

CLF EF SMOKE 1500 MANUAL

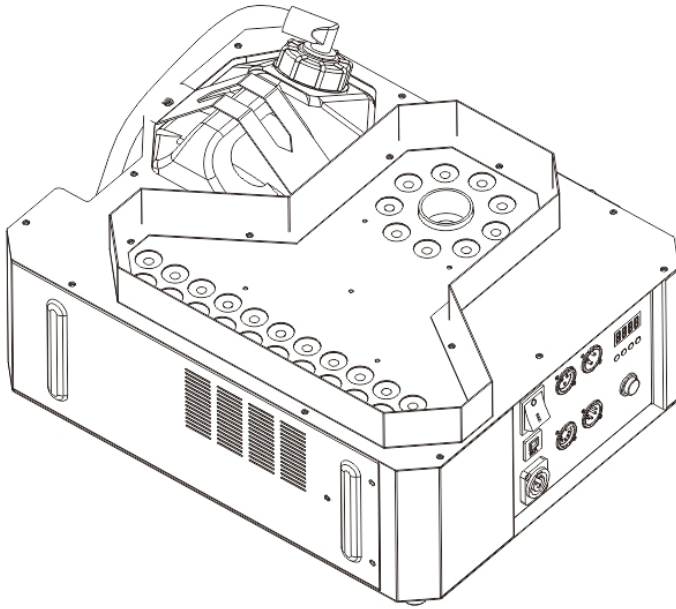
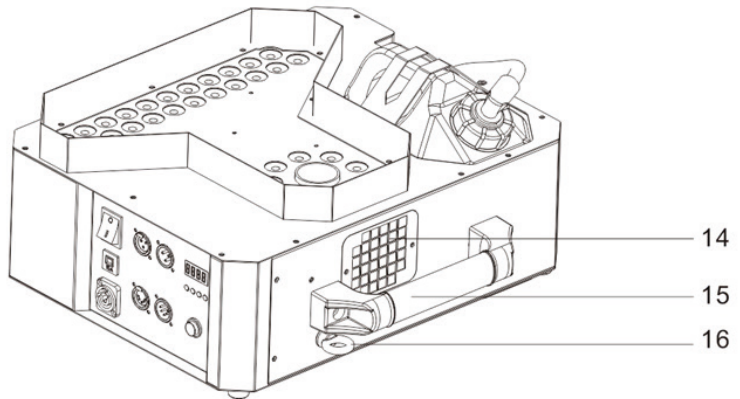
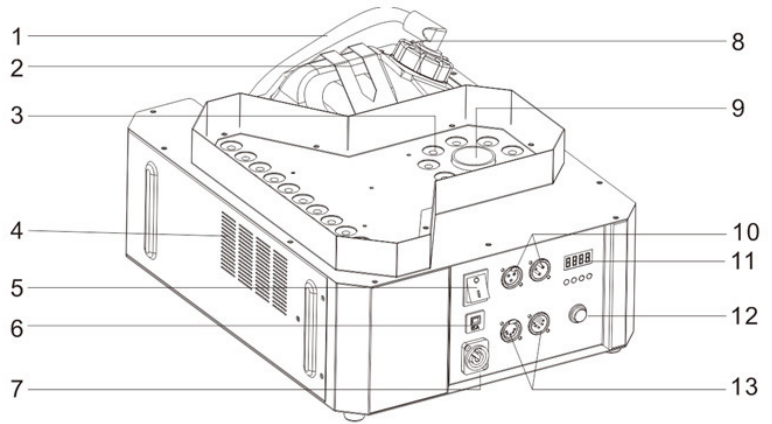


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MACHINE OVERVIEW

1. Fluid tube
2. Tank fixing plate
3. 32 pcs LED
4. Ventilation
5. Power switch
6. Overload protection
7. PowerCON
8. 2.5L tank
9. Nozzle
10. 3-pin DMX socket
11. LCD display
12. Direct fog button
13. 5-pin DMX socket
14. Ventilation inlet
15. Handle
16. Safety point



SAFETY INSTRUCTION



WARNING!

Read the safety precautions in this section before installing, powering, operating or servicing this product

The following symbols are used to identify important safety information on the product and in this manual:



DANGER!
Safety hazard.
Risk of severe injury or death.



