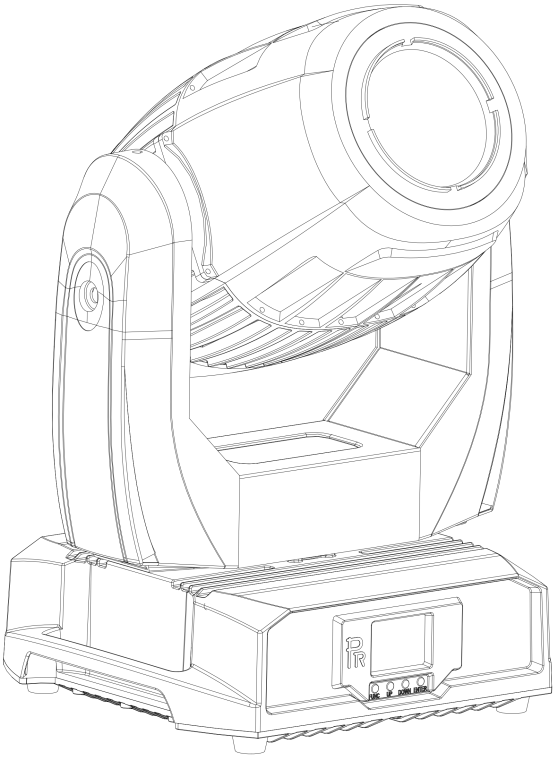


AQUA 380 BWS

PR-2366

This product manual contains important information about the safe installation and use of this projector. Please read and follow these instructions carefully 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
G clamp	2	Pcs	
XLR connectors	1	Set	Male and female
Safety cord	1	Pc	
User manual	1	Pc	
Ω clamp	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.

Any future technical changes are not subject to further notice.

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 lamp should be replaced if damaged or deformed by heat.

- 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.

- 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
- If there are visible damages on the lamp, lens and protective cover for the screen, i.e., to the extent which affects its performance like cracking or deformation, please stop using it and contact the manufacture for their replacement with original parts, otherwise its performance will be compromised
- The installing location of a projector shouldn't make it stared in less than 4 meters for too long.

.

- 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 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

•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 under normal ambient temperatures, the temperature of the housing of the projector including the surface of the heat sink will reach 80℃ 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 the projector has some defects.

•Don't touch the metallic housing of a running projector to avoid being burned.

•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 18m.

•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.

•Do not let front lens of a projector exposed to sunlight or any strong light sources at any angle, otherwise a fire inside can be caused because of focused light inside the projector.

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.

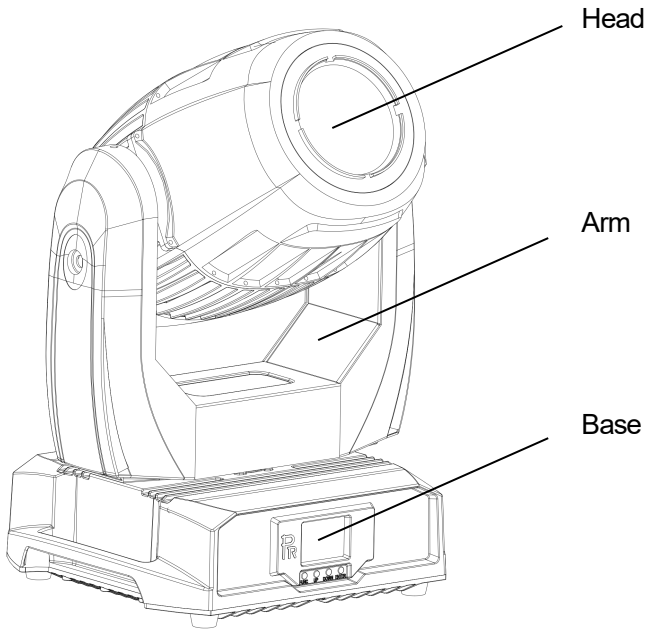
•LUBRICATION

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

•TROUBLESHOOTING

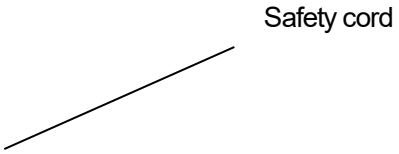
PROBLEM	ACTION
The projector doesn't switch on	➢ Check the fuse on the power socket. ➢ Check the lamp.
The lamp is on but the projector doesn't respond to the controller	➢ Make sure that the fixture's start address is right ➢ Replace or repair the XLR signal cable.
The projector functions intermittently	➢ 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.

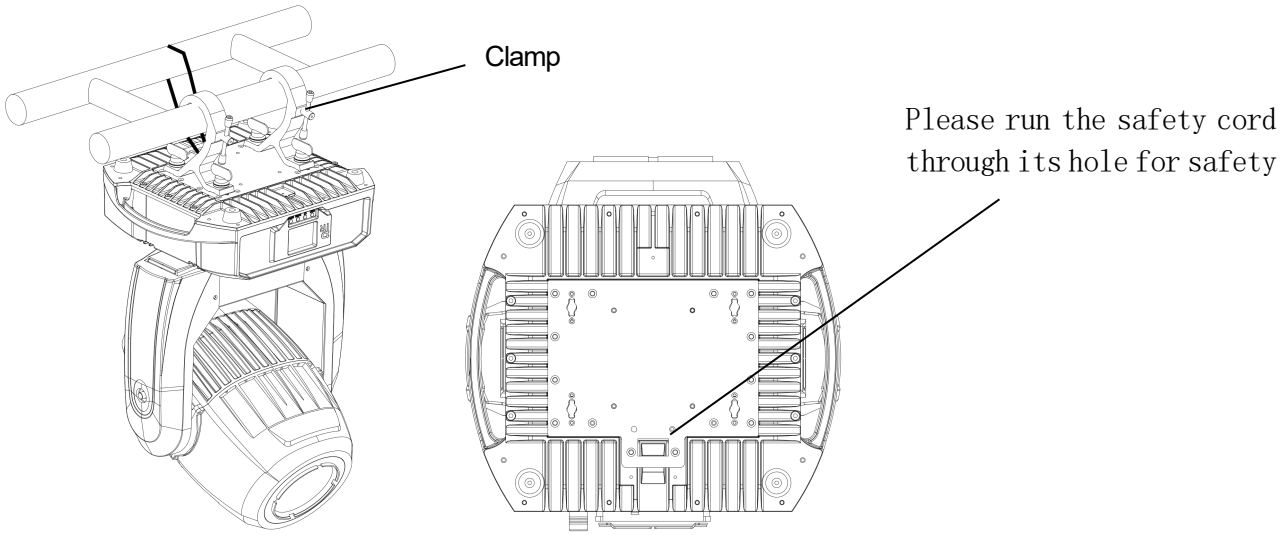
3. APPEARANCE



4. INSTALLATION

•RIGGING





Take 2 clamps and 1 safety cords out from the package and mount 2 clamps on the underside of fixture with 4 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) 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 is secure and is strong enough to support the weight of the fixture.

