SPARKULAR PRO
User Manual

★Please read this manual carefully before operating this product.

★Warranty card attached in the manual, please keep it well.

> Safety Considerations

» Never touch the nozzle of SPARKULAR PRO, danger of getting burnt.

» Never touch the sparks which shooting out from the nozzle.

» Cover of nozzle of SPARKULAR PRO is prohibited.

» Keep audience, animals or flammable objects at a minimum distance of 3m from SPARKULAR PRO. Make sure sparks shoot out from SPARKULAR PRO can NOT touch any objects in the air.

» Ensure that children, animals and unauthorized persons don't have access to the SPARKULAR PRO!

» Unauthorized repair are prohibited, it may cause serious incident.

» Make sure lid of feeding hopper are well covered when use SPARKULAR PRO. Accidentally burning of Composite Ti can only use sands to extinguish. Composite Ti should keep away from moisture and stored in a dry sealed environment.

» please be noted that there may sparks or remains fall to the ground when use HC8200 LARGE, LARGE Ⅰ.

» Clear material is necessary both before and after the show. Please check nozzle of SPARKULAR PRO after each show, if there are consumable agglomerated in the nozzle, please clear it with screwdriver, otherwise it will affect the spark effects and even damage the machine.

» Maximum cascade of SPARKULAR PRO is 5 units (110V version is 3 units) with one standard power cable. Otherwise it may damage the machine and even cause fire.

» For better heat dissipation, block the air intake and air outlet is prohibited.

Model	BT71/BT72
Dimension	315 x 280 x 255mm
Weight	14kg
Input	BT71: AC 220VAC-240VAC,50/60HZ; 600W
	BT72: AC 100VAC-120VAC,50/60HZ; 700W
Work Temp.	-10°C~50°C
Effect height	HC8200 LARGE Ⅰ: 6-7m / HC8200 LARGE : 5-6m
Height adjustable	Yes, gear 1~10
Effect direction	Straight up
Hopper capacity	1200g
Control	DMX

SPARKULAR PRO is specially designed for outdoor events, installations and projects. It is waterproof design and can be used in heavy rainfall. Huge hopper design, guarantee as long as 60min effects time after fill up.

> Operating Panel
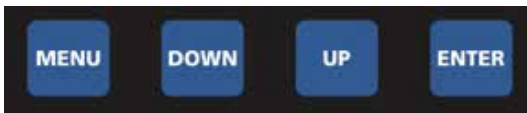
LED display area:

READY: Turns from flashing into long on, indicates that the machine is ready to work.

DMX: Flashing shows that DMX signal is connected, light OFF means there is no DMX signal

FAULT: Light ON when error occurs

HEAT: Light ON when system is heating up

Control Button Area:

MENU: switch through setup menu. Press 3s switch to advanced interface

DOWN: parameter down

UP: parameter up

ENTER: confirm and save parameters

Radio Frequency Identification Area:

RFID card comes together with HC8200. It is a safety design, allows machine to identify the parameter and types of consumable.

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

> Interface

Main interface：

```
DMX Address        1
210 ▮▮          07.24
```

First line: shows DMX address

Second Line: shows inner temp. and temp. bar, as well as error info if available

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	Activated time for machine is not enough, need to swip RFID card
E5 K Temp. Over	Inner core over-temperature
E6 Heat Fail	Heating Fail, if it recovery automatically, problem is shortage of power supply

Setting Menu

Press "MENU" switch through setup menu

Set DMX Address	1-512	Set DMX address If controlled by Host Controller, please set DMX address as 1, 3, 5, 7,…2n-1, otherwise it may leads to signal interference
Manual Fountain	On/Off	Manual firing, for test only
Fountain Height	1-10	Manual firing height setup, for test only
Auto Clear Delay	0.1-0.9s	Auto clear material time after each firing

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.

Option	Range	Explanation
Set Temperature	580-620	Default is 580. Please don't change default value without engineer's suggestion from SHOWVEN.
LCD Backlight	On/Off	LCD screen backlight ON/OFF
Density@ Height 1	80	Sparks density @ Height gear 1
Density@ Height 2	80	Sparks density @ Height gear 2
Density@ Height 3	80	Sparks density @ Height gear 3
Density@ Height 4	80	Sparks density @ Height gear 4
Density@ Height 5	80	Sparks density @ Height gear 5
Density@ Height 6	100	Sparks density @ Height gear 6
Density@ Height 7	100	Sparks density @ Height gear 7
Density@ Height 8	100	Sparks density @ Height gear 8
Density@ Height 9	40-100	Sparks density @ Height gear 9
Density@ Height 10	40-100	Sparks density @ Height gear 10
Mode Selection	Factory Mode User Mode	Factory mode is for engineer only. When in Factory mode machine can't controlled by DMX console/host controller
Motor Protect	On/Off	Motor protect function, default setting is Off
Standby Switch	On/Off	When ON, the machine can firing only when heating up was finished

For better performance of SPARKULAR PRO, please don't change the default value of density without permission from SHOWVEN.

SPARKULAR PRO occupy 2 channels

First Channel	Function
0-15	Firing OFF
16-255	Firing ON and with adjustable height
Second Channel	**Funciton**
60-80	Firing ON and with adjustable height
20-40	Emergency Stop
0-10	Pre-heat OFF (disabled when auto-heat ON)
240-255	Pre-heat ON (disabled when auto-heat ON)

Please follow bellowing rules to set DMX address when use SHOWVEN Host Controller, otherwise it may leads to signal interference.

Sparkular No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
DMX Address	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35

Warranty Instructions

▲Sincere thanks for your choosing SPARKULAR PRO, 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:

1. Damage caused by improper transportation, usage, management, and maintenance, or damage caused by human factors;

2. Disassemble, modify or repair products without Showven's permission;

3. Damage caused by external reasons (lightning strike, power supply etc);

4. Damage caused by improper installation or use;

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

★Invoice and warranty card are necessary when applying for maintenance service from SHOWVEN.

Warranty Card

Product Name:		Serial No.	
Purchase Date:			
Tel:			
Address:			
Problem Feedback			
Actual Problem:			
Maintenance Detail:			
Service Engineer:		Service Date:	