

COBRA 3.1



Set of Equipment supplied

- 1 Cobra 3.1 fog generator incl. Duct Adaptor/Protection against contact
- 1 Tank lid with Quick Connector
- 1 mains cable 2 m with Powercon True plug
- 1 Operating manual

Please check whether all the products you ordered are supplied.

Contents

1. Introduction	4
2. Security instructions	5
3. Description of the parts	6
4. Fluid	8
4.1 General Notes	8
4.2 Changing the fluid container	8
5. Operating the Cobra 3.1	8
5.1 Selecting the location	8
5.2 Putting into operation	9
5.3 Putting into operation	9
5.4 Operation	10
5.4.1 Adjusting the Pump performance curve/characteristic	12
5.4.2 Manual operation	13
5.4.3 Operating via analog	14
5.4.4 Operating via DMX	15
5.4.4.1 RDM	16
5.4.5 Operating via Ethernet	17
5.4.5.1 Artnet	17
5.4.5.2 sACN	18
5.4.5.3 IP-Configuration	19
5.4.6 Using the internal Timer	20
5.4.7 More adjustments	21
5.4.7.1 Settings 2	21
— Pump Adjustment	21
— Screensaver	21
— Brightness	22
— Standby	22
5.4.7.2 Settings 3	22
— Operating hours counter	22
— Machine Info	23
— Factory Reset	23
5.5 Wiring of the connectors	24
6. Cleaning, Care and Maintenance	24
7. Troubleshooting	25
8. Specifications	26
9. Warranty conditions	27

1. Introduction

The **Cobra 3.1** is a powerful fog generator, that sets new Standards concerning noise and handling.

With its novel nozzle, that can be unscrewed and cleaned as needed, the machine is very silent - the noise level at full output is 82.5 dBA.

The use of two pumps ensures a very constant fog output at any pump level.

The Touchscreen makes the handling of the **Cobra 3.1** easy and intuitive. Beside the analog and DMX 512 control, the machine can also be operated via Ethernet (Artnet and sACN).

Furthermore, the **Cobra 3.1** has an internal working hours counter, that saves heating and fogging durations.

A Firmware update can be made by the customer.

The machine is supplied with a duct adaptor that also functions as a protection against contact.

Please read the manual carefully before starting the device to ensure a correct operation!

2. Safety instructions

A fog machine is not a toy!

- Very hot steam escapes from the nozzle. Danger of getting burnt.
- Occasionally very hot droplets of fluid may escape when in operation. Thus never aim at persons directly and keep a minimum distance of 3 m to the nozzle.
- Never touch the nozzle when in operation. Danger of getting burnt.
- The location for the machine must be non-flammable, non-combustible and not sensitive to heat. It has to be twice as big as the machine.
- Keep a minimum distance of 60 cm to all flammable, combustible objects and objects sensitive to heat.
- Glycol is alcohol and burns with a slightly bluish, almost invisible flame. Never point the fog at strong sources of ignition like fire or pyrotechnic effects.
- Never open the machine and leave the machine unattended when connected to a power supply.
- It is only allowed to fly/hang the machine by using the original hanging set.
- The visibility has to be more than 2 m in rooms where people walk around.
- Do not swallow the fog fluid. Keep it away from children. In case of eye contact, rinse with a lot of water. Consult a doctor should you have accidentally swallowed some fluid.
- Spilled fluid or splashed fluid droplets can cause slip hazard. Mop up the fluid and dispose of it according to regulations.
- Fog may activate smoke detectors.

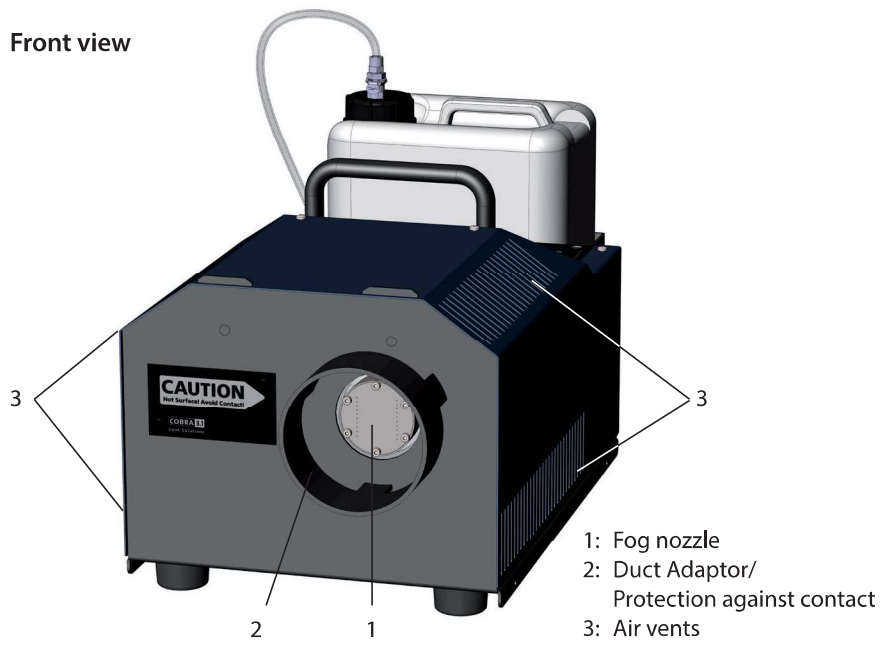
Artificially-made fog can be produced in many different ways. The method used here to produce fog, with a device which works according to the vaporizer principle, is the most harmless one.

