

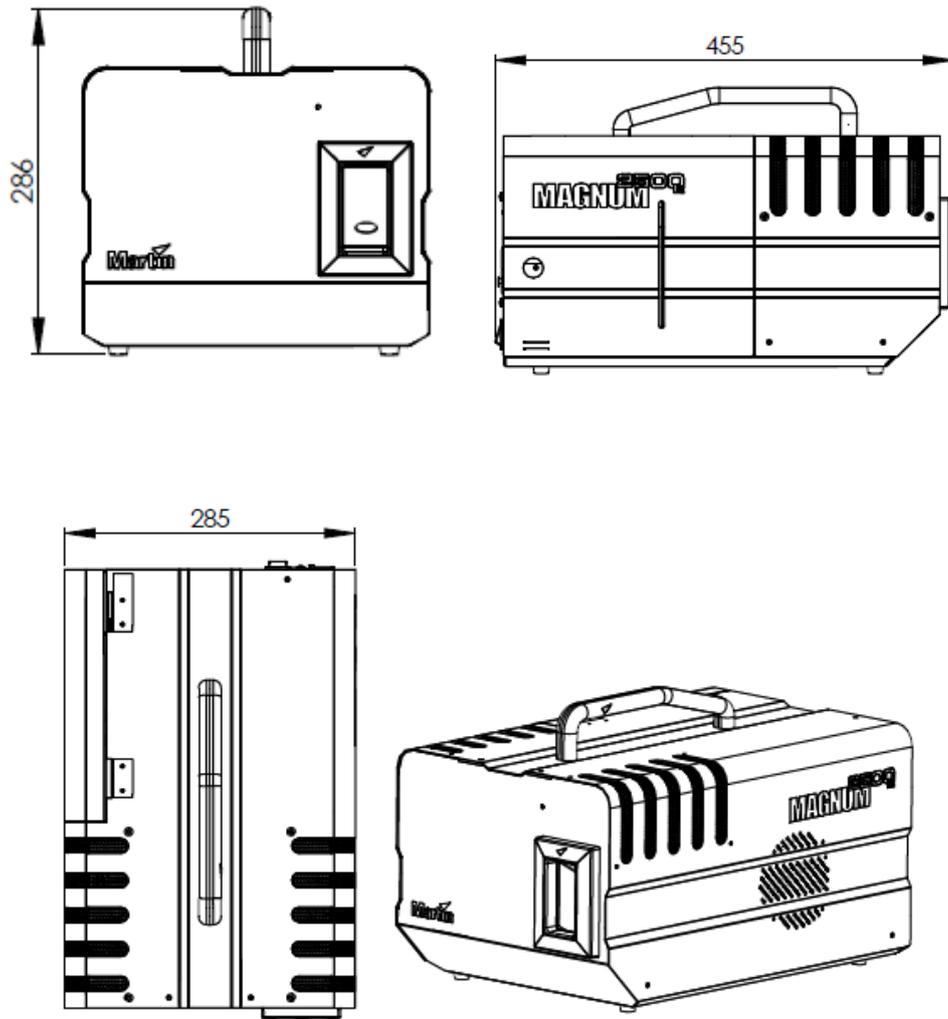
READ AND SAVE THESE INSTRUCTIONS

# Magnum 2500Hz user manual



# Dimensions/Legal

All dimensions are in millimeters



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Document Revision - G

# Contents

Dimensions/Legal .....	2
Contents .....	3
Safety information.....	4
Product overview .....	7
Product description .....	7
Features at a glance .....	7
Product details .....	8
Quick Start .....	9
Setting up .....	9
Making haze.....	9
Installation and setting up.....	10
Location.....	10
AC power .....	10
Setting up.....	11
Final checks .....	12
Turning on the power .....	12
Control settings.....	13
Overview .....	13
Continuous Run Mode .....	13
Setting the Automatic Timer.....	13
Setting the “one-shot” timer .....	14
Priming the Machine .....	15
What the status lights mean.....	16
DMX control .....	17
Overview .....	17
Connection .....	17
DMX functions.....	17
Setting the DMX start address .....	18
Approved Haze Fluid Types .....	19
Approved Discontinued Fluids: .....	19
Basic service.....	20
Cleaning.....	20
Martin Pro Clean and Storage Fluid.....	20
Fuse replacement .....	21
Shutting down the machine .....	22
Shutdown procedure.....	22
Optional accessories .....	23
Fitting the DMX module .....	23
Troubleshooting .....	24
Technical Specifications .....	25
Notes .....	28

# Safety information



Read the safety precautions in this manual before installing, operating or servicing this product.

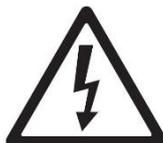
The following symbols are used to identify important safety information:



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



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



Danger! Hazardous voltage. Contact will cause electric shock.



Caution! Fire hazard.



Warning! This product is not for household use. It presents risks of injury due to electric shock, burns, falls and respiratory problems!

Read this manual before operating the machine, follow the safety precautions listed below, and observe all warnings in this manual and printed on the machine. Use the machine only as described in this manual and in accordance with local laws and regulations.

