

TANGO 1800 FRAMING

PR-6617

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.

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

Name	Quantity	Unit	Remark
User manual	1	Pcs	
Safety cord	2	Pcs	
XLR THROUGH CABLE	1	Pcs	MALE
XLR THROUGH CABLE	1	Pcs	FEMALE
Hexagon screws	8	Pcs	M12
Washer	8	Pcs	Coupled with the screws

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

	<p>NOTE</p> <p>Before a projector’s installation, power-on, operation and maintenance, please carefully read the safety information hereinafter!</p>
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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 any damage caused by transportation before using a projector. Should there be any damage, consult your dealer and do not use it.
- The manufacture is not responsible for any loss caused by a user not following the manual or changing a projector as he/she likes.
- Please be noted that any 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.



- A projector rated for IP66 or higher can be used indoors and outdoors.
- For a projector with lower IP class ,it is for bidden to contact with water or any other liquids directly or indirectly.
- A projector should be kept away from high temperature, fire, electrical surge, vibration and strong light while being operated.
- A projector is only intended for installation, operation and maintenance by a qualified person. And the operation must strictly follow the procedures in the manual.
- A projector is not for a user to make any replacements and the user shouldn't open a projector for repair and maintenance.



- 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 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 location of a projector, it shouldn't be seen in the distance of less than 4 meters.



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



- 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 its 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, if a projector is not waterproof and dust-proof, it should not be under rains or in humidity

to avoid being short.

•Do not switch on and off a projector constantly in very short intervals, otherwise its 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 being in stable working state under normal ambient temperature, the temperature of the surface of the metallic housing of a projector including heat sink will reach 75°C.

•While its 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 a projector running, do not touch the metallic 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 it and illuminated items is 10m.

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

•Do not let the front lens expose to sunlight or other strong light sources at any angle, otherwise the focused beam inside can result in fire potentially.

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 it has over-temperature protective device. If the temperature is too high, the protective device will be triggered to shut it off. When it happens, please check if the fans run normally or fan shield is blocked by dust. After the issue is solved, restart it.

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 a project is off the power.

•Only a qualified person is allowed to do maintenance.

•During maintenance and before maintenance, a projector must be off power.



•To avoid sunlight or other light penetrating into the head via the front lens, resulting in high temperature internally

causing damages to a projector. Before power-off, please use Tilt channel to move the head and make it facing downward.

• Do not use alcohol or other organic solvent to clean the housing to avoid damage.

• Do not use any solvent with chemical elements to clean color filters or hot mirror.

SPECIAL NOTE

While water-proof projectors are in use, it's normal there will be some minor mist on the front lens.

•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 can't be switched on	<ul style="list-style-type: none"> ➤ Check if the fuse is burned ➤ Check if the power cord is connected well ➤ Check if the switching power supply is bad or not connected well. A professional technician is required for the repair ➤ Check if the control board is connected well. .A professional technician is required for the repair
A projector can be switched on , but the LED lamp's brightness can't be controlled	<ul style="list-style-type: none"> ➤ Check if the LED driver board is connected well. A professional technician is required for the repair
A projector can be switched on normally, but not controlled by the DMX controller	<ul style="list-style-type: none"> ➤ Make sure that its start address is right ➤ Replace or repair the XLR signal cable.
The beam is not bright and its brightness decreases sharply	<ul style="list-style-type: none"> ➤ Make sure the fans are working well or fans and their shields are not blocked by dust. ➤ Make sure that the internal optics are clean.
A project image appears to have a halo	<ul style="list-style-type: none"> ➤ Carefully clean the LED lamp, optical lenses and other components.
Heavily Defective Beam	<ul style="list-style-type: none"> ➤ Check if lens are in good condition(not cracked) ➤ Clean dust or grease on the lens.

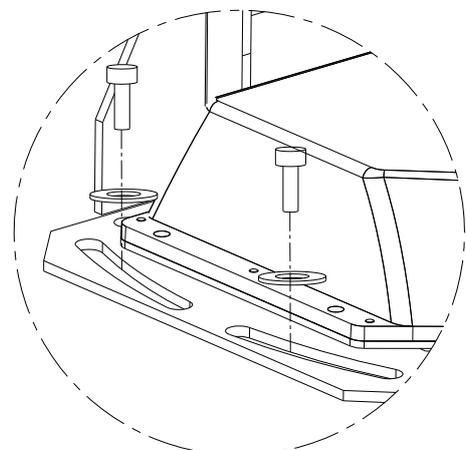
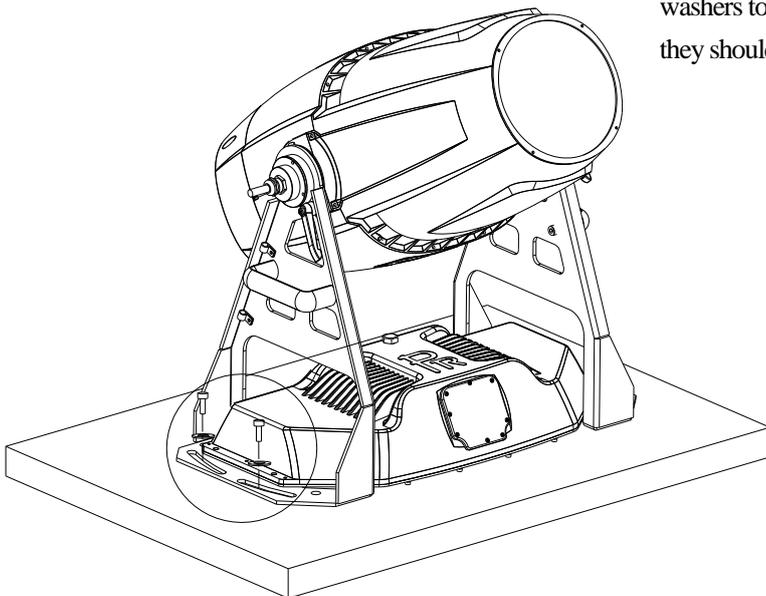
3. INSTALLATION

•PLACED ON A FLAT SURFACE

While placing a projector on a flat surface, tighten the head after loosening its screw and adjusting its angle till desired. For the version with wireless control, while it is on a flat surface its antenna should face upward.

NOTE

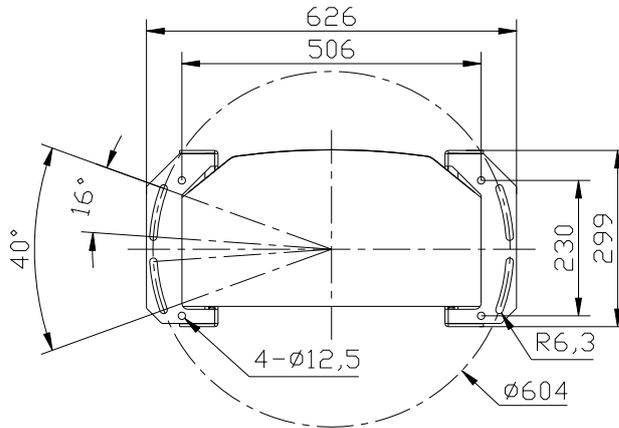
It's advised to use hexagon screws coupled with anti-slipping washers to ensure firm installation. Whatever screws may be used, they should not be less than 2 pairs.



The size of the screws are to be decided by the customer based on the size of mounting holes in the arms, the following sizes in the table are

only for reference.

NO	NAME	SIZE	QTY	REMARKS
1	Hexagon screws	M12	8	
2	Washer	Coupled with the screws	8	



• **POWER CONNECTION**

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

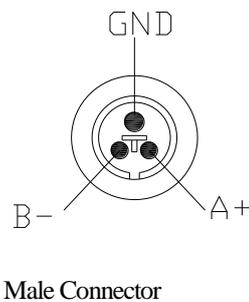
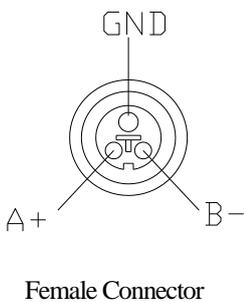
Before power connection, please ensure the power supplied must match what the nameplate says. It is recommended that each projector be connected with power separately so that they may be individually switched on and off.



