DJPOWER®

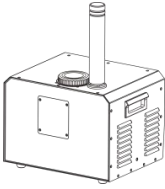# *V-5* SPARK JET

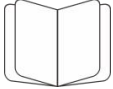## USER MANUAL

1 BEFORE YOU BEGIN

1.1 What Is Included

V-5 Spark Jet

Power Cord

Wrench

Spark Seed Recycling Tube

User Manual

Warranty Card

Spark Seed Filling Funnel

1.2 Unpacking Instructions

Carefully unpack the product immediately and check the container to make sure all the parts are in the package and are in good condition.

If the box or the contents (the product and included accessories) appear damaged from shipping, or show signs of mishandling, notify the carrier or dealer/seller immediately. In addition, keep the box and contents for inspection.

1.3 Symbols

Symbol	Meaning
⚠	*Caution* Critical installation, configuration, or operation information. Not following these instructions may make the product not work, cause damage to the product, or cause harm to the operator.
ⓘ	*Important* Important installation or configuration information. Failure to comply with this information may keep the product from working correctly.
💬	*Information* Useful information.

1.4 Disclaimer

The information and specifications contained in this User Manual are subject to change without notice. DJPOWER assumes no responsibility or liability for any errors or omissions and reserves the right to revise or to create this manual at any time.Copyright © 2022 DJPOWER. All rights reserved.

1.5 Safety Notes

Please read the following Safety Notes carefully before working with the product. The notes include important safety information about installation, usage, and maintenance.

1.5.1   Personal Safety

- Always connect the product to a grounded circuit to avoid the risk of electrocution.

- Do not touch the casing of the machine during operation as it may be very hot.

- The machine spout is very hot during operation, do not touch it.

- The minimum safe distance between people and flammable objects is **3 meters** from the machine. The flash spark can only be in the air, can't touch anything, and **keep an eye out for spray residue that may fall.**

- Keep children away from the machine! Minors are prohibited from using and operating the machine.

- Protect your eyes when working near the machine.

1.5.2   Mounting and Rigging

- When using outdoors, for best effects, please place it away from wet ground.

- For safety reasons, we do not recommend other installation methods, please install and operate the machine in a flat position.

- When transferring product from extreme temperature environments, (e.g. cold truck to arm humid ballroom) condensation may form on the internal electronics of the product. To avoid causing a failure, allow product to fully acclimate to the surrounding environment before connecting it to power. Please make sure that there are no flammable materials around the product during operation.

- Do not mount the product on a flammable surface (linoleum, carpet, wood, paper, carton, plastic, etc.)

- Do not use in a confined space. Always install the product in a location with adequate ventilation, at least **20 in (50 cm)** from adjacent surfaces. Be sure that no ventilation slots on the product's housing are blocked.

1.5.3   Power and Wiring

- Always make sure that the voltage of the outlet to which you are connecting the product is within the range stated on the decal or rear panel of the product.

- Make sure the power cord is not crimped or damaged.

- Never connect this product to a dimmer pack or rheostat.

- Never disconnect the product from power cord by pulling or tugging on the cord.

- To eliminate unnecessary wear and improve its lifespan, during periods of non-use completely disconnect the product from power via breaker or by unplugging it

1.5.4   Operation

- Do not operate this product if you see damage to the housing or cables. Have the damaged parts replaced by an authorized technician at once.

- Make sure there are no flammable materials close to this product while it is operating.

- Do not cover or plug the output nozzle during operation.

- Do not use the product as a space heater.

- Never carry the product by the power cord or any moving part. Always use the handles.

- Empty the storage bin before transporting the product.

- The maximum ambient temperature (Ta) is 104 °F (40 °C). Do not operate the product at higher temperatures.

- Always disconnect the product from the power source before cleaning.

- This product contains no user-serviceable parts. Any reference to servicing in this User Manual will only apply to properly trained, certified technicians. Do not open the housing or attempt any repairs which can lead to damage or malfunction.

- In the event of a serious operating problem, stop using the product immediately.

- Use only DJPOWER Spark Seed PRO-K or PRO-K4.

