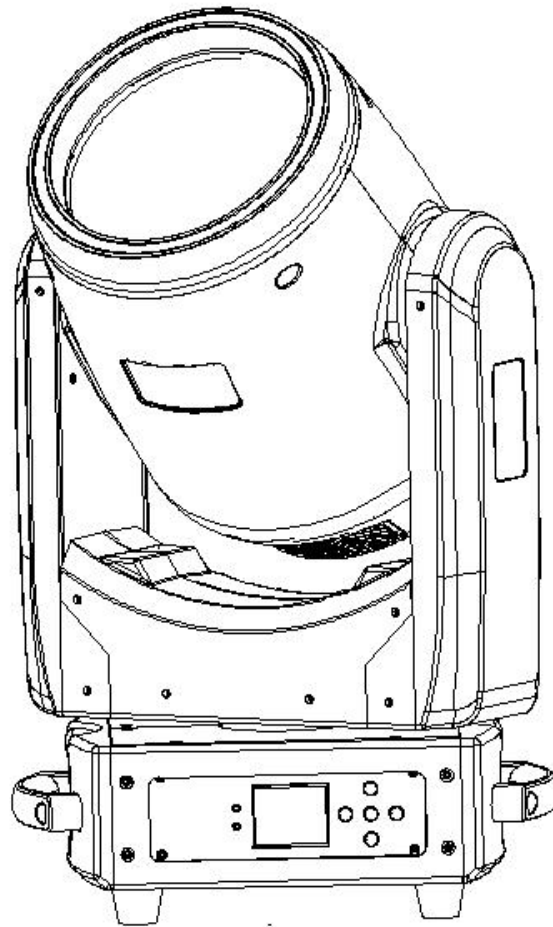


# LED 198 module Beam Moving Head



**User Manual**

## 1.Safety Instructions

**Please read the instruction carefully which includes important information about the installation, usage and maintenance.**

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

**Important:**

**Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.**

Unpack and check carefully to ensure that there is no transportation damage before using the unit.

This product is for indoor use only. Use only in a dry location.

DO install and operate by qualified operator.

DO NOT allow children to operate the fixture.

Use safety chain when fixing the unit. Handle the unit by carrying its base instead of head only.

The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces.

Be sure that no ventilation slots is blocked, otherwise the unit will be overheated.

Before operation, ensure that you are connecting this product to the proper voltage in accordance with the specifications in this manual or on the product's specification label.

It's important to ground the yellow/green conductor to earth in order to avoid electric shock.

Minimum ambient temperature TA: 0°C. Maximum ambient temperature TA: 40°C. Do not operate this product at a lower or higher temperature.

DO NOT connect the device to any dimmer pack.

Avoid any flammable liquids, water or metal from entering the unit. Once it happens, cut off the mains power immediately.

DO NOT operate in a dirty or dusty environment. DO clean the fixture regularly. DO NOT touch any wire during operation as there might be a hazard of electric shock.

Avoid entanglement of the power cord with other wires.

The minimum distance to objects/surface must be more than 1 meters.

Disconnect mains power before fuse/lamp replacement or servicing.

Replace fuse/lamp only with the same type.

In the event of serious operating problem, stop using the unit immediately.

Never turn on and off the unit time after time.

The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.

DO NOT attempt to operate this unit if it becomes damaged. DO NOT attempt any repairs

yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center if needed.

Disconnect this product from its power source before servicing.

DO use the original packaging if the device is to be transported.

Avoid direct eye exposure to the light source while the product is on.

Never touch bulb with bare fingers, as it is very hot after using.

DO NOT operate this product if you see damage on the housing, shields, or cables. Have the damaged parts replaced by an authorized technician at once

### **Installation:**

The fixture should be fixed on the clamp. Always ensure that the unit is firmly fixed to avoid vibration and slipping off during operation. Ensure that the trussing or area of installation must be able to hold 10 times the weight without any deformation. Always install a safety cable that can hold at least 12 times the weight of the fixture when installing. DO install and operate by qualified operator. It must be installed in a place where there is out of the reach of people.

