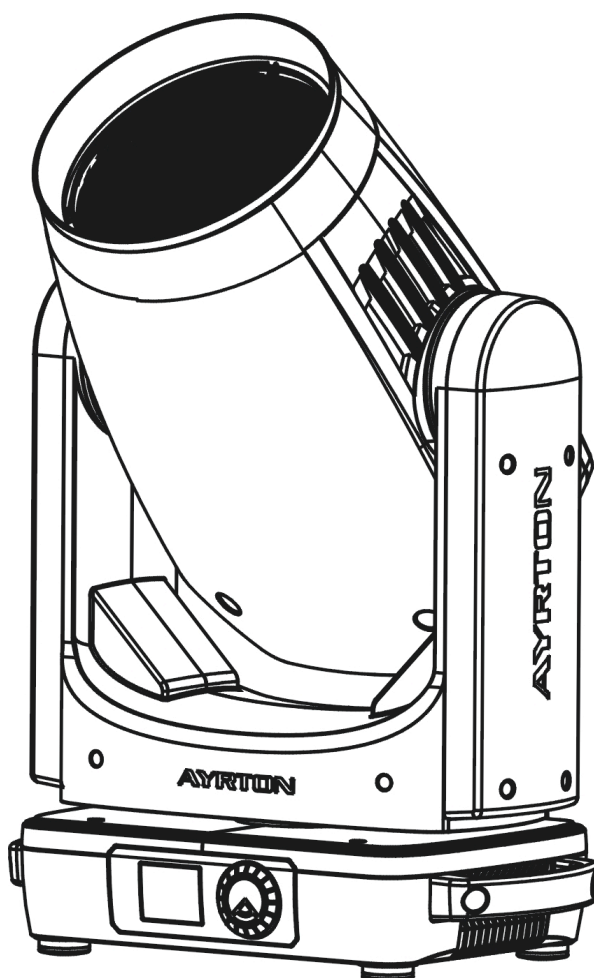




*User Manual*



**merak**

KEEP THIS MANUAL FOR FUTURE NEEDS



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## **1. SAFETY INSTRUCTIONS**

### **1.1. IMPORTANT SAFETY WARNING**


This device has left the factory in perfect condition. In order to maintain this condition and to ensure safe operation, it is absolutely necessary for the user to follow the safety instructions and

warning notes written in this user manual.

In order to install, operate, and maintain the lighting fixture safely and correctly we suggest that the installation and operation be carried out by qualified technicians and these instructions be carefully followed.

	<b>CAUTION!</b> HIGH VOLTAGE. RISK OF SEVERE OR FATAL ELECTRIC SHOCK
---	---

	<b>CAUTION!</b> ALWAYS DISCONNECT MAINS SUPPLY BEFORE REMOVING ANY FIXTURE COVERS
---	--

	<b>CAUTION!</b> NEVER LOOK DIRECTLY INTO THE LIGHT SOURCE. SENSITIVE PERSONS MAY SUFFER AN EPILEPTIC SHOCK
---	---

	<b>CAUTION!</b> NEVER TOUCH THE DEVICE DURING OPERATION! COVERS MAY BE HOT
---	---

	<b>CAUTION!</b> KEEP THIS DEVICE AWAY FROM RAIN AND MOISTURE
---	---

***Important:***



***Damage caused by the disregard of this user manual is not subject to warranty. The dealer and manufacturer will not accept liability for any resulting defects or problems.***

- If the device has been exposed to temperature changes due to environmental conditions, do not power on immediately. The resulting condensation could damage the device. Leave the device powered off until it has reached room temperature.
- This device falls under protection-class I. Therefore, it is essential that the device be earthed.
- If either lenses or display are damaged (damage may include cracks or gashes in the material) they must be replaced.
- Electrical connections, such as replacing the power plug, must be performed by a qualified person.
- Make sure that the available voltage is not higher than that which is stated at the end of this manual.
- Make sure the power cord is never crushed or damaged by sharp edges. Should the power cord suffer If this should be the case, replacement of the cable must be done by an authorized dealer.
- If the external flexible power cord of this device is damaged, it shall be exclusively replaced by the manufacturer or their service agent or a similar qualified person in order to avoid injury.
- When the device is not in use or before performing maintenance, always disconnect the device from the mains. Only handle the power cord from the plug. Never pull the plug out

of a socket by tugging the power cord.

- When powered on for the first time, some smoke or smell may occur. This is caused by coating on metal parts when heated and is normal. If you are concerned, please contact your distributor.
- Do not focus the beam onto flammable surfaces. The minimum distance between the exiting lens of the device and the illuminated surface must be greater than 0.5 meter.

**Please be aware that damage caused by any modifications to the device are not subject to warranty. Keep away from children and non-professionals.**

## 1.2. GENERAL GUIDELINES

- This device is a lighting effect for professional use on stages, in discotheques, theatres, etc., the device was designed for indoor use only.
- This fixture is only allowed to be operated within the maximum alternating current as stated in the technical specifications in section 2 of this manual.
- Handle the device with care, avoid shaking or using force when installing or maintaining the device.
- When choosing the installation location, please make sure that the device is not exposed to extreme heat, moisture or dust.
- If you use the quick lock cam when rigging the device, make sure the quick lock fasteners are located in the quick lock holes correctly and securely.
- Operate the device only after having familiarized yourself with its functions. Do not permit operation by persons not qualified for operating the device. Most damages are the result of unprofessional operation.
- Please use the original packaging if the device is to be transported.
- The applicable temperature for the device is between -10°C to 45°C. Do not use the device outside of this temperature range.

**For safety reasons, please be aware that all modifications to the device are forbidden. If this device is operated in any way different to the ones described in this manual, the product may suffer damage and the warranty becomes void. Furthermore, any other operation may lead to short-circuits, burns, electric shocks etc.**

## 2. FEATURES

### POWER SUPPLY

- AC 100-240V~, 50-60Hz
- Power Consumption: 400W

### OPTICS

- LED: 250W RGBW LED
- RGBW 4 in 1 LED make extremely even and smooth color mixing effect
- Extremely long Life: 50,000H and low power consumption

### **MOVEMENT**

- Pan movement: 540° /630° Optional (16 bit)
- Tilt movement: 270° (16 bit)
- Advanced moving system: fast, stable and quite, auto x-y repositioning

### **COLORS**

- Excellent color mixing and rainbow effect
- Color temperature linear adjust from 2700K to 8000K, preset color temperature scenes with: 2700K, 3200K, 4300K, 5600K, 6500K, 8000K options

### **FEATURES**

- 3 Control channel modes: 18/21/28 channels
- 2 operations modes: DMX-512, Master / Slave
- Strobe effect with 1-25 flashes per second and pulse effect
- Rotating Prism
- Dimmer: 0%~100% full range dimming.

