

# SPARK JET PRO

## SF-05

# USER MANUAL



SPARK MACHINE  
MACHINE A ETINCELLES  
FUNKENSPRUHMASCHINE  
VONKENMASCHINE

## USER MANUAL

### EXPLANATION OF SYMBOLS ON THE SILKSCREEN



The triangle containing a lightning symbol is used to indicate whenever your health is at risk (due to electrocution, for example).



An exclamation mark in a triangle indicates particular risks in handling or operating the appliance.



The unit complies with UK standards.



For indoor use only.



Protection class I. Requires an earth connection.



Please read this manual carefully before operating this product.

### SAFETY RECOMMENDATIONS

- Don't try to repair the unit by yourself or you invalidate the warranty. Repairs must only be carried out by a qualified technician.
- Keep the unit dry and do NOT use in rain or snow.
- Make sure the lid of the feeding hopper is well covered when using the unit. Accidentally burning of Ti powder can only be extinguished with sand. Composite Ti should be kept away from moisture and stored in a dry, sealed environment.
- Do not mount the product on a flammable surface (linoleum, carpet, wood, paper, carton, plastic, etc.). Keep audience and flammable material at a minimum distance of 3m from SPARK JET PRO. Make sure the sparks shoot out by the unit can NOT touch any objects.
- Clean the unit before and after the show. Make sure that no Composite Ti remains in the pipe and the nozzle. Remove all residues of Composite Ti aggregate, otherwise it will affect the shooting effect or even damage the unit.
- Do not use the unit in a confined space. Always install the product in a location with adequate ventilation, at least 50cm from adjacent surfaces.
- For better heat dissipation, never block the air intake and air outlet.
- Do not cover the nozzle of the unit. Do not aim the nozzle at people or objects.

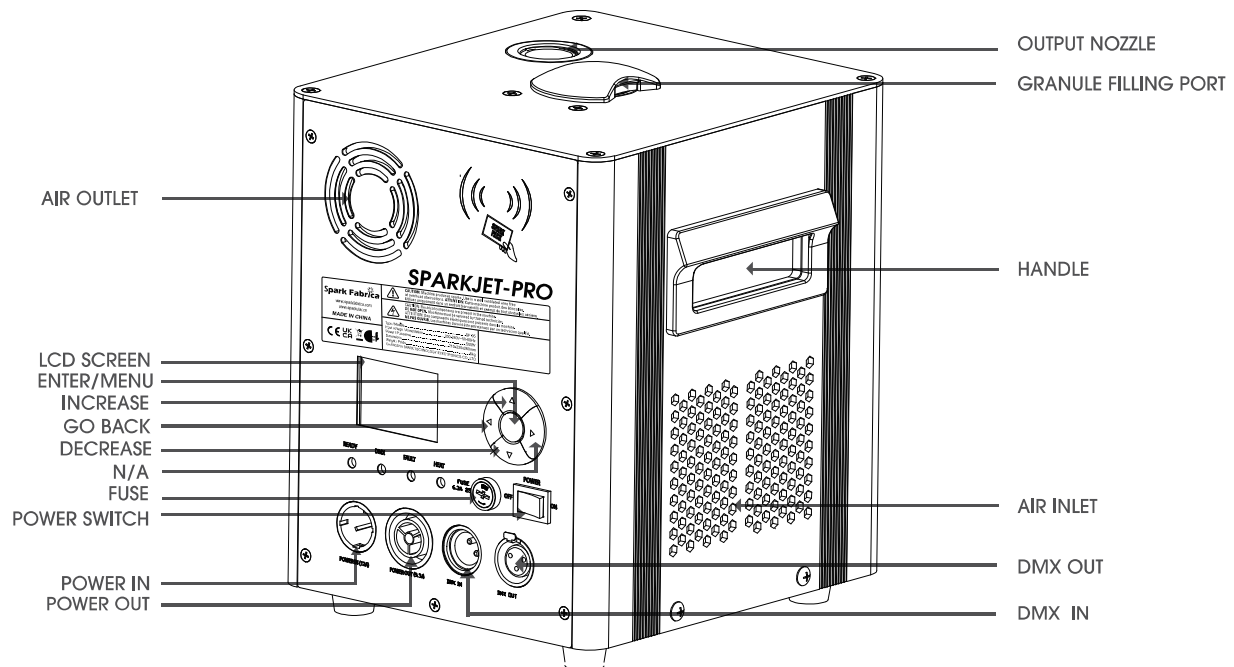
- Make sure that no foreign objects or liquids can fall into the nozzle.
- During operation the unit becomes very hot and remains hot for a long time after operation has stopped. Do not touch the housing or put a finger into the output nozzle.
- During operation the unit becomes very hot and remains hot for a long time after operation has stopped. Do not touch the housing or put a finger into the output nozzle.
- Make sure that children, unauthorized people or animals get never access to the machine.
- The noise level generated from the spark machine is estimated at 80dB.
- Wear eye protection when you fill in granules or test the spark machine.

