

ENGLISH

Dragon 2000

V2

Ordercode: 61103

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Warning



**For your own safety, please read this user manual carefully
before your initial start-up!**

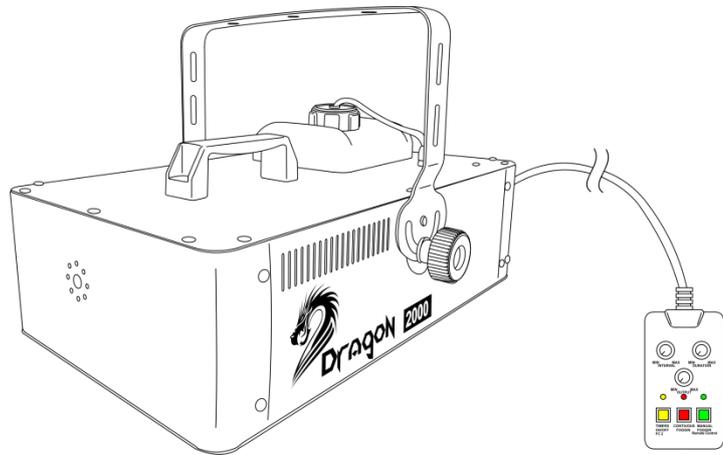


Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

Your shipment includes:

- Dragon 2000
- Detachable on/off remote control (cable length: 5 m)
- IEC power cable (1,5 m)
- User manual



CAUTION!
Keep this device away from rain and moisture!
Unplug mains lead before opening the housing!



Safety Instructions

Every person involved with the installation, operation and maintenance of this device has to:

- be qualified
- follow the instructions of this manual



CAUTION! Be careful with your operations.
**With a dangerous voltage you can suffer
a dangerous electric shock when touching the wires!**



Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

- Never let the power cord come into contact with other cables! Handle the power cord and all connections with the mains with particular caution!
- Always disconnect power from the mains, when device is not used or before cleaning ! Only handle the power cord by the plug. Never pull out the plug by tugging the power cord.
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Never aim the output nozzle directly at people.
- Never aim the output nozzle at open flames.
- Never add flammable liquids of any kind (oil, gas, perfume) to the fog liquid.
- Never drink fog liquid. If it is ingested, call a doctor immediately. If fog liquid comes in contact with skin or eyes, rinse thoroughly with water.
- Never lock fog-filled rooms. Risk: panic among the locked persons!
- Never use the device permanently! The output should be active only for short periods of time.
- Do not insert objects into air vents.
- Do not open the device and do not modify the device.
- Do not connect this device to a dimmerpack.
- Do not switch the device on and off in short intervals, as this would reduce the device's life.
- Do not touch the fogger output bare-handed during its operation (output becomes very hot).
- Do not shake the device. Avoid brute force when installing or operating the device.
- Only use device indoors, avoid contact with water or other liquids.
- Only use fog in well ventilated rooms.
- Only use the high-quality fog liquid, recommended by your dealer (**ordercodes: 60603, 60629, 60637**). Other fog liquids may cause poor effect.
- Avoid flames and do not put close to flammable liquids or gases.
- Always make sure there is sufficient liquid in the fog liquid tank. Operating this unit without liquid will cause damage to the pump and the heater.
- Always allow free air space of at least 20 cm around the sides and top of the unit.
- Always drain tank before shipping or otherwise transporting this unit.
- Always keep tank cap closed while operating.
- Always keep the fog machine upright.
- Always unplug the Dragon before filling its tank.
- For adult use only. Fog machine must be installed out of the reach of children. Never leave the unit running unattended. Leave the grid guarding the nozzle in place if the machine is to be used in the presence of children
- Always keep the nozzle at least 50 cm away from contact with anything, while in operation.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power cord is never crimped or damaged. Check the device and the power-cord from time to time.
- Make sure that the core diameter of extension cords and power cords is sufficient for the required power consumption of the device.
- The cable insert or the female part in the device must never be strained. There must always be sufficient cable to the device. Otherwise, the cable may be damaged which may lead to deadly electrical shocks.
- If the external cable is damaged, it has to be replaced by a qualified technician.
- If device is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If the Dragon fails to work properly, discontinue use immediately. Drain all fog liquid from the tank, pack the unit securely (preferably in the original packing material), and return it to your Showtec dealer for service.
- For replacement use fuses of same type and rating only.
- Allow time to cool down, before cleaning or servicing.

