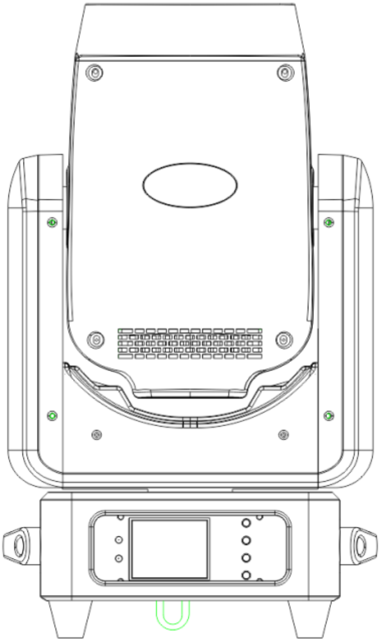
150W LED Beam Moving Head



This product manual contains important information about the safe installation and use of this projector. Please read and follow these instructions carefully and keep this manual in a safe place for future reference.

User manual

Please read the instructions carefully before use

INDEX

1.STATEMENT

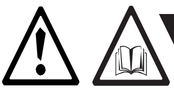
The product has well capability and intact packing when leave factory. All of the user should comply with warning item and manual, any misuse cause of the damages are not included in our guarantee, and also cannot be responsible for any malfunction & problem owing to ignore the manual.

2.ACCESSORIES

These items are packed together with the product:

Name	Quantity	Unit	Remark
USER MANUAL	1	PCS	
DMX CABLE	1	PCS	
BRACKET	2	PCS	
CLAMP	2	PCS	
SATETY CABLE	1	PCS	

3.SAFETY INSTRUCTION



WARNING! *Read the safety precautions in this section before unpacking, installing, powering or operating this product.*

Review the following safety precautions carefully before installing or operating the fixture. This fixture must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the fixture and the hazards involved.

Preventing electric shock

WARNING! *Risk of electric shock.*

- Always power off/unplug the fixture before removing any covers.
- Ensure that the power is turned off when connecting the fixture to the AC mains supply.
- Ensure that the fixture is electrically connected to earth (ground).
- Do not apply power if the fixture is in any way damaged.
- Do not immerse the fixture in water or liquid.

Preventing burns and fire

WARNING! *Take measures to prevent burns and fire.*

- Install in a location that prevents accidental contact with the fixture.
- Install only in a well-ventilated space.
- Install only in accordance with applicable building codes.
- Do not paint, cover or modify the fixture.
- Keep all flammable materials away from the fixture.
- Allow the fixture to cool for 15 minutes after operation, before touching it.
- CAUTION: Exterior surface temperature after 5 min. operation = 45 °C (113 °F). Steady state = 60 °C (140 °F).

Avoid personal injury

WARNING! *Take measure to prevent personal injury.*

- Do not look directly at the light source from close range.
- Take precautions to prevent injury due to falls when working at height.
- For permanent installation, ensure that the fixture is securely fastened to a load-bearing surface with suitable corrosion-resistant hardware.
- For temporary installation with clamps, ensure that the quarter-turn fasteners are turned fully and secured with a suitable safety cable. The cable must be approved for a safe working load (SWL) of 10 times the weight of the fixture, and it must have a minimum gauge of 3 mm.

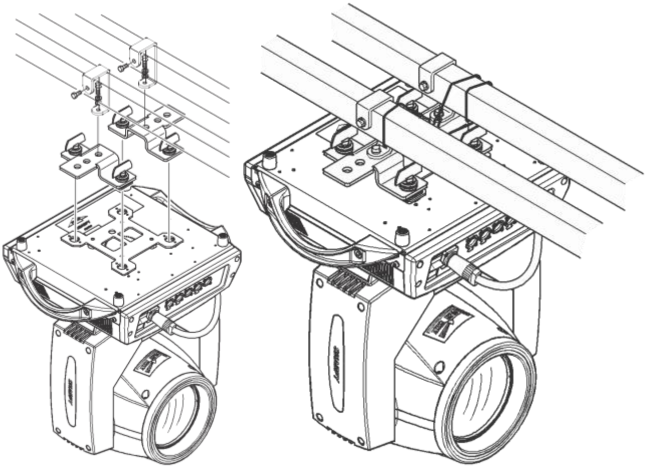
4.INSTALLATION

The unit should be mounted via its screw holes on the bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. And make sure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the unit's weight. Also always use a safety cable that can hold 12 times of the weight of the unit when installing the fixture.