- **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.**
- **A projector uses naked wires. For wiring please use waterproof junction box with IP class not lower than IP66.**

• **THE WIRING OF CONTROL SIGNAL**

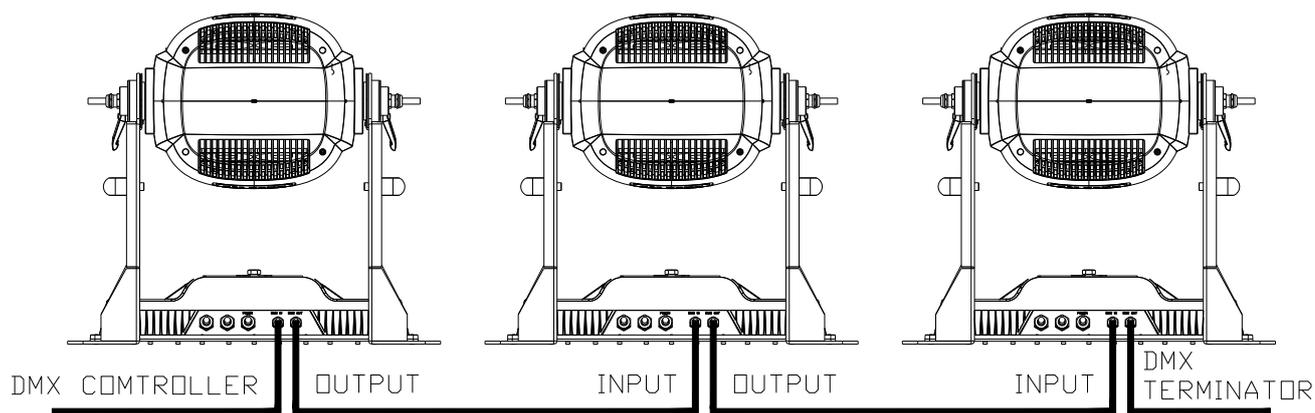
The colors of signal wires responds to their respective functions:



Blue --- A+
 White --- B-
 Shied wire ---GND
 Wires with different colors inside the XLR cable and their respective functions

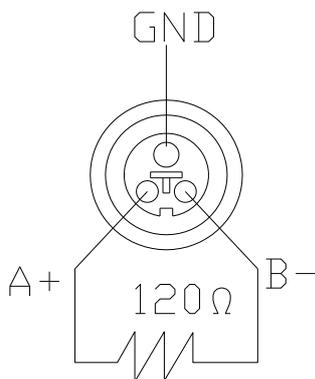
The shielded 2-core wire between a projector and a controller or between projectors should be not less than 0.5mm in diameter and

the maximum number of projectors in a DMX chain should be less than 32 pieces.

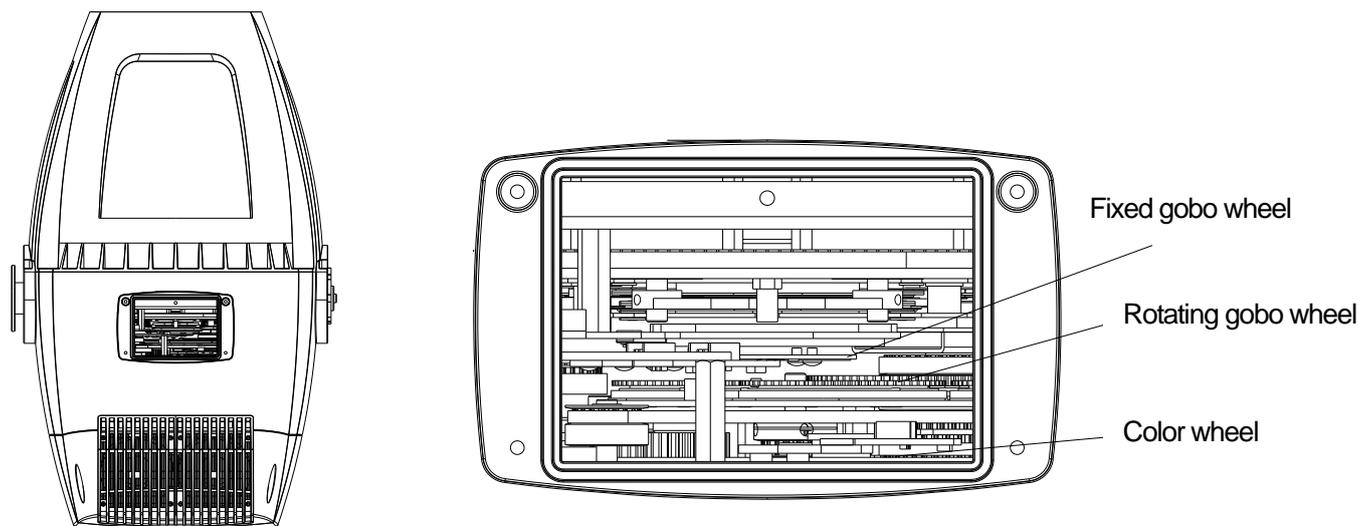


DMX TERMINATOR

In the Controller mode, at the last fixture in the chain, its female DMX output has to be connected with a DMX terminator. The DMX terminator is simply a Canon connector with a 120Ω (ohm) resistor connected across pin A+ and pin B-, which prevents electrical noise from disturbing and corrupting the DMX control signals. Before DMX terminator connection, please make proper insulation and waterproof treatment. . The connections are illustrated below.

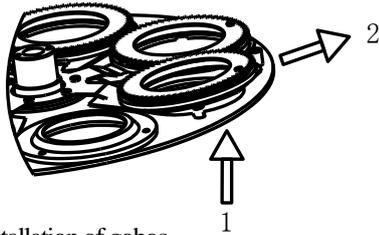


GOBO FILTER REPLACEMENT



Lock the tilt and loosen the 4 fast-fit screws on the upper cover ,After removing the cover, you will see the structures as the figure above. To replace a gobo on the rotating gobo wheel: take the rotator from the wheel in the sequence of 1→2 , take the gobo out from the rotator by removing the tightening spring. Put the new gobo back to the rotator, then tighten it with the spring. Please ensure the spring is in the narrow location of the rotator, which is the internal ring of it and flatten it. At last, pull up the spring strip using proper tool and put the

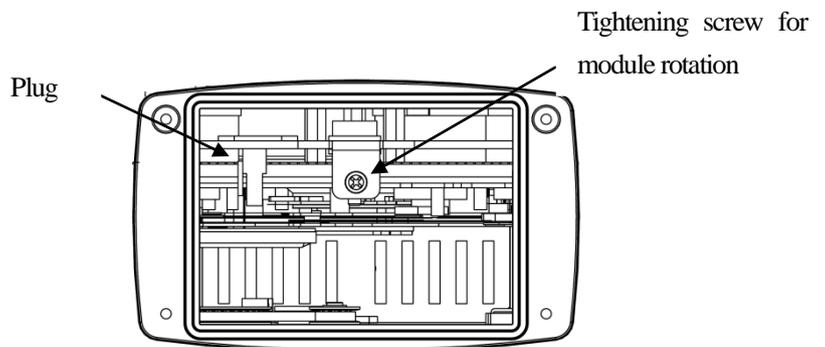
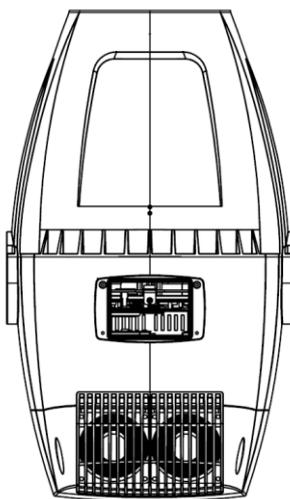
rotator back to the wheel with the assistance by another hand. Its installation is of the opposite sequence of removal(2→1) .



Installation of gobos

NOTE: Do not touch the glass gobo with bare hand. Place clean and soft paper or cloth between hand and glass gobos. Tighten 4 hexagon screws after the cover is on. Unlock the tilt.

●**FIXING THE FRAMING MODULE**



- ① Remove the small cover after locking Tilt after adjusting the framing blades. Unplug the plug on the left after tightening the screw against the module till it can't move . At last, install the small cover.
- ② If the framing blades need to be adjusted, plug the plug into its original place after loosening the tightening screw, then repeat Step 1.

