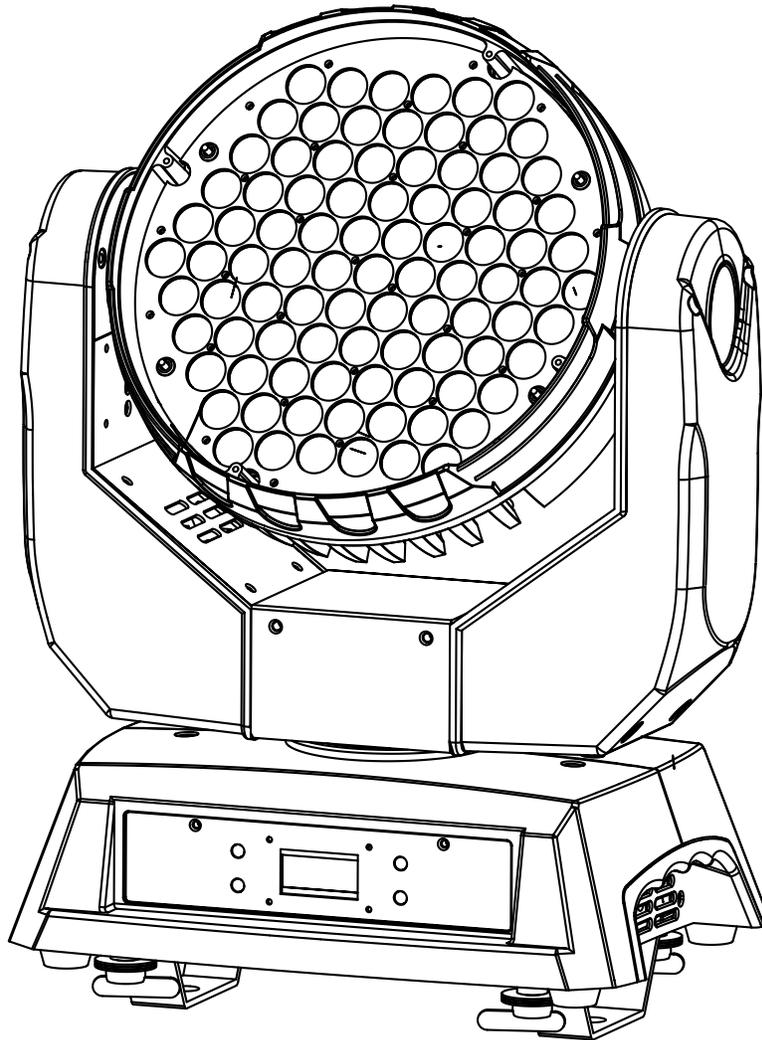


# BT-91L3 ZOOM



## ENGLISH Operation Manual

CE

Version: 1.0

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

# T ABLE OF CONTENTS

|  |            |
|--|------------|
| <b>PART 1 PRODUCT SPECIFICATIONS.....</b>  | <b>1.</b>  |
| 1.1-- <i>PRODUCT SPECIFICATIONS</i> .....  | 1.         |
| 1.2-- <i>DIMENSIONS</i> .....              | 2.         |
| 1.3-- <i>PRODUCT FEATURES</i> .....        | 2.         |
| 1.4-- <i>SAFETY WARNING</i> .....          | 3.         |
| <br>                                       |            |
| <b>PART 2 INSTALLATION.....</b>            | <b>4.</b>  |
| 2.1-- <i>MOUNTING</i> .....                | 4.         |
| 2.2-- <i>SETTING UP</i> .....              | 5.         |
| 2.3-- <i>FUSE REPLACEMENT</i> .....        | 5.         |
| <br>                                       |            |
| <b>PART 3 DISPLAY PANEL OPERATION.....</b> | <b>6.</b>  |
| 3.1-- <i>BASIC</i> .....                   | 6.         |
| 3.2-- <i>MENU</i> .....                    | 7.         |
| 3.3-- <i>INTRO</i> .....                   | 8.         |
| 3.4-- <i>INVERT</i> .....                  | 8.         |
| 3.5-- <i>RANGE</i> .....                   | 9.         |
| 3.6-- <i>SPECIAL</i> .....                 | 9.         |
| 3.7-- <i>EDIT</i> .....                    | 9.         |
| 3.8-- <i>EXTRA</i> .....                   | 11.        |
| 3.9-- <i>CALIB</i> .....                   | 11.        |
| 3.10-- <i>DEFAULT</i> .....                | 12.        |
| <br>                                       |            |
| <b>PART 4 USING DMX512 CONTROLLER.....</b> | <b>13.</b> |
| 4.1-- <i>CHANNEL ASSIGNMENT</i> .....      | 13.        |
| <br>                                       |            |
| <b>PART 5 APPENDIX.....</b>                | <b>17.</b> |
| 5.1-- <i>MAINTENANCE</i> .....             | 17.        |

# 1 PRODUCT SPECIFICATIONS

## 1.1 PRODUCT SPECIFICATIONS

### **Electrical**

- ◆ Voltage: AC100~240V, 50/60Hz
- ◆ Rated Power: 310W

### **LED**

- ◆ LED: 91PC(23R+23G+23B+22W)
- ◆ Cooling: Forced air convection

### **Function**

- ◆ Color mixing / Custom programs / Strobe / White balance / RGB calibration / Dim 4 / Fan speed

