XL Beam 300

PR-2330/2330M

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

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 this 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.

ACCESSORIES

These items are packed together with the projector:

Name	Quantity	Unit	Remark
G clamps	2	Pcs	
3-pin XLR connector	1	Set	Without cable
Safety cord	1	Pc	
This manual	1	Pc	
Ω clamps	2	Pcs	Options

SAFE USAGE OF THE PROJECTOR

When unpacking and before disposing of the carton check there is no transportation damage before using the projector. Should there be any damage caused by transportation, consult your dealer and do not use the apparatus.

The projector is for indoor use only, IP20. Use only in dry locations. Keep this device away from rain and moisture, excessive heat, humidity and dust. Do not allow contact with water or any other liquids.

The projector is not designed or intended to be mounted directly on to inflammable surfaces. 

The projector is only intended for installation, operation and maintenance by qualified personnel.

The projector must be installed in a location with adequate ventilation, at least 50cm from adjacent wall surfaces. Be sure that no ventilation slots are blocked.

Do not project the beam onto inflammable surfaces, minimum distance is 5m. 5m

Avoid direct exposure to the light from the lamp. The light is harmful to the eye.

Do not attempt to dismantle and/or modify the projector in any way.

Electrical connection must only be carried out by qualified personnel.

Before installation, ensure that the voltage and frequency of power supply match the power requirements of the projector.

It is essential that each projector is correctly earthed and that electrical installation conforms to all relevant standards.

Do not connect this device to any other types of dimmer apparatus.

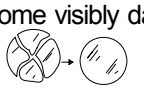
Make sure that the power-cord is never crimped or damaged by sharp edges. Never let the power-cord come into contact with other cables. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.

Keep the lamp clean. Do not touch the lamp glass with bare hand.

The projector should always be installed with a secondary safety fixing. A safety cord is supplied for this; it should be attached as shown in “installing the projector” section.

The lamp used in this projector is a discharge lamp. After switching off don’t attempt to restart the projector until lamp has cooled, this will require approx 15 minutes. Switching the lamp on and off at short intervals will reduce the life of both the lamp and the projector. But occasional breaks will prolong the life of the lamp and projector.

Never run the projector without a lamp.
The lamp shall be changed if it has become damaged or thermally deformed.

Shields and lens shall be changed if they have become visibly damaged to such an extent than their effectiveness is impaired, for example by cracks or deep scratches. 

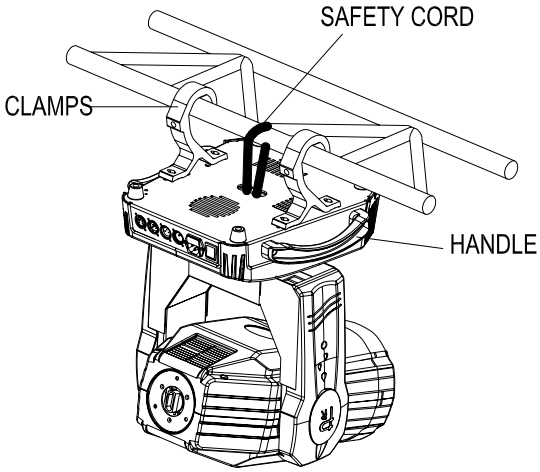
Exterior surface temperatures of the luminaire after 5 minutes operation is 40℃, when steady state is achieved 50℃,

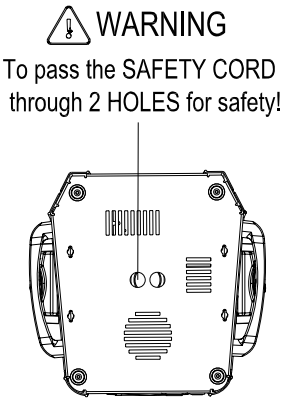
There is no user serviceable parts inside the projector, do not open the housing and never operate the projector with the covers removed.

Always disconnect from the mains, when the device is not in use or before cleaning it or before attempting any maintenance work !

If you have any questions, don’t hesitate to consult your dealer or manufacturer.

INSTALL THE PROJECTOR





Take 2 clamps and the safety cord out from the package and mount 2 clamps on the underside of fixture with 2 retainers attached to each clamp. Hang the fixture on the structure and fasten the screws attached to each clamp. (See the **WARNING** on the underside of the base as shown above) **To pass the SAFETY CORD through 2 HOLES for safety!** Always ensure that the projector is firmly anchored to avoid vibration and slipping whilst functioning. Always ensure that the structure that you are going to mount the projector to is secure and is strong enough to support a weight of XL Beam 300.

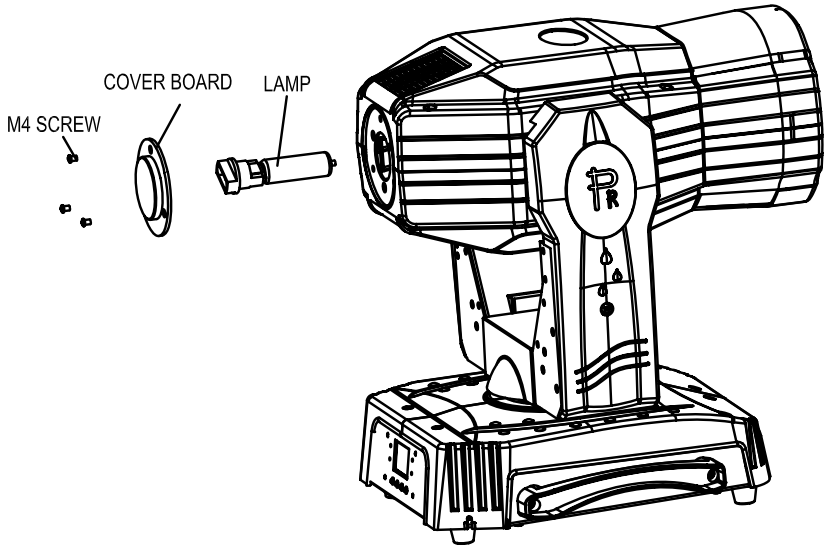
WARNING:

1. Unlock the PAN and TILT before the 1st application of projector for safety.

2. The projector MUST be lifted or carried by the HANDLES instead of clamps.

3. For safety the safety cord should afford 10 times of the unit's weight.

FITTING THE LAMP



Lock the yoke before fitting/replacing the lamp.

Open the cover board at the rear of the projector by loosening 3 screws, you can see the structure as shown in the figure above.

Gently pull out the lamp holder assembly.