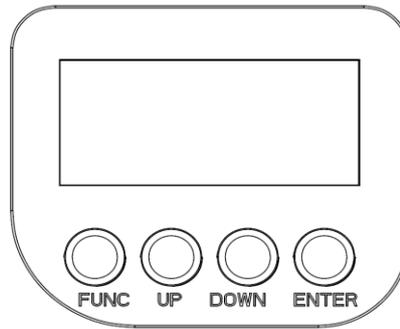


DANGER!

BEFORE REPLACEMENT OF GOBOS/COLOR FILTERS, A PROJECTOR MUST BE OFF THE POWER!

4. SETUP AND CONFIGURATION

●**FRONT PANEL OPERATION**



A projector's configuration can be set conveniently via push button and LCD display.

Launch the projector and press button **ENTER** for more than 5 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.

To set up or browse through its functions, press button **UP** or **DOWN**

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

Launch the projector. Press button **ENTER** more than 5 seconds 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

• 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.

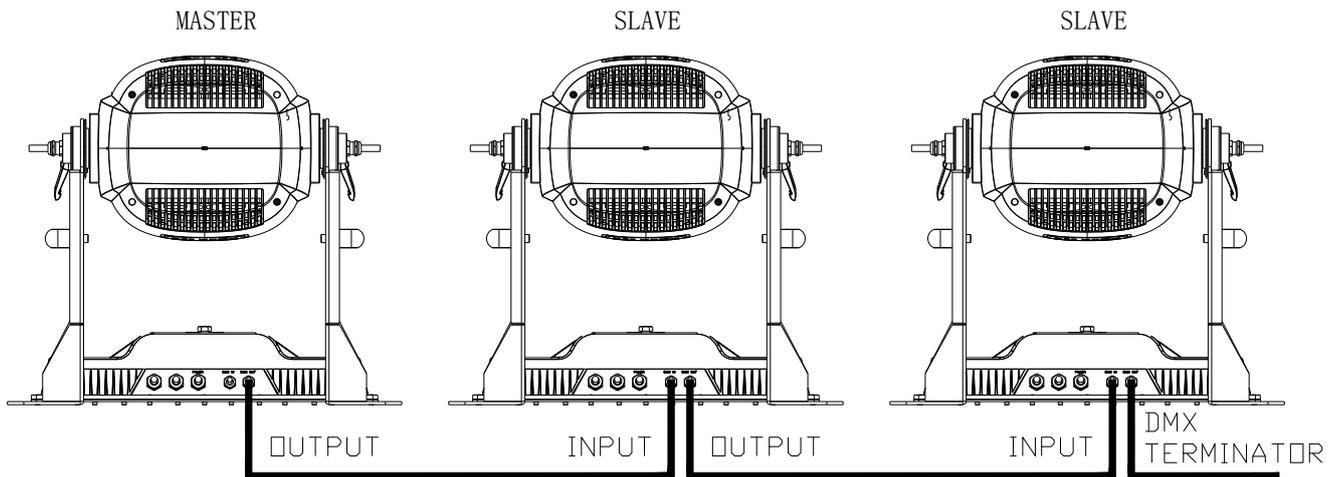
DMX address can be set at any number within 512.

• 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 projectors 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. It's advised that the maximum quantity of projectors in a DMX chain is less than 32.

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



5. OPERATION MENU

1st LEVEL	2nd LEVEL	3rd LEVEL	4th LEVEL	5th LEVEL	
		Product model DMX address			
		Signal Mode Channel mode			
DMX setting	DMX Address	Short Mode:1-485 Standard Mode:1-482 Extended Mode:1-67			
Reset	Total Reset	Really Reset?	Confirm/Cancel		
	Colour System	Really Reset?	Confirm/Cancel		
	Gobo Reset	Really Reset?	Confirm/Cancel		
	Zo.Fo. Pr.	Really Reset?	Confirm/Cancel		
	Other Reset	Really Reset?	Confirm/Cancel		
Config Set	Channel Mode	Short 28CH			
		Standard 31CH			
		Extended 46CH			
	Signal Select	View Mode		001 Strobe ...	
		XLR Only			
		XLR First			
		Wireless Only			
		Wireless First			
	Loss of DMX	Wireless XLR			
		Normal timeout			
	Disp. Config	Hold Last			
		Display Mode		Off Delay	
				On Always	
		Display Inv		Invert OFF	
				Invert ON	
Language Set			English		
		Chinese			
Temp. Unit	Celsius				
	Fahrenheit				
Un-Link WDMX	Really Un-Link?		Confirm/Cancel		

	Factory Reset	Factory Reset	Confirm/Cancel	
Option Set	Invert Set	Zoom Inv.	OFF/ ON	
		CYM Inv.	OFF/ ON	
		CTO Inv.	OFF/ ON	
	Dimmer Set	Gamma Curve	Gamma 2.0/2.2/2.4/2.6	
		LED Ref. Rate	1200/2400/4800/10000/12000/15000/20000/25000Hz	
		Dimmer Speed	Fast/Medium/Slow Speed	
	Fan Set	Standard/Theatre		
Blade Detect	Detect Disable/ Detect Enable			
Information	View DMX	Strobe XXX		
		Dimmer XXX		
		Dimmer F XXX		
		CMY Macro XXX		
		Cyan XXX		
		Yellow XXX		
		Magenta XXX		
		CTO XXX		
		Colour XXX		
		Colour F XXX		
		FGobo XXX		
		RGobo XXX		
		RGobo R XXX		
		RGobo RF XXX		
		Flade 1 A XXX		
		Flade 1 B XXX		
		Flade 2 A XXX		
		Flade 2 B XXX		
		Flade 3 A XXX		
		Flade 3 B XXX		
	Flade 4 A XXX			
	Flade 4 B XXX			
	Flade R XXX			
	Prism XXX			
	Prism R XXX			
	Effect XXX			
	Effect R XXX			
Frost XXX				
Focus XXX				
Zoom XXX				
Pow/Sp Fun XXX.				
Total Hours	XXXXXH			
Temperature	Display XXX			
	Driver 1 XXX			
	Driver 2 XXX			
	Driver 3 XXX			
	Driver 4 XXX			
	Fan board XXX			
	LED XXX			
Software Ver.	Display	XXX		
	Driver 1	XXX		
	Driver 2	XXX		
	Driver 3	XXX		
	Driver 4	XXX		
Fan Board	XXX			
Elect SN	Elect SN= *****			
RDM Label	ANSI E1.20 RDM TANGO 1800 FRAMING			
Fan Status	Head Fan XXXx/√			

Service	Manual Ctrl	Strobe	XXX		
		Dimmer	XXX		
		Dimmer F	XXX		
		CMY Macro	XXX		
		Cyan	XXX		
		Cyan F	XXX		
		Yellow	XXX		
		Yellow F	XXX		
		Magenta	XXX		
		Magenta F	XXX		
		CTO	XXX		
		CTO	XXX		
		Colour	XXX		
		Colour F	XXX		
		FGobo	XXX		
		RGobo	XXX		
		RGobo R	XXX		
		RGobo RF	XXX		
		Flade 1 A	XXX		
		Flade 1 AF	XXX		
Flade 1 B	XXX				
Flade 1 BF	XXX				
Flade 2 A	XXX				
Flade 2 AF	XXX				
Flade 2 B	XXX				
Flade 2 BF	XXX				
Flade 3 A	XXX				
Flade 3 AF	XXX				
Flade 3 B	XXX				
Flade 3 BF	XXX				
Flade 4 A	XXX				
Flade 4 AF	XXX				
Flade 4 B	XXX				
Flade 4 BF	XXX				
Flade R	XXX				
Flade RF	XXX				
Prism	XXX				
Prism R	XXX				
Effect	XXX				
Effect R	XXX				
Frost	XXX				
Focus	XXX				
Focus F	XXX				
Zoom	XXX				
Zoom F	XXX.				
	Factory Test				
Operation	DMX Mode	Change Mode?	Confirm/Cancel		
	Master Mode	Preset Memory	Change Mode?	Confirm/Cancel	Confirm/Cancel
		User Memory 1	Change Mode?	Confirm/Cancel	Confirm/Cancel
		User Memory 2	Change Mode?	Confirm/Cancel	Confirm/Cancel
	Stand-Alone	Preset Memory	Change Mode?	Confirm/Cancel	Confirm/Cancel
		User Memory 1	Change Mode?	Confirm/Cancel	Confirm/Cancel
		User Memory 2	Change Mode?	Confirm/Cancel	Confirm/Cancel
	Static Scene	Change Mode?	Confirm/Cancel		