### **Operation**

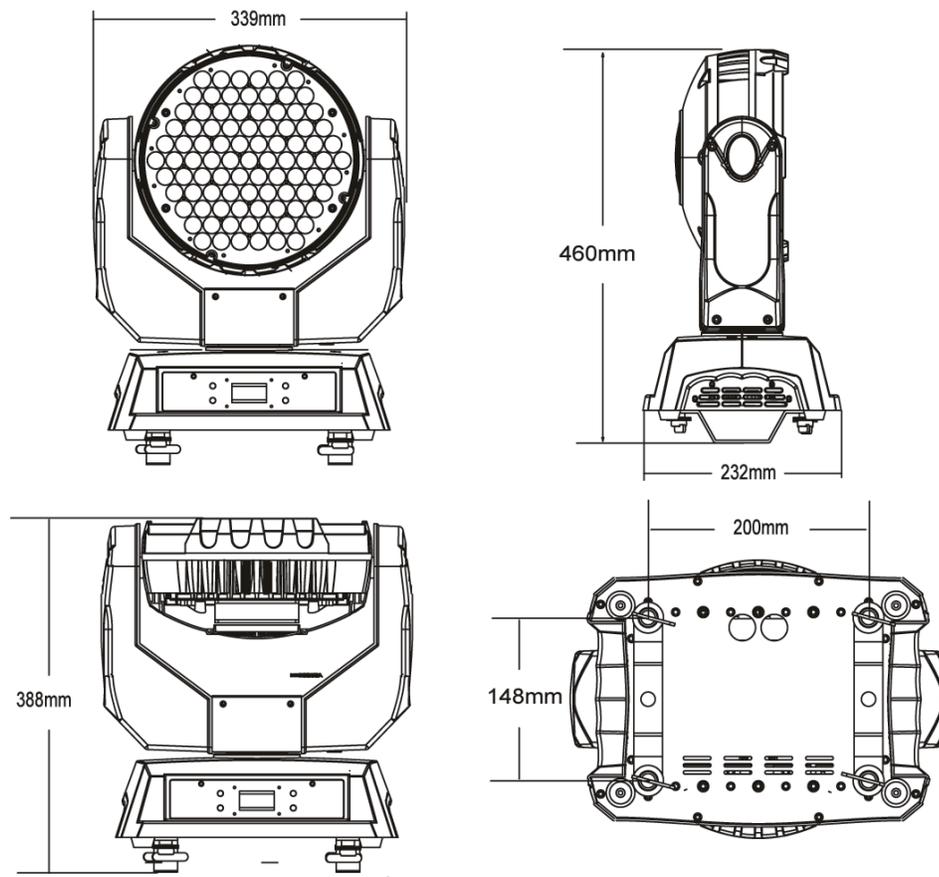
- ◆ Control mode: Master-Slave/Auto/Custom/ Sound
- ◆ LCD display
- ◆ DMX512 Chs: 11CHS/ 15CHS

### **Pan/Tilt**

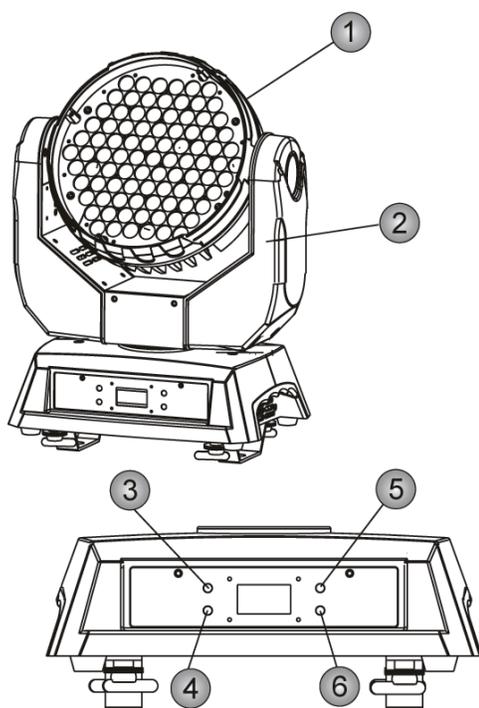
- ◆ Pan 540° Tilt 270°
- ◆ Pan/Tilt speed
- ◆ User-selectable Pan/Tilt ranges

