

Magnum 2000

user manual



Martin[®]
by HARMAN

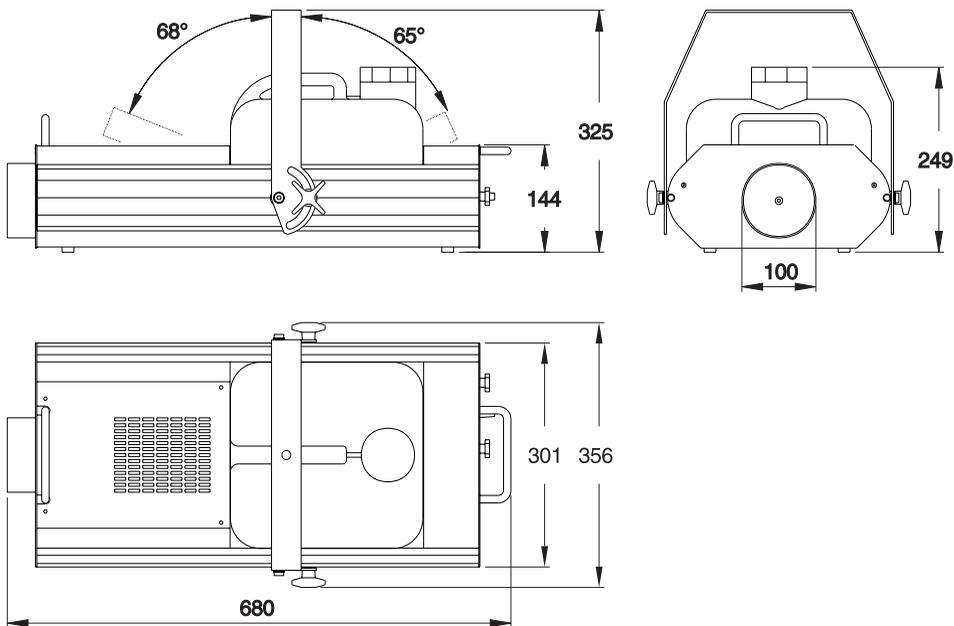


Figure 1: Dimensions in mm

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INTRODUCTION

FEATURES

The Magnum 2000 is a high performance micro-controller based smoke machine that features:

- Specially designed heating element for long life and reliability
- High pressure pump
- Variable smoke output
- Remote control unit with auto-timer and memory function
- 0-10 V control input
- Slave output for control of multiple units from a single remote control
- 9.5 liter (2.5 gallon) internal tank
- Electronic and mechanical overheating protection with manual reset
- Mounting bracket and carrying handles
- Non-toxic fog-fluid

SAFETY

This product is for professional use only. It is not for household use. For safe usage, read this manual before powering or installing the device, follow the safety precautions listed below and observe all warnings in this manual and printed on the device. If you have questions about how to operate the device safely, please contact your Martin dealer or call the Martin 24-hour service hotline at +45 70 200 201.

- Keep the output nozzle at least 60 cm (24 inches) away from people and objects.
- Never point the output at people's heads or place your hand over the nozzle.
- Disconnect the device from AC power before refilling the fluid tank or servicing.
- Use specified fog fluid only.
- Always ground (earth) the device electrically. Use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault protection.
- Do not expose the device to rain.
- Never operate the smoke machine if it is damaged or if parts are missing.
- Never attempt to bypass the thermostatic switch or fuses. Always replace defective fuses with ones of the specified type and rating.
- Allow the device to cool before handling.
- Refer all service not described in this manual to a qualified technician.
- Do not install the smoke machine directly over people.
- When suspending the device above ground level, verify that the structure can hold at least 10 times the weight of all installed devices. Use an approved means of secondary attachment such as a safety cable.
- Block access below the work area whenever installing or removing the device.