User Memory	Edit Memory	Edit Memory 1 /Edit Memory 2	Scene XX (1~16 Scenes)	Strobe XXX Dimmer XXX Dimmer F XXX CMY Macro XXX Cyan XXX Cyan F XXX Yellow XXX Yellow F XXX Magenta XXX Magenta F XXX CTO XXX Colour XXX Colour F XXX FGobo XXX RGobo XXX RGobo R XXX RGobo RF XXX Flade 1 A XXX Flade 1 AF XXX Flade 1 B XXX Flade 1 BF XXX Flade 2 A XXX Flade 2 AF XXX Flade 2 B XXX Flade 2 BF XXX Flade 3 A XXX Flade 3 AF XXX Flade 3 B XXX Flade 3 BF XXX Flade 4 A XXX Flade 4 AF XXX Flade 4 B XXX Flade 4 BF XXX Flade R XXX Flade RF XXX Prism XXX Prism R XXX Effect XXX Effect R XXX Frost XXX Focus XXX Focus F XXX Zoom XXX Zoom F XXX Fade Time XXX Hold time XXX Delay Time XXX Delay unit (msec/s/m) Next Step XXX
		Edit Scene	Paste? Confirm	Strobe XXX Dimmer XXX Dimmer F XXX CMY Macro XXX Cyan XXX Cyan F XXX Yellow XXX Yellow F XXX Magenta XXX Magenta F XXX CTO XXX Colour XXX Colour F XXX FGobo XXX RGobo XXX RGobo R XXX RGobo RF XXX Flade 1 A XXX

				Flade 1 AF	XXX
				Flade 1 B	XXX
				Flade 1 BF	XXX
				Flade 2 A	XXX
				Flade 2 AF	XXX
				Flade 2 B	XXX
				Flade 2 BF	XXX
				Flade 3 A	XXX
				Flade 3 AF	XXX
				Flade 3 B	XXX
				Flade 3 BF	XXX
				Flade 4 A	XXX
				Flade 4 AF	XXX
				Flade 4 B	XXX
				Flade 4 BF	XXX
				Flade R	XXX
				Flade RF	XXX
				Prism	XXX
				Prism R	XXX
				Effect	XXX
				Effect R	XXX
				Frost	XXX
				Focus	XXX
				Focus F	XXX
				Zoom	XXX
				Zoom F	XXX
	Init Memory	Reset Memory 1	Confirm/Cancel	Input Password123	
		Reset Memory 2	Confirm/Cancel	Input Password123	
		Reset Static Scene	Confirm/Cancel	Input Password123	

6. DMX PROTOCOL

Short mode	Standard mode	Extended mode	Description	Decimal low	Decimal High
1	1	1	Strobe		
			Close	0	
			Pulse strobe from slow to fast	1	127
			Strobe from slow to fast	128	225
2	2	2	Dimmer		
			Close	0	0
			Linear dimmer (0-100%)	1	255
	3	3	Dimmer in 16 bit		
			Dimmer in 16 bit adjustment	0	255
3	4	4	CYM macros		
			The following functions will disable CMY,CTO, color wheel		
			No function	0	9
			Color macro1	10	11
			Color macro2	12	13
			Color macro3	14	15
			Color macro4	16	17
			Color macro5	18	19
			Color macro6	20	21
			Color macro7	22	23
			Color macro8	24	25
			Color macro9	26	27

Color macro10	28	29
Color macro11	30	31
Color macro12	32	33
Color macro13	34	35
Color macro14	36	37
Color macro15	38	39
Color macro16	40	41
Color macro17	42	43
Color macro18	44	45
Color macro19	46	47
Color macro20	48	49
Color macro21	50	51
Color macro22	52	53
Color macro23	54	55
Color macro24	56	57
Color macro25	58	59
Color macro26	60	61
Color macro27	62	63
Color macro28	64	65
Color macro29	66	67
Color macro30	68	69
Color macro31	70	71
Color macro32	72	73
Color macro33	74	75
Color macro34	76	77
Color macro35	78	79
Color macro36	80	81
Color macro37	82	83
Color macro38	84	85
Color macro39	86	87
Color macro40	88	89
Color macro41	90	91
Color macro42	92	93
Color macro43	94	95
Color macro44	96	97
Color macro45	98	99
Color macro46	100	101
Color macro47	102	103
Color macro48	104	105
Color macro49	106	107
Color macro50	108	109
Color macro51	110	111
Color macro52	112	113
Color macro53	114	115

			Color macro54	116	117
			Color macro55	118	119
			Color macro56	120	121
			Color macro57	122	123
			Color macro58	124	125
			Color macro59	126	127
			Color macro60	128	129
			Color macro61	130	131
			Color macro62	132	133
			Color macro63	134	135
			Color macro64	136	137
			Color macro65	138	139
			Color macro66	140	141
			Color macro67	142	143
			Color macro68	144	145
			Color macro69	146	147
			Color macro70	148	149
			Color macro71	150	151
			Color macro72	152	153
			Color macro73	154	155
			Color macro74	156	157
			Color macro75	158	159
			Color macro76	160	161
			Color macro77	162	163
			Color macro78	164	165
			Color macro79	166	167
			Color macro80	168	169
			Color macro81	170	171
			Color macro82	172	173
			Color macro83	174	175
			Color macro84	176	177
			Color macro85	178	179
			Color macro86	180	181
			Color macro87	182	183
			Color macro88	184	185
			Color macro89	186	187
			Color macro90	188	189
			Color macro91	190	191
			Color macro92	192	193
			Color macro93	194	195
			Color macro94	196	197
			Color macro95	198	199
			CMY color mixing fade from slow toast	200	255
4	5	5	Cyan		

			Cyan (Linear 0-100%)	0	255
		6	Cyan in 16 bit		
			Cyan 16 bit adjustment	0	255
5	6	7	Yellow		
			Yellow (Linear 0-100%)	0	255
		8	Yellow in 16 bit		
			Yellow 16bit adjustment	0	255
6	7	9	Magenta		
			Magenta (Linear 0-100%)	0	255
		10	Magenta in 16bit		
			Magenta 16 bit adjustment	0	255
7	8	11	CTO		
			Linear CTO from high t low	0	255
		12	CTO in 16 bit		
			CTO 16 bit adjustment	0	255
8	9	13	Color wheel		
			Continuous positioning		
			Indexing 0-360 °	0	63
			Positioning		
			Open	64	67
			Open /Color1	68	71
			Color 1	72	75
			Color1/Color2	76	79
			Color2	80	83
			Color2/Color3	84	87
			Color3	88	91
			Color3/Color4	92	95
			Color4	96	99
			Color4/Color5	100	103
			Color5	104	107
			Color5Color6	108	111
			Color6	112	115
			Color6 /Open	116	119
			Open	120	127
Clockwise rainbow effect from slow to fast	128	191			
Anti-clockwise rainbow effect from slow to fast	192	255			
	10	14	Color wheel in 16bit		
			Color wheel continuous positioning ,16bit adjustment	0	255
9	11	15	Fixed gobo wheel		
			Open	0	16
			Gobo1	17	31
			Gobo2	32	47
			Gobo3	48	63
			Gobo4	64	79