- ◆ Size: 339x252.5x361mm
- ◆ Weight: 11kg

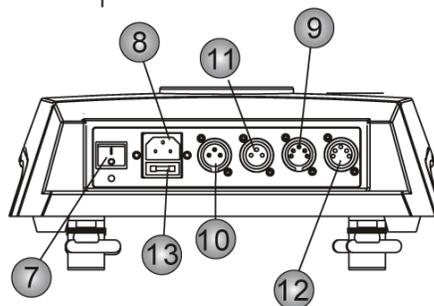
## 1.2 DIMENSIONS



## 1.3 PRODUCT FEATURES



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



## 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**



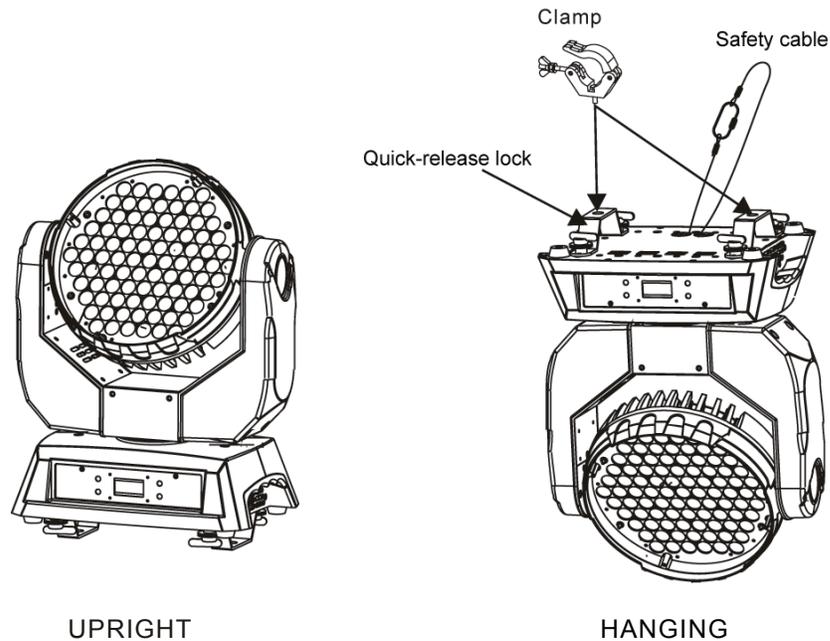
- This product left the place of manufacture in perfect condition. In order to maintain this condition and for safe operation, the user must always follow the instructions and safety warnings described in this user manual.
- Avoid shaking or strong impacts to any part of the equipment.
- Make sure that 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.



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

Always use a safety cable when installing this unit!!

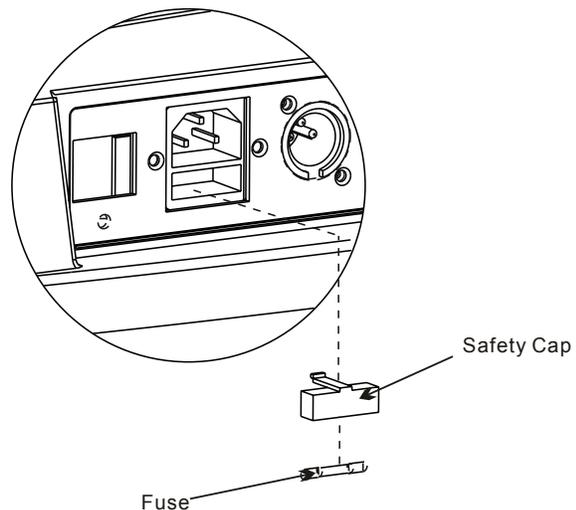
Be sure that the safety cable is connected to a solid load-bearing structure.

## 2.2 SETTING UP (STAND ALONE)

The LED fixture can be used as a stand alone unit. The stand alone functions AUTO 1, AUTO 2 and 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.

