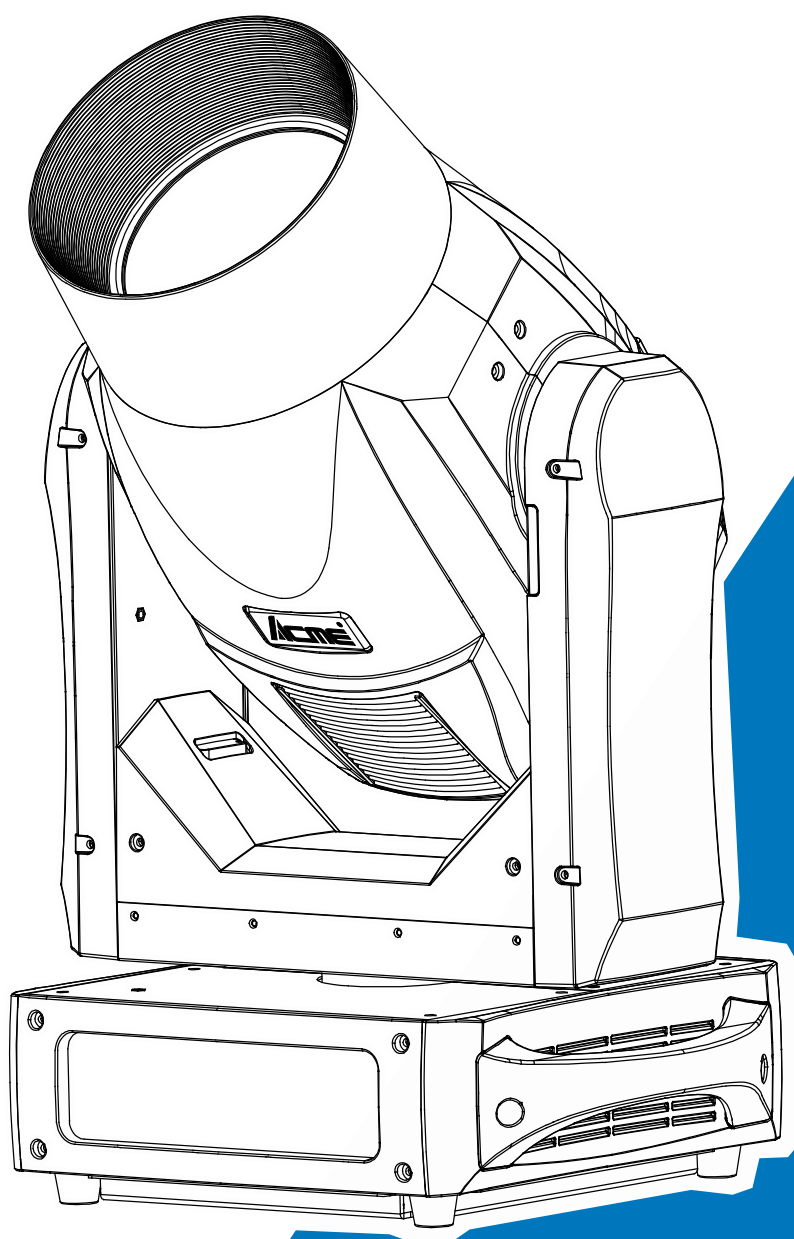# SPARTAN HYBRID C

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.
- During initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective, and it will decrease gradually within 15 minutes.
- 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 90℃. 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 18 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 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.
- Hot lamp explosion hazard. DO NOT open the unit within 15 minutes after switching off.
- DO replace the bulb once it is damaged, deformed or life-expired.
- DO NOT look directly at the light while the bulb is on.
- Never touch bulb with bare fingers, as it is very hot after using.
- DO NOT start on the unit without bulb 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:

660W

Light Source:

PHILIPS MSD Platinum 20 R

Color Temperature:

7800K

Zoom Range:

BEAM mode: 2°~7°

SPOT mode: 5°~32°

WASH mode: 8°~70°

Movement:

Pan: 540°

Tilt: 270°

Pan/Tilt Resolution: 16 bit.

Fixation: Tilt lock

Dimmer/Shutter:

Smooth dimming from 0-100%; outstanding variable speed strobe effect

Color Wheel:

1 x color wheel with 14 colors plus white with rainbow effect

Gobo Wheel:

1 x static gobo wheel with 18 gobos plus open

1 x rotating gobo wheel with 7 gobos plus open

Control:

DMX Channel: 28/24/21/20 channels

Protocols: DMX, RDM

Firmware Upgrade via DMX link

Construction:

Display: LCD display

Battery backup for user operation without connecting to the mains

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

Power In/Out: Power Connector in

Protection Rating: IP20

Features:

Linear motorized zoom

Motorized focus

2 x prisms: 8 facet + 16 facet, rotatable in both directions and overlayable

Independent frost effect

Dimension/Weight:

400x335x667mm, 27kgs

15.7"x13.2"x26.3"in, 59.5lbs

Photometrics Diagram:

Distance(m)	5	10	15	20
2° Lux	850000	450000	189000	150000
Diameter(m)	0.18	0.35	0.53	0.7
32° Lux	26800	6400	2900	1500
Diameter(m)	2.9	5.7	8.6	11.5
70° Lux	1500	375	167	94
Diameter(m)	6.37	12.74	19.11	25.48
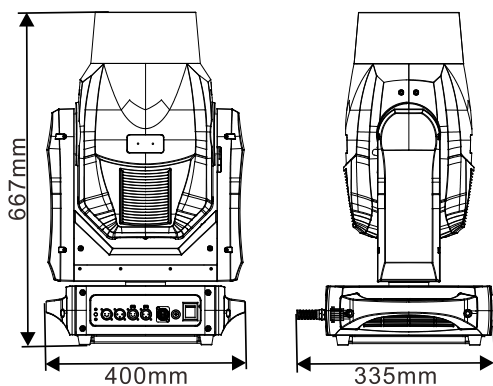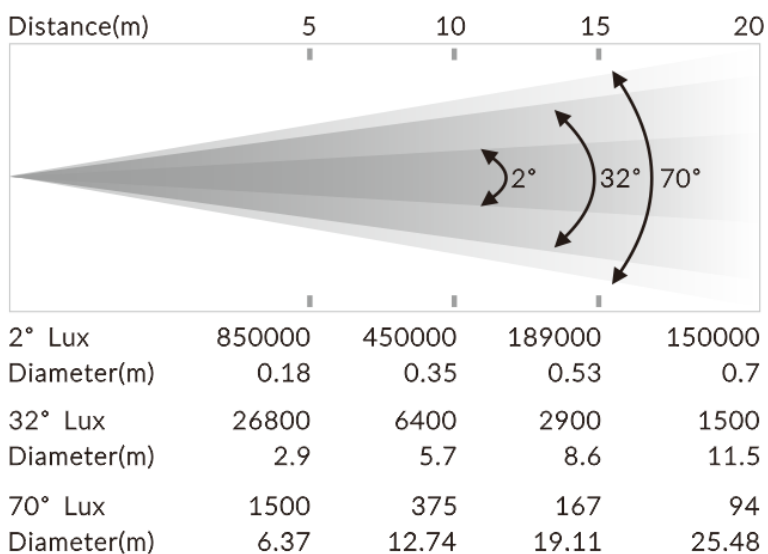
3. Control Panel
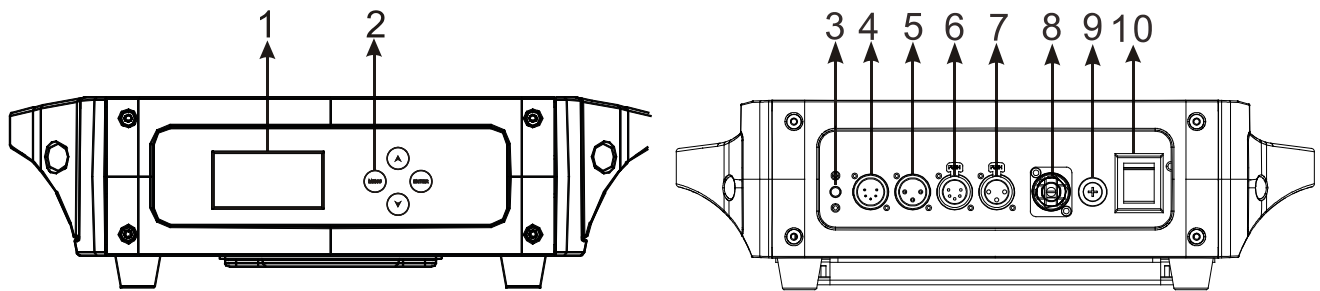
1. Display: Shows the various menus and the selected functions