## **2.INSTALLATIONS**

installations Note: In order to increase protection, please install the lamp on the sidewalk, outside the seating area, or an area where unauthorized persons may touch the lamp

Before installing the fixture on any surface, make sure that the installation area can bear the minimum point load above 10 points of the weight of the equipment. The installation of the fixing device must always be fixed with auxiliary safety accessories (such as a suitable safety rope)

Do not stand directly under the equipment when installing, removing, or servicing fixtures

From the ceiling or set on a flat surface (see the picture below). Ensure that this fixture is kept at least 0.5m (1.5 feet) away from any flammable materials (decorations, etc.)

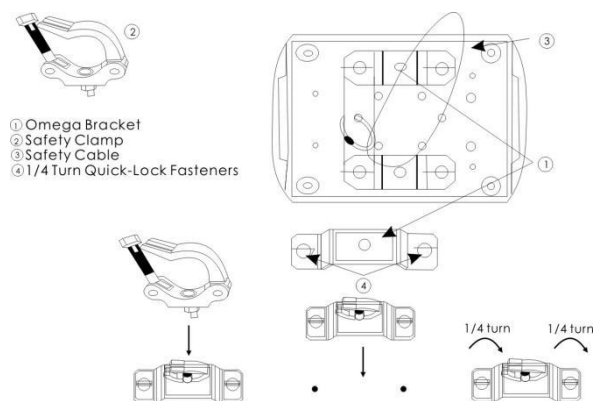
Be sure to use and install the supplied safety rope to ensure safety and

prevent accidental damage and/or injury in case the fixture is damaged

Installation point: Overhead installation requires a wealth of experience, including calculation of working load limits, in-depth understanding of the installation materials used, and regular safety inspections of all installation materials and fixtures. If you do not have these qualifications, please do not try to install it yourself. Improper installation can cause personal injury

Before connecting the main power cord to an appropriate wall outlet, make sure to complete all assembly and installation procedures

Lamp installation: LED shaking head provides a unique mounting bracket assembly, which integrates the bottom of the base and the fixing point of the safety cable into one unit (see the figure below). When installing the fixture to the truss, make sure to use the appropriate tools to fix it on the attached bracket, and use the M10 screw that passes through the center hole of the "bracket" to fix it. As an additional safety measure, make sure to use at least one safety cable integrated in the base assembly to connect at least one appropriately rated safety cable to the fixture.

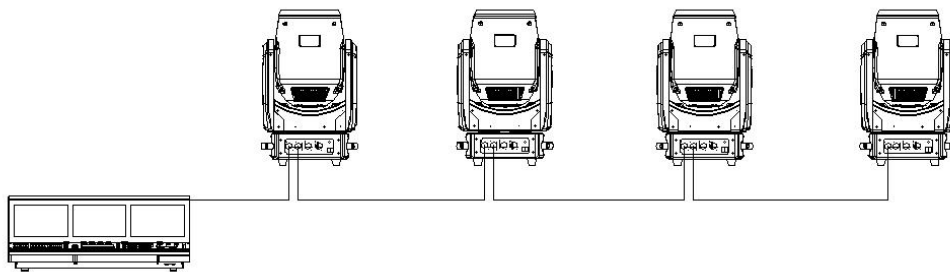
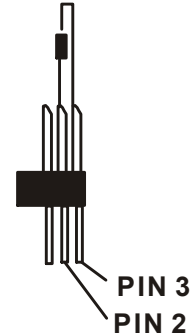
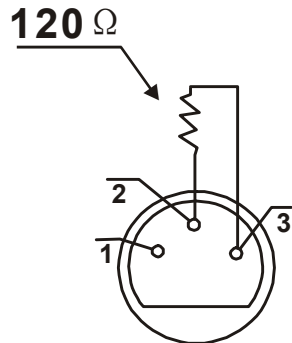
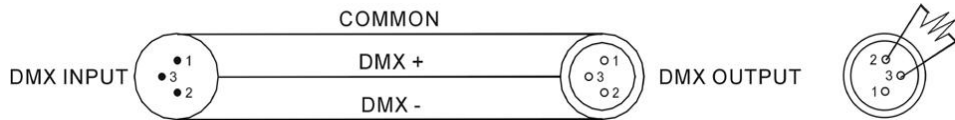


