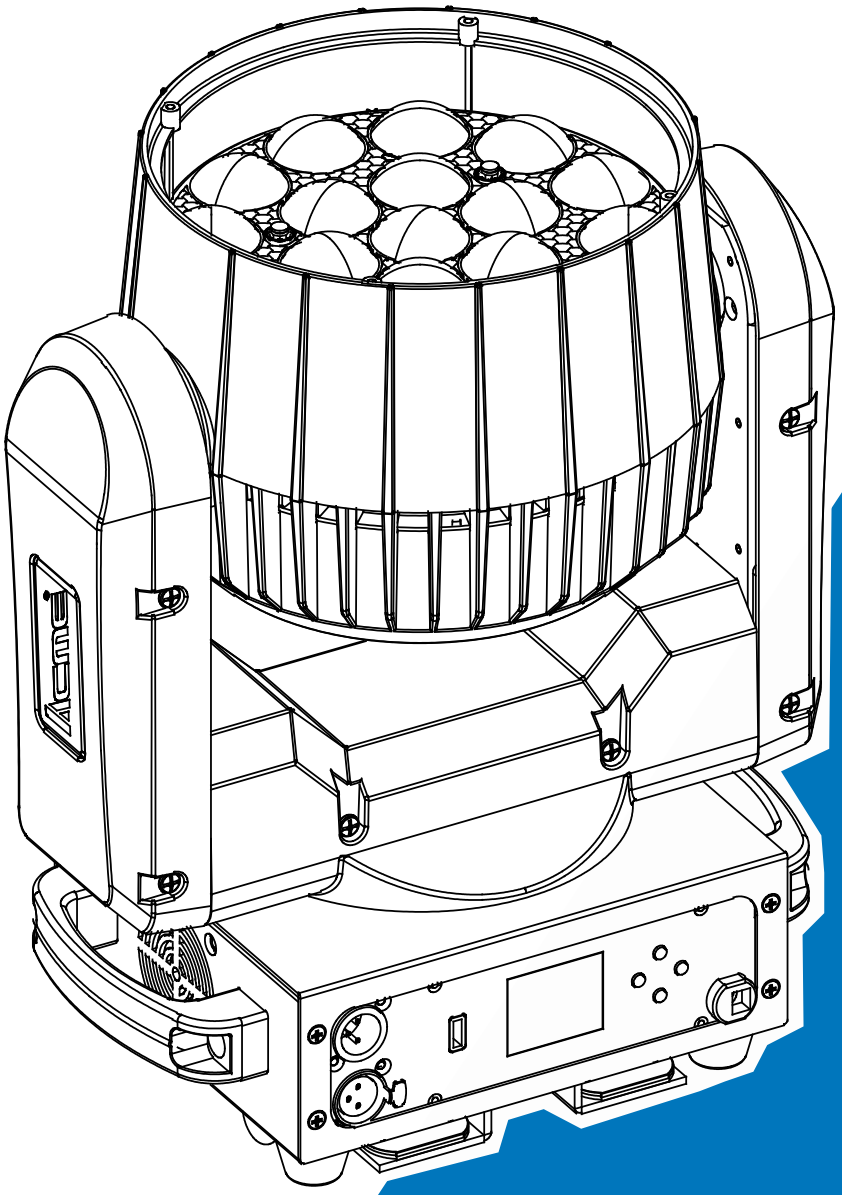
DIABOLO



User Manual

Please read the instruction carefully before use

CONTENTS

1. Safety Instructions 2
2. Technical Specifications 4
3. Control Panel 5
4. How To Set The Unit 6
    4.1 Main Function 6
    4.2 Home Position Adjustment 13
5. Control By Universal DMX Controller 14
    5.1 DMX512 Connection 14
    5.2 Address Setting 15
    5.3 DMX512 Configuration 16
6. Error Information 22
7. Troubleshooting 24
8. Fixture Cleaning 25

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 75℃. 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 0.5 meters.
- 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 bulb is on.
- 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:

280W

Light Source:

19x20W RGBW LED

Zoom Range:

10°~60°

Movement:

Pan: 540°

Tilt: 225°

Pan/Tilt Resolution: 16bit

Dimmer/Shutter:

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

Control:

DMX channel: 11/14/15/14* channels

Control Mode: DMX512, RDM

Firmware Upgrade: Update via DMX link & USB

Construction:

Display: LCD display

Data In/Out: 3-pin XLR

Power In/Out: Power Cord out/Power Connector in/out

Protection Rating: IP20

Features:

Electronic linear zoom system

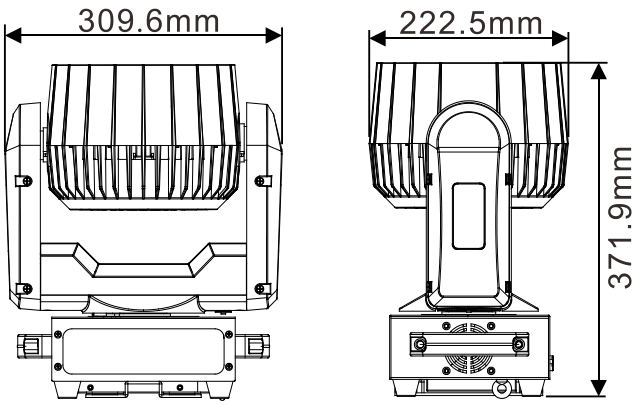
Outstanding color macro effect

Fast and mute operating, flicker free

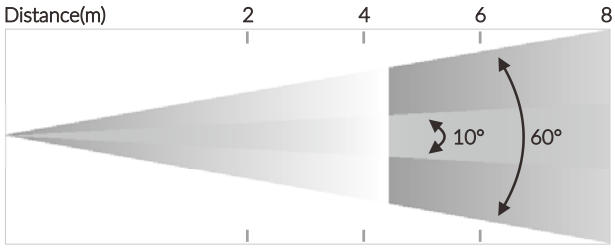
Dimension/Weight:

309.6x222.5x371.9mm, 8.8kgs

12.2"x8.8"x14.6"in, 19.4lbs



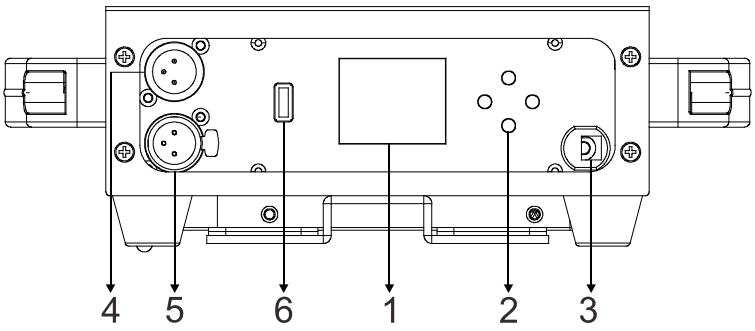
Photometric Diagram:



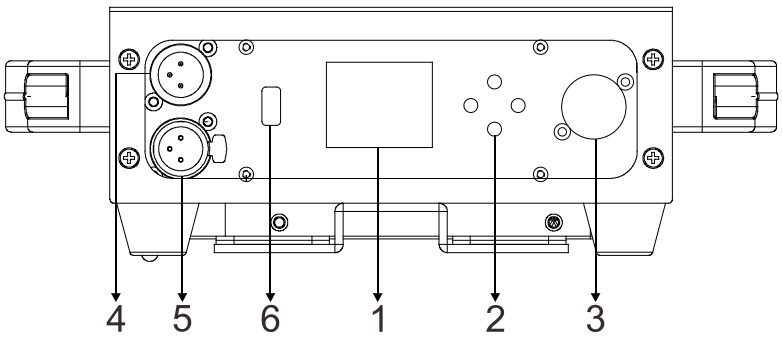
10° Lux	42987	10747	4776	2687
Diameter(m)	0.4	0.7	1	1.4
60°Lux	3675	919	408	230
Diameter(m)	2.3	4.6	7.0	9.3

3. Control Panel

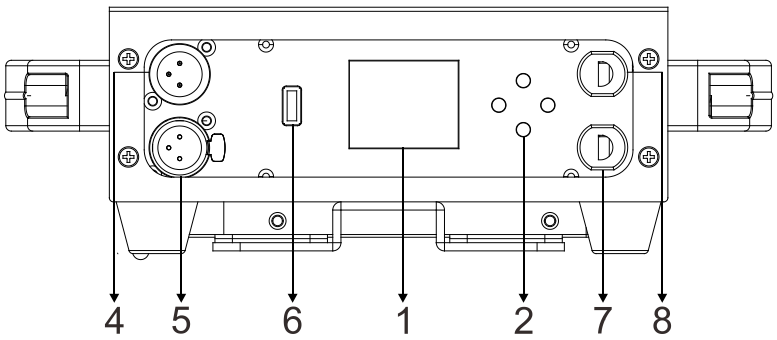
WIRE VERSION:



POWERCON VERSION1:



POWERCON VERSION2:



1. DISPLAY: To show the various menus and the selected function

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. POWER: To connect to supply power

4. DMX IN: For DMX512 link, use 3-pin XLR cable to link the unit and DMX controller

5. DMX OUT: For DMX512 link, use 3-pin XLR cable to link the next units

6. FIRMWARE UPGRADE: Use to upgrade fixture's firmware

7. POWERCON OUT: To connect to the next fixture

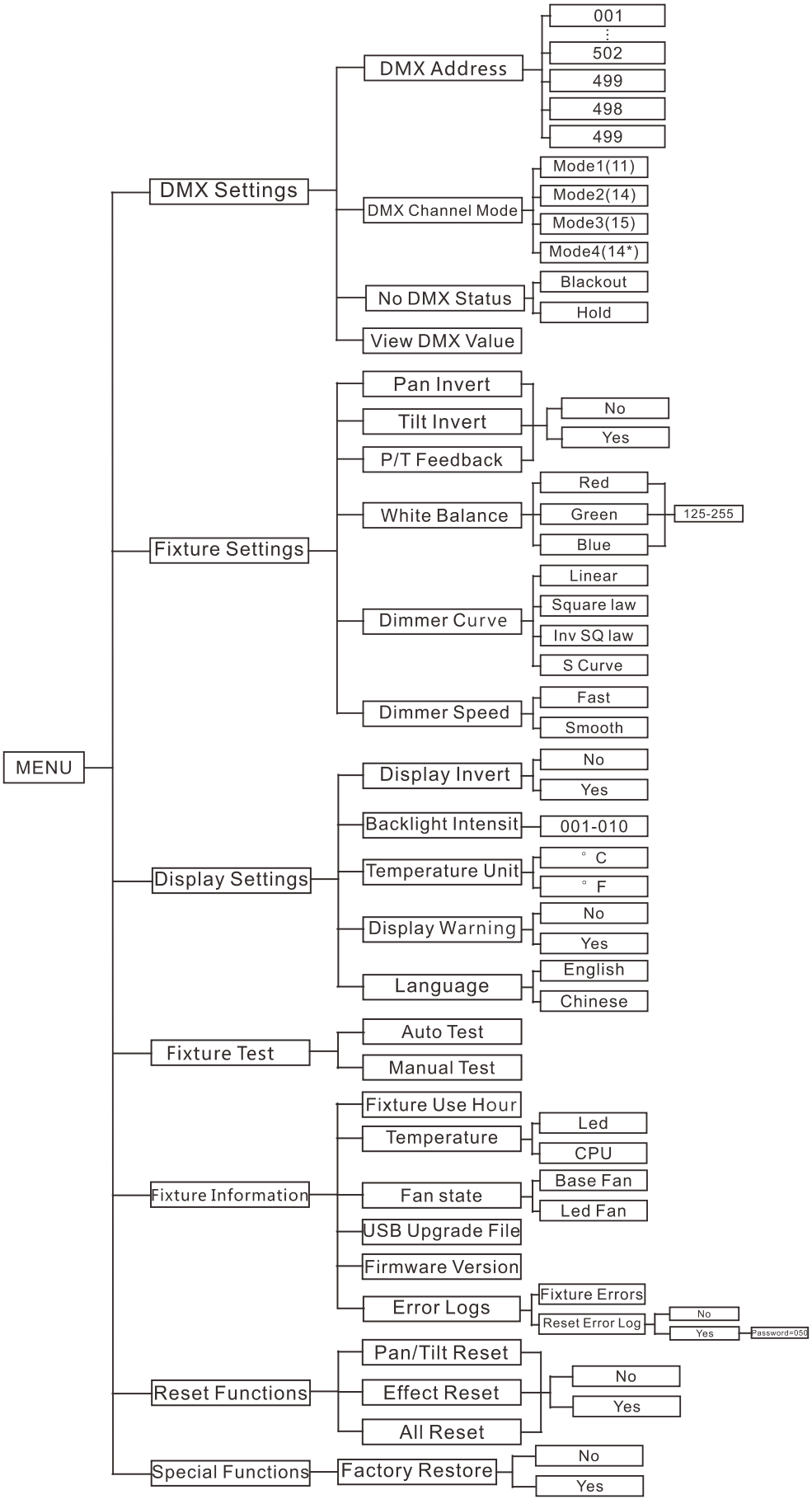
8. POWERCON IN: To connect to supply power