No case has so far been reported in which a sound human being has been harmed because of using our device to produce artificial fog. However, this can only be guaranteed if the professional fog generators are used accordingly, i.e. at the correct vaporization temperatures as well as with the correctly mixed fog fluid.

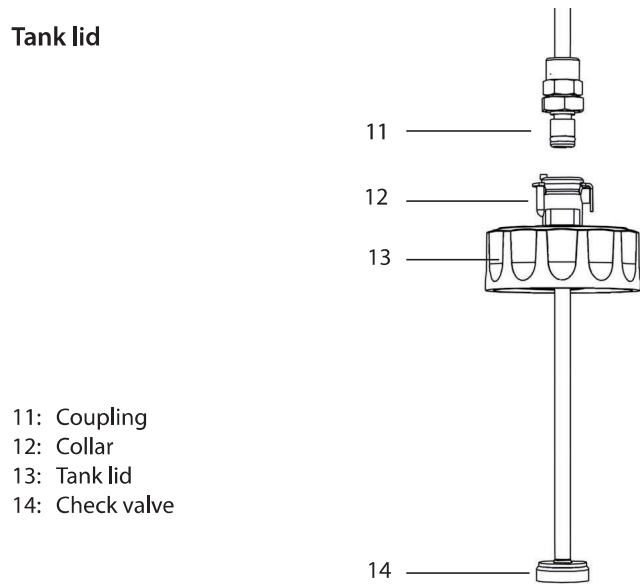
We, however, recommend: **People with health problems or problems of the respiratory tract or with an inclination for allergies should avoid any contact with artificially-made fog.**

3. Description of the parts

Front view

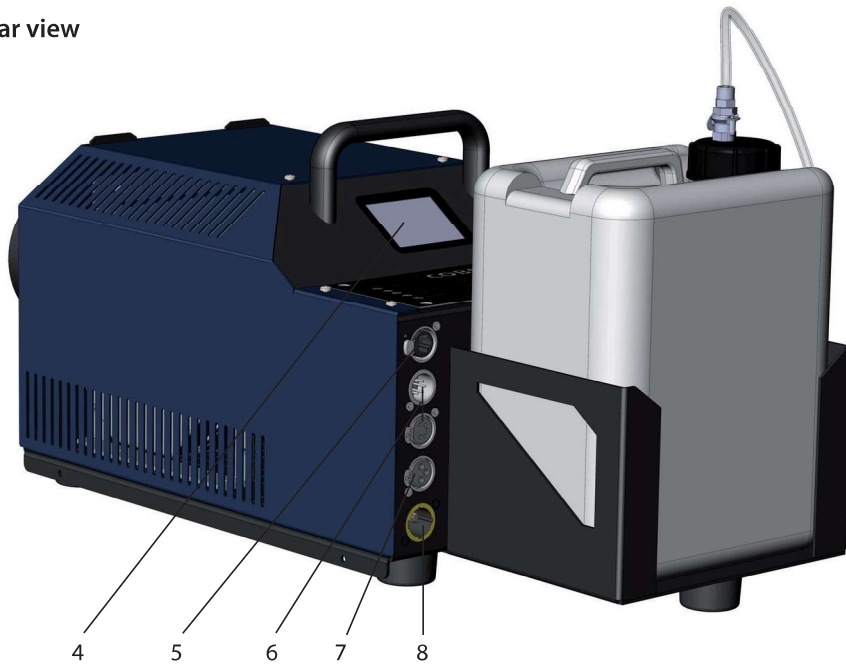


Tank lid



3. Description of the parts

Rear view



4: Touchscreen/Control Panel

5: Ethernet-Connector RJ45/Ethercon

6: DMX512 in/out 5pin-XLR

7: Analog in 3pin-XLR

8: Power in/out for Powercon True plug

4. Fluid

4.1 General Notes

The **Cobra 3.1** has been designed to be used with Look fog fluids.

The following Look fog fluids are available:

Quick-Fog	thick, quick disappearing fog fluid
Regular-Fog	thick, long lasting fog fluid
Slow-Fog	thick, extremely long lasting fog fluid

If fluids have been used other than Look fog fluids we can't grant warranty on parts that have been in contact with the fluid.

PLEASE NOTE: The vaporizer of our machines does not have to be cleaned! Cleaners, available on the market, can damage the vaporizer! We cannot grant warranty in this case.

4.2 Changing the fluid bottle

- Disconnect the fluid tube from the lid by pressing the lever on the collar [12] and removing the coupling [11].
- Remove the bottle from the tank housing of the **Cobra 3.1**
- Unscrew the lid [13] of the empty bottle and screw it onto the new container.
- Place the full can into the tank housing.
- Push the coupling [11] into the collar [12] until you hear a click. The collar is now locked firmly.

5. Operating the Cobra 3.1

5.1 Selecting the location

The location in which the **Cobra 3.1** is to be operated must

- be dry,
- be free from dusty or polluted air,
- be free from vibrations,
- be a non-flammable place or surface,
- be well-ventilated with fog-free air keeping the ambient operating temperature between 5° C and 45° C and the relative air humidity below 80%.

