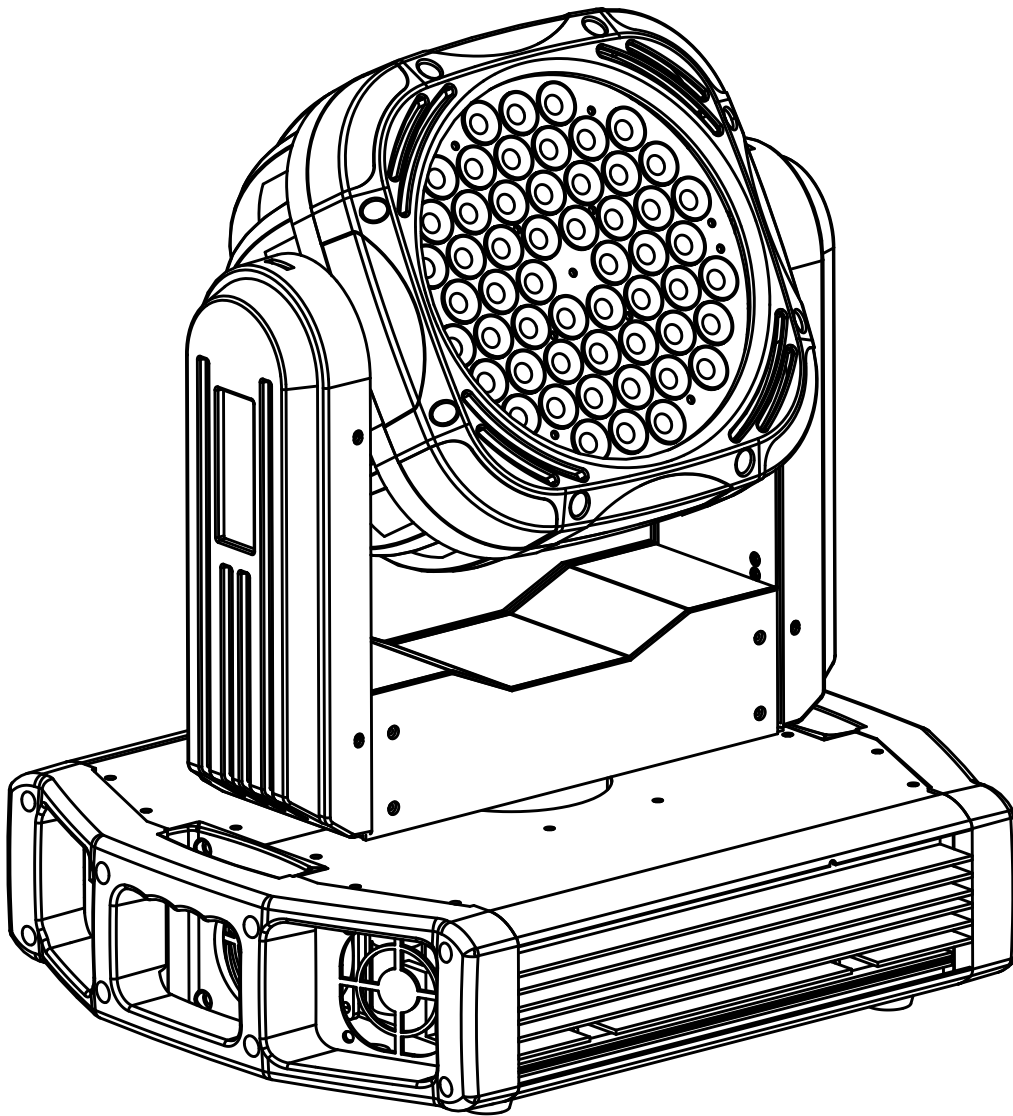


# ***BT-54L3***

***LED MOVING WASH***



**BriteQ**<sup>®</sup>  
LIGHT RESEARCH

**USER  
MANUAL  
VER 1.0**

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# 1 PRODUCT (GENERAL)

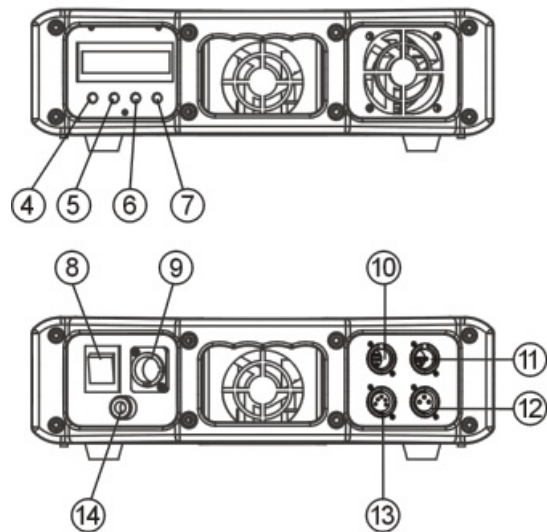
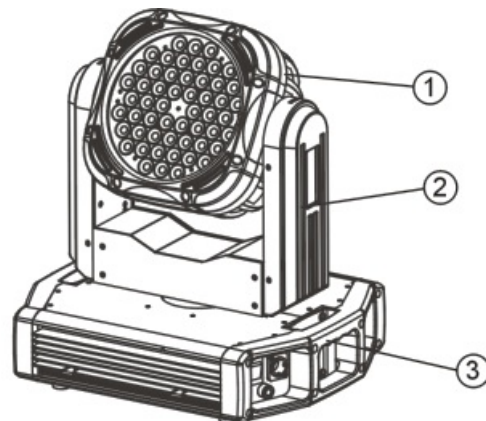
## 1.1 PRODUCT INTRODUCTION

This product is designed for indoor use only. Suitable applications include wash or effect lighting for architectural, stage or nightclub applications. Direct input of DMX512 signal allows the fixtures to be controlled from any DMX512 controller. The fixture is fully programmable with one custom program available and is supplied with two automatic programs (all accessible from DMX512 controller). This product can be operated as a single unit or with multiple units for large applications.

