

USER MANUAL

SPARKULAR® MOBILE

V1.0

2024/01/01



Showven Technologies Co., Ltd.

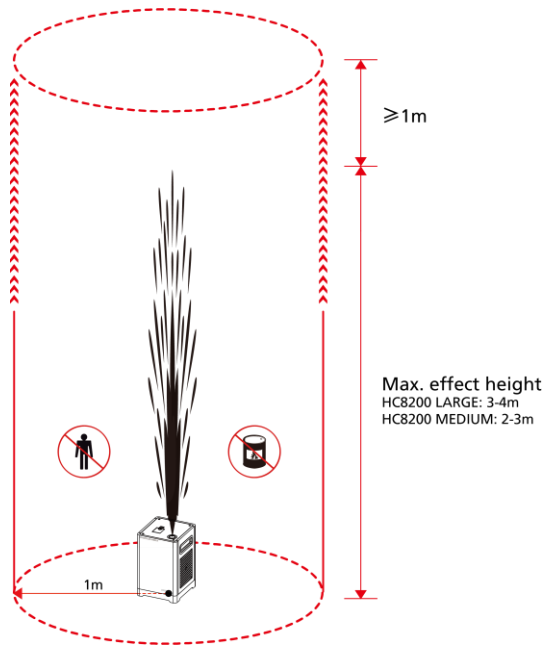
Thanks for choosing SPARKULAR® mini, we wish it will sparks up your show. Please read the following manual carefully before operating this product.

Δ Safety Instructions

- \ Unauthorized repair are prohibited, it may cause serious incident.
- \ Keep SPARKULAR® MOBILE dry and do NOT use in rain or snow.
- \ Make sure lid of feeding hopper are well covered when use SPARKULAR® MOBILE.
- \ Accidentally burning of consumable can only use sands to extinguish.
- \ Consumables should be kept away from moisture and stored in a dry sealed environment.
- \ Check whether there is consumable aggregate in the output nozzle both before and after each show, if any, please clean it up, or it will affect the firing effect or even damage SPARKULAR® MOBILE.
- \ For better heat dissipation, blocking the air intake and air outlet is prohibited.
- \ It is strictly forbidden to cover the nozzle when in use.
- \ The device contains a lithium-ion battery, so use it at a temperature of -10°C to 50°C. Too high temperature may cause a fire, and too low temperature will reduce battery performance.
- \ It is forbidden to disassemble or puncture the battery with a sharp object in any way.
- \ Avoid physical shocks and vibrations.
- \ Do not store the battery for a long time after completely discharging to avoid the battery entering the over-discharge state and causing the battery to lose its function. It is recommended to charge it once every two months at most.

Safety Distance

- \ Keep audience and flammable material at a minimum distance of 1m from SPARKULAR® MOBILE.
- \ Make sure sparks shoot out from SPARKULAR® MOBILE can NOT touch any objects. And keep a clearance with minimum 1m from the setting maximum effect height.
- \ In windy environment, increase the safety distance according to the wind direction and speed.
- \ The safety zone area changes accordingly when machine installed in tilt position. Please increase the safety distance in the direction which machine tilt.
- \ Sparks and consumables from the machine can lead to serious eye injury. Always wear safety goggles when enter the safety zone.



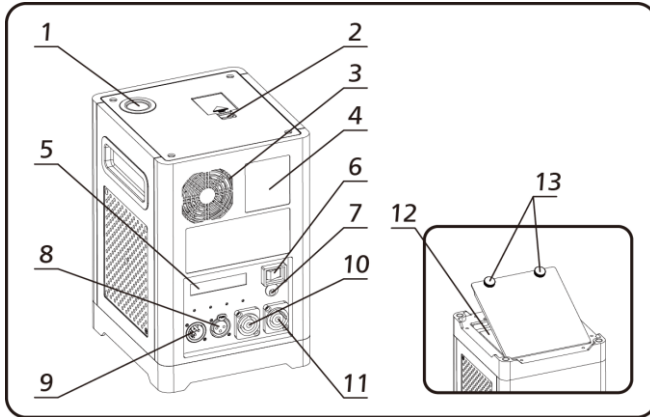
Δ Description

SPARKULAR® MOBILE is a compact and portable SPARKULAR® machine that is specifically designed for small party settings. It can be placed anywhere without the need for complex wiring.

