



XR580 BWS
PR-2552

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>

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ACCESSORIES

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

Name	Quantity	Unit	Remark
G clamps	2	Pcs	
XLR connector	1	Set	Male and female
Safety cord	1	Pc	
User manual	1	Pc	
Ω clamps	2	Pcs	Optional

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.

•After lamp switched on, the minimum distance between the projector and illuminated surface is 18 m.

•lens and other optical parts shall be replaced immediately if they have deformed or been damaged, otherwise the light output will be compromised.



•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 running for 30minutes, the temperature of the housing of the projector is 45°C.After stable operation , its max. temperature is 120°C.
- While the lamp is stricken for the first time, there will be smoke and strange smell. It's normal and does not mean the projector has some defects.



- Do not mount the projector directly on inflammable surface.
- Do not project the beam straightly on combustibile items and the minimum distance between the projector and illuminated items is 18 m.
- 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.

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 internal damage, sun light or other light mustn't penetrate into the projector via front lens whether it runs or not.
- 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.

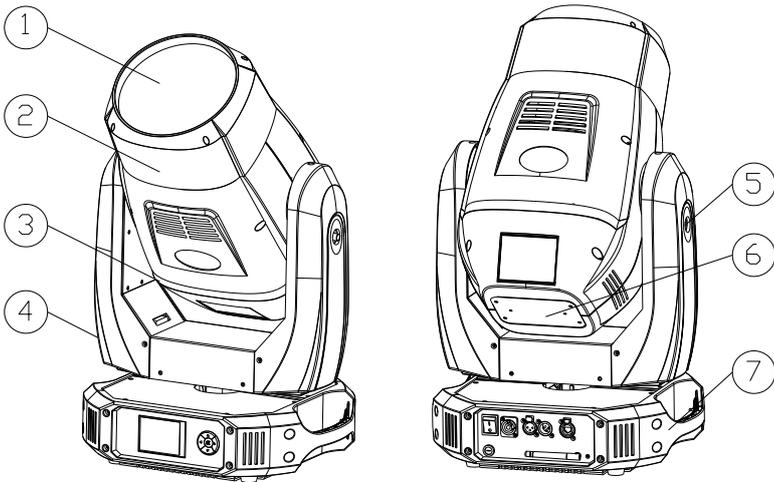
•LUBRICATION

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 doesn't switch on	<ul style="list-style-type: none"> ➤ Check the fuse on the power socket. ➤ Check the lamp.
The lamp is on but the projector doesn't respond to the controller	<ul style="list-style-type: none"> ➤ Make sure that the fixture's start address is right ➤ Replace or repair the XLR signal cable.
The projector functions intermittently	<ul style="list-style-type: none"> ➤ Make sure the fan is working well or fans and their shields are not blocked
Beam appears dim, Low in brightness	<ul style="list-style-type: none"> ➤ Make sure the lamp is within its lifespan ➤ Remove dust or grease from the lenses.
The project image appears to have a halo	<ul style="list-style-type: none"> ➤ Carefully clean the lamp, optical lenses and other components.
Heavily Defective Beam	<ul style="list-style-type: none"> ➤ Check if lens are in good condition(not cracked)

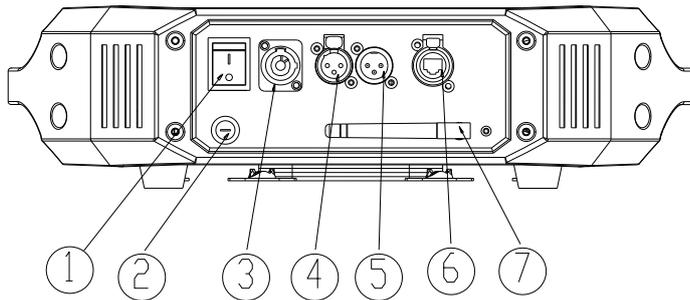
3. APPEARANCE



- 1. Front Lens
- 2. Lens Cover
- 3. Head Cover
- 4. Arm Cover
- 5. Tilt Lock
- 6. Lamp Chamber Cover
- 7. Base Handle

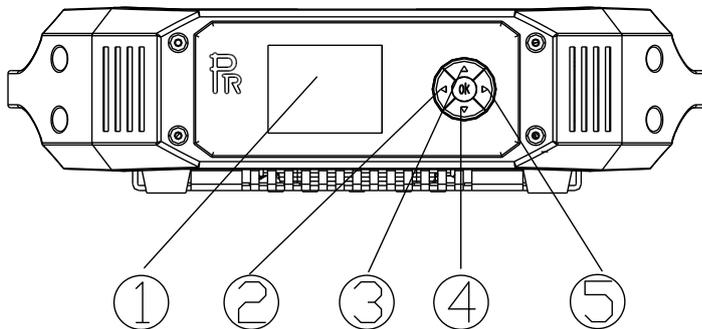
While transportation, the head should be locked-Tilt Lock(5) and Pan Lock(6) should be at locking positions. Before the use of the projector, unlock both.

Rear Panel of the Base



- 1. Power Switch
- 2. Fuse Holder
- 3. Power Socket
- 4. 5-Pin XLR Socket(Female)
- 5. 5-Pin XLR Socket(Male)
- 6. Ethernet Socket
- 7. Wireless Antenna(Only for projector requested for wireless control)

Front Panel of the Base

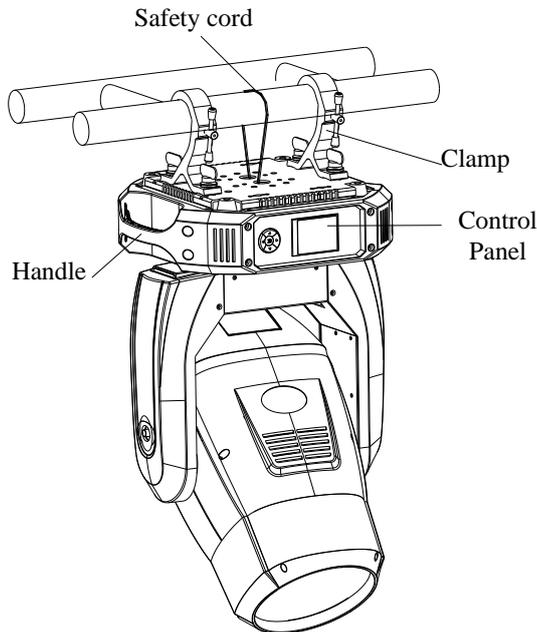


- 1. Touch Screen
- 2. Escape / Left Key
- 3. Up key
- 4. Down Key
- 5. Right Key

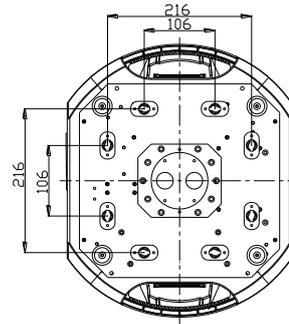
4. INSTALLATION

•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 the two safety cord holes to ensure safety safety cord holes



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 XR 1000 Framing.



