

XR 300 (BEAM)

PR-2353

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>

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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	
XLR cable	1	Pc	with plug
Safety cord	1	Pc	
This manual	1	Pc	
Ω clamps	2	Pcs	Optional

SAFE USAGE OF THE PROJECTOR

When unpacking and before disposing of the carton check if 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 12m.  12m 

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 or reached its life limit.

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. 

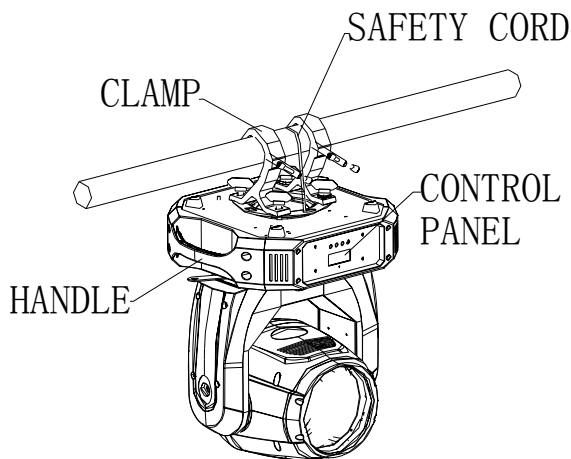
Exterior surface temperatures of the luminaire after 5 minutes operation is 45°C, when steady state is achieved 50°C,


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

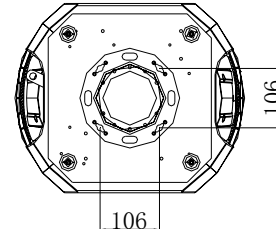
If you have any questions, don't hesitate to consult your dealer or manufacturer.

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

INSTALL THE PROJECTOR



 **WARNING**
To pass 1 SAFETY CORD
through 2 holes for safety



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

1. The projector **MUST** be lifted or carried by the **HANDLES** instead of clamps.
2. For safety the safety cord should support 10 times of the unit's weight.

FITTING THE LAMP

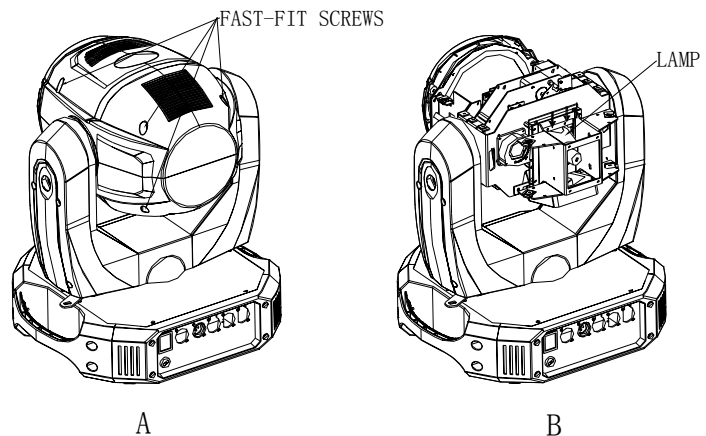
Unplug the projector from power before lamp installation or replacement and wait for it to cool.

Lock the yoke before fitting/replacing the lamp. Loosen 8 fast-fit screws and remove the back cover, you can see the structure as shown in the figure 2..

After unplug the power wires, hold the end of the lamp and push it as directed by the arrow resulting in the other end of the lamp unblocked, then pull the lamp out. Before installing new lamp, plug the power wires for the lamp tightly. Installation of the lamp is an reverse sequence to the pull-out.

Fit new lamp and close the back cover by fastening 8 fast-fit screws. **Note:** don't touch the bulb of the new lamp with bare hand so as not to influence the beam output; Do not harm the sticking out point of the lamp during its installation.

