PLANET

PR-8128

This product manual contains important information about the safe installation and use of this product. Please read and follow these instructions carefully before installing and using the product and keep this 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
Clamp	2	Pc	
Safety Cord	1	Pc	
User manual	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.

Any future technical change in the user manual won't be with any notice.

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 10m
●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 55℃.After stable operation , its temperature is 50℃.
- 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 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.

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.
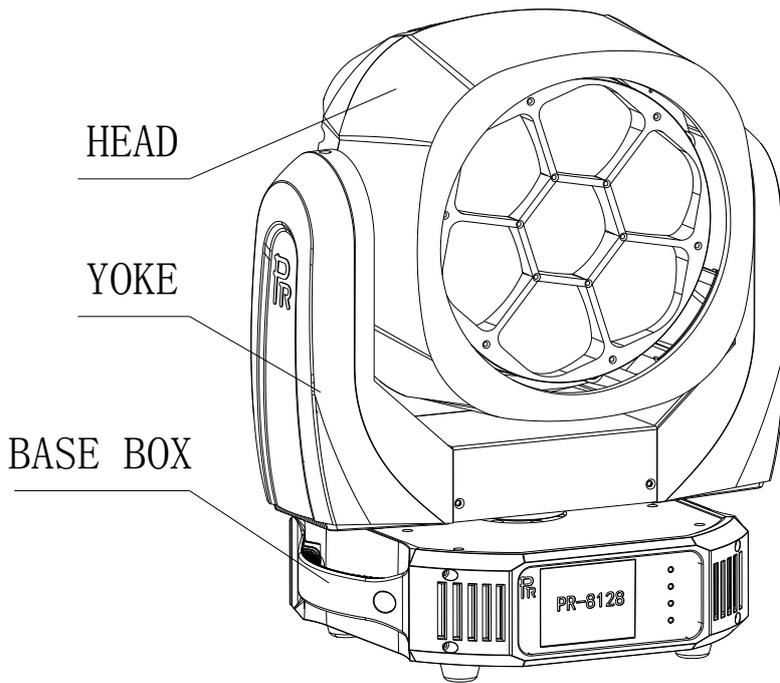
- **LUBRICATION**

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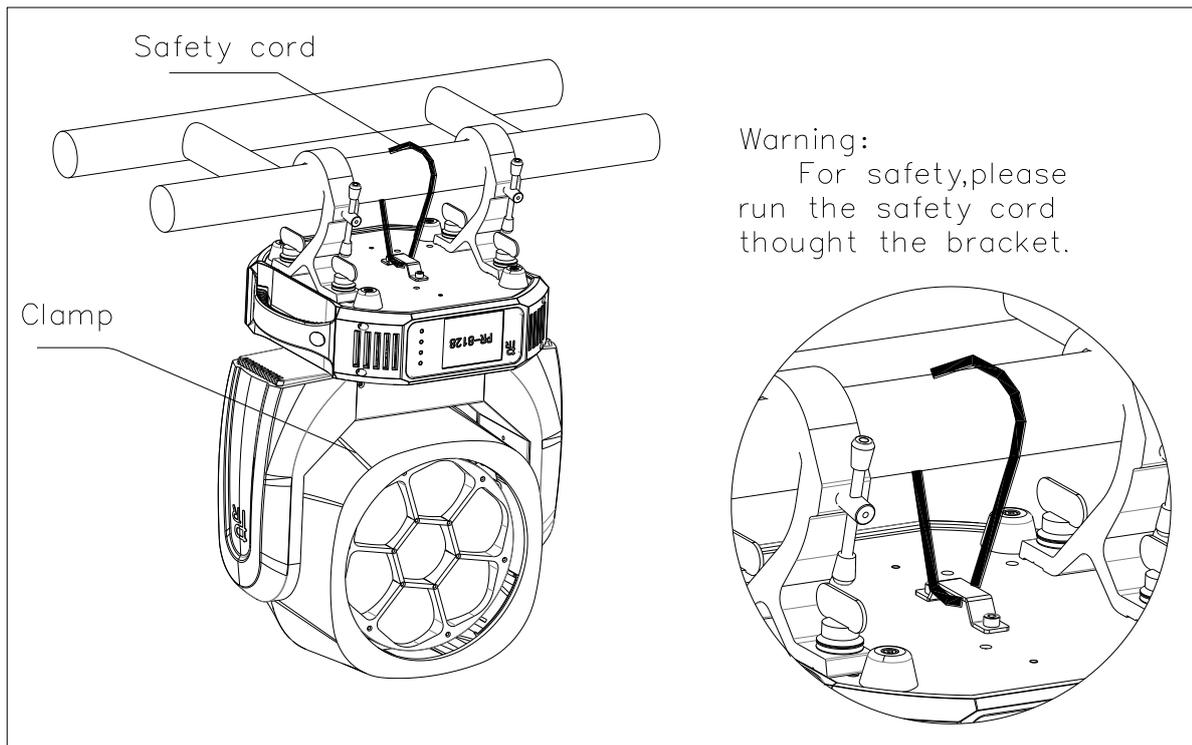
- **TROUBLESHOOTING**

PROBLEM	ACTION
The projector doesn't switch on	➢ Check the power cord connection ➢ Power Switch fails or is not connected well, call a professional technician for repairing and checking ➢ Control board is not connected normally, call a professional technician for repairing and checking ,
The project can be turned on, but the LED lamps can't be on	➢ LED lamp board is not connected well, call a professional technician for repairing and checking
The LED lamps can be on, but not controlled by DMX	➢ Check DMX Start Address ➢ Check if XLR cable fails or not
The brightness decreases obviously	➢ Ambient temperature is too hot which makes the projector too hot, please take appropriate ventilation measures

3.APPEARANCE

HEAD

YOKE

BASE BOX

4.INSTALLATION

●RIGGING

Safety cord

Clamp

Warning:
    For safety,please
run the safety cord
thought the bracket.

