AQUA 580S BEAM
PR-2569S

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
G clamps	2	Pcs	
XLR connector	1	Set	Male and female
Safety cord	1	Pcs	
User manual	1	Pcs	
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 a projector. Should there be any damage caused by transportation, consult your dealer and do not use it.

●The manufacturer is not responsible for any loss caused by the user not following the manual or changing a projector as he/she likes.

●Please be noted that the damage caused by changing a projector at will is not warranted.

● Do not hesitate to contact the dealer or the manufacturer if any questions or advice.

●If a lamp is damaged or deforms because of heat, it should be replaced.(It applies only to traditional lamps)

• The projector is for indoor and outdoor use, IP66.

• It can be used in humid and dusty areas. And it can contact water and other non-corrosive 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.

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●Don't look straightly into the light sources especially for epileptics, otherwise eyes will be burned.

●Do not connect a projector to any type of dimmer pack.

●If the lamp, lens and screen protective cover of the a projector have obvious damage, i.e., to the extent that it hurts the performance like cracking or deformation. Please stop using it and replace them with the original parts, otherwise its performance will be compromised.

● For the installation location of a projector, it shouldn't be seen in the distance of less than 4 meters for a long time.

●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 like eye goggles , gloves and etc..

●Any electrical connection must be carried out by a qualified person .

●Before installation, please confirm the voltage supplied matches what is required for a 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 a 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.

●If a projector is not water and dust proof, while being operated it should not be under rains or in humidity to avoid short circuit.

●Do not switch on and off a 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 a projector is disconnected from power mains.

● While running normally under normal ambient temperature, the temperature of the external surface of the metal housing of a projector including that of the heat sink may reach 170℃ at maximum.

●While the lamp is stricken for the first time, there will be smoke and strange smell. It's normal and does not mean a projector has some defects.

●While it running, don't touch the metal housing to avoid being burned!

●Do not mount a projector directly on inflammable surface.

●Do not project the beam straightly on combustible items and the minimum distance between a projector and illuminated items is 18m.

●A projector should be installed with good ventilation and the minimum distance between a projector and a wall is 50cm. At the same time, please ensure the fans and air inlets and outlets are workable.

●Do not let the front lens under sunlight or other strong light sources at any angle, otherwise the danger of fire can be caused by the focused beam by the lens inside a projector.

. 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**

Under normal running, the protective units of a projector should be inspected regularly like power fuse. If it is burned, please install a new one and ensure it is the same rating as the burned one.

For a projector with an over-temperature protective unit, please inspect cooling units regularly like cooling fans, heat sink and other cooling parts. Please check if the fans run normally or fans and air inlets are blocked by dust. To keep air inlets /outlets clean, cooling fans should be cleaned every 15days.

For projectors with lens, reflectors and coated filters, the accumulation of oil, smoke and dust on them will compromise the light output. Cleaning a projector is very necessary to ensure a reliable use. Internal and external lens, flat glass, reflector and coated filters 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. For a projector with high IP rating, if no damage inside, it is advised to clean the surfaces of its housing in principle. Keep lens clean and do not touch optical parts with bare hands.

SPECIAL NOTE:

It's normal phenomena that there will be mild water mist on the lens while the waterproof product is in use.

●Before any maintenance and cleaning, please ensure a project is off the power.

●Only a qualified person is allowed to do maintenance.

●**To avoid sunlight or other light penetrating into the head via the front lens, resulting in high temperature internally causing damages to a projector. Before power-off, please use Tilt channel to move the head and make the head 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 coated filters.

●**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
A projector doesn't switch on	➢ Check the fuse on the power socket. ➢ Check the lamp.
The lamp is on but a projector doesn't respond to the controller	➢ Make sure that the fixture's start address is right ➢ Replace or repair the XLR signal cable.
A projector functions intermittently	➢ Make sure the fan is working well or fans and their shields are not blocked
Beam appears dim, Low in brightness	➢ Make sure the lamp is within its lifespan ➢ Remove dust or grease from the lenses.
The project image appears to have a halo	➢ Carefully clean the 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**