WARNING: 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:

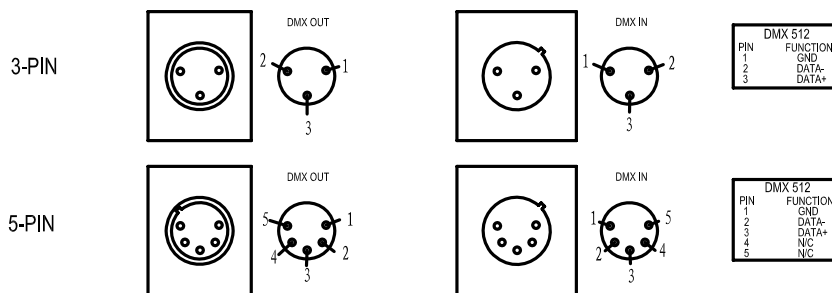
- L (live) =brown
- E (earth) =yellow/green
- N (neutral) =blue

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(yellow/green twin wire) and the electrical installation conforms to all relevant standards.

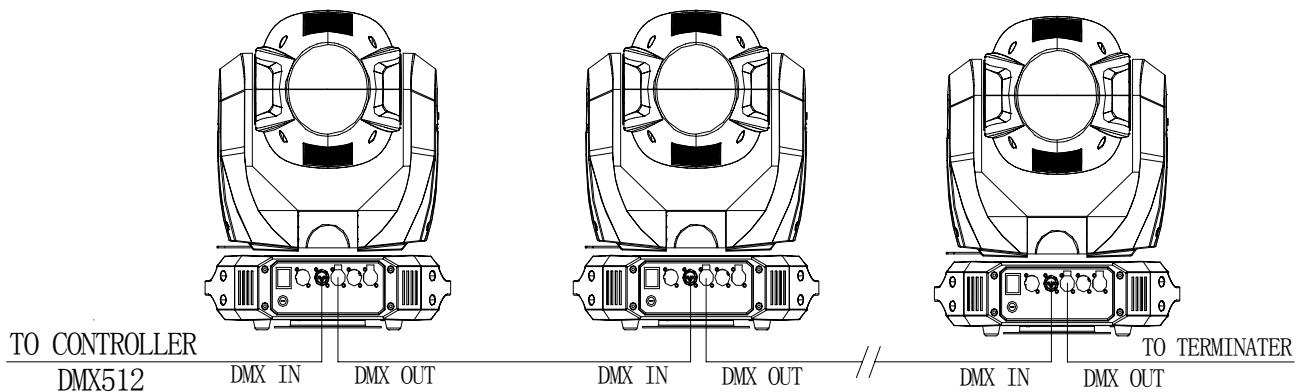
CONTROL CONNECTION



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 other than as shown above. The projector accepts digital control signals in protocol DMX512 (1990).

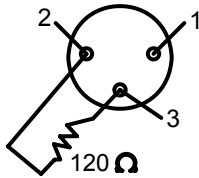
Connect the controller's output to the first fixture's input, and connect the first fixture's output to the second fixture's input and connect the rest fixtures in the same way. Eventually connect the last fixture's output to a DMX terminator as shown in the figure below.



DMX TERMINATOR

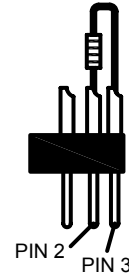
In the Controller mode, at the last fixture in the chain, the DMX output has to be connected with a DMX terminator. This prevents electrical noise from disturbing and corrupting the DMX control signals.

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.



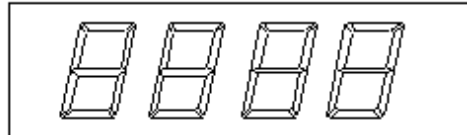
DMX TERMINATOR CONNECTION

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

DMX



FUNC



DOWN



UP



ENTER

Projector configuration can be set conveniently via switch button and LCD display. Turn the projector on and the LCD display will show DMX address you set and save last time and it can be reset and saved again as you please.

Launch the projector. Press button **ENTER** more than 5 seconds to unlock panel. After this, the display shows the projector's function menu and each option has its own sub-menus. Each menu stands for special function, see details as follows.

