AYRTON
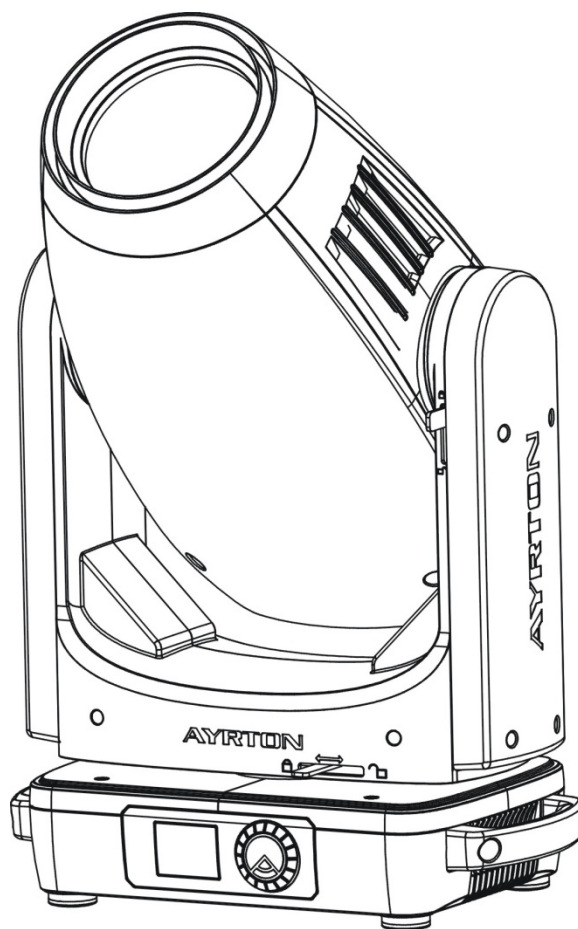
User Manual

mistral

CE

KEEP THIS MANUAL FOR FUTURE NEEDS

AYRTON – 2 rue VItruve – 91140 Villebon sur Yvette – FRANCE
www.ayrton.eu

CONTENTS

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.

	CAUTION!
⚡	HIGH VOLTAGE. RISK OF SEVERE OR FATAL ELECTRIC SHOCK

	CAUTION!
🔌	ALWAYS DISCONNECT MAINS SUPPLY BEFORE REMOVING ANY FIXTURE COVERS

	CAUTION!
⚠	NEVER LOOK DIRECTLY INTO THE LIGHT SOURCE. SENSITIVE PERSONS MAY SUFFER AN EPILEPTIC SHOCK

	CAUTION!
🔥	NEVER TOUCH THE DEVICE DURING OPERATION! COVERS MAY BE HOT

☞ ***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.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 1.5 meter.

Please be aware that damages 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. This device was designed for indoor use.
- 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.
- 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.
- The light source of this luminaire is not replaceable; when the light source reaches its end of life the whole luminaire shall be replaced.

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
- AC100-240V~，50/60Hz
- Power Consumption：400W

LIGHT SOURCE
- LED：White LED，8000K Color Temperature
- Extremely long Life：>50,000H

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

COLORS
- CMY color mixing，uniform，linear and speed can be adjustable
- 1 Color wheel：7 dichroic filters + open，indexable，rainbow effect

GOBOS : Gobo size: Diameter 25mm – image 20mm
- Rotating gobo wheel：7 interchangeable，rotating，and indexable，gobo+open
- "Slot in & out" gobo wheel system.
- Fix gobo wheel：9 + open，with different speed gobo shaking and gobo indexing

FEATURES
- 3 Control channel modes：28/26/39 channels
- 2 Operation modes：DMX-512，Master / Slave mode
- Strobe effect with 1-25 flashes per second and pulse effect
- Zoom：Zoom adjustment from small to big (6,7° to 53°)
- Animation wheel：can make special dynamic flame or water effect
- Focus：Motorized focus
- Prism : 5 facet Prism
- Stepless frost：0%~100% linear change frost
- Stepless iris：5%~100% linear change iris，pulse iris effect
- Dimmer：0%~100% full range dimming

DISPLAY
- Advanced and convenient full –color LCD，with rechargeable battery (optional)
- Can be changed 180° reverse to fit for different installation position

SOFTWARE
8 pre-installed programs available upon selection
Upgrades：fast and convenient through DMX cable with DMX-512 controller
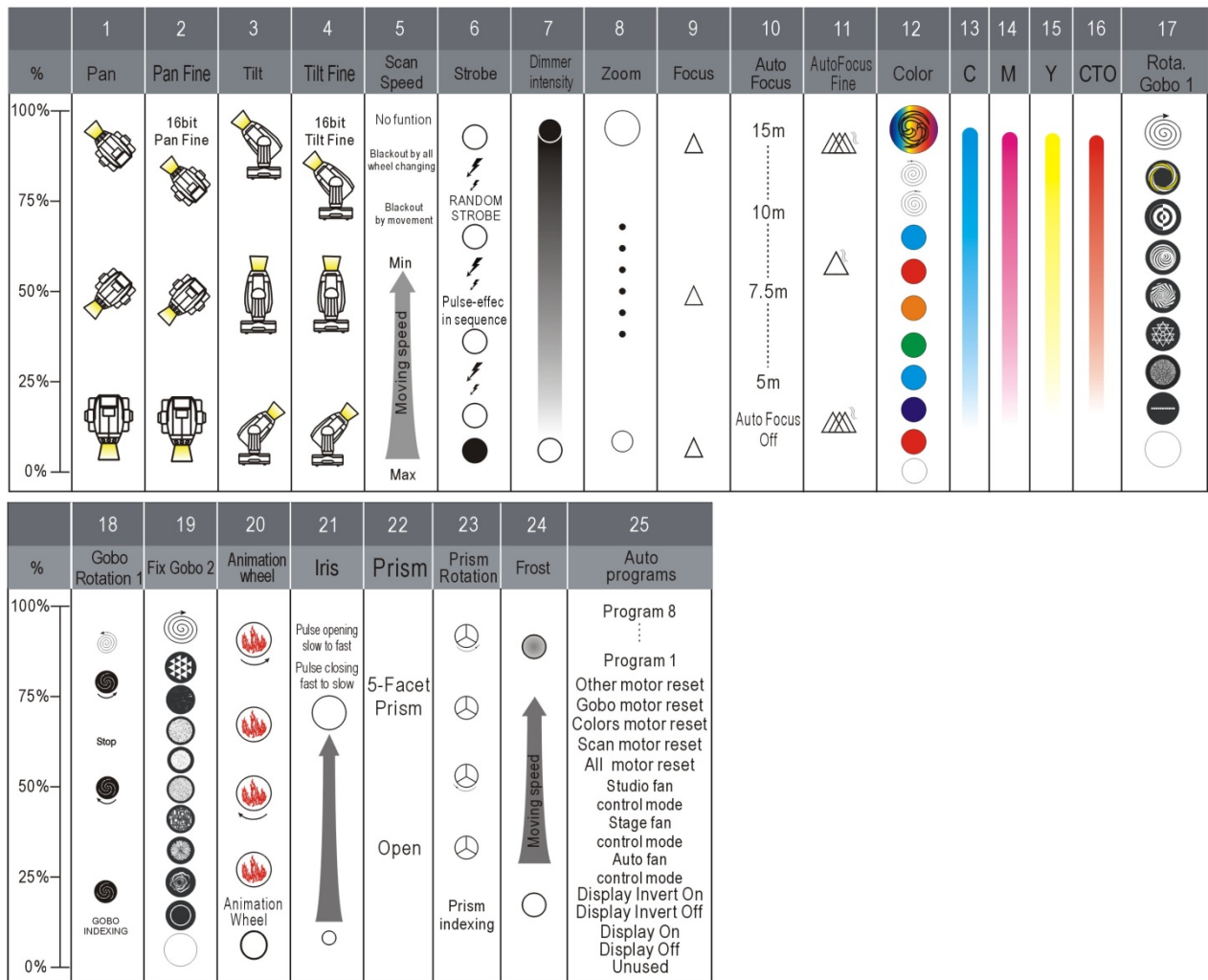Reset via DMX address, reset can all be done by the DMX controller
Running time of fixture on display for reference