## 1.2 PRODUCT FEATURES

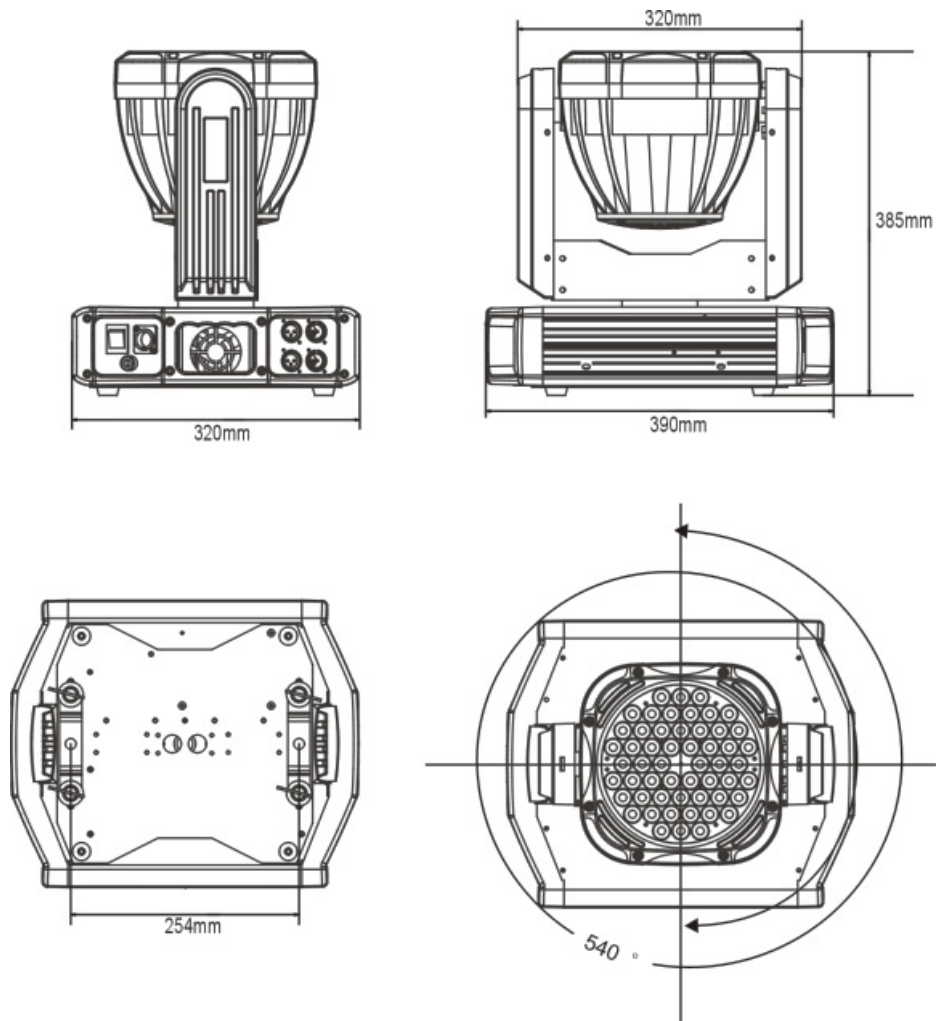
- RGBW Dimmer 0-100%
- Strobe
- Automatic programs
- Custom program (programmable)
- Auto-color sequence (variable speed)
- LCD display
- Fan speed control
- DirectDMX512 input

No	ITEM
1	Head
2	Side arm
3	Handle
4	Menu
5	Enter
6	Down
7	Up
8	Switch
9	Power input
10	DMX 5-PIN signal input
11	DMX 3-PIN signal input
12	DMX 3-PIN signal output
13	DMX 5-PIN signal output
14	Safety lock



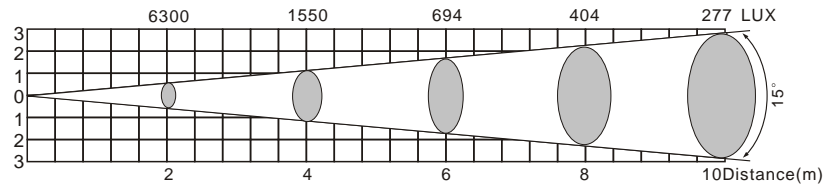
# 1.3 TECHNICAL SPECIFICATIONS

<b>Voltage</b>	100~240V...50/60Hz
<b>Rated Power</b>	280W
<b>LED/Unit</b>	54pcs (14 X2W RED /14 X 3W GREEN / 14 X3W BLUE/12 X3W WHITE)
<b>Cooling</b>	Forced air convection
<b>Dimensions</b>	390 x 320 x 385mm
<b>Weight</b>	16Kg

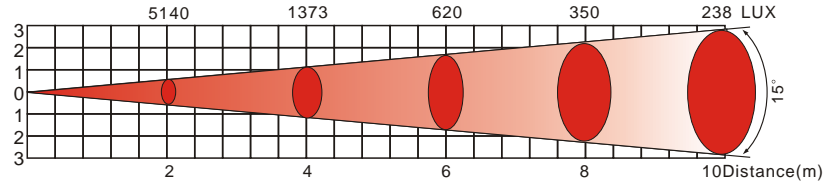


# 1.4 PHOTOMETRIC DATA

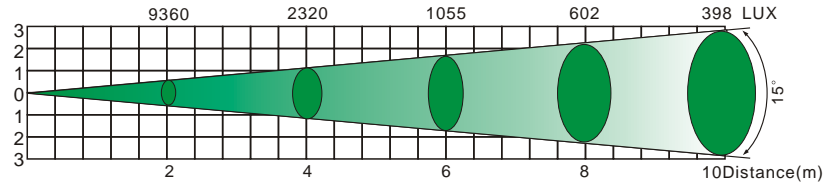
## WHITE



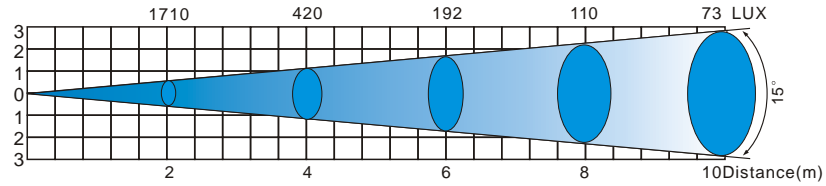
## RED



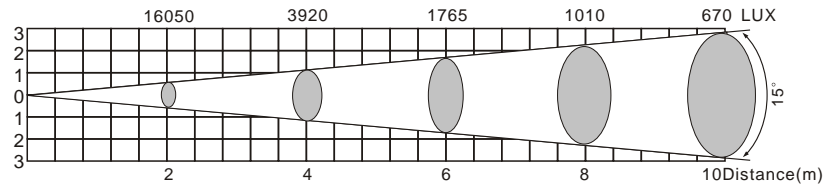
## GREEN



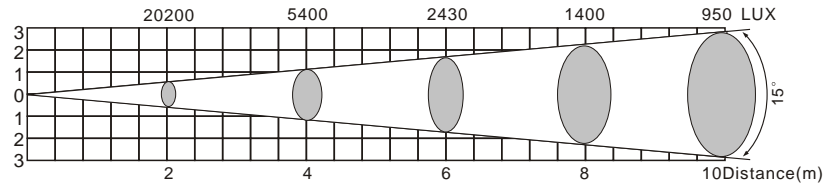
## BLUE



## RGB



## RGB+WHITE



## 1.5 SAFETY WARNING

---

### *IMPORTANT*

---

**【ALWAYS READ THE USER MANUAL BEFORE OPERATION. 】  
【PLEASE CONFIRM THAT THE POWER SUPPLY STATED ON THE  
PRODUCT IS THE SAME AS THE MAINS POWER SUPPLY IN YOUR AREA. 】**

- This product must be installed by a qualified professional.
- Always operate the equipment as described in the user manual.
- A minimum distance of 0.5m must be maintained between the equipment and combustible surface.
- The product must always be placed in a well ventilated area.
- Always make sure that the equipment is installed securely.
- DO NOT stand close to the equipment and stare directly into the LED light source.
- Always disconnect the power supply before attempting and maintenance.
- Always make sure that the supporting structure is solid and can support the combined weight of the products.
- The earth wire must always be connected to the ground.
- Do not touch the power cables if your hands are wet.

