Off	
<b>Frame Rate</b>	24 frames, 25 frames, 30 drop frames, 30 frames	SMPTE frame rate options
<b>Clock Override</b>	OFF, ON	
<b>SMPTE Net Node</b>	LOCAL, Net Node Name	
<b>MIDI Net Node</b>	LOCAL, Net Node Name	

## Patch Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+]** **[-]** or wheel or set to factory default with **{DEFAULT}** soft key.

Function	Option/Range	Action/Example

<b>Default Scale %</b>	0..200	Default scaling used in patch intensity channels.
<b>Default Frame</b>	2..100	Default maximum frame number used in patching attribute channels
<b>Default N-Dim %</b>	0..100	Default non-dim threshold value used in patch operations

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## Console Time Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+] [-]** or wheel or set to factory default with **{DEFAULT}** soft key.

<b>Function</b>	<b>Option/Range</b>	<b>Action/Example</b>
<b>Time Display</b>	AM/PM, 24 Hour	Sets time display format
<b>Date Display</b>	DD/MM/YY MM/DD/YY	Sets date display format
<b>Set Time HH:MM</b>	Current Time	Sets current time
<b>Set Date DD/MM/YYYY</b>	Current Date	Sets current date

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## At Time Macros Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+] [-]** or wheel or set to factory default with **{DEFAULT}** soft key.

<b>Function</b>	<b>Option/Range</b>	<b>Action/Example</b>
<b>MTWTFSS</b>	tick (selected) _ not selected.	Sets the day(s) of the week for at time macro
<b>Start Time/Date</b>	Off..Time/Off..Date	Sets start time for at time macro
<b>Interval</b>	Off..1 sec to 23:59 hrs	Sets on duration of at time macro
<b>Stop Time/Date</b>	Off..Time/Off..Date	Sets the stop time for at time macro



<b>Trig Macro</b>	1..1999	Number of macro to run.
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## Console Setup

Key Sequence	Action
<b>[REPORT] {ADV SETUP} {CONSOL SETUP}</b>	Display Console Setup Screen

The Console Setup is described under the main windows of the screen as follows:

- [Output Connections Window](#)
- [Network Window](#)
- [Communications Window](#)
- [External Submasters](#)

## Output Connections Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+] [-]** or wheel or set to factory default with **{DEFAULT}** soft key.

Function	Option/Range	Action/Example
<b>D54/AMX Not applicable to 300 Series Consoles.</b>	Off, AMX Out, D54 Out	Which analogue MUX port to use
<b>Start</b>	1..2048	1st MUX address transmitted
<b>Scaling</b>	80..120	Scale factor
<b>DMX1/2/3/4 (DMX1 and 2 only on 300 Series Consoles)</b>	Off, DMX OUT, DMX IN	Port functions
<b>Start</b>	1..2048	1st MUX address transmitted
<b>End</b>	1..2048	Last MUX address transmitted

## Network Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+] [-]** or wheel or set to factory default with **{DEFAULT}** soft key.

Available with Networker only.

Function	Option/Range	Action/Example
<b>Networker</b>	Off, On	Only enable when network hardware is installed AND network cables installed!
<b>Net Video Slot</b>	Off, 1..9	Start address for 1st VDU
<b>NET1 - NET4</b>	OFF, DMX IN, DMX OUT, PREVIEW	Configures the network DMX output
<b>Start</b>	1..4096	First MUX address transmitted
<b>End</b>	1..4096	Last MUX address transmitted
<b>Net Slot</b>	1..4096	The first slot (network dimmer address) which the start-end range is transmitted to (DMX OUT) or received from (DMX IN).

## Communications Window

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+] [-]** or wheel or set to factory default with **{DEFAULT}** soft key.

Some fields available with CommuniquéPro only

Function	Option/Range	Action/Example
<b>Reporter</b>	OFF, ON	Sets the console reporter on or off.

