

Moving head spark machine

User Manual



Safety

Warnings and Cautions



The sign is to remind users of paying attention to risk and security.

Please note that the machines are not meant to be a continuous duration effect. The maximum running time is 30 second and can be repeated but should not be done to overheat the machine.

Eye Protection



Eye protection warning sign is to remind you of protecting the eyes during the machine operation.

Injury Voltages



Warning: Dangerous voltages are present in this machine when electrical power is applied. There is a danger of injury from electric shock. Under no circumstances are you to attempt to open the machine or attempt to remove or adjust any components fitted within the machine.

Only fully trained engineers can open the equipment.

Caution Against Liquids



Use caution so that any liquids do not wet the machine.

Keep the machine and controller dry and not use rainy or snowy days unless covered.

Warning



Please prevent anything from entering the fountain port, if this happens

Please clear obstructions before continuing operation.

Please prevent machine from dropping when installing “DAMAGE CAN OCCUR”.

Cleaning



Please inspect fountain nozzle before use and confirm whether there are

accumulation granulates. If it does, please clean out by inverting the machine to clean out port.

➤ **Security Considerations:**

1. Unauthorized repair is prohibited, or else it may cause serious accident.
2. Keep spark machine dry and do NOT use in rain or snow.
3. Make sure the hopper lid is well covered when use spark machine. Accidentally Burning of Composite Ti can only use sands to extinguish. Composite Ti should be stored in a dry sealed environment.
4. Keep audience and flammable material at a minimum distance of 3m from spark machine. Make sure sparks shooting out from spark machine can NOT reach any objects.
5. It is necessary to clean the Composite Ti remains in the pipe before and after the show. Check whether there are Composite Ti remains in the nozzle after each show. If it does, please clean it up, or else it will affect the shooting effect or even damage spark machine.
6. Connection maximum is 6 pieces, and over-connection may result in damage or even fire.
7. For better heat dissipation, do NOT block the air intake and air outlet.
8. Cover nozzle is prohibited.

➤ **Parameter(machine):**

Working Height:	1-5 meters
Working Temperature:	-10°C-50°C
Heating Power:	750w 6.8A (110V version) 750w 3.4A (220V version)
Fuse:	110V/10A, 220V/6A
Control:	DMX
Net Weight:	11.8kg
Dimensions:	265*265*480mm
Max connections:	6 pieces
Warranty:	1 year
Package:	Carton box Flight case(2 in 1) Flight case(4 in 1)

➤ **Parameter(consumables):**

Consumable material:	Titanium Alloy Grains
Net Weight:	200g
Usage:	total 7-15 minutes spark shooting
Package:	Vacuum packing

➤ **DMX 512 Operation:**

1) International standard control signal: DMX 512

2) The device uses five channels

Channel 1: control preheat and emergency stop

Channel 2: control spark height

Channel 3: X-axis rotation

Channel 4: Y-axis rotation

Channel 5: speed adjustment

3) Spark height, X/Y axis rotating direction and speed can be adjustable

4) Overheating can be intelligently protected and shows error code

5) The digital display of the cold spark machine shows that F1-F5 corresponds to the 1-5-position spark height respectively

6) When the ready green light is on, the spark effect is best

➤ **Operation Interface:**



READY(green): flash: not ready, light on: ready

DMX(blue): flash: dmx signal, light off: signal disconnected

FAULT(yellow): reminder error

HEAT(red): heating lights

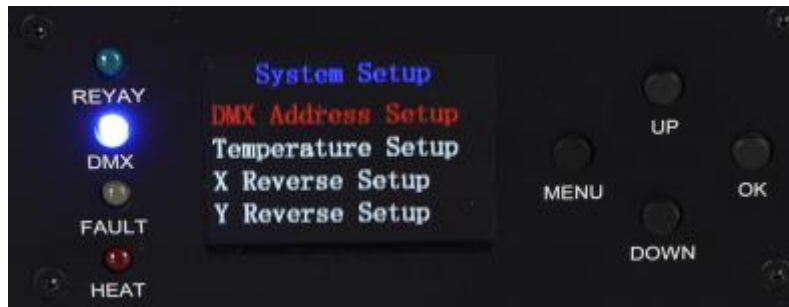
MENU: menu

UP: choose above

DOWN: choose below

OK: confirm

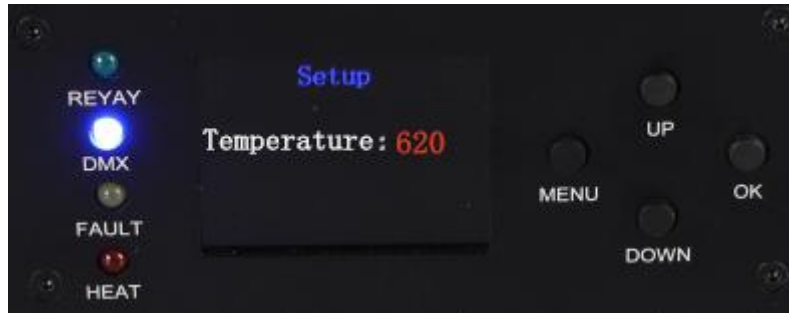
1. Address adjustment: MENU-- DMX Address Setup --OK --UP/DOWN



2. Temperature adjustment: MENU-- Temperature Setup --OK -- UP/DOWN

(Temperature range: 580-650 degree, presetting: 620 degree)