---

### *ATTENTION*

---



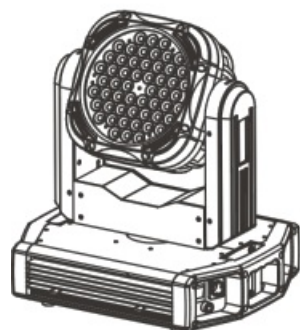
- This product left the place of manufacture in perfect condition. In order to maintain this condition and for safe operation, the user must always follow the instructions and safety warnings described in this user manual.
- Avoid shaking or strong impacts to any part of the equipment.
- Make sure that all parts of the equipment are kept clean and free of dust.
- Always make sure that the power connections are connected correct and secure.
- If there is any malfunction of the equipment, contact your distributor immediately.
- When transferring the product, it is advisable to use the original packaging in which the product left the factory.
- Shields, lenses or ultraviolet screens shall be changed if they have become damaged to such an extent that their effectiveness is impaired.
- The lamp (LED) shall be changed if it has become damaged or thermally deformed.

# 2 INSTALLATION

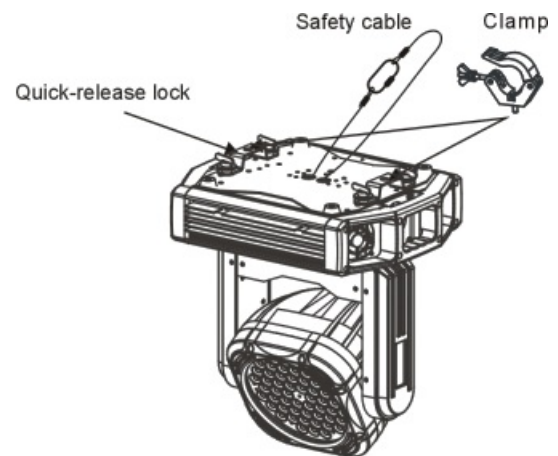
## 2.1 MOUNTING

The LED fixture can be operated in any position at any angle. When mounted on a flat surface, the surface must be strong enough to support 10 times the weight of the fixture and stable so that there will be no damage caused to the fixture or surrounding people or objects because of movements of the fixture on the surface.

When the unit is mounted in a hanging position, the fixture is attached using the mounting brackets and a standard truss clamp or other clamping device. The mounting brackets supplied are mounted using quick-release locks allowing simple mounting or removal.



UPRIGHT



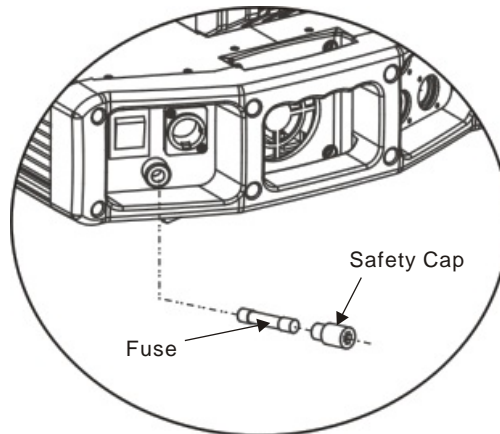
HANGING

### **IMPORTANT SAFETY NOTE!!**

Always use a safety cable when installing this unit!!  
Be sure that the safety cable is connected to a solid load-bearing structure.

## 2.2 FUSE REPLACEMENT

- Remove the safety cap by a screwdriver.
- Fetch the old fuse from safety cap.
- Install a new fuse.
- Install the safety cap.



## 2.3 SETTING UP (STAND ALONE)

The LED fixture can be used as a stand alone unit. The stand alone functions AUTO 1, AUTO 2, CUSTOM can be activated without the need to connect to any controller or connecting to any other equipment.

Simply, access the <operation> menu from the DISPLAY and select the target program to activate.



## 2.4 SETTING UP (MASTER/SLAVE)

When units are connected in series using DMX512 signal cable connect the units as shown in the diagram below

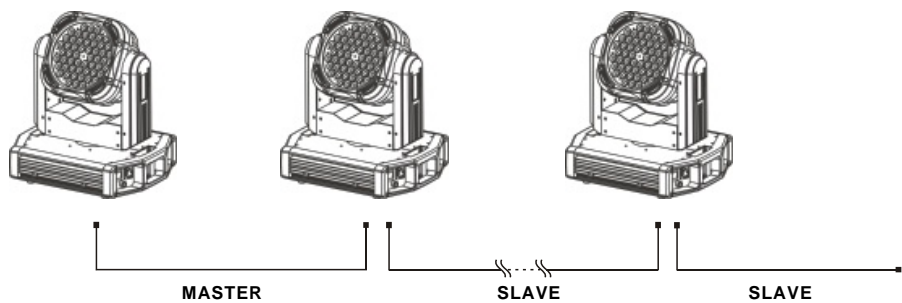
Connect the (male) 3 pin connector side of the DMX cable to the output (female) 3 pin connector of the first (MASTER) fixture.

Connect the end of the cable coming from the MASTER fixture which will have a (female) 3 pin connector to the input connector of the next fixture consisting of a (male) 3 pin connector.

Then proceed to connect from the output as stated above to the input of the following fixture and so on.

Set the first unit in the series to one of the STAND ALONE modes as described in section 2.2

All other units in the series should be set to <SLAVE> from the <operation> menu.



## 2.5 SETTING UP (DMX512 CONTROLLER)

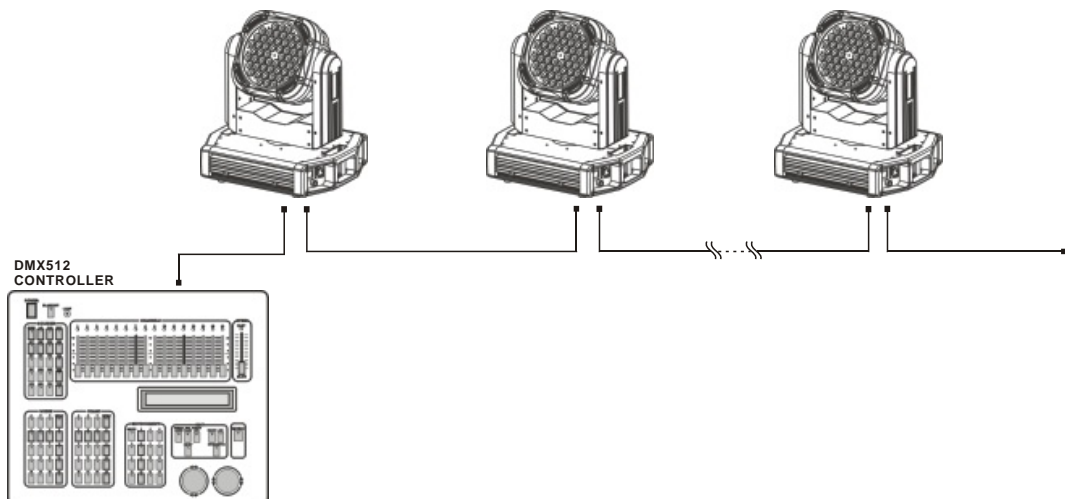
When units are connected in series to a DMX512 controller and other DMX512 equipment, connect the equipment as shown in the diagram below.

Connect the (male) 3 pin connector side of the DMX cable to the output (female) 3 pin connector of the controller.

Connect the end of the cable coming from the controller which will have a (female) 3 pin connector to the input connector of the next fixture consisting of a (male) 3 pin connector.

Then proceed to connect from the output as stated above to the input of the following fixture and so on.

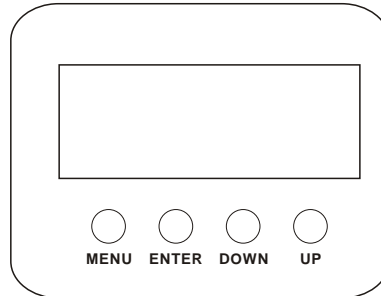
If over 32pcs fixtures connected ,the amplifier is needed.