OTHER SPEC
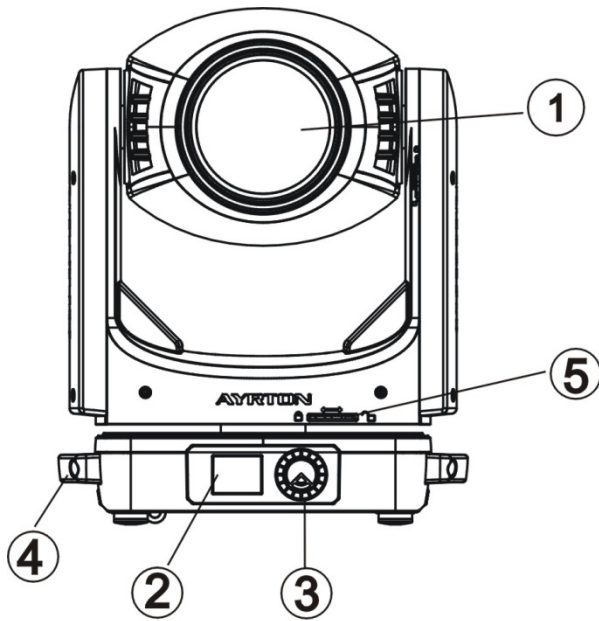Input signal isolation：guarantees stable signal transmission without interference
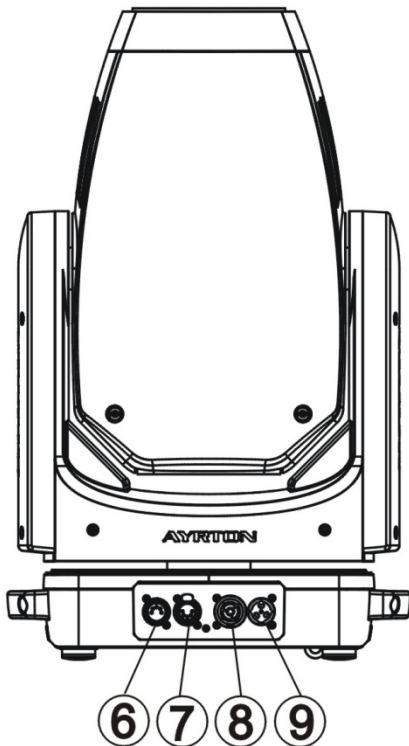Advanced RDM function

WEIGHT
Net weight: 19 kg

DMX CHANNEL CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
%	Pan	Pan Fine	Tilt	Tilt Fine	Scan Speed	Strobe	Dimmer intensity	Zoom	Focus	Auto Focus	AutoFocus Fine	Color	C	M	Y	CTO	Rota. Gobo 1
100%		16bit Pan Fine		16bit Tilt Fine	No funtion				△	15m							
75%					Blackout by all wheel changing; Blackout by movement	RANDOM STROBE				10m	△						
50%					Min	Pulse-effec in sequence			△	7.5m							
25%					Moving speed					5m							
0%					Max				△	Auto Focus Off							

|	18	19	20	21	22	23	24	25
%	Gobo Rotation 1	Fix Gobo 2	Animation wheel	Iris	Prism	Prism Rotation	Frost	Auto programs
100%				Pulse opening slow to fast				Program 8
75%				Pulse closing fast to slow	5-Facet Prism			Program 1; Other motor reset; Gobo motor reset; Colors motor reset; Scan motor reset; All motor reset
50%	Stop						Moving speed	Studio fan control mode; Stage fan control mode; Auto fan
25%					Open			control mode; Display Invert On; Display Invert Off; Display On
0%	GOBO INDEXING		Animation Wheel			Prism indexing		Display Off; Unused