2. Button:

MENU	To enter into move backward or leave the menu
▲ UP	To go backward to move up in the menu
▼ DOWN	To go forward to move down in the menu
ENTER	To perform the desired functions

3. BATTERY DISPLAY:

   To show the battery status

4. DMX IN:

   For DMX512 operation, use 5-pin XLR cable to link the unit and DMX controller

5. DMX IN:

   For DMX512 operation, use 3-pin XLR cable to link the unit and DMX controller

6. DMX OUT:

   For DMX512 operation, use 5-pin XLR cable to link the next units

7. DMX OUT:

   For DMX512 operation, use 3-pin XLR cable to link the next units

8. POWER:

   To connect to supply power

9. FUSE(T 10A):

   Protect the unit from damage of over current

10. POWER SWITCH:

   Turns On/Off the power

4. Color/Gobo and Lamp

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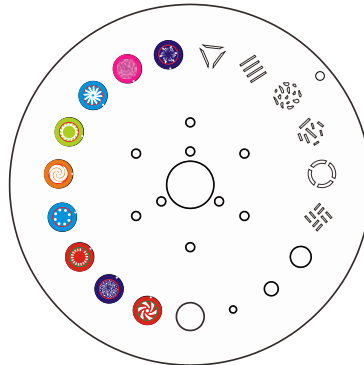
COLOR WHEEL   STATIC GOBO WHEEL   ROTATING GOBO WHEEL
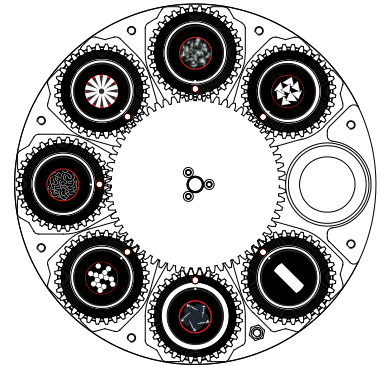
> **DANGER!**
> **Install the color wheel/gobo wheels with the device switched off only.**
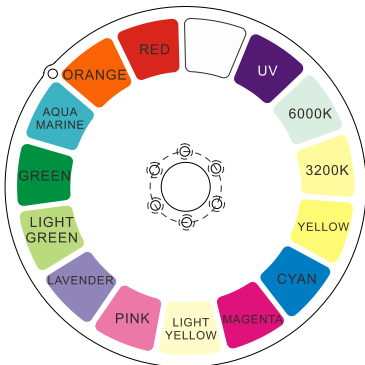> **Unplug from mains before changing the color wheel/gobo wheels!**

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

4.2 Light Source

PHILIPS MSD Platinum 20 R

- Because of its high internal pressure, there might be a risk that the Discharge lamp would explode during operation. The lamp emits intense UV radiation which is harmful to the eyes and skin. The high luminance of the arc can cause severe damage to the retina if you take a close look at the lamp.

- To protect the lamp, always turn off the lamp first (via control panel or DMX controller) and let the unit run at least five minutes to cool down before switching off the mains supply. Never handle the lamp or luminary when it is hot.

- Do not touch the bulb with bare hands. If this happens, clean the lamp with denatured alcohol and wipe it with a lint free cloth before installation.

- The lamp generates UV radiation. Never operate the lamp without appropriate shielding.

- When lighting up, the lamp operates at high pressure and there is a slight risk of arc tube rupture. The risk increases with age, temperature and improper handling of the lamp. Do not use the lamp longer than its lifespan.

- Make sure the lamp is located in the center of the reflector for the best projection.

4.3 Changing the Lamp

Attention: The entire light path and lens of the luminaire must be thoroughly cleaned before changing the bulb.

Do not use this lamp more than 1500 hours, using the lamp any longer than its set life could seriously damage your unit. Periodically checking the lamp running time, when the lamp reaches the 1500 hour mark, or close to it, we strongly suggest you switch the lamp out. Reset the lamp time after you have replaced the lamp.

To replace the lamp:

1. Ensure that the fixture is detached from power and has cooled down completely. It is a good idea to allow the fixture to run for 10 minutes after the lamp has been turned off, so that the cooling fans have time to works.

2. Loosen the screws on the head of the fixture and open the fixture head covers.
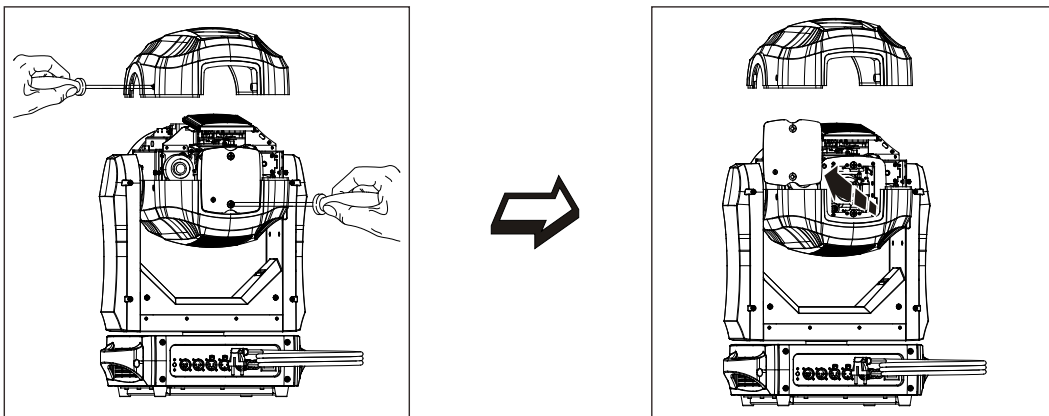
3. Unplug the leads of the lamp and lift the lamp out of its recess, disconnect the lamp and connect a new lamp that must be the same type with the old one. And then place the new lamp into the lamp recess.
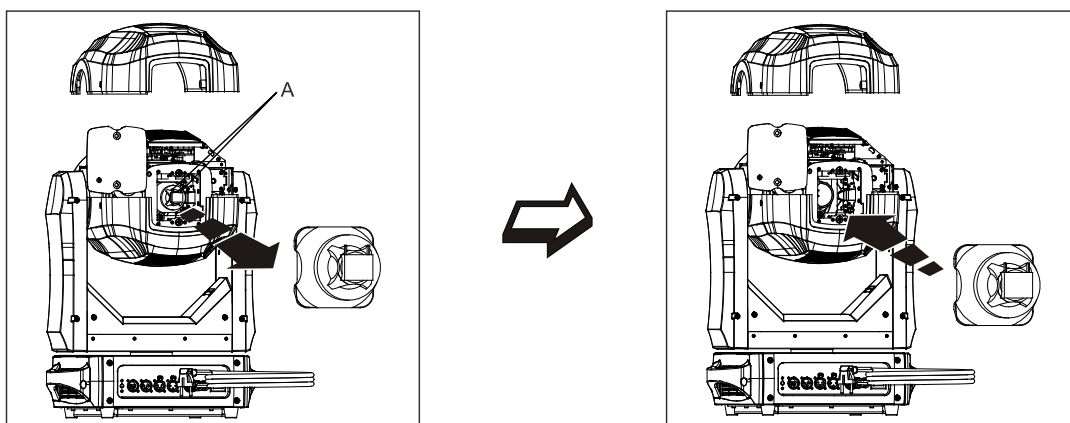
Finally reinstall the head cover, fastening it securely before reapplying power.