Head

Arm

Base
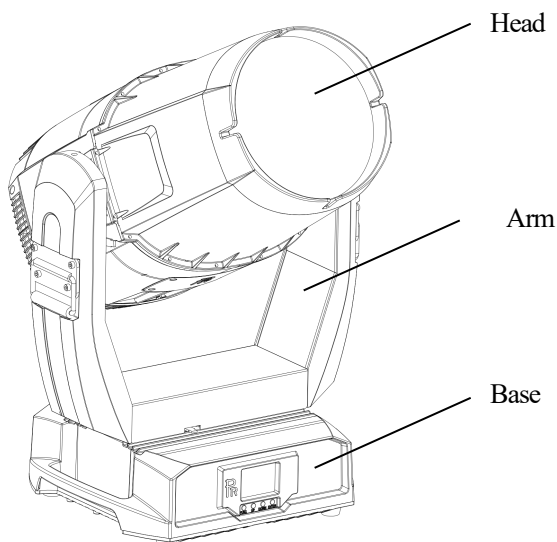
4. INSTALLATION

●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!
For safety, please run the safety cord through its hole.
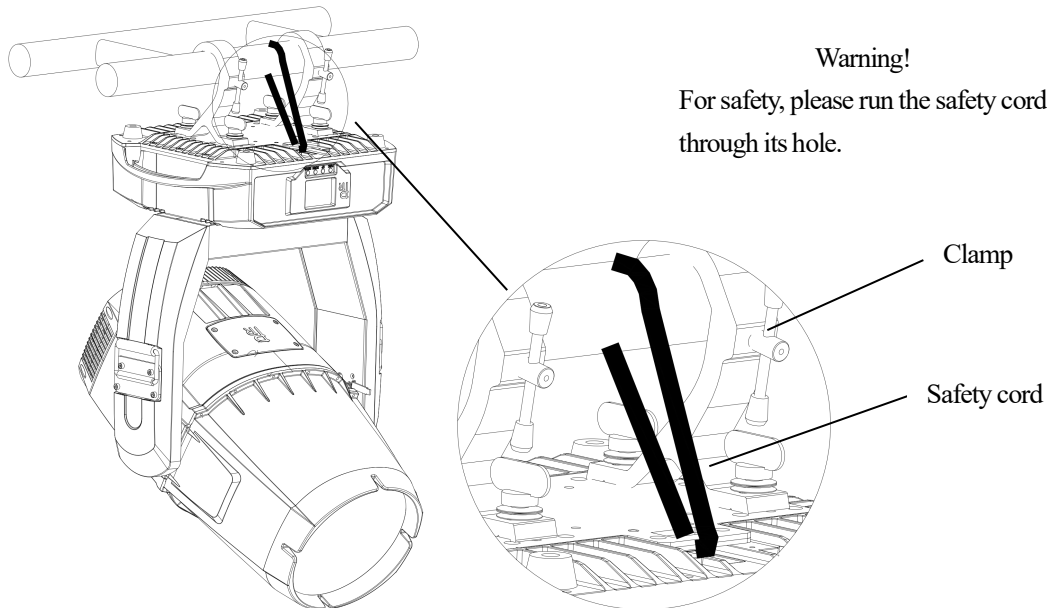
Clamp

Safety cord

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:

	DMX OUT			DMX IN			DMX 512	

PIN	FUNCTION
1	GND
2	DATA-
3	DATA+
4	N/C
5	N/C
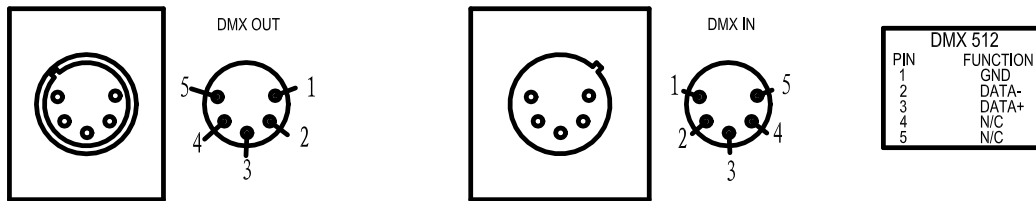
Connection between controller and projector and between one projector and another must be made with a twin-screened cable, with each wire having at least a 0.5mm in diameter. Connection to and from the projector is via cannon 5 pin (which are included with the projector) or 5 pin XLR plugs and sockets. 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.