3. FIXTURE OVERVIEW

1) LED Assembly

2) Display

3) Jog wheel

4) Handle

5) Lock button

6) DMX Out

7) DMX In

8) Power Out

9) Power In

4. DIMENSIONAL DRAWINGS
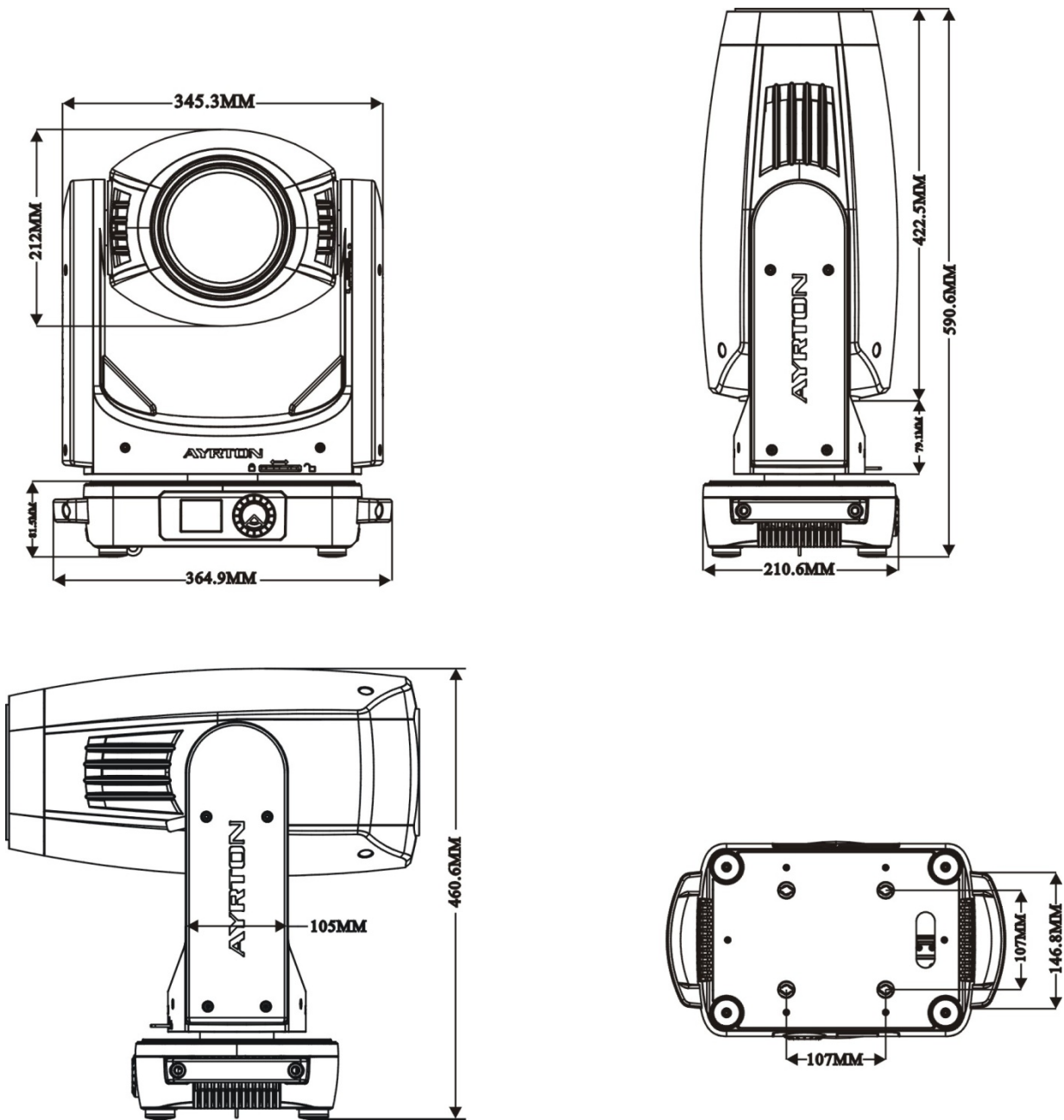
# 5. INSTALLATION INSTRUCTIONS

5.1. Rigging the device

> ⚠️ **CAUTION!**
> PLEASE CONSIDER THE RESPECTIVE NATIONAL NORMS DURING INSTALLATION. THE INSTALLATION MUST ONLY BE CARRIED OUT BY A QUALIFIED PERSON.

- The applicable temperature for this unit is between -10°C to 45°C. Do not use the unit under or above the temperature.
- The installation of the unit has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming deformation.
- The installation must always be secured with a secondary safety attachment，e.g.an appropriate safety cable.
- Never stand directly below the device when mounting，removing or servicing the fixture.
- The operator has to make sure the safety relating and machine technical installations are approved by an expert before taking the device into operation for the first time.
- These installations have to be approved by a skilled person once a year.
- Overhead mounting requires extensive experience，including amongst others calculating working load limits，installation material being used，and periodic safety inspection of all installation material and the device.If you lack these qualifications，do not attempt the installation yourself.Improper installation can result in bodily injury.

5.2. Rigging using the omega brackets

(1)Omega–holders
(2)Clamp
(3)Safety–rope
(4)Quick–lock fastener
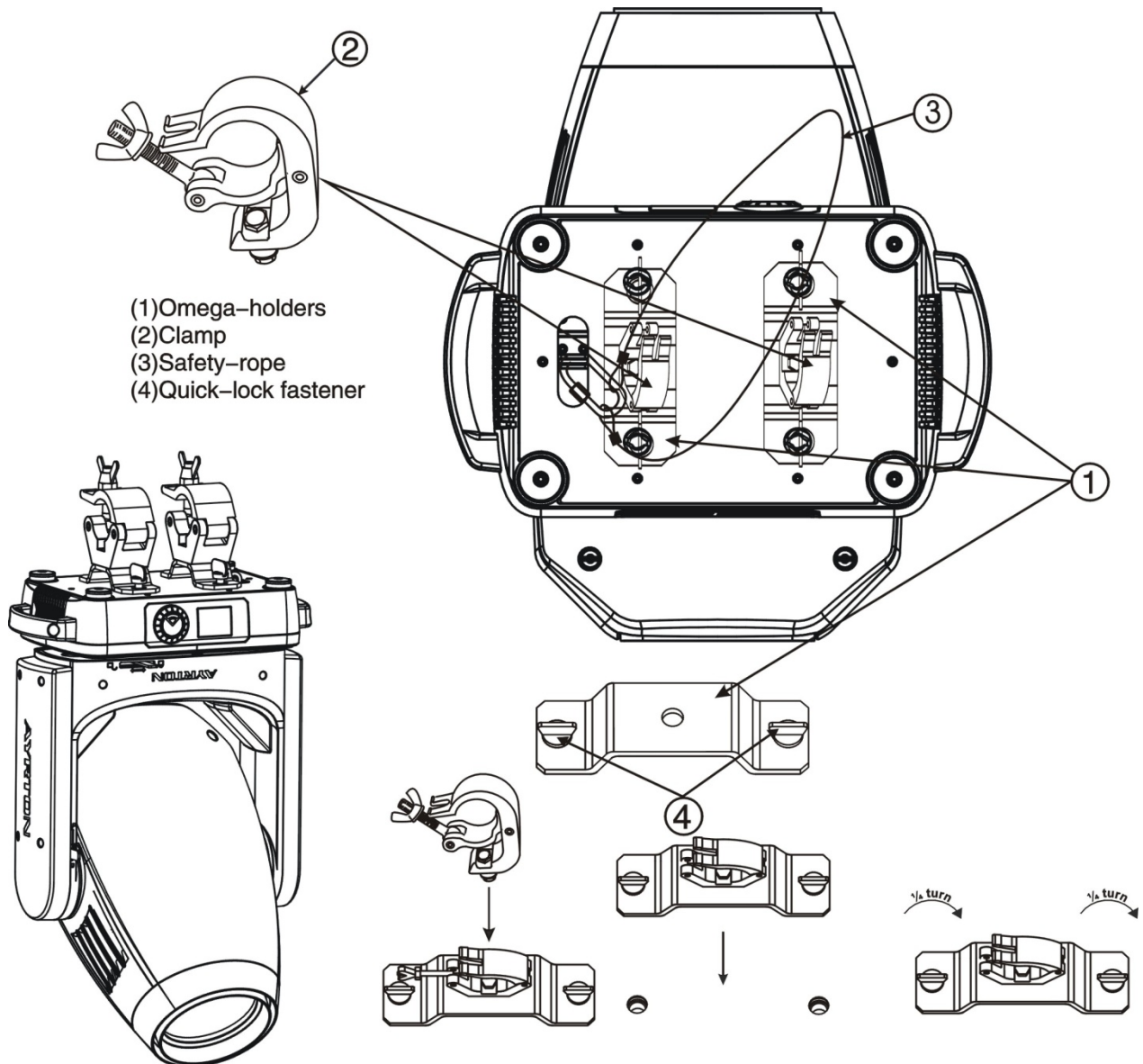
- Fix the clamp to the bracket by tightening the M12 nut and bolt to the bracket through the Φ13 hole in the middle of the bracket.
- Insert the quick-lock fasteners of the first Omega holder into the respective holes on the bottom of the device. Tighten the quick-lock fasteners fully clockwise.
- Install 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
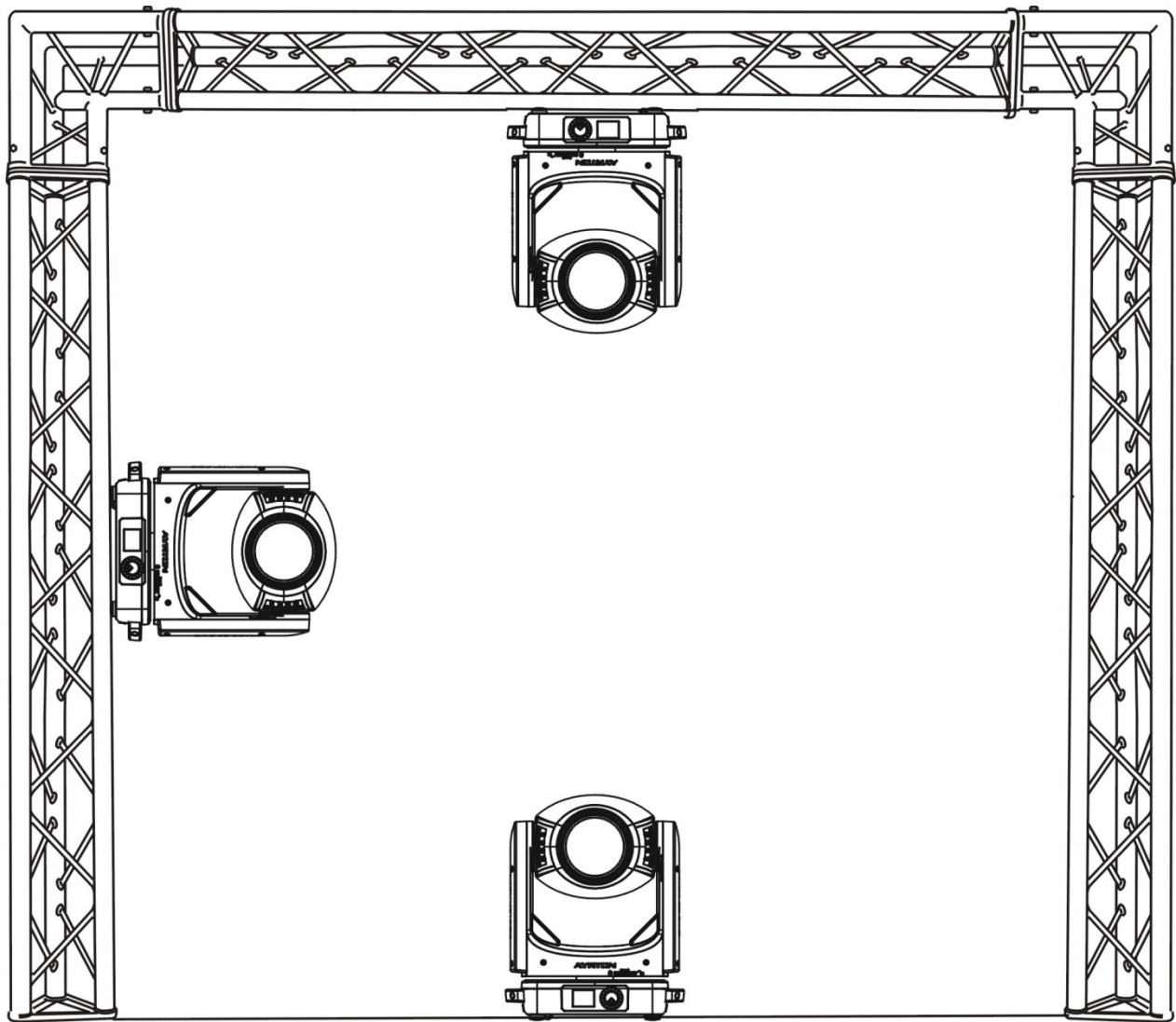
- Be sure this fixture is kept at least 2 m away from any flammable materials (decoration etc.).
- Always use and install the supplied safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.