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

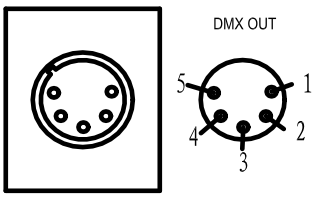
Before power connection, please ensure the power supplied must match what the nameplate says. It is recommended that each projector be connected with power separately so that they may be individually switched on and off.

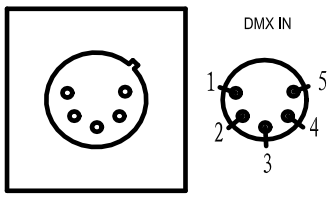
Note: If projectors are connected in series, please connect POWERIN port of the 1st projector with the Power Mains, then connect its POWER OUT with POWER IN of the 2nd projector, and so on till all fixtures are connected. If the voltage supplied is 200V-240V, the maximum projectors connected is 8pcs, 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

5-PIN



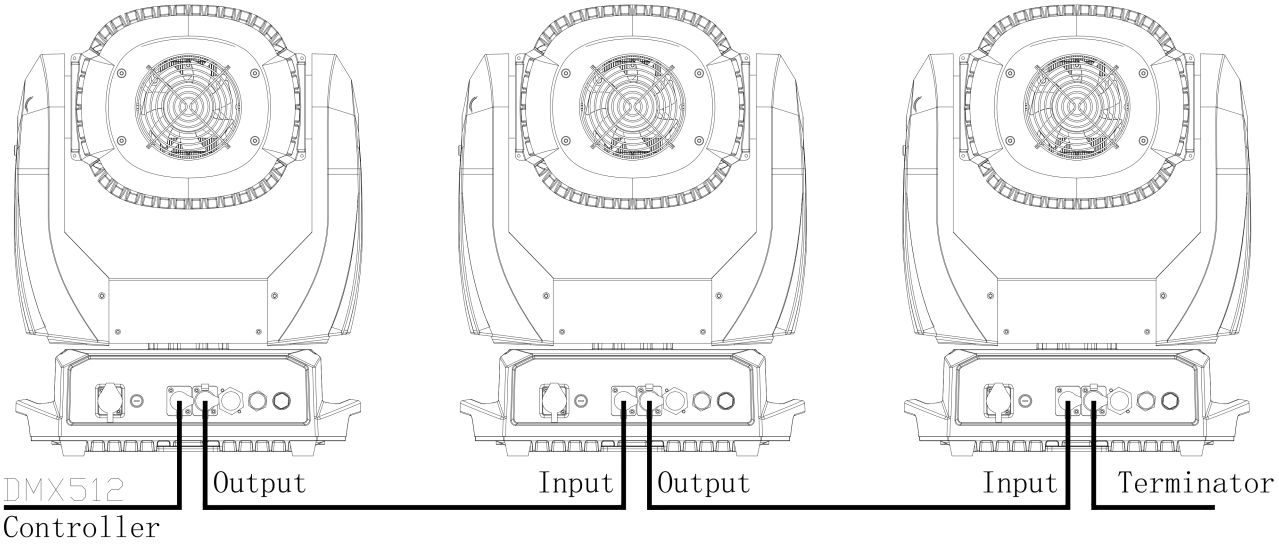


DMX 512	
PIN	FUNCTION
1	GND
2	DATA-
3	DATA+
4	N/C
5	N/C

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 projector accepts digital control signals in protocol DMX512 (1990).

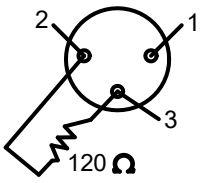
Connect the controller's DMX output to the first fixture's DMX input, and connect the first fixture's DMX output to the second fixture's DMX input and connect the rest fixtures in the same way. Eventually connect the last fixture's DMX output to a DMX terminator as shown in the figure below.



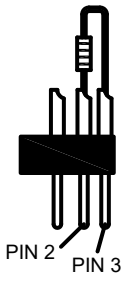
•DMX TERMINATOR

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.



•INSTALLATION/REPLACEMENT OF A LAMP

Lock the yoke before fitting/replacing the lamp.
Just as Shown by Figure 1, after Opening the airflow cover as shown by loosening 4 tightening screws, the structure like figure 2 will be seen.
Just as shown by the figure 2, loosen the 4 tightening screws of the bob-weight block, take it down and the structure like figure 3 will be seen.
Just as shown by figure 3, loosen the 8 tightening screws of lamp cover , open the cover and structure like the figure 4 will be seen.
Unplug the lamp with power wires, hold the bottom of the lamp by hand and move it as directed by the arrow using force to make the other end of the lamp off the holder. At last take the lamp out of the bottom of the head. Before placing a new lamp inside , plug the lamp with power wires tightly. Lamp placement and its removal are in opposite orders
Note: 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.
Put back the lamp cover, bob-weight block, airflow cover and tighten all screws.

Important: Please read "Instructions " enclosed with the lamp carefully before its use.