### 3. DMX-512 control connections

Connect the provided XLR cable to the female 3-pin XLR output of your controller and the other side to the male 3-pin XLR input of the moving head. You can chain multiple

Moving heads be connected together through serial linking. The cable needed should be two core, screened cable with XLR input and output connectors.

For installations where the DMX cable has to run a long distance or is in an electrically noisy environment, such as in a discotheque, it is recommended to use a DMX terminator. This helps in preventing corruption of the digital control signal by electrical noise. The DMX terminator is simply an XLR plug with a 120  $\Omega$  resistor connected between pins 2 and 3, which is then plugged into the output XLR socket of the last fixture in the chain. Please see illustrations below



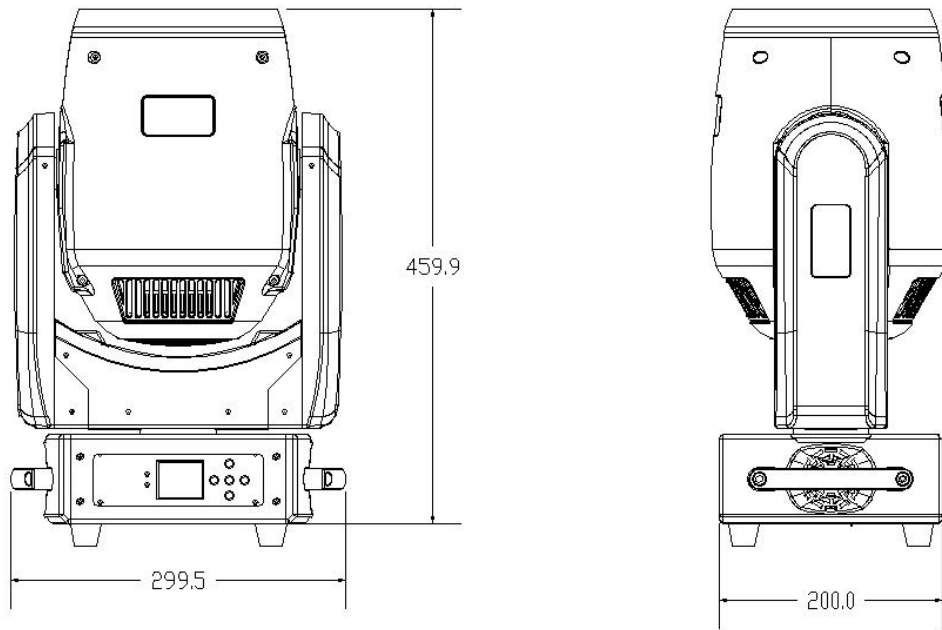
#### 4.Address code setting

If you use a universal DMX controller to control the units, you have to set DMX address from 1 to 512 so that the units can receive DMX signal.