# 3 DISPLAY PANEL OPERATION

## 3.1 BASIC

The LED fixture is mounted with a LCD display and 4 control buttons.



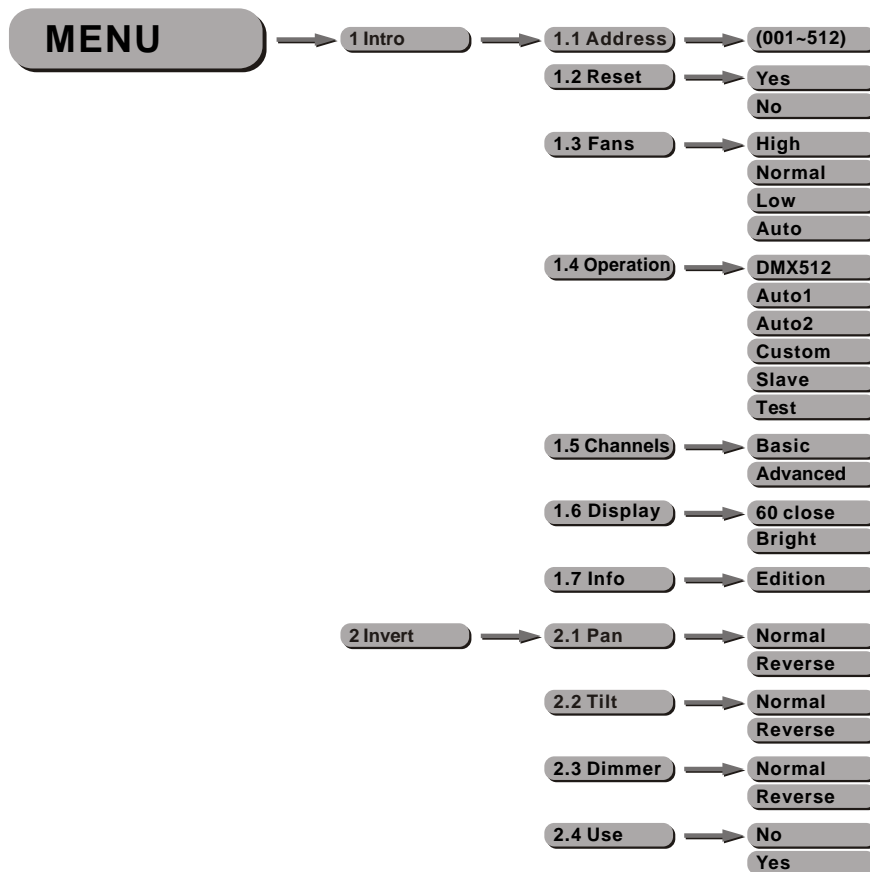
**【 MENU 】** Scroll through the main menu or exit from the current sub-menu

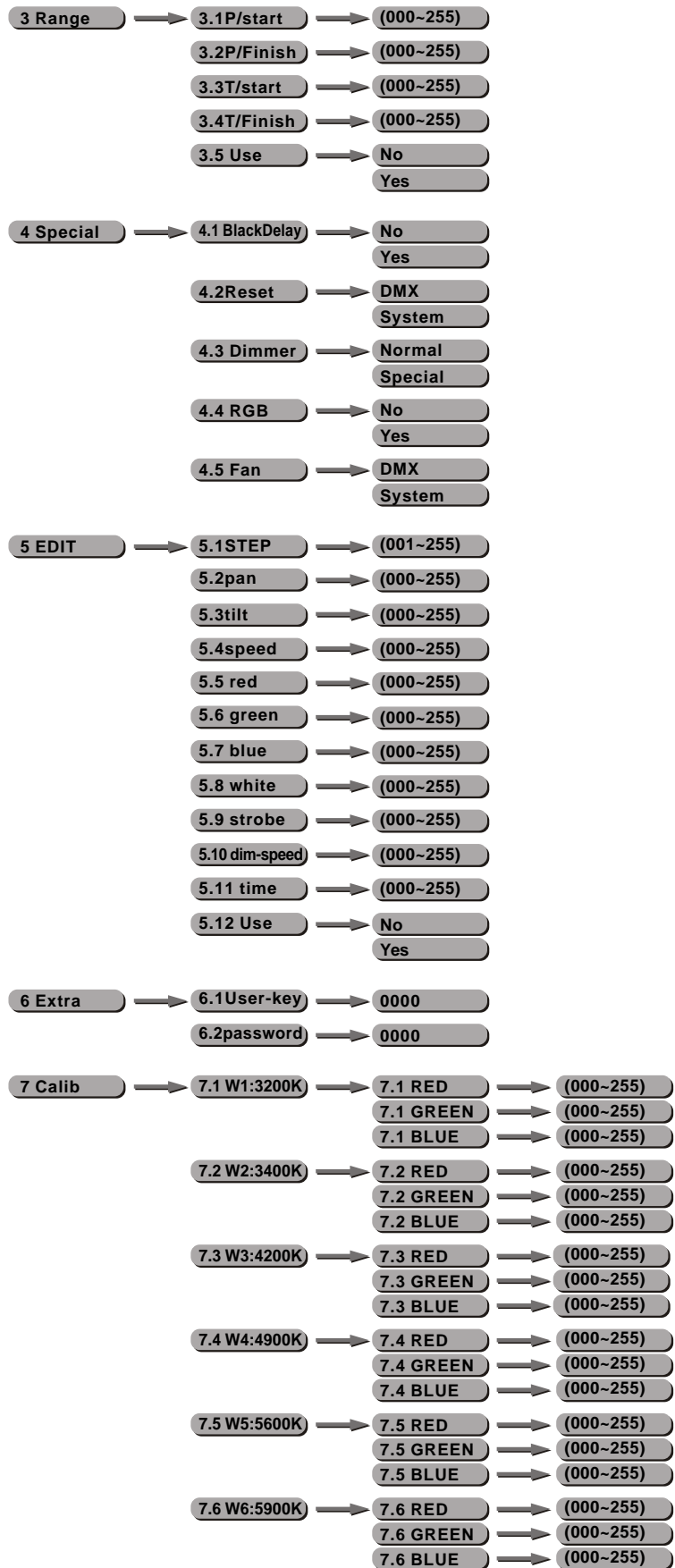
**【 ENTER 】** Enter the currently selected menu or confirm the current function value