5. Operating the Cobra 3.1

5.2 Putting into operation

Connect the fluid container and - if needed - the corresponding cable for operating via analog, DMX or Ethernet.

Connect the supplied PowerCon mains cable to the plug [8] and twist the Powercon True plug until it is locked.

Now connect the **Cobra 3.1** to the mains supply. Make sure the correct voltage is selected (230V/50 Hz). The main screen will appear on the display.

The machine needs approx. 15 minutes to heat up. The heating is indicated by the **READY-STATUS**. Once the machine is heated up, the **START**-button changes from red to green.



Fig. 1: Machine not ready



Fig. 2: Machine ready

5.3 Switching the device off

At manual operation, disconnect the mains plug or switch the machine to Standby. You can get into the Standby-Mode via **Settings 2** —> **Standby** (—> see chapter 5.4.7.1).

The heating element will be switched off, the display turns black. A dot appears in the right lower corner.

If you press **BACK**, you will get back to Settings or the main screen without saving the values.

If the **Cobra 3.1** stops receiving any data/information via DMX, Artnet or sACN, it switches into the Standby-Mode after 10 seconds.

The heating element will be switched off, the display turns black. A dot appears in the right lower corner.

5. Operating the Cobra 3.1

5.4 Operating

The **Cobra 3.1** can be controlled manually, analog, via DMX or Ethernet.

The following control hierarchy is valid:

1. Manual operation - will be overwritten with all other controls
2. Operation via analog
3. Operation via DMX
4. Operation via Ethernet, overwrites everything else

The chosen/active function will be highlighted at the Touchscreen in cyan.

In the printed black and white Operating manual, the active function appears darker than the other panels.

All control choices as well as more adjustments will be described on the following pages.

5. Operating the Cobra 3.1

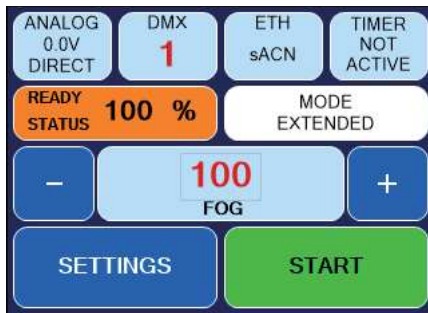


Fig. 3 Main screen

After starting the **Cobra 3.1**, the display shows the main screen (Fig. 3). It shows the following panels:

First line from left to right:

- Button **ANALOG**: shows the adjusted mode and the voltage. —> See chapter 5.4.3
- Button **DMX**: shows whether DMX is active and the adjusted DMX-address. —> See chapter 5.4.4
- Button **ETH**: shows the selected Ethernet protocol and whether the machine is controlled via Ethernet. —> See chapter 5.4.5

Second line shows

- whether the machine has reached the operating temperature or how far the heating process has progressed. The display increases from 0 to 100%.
- which performance curve/-characteristic (= **MODE**) has been selected. By pressing **MODE**, the display changes into the **MODE**-display. Here you can choose between four different performance curves. —> See chapter 5.4.1

Third line: Actual value of fog/output (pump). The value can be changed from 0% to 100% by pressing the Plus- or Minus button. Pressing the button in the middle (**FOG**), a keyboard appears where the new value can be typed in.

Fourth line:

- **SETTINGS**: changes into the adjusting menu.
- **START**: During the heating up phase the start button is red. As soon as the fogging process can be started, the button turns green.

5. Operating the Cobra 3.1

5.4.1 Selection of the performance curve/characteristic

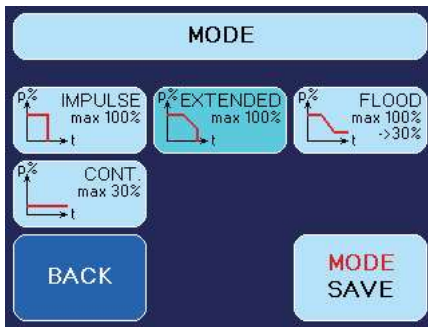


Fig. 4 Mode screen - Extended Mode

Depending on the use of the **Cobra 3.1** and the desired effect, it can be helpful to change the performance curve and therefore the kind of fogging process. Pressing **MODE** at the main screen opens the **MODE** screen.

Here, the performance curve can be selected. Four different characteristics are provided.

The machine is delivered with the Extended-Mode selected.

1. **IMPULSE** – The pump produces fog with the adjusted value without being down-regulated. If the shutdown temperature has been reached (if the heating element is getting too cold), the pump will be switched off and the fogging process stops.
2. **EXTENDED** – This Mode also starts with the adjusted pump value. If the temperature of the heating element is getting lower, the pump will be slowly down-regulated. Thus, the fogging duration can be extended without a drastic decrease of the output. If the shutdown temperature has been reached (if the heating element is getting too cold), the pump will be switched off and the fogging process stops.
3. **FLOOD** – And also this Mode starts with the adjusted pump value. If the temperature of the heating element is getting lower, the pump will be slowly down-regulated until the fog output changes to continuous output. This means, the machine starts with high output and regulates down to continuous output. The pump will not be switched off and the fog output won't stop.
4. **CONTINUOUS** – In this Mode, the pump can only be set to 30% as maximum to ensure a steady continuous output.