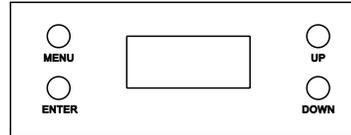
## 2.3 FUSE REPLACEMENT

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



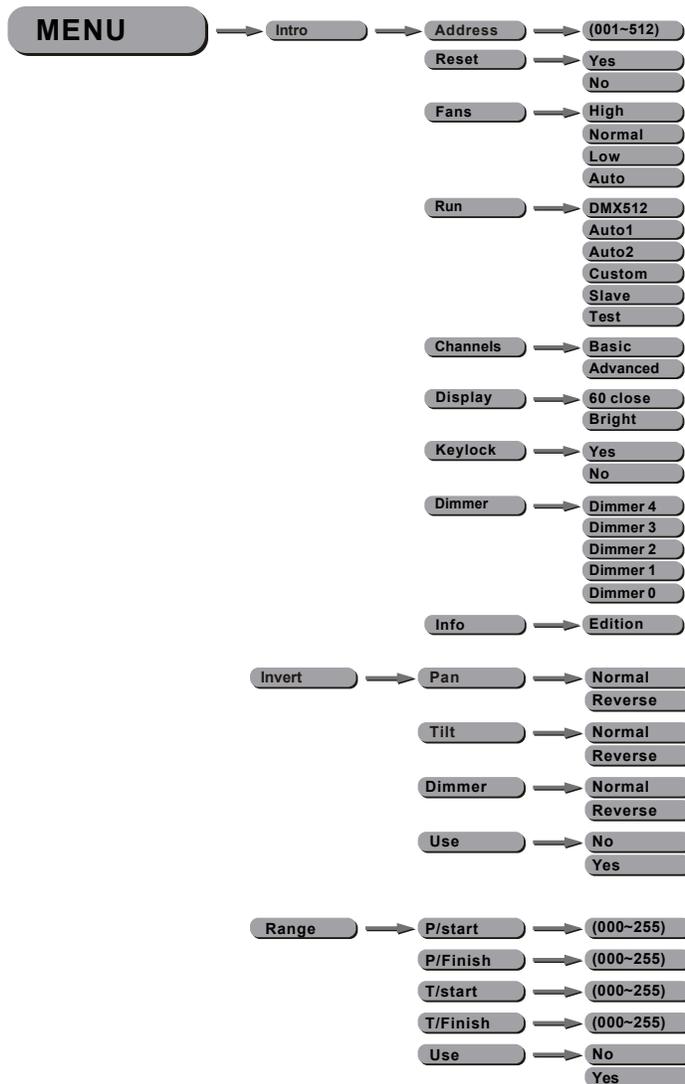
# 3 DISPLAY PANEL OPERATION

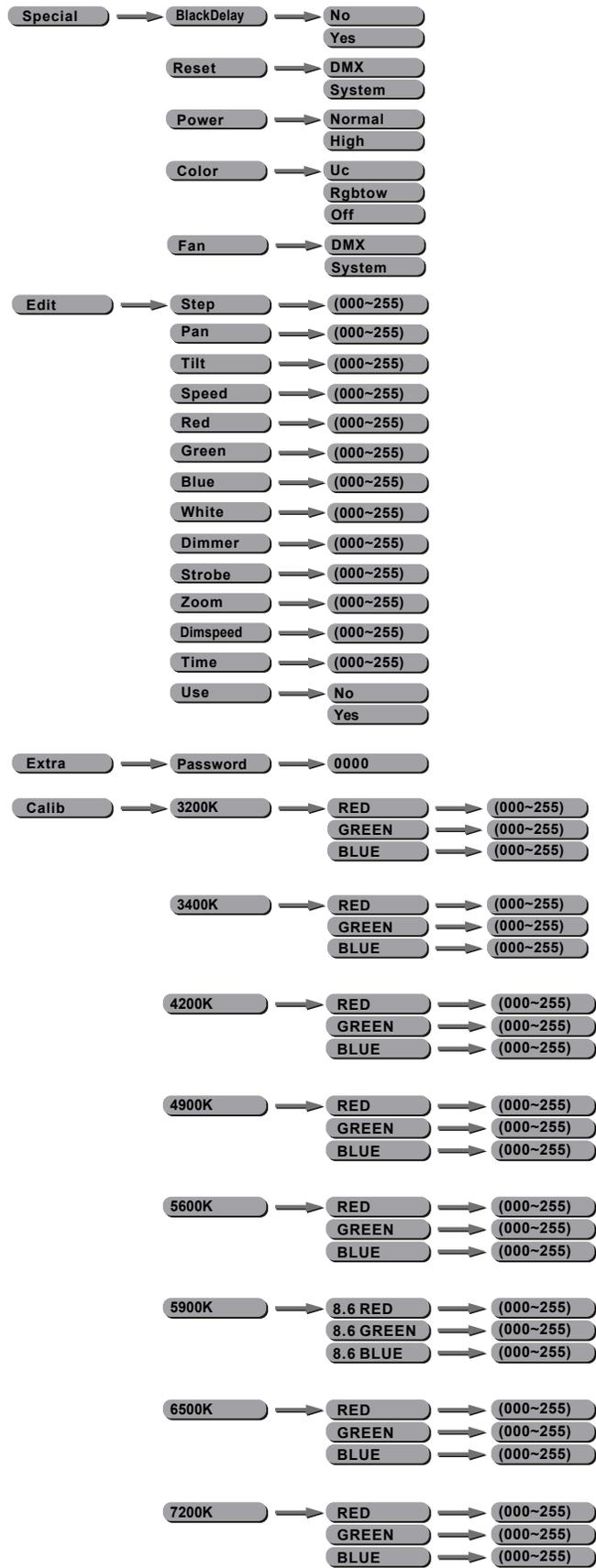
## 3.1 BASIC

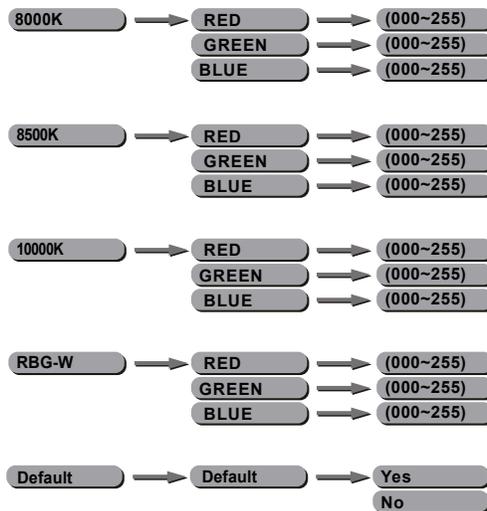


- 【 MENU 】** Scroll through the main menu or exit from the current sub-menu
- 【 ENTER 】** Enter the currently selected menu or confirm the current function value
- 【 DOWN 】** Scroll 'DOWN' through the menu list or decrease the value of the current function
- 【 UP 】** Scroll 'UP' through the menu list or increase the value of the Current function

