Operating manual



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



Set of Equipment supplied

- 1 Cryo-Gate
- 1 Connecting tube complete with connectors to connect the Cryo-Gate to the CO₂-bottle, 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

By using the **Cryo-Gate** and a high pressure bottle of CO_2 , a suitable fog generator can produce low fog. It is necessary to use a CO_2 -bottle with siphon tube.

The connector to connect the delivered safety tube to the the bottle, has to be a W $21.8 \times 1 \, 1/4$ " right male. If a bottle with this connector cannot be found, you have to use an adaptor.

Please note: Only use quick disappearing fog fluid to avoid 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 proper 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 then 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-tube. 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 CRYO GATE 1 5 6

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

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

3. Description of the parts

Rear view



Connection to the high pressure CO₂-bottle with siphon tube

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

11: · CO₂-tube

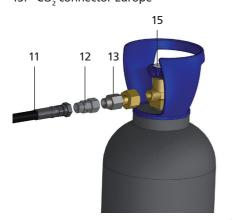
12: · Inline-Filter

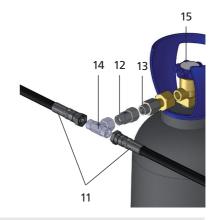
13: · CO₂-connector Europe

14: \cdot T-connector to connect several

CO,-bottles

15: · Valve





4.1 Putting into operation

- 1. Place a fog generator behind the **Cryo-Gate**.
 - The fog nozzle of the fog generator should be placed 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 [5] or with a 3 pin-XLR-cable via analogue out [4] to the Cryo-Gate/analogue 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-bottle to the **Cryo-Gate** [10], using the supplied safety tube (see page 7).
 - Always ensure complete purity of all CO₂-connectors and fittings. If you should notice dirt particles, connect the tube to the bottle, 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 side of the tube that has not been connected yet. Close the valve properly and connect the other side 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 bottle 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 tube of 20 cm Ø can be connected to the front of the Cryo-Gate.

4.2 Switching the device off

Close the valve at the CO₂-bottle [15]. Make sure the valve is really completely closed.
 Release the remaining CO₂ off the tube 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 send from a desk, put the fader for the CO₂ to 100%.

Control via analogue:

If the machine will be controlled via analogue, adjust the analogue remote in a way that the ${\rm CO_2}$ will be released. **Caution**: Due to the selected Presets the fog generator may start fogging!

Alternatively disconnect the 3pin XLR-plug of the XLR-remote from the analogue 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 CO_2 value higher than 0 with the +/- button (line 4) and press **START** CO_2 (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 CO_2 is completely exhausted you can disconnect the **Cryo-Gate** from the mains.

4.3 Changing the CO₂-bottle

Important:

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

- Make sure that the valve at the bottle is completely closed and no CO₂ remains in the tube.
- Disconnect the tube from the CO₂-bottle and connect it to a new bottle.
 Always ensure complete purity of all CO2-connectors and fittings. If you should notice dirt particles, connect the tube to the bottle, 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 side of the tube that has not been connected yet. Close the valve properly and connect the other side 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 bottle completely [15].
- Tighten both connections and open the valve at the bottle completely [15].

4.4 Operation

You have several choices to control the **Cryo-Gate**: manual, analogue, via DMX or Ethernet.

The following control hierarchy is valid:

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

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

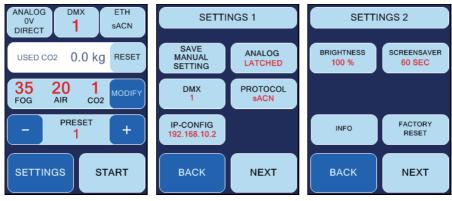


Fig. 1 Main screen

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 activ 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 $\mathrm{CO_2}$ has already been used. This value can be resettet by pressing *RESET*, for example if a new bottle 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 CO_2 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.

4.4.1 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 are available, three can be adjusted and saved individually.

The following fixed presets are available:

- (1) Fog: 35, Air: 20, CO2: $1 \Rightarrow -150 \text{ m}^2$, 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: $3 \Rightarrow ~150 \text{ m}^2$, 20 cm high in 30 sekc

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 now shown MANUAL MODE-screen (Fig. 4), using the PLUS or MINUS-buttons.