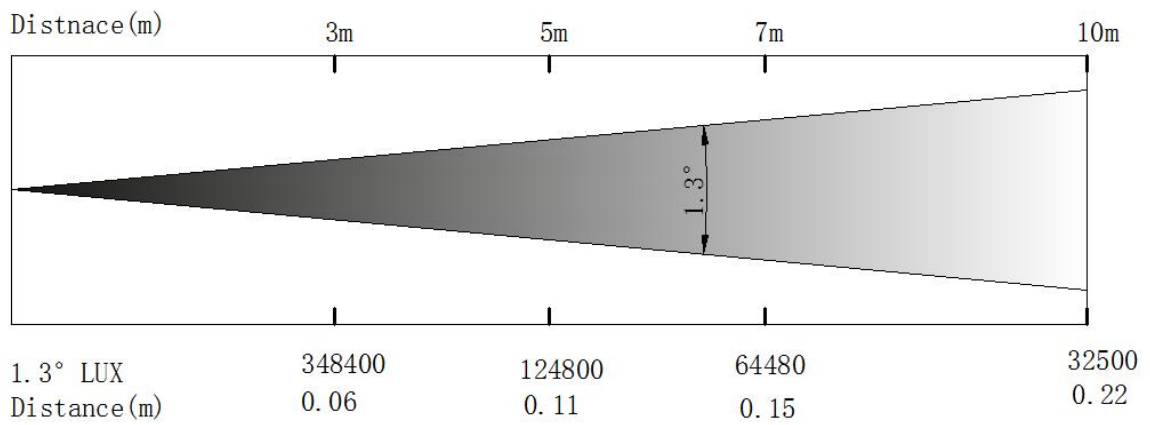
Press the MENU button to enter menu mode, select DMX Settings, press the ENTER button to confirm, use the UP/DOWN button to select DMX Address, press the ENTER button to confirm, the present address will blink in the display, use the UP/DOWN button to adjust the address from 001 to 512, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle 30 seconds to exit menu mode. Please refer to the following diagram to address your DMX512 channel for the first 4 units.

Channel MODE	UNIT1 ADDERSS	UNIT2 ADDERSS	UNIT3 ADDERSS	UNIT4 ADDERSS
17CH	1	18	35	52

## 5. Fixture size

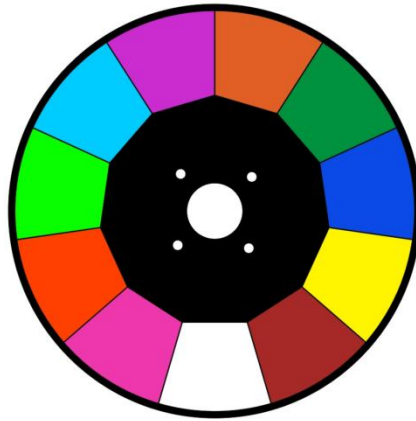


## 6. Illuminance chart:

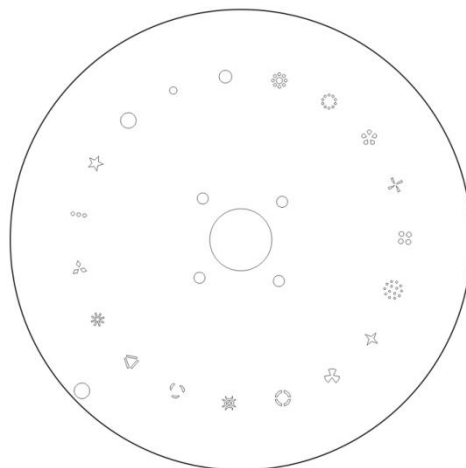


## 7. Effect Wheels

### Color wheels



### Gobo wheels



### Colorful



## 8.Product parameter introduction

Input voltage: AC100-240V 50-60HZ

Output Voltage: V1:36V(Master board+LED driver), V2:12V(cooling fan+Display)

Power supply: 250W

Light source: 198W module high output white light LED

Light strip: 30pcs 0.5W RGB5050LED

Service life: 50,000 hours service life, low power consumption

Color temperature: 7500K

Beam angle: 1.3° beam angle, focusing function

Color: 10 colors + white, variable direction and speed

Fixed gobos: 18 fixed gobos + white light, rotation and jitter

Prism: 16 prism, variable speed bidirectional rotation

With fog and colorful function

Strobe: high-speed strobe effect, 1-25 flashes per second

Channel: 17 CH

Control mode: DMX 512, master-slave, voice control, self-propelled

With remote RDM function

Auto focus function

Display mode: color liquid crystal display

Horizontal scan: 540 degrees (160bit precision scan) electronic error correction.