DMX512 COMTROLLER OUTPUT INPUT OUTPUT INPUT DMX TERMINATOR
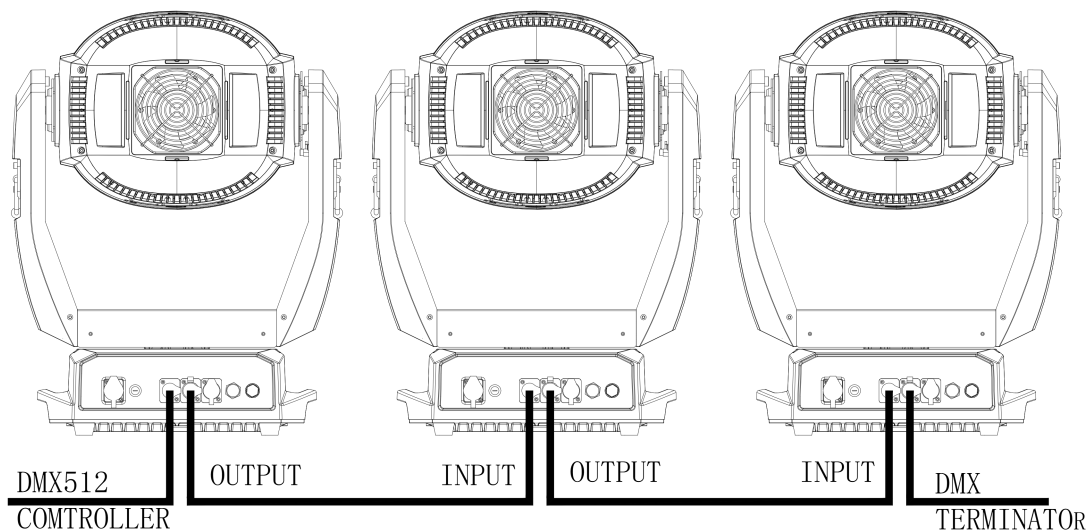
•DMX TERMINATOR

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.

DMX TERMINATOR
CONNECTION
Connect a 120Ω(OHM) resistor across pins 2 and 3 in an XLR plug and insert into the DMX out socket on the last unit in the chain.

PIN 2 PIN 3
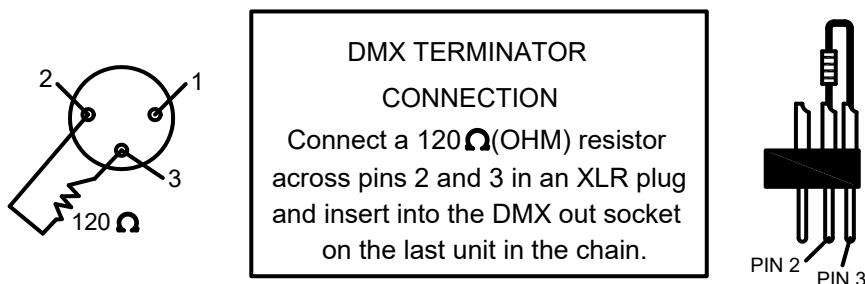
●**ALIGNMENT/INSTALLATION/REPLACEMENT OF A LAMP**

Please hold the projector well before adjustment/installation/replacement of lamp. As shown in figure1, remove fan cover of the head and heat sink.

Removal/Installation of lamp as shown in figure2

Adjust the lamp as shown in figure3

Before the removal of the lamp, unplug the lamp wires. And plug lamp wires after a new one is in.

●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. There is a protruding metal wire in the lamp, while installation do not damage it. Hold the lamp body well before its removal. It's forbidden to use force on the ceramic stand, otherwise it will loosen or fall off.

●Please read "Instructions " enclosed with the lamp

●While adjusting the lamp, it is forbidden to carry out the functions not associated with lamp adjustment.
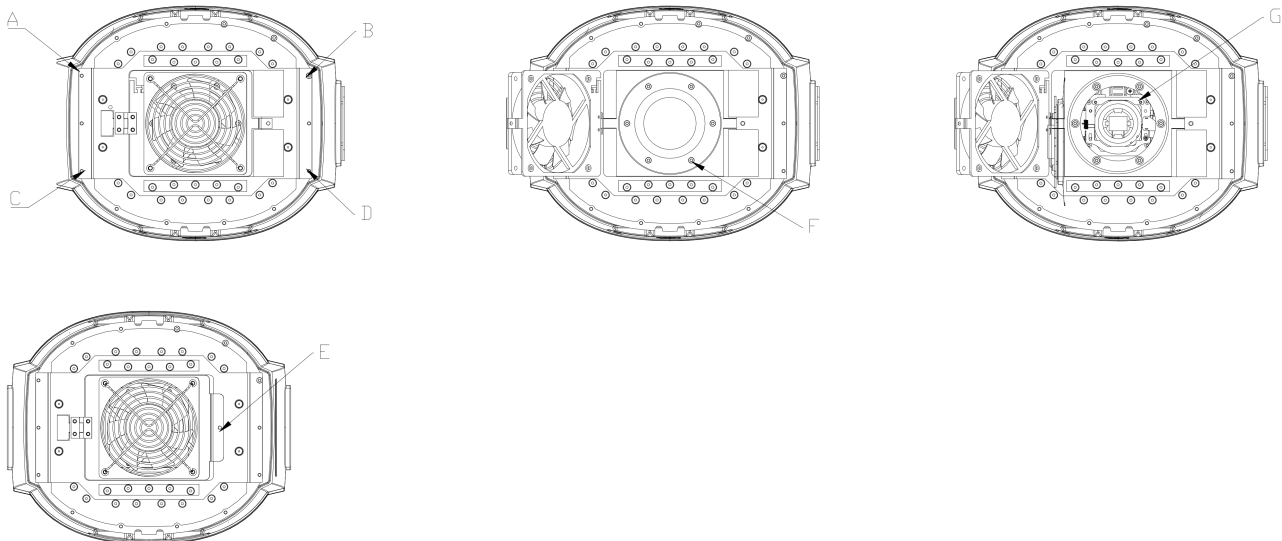
Figure1:After loosening the 4 screws marked as A,B,C,D, remove the cover at the lamp end of the head. Pull the fan assembly after loosening the screw marked as E and the lamp chamber exposed.