- The residence time of persons in fog-filled rooms with the visibility lower than 15 m must never exceed 5 minutes.
- The fog vapour at the point of release is under pressure and is extremely hot.
- The output nozzle becomes very hot during operation (300°C). Keep flammable materials at least 50 cm away from the nozzle.
- The use of fog-fluid is only allowed for adults.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- In dense, fog-saturated surroundings, the oxygen portion is substantially reduced!
- The fog density must be portioned in a way that the visibility of at least 5 m is preserved - Danger of anxiety state due to missing orientation!
- The user is responsible for correct positioning and operating of the Dragon 2000. The manufacturer will not accept liability for damages caused by the misuse or incorrect installation of this device.
- Every fog-filled room must be overseen by a skilled person.
- WARRANTY: Till one year after date of purchase.

Operating Determinations

- This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.
- The maximum ambient temperature $t_a = 40^\circ\text{C}$ must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40°C .
- If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.
- Any other operation may lead to dangers like short-circuit, burns, electric shock, crash etc.

You endanger your own safety and the safety of others!

Rigging

Please follow the European and national guidelines concerning rigging, trussing and all other safety issues.

Do not attempt the installation yourself!

Always let the installation be carried out by an authorized dealer!

Procedure:

- If the fog machine is lowered from the ceiling or high joints, professional trussing systems have to be used.
- Use a clamp to mount the fog machine, with the mounting-bracket, to the trussing system.
- The fog machine must never be fixed swinging freely in the room.
- The installation must always be secured with a safety attachment, e.g. an appropriate safety net or safety cable.
- When rigging, derigging or servicing the fog machine, always make sure, that the area below the installation place is blocked and that unauthorized persons are not in the area.

Connection with the mains

Connect the device to the mains with the power-plug.

Always pay attention, that the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	PHASE
N	BLUE	BLACK	SILVER	NEUTRAL
	YELLOW/GREEN	GREEN	GREEN	PROTECTIVE GROUND

Make sure that the device is always connected properly to the earth!

Improper installation can cause serious damage to people and property!



Return Procedure



Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail aftersales@highlite.nl and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:

- 01) Your name
- 02) Your address
- 03) Your phone number
- 04) A brief description of the symptoms

Claims

The client has the obligation to check the delivered goods immediately upon delivery for any short-comings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.

It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.

Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless otherwise agreed in writing.

Complaints against us must be made known in writing or by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.

Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement of which the obligation is resulting.

Description of the device

Features

The Dragon 2000 is a powerful fog machine. With the Dragon, you can create a cosy and foggy atmosphere in any venue.

- Input Voltage: 220-240V AC, 50Hz
- Power consumption: 2000W
- Output volume: 40000 cu.ft/min
- Tank capacity: 2,4 L
- DMX channels: 1 channel
- Fluid consumption: 1 L/8 min
- Connections: Schuko, dedicated 5-pin DIN connector & 3-pin XLR IN/OUT
- Included: detachable on/off remote control (cable length: 4,5 m)
- Warm-up time: 6 min
- Fuse: F12A/250V
- Dimensions: 445 x 260 x 278 mm (LxWxH)
- Weight: 8,1 kg

Optional accessories:

60603 – Fog Fluid Regular

60629 – Fog Fluid Light

60637 – Fog Fluid High Density

61120 – Wireless Remote Dragon Series

Frontside

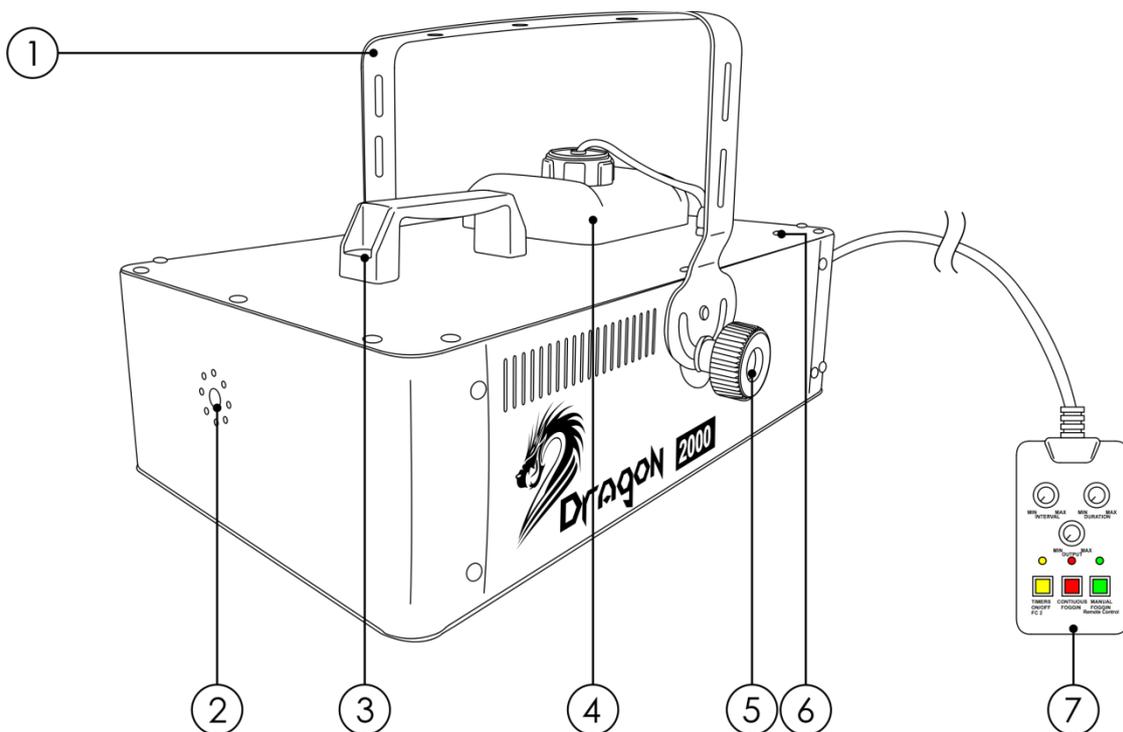


Fig. 01

- 01) Mounting bracket with inclination screw
- 02) Output nozzle
- 03) Carry handle
- 04) Fog fluid tank (2,4 L)
- 05) Adjustment screw
- 06) Ground/earth connection
- 07) Remote control (cable length: 4,5 m)

Backside

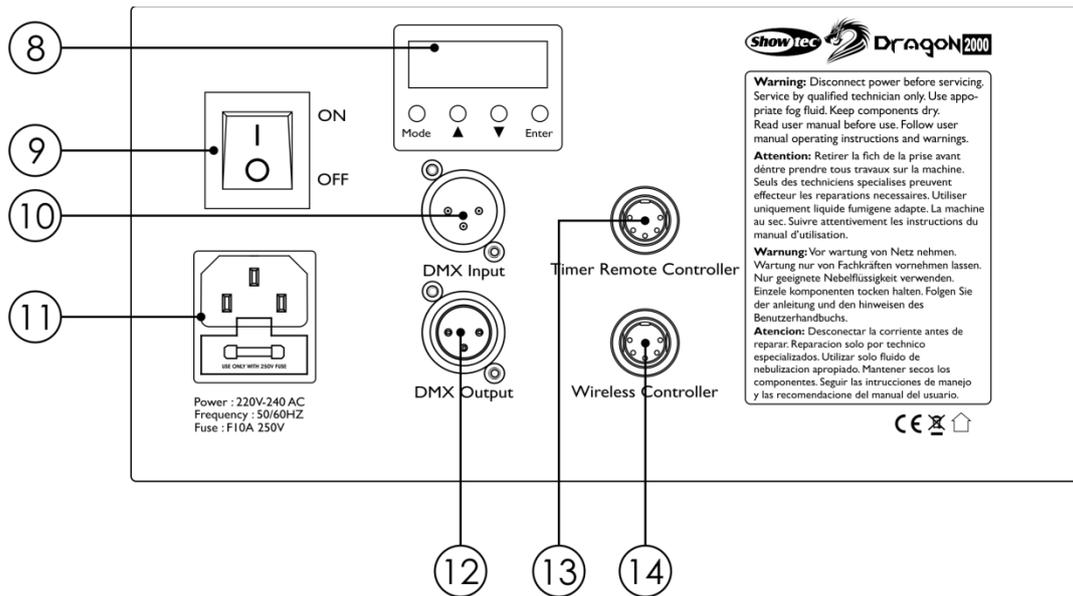


Fig. 02

- 08) LED display + menu buttons
- 09) Power switch ON/OFF
- 10) 3-pin DMX signal connector IN
- 11) IEC power connector 220-240V + Fuse F10A/250V
- 12) 3-pin DMX signal connector OUT
- 13) 5-pin DIN remote control connector IN
- 14) 5-pin DIN wireless receiver connector IN (connect the **61120** – Wireless Remote Dragon Series)

Installation

Remove all packing materials from the Dragon 2000. Check if all foam and plastic padding is removed, especially in the fog output area.

Use with fog liquid (**ordercodes: 60603, 60629, 60637**) or other high-quality fog liquid. Any other types of liquid can damage the unit.

Firmly attach the remote control cable to the proper input on the rear of the machine.

The unit can also be operated at floor level or sitting on any regular surface as well.

If the unit is to be mounted using the bracket, it is important that the fog does not shoot directly at anybody's face. Therefore, do not point the output in a direction that will aim directly at a person.

Whatever installation method you choose, the unit must always be placed in horizontal position.

The maximum inclination angle of the device should not exceed 15°.

Always disconnect from electric mains power supply before cleaning or servicing.

Damages caused by non-observance are not subject to warranty.

Set Up and Operation

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 230V power, or vice versa.

Note: Always monitor fog tank level liquid indicator when making fog!

Note: Be careful not to exceed the maximum fluid level. DO NOT OVERFILL!