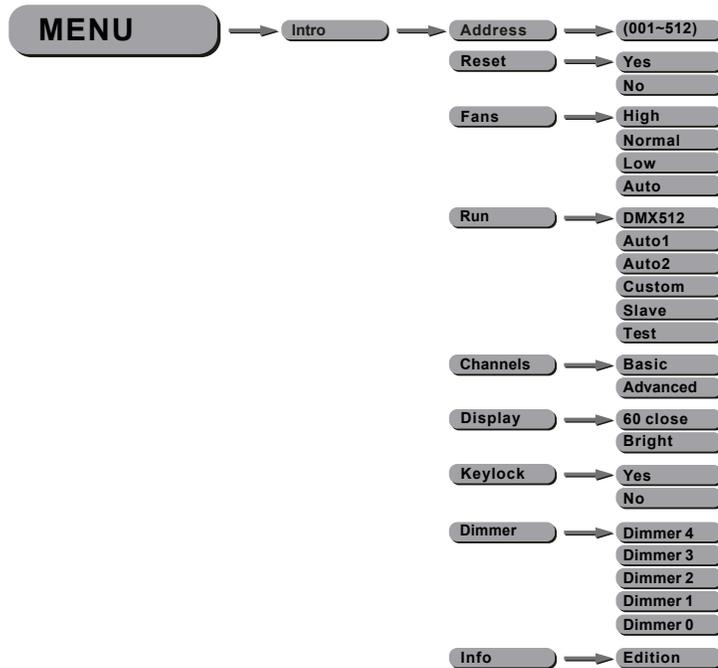
## 3.2 MENU







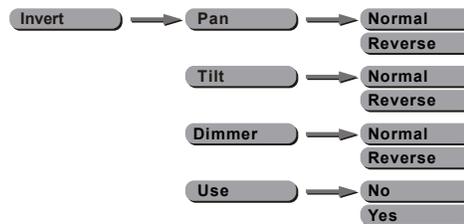
### 3.3 INTRO



- ◆ 【 Address】 Enter 【**Address**】 to set the DMX Address, which is from (001-512)
- ◆ 【 Reset】 In order to rest custom modest to default, select 【**Reset**】
- ◆ 【 Fans】 Enter 【**Fans**】 to select the working mode of fan: 【**High**】 is for fast; 【**Normal**】 is for normal; 【**Low**】 is for slow ; 【**Auto**】 is for Auto
- ◆ 【 Run】 Enter 【**Run**】 to select the operation mode: 【**DMAX512**】 ; 【**Auto1**】 ; 【**Auto2**】 ; 【**Custom**】 ; 【**Test**】 ; 【**Slave**】

- ◆ [ Channels ] Enter **【 Channels 】** to select the DMX channel modes: **【 Basic 】** ; **【 Advanced 】**
- ◆ [ Display ] Enter **【 Display 】** to select the lighting time of the LCD display panel.
- ◆ [ Keylock ] Enter the **【 Keylock 】** mode to select whether the access password is on or off.
- ◆ [ Dimmer ] Enter **【 Dimmer 】** to select dimmer mode and dimmer speed. When DIMMER is set to **【 Off 】** , then RGBW and MASTER DIMMER are linear. The Dim 1/2/3/4 are speed modes of the non linear dimmer , **【 Dim1 】** is the faster, while **Dim4】** is the slowest. The factory default setting is **【 Dim4 】** .
- ◆ Enter **【 Info 】** to see the version of the software.

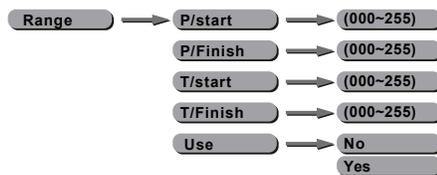
### 3.4 INVERT



#### **【 Invert】**

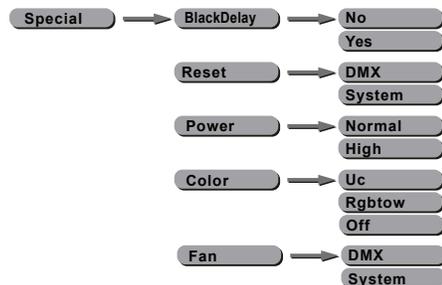
- Select **【 Pan 】** / **【 Tilt 】** / **【 Dimmer 】** to set **【 Normal 】** or **【 Reverse 】**
- Enter **【 Use 】** and set **【 Yes 】** to run the new setting

## 3.5 RANGE



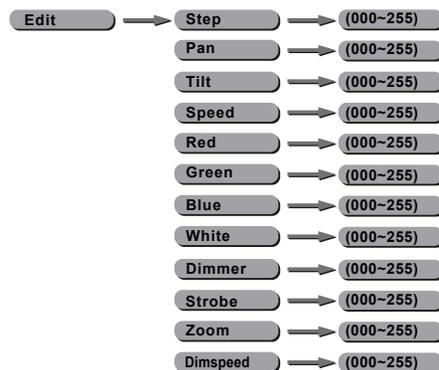
- **【P/start】** Set pan startvalue **【000~255】**
- **【P/Finish】** Set pan finishvalue **【000~255】**
- **【T/start】** Set Tiltstart value **【000~255】**
- **【T/Finish】** Set Tiltfinish value **【000~255】**
- **【Use】** Enter **【Use】** and select **【Yes】** to open the operation of X/Y angle

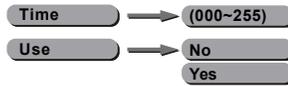
## 3.6 SPECIAL



- ◆ **【BlackDelay】** Enter **【BlackDelay】** to choose **【No】** without delay or **【Yes】** 3seconds delay
- ◆ **【Reset】** Enter **【Reset】** to choose **【DMX】** DMX control reset or **【System】** DMX cannot control reset
- ◆ **【Power】** Enter **【Power】** to choose the power as NORMAL or HIGH.
- ◆ **【Color】** **【COLOR】** is for activate/unactivate the color calibration functions.
- ◆ **【Fan】** Choose **【DMX】** DMX to control fan or **【System】** DMX cannot control fan