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 change the values(plus or minus)

Press button **FUNC**, it will return to the upper menu one by one. If the button not pressed, defaulted will show display status automatically.

TO SET THE 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. XR 200 BEAM has 2 DMX modes. There are standard mode and short mode. For example standard mode have 14 channels, so set the No. 1 projector's address 001, No. 2 projector's address 015, No. 3 projector's address 029, No. 4 projector's address 043, 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 next time, It will display latest values.

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

STAND-ALONE MODE

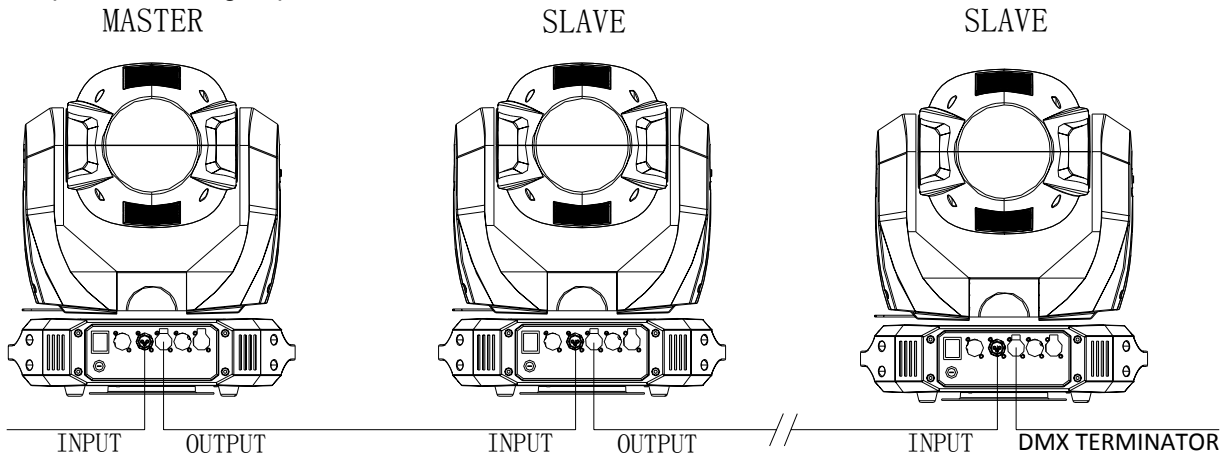
Operate the projector without connecting a controller, enable the master mode in the operation panel, the projector will run in Stand-Alone mode automatically.

MASTER/SLAVE MODE

Without using a controller, many projectors can run synchronously in the Master/Slave mode by linking them with each other. 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. Then the first one is the master with setting options as master mode enabled, and others are slaves.

Start Address for all slaves is 001. The Master can run at any mode for the Master and Slaves run at the corresponding mode compared to the Master.

After powered , the group will run at Master/Slave Mode.



OPERATION MENU

1st LEVEL	2nd LEVEL	3rd LEVEL	4th LEVEL
AddR	XXX (1~512)		
CNFG (Config Settings)	dmX (DMX Mode ,Default: STD)	STd (DMX Mode Standard)	
		SHRT (DMX Mode Short)	
	LA-C (Lamp Control ,Default: CHAN)	CHAN (By Control Channel)	
		POWE (By Power)	
		OFF	
		ON	
	xyCH (Pan Tilt Swap, Default: OFF)	OFF	
		ON	
	xyCP (Pan Tilt Invert, Default: OFF)	OFF	
		ON	
	mORS (Master/Slave Options, Default: SLAV)	SLAV (Slave)	
		mAST (Master 1)	

