


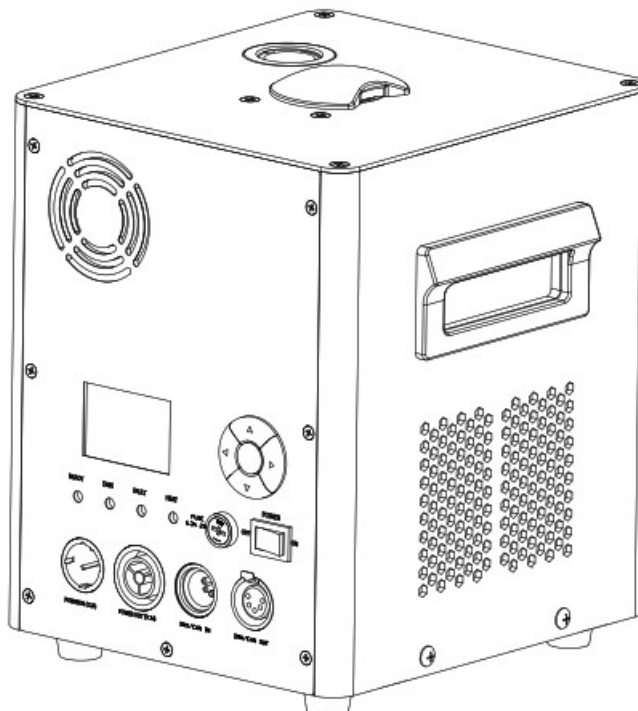


## AFX LIGHT 16-2906 Spark Machine User Manual

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**SPARKLING-PRO  
CODE: 16-2906  
SPARK MACHINE  
MACHINE A ETINCELLES**



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## 16-2906 Spark Machine

### 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



**CAUTION**



**DO NOT OPEN THE HOUSING SHOCK HAZARD**

Please read this manual carefully before operating this product.

### SAFETY RECOMMENDATIONS

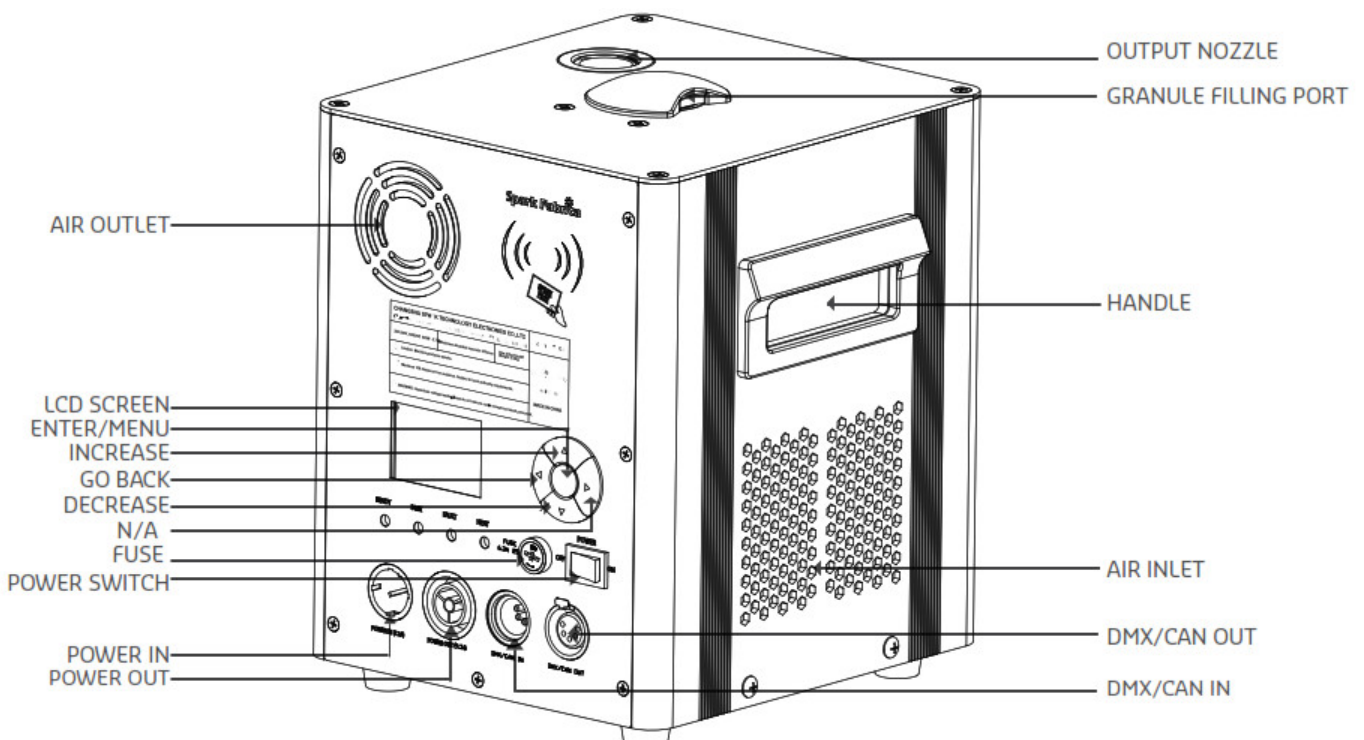
- Don't try to repair the unit by yourself or you invalidate the warranty. Repairs must only be carried out by a qualified technician.
- Keep the unit dry and do NOT use in rain or snow.
- Make sure the lid of the feeding hopper is well covered when using the unit. Accidentally burning of Ti powder can 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 SPARKLING-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.
- 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.