☞ **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.

6. 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.

Address 79　　　　　　　　　Address 40　　　　　　　　　Address 1
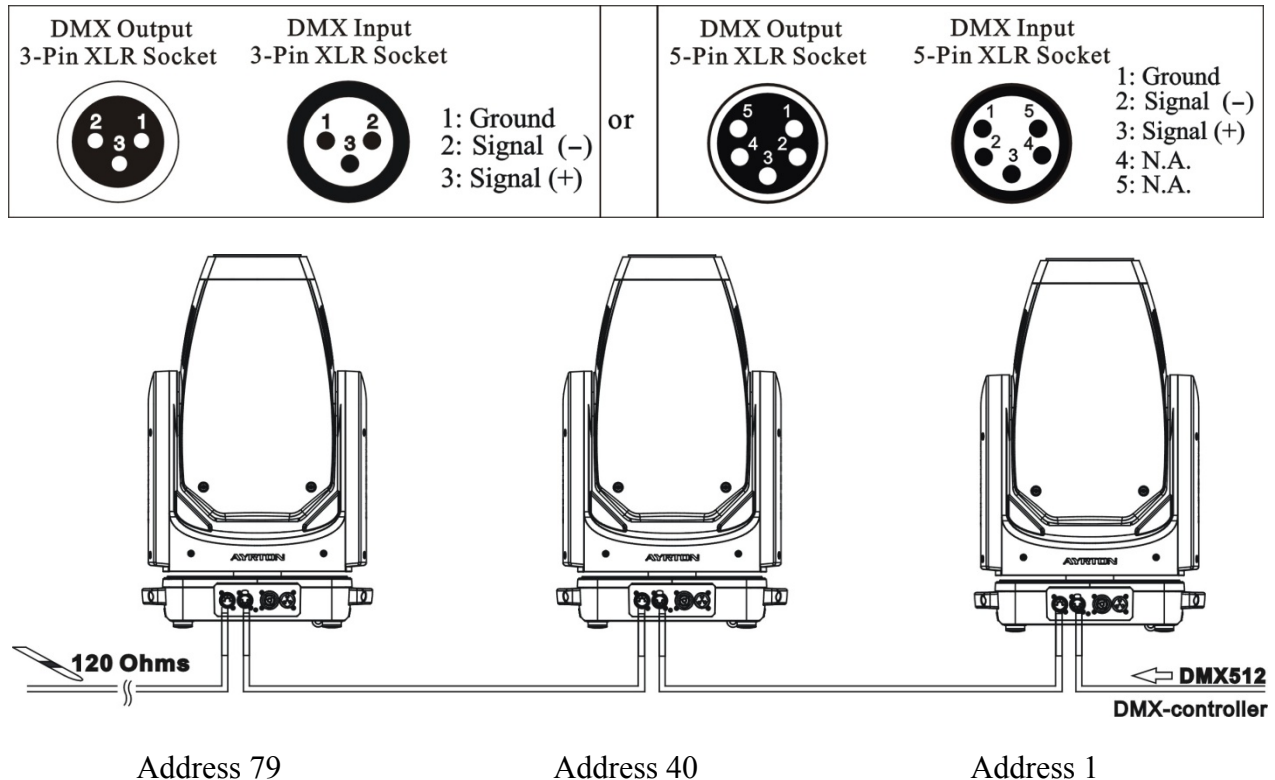
7. DMX-512 CONNECTION WITH DMX TERMINATOR

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.
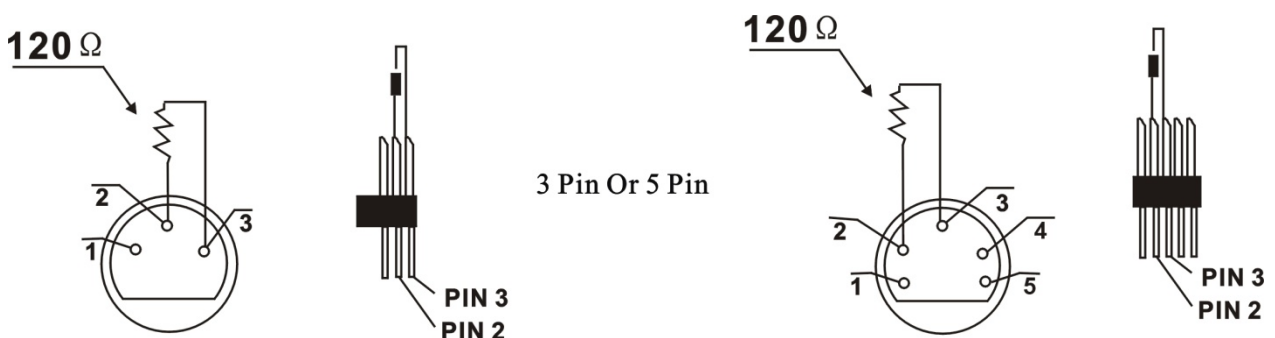
8. DEVICE DMX START ADDRESS SELECTION

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.