<b>Handheld Remote 1/2/3/4Handheld Remote</b>	Off	No Handheld
	R120 Wired	European wired remote
	R120 Radio	European radio remote.
	R130 Wired	American wired remote
	R130 Radio	American Radio Remote.
	Designers	Original (GSX) wired remote.
<b>Net Node</b>	Local, or net node name	
<b>Port  (AUX1 and AUX2 only on 300 Series Consoles)</b>	COM1	PC Serial Port 1 - RS232
	COM2	PC Serial Port 2 - RS232
	2AUX1	Console Aux port 1 - RS232
	2AUX2	Console Aux port 2 - RS232
	2AUX3	Console Aux port 3 - RS232
	4AUX1	Console Aux port 1 - RS485
	4AUX2	Console Aux port 2 - RS485
	4AUX3	Console Aux port 3 - RS485
<b>Baud</b>	1K2, 2K4, 4K8, 9K6, 19k2, 38K4	Serial port baud rates.
<b>Config</b>	7-0-2 7-E-2 7-N-2 7-O-1 7-E-1 T-N-1 8-O-2 8-E-2 8-N-2 8-O-1 8-E-1 8-N-1	Combination of :-  7 data bits 8 data bits  O odd parity E even parity N no parity  1 stop bit 2 stop bits

<b>Address</b>	0..999 0..999	Address of connected RADIO remote control R120 will be 1..8 R130 will be 6 digit number (first 3 digits LH field, last 3 digits RH field)
<b>ASCII Remote Input</b>	Off, On	Port through which console can accept ASCII remote control commands.
<b>GO Key Output</b>	Off, On	Port through which console can send remote Go signals.
<b>Macro Trigger Output</b>	Off, On	Port through which console can send characters in macro texts which start with '!'. !
<b>Remote Test</b>	Off, On	Port through which console can accept special test commands.
<b>Remote Trigger Macro</b>	Off, 1..1999	Macro to run when RS232 trigger bytes received.
<b>Remote Trigger Bytes</b>	Off, 0..FF	Bytes which cause RS232 trigger macro to run.
<b>Audio Input Macro (500 Series Consoles only)</b>	Off, 1..1999	Macro to run when audio input threshold exceeded.

## External Sumbasters

Select option using trackball or mouse and change values by numeric entry, increment or decrement using **[+]** **[-]** or wheel or set to factory default with **{DEFAULT}** soft key.

Available with CommuniquéPro only.

Function	Option/Range	Action/Example
<b>External 1..12 - Input</b>	1..12	External Analogue input number
<b>External Subs Scale %</b>	80..120	Scaling for all external submaster inputs.



## Glossary of Terms

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [L](#) [M](#) [N](#) [O](#) [P](#) [R](#) [S](#) [T](#) [U](#) [W](#) [X](#)

<b>Access Rights</b>	If Logins are set on in the 220node.cfg file, access to the system functions is controlled according to the user name and password entered in the login screen. The access rights are set by the Admin user in the Access Rights Screen.
<b>All Fade (AF)</b>	A cue which fades all channels on all X playbacks to the given levels. An All Fade cue can only have one part. Abbreviated as AF. See also Move Fade, Cross Fade and Cue.
<b>AMX192</b>	A type of analog multiplexed signal used for controlling dimmers and other devices. The AMX192 standard for the analog multiplex transmission of levels is defined by USITT, and supports a maximum of 192 signals per cable. There is 1 AMX192 output connector on the console, labelled AMX.
<b>Application Software</b>	Optional software applications that add functionality to GeniusPro/Lightpalette, e.g., CommuniquéPro, Tracker, Networker, Shownet and Showport.
<b>Archive</b>	Transfer of recorded data to, or from, the console to a floppy disk, hard disk, or server or to a printer.
<b>ASCII Remote Input</b>	Allows most facilities of the console to be remotely controlled using a serial, RS232 or RS485, communications protocol. The controlling equipment could be any computer (PC or Mac) or a dedicated show controller.
<b>ATC Pages</b>	Attribute Channels. Available when Tracker software is installed. Sets the groups of attributes of a fixture controlled by the rotaries. Pressing the left and right unmarked keys above the trackball, changes the attributes controlled by the rotaries.
<b>At Time Macros</b>	Up to 4 macros that can be set to run automatically run at predetermined times.
<b>Attribute</b>	A channel type as set up in the patch. This controls an attribute of a fixture rather than its intensity level, for example its colour, pan, tilt etc. See also channel
<b>Audio Input Macro</b>	A macro set in the Console Setup Screen which is run from the audio bass beat. Only available when CommuniquéPro software is loaded.
<b>Audio Threshold Supermaster</b>	A submaster fader set to control the sensitivity of the Audio Input. The Audio Input can be used to control the stepping of an effect. Recorded submaster levels are ignored.