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:

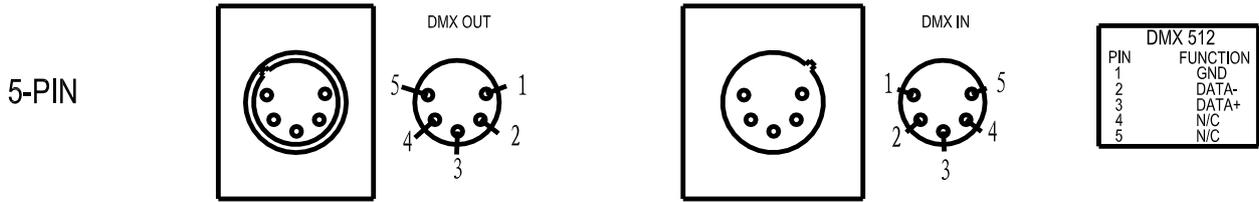
- L (live) =brown
- E (earth) =yellow/green
- N (neutral) =blue

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.

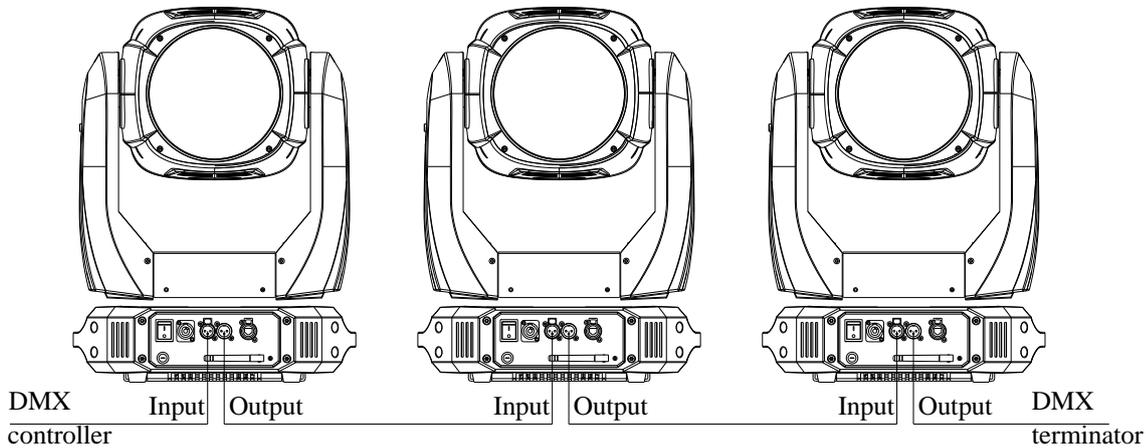
.DMX CONTROL CONNECTION:



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).

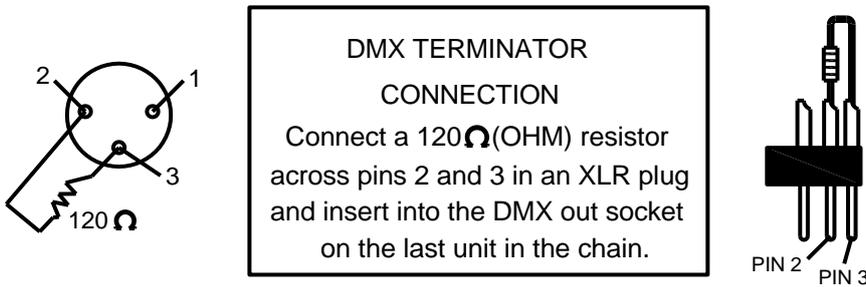
Connect the controller's DMX output to the first fixture's DMX input, and connect the first fixture's DMX output to the second fixture's DMX input and connect the rest fixtures in the same way. Eventually connect the last fixture's DMX output to a DMX terminator as shown in the figure below.



.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.



•ALIGNMENT/INSTALLATION/REPLACEMENT OF A LAMP

Lock the yoke before fitting/replacing the lamp. Just as Shown by Figure 1, after Opening the cover at the rear of the projector by loosening 8 fastfit screws, you can open the head. To adjust the lamp as per Figure 2. Take out the lamp as per the figure 3. Before lamp installation, tighten its power wires well. Lamp in and out are opposite orders



- Don't touch the internal surface of the reflector and the burner of the lamp with bare hands so as not to impair the beam output. While lamp's installation, do not damage the metal wire around the burner.
- Please read "Instructions " enclosed with the lamp
- Do operate the projector while adjusting the lamp

Figure1:Remove the lamp chamber cover after loosening 4 screws labeled as A,B,C,D.

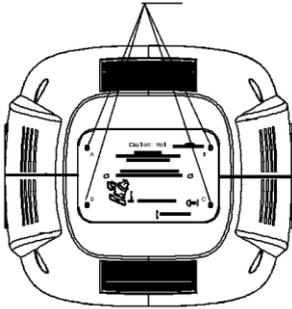


Figure2: Unplug the lamp wires ,loosen 4 pieces of spring screws for lamp tightening plate,adjust both adjusting rods on top and bottom to ensure that lamp clipping plate is away from the center of the lamp to the biggest extent, then push the lamp towards the spring. Take the lamp out obliquely after it is out of the tightening plate below, and lamp installation is same.

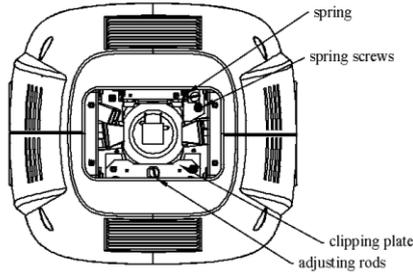
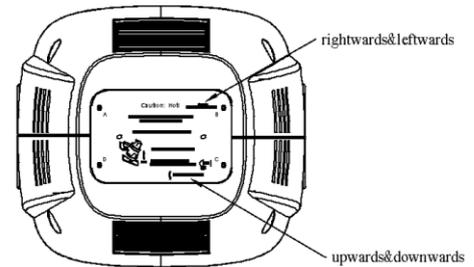
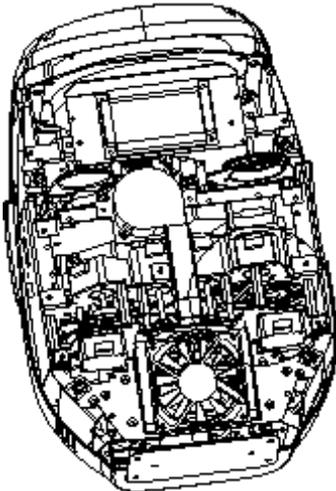


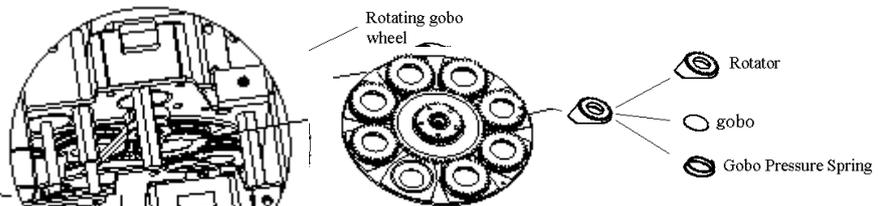
Figure3: After the lamp is in place, please check if the lamp is tightened well, then plug its wires and turn on the lamp. Use a flat screw driver to adjust the central position of the lamp upward,downward, rightwards, and leftwards as per the labeling. After the adjustment, lock the back cover the lamp chamber.



