

USER MANUAL

SPARKULAR® TRIPLE

V2.1

2022/06/23



Showven Technologies Co., Ltd.

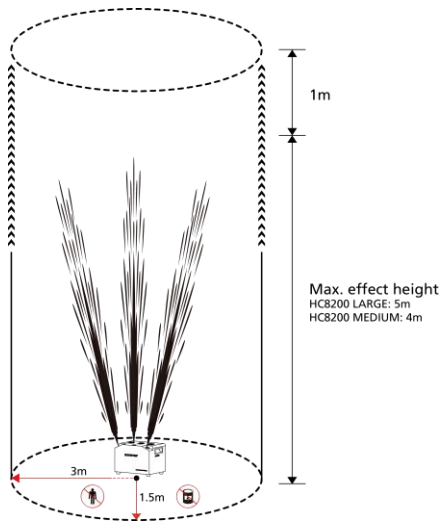
Thanks for choosing SPARKULAR® TRIPLE, we wish it will sparks up your show. Please read the following manual carefully before operating this product.

Δ **Safety Instructions**

- ⚠ Unauthorized repair are prohibited, it may cause serious incident.
- ⚠ Keep SPARKULAR® TRIPLE dry and do NOT use in rain or snow.
- ⚠ Make sure lid of feeding hopper are well covered when use SPARKULAR® TRIPLE.
- ⚠ Accidentally burning of consumable can only use sands to extinguish.
- ⚠ Consumable should keep 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® TRIPLE.
- ⚠ There will be some sparks drop to ground when use HC8200 LARGE, suggest to use HC8200 MEDIUM or SMALL for indoor events.
- ⚠ The SPARKULAR® TRIPLE power supply cable maximum allowed cascade is 2pcs (BT51) / 1 unit (BT52), exceed connecting may result in damage or even cause fire.
- ⚠ For better heat dissipation, block the air intake and air outlet is prohibited.
- ⚠ Cover the output nozzle of SPARKULAR® TRIPLE are forbidden, inspect the machine before each show, making sure no objects or material will block the output nozzle.
- ⚠ Never touch the nozzle of SPARKULAR® TRIPLE, danger of getting burnt
- ⚠ Never touch the sparks which shooting out from the nozzle
- ⚠ Ensure that children, animals and unauthorized persons don't have access to the SPARKULAR® TRIPLE.

Safety Distance

- ⚠ Keep audience and flammable material at a minimum distance of 1.5m (for front and back side) and 3m (for left and right side) from SPARKULAR® TRIPLE.
- ⚠ Make sure sparks shoot out from SPARKULAR® TRIPLE 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.
- ⚠ Sparks and consumables from the machine can lead to serious eye injury. Always wear safety goggles when enter the safety zone.



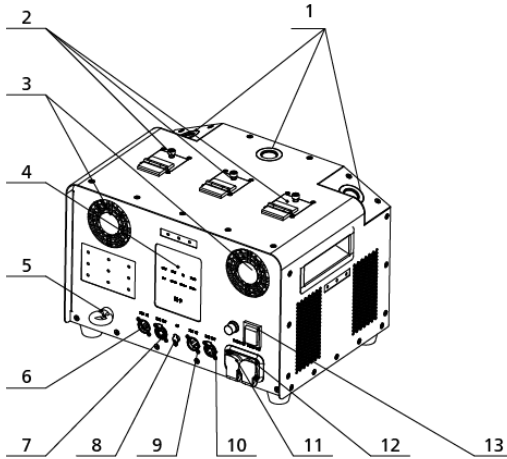
Δ Description

SPARKULAR® TRIPLE is three way SPARKULAR® machine, with one vertical nozzle and two 25°angled nozzles, each nozzle can be controlled individually, the effects height adjustable from 2m to 5m. SPARKULAR® TRIPLE equipped with high-speed motor ensure the excellent eruption speed and powerful burst. Stable and uniform sparks effects generated by adopting channel adaptive technology. Exclusive RDMX technology help operator monitor the working status of each machine, together with high quality waterproof socket makes SPARKULAR® TRIPLE a stable and reliable professional equipment for stage performance.

Δ Technical Specifications

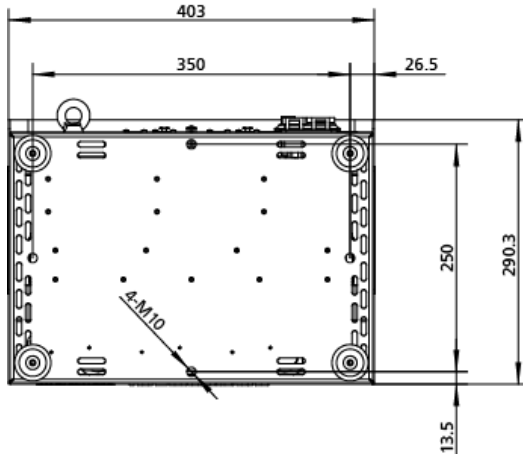
- \\ **MODEL:** BT51/BT52
- \\ **DIMENSION:** 400×290×270mm
- \\ **WEIGHT:** 20kg
- \\ **CASING MATERIAL:** stainless steel
- \\ **VOLTAGE:** 220V(BT51)/110V(BT52), 50/60Hz
- \\ **WORK POWER:** 1500W
- \\ **WORK TEMP.:** -20°C~50°C
- \\ **EFFECT HEIGHT:** 2-5m adjustable
- \\ **EFFECT DIRECTION:** middle nozzle vertical two nozzles angled at 25°
- \\ **HOPPER CAPACITY:** 160g*3
- \\ **HC8200 CONSUMPTION RATE:** 17g/min*3
- \\ **INTERFACE:** Neutrik® powerCON TRUE1 IN/OUT
 Neutrik® 3-pin&5-pin XLR IN/OUT
- \\ **CONTROL:** DMX 6 channels