NOTE: Of course continuous output can be adjusted also in the **IMPULSE**- or **EXTENDED**-Mode. The **Cobra 3.1** can produce continuous fog on pump levels up to approx. 30%. Therefore adjust the pump at the main screen with the Plus- or Minus-buttons to max. 30%.

Select the favoured Mode by pressing the respective button and save it with **MODE SAVE**. The selected Mode will be shown at the main screen. If you press **BACK**, you will get back to the main screen without saving the selection.

5. Operating the Cobra 3.1

The following fogging durations are possible in the *IMPULSE*- and *EXTENDED*-MODE (measured with Look Regular-Fog, if Look Quick-Fog or Look Slow-Fog is used, the times can be slightly different):

Pump adjustment	Fogging time in Seconds	
	<i>IMPULSE-MODE</i>	<i>EXTENDED-MODE</i>
100 %	22 s	55 s
90 %	40 s	76 s
80 %	55 s	95 s
70 %	89 s	128 s
60 %	112 s	176 s
50 %	167 s	347 s
40 %	378 s	more than 10 min/
30 %	Continuous output	Continuous output

5.4.2 Manual Operation

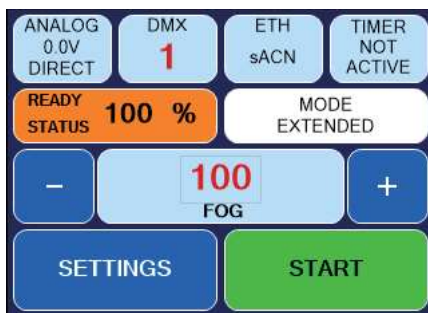


Fig. 5 Manual Mode

The manual operation is very simple.

The fogging process can be started and stopped by pressing the **START**-button.

The amount of the output can be adjusted by pressing the Plus- and Minus-button before or while the machine is producing fog.

To open a keyboard where the value can be typed in, press the button in the middle (FOG).

Please note that the selected performance curve/characteristic also effects the amount of the fog output. Thus - although 100% has been adjusted - the output will eventually be lower. —> See chapter 5.4.1

5. Operating the Cobra 3.1

5.4.3 Operating via Analog



Fig. 5 Analog Mode active

Input voltage between 0 and 10V.

If the voltage is higher than 1 V, the machine will be controlled via analog, provided that neither DMX nor Ethernet signal is present.

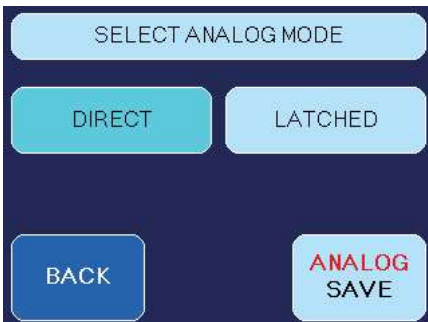


Fig. 6 Select Analog Mode - Direct



Fig. 7 Select Analog Mode - Latched

Connect your cable or radio remote to the “analog in” at the **Cobra 3.1**.

The **ANALOG**-Button at the main screen shows the voltage and the selected Mode (**DIRECT** or **LATCHED**). Also the colour of the button (cyan) shows that the analog mode is now active.

To adjust the analog Mode, press **ANALOG** on the main screen (Fig. 1, Line 1) or choose **SETTINGS** and on the following screen **ANALOG**. The **SELECT ANALOG MODE**-screen (Fig. 6/7) appears.

It is advisable to set the pump (FOG) to 100% to ensure the full output will be used. If the value is adjusted at e. g. 65%, the connected remote/desk regulates the output between 0 and 65% as maximum value.

Please note that the selected performance curve/characteristic also effects the amount of the fog output. Thus - although 100% has been adjusted - the output will eventually be lower. —> See chapter 5.4.1

5. Operating the Cobra 3.1

Choose one of two possible Modes:

1. **DIRECT** for e.g. Look XLR-Remote or any other 0 - 10V remote:

The connected XLR-Remote regulates the fog output between 0 and the adjusted FOG-value.

- When using the XLR-Remote, the fogging process can be started by pressing the on/off-Button on the XLR-Remote.
- When using the Radio Remote, the start button on the transmitter has to be pressed and held during the fogging process.

LATCHED:

Switching on and off via short impulse with e. g. push-button or Radio Remote. The FOG value has to be adjusted at the machine.

- When using the Radio Remote, the button at the transmitter has to be pressed and released. A second impulse stops the fogging process.

Save the adjustments by pressing **ANALOG SAVE**. If you press **BACK**, you will get back to the main screen without saving the adjustments.

Please note: If the machine has been started in the **LATCHED**-mode, it must be stopped in the same mode. Switching into a different mode is actually not possible.

5.4.4 Operating via DMX

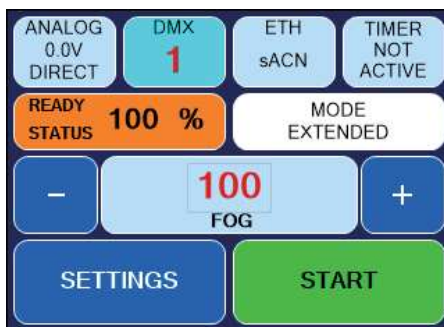


Fig. 8 DMX-Mode active



Fig. 9 Keyboard-screen

Press **DMX** (Fig. 8, line 1) on the main screen or choose **SETTINGS** → **DMX**. The Keyboard-screen (Fig. 9) appears. The DMX-address can be typed in.