Take out the worn-out lamp. Insert the new lamp to the socket. **Note:** don't touch the bulb of the new lamp with bare hands so as not to influence the beam output.

Close the rear cover and fasten 3 screws.

WARNING: The MSD series are high-pressure lamps with external igniters (⚠E). Care should always be taken when handling these lamps. Always read the manufacturers "Instructions for use" enclosed with the lamp.

POWER SUPPLY-MAINS

Connect the power cord as follows:

L (live) =brown

E (earth) =yellow/green

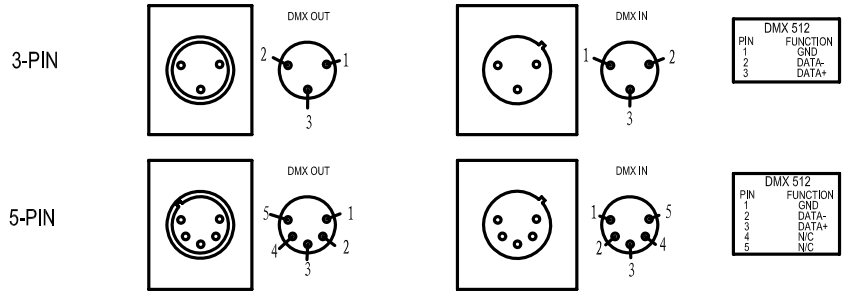
N (neutral) =blue

Use the plug provided to connect the mains power to the projector paying attention to the voltage and frequency marked on the panel of the projector. It is recommended that each projector be supplied separately so that they may be individually switched on and off.

IMPORTANT

It is essential that each projector is correctly earthed and the electrical installation conforms to all relevant standards.

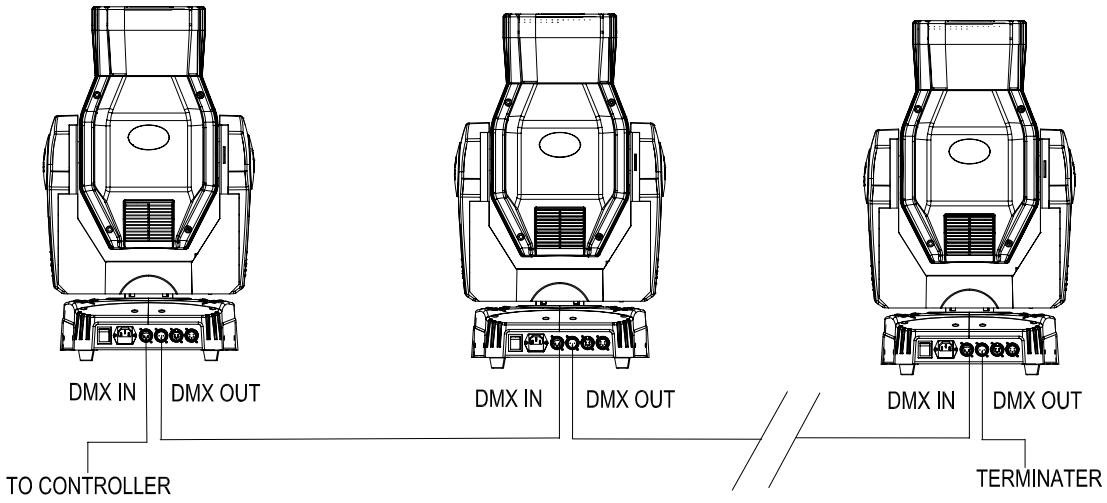
CONTROL CONNECTION



Connection between controller and projector and between one projector and another must be made with a 2 core-screened cable, with each core having at least a 0.5mm diameter. Connection to and from the projector is via cannon 3 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.

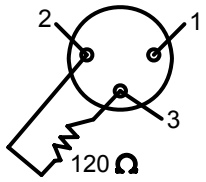
Note: care should be taken to ensure that none of the pins touch the metallic body of the plug or each other. The body of the plug is not connected in any way. The XL Beam 300 accepts digital control signals in protocol DMX512 (1990).

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

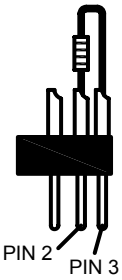


DMX TERMINATOR

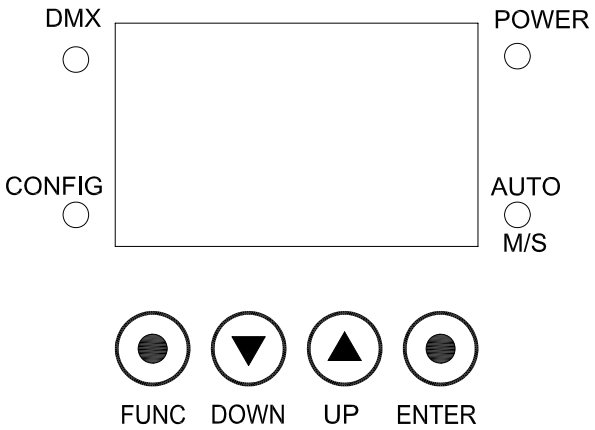
In the Controller mode, at the last fixture in the chain, the DMX output has to be connected with a DMX terminator. This prevents electrical noise from disturbing and corrupting the DMX control signals.
The DMX terminator is simply an XLR connector with a 120Ω (ohm) resistor connected across pins 2 and 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.



SETUP OPTIONS-PROJECTOR CONFIGURATION



Projector configuration can be set conveniently via pressbutton switch and LCD display. Turn the projector on and the LCD display will show DMX address you set and saved last time and it can be reset and saved again as you please.
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.
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 next menu.
Press button UP or DOWN to shift.
Press button FUNC, it will return to the upper menu one by one. If you stay for minutes defaulted will show display status automatically.

TO SET THE DMX START ADDRESS

Each XL Beam 300 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 XL Beam 300 has 3 DMX modes. There are standard mode, extended mode and short mode. For example standard mode has 19 channels, so set the No. 1 projector's address 001, No. 2 projector's address 020, No. 3 projector's address 039, No. 4 projector's address 058, and so on.
Launch the projector. Press button ENTER more than 5 seconds to unlock panel.
Press button FUNC to display **DMX address**;

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

Press button ENTER to confirm; In the same time. The GREEN LED will flash one time. It means the setting has been enabled.

Press button FUNC, it will return to the upper menu one by one.