4 Screws for
Bob-weight block

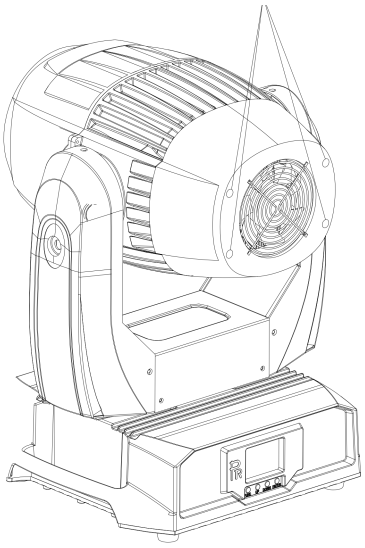


Figure 1

4 Screws for
fan cover

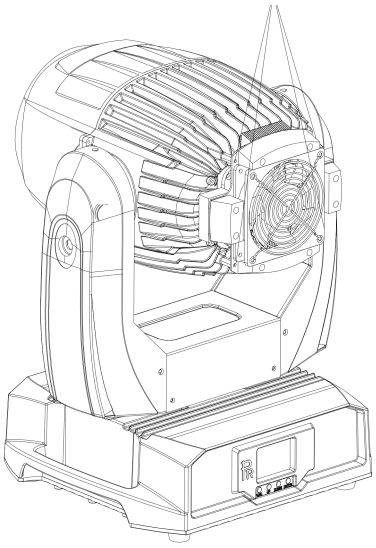


Figure 2

8 Screws for heat
sink

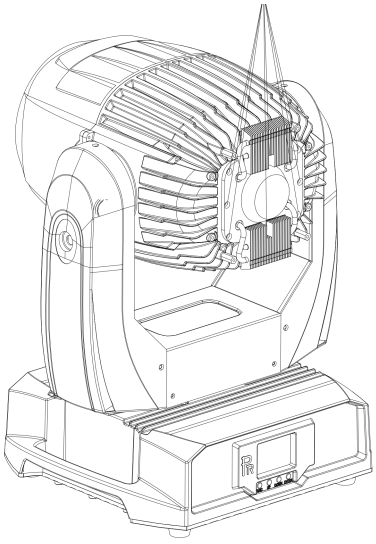


Figure 3

Lamp

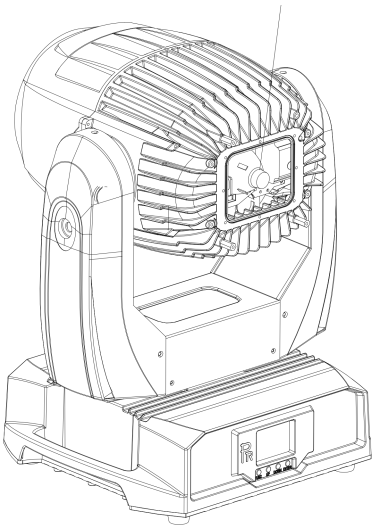
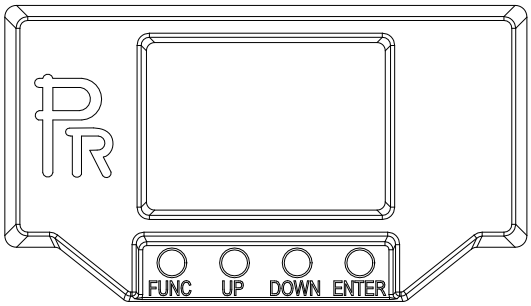


Figure 4

5. SETUP AND CONFIGURATION

•FRONT PANEL OPERATION



Projector configuration can be set conveniently via push button and LCD display.
Launch the projector and press button ENTER for more than 3 seconds to unlock the panel, the LCD 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

Each projector must be given a DMX start address so that the correct projector responds to the correct control signals. This DMX start address is the channel number from which the projector starts to "listen" to the digital control information being sent out from the controller. The projector has 3 DMX modes. There are short mode ,standard mode and extended mode. For example standard mode has 27 **c**hannels, so set the No. 1 projector's address 001, No. 2 projector's address 028, No. 3 projector's address 055, No. 4 projector's address082, and so on.

Launch the projector. Press button ENTER more than 3seconds 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

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

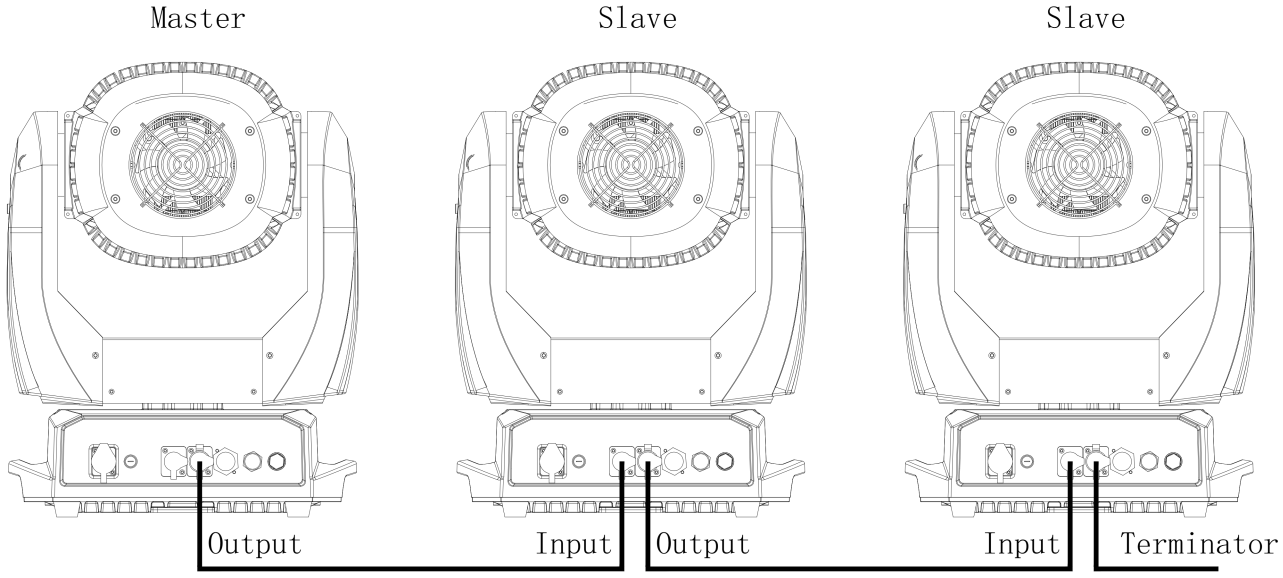
Operate the projector without connecting with a controller, enable the master mode through the operation panel, the projector will run in Stand-Alone mode automatically.
DMX address can be set at any number within 512.

