

**Accessory for low fog
to be used with CO₂- high pressure tank**



Set of Equipment supplied

- 1 **Cryo-Gate**
- 1 Connecting tube complete with connectors to connect the Cryo-Gate to the CO₂-tank, 5 m
- 1 mains cable 2 m Powercon True plug
- 1 **Inline-Filter**
- 1 Operating manual

Please check whether all the products you ordered are supplied.

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1. Introduction

The **Cryo-Gate** is a compact device that mates up to any professional fogger. It enables the user to temporarily transform their existing fogger into a low fog generator.

The **Cryo-Gate** sits in front of the fogger's nozzle. A high-pressure dip-tube siphon CO₂ tank connects to the unit and allows the user to add a variable amount of CO₂ and air to the fog's output. The result is a cold fog that stays low.

The connector to connect the delivered safety tube to the bottle has to be a W 21.8 x 1 1/4" right male (CGA 320 connector). If a tank with this connector cannot be found, you have to use an adaptor.

A tube (Ø 200 mm) can be connected to the front of the **Cryo-Gate** to guide the fog into the requested direction.

The tube can be around ten meters long, allowing to place the machine away from the stage to avoid disturbing noise.

Holes at the **Cryo-Gate** ease mounting it to a rack or building it into a flightcase.

Please note: Only use quick disappearing fog fluid to avoid the chance that the fog will get warm and rises.

Also cooled down fog will rise after some time!

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

2. Safety Instructions

A fog machine is not a toy!

- Make sure, that all persons who work with the bottle and the gas are professionals. Incorrect use can cause the risk of suffocation!
- Carbon dioxide is not toxic but may cause asphyxiation in high concentrations.
- Carbon dioxide is heavier than air. The highest concentration is therefore at floor level. The maximum allowed concentration is 0.5 Vol% (MAK: 5.000 ppm).
- Ensure adequate ventilation.
- Ensure all national/local regulations for handling and storage of liquid carbon dioxide (CO₂) are observed.
- Avoid dust or dirt particles inside the CO₂-hose. Always ensure complete purity of all CO₂-connectors and fittings
- Extreme temperatures at the nozzle (hot/cold)! Danger of burning/frostbite.
- Occasionally very hot droplets of fluid may escape when in operation. Never aim at persons directly and keep a minimum distance of 3 m from the nozzle.
- Never touch the nozzle when in operation. Danger of getting burnt.
- The location of the machine must be non-flammable, non-combustible and not sensitive to heat. It must 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.
- The visibility must be more than 2 m in rooms where people walk around.
- Do not swallow the fog liquid. Keep it away from children. In case of eye contact, rinse with a lot of water. Consult a doctor should you accidentally swallow some fluid.

2. Safety Instructions

- Spilled liquid or splashed liquid droplets can cause slip hazard. Mop up the fluid and dispose of it according to regulations.
- Fog may activate smoke detectors.

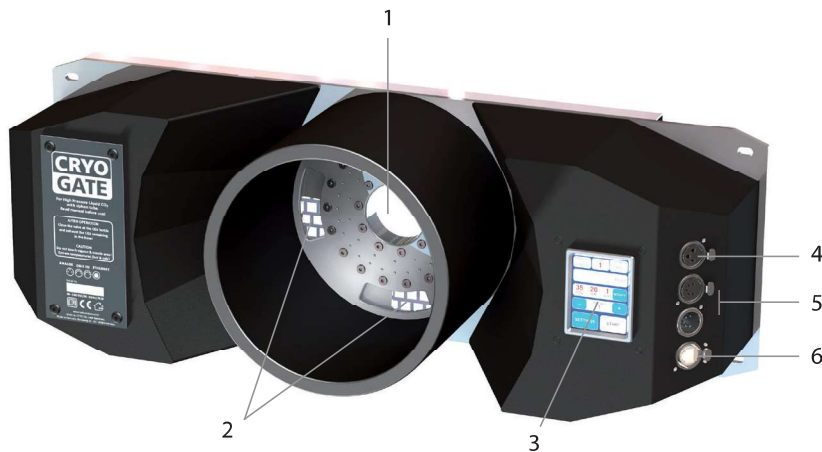
Artificially-made fog can be produced in many different ways. The method used here to produce fog, with a device which works according to the vaporizer principle, is the most harmless one.