•GOBO REPLACEMENT



Rotating gobo replacement:
Open the head cover, and push the rotator of which gobo needs to be replaced, out of the rotating gobo wheel. After the rotator is sliding out of the wheel, pull it gently. After the gobo replaced, insert the rotator into the wheel and ensure it is secured and not loose.

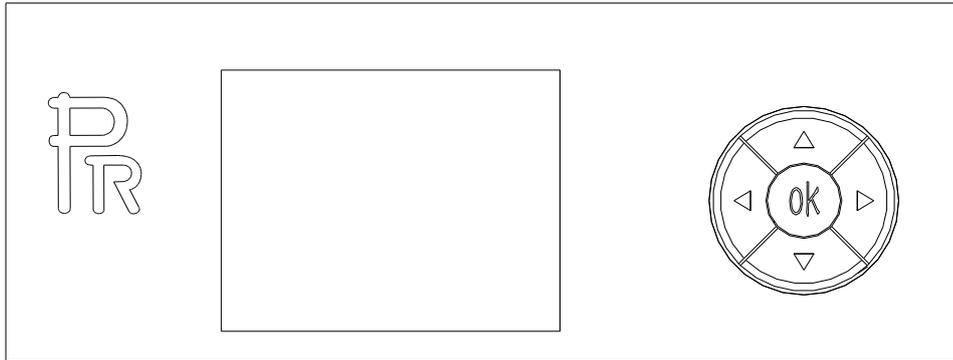


DANGER!

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 OK button for more than 3s(Only powered by the battery, pressing the OK button) to unlock the screen, then press  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 , , ,  keys or their respective icons to select the functions desired.
2. While at 2nd, 3rd and 4th level of menus, the  key is for ESCAPE, but  key won't work, and  key is used for ENTER. Press  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.

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 3DMX modes. There are standard mode, short mode and extended mode. For example standard mode has 31 channels, so set the No. 1 projector's address 001, No. 2 projector's address 032, No. 3 projector's address 063, No. 4 projector's address 094, and so on.

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

Select DMX Address icon and press OK 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 OK key to confirm.

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

•DMX WIRELESS CONTROL

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

The setup of it is below:

1. Press  for more than 3s to unlock the control panel, then press  key 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 Settings , then the fixture is unlinked with the wireless transmitter.

•STAND-ALONE MODE

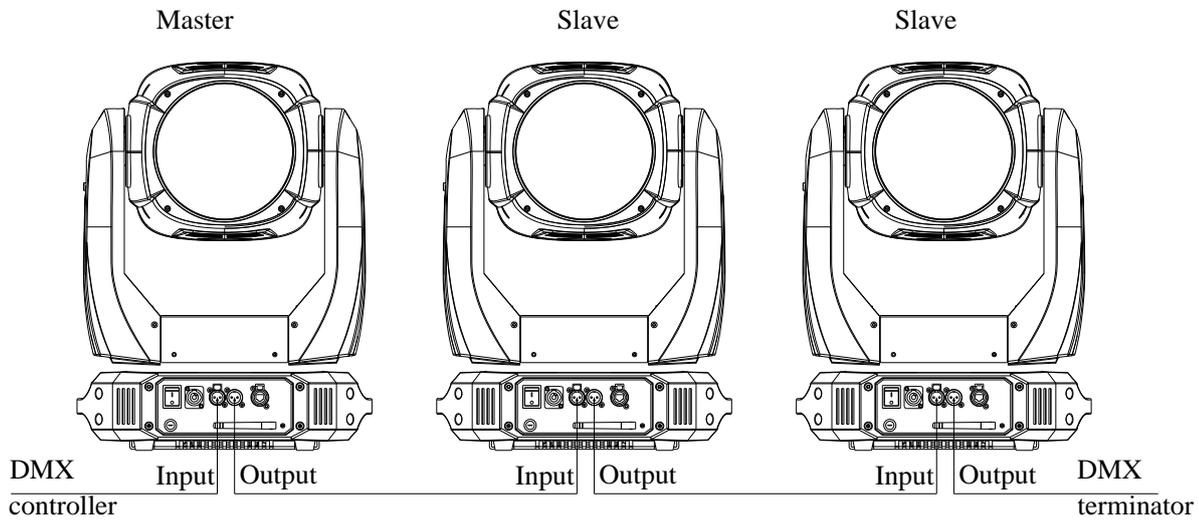
Operate the projector without connecting with a controller, enable the master mode through the operation panel, the projector will run in Stand-Alone mode automatically.
DMX address can be set at any number within 512.

•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	1-481		
	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		
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		

	Dimmer/Shutter reset	Really Reset? Confirm or Cancel		
	Fo. Fr. Pr. Reset	Really Reset? Confirm or Cancel		
Config Settings 	DMX Channel Mode	Short Mode		
		Standard Mode		
		Extended Mode		
		View Selected Mode	.	
	Lamp Control	Lamp Control	OFF/ ON	
		On By Power On	OFF/ ON	
		Control By DMX	OFF/ ON	
		Eco Power	OFF/ ON	
	Signal Select	XLR Only		
		XLR First		
		Wireless Only		
		Wireless First		
		Wireless In/XLR Out		
		ARTNET Only		
		ARTNET 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)	

	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	
	Invert Settings	Dimmer Invert	OFF/ ON	
		CYM Invert	OFF/ ON	
Information 	View DMX Values	Channel Value Strobe XXX Dimmer XXX Dimmer Fine XXX CYM Macro XXX Cyan XXX Yellow XXX Magenta XXX CTO XXX Color Wheel XXX Color Wheel Fine XXX Fixed Gobo Wheel XXX Rot. Gobo Wheel XXX Rot. Gobo Rotation XXX Rot. Gobo Rotation F. XXX Effect XXX Effect Rotation XXX Prism1 XXX Prism1 Rotation XXX Prism2 XXX Prism2 Rotation XXX Frost XXX Focus XXX Focus Fine XXX Zoom XXX Zoom Fine XXX Pan XXX Tilt XXX Pan/Tilt Speed & Time XXX Power/Special Fun. XXX		
	Lamp Hours	XXX H Reset Lamp Hours		
	Total Hours	xxxH		
	Temperature	Display Board=xxxC Pan & Tilt board=xxxC Driver Board1=xxxC Driver Board 2=xxxC		