•MASTER/SLAVE MODE

Many projectors can run synchronously in the Master/Slave mode by linking them with each other. First, connect the first 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	1-490（Short） 1-486（Standard） 1-481（Extended）		
	IP Address	Default IP Address	2.X.X.X /10.X.X.X	
		Custom IP Address	X.X.X.X	
	Subnet Mask	X.X.X.X		
	ArtNet Universe	0-255		
	sACN Universe	1-63999		
Reset	Total Reset	Really Reset? Confirm or Cancel		
	Pan&Tilt Reset	Really Reset? Confirm or Cancel		
	Colour System Reset	Really Reset? Confirm or Cancel		

	Gobo Reset	Really Reset? Confirm or Cancel		
	Dimmer/Strobe reset	Really Reset? Confirm or Cancel		
	Zo.Fo. Fr.Pr. Reset	Really Reset? Confirm or Cancel		
Config Settings 	DMX Channel Mode	Short 23CH		
		Standard 27CH		
		Extended 32CH		
		View Selected Mode	Ch.01 Strobe Ch.02 Dimmer …. Ch XX Control Function	
	Lamp Control	Lamp Control	OFF/ ON	
		On By Power On	OFF/ ON	
		Control By DMX	OFF/ ON	
		ECO Power	OFF/ ON	
	Signal Select (Only for the projectors with wireless receiver assembly)	XLR Only		
		XLR First		
		Wireless Only		
		Wireless First		
		Wireless In/XLR Out		
		ArtNet Only		
		ArtNet In/XLR Out		
		sCAN Only		
		sCAN 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 the projectors with wireless receiver assembly)	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	
		Zoom Invert	OFF/ ON	
		CYM Invert	OFF/ ON	
	View DMX Values	Channel Value Strobe XXX Dimmer XXX Dimmer Fine XXX CYM Macro XXX Cyan XXX Yellow XXX Magenta XXX Colour Wheel XXX Colour Wheel Fine XXX Fixed Gobo Wheel XXX Rot. Gobo Wheel 1 XXX Rot. Gobo1 Rotation XXX Rot. Gobo 1 Rotation F. XXX		

Information		Effect Wheel XXX Effect Wheel Rotation XXX Prism XXX Prism Rotation XXX Frost XXX Animation Wheel XXX Focus XXX Zoom XXX Pan XXX Pan Fine XXX Tilt XXX Tilt Fine XXX Pan/Tilt Speed & Time XXX Power/Special Fun. XXX		
	Lamp Hours	Lamp Hours=××××h Reset Lamp Hours		
	Total 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 380 BWS ANSI E1.20 RDM		
	Fan Status	Fan Speed Status Lamp Fan xxx on/off Color Fan xxx on/off Head Fan xxx on/off		
	Acceleration Sensor	X Axis: XXX Y Axis: XXX Z Axis: XXX Position: XXX XXX		
	Lamp Fan Errors	Fan Error Count Lamp Fan XXX Color Fan XXX Head Fan 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 Colour Wheel XXX Colour Wheel Fine XXX Fixed Gobo Wheel XXX Rot. Gobo Wheel 1 XXX Rot. Gobo1 Rotation XXX Rot. Gobo 1 Rotation F. XXX		

		Effect Wheel XXX Effect Wheel Rotation XXX Prism XXX Prism Rotation XXX Frost XXX Animation Wheel XXX Focus XXX Focus Fine XXX Zoom XXX Zoom Fine XXX Pan XXX Pan Fine XXX Tilt XXX Tilt Fine XXX Pan & Tilt Speed XXX		
	Factory Mode	XXX		
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		
	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 Colour Wheel XXX Colour Wheel Fine XXX Fixed Gobo Wheel XXX Rot. Gobo Wheel 1 XXX Rot. Gobo1 Rotation XXX Rot. Gobo 1 Rotation F. XXX Effect Wheel XXX Effect Wheel Rotation XXX Prism XXX Prism Rotation XXX Frost XXX Animation Wheel XXX Focus XXX Focus Fine XXX Zoom XXX Zoom Fine XXX Pan XXX Pan Fine XXX Tilt XXX Tilt Fine XXX

User Memories 				Pan & Tilt Speed XXX Fade Time XXX Hold time XXX Delay Time XXX Delay unit (msec/s/m) 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 Colour Wheel XXX Colour Wheel Fine XXX Fixed Gobo Wheel XXX Rot. Gobo Wheel 1 XXX Rot. Gobo1 Rotation XXX Rot. Gobo 1 Rotation F. XXX Effect Wheel XXX Effect Wheel Rotation XXX Prism XXX Prism Rotation XXX Frost XXX Animation Wheel XXX Focus XXX Focus Fine XXX Zoom XXX Zoom Fine XXX Pan XXX Pan Fine XXX Tilt XXX Tilt Fine XXX Pan & Tilt Speed 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	000-010	Close
				011-255	Linear dimming（0-100%）
	3	3	Dimmer Fine	000-255	Dimmer in 16 bit
			CMY Macro	000-016	Open

3	4	4		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	CMY color mixing from slow to fast
4	5	5	Cyan	000-255	Linear Cyan (0-100%)
		6	Cyan Fine	000-255	Cyan in 16 bit Control
5	6	7	Yellow	000-255	Linear Yellow(0-100%)
		8	Yellow Fine	000-255	Yellow in 16 bit Control
6	7	9	Magenta	000-255	Linear Magenta (0-100%)
		10	Magenta Fine	000-255	Magenta in 16 bit Control
7	8	11	Color Wheel	000-063	Indexing(0-360degrees)
				064-067	Open
				068-071	Color1(Dark Red)
				072-075	Color2(Dark Blue)
				076-079	Color3(Yellow)
				080-083	Color4(Green)
				084-087	Color5(Plum)
				088-091	Color6(Sky Blue)
				092-095	Color7(Red)
				096-099	Color8(Dark Green)
				100-103	Color9(Dark Yellow)
				104-107	Color10(Blue)
				108-111	Color11(Orange)
				112-115	Color12(UV)
				116-119	Color13(Diffuser)
				120-127	Open
				128-191	Rotation ,Clockwise from slow to fast
				192-255	Rotation ,Anti-Clockwise from fast to slow
	9	12	Color wheel Fine	000-255	Color Wheel in 16 Bit
8	10	13	Fixed Gobo	000-006	Hole1(Open)
				007-017	Hole2
				018-028	Hole3
				029-039	Gobo1
				040-050	Gobo2
				051-061	Gobo3
				062-072	Gobo4
				073-083	Gobo5
				084-094	Gobo6
				095-105	Gobo7
				106-116	Gobo8