No case has so far been reported in which a healthy 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 appropriately, 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



- 1: Fog nozzle
- 2: Air vents
- 3: Touchscreen

- 4: Analog in 3pin-XLR
- 5: DMX512 in/out 5pin-XLR
- 6: Ethernet-Connector RJ45/Ethercon

3. Description of the parts

Rear view



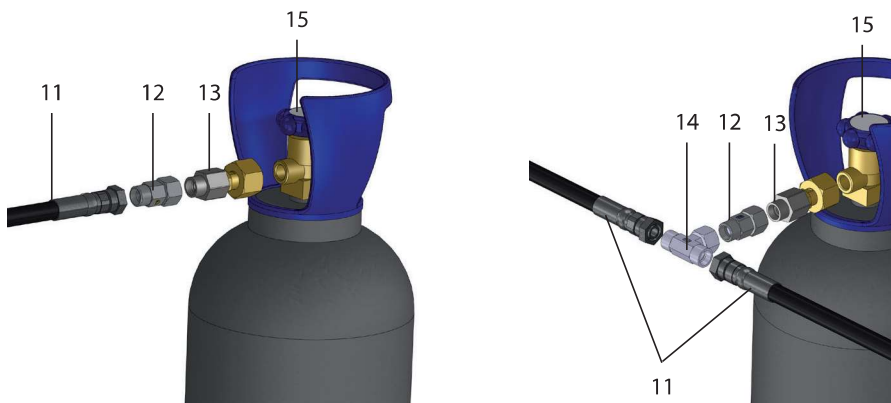
- 7: Power in/out for Powercon
- 8: Analog out 3pin-XLR
- 9: DMX out 5pin-XLR
- 10: Connector for liquid-CO₂-tube

Connection to the high pressure CO₂-tank with siphon tube

- Avoid dust or dirt particles inside the CO₂-hose!
- Always ensure complete purity of all CO₂-connectors and fittings!

- 11: CO₂-hose
- 12: Inline-Filter
- 13: CO₂-connector Europe

- 14: T-connector to connect several CO₂-tanks
- 15: Valve



4. Operating the Cryo-Gate

4.1 Putting into operation

1. Place a fog generator behind the **Cryo-Gate**.

The fog nozzle of the fog generator should be placed centric and approx. 1 to 2 cm behind the nozzle of the **Cryo-Gate**.

If your fog machine is equipped with a PowerCon-plug (up to max. 3 kW/1.8 kW for USA), connect it to the Power out plug [7] at the **Cryo-Gate**.

If your fog machine is not equipped with a PowerCon-plug, plug the mains cable of your machine to a normal socket.

2. Also connect the fog generator with a 5 pin-XLR-cable via DMX [9] or with a 3 pin-XLR-cable via analog out [8] to **the back** of the **Cryo-Gate** and the analog in at the fog generator.

If the fog generator is connected via DMX to the Cryo-Gate, make sure the adjusted DMX start address at the fog generator is "001".

3. Connect the CO₂-tank to the **Cryo-Gate** [10], using the supplied safety hose (see page 7).

Always ensure complete purity of all CO₂-connectors and fittings. If you should notice dirt particles, connect the tube to the tank, tighten the connection to make sure that no gas can come out, and open the valve at the bottle for a few moments. CO₂ comes out at the end of the hose that has not been connected yet. Close the valve properly and connect the other end of the tube to the **Cryo-Gate** [10].

Tighten both connections properly to make sure that no gas can come out. Open the valve at the tank completely [15].

4. Connect the supplied PowerCon mains cable to the jack [7] at the **Cryo-Gate**. Turn the plug until it is locked. Plug the power plug to a socket.

To use your fog generator in the right way, read the operating manual of the fog machine. After the fog generator has heated up completely, you can start the **Cryo-Gate**.

A ducting hose of 200 cm Ø can be connected to the front of the **Cryo-Gate**.

4. Operating the Cryo-Gate

4.2 Switching the device off

- Close the valve at the CO₂-tank [15]. Make sure the valve is really completely closed. Release the remaining CO₂ off the hose as follows:

Control via DMX:

The Cryo-Gate uses four channels at the DMX-desk: channel 1 = pump, channel 2 = air, channel 3 = cooling/CO₂, channel 4 = fan
Put the fader for the CO₂ to 100% and wait until the CO₂ has been disappeared.

Control via Ethernet:

If the Cryo-Gate is controlled via Ethernet, tell the Software to put the channel for the CO₂ to 100%.
If the Ethernet-packages will be sent from a control desk, put the fader for the CO₂ to 100%.