Save the adjustments by pressing **DMX ADDRESS SAVE**. If you press **BACK**, you will get back to the main screen without saving the adjustments.

5. Operating the Cobra 3.1

The fog output can now be adjusted from 0 - 100% via the DMX-desk.

If you also want to change the Mode (Impulse, Extended, Flood, Continuous) at the desk, the Personality has to be changed to **Value + Mode** (see below).



Fig. 10 Personality „Value“



Fig. 11 Personality „Value + Mode“

The machine can - depending on the chosen Personality - be controlled via one or two DMX-channels. (Adjustments via **SETTINGS** —> **PERSONALITY**).

- If Personality **VALUE** is chosen, the **Cobra 3.1** can only be controlled via one DMX-channel. This controls the pump value (= fog output).
- If Personality **VALUE+MODE** has been chosen, the machine can be controlled via two following DMX-channels. The first channel regulates the pump, the second one selects the pump mode. —> See chapter 5.4.1.

The second channel is divided into four ranges:

Mode	DMX-Value
Impulse	195 - 255
Extended	130 - 194
Flood	65 - 129
Continuous	0 - 64

5.4.4.1 RDM

The following functions can be seen via RDM:

- Status: Ready, Re-heating, Error messages (E-1, E-2 etc)
- DMX-Patch: set/change/check the DMX start address and display how many DMX channels are used
- Temperature: Heating element, PCB
- Adjusting the Personality (1 or 2 channels)
- General Information about the machine

5. Operating the Cobra 3.1

5.4.5 Operating via Ethernet

Press **ETH** at the main screen (Fig. 1, line 1) or select **SETTINGS** -> **PROTOCOL**. Screen (Fig. 12/13) appears.

5.4.5.1 Artnet

Select **ARTNET**. The button will change its colour to cyan, showing that Artnet is activated.

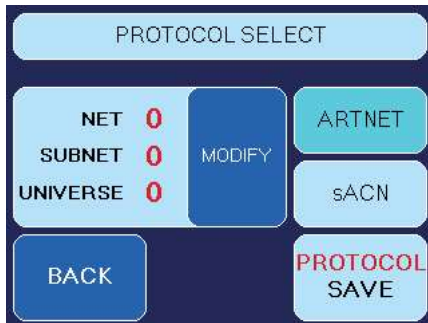


Fig. 12 Screen with activated ARTNET-Button

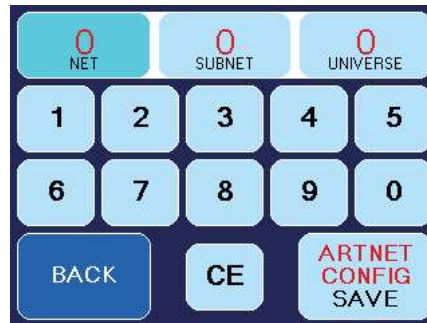


Fig. 13 Screen for configuring ARTNET

You can adjust the *Net*, *Subnet* and the *Universe*.

- Therefore press **MODIFY** (Fig. 12). The screen shown on the right (Fig. 13) appears.

Corresponding to the standards for DMX and ARTNET, a *Universe* consists of 512 DMX-channels. A *Subnet* contains 16 Universes and a *Net* 16 Subnets. There are 128 Nets.

- Select **NET**, **SUBNET** or **UNIVERSE** (Fig. 13, line 1), to change the respective value. Press **CE** and type in the new value.
- Pressing **ARTNET CONFIG SAVE** saves the values, **BACK** switches back to the previous screen (Fig. 12) without saving the value.
- Press **PROTOCOL SAVE** (Fig. 12) to save the ARTNET adjustments.
If you press **BACK**, you will get back to Settings or the main screen without saving the values.

5. Operating the Cobra 3.1

5.4.5.2 sACN

Press **sACN** (Fig. 14). The button changes its colour to cyan, showing its active mode.

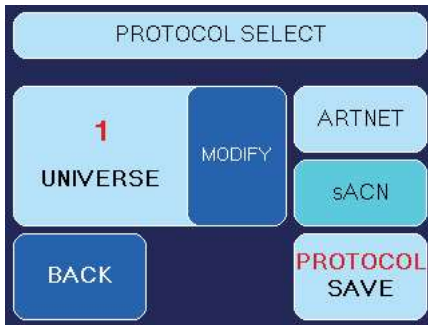


Fig. 14 Screen with activated sACN-Button



Fig. 15 Screen for configuring sACN

You can adjust the *Universe*.

- Press **MODIFY** (Fig. 14). The screen on the right appears (Fig. 15).

Corresponding to the standards for DMX and sACN a *Universe* consists of 512 DMX-channels. In sACN there are Universes between 1 and 63999.

- Press **CE** (Fig. 15) and type in the value for the selected *Universe*.
- **sACN UNIVERSE SAVE** saves the value, **BACK** switches back to the previous screen (Fig. 14) without saving the value.
- Now press **PROTOCOL SAVE** (Fig. 14) to save your sACN adjustments.
If you press **BACK**, you will get back to Settings or the main screen without saving the value.