If you have questions about how to operate the machine safely, or if you have followed the instructions in this manual and the machine is malfunctioning, please contact Martin Service and Support.

## Preventing electric shocks



- Always ground (earth) the machine electrically.
- Use only a source of AC power that complies with local building and electrical codes, and that has both overload and ground-fault protection.
- Before connecting the machine to power, check that the voltage indicated on the machine's serial label matches your local AC power voltage. If your AC power voltage does not match, do not use the machine. Contact Martin Service and Support for assistance.
- 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.
- If the machine or any cables connected to it are in any way damaged, defective, wet, or show signs of overheating, stop using the machine and contact Martin Service and Support for assistance. If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.
- Disconnect the machine from AC power before servicing and when not in use.
- This machine is not waterproof and should not be exposed to wet outdoor conditions. Do not immerse in water or any other liquid. Do not expose to high-pressure water jets.

- Do not spill fluid over or inside the machine. If fluid is spilled, disconnect AC power and clean with a damp cloth. If fluid is spilled onto electronic parts, take the machine out of service and contact Martin Service and Support for advice.
- Do not remove the covers or attempt to repair a faulty machine. Refer any service not described in this manual to Martin Service and Support.
- Do not operate the machine if any parts are damaged, defective or missing.
- Moisture and electricity do not mix. Do not aim haze output at electrical connections or devices.

### Preventing burns and fire



- The haze produced by the machine is hot enough to cause burns when it leaves the nozzle, and very hot droplets of fluid escape occasionally. Keep people and objects at least 600 mm (24 in.) away from the haze output nozzle.
- Do not touch the haze output nozzle during or after use – it becomes extremely hot and remains hot for several hours after the machine has been shut down.
- Haze output contains glycol, a flammable alcohol that burns with an almost invisible blue flame. Do not point haze output at sources of ignition such as open flames or pyrotechnic effects.
- Do not attempt to bypass thermostatic switches, fluid sensors or fuses.
- Replace fuses only with ones of the type and rating specified in this manual for the machine.
- Provide a minimum free space of 100 mm (4 in.) around the machine.
- Provide a minimum free space of 500 mm (20 in.) around fans and air vents and ensure free and unobstructed airflow to and around the machine.
- Keep the machine at least 600 mm (24 in.) away from combustible and heat-sensitive materials.
- Do not operate the machine if the ambient temperature ( $T_a$ ) is below 5° C (41° F) or above 40° C (104° F).
- Do not operate the machine if the relative air humidity exceeds 80%.

### Preventing injuries

- Ensure that the surface on which the machine is located or installed can safely hold the weight of the machine.
- Do not install the machine over areas where people are present.
- Do not operate the machine with missing or damaged covers or shields.
- In the event of an operating problem, stop using the machine immediately and disconnect it from power. Do not attempt to use a machine that is obviously damaged.
- Do not modify the machine in any way not described in this manual or install other than genuine Martin parts.
- Refer any service operation not described in this manual to a qualified technician.
- Haze output can cause condensation. Do not point the output at smooth floors. Floors and surfaces may become slippery. Check these frequently and wipe dry as necessary to avoid any danger of slipping.
- Ensure at least 2 m (6.6 ft.) visibility in areas where haze is being produced.

- Haze fluid contains food-grade glycols in solution that may present health risks.  
**IF SWALLOWED:** Do not induce vomiting. Drink 1-2 glasses of water and seek medical attention.  
**AVOID CONTACT WITH SKIN AND EYES:** In case of accidental contact: **EYES:** Hold eyes open and flush with water for ten minutes, seek medical attention if irritation persists. **SKIN:** Remove contaminated clothing and rinse skin for 20 minutes, seek medical attention if irritation persists.  
Consult the fluids' SDS for more detailed safety information at <http://www.martin.com/safety-documents>
- This machine is not intended for use by persons (including children) with reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the machine by a person responsible for their safety. Children should be supervised to ensure that they do not play with the machine.

### Preventing breathing problems



- A haze machine can operate safely only with the haze fluid it is designed for. Use the machine only with fluids specified under “Approved Haze Fluid Types” on page 19 or you may cause the release of toxic gases, presenting a severe health hazard. You will also probably damage the machine.
- Do not create dense haze in confined or poorly ventilated areas.
- Do not expose people with health problems (including allergic and/or respiratory conditions such as asthma) to haze output.
- Do not point haze output directly at a person’s face or at face height.

For the latest user documentation and other information for this and all Martin products, please visit the Martin website at <http://www.martin.com>  
If you have any questions about how to install, operate or service the fixture safely, please contact your Martin distributor, dealer or contact Martin Service and Support.

# Product overview

## Product description

The Magnum 2500Hz from Martin provides a uniquely flexible and convenient solution to a wide range of atmospheric requirements whether permanently installed or taken on the road.