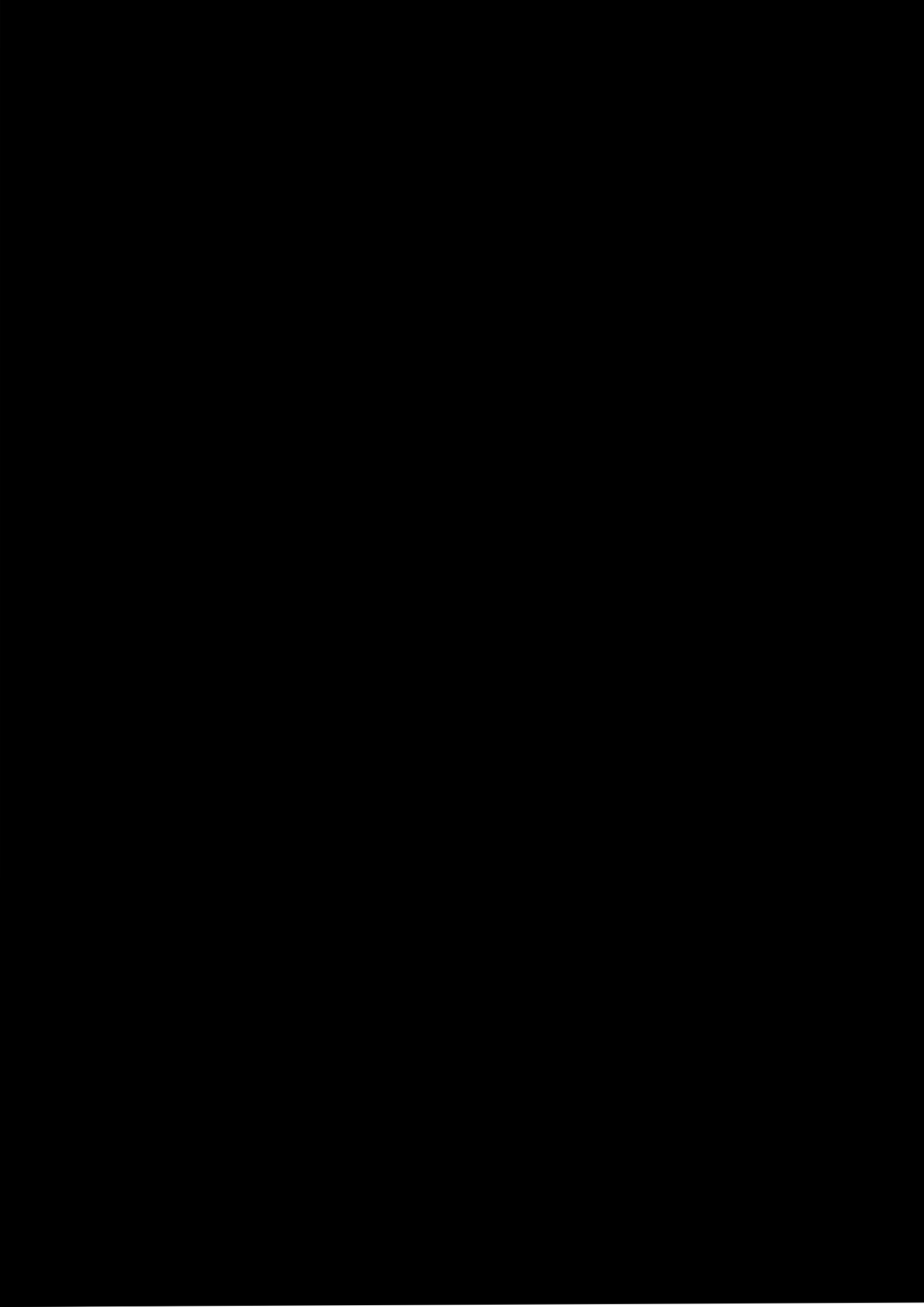
#### Features:

- Cold sparks projected up to 5m high
- 2 or 8 DMX channels
- Adjustment of height and duration of the spark fountain
- Tilt detector
- TFT screen which displays the operating status of the machine
- Works with a low residue metal powder that generates no smoke, odours or other harmful gases.
- Automatic cleaning to avoid the accumulation of residues in the combustion chamber
- Supplied with remote control

This machine is used on stage, at weddings, parties, sporting events, concerts, etc.