Figure2:Pull the fan assembly and remove the lamp chamber cover after loosening its 6 screws marked as F and be careful not to let its seal fall down.

Figure 3: After loosening 4 screws of lamp's pressuring plate, push the lamp towards one side of the strip-shaped hole till it can be removed. At last unplug its wires. Place a new lamp in the chamber, plug its wires, cover its cover, tighten its screws and ensure the seal in its right place. At last restore its original appearance by the opposite sequence of the lamp removal.

5. SETUP AND CONFIGURATION
●**FRONT PANEL OPERATION**
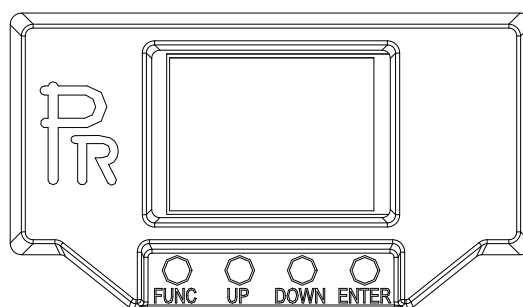
To browse through or change the projector 's settings, press ENTER key for more than 3s(press ENTER key after power on) to unlock the screen , then press UP/DOWN key to enter the projector 's function menus. Each main menu has its sub-menus. And each menu stands for special function. For the details, please see the following 6th point "Operation Menu".:

1. At the page to set the fixture's functions, press UP or DOWN key to select the functions desired.

2. While menu operations, the FUNC key to escape, and ENTER key is used to confirm. Press ENTER key to save the changes or enter into the sub menus. Press UP or DOWN key to change the numbers(minus or plus).

Press FUNC key to go to the uppler menu. If no key is pushed, the system will go back to initial status automatically.
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• 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 18 channels, so set the No. 1 projector's address 001, No. 2 projector's address 019, No. 3 projector's address 037,No. 4 projector's address 055, and so on.

Switch on the Projector . Press ENTER key more than 3 seconds to unlock panel, then press UP or DOWN key to enter into the fixture's operation menus.
Select DMX Address icon and press ENTER key on the display and select DMX address at the 2nd level menu for the address setting.
Press UP or DOWN key for the DMX address desired.
Press ENTER key to confirm.
Press the FUNC key to go back to the upper level menu.
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•DMX WIRELESS CONTROL(Only for fixtures with 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   ENTER   for more than 3s to unlock the control panel, then press UP or DOWN key to enter into the operation menu and select "Config Settings".
2. Select "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.

•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

MASTER   SLAVE   SLAVE

OUTPUT   INPUT   OUTPUT   INPUT   DMX TERMINATOR
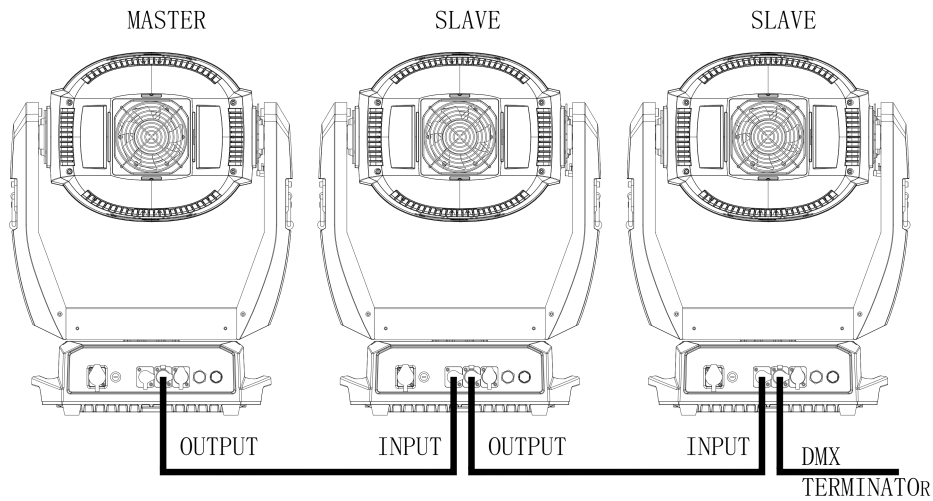
6.OPERATION MENU

1st LEVEL	2nd LEVEL	3rd LEVEL	4th LEVEL	5th LEVEL
Address	DMX Address	1-498(Short Mode) 1-495(Standard Mode) 1-493(Extend 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 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. Pr. Reset	Really Reset? Confirm or Cancel		
Config Settings	DMX Channel Mode	Short Mode15CH		
		Standard Mode18CH		
		Extended Mode 20CH		
		View Selected Mode	Ch.01 Strobe Ch.02 Dimmer …… Ch20 Function Control	
	Lamp Control	Lamp Control	OFF/ ON	
		On By Power On	OFF/ ON	

