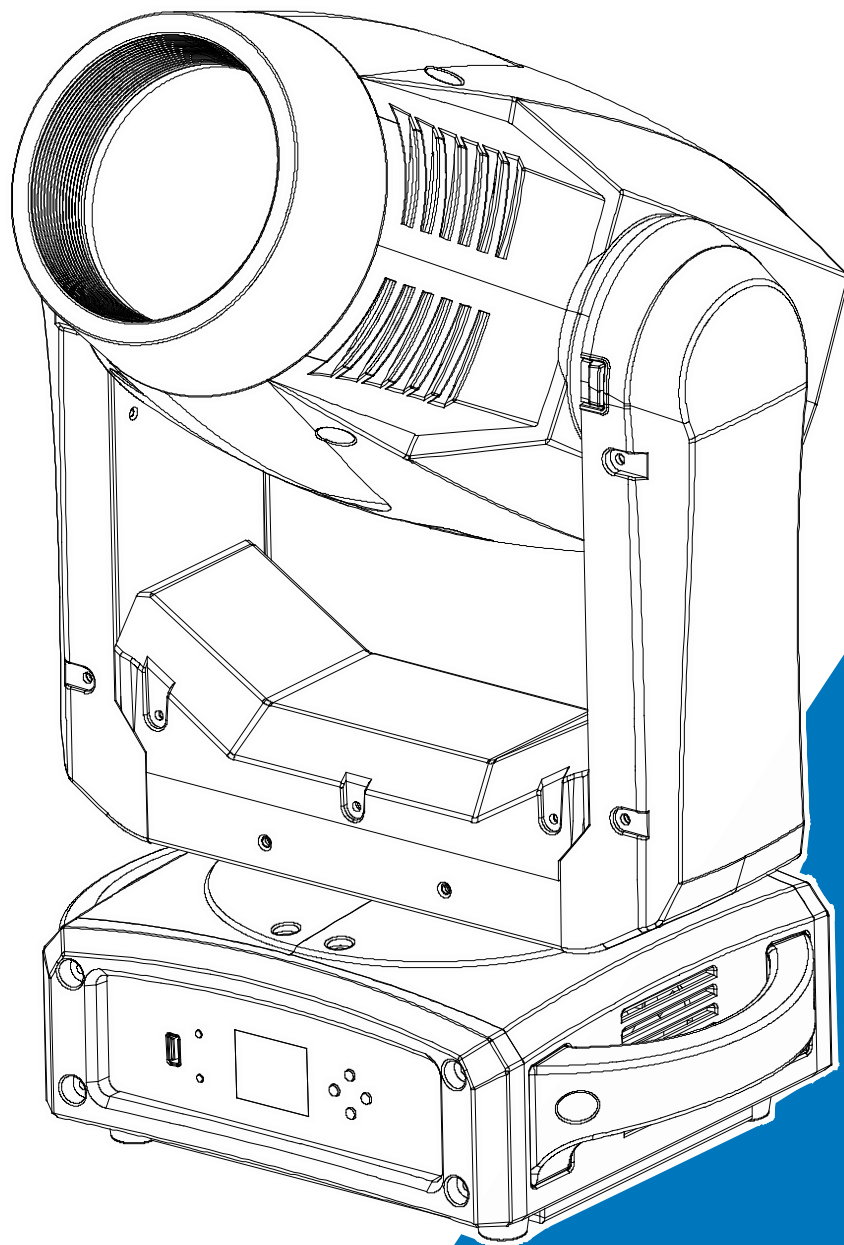# ACME®

ENERGY
SPOT
PRO

User Manual
Please read the instruction carefully before use

CONTENTS

1. Safety Instructions

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

WARNING

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 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 are blocked, otherwise the unit will be overheated.
- Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- Minimum ambient temperature TA: 0℃. Maximum ambient temperature TA: 40℃.
- DO NOT connect the device to any dimmer pack.
- Make sure there are no flammable materials close to the unit while operating to avoid fire hazard.
- Examine the power wires carefully; replace them immediately if there is any damage.
- Unit's surface temperature may reach up to 50℃. DO NOT touch the housing bare-handed during its operation.
- Avoid any inflammable liquids, water or metal objects entering the unit. Once it happens, cut

off the mains power immediately.

- DO NOT operate in dirty or dusty environment, do clean fixtures regularly.

- DO NOT touch any wire during operation as there might be a hazard of electric shock.

- Avoid power wires together twist other cables.

- The minimum distance between light output and the illuminated surface must be more than 2 meters.

- Disconnect mains power before fuse replacement or servicing.

- Replace fuse 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 open the unit as there are no user serviceable parts inside.

- Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center if needed.

- Disconnect the mains power if the fixture is has not been used for a long time.

- DO use the original packing materials before transporting it again.

- DO NOT look directly at the light while the LED is on.

- DO NOT start on the unit without LED enclosure or when housing is damaged.

Installation:

The fixture should be mounted via its Omega Quick Release Clamp 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 fixtures weight. Always use a safety cable that can hold 12 times of the weight of the fixture when installing.

The equipment must be installed by professionals. It must be installed in a place where is out of the reach of people and no one can pass by or under it.

2. Technical Specifications

Power Voltage:

AC 100~240V, 50/60Hz

Power Consumption:

450W

Light Source:

HL-270-B

Color Temperature:

8000K

Zoom Range:

8°~45°

Movement:

Pan: 540°

Tilt: 270°

Pan/Tilt Resolution: 16 bit

Fixation: Tilt lock

Color Wheel:

1 color wheel with 9 colors plus white

Gobo Wheel:

1 static gobo wheel with 9 gobos plus open

1 rotating gobo wheel with 7 gobos plus open, convenient replacement

Control:

DMX Channel: 18/22/25 channels

Control Mode: DMX512, RDM

Firmware Upgrade via DMX link or USB disk

Construction:

Display: Color display

Data In/Out: 3-pin & 5-pin XLR

Power In/Out: Power Connector in/out

Protection Rating: IP20

Features:

Motorized focus

Linear CMY color mixing

Motorized linear iris

3 x facets prism rotating in both directions

Independent frost effect

Various strobe speeds

Dimension/Weight:

369x253x625mm, 20.8kgs

14.5"x9.9"x24.6"in, 45.9lbs

Photometrics Diagram

Distance(m)	5	10	15	20
8°Lux	32000	7800	3300	1750
Diameter(m)	0.72	1.45	2.17	2.91
45°Lux	1470	470	230	130
Diameter(m)	4.1	8.2	12.3	16.4
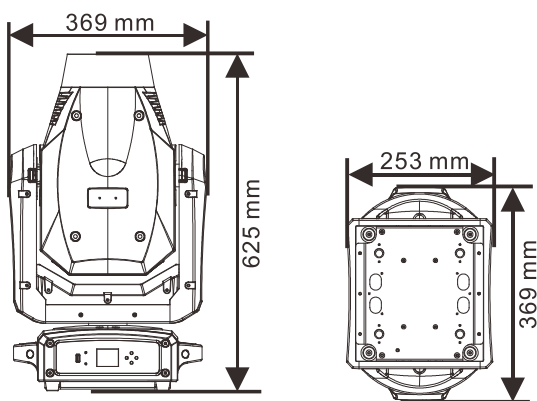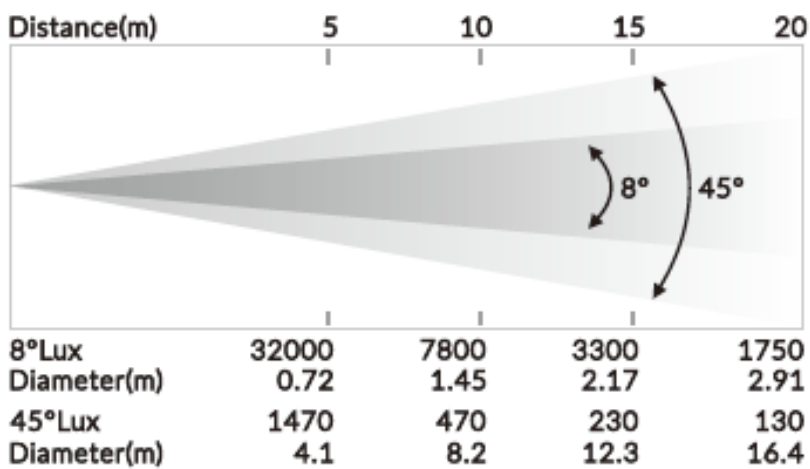
3. Control Panel
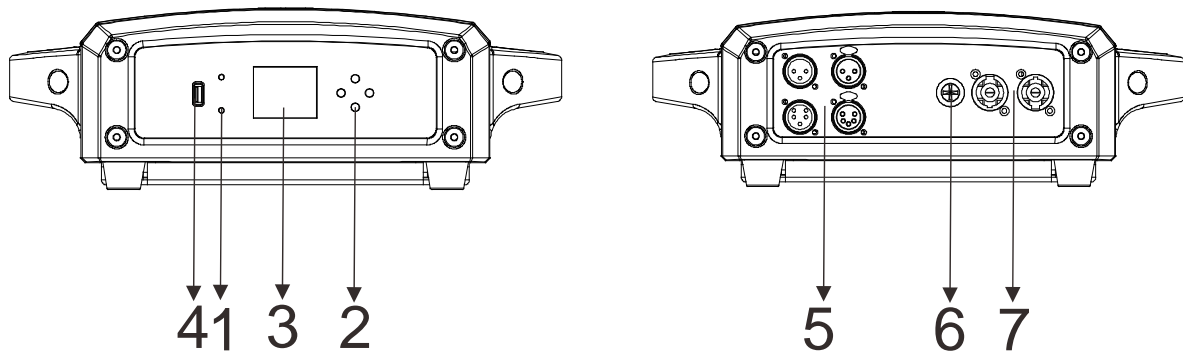
1. LED:

POWER	On	Power On
DMX	On	DMX input present

2. Button:

MENU	To enter into move backward or leave the menu
▼ UP	To go backward in the selected functions
▲ DOWN	To go forward in the selected functions
ENTER	To confirm the selected functions

3. Display:

To show the various menus and the selected function

4. FIRMWARE UPGRADE:

Used to upgrade the unit's firmware

5. DMX IN/OUT:

For DMX512 link, use 3/5 pin XLR cable to link the unit and the DMX controller

6. FUSE(T 10A):

Protect the unit from damage of the overcurrent

7. POWER IN/OUT:

Used to connect to supply power/Used to connect to the next fixture

4. Color/Gobo
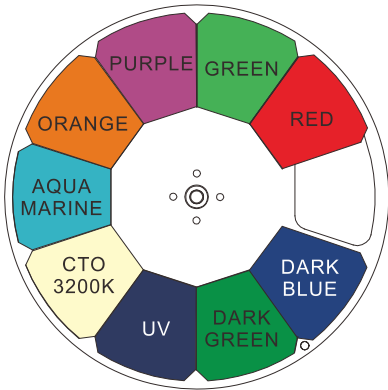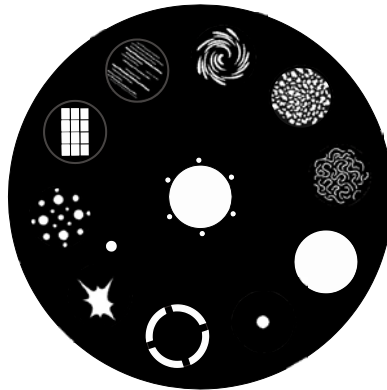
COLOR WHEEL   STATIC GOBO WHEEL   ROTATING GOBO WHEEL
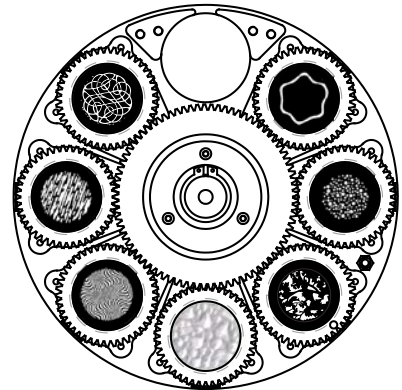
DANGER!
Install the color wheel/gobo wheels with the device switched off only.
Unplug from mains before changing the color wheel/gobo wheels!

CAUTION: Never unscrew the screws of the rotating gobo as the ball bearing will otherwise be opened!