### **DISPLAY**

- Advanced and convenient full –color LCD, with rechargeable battery(optional)

### **SOFTWARE**

7 pre-installed programs available upon selection

Upgrades: fast and convenient through DMX cable

Reset DMX address, remote lamp switch, reset can all be done by the controller

Running time of fixture on display for reference

### **OTHER SPEC**

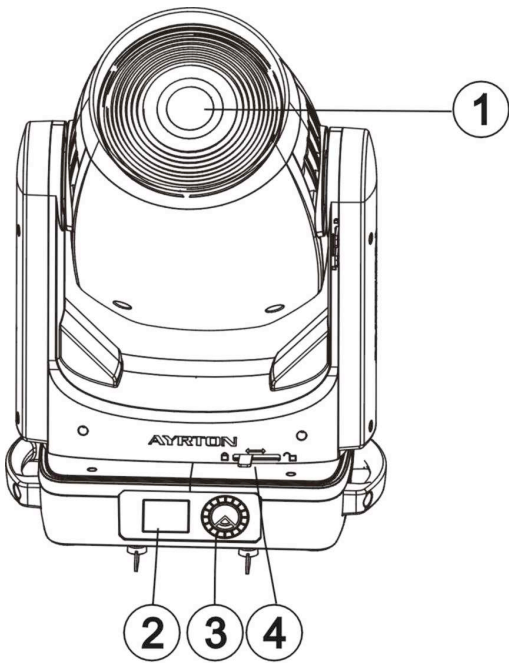
Input signal isolation: guarantees stable signal transmission without interference

Advanced RDM function

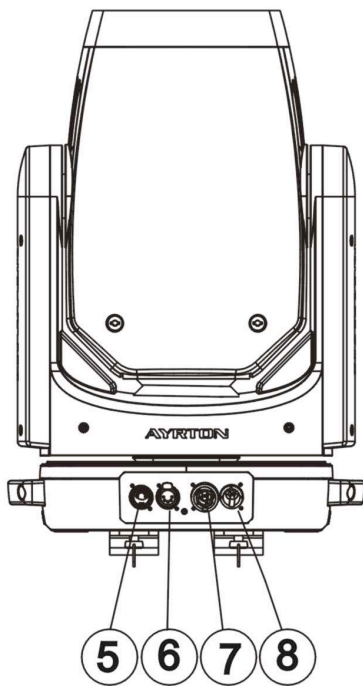
### **WHIGHT**

Net weight: 13.8 kg

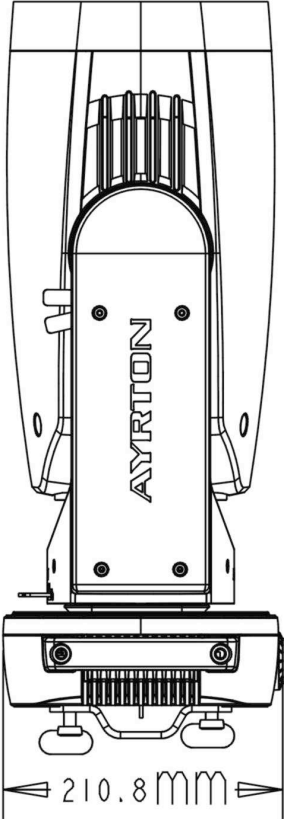
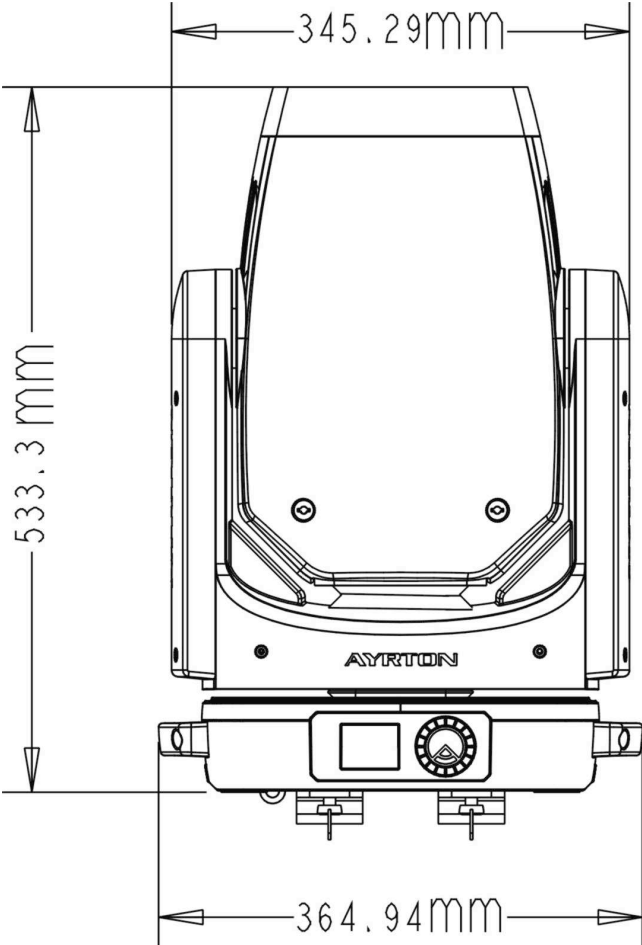
## **FIXTURE OVERVIEW**



- 1) Lens
- 2) Display
- 3) Jog wheel
- 4) Lock button
- 5) DMX out
- 6) DMX in
- 7) Power out
- 8) Power in



### 3. DIMENSIONAL DRAWINGS



## 4. INSTALLATION INSTRUCTIONS



### CAUTION!

DO NOT OPERATE THIS DEVICE WITH OPEN COVER

### 5.1. RIGGING THE DEVICE



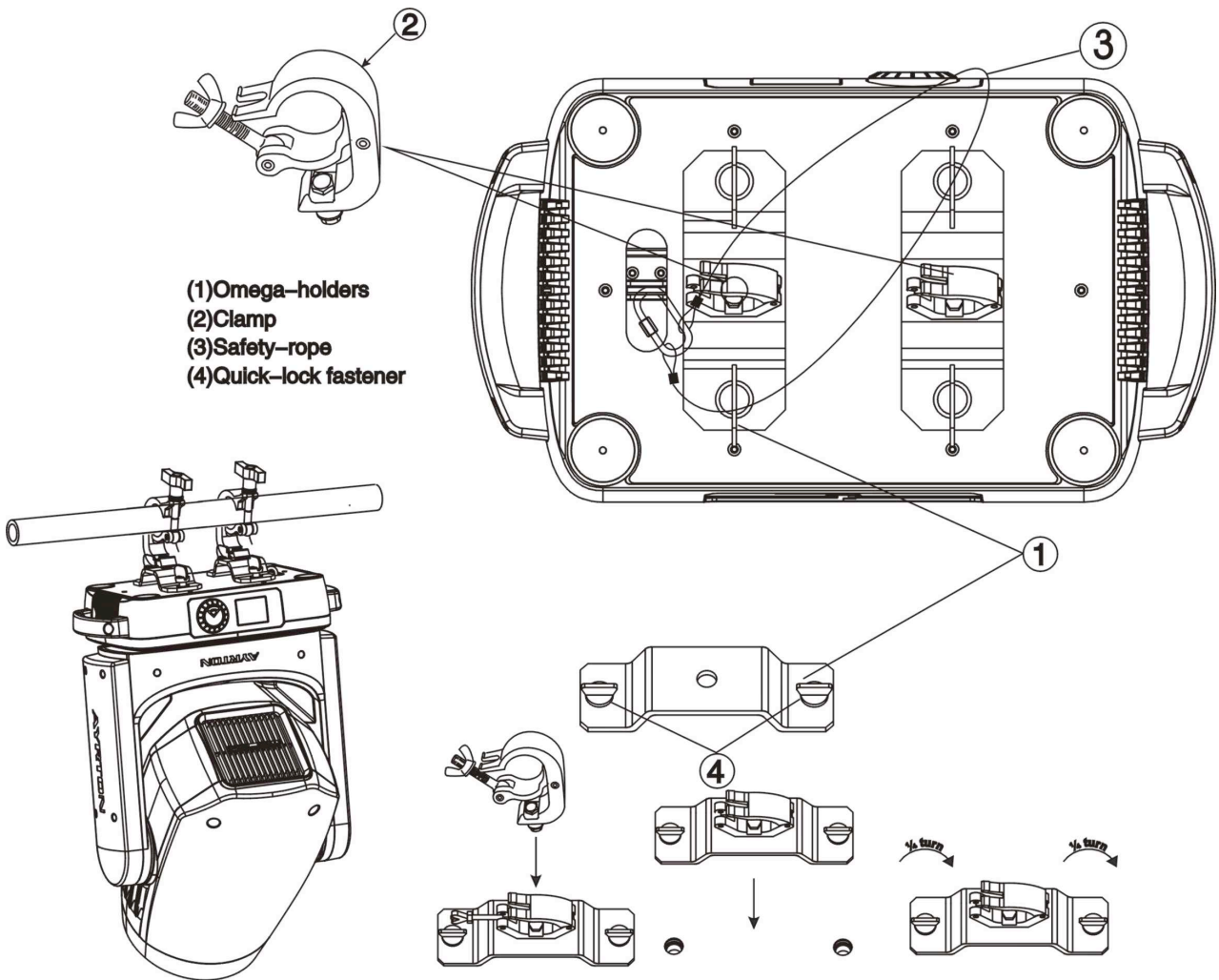
### CAUTION!