		Control By DMX	OFF/ ON	
		Lamp ECO Power	OFF/ ON	
	Signal Select (Only for fixtures with wireless control)	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 (Only for fixtures with wireless control)	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	Note: "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.
	Invert Settings	Dimmer Invert	OFF/ ON	
Information	View DMX Values	Channel Value Strobe XXX Dimmer XXX Color Wheel XXX Fixed Gobo Wheel XXX Prism1 XXX Prism1 Rotation XXX Prism2 XXX Prism2 Rotation XXX Focus XXX Pan XXX Tilt XXX Control Function XXX		
	Lamp Hours	XXX H Reset Lamp Hours		
	Total Hours	××××H		
	Temperature	Display Board=×××C Pan board=×××C Tilt board=×××C Driver Board1=×××C Driver Board 2=×××C Head Sensor=×××C		
	Software Version	PCB Sys Boot Display Board xxx xxx Pan board xxx xxx Tilt board xxx xxx Driver Board1 xxx xxx Driver Board 2 xxx xxx		
	Electronic SN	XXXXXX		
	RDM Device Label	AQUA 550S Beam ANSI E1.20 RDM		
	Fan Status	Fan Speed Status Lamp Fan1 xxx on/off Lamp Fan2 xxx on/off Head Fan xxx on/off Gobo Fan xxx on/off Lamp T Fan xxx on/off Lamp R Fan xxx on/off		
	Acceleration Sensor	X Axis: XXX Y Axis: XXX Z Axis: XXX Position: XXX		
	Lamp-offs	Fan lamp-offs Lamp Fan1 0 Lamp Fan2 0 Head Fan xxx 0		

Service		Gobo Fan 0		
		Lamp T Fan 0		
		Lamp R Fan 0		
	Manual Effect Control	Strobe XXX		
		Dimmer XXX		
		Dimmer Fine XXX		
		Color Wheel XXX		
		Color Wheel Fine XXX		
		Fixed Gobo Wheel XXX		
		Prism 1 XXX		
		Prism 1 Rotation XXX		
		Prism 2XXX		
		Prism 2 Rotation XXX		
		Focus XXX		
		Focus Fine XXX		
		Pan XXX		
		Pan Fine XXX		
		Tile 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		
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
				Color Wheel XXX
				Color Wheel Fine XXX
				Fixed Gobo Wheel XXX
				Prism 1 XXX
				Prism 1 Rotation XXX
				Prism 2XXX
				Prism 2 Rotation XXX
				Focus XXX
				Focus Fine XXX
				Pan XXX
				Pan Fine XXX
				Tilt XXX
				Tilt Fine XXX
				Pan & Tilt Speed &Time XXX
				Delay Time XXX
				Delay time unit ms/s/m
				Link to Step XXX
		Edit Static Scene	Strobe XXX	
			Dimmer XXX	
			Dimmer Fine XXX	

			Color Wheel XXX	
			Color Wheel Fine XXX	
			Fixed Gobo Wheel XXX	
			Prism 1 XXX	
			Prism 1 Rotation XXX	
			Prism 2XXX	
			Prism 2 Rotation XXX	
			Focus XXX	
			Focus Fine XXX	
			Pan XXX	
			Pan Fine XXX	
			Tile XXX	
			Tilt Fine XXX	
			Pan & Tilt Speed &Time 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	

Remarks: Lamp fan sensor is only used during lamp adjustment

Open: the lamp is affected by the lamp fan. If the lamp fan fails, the lamp won't be on.

Close: the lamp is not affected by the lamp fan. Even if the lamp fan is not installed, the lamp will be on, but Pan and Tilt are without force .

"Close" status is used only in emergency. If the lamp fan won't run for long, it will cause harm to the lamp.

After lamp adjustment, set the "lamp fan sensor as "Open" and activate total reset.