			Gobo5	80	95
			Gobo6	96	111
			Gobo7	112	127
			Clockwise rainbow effect from slow to fast	128	149
			Anti-clockwise rainbow effect from slow to fast	150	171
			Gobo1 shake from slow to fast	172	183
			Gobo2 shake from slow to fast	184	195
			Gobo3 shake from slow to fast	196	207
			Gobo4shake from slow to fast	208	219
			Gobo5 shake from slow to fast	220	231
			Gobo6 shake from slow to fast	232	243
			Gobo7shake from slow to fast	244	255
10	12	16	Rotating gobo wheel		
			Open	0	31
			Gobo1	32	47
			Gobo2	48	63
			Gobo3	64	79
			Gobo4	80	95
			Gobo5	96	111
			Gobo6	112	127
			Clockwise rotation from slow to fast	128	143
			Anti-clockwise rotation from slow to fast	144	159
			Gobo1 shakes from slow to fast	160	175
			Gobo2 shakes from slow to fast	176	191
			Gobo3 shakes from slow to fast	192	207
			Gobo4shakes from slow to fast	208	223
Gobo5shakes from slow to fast	224	239			
Gobo6shakes from slow to fast	240	255			
11	13	17	Gobo rotation		
			Indexing 0-360°	0	128
			Clockwise rotation from slow to fast	129	188
			Stop	189	195
			Anti-clockwise rotation from slow to fast	196	255
	14	18	Gobo rotation in 16bit		
			Gobo rotation 16 bit adjustment	0	255
12	15	19	Framing blade 1 left		
			Linear Framing Blade1 Left Change 0%-100%	0	255
		20	Framing Blade 1 Left change in 16 bit		
			Framing Blade 1 Left change in 16 bit precision	0	255
13	16	21	Framing Blade 1 right		
			Linear Framing Blade1 Right Change 0%-100%	0	255
		22	Framing Blade 1 right change in 16 bit		
			Framing Blade 1 right change in 16 bit precision	0	255

14	17	23	Framing Blade 2 Left		
			Linear Framing Blade2 Left Change 0%-100%	0	255
		24	Framing Blade 2 Left change in 16 bit		
			Framing Blade 2 Left change in 16 bit precision	0	255
15	18	25	Framing Blade 2 Right		
			Linear Framing Blade2 Right Change 0%-100%	0	255
		26	Framing Blade 2 right change in 16 bit		
			Framing Blade 2 right change in 16 bit precision	0	255
16	19	27	Framing Blade 3 Left		
			Linear Framing Blade3 Left Change 0%-100%	0	255
		28	Framing Blade 3 Left change in 16 bit		
			Framing Blade 3Left change in 16 bit precision	0	255
17	20	29	Framing Blade 3 Right		
			Linear Framing Blade3 Right Change 0%-100%	0	255
		30	Framing Blade 3 right change in 16 bit		
			Framing Blade 3right change in 16 bit precision	0	255
18	21	31	Framing Blade 4 Left		
			Linear Framing Blade4Left Change 0%-100%	0	255
		32	Framing Blade 4 Left change in 16 bit		
			Framing Blade 4Left change in 16 bit precision	0	255
19	22	33	Framing Blade 4 Right		
			Linear Framing Blade4Right Change 0%-100%	0	255
		34	Framing Blade 4 right change in 16 bit		
			Framing Blade 4right change in 16 bit precision	0	255
20	23	35	Framing Module rotation		
			Framing Module Indexing(0-90degrees)	0	255
		36	Framing Module rotation in 16 bit		
			Framing Module rotation(0-90degrees) in 16 bit	0	255
21	24	37	Prism		
			No	0	16
			Prism in	17	255
22	25	38	Prism rotation		
			Prism indexing	0	127
			Stop	128	
			Clockwise rotation from slow to fast	129	191
			Stop	192	
			Anti-clockwise rotation from slow to fast	193	255
23	26	39	Effect wheel		
			No	0	19
			Effect wheel in	20	255
24	27	40	Effect wheel rotation		
			Clockwise rotation from fast to slow	0	127
			Anti-clockwise rotation from slow to fast	128	255
25	28	41	Frost		

			Linear frost 0% - 100%	0	255		
26	29	42	Focus				
			Linear focus	0	255		
		43	Focus in 16 bit				
			Focus 16 bit adjustment	0	255		
27	30	44	Zoom				
			Linear Zoom	0	255		
		45	Zoom in 16 bit				
			Zoom 16 bit adjustment	0	255		
28	31	46	Power/Special function				
			No function	0	4		
			Reserved	5	19		
			The following function must stay in the DMX range for more than 5s to activate it				
			Display on	20	24		
			Display off	25	29		
			Reserved	30	44		
			Reserved	45	46		
			Fan standard mode	47	48		
			Fan theater mode	49	50		
			Reserved	51	52		
			Fast dimmer speed	53	54		
			Medium dimmer speed	55	56		
			Slow dimmer speed	57	58		
			Gamma curve 2.0	59	60		
			Gamma curve 2.2	61	62		
			Gamma curve 2.4	63	64		
			Gamma curve 2.6	65	66		
			LED fresh rate 1200Hz	67	68		
			LED refresh rate 2400Hz	69	70		
			LED refresh rate 4800Hz	71	72		
			LED refresh rate 10000Hz	73	74		
			LED refresh rate 12000Hz	75	76		
			LED refresh rate 15000Hz	77	78		
			LED refresh rate 20000Hz	79	80		
			LED refresh rate 25000Hz	81	82		
			Reserved	83	89		
			Reserved	90	94		
			Reserved	95	99		
			Reserved	100	129		
			Reserved	130	139		
			Reserved	140	149		
Color system reset	150	159					
Gobo wheel reset	160	169					

		Reserved	170	179
		Zoom/Focus/Frost/Prism reset	180	189
		Other (effect wheel, framing module) reset	190	199
		Total reset	200	209
		Reserved	210	229
		Reserved	240	255

Remarks:

1. Fan errors can result in LED lamp off automatically
2. DMX channel priority: CMY macro is prior to Magenta , Yellow and Cyan flags; Prism is prior to Frost

7. ERROR MESSAGES

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

Name	Correction
Cyan	Check if wiring, positioning parts and motors are normal
Yellow	Check if wiring, positioning parts and motors are normal
Magenta	Check if wiring, positioning parts and motors are normal
CTO	Check if wiring, positioning parts and motors are normal
Color Wheel	Check if wiring, positioning parts and motors are normal
Fixed Gobo Wheel	Check if wiring, positioning parts and motors are normal
Rot. Gobo Wheel	Check if wiring, positioning parts and motors are normal
Rot. Gobo Rotation	Check if wiring, positioning parts and motors are normal
Prism	Check if wiring, positioning parts and motors are normal
Prism Rotation	Check if wiring, positioning parts and motors are normal
Focus	Check if wiring, positioning parts and motors are normal
Zoom	Check if wiring, positioning parts and motors are normal
Effect wheel	Check if wiring, positioning parts and motors are normal
Effect wheel rotation	Check if wiring, positioning parts and motors are normal
Driver 1	Check signal wire
Driver 2	Check signal wire
Driver 3	Check signal wire
Driver 4	Check signal wire
Fan Board	Check signal wire
Time IC	

8. TECHNICAL DATA

ELECTRIC PARAMETERS

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

Input power 1100W@220V AC

1140W @ 100V AC

Maximum current 12.0 A(100V)

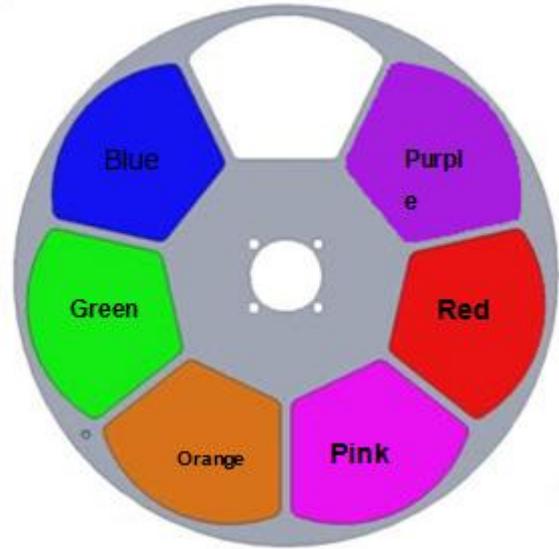
Power factor PF>0.9

THE SPECIFICATIONS OF THE LIGHT SOURCE

Power	800W
Color temperature	8000K
Rated life	20000hrs
CRI	Ra≥70
Optional high CRI light source	Ra ≥95, R9≥90

COLORS

CMY linear mixing system with macros
1 color wheel: 6exchangeable colors+ Open
Half color effect, rainbow effect with bi-directional and variable speeds,
Stepping/linear color changing

