TOPCAT®

CAT-2 ATMOSPHERIC GENERATOR

USE MANUAL

1   BEFORE YOU BEGIN

1.1   What Is Included

CAT-2 × 1；   Power Cord × 1；   10 meters pipe× 1；   Gas pressure reducer× 1 ；   Warranty Card× 1

Note：Standard pipe length is 10m. It can be customized as requested with extra charge.

1.2   Unpacking Instructions

Carefully unpack the product immediately and check the container to make sure all the parts are in the package and are in good condition.

If the box or the contents (the product and included accessories) appear damaged from shipping, or show signs of mishandling, notify the carrier or dealer/seller immediately. In addition, keep the box and contents for inspection.

1.3   Symbols

Symbol	Meaning
⚠	*Caution* Critical installation, configuration, or operation information. Not following these instructions may make the product not work, cause damage to the product, or cause harm to the operator.
ⓘ	*Important* Important installation or configuration information. Failure to comply with this information may keep the product from working correctly.
💬	*Information* Useful information.

1.4   Disclaimer

The information and specifications contained in this User Manual are subject to change without notice. DJPOWER assumes no responsibility or liability for any errors or omissions and reserves the right to revise or to create this manual at any time.

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1.5   Safety Notes

Please read the following Safety Notes carefully before working with the product. The notes include important safety information about installation, usage, and maintenance.

1.5.1   Personal Safety

• Always connect the product to a grounded circuit to avoid the risk of electrocution.

• Make sure that children, unauthorized people and animals do not obtain access to the machine.

1.5.2   Mounting and Rigging

• The product is for indoor use! To prevent risk of fire or shock, do not expose the product to rain or moisture.

• CAUTION: When transferring product from extreme temperature environments, (e.g. cold truck to warm humid ballroom) condensation may form on the internal electronics of the product. To avoid causing a failure, allow product to fully acclimate to the surrounding environment before connecting it to power.

• Do not mount the product on a flammable surface (linoleum, carpet, wood, paper, carton, plastic, etc.).

- Do not use in a confined space. Always install the product in a location with adequate ventilation, at least 20 in (50 cm) from adjacent surfaces.

- Be sure that no ventilation slots on the product's housing are blocked.

1.5.3   Power and Wiring

- Always make sure that the voltage of the outlet to which you are connecting the product is within the range stated on the decal or rear panel of the product.

- Make sure the power cord is not crimped or damaged.

- Do not connect the machine to the dimming controller or rheostat.

- Never disconnect the product from power cord by pulling or tugging on the cord.

- To eliminate unnecessary wear and improve its lifespan, during periods of non-use completely disconnect the product from power via breaker or by unplugging it.

1.5.4   Operation

- Do not operate this product if you see damage to the housing or cables. Have the damaged parts replaced by an authorized technician at once.

- Make sure there are no flammable materials close to this product while it is operating.

- Do not cover or plug the output nozzle during operation.

- Do not cover the vents always.

- Do not use the product as a space heater.

- Never carry the product by the power cord or any moving part. Always use the handles.

- Empty the storage bin before transporting the product.

- The maximum ambient temperature (Ta) is 104 °F (40 °C). Do not operate the product at higher temperatures.

- Always disconnect the product from the power source before cleaning.

- This product contains no user-serviceable parts. Any reference to servicing in this User Manual will only apply to properly trained, certified technicians. Do not open the housing or attempt any repairs which can lead to damage or malfunction.

- In the event of a serious operating problem, stop using the product immediately.

- Use only DJPOWER Professional Neutral Fluid PRO-GX and CO_2 or N_2.

2   INTRODUCTION

2.1   Description

TOPCAT CAT-2 Atmospheric Generator creates fog or haze effect from a single device. It breaks through the traditional concept of fog or haze machine by mixing CO_2/Nitrogen with oil based Pro Neutral Fluid, then uses evaporator to produce massive tiny particles, delicately enhancing the light effect.

The particles are very small, about 0.5 microns. They can spread very quickly in the air even with little air flows.