In the case of the LED moving head，in 39 channel mode，you should set the starting address of the first unit to 1，the second unit to 40 (39 + 1)，the third unit to 79 (39 + 40)，and so on.

9. 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 until the display starts flashing. Browse through the menu by turning jog wheel clockwise or counterclockwise.

Press the Jog wheel 2 times in order to select the desired menu, double click the Jog wheel for confirm. 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. Press the jog wheel for 2 seconds to exit menus.

When the unit is powered on，if no data signal is connected after 1 minute，then the display will switch off automatically. The Display does not need external power to operate in case there is battery，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.

<table>
<tr><td colspan="2" style="text-align:center">CAUTION!
THE BATTERY MUST BE A LI-ION RECHARGEABLE BATTERY,
THE SPECIFICATION IS AS FOLLOWING:</td></tr>
</table>

⚠️ **CAUTION!**
THE BATTERY MUST BE A LI-ION RECHARGEABLE BATTERY,
THE SPECIFICATION IS AS FOLLOWING:
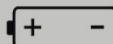
```
┌─────────┐
│ + │ - │
└─────────┘
Li-ion Rechargeable Battery
ICR 14500 3.7V
```

Default settings shaded

Address	Set Dmx Address	A001~AXXX		DMX address setting
Mode	User Mode	Stand Mode Basic Mode Extend Mode User Mode A User Mode B User Mode C		User's mode to change channel numbers
	Edit User ModeA :	Max channel PAN :		Preset User modes A,B,C :
Options	Status	No DMX Mode Pan Reverse Tilt Reverse Pan Degree Feedback Pan/Tilt Spd Hibernation	Close/Hold/Auto ON/OFF ON/OFF 630/540 ON/OFF Speed 1~ 4 OFF , 01M~99M	Auto run if no DMX Pan Reverse movement Tilt Reverse movement Pan Degree Select Movement Feedback Movement Speed Stand by Mode
	Service PIN	Service PIN Cross Load SW	Password=XXX ON/OFF	Service password is 050 Upload SW tio other units
	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 C°/F°
	Initial Pos.	PAN =XXX		Initial effect position
	Wireless DMX	Activate WDMX Act&Data Out		Activate WDMX Act&Data Out

		Rest WDMX		Rest WDMX
	Refresh Select	1.2K 2.4K 16K		Refresh Select
	Trigger	DMX Value Disp. Set To Slave	PAN…… Slave1, Slave2, Slave3	DMX Value Disp. Set To Slave
		Auto Program	Master / Alone	Auto Program
	ResetDefault	ON/OFF		Restore factory set.
Info	Time Info.	Current Time		XXXX(Hours)
		Ttl Life Hrs		XXXX(Hours)
		Last Run Hrs		XXXX(Hours)
		Timer PIN		Password=XXX
		Clr Last Run		ON/OFF
	Temp. Info	Head Temp.		XXX℃/℉
	Software Ver	V1.0……		Software version
Test	Home	All		Reset All
		Pan&Tilt		Reset Pan&Tilt
		Color		Reset Color
		Gobo		Reset Gobo
		Other		Reset Other
	Test Channel	PAN ……		Test function
	Manual Ctrl.	PAN =XXX :		Fine adjustment of the lamp
	Calibration	-Password- PAN :		Password "050" Calibrate and adjust the effects to standard/right position
Preset	Select Prog.	Prog. Part 1 = Program 1 ~ 10 Program 1 Prog. Part 2 = Program 1 ~ 10 Program 2 Prog. Part 3 = Program 1 ~ 10 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
9.1.1. Set DMX Address
With this function，you can adjust the desired DMX-address via the Display.
1. Double click jog wheel to access main menu.
2. The display will show"ADDRESS".
3. Doulbe click Jog wheel then display"Set DMX Address".
4. Turn the jog wheel clockwise then display"A001~AXXX".
5. Doulbe click Jog wheel to confirm
6. Long click the jog wheel to exit menu–"Set DMX Address"，then back to main menu .

9.2. Users Mode
9.2.1. User Mode
With this function，you can choose the User mode from Standard, Basic or Extended mode.
1．Double click jog wheel to access main menu，turn the jog wheel clockwise to display "USERS MODE".
2．Double click to edit.
3．Turn the jog wheel clockwise to display"User mode"，double click 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 – "User Mode"，then back to main menu by long press.

9.2.2. Edit User Mode
With this function，you can adjust the rest user defined channel order.
1．Double click jog wheel to access"USERS MODE"menu，turn the jog wheel until display"Edit User".
2．Double click 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.
5．Long click the jog wheel to exit menu – "Edit User"，then back to main menu by long click again.

9.3. Options
9.3.1. Status Settings
No DMX Status
With this function，if DMX signal is lost，unit will close its shutter or keep the last DMX values received，the default is hold.
1. Double click jog wheel to access main menu.
2. Turn the jog wheel clockwise then display"Options".
3. Double click to access"Options"，turn the jog wheel to select "Status".
4. Double click to access"Status"menu，The display will show"No DMX Status".
5. Double click to access"No DMX Status"，The display will show "Hold"，Turn the jog wheel to select"Close"，"Auto".
6. Double click to confirm
7. Long click the jog wheel to exit menu –"Status"，then back to main menu by long click again.

Pan Reverse

With this function you can reverse the Pan-movement.
1. Double click jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Options".
3. Double click to access "Options", turn the jog wheel to select "Status".
4. Double click to access "Status" menu, The display will show "Pan Reverse".
5. Double click to access "Pan Reverse", The display will show "OFF", Turn the jog wheel to select "NO".
6. Double click to confirm
7. Long click the jog wheel to exit menu – "Status", then back to main menu by long click again.

Tilt Reverse

With this function you can reverse the Tilt-movement.
1. Double click jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Options".
3. Double click to access "Options", turn the jog wheel to select "Status".
4. Double click to access "Status" menu, The display will show "Tilt Reverse".
5. Double click to access "Tilt Reverse", The display will show "OFF", Turn the jog wheel to select "NO".
6. Double click to confirm
7. Long click the jog wheel to exit menu – "Status", then back to main menu by long click again.

Pan Degree

With this function, you can select pan degree for 630 or 540.
1. Double click jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Options".
3. Double click to access "Options",
4. Turn the jog wheel to select "Status".
5. Double click to access "Status" menu, The display will show "Pan Degree".
6. Double click to access "Pan Degree", The display will show "540", Turn the jog wheel to select "630".
7. Double click to confirm
8. Long click to exit menu – "Status", then back to main menu by long click again.

Feedback

With this function, pan movement or tilt movement feedback can be activated or deactivated
1. Double click jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Options".
3. Double click to access "Options", turn the jog wheel to select "Status".
4. Double click to access "Status" menu, The display will show "Feedback".
5. Double click to access "Feedback", The display will show "ON", Turn the jog wheel to select "OFF".
6. Double click to confirm
7. Long click the jog wheel to exit the menu, then back to main menu by long click again.

Pan/Tilt Spd

With this function，you can select scan mode from 1 to 4.
1. Double click jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Options".
3. Double click to access "Options"，turn the jog wheel to select "Status".
4. Double click to access "Status" menu，The display will show "Pan/Tilt Spd".
5. Double click to access "Pan/Tilt Spd"，The display will show "Speed 1"，Turn the jog wheel to select "Speed 1"，"Speed 2"，"Speed 3"，"Speed 4".
6. Double click to confirm
7. Long click the jog wheel to exit the menu – "Status"，then back to main menu by long click again.