<b>Auto Channel Paging</b>	When set to on, setting a channel level automatically pages the display to show the channel, or in the case of the Patch display in output order, to show the output
<b>Auto Go</b>	Automatically starts the next cue on completion of the current cue. See also wait time.
<b>Auto Hold Mode</b>	Setup option. When on channels cannot be “stolen” from the Channel Control by cues, subs, and effects.
<b>Auto Move While Dark</b>	Show Setup option. When on, scrollers and other moving fixtures move to new positions at the end of a cue while the fixtures are dark.
<b>Blackout</b>	A lighting state where all intensity channel levels are off. Attributes are not affected. You can create a blackout by running cue 0 (a permanent blackout cue), by setting the grand master fader to zero, by pressing [ <b>STOP</b> ] (having set it to 'Blackout' in the User Setup Screen), by pressing [ <b>REM DIM</b> ] twice with no channels selected, or by pressing [*] [@] [*] or [1] [ <b>THRU</b> ] [ <b>LAST</b> ] [@] [0] while in the Live display.
<b>Blackout Cue</b>	The first cue in the cue sheet is called the blackout cue and is numbered cue 0. This is an All Fade cue with all intensity levels and times of 0; it does not affect attributes. It cannot be modified or deleted.
<b>Blind Recording</b>	The process of recording submasters, cues, effects, or groups without the results showing on stage. See also preview and live
<b>Block Cue (BL)</b>	A cue into which channels do not track. In a tracking system, this ensures that all channels are forced to known levels when this cue is run, regardless of any changes made in cues before it. Channels set in a block cue track to later cues. See also soft block and hard block.
<b>Bump button</b>	A button associated with each submaster fader which flashes the submaster to a preset level. See also flash and solo. Also a soft key available when the Live screen is displayed which flashes the currently selected channels. The { <b>BUMP SUB</b> } softkey on the 510i LCD display bumps the currently selected submaster
<b>Bump mode</b>	The current operational mode of the bump buttons, set using [ <b>BUMP MODE</b> ] and the bump mode buttons that appear in the centre LCD (consoles with 3 LCD displays) or right LCD (consoles with 2 LCD displays).
<b>Circuit</b>	Wiring for powering a lighting fixture from a dimmer