Δ Technical Specifications

- \ **DIMENSION:** 168×180×257mm
- \ **WEIGHT:** 6kg
- \ **CHASSIS MATERIAL:** FLAME RETARDANT ABS AND ALUMINIUM ALLOY
- \ **VOLTAGE:** AC 100-240V 50/60Hz
- \ **WORK POWER:** 100W
- \ **BATTERY:** LITHIUM ION BATTERY(10000mAh @25.2V)
- \ **HEATING TIME:** 2 MINS
- \ **STANDY TIME:** >144h(NO HEATING TIME)
>3h (HEATED)
- \ **CHARGING TIME:** 5h (MAXIMUM CHARGING TIME)
- \ **TEMPERTURE:** -10°C-50°C
- \ **EFFECT HEIGHT:** 2-3m (MEDIUM), 3-4m (LARGE)
- \ **SPRAYING DIRECTION:** VERTICAL UP
- \ **HOPPER CAPACITY:** 100g
- \ **CONSUMABLE CONSUMPTION:** 15g/min
- \ **INTERFACE:** 3-pin XLR, POWER IN/OUT
- \ **CONTROL:** DMX 2 CHANNELS, 2.4GHZ WIRELESS, 433 MHz WIRELESS

Δ Structure of SPARKULAR[®] MOBILE



- 1.Output Nozzle
- 2.Feeding Hopper Lid
- 3.Cooling Fan
- 4.Swipe area
- 5.LCD Screen
- 6.Power Switch
- 7.DC 5V Output
- 8.DMX OUT
- 9.DMX IN
- 10.POWER IN
- 11.POWER OUT
- 12.Battery
- 13.Hand Screws of battery compartment

Δ Operation Panel

1. LED display area



READY: After turn on machine, it will automatically preheat around 2 minutes, when the "READY" green light turns from flashing into long on, indicates that the machine is ready to work.

DMX: Flashing shows that DMX signal or wireless signal is connected, otherwise is without signal.

FAULT: When any malfunction, the indicate light turn on.

CHARGE: The charging indicator light. RED - charging, GREEN - charging is complete.

Note: The CHARGE indicator light will work when the power cord is connected, regardless of whether the device is powered on or off.

2. Control button area



MENU: Short press to switch interface, press and hold for 3 seconds can switch to the advanced setup interface

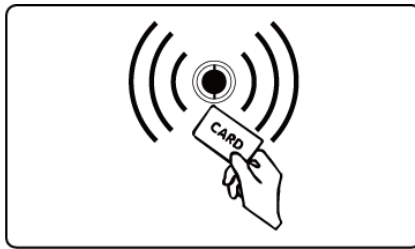
-: Parameters down

+: Parameters up

ENTER: Confirm and save parameters.

Note: If there is no button operation within 15 seconds, the display will automatically switch to the main interface.

3. RFID area



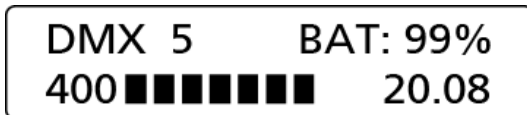
The consumables come with an identification card, which is used for swiping to identify the parameters and types of consumables.

Please note that the card can increase specific working time for a single machine. The RFID card is disposable, one card can only use one time.

Each RFID card come with 50g package HC8200 can increase single machine 4min working time, the maximum recharge time for SPARKULAR[®] MOBILE is 30min, when time remain reached 30min, please don't swipe anymore RFID card.

Δ Interface

1. Main Interface



First line Left Side: Display DMX address is "5"

First line Right Side: Display the current remaining battery power

Second line Left Side: Display the present inner core temperature and the temperature progress bar

Second line Right Side: Display remaining time is 20 minutes and 8 seconds

2. Error Information

Error codes	Error information	Explanation
E0	System	Systematic error
E1	Fan/Shaft	The fan motor or shaft motor is wrong
E2	Temp. Sensor	Temperature sensor is not connected or damage
E3	P Temp. Over	Chassis over-temperature
E4	Time Remain	Insufficient granules or remaining time, please swiping time card
E5	K Temp. Over	Heating chamber over-temperature
E6	Heat Fail	Heating failed
E7	Tip Over	Dump alarm
E8	Heat Protect	Heating overload protection
E9	Battery Error	Battery alarm

3. Setting Menu

Press "MENU" to enter the Setting interface, press the "MENU" button to enter different options until you return to the main interface.

Options	Range	Default	Explanation
Set DMX Address	1-512	1	Set the DMX address
DMX Channel Mode	2CH-N/3CH-P	2CH-N	DMX channel mode selection
Wireless Remote	ON/OFF	ON	Wireless function switch, you can match machine with remote controller when at "ON" status
Manual Fountain	ON/OFF	OFF	Manual fountain switch, for testing purposes only
Auto Heat	ON/OFF	ON	Automatic heating switch(When set to ON, DMX and wireless cannot turn off the preheat function)

4. Advanced Menu

Press and hold "MENU" for 3 seconds to enter the advanced setup interface, press MENU key to enter different options, wait 3 seconds to return to the main interface.

