



# User's Manual of Stage Special Effect Spark Machine

## Safety concerns

1. Unauthorized maintenance is prohibited, otherwise serious accidents may occur.
2. Keep dry and do not use in rain or snow.
3. After adding consumables or using, ensure that the opening lid is well covered. Accidental combustion of composite titanium can only be extinguished with sand. Composite titanium should be stored in a dry and sealed environment.
4. Keep the crowds and flammable materials at a safe distance of 3 meters to ensure that no objects will be touched after the sparkle flashes out.
5. Before and after performances, the residual composite titanium must be cleaned at the nozzle. After each performance, the residual composite titanium must be checked. If so, please clean it up, otherwise it will affect the effect and even damage the machine.
6. Up to six machines are connected in series. Over-connection may cause damage or even fire.
7. For better heat dissipation, do not block the intake and exhaust ports.
8. No object should be used to seal the nozzle.

## Machine parameter

Model number	HW-01
Jetting height	1-5 meter
Operating temperature	-10°C-50°C
Power power	600w 3.8A (110V) / 600w 1.9A (220V)
Fuse fuse	110V /6.3A , 220V /6.3A
Control control	Remote control/DMX512
Net weight subtle	5.5kg
Volume Dimension	185mm*165mm*245mm
Maximum number of tandem stations Maximum number of series	6
Warranty period	1 year
Packaging package	Packing in cartons or 1 pack in 2/4/6 air boxes Carton or 1 to 2/4/6 air case

Sparkular is a revolutionary special effect system. It uses a newly designed delivery control system for a fountain style special effect and uses DMX communication and is compatible with other control equipment. Functions:

The controlling signal of international standard: DMX 512

Fixture uses two channels (channel 1 controls effect & height; channel 2 controls the pre-heat and safety feature).

Adjustable effect height

Continuous feedback protection for overheating, redundant safeties for heat protection.

This instruction contains important information. Please read the instruction before making the machine.

Every time you have finished adding consumables, please cover the lid immediately. It is strictly forbidden to spark without the lid. When you ignite the consumables carelessly, please use sand to extinguish them. You can't use water. If the consumables in the bin are not used up, please pour them out and seal them with rags for the next time.

Attention!

The continuous sparking time of the machine can not exceed 30 seconds. Otherwise it will affect the service life of the machine. If you want to continue using, you need to pause for a few seconds before sparking flowers.

Eye Protection Warning!

Remind you to protect your eyes during machine operation.

Installed in warning: When applying power supply, there is dangerous voltage and electric shock risks in the machine. Under no circumstances should you try to open the machine or try to remove and adjust any parts installed in the machine. The machine must be repaired and opened by qualified technicians.

Please use it carefully and don't wet the machine. Keep the machine and controller dry. Do not use them in unshielded places on rainy or snowy days. Please prevent anything from entering the spark outlet. If it happens, do not continue to operate the machine and remove obstacles first.

When installing, please prevent the machine from falling off "Damage may occur"

Please check the nozzle before using, and confirm whether there is any particle accumulation. If there is, please invert the machine to clean up the particles.

Store the consumables in a dry place without direct sunlight, away from the source of fire.

## Material parameters

Consumables	Titanium composite article
Net weight subtle	45 g/200g
Time time	It can take 4–15 minutes.It can take 4–15 minutes
Packaging package	Vacuum package

## Operation steps

1. When the machine is not connected to DMX, the machine automatically reheats after starting (when DMX signal is connected, CH1 channel value 240–255 is ready). After preheating is completed, the indicator READY starts to flicker to indicate that the machine is preheating and the temperature is not up to the preset temperature during the preheating process. The indicator READY stops flickering to indicate that the temperature has been heated to the preset temperature and can start sparking, press the key No.1–6 of the remote control button, the extension device opens for 8 seconds, press again halfway, the machine suspends operation, the machine displays the key No.1 of the remote control corresponding to F01, the key No.2 of the remote control corresponding to F02 on the machine, the key No.3 of the remote control corresponding to F03 on the machine, the key No.4 of the remote control corresponding to F04 on the machine, and the key F05 on the machine corresponding key No.5 of the remote controller, and the corresponding key of F06 is No. 6 on the machine display (the range of the address code of the remote controller is adjustable from 1 to 6).

2. Preheating mode: No. 1 green indicator READY flickers, No. 4 red indicator HEAT lights up, indicating that it has entered the preheating state, the preheating is completed, No. 1 indicator READY is always on, No. 4 indicator lights out HEAT.

3. Connect 512 console: No. 2 blue indicator DMX is on, representing 512 communication, when remote control invalid CH1 channel value 240-255 ready, channel value stops when pushed to 0-10 stop.

Fault: When the indicator No. 3 FAULT flickers, the digital tube shows the corresponding fault code:

- ER2 Temperature Sensor Fault
- ER3 Box Excessive Temperature
- ER4 Body tilt protection
- ER5 Core Excessive temperature
- ER6 Heating Failure
- ER7 Temperature Abnormal Alarm

4. Turn off: Press the button 12 of the remote controller, COL appears and wait for 2 minutes before power off. (If DMX signal is turned on, push CH1 channel value to 0-10 stop running.)