💬 **Keep this User Manual for future use. If you sell the product, be sure that the purchaser receives this document.**
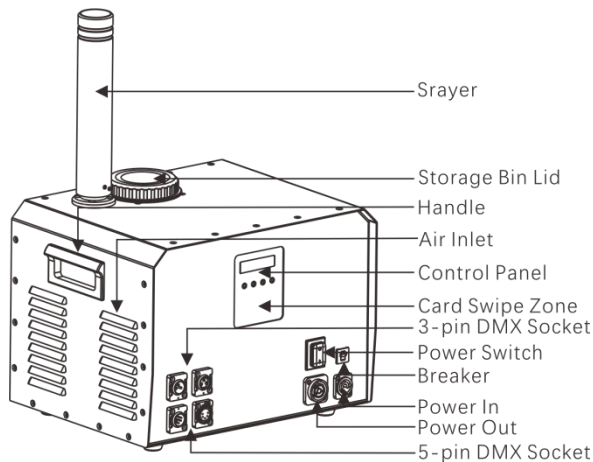
2 INTRODUCTION

2.1 Description

V-5 is a machine that automatically pressurizes the inside of the machine without using an external air source. The upgraded powder conveying structure is designed, the maximum height is about 10 meters, and the flash spark effect is higher and denser, which can create a more flaming and explosive stage effect. It is suitable for large-scale performances, large-scale conferences, music festivals and other scenes.
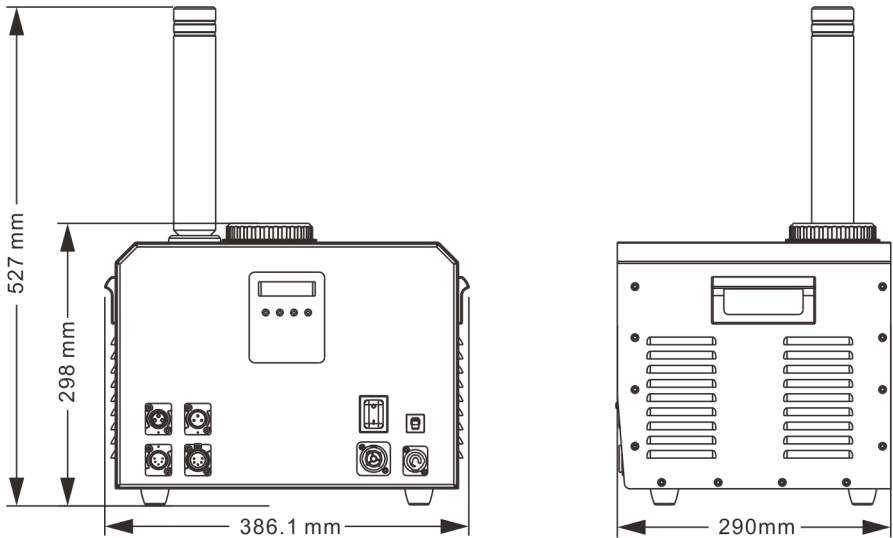
2.2 Features

- Automatic charging, no need to use external air source, more convenient to use.

- Combination of explosion sound and super-jet, instantly bring flash spark effects.

- Adjustable height is up to 10 meters, and the flash spark effect is higher and denser.

Note: The actual effect may be affected by the usage environment.

2.3 Product Overview

2.4   Product Dimensions

3   TECHNICAL SPECIFICATIONS

Identification	Category	Spark Machine	
	Model	V-5	
AC Power	Input Voltage & Rate	AC 100-120 V, 50/60 Hz	AC 220-240 V, 50/60 Hz
	Current Limiter Specifications	10 A, 250 V	10 A, 250 V
	Typical Current	10 A	10 A
	Current Limiter Type	Breaker	Breaker
	Nominal Total Power Consumption	500 W	500 W
	Power Input/Output Connector	Lockable PowerCon	
Heating	Heat Up Time	Appr.15 min	
Capacity	Powder Tank Capacity	380 g	
Output	Max Output Height	PRO-K Appr. 10 m, PRO-K4 Appr. 12 m	
	Powder Consumption	10-15g/shoot	
	Consumable Type for Standard Output Test	PRO-K or PRO-K4	
	Full powder shoot	25 times	
Accessory	Power Cord	√	
	Wireless Controller (Controller Model)	×	
	Wired Controller (Controller Model)	×	
Placement &	Horizontal	√	