5. How To Set The Unit

5.1 Main Function

Turn on the unit, press the **MENU** button into menu mode, and press the **UP**/**DOWN** button until the required function is shown on the monitor. Select the function by the **ENTER** button. Use the **UP**/**DOWN** button to choose the submenu, press the **ENTER** button to store and automatically return to the last menu. Press the **MENU** button or let the unit idle 30 seconds to exit menu mode. The main functions are shown below:

```
                                                                    ┌─ 1 ─┐
                                                                    │  ⋮  │
                                         ┌─ DMX Address ────────────┤ 495 │
                                         │                          │ 491 │
                                         │                          └ 488 ┘
                                         │                          ┌ Mode1(18) ┐
               ┌─ DMX Functions ─────────┼─ DMX Channel Mode ───────┤ Mode2(22) │
               │                         │                          └ Mode3(25) ┘
               │                         │                          ┌ Blackout ┐
               │                         ├─ DMX State ──────────────┤          │
               │                         │                          └ Hold ────┘
               │                         └─ View DMX Value
               │
               │                         ┌─ Pan Invert
               │                         │
               │                         ├─ Tilt Invert ───────────┐  ┌ No ─┐
               │                         │                          ├──┤     │
               │                         ├─ P/T Feedback ───────────┘  └ Yes ┘
               │                         │                          ┌ Liner ──────┐
               │                         │                          │ Square Law  │
               ├─ Fixture Setting ───────┼─ Dimmer Curve ───────────┤ Inv SQ Law  │
               │                         │                          └ S Curve ────┘
               │                         │                          ┌ Fast ───┐
               │                         ├─ Dimmer Speed ───────────┤         │
               │                         │                          └ Smooth ─┘
               │                         │                          ┌ Disable ┐
               │                         │                          │ Near    │
               │                         └─ Focus Compensate ───────┤ Medium  │
               │                                                    └ Far ────┘
               │
               │                         ┌─ Display Invert ─────────┐  ┌ No ─┐
               │                         │                          ├──┤     │
               │                         │                          │  └ Yes ┘
    MENU ──────┤                         ├─ Backlight Intensit ─────┤ 1-10 │
               ├─ Display Setting ───────┤                          ┌──────┐
               │                         ├─ Temperature Unit ───────┤ ℃/℉ │
               │                         │                          ┌ English ┐
               │                         └─ Language ───────────────┤         │
               │                                                    └ Chinese ┘
               │
               │                         ┌─ Auto Test
               ├─ Fixture Text ──────────┤
               │                         └─ Manual Test
               │
               │                         ┌─ Fixture Use Time
               │                         │
               │                         ├─ Temperature
               │                         │
               │                         ├─ USB Upgrade File
               ├─ Fixture Information ───┤
               │                         ├─ Firmware Version
               │                         │
               │                         ├─ RDM UID
               │                         │                          ┌ Fixture Errors ─┐
               │                         └─ Error Logs ─────────────┤                 │  ┌ No ─┐
               │                                                    └ Reset Error Log ┤  │     ├─ Password=050
               │                                                                      └──┤ Yes ┘
               │                         ┌─ Pan/Tilt
               │                         │                          ┌ No ─┐
               ├─ Reset Functions ───────┼─ Effect ─────────────────┤     │
               │                         │                          └ Yes ┘
               │                         └─ All
               │                                                    ┌ No ─┐
               └─ Special Functions ─────── Factory Setting ────────┤     │
                                                                    └ Yes ┘
```

DMX Functions

To select **DMX Functions,** press the **ENTER** button to confirm, use the **UP/DOWN** button to select **DMX Address, DMX Channel Mode, DMX State** or **View DMX Value.**

DMX Address

To select **DMX Address**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to adjust the address from **001** to **495/491/488**, 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.

DMX Channel Mode

To select **DMX Channel Mode**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Mode1(18)**, **Mode2(22)** or **Mode3(25)**, 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

DMX State

To select **DMX State**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Blackout**(fixture blacks out if DMX signal stops) or **Hold**(fixture continues to obey the last command it received Via DMX if DMX signal stops), 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.

View DMX Value

To select **View DMX Value**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to view the DMX channel value. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Fixture Setting

To select **Fixture Setting**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Pan Invert, Tilt Invert, P/T Feedback**, **Dimmer Curve, Dimmer Speed** or **Focus Compensate.**

Pan Invert

To select **Pan Invert**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **No**(normal) or **Yes**(pan invert), 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.

Tilt Invert

To select **Tilt Invert**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **No**(normal) or **Yes**(tilt invert), 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.
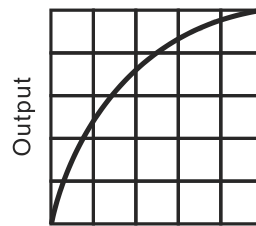
P/T Feedback

To select **P/T Feedback**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **No**(Pan or tilt's position will not feedback while out of step) or **Yes**(Feedback while pan/tilt out of step), 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.
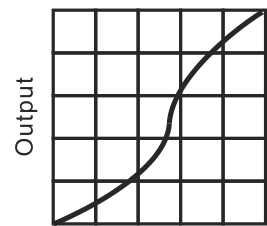
Dimmer Curve

To select **Dimmer Curve**, press the **ENTER** button to confirm. Use the **DOWN/UP** button to select **Linear**, **Square Law**, **Inv SQ Law** or **S Curve**, 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.

Dimmer Modes
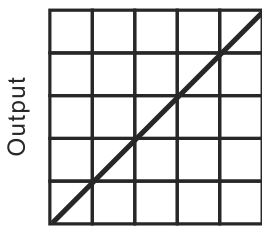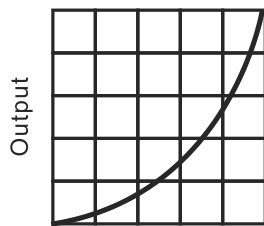
| Optically Linear | Square Law | Inverse Square Law | S-curve |

Optically Linear: The increase in light intensity appears to be linear as DMX value is increased.

Square Law: Light intensity control is finer at low levels and coarser at high levels.

Inverse Square Law: Light intensity control is coarser at low levels and finger at high levels.

S-Curve: Light intensity control is finger at low levels and high levels and coarser at medium levels.