Control via analog:

If the machine will be controlled via analog, adjust the analog remote in a way that the CO₂ will be released. **Caution:** Due to the selected Presets the fog generator may start fogging!
To prevent this disconnect the 3pin XLR-plug of the XLR-remote from the analog in and do the adjustments directly at the Cryo-Gate.

Manual adjustments at the Touchscreen:

Press **MODIFY** at the main screen (*Fig. 1, see next page*). The screen switches to MANUAL MODE (*Fig. 4*). Adjust a CO₂ value higher than 0 with the +/- button (*line 4*) and press **START CO₂** (*line 4*).
The internal valves opens and the CO₂ can exhaust.

To switch off your fog generator read the manual of the fog machine.

As soon as the CO₂ is completely exhausted you can disconnect the Cryo-Gate from the mains.

4. Operating the Cryo-Gate

4.3 Changing the CO₂-tank

Important:

Before you disconnect the hose, the CO₂ in the hose must ALWAYS be removed!
Please see chapter 4.2 how to do this.

- Make sure that the valve at the tank is completely closed and no CO₂ remains in the hose.
- Disconnect the hose from the CO₂-tank and connect it to a new tank.
Always ensure complete purity of all CO₂-connectors and fittings. If you should notice dirt particles, connect the hose to the tank, tighten the connection to make sure that no gas can come out, and open the valve at the tank for a few moments. CO₂ comes out at the end of the hose that has not been connected yet. Close the valve properly and connect the other end of the hose to the **Cryo-Gate** [10].
Tighten both connections properly to make sure that no gas can come out. Open the valve at the tank completely [15].
- Tighten both connections and open the valve at the tank completely [15].

4.4 Operation

You have several choices to control the **Cryo-Gate**: manual, 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.

4. Operating the Cryo-Gate



Fig. 1 Main screen

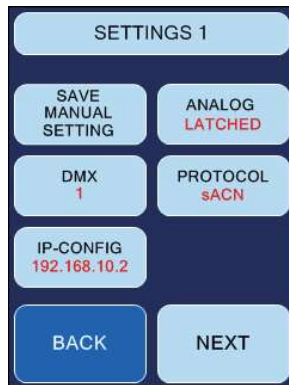


Fig. 2 Settings 1

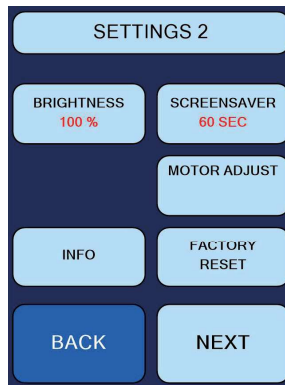


Fig. 3 Settings 2

After starting the **Cryo-Gate** the display shows the main screen (Fig. 1).

First line from left to right:

- Button **ANALOG**: shows the adjusted mode and the voltage. - See point 4.4.2
- Button **DMX**: shows whether DMX is active and the adjusted DMX-address. - See point 4.4.3
- Button **ETH**: shows the selected Ethernet protocol and whether the machine is controlled via Ethernet. - See point 4.4.4

Second line: shows the current value of how much CO₂ has already been used. This value can be reset by pressing **RESET**, for example if a new tank has been connected. This value is only roughly measured and does not show the exact usage.

Third line: Actual values for fog (pump), air and CO₂. The values can be adjusted after pressing **MODIFY**. - See point 4.4.1

More air => higher output speed, higher fog level/carpet

More fog (thus more output/higher pump level) => more low fog - more CO₂ is needed.

Fourth line: Adjusting a Preset. - See point 4.4.1

Fifth line: **SETTINGS** => change to Settings 1, **START** => manual start of the fogging process.

4. Operating the Cryo-Gate

4.4.1 Manual operation

There are two ways of manual operating: Choosing a preset or adjusting manual values directly at the Touchscreen.

a) Selecting one of six Presets:

A preset is a specification. Three fixed presets are available, three can be adjusted and saved individually.

The following fixed presets are available:

- (1) Fog: 35, Air: 20, CO₂: 1 => ~150 m², 10 cm high in 1 min.
- (2) Fog: 45, Air: 30, CO₂: 2 => ~150 m², 15 cm high in 1 min.
- (3) Fog: 50, Air: 30, CO₂: 3 => ~150 m², 20 cm high in 30 sec.