Fluid being used is made of a special environmentally friendly oil which can keep the haze stay in the air for longer time.
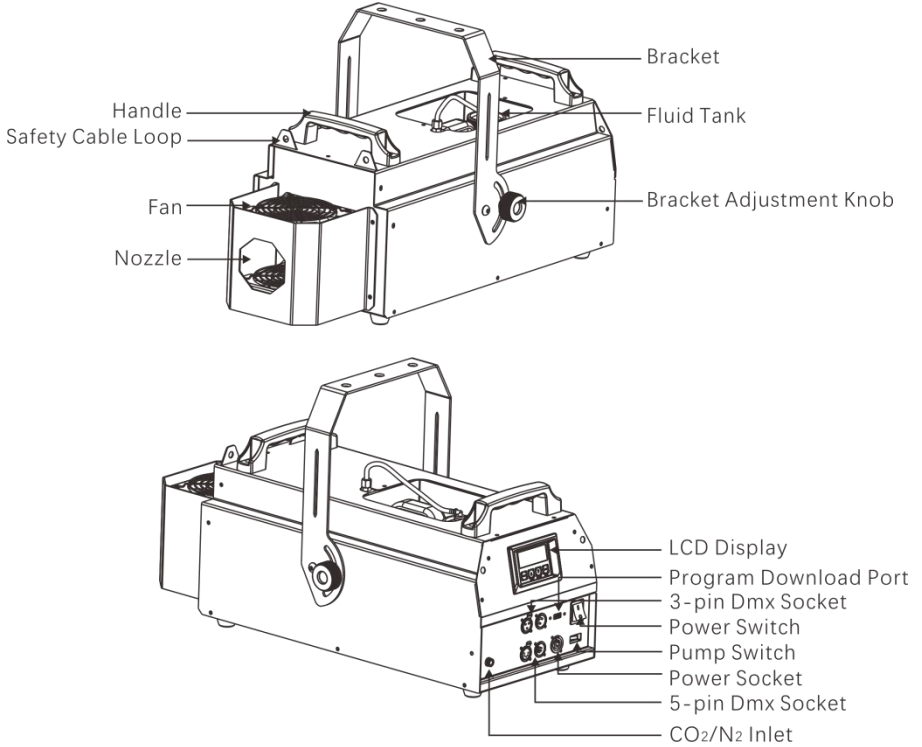
The high quality fine haze effect makes it best mate for the professionals to create an amazing show.
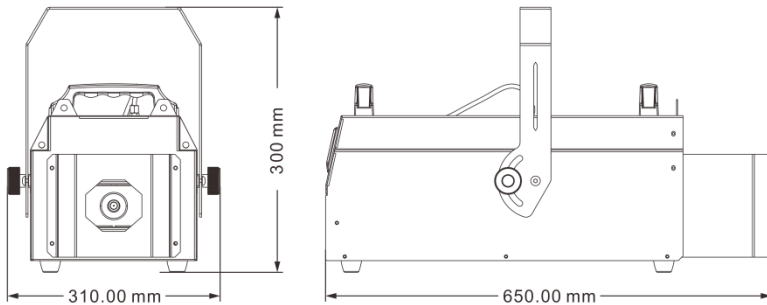
2.2   Features

- Automatic troubleshooting function.

- Automatic cleaning function.

- Low fluid consumption.

- Dual fluid supply system.

- Independent fan control, three output directions.

- With super low noise and anti-humid fan.

- 110V ~240V wide voltage.

- Two fans to switch the haze output UP or DOWN.

- Support RDM function.

- Built in LCD control, 3-pin and 5-pin DMX control.

2.3 Product Overview

Bracket
Handle
Safety Cable Loop
Fluid Tank
Fan
Bracket Adjustment Knob
Nozzle

LCD Display
Program Download Port
3-pin Dmx Socket
Power Switch
Pump Switch
Power Socket
5-pin Dmx Socket
CO_2/N_2 Inlet