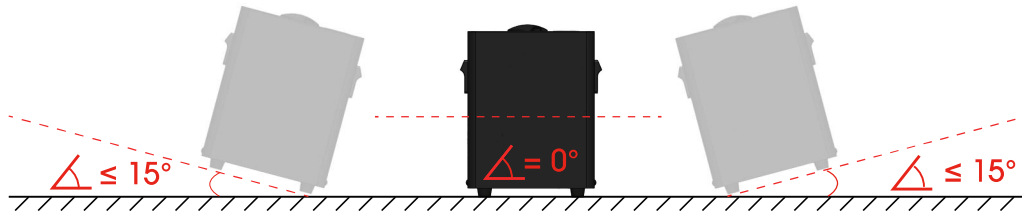
## DESCRIPTION



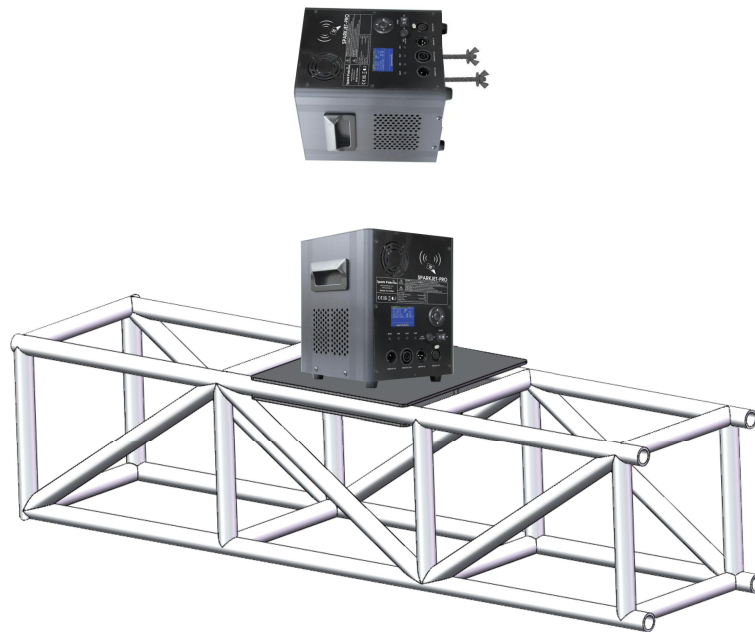


## INSTALLATION OF THE MACHINE

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



Install the machine on a truss via the supplied accessories.



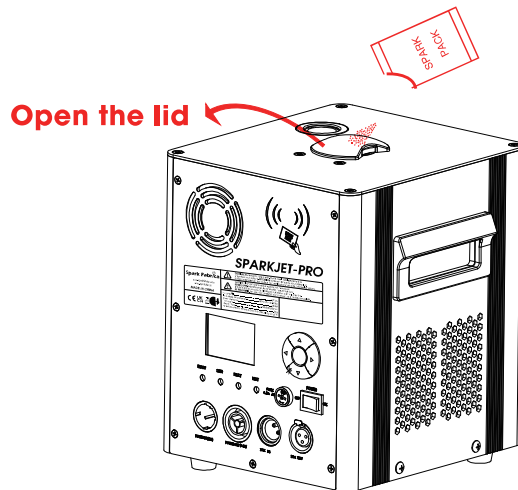
## FILLING IN THE GRANULATE

Please use our LARGE size granulate for spark fountains of 3-5m height (order code : SPARK-POWDER-LARGE).

1. Open the vacuum package of granules and fill them into the granule receptacle on top of the machine. The maximum capacity is 150g.

**2.DO NOT fill granules into the output nozzle! FIRE HAZARD!!!**

3.Close the lid securely after filling.