Note: Running a fog machine with no fog liquid can permanently damage the unit!

Remote control operation

- 01) Plug power cord into a grounded electrical outlet. Warm-up is complete when the LED on the remote control lights up.
- 02) Set the fog output duration by turning the **DURATION** control to the left or right. The adjustment range is from min to max (from short to long).
- 03) Set the interval time between separate fog outputs by turning the **INTERVAL** control to the left or right. The adjustment range is from min to max (from short to long).
- 04) Set the fog output volume by turning the **OUTPUT** control to the left or right. The adjustment range is from min to max (from 0-100%).
- 05) Press the **TIMER** button to activate timer function.
- 06) Press the **CONTINUOUS** button to activate continuous fog output.
- 07) Press the **MANUAL** button to activate maximum output. Once this button is pressed, all the previously activated functions become inactive.

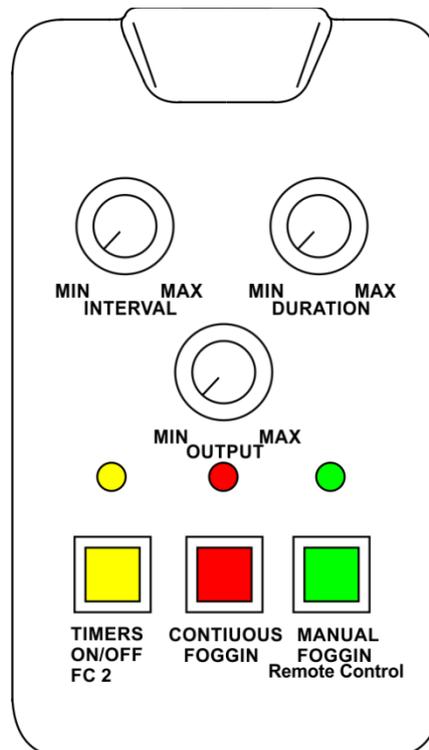


Fig. 03

Control Modes

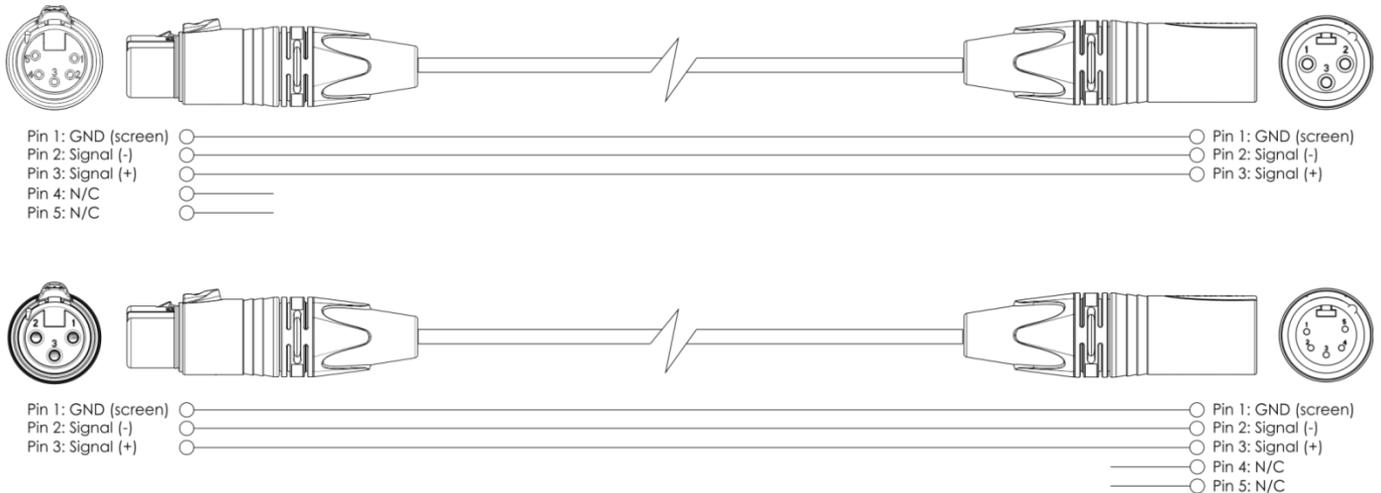
- There are 2 modes:
- Stand-alone mode
 - DMX-512 (1CH)

One Dragon (Stand-alone)

- 01) Place the effect on the flat stage floor. Leave at least 0,5 meter on all sides for air circulation.
- 02) Plug the end of the electric mains power cord into a proper electric power supply socket.
- 03) When the Dragon is not connected with a DMX-cable, it functions as a stand-alone device.

Multiple Dragons (DMX Control)

- 01) Place the effect on the stage floor. Leave at least 1 meter on all sides for air circulation.
- 02) Plug the end of the electric mains power cord into a proper electric power supply socket.
- 03) Use a 3-pin XLR cable to connect the Dragons and other devices.