PLEASE CONSIDER THE GB7000.1-2015, GB7000.217-2008 AND THE OTHER RESPECTIVE NATIONAL NORMS DURING THE INSTALLATION. THE INSTALLATION MUST ONLY BE CARRIED OUT BY A QUALIFIED PERSON.

- The structure on which the device is rigged must be able to support 10 times the weight of the device for 1 hour without any critical deformation occurring.
- The installation must always be secured with a secondary safety attachment, e.g. the included appropriate safety cable.
- Never stand directly below the device when rigging, de-rigging or maintaining the device.
- All electrical connections should be approved by a qualified electrician prior to using the product.
- When the device is permanently installed these installations have to be approved by a qualified person once a year.
- Overhead rigging requires extensive experience, including (but not limited to) calculating working load limits, specifying installation/ rigging materials, and periodic safety inspection of all installation material as well as the device. If you lack these qualifications, do not attempt the rigging of this device yourself. Improper installation/ rigging can result in serious bodily injury.
- Before rigging make sure that the installation area can hold a minimum point load of 10 times the device's weight.



## 5.2. RIGGING USING THE OMEGA BRACKETS



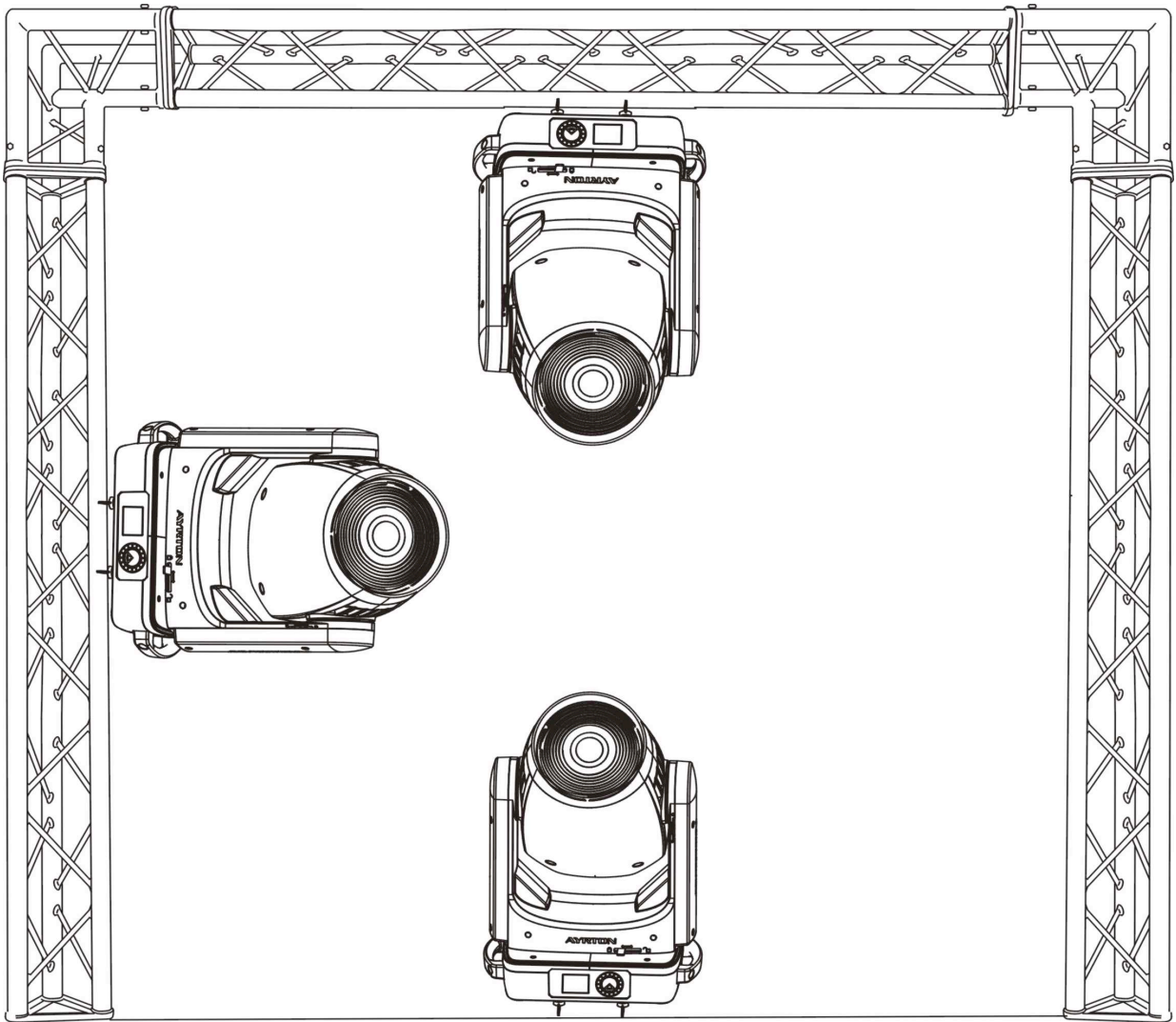
- Fix the clamp to the bracket by tightening the M12 nut and bolt to the bracket through the  $\Phi 13$  hole in the middle of the bracket.
- Insert the quick-lock fasteners of the first Omega holder into the respective holes on the bottom of the device. Tighten the quick-lock fasteners fully clockwise.
- Install the second Omega holder.
- Pull the safety cable through the holes on the bottom of the base and over the trussing system or another suitable rigging point. Insert the end into the carabiner and tighten the safety screw.



### Important:

**This step is very important to ensure safe rigging of the fixture.**

### 5.3. RIGGING DRAWINGS



- The device can be rigged in any of the orientations shown in the image above.
- The device must be kept at least 0.1 m away from any flammable materials (decoration etc.).
- Always use and install the supplied safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.