Make sure that the **Cobra 3.1** has a valid network address and a correct subnet mask. You can check and change this by pressing **SETTINGS** → **IP-CONFIG** (see chapter 5.4.6).

5. Operating the Cobra 3.1

5.4.5.3 IP-Configuration

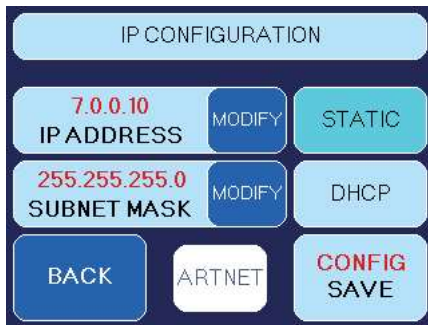


Fig. 16 IP-Configuration screen, STATIC active



Fig. 17 Screen to adjust the IP-address and Subnet mask

To adjust the IP-address and the Subnet mask for your network, press **SETTINGS** at the main screen and in the following Settings 1-screen **IP-CONFIG**.

First select whether you want to use a static network address or a dynamic one (DHCP) by pressing **STATIC** or **DHCP** (Fig. 16).

If you select **DHCP**, the **Cobra 3.1** gets an IP-address and a subnet mask from a DHCP-Server or Router in your network.

If you select **STATIC**, you can type in the IP-address and the subnet mask in the following screen (Fig. 17). Ask your network administrator if necessary.

- Press **CE** and type in the address. Save the address with **IP ADDRESS SAVE** respectively **SUBNET MASK SAVE**, press **BACK** to get to the previous screen without saving the values.

For networks, where the IP-address and the subnet mask shall be used with the **ARTNET**-standard, press **STATIC** and then **ARTNET** (both Fig. 16).

The IP-address will then be generated from the invariable MAC-address of the **Cobra 3.1** and an OEM-Code. The subnet mask will be automatically set to 255.0.0.0.

5. Operating the Cobra 3.1

5.4.5.4 Using the internal Timer

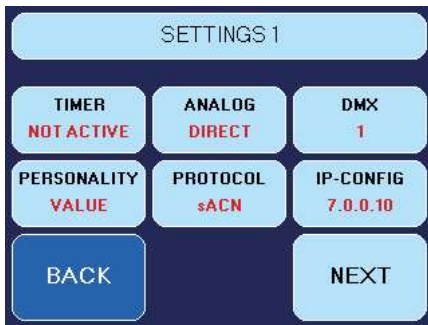


Fig. 18 Screen Settings 1

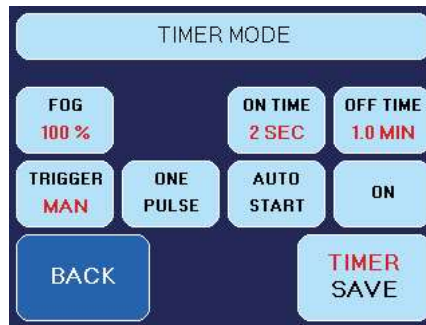


Fig. 19 Screen Timer-Mode

To change into the Timer-Mode, press **TIMER** at the main screen or press **SETTINGS** → **TIMER** (Fig. 18).

- On the following Timer Mode-screen (Fig. 19), the pump value (FOG = output) can be adjusted between 0 and 100%.
Please note that the selected performance curve/characteristic also effects the amount of the fog output. Thus - although 100% has been adjusted - the output will eventually be lower. —> See chapter 5.4.1
- For the **ON TIME** (= fogging time), values between 1 - 99 Seconds and for the **OFF TIME** (= wait time) values between 0.1 - 99.9 Minutes can be adjusted.
- The Timer can be started manually as well as via Remote. To select the starting Mode, press **TRIGGER**. Depending on the Mode that has been chosen, the screen shows **MAN** or **REM**.
- Furthermore it is possible to program a single timer cycle. Press **ONE PULSE** to activate or deactivate this Mode. The machine will then produce fog once with the programmed duration.
- If you want the Timer to start automatically directly after the working temperature has been reached, activate **AUTO START**. This is also useful if you will disconnect the power from the mains during timer operation, and you want the timer to continue when the power is reconnected.

To activate the Timer, press **ON**. Save the values with **TIMER SAVE**.

To activate or deactivate the Timer manually, press **ACTIVE** respectively **NOT ACTIVE** on the main screen.

5. Operating the Cobra 3.1

5.4.7 More adjustments

5.4.7.1 Settings 2



To open the Settings 2-screen, press **SETTINGS** at the main screen and, on the following Settings 1-screen, **NEXT**. The shown screen appears.

Fig. 20 Settings 2-screen

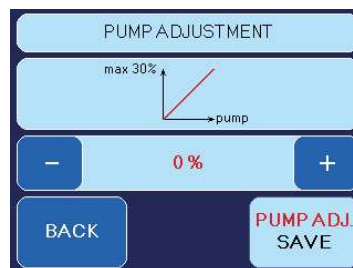
— Pump Adjustment

This option is for finest adjustment of the pump. You can adjust the performance curve 5% up or down using the **Plus-** and **Minus-**Buttons.

Productionwise, the machines might vary in output. If you have several machines of the same type, you can adapt the output of the machines to make them perform identically.

Also the aging process can influence the output. With the pump adjustment you can adapt the differences.

Save the value with **PUMP ADJ. SAVE**. Press **BACK** to get to the previous screen without saving the value.