- 04) Link the units as shown in Fig. 03, Connect a DMX signal cable from the first unit's DMX "out" socket to the second unit's "in" socket. Repeat this process to link the second, third, and fourth units.
- 05) Supply electric power: Plug electric mains power cords into each unit's IEC socket, then plug the other end of the mains power cord into proper electric power supply sockets, starting with the first unit. Do not supply power before the whole system is set up and connected properly.

Multiple Dragons DMX Set Up

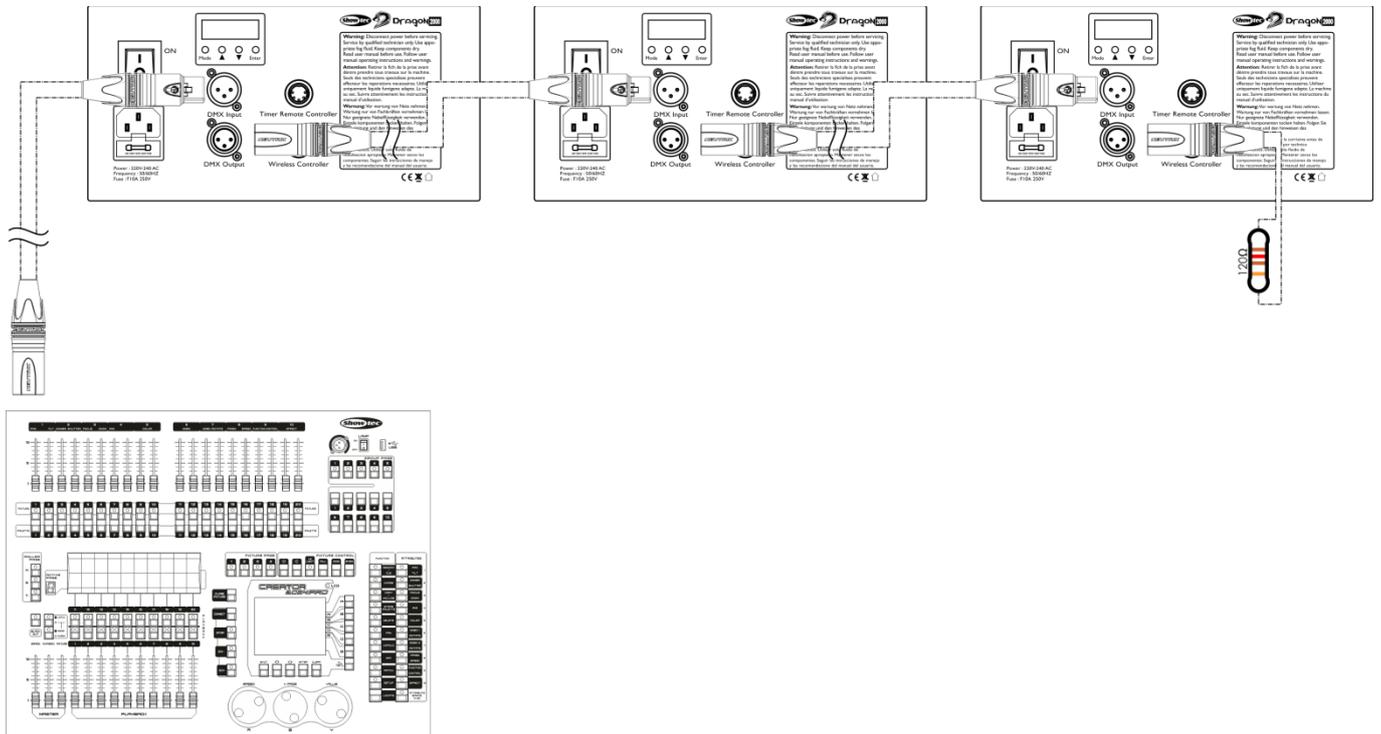


Fig. 03

Note: Link all cables before connecting electric power

Data Cabling

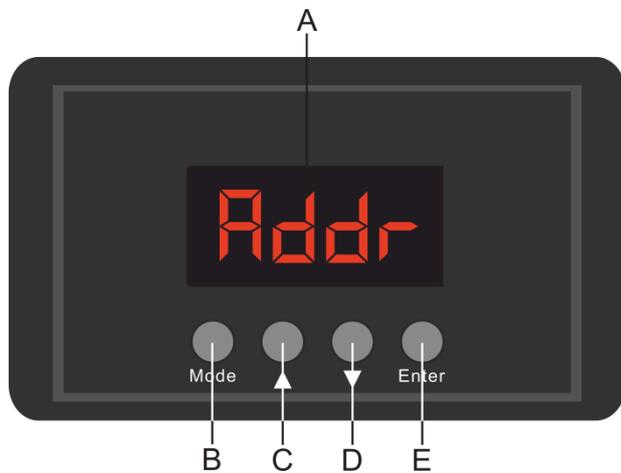
To link fixtures together, you must obtain data cables. You can purchase DAP Audio certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable, please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

