# RAIN SPARKLE L007760 USER MANUAL



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#### **DISCLAIMER**

Please read the manual carefully before installing and using this product. Failure to read or comply with this manual may result in injury to products and personnel.

This product is a professional machine, we do not assume any responsibility for accidents or losses caused by the use or maintenance of this product by personnel without professional training and permission.

Our company reserves the right to modify the user manual at any time.

#### **PREFACE**

\*This manual includes warning, caution and notice concerning the safe operation of equipment. These warningcaution and notice come with the following icons. Please read them carefully!

This warning indicates a dangerous situation that may result in death or serious injury if not avoided.

A CAUTION

This alert indicates a dangerous situation that may result in mild or moderate injury if not avoided.

NOTICE

This means that you need to be careful.

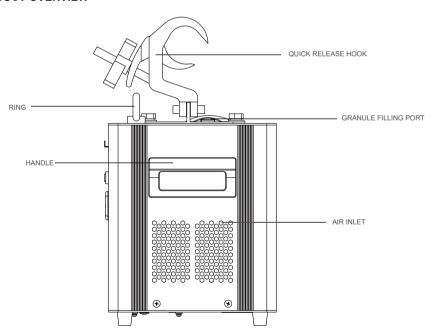
#### 1. PRODUCT INTRODUCTION

This product belongs to special effects equipment, only for professional use.

This product belongs to the cold fireworks simulation special effects equipment, using CST technology, heating special metal powder, and sparking silver spark fountain which is safer than the traditional cold fireworks. It has three controllable variables: height, density and duration.

This product is widely used in weddings, concerts, sports events, event meetings and so on. Stimulate your interest and light up your activity.

#### 1.1 PRODUCT OVERVIEW



# 1.2 PRODUCT ACCESSORIES

1.6 Meter Power Plug or 3 Meters Power Pair Cable

3 Meters DMX Pair Cable

User Manual

Safety Rope

NOTICE

Open the package carefully and check to make sure the goods are in good condition.

# 1.3 GRANULE

A kind of special metal powder with full spark and less residue, no smoke, no odor and no toxic gas while use



we shall not be liable for any machine breakdown,personal injury and property losscaused by the use of consumables not provided by the company.