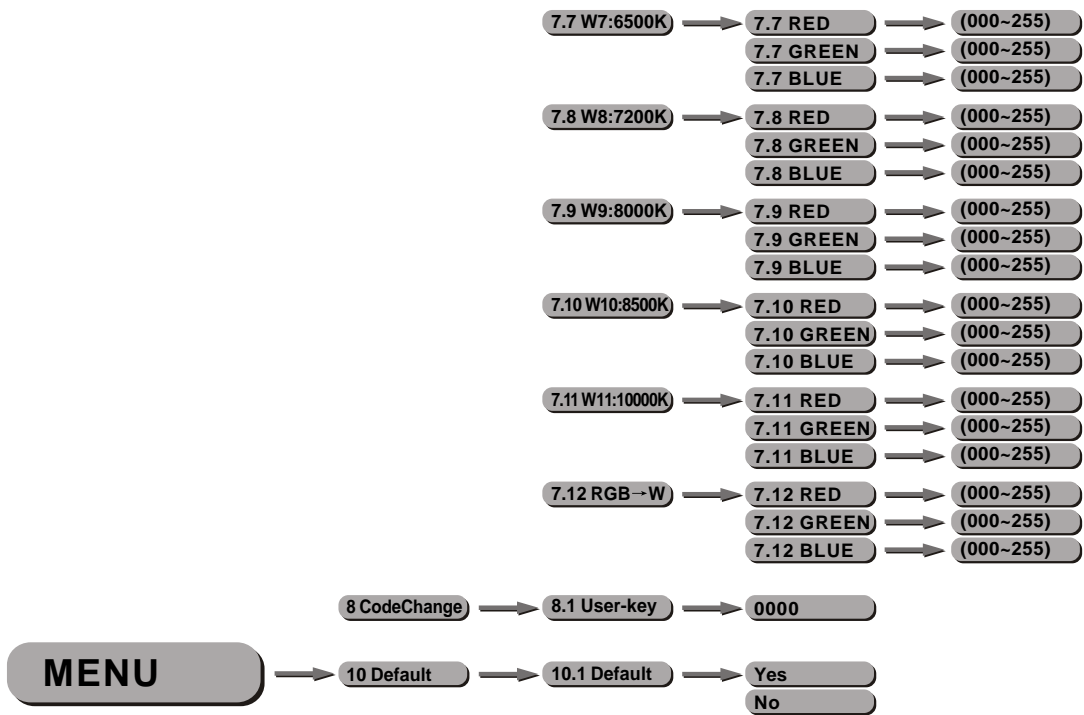
**【 DOWN 】** Scroll 'DOWN' through the menu list or decrease the value of the current function

**【 UP 】** Scroll 'UP' through the menu list or increase the value of the current function

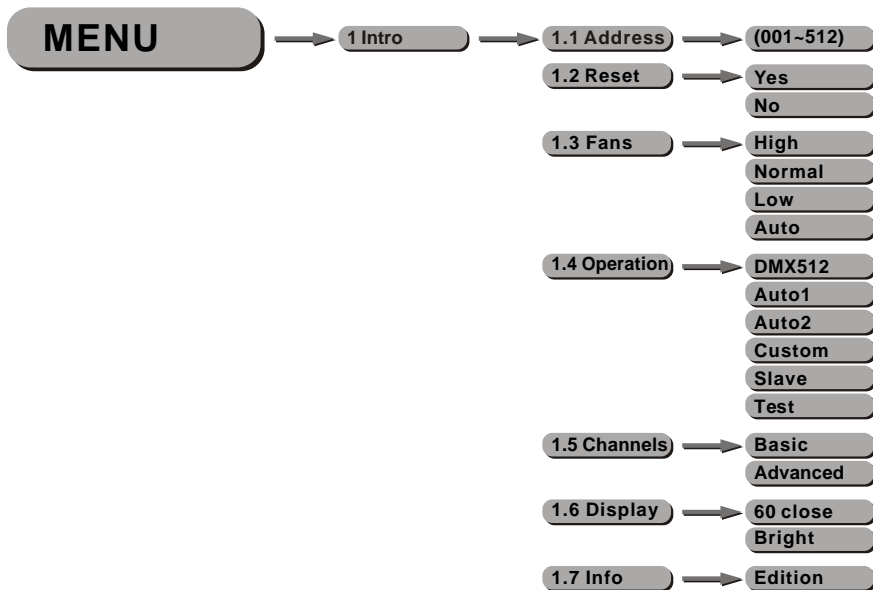
## 3.2 MENU







### 3.3 INTRO



**【1.1 Address】**

- Enter **【1.1 Address】** to set the DMX Address, which is from (001-512)

**【1.2 Reset】**

- In order to rest custom modest to default, select **【1.2 Reset】**

**【1.3 Fans】**

- Enter **【1.3 Fans】** to select the working mode of fan: **【High】** is for fast; **【Normal】** is for normal; **【Low】** is for slow; **【Auto】** is for Auto

**【1.4 Operation】**

- Enter **【1.4 Operation】** to select the operation mode: **【DMAX512】**; **【Auto1】**; **【Auto2】**; **【Custom】**; **【Slave】**; **【Test】**

**【1.5 Channels】**

- Enter **【1.5 Channels】** to select the DMX channel modes: **【Basic】**; **【Advanced】** .

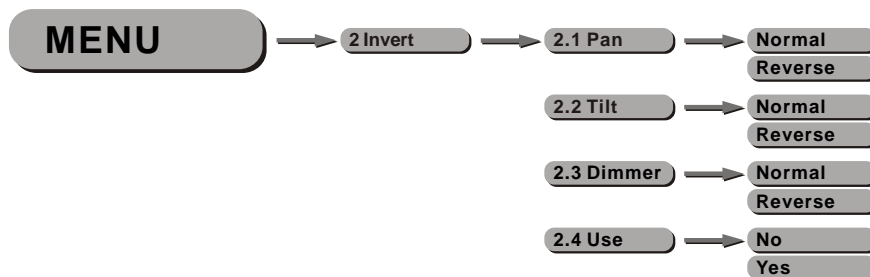
**【1.6 Display】**

- Enter **【1.6 Display】** to select the lighting time of the LCD display panel.

**【1.7 Info】**

- Enter **【1.7 Info】** to see the version of the software.

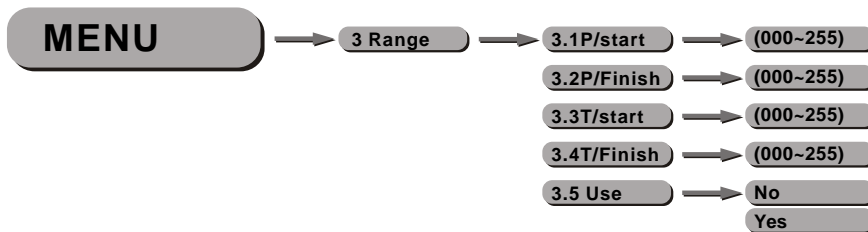
## 3.4 INVERT



**【2 Invert】**

- Select **【2.1 Pan】** / **【2.2 Tilt】** / **【2.3 Dimmer】** to set **【Normal】** or **【Reverse】**
- Enter **【2.4 Use】** and set **【Yes】** to run the new setting

## 3.5 RANGE



### 【3.1P/start】

- Set pan start value 【000~255】

### 【3.2P/Finish】

- Set pan finish value 【000~255】

### 【3.3T/start】

- Set Tilt start value 【000~255】

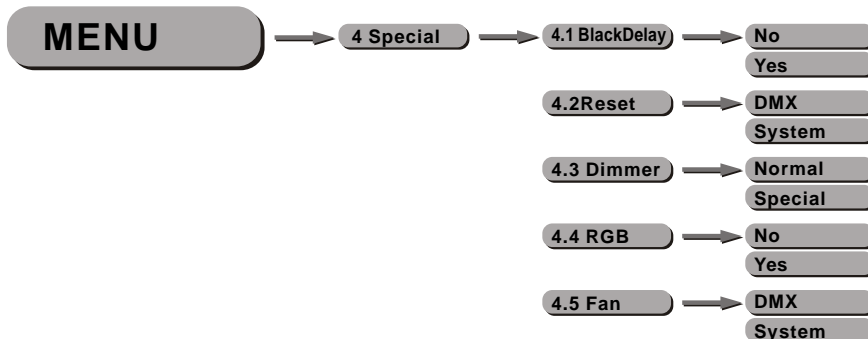
### 【3.4T/Finish】

- Set Tilt finish value 【000~255】

### 【3.5 Use】

- Enter 【3.5 Use】 and select 【Yes】 to open the operation of X/Y angle

## 3.6 SPECIAL



### 【4.1 BlackDelay】

- Enter 【4.1 BlackDelay】 to choose 【No】 without delay or 【Yes】 3seconds delay

### 【4.2Reset】

- Enter 【4.2Reset】 to choose 【DMX】 DMX control reset or 【System】 DMX cannot control reset