2.4 Product Dimensions

300 mm

310.00 mm

650.00 mm

3   TECHNICAL SPECIFICATIONS

AC Power	Input Voltage & Rate	AC 110V-240V 50/60Hz
	Current Limiter Type	Breaker
	Current Limiter Specifications	8 A, 250 V
	Nominal Total Power Consumption	715 W
Heating	Heat Up Time	Appr. 8 min
Capacity	Fluid Tank Capacity	3 L
Output	Fog/Fan Adjustable Output	√
	Continuous Output	√
	Max Output Volume	Appr. 24,000 cfm
	Max Output Distance	Appr. 10 m
	Gas consumption Rate	1% output , Appr. 0.3 kg/H 50% output , Appr. 0.5 kg/H 100% output , Appr. 0.7 kg/H
	Fluid Consumption Rate	1% output , Appr. 41 ml/H 50% output , Appr. 95 ml/H 100% output , Appr. 179 ml/H
Placement & Mounting	Horizontal	√
	Inclined	×
	Sidelong	×
	Hang Upside Down	×
	Rigging & Trussing	√
Control	On-device Manual Control	√
	Wireless Control	×
	Wired Control	×
	Control Protocol	DMX512
	DMX Channel Range	4
Consumable	Consumable	Only DJPOWER Neutral PRO-GX and CO_2 or N_2
Weight & Dimensions	Net Weight	16.5kg
	Gross Weight	22kg
	Machine Dimensions	650 × 310 × 300mm
	Packing Dimensions - Height	800 × 450× 410mm

4   SETUP

4.1   AC Power

The machine has a wide voltage power supply and can work with an input voltage of AC 110 V-240 V, 50/60 Hz.

To determine the product's power requirements (circuit breaker, power outlet, and wiring), use the current value listed on the label affixed to the product's back panel, or refer to the product's specifications chart. The listed current rating indicates the product's average current draw under normal conditions.

⚠   **Always connect the product to a protected circuit (circuit breaker or fuse). Make sure the product has an appropriate electrical ground to avoid the risk of electrocution or fire.**

ⓘ   **Never connect the product to a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel serves only as a 0 to 100% switch.**

4.2   DMX Linking

You can link the CAT-2 to a DMX controller using a 3- or 5-pin DMX connection. If using other DMX-compatible products with this product, you can control each individually with a single DMX controller. Instructions for connecting and configuring this product for DMX operation are in the User Manual.

4.3   Mounting

Before mounting the product, read and follow the safety recommendations indicated in the Safety Notes.
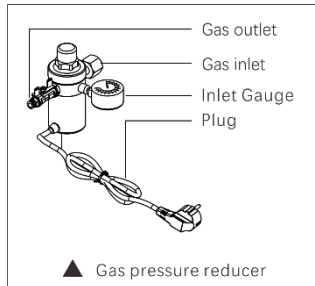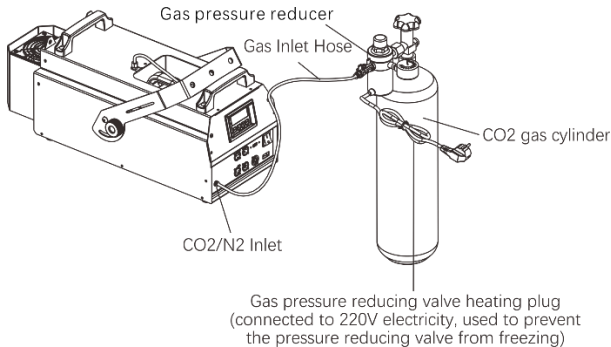
Note: Use CO2 or N2 gas only.

4.3.1   Orientation

For safety reasons, we do not recommend mounting the product in any capacity. Operate the product while it is flat in a safety position, and make sure there is adequate room for ventilation, configuration, and maintenance.

4.3.2   Rigging

DJPOWER recommends using the following general guidelines when mounting this product.

• Before deciding on a location for the product, make sure there is easy access to the product for maintenance and programming purposes.

• Make sure that the structure or surface onto which you are mounting the product can support the product's weight (see the Technical Specifications).

• When mounting the product on the floor, make sure that the product and cables are away from people and vehicles.

• When mounting the product overhead, always use a safety cable. Mount the product securely to a rigging point, whether an elevated platform or a truss.

5   OPERATION

5.1   Preparing for Operation

• After checking that all the parts are intact and complete, position the machine on flat.

• Fill the DJPOWER neutral fluid PRO-GX into the fluid tank.

• The gas only can be CO2 or N2 when the unit is connected to gas cylinder.

• Always connect the product to a grounded circuit. Before power on, make sure it is connected with the rated voltage.

• Turn on the machine, it will immediately start heating up.

5.2   On-device Control Mode & Operation

5.2.1   On-device Control

To access the control panel functions, use the four buttons located underneath the LCD display.

