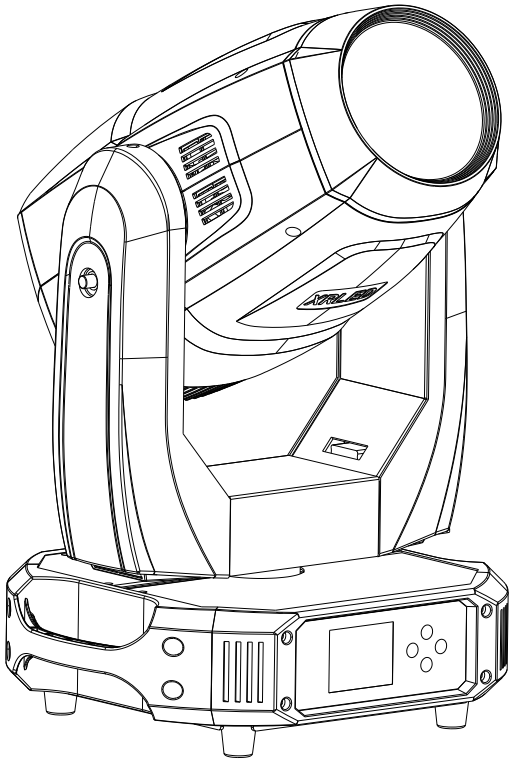


XRLED 1600-W BWSF

PR-8194

The user manual contains important information about the safe installation and use of a projector. Please read and follow these instructions carefully and keep the manual in a safe place for future reference.

PR LIGHTING LTD.
http://www.pr-lighting.com

INDEX

ACCESSORIES

The following items are supplied with the projector and please check:

Name	Quantity	Unit	Remark
XLR connectors	1	Set	Male and female
Safety cord	1	Pc	
User manual	0	Pc	QR Code
Power cord	1	Pc	

Please note that as part of our ongoing commitment to continuous product development, specifications are subject to change without notice. Whilst every care is taken in the preparation of the manual we reserve the right to change specifications in the course of product improvement. The publishers cannot be held responsible for the accuracy of the information herein, or any consequence arising from them.
Every unit is tested completely and packed properly by the manufacturer. Please make sure the packing and / or the unit are in good condition before installation and use. Should there be any damage caused by transportation, consult your dealer and do not use the unit. Any damage caused by improper use will not be assumed by the manufacturer and / or dealer.

Note: For the products made by Guangzhou PR lighting Ltd, the warranty for the whole product is one year starting from the delivery date but the light source is not within the warranty.

1. SAFETY AND WARNINGS

NOTE

Before a projector's installation, power-on, operation and maintenance, please carefully read the safety information hereinafter!

The following safety signs are used in the user manual.

						
Warning	**User Manual**	**Electrical shock**	**Goggles**	**Protective Gloves**	**Flames**	**High Temperature**

- When unpacking , check if there is transportation damage before using the projector. Should there be any damage caused by transportation, consult your dealer and do not use it.
- The manufacture is not responsible for loss caused by the user not following the manual or changing the projector as he/she likes.
- Please be noted that the damage caused by changing the projector at will is not warranted.
- Do not hesitate to contact the dealer or the manufacturer if any questions or advice.

- The projector is for indoor use only, IP20.
- Use only in dry locations. Keep this unit away from rain and moisture, excessive heat, humidity and dust. Do not allow contact with water or any other liquids.
- The projector should be kept away from high temperature, fire, electrical surge, vibration and strong light while being operated.
- The projector is only intended for installation, operation and maintenance by qualified personnel. And the operation must strictly follow the procedures in the manual.
- No repairable parts in the projector and do not open covers for maintenance by yourself.

- Don't look straightly into the light sources especially for epileptics, otherwise eyes will be burned..
- Do not connect this device to any type of dimmer pack.
- lens and other optical parts shall be replaced immediately if they have deformed or been damaged, otherwise the light output will be compromised.
- For the location of a lighting fixture, it shouldn't be seen in the distance of less than 4 meters.

- Before operation, please confirm that all covers(housing) are on and screws tightened. It's forbidden to use a projector while covers(housing)are off .
- Keep the lamp clean and do not touch it with bare hands.
- While operating it, wear protective items.

- Any electrical connection must be carried out by a qualified person .
- Before installation, please confirm the voltage supplied matches what is required for the projector.
- Each projector must be properly earthed and installed as per related electrical standards.
- Do not use power cord with its insulator damaged and connect the power cord with other cables.
- If the projector is not used or under cleaning,, please hold the plug and unplug it. Do not unplug it forcefully or by pulling the power cable.
- All power cords must conform to related safety and regulations.
- While being operated, the projector should not be under rains or in humidity.
- Do not switch on and off the projector constantly in very short intervals, otherwise the light source's and other electrical parts' life will be shortened .

•There are safety cord holes at the bottom of the base of a projector. In view of safety, please run the safety cord supplied through the safety cord holes for safety support.
•Before any installation, maintenance and cleaning work, please ensure the projector is disconnected from power mains.

•.After stable operation under normal ambient temperature ,the temperature of the external surface of the housing of the LED lighting fixture (the surface of the heat sink) is 75℃ after the stable running.
•While the LED is lit for the first time, there will be smoke and strange smell. It's normal and does not mean the projector has some defects.
•While projector running, do not touch the metal housing with bare hand, otherwise get burned.
• Under normal ambient conditions, the housing's temperature should be less than 75℃.

•Do not mount the projector directly on inflammable surface.
•Do not project the beam straightly on combustible items and the minimum distance between the projector and illuminated items is 10m.
•A projector should be installed with good ventilation and the minimum distance between the projector and walls is 50cm. At the same time, please ensure the fans and air inlets and outlets are workable.
•To avoid sunlight or other light penetrating into the head via the front lens, resulting in high temperature internally causing damages to the projector. Before power-off, please use Tilt channel to move the head and make it facing downward.

• The product meets The General Technical Requirements and Standards for Recycle and Use Of Expired Appliance and Electronic Products.
• When the product meets disposal standards and needs to be disposed, a client needs to dispose and recycle it.

2. INSTRUCTIONS

•CLEANING AND MAINTENANCE

If a projector can't start. Please check if the fuse is blown up. If it does, replace it with a new fuse with same ratings. And the projector has over-temperature protective device. If the temperature is too high, the protective device will be triggered to shut the projector off. When it happens, please check if the fans run normally or fan shield is blocked by dust. After the issue is solved, restart the projector.

The accumulation of oil, smoke and dust on the lens will compromise the light output. Cleaning a projector is very necessary to ensure a reliable use of it. Cooling fans need to be cleaned every 15days. Internal lens, reflector and hot mirror need to be cleaned periodically to optimize light output.

Cleaning frequency is to be decided by operations and its environment. Use soft cloth and normal detergent for glass for cleaning work. It's advised external optical system be cleaned every 20days and internal optical systems every 30/60days. Keep lens clean and do not touch optical parts with bare hands.

•Before any maintenance and cleaning, please ensure the project is off the power.
•Only qualified person is allowed to do maintenance.
•During maintenance and before maintenance, the projector must be off power.

•To avoid sunlight or other light penetrating into the head via the front lens, resulting in high temperature internally causing damages to the projector. Before power-off, please use Tilt channel to move the head and make it facing downward.
•Do not use alcohol or other organic solvent to clean the housing to avoid damage.
•Do not use any solvent with chemical elements to clean color filters or hot mirror.

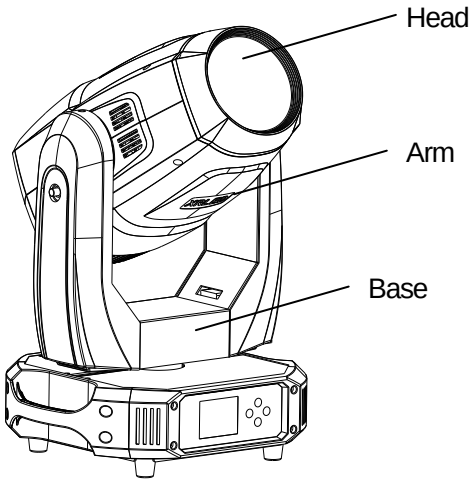
•LUBRICATION

To ensure smooth movement of gobos and zoom and focus lens, it's advised rotators' bearings and 2 sliding bars for zoom and focus lens be lubricated every 2 months. High quality and high temperature lubricant/grease is advised..