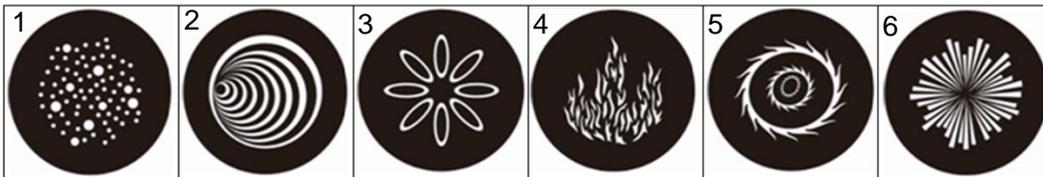


CTO

0-100% linear CTO

GOBO

1 Rotating Gobo Wheel: 6 replaceable gobos+ Open, Glass or Metal Gobo
Bi-directional Rotation with variable speeds
With Indexing Function
Gobo Shake Effect with Variable Speeds
Bi-directional Scrolling with Variable Speeds
Gobo outer size:37.5mm Gobo image size: 24mm



1 fixed Gobo Wheel: 7 replaceable gobos+ Open
Bi-directional Rotation with variable speeds
Gobo Shake Effect with Variable Speeds
Gobo outer size:36.3mm Gobo image size: 23mm



1 framing module rotates between 0 °and 90 °and produces graphics of different shapes and sizes
4 framing blades can produce full curtain effect

PRISM

1pc of 4 facet prism , Bi-directional rotation with variable speeds and indexing function

FROST

1pc frost filter, linear frost effect(0%-100%)

EFFECT WHEEL

1pc, replaceable, bi-directional rotation with variable speeds

FOCUS

DMX linear Focusing

DIMMER

0-100% Linear adjustment

STROBE

Double shutter blades, 0.3~25 F.P.S

TILT

270 °

BEAM ANGLE

linear zoom 6 °~ 56 °(open)with 16 bit function

CONTROL

DMX512, 5 pin interfaces

RDM control protocol

28channels in short mode,31channels in standard mode and46channels in extended mode

Master/Slave synchronized mode

Stand-alone mode

OTHER FUNCTION

Total hours displayable

English and Chinese menus

Built-in sensor diagnostic system

Software versions displayable

Input signal isolation

Modular Structure for easy maintenance

HOUSING

High temperature ABS+ High tensile cast aluminum , IP66

NET WEIGHT

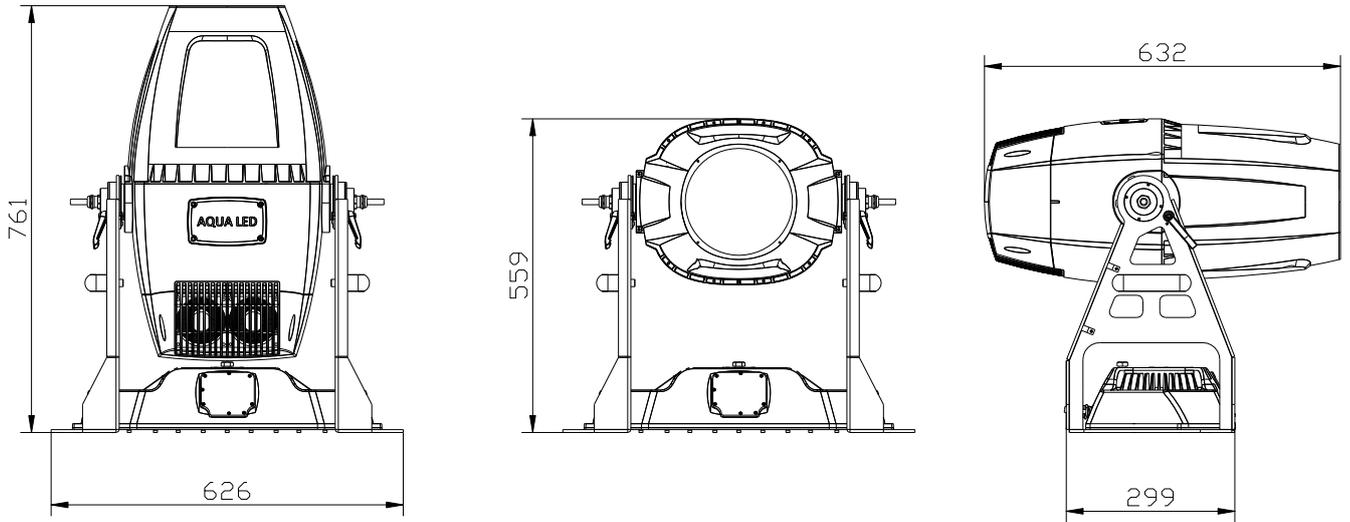
42Kg

OPERATION TEMPERATURE

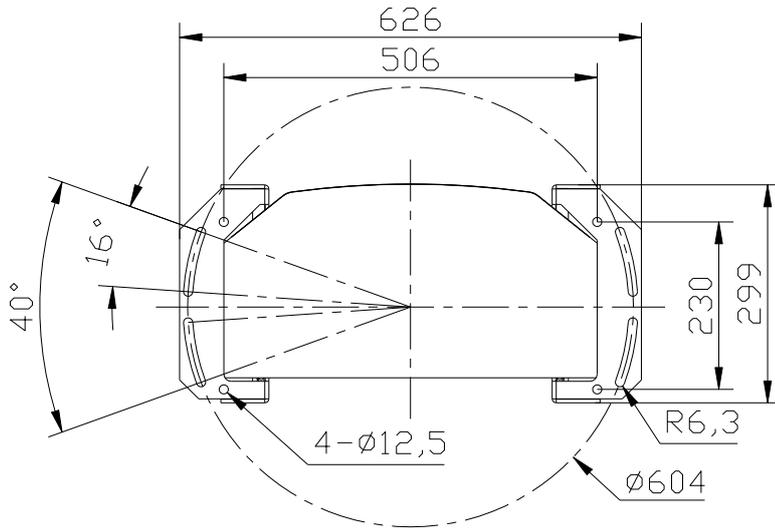
-20°C~45°C

Note: If the ambient temperature is below -20 °C, reset a projector before pre-heating it for more than 30 minutes

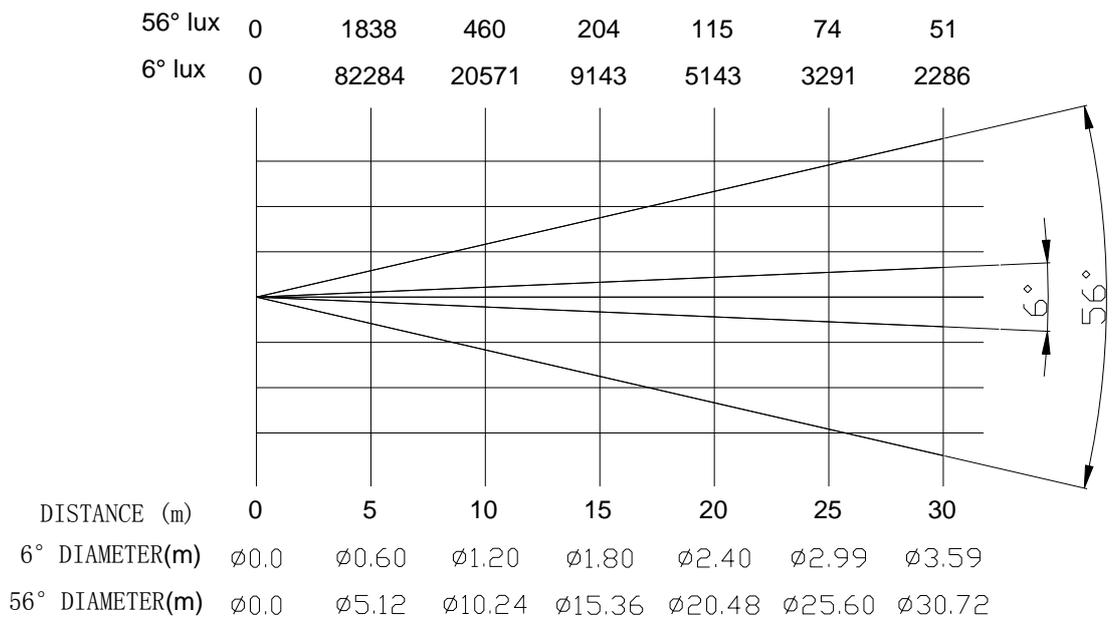
SIZES (unit: mm)



