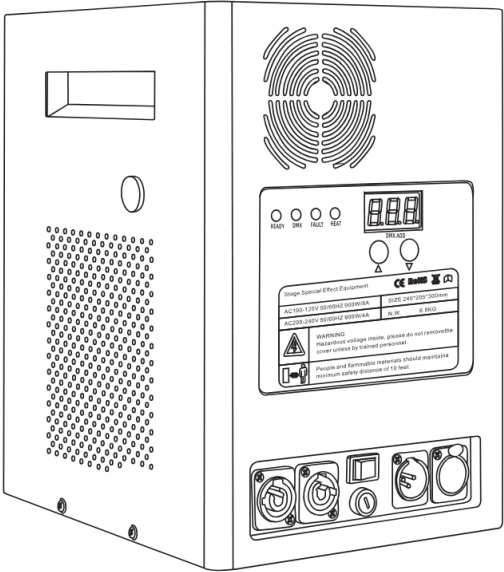


# SPARK ONE

COLD SPARK EFFECT FLOOR MACHINE



## USER MANUAL



PRODUCT DOCUMENTATION



DMX CHART

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

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## DISCLAIMER

**WARNING:** This equipment utilizes high-power electromagnetic induction heating and contains high-voltage electrical components. Failure to strictly adhere to the safety distances and operational protocols in this manual may result in serious injury, fire, severe thermal burns, or death. This product is intended for professional use only by trained operators.



## 1. Introduction

### 1.1. Foreword

Thank you for purchasing the Spark One. This manual contains all necessary information for the safe and intended use, operation, and maintenance of the equipment. The Spark One utilizes granular composite metal powder to create aerial fountain effects; failure to follow instructions may result in impact trauma, property damage, or permanent equipment failure.

### 1.2. Liability Statement

Deviation from these instructions, unauthorized modification, or neglect of safety guidelines will void the product warranty and release the manufacturer from all liability. Specifications are subject to change without notice.

## 1.3 Product Components

- 1 x cold spark machine;
- 1 x power cord;
- 1 x signal cable;

## 2. Safety Information

### 2.1. Fire and Heat Safety

- **Consumables:** Use **ONLY** certified, manufacturer-supplied composite metal powder. Using non-approved materials (e.g., standard iron filings) is strictly forbidden and poses a high fire risk.
- **Extinguishment:** If consumables accidentally ignite, **USE SAND ONLY. DO NOT USE WATER** or standard CO2 extinguishers.
- **Cooling Procedure:** After use, **DO NOT** immediately disconnect the power. Allow the cooling fan to run until the internal temperature reduces to ambient levels (approx. 5–10 mins).
- **Heating Hazard:** The housing, specifically the **Spray Hole**, becomes extremely hot. Do not touch during or for 20 minutes after operation.

### 2.2. Placement and Rigging

- **Safety Distance:** Maintain a minimum distance of **5 Meters (16.4 ft)** between the machine and all personnel, audience members, and flammable materials.
- **Ventilation:** Ensure at least 1 meter of clear space around the cooling fans to prevent overheating.
- **Daisy-Chaining:** The maximum number of units linked via power cables is **4 units**. Exceeding this limit causes extreme fire risk.

### 3. Technical Specifications

<b>Parameter</b>	<b>Specification</b>
<b>Model Name</b>	Spark One
<b>Fountain Height</b>	3 - 6 meters
<b>Fountain Direction</b>	Vertical Upward
<b>Control Mode</b>	DMX512 / Wireless Remote
<b>DMX Channels</b>	2 Channels
<b>Heating Method</b>	Electromagnetic Heating
<b>Powder Box Capacity</b>	250 g
<b>Housing Material</b>	Anti-Flaming ABS
<b>Power Input (Voltage/Current)</b>	110V/60Hz (Max 900W/8A) OR 220V/50Hz (Max 900W/4.1A)
<b>Power Consumption</b>	900W
<b>Fuse</b>	110V/12A OR 220V/6A
<b>Product Dimensions</b>	22 cm x 25 cm x 31 cm
<b>Net Weight</b>	7.8KG

## 4. Product Overview

1. **Cooling Fan:** High-speed heat dissipation.
2. **Remote Receiver:** Internal antenna for wireless control.
3. **Power Switch:** Main system ON/OFF.
4. **Power Port (In/Out):** PowerLink compatible (Max 4 units).
5. **Fuse:** Overcurrent protection (12A for 110V / 6A for 220V).
6. **DMX Ports:** 3-pin XLR In/Out for signal.
7. **Powder Hole:** Inlet for consumables (Cap must be closed during fire).
8. **Spray Hole:** Output nozzle for fountain.
9. **Dust Net:** Protective mesh for electronics.
10. **Access Hole:** Reserved access point (do not tamper).
11. **Display:** Digital display for setting DMX address and viewing temperature/status.