## 3.7 EDIT





### 【 Edit 】

- Enter the 【 Edit 】 mode to edit the custom programs by adjusting the value of 【 Step 】 , 【 Pan 】 , 【 Tilt 】 , 【 Speed 】 , 【 Color 】 , 【 Gobo 】 , 【 Gobo.rot 】 , 【 Prism 】 , 【 Dimmer 】 , 【 Strobe 】 , 【 Time 】
- Enter 【 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 【 Time 】 as 0

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

Step 1 【 Time 】 = 4    【 Use 】 = Yes  
 Step 2 【 Time 】 = 5    【 Use 】 = Yes  
 Step 3 【 Time 】 = 0    【 Use 】 = Yes

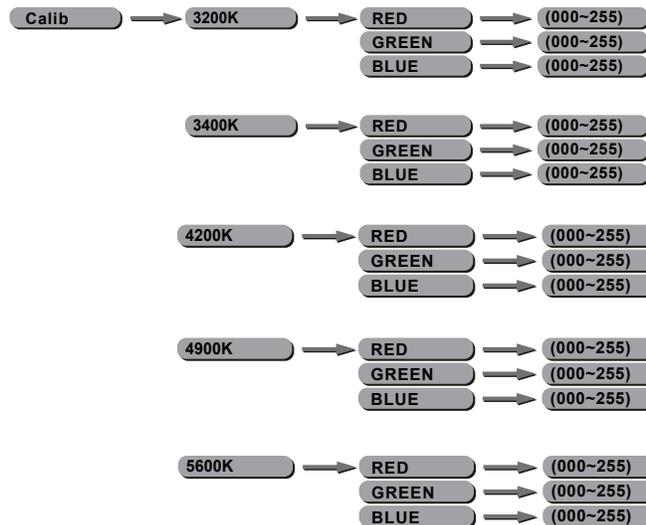
## 3.8 EXTRA

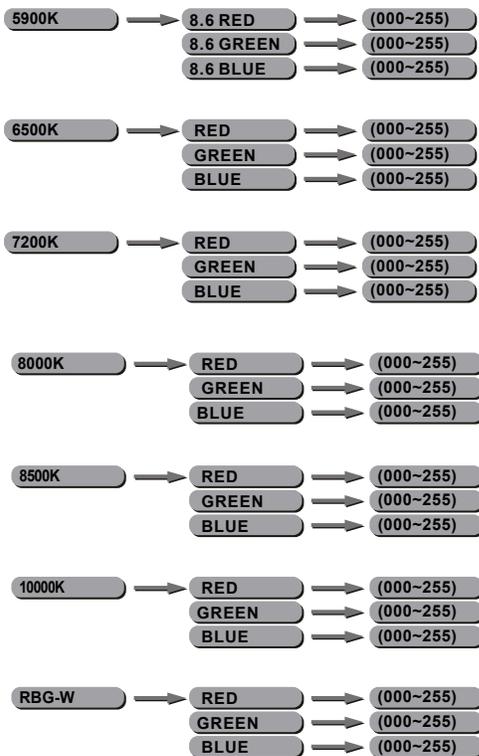


- ◆ When the user enter 【 password 】 and input the correct password, the hidden menu 【 Cablid 】 , 【 default 】 will appear on display panel, and the user is able to reset the 【 DEFAULT 】 values of all functions.

The default access code is UP + DOWN + UP + DOWN..

## 3.9 CALIB





### 【 *Calib* 】

- Enter the **【*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 DEFAULT



### 【 *Default* 】

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

# 4 USING A DMX512 CONTROLLER

## 4.1 CHANNEL ASSIGNMENT

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

### ADVANCED

| CHANNEL | VALUE  | FUNCTION  |
|---------|--|---|
| 1       | 000~255  | <b>PAN</b><br>Clockwise rotate 0~540°   |
| 2       | 000~255  | <b>PAN FINE</b><br>Fine control of pan movement 0~3°  |
| 3       | 000~255  | <b>TILT</b><br>Anti-clockwise rotate 0~270°   |
| 4       | 000~255  | <b>TILT FINE</b><br>Fine control of tilt movement 0~3°  |
| 5       | 000~255  | <b>PAN/TILT SPEED</b><br>From fast to slow  |
| 6       | 000~255  | <b>RED</b>  |
| 7       | 000~255  | <b>GREEN</b>  |
| 8       | 000~255  | <b>BLUE</b>   |
| 9       | 000~255  | <b>WHITE</b>  |
| 10      | 000~005<br>006~010<br>011~030<br>031~050<br>051~070<br>071~090<br>091~110<br>111~130<br>131~150<br>151~170<br>171~200<br>201~205<br>206~210<br>211~215<br>216~220<br>221~225<br>226~230<br>231~235<br>236~240<br>241~245<br>246~250<br>251~255 | <b>COLOR/WHITE MACRO</b><br>NO FUNCTION<br>FULL POWER<br>RED 100% / GREEN UP / BLUE 0%<br>RED DOWN / GREEN 100% / BLUE 0%<br>RED 0% / GREEN 100% / BLUE UP<br>RED 0% / GREEN DOWN / BLUE 100%<br>RED UP / GREEN 0% / BLUE 100%<br>RED 100% / GREEN 0% / BLUE DOWN<br>RED 100% / GREEN UP / BLUE UP<br>RED DOWN / GREEN DOWN / BLUE 100%<br>RED 100% / GREEN 100% / BLUE 100% / WHITE 100%<br>WHITE1: 3200K<br>WHITE2: 3400K<br>WHITE3: 4200K<br>WHITE4: 4900K<br>WHITE5: 5600K<br>WHITE6: 5900K<br>WHITE7: 6500K<br>WHITE8: 7200K<br>WHITE9: 8000K<br>WHITE10: 8500K<br>WHITE11: 10000K |