Hibernation：Standby mode

The device and step motors will be power off if the fixture stay without DMX signal for 15 mins (Factory default). Fixture will perform a reset once DMX signal back again.
1. Double click jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Options".
3. Double click to access "Options"，turn the jog wheel to select "Status".
4. Double click to access "Status" menu，The display will show "Hibernation".
5. Double click to access "Hibernation"，The display will show "OFF"，Turn the jog wheel to select "01M"，"02M" ... "99M".
6. Double click to confirm
7. Long click the jog wheel to exit menu –"Status"，then back to main menu by long click again.

9.3.2. Service PIN

Password

Password for this function is 050.

Cross Load SW

With this function you can set the fans speed mode between Auto, Stage, Studio and Silence.
1．Double click jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Options".
3．Double click to access "Options"，turn the jog wheel to select "Service PIN".
4．Double click to access "Service PIN" menu，The display will show "CrossLoad SW".
5．Double click to access "CrossLoad SW"，The display will show "CrossLoad SW"
6．Double click to confirm and wait until process is done
7．Long click the jog wheel to back to exit menu

9.3.3. Fans Control

Head Control

With this function you can set the fans speed mode between Auto, Stage, Studio and Silence.
1．Double click jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Options".
3．Double click to access "Options"，turn the jog wheel to select "Fans Control".

4．Double click to access "Fans Control" menu，The display will show "Head Control" .

5．Double click to access "Head Control"，The display will show "Auto"，Turn the jog wheel to select "Stage" ， "Studio" or "Silence".

6．Double click to confirm

7．Long click the jog wheel to back to exit menu – "Fans Control"，then back to main menu by long click again.

9.3.4. Display Setting

Shut off Time

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

1．Double click jog wheel to access main menu.

2．Turn the jog wheel clockwise then display "Options" .

3．Double click to access "Options"，turn the jog wheel to select "Display Setting" .

4．Double click to access "Display Setting" menu.The display will show "Shut off Time".

5．Double click to access "Shut off Time"，The display will show "05m"，Turn the jog wheel to select "02~60m" .

6．Double click to confirm

7．Long click the jog wheel to back to last button press – "Display Setting"，then back to main menu by long click again.

Flip Display

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

1．Double click jog wheel to access main menu.

2．Turn the jog wheel clockwise then display "Options" .

3．Double click to access "Options"，turn the jog wheel to select "Display Setting" .

4．Double click to access "Display Setting" menu，The display will show "Flip Display" .

5．Double click to access "Flip Display"，The display will show "OFF"，Turn the jog wheel to select "ON" .

6．Double click to confirm

7．Long click the jog wheel to exit menu – "Display Setting"，then back to main menu by long click again.

Key Lock

With this function you can activate the automatic key lock function. When activated，jog wheel will be locked automatically after 15 seconds. Press the jog wheel for 10 seconds to unlock.

1．Double click jog wheel to access main menu.

2．Turn the jog wheel clockwise then display "Options" .

3．Double click to access "Options"，turn the jog wheel to select "Display Setting" .

4．Double click to access "Display Setting" menu，The display will show "Key Lock" .

5．Double click to access "Key Lock"，The display will show "OFF"，Turn the jog wheel to select "ON" .

6．Double click to confirm

7．Long click to exit menu – "Display Setting"，then back to main menu by long click again.

DispFlash

Display will flash if no DMX is detected when this function is activated. This function is disabled as default.

1．Double click jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Options".
3．Double click to access "Options", turn the jog wheel to select "Display Setting".
4．Double click to access "Display Setting" menu，The display will show "DispFlash".
5．Double click to access"DispFlash"，The display will show "OFF"，Turn the jog wheel to select "ON".
6．Double click to confirm
7．Long click the jog wheel to exit menu – "Display Setting"，then back to main menu by long click again.

9.3.5. Signal Select

1．Double click jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Options".
3．Double click to access "Options", turn the jog wheel to select "Signal Select".
4．Double click to access "Signal Select"，The display will show "DMX"，Turn the jog wheel to select "DMX"，"WDMX".
5．Double click to confirm
6．Long click the jog wheel to exit menu – "Signal Select"，then back to main menu by long click again.

9.3.6. Temperature C/F

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

1．Double click jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Options".
3．Double click to access "Options", turn the jog wheel to select "Temperature C/ F".
4．Double click to access"Temperature C/ F"，The display will show "Celsius"，Turn the jog wheel to select "Fahrenheit".
5．Double click to conform
6．Long click the jog wheel to exit menu – "Temperature C/ F"，then back to main menu by long click again.

9.3.7. Initial Pos.

With this function you can display initial effect position.

1．Double click jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Options".
3．Double click to access "Options", turn the jog wheel to select "Initial Pos.".
4．Double click to access "Initial Pos.", The display will show "PAN=XXX".
5．Long click the jog wheel to exit menu – "Initial Pos.", then back to main menu by long click again.

9.3.8. Wireless DMX

From factory，this projector is prepared for wireless data transmission (W-DMX). If you wish to de-activate W-DMX control，you can select the function "De-activate WDMX" by turning the encoder. With the function "rest"，you can log out the projector from the wireless sender.

1．Double click jog wheel to access main menu.

2. Turn the jog wheel clockwise then display "Options".
3. Double click to access "Options", turn the jog wheel to select "Wireless DMX".
4. Double click to access "Wireless DMX", The display will show "Activate WDMX", Turn the jog wheel to select "Act&Data Out", "Rest WDMX".
5. Double click to confirm
6. long click the jog wheel to back to last button press – "Wireless DMX", then back to main menu by long click again.

9.3.9. Refresh Select

This menu allows you to change the PWM frequency
1. Double click jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Options".
3. Double click to access "Options", turn the jog wheel to select "Refresh Select".
4. Double click to access "Refresh Select", The display will show "1.2K", Turn the jog wheel to select "2.4K", "16K".
5. Double click to confirm
6. Long click the jog wheel to exit menu – "Refresh Select", then back to main menu by long click again.

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 jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Options".
3. Double click to access "Options", turn the jog wheel to select "Trigger".
4. Double click to access "Trigger" menu, The display will show "DMX Value Disp".
5. Double click to access "DMX Value Disp", The display will show "PAN=……..".
6. Long click the jog wheel to exit menu – "Trigger", then back to main menu by long click again.

Set To Slave
With this function, you can define the device as slave.
1. Double click jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Options".
3. Double click to access "Options", turn the jog wheel to select "Trigger".
4. Double click to access "Trigger" menu, The display will show "Set To Slave".
5. Double click to access "Set To Slave", The display will show "Slave1", "Slave2", "Slave3".
6. Long click the jog wheel to exit menu – "Trigger", then back to main menu by long click again.

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 jog wheel to access main menu.

2．Turn the jog wheel clockwise then display "Options" .
3．Double click to access "Options"，turn the jog wheel to select "Trigger" .
4．Double click to access "Trigger" menu，The display will show "Auto Program" .
5．Double click to access "Auto Program"，The display will show "Master"，"Alone".
6．Long click the jog wheel to exit menu – "Trigger"，then back to main menu by long click again.

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 jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Options" .
3．Double click to access "Options"，turn the jog wheel to select "Reset Default" .
4．Double click to access "Reset Default" menu，The display will show "OFF"，Turn the jog wheel to select "ON" .
5．Double click to confirm
6．Long click the jog wheel to exit menu – "Reset Default"，then back to main menu by long click again.