7. DMX PROTOCOL

Short mode	Standard Mode S	Extended Mode E	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	000-035	Close
				036-255	Linear dimming（0-100%）
	3	3	Dimmer Fine	000-255	Dimmer in 16 bit
3	4	4	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(Dark Blue)
				109-113	Color10(UV)
				114-118	Color11(Light Yellow)
				119-123	Color12(Dark Yellow)
				124-127	White
				128-191	Rotation ,Clockwise from slow to fast
				192-255	Rotation, Anti-clockwise from fast to slow
	5	5	Color Wheel Fine	0000-255	Color Wheel in 16 Bit
4	6	6	Fixed Gobo Wheel	000-008	White
				009-015	Gobo1
				016-022	Gobo2
				023-029	Gobo3
				030-036	Gobo4
				037-043	Gobo5
				044-050	Gobo6
				051-059	Gobo7
				058-064	Gobo8
				065-071	Gobo9
				072-078	Gobo10
				079-085	Gobo11
				086-092	Gobo12
				093-099	Gobo13
				100-106	Gobo14
				107-113	Gobo15
				114-120	Gobo16
				121-124	Gobo17
				125-127	Gobo18
				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
				252-255	Shake effect 17 from slow to fast
5	7	7	Prism 1	000-016	Open
				017-127	Prism1
				128-255	Prism2
6	8	8	Prism1 Rotation	000-127	Prism Indexing
				128	Stop
				129-191	Rotation(Clockwise from slow to fast)
				192	Stop
				193-255	Rotation(Anti- Clockwise from slow to fast)
		9	Prism 1 Rotation Fine	0-255	16bit control
7	9	10	Prism 2	000-016	White
				017-127	Prism3
				128-255	Frost in
8	10	11	Prism2 Rotation	000-127	Prism2 Indexing
				128	Stop
				129-191	Rotation(Clockwise from slow to fast)
				192	Stop
				193-255	Rotation(Anti- Clockwise from slow to fast)
		12	Prism 2 Rotation Fine	0-255	16bit control
9	11	13	Focus	000-255	Linear focus
	12	14	Focus Fine	000-255	Focus in 16 bit precision
10	13	15	Pan	000-255	Pan(0°~540°)
11	14	16	Pan Fine	000-255	Pan in 16 bit
12	15	17	Tilt	000-255	Tilt(0°~270°)
13	16	18	Tilt Fine	000-255	Tilt in 16 bit
14	17	19	Pan & Tilt Speeds	000-255	Pan & Tilt Speed from Fast to Slow
15	18	20	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	Focus/Prism Reset
				190-199	Reserved
				200-209	Total Reset
				210-229	Reserved
				230-239	Lamp Off
				240-255	Reserved

Remarks:

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

2. Fan error can cause lamp-off.

3. Note: "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.

8. SIGNS ON THE TOUCH SCREEN

	Lamp comtrol		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
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

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
Lamp Fan	Error	Check if fan and its wiring are normal
Head Fan	Error	Check if fan and its wiring are normal
Head Fan 2	Error	Check if fan and its wiring are normal
Base 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
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

Power factor: PF〉0.9

LAMP   SPECIFICATIONS

Lamp	PHILIPS MSD Platinum 500L Flex(550W)
Color Temperature	7800K
Manufacturers Rated Lamp Life	1500hours

COLORS

1 Color wheel: 12colors+ Open,

rainbow effect with bi-directional and variable speeds,

Stepping/linear color changing

FIXED GOBO WHEEL

1 Fixed gobo wheel: 18 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	Gobo18			

PRISM/FROST

3 pcs of prisms which can be overlapped (8 facet circular prism+ 4facet linear prism) (16 facet circular prism+ frsot)   And other optional prisms

FOCUS

DMX linear Focus

DIMMER/STROBE

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

HEAD MOVEMENT

Pan 540º, Tilt 270º with auto position correction

BEAM ANGLE

Beam angle   2°

CONTROL

DMX512, 5-pin interfaces(Optional 3-pin)
15channels in short mode, 18channels in standard mode , 20channels 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 receiever