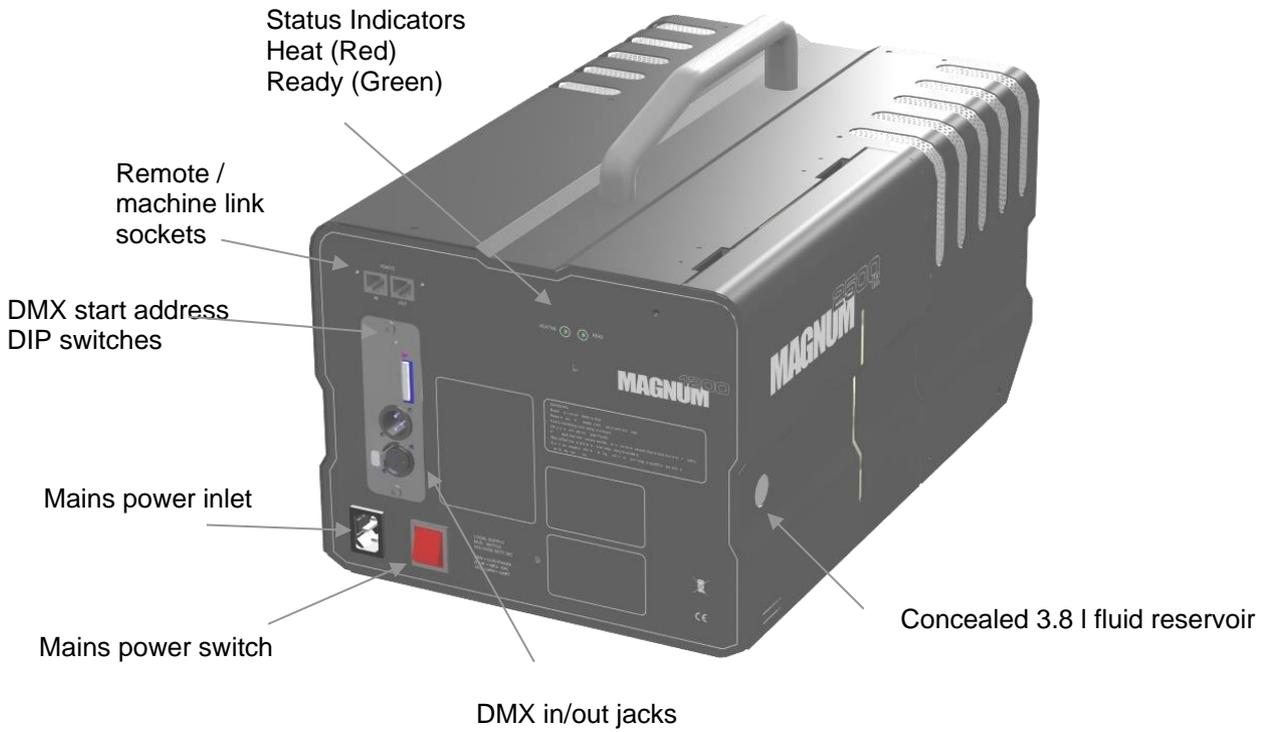
The machine features a unique new design that encompasses what the Magnum range is all about: state of the art technology, high quality and ruggedness.

Congratulations on your purchase of the Magnum 2500Hz from Martin. Details of the full range of Martin products are available on our website at [www.martin.com](http://www.martin.com).

## Features at a glance

- Proportional haze & fan output
- Continuous effect output
- Timer remote control included
- Output and density level control
- Internal remote control storage
- Concealed 3.8 l fluid reservoir
- Fluid-out sensing
- Uses economical RUSH & THRILL Haze Fluid
- Optional DMX interface
- Machine link mode - up to 4 units can be operated at the same time with one remote.

## Product details



Warning!  
High temperature vapour  
and surfaces!

## Quick Start

You are no doubt eager to switch on the machine and try it out by making a lot of haze. This section tells you how to do that. However, please also make the time to read the safety and servicing instructions in the remainder of this manual.

### Setting up

Locate the machine in a suitably large area with nothing in front of the haze output.

Fill the fluid reservoir with Martin approved haze fluid (see page 19). The fluid compartment is opened by pulling outwards on the cover (pull using a finger in the round hole).

Connect the machine to a suitably rated power source. The power requirements are:

EU Models – 920 W, 220-240 V

US Models – 920 W, 100-130 V

Connect the remote control to the REMOTE IN connector on the rear panel.

Turn on the power switch. The red Heat indicator on the remote and the rear of the unit will light. After about 6-8 minutes the green Ready indicator on the remote and the rear of the unit will light. The machine is then ready to produce haze. To obtain maximum haze output, wait another couple of minutes for the Heat indicator to go out.

### Making haze

Once the machine has heated up, press the FOG button on the remote to start the haze output. The green ON light will come on. Press the FOG button again to turn off the haze.

You can set the haze density by turning the knob. If the knob is turned fully counter-clockwise, no haze will be produced.

# Installation and setting up



**DANGER! DO NOT** operate the Magnum 2500Hz until you have read and observed all the precautions listed under “Safety information” on page 4.

## Location

The Magnum 2500Hz should be located on a solid surface such as the floor.

The machine can operate in any orientation from 30° upwards to 30° downwards. Steeper tilting may cause fluid leakage.

Do not suspend the machine over areas where people will be underneath.