**OPERATION**

**CONNECTION**

Plug in the supplied mains lead into the POWER IN socket of the machine. If you wish to daisy-chain several machines, plug another power lead into the POWER OUT socket and the other end into the POWER IN connector of the following machine.

Plug a 3-pin DMX cable into the DMX IN socket and the other end into the DMX OUT connector of your DMX controller. If you want to connect another machine, connect the DMX OUT connector to the DMX IN connector of the following machine.

Connect a DMX512 controller via a DMX signal cable to the DMX IN connector.

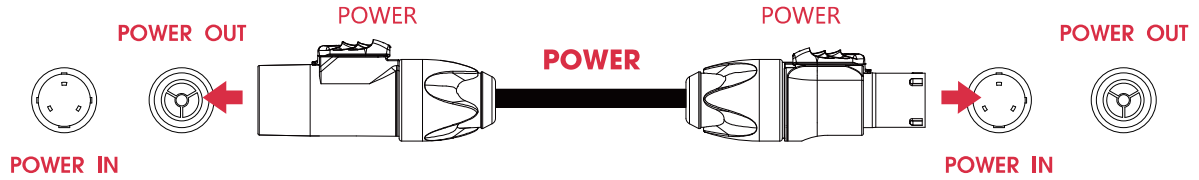
DMX connector configuration

DMX terminators reduce signal errors. To avoid signal transmission problems and interference, it is always advisable to connect a DMX signal terminator between pin 2 and 3 of the last unit.