### 【4.3 Dimmer】

- When DIMMER is set to NORMAL, then RGBW and MASTER DIMMER are linear CURRENT Vs. DMX. When DIMMER is set to SPECIAL, then the dimming is not linear

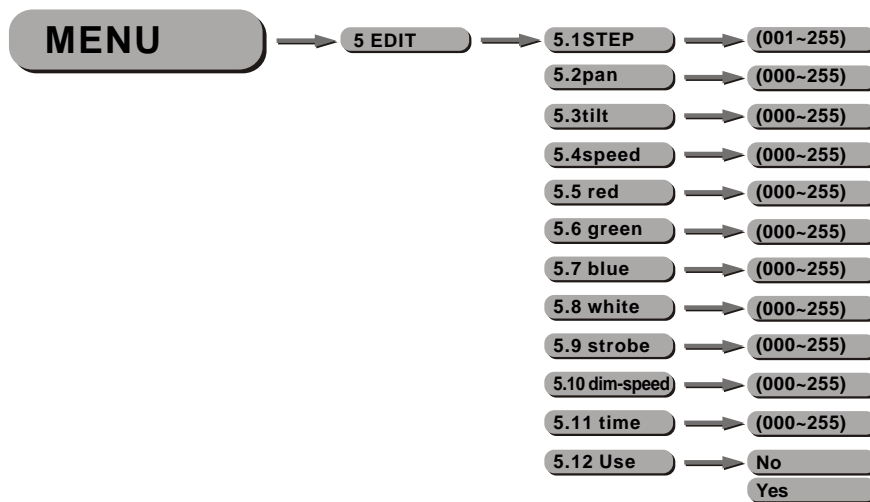
### 【4.4 RGB】

- When RGB TO WHITE is set to 【Yes】 , then when RGB = 255,255,255 then the color is perfect white as the actual RGB values are adjusted to make white. When RGB TO WHITE is set to 【No】 , then when RGB = 255,255,255, the RGB values are not adjusted and the output is most powerful

### 【4.5 Fan】

- Choose 【DMX】 DMX to control fan or 【System】 DMX cannot control fan

## 3.7 EDIT



### 【5 EDIT】

- Enter the **【5 EDIT】** mode to edit the custom programs by adjusting the value of **【5.1STEP】**, **【5.2pan】**, **【5.3tilt】**, **【5.4speed】**, **【5.5 red】**, **【5.6 green】**, **【5.7 blue】**, **【5.8 white】**, **【5.9 strobe】**, **【5.10 dim-speed】**, **【5.11 time】**
- Enter **【5.12 Use】** and select **【Yes】** to run the steps user need.

**Note:** if user want to circulate the created steps, please set the last step ‘s **【5.11 time】** as 0

For example, there are 3 steps, the setting should be like belowed:

Step 1	<b>【5.11 time】</b> = 4	<b>【5.12 Use】</b> = Yes
Step 2	<b>【5.11 time】</b> = 5	<b>【5.12 Use】</b> = Yes
Step 3	<b>【5.11 time】</b> = 0	<b>【5.12 Use】</b> = Yes

## 3.8 EXTRA



### 【6.1User-key】

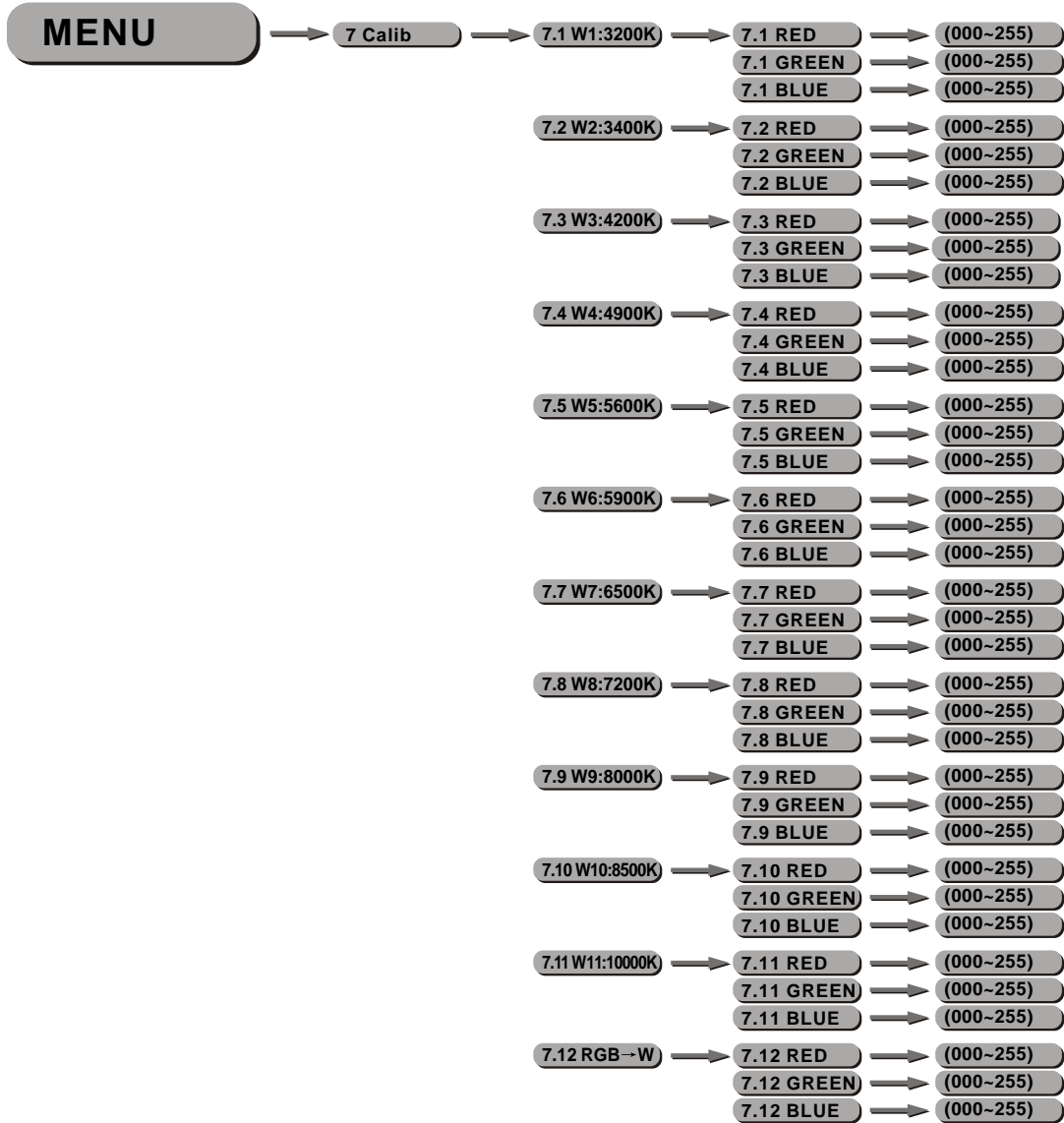
- When the user inputs **【6.1User-key】**, the hidden menu **【7 Cablid】**, **【8 CodeChange】**, **【9 default】** will appear on display panel, and the user is able to reset the **【DEFAULT】** values of all functions.