Button	Function
<MENU>	Switch menu pages to select a function
▲ <TIMER>	Increases the numeric value of current function
	Trigger TMER output mode
▼ <VOLUME>	Decreases the numeric value of current function
	Trigger Manual output mode
<ENTER> <STOP>	Save settings
	STOP turns the fog output off

5.2.2   Menu Map

	Display	Description	Parameter Range
Starting Page	TOPCAT CAT-2 Version 1.0		
Preparing Page	Heating up >>>>>>>>	The machine is heating up.	
Standby Page	Ready to work TOPCAT	Finished heating up, ready to work.	

> 🙂 **The machine will heat up automatically when power on. If the temperature of the heater is lower than the set temperature, the LCD display will show "Heating up"; if it reaches the set temperature, it will show "Ready to work".**

	Display	Description	Parameter Range
Working Status Page	Interval 600s TOPCAT	Interval countdown of TIMER mode	
	Duration 300s TOPCAT	Duration countdown of TIMER mode	
	Fog output 100% TOPCAT	Output of VOLUME mode	1% ~ 100%
Setting Pages	Fog Output 100%	Press "▲" or "▼" to set fog output of VOLUME mode	1% ~ 100%

	Fan Speed 100%	Press **"▲"** or **"▼"** to set fan speed of VOLUME mode	1% ~ 100%
	Timer Interval 600s	Press **"▲"** or **"▼"** to set interval of TIMER mode	5 ~ 600s
	Timer Duration 300s	Press **"▲"** or **"▼"** to set duration of TIMER mode	5 ~ 300s
	DMX address 512	Press **"▲"** or **"▼"** to select DMX starting address	1-512
	RDM-UID 512D00000001	Machine RDM-UID	512D00000001- 512D000FFFF1
	Fluid Sensor on	Press **"▲"** or **"▼"** to turn on/off no-fluid protection function	On/off
	Auto Run Last Settings yes	Press **"▲"** or **"▼"** to set if the machine will automatically run previous setting when power on again	Yes/no
	Self-Clean & Shut down on	Press **"▲"** or **"▼"** to activate/deactivate Self-Clean mode	On/off
	Work mode Down mode	Press **"▲"** or **"▼"** to select Down mode/Up mode/Forward mode	Down mode Up mode Forward mode
	Pump Switch on	The unit comes with two pumps. In case this function ON, the pump switches to another every time when the unit is powered on Press "▲" or "▼" to select the status.	On/off
Status Pages	Self-Clean Initializing...	When the unit is out of DMX control for 15 seconds, or if holding "ENTER" button for 3 seconds, the unit will enter into Self-Clean mode. Press any buttons or input DMX signal to exit clean mode.	
	Self-Cleaning 180s	Self-Cleaning Press any buttons or input DMX signal to be exit Self-Clean mode.	4s-180s
	Shutting Down 3s	When cleaning is finished, the LCD display will blackout and the unit will enter into standby mode automatically.	1s-3s
Error & Warning Pages	Fog Fluid Low Refill	LCD display flickers to show fluid level is low.	
	Heating Failure Contact Service	Heating failed	
	Pressure Low	Gas pressure is low.	

5.3   DMX Mode & Operation

Machine CAT-2 works with a DMX controller.
- Connect the product to a suitable power outlet.
- Turn the product on.
- Connect a DMX cable from the DMX output of the DMX controller to the DMX input socket on the product.

When connected with DMX controller and receiving DMX signal, the LCD display will always show current DMX starting address which can be reset by pressing "▲"or "▼".

5.3.1   DMX Channel Assignments and Values

| Channel	Function	Value	Description
1	Fan Speed	0-10	No Function
		11-255	1-100% increase. No function when under the forward mode.
2	Fog Output	0-10	No Function
		11-255	1-100% increase
3	Work Mode	0-85	Down mode
		86-171	Up mode
		171-255	Forward mode
4	Forced pumping mode	0-5	Turn off/reset the forced pumping mode
		6-253	Hold, no operation
		254-255	Enable the forced pumping mode and it will be shut down after 10 seconds. If you need to enable the forced pumping mode again, please reset the forced pumping mode first.

5.4   RDM Function

"RDM-UID" is the only UID code for CAT-2. RDM allows two way communication between a controller and the unit. CAT-2 support 3 kinds of sensor information as below.