Mounting	Inclined	≤15°
	Vertical	×
	Hang Upside Down	×
	Rigging & Trussing	×
	Rotating Nozzle	×
	Deflector	×
Control	On-device Manual Control	LCD Control Board
	Wireless Control	×
	Wired Control	×
	Control Protocol	DMX-512
	DMX Channel Range	2
	RFID Card	√
Certification	CE	√
	RoHS	√
Weight & Dimensions	Net Weight	20 kg
	Gross Weight	22.6 kg
	Machine Dimensions	386.1 × 290 × 298 mm
	Packing Dimensions	504 × 430 × 396 mm
Consumable	Consumable	Spark Seed PRO-K or PRO-K4

4　SETUP

4.1　AC Power

V-5 has a fixed voltage power supply, which can be used according to the specific model AC 100-120 V, 50/60 Hz or AC 220-240V, 50/60 Hz.

To determine the product's power requirements (circuit breaker, power outlet, and wiring), use the current value listed on the label affixed to the product's back panel, or refer to the product's specifications chart. The listed current rating indicates the product's average current draw under normal conditions.

⚠ **Always connect the product to a protected circuit (circuit breaker or fuse). Make sure the product has an appropriate electrical ground to avoid the risk of electrocution or fire.**

ⓘ **Never connect the product to a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel serves only as a 0 to 100% switch.**

4.2　AC Plug

The Spark Machine V-5 comes with a power input cord terminated with a Lockable power connector on one end. The other end is

* CN plug (CN market, etc.)

* EU plug (EU market, etc.)

* US plug (US market, etc.)

If the power input cord that came with your product has no plug, or if you need the change the plug, use the table below to wire the new plug:

Connection	Wire (China)	Wire (Europe)	Wire (U.S.)
AC Live	Brown	Brown	Black
AC Neutral	Blue	Blue	White
AC Ground	Green/Yellow	Green/Yellow	Green/Yellow

4.3   Resetting the Breaker

This product is equipped with a resettable breaker. If the breaker trips, all sections of this product will lose power.

• Remove the power cord from mains power.

• Allow unit to cool for 15 minutes.

• After 15 minutes, you may attempt to reset the breaker by pressing the button with your finger.

• Plug the product's power cord into the power outlet and continue using as recommended.
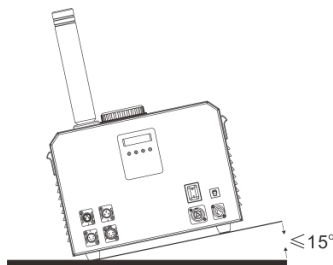
4.4   DMX Linking

V-5 supports 3-pin or 5-pin connection to the DMX console, it can be connected to the same console with other DMX-supported devices and be controlled separately. This manual covers the operation connection and configuration of DMX.

4.5   Mounting

Before mounting the product, read and follow the safety recommendations indicated in the Safety Notes.

4.5.1   Orientation

For safety, it is recommended to install and operate this machine in a flat location with adequate ventilation, configuration and maintenance space. When the starlight effect is required to be tilted, the tilt direction is as shown in the figure, and the tilt angle is not more than 15°.

4.5.2   Rigging

DJPOWER recommends using the following general guidelines when mounting this product.

• Before deciding on a location for the product, make sure there is easy access to the product for maintenance and programming purposes.

• Make sure that the structure or surface onto which you are mounting the product can support the product's weight (see the Technical Specifications).

• When mounting the product on the floor, make sure that the product and cables are away from people and vehicles

5   OPERATION

5.1   Preparing for Operation

• After checking that all the parts are intact and complete, position the machine on flat.

• Fill the consumable into feed port when power off.

• Always connect the product to a grounded circuit. Before power on, make sure it is connected with the rated voltage.

• Turn on the machine, it will immediately start heating up.

5.2   On-device Control Panel

To access the control panel functions, use the four buttons located underneath the LCD display.