		Driver Board 3=×××C Fan Driver Board=XXXX Head Sensor=×××C		
	Software Version	PCB Sys Boot Display Board xxx xxx Pan & Tilt board xxx xxx Driver Board1 xxx xxx Driver Board 2 xxx xxx Driver Board 3 xxx xxx Fan Driver Board=XXXX		
	Electronic SN	XXXXXXX		
	RDM Device Label	XR 580 BWS ANSI E1.20 RDM		
	Fan Status	Fan Speed Status Lamp Fan xxx on/off Lamp Fan2 xxx on/off Lamp T Fan xxx on/off Lamp R Fan2 xxx on/off Head Fan xxx on/off Head Fan2 xxx on/off CYM Fan xxx on/off Gobo Fan xxx on/off Basic Fan xxx on/off		
	Fan Error	Fan Count Lamp Fan 1 xxx Lamp Fan2 xxx Lamp T Fan xxx Lamp R Fan xxx Head Fan xxx Head Fan2 xxx CYM Fan xxx Gobo Fan xxx Basic Fan xxx		
	Acceleration Sensor	X Axis: XXX Y Axis: XXX Z Axis: XXX Position: XXX		
Service 	Manual Effect Control	Strobe XXX		
		Dimmer XXX		
		Dimmer Fine XXX		
		CYM Macro XXX		
		Cyan XXX		
		Cyan Fine XXX		
		Yellow XXX		
		Yellow Fine XXX		
		Magenta XXX		
		Magenta Fine XXX		
		CTO XXX		
		CTO Fine XXX		
		Color Wheel XXX		
		Color Wheel Fine XXX		
		Fixed Gobo Wheel XXX		
		Rot. Gobo Wheel XXX		
		Rot. Gobo Rotation XXX		
		Rot. Gobo Rotation F. XXX		
		Effect XXX		
		Effect Rotation XXX		
Prism 1 XXX				
Prism 1 Rotation XXX				
Prism 2XXX				
Prism 2 Rotation XXX				

		Frost XXX			
		Focus XXX			
		Focus Fine XXX			
		Zoom XXX			
		Zoom Fine XXX			
		Pan XXX			
		Pan Fine XXX			
		Tilt XXX			
		Tilt Fine XXX			
		Pan & Tilt Speed &Time XXX			
Factory Mode		...			
Operation Mode 	DMX Mode	Change Operation Mode? Confirm or Cancel			
	Master Mode	Preset Memory	Change Operation Mode? Confirm or Cancel		
		User Memory 1	Change Operation Mode? Confirm or Cancel		
		User Memory 2	Change Operation Mode? Confirm or Cancel		
	Stand-Alone Mode	Preset Memory	Change Operation Mode? Confirm or Cancel		
		User Memory 1	Change Operation Mode? Confirm or Cancel		
		User Memory 2	Change Operation Mode? Confirm or Cancel		
	Static Scene	Change Operation Mode? Confirm or Cancel			
	DiffFrost User Memories 	Edit User Memory	Edit User Memory 1 / Edit User Memory 2	(1~200Scenes) Scene XX (1~200 Scenes)	Strobe XXX
					Dimmer XXX
Dimmer Fine XXX					
CYM Macro XXX					
Cyan XXX					
Cyan Fine XXX					
Yellow XXX					
Yellow Fine XXX					
Magenta XXX					
Magenta Fine XXX					
CTO XXX					
CTO Fine XXX					
Color Wheel XXX					
Color Wheel Fine XXX					
Fixed Gobo Wheel XXX					
Rot. Gobo Wheel XXX					
Rot. Gobo Rotation XXX					
Rot. Gobo Rotation F. XXX					
Effect XXX					
Effect Rotation XXX					
Prism 1 XXX					
Prism 1 Rotation XXX					
Prism 2XXX					
Prism 2 Rotation XXX					
Frost XXX					
Focus XXX					
Focus Fine XXX					
Zoom XXX					
Zoom Fine XXX					
Pan XXX					
Pan Fine XXX					
Tilt XXX					
Tilt Fine XXX					
Pan & Tilt Speed &Time					

				XXX
				Fade Time XXX
				Hold Time XXX
				Delay Unit XXX
				Link to Step XXX
		Edit Static Scene	Strobe XXX	
			Dimmer XXX	
			Dimmer Fine XXX	
			CYM Macro XXX	
			Cyan XXX	
			Cyan Fine XXX	
			Yellow XXX	
			Yellow Fine XXX	
			Magenta XXX	
			Magenta Fine XXX	
			CTO XXX	
			CTO Fine XXX	
			Color Wheel XXX	
			Color Wheel Fine XXX	
			Fixed Gobo Wheel XXX	
			Rot. Gobo Wheel XXX	
			Rot. Gobo Rotation XXX	
			Rot. Gobo Rotation F. XXX	
			Effect XXX	
			Effect Rotation XXX	
			Prism 1 XXX	
			Prism 1 Rotation XXX	
			Prism 2 XXX	
			Prism 2 Rotation XXX	
			Frost XXX	
			Focus XXX	
			Focus Fine XXX	
			Zoom XXX	
			Zoom Fine XXX	
			Pan XXX	
		Pan Fine XXX		
		Tilt XXX		
		Tilt Fine XXX		
		Pan & Tilt Speed & Time XXX		
		Fade Time XXX		
		Hold Time XXX		
		Delay Unit XXX		
		Link to Step XXX		
	Init User Memory	Reset User Memory 1	Reset User Memory? Confirm or Cancel	
		Reset User Memory 2	Reset User Memory? Confirm or Cancel	
		Reset Static Scene	Reset Static Scene? Confirm or Cancel	

7. DMX PROTOCOL

Short mode	Standard mode	Extended Mode	FUNCTION	DMX	DESCRIPTION
1	1	1	Strobe	000-010	Close
				011-025	Open
				026-225	Strobe speed from slow to fast
				226-246	Random strobe from slow to fast
				247-255	Open
2	2	2	Dimmer	000-009	Close
				010-255	Linear dimming (0-100%)
	3	3	Dimmer Fine	000-255	Dimmer in 16 bit

3	4	4	CYM Macro	000-016	White
				017-035	Yellow+ Magenta=Red
				036-054	Yellow
				055-073	Yellow +Cyan=Green
				074-092	Cyan
				093-111	Cyan + Magenta= purple
				112-128	Magenta
				129-255	CYM color mixing from slow to fast
4	5	5	Cyan	000-255	Cyan (linear 0~100%)
		6	Cyan Fine	000-255	Cyan in 16 Bit
5	6	7	Yellow	000-255	Yellow (linear 0~100%)
		8	Yellow Fine	000-255	Yellow in 16 Bit
6	7	9	Magenta	000-255	Magenta (linear 0~100%)
		10	Magenta Fine	000-255	Magenta in 16 Bit
7	8	11	CTO	000-005	No
				006-024	Diffuser
				025-255	Linear CTO
		12	CTO Fine	000-255	CTO in 16 bit
8	9	13	Color Wheel	000-063	Indexing(0-360degrees)
				064-068	Color1(Red)
				069-073	Color2(Light Green)
				074-078	Color3(Blue)
				079-083	Color4(Cyan)
				084-088	Color5(Yellow)
				089-093	Color6(Magenta)
				094-098	Color7(Orange)
				099-103	Color8(Green)
				104-108	Color9(Deep Blue)
				109-113	Color10(UV)
				114-118	Color11(Light Yellow)
				119-123	Color12(Deep Yellow)
				124-127	White
				128-191	Rotation ,Clockwise from slow to fast
192-255	Rotation, Anti-clockwise from fast to slow				
	10	14	Color Wheel Fine	0000-255	Color Wheel in 16 Bit
9	11	15	Fixed Gobo Wheel	0-19	White
				20-25	Gobo1
				26-31	Gobo2
				32-37	Gobo3
				38-43	Gobo4
				44-50	Gobo5
				51-57	Gobo6
				58-64	Gobo7
				65-71	Gobo8