<b>Channel</b>	An output or group of outputs. Historically, there was a physical controller (such as a slider) for each channel. On current control systems, channels are numbers accessed by a numeric keypad. There can be up to 6000 intensity channels and 2000 attribute channels. The actual number of channels is determined by the software you purchased, and the number of attribute channels may be limited by your hardware performance. You can increase the number of attribute channels beyond the purchased maximum by deleting intensity channels and assigning them as attribute channels, but cannot increase intensity channels beyond the purchased maximum. Channels are numbered arbitrarily 1 to 9999.
<b>Channel Control</b>	A set of controls which let you select and modify the levels for a set of channels (the current selection).
<b>Channel Formatting</b>	Setup option. Controls whether or not all channels will be shown on screen. A number of display options are available, i.e., OFF, AUTO, COMPACT, DISPLAY GROUP, or CHAN IN USE
<b>Channel Level</b>	The value of a channel from 0% (off or on at 0) to 100% (Full).
<b>Channel Mode</b>	DMX IN Channel Mode uses the incoming DMX levels as the contents of a user selectable Submaster. A user selectable Submaster fader can master these channel levels. The levels are visible on the LIVE screen when they are active and are recordable. [max. 512 channels] - See DMX IN
<b>Channel Scaling</b>	A value used to modify the output according to the channel type
<b>Colour Palettes</b>	A Tracker feature allowing gel numbers or CMY position to be recorded in the first 750 groups. See also Preset Focus
<b>Colour scroller</b>	See Scroller.
<b>Command Line</b>	A mode of entering commands (Lightpalette default). Commands generally need to be terminated by [*] before taking effect. See also Direct Action.
<b>CommuniquéPro</b>	An add on software package for Strand Lighting's 500 Series Consoles .
<b>Console</b>	The 430/520/530/550 unit with the controls, LCD's and floppy disk aperture on its top panel. This is connected to the displays, dimmers, automated fixtures, a printer, etc. through connectors at its rear.
<b>Console Lock</b>	[SHIFT] [HELP] locks the console faders and key to prevent accidental changes to a show. [SHIFT][HELP] toggles the console keyboard and fader state between locked and unlocked.



<b>Console Reporter</b>	An add-on software package designed to monitor the status of all compatible patched dimmers and dimmer racks and to alert the operator when a fault condition occurs.
<b>Console Time</b>	The date and time used by the console for all time-related operations. Set-up in the Show Setup Screen
<b>Cross Fade (XF)</b>	A cue which fades all channels (including channels that are recorded off) to the given levels. A Cross Fade cue can only have one part. Abbreviated as XF. This is the default fade type for GeniusPro consoles when Cue Tracking is OFF.
<b>Cue</b>	A recorded lighting state plus fade times which can be played back on an X playback. Cues can be numbered as an integer number from 1 to 999 (Cue 0 is the Blackout cue). However, in order to permit cues to be inserted between integer numbers decimal-numbered cues can also be used (e.g., Cue 2.1). The maximum number of cues depends on the number of cue parts (see Cue Parts). Also called a Preset. See also , Cross Fade, and Move Fade
<b>Cue Part</b>	All cues, can have up to 12 parts numbered from 1 to 12. Each cue consists of a minimum of 1 part (e.g., Cue 1 Part 1, Cue 3.2 part 12, etc). If a part number is not specified using the <b>{PART}</b> softkey when recording a cue, part 1 is automatically assumed. When a cue is run, all parts of the cue are run together. The total number of cue parts is 2000 maximum. (See also Cue Types)
<b>Cue Command</b>	An optional action taken automatically when a cue is run.
<b>Cue Sheet</b>	A listing of the cues currently recorded.
<b>Cue Sheet Macros</b>	This is the general term given to macros which can be triggered indirectly, rather than by direct macro keys or commands. Sources include: Cue sheet, timecode events, 510i bump inputs and local fader control, MIDI, external submasters, audio input, remote trigger, and optional macro tablet.
<b>Cue Tracking</b>	A cue recording mode where a channel level set in a cue is added automatically to later cues without having to edit each one.
<b>Cue Types</b>	Determines how the console treats unchanging channel levels when running a cue. See Move Fades, Cross Fade and All Fade (GeniusPro) or Tracking Cues, Hard Block Cues and Softblock Cues (Lightpalette)
<b>Current Selection</b>	The channels or outputs which are being controlled by the Channel Control. These are shown with a red or purple background on the display.