DAP Audio DMX Data Cables

- DAP Audio Basic microphone cable for allround use. bal. XLR/M 3-pin > XLR/F 3-pin. **Ordercode** FL01150 (1,5 m), FL013 (3 m), FL016 (6 m), FL0110 (10 m), FL0115 (15 m), FL0120 (20 m).
- DAP Audio X-type data cable XLR/M 3-pin > XLR/F 3-pin. **Ordercode** FLX0175 (0,75 m), FLX01150 (1,5 m), FLX013 (3 m), FLX016 (6 m), FLX0110 (10 m).
- DAP Audio cable for the demanding user with exceptional audio-qualities and connector made by Neutrik®. **Ordercode** FL71150 (1,5 m), FL713 (3 m), FL716 (6 m), FL7110 (10 m).
- DAP Audio cable for the demanding user with exceptional audio-qualities and connector made by Neutrik®. **Ordercode** FL7275 (0,75 m), FL72150 (1,5 m), FL723 (3 m), FL726 (6 m), FL7210 (10 m).
- DAP Audio 110 Ohm cable with digital signal transmission. **Ordercode** FL0975 (0,75 m), FL09150 (1,5 m), FL093 (3 m), FL096 (6 m), FL0910 (10 m), FL0915 (15 m), FL0920 (20 m).
- DAP Audio DMX adapter: 3-pin/5-pin. **Ordercode** FLA30.

The Dragon 2000 can be operated with a controller in **control mode** or without the controller in **stand-alone mode**.

Control Panel



- A) LED display
- B) MODE button
- C) UP button
- D) DOWN button
- E) ENTER button

Fig. 04

Control Mode

The fixtures are individually addressed on a data-link and connected to the controller. The fixtures respond to the DMX signal from the controller. (When you select the DMX address and save it, the controller will display the saved DMX address, next time.)

DMX Addressing

The control panel on the front side of the base allows you to assign DMX fixture addresses, which is the first channel with which the Dragon will respond to the controller.

Please note, when you use the controller, the unit has **1** channel.

When using multiple Dragons, make sure you set the DMX addresses right.

Therefore, the DMX address of the first Dragon should be **1(001)**; the DMX address of the second Dragon should be **1+1=2 (002)**; the DMX address of the third Dragon should be **2+1=3 (003)**, etc.

Please, be sure that you do not have any overlapping channels in order to control each Dragon correctly. If two or more Dragons are addressed similarly, they will work similarly.

Controlling:

After having addressed all Dragon fixtures, you may now start operating these via your lighting controller.

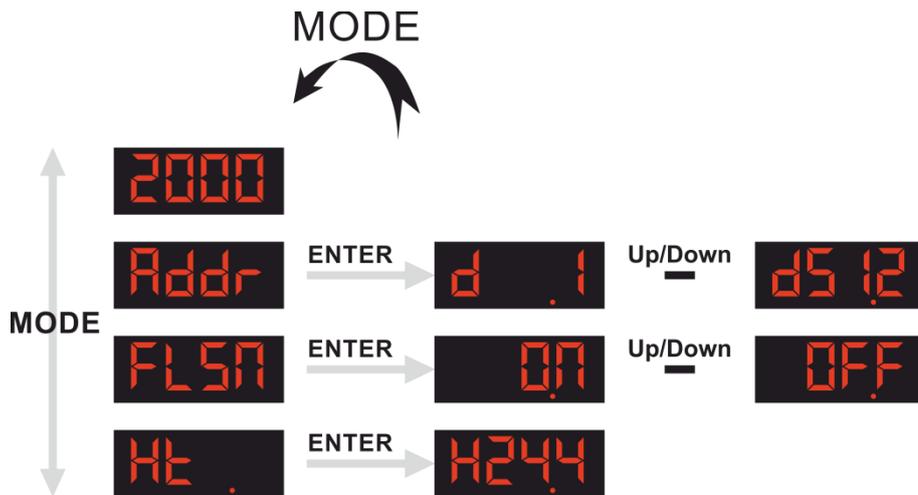
Note: After switching on, the Dragon will automatically detect whether DMX 512 data is received or not. If there is no data received at the DMX-input, the "LED" on the control panel will not flash.

If not, the problem may be:

- The XLR cable from the controller is not connected with the input of the Dragon 2000.
- The controller is switched off or defective, the cable or connector is defective, or the signal wires are swapped in the input connector.

Note: It is necessary to insert an XLR termination plug (with 120 Ohm) in the last fixture in order to ensure proper transmission on the DMX data link.