| CHANNEL | VALUE  | FUNCTION  |
|---------|--|---|
| 11      | 000~255  | <b>DIMMER</b>   |
| 12      | 000~009<br>010~255   | <b>STROBE</b><br>NO function<br>1~20Hz  |
| 13      | 000~255  | <b>ZOOM</b>   |
| 14      | 000~009<br>010~029<br>030~069<br>070~129<br>130~189<br>190~255   | <b>DIMMER SPEED</b><br>PRESET DIMMER SPEED FROM DISPLAY MENU<br>LINEAR DIMMER<br>NON LINEAR DIMMER 1 (fastest)<br>NON LINEAR DIMMER 2<br>NON LINEAR DIMMER 3<br>NON LINEAR DIMMER 4 (slowest)   |
| 15      | 000~019<br>020~039<br>040~059<br>060~079<br>080~099<br>100~119<br>120~139<br>140~149<br>150~159<br>160~169<br>170~179<br>180~199<br>200~219<br>220~255 | <b>CONTROL</b><br>NO FUNCTION<br>PAN/TILT BLACK ACTIVATED<br>PAN/TILT BLACK DEACTIVATED<br>FAN AUTO<br>FAN SLOW<br>FAN NORMAL<br>FAN FAST<br>AUTO1 (ACTIVATED AFTER 3 SECS)<br>AUTO2 (ACTIVATED AFTER 3 SECS)<br>TEST (ACTIVATED AFTER 3 SECS)<br>CUSTOM (ACTIVATED AFTER 3 SECS)<br>NO FUNCTION<br>RESET (ACTIVATED AFTER 3 SECS)<br>NO FUNCTION |