<b>D54</b>	A type of analog multiplexed signal used for controlling dimmers and other devices. The D54 standard for the analog multiplex transmission of levels is defined by Strand Lighting, and supports a maximum of 384 signals per cable. There is 1 D54 output connector on the console, labelled D54.
<b>Default</b>	A preset factory setting which remains until changed by the user. The user may return setting to the factory default using the <b>{DEFAULT}</b> softkey (when available)
<b>Delay</b>	The time between running a cue and starting its fade. Delay times can be split for the up and down fades.
<b>Device Address</b>	Together with the network address, forms the IP Address (Internet Protocol) for a device on a network.
<b>Dimmer</b>	An electronic device external to the console that controls the brightness of one or more fixtures.
<b>Dimmer Backup Scene</b>	A backup scene that can be set manually at the dimmer rack in the event of a major failure. The backup scene is activated by Console Reporter in the event of a major failure.
<b>Dimmer Filter</b>	A filter within Console Reporter used to filter out selected fault conditions from the Dimmer Fault Display.
<b>Dimmer Mode</b>	DMX IN Dimmer Mode patches the incoming DMX levels to outgoing DMX via the dimmer patch. A user selectable Submaster fader can master these dimmer levels. They cannot be recorded and are not visible on the LIVE screen. [first 512 dimmers only].
<b>Direct Action</b>	A mode of entering commands (Direct 1 Digit or Direct 2 Digit, named after the number of channel level digits which have to be entered before a Direct Action channel control command terminates automatically). The commands generally take effect as soon as the final key is pressed. See also Direct 1 Digit, Direct 2 Digit and Command Line.
<b>Direct 1 Digit</b>	A mode of entering commands (GeniusPro Default). Commands are carried out as soon as they are fully entered although the <b>[*]</b> key is required for some commands. In general, the syntax is object first, then action (for instance, <b>[CUE][1][RECORD]</b> ). Channel levels are entered as a single digit number which represents a multiple of 10%. This can be followed by <b>.</b> and a second digit for fractions of 10%.

<b>Direct 2 Digit</b>	A mode of entering commands. Commands are carried out as soon as they are fully entered although the [*] key is required for some commands. In general, the syntax is object first, then action (for instance, [CUE][1][RECORD]). Channel levels are entered as a two digit number.
<b>Direct Output Control</b>	Direct control of outputs using the [DIMMER] key
<b>Display</b>	A specific set of data that is shown on the console monitors. To identify the specific display and its parts, the display name (for instance, Groups display) and screen name (State screen or Levels screen) are used. See monitor and screen.
<b>Display group</b>	A special group containing “flag” channels (values can only be off or FL) used to determine which channels are displayed on Levels screens. The group is only used when the Channel Formatting field in the User Setup display is set to Display Group.
<b>DMX512</b>	A type of digital multiplexed signal used for controlling dimmers and other devices. The DMX512 standard for the digital multiplex transmission of levels is defined by USITT, and supports a maximum of 512 signals per cable. There are 4 DMX512 output connectors on the console, labelled DMX1 through DMX4.
<b>DMX Channel Submaster</b>	A submaster type, where the DMX input signals become levels for channels 1-512 in the submaster, and are combined with effects, playbacks, and other submasters on a highest takes precedence basis
<b>DMX Dimmer Submaster</b>	A submaster type, where the local submaster controls the level of the DMX input, and thus the levels of any dimmers patched to DMX inputs. Recorded submaster levels are ignored
<b>DMX IN</b>	Allows an external DMX source, for instance an FX desk, to be combined with the existing console dimmer patch. Either patches the incoming DMX levels to outgoing DMX via the dimmer patch (Dimmer Mode), or uses the incoming DMX levels as the contents of a user selectable Submaster (Channel Mode). In both modes, a user-selectable submaster can be used to master the levels.
<b>Dongle</b>	A security device used with Consoles and PCs. Applications are registered to the Dongle Security Number stored inside the dongle and marked on the outside of the dongle. The number will be composed of 6 groups of 3 digits between 0 and 255; e.g. 001 002 003 002 003 004. Dongles can be moved between PCs and when plugged into consoles are used instead of the internal Console Security Number.