•TROUBLESHOOTING

PROBLEM	ACTION
The projector can't be switched on	➢ Check if the fuse is burned ➢ Check if the power cord is connected well ➢ Check if the switching power supply is bad or not connected well. A professional technician is required for the repair ➢ Check if the control board is connected well. .A professional technician is required for the repair
The projector can be switched on , but the LED lamp's brightness can't be controlled	➢ Check if the LED driver board is connected well. A professional technician is required for the repair
The projector can be switched on normally, but not controlled by the DMX controller	➢ Make sure that the fixture's start address is right ➢ Replace or repair the XLR signal cable.
The beam is not bright and its brightness decreases sharply	➢ Make sure the fans are working well or fans and their shields are not blocked by dust. ➢ Make sure that the internal optics is clean.
The project image appears to have a halo	➢ Carefully clean the LED lamp, optical lenses and other components.
Heavily Defective Beam	➢ Check if lens are in good condition(not cracked) ➢ Clean dust or grease on the lens.

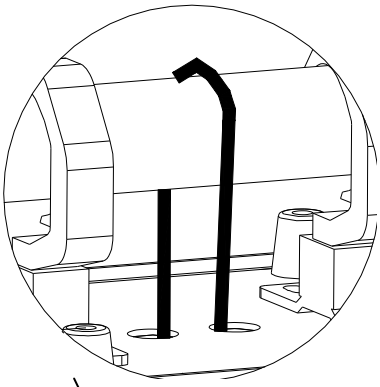
3. APPEARANCE



4. INSTALLATION

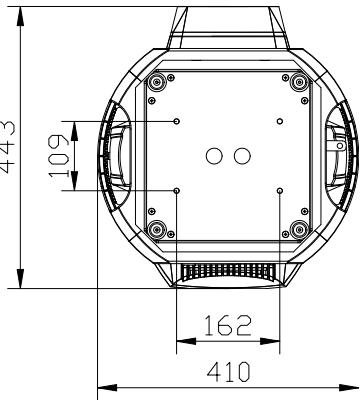
•RIGGING

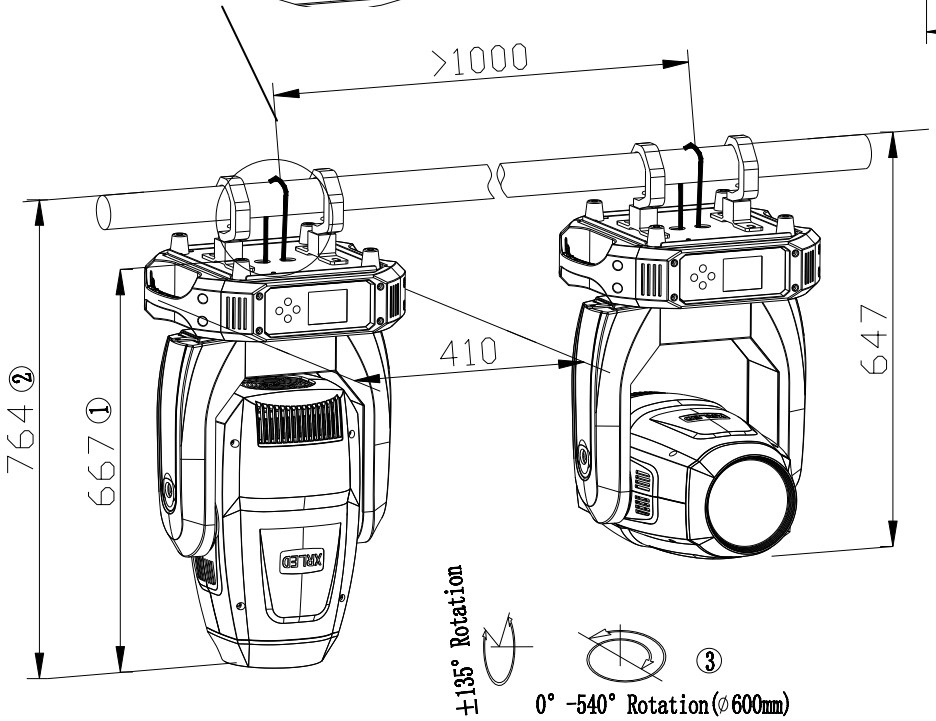
Before moving a projector, Please lock Pan and Tilt. Before its operation, please unlock them. It's forbidden to run a projector with power while it is locked.



Warning

Please run the safety cord through its 2 holes for safety





Note:

1. the distance between the foot of the base and the front lens cover(the head facing downward)
2. the distance between mounting truss and the front lens cover(the head facing downward)
3. The maximum diameter of the rotating head (minimum spacing between fixtures)

Take 2 clamps and the safety cord out from the package and mount 2 clamps on the underside of fixture with 2 retainers attached to each clamp. Hang the fixture on the structure and fasten the screws attached to each clamp. (See the **WARNING** on the underside of the base as shown above) **To pass the SAFETY CORD through the HOLES for safety!** Always ensure that the projector is firmly anchored to avoid vibration and slipping whilst functioning. Always ensure that the structure that you are going to mount the projector to is secure and strong enough to support the weight of a projector.

WARNING:

- The projector MUST be lifted or carried by the HANDLES instead of clamps.
- .For safety the safety cord should afford 10 times the Projector's weight.

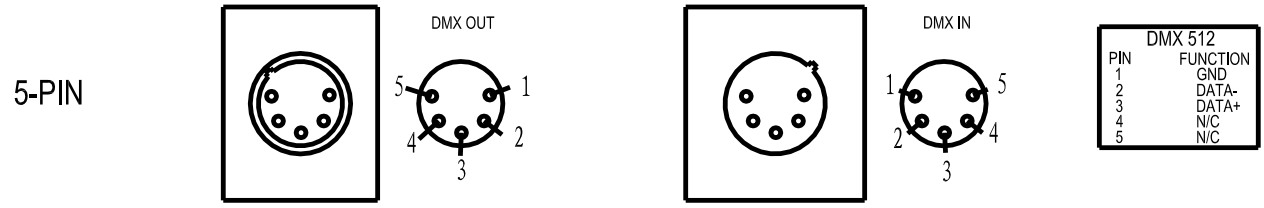
- **POWER CONNECTION**

  Connect the power cord as follows:
  L (live) =brown
  E (earth) =yellow/green
  N (neutral) =blue

Before power connection, please ensure the power supplied must match what the nameplate says. It is recommended that each projector be connected with power separately so that they may be individually switched on and off.

•The earth wire(yellow/green) must be connected to the ground. And electrical connection must be in accordance with the standards concerned.
•If any questions about the electrical installation, do not continue but consult a qualified electrician.

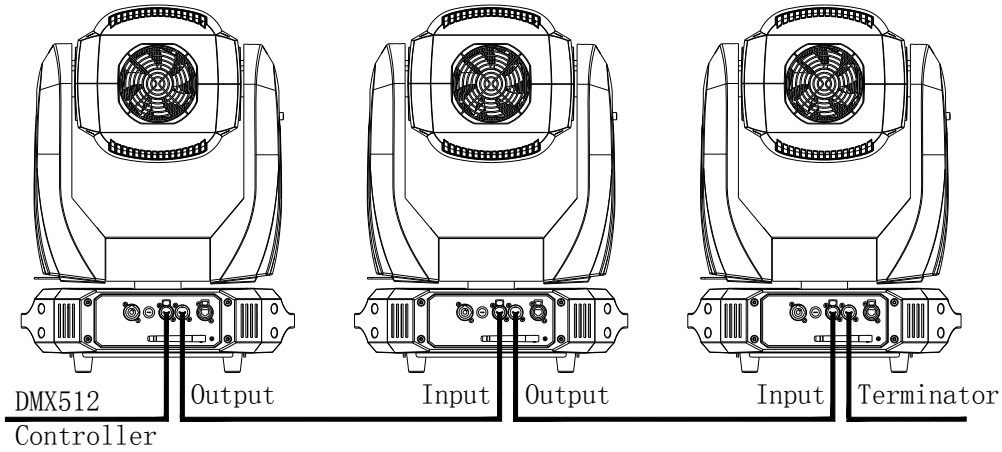
•DMX CONTROL CONNECTION:



Connection between controller and projector and between one projector and another must be made with a twin-screened cable, with each wire having at least a 0.5mm in diameter. Connection to and from the projector is via cannon 5 pin (which are included with the projector) or 5 pin XLR plugs and sockets. The XLR's are connected as shown in the figure above.