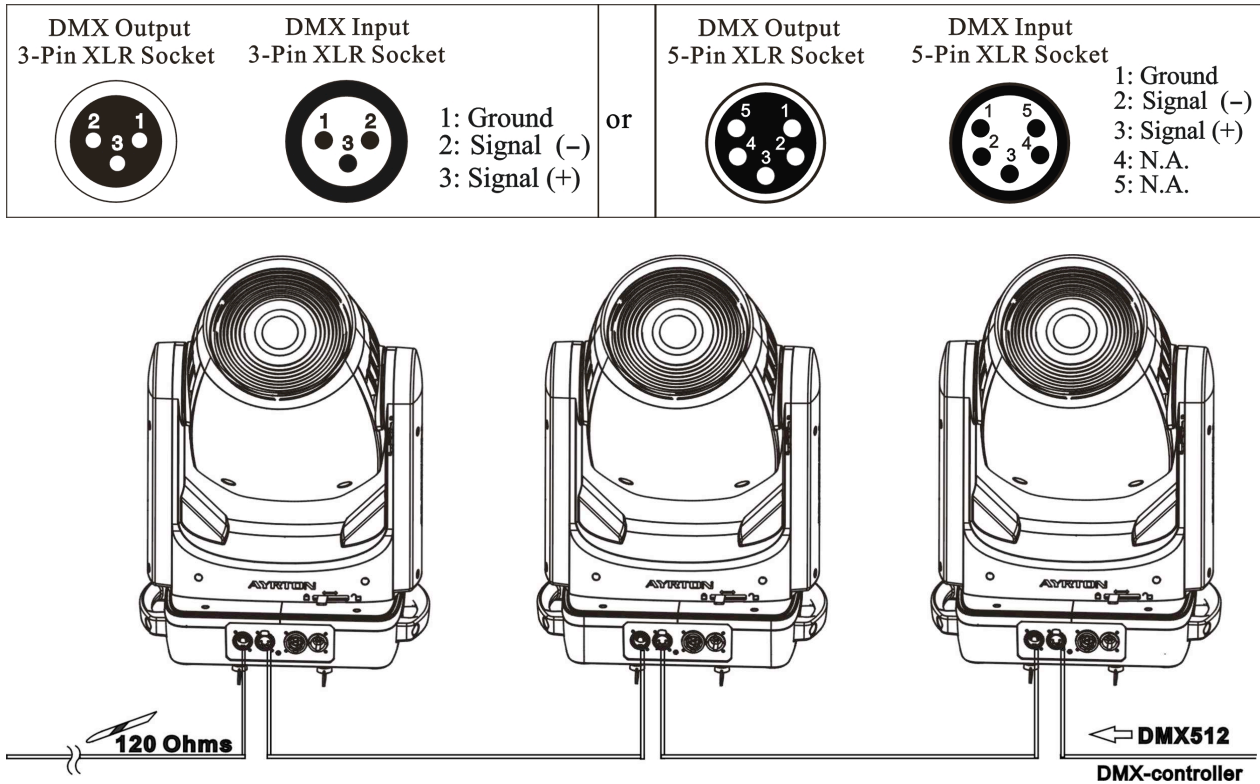


**Important:**

Overhead rigging requires extensive experience, including (but not limited to) calculating working load limits, specifying installation/ rigging materials, and periodic safety inspection of all installation material as well as the device. If you lack these qualifications, do not attempt the rigging of this device yourself. Improper installation/ rigging can result in serious bodily injury.

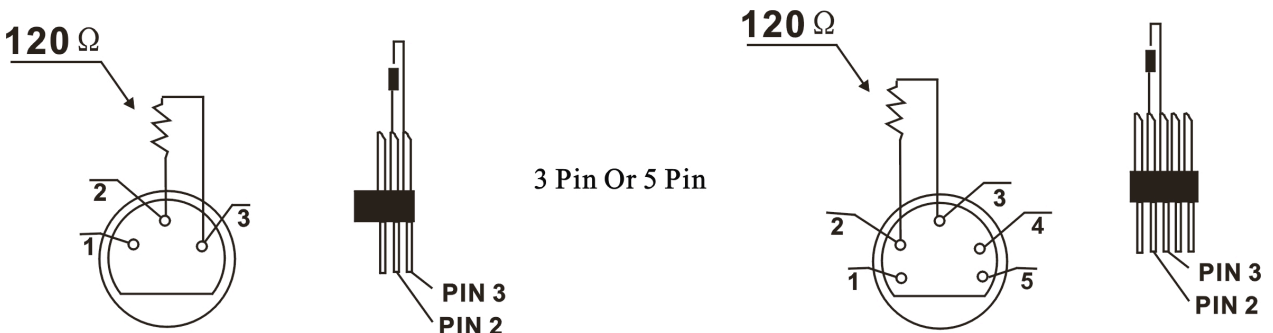
## 5. DMX-512 CONTROL CONNECTION

Connect the provided male side of the XLR cable to the female XLR output of your controller and the female side of the XLR cable to the male XLR input of the device. You can connect multiple devices together in a serial fashion. The cable needed should be two core, screened cable with XLR input and output connectors. Please refer to the diagram below.



## 6. DMX-512 CONNECTION WITH DMX TERMINATOR

For installations where the DMX cable has to run over a long distance or is in an electrically noisy environment, such as in a discotheque, it is recommended to use a DMX terminator. This helps in preventing corruption of the digital control signal caused by electrical noise. The DMX terminator is an XLR plug with a 120 Ω resistor connected between pins 2 and 3, which is then plugged into the output (female) XLR socket of the last fixture in the chain. Please see illustrations below.



## 7. DEVICE DMX START ADDRESS SELECTION

All fixtures should be given a DMX starting address when using a DMX signal, so that the correct fixture responds to the correct control signals. This digital starting address is the channel number from which the fixture starts to “listen” to the digital control information sent out from the DMX controller. The allocation of this starting address is achieved by setting the correct address number on the display located on the base of the device.

You can set the same starting address for all fixtures or a group of fixtures, or set different addresses for each fixture individually.

If you set the same address on all devices, all the devices will start to “listen” to the same control signal from the same channel number. In other words, changing the settings of one channel will affect all the fixtures simultaneously.

If you set a different address, each unit will start to “listen” to the channel number you have set, based on the quantity of control channels of the unit. That means changing the settings of one channel will affect only the selected device.

If Extended mode is set, which requires 28 channel, you should set the starting address of the first unit to 1, the second unit to 29 (28 + 1), the third unit to 57 (28+ 29), and so on.

## 8. DISPLAY

The Display offers Jog wheel features: you can set the starting address, run the pre-programmed program or reset the device.


The main menu is accessed by double clicking the jog wheel of jog wheel until the display starts flashing. Browse through the menu by turning jog wheel clockwise or counterclockwise. Press the Jog wheel for 2 seconds in order to select the desired menu and double click the Jog wheel for exit menu. After accessing the edit mode, the unit will automatically exit to the main menu after 15 seconds from the last button press. Clockwise is positive direction while counterclockwise is opposite direction.

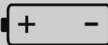
When the unit is powered on, if no data signal is connected after 1 minute, then the display will switch off automatically. Display does not need external power to operate if an optional battery is installed; hold down the jog wheel for seconds and the Display will turn on by using the unit’s battery.

PS: No response when quick press the jog wheel.