- Press BACK to return to the main screen.
- Press SETTINGS and at the appearing 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 switces 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 startet, but not air and CO₂ (same for START AIR or START CO2, whereat 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 analogue

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

To adjust the analogue 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) shows up.

Select one of two modes:

- 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 knop 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.

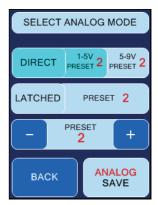


Fig. 6 Select Analog Mode

- 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).

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 analogue 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 analogue 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 desk:

- Fog => goes to the connected fog machine and operates the pump.
- 2. Air => controls the air regulation.
- 3. CO_2 => regulates the CO_2 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 pass to the fog machine connected via DMX.

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

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.

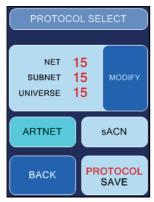




Fig. 8 Screen with active ARTNET-Button

Fig. 9 Screen to configurate ARTNET

You can adjust the Net, Subnet and the Universe.

 Therefor 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.

4.4.4.2 sACN

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



124
7 8 9 CE
4 5 6 0
1 2 3

BACK

SACN
UNIVERSE
SAVE

Fig. 10 Screen with activated sACN-Button

Fig. 11 Screen to configurate 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 ssaves 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).

4.4.5 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).



192 168 101 101
7 8 9 CE
4 5 6 0
1 2 3

BACK

IP
ADDRESS
SAVE

Fig. 12 IP-Configuration screen, STATIC active

Fig. 13 Screen to adjust the IPaddress 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.

4.4.6 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 2) INFO.

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

FIRMWARE UPDATE starts an update of the software. Therefore an additional programm as well as a Computer and a network connection between PC and **Cryo-Gate** is needed. More info on request.



Fig. 16

4.4.6.4 Factory Reset

Here you can switch back to the factory settings.

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

4.5 Wiring of the connectors

5pol XLR (DMX):

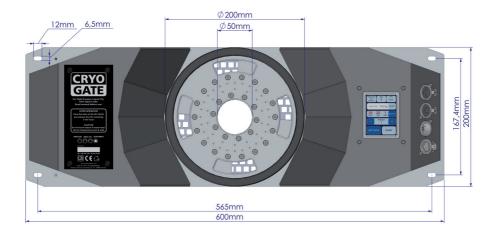
Pin 1 = Ground, Pin 2 = DMX -, Pin 3 = DMX +, Pin 4 u. 5 = nc

3pol XLR (analog):

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

5. Specifications

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



Manufactured for

 $\textbf{Look Solutions} \cdot \textbf{Fog machines made in Germany} \cdot \textbf{B\"{u}nteweg 33} \cdot \textbf{DE-30989 Gehrden}$

9. 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.
- Any freight costs arrising 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.



Konformitätserklärung Declaration of Conformity Declaration de Conformité



Wir/we/nous OTTEC Technology GmbH

Anschrift/ address / adress Bünteweg 33

DE - 30989 Gehrden

Germany

erklären in alleiniger Verantwortung, daß das Produkt declare under our sole responsibility, that the product declarons sous notre seule responsibilité, que le produit

Bezeichnung/name/nom Bodennebelvorsatz

Accessory for low fog

Accessorie de bruillard au sol

Typ/type/type Cryo-Gate

mit den Anforderungen EN 55014 Teil 1/Part 1 : Generic emission standard der Normen übereinstimmt EN 55014 Teil 2/Part 2 : Generic immunity standard

fulfills the requirements of the standard satisfait aux exigences des normes SDF 0700 Teil 245/Part 245 : Electrical safety

Das Produkt erfüllt somit die Forderungen der EG-Richtlinie Therefor the product fulfills the demands of the following EC-Directive Le produit satisfait ainsi aux conditions des directives suivantes de la CE

2004 / 108 / EG

Richtlinie über die elektromagnetische Verträglichkeit Directive relating to electromagnetic compatibility Directive relatives à la compatabilité électromagnétique

2006 / 42 / EG

Maschinenrichtlinie Machinery directive

Directive relative aux machines

Gehrden, 01.09.2015

Ort, Datum der Ausstellung

Place and Date of Issue Lieu et date d'ètablissement Jörg Pöhler

Name u. Unterschrift/Name a. signature/Nom et signature des Geschaftsführers u. Dokumentationsbevollmächtigten

of the Director and Agent for documentation de la Directeur et Agent de documentation