While transportation of the fixture, please lock both Pan and Tilt well; Before the use of the fixture, please unlock both. It's forbidden to run the fixture while it's locked.

Take 2clamp and 1 the safety cord out from the package and mount 1 clamp on the BOTTOM of fixture with 2 retainers attached to the clamp. Hang the fixture on the steel truss and fasten the retainers attached to the clamp. Always ensure that the location that you are going to mount the unit is secure and is strong enough to support the weight of the unit (See the **WARNING** as shown above) **To pass SAFETY CORD through the SAFETY HOLE on the back cover of the base of the fixture for safety!** Always ensure that the unit is firmly anchored to avoid vibration and slipping whilst functioning.

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.

Note: If projectors are connected in series, please connect POWERIN port of the 1st projector with the Power Mains, then connect its POWER OUT with POWER IN of the 2nd projector, and so on till all fixtures are connected. If the voltage supplied is 200V-240V, the maximum projectors connected is 8pcs, if it is 100V-120V, the maximum is 4pcs. The diameter of the cores of the wires for the Power in/out cables must be equal or bigger than 2.5mm^2.

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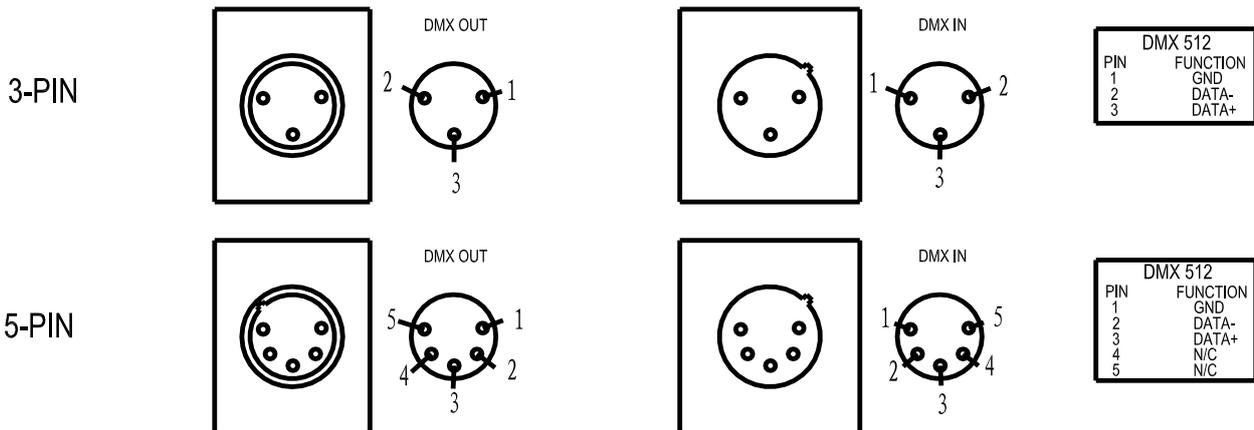
Connection between controller and projector and between one projector and another must be made with a twin-screened cable, with each wire having at least a 0.5mm in diameter. Connection to and from the projector is via cannon 5 pin (which are included with the projector) or 5 pin XLR plugs and sockets.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