Remarks: After changing 512 address. Operation 512 console dialing needs to select 3-bit lever according to address



# Instructions for Machine Display and Key Operation

1. Contents displayed in the machine display area:

1) F01, F02, F03, F04, F05, F06 (when the remote control is in control state, the default display area shows F1–F6 as the address code of the remote control is adjustable).

2) DMX512 Address (When connecting to DMX, the default display area shows that DMX512 Address 1–510 is adjustable corresponding to DMX1–510 Address Code)

3) Total running time

4) Case temperature

5) Current temperature

2. Content of Function Number

1). P00 – Device parameter setting

2). P01–DMX512 Address Settings

3). P02–gear adjustment settings (function number selection parameters 1, 2, 1 represent the indoor gear, 2 represent the outdoor gear. User-friendly for indoor and outdoor two scenarios.

4). When the device is powered on and two keys are pressed at the same time, it can enter the temperature setting interface and set the target temperature. After the setting is completed, the device needs to be restarted before it takes effect.

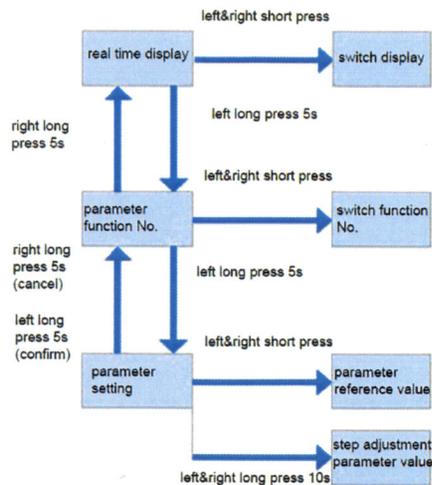
Key operation instructions:

1. After powering on the machine, the display interface shows: F01 represents the device number and can switch display content by pressing left and right keys.

2. Long press left key, you can enter function number, P00, P01, P02. At this time, you can switch function number by pressing left and right key.

3. Long press left key to enter the function number parameter setting interface, short press left key to increase the function number parameter, short press right key function number parameter to reduce, after setting is completed, often press left key to confirm.

Display of parameter function number	P88
Normal Digital Display	Up to three decimal-free points
Alarm display	Er0–9
Data Overflow Display	9.9.9.



## Remote Controller Description



Before using the remote control, the antenna should be pulled out to achieve the best control effect.

### DMX512 ADDRESS PARAMETERS

512 channel	value	Function
CH1	0 – 10	Preheat shut
	11 – 179	Emergency stop
	180 – 199	Clear material
	200 – 219	Protocol switching
	220 – 239	Spare
	240 – 255	Ready
CH2	0-255	Spare
Ch3	0-255	Height adjustment

### Notes for 512 Address Operation

- 1.Each extension occupies three channels
- 2.Set 4, 7, 10 with interval of 3
- 3.Actual Operating Channel 1 goes to the Operating Address Code.
- 4.Channel 2 is a density channel.
- 5.Channel 3 is height channel

1 KEY: No. 1 address number on/off, press No. 1 key, the machine starts, press No. 1 key again, the machine stops; after pressing No. 1 key, the machine runs for 8 seconds by default.

2 KEY: No. 2 address number on/off, press No. 2 key, the machine starts, press No. 2 key again, the machine stops; after pressing No. 2 key, the machine runs for 8 seconds by default.

3 KEY: No. 3 address number on/off, press No. 3 key, start the machine, press No. 3 key again, stop the machine; press No. 3 key, the machine runs for 8 seconds by default.

4 KEY: No. 4 address number on/off, press No. 4 key, start the machine, press No. 4 key again, the machine stops; press No. 4 key, the machine runs for 8 seconds by default.

5 KEY: No. 5 address number on/off, press No. 5 key, machine start, press No. 5 key again, machine stop; press No. 5 key, machine runs for 8 seconds by default.

6 KEY: No. 6 address number on/off, press No. 6 key, the machine starts, press No. 6 key again, the machine stops; after pressing No. 6 key, the machine runs for 8 seconds by default.

7 KEY: Spark 1.5 seconds from 1-6 address once, time interval is 0.5 seconds, cycle is 3 times, 1.5 seconds for extension 1, 0.5 seconds for extension 2, 1.5 seconds for extension 2, and 0.5 seconds for extension 2. Until extension 6 sparks 1.5 seconds, waits 0.5 seconds; Then start on the 1st and cycle three times.

