

# Electronic Sparks machine

## User Manual

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**Disclaimer:** Please read the instruction manual carefully before operating, and our company is not responsible for equipment damage or casualties caused by non-compliance with the instructions.

# List

I. Safety warnings .....	1
II. Safety precautions .....	2
III. Product brief .....	3
IV. Product parameters .....	3
V. DMX Explanation .....	4
VI. Indicator lights & buttons .....	5
VII. Remote controller .....	6
VIII. Remote controller / DMX console operation .....	8
IX. Consumables .....	9
X. Clearing & Maintenance .....	9
XI. After sales .....	10
XII. Fault & Troubleshooting .....	10

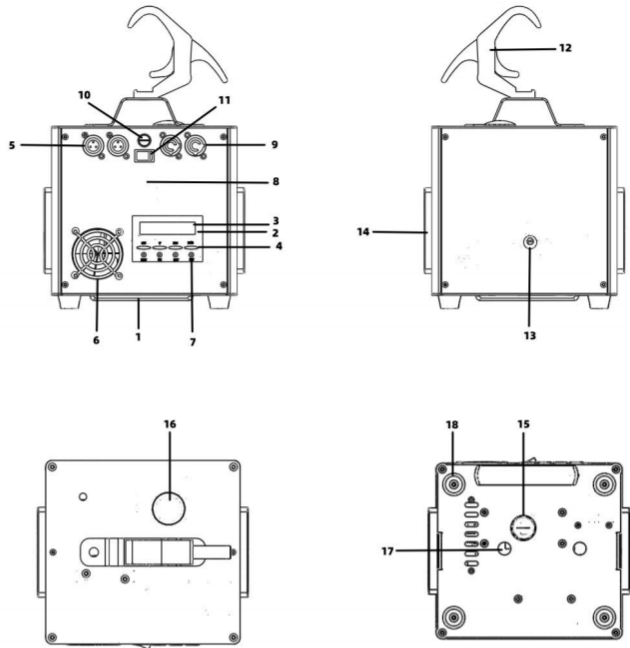
## I. Safety warnings

	<p>This symbol reminds the operator of danger and provides important information on safe and effective operation.</p> <p>Example of safety statement:</p> <p>Warning: Remind the operator of hazards or potential danger. This manual contains the hazard description and consequences.</p>
	<p>This warning symbol reminds the operator to protect the eyes when operating machine.</p>
	<p>The spark outlet is in a high temperature and hot , please DO NOT touch the outlet.</p>
	<p>Consumables filling hopper.</p>
	<p>Warning: The dangerous voltage in the equipment and controller may cause electric shock.</p> <p>Do not open the sparks machine and controller or remove any part inside without authorization. The machine and controller must be opened by person who received professional training.</p>
	<p>Keep machine and controller in dry place. do not operate machine in rain&amp; snow</p>
<b>Clear</b>	<p>After operating machine each time, switch off machine and pour out remain consumables, then switch on machine and clear consumables completely with consumables clearing program. Before transporting machine, pour out remain consumables and put it in a sealed &amp; dry container for use next time.</p>

## II. Safety Precautions

- 2.1. The machine has a built-in protection program, which will automatically stop after a single continuous spark reaches 30 seconds. continuous spark for too long will cause the interior to heat up rapidly, which may can cause damage or permanent damage to the internal structure of the equipment. It is recommended that a continuous spark time should not exceed 1 minute.
- 2.2. A standard power cord only allows a maximum of 6 machines to be connected in series, too many connections in series may cause damage or fire disaster. (power of the equipment is large, please pay attention to the configuration according to the load when using)
- 2.3. If there is no normal spark at the sparks nozzle during use, please stop the equipment operation immediately and contact after sales service.
- 2.4. Don't switch off the power immediately after spark, turn off the heating program and let the cooling fan discharge internal heat of the machine when the power is turned on.
- 2.5. Please use the machine in an open space and keep a safe distance of at least 5 meters from people.
- 2.6. Make sure the equipment is turned off before consumables feeding. Do not block the air inlet and outlet to avoid influence on ventilation and do not cover the nozzle.
- 2.7. If the consumable is accidentally ignited, please use sand to extinguish it, do not use water. Keep consumables in a dry and sealed place to prevent moisture and keep the machine dry.
- 2.8. When finish operating machine each time, please pour out the remain consumables inside machine, then switch on machine and make it working again, until there is no sparks coming out, to avoid block or damage to machine.
- 2.9. Damage to the device due to improper use or human factors is not covered by the warranty.
- 2.10. The final interpretation right belongs to our company.