MASTER   SLAVE   SLAVE

DMX INPUT   DMX OUTPUT   DMX INPUT   DMX OUTPUT   DMX INPUT   DMX TERMINATOR
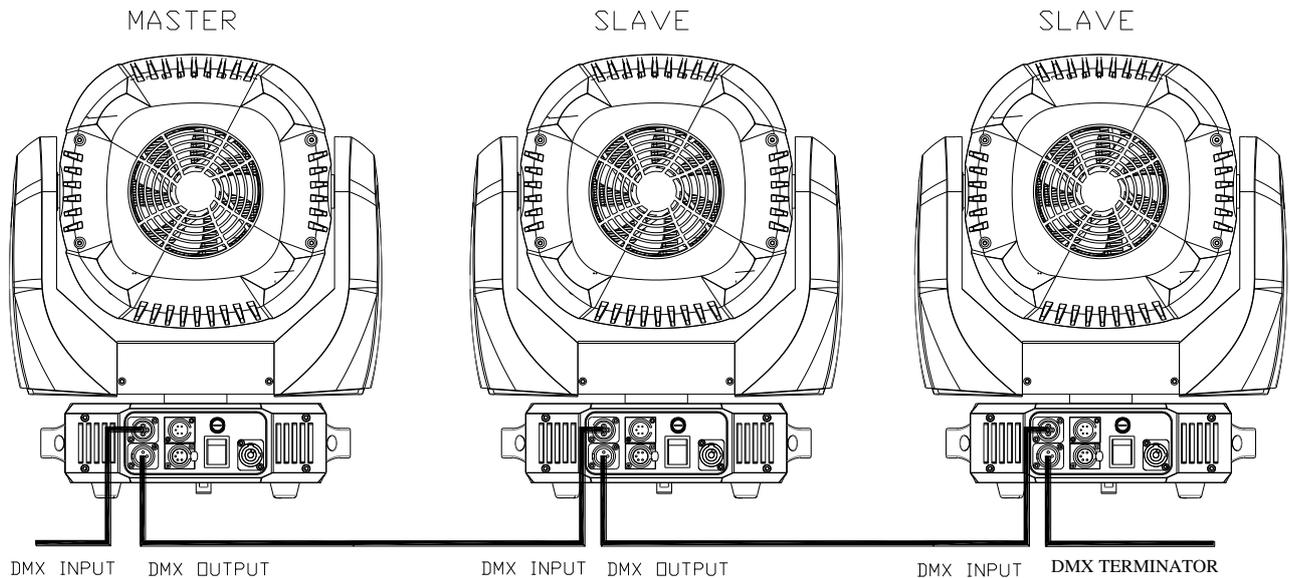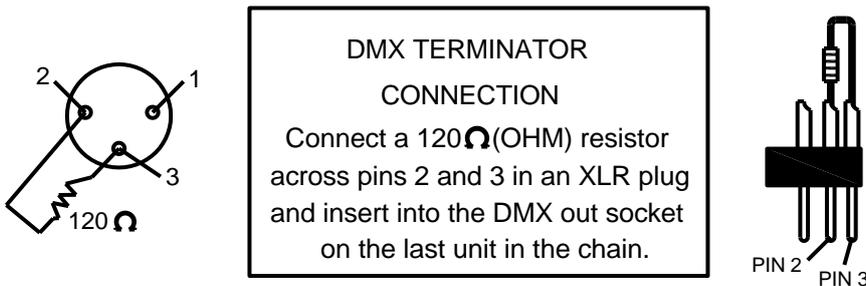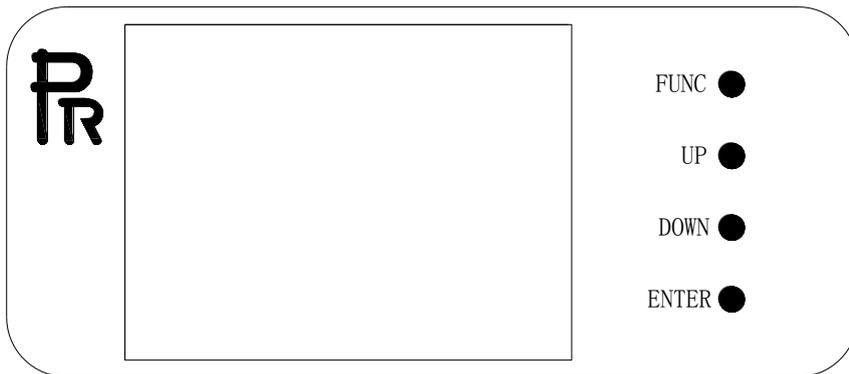
●**DMX TERMINATOR**

In the Controller mode, at the last projector   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

5.SETUP AND CONFIGURATION

●**Front Panel Operation**

FUNC ●

UP ●

DOWN ●

ENTER ●

Projector configuration can be set conveniently via push button and the color touch screen.

Launch the projector and press button ENTER for more than 3seconds to unlock the panel, the display will show the function menu of the projector, each main menu has its submenus and each submenu has a specific function. For details, please see the "OPERATION MENU" section.

Press button UP or DOWN if you want to browse through the various Setup Options.

Press button ENTER to save your settings or enter the submenu.

Press button UP or DOWN to change values(plus or minus)

Press button FUNC, it will return to the upper menu. If button FUNC not pressed, the default will show display status automatically.

● DMX START ADDRESS

If many projector s are controlled by the controller, each projector   should be set with a start address to receive signals sent by the controller and respond to it. The projector   have 3 DMX modes. There are short mode, standard mode and extended mode. For example standard mode has 18channels, so set the No. 1 Projector 's address 001, No. 2 Projector 's address 031, No. 3 Projector 's address 061 and so on.

Launch the projector. Press button ENTER more than 2seconds to unlock panel.

Press button ENTER to display DMX address;

Press button UP and DOWN, you can set the address;

Press button ENTER to confirm; after powered on next time, the default will be last value saved

Press button FUNC, it will return to the upper menu

●DMX WIRELESS CONTROL (Optional)

The projector has the optional wireless control function. With wireless receiver module and antenna, it can achieve remote control.

The setup of it is below:

1.   Enter into the projector's menu. Select   the menu "Config Settigns" via the bottoms of   UP and DOWN

2.   Select **DMX control Mode---- Wireless First** (Note: do not select **XLR ONLY),**then wireless indication in the front panel will be on, meaning wireless control function is activated.

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 Unlink Wireless under the upper level menu of Config Settigns .

●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 projector 's DMX output to the second projector 's DMX input using XLR-XLR control cable and then connect the second projector 's DMX output to the third projector 's DMX input, and so on until all projector are connected in this way. Eventually connect the last projector '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