Dimmer Speed

To select **Dimmer Speed**, press the **ENTER** button to confirm. Use the **DOWN/UP** button to select **Fast** or **Smooth**, 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.

Focus Compensate

To select **Focus Compensate**, press the **ENTER** button to confirm. Use the **DOWN/UP** button to select **Disable**, **Near**, **Medium** or **Far**, 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.

Display Setting

To select **Display Setting**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Display Invert, Backlight Intensity, Temperature Unit** or **Language.**

Display Invert

Select **Display Invert**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP/DOWN** button to select **No**(normal display) or **Yes**(inverse display), 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.

Backlight Intensity

Select **Backlight Intensity**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP/DOWN** button to adjust backlight intensity from **1**(dark) to **10**(bright), 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.

Temperature Unit

Select **Temperature Unit**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP/DOWN** button to select ℃ or ℉, 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.

Language

To select **Language**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP/DOWN** button to select **English** or **Chinese**, 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.

Fixture Test

To select **Fixture Test**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Auto Test** or **Manual Test.**

Auto Test

Select **Auto Test**, press the **ENTER** button to confirm, the unit will run built-in programs to automatically test pan, tilt, color, gobo, gobo rotation, prism, prism rotation, iris, frost, focus, zoom, dimmer, etc. Press the **MENU** button back to the last menu or exit menu mode after auto test.

Manual Test

Select **Manual Test**, press the **ENTER** button to confirm, the present channel will show on the display, use the **UP/DOWN** button to select channel, press the **ENTER** button to confirm, then use the **UP/DOWN** button to adjust the value, press the **ENTER** button to store, the fixture will run as the channel value indicates. Press the **MENU** button back to the last menu or exit menu mode idling 30 seconds.

(All channels value will become 0 after exiting Manual Test menu)

Fixture Information

To select **Fixture Information**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Fixture Use Time, Temperature, USB Upgrade File, Firmware Version, RDM UID** or **Error Logs.**

Fixture Use Time

Select **Fixture Use Time**, press the **ENTER** button to confirm, fixture use time will show on the display, press the **MENU** button to exit.

Temperature

Select **Temperature**, press the **ENTER** button to confirm, fixture temperature will show on the display, press the **MENU** button to exit.

USB Upgrade File

Select **USB Upgrade File**, press the **ENTER** button to confirm, USB upgrade file will show on the display, press the **MENU** button back to exit.

Firmware Version

Select **Firmware Version**, press the **ENTER** button to confirm, firmware version will show on the display, press the **MENU** button back to exit.

RDM UID

Select **RDM UID**, press the **ENTER** button to confirm, RDM UID will show on the display, press the **MENU** button back to exit.

Error Logs

Select **Error Logs**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Fixture Errors** or **Reset Error Log**, press the **ENTER** button to store. Select **Reset Error Log**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **No** or **Yes**, press the **ENTER** button to store. Select **Yes**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to set the password **050**, press the **ENTER** button to reset error log. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Reset Functions

To select **Reset Functions**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Pan/Tilt, Effect** or **All.**

Pan/Tilt

Select **Pan/Tilt**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **No**(normal) or **Yes**(the unit will run built-in program to reset pan and tilt to their home positions), press the **ENTER** button to store. Press the **MENU** button to exit.

Effect

Select **Effect,** press the **ENTER** button to confirm, use the **UP/DOWN** button to select **No** or **Yes**(the unit will run built-in program to reset effect to their home positions), press the **ENTER** button to store. Press the **MENU** button to exit.

All

Select **All,** press the **ENTER** button to confirm, use the **UP/DOWN** button to select **No** or **Yes**(the unit will run built-in program to reset all motors to their home positions), press **ENTER** button to store. Press the **MENU** button to exit.

Special Functions

Factory Setting

Select **Factory Setting,** press the **ENTER** button to confirm, use the **UP/DOWN** button to select **No**(normal) or **Yes**(the fixture will reset to factory settings), press **ENTER** button to store. Press the **MENU** button to exit.

RDM FUNCTIONS

Select the MANUFACTURER menu to display the manufacturer of the fixture.

Select the SOFTWARE VERSION menu and the program version number of the fixture will be displayed.

Select the DMX START ADDRESS menu to change the DMX 512 address (001-512).

Select the DEVICE MODEL DESCRIPTION menu to display the model of the fixture.

Select the DEVICE LABEL menu to change the model of the fixture.

Select the DMX PERSONALITY menu to set the channel mode of the fixture (18/22/25 channel).

Select the DMX PERSONALITY DESCRIPTION menu to display the current channel mode of the fixture.