The equipment must be fixed by professionals. And it must be fixed at a place where is out of the touch of people.

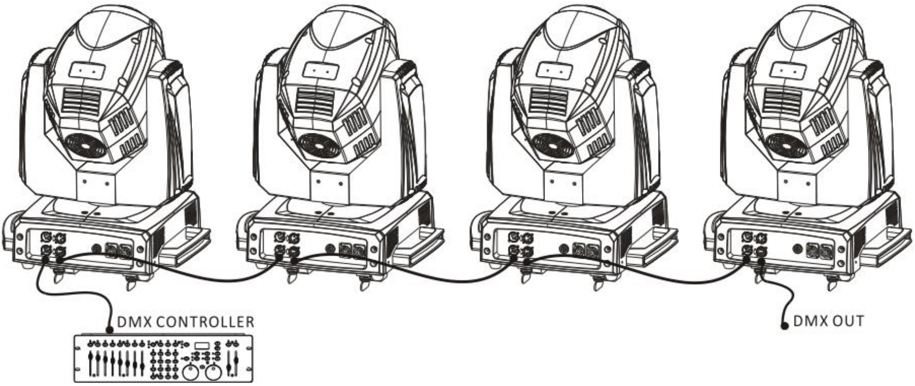
Clamp mounting

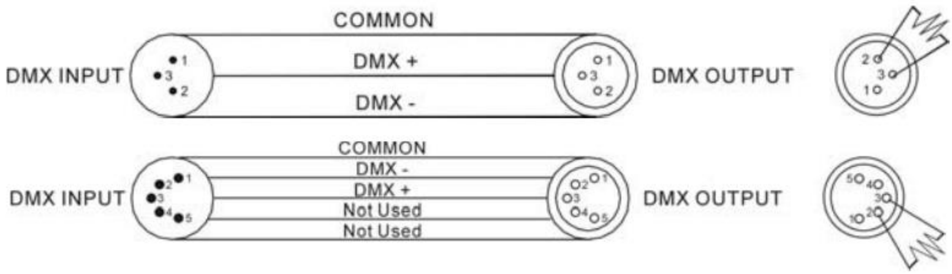
The moving head provides a unique mounting bracket assembly that integrates the bottom of the base, the included '**Omega Bracket**' and the **Safety Cable** rigging point in one unit (see the illustration below).When mounting this fixture to truss be sure to sere to secure an appropriately rated clamp to the included **Omega Bracket** using a M10 screw fitted through the center hole of the 'omega bracket'. As an added safety measure be sure to attached at least one properly rated **Safety Cable** to the fixture using one of the safety cable rigging point integrated in the base assembly.



DMX-512 control connection:

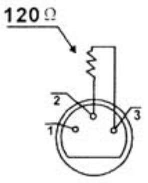
Connect the provided XLR cable to the female 3-pin XLR output of your controller and the other side to the male 3-pin XLR input of the moving head. You can chain multiple Moving head together through serial linking. The cable needed should be two core, screened cable with XLR input and output connectors. Please refer to the diagram below.





DMX-512 connection with DMX terminator:

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 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.



DMX Address Setting:

By using a universal DMX controller to control the units, you will need to set DMX address from 1 to 512 so that the units can receive DMX signal.

Press the MENU button up to when the DMX Address is showing on the display. Pressing the ENTER button and the display will blink. Use the UP/DOWN buttons to change the DMX address.

Once the address has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Press and hold the MENU button about one second or wait for about one minute to exit the menu mode.