**CAUTION!**

THE OPTIONAL BATTERY MUST BE A LI-ION RECHARGEABLE BATTERY,  
THE SPECIFICATION IS AS FOLLOWING:





**Li-ion Rechargeable Battery**  
ICR 14500 ≥350mAh 3.7V

Default settings shaded

ADDRESS	Set Dmx Addr	A001~AXXX		DMX address setting
MODE	User Mode	Stand Mode Basic Mode Extended Mode User Mode A User Mode B User Mode C		User's mode to change channel numbers
	Edit User	Max channel PAN :		Preset User modes A,B,C :
OPTIONS	Status	No DMX Mode Pan Reverse Tilt Reverse Pan Degree Tilt Degree Feedback Pan/Tilt Spd Hibernation	Close/Hold/Auto ON/OFF ON/OFF 630/540 270 ON/OFF Speed 1~ 4 OFF, 01M~99M, OFF	Auto run if no DMX Pan Reverse movement Tilt Reverse movement Pan Degree Select Tilt Degree Select Movement Feedback Movement Speed Stand by Mode
	Service PIN	Service PIN RDM PID	Password=XXX Xxxxxx	Service Password="050" RDM PID Code
	Fans Control	Head Control	Auto Stage Studio	Fans Speed select
	Disp.Setting	Shutoff Time Flip Display Key Lock DispFlash	02~60m 05m ON/OFF ON/OFF ON/OFF	Display shutoff time Reverse 180 degree Key Lock DispFlash
	Signal Select	DMX WDMX		DMX WDMX
	Temp. C/F	Celsius Fahrenheit		Temperature switch between <input type="checkbox"/> / <input type="checkbox"/>
	Initial Pos.	PAN =XXX		Initial effect position
	Wireless DMX	Activate WDMX Act&Data Out Rest WDMX		Activate WDMX Act&Data Out Rest WDMX
	Refresh Select	1.2K , 16K		PWM Frequency

	Trigger	DMX Value Disp. Set To Slave Auto Program	PAN..... Slave1,Slave2,Slave3 Master / Alone	DMX Value Disp. Set To Slave Auto Program
	Reset Default	ON/OFF		Restore factory set.
INFO	Time Info.	Current Time Ttl Life Hrs Last Run Hrs Timer PIN Clr Last Run		XXXX(Hours) XXXX(Hours) XXXX(Hours) Password=XXX ON/OFF
	Temp. Info	Head Temp.		XXX °C/°F
	Software Ver	V x.x.x		Software version
TEST	Home	All Pan&Tilt other		Reset All Reset Pan&Tilt Reset Others
	Test Channel	PAN .....		Test function
	Manual Ctrl.	PAN =XXX :		Fine adjustment of the lamp
	Calibration	-Password- PAN :		Password "050" Calbrate and adjust the effects to standard/right position
PRESET	Select Prog.	Prog. Part 1 = Program 1 ~ 10 Prog. Part 2 = Program 1 ~ 10 Prog. Part 3 = Program 1 ~ 10	Program 1 Program 2 Program 3	Select programs to be run
	Edit Prog.	Program 1 : Program 10	Program Test Step 01=SCxxx Step 64=SCxxx	Testing program Program in loop Save and exit
	Edit Scenes	Edit Scene 001 ~ Edit Scene 250	Pan,Tilt,..... --Fade Time-- --Secne Time-- Input By Outside	Save and automatically return manual scenes edit
	Scenes Input	XX~XX		Scenes Input

## 9.1. ADDRESS

### Set DMX Address

With this function, you can adjust the desired DMX-address via the Display.

1. Double click to enter the menu.
2. The display will show "ADDRESS" .
3. Double click to enter then display "Set DMX Address" .
4. Turn the jog wheel clockwise then display "A001~AXXX" .
5. Long press to exit the menu.

## 9.2. MODE

With this function, you can create user defined channel orders.

1. Double click to enter the menu, turn the jog wheel clockwise to display “USERS MODE” .
2. Double click to enter to edit.
3. Turn the jog wheel clockwise to display “User mode” . Double click to enter to edit.
4. When in “Stand Mode”, turn the jog wheel to select “Basic mode”, “Extended Mode”, “User Mode A”, “User Mode B” and “User Mode C” .
5. Double click to confirm
6. Long press to exit the menu.

**Except the settled channel modes, the user can edit 3 channel modes. Setting as follow:**

1. Double clicking jog wheel to access “MODE” menu, turn the jog wheel until display “Edit User”
2. Pressing the jog wheel 2 seconds to access “Edit User” menu
3. Set up “Max Channel=xxx” and select channel value
4. Set up “Mode B” and “Mode C by the same way.

## 9.3. OPTIONS

### 9.3.1. Status

#### No DMX Status

With this function, when no DMX signal is detected, the unit will keep the last DMX status or close the shutter or run an automatic sequence. The default is hold.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Status” .
4. Double click to enter “Status” menu, The display will show “No DMX Status” .
5. Double click to enter “No DMX Status”, The display will show “Hold”, Turn the jog wheel to select “Close”
6. Double click to confirm
7. Long press to exit the menu.

#### Pan Reverse

With this function you can reverse the Pan-movement.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Status” .
4. Double click to enter “Status” menu, The display will show “Pan Reverse” .
5. Double click to enter “Pan Reverse”, The display will show “OFF”, Turn the jog wheel to select “NO” .
6. Double click to confirm
7. Long press to exit the menu.

#### Tilt Reverse

With this function you can reverse the Tilt-movement.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .

3. Double click to enter “Options”, turn the jog wheel to select “Status” .
4. Double click to enter “Status” menu, The display will show “Tilt Reverse” .
5. Double click to enter “Tilt Reverse”, The display will show “OFF”, Turn the jog wheel to select “NO” .
6. Double click to confirm
7. Long press to exit the menu.

### **Pan Degree**

With this function, you can select pan degree for 630 or 540.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Status” .
4. Double click to enter “Status” menu, The display will show “Pan Degree” .
5. Double click to enter “Pan Degree”, The display will show “540”, Turn the jog wheel to select “630”. Double click to confirm
6. Long press to exit the menu.

### **Feedback**

With this function, you can feedback switch of pan movement or tilt movement.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Status” .
4. Double click to enter “Status” menu, The display will show “Feedback” .
5. Double click to enter “Feedback”, The display will show “ON”, Turn the jog wheel to select “OFF” . Double click to confirm
6. Long press to exit the menu.

### **Pan/Tilt Speed**

With this function, you can select scan mode from 1 to 4.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Status” .
4. Double click to enter “Status” menu, The display will show “Pan/Tilt Spd” .
5. Double click to enter “Pan/Tilt Spd”, The display will show “Speed 1”, Turn the jog wheel to select “Speed 1”, “Speed 2”, “Speed 3”, “Speed 4”. Double click to confirm
6. Long press to exit the menu.

### **Hibernation: Standby mode**

The device and step motors will be power off if the fixture stay without DMX signal for 15 mins (Factory default).And the fixture will be reset before working once it receive DMX signal again.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Status” .



4. Double click to enter “Status” menu, The display will show “Hibernation” .
5. Double click to enter “Hibernation”, The display will show “OFF”, Turn the jog wheel to select “01M”, “02M” ... “99M” . Double click to confirm
6. Long press to exit the menu.

### 9.3.2. Service Setting

#### Password

The Password for this function is “050”.