DANGER!
Hazardous voltage. Risk of lethal or severe electric shock.



WARNING!
Fire hazard.



WARNING!
LED light emission. Risk of eye injury.



WARNING!
Burn hazard. Hot surface. Do not touch.



WARNING!
Wear protective eyewear.



WARNING!
Refer to user manual.



USING FOR THE FIRST TIME

This product is for professional use only. It is not for household use.

This product presents risks of severe injury or death due to fire and burn hazards, electric shock and falls.

Read this manual before installing, powering or servicing the fixture, follow the safety precautions listed below and observe all warnings in this manual and printed on the fixture. If you have questions about how to operate the fixture safely, please contact your supplier.



PROTECTION FROM ELECTRIC SHOCK



- Disconnect the machine from AC power before removing or installing any cover or part and when not in use.
- Always ground (earth) the fixture electrically.
- Use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault (earth-fault) protection.
- Before using the machine check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.
- Power input and throughput cables must be rated 20 A minimum, have three conductors 1.5 mm² (16 AWG) minimum conductor size and an outer cable diameter of 5 - 15 mm. Cables must be hard usage type (SJT or equivalent) and heat-resistant to 90° C minimum.
- Use only PowerCON® cable connectors to connect to power input sockets. Use only PowerCON® cable connectors to connect to power through put sockets.
- Isolate the machine from power immediately if the power plug or any seal, cover, cable, or other component is damaged, defective, deformed, wet or showing signs of overheating. Do not reapply power until repairs have been completed.



DO NOT EXPOSE THE FIXTURE TO RAIN OR MOISTURE

CLF EF Smoke 1500 has an IP20 rating, indoor use only.

SAFETY INSTRUCTION



PROTECTION FROM BURNS AND FIRE



- Do not operate the machine if the ambient temperature (T_a) exceeds 45°C.
- The exterior of the machine becomes hot during use. Avoid contact by persons and materials. Allow the machine to cool for at least 10 minutes before handling.
- Keep all combustible materials (e.g. fabric, wood, paper) at least 100 mm away from the nozzle
- Keep flammable materials well away from the machine
- Ensure that there is free and unobstructed airflow around the machine
- Do not place objects within 200 mm of the machine
- Do not attempt to bypass thermostatic switches or fuses.
- If you relay power from one machine to another using power throughput sockets, do not connect more than 1 machines in total to each other in an interconnected chain.
- Connect only other machines to fixture power throughput sockets. Do not connect any other type of device to these sockets.
- Do not connect any other type of device to these sockets.
- Do not stick filters, masks or other materials onto any optical component.
- Do not modify the machine in any way not described in this manual
- Do not connect machine to a dimmer



PROTECTION FROM INJURY



- Ensure that persons are not looking at the LEDs from within 3 meters when the product lights up suddenly. This can happen when power is applied, when the product receives a DMX signal, or when SERVICE menu items are selected.
- Fasten the fixture securely to a fixed surface or structure when in use. The fixture is not portable when installed.
- Ensure that any supporting structure and/or hardware used can hold at least 10 times the weight of all the devices they support.
- Allow enough clearance around the head to ensure that it cannot collide with an object or another fixture when it moves.
- Check that all external covers and rigging hardware are securely fastened.
- Block access below the work area and work from a stable platform whenever installing, servicing or moving the machine
- Do not operate the machine with missing or damaged covers, shields or any optical component.

AC POWER



POWER VOLTAGE

Check that the voltage range specified on the machine serial number label matches the local AC mains power voltage before applying power to the fixture. The machine accepts AC mains power at 100-240 V nominal, 50/60 Hz. Do not apply AC mains power to the machine at any other voltage than specified.