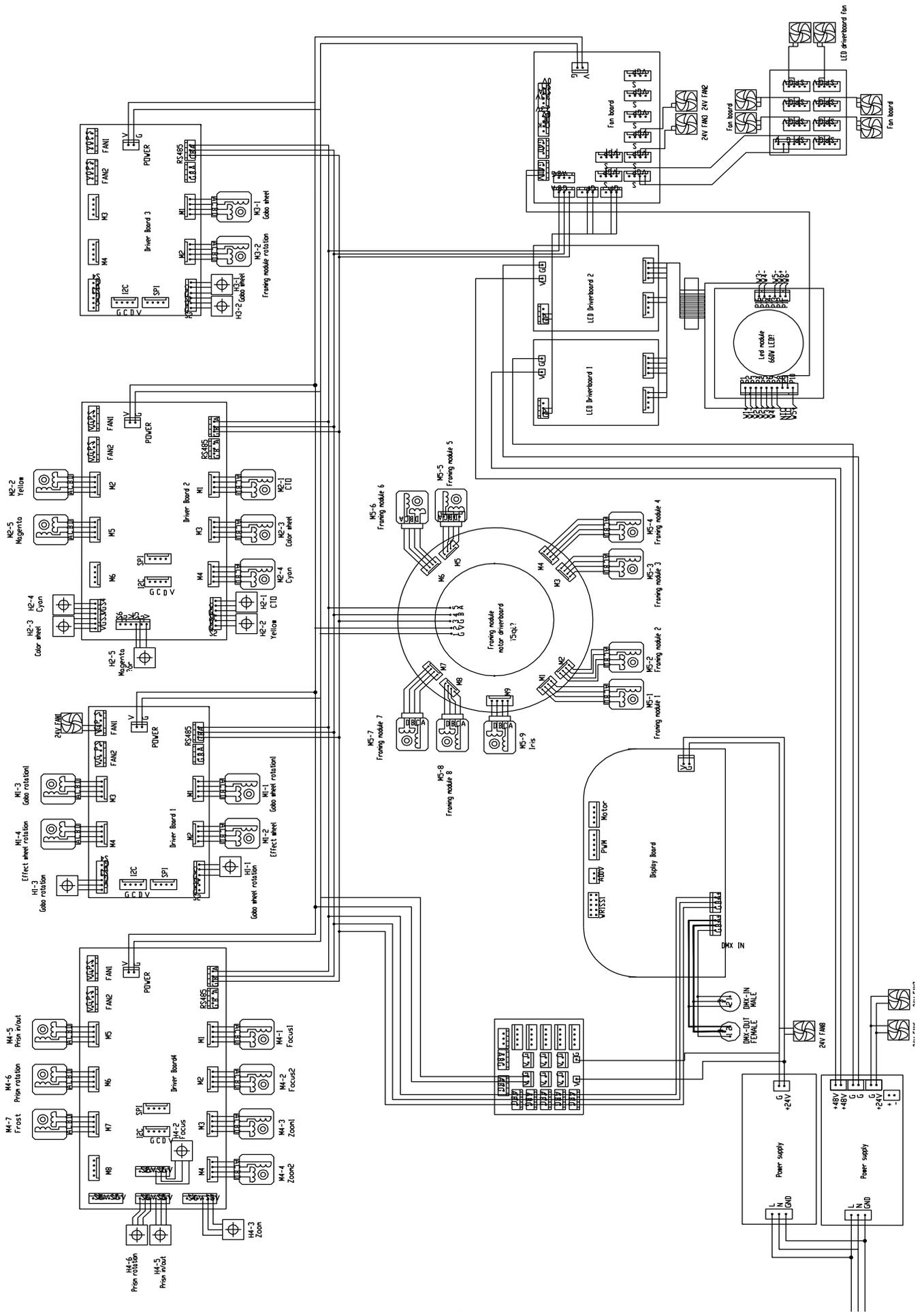
SIZE OF MOUNTING HOLES IN THE BASE (Unit mm)



LIGHT OUTPUT:

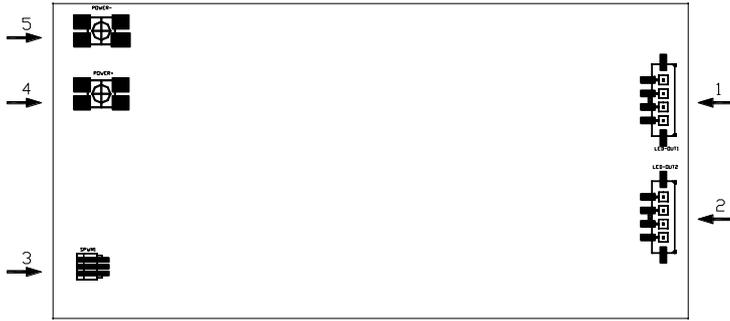


9. CIRCUIT DIAGRAM AND PCB CONNECTIONS
.CIRCUIT DIAGRAM



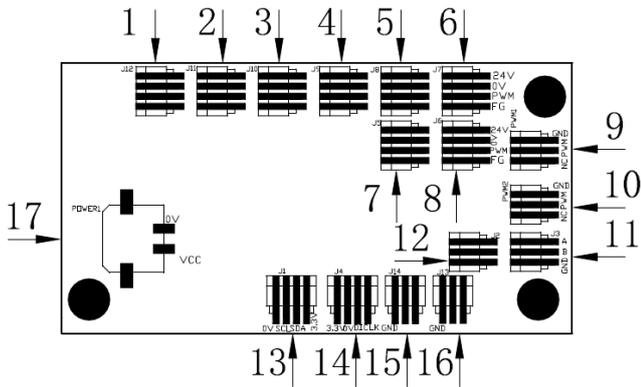
.PCB CONNECTIONS

Driver board 1



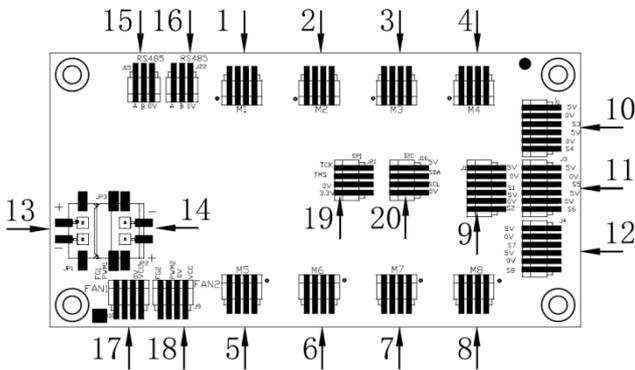
No	Name
1	LED driver Output
2	LED driver Output
3	PWM Input
4	48V Input +
5	48V Input -

Fan board



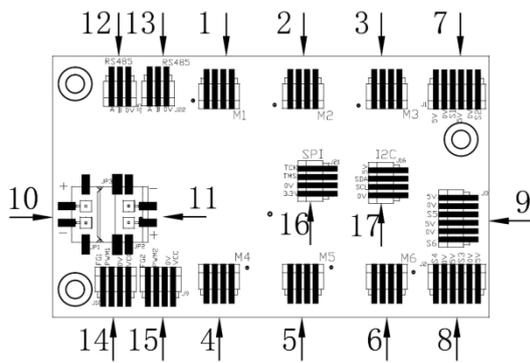
No	Name
1-8	Fan output with varying speeds
9	PWM output
10	PWM output
11-12	485 signal
13-15	Reserved
16	Thermal switch
17	Power input