DMX INPUT   DMX OUTPUT   DMX INPUT   DMX OUTPUT   DMX INPUT   DMX TERMINATOR
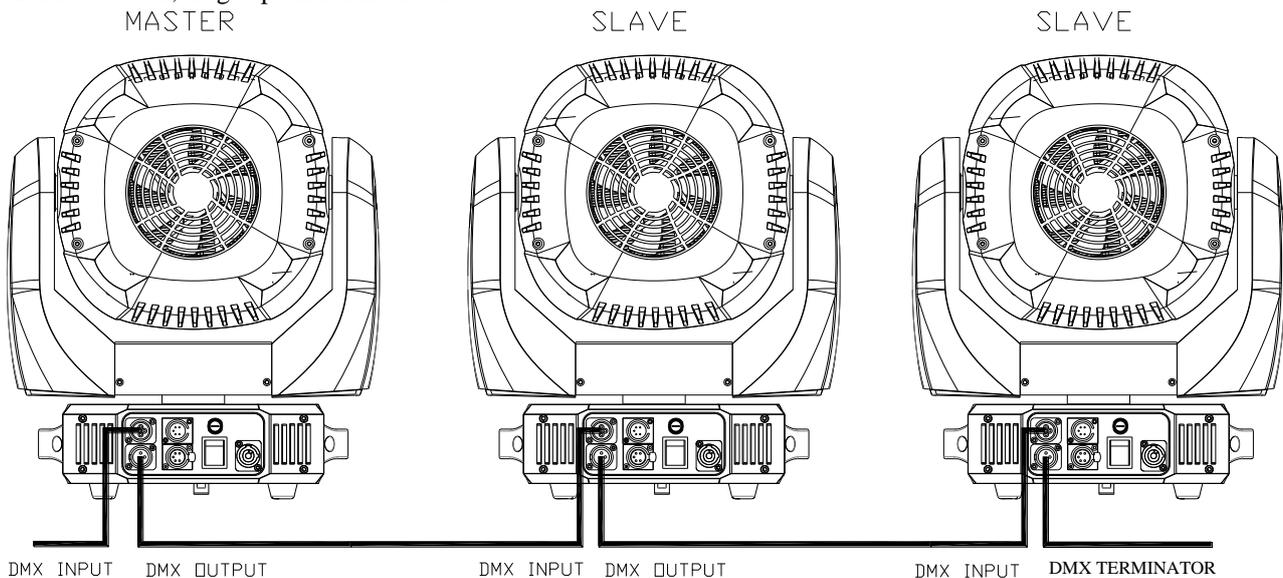
●Sound Operation

To select different level(1-100) of sound sensitivity based on different operating environment under sound operation under

Operation Mode. There are several different(0-8) sound effects for different operating environment under Sound
Operation.

Note: If several fixtures in series under Master/Slave mode, Only Master responds to external sound.

6.OPERATION MENU

1ˢᵗ level menu	2ⁿᵈ level menu	3ʳᵈ level menu	4ᵗʰ level menu
DMX Settings	DMX Address	000 - 512	
	Channel Mode	Standard	
		Extended	
		Short	
	DMX Lost	Black Out	
		Hold Lost	
	View DMX Values		
Reset	Pan/Tilt Reset		
	Head Reset		
	ALL Reset		
Config	Master Slave	Master	
		Slave	
	Display Mode	On Always	
		Off Delay	
	LCD Dimming	1 - 10	
	Display Invert	Normal	
		Inverted	
	Language	English	
		Chinese	
	Calibrate		
	DMX Signal	XLR First	
		XLR Only	
		Wireless Only	
		Wireless First	
		Wireless To XLR	
	UnLink Wireless		
	Factory Sett.		
	PRM Transmit		
	clean Progra		
Option	Pan DMX Invert	OFF	
		ON	
	Tilt DMX Invert	OFF	
		ON	
	Pan Tilt Swap	OFF	
		ON	
	Offset (motor and color offset)	Pan Offset	-127 ~ 127
		Tilt Offset	-127 ~ 127
		Pan Run Offset	-127 ~ 127
		Zoom Offset	-127 ~ 127
		Red Offset	128-255
		Green Offset	128-255
		Blue Offset	128-255
		Time Clean	

	Defaults		Motor and Color offset not restored
Information	Total Hours		
	Temperature	Display Board	
		Pan and Tilt	
		LED 1	
		LED 2	
	Software Ver.	VA	
		VB	
		VC	
		VD	
	Electronic SN		
	Status Inform.	Pan Encoder Pan sensor Pan Over Temp. Pan Fault Tilt Encoder Tilt sensor Tilt Over Temp. Tilt Fault Pan Run Sensor Zoom Sensor LED1 Temperat. LED2 Temperat.	
Test Mode	Auto Test		
	Manual Test	Shutt	000-255
		Dimmr	000-255
		LED1	000-255
		LED2	000-255
		LED3	000-255
		LED4	000-255
		LED 5	000-255
		LED 6	000-255
		LED 7	000-255
		X Run	000-255
		Zoom	000-255
		Pan	000-255
		Tilt	000-255
		XY Sp	000-255
Operation	DMX Mode		
	User Memory		
	Preset Memory		
	Static Scene1-16 (Each scene has 23 steps)	Shutt	000-255
		Dimmr	000-255
		LED1	000-255
		LED2	000-255
		LED3	000-255
		LED4	000-255
		LED 5	000-255
		LED 6	000-255
		LED 7	000-255
		X Run	000-255
		Zoom	000-255
		Pan	000-255
		Tilt	000-255
		Keep T	000-255(0- 20S)

REMARK: LOGO：

NO.	Names	Logo	Remark
1	Warning		
2	Display Invert		
3	Exit		
4	English		
5	Chinese		

7.DMX PROTOCOL

Short 8	Standard 16	Extended 16	function	DMX Value	Description
1	1	1	Strobe	000-007	No
				008-127	Strobe from slow to fast
				128-135	No
				136-177	Fast closing and slow opening
				178-185	No
				186-227	Fast opening and slow closing
				228-235	No
				236-249	Random Strobe
				250-255	No
2	2	2	Dimmer	000-255	Linear Dimmer from dark to bright
3	3	3	Color Temperature	000	No
				001-255	Linear CT change from low to high(10000-2700K)
4	4	4	Colors	000-007	No
				008- 255	Fading Rainbow from slow to fast
5	5	5	Color Macro	000	No
				001-255	255 colors
6	6	6	Area 1 Red	000-255	Linear change from dark to bright
7	7	7	Area 1 Green	000-255	Linear change from dark to bright
8	8	8	Area 1 Blue	000-255	Linear change from dark to bright
9	9	9	Area 1 White	000-255	Linear change from dark to bright
6	6	10	Area 2 Red	000-255	Linear change from dark to bright
7	7	11	Area 2 Green	000-255	Linear change from dark to bright
8	8	12	Area 2 Blue	000-255	Linear change from dark to bright
9	9	13	Area 2 White	000-255	Linear change from dark to bright
6	6	14	Area 3 Red	000-255	Linear change from dark to bright
7	7	15	Area 3 Green	000-255	Linear change from dark to bright
8	8	16	Area 3 Blue	000-255	Linear change from dark to bright
9	9	17	Area3 White	000-255	Linear change from dark to bright