Please refer to the following diagram to address your DMX512 channel for the first 4 units：

CHs Mode	Unit 1 Adds	Unit 2 Adds	Unit 3 Adds	Unit 4 Adds
17CH	1	18	35	52

RDM Note:

RDM is an extended version of DMX512-A protocol. It is a remote device management protocol. Traditional DMX512 protocol communication is one-way communication. The protocol is based on RS-485 bus. RS-485 is a time-sharing multi-point, half-duplex protocol. Only one port is allowed to output at the same time. So, when using RDM, we should pay attention to it. The following points:

- To use console or host device that supports RDM host protocol.
- Use bidirectional signal amplifier, traditional one-way signal amplifier is not suitable for RDM protocol, because the RMD protocol needs feedback data, the use of one-way amplifier will block the return of data, resulting in no search fixture;
- All fixture must be set to DMX mode to ensure only one host on the cable.
- A 120 ohm impedance matching resistor must be inserted between terminals 2 and 3 of the terminal plug. When the signal line is longer, reducing the signal reflection will make the differential signal more stable and beneficial to the quality of communication.
- When the fixture appears to accept DMX control, but can not been search by RDM host, first check the signal amplifier, and then check whether the signal line 2, 3 lines have

bad contact.

5.TECHNICAL SPECIFICATION

Power Supply

- Voltage:AC110-240V,50/60Hz
- Power:250W

Light Source

- Light source: 150W LED
- LED life: 50000 hours

Protocols

- Control mode: DMX512, master-slave operation, auto control
- Channel mode: 17CH
- Support RDM function, DMX software upgrade function

Display/Case/Base

- Display mode: LCD display, lamp temperature display, Chinese and English display, reverse display
- High temperature resistant engineering plastic case + aluminum base

Color Wheel

- Color plate: 14colors + open, with rainbow effect

Gobo Wheel

- Static Gobo Wheel: 10 fixed gobos + 3 glass gobos + white

Prisms

- 8+16 facet prism with bi-direction rotating

Movement
- Pan: 540 degree + fine
- Tilt: 270 degree + fine

Dimmer/Strobe
- Dimming level: 0-100% perfect linear dimming system
- Strobe: 1-25 Hz Synchronous pulse strobe, random pulse strobe

IP Rated
- IP20, indoor only

Weigh & Size
- Net weight: 12kg
- Product size: 300*210*510mm
- G.W.:15kg
- Package size: 54*38*41cm

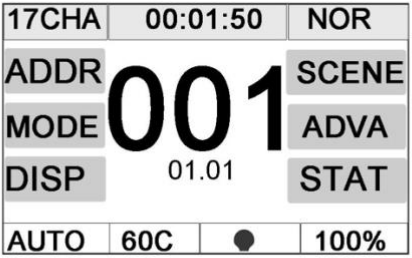
Please Note: Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.

6.PANEL OPERATION

6.1 Brief

The light panel diagram show in below, above area is fixture description, below area show fixture real-time status, such as DMX cable status, lamp status, error or information(ps. when there are message hav't been checked, echo 'ERR' in status bar, otherwise echo 'NOR').

Display & operation just like 'Android operation system', when select or set item value, system save the setting immediately.
RDM protocol is embed in fixture, user set DMX address via cable using the controller support RDM function. when fixture was search by controller, displayer will echo 'RDM' indicate this RDM is work.



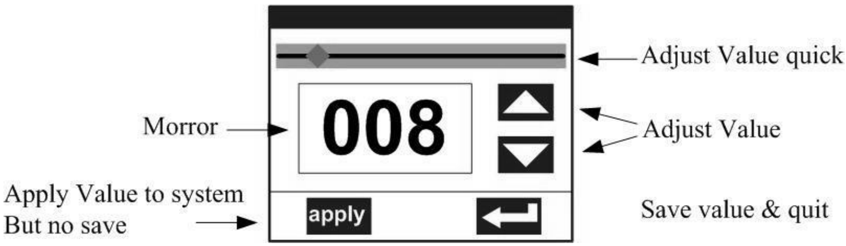
6.2 Operation

6.2.1 Operate fixture with touch or encoder/button

- The left area is TFT Displayer and touch(product which support touch), chick item or value with finger will to complete operation of set light setting(parameters) or view light state.
- The area on the right hand side is rotary encoder with button or key, As auxiliary input interface, if fixture disable touch function, the encoder/key can been choose to set or view the item, and then press the encoder button/key to confirm the selection, rotary encoder or push key again set the parameter value, finally, Press encoder button/key one again to save value or setting

6.2.2 Parameter value setting

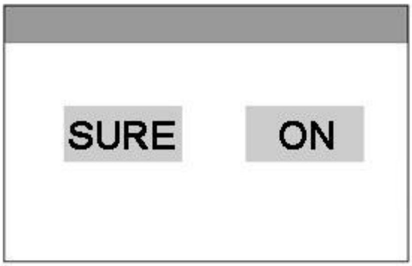
When the selected item is value need to been modified, the dialog shown in below will popup.