<b>Double Width Dimmers</b>	Some analog multiplexed dimmer systems have double width dimmer modules which take two consecutive output signals (for example, Strand's CD80 dimmers, which take single width 2.4K or 6K dimmers or double width 12K dimmers)
<b>Down Fade</b>	The channels in a fade whose levels are decreasing. These may have different fade times than the Up Fade.
<b>Edit Field</b>	A value, or setting that can be changed by the user. Edit fields in Preview displays are displayed in yellow (non-editable) until the trackball is moved while holding down the <b>[SHIFT]</b> key.
<b>Edit Patch</b>	The Edit Patch is always displayed when the <b>[PATCH]</b> key is pressed, enabling the Edit Patch to be edited while the second patch is live.
<b>Effect</b>	A repetitive sequence of steps (lighting states) which can be played back on an effect playback. There are up to 600 effects numbered from 1 to 600. Each effect consists of 1 to 99 steps.
<b>Effect Direction</b>	The effect can be set to run in one of four directions, 'Forward', 'REVERSE' 'BOUNCE' or 'RANDOM'. You can control this property from the Effects display or by pressing <b>[FX DIR]</b> and selecting the appropriate option from the centre LCD (consoles with 3 LCD displays only).
<b>Effect Level</b>	The Effect Level property determines how the effect channel levels are interpreted. Options are 'NORMAL', 'NEGATIVE', 'NORMAL NEGATIVE' 'NEGATIVE NORMAL' or RANDOM
<b>Effect Mode</b>	The Mode property controls how the effect combines with other effects and with the other playbacks and faders.
<b>Effect Playback</b>	A playback control which lets you play an effect. There are 30 effect playbacks numbered from 1 to 30.
<b>Entry Mode</b>	The mode of entering commands. See Command Line and Direct Action.
<b>Effect Scaling</b>	The low and high settings for an effect step. The high setting is the level that channels go to when a step is active with the Level field set to NORMAL.
<b>Effects Supermaster</b>	A submaster fader used to controls the overall level of all effects.
<b>Fade</b>	A gradual change of channel levels from one lighting state to another. See also down fade and up fade.
<b>Fader</b>	A control on the console which is used to set times or levels. For example, each submaster has a dedicated fader which has a range of 0 to 10.

<b>Flash Softkey</b>	The current channel selection can be temporarily set to the Flash level or off (0%) without affecting other channels. The Flash Level is set by the Flash Supermaster. See Flash Supermaster
<b>Flash Supermaster</b>	The submaster fader controls the level for bumps and flashes. Only one submaster can be the Flash Supermaster. If no submaster is assigned as the Flash Supermaster, channels and submasters always flash to Full.
<b>Follow-on</b>	A cue which runs automatically via a wait time in the previous cue. See also wait time.
<b>Full</b>	An intensity channel level of 100%, shown as FL. A channel at Full is always on. This does not apply to attribute channels.
<b>Fx</b>	See effect.
<b>Grandmaster GM1, GM2</b>	A fader that masters all the intensity output levels. Attribute channels are not affected by this.
<b>Grandmaster Group</b>	A special group containing “flag” channels (values can only be off or FL) used to determine which channels are affected by each grandmaster fader. The group is always active.
<b>Group</b>	
<b>Hard Block Cue</b>	A Lightpalette cue type which records explicit levels for every channel in the system, so that any changes made to cues before the cue will track only up to the cue. Once the selected channels are matched to the previous cue they are once again blocked. The next time you change a channel in a previous cue, it will again be blocked by the cue. To allow tracking through a Hard Block Cue you need to change it into a Soft Block Cue or a Tracking cue. See also Soft Block Cue and Tracking Cue.
<b>HTP</b>	Highest takes precedence. If more than one source of control affects a channel, the channel level is set to the one with the highest level. See also LTP.
<b>Intensity</b>	A channel type as set up in the Patch. This controls the intensity (light) level of a fixture. Also see Full, on, off, on At 0, on level.
<b>LCD</b>	Liquid Crystal Display; a type of display. The number of LDSs is dependant on the console model number, i.e., 510 - 1LCD, 520 - 2LCDs, 530 - 3 LCDs, 550 - 3 LCDs
<b>Levels Screen</b>	The screen (or screens in systems with more than two screens) that shows channel intensity and attribute levels. See also State screen.