The User-key can be changed at **【8 codechange】**, the default access code is **【0000】**.

### 【6.2password】

- When the user inputs the **【6.2password】**, the user is able to reset the **【DEFAULT】** values and get the administrator rights The password can be changed at **【8 CodeChange】**, the default access code is **【1111】**

## 3.9 CALIB



### 【7 Calib】

- Enter the **【7 Calib】** to select white color of different color temperature.
- There are 11 pre-programmed White colors plus RGB TO WHITE and can be edited by using **【Red】** , **【Green】** & **【Blue】** .



## 3.10 CODECHANGE



### **【8 CodeChange】**

- Select **【8.1 User-key】** to set the password
- Select **【8.2 Password】** to set the password.

Note: **【8.2 Password】** will not appear only when **【6.2 password】** is activated.

## 3.11 DEFAULT



### **【9 Default】**

- This functions will reset all setting to the original factory setting

# 4 USING A DMX512 CONTROLLER

## 4.1 BASIC ADDRESSING

- Connect all of the units in series using standard DMX512 signal cable .
- Set the DMX512 address in the **【DMX】** menu.
- It is possible to have the same DMX address or independent addresses for each fixture.

## 4.2 CHANNEL ASSIGNMENT

- Note: This product have two DMX512 channel configuration: **【ADVANCED】** and **【BASIC】** .

### ADVANCED

CHANNEL	VALUE	FUNCTION
1	0 ↔ 255	<b>PAN</b> Clockwise rotate 0~540°
2	0 ↔ 255	<b>PAN FINE</b> Fine control of panmovement 0~3°
3	0 ↔ 255	<b>TILT</b> Anti-clockwise rotate 0~270°
4	0 ↔ 255	<b>TILT FINE</b> Fine control of tiltmovement 0~3°
5	0 ↔ 255	<b>PAN/TILT SPEED</b> From fast to slow
6	0 ↔ 255	<b>RED</b>
7	0 ↔ 255	<b>GREEN</b>
8	0 ↔ 255	<b>BLUE</b>
9	0 ↔ 255	<b>WHITE</b>

CHANNEL	VALUE	FUNCTION
<b>10</b>	0 ↔ 5	<b>COLOR/WHITE MACRO</b> NO FUNCTION
	6 ↔ 25	RED UP/GREEN 0%/BLUE 100%
	26 ↔ 45	RED 100%/GREEN UP/BLUE DOWN
	46 ↔ 65	RED DOWN/GREEN 100%/BLUE 0%
	66 ↔ 85	RED 0%/GREEN DOWN/BLUE UP
	86 ↔ 105	RED UP/GREEN 0%/BLUE DOWN
	106 ↔ 125	RED DOWN /GREEN UP/BLUE 0%
	126 ↔ 145	RED UP /GREEN 100% /BLUE 0%
	146 ↔ 165	RED DOWN /GREEN DOWN/ BLUE UP
	166 ↔ 180	NO FUNCTION
	181 ↔ 190	NO FUNCTION
	191 ↔ 200	NO FUNCTION
	201 ↔ 205	WHITE 1:3200K
	206 ↔ 210	WHITE 2:3400K
	211 ↔ 215	WHITE 3:4200K
	216 ↔ 220	WHITE 4:4900K
	221 ↔ 225	WHITE 5:5600K
	226 ↔ 230	WHITE 6:5900K
	231 ↔ 235	WHITE 7:6500K
	236 ↔ 240	WHITE 8:7200K
241 ↔ 245	WHITE 9:8000K	
246 ↔ 250	WHITE 10: 8500K	
251 ↔ 255	WHITE 11:10000K	
<b>11</b>	0 ↔ 255	<b>DIMMER</b>
<b>12</b>	0 ↔ 255	<b>STROBE</b>
<b>13</b>	0 ↔ 5	<b>DIMMER SPEED</b> NO FUNCTION
	6 ↔ 255	Fast to Slow
<b>14</b>	0 ↔ 19	<b>CONTROL</b> No function
	20 ↔ 39	Pan/tilt black activated
	40 ↔ 59	Pan/tilt black deactivated
	60 ↔ 79	Fan auto
	80 ↔ 99	Fan slow
	100 ↔ 119	Fan normal
	120 ↔ 139	Fan fast
	140 ↔ 149	No function
	150 ↔ 159	Auto1 (activated after 3secs)
	160 ↔ 169	Auto2 (activated after 3secs)
	170 ↔ 179	Test (activated after 3 secs)
	180 ↔ 189	Custom (activated after 3secs)
	190 ↔ 199	No function
	200 ↔ 219	Reset (activated after 3secs)
220 ↔ 255	No function	

## BASIC

CHANNEL	VALUE	FUNCTION
1	0 ↔ 255	<b>PAN</b> Clockwise rotate 0~540°
2	0 ↔ 255	<b>TILT</b> Anti-clockwise rotate 0~270°
3	0 ↔ 255	<b>RED</b>
4	0 ↔ 255	<b>GREEN</b>
5	0 ↔ 255	<b>BLUE</b>
6	0 ↔ 255	<b>WHITE</b>
7	0 ↔ 5 6 ↔ 25 26 ↔ 45 46 ↔ 65 66 ↔ 85 86 ↔ 105 106 ↔ 125 126 ↔ 145 146 ↔ 165 166 ↔ 180 181 ↔ 190 191 ↔ 200 201 ↔ 205 206 ↔ 210 211 ↔ 215 216 ↔ 220 221 ↔ 225 226 ↔ 230 231 ↔ 235 236 ↔ 240 241 ↔ 245 246 ↔ 250 251 ↔ 255	<b>COLOR/WHITE MACRO</b> NO FUNCTION RED UP/GREEN 0%/BLUE 100% RED 100%/GREEN UP/BLUE DOWN RED DOWN/GREEN 100%/BLUE 0% RED 0%/GREEN DOWN/BLUE UP RED UP/GREEN 0%/BLUE DOWN RED DOWN /GREEN UP/BLUE 0% RED UP /GREEN 100% /BLUE 0% RED DOWN /GREEN DOWN/ BLUE UP NO FUNCTION NO FUNCTION NO FUNCTION WHITE 1:3200K WHITE 2:3400K WHITE 3:4200K WHITE 4:4900K WHITE 5:5600K WHITE 6:5900K WHITE 7:6500K WHITE 8:7200K WHITE 9:8000K WHITE 10: 8500K WHITE 11:10000K
8	0 ↔ 255	<b>DIMMER</b>
9	0 ↔ 255	<b>STROBE</b>
10	0 ↔ 19 20 ↔ 39 40 ↔ 59 60 ↔ 79 80 ↔ 99 100 ↔ 119 120 ↔ 139 140 ↔ 149 150 ↔ 159 160 ↔ 169 170 ↔ 179 180 ↔ 189 190 ↔ 199 200 ↔ 219 220 ↔ 255	<b>CONTROL</b> No function Pan/tilt black activated Pan/tilt black deactivated Fan auto Fan slow Fan normal Fan fast No function Auto1 (activated after 3secs) Auto2 (activated after 3secs) Test (activated after 3 secs) Custom (activated after 3secs) No function Reset (activated after 3secs) No function