Warning:

The installing direction of lamp:
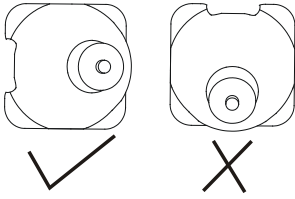
4.4 Lamp Replacement Warning

- When the lamp reaches 1200 hours of usage, the display will flash the message "Replace Lamp Soon" for up to 5 minutes. During this period, the fixture will still work normally.
- When the lamp reaches 1500 hours of usage, the display will flash the message "Replace Lamp Now" for up to 10 minutes. After 10 minutes, the fixture will return to normal operation.
- When the lamp is continuously used overtime, the display will flash the message "Lamp Timeout Use, Replace Lamp Now" for up to 10 minutes. After 10 minutes, the fixture will return to normal operation.

Attention: Damages caused by the failure to replace the bulb in time are not subject to warranty.

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:

MENU
- DMX Settings
  - DMX Address
    - 1
    - :
    - 512
  - Channel Mode
    - Mode1（28）
    - Mode2（24）
    - Mode3（21）
    - Mode4（20）
  - View DMX Value
- Fixture Settings
  - Pan Inverse
  - Tilt Inverse
  - P/T Feedback
    - No
    - Yes
  - P/T Speed
    - Fast
    - Slow
  - Focus Conpensate
    - Disable
    - Near
    - Medium
    - Far
  - Bl.O. P/T Moving
  - Bl.O. Color Change
  - Bl.O. Gobo Change
    - No
    - Yes
  - Dimmer Curve
    - Square Law
    - Inv SQ Law
    - Liner
    - S Curve
  - Soft Filter
    - Auto
    - Disable
    - Enable
- Lamp Settings
  - Lamp On/Off
  - State/Power On
    - Off
    - On
- Display Settings
  - Display Inverse
  - Backlight Auto Off
    - No/Yes
  - Backlight Intensity
    - 1-10
  - Temperature Unit
    - °C/°F
  - Language
    - English/Chinese
- Fixture Test
  - Auto Test
  - Manual Test
- Fixture Information
  - Fixture Use Hour
  - Light Use Hour
    - Exit
    - Reset Time
  - Temperature
  - Lamp State
    - Driver State
    - Lamp Voltage
    - Temp. Condition
    - Fault Mode
  - Fan State
  - Firmware Version
- Reset Functions
  - Pan & Tilt
  - Effect
  - All
    - No
    - Yes
- Special Functions
  - Factory Settings
    - No
    - Yes

10F

DMX Settings

To select **DMX Settings,** press the **ENTER** button to confirm, use the **UP/DOWN** button to select **DMX Address**, **Channel Mode** 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 **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.

Channel Mode

To select **Channel Mode**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Mode1 (28)**, **Mode2 (24)**, **Mode3 (21)** or **Mode4 (20)**, 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 Settings

To select **Fixture Settings**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Pan Inverse, Tilt Inverse, P/T Feedback**, **P/T Speed, Focus Compensate, Bl.O. P/T Moving, Bl.O. Color Change, Bl.O. Gobo Change, Dimmer Curve** or **Soft Filter.**

Pan Inverse

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

To select **Tilt Inverse**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **No** (normal) or **Yes** (tilt inverse), 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.

P/T Speed

To select **P/T Speed**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Slow** or **Fast**, 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 **UP/DOWN** 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.

BL.O. P/T Moving

To select **BL.O. P/T Moving**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **No** (normal while pan/tilt moving) or **Yes** (blackout while pan/tilt moving), 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.

BL.O.Color Change

To select **BL.O. Color Change**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **No** (normal while color moving) or **Yes** (blackout while color changing), 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.

BL.O.Gobo Change

To select **BL.O. Gobo Change**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **No** (normal while gobo moving) or **Yes** (blackout while gobo changing), 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 **UP/DOWN** button to select **Square Law, Inv SQ Law, Liner** 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 |
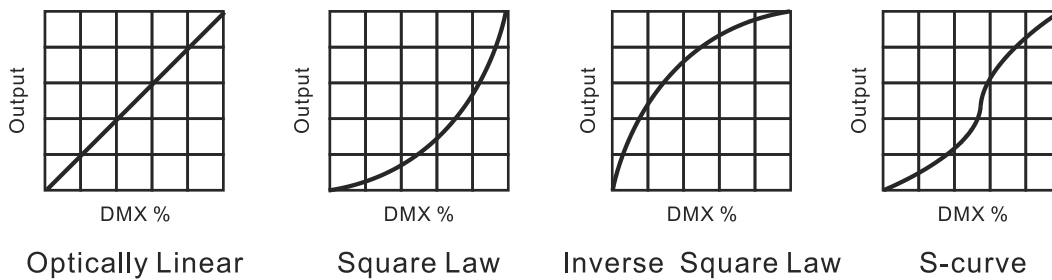
Optically Linear: The increase in light intensity appears to be linear as DMX value is increased.

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.

Soft Filter

To select **Soft Filter**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Auto**, **Disable** or **Enable**, 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.

Lamp Settings

To select **Lamp Settings**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Lamp On/Off** or **State/Power on.**

Lamp On/Off

To select **Lamp On/Off**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **On** (lamp on) or **Off** (lamp off), 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.

State/Power On

To select **State/Power On**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **On** (Lamp on while power on) or **Off** (Lamp off while power on), 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 Settings*

To select **Display Settings**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Display Inverse, Backlight Auto Off, Backlight Intensity, Temperature Unit** or **Language.**

Display Inverse

Select **Display Inverse**, 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 Auto Off

Select **Backlight Auto Off**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP/DOWN** button to select **No** (normal) or **Yes** (backlight auto off), 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

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 **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, shutter, color, gobo, gobo rotation, prism, prism rotation, frost, focus, zoom, 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** and **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 Hour, Light Use Hour, Temperature, Lamp State, Fan State** or **Firmware Version.**

Fixture Use Hour

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

Light Use Hour

Select **Light Use Hour**, press the **ENTER** button to confirm, light use time will show on the display, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Exit** or **Reset Time**, press the **ENTER** button to confirm, 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.