Note: care should be taken to ensure that none of the pins touch the metallic body of the plug or each other. XLR plugs and sockets mustn't be connected in any way other than mentioned in the above figure. The XR330BWS accepts digital control signals in protocol DMX512 (1990).

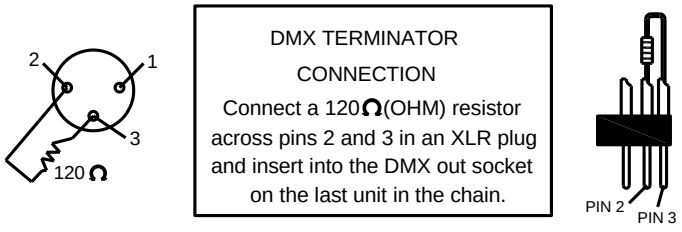
Connect the controller's DMX output to the first fixture's DMX input, and connect the first fixture's DMX output to the second fixture's DMX input and connect the rest fixtures in the same way. Eventually connect the last fixture's DMX output to a DMX terminator as shown in the figure below.



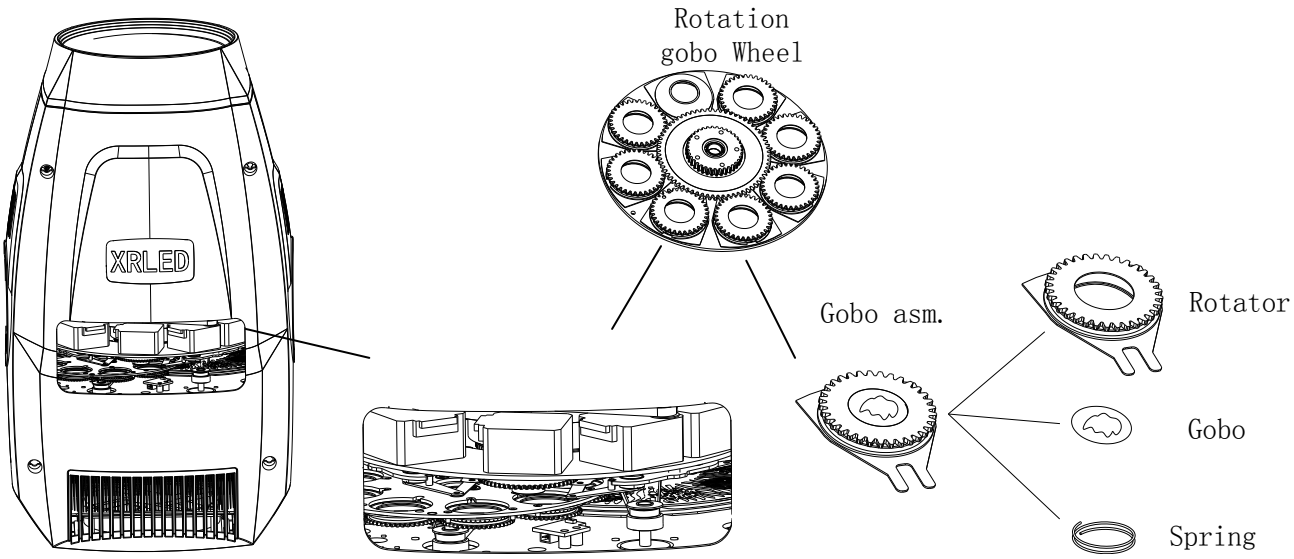
•DMX TERMINATOR

In the Controller mode, at the last fixture in the chain, the DMX output has to be connected with a DMX terminator. This prevents electrical noise from disturbing and corrupting the DMX control signals.

The DMX terminator is simply an XLR connector with a 120Ω (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. The connections are illustrated below.



- **GOBO REPLACEMENT**



Open the head cover after locking the Tilt and loosening 6 fast-fit screws of the cover and the structures as illustrated by the above figures will be seen.
For the rotating gobos: Take out the rotators by hand and remove the spring and gobo. Place a new gobo into the rotator and put back the spring. Ensure the spring is in the narrower side of the rotator, i.e. inner circle of the rotator, and flatten it. At last, use proper tool to compress the spring and with the help of the other hand place the rotator back to its original place in the wheel.

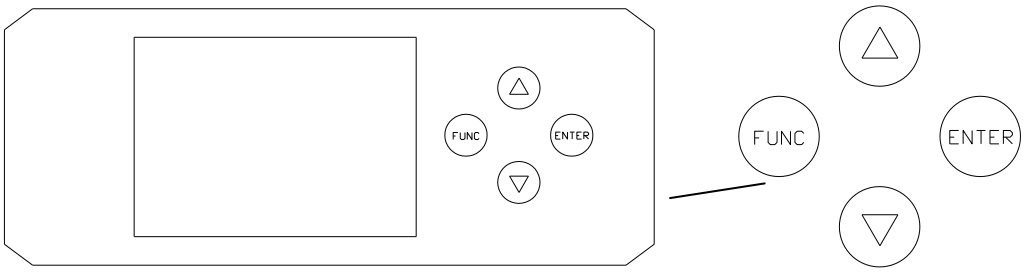
Note: Do not touch the color filter and gobos by hand. Clean and soft paper or cloth must be between hands and gobos or color filters. Tighten the 6 fast-fit screws after the head cover is on. Unlock the Tilt.

DANGER!

Before replacement of gobos, the projector must be off the power.

5. SETUP AND CONFIGURATION

•FRONT PANEL OPERATION



The projector configuration can be set conveniently via push buttons and color touch screen.

To browse through or change the projector 's settings, touch the white area of the touch screen or press ENTER button for more than 3s(Only powered by the battery, pressing the ENTER button) to unlock the screen , then press ENTER key to enter the projector 's function menus. Each main menu has its sub-menus. And each menu stands for special function. For the details, please see the following 6th point "Operation Menu".:

1. At the page to set the fixture's functions, press FUNC, ENTER,▲,▼ keys or their respective icons to select the functions desired.

2. While at 2nd,3rd and 4th level of menus, the FUNC key is for ESCAPE, but ENTER key won't work, and ENTER key is used for ENTER. Press ENTER key to save the changes or enter into the sub menus. Press ▲or ▼ keys to change the numbers(minus or plus). Or touch the option needed for change.
   Push the left key or X on the top right to go back to the upper level menu. Otherwise, the system will go back to initial status.
   Shortcut keys: After the Function Menu is entered into, there are all options for the functions on the top of the screen. On the right there are 4 shortcut keys like ←,→ Lamp Control and English/Chinese.

• DMX START ADDRESS

Each projector must be given a DMX start address so that the correct projector responds to the correct control signals. This DMX start address is the channel number from which the projector starts to "listen" to the digital control information being sent out from the controller. The projector has 3 DMX modes. There are standard mode ,short mode and extended mode. For example standard mode has 46 channels, so set the No. 1 projector's address 001, No. 2 projector's address 047, No. 3 projector's address 093, and so on.

Switch on the Projector . Press ENTER key more than 3 seconds to unlock panel, then press ENTER key to enter into the fixture's operation menus.

Select DMX Address icon and press ENTER key or touch the icon directly on the display and select DMX address at the 2nd level menu for the address setting.

Press▲ or▼ keys or touch<、>displayed for the DMX address desired.

Press ENTER key to confirm.

Press the FUNC key to go back to the upper level menu.

.

•DMX WIRELESS CONTROL（Optional）

The projector has wireless control function with wireless receiver module and antenna for remote control.

The setup of it is below:

1. Press ▲ and ▼keys to enter into the operation menu and select "Config Settings".
2. Select "Wireless First" or "Wireless Only" from the menu of "Signal Select".

Only after the projector is linked with a transmitter, can it receive wireless signal sent by the transmitter. If unlinking it, Press "Enter" for the menu of Un-link Wireless under the upper level menu of Config Settigns , then the fixture is unlinked with the wireless transmitter.

•FAN SPEED MODES

It has standard and theater modes. Theater mode is quiet mode.

Its setups are as follows:

1. Hold the "ENTER"button for more than 3s to unlock the control panel and then push▲ 、▼button to enter into the menus and select "Option Settings".
2. Select either of Standard and theater modes after the menu of Fan Settings.