Ensure that there is at least 100 mm (4 in.) clearance around the machine and at least 600 mm (24 in.) in front of the haze output.

## AC power

Before using the machine, ensure that a grounding-type (earthed) power plug that fits the local power outlets is installed on the power cable.



**DANGER!** Make sure the power plug is correctly rated:

- For EU models fit with a plug rated at 6 A minimum.
- For US models fit with a plug rated at 10 A minimum.

When installing the plug, follow the plug manufacturer’s instructions and connect pins as follows:

Yellow and green wire to ground (earth), blue wire to neutral and brown wire to live.

The table below shows some common pin identification schemes.

wire	function	marking	screw colour
brown	live	“L”	yellow or brass
blue	neutral	“N”	silver
green/yellow	earth		green

Before connecting the Magnum 2500Hz to power, verify that the AC supply is adequately dimensioned for the current draw of the machine. The machine requires:

EU Models – 920 W, 220-240 V

US Models – 920 W, 100-130 V

Check that the local AC voltage is appropriate, as indicated on the machine’s serial number label. If your AC voltage is outside the appropriate range, do not use the machine. Contact Martin Service and Support for assistance.

## Setting up

Fill the fluid reservoir with Martin approved haze fluid (see page 19). The fluid compartment is opened by pulling outwards on the cover (pull using a finger in the round hole). The cover is held closed by a magnetic catch and hinges upwards.

If the optional DMX module is fitted and DMX control is being used, connect the machine to the DMX line (see page 17).

Connect the remote to the REMOTE IN socket on the back panel.

If you are operating several machines using the machine-to-machine link function, connect the machines in a daisy-chain using RJ45 (computer network) type cables. The maximum total length of cable, including the remote cable, is 50 m (164 ft.).

To additional machines



Do not connect a computer network to the RJ45 remote / link sockets on the Magnum 2500Hz. Although the connectors are compatible, the electrical signals are not, and equipment may be damaged.

## Final checks

Before applying power to the Magnum 2500Hz, verify the following:

- the machine is safely located or installed and meets the location requirements stated on page 10.
- the operator is familiar with, and able to comply with, the requirements for safe operation listed on page 4.
- the haze fluid is genuine Martin fluid listed under “Approved Haze Fluid Types” on page 19.
- the machine is electrically grounded (earthed).
- the AC power distribution circuits and lines are adequately rated for the current load.

## Turning on the power

Turn on the mains power switch located next to the mains power inlet cable. The red Heat indicator on the remote and on the rear of the machine will light for about 6-8 minutes as the machine heats up to operating temperature.

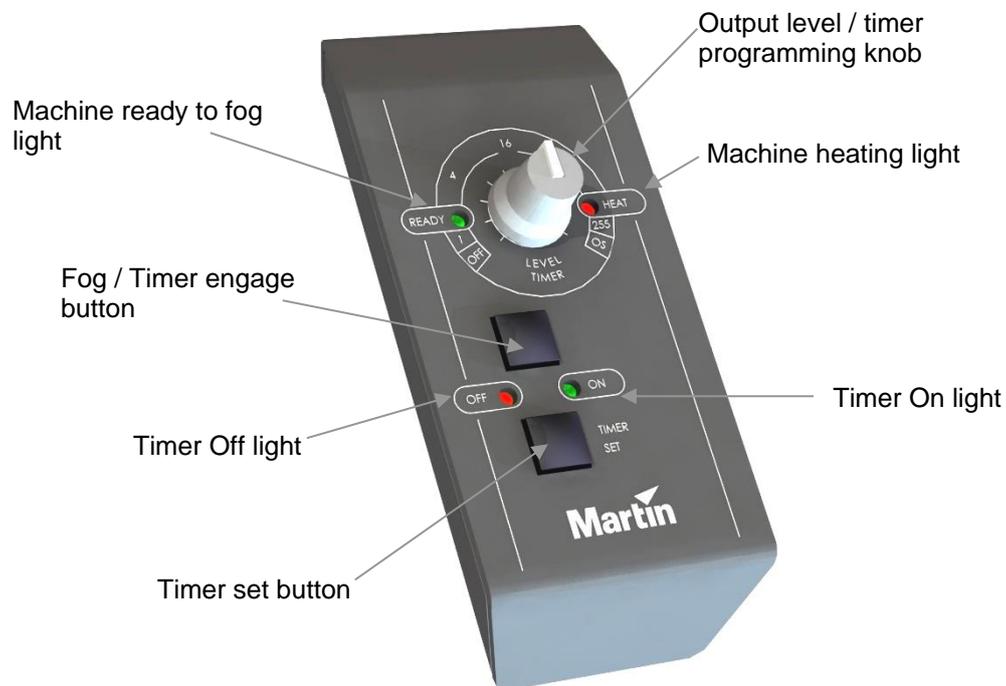
When the green Ready indicator comes on, the machine is ready to make haze.



*To obtain maximum output, wait another few minutes for the red Heat indicator to go off, as haze output is reduced while the unit is heating up.*

# Control settings

## Overview



The unit is controlled using the remote control. You can control it in these ways:

- Automatic Continuous run mode.
- Automatic haze bursts using a repeating timer
- You trigger a timed burst of haze using the “one-shot” timer

You can also set the haze output level using the knob.