Δ Structure of SPRKULAR® TRIPLE



1. Output Nozzle
2. Feeding Hopper Lid
3. Cooling Fan
4. LCD Display
5. Safety Loop
6. 5-pin DMX IN
7. 5-pin DMX OUT
8. DC 5V
9. 3-pin DMX IN
10. 3-pin DMX OUT
11. POWER IN
12. POWER OUT
13. POWER SWITCH

Diagram of Bottom Panel



Δ Operation Panel

1. LED display area

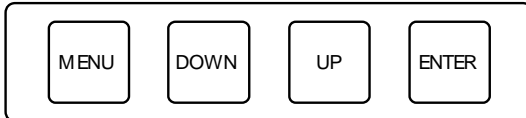


READY1, READY2, READY3

Shows the status of 3 heads respectively, after turn on, the machine pre-heating automatically, pre-heating time is around 5min. When “READY” turns from flashing into long on, indicates that the machine is ready to work.

DMX: Flashing shows that DMX signal is connected, otherwise is without signal

2. Control button area



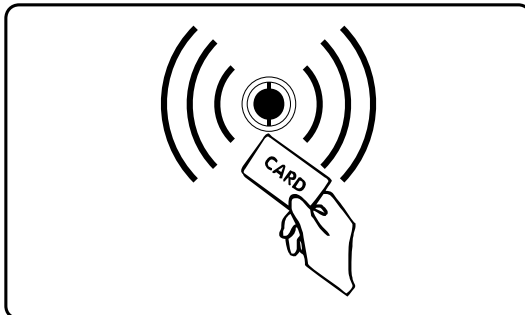
MENU: Short press to switch interface, press and hold for 3 seconds can switch to the advanced setup interface

DOWN: Parameters down

UP: Parameters up

ENTER: Confirm and save parameters.

3. RFID area



Composite Ti with RFID card, swiping cards used to identify parameters and types of granules. The RFID card is disposable, one card can only use one time.

Δ Interface

1. Main Interface

580	580	580
DMX	1	10.22

First line: temp. and error info. of each nozzle of machine Left shows nozzle 3, middle shows nozzle 2, right show nozzle 1.

Second line: shows DMX address, and remaining working time 10min 22seconds

2. Error information

Error information	Explanation
E0 System IC	Systematic error
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.

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
Manual Fountain	ON/OFF	OFF	Manual fountain switch, for testing purpose only
Fountain Height	1-10	1	Manual fountain, set shooting height, for testing purpose only

4. Advanced Menu

Press "MENU" 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	500-610	580	Default is 580. Please don't change default value without engineer's suggestion from SHOWVEN®
Auto Heat	ON/OFF	ON	Auto preheat function switch after turning on machine
Density	70-100	90	Adjust the sparks density. Please don't change default value without engineer's suggestion from SHOWVEN®

Mode Selection	Factory Mode User Mode	User Mode	Factory Mode is factory debugging mode. User Mode is using mode
Default Parameter			Useless
Standby Switch	ON/OFF	OFF	When it's on, the machine can only generate spark when pre-heating finished

5. DMX control

SPARKULAR[®] TRIPLE occupies 6 channels, each nozzle takes 2 channels thus can be controlled separately.

First channel (nozzle 1)	Function
0-15	Firing OFF
16-255	Fountain ON, Height adjustable
Second Channel (nozzle 1)	Functions
60-80	Clear Material
20-40	Emergency Stop
0-10	Pre-heat OFF (Disable in Auto-heat)
240-255	Pre-heat ON (Disable in Auto-heat)
Third Channel (nozzle 2)	Functions
0-15	Fountain OFF
16-255	Fountain ON, Height adjustable
Fourth Channel (nozzle 2)	Functions
60-80	Clear Material
20-40	Emergency Stop
0-10	Pre-heat OFF (Disable in Auto-heat)
240-255	Pre-heat ON (Disable in Auto-heat)
Fifth Channel (nozzle 3)	Functions
0-15	Fountain OFF
16-255	Fountain ON, Height adjustable
Sixth Channel (nozzle 3)	Functions
60-80	Clear Material
20-40	Emergency Stop
0-10	Pre-heat OFF (Disable in Auto-heat)
240-255	Pre-heat ON (Disable in Auto-heat)

If use together with HOST CONTROLLER ZK6200/6300, each unit of SPARKULAR[®] TRIPLE must set different DMX address, otherwise it may leads to signal interference.