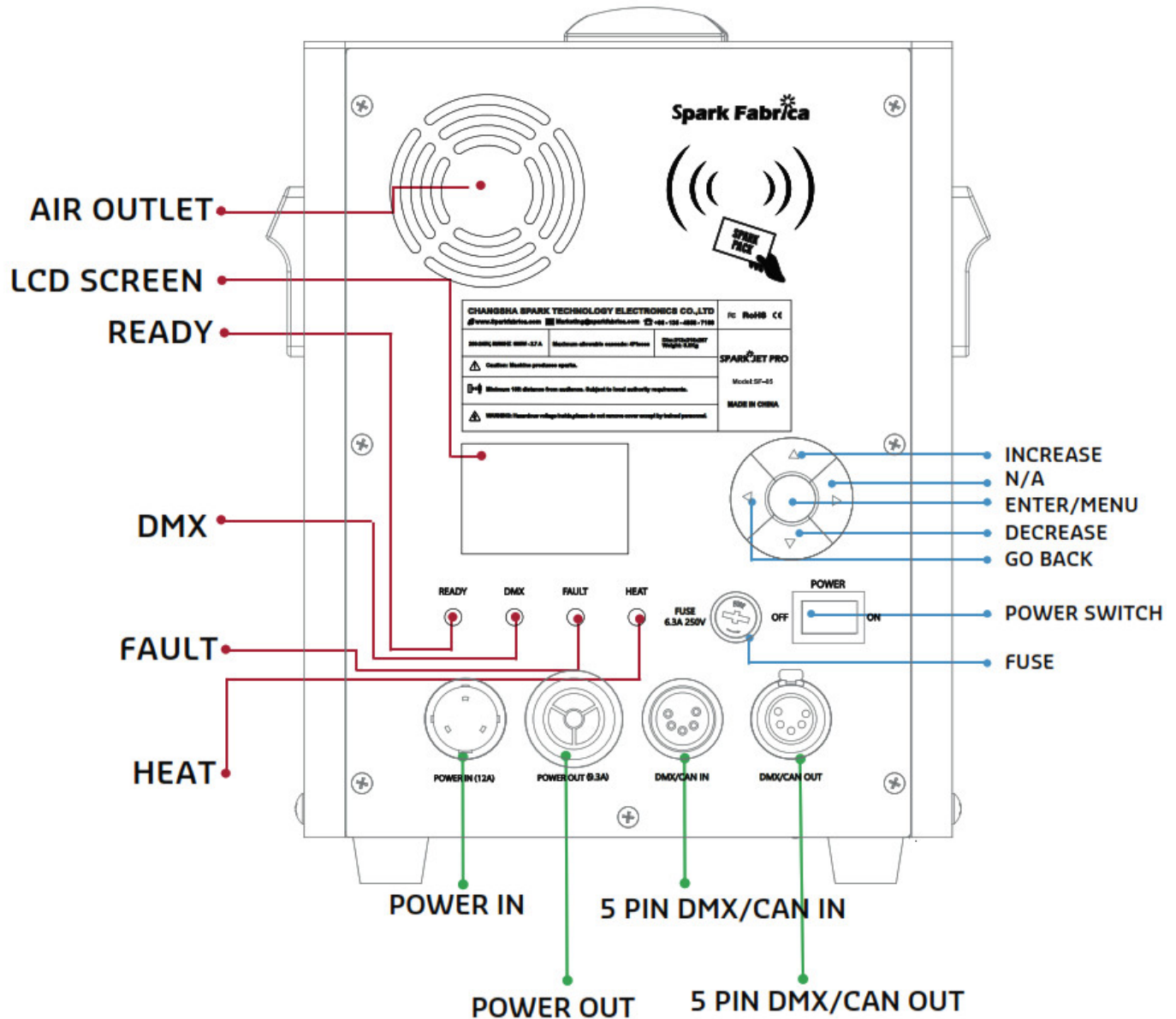
## Features:

- Cold sparks projected up to 5m high
- 2 or 3 DMX channels
- RDM function
- Adjustment of height, density and duration of the spark fountain
- Tilt detector
- TFT screen which displays the operating status of the machine
- Firing activated only by RFID card to prevent accidental triggering
- 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



## REAR PANEL:



**READY:** The READY LED flashes as long as the set temperature has not been reached. When it stays steadily on, the machine is ready for sparking.

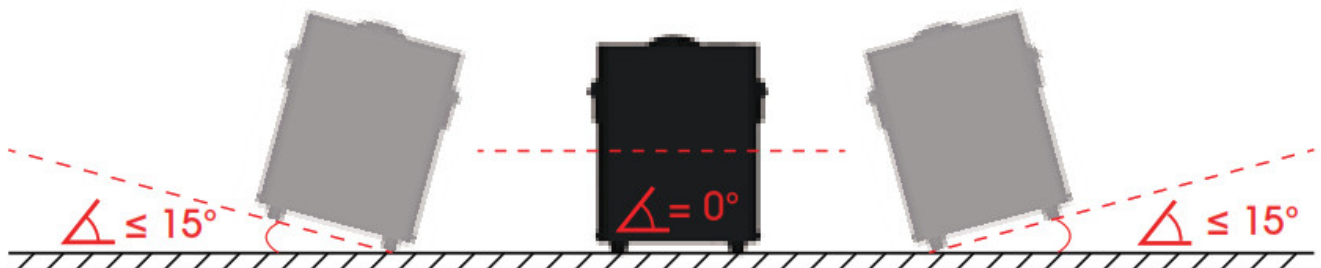
**DMX:** The LED is on when a DMX signal is received. In wireless mode, it will flash.