SET UP

Your Magnum 2000 package comes complete with the following items:

- Magnum 2000 smoke machine with remote control unit
- 5 meter (16.5 ft) XLR/XLR cable for remote control
- Adaptor-cap with fluid filter for fluid tank
- Users guide

Warning! *Before attempting any of the following ensure that the machine is disconnected from mains power.*

FITTING THE MAINS PLUG

Warning! *For protection from fire and electric shock, the fixture must be grounded (earthed).*

The Magnum 2000 is delivered from the factory without a plug on the mains lead. You will have to fit a suitable plug (one that fits your local wall outlet) before you can connect the machine to the mains. The double isolated mains lead on the Magnum 2000 contains three wires. Connect the brown wire to the LIVE pin, the blue wire to the NEUTRAL pin, and the Yellow/Green wire to the EARTH pin (ground).

INSTALLATION

The Magnum 2000 may be placed on a flat surface or suspended by means of a rigging clamp (not included) fastened through the 13 mm (0.5 inch) hole in the mounting bracket. The adjustable bracket allows you to turn and/or tilt the machine.

Warning! *DO NOT install directly above or within 60cm (24 inches) of people.*

Warning! *Use a safety cable for secondary attachment.*

FOG FLUID

Martin fog fluid comes in disposable containers that fit the smoke machine.

Important! Use Martin or Jem “Pro-Smoke” fog fluid only. Other fluids may clog the heating element or spit from the nozzle.

To install the fluid tank

- 1 Place the fluid tank in the Magnum 2000 as shown on page 2.
- 2 Remove the container cap and screw on the tank adaptor cap. Verify that the tube (with fluid filter) reaches the bottom of the tank.
- 3 Connect the fluid tube to the fluid outlet of the tank adaptor cap.

OPERATION

For optimum performance from your Magnum 2000:

- Keep the machine and the remote control unit away from damp rooms or wet conditions.
- Never operate the machine without fluid in the tank, as this may harm the pump system.
- Use clean fluid to avoid clogging of the heating element and damage to the pump.
- Use Martin fog fluid. This fluid is non- toxic, water-based and specially designed for Martin smoke machines. Jem “Pro-Smoke” fluids may be substituted.

(REMOTE) CONTROL UNIT

The control unit is secured to the back panel by two thumbscrews. It may be removed for remote control and placed in a rack or on a table.

To remove the control unit

- 1 Unscrew the thumbscrews on either side of the control unit and pull it out of the control unit well.**
- 2 Use the included cable to connect either one of the 3-pin outputs on the control unit to the 3-pin input inside the control unit well.**

Either of the control unit's outputs may be used, but not both. To connect additional machines, use the “Slave output” on the rear panel of the smoke machine.

POWER

To enable the heater circuit, simply turn the knob on the control unit clockwise until the POWER LED lights.

STATUS

The three LEDs on the rear panel of the smoke machine indicate the machines status.

POWER (red): There is power to the heater.

HEAT (red): The machine is heating. The LED flashes rapidly and then more slowly as the heating cycle nears the end. It turns off when the heating element has reached maximum temperature. The heating cycle for a cold machine takes 8 to 10 minutes.

READY (green): Ready to produce smoke. The HEAT and READY LEDs can be on simultaneously as smoke production is possible when the machine is heating.

MANUAL OPERATION

As soon as the green READY LED turns on, you can make smoke by pressing the Smoke button on the control unit. The output level can be adjusted using the Smoke output knob.

Though the fluid pump stops when you release the Smoke button, smoke emission will continue for another few seconds because the fluid in the heating element is under pressure.

AUTO-TIMER

The auto-timer allows you to program output duration and level at repeatable intervals. The maximum programmable interval (output duration + pause) is approximately 1 hour.

The auto-timer sequence is stored in the smoke machine's memory and is not cleared when disconnecting the machine from mains power. When switched on, the machine will execute the auto-timer sequence as soon the machine is ready. Adjusting the smoke output potentiometer does not override the stored auto-timer level. You can still produce smoke manually and, if this level is higher than the stored level, it will take precedence.

To set the auto-timer

- 1 **Adjust the Smoke output knob to the desired level.**
- 2 **Press the smoke button for the desired output duration.**
- 3 **Wait for the desired pause time and then press the timer store button.**

- 4 To terminate the auto-timer sequence, press the timer store button for 5 seconds. This clears the memory.**

For example, to program 15 seconds of smoke every 2 minutes, press the smoke button for 15 seconds, wait 1 minute and 45 seconds, and then press timer store.