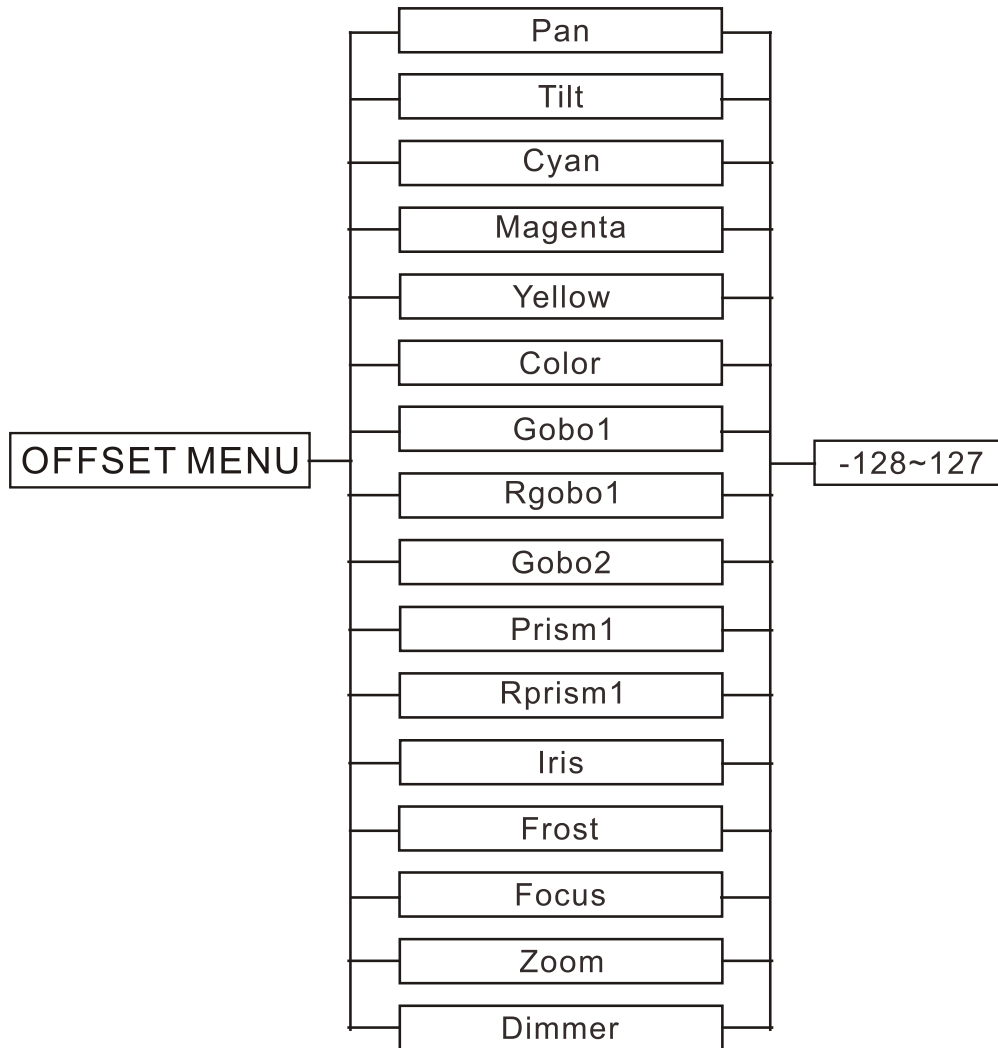Select the DEVICE HOURS menu to display the running time of the fixture.

Select the PAN INVERT menu and the fixture will run the pan invert mode.

Select the TILT INVERT menu and the fixture will run the tilt invert mode.

Select the RESET DEVICE menu, the WARM RESET/COLD RESET option will be displayed. When WARM RESET is selected, the fixture will start a warm reset, and exit when COLD RESET is selected.

5.2 Home Position Adjustment

Press the **MENU** button into menu mode, then press the **ENTER** button for about 3 seconds into offset mode to adjust the home position. Select the function by the **ENTER** button. Use the **UP/DOWN** button to choose the submenu, press the **ENTER** button to store and automatically return to the last menu. Press **MENU** button to exit.

```
                    ┌──────────────────┐
              ┌─────│       Pan        │─────┐
              │     ├──────────────────┤     │
              ├─────│       Tilt       │─────┤
              │     ├──────────────────┤     │
              ├─────│       Cyan       │─────┤
              │     ├──────────────────┤     │
              ├─────│     Magenta      │─────┤
              │     ├──────────────────┤     │
              ├─────│      Yellow      │─────┤
              │     ├──────────────────┤     │
              ├─────│      Color       │─────┤
              │     ├──────────────────┤     │
              ├─────│      Gobo1       │─────┤
┌───────────────┐  ├──────────────────┤     │  ┌──────────┐
│ OFFSET MENU   │──┤      Rgobo1      │─────┼──│ -128~127 │
└───────────────┘  ├──────────────────┤     │  └──────────┘
              ├─────│      Gobo2       │─────┤
              │     ├──────────────────┤     │
              ├─────│      Prism1      │─────┤
              │     ├──────────────────┤     │
              ├─────│     Rprism1      │─────┤
              │     ├──────────────────┤     │
              ├─────│       Iris       │─────┤
              │     ├──────────────────┤     │
              ├─────│      Frost       │─────┤
              │     ├──────────────────┤     │
              ├─────│      Focus       │─────┤
              │     ├──────────────────┤     │
              ├─────│       Zoom       │─────┤
              │     ├──────────────────┤     │
              └─────│      Dimmer      │─────┘
                    └──────────────────┘
```

Pan

Enter offset menu, select **Pan**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Tilt

Enter offset menu, select **Tilt**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Cyan

Enter offset menu, select **Cyan**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Magenta

Enter offset menu, select **Magenta**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Yellow

Enter offset menu, select **Yellow**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Color

Enter offset menu, select **Color**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Gobo 1

Enter offset menu, select **Gobo 1**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

RGobo 1

Enter offset menu, select **RGobo 1**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Gobo 2

Enter offset menu, select **Gobo 2**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Prism 1

Enter offset menu, select **Prism 1**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

R-Prism 1

Enter offset menu, select **R-Prism 1**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Iris

Enter offset menu, select **Iris**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Frost

Enter offset menu, select **Frost**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Focus

Enter offset menu, select **Focus**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Zoom

Enter offset menu, select **Zoom**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Dimmer

Enter offset menu, select **Dimmer**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

6. Control By Universal DMX Controller

6.1 DMX512 Connection
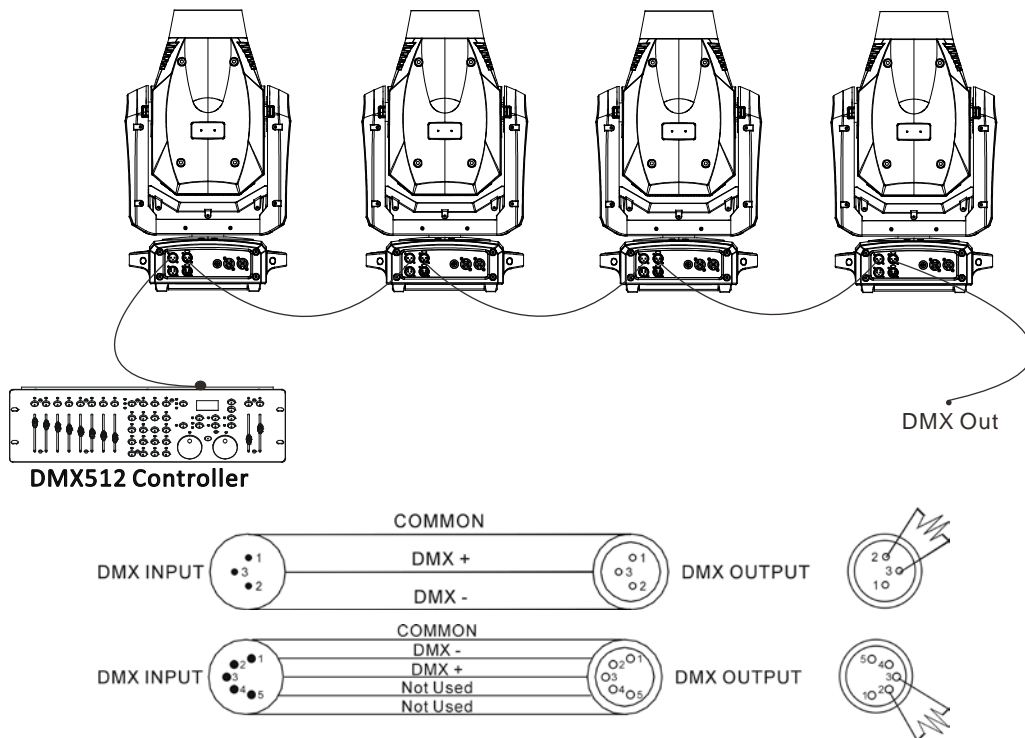
1. At last unit, the DMX cable has to be terminated with a terminator. Solder a 120-ohm 1⁄4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.