**FAULT:** If the machine does not operate correctly, this LED will light and the LCD will display the error message.

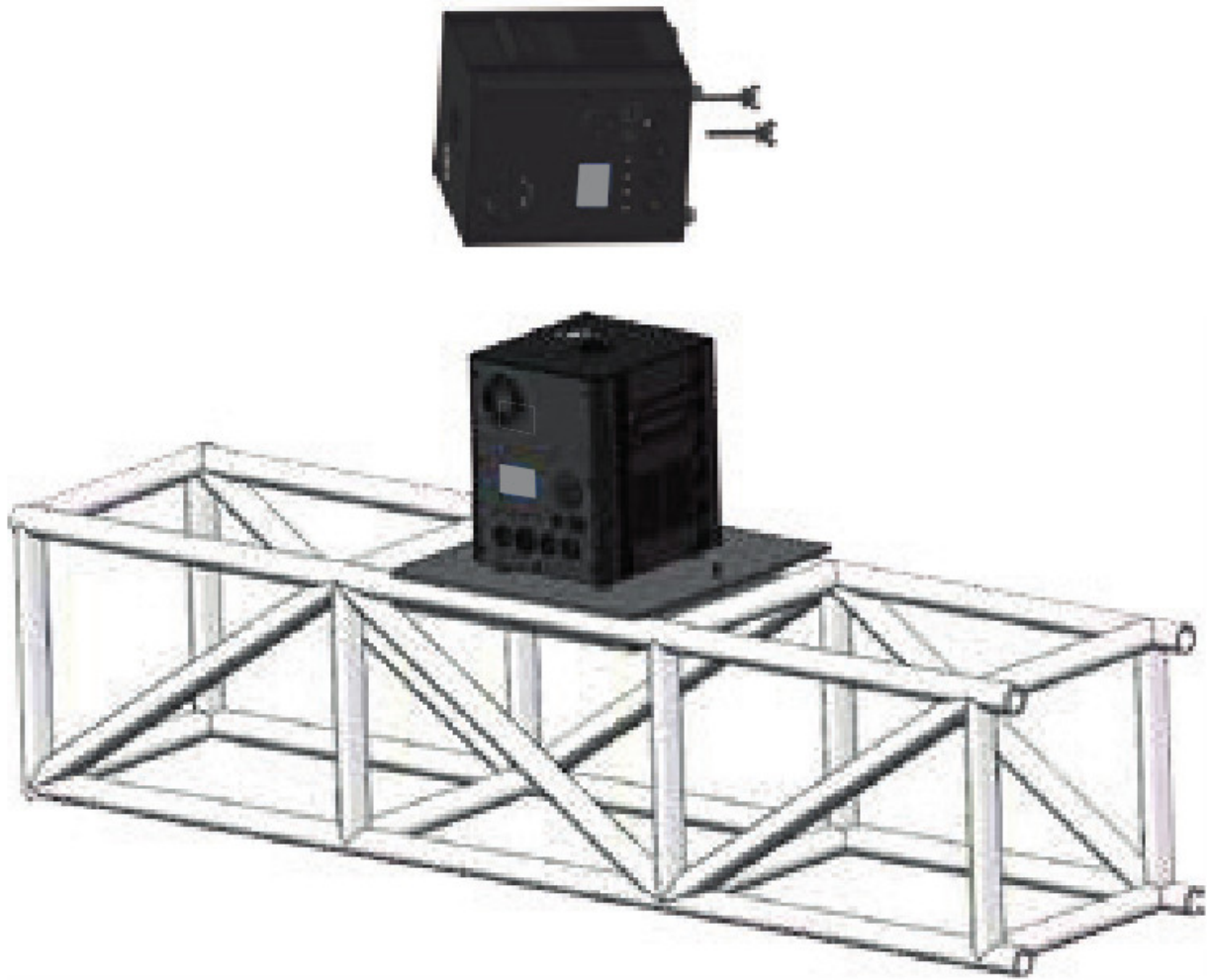
**HEAT:** The indicator is ON when the machine is heating up.

## 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!
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 5-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.