Menu Overview



Main Menu Options

Addr DMX address settings (Stand-alone)

FLSN Fog liquid sensor

Ht Heater temperature (Stand-alone)

- 01) Upon start up, the display will show **2000**.
- 02) Wait until the device is ready for operation. It will take approximately 6 minutes.

1. DMX address settings

With this menu, you can set the desired DMX starting address.

- 01) Press the **MODE** button, until the display shows **Addr**.
- 02) Press the **ENTER** button to open the menu.
- 03) Press the **UP/DOWN** buttons to set the desired DMX starting address. The adjustment range is between **d . 1** ^{Up/Down} **d5 12**.
- 04) Press the **ENTER** button to save changes.

2. Fog liquid sensor

With this menu, you can set the fog fluid sensor.

- 01) Press the **MODE** button, until the display shows **FLSN**.
- 02) Press the **ENTER** button to open the menu.
- 03) Press the **UP/DOWN** buttons to set the desired fog liquid sensor setting.

OFF Off, when the fog fluid tank is empty, the dragon pump will keep going.

0n On, when the fog fluid tank is empty, the device will stop fogging.

First refill the tank. The fluid tubes will remain empty, now set the device to **OFF**. The pump will start running and fill all tubes.

Now the entire system is filled and you have to set the device to **0n**.

Please make sure that you've got the correct setting, otherwise the pump will keep running, while the tank is empty and the warranty will become void.

- 04) Press the **ENTER** button to save changes.

3. Heater temperature

With this menu, you can monitor the temperature of the heater.

- 01) Press the **MODE** button, until the display shows **HE .**
- 02) Press the **ENTER** button to open the menu.
- 03) Now you can monitor the temperature of the heater.

DMX Channels

1 channel

Channel 1 – Functions

0-9	Fog output OFF
10-255	Fog output ON

Maintenance

The Dragon 2000 requires almost no maintenance. However, you should keep the unit clean. Disconnect the mains power supply and then wipe the cover with a damp cloth. Wipe the front panel with a damp cloth. Do not use alcohol or solvents. Do not immerse in liquid.

Keep connections clean. Disconnect electric power, and then wipe the connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

Do not allow the fog liquid to become contaminated. Always replace the caps on the fog liquid container and the fog machine liquid tank immediately after filling.

After every 40 hours of continuous operation, it is recommended to run a cleaning solution composed of 80% distilled water / 20% white vinegar through the system. Repeat this 2-4 times.

When cleaning, use only a clean, lint-free soft cloth. An effective cleaning regimen is as follows:

- 01) While unit is unplugged and cool, clean out debris with vinegar and a pipe cleaner, making sure that the hole is free of clogs.
- 02) Remove all fog liquid from machine. Add cleaning solution to tank. Plug unit in.
- 03) Run unit in a well-ventilated area until tank is empty.
- 04) Refill with fog liquid.

Performance Note:

Fog machines may sputter small amounts of fog occasionally during operation and for a about a minute after being turned off.

Replacing a Fuse

Power surges, short-circuit or inappropriate electrical power supply may cause a fuse to burn out. If the fuse burns out, the product will not function whatsoever. If this happens, follow the directions below.

- 01) Unplug the unit from electric power source.
- 02) Insert a screwdriver into the slot in the fuse cover. Gently pry up the fuse cover. The fuse will come out.
- 03) Remove the used fuse. If brown or unclear, it is burned out.
- 04) Insert the replacement fuse into the holder where the old fuse was. Reinsert the fuse cover. Be sure to use a fuse of the same type and specification. See the product specification label for details.

Troubleshooting

This troubleshooting guide is meant to help solve simple problems.

Always monitor tank liquid level as you are blowing fog. Running a fog machine with no liquid can permanently damage the unit.

If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

If the fog machine does not operate properly, refer servicing to a technician.

- 01) If you experience low output, mechanical pump noises other than the usual normal operating pump noise, or no output at all, unplug immediately.
- 02) Check liquid level, remote connection and power from the wall.
- 03) If all of the above appears to be O.K., plug the unit in again.
- 04) If fog does not come out after holding the remote button down for 30 seconds, check the hose attached to the tank to make sure there is liquid going through the hose.
- 05) If you are unable to determine the cause of the problem, do not simply continue pushing the remote button, as this may damage the unit.
- 06) Return the machine to your Showtec dealer.