Options	Range	Default	Explanation
Set Temperature	300-500	400	Setup inner Core temperature
Density	50-100	100	Adjust the sparks density
Mode Selection	User Mode Factory Mode	User Mode	User Mode/Factory Mode
Tip Over Error	ON/OFF	ON	Tilt protection function switch
Standby Switch	ON/OFF	ON	When ON, the machine can firing only when heating up was finished

5. Monitoring Interface

After pressing the ENTER key, you can enter the monitoring menu. Press the MENU key to access different options, and press the ENTER key again to return to the main interface.

Options	Explanation
PCBA Temperature	PCB Temperature

Fan Sensor	Fan Sensor
Fan Out	Fan Feedback
Shaft Sensor	Shaft motor Sensor
HEAT Sensor	Heat Function Sensor

6. DMX Channel Mode

There are two different channel mode optional for SPARKULAR MOBILE. 2CH-N and 3CH-P.

2CH-N:

SPARKULAR MOBILE occupies 2 operational DMX channels. First channel is for effect height, second channel for effect trigger and clear material etc.

CH1	Functions
0-15	Fountain OFF
16-135	Low Effect Height
136-255	High Effect Height
CH2	Functions
0-10	Pre-heat OFF
20-40	Stop Fountain
60-80	Clear Material
240-255	Pre-heat ON

3CH-P:

In 3 channel mode, SPARKULAR MOBILE occupies 2 operational DMX channels and a separate safety channel.

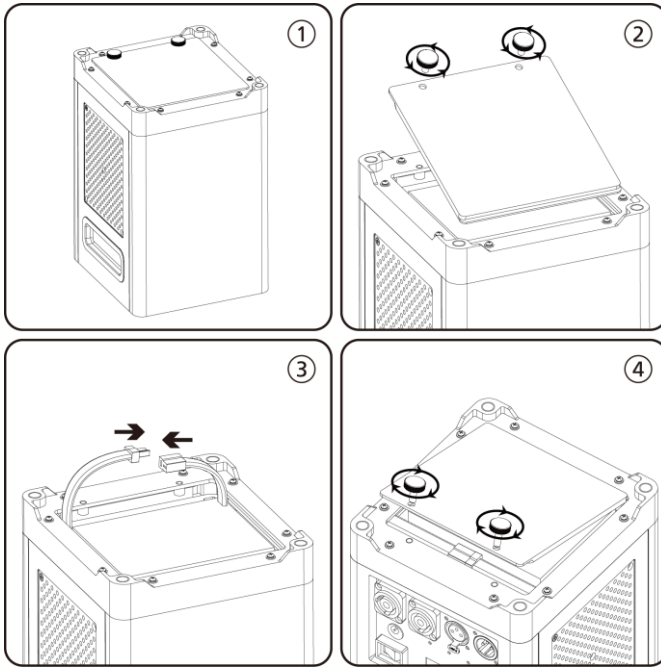
Note: The safety channel address can be assigned through the "Safety Address" in menu. After the setting the safety channel, "DMX" address and the "SAFE" address will display on the main interface alternatively.

CH1	Functions
0-15	Fountain OFF
16-135	Low Effect Height
136-255	High Effect Height
CH2	Functions
0-10	Pre-heat OFF
20-40	Stop Fountain
60-80	Clear Material
240-255	Pre-heat ON
CH-Safety Address	Functions
50-200	Device armed
0-49, 201-255	Device disarmed

Δ Operation Guide

1. Connect SPARKULAR MOBILE with battery

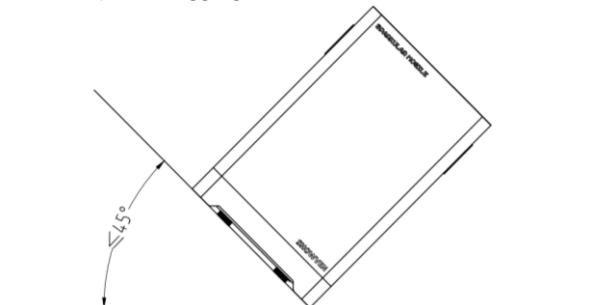
For safety, the battery of SPARKULAR MOBILE is disconnected from the machine. After unbox the machine, please follow below steps to connect the battery with machine.



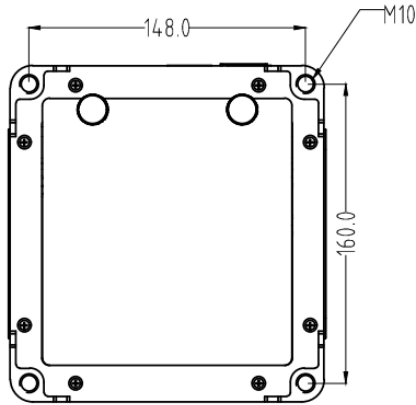
- ① Turn the machine upside down
- ② Remove the screws of the bottom plate.
- ③ Take out the wires and connect. (Make sure POWER SWITCH of machine stays at OFF status when connecting)
- ④ Put the wire back and cover the bottom plate, screw tight the screws.

