

LOW FOG MACHINE

SF-AQ3000

USER MANUAL



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DISCLAIMER

Read this user manual carefully before installing and using this product. Failure to read or comply with this manual may result in damage to the product or personal injury, and our company assumes no responsibility for such incidents.

The information and specifications contained in this manual are subject to change without prior notice. Our company reserves the right to modify or revise this manual at any time.

PREFACE



WARNING

This means that you need to operate safely.

NOTICE

This means that you need to be careful.

1 PRODUCT INTRODUCTION

The SF-AQ3000 LOW FOG MACHINE is a special effect device that uses ultrasonic atomization to mix water mist and smoke, allowing the smoke to diffuse along the ground. It does not require dry ice, and its main consumables are pure water and a small amount of PRO MEDIUM DISSIPATING FOG FLUID, featuring low operating costs and causing no pollution or harm to the environment or human body.

The main chassis is integrally molded from high-strength composite materials, which is lighter, more durable, and rust-free. The machine comes with a backup water tank that automatically replenishes water to the atomization chamber, enabling long-term continuous operation without frequent refilling. It is also equipped with quick water pipe connectors for direct connection to tap water pipes to ensure uninterrupted water supply during extended use.

The product has 2 smoke outlets, takes up little space, delivers higher smoke output, and offers powerful performance. The system adopts a Chinese-English bilingual display, and the machine settings are simple and easy to operate. One-click switching between timed working mode and continuous working mode is supported. The automatic water replenishment control system ensures stable and continuous output. Real-time water level and oil level detection will promptly remind users to refill water and oil during long-term operation. This product is widely used in weddings, concerts, large bars, large-scale performances, events, conferences and other occasions.

1.1 FUNCTIONAL FEATURES

★ The entire chassis is integrally molded from composite plastic material, rust-proof, corrosion-resistant and durable. The unique integrated flight case chassis + pulley design makes it easy to move and transport.

★ Fully rainproof design, suitable for various outdoor weather conditions.

★ A convenient drain valve is installed on the water tank for easier drainage and prevents water leakage during transportation.

★ Equipped with water shortage and oil shortage protection systems: the machine stops spraying when water or oil is insufficient, ensuring safe operation.

★ Upgraded deflector tube material: lighter, more durable, and takes up less space.

★ Multiple operation control modes: built-in timer control, manual spray control, DMX spray control, remote control, etc.

★ Intuitive LCD display and function button panel: real-time display of machine status, working status and alarm information for clear visibility.