To choose a fixed preset:

- Press **PLUS** or **MINUS** (line 4) at the main screen (Fig. 1) until the requested preset appears.
- Press **START** to start the fogging process.

The screen now changes to **MANUAL MODE** (Fig. 4) (where also the values for the individual presets can be changed), now showing **STOP** instead of **START** because the fogging process has already been started. You can stop the fogging process by pressing **STOP ALL**.



Fig. 4 Manual Mode

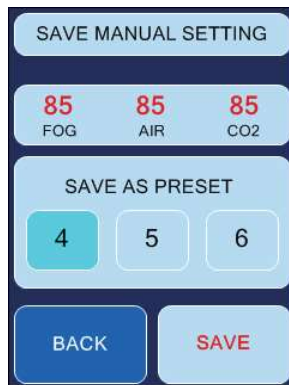


Fig. 5 Save Manual Setting

To save an individual preset:

- Press **MODIFY** (line 3) at the main screen (Fig. 1) and adjust the requested values for fog, air and CO₂ at the currently displayed MANUAL MODE-screen (Fig. 4), using the **PLUS** or **MINUS**-buttons.

4. Operating the Cryo-Gate

- Press **BACK** to return to the main screen.
- Press **SETTINGS** and at the displayed screen (Fig. 2) **SAVE MANUAL SETTING**, to get to the **SAVE MANUAL SETTING** screen (Fig. 5).
- Select the number of the preset, where you wanted to save the adjusted values and press **SAVE**.
If you only press **BACK**, you can return to the main screen without saving the values.

b) Using individual values:

- Press **MODIFY** at the main screen. The screen switches to Manual Mode (Fig. 4).
- Adjust the requested values for fog, air and CO₂, using the **PLUS** or **MINUS**-buttons.
- Press **START ALL** to start all parameters at once, and **STOP ALL**, to stop all parameters.
If you only press **START FOG**, the fogging process will be started, but not air and CO₂ (same for **START AIR** or **START CO2**, whereas **START AIR** without fog or CO₂ makes no sense!).

The selected button changes its colour to cyan.
You can return to the main screen, pressing **BACK**.

4.4.2 Operating via Analog

Input voltage between 0 and 10 V. If the voltage is higher than 1 V, the machine will be controlled via analog, provided that neither DMX nor Ethernet is active.

To adjust the analog in, press the **ANALOG**-Button at the main screen (Fig. 1, line 1) or press **SETTINGS** and at the following screen (Fig. 2) **ANALOG**.

Adjoining screen (Fig. 6) displays.

Select one of two modes:

1. **DIRECT** (line 2) for e. g. Look XLR-remote:
One Preset is active for an input voltage between 1 and 5 V, a second one for 5 to 9 V.
1 - 5 V correspond to the first half of the rotary knob at the XLR-remote, 5 - 9 V to the second half.
- Select **1-5V PRESET** and adjust the requested preset with **PLUS** and **MINUS** (line 4). Then switch to **5-9V PRESET** and select this one as well.
2. **LATCHED** (line 3): Switching the preset on and off with a short voltage impulse e.g. with a push-button or a radio remote.
- Select the requested preset with **PLUS** and **MINUS** (line 4).



Fig. 6 Select Analog Mode

4. Operating the Cryo-Gate

Save your adjustments (Direct or Latched) with **ANALOG SAVE**. If you press **BACK**, you will get back to Settings or the main screen without saving the values.

Connect your cable or radio remote to the "analog in" at the **Cryo-Gate**. The **ANALOG**-Button (Fig. 1, line 1) at the main screen shows the voltage and the selected mode (**DIRECT** or **LATCHED**). Also the changed colour of the button (cyan) shows that the analog mode is now active.

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.

4.4.3 Operating via DMX in

Press the **DMX**-Button at the main screen (Fig. 1, line 1) or press **SETTINGS** → **DMX**. The adjoining screen (Fig. 7) appears.

Here you can type in the DMX-address.

Save the address with **DMX-ADDRESS SAVE**. Press **BACK** to get back to the previous screen without saving the address.

The **Cryo-Gate** needs four channels on the control desk:

1. *Fog* => goes to the connected fog machine and operates the pump.
2. *Air* => controls the air regulation.
3. *CO₂* => regulates the CO₂ in four divisions:

CO ₂ usage	DMX value
0 kg	0 - 64
1 kg	65 - 129
2 kg	130 - 194
3 kg	195 - 255



Fig. 7

4. *Fan* => will be passed to the fog machine connected via DMX.