POWER CABLES

Power input and throughput cables must be rated 20 A minimum, have three conductors 1.5 mm² (16 AWG) minimum conductor size and an outer cable diameter of 5 - 15 mm. Cables must be hard usage type (SJT or equivalent) and heat-resistant to 90°C minimum. In the EU the cable must be HAR approved or equivalent. If you install a power plug on the power cable, install a grounding-type (earthed) plug that is rated 20 A minimum. Follow the plug manufacturer's instructions. Table 1 shows standard wire color-coding schemes and some possible pin identification schemes; if pins are not clearly identified, or if you have any doubts



Wire color (EU models)	Wire color (US models)	Conductor	Symbol	Screw (US)
Brown	Black	Live	L	Yellow or Brass
Blue	White	Neutral	N	Silver
Yellow / green	Green	Ground (earth)	 or 	Green

Table 1: Wire color-coding and power connections

DATA LINK

A DMX 512 data link is required in order to control a machine via DMX. The machine has 3 & 5-pin XLR connectors for DMX data input and output. The pin-out on all connectors is pin 1 = shield, pin 2 = cold (-), and pin 3 = hot (+) Pins 4 and 5 in the 5-pin XLR connectors are not used.

TIPS FOR RELIABLE DATA TRANSMISSION

To connect the machine to data:

1. Connect the DMX data output from the controller to the closest machine's male 3 & 5-pin XLR DMX input connector.
2. Connect the DMX output of the machine closest to the controller to the DMX input of the next machine and continue connecting machines output to input.

PHYSICAL INSTALLATION



Warning! The machine must be either fastened to a flat surface such as a stage or wall, or clamped to a truss or similar structure in any orientation using a rigging clamp.

Warning! At all times machine can cause injury or damage if it falls, attach an approved safety cable to one of the safety cable attachment points on the base (see “machine overview” on page 4).



Check that all surfaces more far away than a minimum of 200 mm. from the machine, that combustible materials (wood, fabric, paper, etc.) are minimum 100 mm. from the nozzle, that there is free airflow around the machine and that there are no flammable materials nearby.

FASTENING THE MACHINE TO A FLAT SURFACE

The machine can be fastened to a fixed flat surface that is oriented at any angle. Check that the surface can support at least 10 times the weight of all machines and equipment to be installed on it. Warning! The supporting surface must be flat otherwise the air vents in the base may be blocked, which will cause overheating. Fasten the machine securely. Do not place it on a surface or leave it where it can be moved or can fall over. Attach a securely anchored safety cable to the safety cable attachment point (see “machine overview” on page).

If the machine is installed in any location where it may fall and cause injury or damage if the primary attachment fails:

1. Block access under the work area. Working from a stable platform.
2. Secure the machine with a secondary attachment such as an approved safety cable that is rated for the weight of the machine using one of the attachment points at the edges of the base (see “machine overview” on page 4). Do not use any other part of the machine as a safety cable attachment point.

OPERATING INSTRUCTIONS

1. After checking that all the parts are intact and complete, position the machine on a flat surface.
2. Only use designated CLF Lighting smoke liquid. Machine can be harmed when using other fluids and warranty is expired.
3. Connecting the power cord. Before power on, make sure it is connected with the rated voltage.
4. Turn on the machine, it will immediately start heating up, the digital display will show “WARMING UP”.

MENU INSTRUCTION

1. MENU button: When it shows “HEAT”, press “menu” button to enter the page “ADDR”
2. UP button: Increase the relevant value of each page
3. DOWN button: Decrease the relevant value of each page
4. ENTER button: Enter or exit each page

WIRELESS CONTROL

When the wireless control function is activated, digital display will show as the above picture once the machine is powered on. The line will increase gradually, and the digital display will exit this page till the line is full (12 lines). It takes 12 seconds to fulfill this. During this time, press any button on the remote, the digital display will flash twice, this means that the wireless remote matches with fog machine successfully. Users can control the machine by the wireless remote. Remark: There would be no response for rematch.

One machine can match with five different frequency controllers at most (the process should be finished within 12s). If the machine has matched with a controller last time, then in next time's use, if user does not register it with another new remote, it will recognize last time's remote. While if the machine has matched with three controllers last time, and user matches it with another new remote in next time's use, it would only recognize the new remote rather than the old three.

MENU NAVIGATION

Press MENU button to navigate different setting pages.

1. DMX address setting page



When it shows ADDR, press ENTER button to enter into the setting page of DMX address. Press UP or DOWN to increase or decrease the address value. After finished setting, press ENTER button again to back to page ADDR.