Lamp State

Select **Lamp State**, press the **ENTER** button to confirm, lamp state will show on the display, press the **MENU** button to exit.

Fan State

Select **Fan State**, press the **ENTER** button to confirm, fan state will show on the display, press the **MENU** button 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.

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**(normal) 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**(normal) 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 Settings

Select **Factory Settings,** 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.

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.

OFFSET MENU		
	Pan	-128-127
	Tilt	-128-127
	Shutter	-128-127
	Color	-128-127
	Soft Filter	0-255
	Rotating Gobo	-128-127
	R-Gobo	-128-127
	Static Gobo	-128-127
	Prism1	-128-127
	R-Prism1	-128-127
	Prism2	-128-127
	R-Prism2	-128-127
	Frost	0-255
	Focus	-128-127
	Zoom	-128-127
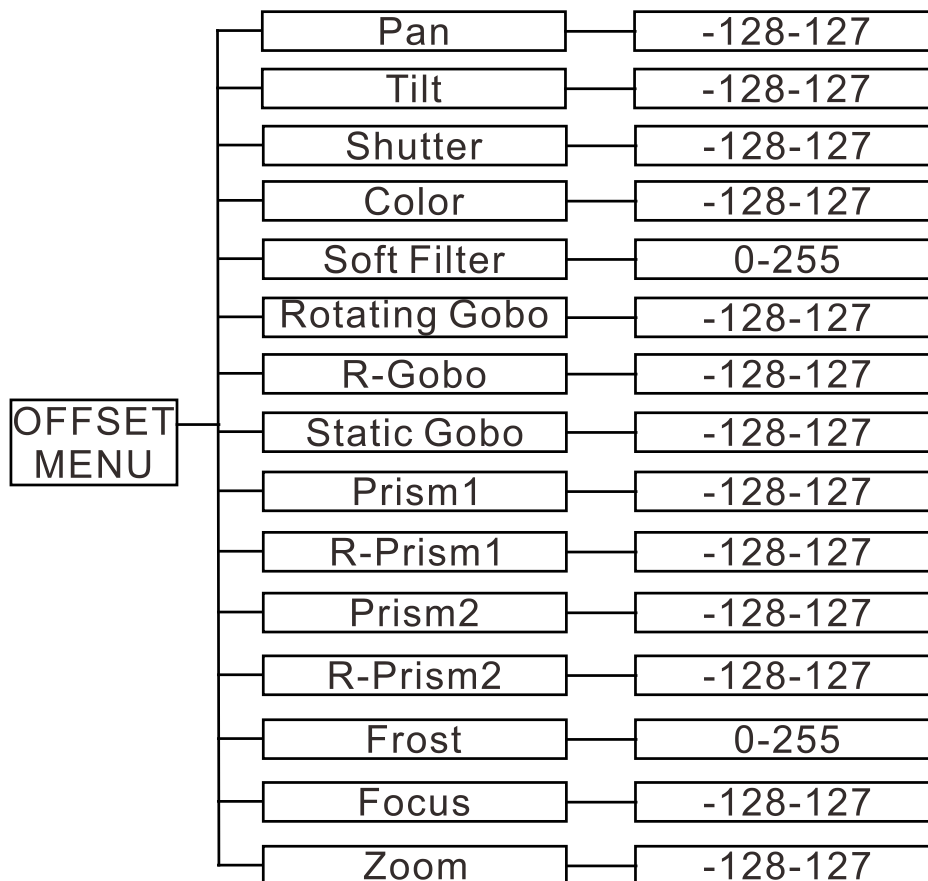
Pan

Enter offset mode, 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 mode, 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.

Shutter

Enter offset mode, Select **Shutter**, 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 mode, 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.

Soft Filter

Enter offset mode, Select **Soft Filter**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 255, press the **ENTER** button to store. Press the **MENU** button to exit.

Rotating Gobo

Enter offset mode, Select **Rotating Gobo**, 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-Gobo

Enter offset mode, Select **R-Gobo**, 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.

Static Gobo

Enter offset mode, Select **Static Gobo**, 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 mode, 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 mode, 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.

Prism 2

Enter offset mode, Select **Prism 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.

R-Prism 2

Enter offset mode, Select **R-Prism 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.

Frost

Enter offset mode, 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 0 to 255, press the **ENTER** button to store. Press the **MENU** button to exit.

Focus

Enter offset mode, 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 mode, 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.

6. Control By Universal DMX Controller

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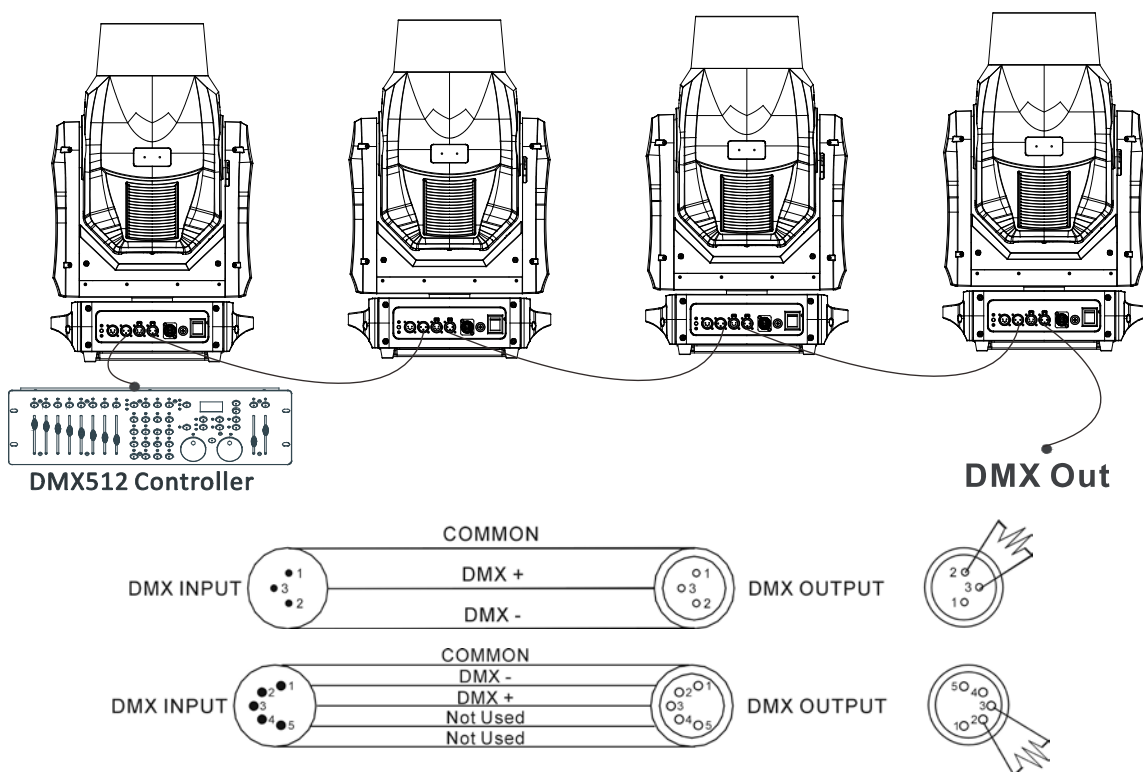
1. At last unit, the DMX cable has to be terminated with a terminator. Solder a 120-ohm 1⁄4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.