Connect the **Cryo-Gate** to your DMX-desk and do the adjustments with the faders.

4.4.3.1 RDM

The following functions can be seen via RDM:

- Status: CO₂ consumption
- DMX-Patch: set/change/check the DMX start address and display how many DMX channels are used
- General Information about the machine

4. Operating the Cryo-Gate

4.4.4 Operating via Ethernet

Press **ETH** at the main screen (Fig. 1, line 1) or select **SETTINGS** → **PROTOCOL**. Screen (Fig. 8/10) appears.

4.4.4.1 Artnet

Select **ARTNET** (Fig. 8, line 3). The button will change its colour to cyan, showing that Artnet is activated.



Fig. 8 Screen with activated ARTNET-Button



Fig. 9 Screen to configure ARTNET

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

- Therefore press the **MODIFY**-button (Fig. 8, line 2). The screen shown on the right (Fig. 9) 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. 9, 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. 8) without saving the value.
- Press **PROTOCOL SAVE** (Fig. 8, line 4) to save the ARTNET adjustments.
If you press **BACK**, you will get back to Settings or the main screen without saving the values.

4. Operating the Cryo-Gate

4.4.4.2 sACN

Press **sACN** (Fig. 8, line 3). The button changes its colour to cyan, showing its active mode.

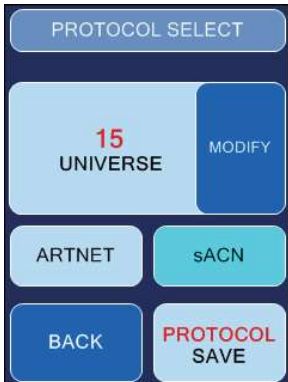


Fig. 10 Screen with activated sACN-Button

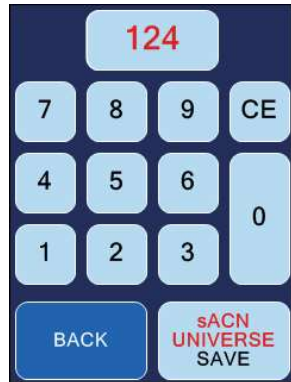


Fig. 11 Screen to configure sACN

You can adjust the *Universe*.

- Press **MODIFY** (Fig. 10, line 2). The screen on the right appears (Fig. 11).

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. 11, line 2) and type in the value for the selected *Universe*.
- **sACN UNIVERSE SAVE** saves the value, **BACK** switches back to the previous screen (Fig. 8) without saving the value.
- Now press **PROTOCOL SAVE** (Fig. 10, line 4) 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 **Cryo-Gate** has a valid network address and a correct subnet mask. You can check and change this by pressing **SETTINGS** → **IP-CONFIG** (see point 4.4.5).

4. Operating the Cryo-Gate

4.4.5 IP Configuration

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** (Fig. 2, line 4).



Fig. 12 IP-Configuration screen, **STATIC** active



Fig. 13 Screen to adjust the IP-address and Subnet mask

First select whether you want to use a static network address or a dynamic one (DHCP) by pressing **STATIC** or **DHCP** (Fig. 12, line 4).

If you select **DHCP**, the **Cryo-Gate** 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. 13). Ask your network administrator if necessary.

- Press **CE** and type in the address. Save the address with **IP ADDRESS SAVE** respectively **SUBNET MASK SAVE** (Fig. 13, line 5), 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. 12, line 4).

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

4. Operating the Cryo-Gate

4.4.6 More adjustments

4.4.6.1 Background lighting

You can adjust the brightness of the background lighting.

- Press **SETTINGS** at the main screen, in the following „Settings 1“-screen **NEXT** and in the „Settings 2“-screen (Fig. 3, line 2) **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.

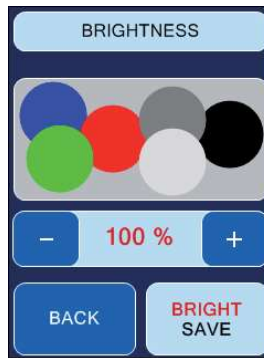


Fig. 14

4.4.6.2 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 (Fig. 3, line 2) **SCREENSAVER**.
- 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.