•STAND-ALONE MODE

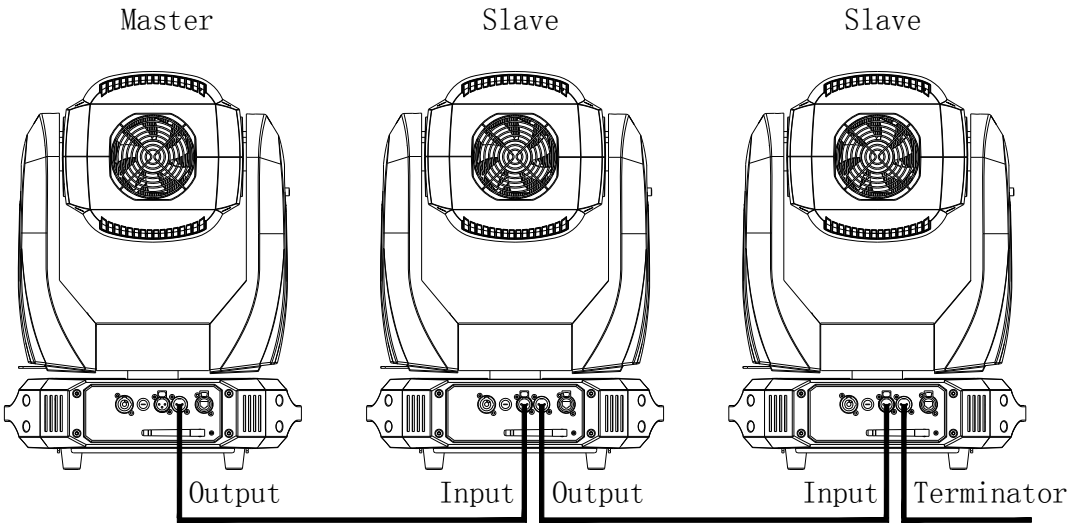
Operate the projector without connecting with a controller, enable the master mode through the operation panel, the projector will run in Stand-Alone mode automatically.
DMX address can be set at any number within 512.

•MASTER/SLAVE MODE

Many projectors can run synchronously in the Master/Slave mode by linking them with each other. First,
connect the first fixture's DMX output to the second fixture's DMX input using XLR-XLR control cable and then connect the second fixture's DMX output to the third fixture's DMX input, and so on until all projector are connected in this way. Eventually connect the last fixture's DMX output to a DMX terminator. Set 1st projector as the master and others are Slaves.

Start Addresses of all Slaves are 001; Operation mode of the Master can be set any mode for a Master' and Slaves' operation mode can be set accordingly.

After Powered on, the group will run in Master/Slave Mode



6. OPERATION MENU

1st LEVEL	2nd LEVEL	3rd LEVEL	4th LEVEL	5th LEVEL
Address	DMX Address	1-473（short mode） 1-467（STD mode） 1-454（Extended mode）		
	IP Address	Default IP Address	2.X.X.X /10.X.X.X	
		Custom IP Address	X.X.X.X	
	SubNet Mask	X.X.X.X		
	ArtNet Universe	0-255		
	sACN Universe	1-63999		
Reset	Total Reset	Really Reset?	Confirm or Cancel	
	Pan&Tilt Reset	Really Reset?	Confirm or Cancel	
	Colour System Reset	Really Reset?	Confirm or Cancel	
	Gobo Reset	Really Reset?	Confirm or Cancel	
	Fo. Zo. Fr. Pr. Reset	Really Reset?	Confirm or Cancel	
	Other Reset	Really Reset?	Confirm or Cancel	
Config Settings	DMX Channel Mode	Short 40CH		
		Standard 46CH		
		Extended 59CH		
		View Selected Mode	.Ch.01 Strobe ……..	
	Signal Select	XLR Only		

		XLR First		
		Wireless Only		
		Wireless First		
		Wireless In/XLR Out		
		ArtNet Only		
		ArtNet In/XLR Out		
		sACN Only		
		sACN In /XLR Out		
	Loss of DMX	Normal time out		
		Hold Last Value		
	Display Config	Display Mode	Off After Delay	
			On Always	
		Display Invert	Invert OFF	
			Invert ON	
			Invert Auto	
		Language Setting	English	
			Chinese	
		Touch Calibration	0-999	
	Temperature Unit	Celsius Degree		
		Fahrenheit Degree		
	Un-Link Wireless	Really Un-Link?	Confirm or Cancel	
	Factory Defaults	Restore Defaults?	Confirm or Cancel	
Option Settings	Pan/Tilt Settings	Pan DMX Invert	OFF/ ON	
		Tilt DMX Invert	OFF/ ON	
		Pan Tilt Swap	OFF/ ON	

		XY Feedback	OFF/ ON	
		Pan/Tilt mode	Speed/Time	
	Dimmer Settings	Gamma Curve	Gamma 2.0/2.2/2.4/2.6/Line	
		LED Refresh rate	1200/2400/4800/10000/12000/15000/20000/25000Hz	
		Dimmer speed	Fast/Medium/Slow	
	Fan Settings	Standard/Theatre		
	Light Type	Moving Head 5-60		
		Profile 35-60		
		Profile 15-35		
		Profile 5-15		
		Profile 60		
		Profile 36		
		Profile 26		
		Profile 19		
		Profile 10		
		Profile 5		
	Invert Settings	Iris Invert	ON/OFF	
		Zoom Invert	ON/OFF	
		CYM Invert	ON/OFF	
		CTO Invert	ON/OFF	
	Defaults	Restore Defaults?	Confirm/Cancel	
Information	View DMX Values	Channel Value Strobe XXX Dimmer XXX ……		
	Lamp Hours	Reset Lamp Hours		
	Total Hours	Total Hours＝XXX H		
	Temperature	Display Board XX℃/F		
		Pan and Tilt Board XX℃/F		
		Driver Board 1 XX℃/F		
		Driver Board 2 XX℃/F		
		Driver Board 3 XX℃/F		
		Blade Board XX℃/F		
		Fan Board XX℃/F		
		Led Sensor℃/F XX℃/F		
	Software Version	Display Board	System= XXX Boot =XXX	
		Pan ＆Tilt Board	System= XXX Boot =XXX	
		Driver Board 1	System= XXX Boot =XXX	
		Driver Board 2	System= XXX Boot =XXX	
		Driver Board 3	System= XXX Boot =XXX	
		Blade Board	System= XXX Boot =XXX	
		Fan Board	System= XXX Boot =XXX	

	Electronic SN	XXXXXX		
	RDM Device Label	XXXXXXX ANSI E1.20 RDM		
	Fan Status	Power Fan XXX Base Fan XXX Intate Fan1 XXX Intate Fan2 XXX Gobo Fan XXX Exhaust Fan XXX LED Fan XXX LDriver Fan XXX		
Service	Manual Effect Control	Strobe XXX		
		Dimmer XXX		
		…		
	Factory Test		…	
Operation Mode	DMX Mode	Change Operation Mode?	Confirm/Cancel	
	Master Mode	Preset Memory	Change Operation Mode?	Confirm/Cancel
		User Memory 1	Change Operation Mode?	
		User Memory 2	Change Operation Mode?	
	Stand-Alone Mode	Preset Memory	Change Operation Mode?	
		User Memory 1	Change Operation Mode?	
		User Memory 2	Change Operation Mode?	
	Static Scene	Change Operation Mode?		
User Memories	Edit User Memory	Edit User Memory 1 / Edit User Memory 2	Scene XX (1~200Scenes）	Strobe XXX Dimmer XXX … Delay Time XXX Delay Unit Link To Step XXX
		Edit Static Scene	Strobe XXX	
			Dimmer XXX	
			…	
	Init User Memory	Reset User Memory 1	Reset User Memory?	Input Password123
		Reset User Memory 2	Reset User Memory?	Input Password123
		Reset Static Scene	Reset Static Scene?	Input Password123

Note: signs on the touch screen

	Config Settings		Option Settings
	Address		Information
	Error Messages		Service
	Reset		Operation Mode
	User Memories		