#### RDM PID

With this function you can call up various submenus via RDM.

This device is RDM ready. RDM stands for "remote device management" and makes remote control of devices connected to the DMX-bus possible. ANSI E1.20-2006 by ESTA specifies the RDM standard as an extension of the DMX512 protocol.

Manual settings like adjusting the DMX starting address are no longer needed. This is particularly useful when the device is installed in a remote area.

RDM ready and conventional DMX devices can be operated in one DMX line. The RDM protocol sends own packages in the DMX512 data feed and does not influence conventional devices.

If DMX splitters are used and RDM control is to be used, these splitters must support RDM.

The number and type of RDM parameters depend on the RDM controller being used.

### 9.3.3. Fans Control

With this function, you can set the speed of the running fans. The OPTIONS are Auto, Stage and Studio.

1. Double clicking jog wheel to access main menu
2. Turn the jog wheel clockwise then display “OPTIONS”
3. Pressing the jog wheel 2 seconds to access “OPTIONS”, turn the jog wheel to select “Fans Control”
4. Pressing the jog wheel 2 seconds to access “Head Control”, The display will show “Auto, ”, Turn the jog wheel to select “Stage”, “Studio”.
5. Double click the jog wheel to back to last button press – “Fans Control”, then back to main menu by double click again.

### 9.3.4. Disp. Setting

#### Shut off time

With this function you can shut off the LCD display after 2 to 60 minutes. The default is 5 minutes.

1. Double clicking jog wheel to access main menu
2. Turn the jog wheel clockwise then display “OPTIONS”
3. Pressing the jog wheel 2 seconds to access “OPTIONS”, turn the jog wheel to select “Disp. Setting”.
4. Pressing the jog wheel 2 seconds to access “Disp. Setting” menu, The display will show “Shut off time”.
5. Pressing the jog wheel 2 seconds to access “Shut off time”, The display will show “0.5m”, Turn the jog wheel to select “02m”, “03m” .... “60m”..

6. Double click the jog wheel to back to last button press – “Disp. Setting”, then back to main menu by double click again.

### **Flip Display**

With this function you can rotate the display by 180°.

1. Turn the jog wheel clockwise then display “OPTIONS”
2. Pressing the jog wheel 2 seconds to access “OPTIONS”, turn the jog wheel to select “Disp. Setting”.
3. Pressing the jog wheel 2 seconds to access “Disp. Setting” menu, The display will show “Flip Display”.
4. Pressing the jog wheel 2 seconds to access “Flip Display”, The display will show “OFF”, Turn the jog wheel to select “ON”.
5. Double click the jog wheel to back to last button press – “Disp. Setting”, then back to main menu by double click again.

### **Key Lock**

With this function you can activate the automatic key lock function. If this function is activated, the keys will be locked automatically after exiting the edit mode for 15 seconds. Keeping press the <MODE/ESC>key for 3 seconds if you do not need this function.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Display Setting” .
4. Double click to enter “Display Setting” menu, The display will show “Key Lock” .
5. Double click to enter “Key Lock”, The display will show “OFF”, Turn the jog wheel to select “ON” . Double click to confirm
6. Long press to exit the menu..

### **Displ Flash**

With this function display will be flashing if no signal is detected. This function is disabled as default.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Display Setting” .
4. Double click to enter “Display Setting” menu, The display will show “DispFlash” .
5. Double click to enter “DispFlash”, The display will show “OFF”, Turn the jog wheel to select “ON” . Double click to confirm
6. Long press to exit the menu.

### **9.3.5. Signal Select**

With this function you can choose the DMX or WDMX.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Signal Select” .
4. Double click to enter “Signal Select”, The display will show “DMX”, Turn the jog wheel to select “DMX”, “WDMX” . Double click to confirm
5. Long press to exit the menu.

### 9.3.6. Temp. C/F

With this function you can display the temperature in Celsius or Fahrenheit.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Temperature C/F” .
4. Double click to enter “Temperature C/F”, The display will show “Celsius”, Turn the jog wheel to select “Fahrenheit” . Double click to confirm
5. Long press to exit the menu

### 9.3.7. Initial Pos

With this function you can display initial effect position.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Initial Pos.” .
4. Double click to enter “Initial Pos.”, The display will show “PAN=XXX” .
5. Long press to exit the menu.

### 9.3.8. Wireless DMX

#### Activate WDMX

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Wireless DMX” .
4. Double click to enter “Wireless DMX”, The display will show “Activate WDMX”, Turn the jog wheel to select “Act&Data Out”, “Rest WDMX”. Double click to confirm
5. Long press to exit the menu.

#### Act&Data Out

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Wireless DMX” .
4. Double click to access “Wireless DMX” menu, The display will show “Act&Data Out”.
5. Double click to access “Act&Data Out”.
6. Double click the jog wheel to confirm
7. Long press to exit the menu.

#### Rest WDMX

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Wireless DMX” .
4. Double click to access “Wireless DMX” menu, The display will show “Act&Data Out”.
5. Double click to access “Rest WDMX”.
6. Double click the jog wheel to confirm
7. Long press to exit the menu..

### 9.3.9. Refresh Select

With this function you can change the PWM frequency.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Refresh Select” .
4. Double click to enter “Refresh Select”, The display will show “1.2K”, Turn the jog wheel to select “16K” . Double click to confirm
5. Long press to exit the menu.

### 9.3.10. Trigger

#### DMX Value Disp

With this function you can display the DMX 512 value of each channel. The display automatically shows the channel with a value changing.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Trigger” .
4. Double click to enter “Trigger” menu, The display will show “DMX Value Disp” .
5. Double click to enter “DMX Value Disp”, The display will show “PAN=.....” .
6. Long press to exit the menu.

#### Set To Slave

With this function, you can define the device as slave.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Trigger” .
4. Double click to enter “Trigger” menu, The display will show “Set To Slave” .
5. Double click to enter “Set To Slave”, The display will show “Slave1”, “Slave2”, “Slave3” . Double click to confirm
6. Long press to exit the menu.

#### Auto Program

With this function, you can run the internal program. You can select the desired program under “**Select program**”. You can set the number of steps under “**Edit program**”. You can edit the individual scenes under “**Edit scenes**”. With this function, you can run the individual scenes either automatically, i.e. with the adjusted Step-Time.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .
3. Double click to enter “Options”, turn the jog wheel to select “Trigger” .
4. Double click to enter “Trigger” menu, The display will show “Auto Program” .
5. Double click to enter “Auto Program”, The display will show “Master”, “Alone” . Double click to confirm
6. Long press to exit the menu.

### 9.3.11. Reset Default

With this function, you can select restore factory set for ON or OFF, the default is OFF.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Options” .

3. Double click to enter “Options”, turn the jog wheel to select “Reset Default” .
4. Double click to enter “Reset Default” menu, The display will show “OFF”, Turn the jog wheel to select “ON” . Double click to confirm
5. Long press to exit the menu.

## 9.4. INFO

### 9.4.1. Time Info.

#### **Current Time**

With this function, you can display the temporary running time of the device from the last power on. The display shows “XXXX”, “XXXX” stands for the number of hours. The counter is reset after turning the device off.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Info” .
3. Double click to enter “Info”, turn the jog wheel to select “Time Info.” .
4. Double click to enter “Time Info.”, The display will show “Current Time” .
5. Double click to enter “Current Time”, The display will show “XXXX (Hours)” .
6. Long press to exit the menu.