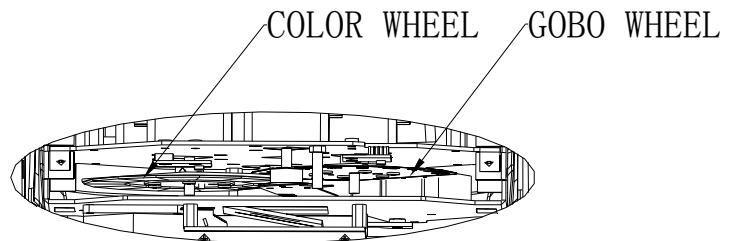
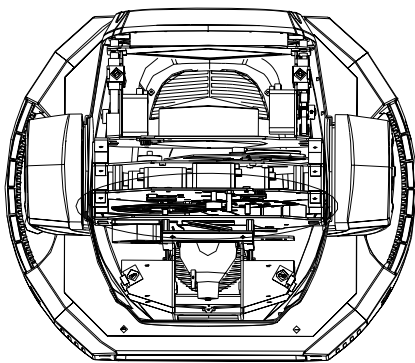
	FACT (Factory Default Settings?)	yES	
	TRmd (Parameters transmitted(2)?)	yES	
INFO (Information)	TimE (Lighting Fixture Use Time)	XXXX (Time displayed)	
	TLAM (Lamp Use Time)	XXXX (Time displayed)	
	VER (Version No.)	X.X.X (Software Version No.)	
TEST (Test Modes)	STOB (Strobe)	NO (Without Strobe)	
		STO1 (Strobe 1)	
		STO2 (Strobe 2)	
	COWH (Color Wheel)	NO (White)	
		Cw1-CW14 (Color Wheel1-Color Wheel14)	
		FORw (Rotation)	
		STOP (Rotation Stops)	
		REVE (reverse Rotation)	
	FGwH (Fixed Gobo Wheel)	NO (White)_	
		FGw1-FGW17 (Gobo1-Gobo17)	
		FORw (Rotation)	
		REVE (Reverse Rotation)	
		GWS1-GWS10 (Shake Effect 1-10)	
	PRIS (Prism)	NO (Prism not used)	
		PR! (Effect 1)	
		PR2 (Effect 2)	
		PR3 (Effect 3)	
		PR4 (Effect 4)	
	PRRO (Prism Rotation)	STOP (Rotation Stops)	
		FORw (Rotation)	
REVE (Reverse Rotation)			
FOCU (Focus)	0-255 (Linear Focusing)		
PAN	0-255		
TILT	0-255		
X&YS (PAN and Tilt Speeds)	0-255		
RESE (Reset?)	Yes		

mENU (Operating Menu)	Dmx (DMX Mode)			
	PR XX (Preset Memory,PR01-PR16)			
	ET XX (User Memory,ET01~ET16)	CH1 (Strobe)		0-255
		CH2 (Dimming)		0-255
		CH3 (Color Wheel)		0-255
		CH4 (Fixed Gobo Wheel)		0-255
		CH5 (Prism Wheel)		0-255
		CH6 (Prism Rotation)		0-255
		CH7 (Focusing)		0-255
		CH8 (Pan)		0-255
		CH9 (Tilt)		0-255
		CH10 (Pan and Tilt Speeds)		0-255
CH11 Scene hold time		0-255 Time=X*40mS		
LAMP (Manual Ignition)	L-ON (Lamp ON)	YES		
	L-OFF (Lamp Off)	YES		

Remark:

1. In the synchronous control of multiple projectors parameters can be transmitted from the master including: DMX mode, display setting, operation mode(user memory);
2. all projectors Accepting parameters will automatically be set to slave mode.

REPLACING GOBOS



Disconnect the fixture from power. Lock Tilt. Carefully lift off the cover by unfastening the 4 screws and see the structure shown as above..

For the replacement of color wheels, it can be directly taken off by hands with due care. New color filters must be tightly glued in right direction to the color wheel..

Gobo Replacement: Gobo wheel is taken off in the same direction as color wheel after it is taken off by hand. After the new gobos are tightly inserted into the gobo wheel in the right direction and fixed gobo wheels installed, then the color wheel should be re-installed.