III. Product brief



Indications :

Indications					
1	remote receiver	6	fan	11	power switch
2	parameter plate	7	indicator light	12	folding handle
3	display	8	service code	13	fix hole
4	button	9	power port	14	anti dust net
5	DMX port	10	fuse	15	sparkling hole
				16	filling hopper
				17	washer
				18	clear hole

Remarks: In case of adjustment of the appearance & function, there is no other explanation, please refer to the actual product.

## IV. Product Parameters

<b>Sparks height</b>	1.0~5.0 m
<b>Direction</b>	Down
<b>Working Temp</b>	-10℃~50℃
<b>Power input</b>	650W 6A / 110V, 650W 3A / 220V
<b>Fuse</b>	110V / 10A, 220V / 6.3A
<b>Interface</b>	dual DMX port, dual AC powder port
<b>Control mode</b>	DMX / Remote
<b>N.W.</b>	6.0 KGS
<b>Product size</b>	228*190*255mm
<b>Warranty</b>	1 year

## V. DMX Explanation

<b>1<sup>st</sup> channel</b>	<b>Function</b>	<b>Display</b>
100~219	Consumables clear	Clear
220~255	Preheat ON	0~600℃
<b>2<sup>nd</sup> channel</b>	<b>Function</b>	<b>Display</b>
0~15	Sparks OFF	
16~63	Spark height 1	Display screen backlight OFF
64~111	Spark height 2	Display screen backlight OFF
112~159	Spark height 3	Display screen backlight OFF
160~207	Spark height 4	Display screen backlight OFF
208~255	Spark height 5	Display screen backlight OFF

5.1. The machine has DMX IN and DMX OUT port, workable with universal 512 DMX control.

5.2. DMX channel: this machine take 2 channels.

### 5.3. DMX address code setting

DMX indicator light ON after connecting machine to control console with signal cable, press MENU to enter DMX setting page, press ^ and <> to set digital. Max setting 512 channels, this machine take 2channels, therefore each machine's address code should be odd digital such as 001,003,005...default setting 001, after setting press ENTER to save and go back to main page.

**Remarks:** under DMX512 control mode, each machine is connected by DMX INPUT and OUTPUT, the XLR plug should be corresponding to each other. when connecting machine it is advisable to use DMX signal terminator and twisted shielded cable to avoid signal interference.

5.4. Under DMX control mode, remote control is not available.

## VI. Indicator lights & Buttons



**READY: green** Indicator light flash, software is preparing; Indicator light on constantly, machine is ready for work.

**DMX: blue** Indicator light flash, remote controller already connected; Indicator light on constantly, DMX control console already connected; Indicator light off, no signal control mode connected.

**FAULT: red** This defect indicator light on when there is defect.

**HEAT: yellow** Indicator light on, machine is under heating; Indicator light off, already reach the setting temperature; Indicator light on constantly, heating function closed.

**MENU: menu**

- 6.1 Press **MENU** to enter sparks effects address code setting, press again to enter sparks effects series setting.

6.2 Under DMX control mode, press to enter 512 channels setting page.

6.3 Press for 5 seconds to enter temperature setting page.

**^ < >: Value setting** For setting parameter value on corresponding page.

**NETER: Setting save**

6.4 Press ENTER to save setting on setting page.

6.5 On default page, press ENTER two times quickly to enter preheating.

6.6 Under heating, press ENTER two times quickly to close heating.

## VII. Remote controller



**A- Preheat, Star / Stop**

**B- Low**

**C- Medium**

**D- High**

**A:**

1. After switch on machine, press A to connect machine and preheat, then DMX
2. Indicator light and HEAT indicator light flash.
3. Under sparkling status, press A to stop machine.
4. Press A for 5 seconds to enter consumables clearing and lasting 30seconds.