2. Connect the unit together in a "daisy chain" by XLR plug cable from the output of the unit to the input of the next unit. The cable cannot be branched or split to a "Y" cable. DMX 512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.

3. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units' power is disconnected.

4. Each lighting unit needs to have a DMX address to receive the data by the controller. The address number is between 1-512.

5. The end of the DMX 512 system should be terminated to reduce signal errors.

6.   3 pin XLR connectors are more popular than 5 pins XLR.

    3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)

    5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+), Pin4, Pin5 not used.

6.2 Address 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 blinking 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	Unit 1 Address	Unit 2 Address	Unit 3 Address	Unit 4 Address
18 channels	1	19	37	55
22 channels	1	23	45	67
25 channels	1	26	51	76

6.3 DMX512 Configuration

Please refer to below configurations to control the fixtures

Attentions:

1. The unit will maintain the last condition until reset if you cut-off the DMX signal.

2. For the channel Function, keep the value for about 3 seconds, then the corresponding function will take into effect.

18 Channels Mode (Mode 1):

Channel	Value	Function
1	000-255	**Pan** 0°→540°
2	000-255	**Tilt** 0°→270°
3	000-019 020-024	**Shutter** Blackout Open

	025-064	Strobe 1: fast to slow
	065-069	Open
	070-084	Strobe 2: opening pulse, fast to slow
	085-089	Open
	090-104	Strobe 3: closing pulse, fast to slow
	105-109	Open
	110-124	Strobe 4: random strobe, fast to slow
	125-129	Open
	130-144	Strobe 5: random opening pulse, fast to slow
	145-149	Open
	150-164	Strobe 6: random closing pulse, fast to slow
	165-169	Open
	170-184	Strobe 7: burst pulse, fast to slow
	185-189	Open
	190-204	Strobe 8: random burst pulse, fast to slow
	205-209	Open
	210-224	Strobe 9: sine wave, fast to slow
	225-229	Open
	230-244	Strobe 10: burst, fast to slow
	245-255	Open
4		**Dimmer**
	000-255	0%→100%
5		**Cyan**
	000-255	0%→100%
6		**Magenta**
	000-255	0%→100%
7		**Yellow**
	000-255	0%→100%
8		**Color**
	000-006	Open
	007-012	Color1
	013-018	Color2
	019-025	Color3
	026-031	Color4
	032-037	Color5
	038-044	Color6
	045-050	Color7
	051-056	Color8
	057-063	Color9
	064-127	Color Index
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast

		Gobo1	
	000-007	Open	
	008-015	Gobo1	
	016-023	Gobo2	
	024-031	Gobo3	
	032-039	Gobo4	
	040-047	Gobo5	
	048-055	Gobo6	
	056-063	Gobo7	
9	064-072	Gobo1 Shaking	
	073-081	Gobo2 Shaking	
	082-090	Gobo3 Shaking	
	091-099	Gobo4 Shaking	
	100-108	Gobo5 Shaking	
	109-117	Gobo6 Shaking	
	118-127	Gobo7 Shaking	
	128-190	Rotation, Fast to Slow	
	191-192	Stop	
	193-255	Rotation, Slow to Fast	
		RGobo1	
	000-127	Index 0°→360°	
10	128-190	Rotation, Fast to Slow	
	191-192	Stop	
	193-255	Rotation, Slow to Fast	
		Gobo2	
	000-006	Open	
	007-012	Gobo1	
	013-018	Gobo2	
	019-025	Gobo3	
	026-031	Gobo4	
	032-037	Gobo5	
	038-044	Gobo6	
	045-050	Gobo7	
	051-056	Gobo8	
11	057-063	Gobo9	
	064-070	Gobo1 Shaking	
	071-077	Gobo2 Shaking	
	078-084	Gobo3 Shaking	
	085-091	Gobo4 Shaking	
	092-098	Gobo5 Shaking	
	099-105	Gobo6 Shaking	
	106-112	Gobo7 Shaking	
	113-119	Gobo8 Shaking	
	120-127	Gobo9 Shaking	

	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
12		**Iris**
	000-255	100%→0%
13		**Prism**
	000-010	No Effect
	011-127	Prism On
	128-255	Prism Macro1 to Macro32
14		**R-Prism**
	000-127	Index 0°→360°
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
15		**Frost**
	000-255	0%→100%
16		**Zoom**
	000-255	0%→100%
17		**Focus**
	000-255	0%→100%
18		**Function**
	000-069	Null
	070-079	BlackOut Pan/Tilt Move Enable
	080-089	BlackOut Pan/Tilt Move Disable
	090-099	BlackOut Color Move Enable
	100-109	BlackOut Color Move Disable
	110-119	BlackOut Gobo Move Enable
	120-129	BlackOut Gobo Move Disable
	130-139	Focus Compensate Disable
	140-149	Focus Compensate Near
	150-159	Focus Compensate Medium
	160-169	Focus Compensate Far
	170-199	Null
	200-209	Reset All
	210-219	Reset Effect
	220-229	Reset Pan/Tilt
	230-255	Null