Driver board1



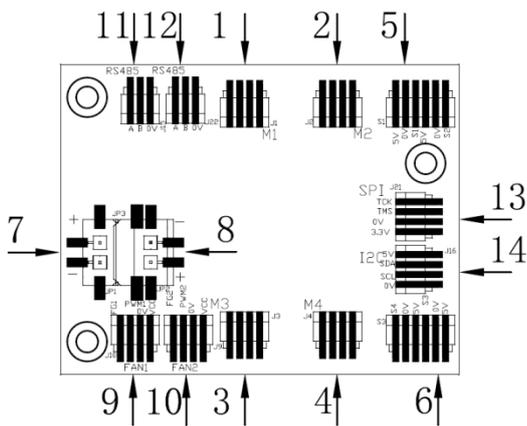
No	Name
1-2	Zoom Motor
3-4	Focus Motor
5	Prism In/Out Motor
6	Prism rotation Motor
7	Frost Motor
8	Reserved
9	Magnet sensors Zoom
10	Magnet sensors Focus
11	Prism/Prism rotation magnet sensor
12	Reserved
13-14	Power Input
15	485 Signal fo Input
16	485 Signal Output
17-20	Reserved

Driver board2



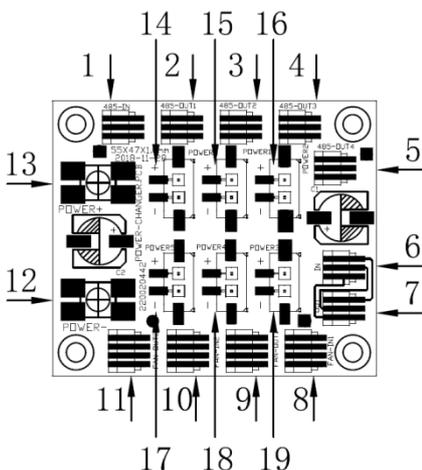
No	Name
1	CTO Motor
2	Colour wheel Motor
3	Cyan Motor
4	Yellow Motor
5	Pink Motor
6	Reserved
7	Magnet sensor for CTO
8	Magnet sensors for Colour wheel/Cyan
9	Magnet sensors Pink
10-11	Power Input
12	485 Signal Input
13	485 Signal Output
14-15	Fan
16-17	Reserved

Driver board 3



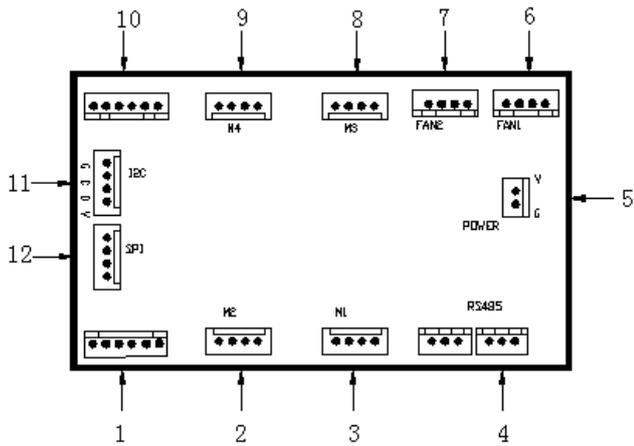
No	Name
1	Rotating gobo wheel rotation motor
2	Effect wheel In/Out motor
3	Gobo rotation motor
4	Effect wheel rotation motor
5	Rotating gobo wheel magnet sensor
6	Gobo rotation sensor
7-8	Power Input
9-10	Fan
11	485 Signal Input
12	485 Signal Output
13-14	Reserved

Driver board 4



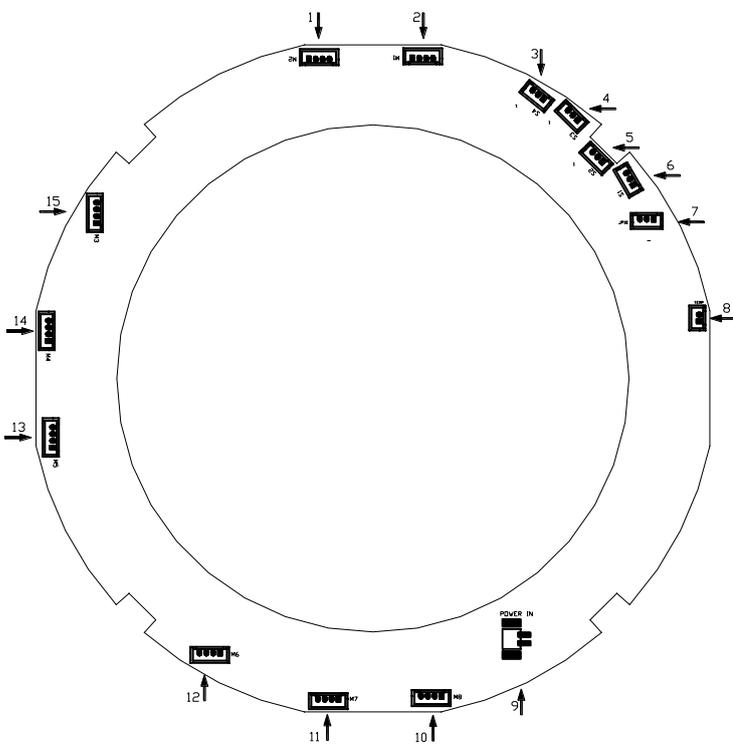
No	Name
1-5	485 Signal
6-11	Reserved
12	24V Input +
13	24V Input -
14-19	24V Output

Driver board 5



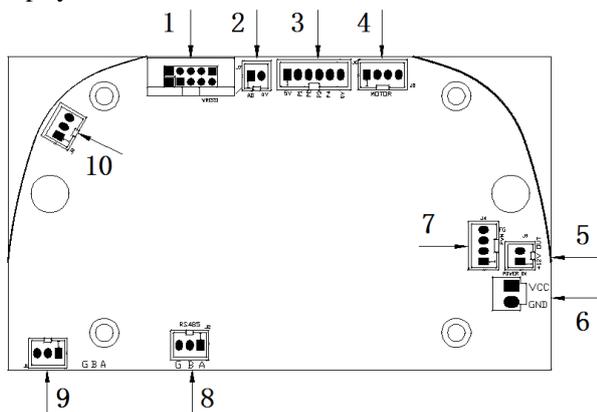
No	Name
1	Magnet sensors
2	Framing Motor
3	Gobo Motor
4	485Signal
5	24V Input
6-12	Reserved

Framing module board



No	Name
1	Framing motor2
2	Framing motor 1
3	Reserved
4	Reserved
5	Reserved
6	Reserved
7	Software flashing interface
8	Reserved
9	24V Input
10	Framing Motor 8
11	Framing Motor 7
12	Framing Motor 6
13	Framing Motor 5
14	Framing Motor 4
15	Framing Motor 3

Display board



No	Name
1-5	Reserved
6	Power Input
7	Fan
8	485 Signal
9	DMX 512 Signal
10	Reserved

10.COMPONENT ORDER CODES

NAME	CODE NO.	QTY.	REMARKS
SWITCHING POWER SUPPLY	6190000014A	1	
SWITCHING POWER SUPPLY	192010220A	1	
LED MODULE	150020323	1	
LED MODULE FAN	030060109	4	
BLOWER FOR COLOR WHEEL	030060094A	1	
BLOWER FOR FRAMING MODULE	030060094A	1	
FAN FOR SMALL POWER SUPPLY IN THE BASE	030060052A	1	
LED DRIVER FAN	030060084	2	
FAN FOR BIG POWER SUPPLY IN THE BASE	030060084	2	
FAN FOR LENS ACCESSORY 8025	030060112	1	
BLOWER FOR LENS ACCESSORY(ZOOM LENS)	030060072A	1	
FOCUS MOTOR	030040213A	2	
ZOOM MOTOR	030040154A	2	
PRISM MOTOR	030040203	1	
FROST MOTOR	030040220A	1	
PRISM ROTATION/ROTATING GOBO WHEEL MOTOR	030040132A	1	
GOBO ROTATION MOTOR	030040293	1	
EFFECT WHEEL ROTATION MOTOR	030040060	1	
FIXED GOBO WHEEL/COLOR WHEEL MOTOR	030040221A	1	
EFFECT WHEEL IN/OUT MOTOR	030040236	1	
CMY MOTOR	030040211A	3	
CTO MOTOR	030040211A	1	

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PR lighting will try its best to offer accurate and overall information about a product's technical data. Any changes won't be notified if necessary. Patented Products. Counterfeiting Will be Prosecuted!

P/N: 320021285
Old Version:20210416
New Version:20210511