4. How To Set The Unit

4.1 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
001
502
499
498
499
DMX Channel Mode
Mode1(11)
Mode2(14)
Mode3(15)
Mode4(14*)
No DMX Status
Blackout
Hold
View DMX Value
Fixture Settings
Pan Invert
Tilt Invert
No
Yes
P/T Feedback
White Balance
Red
Green
Blue
125-255
Dimmer Curve
Linear
Square law
Inv SQ law
S Curve
Dimmer Speed
Fast
Smooth
Display Settings
Display Invert
No
Yes
Backlight Intensit
001-010
Temperature Unit
° C
° F
Display Warning
No
Yes
Language
English
Chinese
Fixture Test
Auto Test
Manual Test
Fixture Information
Fixture Use Hour
Temperature
Led
CPU
Fan state
Base Fan
Led Fan
USB Upgrade File
Firmware Version
Error Logs
Fixture Errors
Reset Error Log
No
Yes
Password=050
Reset Functions
Pan/Tilt Reset
Effect Reset
All Reset
No
Yes
Special Functions
Factory Restore
No
Yes

DMX Settings

To select **DMX Settings**, press the **ENTER** button to confirm, use the **UP**/**DOWN** button to select **DMX Address, DMX Channel Mode, No DMX Status** 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 **502/499/498/499**, 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 (11), Mode2 (14), Mode3 (15)** or **Mode4 (14*)**, 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.

No DMX Status

To select **No DMX Status**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to select **Blackout** or **Hold**, 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 Invert, Tilt Invert, P/T Feedback, White Balance, Dimmer Curve** or **Dimmer Speed**.

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.

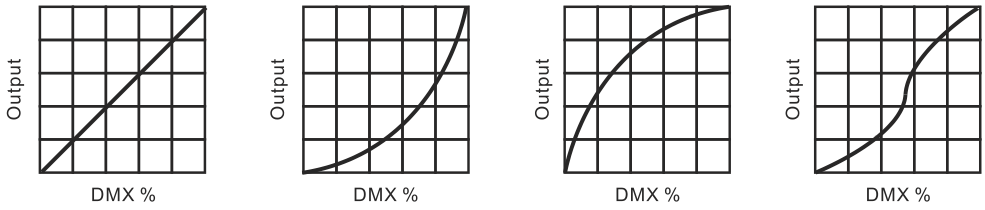
White Balance

To select **White Balance**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to select **Red, Green** or **Blue**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to adjust the value from **125** to **255**, 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**. Once the mode has been selected, press the **ENTER** button to setup. To go back to the functions without any change, press the **MENU** button.

Dimmer Modes



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 **UP**/**DOWN** 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.

Display Settings

To select **Display Settings**, press the **ENTER** button to confirm, use the **UP**/**DOWN** button to select **Display Invert, Backlight Intensit, Temperature Unit, Display Warning** 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**(invert 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 Intensit

Select **Backlight Intensit**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust backlight intensity from **001** (dark) to **010** (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.

Display Warning

Select **Display Warning**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to select **No** or **Yes**, 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 **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. 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 the 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 Hour, Temperature, Fan State, USB Upgrade File, Firmware Version** or **Error Logs.**

Fixture Use Hour

Select **Fixture Use Hour**, press the **ENTER** button to confirm, fixture use hour 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.

Fan State

Select **Fan State**, press the **ENTER** button to confirm, fixture fan state 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 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.

Error Logs

To 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. To 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. To 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 Reset, Effect Reset** or **All Reset.**

Pan/Tilt Reset

Select **Pan/Tilt Reset**, 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 Reset

Select **Effect Reset,** 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 Reset

Select **All Reset,** 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 the **ENTER** button to store. Press the **MENU** button to exit.

Special Functions

Factory Restore

Select **Factory Restore,** 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 (11/14/15/14* 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.