Button	Function
<MENU>	Switch menu pages
▲	Add submenu
▼	Reduce submenu
<ENTER>	Short press: return to the home page. Long press for 2 seconds to switch to the advanced interface

5.3   Device control mode and operation

5.3.1   Operation guide

• Refer to the Menu page for menu options, including the operator interface displayed and the values available for selection.

• Press the <MENU> key repeatedly to the page you want to set, until the parameter setting page appears. The value that appears on this page is the first value for this parameter.

• Press "▲" or "▼" to set or select a parameter value on the current page. If it exceeds the parameter range, you will see the first parameter or the set value.

• Press the <MENU> key repeatedly to switch sequentially between different menu pages.

• Press <ENTER> at any time to switch between the current menu page and the standby page

5.3.2 Menu Map

	Display	Description	Parameter Range
Preparing Page	`Heating Up` `Temp     550`	**Shows the device is heating** The current temperature, current pressure and delay time will cycle through the display.	530 ℃ - 630℃
	`Heating Up` `Pressure   23`		
	`Heating Up` `Delat    1.0S`		
Standby Page	`Ready to Spark` `Temp     580`	**The equipment preheating is completed.** The current temperature, current pressure and delay time will cycle through the display.	530 ℃ - 630℃
	`Ready to Spark` `Pressure   23`		
	`Ready to Spark` `Delat    1.0S`		
Operation Page	`Spark ON` `Temp     630`	**Show the device working status.** The current temperature, current pressure and delay time will cycle through the display.	
	`Spark ON` `Pressure   23`		
	`Spark ON` `Delat    1.0S`		
Status Pages	`DMX Address` `        512`	Press "▲" or "▼" to set the DMX start address	1-512
	`Pressure Set` `         45`	**Equipment pressing pressure setting** Press "▲" or "▼" to set the air pressure value	15-45
	`Test Spark` `      ON/OFF`	**Equipment manual switch injection test.** This menu is only useful if it is enabled under the Manual Job Settings page in the Advanced menu.	ON/OFF
	`Manual Clear Up` `      ON/OFF`	**Manually set the cleanup switch** This menu is only useful if it is enabled under the Manual Job Settings page in the Advanced menu.	ON/OFF
	`Remaining Time` `         10`	**Device remaining time**	

		Press <ENTER> for 3 seconds to enter the advanced setting menu page, then press <MENU> to select the corresponding menu, and press "▲" or "▼" to select an option or value.

Advanced Settings	Temperature Set 【 450 】 580	**Device operating temperature settings** Current temperature 450 ℃ , set temperature 580℃	530 ℃ - 630℃
	Warm-Up ON/OFF	**Automatic warm-up function when power on** Automatically pressurizes when preheat is on, and does not pressurize when preheat is off.	ON/OFF
	Pressurize Set ON/OFF	**When the standby function is turned on, it must be** preheated and pressurized before the injection can be started.	ON/OFF
	Output delay time 0.5S	**output delay setting** After the machine starts spraying, wait a fixed time before spraying. The fixed time is the injection delay time set under this menu	0.5-2S
	Feeding Test ON/OFF	Open the blanking and feeding system to test whether it works normally	ON/OFF
	Blower Test ON/OFF	Turn on the blower and test if it works	ON/OFF
	Feeding time set 100MS	**Seed filling setting** The longer the time, the larger the filling amount	100MS-300MS
	Feeding time set 0.5S	**Seed filling time setting** This time setting is less than the injection delay time	0.5S-3S
	Manual work set ON/OFF	**Manual work settings** When it is turned on, the "Test spray interface" will appear on the user menu page, which is used to manually test the spray effect. When the device is powered off and restarted, this function setting will disappear, and it needs to be reset to use it again.	ON/OFF
	Press ENTER to Exit Settings	Press ENTER to exit the advanced menu settings	

5.4 DMX control mode and operation

V-5 can be operated with DMX mode.

• Connect the machine to a suitable power outlet.

• Turn on the machine.

- Connect the DMX output of the DMX controller to the DMX input socket on the machine through the DMX cable.

💬 **The starting address of the V-5 can be set in the DMX value range of 001 - 512, and it can control 256 products with a channel number of 2 at the same time.**

5.4.1 Starting Address

When choosing a startup DMX address, always consider the number of DMX channels. If you choose a starting address that is too high, some channels will not be accessible.