			Wheel	117-127	Gobo9
				128-142	Clockwise rotation from slow to fast
				143-156	Anti Clockwise rotation from slow to fast
				157-166	Hole 2 shake effect from fast to slow
				167-174	Hole 3 shake effect from fast to slow
				175-183	Gobo 1 shake effect from fast to slow
				184-192	Gobo 2 shake effect from fast to slow
				193-201	Gobo 3 shake effect from fast to slow
				202-210	Gobo 4 shake effect from fast to slow
				211-219	Gobo5 shake effect from fast to slow
				220-228	Gobo 6 shake effect from fast to slow
				229-237	Gobo7 shake effect from fast to slow
				238-246	Gobo 8 shake effect from fast to slow
				247-255	Gobo 9 shake effect from fast to slow
9	11	14	Rotating Gobo Wheel	000-007	Open
				008-017	Gobo 1
				018-027	Gobo 2
				028-037	Gobo 3
				038-047	Gobo 4
				048-057	Gobo 5
				058-067	Gobo 6
				068-077	Gobo 7
				078-087	Gobo 8
				088-097	Gobo 9
				098-107	Gobo 10
				108-117	Gobo 11
				118-127	Gobo 12
				128-143	Forward Rotation From slow to Fast
				144-159	Reverse Rotation From slow to Fast
				160-167	Shake of Gobo 1 from slow to fast
				168-175	Shake of Gobo 2 from slow to fast
				176-183	Shake of Gobo 3 from slow to fast
				184-191	Shake of Gobo 4 from slow to fast
				192-199	Shake of Gobo 5 from slow to fast
				200-207	Shake of Gobo 6 from slow to fast
				208-215	Shake of Gobo 7 from slow to fast
				216-223	Shake of Gobo 8 from slow to fast
				224-231	Shake of Gobo 9 from slow to fast
				232-239	Shake of Gobo 10 from slow to fast
				240-247	Shake of Gobo 11 from slow to fast
				248-255	Shake of Gobo 12 from slow to fast
10	12	15	Gobo Rotation	000-128	Gobo Indexing(0~360degrees)
				129-188	Rotation （Clockwise From slow to Fast）

				189-195	Stop
				196-255	Rotation （Anti-Clockwise From slow to Fast）
	13	16	Gobo Rotation Fine	000-255	Gobo Rotation in 16 Bit
11	14	17	Effect Wheel	000-063	No
				064-127	Linear prism
				128-255	Circular prism
12	15	18	Effect Wheel Rotation	000-127	Circular prism indexing
				128	Stop rotating
				129-191	Clockwise rotation from slow to fast
				192	Stop rotating
				193-255	Anti-Clockwise rotation from slow to fast
13	16	19	Prism	000-016	Open
				017-255	Prism
14	17	20	Prism 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)
15	18	21	Frost	000-255	Linear Frost
16	19	22	Animation Wheel	000-011	No
				012-020	Wheel In
				021-255	Wheel moves back and forth from slow to fast
17	20	23	Focus	000-255	Linear frost
		24	Focus Fine	000-255	Focus in 16 bit precision
18	21	25	Zoom	000-255	Linear frost
		26	Zoom Fine	000-255	Zoom in 16 bit precision
19	22	27	Pan	000-255	Pan(0°~540°)
20	23	28	Pan Fine	000-255	Pan in 16 bit precision
21	24	29	Tilt	000-255	Tilt(0°~270°)
22	25	30	Tilt Fine	000-255	Tilt in 16 bit precision
	26	31	Pan & Tilt Speeds	000-255	Pan & Tilt Speed from Fast to Slow
23	27	32	Control	000-019	Reserved
				The following functions will be activated after the DMX value has been held for more than 5s.	
				020-024	Display On
				025-029	Display Off
				030-034	Reserved
				035-039	Lamp Half 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 Wheels Reset
				170-179	Dimmer/Shutter Reset
				180-189	Frost/Focus/Prism Reset
				190-199	Reserved
				200-209	Total Reset
				210-229	Reserved
				230-239	Lamp Off
				240-255	Reserved

Note:

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.
4.If both rotating gobo wheel and fixed gobo wheel are to be used, the former is prior to the latter.

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8. ERROR INFORMATION

The system can detect some errors during the reset, if ⚠ displayed, touch the logo ⚠ 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
Rot. Gobo Wheel	Timeout	Check if wiring, positioning parts and motors are normal
Rot. Gobo Rotation	Timeout	Check if wiring, positioning parts and motors are normal
Dimmer	Timeout	Check if wiring, positioning parts and motors are normal
Prism	Timeout	Check if wiring, positioning parts and motors are normal
Prism Rotation	Timeout	Check if wiring, positioning parts and motors are normal
Effect wheel	Timeout	Check if wiring, positioning parts and motors are normal
Effect wheel Rotation	Timeout	Check if wiring, positioning parts and motors are normal
Focus	Timeout	Check if wiring, positioning parts and motors are normal
Lamp Fan	Error	Check if fan and its wiring are normal
Color Fan	Error	Check if fan and its wiring are normal
Head 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 and re-strike it after cooling
Lamp Life	Timeout Warning	
Lamp Off[Fan Error]	Error	Check if all fans are normal
Time IC	Error	
Days Lapsed	X days	

9. TECHNICAL DATA

ELECTRICAL PARAMETERS

Input voltage: 100V-240V AC，50/60Hz

Input power: 600W@100V

570W @ 220V

Maximum current: 6.7A

Power factor: PF>0.9

SPECIFICATIONS OF LIGHT SOURCE

Philips	MSD Platinum Flex 300S
Color Temperature	7800K+/-300K
Manufacturers Rated Lamp Life	6000hrs （Reference the spec of MSD Platinum Flex 300S）