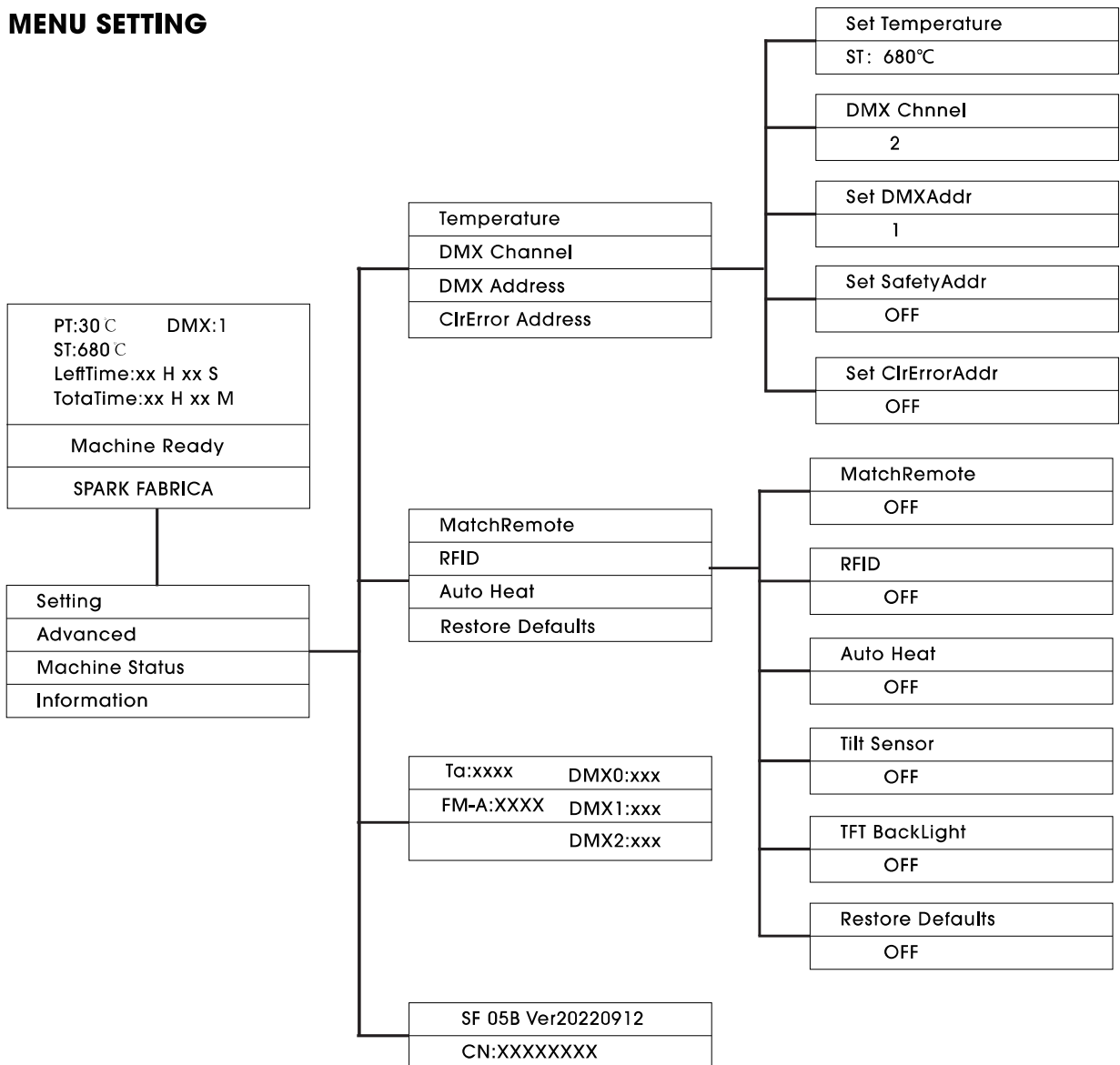
**POWER LINK**

You can power up to 4 units via the POWER IN/POWER OUT connectors from one single mains outlet. Connect a power cable from the POWER OUT connector of the 1st unit to the POWER IN connector of the second unit, etc.





### MENU SETTING



Press OK to into the setting menu. The screen will automatically return to the main state interface with no modification.

Press ▲ or ▼ to change the values. The values will flash after modification, press OK to save the change.

Press ◀ to return to previous page.

### STATUS ICONS



#### NOTICE

When the icons are green means the machine is working normally, and yellow means abnormal.

	Blower Motor	<b>TS</b>	Temp Sensor Unconnected
	Shaft Motor		Temp Over Heat
	Hopper Motor		Tip Over
	Lack Of Time		Sub PCB Connected
	PCB Too Hot		2/3 Channel Mode Optional

### RDM FUNCTION

RDM allows a console with RDM function to define DMX address and starting temperature of spark jet .

### DMX OPERATION

First Channel	DMX address	Function
<b>CH1</b>	0~10	Stop
	11~255	Fountain Height 1~25
<b>CH2</b>	0~200	Pre-heat Off
	11~39	Emergency Stop
	56~200	Clear Material
	240~255	Pre-heat On
<b>Safety channel</b>	0~200	Control off
	201~255	Control On



## INITIAL SETTING

Setting	Range	Default
Set Temperature	400-680	680
DMX Address	1~512	1
DMX Channel Mode	2/8	2
Safety Addresss	0~512	OFF(0)
Tilt Sensor	ON/OFF	ON
Restore Defaults	YES/NO	NO
TFT BackLight	ON/OFF	ON
Auto Heating	ON/OFF	ON

### Turn on power.

Check the status icons. If the icons are yellow, operation is abnormal. Please ask a professional to check and repair the machine.

The sparking temperature of the machine is the factory default temperature. The machine will heat up automatically when the DMX signal is disconnected . Automatic heating function can be set on or off.

If the machine is connected to a DMX signal, the heating can only be started by the DMX controller.

## SET CHANNEL MODE

Please refer to the MENU chapter to set to the desired number of channels.

## SET DMX ADDRESS

Please set the DMX address according to the selected channel mode:

If the machine is set to 2 channels, please set the DMX address to 1, 3, 5, 7, etc.

If the machine is set to 8 channels, please set the DMX address to 1, 9, 17, 25, etc.

## RFID TIME CARD

This model does NOT offer the RFIO function.

## START TO SPARK

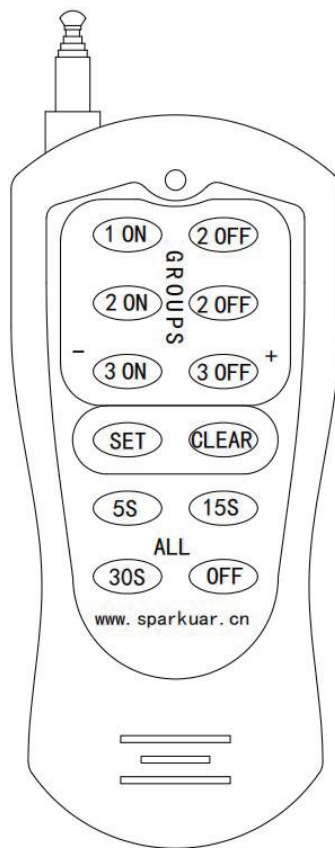
Turn on your DMX controller  
Turn on the heating function

- The heating function of the second DMX channel has the value 240- 255 . It takes about 5 minutes to preheat after power on.
- When the heating is turned on, the HEAT indicator light on the machine will turn to red and the READY indicator flashes green .
- When heating is completed, the READY indicator lights steadily green and the machine enters into sparking status.