⚠️ **DJPOWER® V-5 uses 2 DMX channels. If you need to control all channels, it is recommended to configure the highest starting address as 512.**

💬 **When the DMX signal is connected, the menu will automatically jump to the "DMX Mode Menu" page, or press "MENU" to enter the "DMX Mode Menu" page, press the "▲" or "▼" key to set the DMX channel**

5.4.2 DMX Mode Menu Map

	Display	Description	Parameter Range
Preparing Page	Heating Up DMX Address 512 Current Temperature 33 DMX Address 512 Current Pressure 45 DMX Address 512 Delat Time 1.5S DMX Address 512	**In DMX control state, it shows that the device is heating** During heating, current temperature, current pressure, and delay time, it will be displayed on the screen.	1 - 512
Standby Page	Ready to Spark DMX Address 512 Current Temperature 33 DMX Address 512 Current Pressure 45 DMX Address 512 Delat Time 1.5S DMX Address 512	**In DMX control state, it shows that heating is ready.** Ready for output, current temperature, current pressure, and delay time, it will be displayed on the screen.	1 - 512
Operation Page	Spark ON DMX Address 512 Current Temperature 33 DMX Address 512	**In DMX control state, it shows that machine is working.** Spark output, current temperature, current pressure, and delay time, it will be displayed on the screen.	1 - 512

Display	Description	Parameter Range
| ```
Current Pressure 45
DMX Address    512
``` | | |
| ```
Delat  Time    1.5S
DMX Address    512
``` | | |

5.4.3   DMX Channel Assignments and Values

Channel	Value	Description
1	0-111	No function
	112-255	Spark out: If the spark is triggered, assuming the delay time is 1 second, the output will not start until 1 second later.
2	0-10	Preheating off, automatic pressurize function is closed (automatic preheating startup function is invalid)
	20-40	Emergency stop: When the machine is triggered, it can be forced to close during the working delay process, and it will not be started after the delay is reached.
	60-80	Cleaning up consumables: The valve will open immediately, which can empty the remaining consumables in the tube, clean at least once after each performance.
	240-255	Preheating on, automatic pressurize function is on (automatic preheating startup function is invalid)

5.5   Running Time

5.5.1   Running time

When V-5 starts to work, it will spark at once in a trouble-free state. If you want to try the second time, you need to start it again. After each try, the remaining use of the device will be reduced by one. When the remaining number of uses is 0, an error E5 will be reported, and the card needs to be recharged.

5.5.2   Running out of time

When this page is displayed, it means that the remaining time is insufficient and the machine will not be able to continue working. Additional runtimes can be added by swiping a new card.

Body Control Mode   DMX Control Mode

```
Time is Up                Time is Up    E5
          E5              DMX Address    1
```
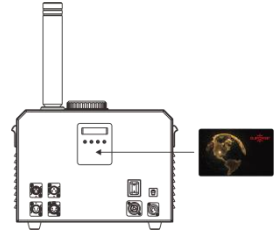
5.5.3   Manual Mode

Enter the advanced menu and set it to ON in the manual work setting interface. On the user menu page, there will be a "spark test" interface, which can be used to manually set the switch to test spark effect.

6 SPARK SEED

Spark Seed is the consumable specially designed for DJPOWER Spark Machine, to create light golden color cold firework for stage effect.

6.1 Identify & Activate Spark Seed

- Swipe the Consumable ID card that come with the Spark Seed to identify the consumables about to be filled into the fixture.

- When the LCD on the fixture shows the information of the Spark Seed after successfully swiping card, the identified Spark Seed could be filled into the fixture.

- Please keep the unscanned ID card and its associated spark seed. The ID card that is successfully scanned and identified card will be invalid immediately

ⓘ **Recharge instructions: Put the ID card in the scanning area of the machine to recharge, and the screen will display the current recharge time when the recharge is complete.Each card can be recharged 30 times. The ID card will automatically expire after the recharge is completed.**
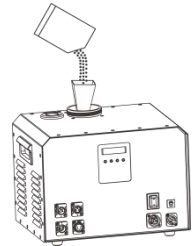
6.2 Fill in Spark Seed

Tear open the vacuum resealable foil pouch, and fill in the Spark Seed through the feed port on the top of the fixture depending on the dosage needed.