	Status	Value	Description
1	Heater Status	0	Heating
		1	Heating finished
2	Fluid Sensor	0	Enough fluid
		1	Low fluid
3	Pressure Sensor	0	Enough pressure
		1	Low pressure

5.5 Three working mode

Install a fan on the top and bottom, which can make the smoke blow up or down, which is convenient for hanging or ground use
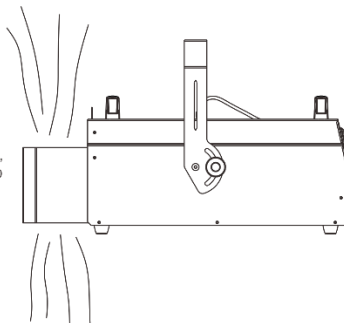
• Down mode

The fan beneath the nozzle is working in this mode, and its speed is can be adjusted through the LCD display or "DMX".

• Up mode

The fan above the nozzle is working in this mode, and its speed is can be adjusted through the LCD display or "DMX".

• Forward mode

Under this mode, both fans are defaulted OFF. Fans' speed can not be adjusted through the LCD display or "DMX".

• Self-Clean mode

When the unit is out of DMX control for 15 seconds, or if holding "ENTER" button for 3 seconds, the unit will enter into Self-Clean mode. The display will show a countdown as you hold the enter button. Then, after it counts down from 3 to 0, the auto clean mode is engaged. It should take 180 seconds for cleaning. Then, the unit will go into standby mode. The display will go black until the user presses an buttons or connects DMX control. Then, the unit will wake up again. Under clean mode, Press any buttons or input DMX signal can exit clean mode.

```
Self-Clean
ON
```

5.6 Auto Run Last Settings

If the machine is shut off while it is operating at standalone mode (On-device manual control), the "Auto Run Last Setting" will allow the machine to recover its previous same operating status when the unit is powered on again without pressing any button.

☺ • **Shut off: Get disconnected from power supply or turn off the power switch**
• Power on: Get connected with power supply or turn on the power switch

5.7 Fluid Sensor

This machine uses software-based fluid sensor to detect whether there is fluid inside tube so as to protect the pump from being damaged. Turn on the "Fluid Sensor" to activate "No Fluid Protection" function.

```
Fluid Sensor
ON
```

5.8 Trigger "No-Fluid Protection"

When the Fluid Sensor is ON, the software-based "no-fluid protection" function will be activated. After the program continues to detect the machine working with no fluid inside the tube for 60 s, the pump-shutoff will be activated with the flickering warning page showing on the screen.

5.9 Clear "No-Fluid Protection" Warning

When the machine is under the no-fluid protection, after refilling the fluid, there are three ways to clear the warning.
• Press<ENTER> first, then press<VOLUME> to let the machine run again, the warning will disappear until the fluid is pumped and fill the tube.

- Under the DMX control mode, slide down channel 1 to OFF (value 0-10), then back to ON (value 11-255), to let the machine run again. The warning will disappear until the fluid is pumped and fill the tube.
- Turn off "Fluid Sensor" in the menu.

6   TECHNICAL INFORMATION

6.1   Maintenance

1、   Please use DJPOWER PRO Neutral Fluid only.

2、   Any reference to servicing in this User Manual will only apply to properly trained, certified technicians. Do not open the housing or attempt any repairs which can lead to damage or malfunction.

3、   Excessive dust, fluid residue and dirt will degrade performance and cause overheating. Remove dust from air vents with air compressor, vacuum or soft brush. The casing could be cleaned by the damp cloth.

ⓘ   **Test-run your DJPOWER® CAT-2 on a monthly basis to achieve the best performance.**

6.2   Storage

6.2.1   Machine Storage

Before storing the machine, clean it and empty the fluid tank.

6.3   Troubleshooting

Errors	Symptom	Potential Cause	Solution
No fluid	Refer to "MENU MAP" chapter to for more information	No fluid in the tank	Refill the fluid
		Pump problem	Contact dealer for Service
Heating failure	Refer to "MENU MAP" chapter to for more information	Heater problem	Contact dealer for Service
Low pressure	Refer to "INSTALLATION" chapter to for more information	Low pressure	Check the gas cylinder: if the hose is in correct connection; if there is enough gas in the cylinder