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 blink on 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
28 channels	1	29	57	85
24 channels	1	25	49	74
21channels	1	22	43	64
20 channels	1	21	41	61

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.

28 Channels:

CHANNEL	Value	FUNCTION
1		**Color**
	000-004	Open
	005-008	Color1
	009-012	Color2
	013-016	Color3
	017-021	Color4
	022-025	Color5
	026-029	Color6
	030-033	Color7
	034-037	Color8
	038-042	Color9
	043-046	Color10
	047-050	Color11
	051-054	Color12
	055-058	Color13
	059-063	Color14
	064-127	Open
	128-189	Clockwise Rotation Fast to Slow
	190-193	Stop
	194-255	Counter-Clockwise Rotation Slow to Fast
2		**Soft Filter**
	000-127	OFF
	128-255	ON
3		**Strobe**
	000-003	Light OFF
	004-103	Strobe from Slow to Fast
	104-107	Light ON
	108-207	Pulsation from Slow to Fast
	208-212	Light ON
	213-225	Random Strobe at low frequency
	226-238	Random Strobe at medium frequency
	239-251	Random Strobe at high frequency
	252-255	Light ON
4		**Dimmer**

	000-255	0%→100%
5	000-255	**Dimmer Fine**
6		**Static Gobo**
	000-003	Empty Position
	004-007	Gobo1
	008-011	Gobo2
	012-015	Gobo3
	016-018	Gobo4
	019-022	Gobo5
	023-026	Gobo6
	027-030	Gobo7
	031-034	Gobo8
	035-037	Gobo9
	038-041	Gobo10
	042-045	Gobo11
	046-049	Gobo12
	050-053	Gobo13
	054-056	Gobo14
	057-060	Gobo15
	061-064	Gobo16
	065-068	Gobo17
	069-071	Gobo18
	072-113	Clockwise Rotation from Fast to Slow
	114-117	Stop
	118-159	Counter-clockwise Rotation from Slow to Fast
	160-165	Gobo1 shaking
	166-170	Gobo2 shaking
	171-175	Gobo3 shaking
	176-181	Gobo4 shaking
	182-186	Gobo5 shaking
	187-191	Gobo6 shaking
	192-197	Gobo7 shaking
	198-202	Gobo8 shaking
	203-207	Gobo9 shaking
	208-213	Gobo10 shaking
	214-218	Gobo11 shaking
	219-223	Gobo12 shaking
	224-229	Gobo13 shaking
	230-234	Gobo14 shaking
	235-239	Gobo15 shaking
	240-245	Gobo16 shaking
	246-250	Gobo17 shaking
	251-255	Gobo18 shaking
7		**Rotating Gobo**
	000-018	Empty Position
	019-037	Gobo1

	038-055	Gobo2
	056-074	Gobo3
	075-092	Gobo4
	093-111	Gobo5
	112-129	Gobo6
	130-150	Gobo1 shaking
	151-171	Gobo2 shaking
	172-192	Gobo3 shaking
	193-213	Gobo4 shaking
	214-234	Gobo5 shaking
	235-255	Gobo6 shaking
8		**Gobo Rotation**
	000-021	Gobo indexing: 0°→90°
	021-042	Gobo indexing: 90°→180°
	042-063	Gobo indexing: 180°→270°
	063-084	Gobo indexing: 270°→360°
	084-105	Gobo indexing: 360°→450°
	105-127	Gobo indexing: 450°→540°
	128-190	Counter-clockwise Rotation from Fast to Slow
	191-192	Stop
	193-255	Clockwise Rotation from Slow to Fast
9	000-255	**Fine Gobo Rotation**
10		**Prism**
	000-010	Prism Out
	011-132	Prism 1
	133-223	Prism 2
	224-255	Prism 1+Prism 2 mixing effect
11		**Prism Rotation**
	000-021	Prism indexing: 0°→90°
	021-042	Prism indexing: 90°→180°
	042-063	Prism indexing: 180°→270°
	063-084	Prism indexing: 270°→360°
	084-105	Prism indexing: 360°→450°
	105-127	Prism indexing: 450°→540°
	128-190	Counter-clockwise Rotation from Fast to Slow
	191-192	Stop
	193-255	Clockwise Rotation from Slow to Fast
12		**Frost**
	000-255	0%→100%
13		**Zoom**
	000-255	2°→70°
14		**Focus**
	000-255	0%→100%
15	000-255	**Focus Fine**

16	000-127 128-191 192-255	**Beam Mode** Zoom/Auto Focus Mode Beam Mode Wash Mode
17	000-255	**Pan** 0°→540°
18	000-255	**Pan Fine**
19	000-255	**Tilt** 0°→270°
20	000-255	**Tilt Fine**
21	000-011 012-024 025-037 038-114 115-127 128-140 141-153 154-166 167-179 180-192 193-205 206-255	**Function** Unused Range Fast Pan/Tilt Speed Normal Pan/Tilt Speed Unused Range Soft Filter Auto Soft Filter Disable Soft Filter Enable Focus Compensate Disable Focus Compensate Near Focus Compensate Medium Focus Compensate Far Unused Range
22	000-025 026-076 077-127 128-255	**Reset** Unused Range Zoom Reset Pan/Tilt Reset All Reset
23	000-025 026-100 101-255	**Lamp Control** Unused Range Lamp OFF Lamp ON
24	000-007 008-015 016-035 036-055 056-075 076-095 096-115 116-135 136-155 156-175 176-195 196-215	**Macro Effects** Macro Off Standby Zoom in fade (black) Zoom out fade (black) Zoom in fade out fade (no black) Zoom in fade (no black) Zoom out fade (no black) Standby Zoom in Fade Zoom out Fade Zoom in fade out fade (no black) Zoom in fade (no black)

CHANNEL	Value	FUNCTION
	216-225	Zoom out fade (no black)
	226-255	Standby
25		**Pan/Tilt Time**
	000-254	Fast to Slow
	255	Fast
26		**Color Time**
	000-254	Fast to Slow
	255	Fast
27		**Beam Time**
	000-254	Fast to Slow
	255	Fast
28		**Gobo Time**
	000-254	Fast to Slow
	255	Fast

24 Channels:

CHANNEL	Value	FUNCTION
		Color
	000-004	Open
	005-008	Color1
	009-012	Color2
	013-016	Color3
	017-021	Color4
	022-025	Color5
	026-029	Color6
	030-033	Color7
	034-037	Color8
1	038-042	Color9
	043-046	Color10
	047-050	Color11
	051-054	Color12
	055-058	Color13
	059-063	Color14
	064-127	Open
	128-189	Clockwise Rotation Fast to Slow
	190-193	Stop
	194-255	Counter-Clockwise Rotation Slow to Fast
2		**Soft Filter**
	000-127	OFF
	128-255	ON
3		**Strobe**
	000-003	Light OFF
	004-103	Strobe from Slow to Fast