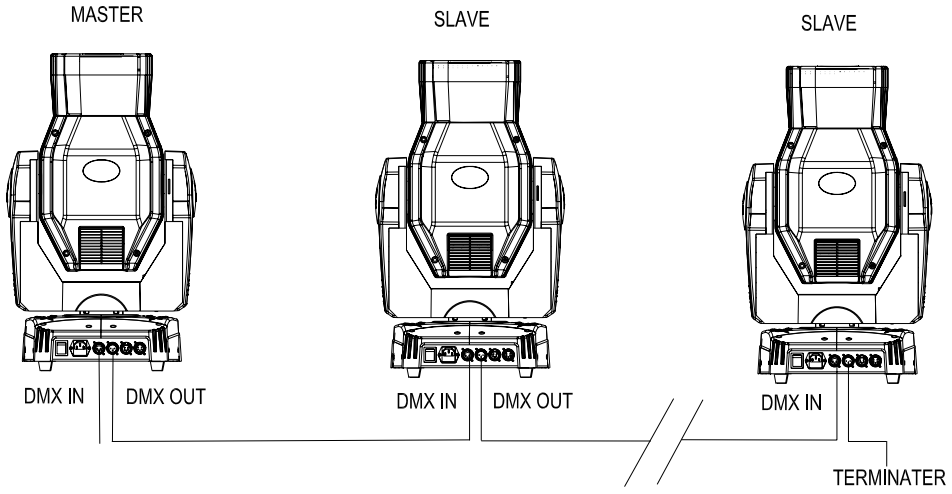
STAND-ALONE MODE

Operate the projector without connecting a controller, enable the master mode in the operation panel, the projector will run in Stand-Alone mode automatically.

MASTER/SLAVE MODE

Without using a controller, many projectors can run synchronously in the Master/Slave mode by linking them with each other. Select one projector as the master with setting options master mode enabled but slaves. Regard the other projectors as the slaves with setting options slave mode enabled and all DMX start address “001”.

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



OPERATION MENU

1st LEVEL	2nd LEVEL	3rd LEVEL	4th LEVEL	5th LEVEL	6th LEVEL
PR LIGHTING XL SERIES XL BEAM 300					
PR LIGHTING DMX Address	PR LIGHTING DMX Address XXX				
PR LIGHTING Reset	PR LIGHTING Reset Are you sure				
PR LIGHTING Config Settings	PR LIGHTING DMX Mode	PR LIGHTING DMX Mode Standard			
		PR LIGHTING DMX Mode Extended			
		PR LIGHTING DMX Mode Short			
	PR LIGHTING Loss of DMX	PR LIGHTING When DMX is Lost Normal Time Out			
		PR LIGHTING When DMX is Lost Hold Last Value			
	PR LIGHTING Lamp Control	PR LIGHTING Lamp Control By Control Channel			
		PR LIGHTING Lamp Control By Power On			
		PR LIGHTING Lamp Control By DMX Present			
PR LIGHTING Option Settings	PR LIGHTING Colour Positions	PR LIGHTING Colour Positions STEPPED			
		PR LIGHTING Colour Positions LINEAR			
	PR LIGHTING Pan DMX Invert	PR LIGHTING Pan DMX Invert OFF			
		PR LIGHTING Pan DMX Invert ON			
	PR LIGHTING Tilt DMX Invert	PR LIGHTING Tilt DMX Invert OFF			
		PR LIGHTING Tilt DMX Invert ON			
	PR LIGHTING Pan Tilt Swap	PR LIGHTING Pan Tilt Swap OFF			
		PR LIGHTING Pan Tilt Swap ON			
	PR LIGHTING Dimmer Invert	PR LIGHTING Dimmer Invert OFF			
		PR LIGHTING Dimmer Invert			

		ON			
	PR LIGHTING Iris Invert	PR LIGHTING Iris Invert OFF			
		PR LIGHTING Iris Invert ON			
	PR LIGHTING Zoom Invert	PR LIGHTING Zoom Invert OFF			
		PR LIGHTING Zoom Invert ON			
	PR LIGHTING CYM Invert	PR LIGHTING CYM Invert OFF			
		PR LIGHTING CYM Invert ON			
	PR LIGHTING Defaults	PR LIGHTING Defaults OFF			
		PR LIGHTING Defaults Restore Defaults			
PR LIGHTING Display Options	PR LIGHTING Display Mode	PR LIGHTING Display Mode On Always			
		PR LIGHTING Display Mode Off After Delay			
	PR LIGHTING Display Invert	PR LIGHTING Display Invert OFF			
		PR LIGHTING Display Invert ON			
	PR LIGHTING Display Dimming	PR LIGHTING Disp Dim Level XXX(Min,1~9,Full), Default is 8)			
	PR LIGHTING Display Contrast	PR LIGHTING Display Contrast XX(0~20, Default is 10)			
PR LIGHTING Information	PR LIGHTING Lamp Hours	PR LIGHTING Lamp Hours= XX	PR LIGHTING Reset Lamp Hours Are You Sure?		
	PR LIGHTING Total Hours	PR LIGHTING Total Hours=XX			
	PR LIGHTING Temperature	PR LIGHTING Driver Board	PR LIGHTING Driver Board= XX℃		
		PR LIGHTING Head Sensor	PR LIGHTING Head Sensor= XX ℃		
	PR LIGHTING Software Version	PR LIGHTING Display Board	PR LIGHTING Display Board= X.X.X		
	PR LIGHTING View DMX Values	PR LIGHTING DMX Channel 1=0			
	PR LIGHTING Electronic SN	PR LIGHTING Electronic SN= =**********			
PR LIGHTING Test Modes	PR LIGHTING Factory Setup	PR LIGHTING Factory Setup OFF			
		PR LIGHTING			

		Factory Setup ON			
	PR LIGHTING Self Test	PR LIGHTING Self Test OFF			
		PR LIGHTING Self Test ON			
PR LIGHTING Lamp Manual Control	PR LIGHTING Lamp Status	PR LIGHTING Status = XX Control = XX			
	PR LIGHTING Turn Lamp On				
	PR LIGHTING Turn Lamp Off				
PR LIGHTING Operation Mode	PR LIGHTING Operation Mode= DMX Operation				
	PR LIGHTING Operation Mode= Master Mode	PR LIGHTING Select Memory User Memory 1			
		PR LIGHTING Select Memory User Memory 2			
		PR LIGHTING Select Memory Preset Memory 1			
		PR LIGHTING Select Memory Preset Memory 2			
		PR LIGHTING Select Memory Preset Memory 3			
	PR LIGHTING Operation Mode= Slave Mode	PR LIGHTING Select Memory User Memory 1			
		PR LIGHTING Select Memory User Memory 2			
		PR LIGHTING Select Memory Preset Memory 1			
		PR LIGHTING Select Memory Preset Memory 2			
		PR LIGHTING Select Memory Preset Memory 3			
	PR LIGHTING Mode= Static Scene				
PR LIGHTING User Memories	PR LIGHTING Edit User Memory	PR LIGHTING User Memory 1	PR LIGHTING Scene XX （1~28）	PR LIGHTING Shutter	PR LIGHTING Shutter XXX
				PR LIGHTING Dimmer	PR LIGHTING Dimmer XXX
				PR LIGHTING CYM Macro	PR LIGHTING CYM Macro XXX
				PR LIGHTING Cyan	PR LIGHTING Cyan XXX
				PR LIGHTING Yellow	PR LIGHTING Yellow