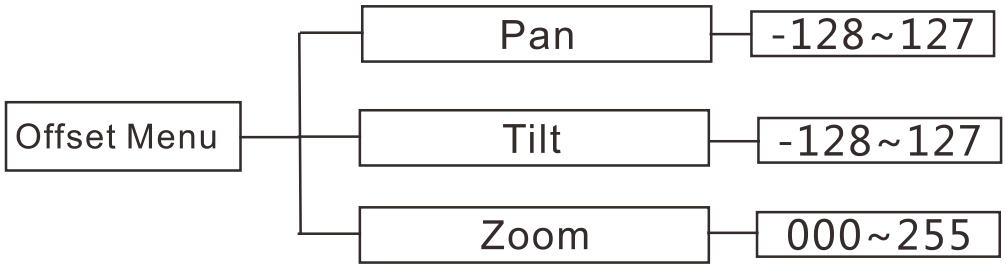
Select the PAN INVERT menu and the fixture will run the pan invert mode.

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.

4.2 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 the MENU button to exit.



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

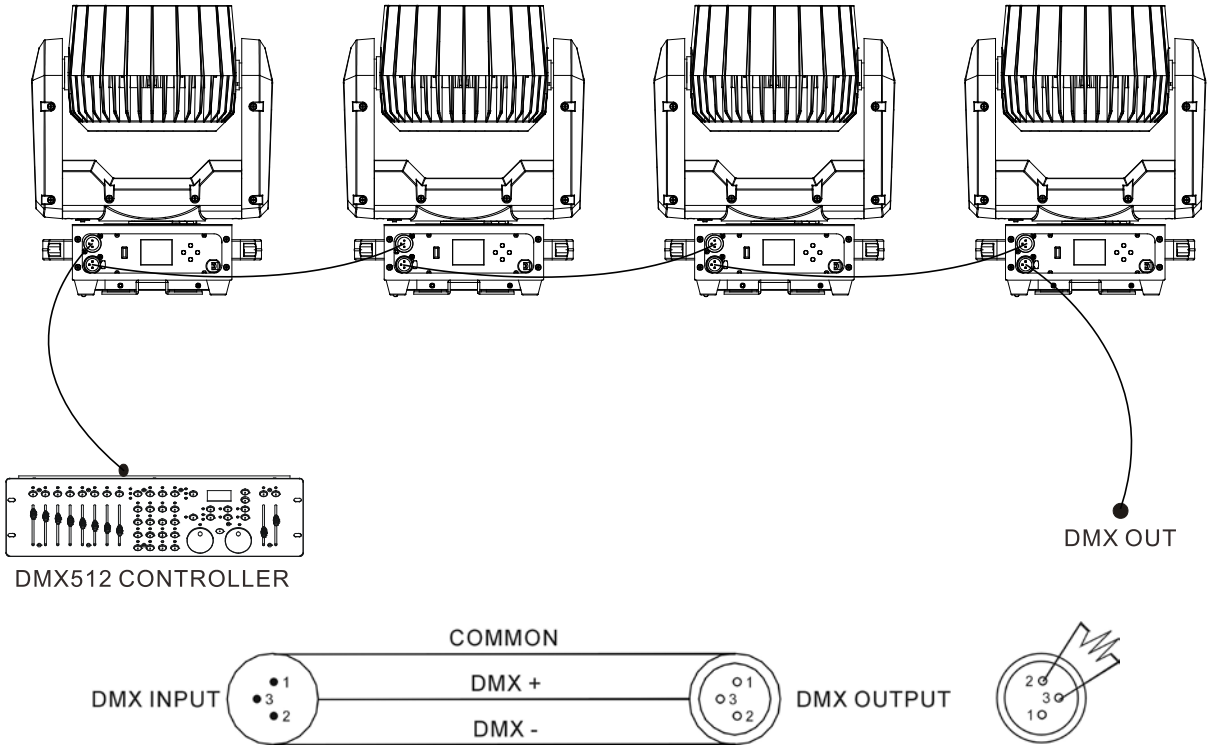
Enter offset menu, select **Tilt**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP**/**DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

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

5. Control By Universal DMX Controller

5.1 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.

5.2 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 502/499/498/499, press the ENTER button to store. Press the MENU button back to the last menu or idling let the unit idle one minute 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
11 channels	1	12	23	34
14 channels	1	15	29	43
15 channels	1	16	31	46
14* channels	1	15	29	43

5.3 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.