## Continuous Run Mode

Press the FOG button once (for less than one second) to enter continuous run mode or timer mode. If the timer is set, the timer mode will run automatically, otherwise continuous mode will be enabled and the machine will produce haze until the button is pressed again. The green timer LED will light when in continuous run mode.

## Setting the Automatic Timer

The Automatic Timer allows you to set the machine to keep producing timed bursts of haze without anyone having to press any buttons. You need to set two times: the run/on time during which the machine will produce haze, and the wait/off time during which the machine will idle.

1. Press the TIMER SET button. The ON light will flash. You are now setting the On/Run time.

2. Turn the knob to the required “run” time, as shown on the outer scale of the knob (OFF – 255 seconds).
3. Press the TIMER SET button once. The ON light will come on static and the OFF light will flash. You are now setting the Off/Wait time.
4. Turn the knob to the required “wait” time.
5. Press the TIMER SET button once more. Both ON/OFF lights will come on to show the timer is programmed.

The run and wait times are now stored and will be remembered even after the unit has been switched off.

To start the timer using the times you’ve set, press the FOG / TIMER ENGAGE button briefly. To turn off the timer, press the FOG / TIMER ENGAGE button briefly again. When the timer is engaged, the ON light will come on during the On/Run time and the OFF light will come on during the Off/Wait time.



*If you only want to change the Off/Wait time, leaving the On/Run time unchanged, press TIMER SET twice. This will take you directly to setting the Off time without changing the On time.*

To find out what the current time settings are, press TIMER SET then rotate the knob slowly until the “ON” light begins to flash very rapidly. The knob is now set to the current run/on time. Press TIMER SET once and rotate the knob slowly again until the “OFF” light begins to flash very rapidly. The knob is now set to the current wait/off time. Press TIMER SET again to get back to normal.

### Setting the “one-shot” timer

The “one shot” timer allows you to pre-program the length of the haze burst. This can be useful if you want to have a fixed-time burst of haze which you can repeat at will by pressing the haze button.

1. Press the TIMER SET button. The ON light will flash. You are now setting the On/Run time.
2. Turn the knob to the required “run” time, as shown on the outer scale of the knob (OFF – 255 seconds).
3. Press the TIMER SET button once. The ON light will come on and the OFF light will flash.
4. Turn the knob fully right to where “OS” (“One Shot”) is marked.
5. Press the TIMER SET button once more.

The timer is now programmed to one-shot mode and this will be remembered even after the unit has been switched off.

To produce a timed burst of haze, press the FOG button briefly. To stop the timed haze output early, press the FOG button briefly again.

## Priming the Machine

If the machine runs out of fluid, it may not pump properly after refilling the fluid due to airlocks in the fluid pipes.

To prime the machine, hold down the FOG button and turn the knob to maximum. Keep the button held until the haze output is strong and steady. Then turn the knob back to the required output level and release the FOG button.



*During PRIME mode the machine will prime for 10-seconds if any airlock is still visible on the fluid line, prime machine again until the haze output is continuous. Note that you must turn the knob to start the prime process.*



If the machine is left to run when out of fluid, damage may be caused to the pump leading to premature pump failure. The automatic fluid sensing system will shut the machine down within approximately 5-minutes of running dry.

## What the status lights mean

The four lights on the remote have the following functions. The red “HEAT” light and the green “READY” light are also duplicated on the rear of the machine itself.

HEAT+READY	meaning	
no lights	Machine is not powered, or remote is not connected.	
heat	Machine is heating but is not yet up to operating temperature.	
heat + ready	Machine is heating and has reached minimum operating temperature. Haze output level may be reduced while heating.	
ready	Machine has finished heating and is at full operating temperature.	
ready flashing	If the ready LED is flashing, refer to the following code table.	
	Single pulse	Calibration Error
	Double pulse	Fluid-Out Error
	Triple pulse	Overheat Error

OFF+ON	meaning	
no lights	Timer is disabled	
both on	Timer is programmed but not enabled	
“OFF” lit	Timer is running, currently in Off/Wait period	
“ON” lit	Timer is running, currently in On/Run period or continuous mode	
“ON” flashing	The timer “ON” time is currently being programmed	
“ON” lit, “OFF” flashing	The timer “OFF” time is currently being programmed	

# DMX control

## Overview

DMX is a digital control system widely used in entertainment and architectural lighting. Any controller meeting the DMX-512A standard may be used to control and program the haze output of the Magnum 2500Hz.

The Magnum 2500Hz requires the optional DMX control module to allow DMX operation.

## Connection

The Magnum 2500Hz provides a 3-pin XLR plug and socket on the rear panel for DMX connection. The wiring is shown below.

Connector pin	function
1	Ground
2	Data – (“Cold”)
3	Data + (“Hot”)

For best results, use cable designed for high speed digital data transmission.

## DMX functions

The Magnum 2500Hz operates from a single DMX channel which gives proportional control of haze density and the fan from 0-100%.