**B:** Press B for a low spark height.

**C:** Press C for a medium spark height.

**D:** Press D for a high spark height.

## VIII. Remote controller / DMX console operation

### 8.1 Remote controller operation:

8.1.1 Connect power cable and switch on machine.

8.1.2 Press button **A** to connect machine and enter preheat, when READY indicator light on, machine is ready for sparkling.



8.1.3 Press **B / C / D** to get a different height sparks.

## 8.2 DMX console operation:

8.2.1 Connect power cable and switch on machine, then connect DMX signal cables, DMX indicator light on, DMX connecting successfully.

8.2.2 Push the 1<sup>st</sup> channel pole to top to enter preheat, when READY indicator light on constantly, machine is ready for sparking.

8.2.3 Push the 2<sup>nd</sup> channel pole to get different height sparks.

## IX. Consumables

9.1 **Specifications:** N/Y: Spark height in 1.0-3.5M (0.5M deviation)

W/Y: Spark height in 2.0-5.0M (0.5M deviation)

9.2 **Consumables choose:** Please use the corresponding consumables from our company to make sure a good spark effects; We will not provide warranty in case machine's block or damage caused by using consumables from other supplier.

9.3 **Storage:** Consumables should be kept on a dry and sealed container to avoid damp. (DO NOT put consumables into machine if it get damp) .

9.4 **Refilling:** If spark comes less, please switch off machine and refill consumables.

## X. Clearing & Maintenance

10.1 Anti dust net clearing: take off the net from machine to clear it.

10.2 Machine outer clean: use a soft cloth to clear outer of machine outer.

10.3 Consumable clearing: after operating machine each time, switch off machine and pour out remain consumables, then switch on machine and clear consumables completely with consumables clearing program . (We will not provide warranty for problems caused by improper consumables clearing)



- 10.4 Inside machine clearing: There is clean hole in bottom of machine, open the hole stopper to clear inside machine.

## **XI. After sales**

- 11.1 Warranty: One year from date of manufacture.
- 11.2 There is warranty code sticker on machine, please show warranty code when service, warranty code void if ripped.
- 11.3 Video or pictures may requested for reference when after sales service.

## **XII. Fault & Troubleshooting**

<b>Appearance</b>	<b>Cause</b>	<b>Troubleshooting</b>
<b>Error 0</b>	Heating fault	1: Check heat PCB 2: Replace heat PCB or heating element
<b>Error 1</b>	Sensor fault	1: Check sensor if loosen 2: Replace sensor
<b>Error 2</b>	High temperature	Stop sparking for 2 minutes
<b>Error 3</b>	Anti tilt activate	lay machine flat and connect machine again
<b>Emergency stop</b>	Touch emergency stop on DMX console	Switch off and restart machine
<b>Screen goes off / Power off</b>	Power off protection activate	1: Check cooling fan & anti dust net if blocked. 2: Switch off machine for 10 minutes to cool down machine and restart.

### **Warning:**

**When there is fault indicator light (red) on, switch off machine immediately to avoid additional losses, check and solve fault before running machine again.**

### ◆ Important notes ◆

1. If the machine has run sparking CONTINUOUSLY for 60seconds for one time , then we suggest user to close the machine to cool it down and restart it again 60 seconds later. a long time continuous' running may cause a high temperature protection alarm from the machine itself, control program will force machine to stop & cool down.
2. Each time when finish operating machine, user should clear up consumables powder COMPLETELY inside the filling hopper & feeding rod channel, the best way is to make the machine STILL working for at least 30 seconds after consumables powder run out. Please note that a remain consumable powder may block machine and there is no sparks when user operate this machine next time.
3. When this machine is operated with DMX controller, user should push the rod of the second channel to top quickly and remain it, because a emergency stop will occur when user slide the rod slowly from 240~255.
4. Please use designated dedicated consumable powder from us with this machine, otherwise we will not provide warranty service.