9.4.　Info
9.4.1.　Time information
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 jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Info" .
3．Double click to access "Info"，turn the jog wheel to select "Time Info." .
4．Double click to access "Time Info."，The display will show "Current Time" .
5．Double click to access "Current Time"，The display will show "XXXX (Hours)" .
6．Long click the jog wheel to exit menu – "Time Info"，then back to main menu by long click again.

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 jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Info" .
3．Double click to access "Info"，turn the jog wheel to select "Time Info." .
4．Double click to access "Time Info."，The display will show "Ttl Life Hrs" .
5．Double click to access "Ttl Life Hrs"，The display will show "XXXX (Hours)" .
6．Long click the jog wheel to exit menu – "Time Info"，then back to main menu by long click again.

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 jog wheel to access main menu.

2. Turn the jog wheel clockwise then display "Info".
3. Double click to access "Info", turn the jog wheel to select "Time Info.".
4. Double click to access "Time Info.", The display will show "Last Run Hrs".
5. Double click to access "Last Run Hrs", The display will show "XXXX (Hours)".
6. Long click the jog wheel to exit menu – "Time Info", then back to main menu by long click again.

Timer PIN

With this function，you will be prompted to enter the Timer PIN.
1．Double click jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Info".
3．Double click to access "Info", turn the jog wheel to select "Time Info.".
4．Double click to access "Time Info.", The display will show "Timer PIN".
5．Double click to access "Timer PIN", Enter Timer PIN "Password=038".
6．Long click the jog wheel to exit menu – "Time Info", then back to main menu by lo,g click again.

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 jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Info".
3. Double click to access "Info", turn the jog wheel to select "Time Info.".
4. Double click to access "Time Info.", The display will show "Clear Last Run".
5. Double click to access "Clear Last Run", The display will show "OFF", turn the jog wheel to select "ON".
6. Double click to confirm
7. Long click the jog wheel to exit menu – "Time Info", then back to main menu by long click again.

9.4.2. Temp.Info
Head Temp.
With this function you can display the temperature on the display board of the base in Celsius.
1. Double click jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Info".
3. Double click to access "Info", turn the jog wheel to select "Temp Info".
4. Double click to access "Temp Info", The display will show "Head Temp.".
5. Double click to access "Head Temp.", The display will show "XXX °C/ °F".
6. Long click the jog wheel to exit menu – "Temp Info", then back to main menu by long click again.

9.4.3. Software Ver
With this function，you can display the software version of the device.
1. Double click jog wheel to access main menu.
2. Turn the jog wheel clockwise then display "Info".
3. Double click to access "Info", turn the jog wheel to select "Software Ver".
4. Double click to access "Software Ver", The display will show "Ver x.x.x".

5. Long click the jog wheel to exit menu – "Software Ver"，then back to main menu by long click again.

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.
1．Double click jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Test"．
3．Double click to access "Test"，turn the jog wheel to select "Home"．
4．Double click to access "Home"，The display will show "All"，Turn the jog wheel to select "All"，"Pan&Tilt"，"Color"，"Gobo"，"Other"．
5．Long click the jog wheel to exit menu – "Test"，then back to main menu by long click again.

9.5.2. Test Channel
With this function you can test each channel's function to ensure correct operation.
1．Double click jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Test"．
3．Double click to access "Test"，turn the jog wheel to select "Test Channel"．
4．Double click to access"Test Channel"，The display will show"Pan"，Turn the jog wheel to select other channel.
5．Long click the jog wheel to exit menu – "Test"，then back to main menu by long click again.

9.5.3. Manual Control
When set to Manual Mode，fixture will be back to factory settings. If 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 jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Test"．
3．Double click to access "Test"，turn the jog wheel to select "Manual control"．
4．Double click to access "Manual control"，The display will show "PAN=XXX"．
5．Double click to enter the Pan value. Etc..
6．Long click the jog wheel to exit menu – "Test"，then back to main menu by long click again.

9.5.4. Calibration
With this function，you can calibrate and adjust the home position of fixture effects. Password is 050.
1．Double click jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Test"．
3．Double click to access "Test"，turn the jog wheel to select "Calibration"．
4．Double click to access "Calibration"，The display will show "Password=050"．
5．Long click the jog wheel to exit menu – "Test"，then back to main menu by long click again.
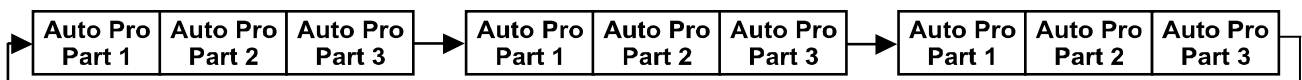
9.6. Preset

1．Double click jog wheel to access main menu.
2．Turn the jog wheel clockwise then display "Preset".
3．Double click to access "Preset", turn the jog wheel to select "Select prog.", "Edit prog.", "Edit Scenes", "Scenes Input".
4．Long click the jog wheel to exit menu – "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.
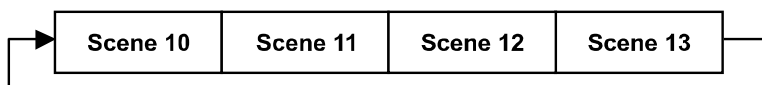
Auto Pro Part 1	Auto Pro Part 2	Auto Pro Part 3	→	Auto Pro Part 1	Auto Pro Part 2	Auto Pro Part 3	→	Auto Pro Part 1	Auto Pro Part 2	Auto Pro Part 3

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
6．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 Part1'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:

Scene 10	Scene 11	Scene 12	Scene 13

Part 2:

Scene 8	Scene 9	Scene 10	Scene 8

Part 3:

Scene 12	Scene 13	Scene 14	Scene 15
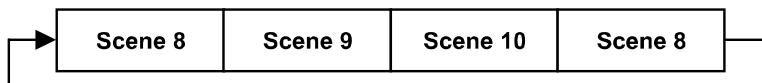
10. DMX PROTOCOL

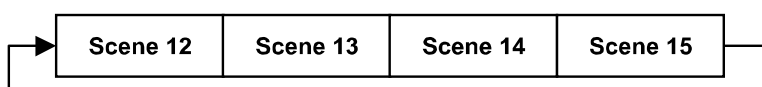| DMX channel´s functions and their values (39DMX channels):				
Mode/Channel			Value	Function
St	Ba	Ex		
1	1	1		**PAN Movement 8bit :**
			0-255	Pan Movement
2		2		**Pan Fine 16bit**
			0-255	Fine control of Pan movement
3	2	3		**TILT Movement 8bit :**
			0-255	Tilt Movement
4		4		**Tilt Fine 16bit**
			0-255	Fine control of Tilt movement
5	3	5		**Speed Pan/Tilt movement:**
			0-225	max to min speed
			226-235	blackout by movement
			236-245	blackout by all wheel changing
			246-255	no function
6	4	6		**Shutter, strobe:**
			0-10	Shutter closed
			11-20	No function (shutter open)
			21-117	Strobe effect slow to fast
			118-126	No function (shutter open)
			127-180	Pulse-effect in sequences
			181-191	No function (shutter open)
			192-245	Random strobe effect slow to fast
			246-255	No function (shutter open)
7	5	7		**Dimmer intensity:**
			0-255	Intensity 0 to 100%
		8		**Fine Dimmer intensity:**
			0-255	Dimmer intensity fine
8	6	9		**Chase Patterns:**
			0-9	Open
			10-19	Chase 1
			20-29	Chase 2
			30-39	Chase 3
			40-49	Chase 4
			50-59	Chase 5
			60-69	Chase 6
			70-79	Chase 7
			80-89	Chase 8
			90-99	Chase 9
			100-109	Chase 10