7. DMX CHART

Short mode	Standard mode	Extended Mode	Function	Decimal low	Decimal high
1	1	1	**Strobe**		
			Close	0	
			Pulse strobe speed from slow to fast	1	127
			Strobe from slow to fast	128	255
2	2	2	**Dimmer**		
			Close	0	0
			Linear dimming（0-100%）	1	255
	3	3	**Dimmer Fine**		
			Dimmer in 16 bit	0	255
3	4	4	**CMY Macro**		
			Disable CMY and CTO before the following functions		
			No function	0	7
			Color Temperature 2700K	8	9
			Color Temperature 3000K	10	11
			Color Temperature 3500K	12	13
			Color Temperature 4000K	14	15
			Color Temperature 4500K	16	17
			Color Temperature 5000K	18	19
			Color Temperature 5700K	20	21
			Color Macro 1	22	23
			Color Macro 2	24	25
			Color Macro 3	26	27
			Color Macro 4	28	29
			Color Macro 5	30	31
			Color Macro 6	32	33
			Color Macro 7	34	35
			Color Macro 8	36	37

			Color Macro 9	38	39
			Color Macro 10	40	41
			Color Macro 11	42	43
			Color Macro 12	44	45
			Color Macro 13	46	47
			Color Macro 14	48	49
			Color Macro 15	50	51
			Color Macro 16	52	53
			Color Macro 17	54	55
			Color Macro 18	56	57
			Color Macro 19	58	59
			Color Macro 20	60	61
			Color Macro 21	62	63
			Color Macro 22	64	65
			Color Macro 23	66	67
			LEE 004 (Medium Bastard Amber)	68	69
			LEE 010 (Medium Yellow)	70	71
			LEE 019 (Fire)	72	73
			LEE 026 (Bright Red)	74	75
			LEE 058 (Lavender)	76	77
			LEE 068 (Sky Blue)	78	79
			LEE 071 (Tokyo Blue)	80	81
			LEE 079 (Just Blue)	82	83
			LEE 088 (Lime Green)	84	85
			LEE 090 (Dark Yellow Green)	86	87
			LEE 100 (Spring Yellow)	88	89
			LEE 101 (Yellow)	90	91
			LEE 102 (Light Amber)	92	93
			LEE 103 (Straw)	94	95
			Lee 104 (Deep Amber)	96	97
			LEE 105 (Orange)	98	99
			LEE 106 (Primary Red)	100	101
			LEE 111 (Dark Pink)	102	103
			LEE 115 (Peacock Blue)	104	105
			LEE 116 (Medium Blue-Green)	106	107
			LEE 117 (Steel Blue)	108	109
			LEE 118 (Light Blue)	110	111
			LEE 119(Deep Blue)	112	113
			LEE 120 (Dark Blue)	114	115
			LEE 121 (LEE Green)	116	117
			LEE 128 (Bright Pink)	118	119
			LEE 131 (Marine Blue)	120	121
			LEE 132 (Medium Blue)	122	123
			LEE 134 (Golden Amber)	124	125

			LEE 135 (Deep Golden Amber)	126	127
			LEE 136 (Pale Lavender)	128	129
			LEE 137 (Special Lavender)	130	131
			LEE 138 (Pale Green)	132	133
			LEE 139 (Primary Green)	134	135
			LEE 141 (Bright Blue)	136	137
			LEE 147 (Apricot)	138	139
			LEE 148 (Bright Rose)	140	141
			LEE 152 (Pale Gold)	142	143
			LEE 154 (Pale Rose)	144	145
			LEE 157 (Pink)	146	147
			LEE 158 (Deep Orange)	148	149
			LEE 162 (Bastard Amber)	150	151
			LEE 164 (Flame Red)	152	153
			LEE 165 (Daylight Blue)	154	155
			LEE 169 (Lilac Tint)	156	157
			LEE 170 (Deep Lavender)	158	159
			LEE 172 (Lagoon Blue)	160	161
			LEE 179 (Chrome Orange)	162	163
			LEE 180 (Dark Lavender)	164	165
			LEE 181 (Congo Blue)	166	167
			LEE 197 (Alice Blue)	168	169
			LEE 201 (Full C.T. Blue)	170	171
			LEE 202 (Half C.T. Blue)	172	173
			LEE 203 (Quarter C.T. Blue)	174	175
			LEE 204 (Full C.T. Orange)	176	177
			LEE 205 (Half C.T. Orange)	178	179
			LEE 206 (Quarter C.T. Orange)	180	181
			LEE 247 (LEE Minus Green)	182	183
			LEE 248 (Half Minus Green)	184	185
			LEE 281 (Three Quarter C.T. Blue)	186	187
			LEE 285 (Three Quarter C.T. Orange)	188	189
			LEE 352 (Glacier Blue)	190	191
			LEE 353 (Lighter Blue)	192	193
			LEE 715 (Cabana Blue)	194	195
			LEE 778 (Millennium Gold)	196	197
			LEE 793 (Vanity Fair)	198	199
			CMY color mixing from slow to fast	200	255
4	5	5	**Cyan**		
			Cyan (linear 0~100%)	0	255
		6	**Cyan Fine**		
			Cyan in 16 Bit	0	255
5	6	7	**Yellow**		
			Yellow (linear 0~100%)	0	255

		8	**Yellow Fine**		
			Yellow in 16 Bit	0	255
6	7	9	**Magenta**		
			Magenta (linear 0~100%)	0	255
		10	**Magenta Fine**		
			Magenta in 16 Bit	0	255
7	8	11	**CTO**		
			CTO(linear 0~100%)	0	255
		12	**CTO Fine**		
			CTO in 16 bit	0	255
8	9	13	**Color Wheel**		
			Continual positioning		
			Indexing(0-360degrees)	0	63
			Positioning		
			Open /Color1 (Dark Red)	64	67
			Color1 (Dark Red)	68	71
			Color1 (Dark Red) / Color2(Amber)	72	75
			Color2(Amber)	76	79
			Color2(Amber) / Color3(Blue)	80	83
			Color3(Blue)	84	87
			Color3(Blue) / Color4(Green)	88	91
			Color4(Green)	92	95
			Color4(Green) / Color5(Pink)	96	99
			Color5(Pink)	100	103
			Color5(Pink) / Color6(Amber)	104	107
			Color6(Amber)	108	111
			Color 6(Amber) / Color 7(UV)	112	115
			Color 7(UV)	116	119
			Color7 (UV) /Open	120	123
			Open	124	127
			Rotation ,Clockwise from slow to fast	128	191
			Rotation, Anti-clockwise from fast to slow	192	255
	10	14	**Color Wheel Fine**		
			Color Wheel in 16 Bit	0	255
9	11	15	**Iris**		
			Linear Iris from small to big 0-100%	0	255
		16	**Iris Fine**		
			Iris in 16 bit precision	0	255
10	12	17	**Iris Macro**		
			Iris Macro disabled	0	10
			Iris Macro1: from big to small with speed from slow to fast	11	74
			Iris Macro2: from small to big with speed from slow to fast	75	138
			Iris Macro3: Iris contracts from slow to fast	139	202
			Iris Macro4(Macro1 at random) with speed from slow to fast	203	210

			Iris Macro5(Macro2 at random) with speed from slow to fast	211	218
			Iris Macro6(Macro3 at random) with speed from slow to fast	219	226
			Open	227	255
11	13	18	**Fixed gobo wheel**		
			Open	0	15
			Gobo 1	16	43
			Gobo 2	44	71
			Gobo 3	72	99
			Gobo 4	100	127
			Rotation （clockwise From slow to Fast）	128	151
			Reverse Rotation（anti-clockwise From slow to Fast）	152	175
			Shake of Gobo 1 from slow to fast	176	195
			Shake of Gobo 2 from slow to fast	196	215
			Shake of Gobo 3 from slow to fast	216	235
			Shake of Gobo 4 from slow to fast	236	255
12	14	19	**Rotating Gobo Wheel**		
			Open	0	15
			Gobo1	16	29
			Gobo 2	30	43
			Gobo 3	44	57
			Gobo 4	58	71
			Gobo 5	72	85
			Gobo 6	86	99
			Gobo 7	100	113
			Gobo 8	114	127
			Rotation （clockwise From slow to Fast）	128	151
			Reverse Rotation（anti-clockwise From slow to Fast）	152	175
			Shake of Gobo 1 from slow to fast	176	185
			Shake of Gobo 2 from slow to fast	186	195
			Shake of Gobo 3 from slow to fast	196	205
			Shake of Gobo 4 from slow to fast	206	215
			Shake of Gobo 5 from slow to fast	216	225
			Shake of Gobo 6 from slow to fast	226	235
			Shake of Gobo 7 from slow to fast	236	245
			Shake of Gobo 8 from slow to fast	246	255
13	15	20	**Gobo Rotation**		
			Gobo Indexing(0~360 degrees)	0	128
			Rotation （Clockwise From slow to Fast）	129	188
			Stop	189	195
			Rotation （Anti-Clockwise From slow to Fast）	196	255
	16	21	**Gobo Rotation Fine**		
			Gobo Rotation in 16 Bit	0	255
14	17	22	**Framing Blade1left**		
			Framing blade 1 left 0-100%	0	255