Note: Color filter must not be touched by hands, 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 and unlock tilt.

DMX PROTOCOL

Short mode	Standard mode	FUNCTION	DMX	DESCRIPTION
1	1	Strobe	000-015	Open
			016-255	Strobe from Slow to Fast
2	2	Dimmer	000-255	From Dark to Bright
3	3	Color Wheel	000-095	White
			096-103	Color 1
			104-111	Color 2
			112-119	Color 3
			120-127	Color 4
			128-135	Color 5
			136-143	Color 6
			144-151	Color 7
			152-159	Color 8
			160-167	Color
			168-175	Color 10
			176-183	Color 11
			184-191	Color 12
			192-199	Color 13
			200-207	Color 14
			208-223	Rotation (From slow to Fast)
224-239	Stops with White			
240-255	Reverse Rotation (From slow to Fast)			
4	4	Fixed Gobo Wheel	000-07	White
			008-015	Gobo 1
			016-023	Gobo 2
			024-031	Gobo 3
			032-039	Gobo 4
			040-047	Gobo 5
			048-055	Gobo 6
			056-063	Gobo 7
			064-071	Gobo 8
			072-079	Gobo 9
			080-087	Gobo 10
			088-095	Gobo 11
			096-103	Gobo 12
			104-111	Gobo 13
			112-119	Gobo 14
120-127	Gobo 15			

			128-135	Gobo 16
			136-143	Gobo 17
			144-159	Rotation (From slow to Fast)
			160-175	Reverse Rotation (From slow to Fast)
			176-183	Shake 1 (From Fast to slow)
			184-191	Shake 2 (From Fast to slow)
			192-199	Shake 3 (From Fast to slow)
			200-207	Shake 4 (From Fast to slow)
			208-215	Shake 5 (From Fast to slow)
			216-223	Shake 6 (From Fast to slow)
			224-231	Shake 7 (From Fast to slow)
			232-239	Shake 8 (From Fast to slow)
			240-247	Shake 9 (From Fast to slow)
			248-255	Shake 10 (From Fast to slow)
5	5	Prism Wheel	000-063	White
			064-127	Prism
			128-191	Frost Filter
			192-255	CT filter
6	6	Prism Rotation	000-063	Stop
			064-127	Rotation (From slow to Fast)
			128-191	Stop
			192-255	Reverse Rotation (From slow to Fast)
7	7	Focusing	000-255	Linear Focusing
	8	Focusing Fine	000-255	Focusing in 16 bit precision
8	9	Pan	000-255	Pan(0° ~540°)
	10	Pan Fine	000-255	Pan in 16 bit precision
9	11	Tilt	000-255	Tilt(0° ~270°)
	12	Tilt Fine	000-255	Tilt in 16 bit precision
	13	Pan & Tilt Speeds	000-255	Pan & Tilt Speed from Fast to Slow
10	14	Control	000-031	Reserved
			032-063	Lamp Off (stop in DMX value for 2 s)
			064-095	Reserved
			096-127	Lamp On (stop in DMX value for 2 s)
			128-159	Reserved
			160-191	Reset(stop in DMX value for 2 s)
			192-255	Reserved

INDICATION OF LED DIGITAL TUBE

Decimal point of the first digital tube	On	DMX signal OK
	Off	No DMX signal
Decimal point of the third digital tube	On	Master / slave signal is OK
	Off	No master / slave signal
Decimal point of the fourth digital tube	On	When setting master mode
	Off	When setting slave mode
Parameters that LED digital tubes display	Flash	Parameters not saved, press "ENTER" to save them