				72-78	Gobo9
				79-85	Gobo10
				86-92	Gobo11
				93-99	Gobo12
				100-106	Gobo13
				107-113	Gobo14
				114-120	Gobo15
				121-127	Gobo16
				128-157	Clockwise rotation from slow to fast
				158-187	Anti Clockwise rotation from slow to fast
				188-191	Shake effect 1 from slow to fast
				192-195	Shake effect 2 from slow to fast
				196-199	Shake effect 3 from slow to fast
				200-203	Shake effect 4 from slow to fast
				204-207	Shake effect 5 from slow to fast
				208-211	Shake effect 6 from slow to fast
				212-215	Shake effect 7 from slow to fast
				216-219	Shake effect 8 from slow to fast
				220-223	Shake effect 9 from slow to fast
				224-227	Shake effect 10 from slow to fast
				228-231	Shake effect 11 from slow to fast
				232-235	Shake effect 12 from slow to fast
				236-239	Shake effect 3 from slow to fast
				240-243	Shake effect14 from slow to fast
				244-247	Shake effect 15 from slow to fast
				248-251	Shake effect 16 from slow to fast
				251-255	Shake effect 17 from slow to fast
10	12	16	Rotating Gobo Wheel 1	000-015	White
				016-031	Gobo1
				032-047	Gobo 2
				048-063	Gobo 3
				064-079	Gobo 4
				080-095	Gobo 5
				096-111	Gobo 6
				112-127	Gobo 7
				128-156	Rotation (clockwise From slow to Fast)
				157-185	Reverse Rotation (anti-clockwise From slow to Fast)
				186-195	Shake of Gobo 1 from slow to fast
				196-205	Shake of Gobo 2 from slow to fast
				206-215	Shake of Gobo 3 from slow to fast
				216-225	Shake of Gobo 4 from slow to fast
				226-235	Shake of Gobo 5 from slow to fast
				236-245	Shake of Gobo 6 from slow to fast

				246-255	Shake of Gobo 7 from slow to fast
11	13	17	Gobo Rotation	000-128	Gobo Indexing(0~540degrees)
				129-188	Rotation (Clockwise From slow to Fast)
				189-195	Stop
				196-255	Rotation (Anti-Clockwise From slow to Fast)
	14	18	Gobo Rotation Fine	000-255	Gobo Rotation in 16 Bit
12	15	19	Effect Wheel	000-020	No
				021-255	Effect Wheel In
13	16	20	Effect Wheel Rotation	000	No
				001-127	Rotation (Clockwise From slow to Fast)
				128-255	Rotation (Anti-Clockwise From slow to Fast)
14	17	21	Prism 1	000-016	Open
				017-127	Prism1
				128-255	Prism2
15	18	22	Prism1 Rotation	000-128	Prism Indexing
				129-191	Rotation(Clockwise from slow to fast)
				192	Stop
				193-255	Rotation(Anti- Clockwise from slow to fast)
16	19	23	Prism 2	000-016	White
				017-255	Prism3
17	20	24	Prism2 Rotation	0-130	Prism2 Indexing
				131-191	Rotation(Clockwise from slow to fast)
				192-194	Stop
				195-255	Rotation(Anti- Clockwise from slow to fast)
18	21	25	Frost	000-09	No
				010-255	Frost In
19	22	26	Focus	000-255	Linear Focus
	23	27	Focus Fine	000-255	Focus in 16 bit precision
20	24	28	Zoom	000-255	Linear Zoom
	25	29	Zoom Fine	000-255	Zoom in 16 bit precision
21	26	30	Pan	000-255	Pan(0°~540°)
22	27	31	Pan Fine	000-255	Pan in 16 bit
23	28	32	Tilt	000-255	Tilt(0°~270°)
24	29	33	Tilt Fine	000-255	Tilt in 16 bit
	30	34	Pan & Tilt Speeds	000-255	Pan & Tilt Speed from Fast to Slow
25	31	35	Control	000-019	Reserved
				Keep in the DMX range for more than 5S to activate the following functions. If power-off, the following are invalid.	
				020-024	Graphic Display On
				025-029	Graphic Display Off
				030-034	Reserved
				035-039	Lamp ECO Power
				040-044	Lamp Full Power

				045-089	Reserved
				090-094	Pan & Tilt Speed Mode
				095-099	Pan & Tilt Time Mode
				100-129	Reserved
				130-139	Lamp On
				140-149	Pan & Tilt Reset
				150-159	Color System Reset
				160-169	Gobo Wheel Reset
				170-179	Dimmer/Shutter Reset
				180-189	Zoom/Frost/Focus/Prism Reset
				190-199	Reserved
				200-209	Total Reset
				210-229	Reserved
				230-239	Lamp Off
				240-255	Reserved

1. The projector can't be turned on within 1 minute after the lamp-off.
2. Fan error can cause lamp-off.

8. Logos

	Lamp Control		Option Settings
	Chinese/English		Information
	Error Messages		Service
	Address		Operation Mode
	Reset		User Memories
	Config Settings		

9. 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 1	Timeout	Check if wiring, positioning parts and motors are normal
Rot. Gobo1Rotation	Timeout	Check if wiring, positioning parts and motors are normal
Dimmer	Timeout	Check if wiring, positioning parts and motors are normal
Prism 1	Timeout	Check if wiring, positioning parts and motors are normal
Prism 1 Rotation	Timeout	Check if wiring, positioning parts and motors are normal
Prism 2	Timeout	Check if wiring, positioning parts and motors are normal
Prism 2 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
Lamp Fan1		Check if fan and its wiring are normal
Lamp Fan2		Check if fan and its wiring are normal
Ceramic Fan	Error	Check if fan and its wiring are normal
CMY Fan	Error	Check if fan and its wiring are normal
Head Fan	Error	Check if fan and its wiring are normal
Gobo Fan	Error	Check if fan and its wiring are normal
Basic Fan	Error	Check if fan and its wiring are normal
Pan and Tilt Board	Error	Check signal wire
Driver Board 1	Error	Check signal wire
Driver Board2	Error	Check signal wire
Driver Board3	Error	Check signal wire
Fan Board	Error	Check signal wire
Acceleration Sensor	Error	Check signal wire
Lamp on	Timeout	Check if he lamp is damaged
Lamp Life	Timeout Warning	
Lamp Off[Fan Error]	Error	Check if all fans are normal
Lapsed Time	Timeout	
Time IC	Error	
Lapsed time	X days	
Use hours Setting	successfully	