3. X-axis direction: MENU-- X Reverse Setup-- OK --UP/DOWN
 (ON: clockwise direction, OFF: anticlockwise direction)

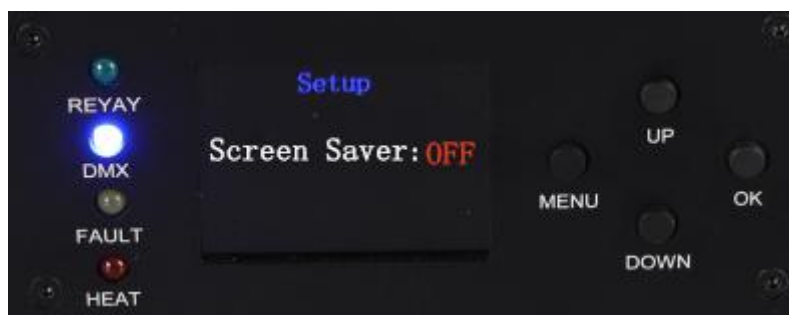


4. Y-axis direction: MENU -- Y Reverse Setup -- OK --UP/DOWN
 (ON: clockwise direction, OFF: anticlockwise direction)





5. Screen Saver Setup: MENU -- Screen Saver Setup -- OK -- UP/DOWN



➤ **DMX512 signal control:**

When using the DMX512 control mode, the signals between devices are connected in parallel. So it is best to use twisted-pair shielded cables when connecting multiple devices. Each device is connected via the DMX signal socket (cassette) INPUT and OUTPUT on the device. The 3-pin XLRXL connector terminals of the connected device must correspond to each other. When connecting device signals, it is recommended to use the DMX signal terminator to avoid signal reflection and damage signal control.

When the DMX console is successfully connected to the machine, the DMX signal light (blue) flashes. When the first channel (240-255) pre-heat function can is on, the HEAT light (red) lights, and the temperature will be displayed on the machine screen. When the heating is completed, the screen will display the DMX channel, and the READY (green) will change from blinking to static state, indicating that the machine is ready, and the height can be controlled through the second channel.

➤ **DMX Channel List**

The 1st channel:	Functions:	Display
0-10	Pre-heat OFF	
11-220	E-stop	E57
221-239	Clear powder	CLE
240-255	Pre-heat ON	0-500
The 2nd channel:	Functions:	
0-15	Pre-heat OFF	OFF
16-63	working height 1	F1
64-111	working height 2	F2
112-159	working height 3	F3
160-207	working height 4	F4
208-255	working height 5	F5
The 3rd channel:	Functions:	
0-255	X-axis direction adjustment(540 degree)	
The 4th channel:	Functions:	
0-255	Y-axis direction adjustment(120 degree)	
The 5th channel:	Functions:	
0-255	Speed adjustment	

➤ **Fault Light solution:**

Code	Reason	solution
E01	Failed heating	1. Check the heating board/radiator works normally or not. 2. Replace the heating board
E02	Heating is out of control	1. Replace the heating board
E03	Inside temperature is too high	1. Check the fan. 2. Stop heating or operating, and restart after 10mins.
E04	Blower stops working	1. Check whether something goes into the nozzle. 2. Replace the blower.
E05	Sensor is faulty	1. Checking sensor socket. 2. Replace sensor.

Note: When the FAULT light is on, please restart the machine until FAULT light is off.

➤ **Consumables:**

1) If the consumables are accidentally ignited, they can only be covered with sand, and the air is isolated until it is extinguished. Do not use water.

2) Consumables should be kept in a dry and sealed environment to prevent moisture.

3) The consumables are classified as:

Indoor consumables: the spray height is 1.0-3.0 m (error 0.5 m), and the remnants are little.

Outdoor consumables: The spray height is 2-5 meters (0.5 m error), and the remnants will leave on ground.

4) If you find that the spark effect is not good, it may be due to insufficient consumables, and please add some.

➤ **Consumables clean(important note):**

1. Please empty the powder by turning over the machine and clean remnants (DMX control address: 221-239) after use.

2. If the remnants are stuck, you have to open the housing and manually rotate the chain anticlockwise.

3. We don't offer free warranty once the machine stops working without clean process after use.

➤ **Warning:**

1. Do not shoot more than 30 seconds each time. If the continuous shooting time is too long, the internal temperature will rise sharply and cause permanent damage. After a single long-time shooting, the machines should have a short pause to cool down.
2. The spark shooting will stop automatically after 30 seconds. If users need it to work again, please operate the second channel again.
3. Max connection is 6 pieces via power connecting cables.
4. If there is no spark out with enough consumables, it is possible that the chain is stuck and please open the side rubber and rotate the chain manually. Please contact after-sale service for help if it does not work.
5. After use the machines, do not immediately turn off the power. The heat-dissipating fan should take out the internal air when the power is on. Otherwise, the internal heat is quickly transmitted to the surface of the casing.
6. The operators should be 3-5 meters away from the cold spark machine.
7. Make sure the device is off before filling the consumables.
8. If the consumables are accidentally ignited, please use the sand to extinguish, do not use water.
9. Store consumables in a cool, dry, sealed environment.
10. Damage caused by improper use or human factors is not covered by the warranty.
11. The final interpretation right belongs to our company.