Optional DMX512 Wireless Transmitter

Optional ArtNet function

HOUSING

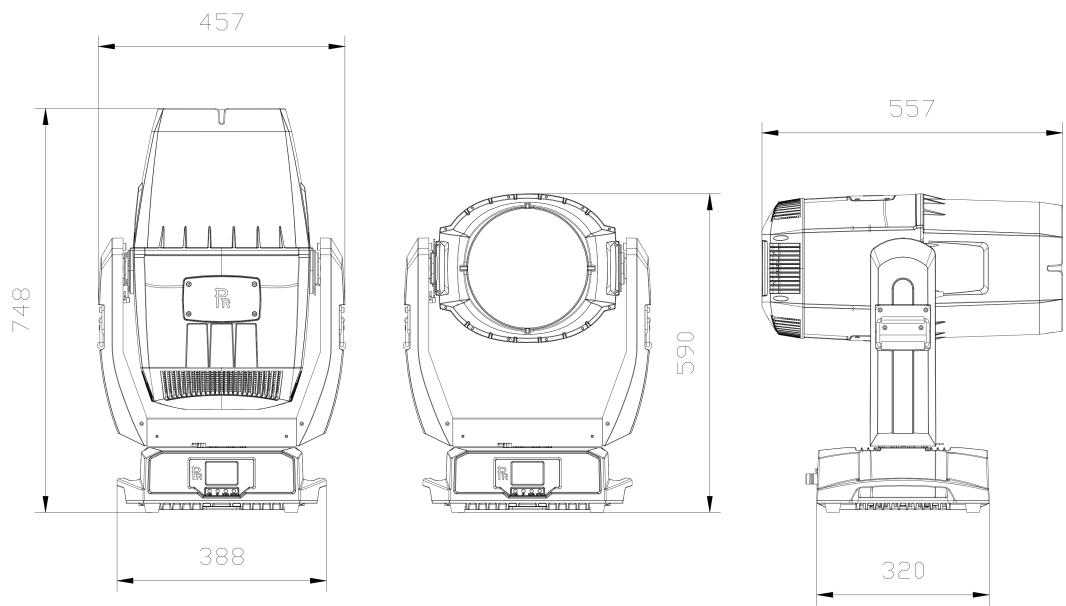Cast Aluminum and high temperature and UV resistant ABS, IP66
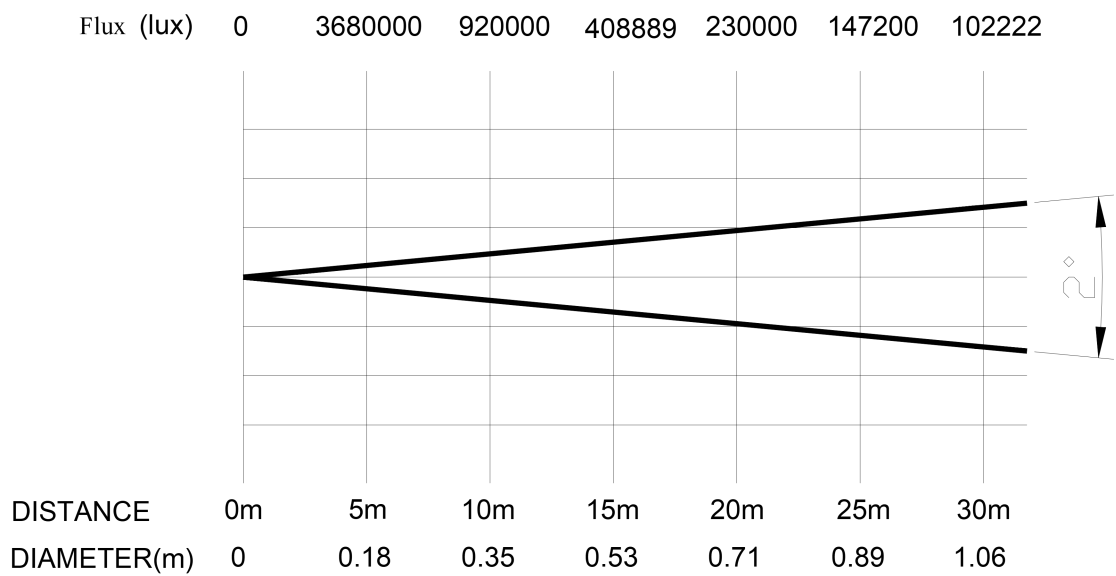
NET WEIGHT:38.8 Kg

WORK TEMPERATURE

Maximum ambient temperature: 45°C

For a waterproof fixture: if the ambient temperature is minus 20 Celsius, strike the lamp to pre-heat for 10minutes and reset it again.
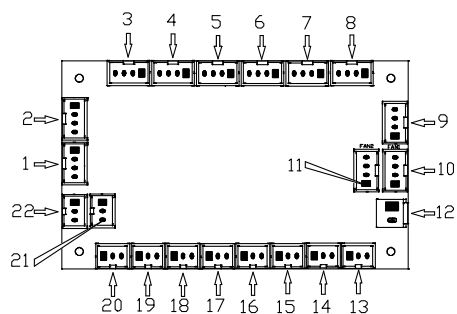
SIZES

LIGHT OUTPUT

| Flux (lux) | 0 | 3680000 | 920000 | 408889 | 230000 | 147200 | 102222 |

DISTANCE	0m	5m	10m	15m	20m	25m	30m
DIAMETER(m)	0	0.18	0.35	0.53	0.71	0.89	1.06

10. CIRCUIT DIAGRAM AND PCB CONNECTIONS
. CIRCUIT DIAGRAM

●PCB CONNECTIONS

8-Channel SLAVE1 ： P/N230060735

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	HALL1-6Magnet Sensor
5	M1-5 Motor	16	HALL1-5 Magnet Sensor
6	M1-6 Motor	17	HALL1-4 Magnet Sensor
7	M1-7 Motor	18	HALL1-3 Magnet Sensor
8	M1-8 Motor	19	HALL1-2 Magnet Sensor
9	MEMS Sensor Board	20	HALL1-1 Magnet Sensor
10	Lamp Fan1	21	Signal output
11	Lamp Fan2	22	Signal input