⚠ **Consumable Feed Port & Storage Bin
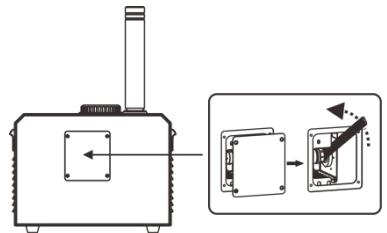(Filling & Refilling Procedures)**

- **Open the feed bin cap.**

- **Fill the consumable into the feed port, NOT into the output nozzle when power off.**

- **Close the lid securely after filling.**

- **The capacity of storage bin is 380g.**

- **Only use DJPOWER consumable.**

6.3 Spark Seed are stuck

⚠
- **Use a screwdriver to open the small cover on the back of the machine.**

- **Use the wrench to align the outer hexagon of the right shaft and pull it up to clear the stuck.**

6.4 Precaution for use

- The Spark Seed could be only filled in and used for the DJPOWER Spark Machine after successfully identified by swiping Consumable ID card.

- Make sure to fill the Spark Seed through the feed port on the top of the fixture and when power supply is off.

- Use Dry Chemical Extinguishers once lighting a fire. DO NOT use Water-Type Extinguishers, Foam Extinguishers or Carbon Dioxide Extinguishers.

7 TECHNICAL INFORMATION

7.1 Maintenance

The V-5 requires regular maintenance in order to maintain optimum performance. However, some steps are needed in order to clean and maintain the product for maximum usage. The recommended procedure is as follows:

After a period of using, check if there is any consumable tuberculation inside the nozzle. Do necessary cleaning up if there has some, or it may affect spark performance, even damage the machine.

ⓘ **Test-run your DJPOWER@ V-5 on a monthly basis to achieve the best performance.**

7.2 Storage

7.2.1 Machine Storage

Before storing the machine, empty the storage bin, clean it as described in the "Maintenance" section. And keep the machine in dry cool place.

⚠ **Empty the storage bin:**
- Remove the power cord from mains power, and allow unit to cool down. Empty the storage bin through feed port by inverting the machine.

- Run the machine to generate Spark till out of Spark Seed, or run Consumable Cleaning Up procedure (Safety channel, channel 2) to completely clear remaining Spark Seed inside the nozzle.

💬 **Refer to "DMX Channel Assignments and Values" chapter to for more information.**

ⓘ **Spark Seed would easily get damp in the open air and deliver poor spark effect. Storing damp Spark Seed in the machine storage bin will do harm to machine and cause clogging.**

7.2.2 Spark Seed Storage & Recycling

7.2.2.1 Sealed Spark Seed Storage

Spark Seed should be stored in a cool, dry place, vacuum packed in resealable foil bags, and protected from moisture, heat, hot surface, open fire and other ignition sources.

7.2.2.2 Spark Seed Recycling

Store the unfinished Spark Seed in the Recycling Tube with the Funnel. Keep it sealed and away from moisture.

7.3 General Troubleshooting

7.3.1 Device Error Description

When error happens, device will stop working and heating system shuts off automatically. LCD shows corresponding error code.

7.3.2   Device Error Menu Map

Errors	Display	Possible Cause
Over heat shutdown	Device Error E0	When the temperature is higher than the limit temperature, the over temperature protection function is activated.
Heat up failed	Device Error E1	Heating system cannot reach pre-set target temperature after 10-min heat-up
Pump protection	Device Error E2	Working current of the air pump exceeds the preset value, the error message will be activated.
Thermocouple failed	Device Error E3	Short circuit or wrong connection of thermocouple
Thermocouple tripped off	Device Error E4	Open circuit or no connection of thermocouple
No remaining run-time	Device Error E5	No remaining run-time
Gas tank pressurization failed	Device Error E6	When the air pump pressurization function is turned on, if it cannot be pressurized normally within 2 minutes, the error message will be activated.
Tank pressure high	Device Error E7	When the pressure of the gas tank is greater than 60, the error message will be activated.