## 4.3 FUNCTION EXPLANATION

### **PAN**

- CH1 adjusts the PAN from 0° to 540°

### **PAN FINE**

- CH2 adjusts the PAN from 0° to 3°

### **TILT**

- CH3 adjusts the TILT from 0° to 270°

### **TILT FINE**

- CH4 adjusts the TILT from 0° to 3°

### **PAN/TILT SPEED**

- CH5 adjusts the speed of the PAN and TILT faders

### **RED, GREEN, BLUE & WHITE**

- CH6, CH7, CH8 & CH9 control the intensity of each of the RED, GREEN, BLUE & WHITE LEDs.
- When the slider is at the highest position (255) the intensity of the color is the maximum
- CH6, CH7, CH8 & CH9 can be combined together to create millions of colors.

### **COLOR MACRO & WHITE**

- The COLOR MACRO allows the user to select from a linear range of colors
- When the slider is at the top of the slider the color is WHITE

### **DIMMER**

- CH11 is an overall DIMMER for the currently selected / created color

### **STROBE**

- CH12 is the strobe channel and controls the speed of the strobe.

### **CONTROL MODE**

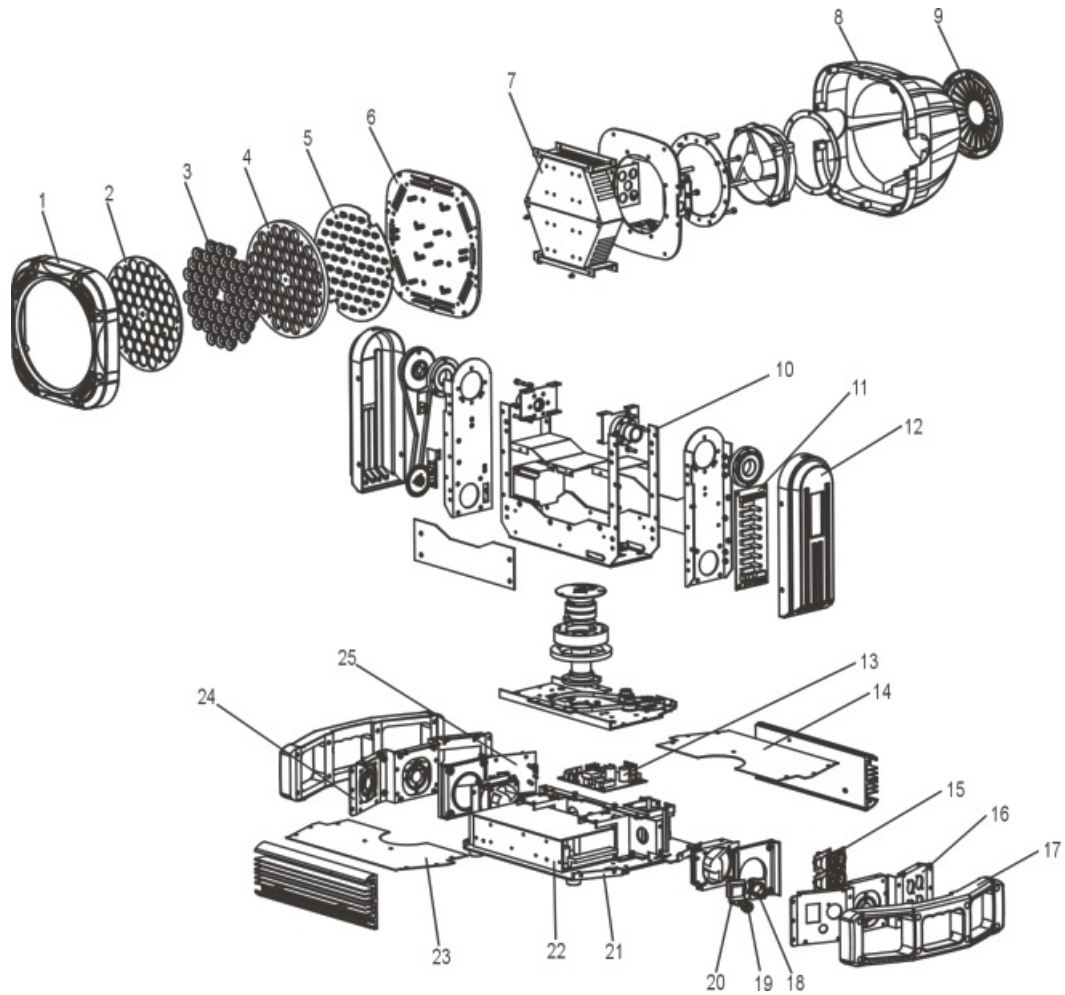
- CH14 allows the user to select special function Pan/Tilt blackout open/close, Fan setting, the preset auto program Auto 01-02, test and custom program.
- CH 14 can be used to reset the fixture.

# 5 APPENDIX

## 5.1 TROUBLE SHOOTING

SITUATION	CAUSE	ACTION	PART ORDER NUMBER
<b>No display</b>	Power connection error	Check all power connections	
	Power switch damaged	Replace power switch	16-03-0042-00
	Display board damaged	Replace display board	26-2A-2107CDI4-00
<b>LED MODULE on, but no control from display</b>	Display board damaged	Replace display board	26-2A-2107CDI4-00
<b>LEDs of the same color are not lit</b>	LED PCB damaged	Replace PCB board	26-2A-603LED3-00
	MAIN PCB damaged	Replace main PCB board	26-2A-LED603POWER-00
<b>LED module on, LEDs of all colors are not lit</b>	MAIN PCB damaged	Replace main PCB board	26-2A-LED603POWER-00
<b>Display normal, but no response to DMX 512 controller</b>	Signal connection error	Check and replace signal cable	
	DMX Address error	Check and reset DMX address	
<b>Fan do not work</b>	Fan error	Replace fan	16-00-0043-00
	Fan actiyator	Replace fan actiyator	26-2A-LED603FAPOWER-00
<b>Pan/Tilt cannot reset</b>	Sensor PCB error	Replace sensor PCB	26-2A-1250HL-00
	Optical sensor PCBerror	Replace optical sensor PCB	34-01-LED603_010-A0
<b>Pan/Tilt motor do not work</b>	Cable of motor damaged	Replace cable of motor	
	Motor damaged	Replace Tilt motor	15-00-0105-00
		Replace pan motor	15-00-0106-00
	Main PCB damaged	Replace main PCBboard	26-2A-LED603POWER-00

## 5.2 MAINTENANCE



No	ITEM
1	Plastic front cover
2	Lens upper cover
3	Lens
4	Lens base cover
5	LED board
6	LED board supporting base
7	Heat-transfer plate
8	Plastic head cover
9	Back cover for head
10	U bracket
11	Driver board
12	Arm cover
13	XY control board

No	ITEM
14	Base upper cover 1
15	DMX board
16	Side coverB
17	Handle
18	Power socket
19	Fuse
20	Switch
21	Base bottom cover
22	Power supply
23	Base upper cover 2
24	Side cover A
25	Display Board