6	6	18	Area 4 Red	000-255	Linear change from dark to bright
7	7	19	Area 4 Green	000-255	Linear change from dark to bright
8	8	20	Area 4 Blue	000-255	Linear change from dark to bright
9	9	21	Area4 White	000-255	Linear change from dark to bright
6	6	22	Area 5 Red	000-255	Linear change from dark to bright
7	7	23	Area 5 Green	000-255	Linear change from dark to bright
8	8	24	Area5 Blue	000-255	Linear change from dark to bright
9	9	25	Area5 White	000-255	Linear change from dark to bright
6	6	26	Area 6 Red	000-255	Linear change from dark to bright
7	7	27	Area 6 Green	000-255	Linear change from dark to bright
8	8	28	Area 6 Blue	000-255	Linear change from dark to bright
9	9	29	Area 6 White	000-255	Linear change from dark to bright
6	6	30	Area 7Red	000-255	Linear change from dark to bright
7	7	31	Area 7 Green	000-255	Linear change from dark to bright
8	8	32	Area 7 Blue	000-255	Linear change from dark to bright
9	9	33	Area 7 White	000-255	Linear change from dark to bright
10	10	34	Front Lens Panel	000	Stop
				001-127	Clockwise rotation from slow to fast
				128-255	Anti-clockwise rotation from slow to fast
11	11	35	Zoom	000-255	
	12	36	Zoom Fine	000-255	In 16 Bit
12	13	37	Pan	000-255	Pan 0-540 degrees
	14	38	Pan in 16 bit	000-255	Pan in 16 bit
13	15	39	Tilt	000-255	Tilt 0-270 degrees
	16	40	Tilt in 16 bit	000-255	Tilt in 16 bit
	17	41	Pan and Tilt Speed	000-255	Pan & Tilt speed from fast to slow
14	18	42	Macros	000-007	NO
				008-255	16 Macros(If it works, color dimmer from LED1to LED6 won't work, but dimmer for all still works.
15	19	43	Macro: Color1 Dimmer	000-255	Linear adjustment from dark to bright (Use the channel to adjust the brightness of color1.)
16	20	44	Macro: Color2 Dimmer	000-255	Linear adjustment from dark to bright
17	21	45	Macro: Speed adjustment	000-255	From slow to fast
18	22	46	Macro Color 1: Red Dimmer	000-255	Linear adjustment from dark to bright
19	23	47	Macro Color 1: Green Dimmer	000-255	Linear adjustment from dark to bright
20	24	78	Macro Color 1:Blue Dimmer	000-255	Linear adjustment from dark to bright
21	25	49	Macro Color 1: White Dimmer	000-255	Linear adjustment from dark to bright

22	26	50	Macro Color 2 :Red Dimmer	000-255	Linear adjustment from dark to bright
23	27	51	Macro Color 2: Green Dimmer	000-255	Linear adjustment from dark to bright
24	28	52	Macro Color2 :Blue Dimmer	000-255	Linear adjustment from dark to bright
25	29	53	Macro Color 2: White Dimmer	000-255	Linear adjustment from dark to bright
26	30	54	Control Function	000-139	Reserved
				140-149	Pan and Tilt Reset(Stay for 3S)
				150-179	Reserved
				180-189	Front Lens Panel Reset (Stay for 3S)
				190-199	Reserved
				200-209	All Reset(Stay for 3S)
				210-255	Reserved

Note: Can the Color Temperature Channel work only after the corresponding color channel is in use.

8. TECHNICAL DATA

VOLTAGES
100V~240V AC,50/60Hz

POWER CONSUMPTION
500W@220V

LIGHT SOURCE
LED:	OSRAMS: 60W RGBW LED(SMT), Four in One
Power:	60W,7pcs
Color temperature:	Linear change from 2700K to 10000K
Rated life	50000hrs

COLORS
Linear RGBW ,color mixing with unlimited colors, macros

DIMMER
0-100% linearly adjustable

STROBE:
Electronic strobe:0-25 F.P.S.(Pulse Strobe Macro)

OTHER EFFECTS:
Rainbow, Wash, Beam, Profile, Effect Modes(Kaleidoscope, Swirl), multiple macros

ROTATION

Pan 0-540 degrees, Tilt 0-210 degrees with auto-positioning , Bi-directional and continual rotation for the front lens panel

BEAM ANGLE

Beam angle(1/2 peak) $\theta_{1/2}$: Linear Zoom $3.3° \sim 60°$

CONTROL:

International Standard DMX512 signal, 5 pin DMX512 interfaces

26channels in short mode, 30channels in standard mode, and 54 channels in extended mode.

Master/slave mode

Stand-alone mode, Preset mode, Self test mode, Single Scene mode

OTHER FUNCTIONS:

Ring control, Pixel Control, each color of RGBW of a LED lamp controllable .