			110-119	Chase 11
			120-129	Chase 12
			130-139	Chase 13
			140-255	Reserved
9	7	10		**Chase Speed:**
			0-125	Fast to Slow Backward
			126-130	Stop (Speed=0)
			131-255	Slow to Fast Forward
10	8	11		**Chase Fade:**
			0-255	Fade chase
11	9	12		**Zoom :**
			0-255	Zoom adjustment from small to big
		13		**Zoom Fine:**
			0-255	Zoom adjustment Fine
12	10	14		**Focus :**
			0-255	Continuous adjustment from near to far
		15		**Focus Fine:**
			0-255	Continuous adjustment Fine
13	11	16		**Auto Focus :**
			0-50	Auto Focus Off
			51-100	5m
			101-150	7.5m
			151-200	10m
			201-255	15m
14	12	17		**AutoFocus Fine:**
			0-255	Continuous adjustment Fine
15	13	18		**Color Wheel:**
			0-3	Open / white
			4-7	Color 1
			8-11	Color 2
			12-15	Color 3
			16-19	Color 4
			20-23	Color 5
			24-27	Color 6
			28-31	Color 7
			32-127	Color indexing
			128-189	Forwards rainbow effect from fast to slow
			190-193	No rotation
			194-255	Backwards rainbow effect from slow to fast
		19		**Color Wheel Fine :**
			0-255	Color Wheel colour change to any position Fine
16	14	20		**Cyan Color :**
			0-255	Cyan (0-white, 255-100% Cyan)

		21		**Cyan Color Fine　:**
			0-255	Cyan Fine
17	15	22		**Magenta Color :**
			0-255	Magenta (0-white, 255-100% magenta)
		23		**Magenta Color Fine :**
			0-255	Magenta Fine
18	16	24		**Yellow Color　　:**
			0-255	Yellow (0-white, 255-100% Yellow)
		25		**Yellow Color Fine :**
			0-255	Yellow Fine
19	17	26		**CTO Color　　:**
			0-255	CTO (0-white, 255-100% CTO)
		27		**CTO Color Fine :**
			0-255	CTO Fine
20	18	28		**Rotating gobos, cont. rotation 1:**
			0-9	Open
			10-19	Rot. gobo 1
			20-29	Rot. gobo 2
			30-39	Rot. gobo 3
			40-49	Rot. gobo 4
			50-59	Rot. gobo 5
			60-69	Rot. gobo 6
			70-77	Rot. Gobo 7
			78-93	Gobo 1 shake slow to fast
			94-109	Gobo 2 shake slow to fast
			110-125	Gobo 3 shake slow to fast
			126-141	Gobo 4 shake slow to fast
			142-157	Gobo 5 shake slow to fast
			158-173	Gobo 6 shake slow to fast
			174-189	Gobo 7 shake slow to fast
			190-221	Gobo wheel rotation forwards from fast to slow
			222-223	No rotation
			224-255	Gobo wheel rotation f backwards from slow to fast
21	19	29		**Rotating gobo index,rotating gobo rotation 1:**
			0-127	Gobo indexing
			128-189	Forwards gobo rotation from fast to slow
			190-193	No rotation
			194-255	Backwards gobo rotation from slow to fast
		30		**Rotating gobo indexing Fine 1:**
			0-255	Fine indexing
22	20	31		**Fixed Gobo2 :**
			0-9	open
			10-19	Gobo 1

			20-29	Gobo 2
			30-39	Gobo 3
			40-49	Gobo 4
			50-59	Gobo 5
			60-69	Gobo 6
			70-79	Gobo 7
			80-89	Gobo 8
			90-99	Gobo 9
			100-109	Gobo 1 shake slow to fast
			110-119	Gobo 2 shake slow to fast
			120-129	Gobo 3 shake slow to fast
			130-139	Gobo 4 shake slow to fast
			140-149	Gobo 5 shake slow to fast
			150-159	Gobo 6 shake slow to fast
			160-169	Gobo 7 shake slow to fast
			170-179	Gobo 8 shake slow to fast
			180-189	Gobo 9 shake slow to fast
			190-221	Clock-wise scroll from fast to slow
			222-223	Reserved
			224-255	Counter clock-wise scroll from slow to fast
23	21	32		**Animation wheel:**
			0-7	open
			8-127	Forwards rotation from fast to slow
			128-135	No rotation
			136-255	Backwards rotation from slow to fast
24	22	33		**Iris:**
			0-191	Max. diameter to Min.diameter
			192-223	Pulse closing fast to slow
			224-255	Pulse opening slow to fast
		34		**Iris Fine:**
			0-255	Iris Fine
25	23	35		**Prism:**
			0-127	Open
			128-255	5-Facet Prism
26	24	36		**Rotating prism index, rotating prism rotation**
			0-127	Prism indexing
			128-189	Forwards prism rotation from fast to slow
			190-193	No rotation
			194-255	Backwards prism rotation from slow to fast
		37		**Rotating prism indexing Fine :**
			0-255	Fine indexing
27	25	38		**Frost:**
			0-255	0-100% Frost

				Reset, internal programs:
28	26	39	0-9	Not used
			10-14	Display Off
			15-19	Display On
			20-24	Display Invert Off
			25-29	Display Invert On
			30-34	Auto fan control mode
			35-39	Stage fan control mode
			40-44	Studio fan control mode
			45-49	Silent fan control mode
			50-54	Dimmer Square
			55-59	Dimmer Linear
			60-64	1,2kHz
			65-69	2,4kHz
			70-74	16kHz
			75-79	Not used
			80-84	All motor reset
			85-87	Scan motor reset
			88-90	Colors motor reset
			91-93	Gobo motor reset
			94-99	Other motor reset
			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	Internal program 8 (scene49~56 of EEPROM)

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 Er
(Zoom 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 Zoom - movement is not located in the default position after the reset.

Focus Er
(Focus 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 Focus - movement is not located in the default position after the reset.

Color wheel Er
(Color 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 Color - movement is not located in the default position after the reset.

Cyan Color Er
(Cyan Color - 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 CMY - movement is not located in the default position after the reset.

Magenta Color Er

(Magenta Color 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 CMY - movement is not located in the default position after the reset.

Yellow Color Er

(Yellow Color - 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 CMY - movement is not located in the default position after the reset.

CTO Er

(CTO - 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 CTO - movement is not located in the default position after the reset.

Rot_Gobo1 wheel Er

(Rot_Gobo1 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 Rot_Gobo1 - movement is not located in the default position after the reset.

Fix_Gobo wheel Er

(Fix_Gobo 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 Fix_Gobo - movement is not located in the default position after the reset.

Animation wheel Er

(Animation 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 Animation - movement is not located in the default position after the reset.

Iris Er

(Iris - 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 Iris - movement is not located in the default position after the reset.

Prism_5 Er

(Prism_5 - 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 Prism_5 - movement is not located in the default position after the reset.

Frost 1 Er

(Frost 1 - 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 Frost 1 - movement is not located in the default

position after the reset.

Frost 2 Er
(Frost 2 - 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 Frost 2 - movement is not located in the default position after the reset.

Animation_Rot wheel Er
(Animation_Rot 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 Animation_Rot - movement 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***:** All information is subject to change without prior notic.