		23	**Framing Blade1left Fine**		
			Framing blade 1 left fine control	0	255
15	18	24	**Framing Blade 1right**		
			Framing blade 1 right 0-100%	0	255
		25	**Framing Blade1 right Fine**		
			Framing blade 1 right fine control	0	255
16	19	26	**Framing Blade2left**		
			Framing blade 2 left 0-100%	0	255
		27	**Framing Blade2left Fine**		
			Framing blade 2 left fine control	0	255
17	20	28	**Framing Blade2right**		
			Framing blade 2 right 0-100%)	0	255
		29	**Framing Blade2 right Fine**		
			Framing blade 2 right fine control	0	255
18	21	30	**Framing Blade3left**		
			Framing blade 3 left 0-100%	0	255
		31	**Framing Blade3left Fine**		
			Framing blade 3 left fine control	0	255
19	22	32	**Framing Blade3right**		
			Framing blade 3 right 0-100%	0	255
		33	**Framing Blade3 right Fine**		
			Framing blade 3 right fine control	0	255
20	23	34	**Framing Blade4left**		
			Framing blade 4 left 0-100%	0	255
		35	**Framing Blade4left Fine**		
			Framing blade 4 left fine control	0	255
21	24	36	**Framing Blade4right**		
			Framing blade 4 right 0-100%	0	255
		37	**Framing Blade4 right Fine**		
			Framing blade 4 right fine control	0	255
22	25	38	**Framing module rotation**		
			Framing module indexing(0-360degrees)	0	127
			Stop	128	
			Clockwise rotation from slow to fast	129	188
			Stop	189	195
			Anti-clockwise rotation from slow to fast	196	255
	26	39	**Framing module rotation fine**		
			Framing module in 16 bit control (0-360 degrees)	0	255
23	27	40	**Prism**		
			Open	0	16
			Prism	17	255
24	28	41	**Prism Rotation**		
			Prism Indexing	0	127

			Stop	128	
			Rotation(Clockwise from slow to fast)	129	191
			Stop	192	
			Rotation(Anti- Clockwise from slow to fast)	193	255
25	29	42	**Frost**		
			No	0	9
			Frost In	10	255
26	30	43	**Effect Wheel**		
			No	0	10
			Effect wheel in	11	20
			Effect wheel rotation from slow to fast	21	255
27	31	44	**Focus**		
			Linear Focus	0	255
	32	45	**Focus Fine**		
			Focus in 16 bit precision	0	255
28	33	46	**Zoom**		
			Linear Zoom	0	255
	34	47	**Zoom Fine**		
			Zoom in 16 bit precision	0	255
29	35	48	**Autofocus**		
			While channels for Iris, Framing module, Fixed gobo wheel and Rotating Gobo Wheel are in use, the fixture has automatic focus function at some distance. Use "Autofocus Calibrations" channel (29/35/48) to focus the image. Priority: Rotating Gobo Wheel >Fixed Gobo Wheel > Iris>Framing module		
			The following functions will disable the focus channel (27/31/44) is disabled.		
			Autofocus Off	0	19
			Autofocus for 5M	20	39
			Autofocus for 10M	40	59
			Autofocus for 15M	60	79
			Autofocus for 20M	80	255
30	36	49	**Focus calibrations**		
			Focus calibrations up	0	127
			Focus calibrations down	128	255
31	37	50	**Pan**		
			Pan(0 ~540)	0	255
32	38	51	**Pan Fine**		
			Pan in 16 bit	0	255
33	39	52	**Tilt**		
			Tilt(0 ~270)	0	255

34	40	53	**Tilt Fine**		
			Tilt in 16 bit	0	255
35	41	54	Pan & Tilt Speeds		
			Fast Mode	0	1
			Pan & Tilt Speed from Fast to Slow	2	255
36	42	55	**CRI Mode**		
			Normal mode	0	127
			High CRI mode	128	255
37	43	56	**Power/Special Function**		
			No function	0	4
			Reserved	5	19
			More than 5s in DMX values before the following functions work		
			Graphic Display On	20	24
			Graphic Display Off	25	29
			Reserved	30	46
			Fan standard mode	47	48
			Fan theater mode	49	50
			Fast dimmer	51	52
			Medium dimmer	53	54
			Slow dimmer	55	56
			Gamma curve 2.0	57	58
			Gamma curve 2.2	59	60
			Gamma curve 2.4	61	62
			Gamma curve 2.6	63	64
			Line curve	65	66
			LED refresh rate 1200Hz	67	68
			LED refresh rate 2400Hz	69	70
			LED refresh rate 4800Hz	71	72
			LED refresh rate 10000Hz	73	74
			LED refresh rate 12000Hz	75	76
			LED refresh rate 15000Hz	77	78
			LED refresh rate 20000Hz	79	80
			LED refresh rate 25000Hz	81	82
			Reserved	83	89
			Pan & Tilt Speed Mode ②	90	94
			Pan & Tilt Time Mode	95	99
			Reserved	100	129
			Led ON	130	139
			Pan & Tilt Reset	140	149
			Color wheel Reset	150	159
			Gobo Wheel Reset	160	169
			Reserved	170	179

			Zoom/Frost/Focus/Prism Reset	180	189
			Other Reset (Blade / Iris/Effect wheel)	190	199
			Total Reset	200	209
			Reserved	210	255
38	44	57	**Fixture type**		
			Select the type via menus	0	39
			Moving Head 5-60	40	59
			Profile 35-60	60	79
			Profile 15-35	80	99
			Profile 5-15	100	119
			Profile 60	120	139
			Profile 36	140	159
			Profile 26	160	179
			Profile 19	180	199
			Profile 10	200	219
			Profile 5	220	255
39	45	58	**LED brightness calibration ③**		
			No	0	127
			LED brightness 50%-100%, linear calibration	128	255
40	46	59	**LED brightness calibration confirmation**		
			Ready to store calibrated value	0	200
			Store calibrated value in the fixture(stay in the DMX range for more than 5s)	201	209
			No	210	255

Remark:

1. Fan error can shut off light source.
2. "Speed Mode" means Pan and Tilt will move from Point A to Point B at their respective maximum speeds."Time Mode" means both Pan and Tilt will arrive at designated point at the same time. It's advised Time Mode be used if the projector runs circles or in oblique lines.
3. LED brightness standard with adjusting range between 50% and 100%. After completion, the desired parameters will be stored into the fixtures without repeated operations.

Procedures:

Step1: DMX value range for Channel LED brightness calibration is between 50 and 100 with according brightness range between 50% and 100%.

Step2:DMX value range for Channel LED brightness calibration confirmation is between 0 and 200. If the fader is moved between 201 and 209 and stays there for more than 5s, the desired brightness value will be stored into fixtures.

Step 3:Move the faders for DMX channels LED brightness calibration and LED brightness calibration confirmation respectively to zero.

If 100% brightness needed, move the fader for channel LED brightness calibration between 100 and 255 for Step 1and repeat Step 2 and 3.

Under the menu, confirm Defaults/Restore default, LED brightness will go back to 100%.