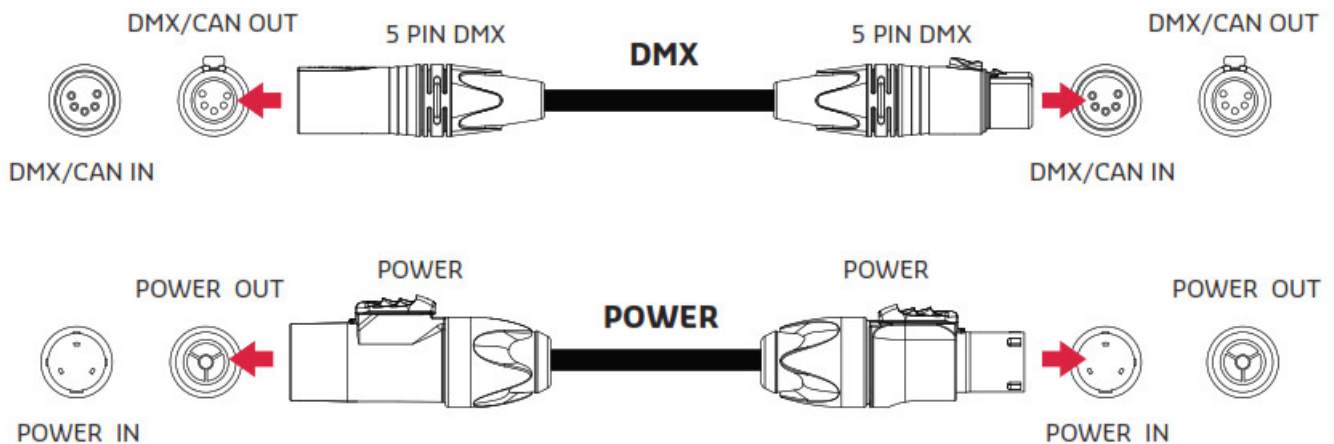
Connect a DMX512 controller via a DMX signal cable to the DMX IN connector.

### DMX connector configuration

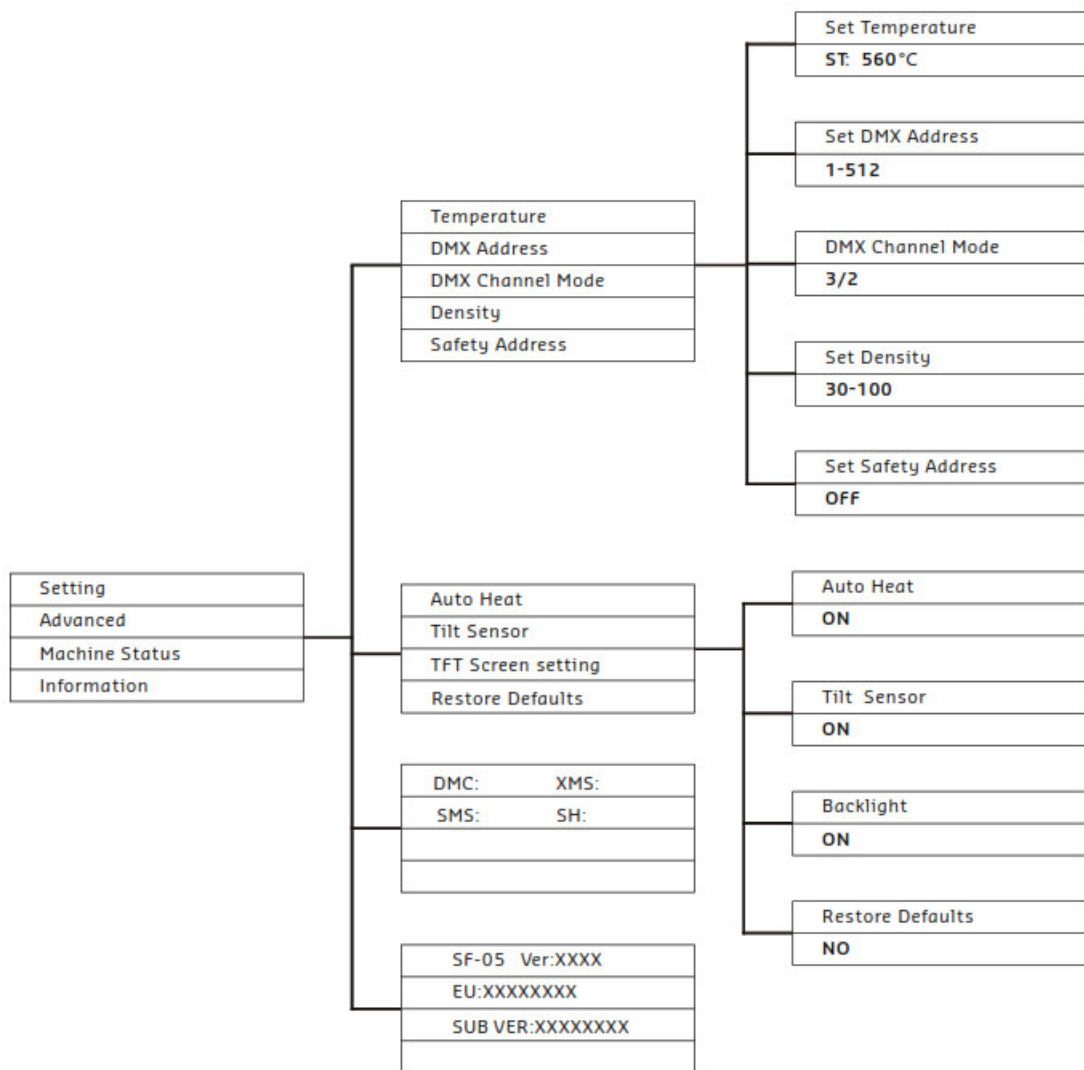
DMX terminators reduce signal errors. To avoid signal transmission problems and interference, it is always advisable to connect a DMX signal terminator between pin 2 and 3 of the last unit.