DMX Level	function
0 – 29	No haze
30 – 255	Haze at variable density, (30=minimum, 255=maximum)

When the machine is receiving valid DMX data, the indicator light next to the address switches will light.

It is possible to control the machine by DMX and using the remote control at the same time, the highest setting will take precedence.

No provision is made for resetting the fluid out condition via the DMX system. Reset this using the remote or by powering down the machine to perform a full reset.

Note that the last switch (switch 10) on the DMX address setting dipswitch is used for the test function not address 512. Setting this switch to ‘on’ will produce a timer (10 second) burst of haze allowing the machine to be tested without the remote control being present.

## Setting the DMX start address

Each unit on a DMX system must be allocated an address so that the DMX controller can send separate commands to the unit. On the Magnum 2500Hz, the DMX start address is set using the bank of switches ("dip switches") on the back panel next to the DMX connectors. The switch settings for each possible DMX address are given in the table below.

DIP-Switch Setting  0 = OFF 1 = ON					#9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1		
					#8	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	1
					#7	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	1	1
					#6	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
#1	#2	#3	#4	#5																			
0	0	0	0	0	32	64	96	128	160	192	224	256	288	320	352	384	416	448	480				
1	0	0	0	0	1	33	65	97	129	161	193	225	257	289	321	353	385	417	449	481			
0	1	0	0	0	2	34	66	98	130	162	194	226	258	290	322	354	386	418	450	482			
1	1	0	0	0	3	35	67	99	131	163	195	227	259	291	323	355	387	419	451	483			
0	0	1	0	0	4	36	68	100	132	164	196	228	260	292	324	356	388	420	452	484			
1	0	1	0	0	5	37	69	101	133	165	197	229	261	293	325	357	389	421	453	485			
0	1	1	0	0	6	38	70	102	134	166	198	230	262	294	326	358	390	422	454	486			
1	1	1	0	0	7	39	71	103	135	167	199	231	263	295	327	359	391	423	455	487			
0	0	0	1	0	8	40	72	104	136	168	200	232	264	296	328	360	392	424	456	488			
1	0	0	1	0	9	41	73	105	137	169	201	233	265	297	329	361	393	425	457	489			
0	1	0	1	0	10	42	74	106	138	170	202	234	266	298	330	362	394	426	458	490			
1	1	0	1	0	11	43	75	107	139	171	203	235	267	299	331	363	395	427	459	491			
0	0	1	1	0	12	44	76	108	140	172	204	236	268	300	332	364	396	428	460	492			
1	0	1	1	0	13	45	77	109	141	173	205	237	269	301	333	365	397	429	461	493			
0	1	1	1	0	14	46	78	110	142	174	206	238	270	302	334	366	398	430	462	494			
1	1	1	1	0	15	47	79	111	143	175	207	239	271	303	335	367	399	431	463	495			
0	0	0	0	1	16	48	80	112	144	176	208	240	272	304	336	368	400	432	464	496			
1	0	0	0	1	17	49	81	113	145	177	209	241	273	305	337	369	401	433	465	497			
0	1	0	0	1	18	50	82	114	146	178	210	242	274	306	338	370	402	434	466	498			
1	1	0	0	1	19	51	83	115	147	179	211	243	275	307	339	371	403	435	467	499			
0	0	1	0	1	20	52	84	116	148	180	212	244	276	308	340	372	404	436	468	500			
1	0	1	0	1	21	53	85	117	149	181	213	245	277	309	341	373	405	437	469	501			
0	1	1	0	1	22	54	86	118	150	182	214	246	278	310	342	374	406	438	470	502			
1	1	1	0	1	23	55	87	119	151	183	215	247	279	311	343	375	407	439	471	503			
0	0	0	1	1	24	56	88	120	152	184	216	248	280	312	344	376	408	440	472	504			
1	0	0	1	1	25	57	89	121	153	185	217	249	281	313	345	377	409	441	473	505			
0	1	0	1	1	26	58	90	122	154	186	218	250	282	314	346	378	410	442	474	506			
1	1	0	1	1	27	59	91	123	155	187	219	251	283	315	347	379	411	443	475	507			
0	0	1	1	1	28	60	92	124	156	188	220	252	284	316	348	380	412	444	476	508			
1	0	1	1	1	29	61	93	125	157	189	221	253	285	317	349	381	413	445	477	509			
0	1	1	1	1	30	62	94	126	158	190	222	254	286	318	350	382	414	446	478	510			
1	1	1	1	1	31	63	95	127	159	191	223	255	287	319	351	383	415	447	479	511			

## Approved Haze Fluid Types

The following types of Martin haze fluid are suitable for use in this machine. Martin supplies high quality haze fluids that is based on ultra-pure deionized water. Use only the following genuine Martin haze fluids. No other fluid is suitable for use.



**DANGER!** The Magnum 2500Hz can run safely only on the specific haze fluids it is designed for. Use **ONLY** the Martin haze fluids designated in this manual. **NEVER** use any other type of fluid, or toxic gas may be produced. You will probably also cause damage to the system that is not covered by the product warranty. Do not dilute haze fluid with water or any other liquid. Discard haze fluid if it becomes contaminated.