8. ERROR MESSAGES

The system can detect some errors during the reset, if  displayed, touch  to view the error.
The error messages are as follows:

Name	Type	Correction
Pan	Timeout/magnet Sensor/Encoder	Check if wiring, positioning parts and motors are normal
Tilt	Timeout/magnet Sensor/Encoder	Check if wiring, positioning parts and motors are normal
Cyan	Timeout	Check if wiring, positioning parts and motors are normal
Yellow	Timeout	Check if wiring, positioning parts and motors are normal
Magenta	Timeout	Check if wiring, positioning parts and motors are normal
CTO	Timeout	Check if wiring, positioning parts and motors are normal
Color Wheel	Timeout	Check if wiring, positioning parts and motors are normal
Fixed gobo wheel	Timeout	Check if wiring, positioning parts and motors are normal
Rot. Gobo Wheel	Timeout	Check if wiring, positioning parts and motors are normal
Rot. Gobo Rotation	Timeout	Check if wiring, positioning parts and motors are normal
Dimmer	Timeout	Check if wiring, positioning parts and motors are normal
Prism	Timeout	Check if wiring, positioning parts and motors are normal
Prism Rotation	Timeout	Check if wiring, positioning parts and motors are normal
Focus	Timeout	Check if wiring, positioning parts and motors are normal
Zoom	Timeout	Check if wiring, positioning parts and motors are normal
Effect wheel	Timeout	Check if wiring, positioning parts and motors are normal
Effect wheel rotation	Timeout	Check if wiring, positioning parts and motors are normal
Pan Board	Error	Check signal wire
Tilt Board	Error	Check signal wire
Driver Board 1	Error	Check signal wire
Driver Board2	Error	Check signal wire
Driver Board 3	Error	Check signal wire
Blade Board	Error	Check signal wire
Fan board	Error	Check signal wire
LED Off[Fan Error]	Error	Check if all fans are normal
Time IC	Error	Contact the manufacturer

9. TECHNICAL DATA

ELECTRIC PARAMETERS

Input voltages : 100V~240V AC，50/60Hz

Input Power : 850W @ 220V

Power factor : PF〉0.95

Max. Current: 3.9A @ 220V

LIGHT SOURCE SPECIFICATIONS(Yellow)

Power consumption : 700W, White LED module

Color Temperature : 8000K

Manufacturers Rated Lamp Life : 20000hour

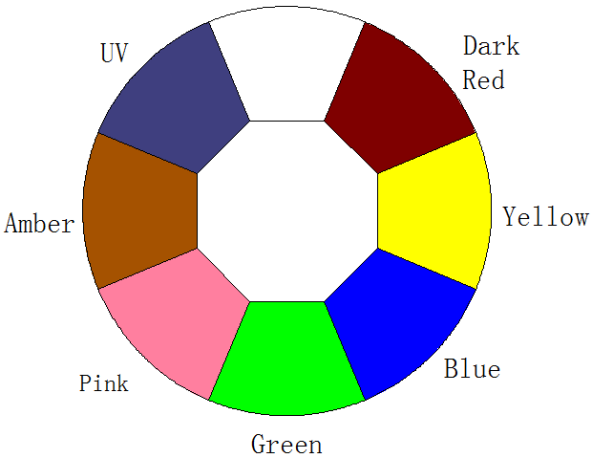
CRI : Ra≥70（Optional Ra≥96，R9≥95）

COLORS

CMY color mixing system with macros

1 Color wheel: 7colors+ Open,

Half color , bi-directional rainbow effect at variable speeds,
Stepping/linear color changing



CTO

Linear CTO system(0-100%, 1800K-6500K)

FRAMING

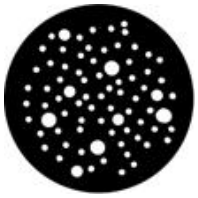
1 Framing Module: 4 Framing Blades

Framing Module continual rotation with many graphics of different sizes and shapes

4 Framing blades to make full curtain effect

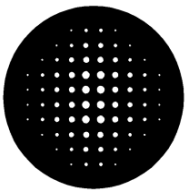
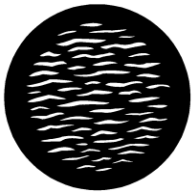
ROTATING GOBO WHEEL

1 Rotating gobo wheel: 8Rotating Gobos +Open
Bi-directionally rotatable, and shakable at variable speeds
Gobo Replaceable, Gobo diameter: Φ24mm ,Gobo image diameter: Φ18mm

Gobo1	Gobo 2	Gobo 3	Gobo 4	Gobo 5
				
Gobo 6	Gobo 7	Gobo8		
				

FIXED GOBO WHEEL

1 fixed gobo wheel(optional):4 fixed Gobos +Open+effect
Bi-directionally rotatable, and shakable at variable speeds

Gobo1	Gobo 2	Gobo 3	Gobo 4
			

ANIMATION EFFECT

bi-directional animation effects at variable speeds

IRIS

5-100% linear with macros

PRISM

1pc, 3-facet circular prism, bi-directional rotation at variable speeds with indexing function

FROST

1 frost filter ,0-100% linear

BEAM ANGLE

5 °~60 °linear with 16 bit control

FOCUS

DMX linear with auto focus function

DIMMER

Linear electronic dimmer 0-100% with 16 bit control

3 dimmer speeds

5 dimmer curves

Dimmer frequency(1.2K-25K) good for 4K high speed video camera

STROBE

Electronic strobe 0.3~25 Hz, optional pulse, synchronized or non-synchronized strobe at slow, medium and fast speeds

HEAD MOVEMENT

Pan 540 °, Tilt 270 °with auto position correction and 16 bit control

Advanced macros

Color temperature macros: optional 2700K,3000K,3500K,4000K,4500K,5000K,5700K

Standard color macros: 89 color options based on standard color chart.

FIXTURE TYPES

Including moving head light, fixed-focus profile light, zoom profile light

Moving head light with beam angle range(5-60 °)

Fixed focus profile light with beam angle options including 5 °,10 °,19 °,26 °,36 °,60 °

Zoom profile light with beam angle ranges including 5-15 °,15-35 °,35-60 °

(Note: Auto quiet theater mode for fixed focus profile light and zoom profile light)

FAN MODE

Standard mode and theater modes. Theater mode is quiet mode

BRIGHTNESS CALIBRATION FUNCTION

With brightness calibration function to calibrate initial brightness for a single fixture or multiple ones and store brightness values into the fixtures

CRI MODE

Running at high CRI mode via DMX channel to ensure high CRI optical effect.

CONTROL

International standard DMX512 signal and RDM function

40channels in short mode, 46channels in standard mode,59channel in extended mode

Art Net protocol(optional) , sACNprotocol(optional), DMX512 wireless control

Master/Slave mode

Standalone mode

Master Mode

CONTROL INTERFACE

DMX512 ports（5-pin）

Ethernet port RJ45

OTHER FUNCTIONS

Adjustable Pan & Tilt speeds

Pan and Tilt invertible and swappable

Lamp's and fixture's hours displayed

Color touch Chinese/English screen, display invertible and touch keys

Intelligently controllable fans

Sensor diagnostic system

Input signal isolated, modular construction for easy maintenance, DMX channel voltages monitoring

Non-touchable magnetic sensor for positioning, signal feedback, absolute position memory, auto-positioning after power-off or DMX signal disrtuption