8KEY: Spark 1.5 seconds from 6-1 address once, time interval is 0.5 seconds, cycle is 3 times, spark 1.5 seconds from extension 6, wait 0.5 seconds, spark 1.5 seconds from extension 5, wait 0.5 seconds. Spark 1.5 seconds until Extension 1, wait 0.5 seconds; Then start from No. 6 and cycle three times (notice the commands here, for example, start sparking No. 1, start sparking No. 2 0.5 seconds after No. 1 start, then start No. 3 0.5 seconds, then start No. 4 0.5 seconds, then No. 1 has sparked 1.5 seconds, closed, and so on). Not required for No. 1 to be sparked until No. 1 runs for 1.5

conds and then starts No. 2 in 0.5 seconds.

9 KEY: Spark 1.5 seconds, 1 second interval, 3 cycles, 1–6 spark 1.5 seconds, 1 second interval, 3 cycles, 1–6 spark 1.5 seconds, 1 second interval, 3 cycles.

10 KEY: Overall spark 30 seconds, 1–6 spark 30 seconds (no matter which address, can receive sparking).

11KEY: The emergency stop command, all the machines receive the command for stopping the sparking action and return to the standby preheating state.

12 KEY: Cleaning, soft shutdown, press soft shutdown, stop all actions, extinguish indicators, only the cooling fan in work, the fastest reversal of the first feeding, the fastest speed of the second feeding motor, the fastest speed of the fan, heating stop, start timing, timing time to the extension execution mechanism all stop, No. 1–6 shutdown, stop all actions, extinguish all indicators. Only the cooling fan is working. Please press No. 12 key before cutting off the power supply. Soft shutdown is needed for cooling. The temperature of the display frequency will drop to about 250 degrees for about 6–8 minutes. It is strictly prohibited to pull out the point source without starting No. 12 key. This will damage the machine.

4: Long press the minus sign on the left most –, the system will display P00 (P00 represents the address code of the remote controller, the parameter range is 1–6 adjustable). When the display displays P00, then long press the minus sign on the left frequently –, enter the adjustment mode of the address code parameters of the remote controller, adjust the parameters with the left and right keys, confirm the parameters by long pressing the left key, and long press the right key for the return operation.

5: Function number P01 parameter adjustment (P01 means DMX address code settings), long press the left key to display P00, then long press the left key to display P01, then long press the left key to enter the DMX address code settings, DMX address code parameter adjustment range is 1–510 adjustable, long press the left key for parameter confirmation, long press the right key for return operation.

6: Function number P02 parameter adjustment (P02 means adjusting indoor and outdoor parameters of the spark machine), long press the left key to display P00, then short press the right key to switch to the P02 display state, then long press the left key to enter the parameter adjustment mode, P02 parameter range 1–2 can be adjusted, 1 means indoor use parameters, 2 means outdoor use parameters, parameter confirmation needs long press the left key, long press right key for return operation.

## Operating panel instructions

1: Connect the power input cable, press the ON key of the main switch of the power supply, the preheating indicator HEAT will turn on the red light, READY indicator flashes, indicating that the preheating of the machine takes about 5 minutes. In the process of preheating, the key of the device to start any remote controller is invalid. When the preheating reaches the preset temperature of 550 degrees in about 5 minutes, the machine is in a constant temperature state. At this time, the HEAT indicator lights out. Indicator READY lights green, indicating that heating to the preset temperature can be operated according to the relative keys on the remote control, below the preset temperature system will automatically heat to the preset temperature.

2: DMX indicator and DMX input and output: When the DMX indicator is not on, it indicates that the device is in the remote control mode. When the DMX is turned on, the DMX indicator will turn blue.

3: When in remote control mode (DMX indicator is not on) the system defaults to F1–F06, which shows the address code controlled by the remote controller. Please operate the machine according to the instructions of the remote controller. Short press the minus–key on the left most side to display the DMX address code 1–510 once, then short press the minus–key on the left most side to display the total running time of the device once, and then short press the minus–key on the left most side to display the total running time of the device. – The temperature in the case is about 25–30 degrees one time, and then short press the minus sign on the left side. The temperature in the case is about 550 degrees at one time. The parameter confirmation needs long pressing the left key, and long press the right key for the return operation.

## Warranty Notes

1. Thank you sincerely for purchasing our products. As our customers, you will receive the high quality after-sales service provided by our company.

2. This product is warranted for one year. For example, within one week, due to quality problems, the company can replace the same type of products.

3. During the warranty period, our company will provide free maintenance service for customers due to hardware failure caused by the product itself. Please do not disassemble and repair the machine by yourself.

4. Any one of the following circumstances does not fall within the scope of warranty service:

1. Damage caused by external reasons or failure to operate in accordance with the instructions;

2. The product has been disassembled, modified or repaired without authorization;

3. Damage caused by improper handling, management, use and maintenance or man-made damage by users;

4. Damage caused by incorrect installation or use of users;

Products not covered by the warranty will provide fee-based maintenance services.

5. When repairing is needed, please show the purchase certificate and this warranty card. Otherwise, it will not be accepted.

## Warranty card

Product name	
Product number	
Date of purchase	
Contact address	
Contact number	
User Feedback information	
Failure	
Disposal	
Repairing personnel	
Repairing date	

# **SPARK** by AUVI Operation Instruction for the Stage Special Effect Spark Machine