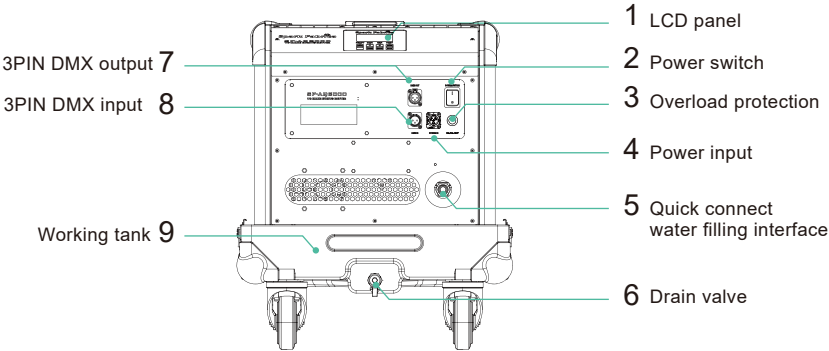
1.2 ACCESSORIES

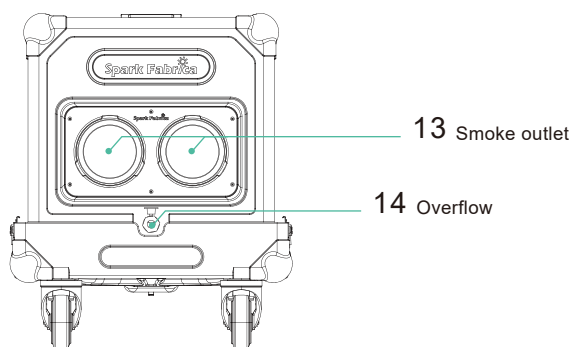
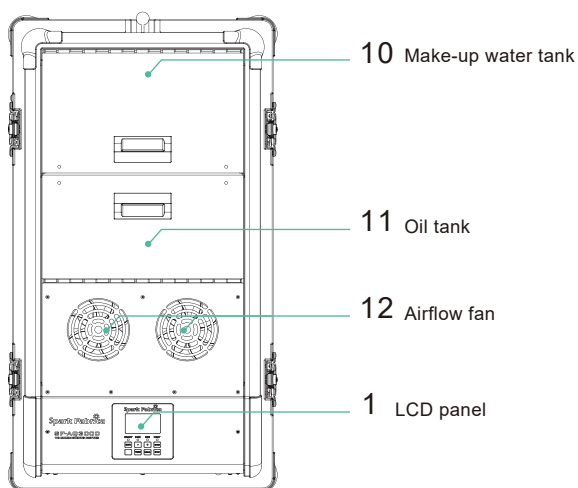
Tube*2
Remote Controller *1(optional)
Power cord *1
DMX cable*1
User Manual* 1

NOTICE

Unpack the package carefully and check to confirm all items are intact.

2 PRODUCT PARAMETERS





3 TECHNICAL PARAMETER

Identification	Manufacturer	Spark Fabrica
	Product Name	Low Fog Machine
	IModel	SF-AQ3000
Current & Power	Input Voltage & Frequency	AC 100V ~ 120V, 60Hz
		AC 220V ~ 240V, 50Hz
	Circuit Breaker Specification	20A, 250V
	Rated Power	3300W
Technical Parameters	Heating Time	2~3 minutes
	Max Smoke Output	Approx. 20,000 cu.ft/min
	Max Oil Consumption	Approx. 30min/L
	Max Coverage Area	Approx. 400 m ²
	Oil Tank Capacity	4L
	Water Tank Capacity	37L
	Backup Water Tank Capacity	14L
	Maximum Continuous Operation	Approx. 100 min
Control	On-board Control	LCD panel buttons
	Wired Control	DMX
	DMX Interface	3-pin or 5-pin XLR
	Wireless Control	Supported
	DMX Channel Quantity	2
	DMX Protocol	DMX-512
Weight	Net Weight	42 Kg
	Gross Weight (with flight case)	62 kg
Dimensions	Machine Size	910mm*510mm*610mm
	Packaging Size	910mm*510mm*850mm
Ultrasonic Atomization	Total Power	1500W
	Quantity	4 PCS
	Output Adjustable	Supported
	Adjustment Range	0-100%
Consumables	PRO MEDIUM DISSIPATING FOG FLUID	SF-BM

4 OPERATING THE MACHINE

NOTICE

Keep the machine dry. It can be used indoors and outdoors. When not in use, unplug the power cord and turn off the machine.

NOTICE

Before connecting to power, carefully verify that the power voltage matches the machine's rated voltage, and use a grounded socket.

NOTICE

The machine requires sufficient PRO MEDIUM DISSIPATING FOG FLUID to operate normally. When adding purified water, do not exceed the maximum water fill line. If the water level is insufficient, the machine will automatically stop working.

NOTICE

When the machine is not in use for an extended period, it is recommended to immediately empty the purified water from the water tank and the fog fluid from the fluid tank. Drain the purified water via the drain valve, and recover and store the fog fluid from the fluid tank.

NOTICE

There are no user-serviceable parts inside the machine. Do not disassemble or make any modifications; otherwise, permanent damage may occur.

NOTICE

The machine is for adult use only. Install it in a place out of reach of children, and keep it away from fire sources and flammable/explosive materials.