### 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 the into the setting menu. The screen will automatically return to the main state interface without any modification.

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

Press ◀ to return to previous page.

### STATUS ICONS

When the icons are green, the machine works normally. When they are yellow, the operation is abnormal.

         	Blower Motor
	Shaft
	Hopper motor
	Temp sensor unconnected
	Temp overheat
	Tip over
	Lack of time
	PCB too hot
	Sub PCB connected
	2/3 channel output

## RDM FUNCTION

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

## DMX OPERATION

Channel	DMX address	Function
CH1	0-10	Stop
	11-255	Fountain height 1-25
CH2	0-200	Pre-heat off
	11-39	Emergency stop
	56-200	Clear material
	!240-255	Pre-heat on
CH3	0-255 -7	Density adjustment (0 is maximum density)
Safety channel	0-200	Control off
	201-255	Control On

## INITIAL SETTING

Setting	Range	Default
Set temperature	400-620	560
DMX address	1-512	1
DMX channel mode	2-Mar	3
Density	30-100	100
Safety address	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 3 channels, please set the DMX address to 1, 4, 7, 10, etc.

#### **RFID TIME CARD**

In order to avoid misuse, failures and accidents caused by unqualified persons, the machine can only be used with a special RFID time card.

Each swipe of the card recharges the operation time for 12 minutes. You can only swipe the card twice for 24 minutes operation max.. The card can only be swiped again when the remaining time is less than 20 minutes.

#### **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.

#### **ADJUST SPARKING DENSITY**

The machine has an independent sparking density adjustment. You can control the density during sparking which allows more special effects during the show.

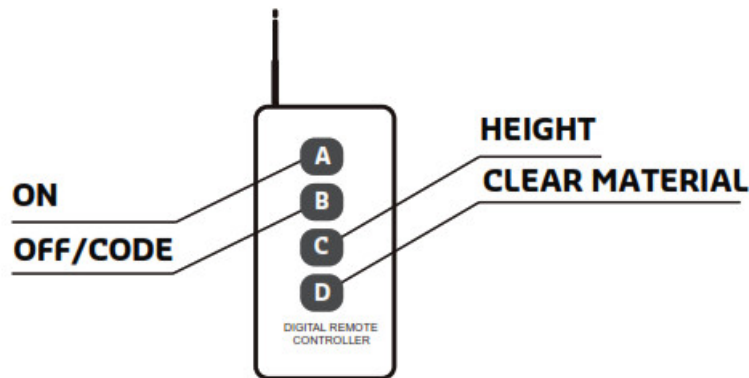
The third channel is dedicated to the density adjustment. The density can be adjusted between 30 and 100%. The default sparking density is 100%. The DMX values are 0-255. 0 means 100% density. The higher the DMX value, the lower the density.