Δ Operation Guide

1. Install SPARKULAR® TRIPLE

- a) SPARKULAR® TRIPLE can only be installed horizontally.
- b) Make sure the machine is securely installed to avoid tipping.
- c) Check carefully the output nozzle of each machine, make sure the output nozzle is in good shape and there is no powder aggregate.

2. Fill SPARKULAR® TRIPLE

- a) Open powder bags and fill the feeding hopper. Hopper capacity of SPARKULAR® TRIPLE is 160g. There are three hoppers for each unit of SPARKULAR® TRIPLE.
- b) 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.
- c) Maximum effect height for HC8200 LARGE is 5m, HC8200 MEDIUM is 4m.
- d) Make sure the lid of hopper is locked tight after filling.

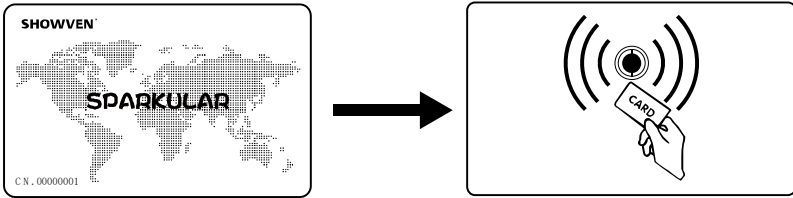
3. Connect Power / DMX cable

- a) Connect a power cable to the POWER IN socket of SPARKULAR® TRIPLE. Connect the other end of power cable to the power source. Make sure power supply is consistent with the rated voltage of the equipment, and the socket must well grounded.
- b) If connect machine in sequence, please connect a power link cable to the POWER OUT of previous machine, connect the other end of the power link cable to POWER IN of the next machine.
- c) The SPARKULAR® TRIPLE power supply cable maximum allowed cascade is 2pcs (BT51) / 1pcs (BT52). Do not connect exceed units to a single electrical circuit.
- d) Power ON all SPARKULAR® TRIPLE.
- e) Assign DMX address for each unit of SPARKULAR® TRIPLE. If use SHOWVEN host controller or FXcommander to control the machine please allocate a unique DMX address for each unit of machine.
- f) Connect a DMX cable to the DMX IN socket of first unit of SPARKULAR® TRIPLE, connect the male connector end of DMX cable to your DMX controller (FXcommander, HOST CONTROLLER, light console etc).
- g) Connect a DMX cable to the DMX OUT of previous machine, and the other end of to the DMX IN of next machine. Connect all devices in series in this way.
- h) Suggest to plug in a DMX terminator into the DMX OUT in last unit of machine to improve signal reliability. Signal amplifier is required for long distance (>200m) DMX signal transmission.

4. Activate SPARKULAR® TRIPLE by swipe RFID card

- a) Swipe an RFID card. Read the card as show below. SPARKULAR® TRIPLE shows time remain if read successfully.
- b) SPARKULAR® TRIPLE will report E4 when remaining time is less than 10 minutes.

- c) Please note each RFID card come with 200g package HC8200 can increase single machine 20min working time, the maximum recharge time for SPARKULAR® TRIPLE is 60min, when time remain reached 60min, it can't recharge anymore RFID card.



5. Programming and Firing

- Programming SPARKULAR® TRIPLE, set the firing height, firing sequences etc.
- Heating up machine, it takes around 5min. it varies according to the voltage and environment temperature.
- Make sure the prescribed safety zone is clear.
- Suggest to clear material before firing.
- Firing. In order to prevent overheat in the heating chamber and protect machine, the maximum continuous firing time for SPARKULAR® TRIPLE is 30s.
- The operator should always have a clear view of the device, so that he/she can stop the show immediately when there is danger.
- Clear material for SPARKULAR® II for 5s after show, clear material will remove the remaining particles from heating chamber.

6. Turn off and Clean up

- Power off SPARKULAR® TRIPLE, allow SPARKULAR® TRIPLE to cool down.
- Disconnect all POWER and DMX cables.
- Empty the remaining HC8200 in hoppers, and store the remaining HC8200 in a dry sealed bottle for next time use. Never touch the output nozzles of SPARKULAR® TRIPLE when empty the hopper. DANGER OF GET BURNT!
- Operators can use handheld vacuum cleaner to empty the feeding hopper. Do make sure the machine was cool down when clean it. Do NOT use high-power vacuum cleaners to avoid hot consumables being sucked into the vacuum cleaner from the heating chamber and cause fire.
- Clean the surroundings to remove powder residues.

Δ Maintenance

- Empty the feeding hopper before shipment of machine.
- Empty the feeding hopper if long time not use, for high humidity environment we suggest to empty feeding hopper after each show.
- Clear material both before and after the show.

Δ **Warranty Instructions**

- \ Sincere thanks for your choosing our products, you will receive quality service from us
- \ The product 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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