NOTICE

Place the machine in a well-ventilated area. Leave at least 50 cm of space around the machine. Do not use the machine in high-temperature environments.

NOTICE

Do not put any flammable liquids (such as oil, gas, perfume, etc.) into the fluid tank.

NOTICE

Be sure to use PRO MEDIUM DISSIPATING FOG FLUID; otherwise, the machine may clog!

NOTICE

Fog fluid is not drinkable. If accidentally ingested and any discomfort occurs, seek medical attention immediately. If it comes into contact with eyes, rinse with clean water.

NOTICE

If the machine operates abnormally, stop using it immediately and disconnect the power supply. Check the fog fluid level, water tank level, fuse, cables, and power plug. If the problem cannot be resolved, contact the distributor.

5 OPERATION

5.1 PREPARATION

1. The bottom wheels facilitate movement. The diagonal wheels are equipped with locks. After placing the machine at the designated position, press down the locks to fix the machine and prevent sliding. To move the machine, press the locks in the opposite direction to release them.

Note: Do not fix the machine on a slope due to its large size.

2. Pour PRO MEDIUM DISSIPATING FOG FLUID into the oil drum on the machine and tighten the oil drum cover.

3. Connect the tap water pipe, inject pure tap water into the backup water tank on the upper part of the machine until the water level in the atomization chamber at the bottom of the machine reaches the rated level.

4. Connect the deflector tube to the machine. The length of the deflector tube is 2.5 meters, and can be adjusted according to the space size.

5. Connect one end of the power cord to the machine (make sure the power switch is in the OFF position). Align the plug (male connector) with the female connector on the machine, insert it and rotate clockwise about 10 degrees to fully fix the power cord.

6. Turn on the machine power, the machine starts preheating. When the heating temperature reaches the set value, the machine enters standby mode, and you can start normal operation.

5.2 SCREEN SETTING AND OPERATION

Different parameter setting pages correspond to different parameters. Press the MENU key to switch between setting pages, and press the STOP key to exit the parameter setting mode. In parameter setting mode, press the "+" key to increase the value, press the "-" key to decrease the value, and press the "ENTER" key to save the modified parameters.



MENU: Menu key

-: Value decrease key

+: Value increase key

ENTER: Parameter save key

TIMER: Timed working mode start key:

MANUAL: Continuous working mode start key

STOP: Timed/continuous working mode stop key / Parameter setting mode exit key

5.3 OPERATING MODES

5.31 LOCK MODE

SETTINGS	RANGE	DEFAULT
Volume out (Spray concentration setting (%))	0-100	100
Fan speed(Fan power setting (%))	0-100	100

5.32 TIMING MODE

SETTINGS	RANGE	DEFAULT
Interval (seconds)	0-999	200
Duration (seconds)	0-999	200
Timer out (smoke output %)	0-100	100

5.33 PARAMETER SETTING

Enter the parameter setting interface (Parameter Set) by pressing the MENU key. Each press of the MENU key switches to the next setting parameter. There are 9 options in total:

SETTINGS	RANGE	DEFAULT
Duration (S)	0-999	200
Interval (S)	0-999	200
Timer out (%)	0-100	100
Volume out (Smoke Density Setting (%))	0-100	100
Fan speed (Fan Speed Setting (%))	0-100	100
DMX512 addr (DMX512 Address)	1-512	1
Wireless (Wireless Settings)	ON/OFF	ON
Fluid sensor (Low Fluid Protection)	ON/OFF	ON
Language (Language)	中文 /English	中文

NOTICE

When modifying parameter values, you can press the MANUAL key to switch the digit to be modified (ones place, tens place, hundreds place). S1 (ones place), S2 (tens place) and S3 (hundreds place) are displayed in the upper right corner of the screen. Switching the modification position allows quick adjustment of parameters.

5.34 SYSTEM INFO

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It Is Normal
Temp:262°C
Ch1 Fan Ch2 Vol

Displays the device's current status and DMX channel control information, among other things.