<b>Link</b>	A jump to a named cue in the cue sheet instead of to the next numerical cue. Links can be set using [CUE] #{LINK}#, or by activating the edit field by holding down the [SHIFT] key and moving the rollball to the Link field then using the wheel to set the link. The link field can also be set to <b>Rtrn</b> to terminate the link chain. This will force an end to the cue sheet and will not start any more cues until you explicitly reload it. See also Link
<b>Live</b>	Output is active and shown on stage.
<b>Live Editing</b>	The process of editing the lighting levels as they appear on stage.
<b>Live Patch</b>	
<b>Live recording</b>	The process of recording submasters, cues, effects, or groups from lighting levels as they appear on stage.
<b>Logins</b>	If the Login display is enabled in the 220node.cfg file, the user requires to enter a user name (Up to 8 alpha-numeric characters) and password to obtain access to the console or remote within a network. The ADMIN user can set access rights for each user and for each console, or remote on a network. See also Access Rights.
<b>Loop</b>	Specifies how many times a link is executed from 1 to 255 times. A value of 0 is indefinitely. Up to 4 loops can be nested within each other.
<b>LTP</b>	Lowest takes precedence. If more than one source of control affects a channel, the channel level is set to the one which is the last to take control. See also HTP.
<b>Macro</b>	A recorded sequence of key presses which can be played back.
<b>Memory Lock</b>	Memory Lock prevents recorded data from being altered but does not stop normal control or playback.
<b>MF</b>	See Move Fade
<b>MIDI</b>	Musical Instrument Digital Interface. An electrical and communications standard. See also MSC.
<b>Monitor</b>	A computer display device. A console can have one to four monitors, which are connected to, but separate from, the console. See also screen.
<b>Move Fade (MF)</b>	A cue which fades some channels to the given levels. Other channels are left unchanged. Abbreviated as MF. See also Cross Fade, All Fade and Cue. This is the default fade type for GeniusPro when Cue Tracking is set to ON
<b>MSC</b>	Midi Show Control. A way of controlling a show via the MIDI input.

<b>Multiplex</b>	A means of transmitting output level data for many outputs down a single signal cable. See AMX192, D54, and DMX512.
<b>Non-dim</b>	An output type as set up in the Patch. This controls the intensity (light level) of a fixture but the level remains off until the channel level reaches a predetermined threshold over which it goes to Full.
<b>Off</b>	An intensity channel level which is at 0% and is not 'On At 0'. This is displayed as a blank. The opposite to off is on.
<b>On</b>	An intensity channel level which is either above 0% or 'On At 0'. This is displayed as 0 to 99 or FL (Full). The opposite to on is off.
<b>On at 0</b>	An intensity channel level which is at 0% but is treated as being on rather than off. This is displayed as 0. This does not apply to attribute channels.
<b>On group</b>	A special group containing channel levels which, if present, are used instead of the value in the On Level field in the User Setup display to set intensity and attribute values when you use [ON].
<b>On level</b>	A level which can be set to any value and which can then be used to set channel levels by using the [ON] key
<b>Output</b>	A level that can be output from the console to control external devices such as dimmers and automated fixtures.
<b>Part</b>	A recorded lighting state used as part of a cue. All parts start when the overall cue is started. Parts 2 to 12 in a multi-part cue are always Move Fade (GeniusPro) or Tracking Cues (Lightpalette).
<b>Partition group</b>	A special group containing “flag” channels (values can only be Off or FL) used to determine which channels can be recorded or are controllable via Channel Control. This can be very useful in multi-console systems. The group is only used when the Channel Partitioning field in the Show Setup display is ON.
<b>Patch</b>	Specifies the channel which controls each output. Each output can only be patched to one channel but a single channel can be patched to more than one output. The patch also sets up the type of channel (intensity, attribute etc.) and the channel scaling. See also Channel Scaling
<b>Preheat group</b>	A special group containing channel levels which, if present, are used to set the preheat level when a channel is auto-preheated. The group is only used when the Auto Preheat field in the Show Setup display is ON.
<b>Preset</b>	See Cue.
<b>Preset Focus</b>	Preset Focus allows individual channels or attributes in Cues, Effects and Submasters to be recorded as links to the same intensity or attribute in one of 750 groups (Groups 1..750).