Product Specification

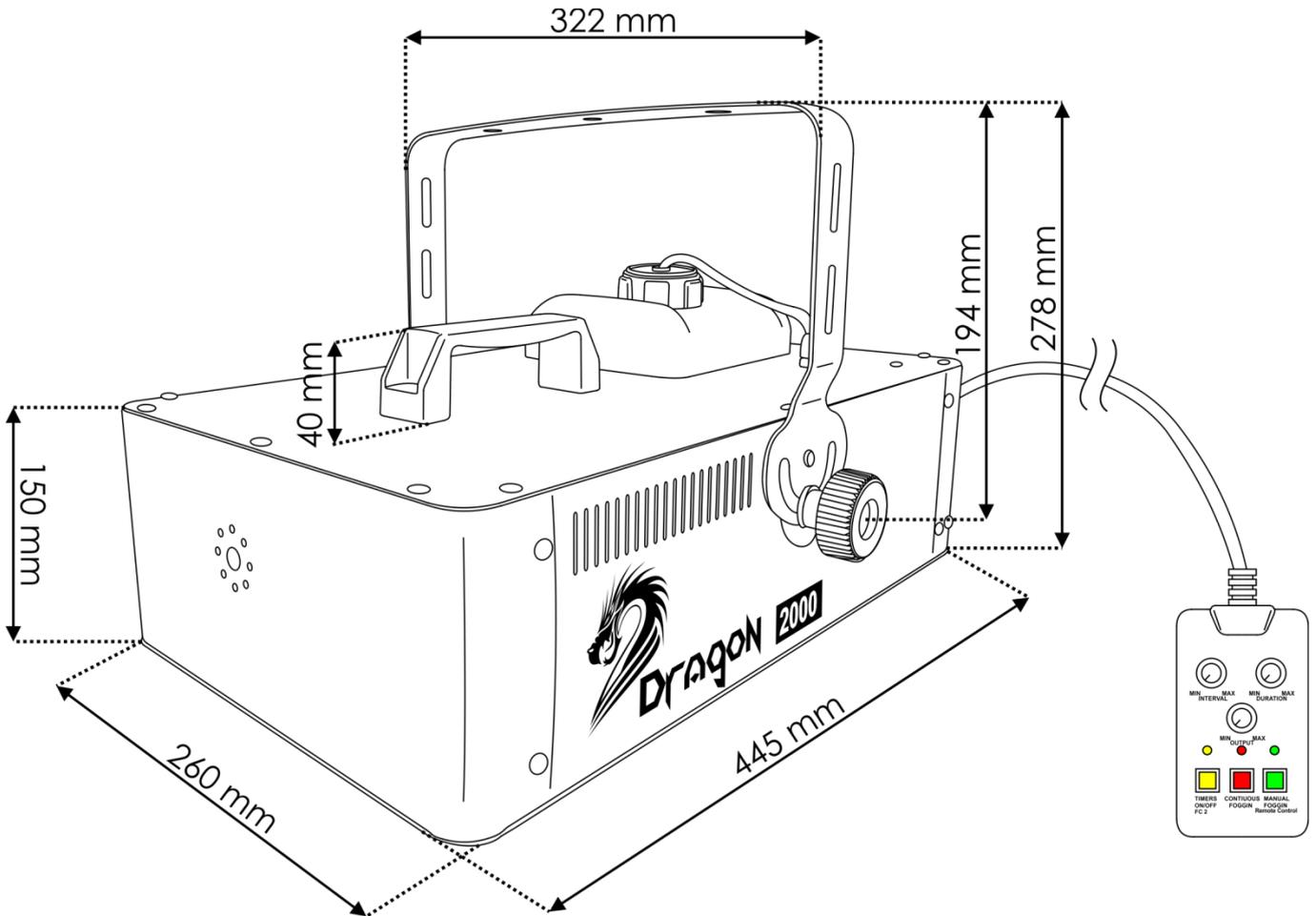
Model:	Dragon 2000
Input Voltage:	220-240V AC, 50Hz
Power consumption:	2000W
Tank capacity:	2,4 L
Fluid consumption:	1L/8 min
Output volume:	40000 cu.ft/min
Warm-up time:	6 min
Fuse:	F12A/250V
Dimensions:	445 x 260 x 278 mm (LxWxH)
Weight:	8,1 kg
Operation and Programming	
Signal pin OUT:	pin 1 earth, pin 2 (-), pin 3 (+)
Setup and Addressing:	Red LED display for all settings
DMX Channels:	1 channel
Signal input:	3-pin DMX signal connector IN
Signal output:	3-pin DMX signal connector OUT
Electro-mechanical effects	
Mounting:	Mounting bracket
Housing:	Die-cast aluminum, powder coat finish
Power connection:	Schuko & dedicated 5-pin DIN connector
Remote control:	Detachable on/off remote control (cable length: 5 m)
Cooling:	Convection (no fans)
Max. ambient temperature t_a :	40°C
Max. housing temperature t_B :	80°C
Minimum distance:	
Minimum distance from flammable surfaces:	0,5 m
Minimum distance to lighted object:	1 m

Design and product specifications are subject to change without prior notice.



Website: www.Showtec.info
 Email: service@highlite.nl

Dimensions





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