5.35 DMX PARAMETERS

Channel	Function	Value Range	Description
CH1	Fan power adjustment	0-10	Off
		11-255	20%~100%
CH2	Water fog volume adjustment	0-10	Off
		11-255	50% ~100%

6 RESET THE OVERLOAD PROTECTOR

This machine is equipped with a resettable overload protector. If the overload protector trips, the machine will disconnect from the power supply. Disconnect the machine from the power supply, wait for the machine to cool down for 15 minutes, then manually press the button of the overload protector to reset it. Reconnect the machine to the power socket and continue to use it as recommended.



Overload protection

7 DMX CONTROL

After the machine is connected to the DMX signal, it can only be controlled via the DMX console, and the DMX signal indicator will flash. The machine uses 2 DMX control channels. The output value of each channel ranges from 0 to 255: Channel 1 is used for fan speed control, and Channel 2 is used for smoke volume control.

7.1 BUILT-IN DMX CONTROL DESCRIPTION

The LOW FOG MACHINE has built-in DMX-512 protocol function and is equipped with 3-pin XLR male and female connectors. When in use, connect the DMX console to the 3-pin connector on the machine via a DMX cable.

After connecting to the DMX console, the spray interval, smoke volume and other parameters are all controlled by the DMX console, and are no longer controlled by the LCD panel buttons on the machine. You can easily connect the fog machine, lights and other special effect machines through the same DMX512 system to coordinate the whole performance.

8 Remote Control

**A**

Key: Function

B

A: Continuous working mode start key

C

B: Timed working mode start key

D

D: Stop key

C + D (long press): Enter remote address pairing mode in wireless switch setting interface

9 FAULT WARNING INFORMATION

Spark Fabrica

Heating Fault
Temp:262℃

ERR red indicator flashes——Heating fault

The heater fails to transfer temperature to the smoke oil effectively, resulting in poor atomization:
The machine continues to work

Spark Fabrica

Water Lower
Temp:262℃

ERR red indicator flashes——Insufficient water in water tank

No water in the tank or water level is too low:
The machine stops sprayin

Spark Fabrica

Oil Lower
Temp:262℃

ERR red indicator flashes——Insufficient oil in oil tank

No oil in the oil tank:
The oil pump stops working, but the ultrasonic atomizer continues to work

10 OTHER IMPORTANT PRECAUTIONS

NOTICE

Water Tank No. 10 is a reserve storage tank for purified water. Do not add any other liquids.

NOTICE

Water Tank No. 9 is the working tank. Do not add any other liquids. You do not need to open the flight case to check Tank No. 9; purified water will automatically be refilled from Tank No. 10 into Tank No. 9.

NOTICE

Oil Tank No. 11 contains melt oil cotton. When using the machine, be sure to fill it with original high-quality professional melt oil.

NOTICE

Turn off the power only after the machine has stopped producing fog; otherwise, the internal atomizing pipes may easily become clogged.

NOTICE

There is a black square metal panel on the left side of the machine, which serves as a cooling vent. Do not block it, and clean it regularly to keep it clean.

NOTICE

If the fog output is too low, the machine makes an abnormal noise, or it fails to spray fog smoothly, turn off the power immediately. Check if there is sufficient fog fluid, check if the water tank has water, and check the controller connection. If all the above are fine, restart the power. If the machine still does not operate properly and you cannot identify the cause, do not continue to run the machine to avoid damage. Immediately turn it off to cool down, and contact the distributor or designated service center for inspection. Do not disassemble the machine yourself.

NOTICE

The characteristic of the SF-AQ3000 is that the fog output clings to the ground and spreads. After prolonged use, the ground may become slippery due to moisture. Pay attention to the floor material and take special care for the safety of people walking or performing on it.

NOTICE

The SF-AQ3000 is an environmentally friendly and safe low-smoke special effect machine that does not use dry ice. However, the output smoke is easily dispersed by wind. Please pay attention to the influence of fans or air conditioners on the effect during use.