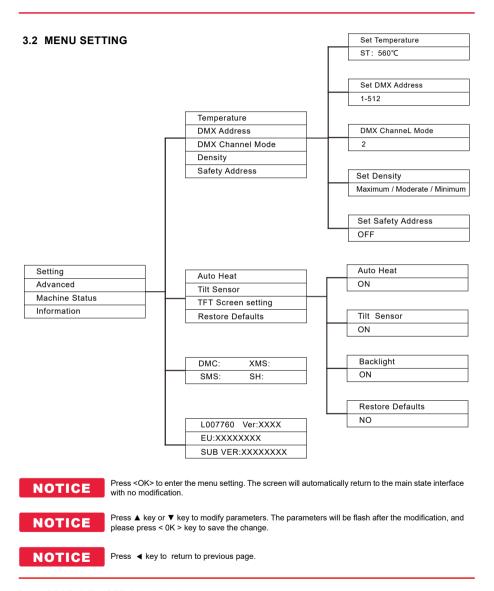
# 2 TECHNICAL PARAMETER

	Name	RAIN SPARKLE
Identification	Model	L007760
		100-120V, 60HZ
	Input Voltage & Frequency	200-240V, 50HZ
	Current Limiter Specifications	10A,100-120V / 6.3A,200-240V
40.5	Constant Current	5.5A,100-120V / 2.7A,200-240V
AC Power	Nominal Total Power Consumption	500W
	Power Input Connector	SEETRONIC
	Power Output Connector	SEETRONIC
	DMX Signal Interface	3PIN
Heating	Heat Up Time	<5 Minutes
	Powder Tank Capacity	150g
Hopper	Lineary Adjustable Density	Maximum / Moderate / Minimum
	Adjustable Height	3-8m
	Height Level	1-10 Level
Technical Parameters	Powder Consumption (100% Output)	17-20g/Minute
	Maximum Single Continuous Duration	30s
	Control Protocol	DMX-512
Control	RFID	√
	SMPTE	MUSIC TRIGGERED
	Power Plug	SEETRONIC (1.6Meter)
	Remote Controller	√
	DMX Cable	√ 3Meter
	Power Cable	√ 3Meter
Accessory	Safety Ring	√
	Safety Rope	√
	Bottom Mounting Screw	×
	Software Upgrade Box	Optional
	120ohms Terminal Resistance	Optional
Certification	CE	√
Ceruncation	ROHS	√
Weight	Net Weight	7 kg
Weight	Gross Weight	8 kg
Dimensions	Machine Dimensions - L*W*H	210mm*220mm*340mm
Dilliensions	Packing Dimensions - L*W*H	285mm*255mm*320mm

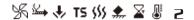
# **SCREEN OPERATION GUIDE**

# 3.1 BACK PANEL INTRODUCTION





# 3.3 STATUS ICONS



NOTICE	When the icons are green means the machine is working normally, and yellow means abnormal.			
	%	Blower Motor	TS	Temp Sensor Unconnected
	ŝ <b>∠</b> →	Shaft Motor	555	Temp Over Heat
	4	Hopper Motor	<b>*</b>	Tip Over
	¥	Lack Of Time	2	2 Channel Mode
	W.	PCB Too Hot		

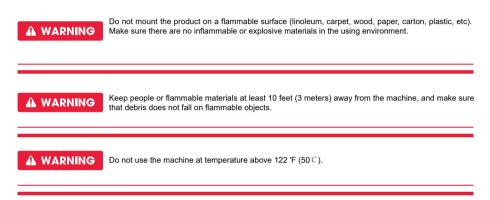
# 3.4 DMX PARAMETER LIST

FIRST CHANNEL	FUNCTION
0~10	Stop
11~255	Fountain Height 1~25
SECOND CHANNEL	FUNCTION
0~200	Pre-heat Off
11~39	Emergency Stop
56~200	Clear Material
240~255	Pre-heat On

# 4 OPERATION NOTES

Please read the following Operation Notes carefully before working with the machine.

# **4.1 WORKING CONDITION REQUIRED**



#### 4.2 SAFETY TIPS

**A WARNING** 

Always connect the ground wire to avoid electric shock. The machine cannot be **WARNING** submerged in water while operating it.

**WARNING** Do Not touch the sparks. During heating up and operation, do not touch the housing.

The product is very hot during operation and it remains hot for a long time after operation **WARNING** has stopped. Do not touch or put finger in the output nozzle.

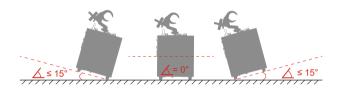
The noise level generated from the spark machine unit is estimated at 80dB depending **WARNING** on the point nearest to the machine(s) during operational discharge mode.

> It is recommended to use the following methods to extinguish the fire: anything similar to sand can be used to cover and put out the fire, and use Class D fire extinguisher for metal material fire.

# 5 MACHINE OPERATION

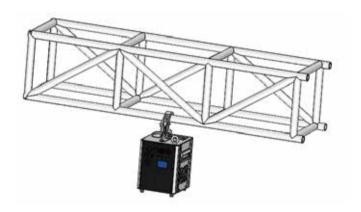
# 5.1 PERPARATION

Install the machine on a firm and level truss, and the maximum tilt angle shall not exceed 15 degrees.



#### **5.1.1 INSTALL MACHINE**

Install the product on truss by using the attached accessories.



\*Specific installation notes please refer to "4 OPERATION NOTES".

# 5.1.2 FILL IN GRANULE

- \* Tear the vacuum package of granule, and fill in granule through the granule filling port on the top of the machine.
- \* Fill the consumable into the feed port, NOT into the output nozzle.
- \* Close the lid securely after filling.
- \* The capacity of storage bin is 150g.