Vertical scanning: 270 degrees (160bit precision scanning) electronic error correction.

Temperature protection function, when the internal temperature reaches 40°C, the fan starts to work, when the internal temperature reaches 70°C and the brightness is reduced by half.

### Features:

The appearance of the product is simple and exquisite, light weight, suitable for use in multiple places, using high-brightness LED module light source, the light is sharp and the spot is clear, using a two-in-one high-precision lens, the minimum light-emitting angle reaches 1.3 degrees, a variety of stroboscopic effects, equipped with Atomization and colorful functions, high standard constant current solution, strong uniformity of low brightness, stable linear dimming, auto focus function, support RMD remote dialing function, the light strip is equipped with 20 static effects and 51 dynamic effects. When dialing the address code, press the up button in the menu to automatically increase the number of channels, without calculating the address code of the next lamp, the lamp automatically monitors the photocoupler and Hall data function, and has a temperature self-check function, the lamp temperature reaches 40 degrees, the fan starts, The power is reduced to 70 degrees to protect the life of the lamp beads.



## 9.Menu top interface



Address: Click to enter the address code setting

Settings: Click to enter the system settings

Manual: Click to enter manual mode

Calibration: Click to enter the password to enter the system calibration mode

Reset: Click to enter the system reset mode

Information: Click to enter to view system information

## 10.Menu structure

Main menu	Secondary menu	Three-level menu/parameter
<b>address</b>	001-512	(Add the number of channels each time, subtract the normal)
<b>System settings</b>	Operating mode	DMX/sound control/self-propelled 1/self-propelled 2
	Channel mode	17CH
	Horizontal reversal	switch
	Vertical reverse	switch
	Hall error correction	switch
	Optocoupler error correction	switch
	Signal hold	switch
	screen protector	switch
	Screen flip	On/off/auto
	Synchronization Update	switch
	Language	Medium/EN
	reset	
<b>Manual mode</b>	Color wheel	000-255
	Strobe	000-255
	Dimming	000-255

	Picture plate	000-255
	Reserved	000-255
	Reserved	000-255
	Atomization	000-255
	focusing	000-255
	X axis	000-255
	X-axis fine adjustment	000-255
	Y axis	000-255
	Y-axis fine adjustment	000-255
	Reserved	000-255
	Reset	000-255
	Reserved	000-255
	Reserved	000-255
	Reserved	000-255
	Reserved	000-255
	Reserved	000-255
	Reserved	000-255
<b>System calibration</b>	X axis motor	000-255
	Y axis motor	000-255
	Color wheel motor	000-255
	Pattern motor	000-255
	Reserved motor	000-255
	Focus motor	000-255
	Atomization motor	000-255
	power	010-255
	MIC sensitivity	000-255
	change Password	Enter a new password
<b>System reset</b>	Effect motor reset	
	Scan motor reset	
	All motors reset	
<b>system message</b>	Reset information	Display specific information content
	DMX data detection	Display specific DMX detection content
	Sensor information	Display specific information of optocoupler and Hall
	hardware version	
	Software version	

### Automatic screen rotation function

The system can automatically rotate the screen according to the direction of gravity without manual rotation. You can also turn off the automatic rotation function.

### Manual control

This interface is used to control the current fixture.

Press the "OK" key to enter the editing state. Press the "up" and "down" keys to change the channel value. Press "OK" again to save the modified value and exit the editing. Press "Exit" to exit the editing without saving the modified value.