	104-107		Light ON
	108-207		Pulsation from Slow to Fast
	208-212		Light ON
	213-225		Random Strobe at low frequency
	226-238		Random Strobe at medium frequency
	239-251		Random Strobe at high frequency
	252-255		Light ON
4		**Dimmer**	
	000-255	0%→100%	
5	000-255	**Dimmer Fine**	
6		**Static Gobo**	
	000-003	Empty Position	
	004-007	Gobo1	
	008-011	Gobo2	
	012-015	Gobo3	
	016-018	Gobo4	
	019-022	Gobo5	
	023-026	Gobo6	
	027-030	Gobo7	
	031-034	Gobo8	
	035-037	Gobo9	
	038-041	Gobo10	
	042-045	Gobo11	
	046-049	Gobo12	
	050-053	Gobo13	
	054-056	Gobo14	
	057-060	Gobo15	
	061-064	Gobo16	
	065-068	Gobo17	
	069-071	Gobo18	
	072-113	Clockwise Rotation from Fast to Slow	
	114-117	Stop	
	118-159	Counter-clockwise Rotation from Slow to Fast	
	160-165	Gobo1 shaking	
	166-170	Gobo2 shaking	
	171-175	Gobo3 shaking	
	176-181	Gobo4 shaking	
	182-186	Gobo5 shaking	
	187-191	Gobo6 shaking	
	192-197	Gobo7 shaking	
	198-202	Gobo8 shaking	
	203-207	Gobo9 shaking	
	208-213	Gobo10 shaking	
	214-218	Gobo11 shaking	
	219-223	Gobo12 shaking	
	224-229	Gobo13 shaking	

	230-234	Gobo14 shaking
	235-239	Gobo15 shaking
	240-245	Gobo16 shaking
	246-250	Gobo17 shaking
	251-255	Gobo18 shaking
7		**Rotating Gobo**
	000-018	Empty Position
	019-037	Gobo1
	038-055	Gobo2
	056-074	Gobo3
	075-092	Gobo4
	093-111	Gobo5
	112-129	Gobo6
	130-150	Gobo1 shaking
	151-171	Gobo2 shaking
	172-192	Gobo3 shaking
	193-213	Gobo4 shaking
	214-234	Gobo5 shaking
	235-255	Gobo6 shaking
8		**Gobo Rotation**
	000-021	Gobo indexing: 0°→90°
	021-042	Gobo indexing: 90°→180°
	042-063	Gobo indexing: 180°→270°
	063-084	Gobo indexing: 270°→360°
	084-105	Gobo indexing: 360°→450°
	105-127	Gobo indexing: 450°→540°
	128-190	Counter-clockwise Rotation from Fast to Slow
	191-192	Stop
	193-255	Clockwise Rotation from Slow to Fast
9	000-255	**Fine Gobo Rotation**
10		**Prism**
	000-010	Prism Out
	011-132	Prism 1
	133-223	Prism 2
	224-255	Prism 1+Prism 2 mixing effect
11		**Prism Rotation**
	000-021	Prism indexing: 0°→90°
	021-042	Prism indexing: 90°→180°
	042-063	Prism indexing: 180°→270°
	063-084	Prism indexing: 270°→360°
	084-105	Prism indexing: 360°→450°
	105-127	Prism indexing: 450°→540°
	128-190	Counter-clockwise Rotation from Fast to Slow
	191-192	Stop
	193-255	Clockwise Rotation from Slow to Fast

12		**Frost**
	000-255	0%→100%
13		**Zoom**
	000-255	2°→70°
14		**Focus**
	000-255	0%→100%
15	000-255	**Focus Fine**
16		**Beam Mode**
	000-127	Zoom/Auto Focus Mode
	128-191	Beam Mode
	192-255	Wash Mode
17		**Pan**
	000-255	0°→540°
18	000-255	**Pan Fine**
19		**Tilt**
	000-255	0°→270°
20	000-255	**Tilt Fine**
21		**Function**
	000-011	Unused Range
	012-024	Fast Pan/Tilt Speed
	025-037	Normal Pan/Tilt Speed
	038-114	Unused Range
	115-127	Soft Filter Auto
	128-140	Soft Filter Disable
	141-153	Soft Filter Enable
	154-166	Focus Compensate Disable
	167-179	Focus Compensate Near
	180-192	Focus Compensate Medium
	193-205	Focus Compensate Far
	206-255	Unused Range
22		**Reset**
	000-025	Unused Range
	026-076	Zoom Reset
	077-127	Pan/Tilt Reset
	128-255	All Reset
23		**Lamp Control**
	000-025	Unused Range
	026-100	Lamp OFF
	101-255	Lamp ON
24		**Macro Effects**
	000-007	Macro Off
	008-015	Standby
	016-035	Zoom in fade (black)
	036-055	Zoom out fade (black)

	056-075	Zoom in fade out fade (no black)
	076-095	Zoom in fade (no black)
	096-115	Zoom out fade (no black)
	116-135	Standby
	136-155	Zoom in Fade
	156-175	Zoom out Fade
	176-195	Zoom in fade out fade (no black)
	196-215	Zoom in fade (no black)
	216-225	Zoom out fade (no black)
	226-255	Standby

21 Channels:

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	000-254 255	**P/T Speed** Fast to Slow Fast
6		**Function**
	000-009	No Function
	010-014	Reset All
	015-029	Reset Effect
	030-034	Reset XY
	035-039	No Function
	040-044	Lamp On
	045-049	Lamp Off
	050-059	No Function
	060-064	Dimmer Curve Square Law
	065-069	Dimmer Curve Inverse Square Law
	070-074	Dimmer Curve Linear
	075-079	Dimmer Curve S
	080-084	XY Speed Fast
	085-089	XY Speed Slow
	090-104	No Function
	105-109	Focus Compensate Disable
	110-114	Focus Compensate Near
	115-119	Focus Compensate Medium
	120-124	Focus Compensate Far

	125-129	Soft Filter Auto
	130-134	Soft Filter Disable
	135-139	Soft Filter Enable
	140-255	No Function
7		**Color**
	000-004	Open
	005-008	Color1
	009-012	Color2
	013-016	Color3
	017-021	Color4
	022-025	Color5
	026-029	Color6
	030-033	Color7
	034-037	Color8
	038-042	Color9
	043-046	Color10
	047-050	Color11
	051-054	Color12
	055-058	Color13
	059-063	Color14
	064-127	Open
	128-189	Clockwise Rotation Fast to Slow
	190-193	Stop
	194-255	Counter-Clockwise Rotation Slow to Fast
8		**Soft Filter**
	000-127	OFF
	128-255	ON
9		**Rotating Gobo**
	000-007	Empty Position
	008-015	Gobo1
	016-023	Gobo2
	024-031	Gobo3
	032-039	Gobo4
	040-047	Gobo5
	048-055	Gobo6
	056-063	Gobo7
	064-094	Counter-Clockwise Rotation from Fast to Slow
	095-098	Stop
	099-129	Clockwise Rotation from Slow to Fast
	130-147	Gobo1 shaking
	148-165	Gobo2 shaking
	166-183	Gobo3 shaking
	184-201	Gobo4 shaking
	202-219	Gobo5 shaking
	220-237	Gobo6 shaking
	238-255	Gobo7 shaking