— Screensaver

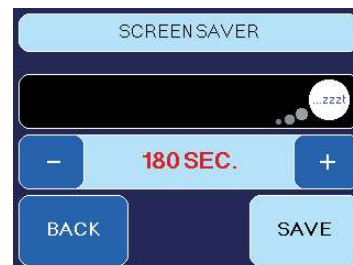
Adjusts the time until the Screensaver appears.

– Press **SETTINGS** at the main screen, at the following „Settings 1“-screen **NEXT** and at the „Settings 2“-screen **SCRENSAVER**.

– Press **PLUS** or **MINUS** to change the value.

– Save the value with **SAVE**.

Press **BACK** to get to the previous screen without saving the value.



5. Operating the Cobra 3.1

— Brightness

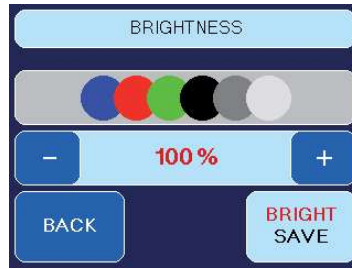
You can adjust the brightness of the background lighting.

Press **SETTINGS** at the main screen, on the following Settings 1-screen **NEXT** and on the Settings 2-screen **BRIGHTNESS**.

Press **PLUS** or **MINUS** to change the value.

Save the value with **BRIGHT SAVE**.

Press **BACK** to get to the previous screen without saving the value.



— Standby

If data via DMX, Artnet or sACN stops, the **Cobra 3.1** switches to the Standby-Mode after 10 Seconds. The heating element will be switched off, the screen turns black. A dot appears in the right lower corner.

You can also activate the Standby-Mode by pressing **SETTINGS 2** —> **STANDBY**. You can interrupt the process by pressing **BACK** or **STANDBY** to switch directly to the Standby-Mode.



5.4.7.2 Settings 3

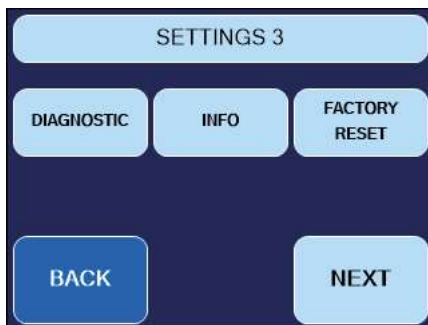


Fig. 21 Settings 3-screen

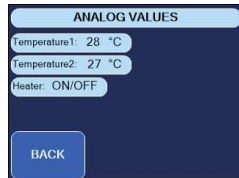
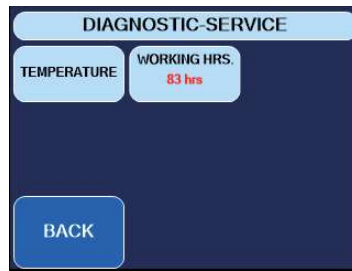
To open the Settings 3-screen, press **SETTINGS** at the main screen and on the following Settings 1- and Settings 2-screens press **NEXT**. The shown screen appears.

5. Operating the Cobra 3.1

Pressing **DIAGNOSTICS** switching to the **DIAGNOSTIC-SERVICE**-screen. There, the temperature and a hour meter can be shown.

The hour meter (**WORKING HRS**) shows, how many hours the machine was heated up and how many minutes and seconds the machine produced fog.

The Counter cannot be resetted.

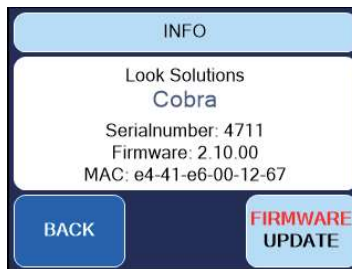


— Machine Information

Here you can find some information about the machine like Product name, Serial number and Firmware number.

Press **SETTINGS** at the main screen, at the following Settings 1 and Settings 2-screen **NEXT** and at the Settings 3-screen **INFO**.

Press **BACK** to get to the previous screen.



FIRMWARE UPDATE starts an update of the software. Therefore an additional program as well as a Computer and a network connection between PC and **Cobra 3.1** is needed. More info on request.

— Factory Reset

Here you can switch back to the default settings.

Press **SETTINGS** at the main screen, in the following Settings 1 and Settings 2-screen **NEXT** and in the Settings 3-screen **FACTORY RESET**.

Press **RESET** only when you are sure that you would like to return to the factory settings.

Press **BACK** to get to the previous screen without starting the reset.



5. Operating the Cobra 3.1

5.5 Wiring of the connectors

5-pin XLR (DMX):

Pin 1 = Ground, Pin 2 = DMX -, Pin 3 = DMX +, Pin 4 u. 5 = nc

3-pin XLR (analog):

Pin 1 = Ground, Pin 2 = 0-10V + DC in, Pin 3 = 12V + DC out, max. 50 mA

6. Cleaning, Care and Maintenance

- Ensure the air vents are not clogged by dust. If necessary remove the dust.
- Take care that the machine cannot overheat.
- Do not run the **Cobra 3.1** without any fluid, as the pump will run dry.
- Wipe up spilled Fluid immediately. Moisture – also fluid – can destroy the electric components of the machine.
- Check the state of the air valve filter from time to time and clean or replace it when necessary. When frequently using the same fluid bottle it should be cleaned thoroughly before adding new fluid. This reduces the chances of the machine clogging up.
- If you install the **Cobra 3.1** make 100% sure that a permanent fog-free air supply for the unit is guaranteed. Cooling air with too high fog concentration (very often in Clubs and Discos) can condense inside the machine and cause moisture damage.
- For cleaning the surface of the device use a suitable, solvent-free cleaner.
- **PLEASE NOTE:** The vaporizer of our machines does not have to be cleaned! Cleaners, available on the market, can damage the vaporizer! We cannot grant warranty in this case.