10. TECHNICAL DATA

ELECTRIC PARAMETERS

Input voltages 100V~240V AC, 50/60Hz

Input Power 800W @ 220V

Current at Maximum 8A

Power factor PF> 0.9

LAMP SPECIFICATIONS

Lamp PHILIPS MSD Platinum 25 R (Optional OSRAM SIRIUS HRI 550W)
 Color Temperature 7800K
 Manufacturers Rated Lamp Life 1500hours

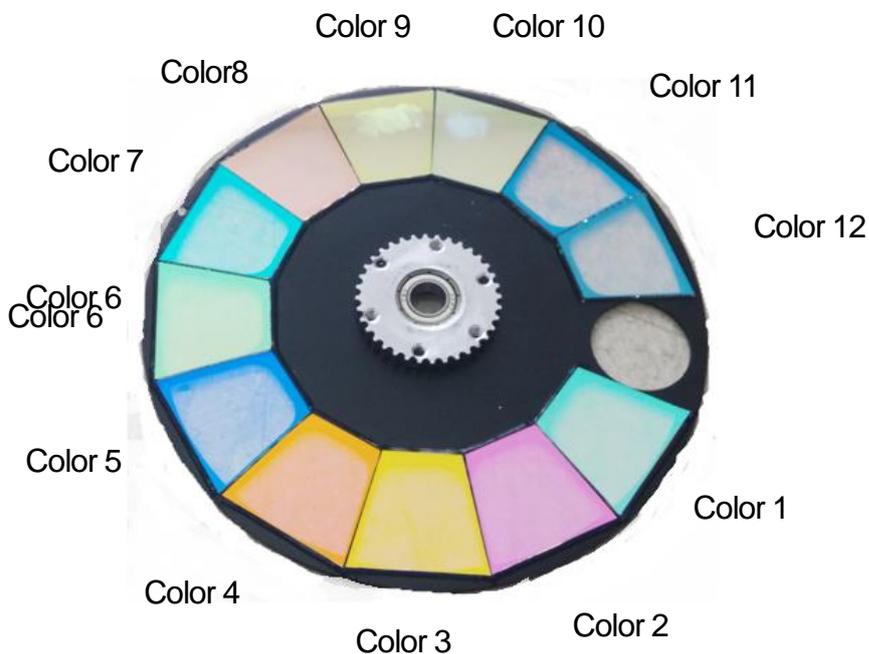
Option

Lamp OSRAM SIRIUS HRI 550W XL
 Color Temperature 7500K
 Manufacturers Rated Lamp Life 1500hours

COLORS

CMY color mixing system with macros

1 Color wheel: 12colors+ Open, rainbow effect with bi-directional and variable speeds, Stepping/linear color changing



No.	Code No.	Colors
1	092550001	Red
2	092550002	Light Green
3	092550003	Blue
4	092550004	Cyan
5	092550005	Yellow
6	092550006	Magenta
7	092550007	Orange
8	092550008	Green
9	092550009	Dark Blue
10	092550010	UV
11	092550011	Light Yellow
12	090071029	Dark Yellow

INDEPENDENT CTO SYSTEM

Linear CTO system (0-100%)

FIXED GOBO WHEEL

1 Fixed gobo wheel: 17 gobos +Open

Bi-directionally rotatable, and shakable at variable speeds

Gobo1	Gobo2	Gobo3	Gobo4	Gobo5	Gobo6	Gobo7
Gobo8	Gobo9	Gobo10	Gobo11	Gobo12	Gobo13	Gobo14
Gobo15	Gobo16	Gobo17				

ROTATING GOBO WHEEL

1 Rotating gobo wheel:

7Interchangeable Gobos +Open

Bi-directionally rotatable, and shakable at variable speeds

Gobo Replaceable, Gobo diameter: $\Phi 22.5\text{mm}$,Gobo image diameter: $\Phi 12\text{mm}$

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

PRISM

3 overlapping prisms (9 facet circular prism)(8 facet circular prism+4 facet linear prism) and some other optional prisms

EFFECT WHEEL

1 graphic effect wheel, bi-directional rotation with variable speeds, and overlapping fixed and rotating gobo wheels

FROST

1Pc frost filter

FOCUS

DMX linear focus

ZOOM

DMX linear focus

DIMMER/STROBE

0-100% Linearly adjustable/ Double shutter blades, 0.3~25 F.P.S

HEAD MOVEMENT

Pan 540 °; Tilt 270 °with auto position correction

BEAM ANGLE

Beam Mode: 0° — 2.0°

Spot Mode: 2.0° — 40° Linear Adjustment

Wash Mode: 3° — 50° Linear Adjustment

CONTROL

DMX512, 5 pin interfaces (Optional 3-pin)

25channels in short mode, 31channels in standard mode , 35channels in extended mode