<b>Profile</b>	A means of altering the default linear characteristics of intensity and attribute fade times. Profiles are also used to alter the default linear relationship between channel levels and console output levels
<b>Proportional</b>	Level Wheel mastering which changes channel levels by a proportion of each level. For example, proportionally mastering up by 20 would set each channel to 1.2 times its previous value so a channel at 10% would go to 12%. See also Shaft
<b>Remainder Dim (REM DIM)</b>	Causes the channels in the current selection to remain at their current levels while all other channels are set to zero.
<b>Remapping</b>	The process of changing the function of a console key, wheel or rollball or re-assigning the function of a console VDU.
<b>Reporter</b>	See Console Reporter
<b>Scroller</b>	A device that changes the colour of one or more fixtures. A scroller is normally controlled by an output from the console which in turn is controlled by a channel attribute. See also dimmer, output, and attribute.
<b>Shaft</b>	Level Wheel mastering which changes channel levels by a fixed amount. For example, shaft mastering up by 20 would add 20 to each channel level so a level at 10% would go to 30%. See also Proportional
<b>Soft Block Cue</b>	Lightpalette cue type which records explicit levels for every channel in the system, so that any changes made to cues before the cue will track only up to the cue. Once set to off, channels in a Soft Block Cue will continue to track changes in previous cues.
<b>Soft Key</b>	One of a row of keys below each LCD whose function is indicated on the the LCD.
<b>Split Delay</b>	Different delay times before fade up and fade down
<b>Split Fade</b>	A fade time with different up fade and down fade times assigned to it.
<b>Solo</b>	A facility for temporarily inhibiting the levels of all channels that are not currently selected, allowing the selected channels to become the current lighting state.
<b>State screen</b>	The screen that shows state information for the X playbacks, submaster faders, and effects playbacks. See also Levels screen.
<b>Step</b>	A recorded lighting state used as part of an effect. There can be up to 99 steps in an effect.



<b>Sub</b>	See Submaster.
<b>Submaster</b>	A playback control with an associated lighting state allowing channel levels to be manually controlled. There number of submasters depends on console type. The last six of these are generally assigned as supermasters, but can also be used as submaster faders.
<b>Supermaster</b>	One of 6 specialized submaster types which are normally assigned to the last 6 submaster faders. As with any other submaster type, you can assign each supermaster to any submaster on the console. But unlike other submaster types, each supermaster can only be assigned to one submaster fader.
<b>Text Labels</b>	A typed identification, entered from an external keyboard (after pressing the [TEXT] key) for individual cues, groups, etc.
<b>Tracking Cues</b>	When cues are recorded, only the levels that changed in the cue are remembered. If you change a level in a cue, and that cue level wasn't changed for the rest of the show, the new level will now "track" through the entire show. By default, Lightpalette records all cues as Tracking Cues.
<b>Up Fade</b>	The channels in a fade whose levels are increasing. These may have different fade times than the down fade.
<b>USITT</b>	United States Institute of Theater Technology. A standards committee.
<b>Wait Time</b>	A timer that starts counting down when a cue is run. When it expires, the next cue (or specified linked cue) is run automatically.
<b>Wheel</b>	A control on the console top panel which is used to set times or levels.
<b>XF</b>	See Cross Fade.
<b>X Playback</b>	A playback control which lets you play back a sequence of cues. There are 2 X Playbacks numbered 1 and 2.
<b>X Playback group</b>	A special group containing "flag" channels (values can only be Off or FL) used to determine which channels are controlled by each X playback. It is used to partition the channel range between the two X playbacks. The group is always active.
<b>XREF</b>	(Cross Reference) A channel display format similar to a spreadsheet which shows the movement of channel levels from cue to cue.

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