7. Troubleshooting

The fog machine **does not fog**

- Check external control signals
- Check mains supply
- Check fluid tank (empty?)
- Check for correct connections at the fluid bottle
- Check for fluid in the fluid tube
- Check if fluid filter is clogged
- Check that pump setting on the machine is >1

The fog machine **fogs uncontrollably**

- Check mains supply
- Check unit for moisture (moisture inside the machine, especially on the PCB can cause fogging)

The fog machine **switches off suddenly**

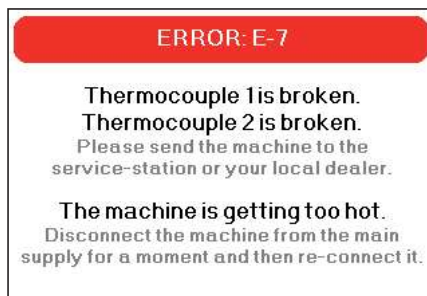
- The „Temperature cutout“ has switched off due to overheating.
Remove external heat source (for instance projector shining right onto the housing) and/or make sure sufficient fresh air supply. After 15 to 30 minutes the unit should switch back to „on“ again.

Loud droning sound during fogging

- The pump is running dry. Avoid this absolutely!
- Refill (or better: replace) fluid bottle
- Double check connection fluid tube and fluid bottle.

Error shown on Display

In case of Error E-1, E-2 or E-4 or a combination of these, a screen appears on the Display, showing the failure(s).
Please contact the Service.



—The fog machine **does not produce fog as expected**

- Check selected performance curve. —> See chapter 5.4.1

8. Specifications

Procedure:	Vaporizing fog generator
Power requirement:	3100 Watt and 1800 Watt
Voltage:	230V/ 50 Hz and 120 V/ 60 Hz
Warm up time:	approx. 15 min.
Fluid consumption, measured with Look Regular-Fog:	at max. output 260 ml/min at cont. output 46 ml/min
Fluid tank capacity:	5 Litre
Fog output:	adjustable in 99 steps of 1%
Output projection:	max. 25 m
Fogging time:	at 100% output: Extended-Mode approx. 55 sec. Impulse-Mode approx. 22 sec. at ≤ 30% output: continuous output
Control:	Manual 0 - 10 V analog DMX 512 Ethernet (Artnet, sACN) Timer Radio remote (optional) XLR-remote (optional)
Temperature control:	Microprocessor controlled
Overheating protection:	Heater block/Thermostat Pump/Thermal switch
Dimensions (L x W x H):	58 x 26.5 x 26 cm
Weight incl. tank:	23 kg

Manufactured for:

Look Solutions GmbH & Co. KG • Bünteweg 33 • D - 30989 Gehrden • www.looksolutions.com

9. Warranty Conditions

For the fog machine **Cobra 3.1** Look' guarantee is:

1. Free of charge, subject to the following conditions (No. 2 - 6) we will repair any defect or fault in the unit if it is caused by a proven factory fault and has been advised immediately after appearance and within 24 month of delivery to the end user. Insignificant deviations of the regular production quality does not guarantee replacement rights, nor do faults or defects caused by water, wrong fog fluid, by generally abnormal environment conditions or Force Majeure.
2. Guarantee Service will be done in the following way: Faulty parts will be repaired or replaced (our choice) with correct parts. Faulty units have to be brought to us or our service centres or to be sent to us or our service centres at customer's expense. The invoice and/or receipt showing the purchase date and the serial number has to come with the faulty unit, otherwise this will not be guarantee service. Replaced parts become our property.
3. The customer loses all rights for guarantee services, if any repairs or adjustments are done to the units by unauthorized persons and/or if spare parts are used which are not approved by us. The right of guarantee service is also lost if fluids other than original Look fog fluids have been used or if units are sent to us with full fluid bottles. Also non compliance with the instructions in this manual or mistakes by incorrect handling/treating of the machine will lead to a loss of guarantee and also any faults and damages caused by undue force.
4. Certain parts of the machine are „consumable parts“ and are not covered by the warranty.
5. Guarantee services do not cause an extension of the guarantee time or the start of a new guarantee time. The warranty for replaced parts ends with the guarantee time of the whole unit.
6. If a defect/fault can not be repaired by us in a satisfactory time, we will, within 6 months after sale of the unit, on choice of the customer, either:
 - replace the whole unit for free or
 - refund the lesser value or
 - take back the whole unit and refund the purchase price, but not more than the usual market price at the time of the refund.
7. Further claims, especially for damages, losses etc. outside the unit are excluded.

Other guarantee regulations may be valid outside Germany. Please check with your dealer!

If you should send the unit for service, do not forget to remove any liquid from the fluid bottle.

a Look Solutions product