## 5. Installation & Operation

### 5.1. Setup Procedure

1. **Loading:** Ensure the device is OFF. Open the Powder Hole (7) and fill with dry composite powder. Do not use damp/clumpy powder.
2. **Rigging:** Place on a flat, stable surface. Ensure the "Safety Distance" of 5m is clear.
3. **Powering:** Turn the Switch (3) ON. The display will show the current temperature.
4. **Heating:** The machine must heat to operating temperature (indicated on display) before firing.

### 5.2. Operation Panel



- **READY:** Green light. When the "READY" green light turns from flashing into light on, it indicates that the machine is ready to work.
- **DMX:** Blue light. Flashing shows that DMX signal is connected, otherwise no signal.
- **FAULT:** Yellow light. The light is on with any malfunction.
- **HEAT:** Red light. When the machine is heating, signal light is on.

### 5.3 DMX Console Operation (2-Channel Mode)

The Spark One occupies two DMX channels for operation.



## 6. Remote Control Guide

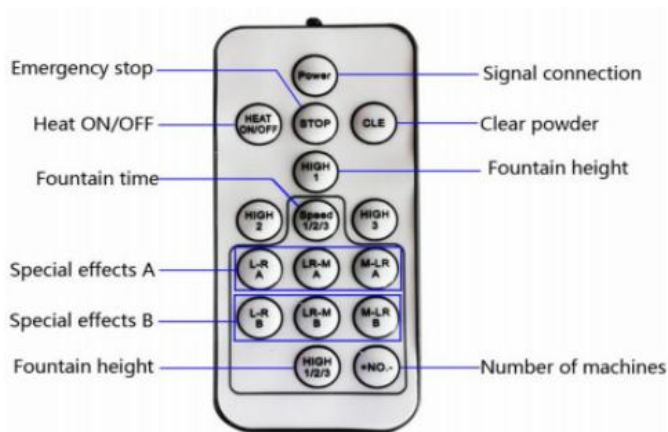
The remote is divided into **Basic Functions** and **Special Effects** (functions within the black border).

### 6.1 Basic Functions

- **Power:** Press for 1 second to wake the machine.
- **HEAT ON/OFF:** Press once to start heating (Red light turns on). Long-press for 3 seconds to stop heating.
- **STOP:** Emergency stop for all fountain activity.
- **CLE (Clear Powder):** Triggers a 30-second automatic purge cycle to clear the internal auger.
- **HIGH 1 / 2 / 3:** Direct height selection (Level 1: Lowest, Level 3: Highest).

### 6.2 Special Effects (Multi-Unit Mode)

- **+NO.-:** Sets the total number of units in the chain (Up to 15 machines).
- **Speed:** Adjusts the fountain duration per machine (1–3 seconds) during sequences.
- **A-Series (Chase Patterns):**
  - **L-R A:** Sequential fire from Left to Right.
  - **LR-M A:** Symmetrical fire from both sides to the Middle.
  - **M-LR A:** Symmetrical fire from the Middle to both sides.
- **B-Series (Build Patterns):**
  - **L-R B:** Accumulative build-up from Left to Right (1, then 1+2, then 1+2+3, etc.).
  - **LR-M B / M-LR B:** Accumulative build-up from sides-to-middle or middle-to-sides.



## 7. DMX Chart

Channel (CH)	Value Range	Function and Description
CH1	0-50	OFF / Deactivated (Heating maintains standby temperature)
	51-100	Heating Only (Pre-heats to maximum temperature for immediate launch)
	101-255	Reserved
CH2	0-50	OFF / Deactivated (CH1 must be set to 0-50 for full safety)
	51-100	Low Output (Spark height approx. 3m)
	101-150	Medium Output (Fountain height approx. 4.5m)
	151-255	High Output (Fountain height approx. 6m)

## 8. Troubleshooting (Yellow Fault Light)

When the yellow LED is illuminated, the LCD will display one of the following codes:

<b>Error Code</b>	<b>Fault Description</b>	<b>Recommended Solution</b>
<b>E2</b>	Over-Temperature / Heating Out of Control	<ol style="list-style-type: none"><li>1. Check if cooling fans are obstructed.</li><li>2. Ensure the unit has proper ventilation.</li><li>3. If persistent, replace the heat dissipation plate.</li></ol>
<b>E3</b>	Power Supply Fault (Control Board)	The electronic master control board is not receiving power. Replace the master control board.
<b>E5</b>	Temperature Sensor Fault	<ol style="list-style-type: none"><li>1. Check the sensor socket connection.</li><li>2. Replace the temperature sensor.</li></ol>
<b>E6</b>	Tilt Protection Active	The machine is not level. Restart the machine on a flat surface. (Safety feature can be disabled in settings if required for

		specific mounts).
<b>E7 / E8</b>	Blower Motor Protection	Blower motor is blocked or faulty. Shut down immediately and check for internal obstructions.
<b>E57</b>	System Standby / Stop	<b>Note:</b> This is not an error. E57 indicates the "Stop" command was received or the safety timer elapsed.

## 8.1 Consumable Powder Specifications

For optimal performance and safety, only use certified MOKA SFX composite metal powder.

### Powder Types:







- **Indoor (SMALL):** \* Height: 2.0m – 4.0m (± 0.5m).
  - **Characteristics: Minimal fallout/residue.** Optimized for low-ceiling environments.
- **Outdoor (LARGE):** \* Height: 3.0m – 6.0m (± 0.5m).
  - **Characteristics:** Higher output and visible grain. Recommended for outdoor or high-stage use only.

## 9. Safety Warnings and Operational Cautions

To ensure the safety of operators and the longevity of the equipment, strictly adhere to the following guidelines.

## 9.1 Handling & Safety:

- **Moisture Control:** Powder must be kept in a dry, vacuum-sealed environment. **Warning:** Damp powder will clump and cause permanent damage to the heating chamber and motor.
- **Refilling:** Always ensure the machine is **powered off** or in **Standby** before adding powder to prevent accidental discharge or injury.
- **Storage:** Never leave powder inside the machine for more than 48 hours. If the machine is not in use, empty the tank back into a sealed container.

	Warning: High temperature warning, high temperature at exit.
	The hole for adding powder
	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 warning sign is to remind you of protecting the eyes during the machine operation.
	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.
	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.
<b>Cleaning</b>	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.

## 9.2 Duty Cycle and Thermal Protection

- **Automatic Cut-off:** The machine features a built-in safety timer. It will automatically stop the spark fountain after **30 seconds** of continuous output. To resume, you must reset the activation command (DMX Channel 2).
- **Overheating Warning:** Continuous firing for more than **60 seconds** is strictly discouraged. Excessive firing causes a sharp rise in internal temperature, which can lead to permanent damage to the heating core and motor.

## 9.3 Power Linking (Daisy Chaining)

- **Maximum Units:** You may connect a maximum of **4 units** via the power-link (PowerCON) cables.
- **Fire Hazard:** Exceeding 4 units on a single power circuit may overload the cables and internal circuitry, leading to equipment failure or fire.

## 9.4 Cool-Down Procedure (Critical)

- **Do Not Power Off Immediately:** After your performance, do not flip the power switch to "Off" immediately. Keep the machine powered on for **3–5 minutes** in standby.
- **Internal Heat Dissipation:** The internal fans must continue running to extract residual heat from the heating block. Turning the power off prematurely can cause "heat soak," where the internal temperature rises and damages the outer housing and electronics.

## 9.5 Setup and Safety Distances

- **Safe Zone:** Maintain a minimum safety distance of **5 meters (16.4 ft)** between the machine and any personnel, audience members, or flammable materials.
- **Placement:** Always operate the equipment in an open, well-ventilated area.

## 9.6 Consumable Safety & Emergency

- **Refilling Safety:** Always ensure the machine is powered off or disconnected from DMX before refilling the powder reservoir.
- **Fire Suppression:** In the highly unlikely event that the metal powder ignites, **DO NOT USE WATER**. Use only **Dry Sand** or a Class D fire extinguisher to smother the fire.
- **No Spark Output:** If the machine is running but no sparks are emitted despite having enough powder, stop operation immediately and contact after-sales support.

## 9.7 Warranty Exclusions

- The manufacturer's warranty does not cover damage resulting from improper use, neglect, physical impact, or unauthorized modifications.

## CORRECT DISPOSAL (WEEE)



This symbol on the product means that used electrical and electronic products (WEEE) must not be mixed with general household waste. For proper treatment, recovery, and recycling, please dispose of this product at designated collection points. Disposing of this product correctly will





## CYCLOPS LIGHTING

**Cyclops Lighting** creates professional lighting fixtures for **lighting professionals**. Our extensive product catalog covers every lighting application, from small to big, from simple to complex. We focus on maximizing value for our users, ensuring superior **performance**, complete **documentation** and expert **worldwide support**.



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