BEAM ANGLE

Beam/Spot Mode 2.5°-30°

Wash Mode 7°-35°

COLOR S

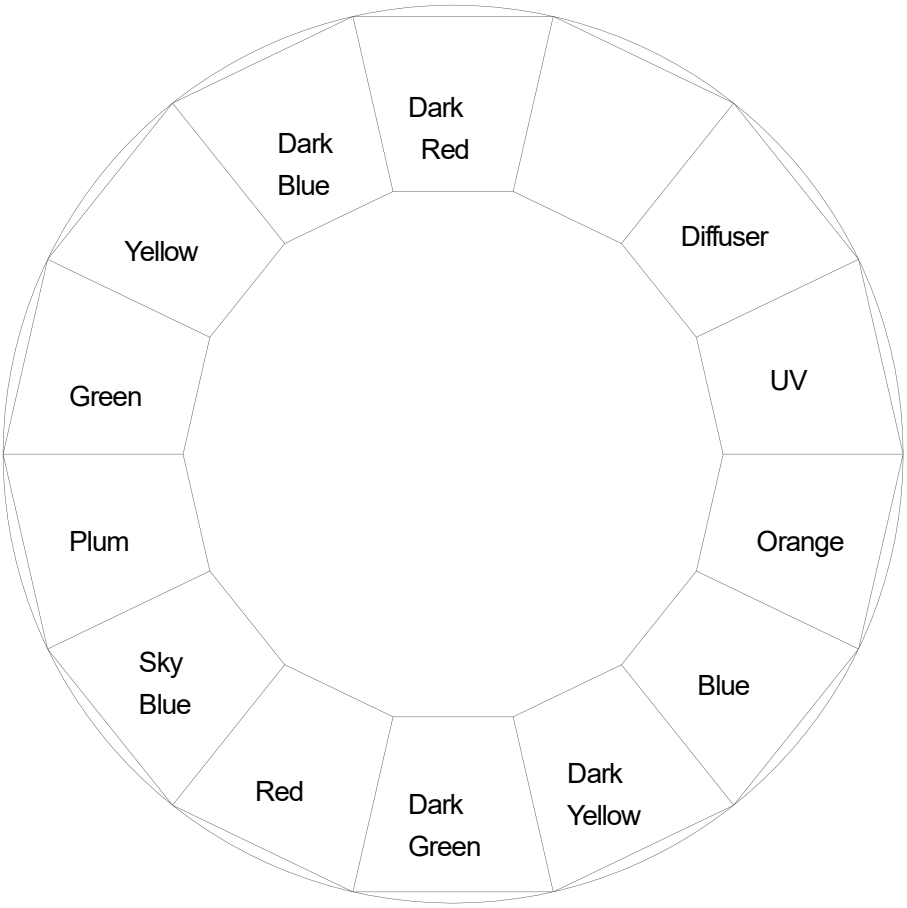
CMY linear color mixing system with macros

1 Color Wheel

12Dichroic color filters +Diffuser+ Open

Variable speed and bi-directional rainbow effect

Linear color changing is available

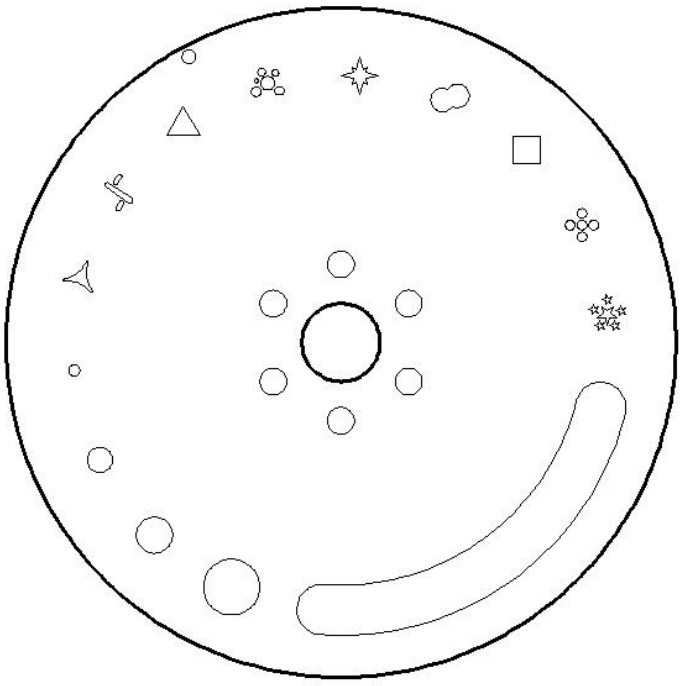


GOBOS

1 Fixed gobo wheel

11 static gobos+ open

Shaking and bi-directional wheel scrolling at variable speeds

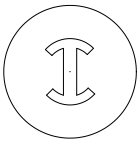
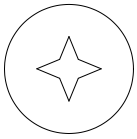
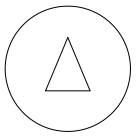


Rotating Gobo Wheel

1Rotating gobo wheel: 12 gobos+ Open

Shaking and bi-directional wheel scrolling at variable speeds

Gobo changeable. Gobo outer size: Φ10mm, image sizeΦ6mm

Gobo 1	Gobo 2	Gobo 3	Gobo 4	Gobo 5	Gobo 6	Gobo 7
						
Gobo 8	Gobo 9	Gobo 10	Gobo 11	Gobo 12		
						

PRISM/EFFECT WHEEL

3Prisms(standard 8facet prism+9facet prism+ linear prism) Bi-directional rotation at variable speeds

(Optional 3-16 facet prism or gradient prism)

FROST

1 Deep frost filter

FOCUS

0-100% linearly adjustable by DMX

ZOOM

0-100% linearly adjustable by DMX

STROBE

Double shutter blades, 0.3~20 F.P.S

HEAD MOVEMENT

Pan 540º, Tilt 270º with auto position correction

CONTROL

International standard DMX512 signal and 5 pin interfaces

23channels in short mode, 27channels in standard mode,32channel in extended mode

Adjustable mode

OTHER FUNCTIONS

Adjustable Pan & Tilt speed

Fixture and lamp hours' display

Modular construction for easy maintenance

DMX512 wireless receiver

DMX512 wireless transmitter (optional)