11 Channels (Mode 1):

CHANNEL	VALUE	FUNCTION
1	000-255	**PAN** 0°→540°
2	000-255	**TILT** 0°→225°
3	000-255	**P/T SPEED** Fast to Slow
4	000-255	**ZOOM** 60°→10°
5	000-255	**DIMMER** 0%→100%
6	000-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	**SHUTTER** Open Strobe effect, slow to fast Open Fast open slow close, slow to fast Open Fast close slow open, slow to fast Open Random strobe effect, slow to fast Open
7	000-255	**RED** 0%→100%
8	000-255	**GREEN** 0%→100%
9	000-255	**BLUE** 0%→100%
10	000-255	**WHITE** 0%→100%
11	000-139 140-149 150-169 170-179	**FUNCTION** Null Pan/Tilt Reset Null Effect Reset

	180-199 200-209 210-255	Null Reset All Null

14 Channels (Mode 2):

CHANNEL	VALUE	FUNCTION
1	000-255	**PAN** 0°→540°
2	000-255	**PAN FINE**
3	000-255	**TILT** 0°→225°
4	000-255	**TILT FINE**
5	000-255	**P/T SPEED** Fast→Slow
6	000-255	**ZOOM** 60°→10°
7	000-255	**DIMMER** 0%→100%
8	000-255	**DIMMER FINE**
9	000-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	**SHUTTER** Open Strobe effect, slow to fast Open Fast open slow close, slow to fast Open Fast close slow open, slow to fast Open Random strobe effect, slow to fast Open
10	000-255	**RED** 0%→100%
11	000-255	**GREEN** 0%→100%
12	000-255	**BLUE** 0%→100%
13	000-255	**WHITE** 0%→100%
14	000-139 140-149	**FUNCTION** No Function Pan/Tilt Reset

	150-169 170-179 180-199 200-209 210-255	No Function Effect Reset No Function Reset All No Function

15 Channels (Mode 3):

CHANNEL	VALUE	FUNCTION
1	000-255	**PAN** 0°→540°
2	000-255	**PAN FINE**
3	000-255	**TILT** 0°→225°
4	000-255	**TILT FINE**
5	000-255	**P/T SPEED** Fast→Slow
6	000-255	**ZOOM** 60°→10°
7	000-255	**DIMMER** 0%→100%
8	000-255	**DIMMER FINE**
9	000-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	**SHUTTER** Open Strobe effect, slow to fast Open Fast open slow close, slow to fast Open Fast close slow open, slow to fast Open Random strobe effect, slow to fast Open
10	000-255	**RED** 0%→100%
11	000-255	**GREEN** 0%→100%
12	000-255	**BLUE** 0%→100%
13	000-255	**WHITE** 0%→100%
14		**LINEAR CTO (8000K-2500K)**

	000	Null
	001-004	8000K
	005-009	7900K
	010-013	7800K
	014-018	7700K
	019-022	7600K
	023-027	7500K
	028-031	7400K
	032-036	7300K
	037-040	7200K
	041-045	7100K
	046-049	7000K
	050-054	6900K
	055-058	6800K
	059-063	6700K
	064-067	6600K
	068-072	6500K
	073-076	6400K
	077-081	6300K
	082-085	6200K
	086-090	6100K
	091-094	6000K
	095-099	5900K
	100-103	5800K
	104-108	5700K
	109-112	5600K
	113-117	5500K
	118-121	5400K
	122-126	5300K
	127-130	5200K
	131-135	5100K
	136-139	5000K
	140-144	4900K
	145-148	4800K
	149-153	4700K
	154-157	4600K
	158-162	4500K
	163-166	4400K
	167-171	4300K
	172-175	4200K
	176-180	4100K
	181-184	4000K
	185-189	3900K
	190-193	3800K
	194-198	3700K
	199-202	3600K
	203-207	3500K

	208-211	3400K
	212- 216	3300K
	217-220	3200K
	221-225	3100K
	226-229	3000K
	230-234	2900K
	235-238	2800K
	239-243	2700K
	244-247	2600K
	248-255	2500K
15		**FUNCTION**
	000-139	No Function
	140-149	Pan/Tilt Reset
	150-169	No Function
	170-179	Effect Reset
	180-199	No Function
	200-209	Reset All
	210-255	No Function