11 MAINTENANCE

NOTICE

Please clean your LOW FOG MACHINE regularly. This will effectively help reduce the frequency of part replacement or repair costs. For the water tank, replace the purified water in a timely manner and regularly clean the inner walls of the tank, especially the surface of the ultrasonic atomizer, to prevent residual impurities from affecting the atomization effect.

NOTICE

Do not contaminate the smoke oil. Always cover the cap of the oil drum and the oil tank cover on the machine.

NOTICE

Before storing the machine when not in use, clean the machine, empty the oil drum, remove the deflector tube and power cord for storage. Store the whole machine and accessories in the accessory slot at the front of the machine. Run the machine for warm-up once a month to prevent moisture damage.

NOTICE

Place the machine in a cool and dry place..

12 TROUBLESHOOTING

OIL SPRAYING FAULT

Description	The heater fails to transfer temperature to the smoke oil in time, resulting in poor atomization of the smoke oil in the heating aluminum pipe and oil spraying.
Cause	Cause 1: Use of low-quality or counterfeit smoke oil. Low-quality oil contains more impurities, which easily adhere to the inner wall of the pipe, block heat transfer, and lead to incomplete atomization and oil spraying.
	Cause 2: Use of incorrect smoke oil. Different types of smoke oil require different atomization temperatures. Using unsuitable oil will result in incomplete atomization and oil spraying.

HEATING ALUMINUM PIPE BLOCKAGE FAULT

Description	Poor atomization and oil spraying are early symptoms of heating aluminum pipe blockage. Using low-quality smoke oil or failing to maintain the LOW FOG MACHINE for a long time will inevitably lead to severe pipe blockage.
Cause	Pipe blockage is caused by using low-quality smoke oil or long-term lack of maintenance, and has nothing to do with the machine quality. This is similar to how using poor-quality gasoline causes fuel line problems in cars, or how long-term lack of car maintenance leads to more serious faults.

INSUFFICIENT SMOKE CONCENTRATION

Description	Poor atomization performance of the ultrasonic atomizer.
Cause	Cause: Ultrasonic atomizer damage, dirt on the atomizing disc, or dirty water in the machine water tank contaminates the atomizing disc.

NOTICE

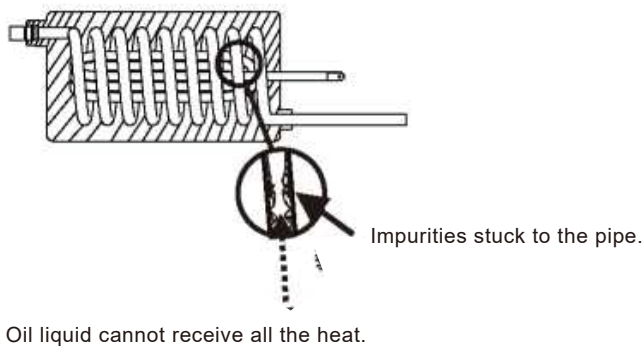
Precipitates are easily generated on the inner wall of the heating pipe after long-term use of the smoke machine (the more inferior the smoke oil, the more impurities, leading to oil spraying or blockage). All smoke machines require regular maintenance (maintenance cycle: once every 1-2 months). The specific maintenance method is: Heat a mixture of 35% white vinegar and 65% distilled water, then spray it through the machine 10–15 times to clean the heating pipe.

NOTICE

Oil spraying or pipe blockage after a period of use is caused by poor smoke oil quality or lack of maintenance, and has nothing to do with the machine quality. Please use genuine high-quality smoke oil and maintain the machine in time..

FIGURE 1

Impurities have adhere to the pipe, causing poor heat transfer and resulting in oil spraying.



WARRANTY CARD

Product Name:		Serial No:	
Purchase Date:			
Tel:			
Address:			
Info.Feedback About The Problem:			
Actual Problem:			
Maintenance Detail:			
Service Engineer:		Service Date:	



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