Make sure you fill Granule through the feed port on the top of the fixture when power supply is off.



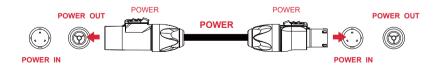
Wear eye protection to avoid eye injury while filling granules and testing spark machines.

#### 5.2 CONNECT THE MACHINE

Connect power and DMX signal line.

- \* Connect the first machine's power plug.
- \* Connect other machines in series with the power cable.
- \* Connect other machines in series with DMX connection line.
- \* Connect PYRO SIM CONTROLLER or DMX512 controller.







Do not use damaged power plug and power cable. One power plug is recommended to connect 4 units in series at most for this product.

# 5.3 INITIAL SETTING

SETTING	RANGE	DEFAULT
Set Temperature	400-800	680
Set DMX Address	1~512	1
DMX Channel Mode	2-8	2
Set Density	Maximum / Moderate / Minimum	Maximum
Safety Addresss	501~511	OFF
Auto Heat	ON/OFF	ON
Tilt Sensor	ON/OFF	ON
TFT BackLight	ON/OFF	ON
Restore Defaults	YES/NO	NO

<sup>\*</sup>Turn on power

<sup>\*</sup>Check the machine status icon(refer to icon introductions of 3.3)



Not until you ask the professional to check and repair the machine can you use it again.

<sup>\*</sup>The sparking temperature of the machine is the factory default temperature. The product will heat up automatically when disconnected with DMX signal. Automatic heating function can be set to on or off, and the concrete operation please refer to "3.2 MENU SETTING".

<sup>\*</sup>When spark machines connect DMX signal, the heating function can be started only on the Sim Pyro Console.

# **5.3.1 SET CHANNEL MODE**

A CAUTION

This machine is in 2-channel mode, please refer to 3.2 Menu Settings for specific operation.

#### **5.3.2 SET DMX ADDRESS**

Please set DMX address according to channel mode:

\*In the 2 channel mode, please set spark machines' DMX address to 1.3.5.7......

NOTICE

Please do not set address code repeatedly.

#### 5.4 SWIPE RFID TIME CARD

In order to avoid machine failure or other safety accidents caused by bad-qualified consumables, this product can only be used with special RFID time card.

NOTICE

Each swipe of the card can be recharged for 12 minutes, and each machine can swipe up to 2 time cards for 24 minutes at most. The card can only be swiped again when the remaining time is less than 20 minutes.

NOTICE

If the customer breaks the card swiping function or cancels the card swiping function at the customer's request.

# 5.5 START TO SPARK

The machine can be controlled by Pyro Sim Controller console or DMX512 console.

# 5.5.1 TURN ON CONSOLE'S POWER

# 5.5.2 TURN ON HEATING FUNCTION

NOTICE	The heating function of the second channel DMX value is 240~255, and it takes about 5 minutes to preheat after turning on.
NOTICE	When heating is turned on, the <heat> indicator light on the machine will turn to red, and the <ready> indicator light flashes green to indicate that the machine is heating.</ready></heat>
NOTICE	When the <ready> indicator light is always green,it means that the heating is complete and the machine enters the sparking status.</ready>
NOTICE	When using the Pyro Sim Controller to control the machines,the screen will display the real-time temperature of each machine. When the temperature value of the control board turns green, it means that the heating is completed and the machine enters the status of sparking.

#### 5.5.3 ADJUST SPARKING HEIGHT

Adjust sparking height through the first channel, and the height adjustment values is DMX parameter values 11-255.



It is recommended to use the following methods to extinguish the fire: anything similar to sand can be used to cover and put out the fire, and use Class D fire extinguisher for metal material fire.

#### 5.5.4 SPARK THROUGH REMOTE CONTROLLER



Battery: 23VA 12V

Please check the spark machine and remote controller before use.

Step 1: Connect the power supply to the device, start the machine, and pull out the antenna in the remote controller.