#### **Ttl Life Hrs**

With this function, you can display the running time of the device. The display shows “XXXX” , “XXXX” stands for the number of hours.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Info” .
3. Double click to enter “Info”, turn the jog wheel to select “Time Info.” .
4. Double click to enter “Time Info.”, The display will show “TtlLifeHrs” .
5. Double click to enter “TtlLifeHrs”, The display will show “XXXX (Hours)” .
6. Long press to exit the menu.

#### **Last Run Hrs**

With this function, you can display last the running time of the device. The display shows “XXXX” , “XXXX” stands for the number of hours.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Info” .
3. Double click to enter “Info”, turn the jog wheel to select “Time Info.” .
4. Double click to enter “Time Info.”, The display will show “Last Run Hrs” .
5. Double click to enter “Last Run Hrs”, The display will show “XXXX (Hours)” .
6. Long press to exit the menu.

#### **Timer PIN**

With this function, you can enter the timer password.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Info” .
3. Double click to enter “Info”, turn the jog wheel to select “Time Info.” .
4. Double click to enter “Time Info.”, The display will show “Timer PIN” .
5. Double click to enter “Timer PIN”, “Password=038” . Double click to confirm
6. Long press to exit the menu.

### **Clr Last Run**

With this function, you can clear last run time of the fixture. The display shows “ON” or “OFF”, Press “Enter” to confirm.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Info” .
3. Double click to enter “Info”, turn the jog wheel to select “Time Info.” .
4. Double click to enter “Time Info.”, The display will show “Clear Last Run” .
5. Double click to enter “Clear Last Run”, The display will show “OFF”, turn the jog wheel to select “ON” . Double click to confirm
6. Long press to exit the menu.

### **9.4.2. Temp. Info**

#### **Head Temp.**

With this function you can display the temperature on the display board of the base (near CMY-filter) in Celsius.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Info” .
3. Double click to enter “Info”, turn the jog wheel to select “Temp Info” .
4. Double click to enter “Temp Info”, The display will show “Head Temp.” .
5. Double click to enter “Head Temp.”, The display will show “H:XXX°C/°F B:XXX°C /°F” .
6. Long press to exit the menu.

### **9.4.3. Software Ver**

With this function, you can display the software version of the device.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Info” .
3. Double click to enter “Info”, turn the jog wheel to select “Software Ver” .
4. Double click to enter “Software Ver”, The display will show “V1.0.....” .
5. Long press to exit the menu.

## **9.5. TEST**

### **9.5.1. Home**

With this function you can reset the device via the Control Board. You can select the different reset functions by turning the encoder.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Test” .
3. Double click to enter “Test”, turn the jog wheel to select “Home” .
4. Double click to enter “Home”, The display will show “All”, Turn the jog wheel to select “All”, “Pan&Tilt”, “Other” . Double click to confirm
5. Long press to exit the menu.

### **9.5.2. Test Channel**

With this function you can test each channel’s function to ensure correct operation.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Test” .

3. Double click to enter “Test”, turn the jog wheel to select “Test Channel” .
4. Double click to enter“Test Channel”, The display will show“Pan”, Turn the jog wheel to select other channel. Double click to confirm
5. Long press to exit the menu.

### 9.5.3. Manual Control

When set to Manual Mode, fixture will be back to factory settings. If you want to adjust brightness, can adjust by shutter and dimming channel, channel value is 0-255. Other functions can be set according to user's real need.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Test” .
3. Double click to enter “Test”, turn the jog wheel to select “Manual control” .
4. Double click to enter “Manual control”, The display will show “PAN=XXX” .
5. Long press to exit the menu..

### 9.5.4. Calibration

With this function, you can calibrate and adjust the effect wheels to their correct positions.The password of calibrate values is 050.

1. Double click to enter the menu.
2. Turn the jog wheel clockwise then display “Test” .
3. Double click to enter “Test”, turn the jog wheel to select “Calibration” .
4. Double click to enter “Calibration”, The display will show “Password=050” .
5. Choose which function you want to adjust
6. Turn jog wheel to adjust the value. Double click to confirm.
7. Long press to exit the menu.

## 9.6. PRESET

1. Double clicking jog wheel to access main menu
2. Turn the jog wheel clockwise then display “PRESET”
3. Pressing the jog wheel 2 seconds to access “PRESET”, turn the jog wheel to select “Select Prog.” ,“Edit Prog.”, “ Edit Scenes” , “Scenes Input”.
4. Double click the jog wheel to back to last button press – “PRESET”.

Run the auto program: A master fixture can output to three different program signals to the slave fixture to operate. It means the host will send cyclically in the following orders (The host will keep operating the program of Part 1) Then the slave fixture will make the selectively receiving according to its own set.



1. If the slave fixture chooses Run For Slave 1 from the menu of 1-3,then it will receive the part 1’s automatic program from link, in the same way, when the slave fixture chooses Run For Slave 2,then it will receive the part 2’s automatic program from link.
2. Enter the menu of 1-3 Function Mode---Set To Slave, Here to set machine operate which part of the program during the host-slave connection
3. Enter the menu of 1-4,1-5 Function Mode---Set To Master
4. Enter the menu of 8-1 Edit Program---Auto Program Part1.The host outputs three groups driven program---Part1, Part2, Part3(Part1 program runs the same effect as the host)
5. Enter the menu of 8-2 Edit Program---Edit Program. Edit the program’s connection,

connect the scene in order

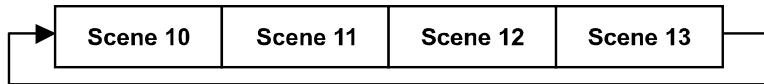
- The editor of the scene, there are as many as 250 scenario editors, and every scene can have a program connection of 10.

**Note:**

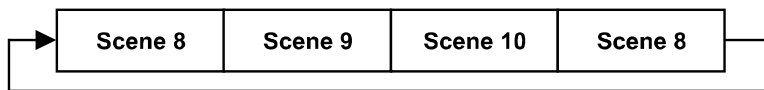
Part 2, Part 3 repeat in accordance with the Part 1's repeat. For example: When Part 1 uses Program 2, Part 2 uses Program 4, Part 3 uses Program 6, Assume: Program 2 includes scene of 10, 11, 12, 13; Program 4 includes scene of 8, 9, 10; Program 6 includes scene of 12, 13, 14, 15; Then it will run as below.