					XXX
				PR LIGHTING Magenta	PR LIGHTING Magenta XXX
				PR LIGHTING Color	PR LIGHTING Color XXX
				PR LIGHTING Iris	PR LIGHTING Iris XXX
				PR LIGHTING R Gobo Wheel	PR LIGHTING R Gobo Wheel XXX
				PR LIGHTING R Gobo Rotate	PR LIGHTING R Gobo Rotate XXX
				PR LIGHTING Focus	PR LIGHTING Focus XXX
				PR LIGHTING Zoom	PR LIGHTING Zoom XXX
				PR LIGHTING Pan Coarse	PR LIGHTING Pan Coarse XXX
				PR LIGHTING Pan Fine	PR LIGHTING Pan Fine XXX
				PR LIGHTING Tilt Coarse	PR LIGHTING Tilt Coarse XXX
				PR LIGHTING Tilt Fine	PR LIGHTING Tilt Fine XXX
				PR LIGHTING M-Speed	PR LIGHTING M-Speed XXX（000~255）
				PR LIGHTING Delay	PR LIGHTING Delay XX Seconds （0.25s~100min）
				PR LIGHTING Link To Step	PR LIGHTING Link To Step XXX（1~28）
		PR LIGHTING User Memory 2	PR LIGHTING Scene XXX（1~28）	PR LIGHTING Shutter	PR LIGHTING Shutter XXX
				PR LIGHTING Dimmer	PR LIGHTING Dimmer XXX
				PR LIGHTING CYM Macro	PR LIGHTING CYM Macro XXX
				PR LIGHTING Cyan	PR LIGHTING Cyan XXX
				PR LIGHTING Yellow	PR LIGHTING Yellow XXX
				PR LIGHTING Magenta	PR LIGHTING Magenta XXX
				PR LIGHTING Color	PR LIGHTING Color XXX
				PR LIGHTING Iris	PR LIGHTING Iris XXX
				PR LIGHTING R Gobo Wheel	PR LIGHTING R Gobo Wheel XXX

				PR LIGHTING R Gobo Rotate	PR LIGHTING R Gobo Rotate XXX
				PR LIGHTING Focus	PR LIGHTING Focus XXX
				PR LIGHTING Zoom	PR LIGHTING Zoom XXX
				PR LIGHTING Pan Coarse	PR LIGHTING Pan Coarse XXX
				PR LIGHTING Pan Fine	PR LIGHTING Pan Fine XXX
				PR LIGHTING Tilt Coarse	PR LIGHTING Tilt Coarse XXX
				PR LIGHTING Tilt Fine	PR LIGHTING Tilt Fine XXX
				PR LIGHTING M-Speed	PR LIGHTING M-Speed XXX（000~255）
				PR LIGHTING Delay	PR LIGHTING Delay XX Seconds （0.25s~100min）
				PR LIGHTING Link To Step	PR LIGHTING Link To Step XXX（1~28）
		PR LIGHTING Static Scene	PR LIGHTING Shutter	PR LIGHTING Shutter XXX	
			PR LIGHTING Dimmer	PR LIGHTING Dimmer XXX	
			PR LIGHTING CYM Macro	PR LIGHTING CYM Macro XXX	
			PR LIGHTING Cyan	PR LIGHTING Cyan XXX	
			PR LIGHTING Yellow	PR LIGHTING Yellow XXX	
			PR LIGHTING Magenta	PR LIGHTING Magenta XXX	
			PR LIGHTING Color	PR LIGHTING Color XXX	
			PR LIGHTING Iris	PR LIGHTING Iris XXX	
			PR LIGHTING R Gobo Wheel	PR LIGHTING R Gobo Wheel XXX	
			PR LIGHTING R Gobo Rotate	PR LIGHTING R Gobo Rotate XXX	
			PR LIGHTING Focus	PR LIGHTING Focus XXX	
			PR LIGHTING Zoom	PR LIGHTING Zoom XXX	
			PR LIGHTING Pan Coarse	PR LIGHTING Pan Coarse XXX	

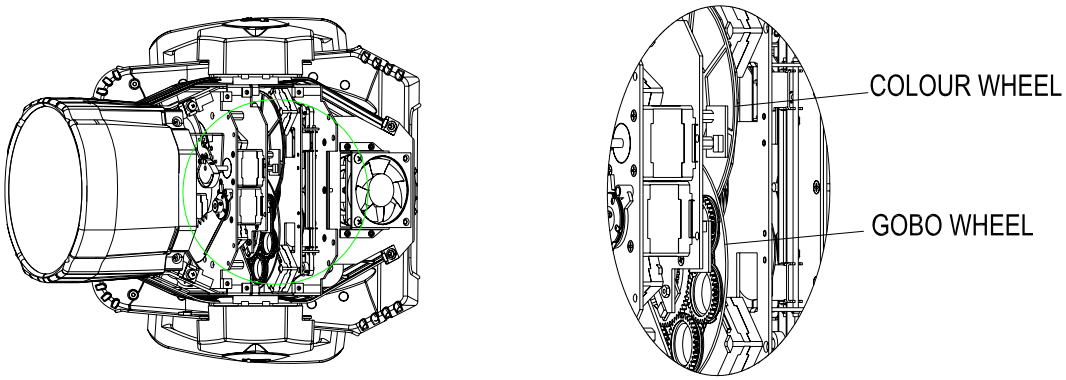
			PR LIGHTING Pan Fine	PR LIGHTING Pan Fine XXX	
			PR LIGHTING Tilt Coarse	PR LIGHTING Tilt Coarse XXX	
			PR LIGHTING Tilt Fine	PR LIGHTING Tilt Fine XXX	
			PR LIGHTING M-Speed	PR LIGHTING M-Speed XXX（000~255）	
	PR LIGHTING Init User Memory	PR LIGHTING Reset Static Scene	PR LIGHTING Reset Static Scn <Unlock> 2 3 & 4 (Press buttons UP,DOWN and ENTER)	PR LIGHTING Static Scene Has Been Reset	
		PR LIGHTING Reset User Memory 1	PR LIGHTING Reset User 1 ? <Unlock> 2 3 & 4?	PR LIGHTING Memory 1 Has Been Reset	
		PR LIGHTING Reset User Memory 2	PR LIGHTING Reset User 2 ? <Unlock> 2 3 & 4	PR LIGHTING Memory 2 Has Been Reset	