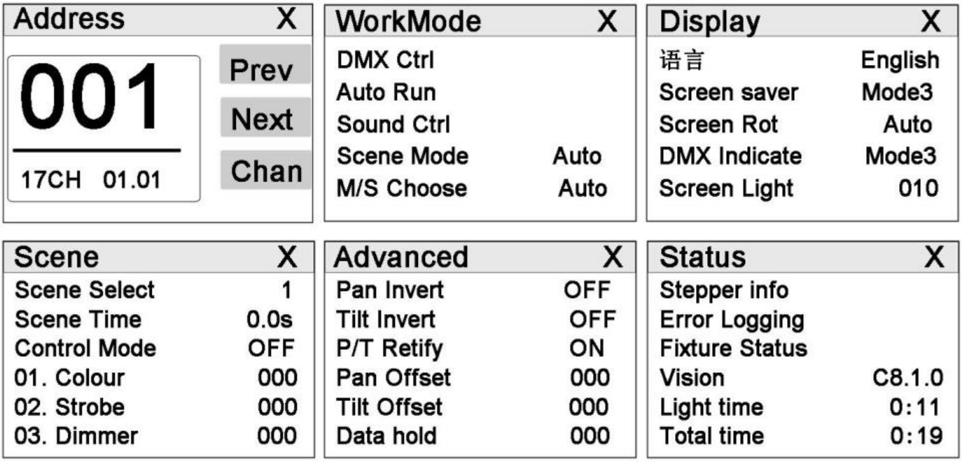
- **Modify value:** Can quickly modify value via pull the slider to the desired position, or click the button of 'up' or 'down' whit finger on the right side to set the exact desired value, another way is roll encoder on the right hand side of panel.
- **Apply value:** When Value had been modified, Then press the bottom of 'apply' in the left corner to apply to the light, but hav't saved;
- **Save Value:** Any time, click on the lower right corner of the "OK" button, the setting will been saved into internal memory.

6.2.3 Boolean parameter setting

- when the selected parameters is a Boolean value (such as ON or OFF), can directly modify setting by chick corresponding item, the setting will been saved right now.
- When the parameter is a key item, chick corresponding item, a dialog shown in below will been popup ask for the confirm. Chick 'sure' to confirm.



6.2.4 Sub Menu (Parameter)



6.3 Operation and parameter instruction

Chick item of main menu, enter corresponding sub menu shown in Figure 6, In main menu, chick 1/6 function button into corresponding parameter menu.
In sub menu(page), chick main item on the left side of displayer, can shift to corresponding sub menu(page) quickly.

6.3.1. DMX address setting

Enter page , can set fixture DMX address, channel mode and so on.The menu settings of fixture have optimized the setting of addresses. Several settings of the address are as follows:

- Select " Prev " or "Next", the fixture will be based on the current address and channel mode, automatically calculate the next or last address, make address setting can quickly;
- Click on the address value, you can enter the numeric editing window, where you can set any valid address, fixture system automatically get the current

number of channels, automatically filter the unusable address (512 - the current number of channels).

- Fixture support RDM protocol, remote address can be set through RDM.

6.3.2 Fixture operating mode setting

Through the page shown in below, the operating mode of the fixture can be set and the lamp can be controlled. The fixture supports four operating modes (DMX mode, auto mode, voice control mode and scene mode). Detailed parameter settings can be refer in the previous section. Specific parameter descriptions are as follows:

Operation mode

<table>
<tr><td>DMX Ctrl</td><td colspan="2">DMX mode, receive DMX signal, RDM signal</td></tr>
<tr><td>Auto Run</td><td colspan="2">Fixture run automatically according to built-in programs</td></tr>
<tr><td>Sound Ctrl</td><td colspan="2">When the fixture detects a strong sound, the fixture automatically runs a scene according to the built-in program, otherwise it will stay the last scene</td></tr>
<tr><td rowspan="3">Scene Mode 01</td><td colspan="2">runs in a set scene, which supports most of the custom editing of 10 scenes.</td></tr>
<tr><td>1~10</td><td>outputs the specified scene</td></tr>
<tr><td>Auto</td><td>Automatically loops the output scene in the set scene time (non-zero) order, and the scene with time 0 automatically ignore</td></tr>
<tr><td rowspan="4">M/S Choose</td><td colspan="2">Master and slave selection, non-DMX mode takes effect, select the mode of data output, fixture detect DMX cable state automatic switch output, prevent data conflicts</td></tr>
<tr><td>Master</td><td>fixture runs built-in program. If DMX has no signal, it outputs data (synchronization), otherwise it does not output data.</td></tr>
<tr><td>Slave</td><td>Fixture runs built-in program and do not output data</td></tr>
<tr><td>Auto</td><td>If DMX has no signal, the fixture will runs built-in program. Otherwise, the fixture will run in DMX Mode(follow DMX).</td></tr>
</table>

Lamp switch	(Lamp light source) pop-up confirmation dialog box, select "SURE" to confirm the current operation, turn on or off the lamp, switch time interval limited to 30 seconds	
	Off	the current lamp output is off
	On	The current lamp output is turned on

Scene mode applies to a single or a small number of fixture, just output a fixed scene, or need to run a simple program, you no need connect to the console, in the scene page can be edited.
If the light source is lamp, wait for 10 minutes before turning off the lamp.

6.3.3 Set display

The fixture support Chinese and English, invert display and so on. Enter the corresponding parameter settings as shown in below. The specific menu contents are as follows:

Display setting

Language	display language settings	
	English	English display
	Chinese	Chinese display
Screen saver	Set screen 30 seconds without operation, the screen's display content or method.	
	OFF	Keep the last operation page
	Mode1	Black
	Mode2	Black screen, showing the address code of the current fixture in the lower left corner.
	Mode3	Display trademark information, address code and operation mode.
Screen Rot	Set the display direction of the screen.	
	OFF	No reverse display
	ON	Reverse display

<table>
<tr><td rowspan="4">DMX Indicate</td><td colspan="2">Set the indication mode of DMX signal indicator.</td></tr>
<tr><td>Mode1</td><td>When signal is bright, no signal is off.</td></tr>
<tr><td>Mode2</td><td>When signal is off, no signal is bright.</td></tr>
<tr><td>Mode3</td><td>When signal is flash, no signal is off.</td></tr>
<tr><td rowspan="2">Screen Light</td><td colspan="2">Set the screen backlight for 10 seconds without operation</td></tr>
<tr><td>1~10</td><td>10</td></tr>
</table>

6.3.4 Scene

Enter the page shown in below, and the fixture enters the scene editing mode. Under this page, the fixture does not receive DMX console data, and the edited data will effect on the fixture immediately.

The content of the page depends on the currently selected channel mode, and the channel content and order displayed are consistent with the fixture channel table. Through this page, you can edit 10 scenes, as shown in the following table:

Scene mode

<table>
<tr><td rowspan="2">Scene Select</td><td colspan="2">Select the current operation scenario.</td></tr>
<tr><td colspan="2">1~10 The 10 scenes sets the format</td></tr>
<tr><td rowspan="3">Scene Time</td><td colspan="2">Sets the retention time of the current scene when it is automatic, unit in 0.1 seconds.</td></tr>
<tr><td>0</td><td>The current scene is not output in automatic scene output.</td></tr>
<tr><td>1-255</td><td>0..1s-25.5s</td></tr>
<tr><td>1. Color</td><td>0-255</td><td rowspan="4">Set up the data of each channel, and the contents and order of the display are one-to-one correspondence with the channel list of fixture.</td></tr>
<tr><td>......</td><td>0-255</td></tr>
<tr><td>......</td><td>0-255</td></tr>
<tr><td>N. Function</td><td>0-255</td></tr>
</table>

If the reset channel in the scene edits the effective reset data, the fixture will reset, but after reset, the corresponding reset channel value will automatically set 0, preventing multiple consecutive resets.

Looking at this page, you can get the current channel table slot of the fixture. For specific channel data, please refer to the detailed channel description

6.3.5 Set light run parameter

Enter the page shown in below, adjust the field parameters of fixture, facilitate the installation of fixture, etc.