0-10 V OPERATION

Operation via a 0-10 volt signal is similar to operation via the remote control unit. Unplug the remote control unit and connect your analog source to the XLR control input inside the control unit well. Verify that GND (ground) on your analog source connects to pin 1 on the XLR control input and that the +0-10V output connects to pin 3.

The analog control levels are shown below.

Voltage	Function
0 - 1.0 V	Standby
1.0 - 2.5 V	Heater power on
2.5 - 9.5 V	Smoke emission, increases with voltage
9.5 - 10.0 V	Timer store

MULTIPLE MACHINES

Whether you operate your Magnum 2000 via the control unit or a 0-10 volt source, you can command additional machines through the XLR “slave output” on the back panel. Connect the slave output on the first machine to the control input (located inside the control unit well) of the next machine. Continue by similarly connecting as many machines as desired output to input.

All machines connected in this manner will produce smoke at the same time and output level as the first machine.

TROUBLESHOOTING

No light in the POWER LED on rear panel.	Check the mains plug. Check the fuse.
No light in the POWER LED on the control unit.	Is the remote control unit properly connected? Check XLR/XLR cable.
Pressing the smoke button activates the pump but no smoke is produced.	Check that the fluid filter reaches the bottom of the tank. Check that the fluid tube is connected to the inlet on the machine.
The machine indicates heating but the READY LED never lights.	Reset the thermo-switch as described below. If the problem persists then consult your Martin dealer.

In case of other failures, contact a Martin service technician.

FUSE

230 V model: Use a 10A slow-blow fuse.

115 V model: Use a 15A slow-blow fuse.

To replace the fuse

Warning! *Before attempting any of the following ensure that the machine is disconnected from mains power.*

- 1 Remove the fluid tank from the machine.
- 2 Remove the Philips screws that secure top-cover at the back of the machine.
- 3 Slide the cover forwards until the circuit board (PCB) is accessible.
- 4 Locate on the left hand-side of the PCB fuse "F1".
- 5 Replace the fuse with a new one (T 10 A at 230 V, T 15 A at 115 V).
- 6 Re-assemble the device before connecting to the mains.

THERMO-SWITCH

The Magnum 2000 has an over-heat switch (thermo-switch) that interrupts power to the heating element should it reach a temperature above normal.

The thermo-switch must be reset manually after it has been activated. This reset is performed by pressing the plastic button on top of the switch.

If the thermo-switch activates repeatedly, contact your Martin dealer for service.

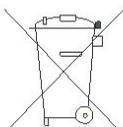
To reset the thermo-switch

Warning! *Before attempting any of the following ensure that the machine is disconnected from mains power and cooled down.*

- 1 Remove the fluid tank from the machine.
- 2 Remove the two Philips screws that secure the top cover over the heating element.
- 3 Slide the cover backwards until the thermo-switch becomes accessible. The thermo-switch is located on the mid, left hand side of the heating element with two wires attached.
- 4 Press the plastic button on the thermo-switch to reset it.
- 5 Reassemble the machine before connecting to the mains.

SPECIFICATIONS

Dimensions:	See figure 1
Weight (empty tank):	13 Kg (28.5 lb)
AC-voltage - 230 V model:	200 - 260 V
AC-voltage - 115 V model:	100 - 130 V
AC-frequency:	50 / 60 Hz
Power consumption:	1700 W
Maximum fluid consumption:	0.2 l/min
Tank capacity:	9.5 l (2.5 gall)
Warm-up time:	8 - 10 min
Fuse:	10 AT at 200 - 260 V 15 AT at 100 - 130 V
Overheat protection:	Electronic / Mechanical (with manual reset)



Disposing of this product

Martin™ products are supplied in compliance with Directive 2002/96/EC of the European Parliament and of the Council of the European Union on WEEE (Waste Electrical and Electronic Equipment), as amended by Directive 2003/108/EC, where applicable.

Help preserve the environment! Ensure that this product is recycled at the end of its life. Your supplier can give details of local arrangements for the disposal of Martin products.