2. Install SPARKULAR® MOBILE

- a) Horizontal installation is preferred for SPARKULAR® MOBILE. If need to installed SPARKULAR® MOBILE in angles, please turn the Tip over to OFF status first, maximum firing angle is 45 ° and can only be angled to the right side as below picture.
- b) Make sure the machine is securely installed to avoid tipping.
- c) The safety zone area shifts accordingly when machine installed in tilt position. Please increase the safety distance in the direction which machine tilt.
- d) Check carefully the output nozzle of each machine, make sure the output nozzle is in good shape and there is no powder aggregate.



- e) SPARKULAR® MOBILE can also be installed on truss through four M10 screw hole at the bottom.



3. Fill SPARKULAR® MOBILE

- Open powder bags and fill the feeding hopper. Hopper capacity of SPARKULAR® MOBILE is 100g.
- Choose correct consumable according to the application scenario. HC8200 LARGE will have some sparks drop on ground, suggest HC8200 MEDIUM or SMALL for indoor use.
- Maximum effect height for HC8200 LARGE is 4m, HC8200 MEDIUM is 3m.
- Make sure the lid of hopper is locked tight after filling.

4. Power ON SPARKULAR® MOBILE and Control

- Switch ON SPARKULAR® MOBILE. Check the time remain of each machine, if there is not enough time for the show please swipe RFID card.
- Set the wireless remote function to ON status at setting menu.

**Wireless Remote
ON**

- c) The 2.4GHz remote controller operation as below.

A	Effect OFF / code matching	
B	High effect ON 30s	
C	Low effect ON 30s (press and hold 3s to clear material)	
D	Turn on preheating (press and hold 3s to turn off preheating)	

Note:

Wireless function disabled when SPARKULAR® MOBILE connect with DMX cable.

When the machine is occasionally not working, may be caused by interference, please press the High effect ON or Low effect ON button again.

Wireless control is easily influenced by interference, suggests to stay as close to machine as possible when use remote controller, and machines cannot use metal shielding

When the indicator light becomes weak on the remote controller, please replace the battery.

Before shipping, please turn off the remote controller to avoid battery consumption.

Battery type: 9V laminated battery

d) Wireless Host Mode (Requires communication cables)

In a strong interference environment, using the wireless host mode can effectively avoid interference and achieve more reliable startup.

Set the first unit of SPARKULAR® MOBILE DMX address into "1++", this machine address is "1", but it can also output DMX signal and turns into wireless host SPARKULAR® MOBILE.

Use communication cables to connect all SPARKULAR® MOBILE, Other machines can be set to normal addresses. The user only needs to stand next to the wireless host. After the wireless host receives the remote control signal, it can synchronously control other machines through wired transmission.

5. Turn off and Clean up

- a) Power off SPARKULAR® MOBILE, allow SPARKULAR® MOBILE to cool down.
- b) Empty the remaining HC8200 in hopper, and store the remaining HC8200 in a dry sealed bottle for next time use. Never touch the output nozzle of SPARKULAR® MOBILE when empty the hopper. DANGER OF GET BURNT!
- c) Clean the surroundings to remove powder residues.

Δ Charging for SPARKULAR® MOBILE

SPARKULAR® MOBILE can be connected in daisy chain with power link cable, with a maximum of 16 devices connect in series. 16 devices connect in series require a power close to 1600W, the wire core should exceed 1.5 square wire diameter.

Δ Maintenance

- a) Empty the feeding hopper before shipment of machine.
- b) Empty the feeding hopper if long time not use, for high humidity environment we suggest to empty feeding hopper after show.
- c) Clear material both before and after the show for SPARKULAR® MOBILE.
- d) Recommended to wash or replace the air intake filter every two months.

Δ Warranty Instructions

- \ Sincere thanks for your choosing our products, you will receive quality service from us
- \ The warranty period of battery of SPARKULAR® MOBILE is 6months after shipping out from our factory.
- \ The main part of SPARKULAR® MOBILE warranty period is one year. If there are any quality problems within 7 days after shipping out from our factory, we can exchange a brand new same model machine for you.
- \ We will offer free of charge maintenance service for machines which with hardware malfunction (except for the instrument damage caused by human factors) in warranty period. Please don't repair machine without factory permission

Below situations NOT included in warranty service:

- \ Damage caused by use other type of consumable which is not from SHOWVEN® or SHOWVEN® authorized distributor.
- \ Damage caused by improper transportation, usage, management, and maintenance, or damage caused by human factors;
- \ Disassemble, modify or repair products without permission;
- \ Damage caused by external reasons (lightning strike, power supply etc.)
- \ Damage caused by improper installation or use;

For product damage not included in warranty range, we can provide paid service.

Invoice is necessary when applying for maintenance service from SHOWVEN®.

SHOWVEN[®]



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