2. DMX address setting page



When it shows "CH-1", press ENTER button to set LED color under button one. Through UP and DOWN button, user can realize the color setting. After finished setting, press ENTER again to exit to page CH-1. The LED's color could be set to OFF, 9 colors (Co1-Co9) and change color automatically (rand).

1. When set to OFF, the LED would not light up.
2. 9 colors are as following:

- Co 1: Red
- Co 2: Green
- Co 3: Blue
- Co 4: Pink
- Co 5: Purple
- Co 6: Orange
- Co 7: Yellow
- Co 8: Sky blue
- Co 9: White

After setting the above color, the LED will show the corresponding color when press the button A on the remote (CH-1 matches with button A). Under Random mode, the LED will change color freely, the interval is 1.

Note: Under DMX control, the LED's color would be controlled by DMX controller instead of this color setting page.

There are four color standby modes, namely CH-1, CH-2, CH-3 and CH-4. Different channels match with different button on the wireless remote.

3. Wireless remote setting



When it shows REMO, press ENTER button to set wireless remote function.

Press UP button, it will show ON. This means that the wireless control function is activated, and it will show the registering page when the machine is powered on. Press DOWN button, it will be OFF. This means that the wireless control function is shut off. And it will not show the wireless remote registering page when the machine is powered on. After setting, press ENTER button again to exit to page REMO.

4. No-fluid protection setting page



When it shows OIL, press ENTER button to set the status of low-fluid protection. Press UP button, it will show ON. This means that the low-fluid protection function is activated. Press DOWN button, it will be OFF. This means that low-fluid protection function is shut off. After setting, press ENTER button again to exit to page OIL.

This machine supports wireless remote control, DMX control, fluid sensor, stop immediate function and LED lights (3W LED, 32 in total). DMX control is prior to wireless remote control. Fog duration is about 7S.

1. LED lights are controlled by the digital display and DMX.
2. LED lights instruction
3. Under wireless remote control, LED color is set according to the digital display. The LED's on/off synchronize with the Fog's on/off.
4. Under DMX control, fog and LED are separate. It has 7 channels to control the effects of LED lights. Please refer to below DMX instruction for the details.

DMX CHANNELS

Channel	Function	Value	Percentage	Remark
CH 1	FOG output	010 - 255	0 - 100%	000 - 009 = OFF
CH 2	Inner LED red output	010 - 255	0 - 100%	000 - 009 = OFF
CH 3	Inner LED green output	010 - 255	0 - 100%	000 - 009 = OFF
CH 4	Inner LED green output	010 - 255	0 - 100%	000 - 009 = OFF
CH 5	Outer LED red output	010 - 255	0 - 100%	000 - 009 = OFF
CH 6	Outer LED green output	010 - 255	0 - 100%	000 - 009 = OFF
CH 7	Outer LED green output	010 - 255	0 - 100%	000 - 009 = OFF
CH 8	Color macro	010 - 255	0 - 100%	000 - 009 = OFF
CH 9	Color macro speed	010 - 255	0 - 100%	000 - 009 = OFF
CH 10	LED strobe	010 - 255	0 - 100%	000 - 009 = OFF
CH 11	LED dimmer	010 - 255	0 - 100%	000 - 009 = OFF

MAINTENANCE

Oil injection trouble:

Refers to the fog fluid atomizing in the heater pipe of the machine is not good, heater temperature cannot be timely and effective transmit to the fog fluid, fog fluid cannot all atomization and lead to oil injection.

1. Using the low quality or counterfeit fog fluid, low quality fog fluid have more impurities, easy to adhere to the pipe wall and hindered temperature transmission result in incomplete atomization caused oil injection.
2. Using an incorrect fog fluid. Different fog fluid have different required atomization temperature. If you use the wrong fog fluid result in oil cannot fully atomization caused oil injection.(fig 1)

Heater blocking trouble:

Poor atomization oil injection is the early signs of heater block. Using poor quality fog fluid or not timely maintenance cleaning the fog machine for a long time. Inevitable will appear the terminal symptom of heater blocking.