10		**Gobo Rotation**
	000-021	Gobo indexing: 0°→90°
	021-042	Gobo indexing: 90°→180°
	042-063	Gobo indexing: 180°→270°
	063-084	Gobo indexing: 270°→360°
	084-105	Gobo indexing: 360°→450°
	105-127	Gobo indexing: 450°→540°
	128-190	Counter-clockwise Rotation from Fast to Slow
	191-192	Stop
	193-255	Clockwise Rotation from Slow to Fast
11	000-255	**Fine Gobo Rotation**
12		**Static Gobo**
	000-003	Empty Position
	004-007	Gobo1
	008-011	Gobo2
	012-015	Gobo3
	016-018	Gobo4
	019-022	Gobo5
	023-026	Gobo6
	027-030	Gobo7
	031-034	Gobo8
	035-037	Gobo9
	038-041	Gobo10
	042-045	Gobo11
	046-049	Gobo12
	050-053	Gobo13
	054-056	Gobo14
	057-060	Gobo15
	061-064	Gobo16
	065-068	Gobo17
	069-071	Gobo18
	072-113	Clockwise Rotation from Fast to Slow
	114-117	Stop
	118-159	Counter-clockwise Rotation from Slow to Fast
	160-165	Gobo1 shaking
	166-170	Gobo2 shaking
	171-175	Gobo3 shaking
	176-181	Gobo4 shaking
	182-186	Gobo5 shaking
	187-191	Gobo6 shaking
	192-197	Gobo7 shaking
	198-202	Gobo8 shaking
	203-207	Gobo9 shaking
	208-213	Gobo10 shaking
	214-218	Gobo11 shaking
	219-223	Gobo12 shaking

	224-229	Gobo13 shaking
	230-234	Gobo14 shaking
	235-239	Gobo15 shaking
	240-245	Gobo16 shaking
	246-250	Gobo17 shaking
	251-255	Gobo18 shaking
13		**Prism**
	000-010	Prism Out
	011-132	Prism 1
	133-223	Prism 2
	224-255	Prism 1+Prism 2 mixing effect
14		**Prism 1 Rotation**
	000-021	Prism indexing: 0°→90°
	021-042	Prism indexing: 90°→180°
	042-063	Prism indexing: 180°→270°
	063-084	Prism indexing: 270°→360°
	084-105	Prism indexing: 360°→450°
	105-127	Prism indexing: 450°→540°
	128-190	Counter-clockwise Rotation from Fast to Slow
	191-192	Stop
	193-255	Clockwise Rotation from Slow to Fast
15		**Prism 2 Rotation**
	000-021	Prism indexing: 0°→90°
	021-042	Prism indexing: 90°→180°
	042-063	Prism indexing: 180°→270°
	063-084	Prism indexing: 270°→360°
	084-105	Prism indexing: 360°→450°
	105-127	Prism indexing: 450°→540°
	128-190	Counter-clockwise Rotation from Fast to Slow
	191-192	Stop
	193-255	Clockwise Rotation from Slow to Fast
16		**Zoom**
	000-255	2°→70°
17		**Focus**
	000-255	0%→100%
18		**Frost**
	000-255	0%→100%
19		**Beam Mode**
	000-127	Zoom/Auto Focus Mode
	128-191	Beam Mode
	192-255	Wash Mode
20		**Strobe**
	000-003	Light OFF
	004-103	Strobe from Slow to Fast
	104-107	Light ON
	108-207	Pulsation from Slow to Fast

	208-212	Light ON
	213-225	Random Strobe at low frequency
	226-238	Random Strobe at medium frequency
	239-251	Random Strobe at high frequency
	252-255	Light ON
21		**Dimmer**
	000-255	0%→100%

20 Channels:

CHANNEL	Value	Function
		Color
	000-004	Open
	005-008	Color1
	009-012	Color2
	013-016	Color3
	017-021	Color4
	022-025	Color5
	026-029	Color6
	030-033	Color7
	034-037	Color8
1	038-042	Color9
	043-046	Color10
	047-050	Color11
	051-054	Color12
	055-058	Color13
	059-063	Color14
	064-127	Open
	128-189	Clockwise Rotation Fast to Slow
	190-193	Stop
	194-255	Counter-Clockwise Rotation Slow to Fast
		Soft Filter
2	000-127	OFF
	128-255	ON
		Strobe
	000-003	Light OFF
	004-103	Strobe from Slow to Fast
	104-107	Light ON
3	108-207	Pulsation from Slow to Fast
	208-212	Light ON
	213-225	Random Strobe at low frequency
	226-238	Random Strobe at medium frequency
	239-251	Random Strobe at high frequency
	252-255	Light ON

4		**Dimmer**
	000-255	0%→100%
5	000-255	**Dimmer Fine**
6		**Static Gobo**
	000-003	Empty Position
	004-007	Gobo1
	008-011	Gobo2
	012-015	Gobo3
	016-018	Gobo4
	019-022	Gobo5
	023-026	Gobo6
	027-030	Gobo7
	031-034	Gobo8
	035-037	Gobo9
	038-041	Gobo10
	042-045	Gobo11
	046-049	Gobo12
	050-053	Gobo13
	054-056	Gobo14
	057-060	Gobo15
	061-064	Gobo16
	065-068	Gobo17
	069-071	Gobo18
	072-113	Clockwise Rotation from Fast to Slow
	114-117	Stop
	118-159	Counter-clockwise Rotation from Slow to Fast
	160-165	Gobo1 shaking
	166-170	Gobo2 shaking
	171-175	Gobo3 shaking
	176-181	Gobo4 shaking
	182-186	Gobo5 shaking
	187-191	Gobo6 shaking
	192-197	Gobo7 shaking
	198-202	Gobo8 shaking
	203-207	Gobo9 shaking
	208-213	Gobo10 shaking
	214-218	Gobo11 shaking
	219-223	Gobo12 shaking
	224-229	Gobo13 shaking
	230-234	Gobo14 shaking
	235-239	Gobo15 shaking
	240-245	Gobo16 shaking
	246-250	Gobo17 shaking
	251-255	Gobo18 shaking
7		**Rotating Gobo**
	000-016	Empty Position

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	017-032	Gobo1
	033-048	Gobo2
	049-064	Gobo3
	065-081	Gobo4
	082-097	Gobo5
	098-113	Gobo6
	114-129	Gobo7
	130-147	Gobo1 shaking
	148-165	Gobo2 shaking
	166-183	Gobo3 shaking
	184-201	Gobo4 shaking
	202-219	Gobo5 shaking
	220-237	Gobo6 shaking
	238-255	Gobo7 shaking
8		**Gobo Rotation**
	000-021	Gobo indexing: 0°→90°
	021-042	Gobo indexing: 90°→180°
	042-063	Gobo indexing: 180°→270°
	063-084	Gobo indexing: 270°→360°
	084-105	Gobo indexing: 360°→450°
	105-127	Gobo indexing: 450°→540°
	128-190	Counter-clockwise Rotation from Fast to Slow
	191-192	Stop
	193-255	Clockwise Rotation from Slow to Fast
9	000-255	**Fine Gobo Rotation**
10		**Prism**
	000-010	Prism Out
	011-132	Prism 1
	133-223	Prism 2
	224-255	Prism 1+Prism 2 mixing effect
11		**Prism Rotation**
	000-021	Prism indexing: 0°→90°
	021-042	Prism indexing: 90°→180°
	042-063	Prism indexing: 180°→270°
	063-084	Prism indexing: 270°→360°
	084-105	Prism indexing: 360°→450°
	105-127	Prism indexing: 450°→540°
	128-190	Counter-clockwise Rotation from Fast to Slow
	191-192	Stop
	193-255	Clockwise Rotation from Slow to Fast
12		**Focus**
	000-255	0%→100%
13		**Reserved**
14		**Pan**
	000-255	0°→540°