### **RUSH & THRILL Haze Fluid**

RUSH & THRILL Haze Fluid is a specially formulated water-based haze fluid formula and is recommended for use with applicable Martin haze effect generators. It gives a fine, optically transparent airborne medium with a light-to-medium index of refraction that is ideal for highlighting beam and aerial FX projections whilst leaving little to no residue behind. RUSH & THRILL Haze Fluid is designed as an economy haze fluid that is suitable for use in nightclubs, bars, stage and outdoor events.

Available in 2.5, 5, 25 and 220 l containers

*“Calibration factors have been developed and approved by the Actors’ Equity Association and the Broadway League for use in measuring theatrical haze with the Magnum 2500Hz™ and RUSH & THRILL Haze Fluid™.”*

### **Approved Discontinued Fluids:**

RUSH Haze Fluid  
RUSH ELX Haze Fluid  
Martin Pro Haze Fluid

## Basic service



Before servicing the Magnum 2500Hz, read and observe all the precautions listed in “Safety information” on page 4. Any service not described in this section must be carried out by a certified Martin service technician.

### Cleaning

Excessive dust, haze fluid, and dirt build up will degrade performance and cause overheating and damage to the machine that is not covered by the product warranty. To maintain adequate cooling, dust must be cleaned from the outer casing and air vents of the machine periodically.



Isolate the machine from power and allow to cool completely before cleaning. The haze output nozzle remains hot for up to 10 hours after use.

- Remove dust from the air vents with a soft brush, cotton swab, vacuum, or compressed air.
- Clean haze fluid residues from the haze output of the machine using a damp cloth.
- Clean the outer casing with a damp cloth only.

### Martin Pro Clean and Storage Fluid

Martin Pro-Clean & Storage Fluid is specially designed for optimizing performance while providing longevity of any effect machine. Martin Pro-Clean & Storage fluid is the ultimate cleaning solution for Martin atmospheric effect heat exchangers. This advanced preventative maintenance fluid has been utilized by Martin service technicians for years of both cleaning and storing effect machines. Utilizing Martin Pro-Clean & Storage Fluid on a regular basis reduces clogging and further extends the life of your Martin atmospheric effect machines. By using the highest-grade chemicals available while remaining eco-friendly, Martin fluids are both effective and safe.

#### *Instructions for use*

Use fluid directly from container, **do not dilute**. Remove cap and safety seal; if inner safety seal has been tampered with, return product to point of purchase. Disconnect effect machine from power source before filling reservoir. When possible, remove reservoir from machine and carefully fill reservoir to desired level, taking care not to overfill or spill. Wipe up any spilled fluid with a damp cloth. Replace cap on container and store upright in a secure location.

**Cleaning and Preventative Maintenance Procedure:** Use Martin Pro Clean and Storage Fluid after every 200 hours of operation or monthly depending on usage and duty cycle. In a well ventilated area temporarily connect Martin Pro Clean and Storage Fluid to the effect machine being serviced or fill the machines provided fluid reservoir. Allow the machine to fully heat. When machine is ready activate the machine to run continuously for 30-45 minutes; use a timer function if available.

**Storage Procedure:** Perform the above cleaning and preventative maintenance procedure. After procedure is completed simply run the machine until all fluid has been visibly purged from the fluid inlet tubing to prevent leaks and seepage.

## Fuse replacement

The main fuse for the Magnum 2500Hz is located on the electronics board inside the unit.



**DANGER!** Disconnect the power supply before removing any covers. Live parts inside!

To replace the fuse, disconnect the power cord from the supply, unscrew the screws holding the top cover of the unit and remove the cover. The electronics board is located at the back of the unit near the remote control sockets.

Remove the fuse holder cover and pull out the fuse. Remove the spent fuse and replace with one of exactly the same size and rating. The fuse type is indicated below. Contact Martin Service if the fuse blows repeatedly.

F1

EU Models = 6.3 AT (slow-blow), 250 V

US Models = 10 AT (slow-blow), 125 V

F2

All models = 3.15AT

## Shutting down the machine

**IMPORTANT:** To ensure both the performance and life of your Magnum 2500Hz is maximised, the following procedures should always be followed.

### **Shutdown procedure**

When shutting down the machine, always allow a 5-minute period with the output set at zero, before removing the power.

## Optional accessories

### Fitting the DMX module

The optional DMX module replaces the blanking plate on the rear of the Magnum 2500Hz.



**DANGER!** Disconnect the power supply before removing the blanking plate. Live parts inside!

1. Remove and keep safe the two screws holding in the blanking plate, and remove the plate.
2. Locate the DMX interface ribbon cable inside the rear of the unit and plug onto the connector on the DMX interface circuit board (PL5).
3. If you cannot locate the ribbon cable, you will need to remove the main covers of the unit. The ribbon cable connects the main circuit board to the DMX interface.
4. Fit the new DMX module into the rear panel and tighten the screws.
5. Refit any covers you have removed before reconnecting the power supply.