MAINTENANCE

If the projector's lens becomes damaged or broken it should be replaced. If the lamp becomes damaged or deformed in any way it must be replaced. If the light from the lamp appears dim this would normally indicate that it is reaching the end of its life and it should be changed at once, aged lamps run to the extremity of their life might explode. 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 and linear motion of the lens for focusing, it is recommended that the bearings for the rotating gobos and the 2 shafts for the focusing lens holder 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	<ul style="list-style-type: none"> ➤ Check the fuse on the power socket. ➤ Replace the lamp.
The lamp comes on but the projector doesn't respond to the controller	<ul style="list-style-type: none"> ➤ Make sure that the fixture's start address is right ➤ Replace or repair the XLR signal cable.
The projector only functions intermittently	<ul style="list-style-type: none"> ➤ Make sure the fan is working well or fans and their filters not blocked
Defective projection	<ul style="list-style-type: none"> ➤ Make sure the lamp is within its life limit ➤ Remove dust or grease from the lenses.
The project image appears to have a halo	<ul style="list-style-type: none"> ➤ Make sure the lamp is installed correctly. ➤ Carefully clean the optical group lenses and the projector components.
The beam appears dim	<ul style="list-style-type: none"> ➤ Check the optics is clean or the lens in good condition(not cracked) ➤ Replace with a new lamp of the specified type and rating.

TECHNICAL DATA

VOLTAGES:

100V/200V/220V/230V/240V AC, 50/60Hz

POWER CONSUMPTION:

400W@220V

LAMP:

PHILIPS	MSD Platinum 15R
Colour Temperature	8000°K
Manufacturers Rated Lamp Life	2000 小时

Color s:

1 Color Wheel
14 dichroic colour filters plus white
variable speed and bi-directional rainbow effect
linear colour changing is available

GOBOS:

1 Fixed gobo wheel :

17 interchangeable gobos+ white
Shaking and bi-directional wheel scrolling at variable speeds
Gobo changing is available

Prism/Frost Wheel

8-facet rotating Prism(bi-directional with variable speeds)+CT filter+ Frost Filter + White

Focusing

0-100% linearly adjustable by Dmx

STROBE:

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

HEAD MOVEMENT:

Pan 540°, Tilt 270° with auto position correction

BEAM ANGLE

0° ~4° , Linear zoom

CONTROL:

DMX512, 3 pin and 5 pin interfaces

10 channels in short mode, 14channels in standard mode

Self-test mode

OTHER FUNCTIONS:

Adjustable Pan & Tilt speed

Fixture and lamp usage time display

Modular construction for easy maintenance

HOUSING:

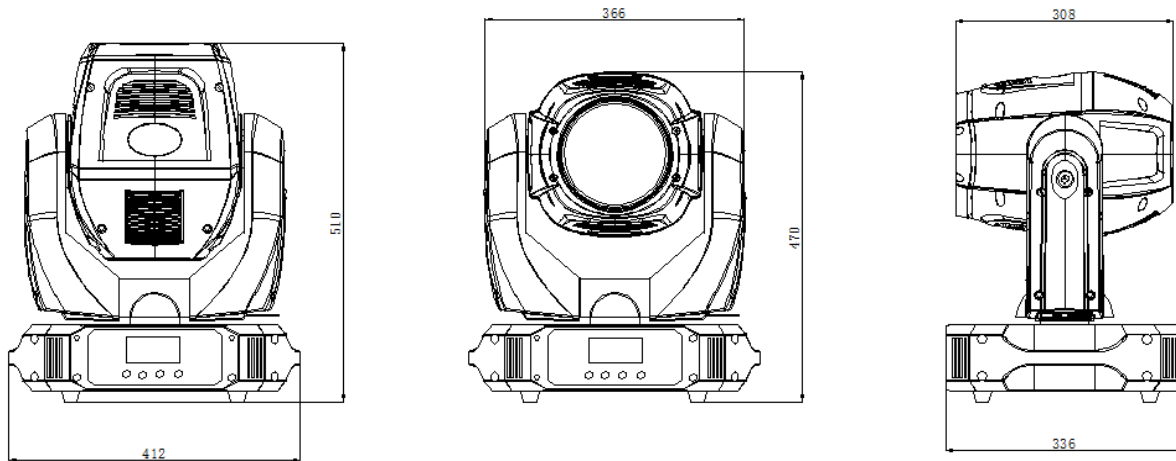
Composite plastic, IP20

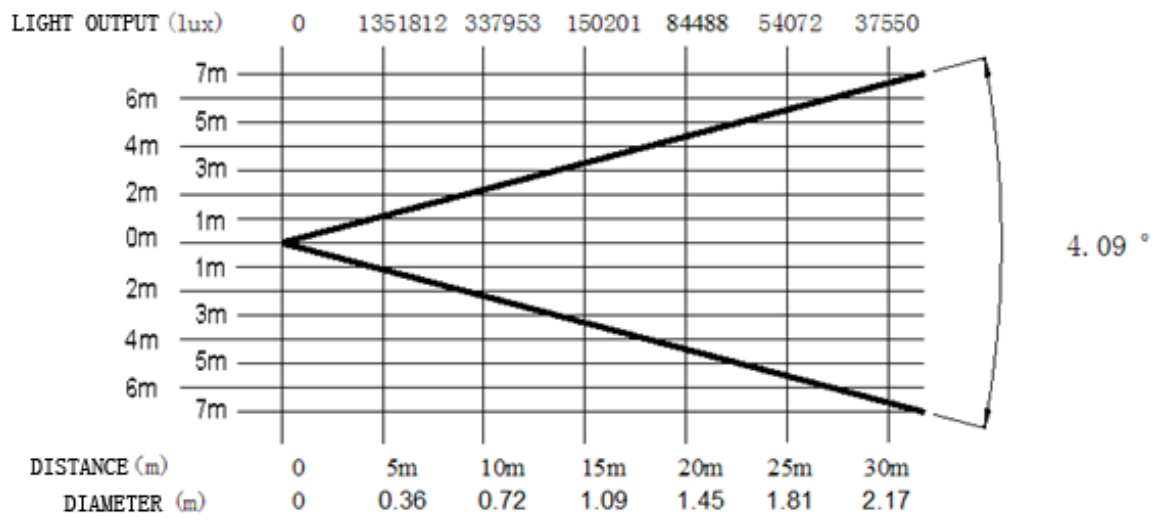
Power driven water proof cover, optional, water proof system control by DMX, IP44