Bi-directional and continual rotation of the front lens panel

Color touch screen and its brightness adjustable

Wireless Control(Optional)

Pan and Tilt Speed adjustable and   Pan and Tilt can be inverted

Firmware upgraded via DMX interface and XLR cable,

Over temperature protection

Total hours, DMX channel number, software versions are displayed and display inversion

HOUSING:

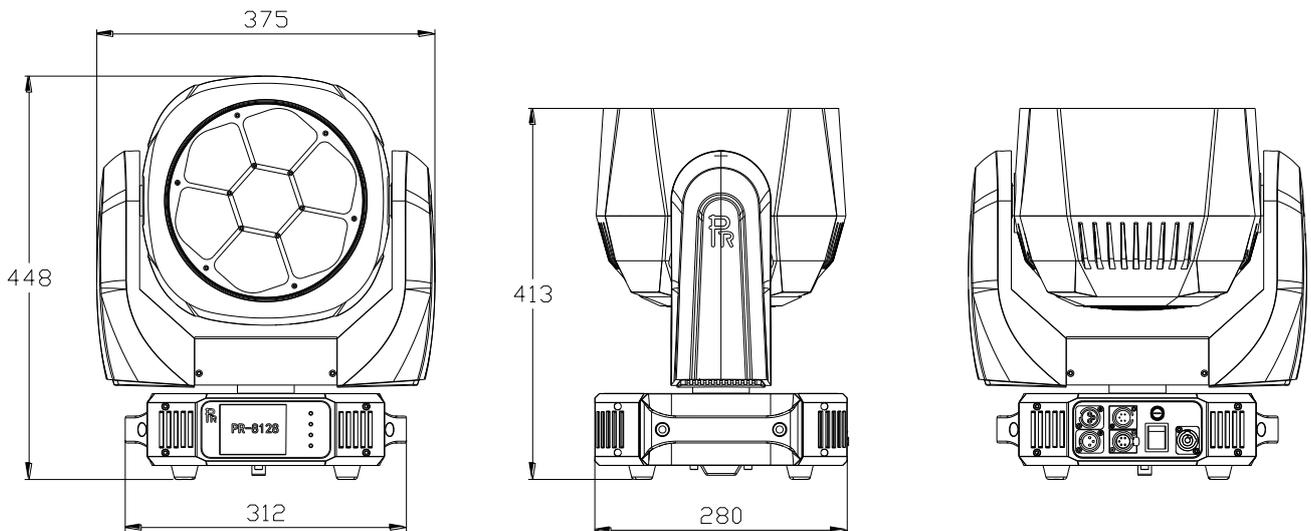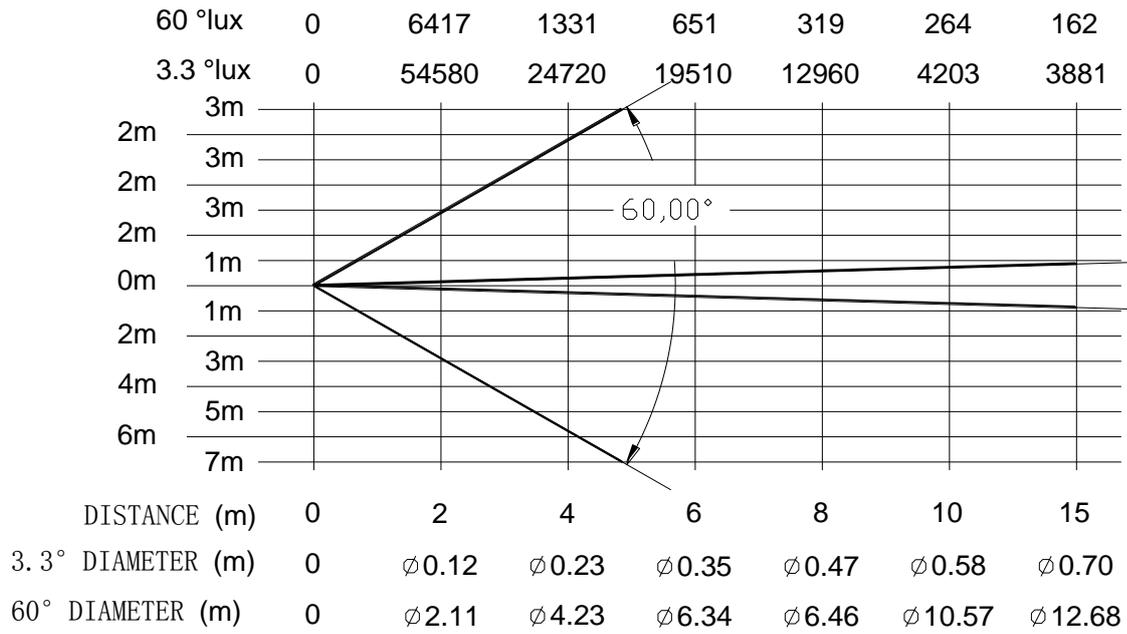High temperature engineering-plastic, IP20

WEIGHT:

14Kg

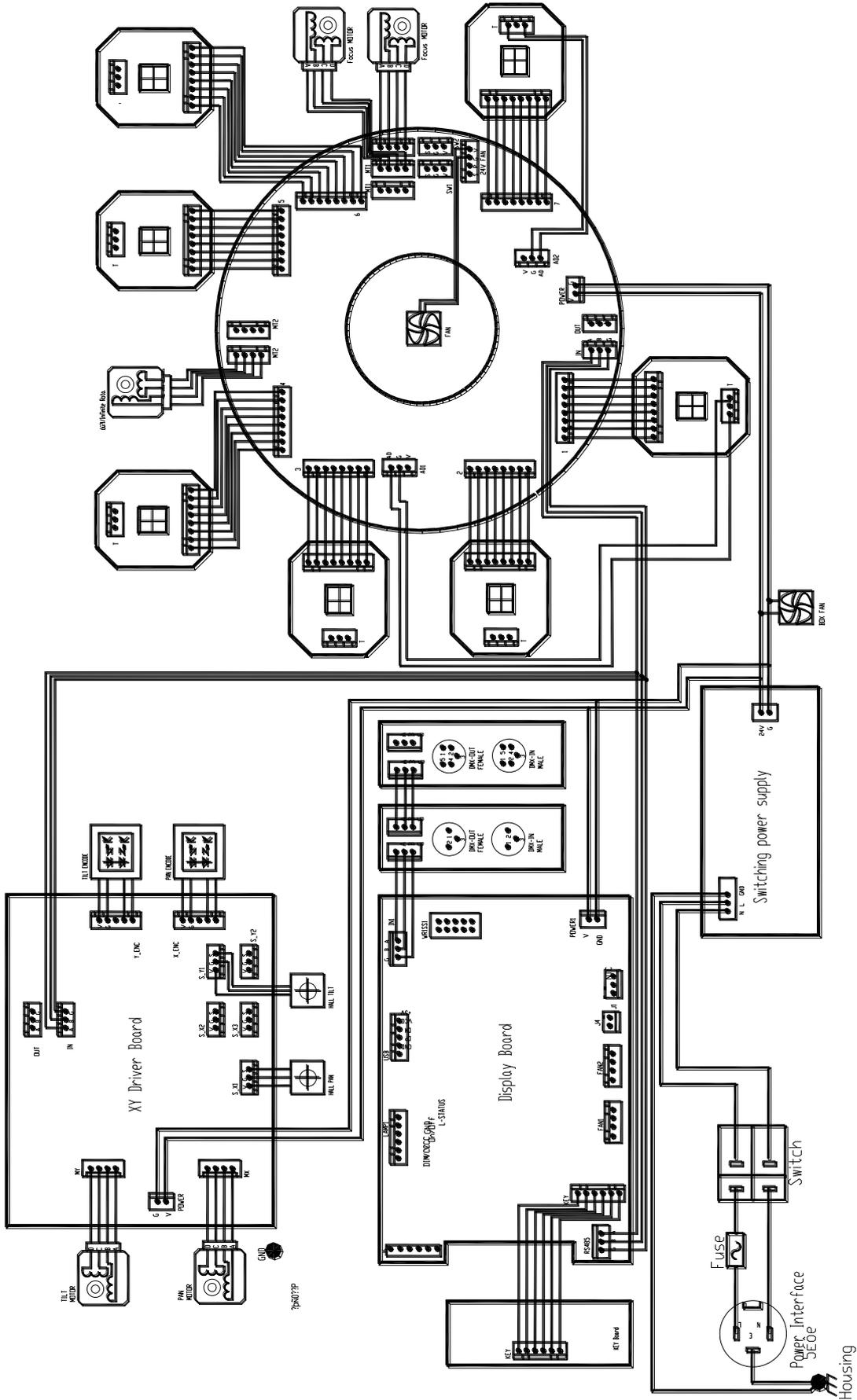## AMBIENT TEMPERATURE

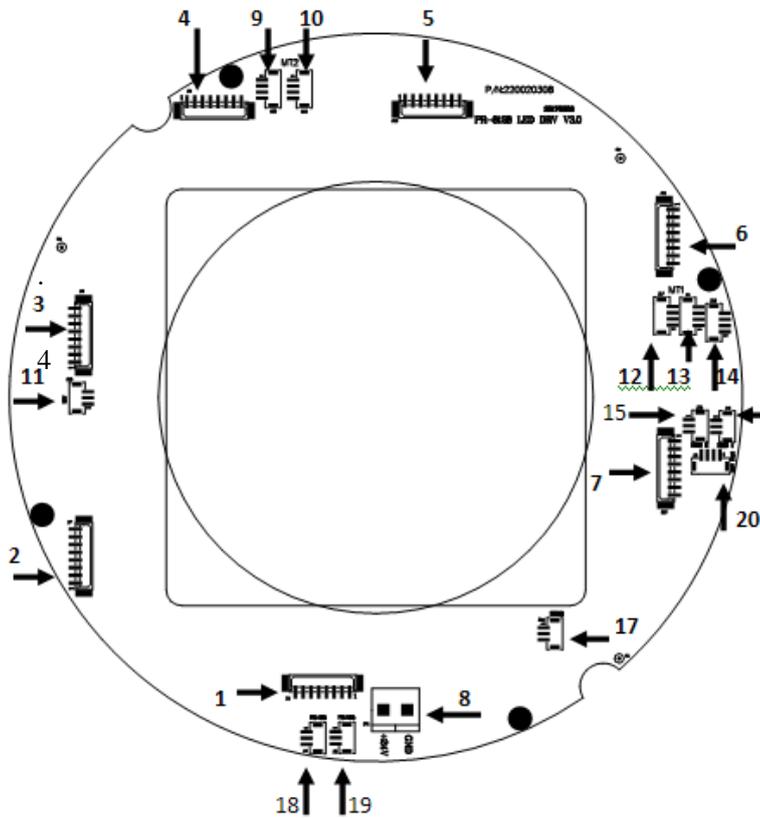Maximum ambient temperature: 40 ℃

SIZES:

LIGHT OUTPUT :

60 °lux	0	6417	1331	651	319	264	162
3.3 °lux	0	54580	24720	19510	12960	4203	3881

DISTANCE (m)	0	2	4	6	8	10	15
3.3° DIAMETER (m)	0	∅0.12	∅0.23	∅0.35	∅0.47	∅0.58	∅0.70
60° DIAMETER (m)	0	∅2.11	∅4.23	∅6.34	∅6.46	∅10.57	∅12.68