# Troubleshooting

Problem	Probable cause(s)	Suggested remedy
Machine will not produce haze when remote control Fog button pressed	Machine not at operating temperature	Wait 10 to 15 minutes
	Machine not powered up or heaters disabled	Ensure mains power switch on, enable heaters by pressing FOG
	Output level control set to zero	Increase setting
Machine continues to produce haze when Fog button is not pressed	Timer is engaged	Disengage the timer by pressing the FOG/TIMER ENGAGE button briefly
Machine can be fired from the remote control, but not by DMX controller	DMX address setting incorrect	Change DMX address (page 18)
	Poor connection in DMX line	Check DMX cables and connections
Haze output is weak	Machine requires priming	Prime machine (page 15)
Wet, greasy, non-uniform haze output, fluid drips or spits from nozzles, or very loud noise when firing machine	Incompatible haze fluid	Use only approved fluid!
Machine appears dead	Mains fuse blown	Replace fuse (page 21)
	No power at AC cable inlet	Check power cable and circuit breaker
Ready LED flashing	Internal error	Check fault codes in status light table.

# Technical Specifications

## Physical

Length .....	455 mm (18 in.)
Width .....	285 mm (11.3 in.)
Height .....	286 mm (11.1 in.)
Weight, dry .....	11.9 kg (26.3 lb.)
Weight, filled.....	15.7 kg (34.6 lb.)

## Performance

Coverage volume .....	2500m <sup>3</sup> (88,287 ft <sup>3</sup> ) minute
Fluid consumption (max.).....	10.5 ml per minute
Continuous effect output	
Ready time .....	6-8 minutes

## Control and programming

Control options .....	Included timer remote control, optional analog DMX, ..... machine link mode
Control parameters .....	Continuous or timer controlled output
Haze and fan .....	Proportionally controlled haze and fan, 0-100%
DMX channels .....	1
DMX compliance .....	ANSI E1.11 – USITT DMX512-A

## Construction

Housing .....	Steel and aluminum
Color .....	Black and silver
Heat exchanger.....	900 W, thermally protected
Blower fan .....	Integrated, 200-2800 RPM
Fluid pump .....	Oscillating piston, high pressure
Fluid reservoir .....	3.8 l concealed reservoir with quick-connect fitting
Fluid management .....	Fluid out sensing, sealed for transportation ..... visual fluid sight gauge
Remote control.....	Includes 3 m (9.8 ft.) lead terminated to RJ45, internal storage

## Installation

Mounting .....	Standing
Orientation.....	Up to +/- 30° from Horizontal
Clearance around machine.....	100 mm (4 in.)

## Connections

AC Power .....	IEC male inlet, C14
Optional DMX in/out .....	3-pin locking XLR
Remote control, machine link in/out.....	RJ45

## Electrical

### EU Model

AC Power .....	220-240 V, 50/60 Hz
Main fuse.....	6.3 AT (slow-blow), 250V
Typical power and current.....	920 W, 4.15 A*

### US Model

AC Power .....	100-130 V, 50/60 Hz
Main fuse.....	10 AT (slow-blow), 125V
Typical power and current.....	920 W, 8 A*

*\*Measurements made at nominal voltage. Allow for a deviation of +/- 10%*

## Thermal

Maximum ambient temperature (Ta max).....	40° C (104° F)
Minimum ambient temperature (Ta Min).....	5° C (41° F)
Exterior surface temperature, steady state.....	40° C (104° F)
Maximum nozzle temperature.....	200° C (392° F)

## Approvals

### EU Model

EU Safety: .....	EN 60 335-1+A15, EN 62233
EU EMC: .....	EN 61000-6-3
EU Immunity:.....	EN 61000-6-1
Australia/NZ (pending): .....	RCM

### US Model

US safety.....	UL Std.998
Canada safety .....	CSA C22.2 No.104-01



*“Calibration factors have been developed and approved by the Actors’ Equity Association and the Broadway League for use in measuring theatrical Haze with the Magnum 2500Hz and RUSH & THRILL Haze Fluid.”*

## Included Items

Fluid reservoir, 3.8 l:.....	P/N 34300537
Power input cable, EU, IEC C13 female, stripped ends, 1.5 m (4.9 m):.....	P/N 11501012
Power input cable, US, IEC C13 female, molded NEMA 5-15P, 3 m (9.84 m): .....	P/N 11501502
Timer remote control .....	P/N 92765033
User manual.....	P/N 35010030

## Accessories

Magnum 2500Hz, DMX interface.....	P/N 91612011
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### Approved Fluids\*

RUSH & THRILL Haze Fluid  
Martin Pro Clean and Storage Fluid

### Approved Discontinued Fluids\*

Martin Pro Haze Fluid  
RUSH Haze Fluid  
RUSH ELX Haze Fluid

### Service Tools

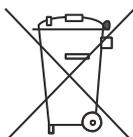
Epsilon 5 AVR Programmer .....	P/N 50502004
Temperature Calibration Box .....	P/N 92620005

*\*Various sizes available - contact your dealer or see martin.com for more details.*

## Ordering information

Magnum 2500Hz, EU.....	P/N 92225450
Magnum 2500Hz, US.....	P/N 92225400

*Specifications subject to change without notice. For the latest product specifications, see [www.martin.com](http://www.martin.com)*



#### **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.

# Notes





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