ERROR MESSAGES

In the course of launch, XL Beam 300 examines automatically whether there are errors and if there are, it will display information as follows:

Display	Message
Sensor Error M1	Motor 1 (Focus) error
Sensor Error M2	Motor 2 (Rotating Gobo wheel) error
Sensor Error M3	Motor 5 (Gobo rotation) error
Sensor Error M6	Motor 6 (Colour wheel) error
Sensor Error M8	Motor 7 (CYM-magenta) error
Sensor Error M9	Motor 9 (CYM-yellow) error
Sensor Error M10	Motor 10 (CYM-cyan) error

REPLACING GOBOS



Disconnect the fixture from power. Lock Tilt. Carefully lift off the rear cover by undoing the 4 screws.

For gobos replacement: Remove the gobo holder with gobo from gobo wheel by hands.
Pull out the spring and drop the old gobo out of the holder.
Insert the new gobo into the holder, and then insert the spring with the narrow end against the gobo.
Push the end of the spring in under lip of the holder.
Pick the spring clip up and put the gobo holder back into the position, if necessary, a small screwdriver will be helped.

Note: If the gobo is a glass one, it should be touched with glabrous, clean and soft tissue or cloth matted between hand and glass instead of with bare hand.
Close the rear cover and fasten 4 screws.

DMX PROTOCOL

Short mode	Standard mode	Extended mode	FUNCTION	DMX	DESCRIPTION
1	1	1	Strobe	000-009	Black
				010-020	Open
				021-244	Strobe speed from slow to fast
				245-255	Open
2	2	2	Dimmer	000-255	Dimming from dark to light (0-100%)
		3	Dimmer Fine	000-255	Dimmer in 16 Bit precision
3	3	4	CYM Macro	000-016	White
				017-035	Red
				036-054	Yellow
				055-073	Green
				074-092	Cyan
				093-110	Blue
				111-128	Magenta
				129-255	Rainbow rotation from slow to fast
4	4	5	Cyan	000-255	Cyan from shallow to deep
		6	Cyan 16Bit	000-255	Cyan in 16 Bit precision
5	5	7	Yellow	000-255	Yellow from shallow to deep
		8	Yellow 16Bit	000-255	Yellow in 16 Bit precision
6	6	9	Magenta	000-255	Magenta from shallow to deep
		10	Magenta 16Bit	000-255	Magenta in 16 Bit precision
7	7	11	Colour Wheel	000-024	White
				025-040	Colour 1
				041-056	Colour 2
				057-072	Colour 3
				073-088	Colour 4
				089-104	Colour 5
				105-120	Colour 6
				121-127	Colour 7
				128-187	Rotation from slow to fast
				188-195	Stop in current position
				196-255	Reverse rotation from slow to fast
8	8	12	Iris	000-135	Iris from large to small
				136-167	Iris opens slow and closes fast, speed from slow to fast
				168-199	Iris closes slow and opens fast, speed from slow to fast
				200-231	Iris opens and closes with the same speed from slow to fast
				232-255	Minimal
9	9	13	Rotating Gobo Wheel	000-016	white
				017-032	Gobo1
				033-048	Gobo 2
				049-064	Gobo 3
				065-080	Gobo 4
				081-096	Gobo 5
				097-112	Gobo 6

				113-127	Gobo 7
				128-150	Rotation speed from slow to fast
				151-171	Reverse rotation from slow to fast
				172-183	Gobo shake 1 from slow to fast
				184-195	Gobo shake 2 from slow to fast
				196-207	Gobo shake 3 from slow to fast
				208-219	Gobo shake 4 from slow to fast
				220-231	Gobo shake 5 from slow to fast
				232-243	Gobo shake 6 from slow to fast
				244-255	Gobo shake 7 from slow to fast
10	10	14	Gobo rotation	000-128	index
				129-188	Gobo rotation from slow to fast
				189-195	Stop rotating
				196-255	Reverse rotation from slow to fast
	11	15	Gobo rotation 16 Bit	000-255	Gobo rotation in 16 Bit precision
11	12	16	Focus	000-255	Linearly focusing
		17	Focus Fine	000-255	Focus in 16 precision
12	13	18	Zoom	000-255	From small to large
13	14	19	Pan	000-255	Pan rotation 540°
	15	20	Pan Fine	000-255	Pan rotation in 16 precision
14	16	21	Tilt	000-255	Tilt rotation 270°
	17	22	Tilt Fine	000-255	Tilt rotation in 16 precision
	18	23	Pan & Tilt speed	000-255	Pan &Tilt speed from fast to slow
15	19	24	Control	000-047	Reserved
				048-080	Reset
				081-112	Reserved
				113-144	Lamp off (stop in DMX value for 10 s)
				145-168	Reserved
				169-200	Lamp power reduced to 50%
				201-223	Reserved
				224-255	Lamp on (See remark below)

Remark:

If you intend to turn on/off the lamp via the last channel of the controller, don't attempt to push the channel to value 224-255 immediately after turning it off, or push the slide bar to value 224-255 to wait it cooling. Under these 2 circumstances, the lamp can not be turned on. The right operation is: turn it off---cool down---push the slide bar to turn it on.

LED INDICATION

Green	On	DMX signal OK
	Off	No DMX signal
	Flash	DMX signal error
Yellow	On	Setting the panel
Blue	On	Power
Red/Green	Red	Running slave mode or self test mode
	Green	Running master mode

MAINTENANCE

If the projector does not function, check the fuses on the power socket of the projector, they should only be replaced by fuses of the same specification. Should these be damaged call a qualified technician before replacement. The projector has thermal protection device that will switch off the projector in case of overheating, should either of these operate, check that the fans are not blocked, and if they are dirty clean them before switching on the projector again. Check that the fans are operational, if not call a qualified technician.

Any maintenance work should only be carried out by qualified technicians.