8-CHANNLE SLAVE2：P/N230060736

No	Name
1, 2	RS485 signal
3, 4	Motor driver output
5, 6	Reserved
7	Thermal sensor
8, 9	Fan
10, 11	Reserved
12, 13	Hall sensor
14	Programming interface

X   BOARD：P/N230060722
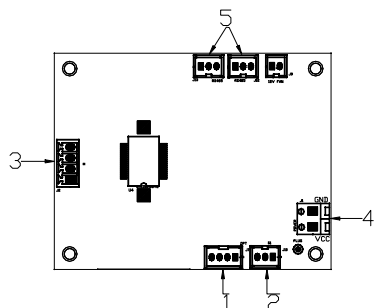
Pan Board	
1	Optical sensor
2	SX magnetic sensor
3	Pan Motor
4	48V power input
5	Signal

Y   BOARD：P/N230060729
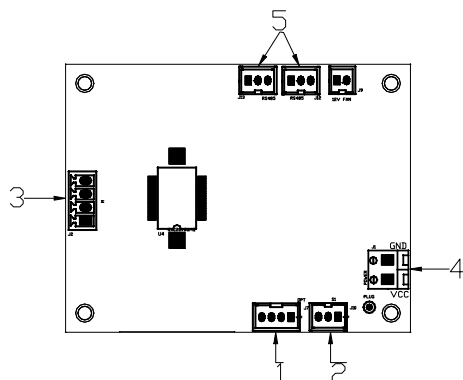
Tilt Board	
1	Tilt Encoder
2	SY magnetic sensor
3	Tilt Motor
4	48V power input
5	Signal

12. COMPONENT ORDER CODES

NAME	PART NO.	QTY.	REMARKS
STEPPER MOTOR	030040121A	2	
STEPPER MOTOR	030040221C	4	
STEPPER MOTOR	030040224C	1	
SCREWMANDREL MOTOR(WITH NUT)	030040243A	2	
STEPPER MOTOR	030040246B	1	
STEPPER MOTOR	030040254A	3	
STEPPER MOTOR 181123	030040277	2	
STEPPER MOTOR 190918	030040278	1	
STEPPER MOTOR 191028	030040284	1	
STEPPER MOTOR 200821	030040292	1	
FAN	030060075	3	
4 WIRE WATERPROOF FAN	030060106	1	
FG FAN (SUNON)	030060113	1	
FG+PWM WATERPROOF VARIABLE SPEED FAN	030060116	1	
FG+PWM VARIABLE SPEED FAN 180820	030060117	7	
LAMP BALLAST	040070152	1	
LAMP	100070057	1	
COLOR WHEEL ACCESSORY	120110973	1	
FIXED GOBO WHEEL ACCESSORY	120110975B	1	
SWITCHING POWER SUPPLY	192010223	1	

APPENDIX: SOME ITEMS REQUIRING ATTENTION AS FOR THE USE OF DISCHARGE LAMP

For the effective extension of the lifespan of discharge lamp, some factors impacting its lifespan are specially listed below, based on manufacturing technology and working mechanism of discharge lamps., physical attributions of the lamps including lamp striking theory(ignited by focused high voltage---highly pressurized air broken down and burning---lamp on at high temperature with thermal protection--- stable running) and lamp off theory(lamp off power ---lamp off at high temperature and thermal protection-highly pressurized air vaporizing evenly----completion of lamp off.

1. The sequence of lamp striking: Power on→lamp striking by controller(advised not to strike lamp via power on), the sequence of lamp off: lamp off by controller→mains power shut off (advised not to turn off lamp by shutting off mains power)

2. Within 1 min after lamp striking, it shouldn't re-strike it frequently. ONLY more than 10 min after the projector is cooled after lamp off, can the lamp be re-stricken again.

3. Within 5 min after lamp striking, it can't be turned off. During the lamp striking process, it's forbidden to turn off lamp via shutting off mains power, but via controller. More than 5 min after the projector is cooled after lamp off, can the mains power be shut off.

4. The projector is advised not to point to the same point for long time, i.e., it shouldn't be used for long time at a fixed angle.

5. The projector is advised not to use double colors for long time, i.e., it shouldn't use 2 or more colors for long time.

6. The projector is advised not to keep shutters closed while lamp on for long time, i.e., it should be less than 1 hr after shutters closed after lamp on.

 It is advised not to use lamp half power function for long time.

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