1. heater blocked is because used inferior fog fluid or not maintenance for a long time. Have nothing to do with the quality of machine. Like a car with poor quality gasoline produce poor oil circuit failure or long-time no maintenance the car will inevitably appear bigger problems. (fig 2)

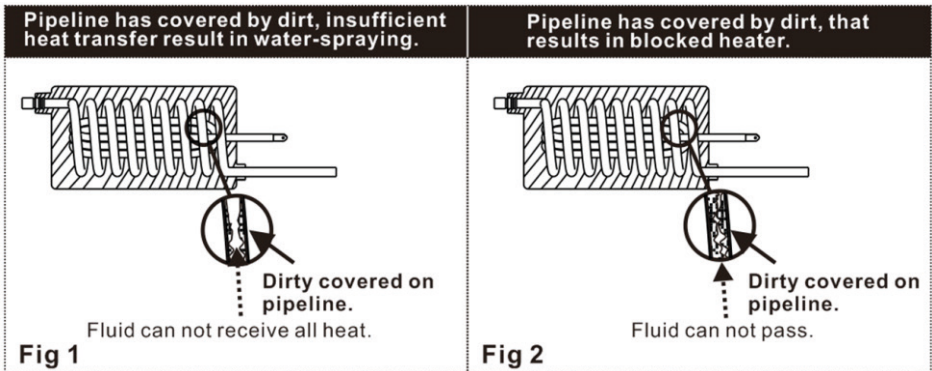
Solutions to these problems:

Fog machine heating pipes used for a long time and then the pipe wall will easily produce sediments (The more inferior fog fluid the more impurities thus lead to oil injection or blocked). All fog machines need regular maintenance (fog machine maintenance cycle for 1 to 2 months/time).

Specific maintenance method: after heating the 35% white vinegar plus 65% distilled water and then spray 10 to 15 times

Conclusion:

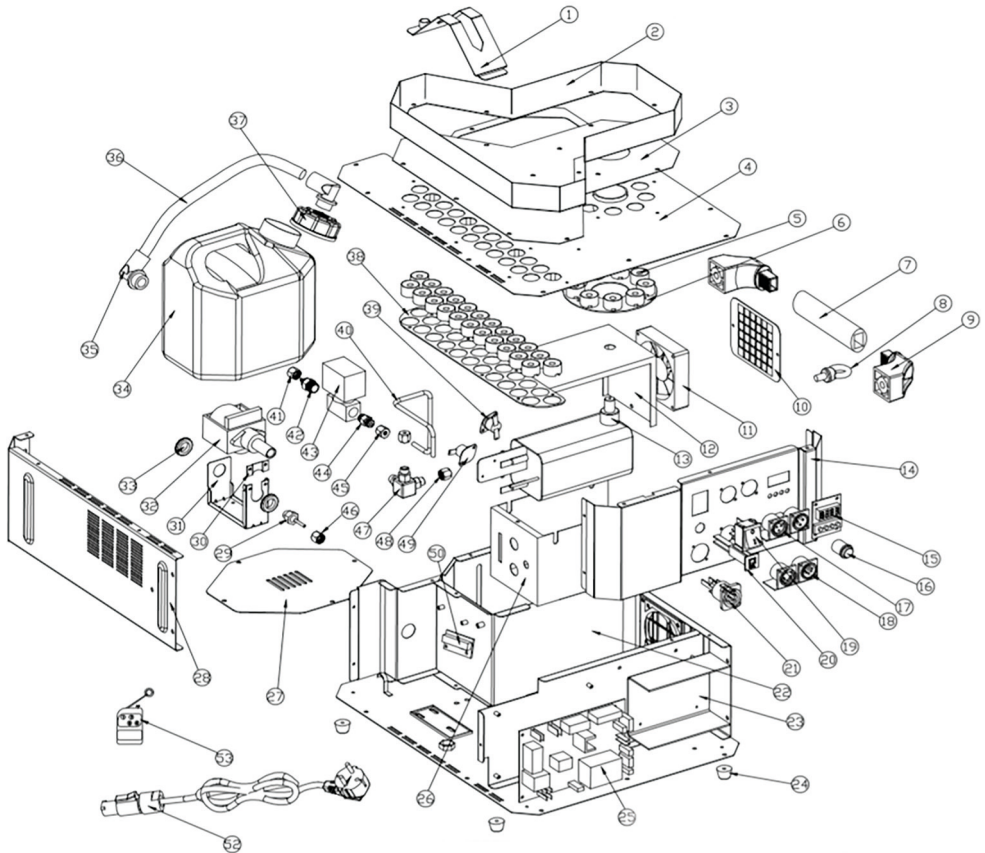
As long as the fog machine with oil injection or heater blocking after using a period of time. It was caused by fog fluid quality or lack of maintenance, has nothing to do with the quality of the machine. Please use the original high quality fog fluid and timely maintain it, then it can be used for a long time