LUBRICATION

To ensure the continuous rotation of the rotating gobos, it is recommended that the bearings for the rotating gobos be lubricated periodically, preferably every two months. Use only high quality, high-temperature resistant grease instead of any type of oil. When lubricating the bearings, a syringe with a fine needle is the easiest way to introduce the grease to the bearings around each gobo.

KEEPING THE PROJECTOR CLEAN

To ensure the reliability of the projector it should be kept clean. It is recommended that the fans should be cleaned every 15 days. The lens and dichroic colour filters should also be regularly cleaned to maintain an optimum light output. **Do NOT use any type of solvent on dichroic colour filters.**

Cleaning frequency depends on the environment in which the fixture operates: damp, smoke or particularly dirty surroundings can cause greater accumulation of dirt on the unit's optics. A soft cloth and typical glass cleaning products should be used in cleaning. It is recommended to clean the external optics at least once every 20 days and clean the internal optics at least once every 30 / 60 days.

Do not use any organic solvent, e.g. alcohol, to clean the reflector mirror, dichroic colour filters or housing of the apparatus.

TROUBLESHOOTING

PROBLEM	ACTION
The projector doesn't switch on	➢ Check the fuse on the power socket. ➢ Replace the lamp.
The lamp comes on but the projector doesn't respond to the controller	➢ Make sure that the projector is correctly configurated. ➢ Replace or repair the DMX cable.
The projector only functions intermittently	➢ Make sure the fan is working and not dirty.
Defective projection	➢ Check the lenses are not broken. ➢ Remove dust or grease from the lenses.
The project image appears to have a halo	➢ Make sure the lamp is installed correctly. ➢ Carefully clean the optical group lenses and the projector components.
The beam appears dim	➢ Check the optics is clean. ➢ Replace with a new lamp of the specified type and rating.

TECHNICAL DATA

VOLTAGES:

Electronical ballast（PR-2330）: 100V/120V/200V/220V/230V/240V AC，50/60Hz

Magnetic ballast（PR-2330M）: 100V/120V/200V/220V/30V/240V AC，50/60Hz

POWER CONSUMPTION:

Electronical ballast（PR-2330）: 400W@220V

Magnetic ballast（PR-2330M）: 470W@220V

LAMP:

PHILIPS	MSD Gold 300/2 FastFit
Colour Temperature	8000°K
Lumen output	22000 lm
Socket	PGJX28, single ended
Manufacturers Rated Lamp Life	750 Hours replacement

COLOURS:

Linear CYM colour mixing system (8-or 16-bit) with macro function

1 wheel with 7 dichroic colour filters plus white

With variable speed bi-directional rainbow effect

Step/linear colour changing is available

GOBOS:

1 Rotating gobo wheel:

7 interchangeable gobos+ white

Indexable, bi-directionally rotatable at variable speeds

bi-directionally scrolling at variable speeds

Gobo shake function

Gobo diameter: 25.7mm, image diameter: 23mm

IRIS

0-100% linearly adjustable(8- or 16-bit)

Macro

FOCUS

DMX controlled focus

DIMMER:

0-100% linearly adjustable

SHUTTER:

Single shutter blade, 0.3~10 F.P.S

HEAD MOVEMENT:

Pan 540º, Tilt 245º with auto position correction

8- or 16-bit

BEAM ANGLE:

Standard: 6 º

With Light Frost: 9 º

With heavy Frost: 20 º

CONTROL:

DMX512, 3 pin, 5 pin interfaces

15 channels in short mode, 19 channels in standard mode, and 24 channels in extended mode.

RDM protocol ready

Master / slave mode

Stand-alone mode

Self-test mode

OTHER FUNCTIONS:

Adjustable Pan & Tilt speed

Fixture and lamp usage time display

LCD display menu in English

Energy saving function of the ballast

Adjustable fan speed

Built-in analyzer for easy fault finding, error messages

Input signal isolating protection

HOUSING:

Composite plastic, IP20

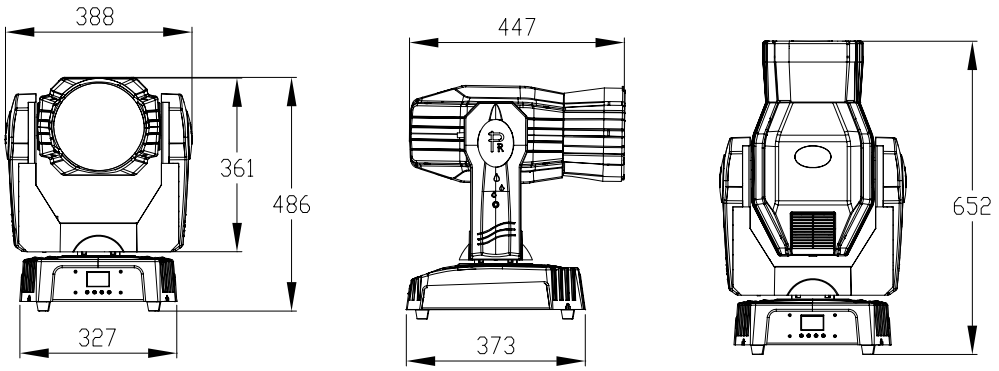
WEIGHT:

Electronical ballast（PR-2330）: 17Kg

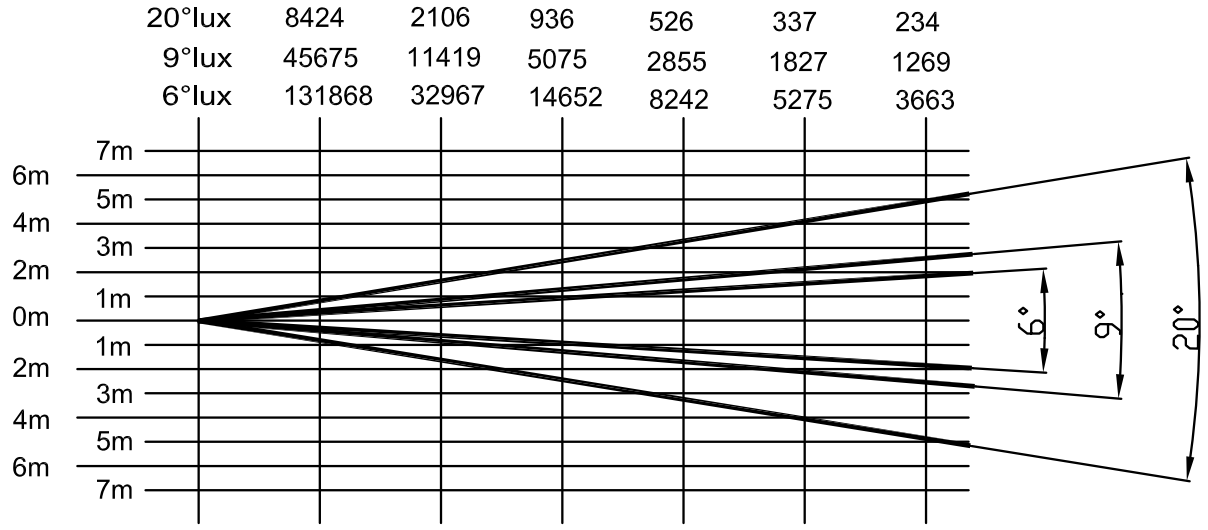
Magnetic ballast（PR-2330M）: 24Kg

SIZES:

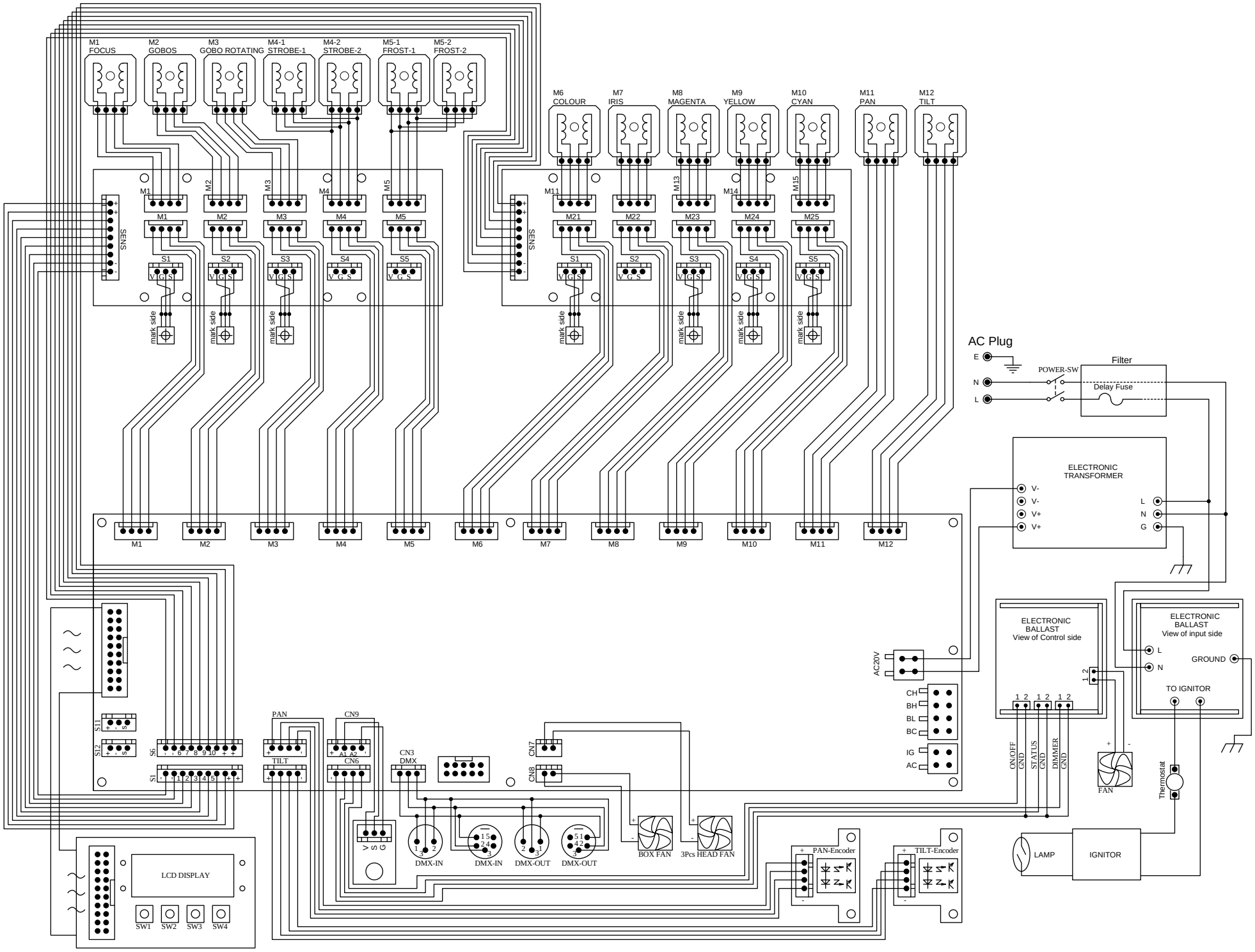
See at below

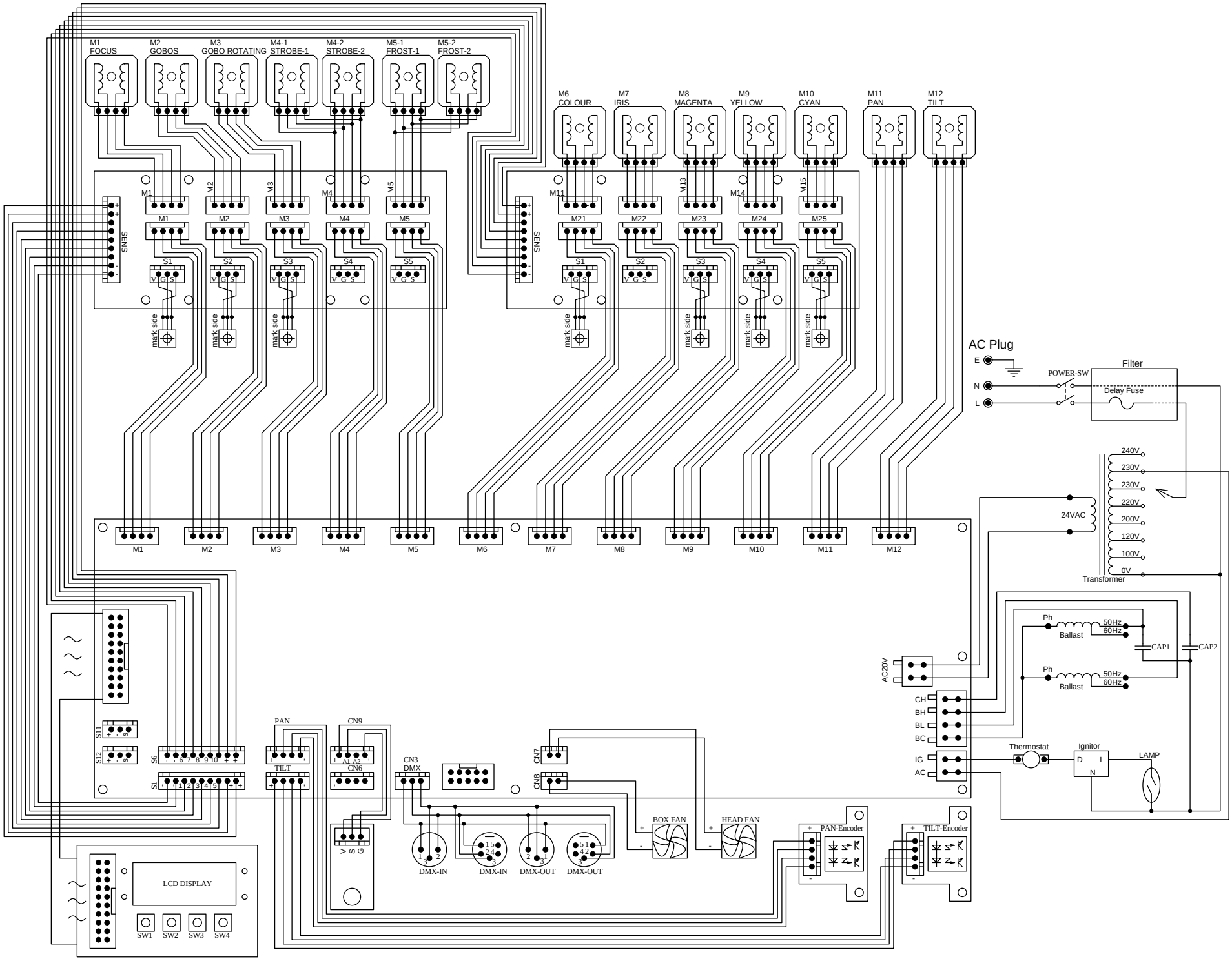


LIGHT OUTPUT:



DISTANCE(m)	0m	5m	10m	15m	20m	25m	30m
6°DIAMETER(m)	ϕ0	ϕ0.56	ϕ1.12	ϕ1.69	ϕ2.25	ϕ2.81	ϕ3.37
9°DIAMETER(m)	ϕ0	ϕ0.88	ϕ1.77	ϕ2.65	ϕ3.53	ϕ4.42	ϕ5.30
20°DIAMETER(m)	ϕ0	ϕ1.63	ϕ3.26	ϕ4.89	ϕ6.52	ϕ8.15	ϕ9.78


M1 FOCUS
M2 GOBOS
M3 GOBO ROTATING
M4-1 STROBE-1
M4-2 STROBE-2
M5-1 FROST-1
M5-2 FROST-2
M6 COLOUR
M7 IRIS
M8 MAGENTA
M9 YELLOW
M10 CYAN
M11 PAN
M12 TILT
SENS
S1
S2
S3
S4
S5
V G S
mark side
M21
M22
M23
M24
M25
AC Plug
E
N
L
POWER-SW
Filter
Delay Fuse
ELECTRONIC TRANSFORMER
V-
V-
V+
V+
L
N
G
ELECTRONIC BALLAST View of Control side
ELECTRONIC BALLAST View of input side
GROUND
TO IGNITOR
AC20V
CH
BH
BL
BC
IG
AC
ON/OFF
STATUS
DIMMER
GND
FAN
Thermostat
LAMP
IGNITOR
PAN
TILT
CN9
CN6
CN3 DMX
CN7
CN8
S11
S12
S6
S1
DMX-IN
DMX-IN
DMX-OUT
DMX-OUT
BOX FAN
3Pcs HEAD FAN
PAN-Encoder
TILT-Encoder
LCD DISPLAY
SW1
SW2
SW3
SW4


M1 FOCUS
M2 GOBOS
M3 GOBO ROTATING
M4-1 STROBE-1
M4-2 STROBE-2
M5-1 FROST-1
M5-2 FROST-2
M6 COLOUR
M7 IRIS
M8 MAGENTA
M9 YELLOW
M10 CYAN
M11 PAN
M12 TILT
SENS
mark side
AC Plug
E
N
L
POWER-SW
Filter
Delay Fuse
240V
230V
230V
220V
200V
120V
100V
0V
24VAC
Transformer
Ph
Ballast
50Hz
60Hz
CAP1
CAP2
AC20V
CH