HOUSING

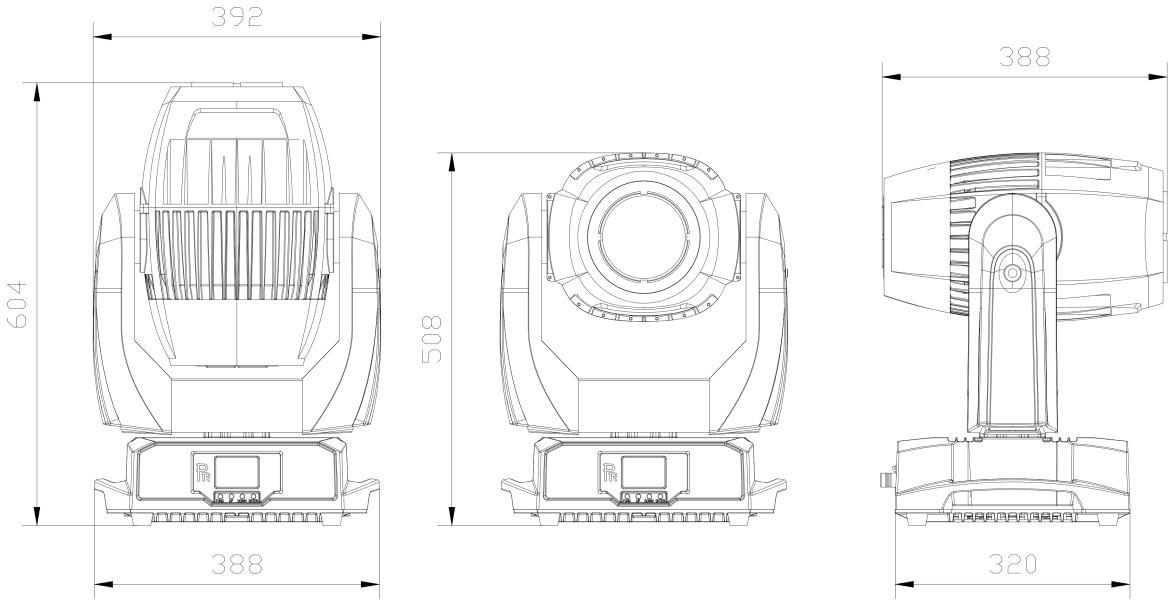
Cast Aluminum, high temperature resistant/anti-UV ABS, IP66

WEIGHT

29 Kg

SIZES:

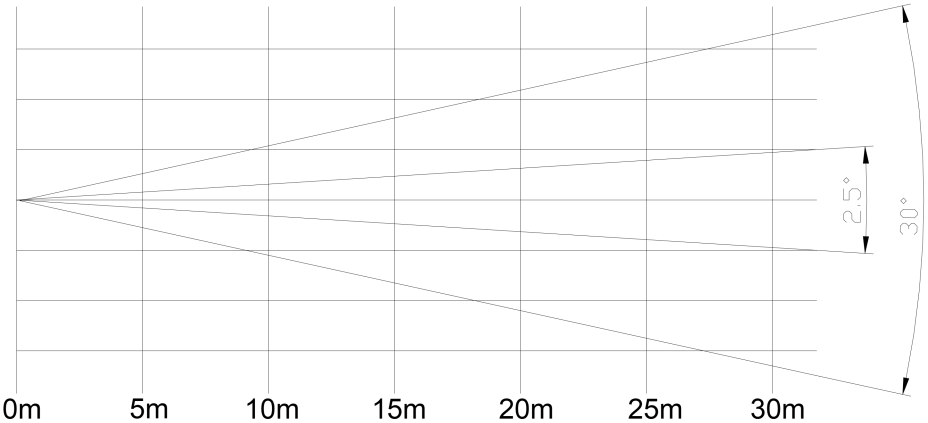
See figures below:



LIGHT OUTPUT:

Beam/Spot Mode

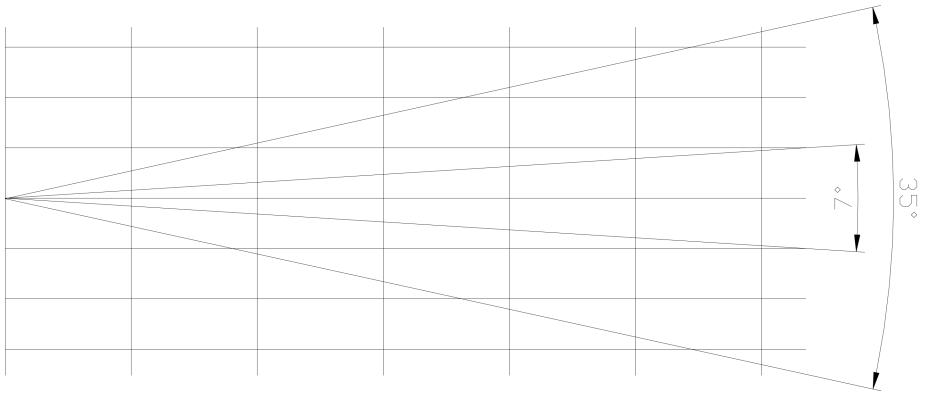
30° Lux	0	8261	2065	918	516	330	229
2.5°Lux	0	1135155	283789	126128	70947	45406	31532



Distance (m)	0m	5m	10m	15m	20m	25m	30m
2.5° Diameter (m)	∅0	∅0.22	∅0.45	∅0.67	∅0.89	∅1.06	∅1.28
30° Diameter (m)	∅0	∅2.69	∅5.37	∅8.03	∅10.71	∅13.39	∅16.06