Example:

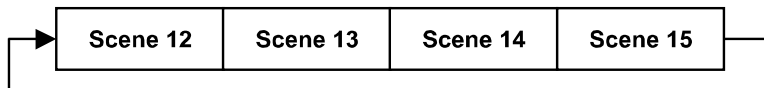
Part 1:



Part 2:



Part 3:



## 10. DMX PROTOCOL

DMX channel's functions and their values (22 DMX channels):				
Mode/Channel		Value	Function	
St	Ba	Ex		
1	1	1	<b>PAN Movement 8bit :</b>	
			0-255	Pan Movement
2		2	<b>Pan Fine 16bit</b>	
			0-255	Fine control of Pan movement
3	2	3	<b>TILT Movement 8bit :</b>	
			0-255	Tilt Movement
4		4	<b>Tilt Fine 16bit</b>	
			0-255	Fine control of Tilt movement
5	3	5	<b>Speed Pan/Tilt movement:</b>	
			0-225	max to min speed
			226-235	blackout by movement
6	4	6	<b>Red LED:</b>	
			0-255	White (0-Black , 255-100% Red)
		7	<b>Red LED Fine:</b>	
			0-255	White (0-Black , 255-100% Red)
7	5	8	<b>Green LED:</b>	
			0-255	White (0-Black , 255-100% White )



		9		<b>Green LED Fine:</b>
			0-255	White (0-Black , 255-100% Green )
8	6	10		<b>Blue LED:</b>
			0-255	White (0-Black , 255-100% Blue )
		11		<b>Blue LED Fine:</b>
			0-255	White (0-Black , 255-100% Blue )
9	7	12		<b>White LED:</b>
			0-255	White (0-Black , 255-100% White )
		13		<b>White LED Fine:</b>
			0-255	White (0-Black , 255-100% White )
				<b>Shutter, strobe:</b>
			0-31	Led turn off
			32-63	Led turn on
			64-95	Strobe effect slow to fast
10	8	14	96-127	Led turn on
			128-159	Pulse-effect in sequences
			160-191	Led turn on
			192-223	Random strobe effect slow to fast
			224-255	Led turn on
11	9	15		<b>Dimmer intensity:</b>
			0-255	Intensity 0 to 100%
12		16		<b>Dimmer intensity Fine :</b>
			0-255	Fine control for Dimmer adjustment
13	10	17		<b>CTO:</b>
			0-255	Intensity 0 to 100%
				<b>Color Macro:</b>
			0-7	No function
			8-39	from RED to YELLOW
			40-71	from YELLOW to GREEN
			72-103	from GREEN to CYAN
			104-135	from CYAN to BLUE
			136-167	from BLUE to MAGENTA
			168-199	from MAGENTA to RED
			200-231	from RED to WHITE
			232-255	Crossfading colours from slow to fast
				<b>Color Presets:</b>
			0-4	No function
			5--9	White2700k
			10--14	White3200k
			15-19	White4200k
			20-24	White5600k
			25-29	White6500k
			30-34	White8000k
15	12	19		

			35-39	Yellow
			40-44	Magenta
			45-49	Cyan
			50-54	Salmon
			55-59	Turquoise
			60-64	Light Green
			65-69	Steel Blue
			70-74	Orange
			75-79	Straw
			80-84	Pale Lavander
			85-89	Pink
			90-94	Red
			95-99	Green
			100-104	Blue
			105-109	White
			110-255	Reserved
16	13	20		<b><u>Color Presets Dimmer:</u></b>
			0-255	Dimmer 100 to 0%
17	14	21		<b><u>Zoom :</u></b>
			0-255	Zoom adjustment
		22		<b><u>Zoom Fine :</u></b>
			0-255	Fine control for Zoom adjustment
18	15	23		<b><u>Beamshaper :</u></b>
			0-63	Open
			64-255	Beamshaper
19	16	24		<b><u>Rotating Beamshaper index, rotating Beamshaper rotation</u></b>
			0-127	Beamshaper indexing
			128-189	Forwards Beamshaper rotation from fast to slow
			190-193	No rotation
			194-255	Backwards Beamshaper rotation from slow to fast
		25		<b><u>Rotating Beamshaper indexing Fine :</u></b>
			0-255	Fine indexing
20	17	26		<b><u>Beamshaper _Focus :</u></b>
			0-255	Beamshaper _Focus adjustment
		27		<b><u>Beamshaper _Focus Fine :</u></b>
			0-255	Beamshaper _Focus Fine control for Focus adjustment
21	18	28		<b><u>Reset, internal programs:</u></b>
			0-79	Normal
			80-83	All motor reset
			84-86	Pan-Tilt motor reset
			87-89	Other motors reset
			90-91	RED Shift 1 On
			92-93	RED Shift 2 On
			94-95	RED Shift 3 On

	96-97	RED Shift 4 On
	98-99	RED Shift 1 Off
	100-119	Internal program 1 (scene1~8 of EEPROM)
	120-139	Internal program 2 (scene9~16 of EEPROM)
	140-159	Internal program 3 (scene17~24 of EEPROM)
	160-179	Internal program 4 (scene25~32 of EEPROM)
	180-199	Internal program 5 (scene33~40 of EEPROM)
	200-219	Internal program 6 (scene41~48 of EEPROM)
	220-239	Internal program 7 (scene49~56 of EEPROM)
	240-255	no function

## 11. ERROR MESSAGES

When you turn on the device, it will first perform a reset. The display may show "Err channel is XX" should there be problems with one or more functions. "XX" stands for channel 1, 2, 3, 4, 5, 6 etc whose sensor has encountered a problem. For example, when the display shows "Err channel is Pan movement", it means there is an error on channel 1. If there are errors on channel 1, channel 3, channel 6 at the same time, you may see the error message, "Err channel is Pan movement", "Err channel is Tilt movement"" "Err channel is Shutter" ,flash twice, and then the device will generate a second reset. If the error messages persist after performing a reset more than twice, the channels which have errors may not work properly however, all other functions can work as usual. Please contact your dealer or manufacturer for service. Self repair is not allowed.

### **PAN- movement Er**

(PAN- yoke movement error) This message will appear after the reset of the fixture if the yoke's magnetic-indexing circuit malfunction (Optical Sensor or Magnetic Sensor fails) or the stepper motor is defective (or its driving IC on the main PCB). The PAN- movement is not located in the default position after the reset.

### **TILT- movement Er**

(TILT- head movement error) This message will appear after the reset of the fixture if the head's magnetic-indexing circuit malfunctions ((Optical Sensor or Magnetic Sensor fails)) or the stepper motor is defective (or its driving IC on the main PCB). The TILT- movement is not located in the default position after the reset.

### **ZOOM wheel Er**

(ZOOM wheel- error) This message will appear after the reset of the fixture if the head's magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepper motor is defective (or its driving IC on the main PCB). The ZOOM - wheel is not located in the default position after the reset.

## 12. CLEANING AND MAINTENANCE

The following points have to be considered during inspection:

- 1) All screws for installing the devices or parts of the device have to be tightly connected and must not be corroded.
- 2) There must not be any deformations to the housing, lenses, rigging and installation points (ceiling, suspension, trussing).
- 3) Motorized parts must not show any signs of wear and must move smoothly without issue.
- 4) The power supply cables must not show any damage, material fatigue or sediment.

Further instructions depending on the installation location and usage have to be adhered to by a qualified installer and any safety concerns have to be removed.



### CAUTION!

Disconnect from mains before starting maintenance operation.

In order to ensure the device remains in good condition and does not fail prematurely, we suggest regular maintenance.

- 1) Clean the inside and outside lens each week to avoid loss of output due to accumulation of dust/ dirt on the lens.
- 2) Clean the fans each week to ensure maximum airflow and efficient thermal cooling. This will ensure the light source is operated in the best possible condition.
- 3) A detailed electrical check by an approved electrician every quarter to make sure that the circuit contacts are in good condition. This will prevent poor circuit contacts and the resultant overheating.

We recommend frequent cleaning of the device. Please use a moist, lint- free cloth. Never use alcohol or solvents.

Please refer to the instructions under “Installation instructions”.

Should you need any spare parts, please order genuine parts from your local dealer.

**Remark:** Errors and omissions for all information given in this manual are excepted. All information is subject to change without prior notice.