SPECIFICATIONS

Power	1500W
LED	32 PCS RGB
Voltage / frequency	AC100V - 240V - 50/60Hz
Fuse	15A/250V
Power consumption; all effects static, zero light output	<25W
AC power input	PowerCON
DMX data in/out	5 pin & 3 pin locking XLR
Netto weight	10kg
Size	417x382x205mm
Control	DMX & Wireless
Channel	11 channels
Output	32000CUFT/MIN (max 6-8m height and max 8 sec)
Settings and addressing	control panel with 7 digit screen
Protocol	USITT DMX512-A & Wireless
Color	Black
Housing	High strenght die-casting aluminium and metal
Protection rating	IP20
Orientation	Up and downwards (when fuel tank is rotated)
Min. distance to combustable materials	100mm from machine
Min. distance to iluminated surfaces	200mm from machine
Wireless remote	4 button remote
Fluid consumption	6,3min/L
Fluid capacity	2,5L
Fluid brand	CLF Fog fluid
Heat up time	4 min
Max. ambient temperature (Ta max)	45°C

EXPLODED VIEW



No.	Description	Part number	No.	Description	Part number
1	Bracket fluid container	CLF-70-130	28	Base plate right	CLF-70-157
2	LED top ring	CLF-70-131	29	Copper connector fluid pump	CLF-70-158
3	Transparent LED cover	CLF-70-132	30	Fluid pump clip	CLF-70-159
4	LED top cover	CLF-70-133	31	Fluid pump bracket	CLF-70-160
5	Lens LED	CLF-70-134	32	Fluid pump	CLF-70-161
6	LED board (ring)	CLF-70-135	33	Rubber ring fluid pump	CLF-70-162
7	Aluminium handle	CLF-70-136	34	Fluid container	CLF-70-163
8	Safety eye	CLF-70-004	35	Elbow connector fluid line	CLF-70-164
9	Bracket for handle	CLF-70-138	36	Fluid line	CLF-70-165
10	Fan cover	CLF-70-137	37	Fluid cap	CLF-70-166
11	Fan	CLF-70-140	38	LED board (line)	CLF-70-167
12	Heater top cover	CLF-70-141	39	Thermostat	CLF-70-168
13	Heater block	CLF-70-142	40	Copper pipe	CLF-70-169
14	Front cover	CLF-70-143	41	Copper cap solenoid valve fluid line	CLF-70-170
15	Display PCB	CLF-70-144	42	Copper connector solenoid valve fluid line	CLF-70-171
16	Smoke button	CLF-70-145	43	Solenoid valve	CLF-70-172
17	3-pin DMX PCB (male/female)	CLF-70-146	44	Copper connector solenoid valve copper line	CLF-70-173
18	5-pin DMX PCB (male/female)	CLF-70-047	45	Copper cap solenoid valve copper line	CLF-70-174
19	Mains switch	CLF-70-148	46	Copper cap fluid pump	CLF-70-175
20	Fuse	CLF-70-051	47	3-way copper connector	CLF-70-176
21	Powercon input socket blue	CLF-70-150	48	Aluminium cap heater	CLF-70-177
22	Base bottom	CLF-70-151	49	Thermostat manual resettable	CLF-70-178
23	Power supply	CLF-70-152	50	Wireless remote PCB	CLF-70-013
24	Rubber foot	CLF-70-153	52	Schuko-PowerCON connection cable 3x1,5mm ² 1.8 mtr	CLF-70-180
25	Main PCB	CLF-70-154	53	Wireless remote control	CLF-70-180
26	Heater bottom cover	CLF-70-155	54	Complete heater core with metal housing	CLF-70-181
27	Fluid container plate	CLF-70-156			



CLF EF SMOKE 1500