Step 2: Hold down the < SET> key until the screen displays :Control Pair code 433M,it means code success. Note: It is recommended that one remote controller controls up to 3 groups of spark machines at most ( the same group should set the same DMX address ).

# Operate the spark machine after coding

- Step 1: Connect the power supply and start the spark machine.
- Step 2: Open feed port cover and add consumables.
- Step 3: If the DMX console is not connected, the machine will automatically heat up.

When the < READY> light turns green, it means that the heating is complete, and the spark machine enters the spark mode.

- Step 4: Press the <1 ON> key to start sparking, the default spark height is the highest height.
- Step 5: Press <1 OFF> to end sparking
- Step 6: After the show, press < CLEAR> to clear the material, and press this button repeatedly until no sparks are emitted.
- Step 8: Turn off the machine, unplug the power, and pour out the remaining consumables.
- Step 9: Keep the remaining consumables away from fire and in a dry place.

#### 5.6 CLEAR MATERIAL

This product has the function of cleaning material, which can clean up the heated but not sparked consumables, so as to avoid nodulation in the combustor and machine stuck machine.

NOTICE

Use the cleaning function of the second channel for cleaning, DMX value is 56-200.

NOTICE

This function must be performed at the end of each show.

#### 5.7 CLEAN MACHINE

After clearing meterial, please clean the machine to extend the service life of the machine.

### **6 MACHINE MAINTENANCE**

Some steps are needed to clean and maintain the product for maximum usage. The recommended procedure is as follows:



After using it for a while, check if there is any consumable accretion inside the nozzle. Do necessary cleaning up if there has some, or it may affect spark performance, even damage the machine.

<sup>\*</sup>Turn off the machine's power.

<sup>\*</sup>Remove power connection and DMX signal cable.

<sup>\*</sup>Use a damp cloth to remove dust and debris from the surface of the machine.

<sup>\*</sup>Unused granule should be stored in a cool, dry place, vacuum packed in sealed foil bags, and protected from moisture, heat, hot surface, open fire and other ignition sources.

# 7 FAILURE HANDLING

ERROR CODE	DESCRIPTION	SOLUTION
System Error E0 Storage Fail	System Error: Storage Fail	Replace main board
Motor Protect E1 M1	Blower motor protection/ disconnected	1.Restart machine to clear alerts,stop operating for 15 minutesuntil temperature return to normal.     2.Check wire connection of motor     3.Replace motor     4.Replace main board
Motor Protect E1 M2	Shaft motor protection/ disconnected	Shaft motor clog (perform clean material function manually)     Check wire connection of motor     Replace motor     Replace main board
Motor Protect E1 M3	Hopper motor protection/ disconnectd	Hopper motor clog ( perform clean material function manually)     Check wire connection of motor     Replace motor
Temp Sensor E2 Unconnected	Temperature sensor disconnected	1.Check wire connection of femperature sensor     2.Replace Temperation sensor     3.Repalce Main board
PCB Too Hot E3	Main board too hot	Stop operating machine until main board temperature return to normal
Time Remain E4	Insufficient time	Please scan new RFID card
Temp Over Heat E5	Heating protection due to over-temperature.	Stop operating machine until temperature return to normal. Alert will clear off automatically.
Heat Fail E6	Heating process fail	I.Inspect Wire connection of heating board     Replace heating coil     Replace heating board
Tip Over E7	Tip over alert	Machine will activate tip over protection if the angle is more than 45 degrees. The alert will go off automatically after putting the machine back to normal position.
Sub PCB Unconnected E8	Sub-PCB disconnected	1.Check wire connection of Sub-PCB     2.Replace Sub-PCB     3.Replace Main Board
Illegal Card Machine Locked	Machine locked because of using illegal or copy RFID card.	Using illegal or piratic RFID card will lock the machine. If so ,seller will stop providing warranty and after sale service. To unlock the machine,please contact seller.

# Spark Fabr*i*ca

www.sparkfabrica.com