### USE OF THE REMOTE CONTROL

Turn on power and don't connect a DMX signal.

On the first screen hold ▲ on the control panel of the machine for 2 seconds until the display shows "Control Pair Remoter 315M".

Press "B" on the remote control until the display shows "Code Success".



One remote control can control up to 4 machines.

Please note that the DMX signal must be disconnected during pairing and use of the remote control, otherwise the remote will not work.

Sparking stops automatically after 30 seconds and clearing material stops after 5 seconds.

The remote control allows to select among 4 height levels.

### 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.

### RECOMMENDATIONS FOR BATTERIES



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

Error Code	Description	Solution
System Error E0 storage fail	System error: storage fail	Replace main board
Motor protect E1 M1	Blower motor protection / disconnected	<ol style="list-style-type: none"> <li>1. Restart machine to clear alerts, stop operating for 15 minutes until temperature has returned to normal.</li> <li>2. Check wire connection of the motor</li> <li>3. Replace motor</li> <li>4. Replace main board</li> </ol>
Motor protect E2 M2	Shaft motor protection / disconnected	<ol style="list-style-type: none"> <li>1. Shaft motor clog (perform Clear material function manually)</li> <li>2. Check wire connection of the motor</li> <li>3. Replace motor</li> <li>4. Replace main board</li> </ol>
Motor protect E3 M3	Hopper motor protection / disconnected	<ol style="list-style-type: none"> <li>1. Hopper motor clog (perform Clear material function manually)</li> <li>2. Check wire connection of the motor</li> <li>3. Replace motor</li> <li>4. Replace main board</li> </ol>
Temp Sensor E2 Unconnected	Temperature Sensor disconnected	<ol style="list-style-type: none"> <li>1. Check wire connection of the temperature sensor</li> <li>2. Replace temperature sensor</li> <li>3. Replace main board</li> </ol>
PCB too hot E3	Main board too hot	Stop operating the machine until the main board temperature has turned to normal
Time remain E4	Insufficient time	Please scan new RFID card

Temp Over heat E5	Heating protection due to over-temperature	Stop operating the machine until temperature returns to normal. Alert will clear off automatically
Heat Fail E6	Heating process fail	<ol style="list-style-type: none"> <li>1. Inspect wire connection of heating board</li> <li>2. Replace heating coil</li> <li>3. Replace heating board</li> </ol>
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 once the machine is back to normal position.
Sub PCB unconnected E8	Sub-PCB disconnected	<ol style="list-style-type: none"> <li>1. Check wire connection of Sub-PCB</li> <li>2. Replace sub-PCB</li> <li>3. Replace main board</li> </ol>
Illegal Card Machine Locked	Machine locked because the RFID card is illegal or a copy	<p>The use of an illegal or copied RFID card will lock the machine. In that case, the seller will stop providing warranty and after-sales service.</p> <p>To unlock the machine, please contact your seller.</p>

## SPECIFICATIONS

Power supply .....	200-240V~ 50/60Hz
Consumption .....	600W
Heating time .....	5 minutes
Granule consumption .....	20-25g/min.
Height of spark fountain .....	Adjustable from 1.5 – 5m in 10 steps
Density .....	30-100%
Max. output duration. ....	30 seconds
Powder tank capacity .....	150g
Weight .....	8kg
Dimensions .....	215 x 250 x 330mm




**IMPORTANT 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.



Assembled in PRC  
Designed by LOTRONIC S.A.  
Av. Z. Gramme 9  
B – 1480 Saintes  
[www.afx-light.com](http://www.afx-light.com)

Documents / Resources

	<p><a href="#">AFX LIGHT 16-2906 Spark Machine</a> [pdf] User Manual 16-2906 Spark Machine, 16-2906, Spark Machine, Machine</p>
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References

-  [Logo AFX](#)

[Manuals+.](#)