Self-test mode

OTHER FUNCTIONS

Adjustable Pan & Tilt speeds

Lamp's and fixture's hours displayed

Modular Structure for easy maintenance

DMX512 wireless receiver

Optional DMX512 Wireless Transmitter

HOUSING

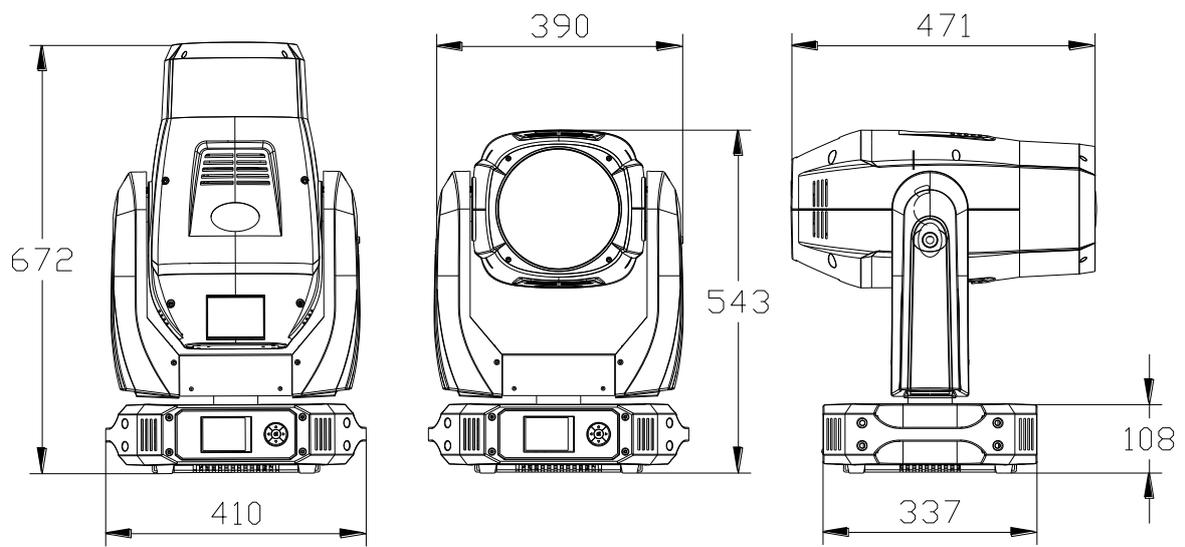
High temperature ABS, IP20

NET WEIGHT: 26Kg

AMBIENT TEMPERATURE

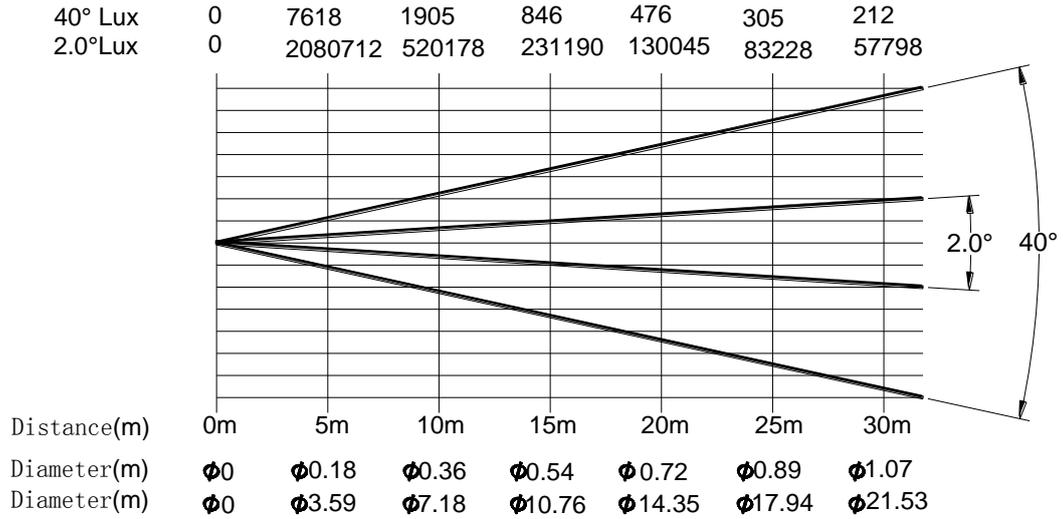
Temperature at maximum 40°C

SIZES

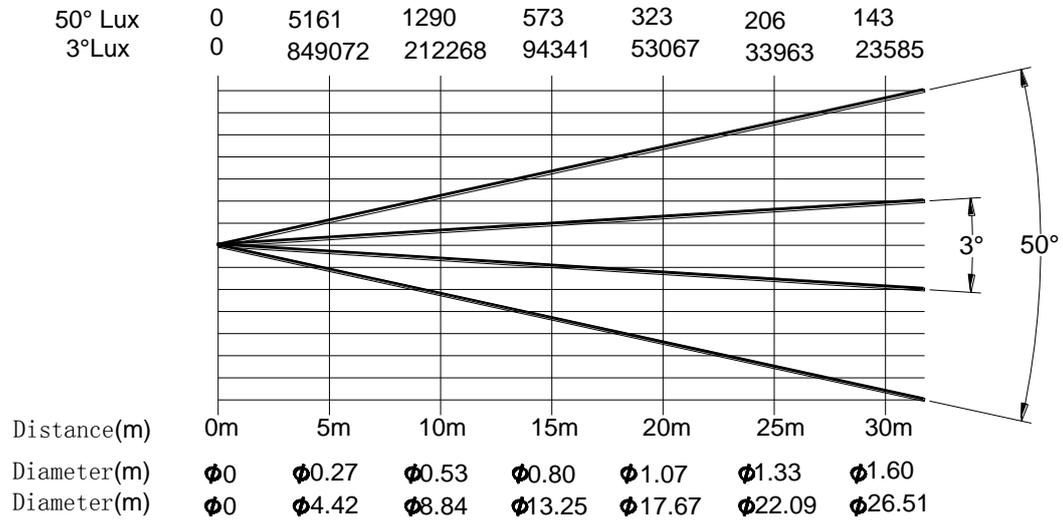


LIGHT OUTPUT

Beam/Spot Mode

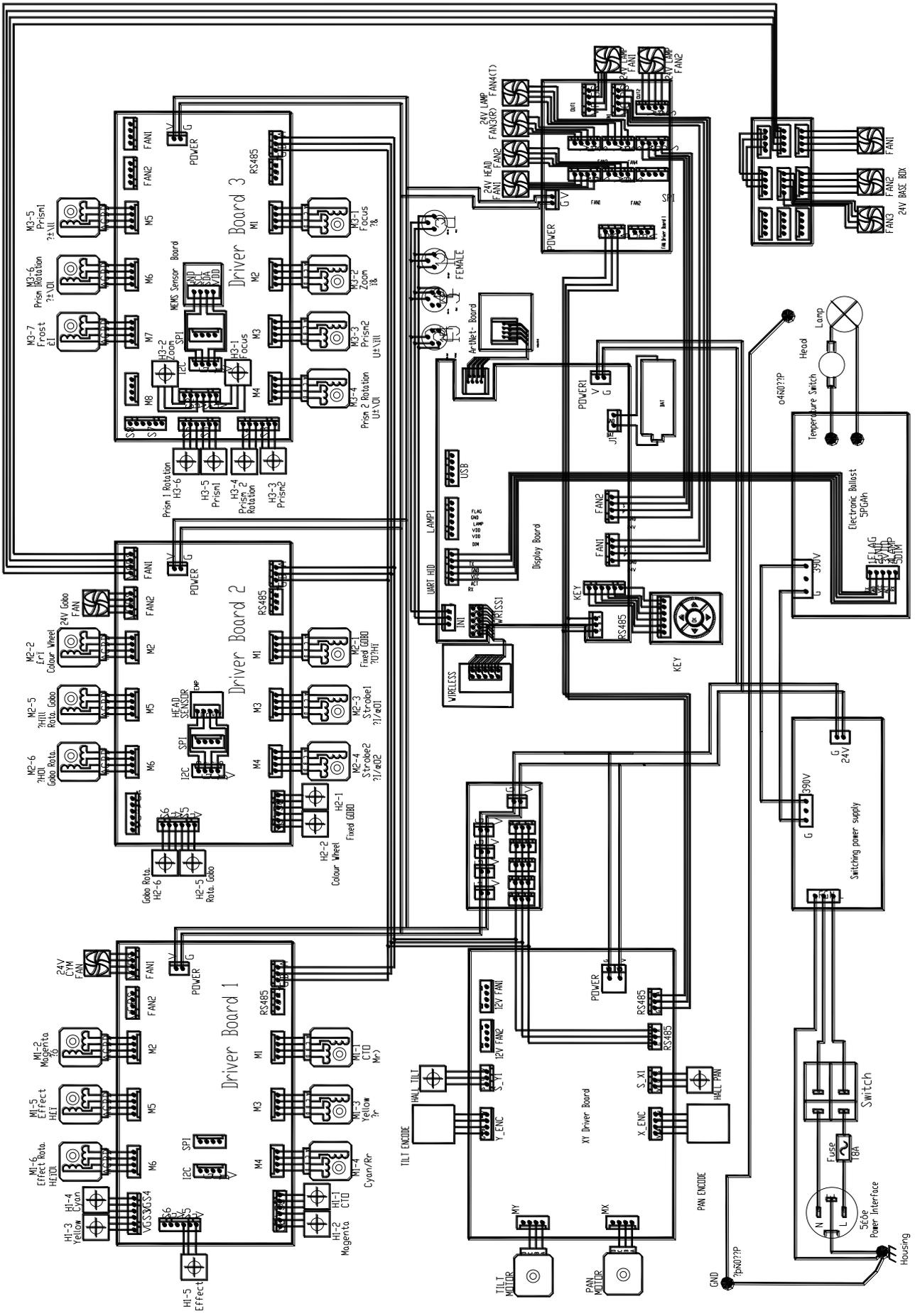


Wash Mode



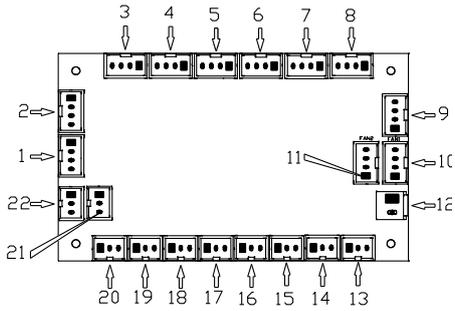
11. CIRCUIT DIAGRAM AND PCB CONNECTIONS

•CIRCUIT DIAGRAM



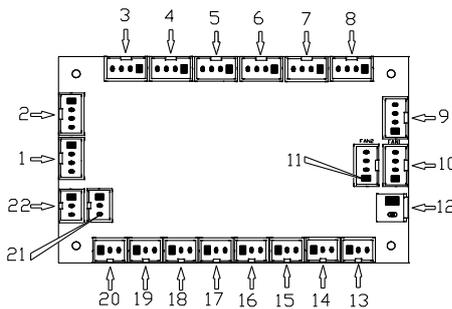
.PCB CONNECTIONS

8-Channel SLAVE1 : P/N230060609



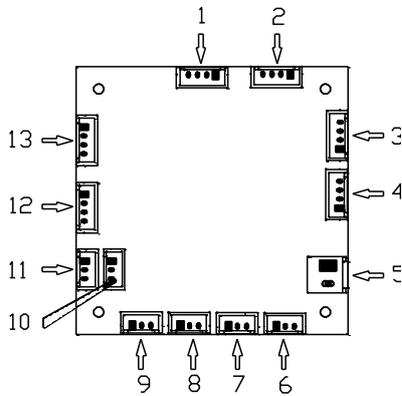
8 Channel Driver Board 1			
1	M1-1 Motor	12	24V Input
2	M1-2 Motor	13	Reserved
3	M1-3 Motor	14	Reserved
4	M1-4 Motor	15	HALL1-6 Magnet Sensor
5	M1-5 Motor	16	HALL1-5 Magnet Sensor
6	M1-6 Motor	17	HALL1-4 Magnet Sensor
7	Reserved	18	HALL1-3 Magnet Sensor
8	Reserved	19	HALL1-2 Magnet Sensor
9	Reserved	20	HALL1-1 Magnet Sensor
10	Ceramic Fan	21	Signal output
11	C'YM Fan	22	Signal input

8-CHANNEL SLAVE2: P/N230060610



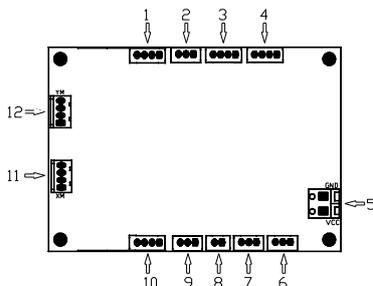
8 Channel Driver Board 2			
1	M2-1 Motor	12	24V Input
2	M2-2 Motor	13	HALL2-8 Magnet Sensor
3	M2-3 Motor	14	HALL2-7 Magnet Sensor
4	M2-4 Motor	15	HALL2-6 Magnet Sensor
5	M2-5 Motor	16	HALL2-5 Magnet Sensor
6	M2-6 Motor	17	HALL2-4 Magnet Sensor
7	M2-7 Motor	18	HALL2-3 Magnet Sensor
8	M2-8 Motor	19	HALL2-2 Magnet Sensor
9	Thermal Sensor	20	HALL2-1 Magnet Sensor
10	Head Fan 1	21	Signal output
11	Head Fan 2	22	Signal input

4-CHANNEL SLAVE3: P/N230060611



4 Channel Driver Board 3			
1	M3-3 Motor	8	Reserved
2	M3-4 Motor	9	Reserved
3	Gravity Sensor	10	Signal input