### System calibration

Set a layer of password here to prevent misuse by non-professionals. Press the "OK" button to verify the password

Option	Description
Initial position calibration	After entering the sub-interface, you can adjust the reset position of the X-axis, Y-axis and other motors to compensate for the error in the hardware installation. The adjustment range is 0~255, and 127 means no adjustment.
Stroke calibration	After entering the sub-interface, you can adjust the X-axis, Y-axis and other motor strokes, the adjustment range is 0~255, 127 means no adjustment.
Force calibration	After entering the sub-interface, you can adjust the force of the X-axis, Y-axis and other motors, the adjustment range is 0~255, 127 means no adjustment.
Speed calibration	After entering the sub-interface, you can adjust the speed of the X-axis, Y-axis and other motors, the adjustment range is 0~255, 127 means no adjustment.
Fan control	Set control fan mode
Other calibration	Voice control sensitivity calibration, and change the password
Advanced calibration	Reserved function
Synchronization Update	Select the above modification to update to other lamps and lanterns simultaneously, "On" means to update the content

### Reset

Press the "up" and "down" keys to switch the reset mode, and press "OK" to reset directly.

Option	Description
head	Reset effect panel except XY
XY	Only XY axis reset
all	Fixture reset

**system message**

Option	Description
Reset error message	If the red ERR indicator is on, it means that the lamp is running wrong, and you can enter the sub-interface to view the details.
DMX data monitoring	This enters the sub-interface to display the channel value numerically for viewing
Sensor information	Real-time monitoring of the status of various photoelectric switches and Hall sensors on the lamp
Hardware version number	Lamp hardware information
Software version number	Lighting software version
Total usage time	Cumulative use time (accurate to the minute)

**11.DMX512Channel**

NO.	Channel function	Value	Description
1	X	0-255	0--540°
2	X fine-tuning	0-255	X axis 16bit
3	Y	0-255	0--270°
4	Y fine-tuning	0-255	Y axis 16bit
5	XY speed regulation	0-255	speed
6	Dimming	0-255	0%-100% dimming
7	Strobe	0-3	Lights off
		4-99	Synchronous strobe
		100-149	Pulse strobe
		150-199	Strobe
		200-250	Random strobe
		251-255	Light up
8	colour	0-1	White
		2-7	Color 1
		8-13	Color 2
		14-19	Color 3
		20-25	Color 4
		26-31	Color 5
		32-37	Color 6
		38-43	Color 7
		44-49	Color 8
		50-55	Color 9

		56-61	Color 10
		62-67	White light + color 1
		68-73	Color 1+color 2
		74-79	Color 2+color 3
		80-85	Color 3+color 4
		86-91	Color 4+color 5
		86-97	Color 5+color 6
		93-103	Color 6+color 7
		100-109	Color 7+color 8
		107-115	Color 8+color 9
		114-121	Color 9+color 10
		121-127	Color 10+white light
		128-189	Flowing water counterclockwise from fast to slow
		190-193	Stop water flow
		194-255	Flow clockwise from slow to fast
9	pattern	0-9	White light
		10-12	Gobo1
		13-15	Gobo2
		16-18	Gobo3
		19-21	Gobo4
		22-24	Gobo5
		25-27	Gobo6
		28-30	Gobo7
		31-33	Gobo8
		34-36	Gobo9
		37-39	Gobo10
		40-42	Gobo11
		43-45	Gobo12
		46-48	Gobo13
		49-51	Gobo14
		52-54	Gobo15
		55-57	Gobo16
		58-60	Gobo17
		61-63	Gobo18
		64-70	Gobo 1 jitters from slow to fast
		71-77	Gobo 2 jitters from slow to fast
		78-84	Gobo 3 jitters from slow to fast
		85-91	Gobo 4 jitters from slow to fast
92-98	Gobo 5 jitters from slow to fast		
99-105	Gobo 6 jitters from slow to fast		
106-112	Gobo 7 jitters from slow to fast		