22 Channels Mode (Mode 2):

Channel	Value	Function
1		**Cyan**
	000-255	0%→100%
2		**Magenta**
	000-255	0%→100%
3		**Yellow**
	000-255	0%→100%
4		**Color**
	000-006	Open
	007-012	Color1
	013-018	Color2
	019-025	Color3
	026-031	Color4
	032-037	Color5
	038-044	Color6
	045-050	Color7
	051-056	Color8
	057-063	Color9
	064-127	Color Index
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
5		**Shutter**
	000-019	Blackout
	020-024	Open
	025-064	Strobe 1: fast to slow
	065-069	Open
	070-084	Strobe 2: opening pulse, fast to slow
	085-089	Open
	090-104	Strobe 3: closing pulse, fast to slow
	105-109	Open
	110-124	Strobe 4: random strobe, fast to slow
	125-129	Open
	130-144	Strobe 5: random opening pulse, fast to slow
	145-149	Open
	150-164	Strobe 6: random closing pulse, fast to slow
	165-169	Open
	170-184	Strobe 7: burst pulse, fast to slow
	185-189	Open
	190-204	Strobe 8: random burst pulse, fast to slow
	205-209	Open

	210-224	Strobe 9: sine wave, fast to slow
	225-229	Open
	230-244	Strobe 10: burst, fast to slow
	245-255	Open
6		**Dimmer**
	000-255	0%→100%
7	000-255	**Dimmer Fine**
8		**Gobo1**
	000-007	Open
	008-015	Gobo1
	016-023	Gobo2
	024-031	Gobo3
	032-039	Gobo4
	040-047	Gobo5
	048-055	Gobo6
	056-063	Gobo7
	064-072	Gobo1 Shaking
	073-081	Gobo2 Shaking
	082-090	Gobo3 Shaking
	091-099	Gobo4 Shaking
	100-108	Gobo5 Shaking
	109-117	Gobo6 Shaking
	118-127	Gobo7 Shaking
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
9		**RGobo1**
	000-127	Index 0°→360°
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
10		**Gobo2**
	000-006	Open
	007-012	Gobo1
	013-018	Gobo2
	019-025	Gobo3
	026-031	Gobo4
	032-037	Gobo5
	038-044	Gobo6
	045-050	Gobo7
	051-056	Gobo8
	057-063	Gobo9
	064-070	Gobo1 Shaking

	071-077	Gobo2 Shaking
	078-084	Gobo3 Shaking
	085-091	Gobo4 Shaking
	092-098	Gobo5 Shaking
	099-105	Gobo6 Shaking
	106-112	Gobo7 Shaking
	113-119	Gobo8 Shaking
	120-127	Gobo9 Shaking
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
11		**Prism**
	000-010	No Effect
	011-127	Prism On
	128-255	Prism Macro1 to Macro32
12		**R-Prism**
	000-127	Index 0°→360°
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
13		**Iris**
	000-255	100%→0%
14		**Frost**
	000-255	0%→100%
15		**Zoom**
	000-255	0%→100%
16		**Focus**
	000-255	0%→100%
17		**Pan**
	000-255	0°→540°
18	000-255	**Pan Fine**
19		**Tilt**
	000-255	0°→270°
20	000-255	**Tilt Fine**
21		**Pan/Tilt Speed**
	000-255	Fast to Slow
22		**Function**
	000-069	Null
	070-079	BlackOut Pan/Tilt Move Enable
	080-089	BlackOut Pan/Tilt Move Disable
	090-099	BlackOut Color Move Enable
	100-109	BlackOut Color Move Disable

	110-119	BlackOut Gobo Move Enable
	120-129	BlackOut Gobo Move Disable
	130-139	Focus Compensate Disable
	140-149	Focus Compensate Near
	150-159	Focus Compensate Medium
	160-169	Focus Compensate Far
	170-199	Null
	200-209	Reset All
	210-219	Reset Effect
	220-229	Reset Pan/Tilt
	230-255	Null

25 Channels Mode (Mode 3):

Channel	Value	Function
1	000-255	**Pan** 0°→540°
2	000-255	**Pan Fine**
3	000-255	**Tilt** 0°→270°
4	000-255	**Tilt Fine**
5	000-255	**Pan/Tilt Speed** Fast to Slow
6		**Function**
	000-069	Null
	070-079	BlackOut Pan/Tilt Move Enable
	080-089	BlackOut Pan/Tilt Move Disable
	090-099	BlackOut Color Move Enable
	100-109	BlackOut Color Move Disable
	110-119	BlackOut Gobo Move Enable
	120-129	BlackOut Gobo Move Disable
	130-139	Focus Compensate Disable
	140-149	Focus Compensate Near
	150-159	Focus Compensate Medium
	160-169	Focus Compensate Far
	170-199	Null
	200-209	Reset All
	210-219	Reset Effect
	220-229	Reset Pan/Tilt
	230-255	Null

		Color
	000-006	Open
	007-012	Color1
	013-018	Color2
	019-025	Color3
	026-031	Color4
	032-037	Color5
7	038-044	Color6
	045-050	Color7
	051-056	Color8
	057-063	Color9
	064-127	Color Index
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
8		**Cyan**
	000-255	0%→100%
9		**Magenta**
	000-255	0%→100%
10		**Yellow**
	000-255	0%→100%
11		**CMY Present**
	000-255	11 CMY Present
		Gobo1
	000-007	Open
	008-015	Gobo1
	016-023	Gobo2
	024-031	Gobo3
	032-039	Gobo4
	040-047	Gobo5
	048-055	Gobo6
	056-063	Gobo7
	064-072	Gobo1 Shaking
12	073-081	Gobo2 Shaking
	082-090	Gobo3 Shaking
	091-099	Gobo4 Shaking
	100-108	Gobo5 Shaking
	109-117	Gobo6 Shaking
	118-127	Gobo7 Shaking
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
13		**RGobo1**