Advanced setting

Pan Invert	Set the rotation direction of PAN	
	OFF	
	ON	
Tilt Invert	Set the rotation direction of TILT	
	OFF	
	ON	
P/T Rectify	Setting up fixture to detect XY lost step and correct	
	OFF	Uncorrected position after out of step
	ON	After losing step, the position is automatically corrected and the out of step
	fault is recorded.	
Pan Offset	Setting the zero point of the PAN of the fixture	
	4-150	
Tilt Offset	Setting the zero point of the TILT of the fixture	
	4-48	
Data hold	When the fixture is not equipped with DMX signal, the output state of the fixture	
	OFF	No signal, so the motor and light source return to the position and state when reset is completed.
	ON	No signal, keep the last frame DMX data output.

Lamp mode	(lamp light source) Set the way to first open the lamp after power up	
	Power on	Turn on the lamp at power up and reset the lamp after 30 seconds.
	After reset	Reset the fixture after 3 seconds when power-on, and turn on the lamp after reset.
	Manual	After reset, manually turn on the lamp through the menu or console.
Reset	Reset fixture	
Factory Setting	Pop up the confirmation box, select "SURE", and return the lamp parameters to the factory settings.	

When choosing power-on mode, the lamp will wait for 30 seconds after power-on, let the lamp fully start, internal voltage is stable enough, then start the reset program, if the field capacity is stable, recommend power-on mode.
When the fixture can not calibrate the position, please check whether the "P/T Rectify" is turned off.
When the signal is unplugged, check the Data Hold setting first if the position of the fixture is not output as expected.
When setting the XY offset, after setting up, please control XY with the maximum stroke first to check that XY will not bump into the positioning rod or shell.

6.3.6 Status and information

Entering the page shown in below, you can view the information and real-time status of the fixture to get their usage status. If the fixture need customer service, please provide the status information displayed on the page as a basis for judgment, as shown in the following table:

Status information

	Display information status of all motors and signals in fixture.

Stepper info	Hall	No display, indicating that the motor has no Hall, 0 indicating that the motor leaves the correction position point, 1 indicating that the motor is in the correction position point
	Status	Display motor reset status
	PAN	Display real-time position value of PAN optocoupler feedback
	TILT	Display real-time position value of TILT optocoupler feedback
	PAN OP	Displays the PAN TILT optocoupler two signal level state, binary
Error Logging	Show the latest 8 error records when the fixture is reset and running. The error records are not saved after power failure. The current power cycle is valid.	
	Error Logging	Total number of failures detected after power on
	12::03	The time of power failure when the fault occurs is in minutes.
	Hall error	The effective hall signal is not detected when the motor is reset
	Hall short	When the motor is reset, the hall signal of the motor is always effective
	Opti error	No effective optocoupler signal is detected when the motor is reset.
	Lose stop	The corresponding motor is out of step during its operation.
	Hit	Striking the positioning rod when the motor is reset
	Lamp error	Lamp explosion accident
	NTC error	The temperature sensor signal is abnormal
	Fan error	The main fan is not working properly.
Fixture status	Displays the critical state data of the current fixture for reference.	
	Communication perc	0~100%, Communication quality of internal data link of lamps and lanterns
	Error cnt	The number of erroneous frames was detected after power on, and the total number of erroneous frames was detected.

	Light Temperature	Show the temperature of the current light source, "---" means no detection.
	Panel Temperature	Displays the temperature of the current display panel or the ambient temperature.
	Sensor1 Temperature	Display the ambient temperature of the motherboard temperature or the motherboard installation position.
Version	Display the information and version of the current fixture, important reference for after sales maintenance.	
	Device	The name of the fixture is the same as the equipment information of RDM.
	Model	The type of fixture is the same as the model information of RDM.
	Panel	Firmware version and serial number of display panel
	Main Board	Firmware version and serial number of mother board 1
Light time	Record the total cumulative time of light source opening, unit minute, user manual cleaning, as a reference for regular maintenance of light source time	
Total time	The total accumulated time for recording the opening of fixture is not allowed to be removed.	