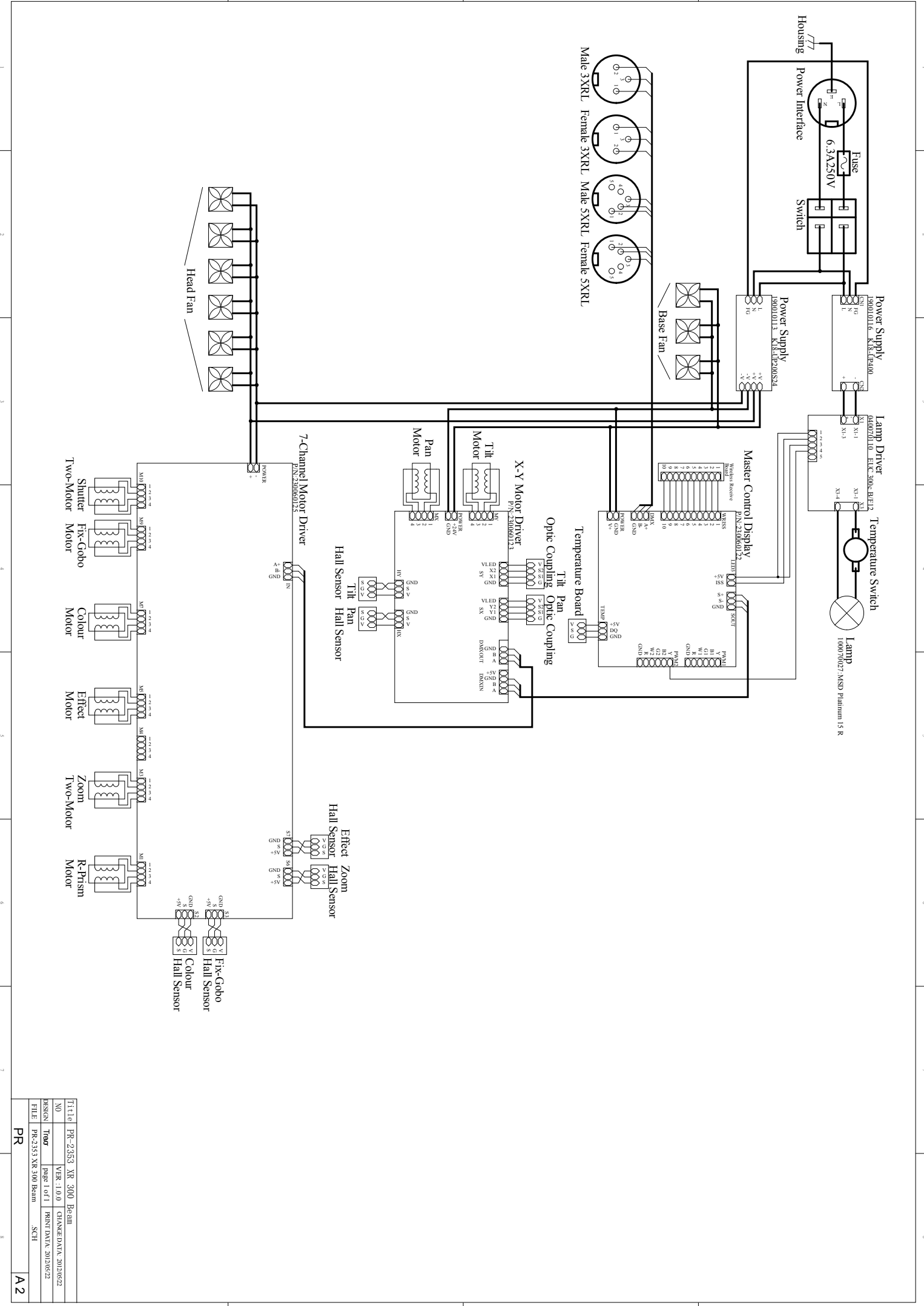
WEIGHT:

16Kg

SIZES:







Title	PR-2353 XR 300 Beam
NO	VER. 1.0.0 CHANGE DATA 20230522
DESIGN	Tao
FILE	PR-2353 XR 300 Beam SCH

COMPONENT ORDER CODES

NAME	PART NO.	QUANTITY	REMARK
15R Ballast	040070110	1	
15R Lamp	100070027	1	
200W Power Switch	190010110	1	
400W Power Switch	190010116	1	
Fuse	270041065	1	T20A250V 6.3*32mm
Pan Driver Belt	290151322	1	HTD-531-3M
Tilt Driver Belt	290151331	1	HTD-399-3M
Prism Wheel Belt	290151255	1	HTD-270-3M
Focusing Belt	290151310	1	72MXL
O SHAPE RUBBER RING	290260054	1	
FAN	030069055	2	
TURBO-FAN	030069068	1	WITH SQUARE BASE
TURBO-FAN	030069072	1	
BASE FAN	030069005	3	
PAN MOTOR	030040160	1	
TILT MOTOR		1	
PRISM MOTOR	030040154	1	
FIXED GOBO WHEEL MOTOR		1	
COLOR WHEEL MOTOR		1	
PRISM ROTATION MOTOR	030040095	1	
FOCUSING MOTOR		2	
STROBE MOTOR		2	
PAN & TILT DRIVER BOARD	230060123	1	
7 CHANNEL DRIVER BOARD	230060125	1	
DISPLAY BOARD	230060122	1	
COLOR WHEEL ACCESSORIES	120110366	1	
FIXED GOBO WHEEL ACCESSORIES	120110367	1	
PRISM WHEEL ACCESSORIES	120110369	1	

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