4	Reserved	11	Reserved
5	24V Input	12	M3-1 Motor
6	Reserved	13	M3-2 Motor
7	HALL3-3 Magnet Sensor		

XY BOARD: P/N230060690



Pan & Tilt Board			
1	TILT ENCODER	7	Signal output
2	SY Magnet Sensor	8	Reserved
3	FAN2(Ballast Fan)	9	SX Magnet Sensor
4	FAN1(Power Switch Fan)	10	PAN ENCODER
5	24V Input	11	JIPAN Motor
6	Signal input	12	TILT Motor

12. COMPONENT ORDER CODES

NAME	PART NO.	QUANTITY	REMARK
PAN MOTOR	030040233A	1	
TILT MOTOR	030040233A	1	
DIMMER/STROBE MOTORS	030040121	2	
ROTATING GOBO WHEEL MOTOR	030040212A	1	
GOBO ROTATION MOTOR	030040073	1	
FIXED GOBO WHEEL MOTOR	030040221A	1	
COLOR WHEEL MOTOR	030040224A	1	
FOCUS MOTOR	030040213A	1	
EFFECT WHEEL IN/OUT	030040167	1	
EFFECT WHEEL ROTATION	030040257	1	
ZOOM MOTOR	030040213A	1	
PRISM ROTATION MOTOR	030040254	2	
PRISM-IN/OUT MOTOR	030040214	2	
FAN	030060095B	4	FAN2 AT THE BOTTOM OF THE HEAD, AND FAN 2 OF THE BASE BOX
TURBO- FAN	030060102	2	TO COOL THE LAMP AND MIDDLE OF THE HEAD
FAN	030060098	1	Ceramic Fan
FAN	030060089	1	BASE BOX
LAMP BALLAST	040070115	1	
LAMP	100070030	1	
ROTATING GOBO WHEEL ACCESSORY	120110826	1	
COLOR WHEEL ACCESSORY	120110828	1	
FIXED GOBO WHEEL ACCESSORY	120110827	1	
SWITCHING POWER SUPPLY	192010684	1	
LCD MASTER BOARD	230060607	1	
8 CHANNEL DRIVER BOARD1	230060609	1	
8 CHANNEL DRIVER BOARD2	230060610	1	
4 CHANNEL DRIVER BOARD3	230060611	1	
XY DRIVER BOARD	230060690	1	
FUSE	270030005	1	
TILT BELT	290151415	1	
ZOOM BELT	290151313	2	
PRISM IN IN/OUT BELT	290151355	1	
ROTATING GOBO WHEEL BELT	290151355	1	
GOBO ROTATION BELT	290151414	1	
PAN BELT	290151392	1	
FOCUS BELT	290151386	1	

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Guangzhou, 511442 China
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Counterfeiting Will be Prosecuted!

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