		113-119	Gobo 8 jitters from slow to fast
		120-126	Gobo 9 jitters from slow to fast
		127-133	Gobo 10 jitters from slow to fast
		134-140	Gobo 11 jitters from slow to fast
		141-147	Gobo 12 jitters from slow to fast
		148-154	Gobo 13 jitters from slow to fast
		155-161	Gobo 14 jitters from slow to fast
		162-168	Gobo 15 jitters from slow to fast
		169-175	Gobo 16 jitters from slow to fast
		176-182	Gobo 17 jitters from slow to fast
		183-189	Gobo 18 jitters from slow to fast
		190-221	Flowing water counterclockwise from fast to slow
		222-223	Stop water flow
		224-255	Flow clockwise from slow to fast
		128-190	Fast to slow rotation counterclockwise
		191-192	stop
		193-255	Slow to fast rotation clockwise
10	Colorful atomization	0-200	Atomization linear cut
		201-255	Colorful
11	Prism	0-127	Prism cut out
		128-255	Prism cut
12	Prism rotation	0-127	Angle adjustment
		128-189	Fast to slow clockwise rotation
		190-193	stop
		194-255	Slow to fast rotation counterclockwise
13	focusing	0-255	Linear focus
14	Light strip strobe	0-3	Lights off
		4-255	Synchronous strobe
		251-255	Light up
15	Light strip macro function	0-51	Built-in colors
		52-55	Effect 1
		56-59	Effect 2
		...	One effect for every 4 numbers
		252-255	Effect 51
16	Light strip effect speed	0-255	From slow to fast
17	Reset	0-199	Invalid area
		200-205	Reset all
		206-255	Invalid area

## **12. Calculation method of lamp start address code:**

The starting address code of the current fixture is equal to (the starting address code of the previous fixture) + (the number of channels of the fixture)

1: The starting address code value of the first lamp is A001.

2: The number of basic channels of the controller should be greater than or equal to the total number of channels used by the lamp.

3: Note: When using any controller, each lamp must have its own start address code. The start address code of one lamp is set to A001, and the number of channels of the lamp is 17CH; then the start address code of the second lamp is Set to A018; the start address code of the third lamp is set to A035; and so on, (this setting method also needs to (Different consoles are available))

## **13. Maintenance and maintenance:**

Shutdown operation: before each shutdown, turn off the LED for 10 minutes in advance. Let the heat dissipation fan quickly discharge the heat generated in the lamp during use, which can extend the life of the accessories in the lamp, especially the LED! In order to ensure that the lamp can operate stably, it should be kept clean. Before disassembling the lamp for repair or starting maintenance work, confirm whether the power supply is disconnected. It is very important to keep the lamp clean and clean. Please clean it regularly, not only Maintain the maximum brightness output, and can also extend the service life of the lamp. It is recommended to use high-quality glass cleaner and a clean soft cloth to clean it. The dust inside the lamp is cleaned at least once every six months.

## **14. Precautions for the use of RDM RMD**

RDM is an extended version of the DMX512-A protocol. It is a remote device management (Remote Device Management) protocol. The traditional DMX512 protocol communication is one-way communication. The protocol is based on the RS-485 bus. RS-485 is a time-sharing multipoint, half-duplex protocol. , Only one port is allowed to output from the host at the same time, so, pay attention to the following points when using RDM:

To use a console or host device that supports RDM protocol host;

To use a two-way signal amplifier, the traditional one-way signal amplifier is not suitable for the RDM protocol, because the RMD protocol requires feedback data, and the use of a one-way amplifier will block the returned data, resulting in the failure to search for the lamps;

The lamp must be set to DMX mode to ensure that there is only one host on the signal line;

A 120ohm impedance matching resistor must be inserted between the terminals 2 and 3 of the terminal plug. When the signal line is relatively long, the use of differential signals is more stable and beneficial, which is beneficial to the quality of communication;

When it appears that the lamp accepts DMX control, but cannot search for the lamp by RDM, first check the signal amplifier, and then check whether there is a bad connection between the 2 and 3 lines of the signal line.