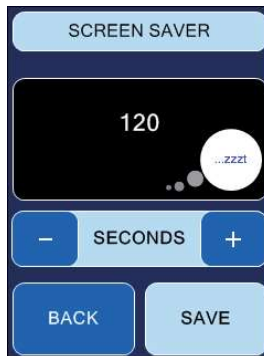


Fig. 15

4.4.6.3 Machine information

Information about the Cryo-Gate

- Press **SETTINGS** at the main screen, at the following „Settings 1“-screen **NEXT** and at the „Settings 2“-screen (Fig. 3, line 4) **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 **Cryo-Gate** is needed. More info on request.



Fig. 16

4. Operating the Cryo-Gate

4.4.6.4 Factory Reset

Here you can switch back to the default settings.

- Press **SETTINGS** at the main screen, in the following „Settings 1“-screen **NEXT** and in the „Settings 2“-screen (Fig. 3, line 4) **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.



Fig. 17

4.4.6.5 Motor Adjust (for model with step-motor)

After replacing the step-motor, its zero point must be measured/calibrated.

IMPORTANT: No external signal (DMX) should be connected during the calibration process!

- Press **SETTINGS** at the main screen, at the following „Settings 1“-screen **NEXT** and at the „Settings 2“-screen (Fig. 18, line 3) **MOTOR ADJUST**.
- To start the calibration, press and hold the **MOTOR ADJUST** button for three seconds. The button turns green.
- Calibration will now start automatically, with the motor moving slightly. When the calibration is finished, the button turns blue again.



Fig. 18

4.5 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):

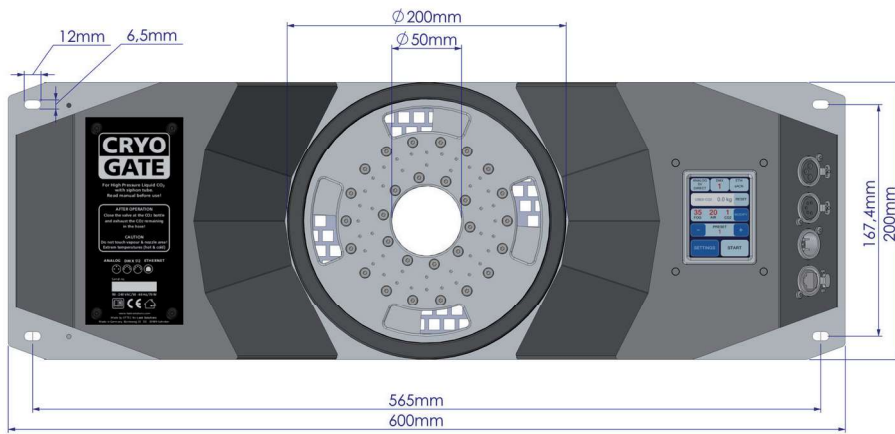
Pin 1 = Ground, Pin 2 = 0-10 V + DC in, Pin 3 = 12 V + DC out, max. 50 mA

5. Cleaning, Care and Maintenance

- Avoid dust or dirt particles inside the CO₂-tube.
- Always ensure complete purity of all CO₂-connectors and fittings.
- Exhaust fittings and connecting tube with CO₂ before connecting to the **Cryo-Gate**.
- Take care that the connected fog machine can not get overheated.
- Wipe up spilled fluid immediately. Moisture - also fluid - can destroy the electric parts of the machine.
- If the **Cryo-Gate** is been used with a tube, there will be some residues in the tube and also the machine after a while.
Please disconnect the tube from the duct adaptor from time to time and wipe the inside with an absorbant cloth while the machine is disconnected from the mains.
- If the **Cryo-Gate** is used for a fixed installation, make 100% sure that permanent fog-free air supply for the unit is guaranteed. Cooling air with too high fog concentration (very often in Clubs or Discos) can condense inside the connected fog machine and cause moisture damage.
- For cleaning the surface of the device use a suitable, solvent-free cleaner.

6. Specifications

Voltage	90 to 240 VAC
Power requirement max.	65 Watt
Dimensions (W x H x D)	60 x 20 x 17.7 cm
Weight	10.5 kg



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

7. Warranty conditions

For the **Cryo-Gate Look'** warranty 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 identification and within 24 months 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. Warranty 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 returned 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 the repair will not be covered under warranty. Replaced parts become our property.
3. The customer loses all rights for warranty 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 warranty service is also lost if liquids/fluids other than the 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 warranty and also any faults and damages caused by undue force.
4. Any freight costs arising in connection with the warranty services have to be born by the customer.
5. Warranty services do not cause an extension of the warranty time or the start of a new warranty period. 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 warranty 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