14* Channels (Mode 4):

CHANNEL	VALUE	FUNCTION
1	000-255	**PAN** 0°→540°
2	000-255	**PAN FINE**
3	000-255	**TILT** 0°→225°
4	000-255	**TILT FINE**
5	000-255	**PAN/TILT SPEED** fast→slow
6		**FUNCTIONS**
	000-009	No function
	010-014	Reset all
	015-255	No function
7	000-255	**DIMMER** 0%→100%
8		**SHUTTER**
	000-019	No function
	020-024	Open
	025-064	Strobe 1: fast to slow
	065-069	Open
	070-084	Strobe 2: slow open fast close, fast to slow
	085-089	Open

	090-104	Strobe 3: fast open slow close, fast to slow
	105-109	Open
	110-124	Strobe 4: random strobe, fast to slow
	125-129	Open
	130-144	Strobe 5: random slow open fast close, fast to slow
	145-149	Open
	150-164	Strobe 6: random fast open slow close, 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
9	000-255	**RED** (0%→100%)
10	000-255	**GREEN** (0%→100%)
11	000-255	**BLUE** (0%→100%)
12	000-255	**WHITE** (0%→100%)
13		**COLOR PRESET**
	000-009	Open
	010-014	Color 1
	015-019	Color 2
	020-024	Color 3
	025-029	Color 4
	030-034	Color 5
	035-039	Color 6
	040-044	Color 7
	045-049	Color 8
	050-054	Color 9
	055-059	Color 10
	060-064	Color 11
	065-069	Color 12
	070-074	Color 13
	075-079	Color 14
	080-084	Color 15
	085-089	Color 16
	090-094	Color 17
	095-099	Color 18
	100-104	Color 19
	105-109	Color 20
	110-114	Color 21
	115-119	Color 22
	120-124	Color 23

	125-129	Color 24
	130-134	Color 25
	135-139	Color 26
	140-144	Color 27
	145-149	Color 28
	150-154	Color 29
	155-159	Color 30
	160-164	Color 31
	165-169	Color 32
	170-174	Color 33
	175-179	Open
	180-201	Color change, fast to slow
	202-207	Stop
	208-229	Color change, slow to fast
	230-234	Open
	235-239	Color change: fast
	240-244	Color change: standard
	245-249	Color change: slow
	250-255	Open
14	000-255	**ZOOM** 60°→10°

6. Error Information

1. CPU-B/C/D 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.

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. Base Fan/LED Fan start errors

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.

7. Base Fan/LED Fan stop errors

Check if the fan circuit on the motherboard breaks down.

Check if the component is damaged.

8. Base Fan/LED Fan speed too fast

Check if the fan is out of order.

Check if the fan circuit on the motherboard breaks down.

9. Base Fan/LED Fan speed too slow

Check if the fan is out of order.

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

10. 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.

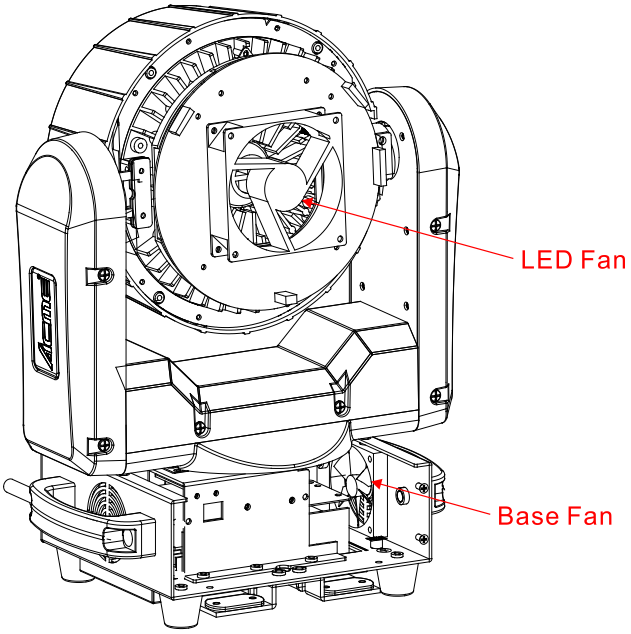
Check if the zoom Hall elements is damaged.

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.

The position of each fan of the fixture:



7. 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.
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.

8. 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.

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