

TECHNO-FOG

JEM

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USER MANUAL

Version 1.0

**FOR OPTIMUM PERFORMANCE AND SAFETY
PLEASE READ THIS MANUAL THOROUGHLY**

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INTRODUCTION

The TECHNO-FOG is a compact and efficient fog generator for semi-professional use. It utilises a water-based fluid with an aluminium and copper heat exchanger to create a white fog for entertainment and theatrical use. Quality materials and innovative design combine to give ease of use and long service life.

FEATURES:

- 1 litre fluid container
- Remote control with timer and output controls
- 5 metre remote cable
- 750 W heating element
- Copper and aluminium heat exchanger
- 'Pump Ramping' feature to maximise run time
- Compact, only 170 x 422 x 160 mm
- Light weight, only 5 kg
- Power ON/OFF switch
- IEC power inlet
- Efficient insulation
- Fail-safe over-temperature cut-out (manual reset)

SAFETY

- Read this manual thoroughly before operating the machine.
- Never install fog machines over people's heads.
- Do not restrict the ventilation on the machine.
- Operating the machine in areas with poor ventilation may lead to condensation forming on surfaces and floors - THIS CAN BE DANGEROUS.
- Do not point the machine into people's faces when making fog.
- Never remove the cover without first disconnecting the machine from the power supply.
- Keep the output of the machine at least 60 cm (2 feet) away from people and surfaces.
- The output nozzle at the front of the machine is very hot and must not be touched.
- Observe the warnings printed on the machine.
- Do not use the machine if it is in poor or unsafe condition, e.g., if the supply cord is damaged.
- Always use genuine JEM fluid in the machine, other fluids may be dangerous.
- Refer all service to qualified service personnel.

INSTALLING THE FLUID BOTTLE

Always disconnect the machine from the power supply when working with the fluid system.

1. Fit the bottle of JEM fluid into the fluid compartment and fit the cap with fluid pipe.
2. Do not attempt to fill the bottle whilst in the machine.
3. If the machine has not been used recently it may be necessary to operate the pump for 10 - 15 seconds to prime the pump. Do this by setting the fog level on the remote to maximum and pressing the fog button when the machine is at operating temperature.

Avoid running the pump for long periods without fluid, as this can cause damage to the seals.

CONNECTING TO THE POWER SUPPLY

Check the rating plate on the machine to see that the rated voltage and frequency match the local supply.

This machine must be earthed!

The wires in the standard cord are coloured as follows:-

Green/Yellow	Earth connection
Blue	Neutral connection
Brown	Live (phase) connection

1. Fit the cord to the IEC connector on the machine and the power supply connector.
2. Before switching the machine on, set controls on the remote to the off positions. See the section on the remote control for instructions. The remote must be connected for the machine to start heating.
3. Set the power switch to '1' and the *Heating* LED on the remote will light up. The machine will take approximately 10 minutes to reach operating temperature, at which point the *Ready* LED will light up.
4. The machine will now make fog when operated from the remote.

OPERATING THE REMOTE



Timer Control and LED

The timer is switched on by rotating the *Timer* control clockwise until the green *Timer* LED is on. At this point the repetition rate of the timed pulse is minimum. Rotating the control clockwise causes the repetition rate to increase. The duration of the pulse is fixed, only the frequency can be changed. When combined with the output level control this provides a simple way to maintain a constant level of fog.

Fog Switch

Press the fog switch at any time (the *Ready* LED must be on) to get fog output at the level currently set with the level control.

Ready LED (Green)

When the machine is up to operating temperature and capable of producing fog, the *Ready* LED is on.

Heat LED (Red)

The *Heat* LED is on when power is being supplied to the heat exchanger. When the maximum operating temperature is reached the LED is off.

Output Level Control

The output level is rotated clockwise to increase the fog output level. Remember that the machine has 'Pump Ramping' so that the output level will automatically reduce as the heat exchanger cools, thus allowing longer run times.

MAINTENANCE

The TECHNO-FOG is designed and constructed to give a long and trouble-free service life.

However, like all equipment, it will benefit from regular simple maintenance.

Keep the following points in mind:

- If fluid is spilt onto the casework of the machine it should be cleaned with a damp cloth (disconnect the power supply before doing this).
- Do not use solvents to clean the casework of the machine as this may remove the silk screen printing.
- Only use JEM fluid in the machine. Other fluids may cause damage to the heat exchanger and other components.
- Keep the cables in good condition.

TROUBLESHOOTING GUIDE

All checks marked * must be carried out with the power supply disconnected from the machine.

The inside of the machine contains parts at high temperature, always allow the machine to cool before removing the cover.

Symptom	Probable Cause	Remedy
No LEDs come on when power is applied to the machine	• Remote control not connected	Connect remote to the DIN socket on the top of the machine
	• Main power switch is off	Switch on
	• Main internal fuse open circuit	*Remove the cover and locate the fuse on the PCB. Replace the fuse with one of correct rating. (See Tech. Spec)
	• Temperature sensor open circuit	*Make a continuity check on the sensor
The machine never reaches operating temperature (ready LED never comes on)	• An electronic or other failure has occurred in the heating system	Refer the problem to a service agent
	• The remote control or its connections are faulty	Replace the remote control
No smoke is produced when the Fog button is pressed	• No fluid in the bottle	Replace the bottle
	• The pump system is not primed with fluid	Set the output level control to maximum and hold down the Fog button for 15 seconds
	• The output control is not set high enough	Increase the output level setting
	• An electronic failure has occurred	Refer the problem to a service agent

Never replace the internal fuse with one of a higher rating. If the fuse blows when replaced, it means that there is a serious problem with the machine that should be referred to a service agent.

Never operate the machine with the safety over-temperature trip disabled. If the trip operates it means that the electronic control system has malfunctioned.

TECHNICAL SPECIFICATION

Heat Exchanger

- Input power UK/Europe 750W @ 240V, 50Hz
USA 750W @ 120V, 60Hz
- Construction Copper vaporising coil in cast aluminium with integral heater
- Operating temperature 300° C maximum
- Over-temperature protection Direct contact thermal cut-out with manual reset

Fuse

- 240V (UK/Europe) 5 A time-delay (T) 5 mm x 20 mm
- 120V (USA) 10 A time-delay (T) 5 mm x 20 mm

Pump

- Input power UK/Europe 40W @ 240V, 50Hz
USA 40W @ 120V, 60Hz
- Type High pressure piston pump

Control System

- Type Electronic
- Temperature sensor Thermocouple

Operating Environment

- Ambient temperature range 0° to +40° C
- Relative humidity 70% maximum

Dimensions

- Height x Length x Width 170 mm (220 mm with bottle) x 422 mm x 160 mm
- Weight 5 kg (6 kg with 1 litre fluid bottle)