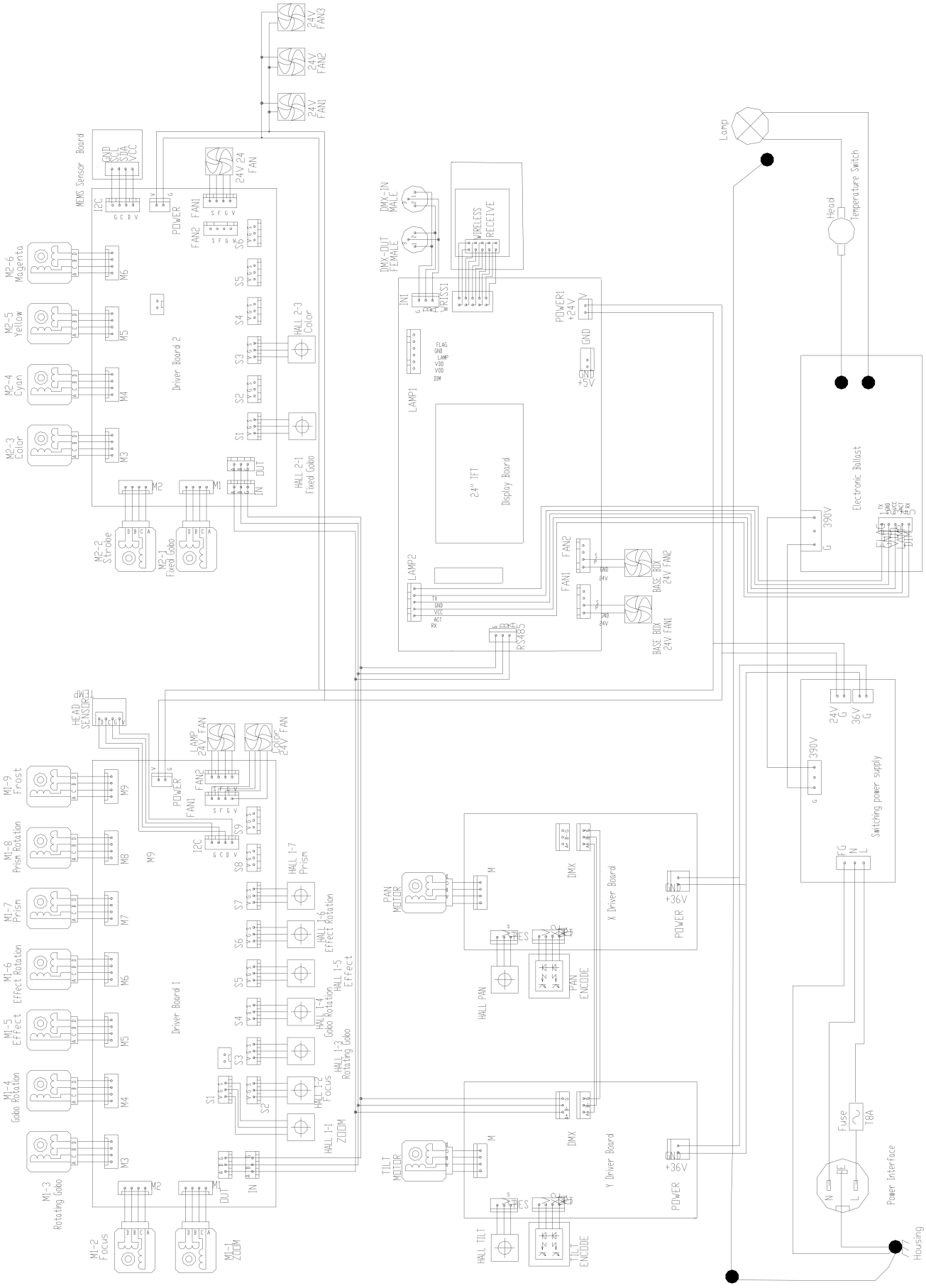
Wash mode

35° Lux	0	2294	573	255	143	92	64
7° Lux	0	46770	11692	5179	2923	1871	1299



Distance (m)	0m	5m	10m	15m	20m	25m	30m
7° Diameter (m)	∅0	∅0.22	∅0.45	∅0.67	∅0.89	∅1.06	∅1.28
35° Diameter (m)	∅0	∅3.07	∅6.13	∅9.20	∅12.26	∅15.33	∅18.39

10. CIRCUIT DIAGRAM


Lamp
Head
Temperature Switch
Electronic Ballast
Switching power supply
Power Interface
Fuse
T8A
Housing
Driver Board 1
Driver Board 2
X Driver Board
Y Driver Board
Display Board
2.4" TFT
MEMS Sensor Board
WIRELESS RECEIVE
DMX-IN MALE
DMX-OUT FEMALE
PAN MOTOR
TILT MOTOR
HALL PAN
HALL TILT
PAN ENCODE
TILT ENCODE
HEAD SENSOR
LAMP 24V FAN
TOP 24V FAN
BASE BOX 24V FAN1
BASE BOX 24V FAN2
24V FAN1
24V FAN2
24V FAN3
24V 24 FAN
M1-1 ZOOM
M1-2 Focus
M1-3 Rotating Gobo
M1-4 Gobo Rotation
M1-5 Effect
M1-6 Effect Rotation
M1-7 Prism
M1-8 Prism Rotation
M1-9 Frost
M2-1 Fixed Gobo
M2-2 Strobe
M2-3 Color
M2-4 Cyan
M2-5 Yellow
M2-6 Magenta
HALL 1-1 ZOOM
HALL 1-2 Focus
HALL 1-3 Rotating Gobo
HALL 1-4 Gobo Rotation
HALL 1-5 Effect
HALL 1-6 Effect Rotation
HALL 1-7 Prism
HALL 2-1 Fixed Gobo
HALL 2-3 Color
RS485
+36V
390V
24V
36V

11. COMPONENT ORDER CODES

NAME	PART NO.	QUANTITY	REMARK
LAMP BALLAST	040070150	1	
LAMP	100070056	1	
SWITCHING POWER SUPPLY	192010223	1	
FUSE	270030005	1	
WATERPROOF FAN	030060116	1	
BLOWER	030060094	2	
BLOWER	030060113	1	
BLOWER	030060117	1	
BLOWER	030060072A	2	
BASE FAN	030069005	2	
PAN MOTOR	030040246B	1	
TILT MOTOR	030040265	1	
GOBO ROTATION MOTOR	030040073B	1	
COLOR WHEEL MOTOR	030040073D	1	
EFFECT WHEEL IN/OUT MOTOR	030040221C	1	
8-FACET PRISM IN/OUT MOTOR	030040279	1	
FIXED GOBO WHEEL MOTOR	030040154A	1	
STROBE MOTOR	030040251B	2	
CMY MOTOR (CYAN)			
CMY MOTOR (YELLOW)			
CMY MOTOR (MAGENTA)			
8-FACET PRISM ROTATION MOTOR	030040254A	1	
ROTATING GOBO WHEEL ROTATION MOTOR	030040275	1	
EFFECT WHEEL ROTATION MOTOR	030040277	1	
FOCUS MOTOR	030040224C	2	
ZOOM MOTOR			
FROST MOTOR	030040273	1	

Appendix: Advice on the Use of Platinum Lamps

Dear Client,

The platinum lamps favored by the lighting sector have high color temperature, high brightness, high CRI, pure light beam and other advantages. For their use, some advice is offered for your reference:

1. After lamp on, it shouldn't be turned off in a very short while. Frequent lamp on and offs will wear out its electrodes, thus resulting in lower brightness and lumen decrease.

2. It's advised to turn off the lamp by controller, but not by shutting off the mains power which can stop the cooling system from working immediately, shortening the lamp's lifespan and may cause short circuit between the electrodes.

3. In case of emergent blackout, do not strike the lamp immediately after mains power recovers. The lamp can be re-stricken successfully 10-15minutes after lamp-off while the fixture's temperature is lower than the start one.

4. The metal vapor in the lamp can cause aging and harm to the place of the burner where it accumulates after the head is fixed at certain position for a long time, resulting in whitening of the burner glass, cracking in it and even damage, thus shortening of its life. It's advised to let the head move in slow speed after shutters closed while the fixture is idle to avoid the head at fixed angle for a long time.

Thank you for your trust and patience.

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