60,00°

3,30°

9.CIRCUIT DIAGRAM AND PCB CONNECTIONS
•CIRCUIT DIAGRAM

●PCB CONNECTIONS

1).LED Driver Control Board of PR-8128

No.	Name
1-7	LED Driver
8	Power
9，10	Front Lens Panel Motor
11，17	LED Lamp board thermal sensor
12，13，14	Zoom Motor
15	Zoom Magnet Sensor
16	Front Lens Panel Magnet Sensor
18，19	485 signal interface
20	24v Fan interface

2). Master board of PR-8128
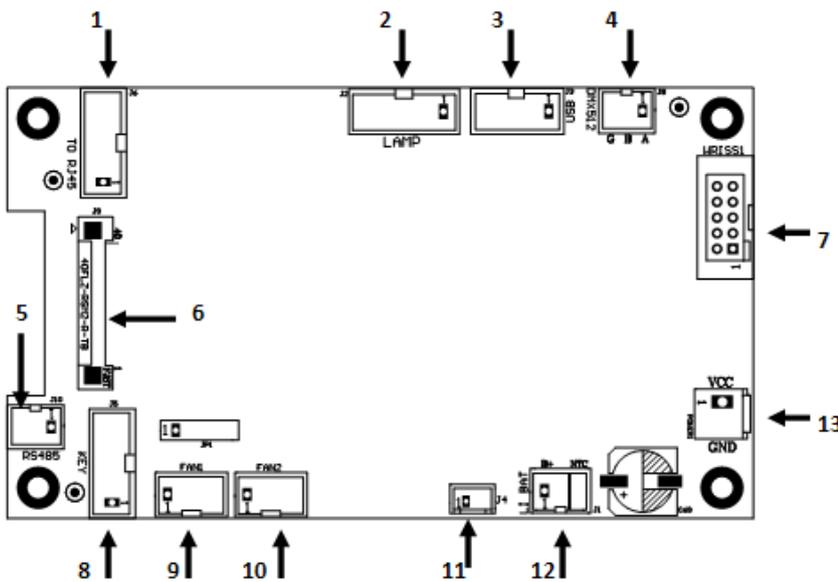
No.	Name
1,2,3	Reserved
4	DMX512 signal input
5	485 signal output
6	TFT screen interface
7	Reserved
8	Key interface
9，10，11，12	Reserved
13	Power

3). Pan & Tilt Board of PR-8128
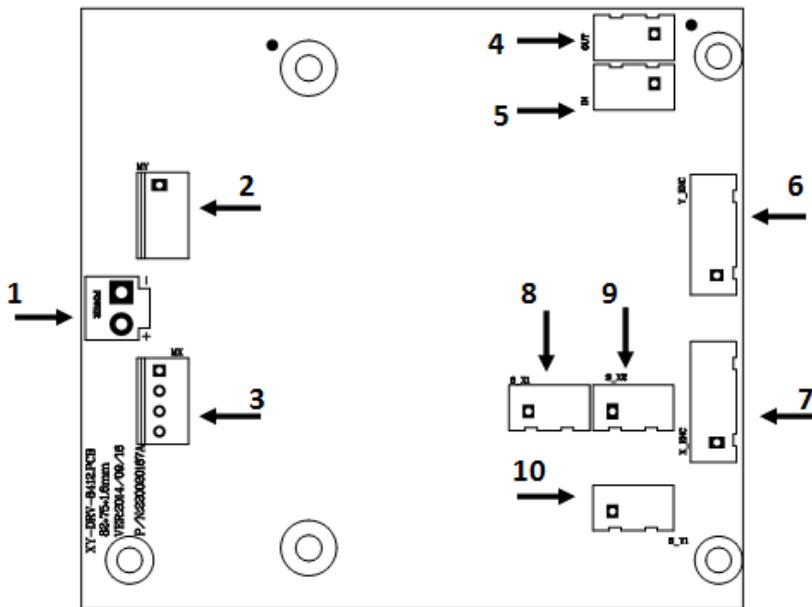
No.	Name
1	Power
2	Tilt Driver
3	Pan Driver
4，5	485 signal
6	Optical-coupler for Tilt
7	Optical-coupler for Pan
8	Pan Magnet Sensor
9	Tilt　Magnet Sensor
10	Reserved

10.COMPONENT ORDER CODES

NO	NAME	PART NO.	QTY	REMARKS
1	POWER SWITCH	192010208	1	24V 25A 600W
2	LED LAMP BOARD	230060621	7	OSRAM'S 60W 4 IN ONE LED LAMP
3	LED DRIVE BOARD	230060638	1	
4	LCD COLOR MASTER BOARD	230060640	1	
5	XY DRIVER BOARD	230060648	1	
6	HEAD LENS IN THE SHAPE OF PENTAGON	071100119	6	
7	HEAD LENS IN THE SHAPE OF HEXAGON	071100120	1	
8	MIXING ROD	080090120	7	
9	FROST FILTER FOR MIXING ROD	080090119	7	
10	FRAME FOR THE MIXING ROD	290010495	7	
11	COVER FOR THE MIXING ROD	290010494	7	
12	XY MOTORS	030040174A	2	23HDV0001-22B
13	CONTINUALLY ROTATING MOTOR FOR THE HEAD	030040255	1	14HY4201-14W
14	ZOOM MOTOR	030040256	2	17HDC1217Y-110NE
15	BASE BOX FAN	030060077	1	24V 0.044A
16	HEAT SINK FAN	030060085	1	12V 0.22A

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