## ADJUST SPARKING HEIGHT

Adjust the sparking height via channel 1. The DMX value of height adjustment is 11-255 .  
The maximum height of indoor and outdoor granule is different. The maximum height of indoor granule is 3.5m while outdoor granule is 5 meters . The height and direction are also affected by wind conditions.

<b>1 ON</b>	Address“1”ON	<b>1 OFF</b>	Address“1”OFF
<b>2 ON</b>	Address“3”ON	<b>2 OFF</b>	Address“3”OFF
<b>3 ON</b>	Address“5”ON	<b>3 OFF</b>	Address“5”OFF
<b>SET</b>	When use different remote control	<b>CLEAR</b>	Autom atically clean material for 3 seconds
<b>5 S</b>	ALL Starts 5 seconds	<b>15 S</b>	ALL Starts 15 seconds
<b>30 S</b>	ALL Starts 30 seconds	<b>OFF</b>	<b>All stop</b>



The first group of machines correspond to DMX address "1", the second group to DMX address "3", the third DMX address is "5". The remote control controls 3 groups of machines. It also can set all addresses to "1".

## INSTALLING THE BATTERY IN THE REMOTE CONTROL

- Place the remote face down on a flat surface.
- Push the compartment cover into the direction of the arrow to slide the battery compartment open.
- Remove the old battery and install the new one (LR23A 12V) with the correct polarity.
- Gently slide the battery compartment closed. It locks automatically.



This symbol indicates that used batteries should not be disposed of with household waste but deposited correctly in accordance with your local regulations

Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

When the internal batteries are not to be used, remove them to avoid damage caused by battery leakage or corrosion.

**ATTENTION:** Danger of explosion if battery is incorrectly placed. Only replace by the same or equivalent type.

**WARNING :** Do not swallow the battery. Danger of chemical burns. Keep new and old batteries out of the reach of children.

If the battery compartment doesn't close properly, stop using the product and keep it out of the reach of children. If you are in doubt whether the batteries have been swallowed or introduced into any other part of the body, contact immediately a doctor.

## CLEAR MATERIAL

The machine offers a cleaning function of heated but not sparked consumables to avoid residues in the heating chamber and blocking of the machine.

Use the cleaning function of channel 2, DMX values 56-200.

Clear material after each show.

## CLEANING

- After the clearing process, clean the machine to extend its life time.

- Turn off power

- Unplug the mains and the DMX cables.

Remove dust and debris from the machine with a damp cloth.

## MAINTENANCE

After a period of use, clean the nozzle to remove eventual residues of consumables.

## FAILURE HANDLING

### 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 minutes until 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	1.Shaft motor clog (perform clean material function manually) 2.Check wire connection of motor 3.Replace motor 4.Replace main board

Motor Protect E1 M3	Hopper motor protection/ disconnectd	1.Hopper motor clog ( perform clean material function manually) 2.Check wire connection of motor 3.Replace motor 4.Replace main board
Temp Sensor E2 Unconnected	Temperature sensor disconnected	1.Check wire connection of temperature 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	1.Inspect Wire connection of heating board. 2.Replace heating coil 3.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 clear off automatically after put 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.	Use illegal or copy RFID card will lock the machine. If so ,seller will stop providing warranty and after sale service. To unlock the machine,please contact seller.

**SPECIFICATIONS**

Power supply .....	200- 240V ~ 50/60Hz
Consumption .....	600W
Heating time .....	10 minutes
Granule consumption .....	20-25g/min.
Height of spark fountain .....	Adjustable from 1.5 - 5m in 10 steps
Max. output duration .....	30 seconds
Powder tank capacity.....	150g
Weight.....	7kg
Dimensions.....	215 x 250 x 330mm



**IMPORANT NOTE:** Electric products must not be put into household waste. Please bring them to a recycling centre. Ask your local authorities or your dealer about the way to proceed.

**Spark Fabrica**

[www.sparkfabrica.com](http://www.sparkfabrica.com)



| [marketing@sparkfabrica.com](mailto:marketing@sparkfabrica.com) |

+86 138 7585 1139