	000-127	Index 0°→360°
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
14		**Gobo2**
	000-006	Open
	007-012	Gobo1
	013-018	Gobo2
	019-025	Gobo3
	026-031	Gobo4
	032-037	Gobo5
	038-044	Gobo6
	045-050	Gobo7
	051-056	Gobo8
	057-063	Gobo9
	064-070	Gobo1 Shaking
	071-077	Gobo2 Shaking
	078-084	Gobo3 Shaking
	085-091	Gobo4 Shaking
	092-098	Gobo5 Shaking
	099-105	Gobo6 Shaking
	106-112	Gobo7 Shaking
	113-119	Gobo8 Shaking
	120-127	Gobo9 Shaking
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
15		**Prism**
	000-010	No Effect
	011-127	Prism On
	128-255	Prism Macro1 to Macro32
16		**R-Prism**
	000-127	Index 0°→360°
	128-190	Rotation, Fast to Slow
	191-192	Stop
	193-255	Rotation, Slow to Fast
17		**Zoom**
	000-255	0%→100%
18		**Focus**
	000-255	0%→100%
19		**Frost**
	000-255	0%→100%
20		**Iris**

	000-255	100%→0%
21		**Shutter**
	000-019	Blackout
	020-024	Open
	025-064	Strobe 1: fast to slow
	065-069	Open
	070-084	Strobe 2: opening pulse, fast to slow
	085-089	Open
	090-104	Strobe 3: closing pulse, fast to slow
	105-109	Open
	110-124	Strobe 4: random strobe, fast to slow
	125-129	Open
	130-144	Strobe 5: random opening pulse, fast to slow
	145-149	Open
	150-164	Strobe 6: random closing pulse, fast to slow
	165-169	Open
	170-184	Strobe 7: burst pulse, fast to slow
	185-189	Open
	190-204	Strobe 8: random burst pulse, fast to slow
	205-209	Open
	210-224	Strobe 9: sine wave, fast to slow
	225-229	Open
	230-244	Strobe 10: burst, fast to slow
	245-255	Open
22		**Dimmer**
	000-255	0%→100%
23	000-255	**Dimmer Fine**
24		**Dimmer Macro**
	000-144	Jump Macro
	145-255	Fade Macro
25		**Dimmer Macro Speed**
	000-255	Slow to Fast

7. Error Information

1. Pan Reset Error

Check if the position of the pan mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the pan operating range.

Check if the pan Hall elements is damaged.

Check if the pan Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the pan motor is damaged.

Check if there is any damage to the circuit of the pan motor drive board.

2. Pan Encoder Error

Check if the pan encoder is damaged.

Check if the pan encoder is in poor contact with the lead of the PCB board or disconnected.

3. Tilt Reset Error

Check if the position of the tilt mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the tilt operating range.

Check if the tilt Hall elements is damaged.

Check if the tilt Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the tilt motor is damaged.

Check if there is any damage to the circuit of the tilt motor drive board.

4. Tilt Encoder Error

Check if the tilt encoder is damaged.

Check if the tilt encoder is in poor contact with the lead of the PCB board or disconnected.

5. CPU- B/C/D/E Error

Check whether the 485 (DATA) leads on the PCB board are install in place or disconnected.

Check whether the 485 (DATA) lead is disconnected.

Check whether the relevant signal circuit 485 (DATA) on the PCB board is damaged.

6. Color Reset Error

Check if the position of the color wheel mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the color wheel operating range.

Check if the color wheel Hall elements is damaged.

Check if the color wheel Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the color wheel motor is damaged.

Check if there is any damage to the circuit of the color wheel motor drive board.

7. Cyan Reset Error

Check if the position of the cyan color wheel mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the cyan color wheel operating range.

Check if the cyan color wheel Hall elements is damaged.

Check if the cyan color wheel Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the cyan color wheel motor is damaged.

Check if there is any damage to the circuit of the cyan color wheel motor drive board.

8. Magenta Reset Error

Check if the position of the magenta color wheel mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the magenta color wheel operating range.

Check if the magenta color wheel Hall elements is damaged.

Check if the magenta color wheel Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the magenta color wheel motor is damaged.

Check if there is any damage to the circuit of the magenta color wheel motor drive board.

9. Yellow Reset Error

Check if the position of the yellow color wheel mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the yellow color wheel operating range.

Check if the yellow color wheel Hall elements is damaged.

Check if the yellow color wheel Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the yellow color wheel motor is damaged.

Check if there is any damage to the circuit of the yellow color wheel motor drive board.

10. Gobo1/2 Reset Error

Check if the position of the gobo wheel1/2 mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the gobo wheel1/2 operating range.

Check if the gobo wheel1/2 Hall elements is damaged.

Check if the gobo wheel1/2 Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the gobo wheel1/2 motor is damaged.

Check if there is any damage to the circuit of the gobo wheel1/2 motor drive board.

11. RGobo1 Reset Error

Check if the position of the gobo wheel1 mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the gobo wheel1 operating range.

Check if the gobo wheel1 Hall elements is damaged.

Check if the gobo wheel1 Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the gobo wheel1 motor is damaged.

Check if there is any damage to the circuit of the gobo wheel1 motor drive board.

12. Prism1/RPrism1 Reset Error

Check if the position of the prism1 mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the prism1 operating range.

Check if the prism1 Hall elements is damaged.

Check if the prism1 Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the prism1 motor is damaged.

Check if there is any damage to the circuit of the prism1 motor drive board.

13. Focus Reset Error

Check if the position of the focus mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the focus operating range.

Check if the focus Hall elements is damaged.

Check if the focus Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the focus motor is damaged.

Check if there is any damage to the circuit of the focus motor drive board.

14. Zoom Reset Error

Check if the position of the zoom mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the zoom operating range.

Check if the zoom Hall elements is damaged.

Check if the zoom Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the zoom motor is damaged.

Check if there is any damage to the circuit of the zoom motor drive board.

8. Troubleshooting

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.

9. Fixture Cleaning

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

• Clean with soft cloth and use normal glass to clean liquid.

• Always dry the parts carefully.

• Clean the external optics at least every 20 days. Clean the internal optics at least every 30 days.

Declaration of Conformity

We declare that our products (lighting equipments) comply with the following specification and bears CE mark in accordance with the provision of the Electromagnetic Compatibility (EMC) Directive 2014/30/EU.

EN 55032: 2015; EN 61000-3-2: 2014;
EN 61000-3-3: 2013; EN 55103-2: 2009.

&

Harmonized Standard

EN 60598-1: 2015; EN 60598-2-17: 1989+A2: 1991;
EN 62493: 2015.
Safety of household and similar electrical appliances
Part 1: General requirements

Innovation, Quality, Performance