7.CHANNEL DESCRIPTION

This channel can be viewed in scene mode in order, channel mode is set in the "Address Settings" page, specific details of the data as follows:

CHs	FUNCTION	Value	DESC
CH1	COLOUR WHEEL	0-3	White
		4-7	Color1
		8-11	Color2

		12-16	Color3
		17-20	Color4
		21-24	Color5
		25-28	Color6
		29-33	Color7
		34-37	Color8
		38-41	Color9
		42-45	Color10
		46-50	Color11
		51-54	Color12
		55-58	Color13
		59-63	Color14
		64-191	Linear color
		192-223	Fast to slow forward rotation
		224-255	Slow to fast reverse rotation
CH2	STOP / STROBE	0-3	Turn off the strobe
		4-250	From slow to fast pulse stroboscope
		251-255	Turn on the strobe
CH3	DIMMER	0-255	0-100% Dimming
CH4	STATIC GOBO CHANGE	0-4	White
		5-9	Gobo1
		10-14	Gobo2
		15-19	Gobo3
		20-24	Gobo4
		25-29	Gobo5
		30-34	Gobo6
		35-39	Gobo7

		40-44	Gobo8
		45-49	Gobo9
		50-54	Gobo10
		55-59	Gobo11
		60-64	Gobo12
		65-69	Gobo13
		70-127	Fast to slow reverse rotation
		128-131	Stop
		132-190	Slow to fast forward rotation
		191-195	Gobo 1 shake, Slow to fast
		196-200	Gobo 2 shake, Slow to fast
		201-205	Gobo 3 shake, Slow to fast
		206-210	Gobo 4 shake, Slow to fast
		211-215	Gobo 5 shake, Slow to fast
		216-220	Gobo 6 shake, Slow to fast
		221-225	Gobo 7 shake, Slow to fast
		226-230	Gobo 8 shake, Slow to fast
		231-235	Gobo 9 shake, Slow to fast
		236-240	Gobo 10 shake, Slow to fast
		241-245	Gobo 11 shake, Slow to fast
		246-250	Gobo 12 shake, Slow to fast
		251-255	Gobo 13 shake, Slow to fast
CH5	PRISM1 INSERTION	0-127	Prism1 excluded
		128-255	Prism1 inserted
CH6	PRISM ROTATION	0-127	Position
		128-190	Fast to slow forward rotation
		191-192	Stop

		193-255	Slow to fast reverse rotation
CH7	PRISM2 INSERTION	0-127	Prism2 excluded
		128-255	Prism2 inserted
CH8	FROST/ RAINBOW	0-127	excluded
		128-191	Frost inserted
		192-255	Colorful inserted
CH9	FOCUS	0-255	From far to near
CH10	PAN	0-255	Angle 0-540
CH11	PAN FINE	0-255	Angle 0-2
CH12	TILT	0-255	Angle 0-270
CH13	TILT FINE	0-255	Angle 0-1
CH14	LED EFFECT	0-15	Turn off the led
		16-255	Every 5 values one effect
CH15	LED EFFECT SPEED	0-127	Fast to slow forward rotation
		128-255	Slow to fast reverse rotation
CH16	RESET	26-73	Reset XY for more than 3 seconds
		77-127	Reset effect motor for more than 3 seconds
		128-255	More than 3 seconds to reset all
CH17	PAN/ TILT SPEED	0-255	Fast to slow

8.TROUBELSHOOTING

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

A. The unit does not work, no light and the fan does not work

1. Check the connect power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED to see if it can be light up or not.

B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if they are linked properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check to see if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

C. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition.

D. The lamp is cutting out intermittently

1. The lamp is not working well. Check the mains voltage either too high or too low.
2. Internal temperature may be too high. Check if replacement of fan is needed on the head.

E. No response to the sound

1. Make sure the unit does not receive DMX signal..
2. Check microphone to see if it is good by tapping the microphone.

F. If The tilt belt is broken

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition

9.CLEANING AND MAINTENANCE

C A U T I O N

Disconnect power before cleaning or maintenance.

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

CLEANING

Frequent cleaning is recommended to insure proper function, optimized light output, and an extended life. The frequency of cleaning depends on the environment in which the fixture operates: damp, smoky or particularly dirty environments can cause greater accumulation of dirt on the fixture's optics.

- Clean the external lens surface at least every 20 days with a soft cloth to avoid dirt/debris accumulation.
- Never use alcohol, solvents, or ammonia based cleaners.

MAINTENANCE

Regular inspections are recommended to insure proper function and extended life. There are no user serviceable parts inside this fixture, please refer all other service issues to an authorized service technician. Should you need any spare parts, please order genuine parts from your local dealer.