BH
BL
BC
IG
AC
Thermostat
Ignitor
D
L
N
LAMP
PAN
TILT
CN9
CN6
CN3
DMX
CN7
CN8
BOX FAN
HEAD FAN
PAN-Encoder
TILT-Encoder
DMX-IN
DMX-IN
DMX-OUT
DMX-OUT
LCD DISPLAY
SW1
SW2
SW3
SW4

COMPONENT ORDER CODES

NAME	PART NO.	QUANTITY	REMARK
POWER SUPPLY	192010132	1	24V 100W
TRANSFORMER****	040030039	1	21V 100W/230V 320W
THERMOSTAT	190010065	1	75℃
BALLAST	040070089	1	MHM 300A5ZC(with 040090055)
BALLAST****	040070047	2	230V 50/60Hz
IGNITOR****	040090016	1	230V 50/60Hz
IGNITOR	040090055	1	IGN40C 04-P
LAMP	100050069	1	MSR Gold 300/2
TILT BELT	290151252	1	HTD-612-3M
PAN BELT	290151251	1	HTD-447-3M
FAN IN BOX	030060057	2	DC24V/2.88W
FAN FOR GOBO WHEEL	030060055	1	24V 0.16A
FAN NEAR THE LAMP		2	
PAN MOTOR	030040053	1	57BYGH301-3A
TILT MOTOR	030040052	1	57BYGH101-2A
FROST MOTOR	030040084	2	17HS0002-59L
COLOUR WHEEL MOTOR		1	
ROTATING GOBO WHEEL MOTOR		1	
GOBO ROTATION MOTOR	030040112	1	17HD0013-38L
FOCUS MOTOR		1	
IRIS MOTOR		1	
SHUTTER BLADE MOTOR		2	
CYM MOTOR	030040129	3	16HY7001-49
MOTOR DRIVE PCB	230020561	1	
DISPLAY PCB	230020255	1	

NOTE:

**** Only apply to Magnetic ballast.

PR LIGHTING LTD.

1582 Xingye Avenue, Nancun Panyu
Guangzhou, 511442 China
TEL: +86-20-3995 2888
FAX: +86-20-3995 2330

P/N: 320020022
Last Revision: 20100303