15	000-255	**Pan Fine**
16	000-255	**Tilt** 0°→270°
17	000-255	**Tilt Fine**
18		**Function**
	000-011	Unused Range
	012-024	Fast Pan/Tilt Speed
	025-037	Normal Pan/Tilt Speed
	038-114	Unused Range
	115-127	Soft Filter Auto
	128-140	Soft Filter Disable
	141-153	Soft Filter Enable
	154-166	Focus Compensate Disable
	167-179	Focus Compensate Near
	180-192	Focus Compensate Medium
	193-205	Focus Compensate Far
	206-255	Unused Range
19		**Reset**
	000-025	Unused Range
	026-076	Zoom Reset
	077-127	Pan/Tilt Reset
	128-255	All Reset
20		**Lamp Control**
	000-025	Unused Range
	026-100	Lamp OFF
	101-255	Lamp ON

7. Error Information

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

Check whether the 485 (DATA) leads on the PCB board are installed 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.

2. 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.

3. Pan Encode 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.

4. 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.

5. Tilt Encode 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.

6. Color 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. Rotating Gobo Error

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

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

Check if the rotating gobo wheel Hall elements is damaged.

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

Check if the rotating gobo wheel motor is damaged.

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

8. R-Gobo Error

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

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

Check if the rotating gobo wheel Hall elements is damaged.

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

Check if the rotating gobo wheel motor is damaged.

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

9. Static Gobo Error

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

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

Check if the static gobo wheel Hall elements is damaged.

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

Check if the static gobo wheel motor is damaged.

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

10. Animation Error

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

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

Check if the animation Hall elements is damaged.

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

Check if the animation motor is damaged.

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

11. Prism1/2 Error

Check if the position of the prism1/2 mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the prism1/2 operating range.

Check if the prism1/2 Hall elements is damaged.

Check if the prism1/2 Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the prism1/2 motor is damaged.

Check if there is any damage to the circuit of the prism1/2 motor drive board.

12. R-Prism1/2 Error

Check if the position of the prism1/2 mounting magnetic steel falls off or is damaged.

Check if there are other interference items in the prism1/2 operating range.

Check if the prism1/2 Hall elements is damaged.

Check if the prism1/2 Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the prism1/2 motor is damaged.

Check if there is any damage to the circuit of the prism1/2 motor drive board.

13. Focus 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 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.

15. Lamp Fan 1/2/3/4 Error

Check if the fan is not running.

Check if the fan leads are installed in place or disconnected.

Check if the fan is damaged.

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

Check if the fan circuit on the motherboard breaks down.

Check if the component is damaged.
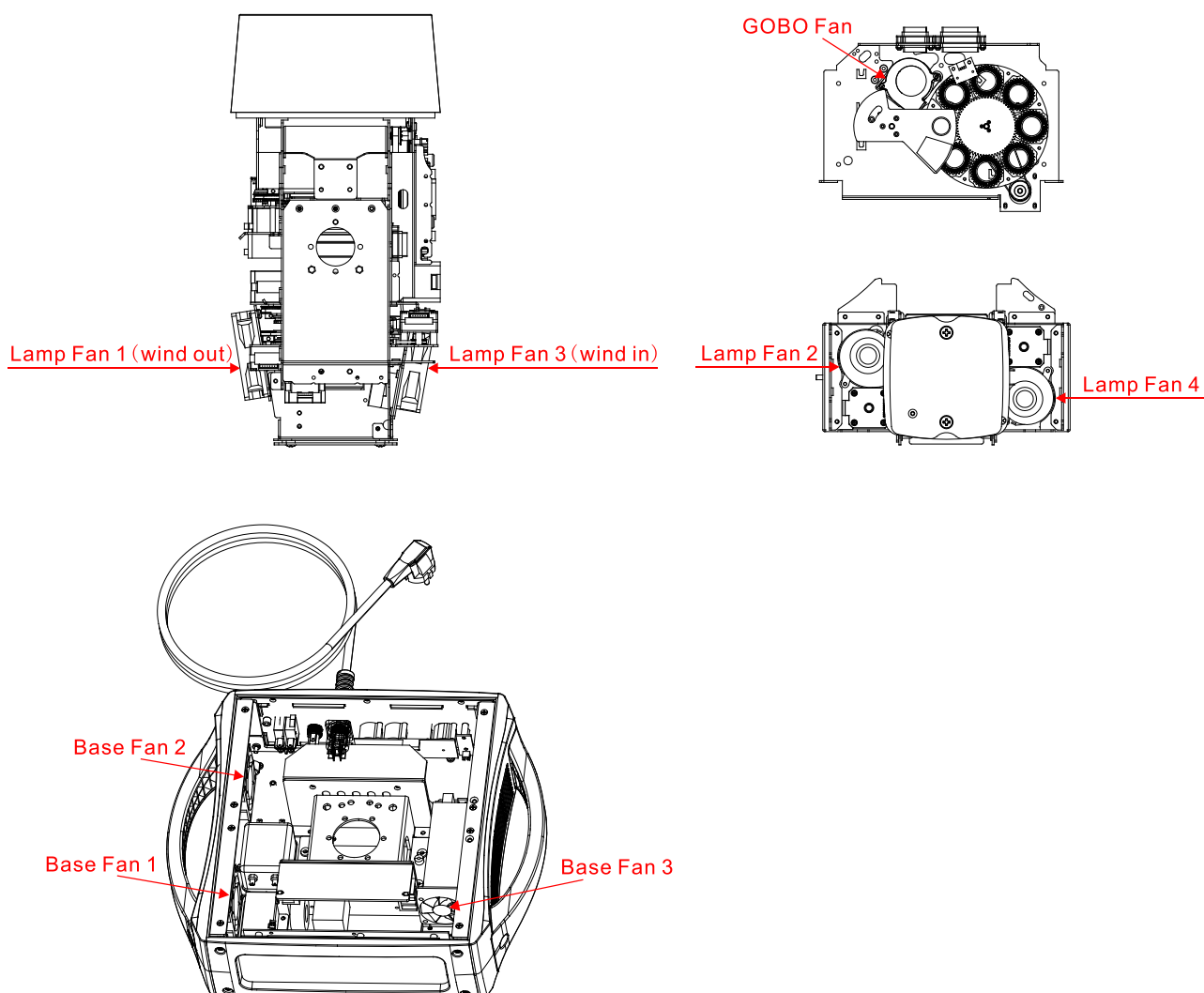
Check if the fan is out of order.

16. Lamp Maintenance

Check lamp use time and replace the lamp in time.

17. Gravity Sensor Error

Check if the gravity sensor on board E is damaged.

The position of each fan of the fixture:

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.   Check DMX connectors, cables to see if they are linked properly.

2.   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.

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.

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