Firmware upgrade via DMX cable

Optional ethernet port

HOUSING

High temperature ABS, IP20

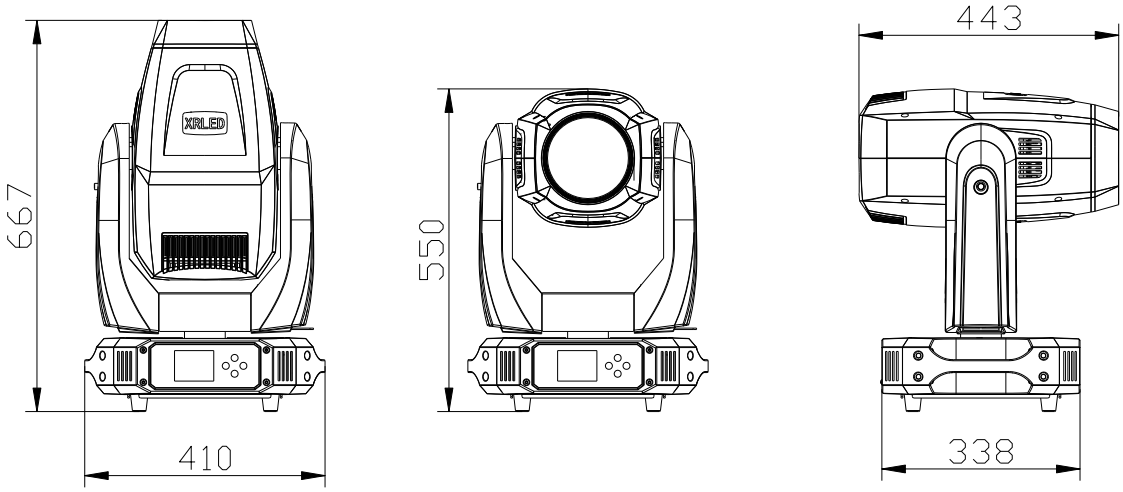
NET WEIGHT

24.2Kg

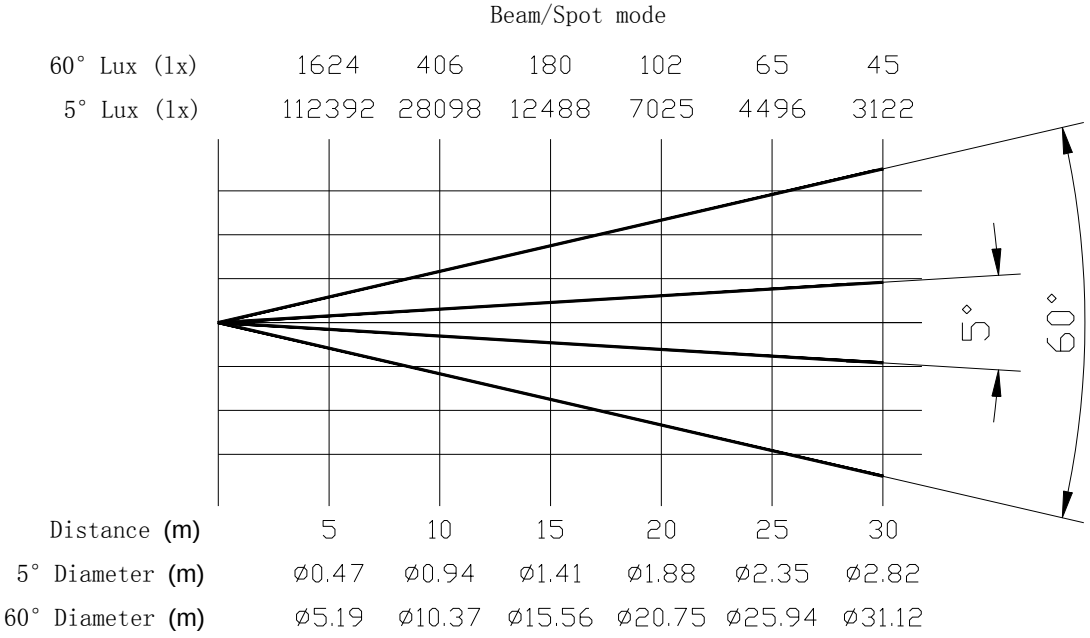
AMBIENT TEMPERATURE

Temperature at maximum 45 ℃

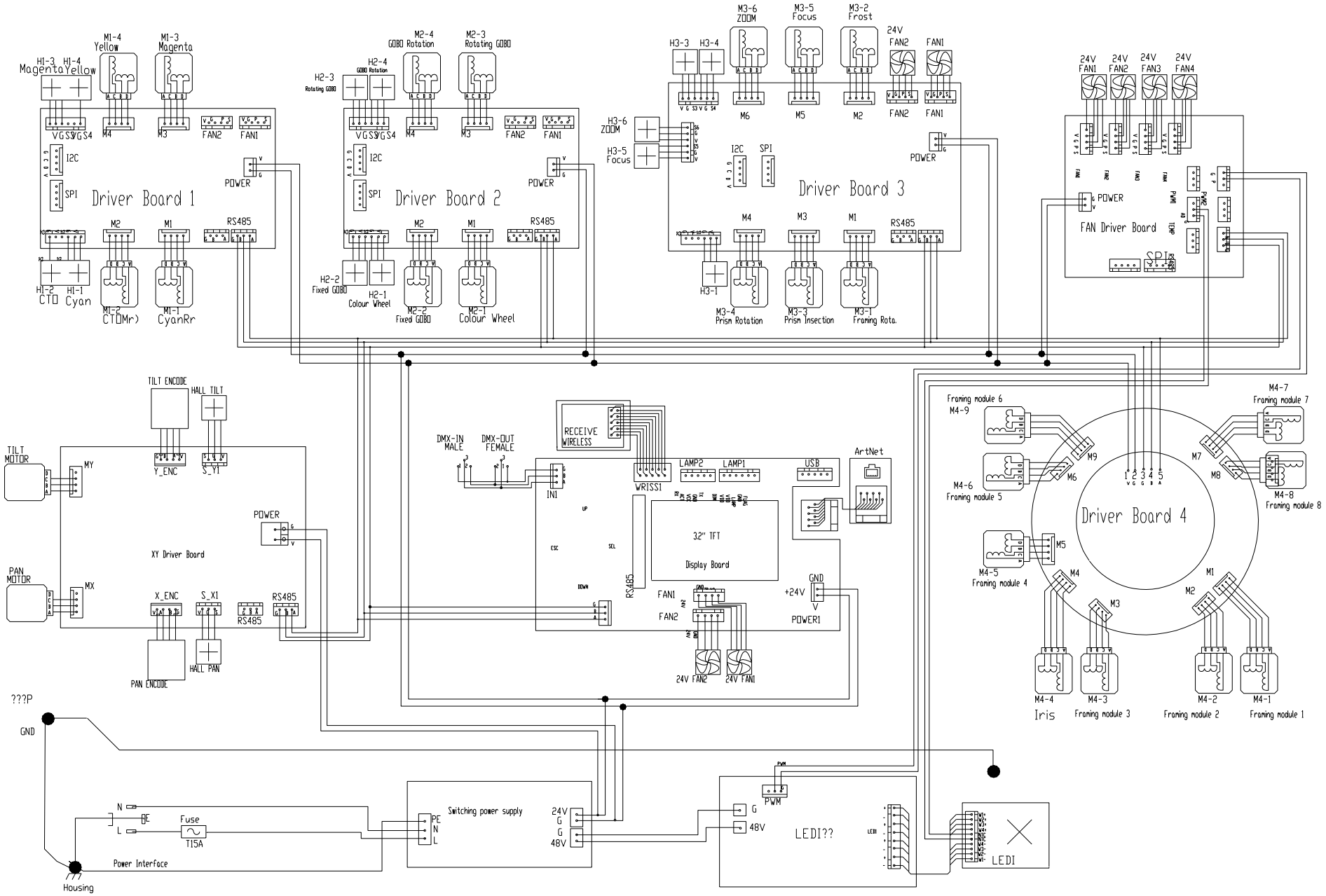
SIZES(unit: mm**)**



LIGHT OUTPUT



10. CIRCUIT DIAGRAM


Driver Board 1
Driver Board 2
Driver Board 3
Driver Board 4
FAN Driver Board
XY Driver Board
32" TFT
Display Board
Switching power supply
Power Interface
Housing
LEDI??
LEDI
Iris
Framing module 1
Framing module 2
Framing module 3
Framing module 4
Framing module 5
Framing module 6
Framing module 7
Framing module 8
Prism Rotation
Prism Insection
Framing Rota.
Fixed GOBO
Colour Wheel
Rotating GOBO
GOBO Rotation
ZOOM
Focus
Frost
Yellow
Magenta
Cyan
CTO
CTO(Mr)
CyanRr
TILT MOTOR
PAN MOTOR
TILT ENCODE
HALL TILT
PAN ENCODE
HALL PAN
DMX-IN MALE
DMX-OUT FEMALE
RECEIVE WIRELESS
WRISS1
ArtNet
USB
POWER
POWER1
RS485
I2C
SPI
PWM
Fuse
T15A

11.COMPONENT ORDER CODES

NAME	CODE NUMBER	QTY	REMARK
Switching power supply	192010228A	1	
Light source	150020355	1	
Power supply fan	030060122	1	
Base fan	030060122	1	
LED driver fan	030060122	1	
Exhuast fan	030060117	1	
Gobo fan	030060117	1	
Inlet fan 1	030060072A	1	
Inlet fan 2	030060072A	1	
LED Fan	030060142	1	
Pan motor	030040276	1	
Tilt motor	030040276	1	
Zoom motor	030040154A	1	
Focus motor	030040154A	1	
Fix gobo wheel motor	030040081B	1	
Rotating gobo wheel motor	030040218A	1	
Gobo rotation motor	030040219A	1	
CMY motor	030040302	2	
CTO motor	030040254A	2	
Frost motor	030040073D	1	
Color wheel motor	030040081B	1	
Prism in/out motor	030040221A	1	
Prism rotation motor	030040289	1	
Framing blade motor	030040302	9	
Framing module motor	030040258A	1	

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