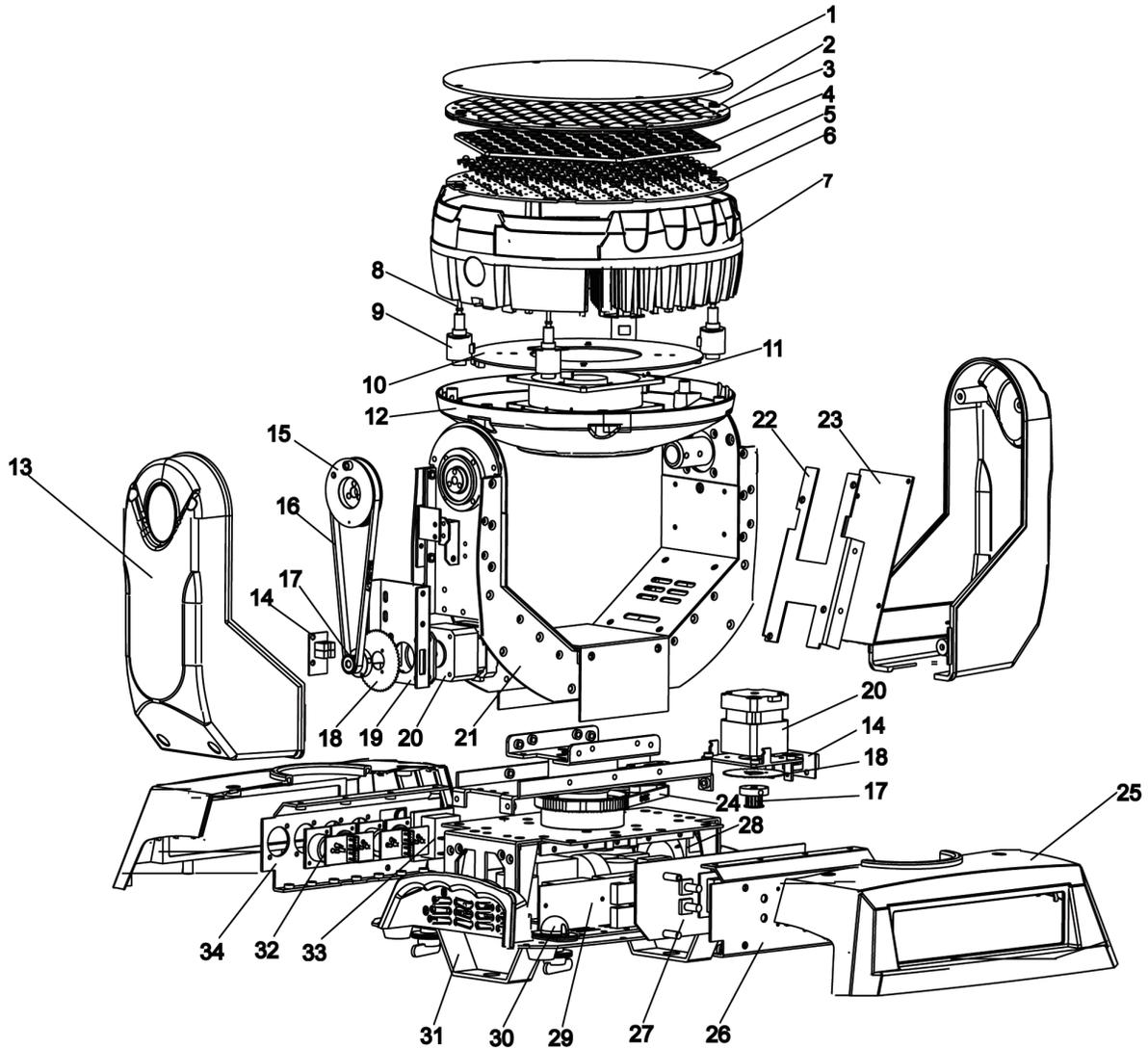
## BASIC

| CHANNEL | VALUE  | FUNCTION  |
|---------|--|---|
| 1       | 000~255  | <b>PAN</b><br>Clockwise rotate 0~540°   |
| 2       | 000~255  | <b>TILT</b><br>Anti-clockwise rotate 0~270°   |
| 3       | 000~255  | <b>RED</b>  |
| 4       | 000~255  | <b>GREEN</b>  |
| 5       | 000~255  | <b>BLUE</b>   |
| 6       | 000~255  | <b>WHITE</b>  |
| 7       | 000~005<br>006~010<br>011~030<br>031~050<br>051~070<br>071~090<br>091~110<br>111~130<br>131~150<br>151~170<br>171~200<br>201~205<br>206~210<br>211~215<br>216~220<br>221~225<br>226~230<br>231~235<br>236~240<br>241~245<br>246~250<br>251~255 | <b>COLOR/WHITE MACRO</b><br>NO FUNCTION<br>FULL POWER<br>RED 100% / GREEN UP / BLUE 0%<br>RED DOWN / GREEN 100% / BLUE 0%<br>RED 0% / GREEN 100% / BLUE UP<br>RED 0% / GREEN DOWN / BLUE 100%<br>RED UP / GREEN 0% / BLUE 100%<br>RED 100% / GREEN 0% / BLUE DOWN<br>RED 100% / GREEN UP / BLUE UP<br>RED DOWN / GREEN DOWN / BLUE 100%<br>RED 100% / GREEN 100% / BLUE 100% / WHITE 100%<br>WHITE1: 3200K<br>WHITE2: 3400K<br>WHITE3: 4200K<br>WHITE4: 4900K<br>WHITE5: 5600K<br>WHITE6: 5900K<br>WHITE7: 6500K<br>WHITE8: 7200K<br>WHITE9: 8000K<br>WHITE10: 8500K<br>WHITE11: 10000K |

| CHANNEL | VALUE  | FUNCTION  |
|---------|--|---|
| 8       | 000~255  | <b>DIMMER</b>   |
| 9       | 000~009<br>010~255   | <b>STROBE</b><br>NO FUNCTION<br>1~20HZ  |
| 10      | 000~255  | <b>ZOOM</b>   |
| 11      | 000~019<br>020~039<br>040~059<br>060~079<br>080~099<br>100~119<br>120~139<br>140~149<br>150~159<br>160~169<br>170~179<br>180~199<br>200~219<br>220~255 | <b>CONTROL</b><br>NO FUNCTION<br>PAN/TILT BLACK ACTIVATED<br>PAN/TILT BLACK DEACTIVATED<br>FAN AUTO<br>FAN SLOW<br>FAN NORMAL<br>FAN FAST<br>AUTO1 (ACTIVATED AFTER 3 SECS)<br>AUTO2 (ACTIVATED AFTER 3 SECS)<br>TEST (ACTIVATED AFTER 3 SECS)<br>CUSTOM (ACTIVATED AFTER 3 SECS)<br>NO FUNCTION<br>RESET (ACTIVATED AFTER 3 SECS)<br>NO FUNCTION |

# 5 APPENDIX

## 5.1 MAINTENANCE



| No | ITEM               |
|----|--------------------|
| 1  | Anti-dust plate    |
| 2  | Anti-vibrate seal  |
| 3  | Zoom lens          |
| 4  | Capture lens plate |
| 5  | Capture lens       |
| 6  | LED PCB            |
| 7  | Head structure     |
| 8  | Adjust pole        |
| 9  | Motor              |
| 10 | Driver PCB         |
| 11 | Fan                |
| 12 | Head cover         |

| No | ITEM            |
|----|-----------------|
| 13 | Arm cover       |
| 14 | Arm board       |
| 15 | Y-large gear    |
| 16 | Tilt belt       |
| 17 | Y-small gear    |
| 18 | Optical wheel   |
| 19 | Y-motor support |
| 20 | Motor           |
| 21 | U-frame         |
| 22 | Driver support  |
| 23 | Driver PCB      |
| 24 | Pan belt        |

| No | ITEM               |
|----|--------------------|
| 25 | Base cover         |
| 26 | Display support    |
| 27 | Display PCB        |
| 28 | Fan                |
| 29 | Power supply       |
| 30 | Quick-lock female  |
| 31 | Hanging bracket    |
| 32 | Connection board   |
| 33 | IEC power socket   |
| 34 | XLR socket support |

**WWW.BRITEQ-LIGHTING.COM**

**Copyright © 2011 by BEGLEC NV**

't Hofveld 2C ~ B1702 Groot-Bijgaarden ~ Belgium

Reproduction or publication of the content in any manner, without express permission of the publisher, is prohibited.