XL 1200

PR-2910/PR-2910M

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	3-pin plug
Safety cord	2	Pcs	
Spare gobos	4	Pcs	
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.
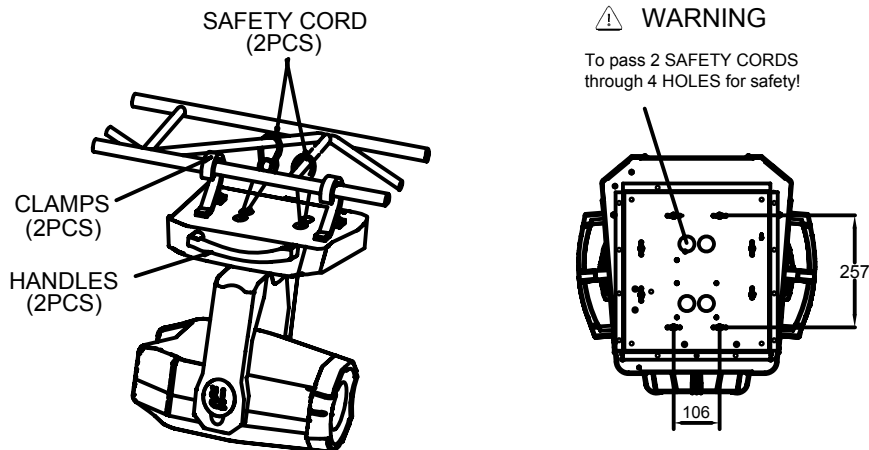
Never run the projector without a lamp.

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

SAFETY CORD
(2PCS)

⚠ WARNING

To pass 2 SAFETY CORDS
through 4 HOLES for safety!

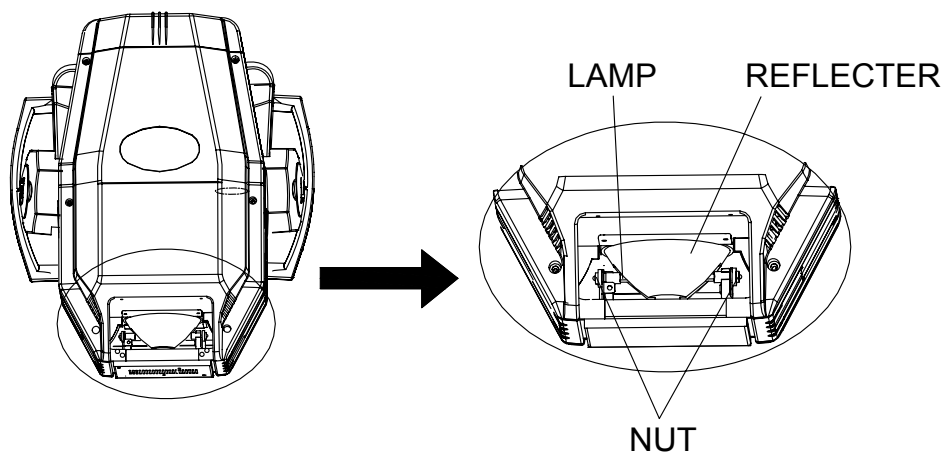CLAMPS
(2PCS)

HANDLES
(2PCS)

257

106

Take 2 clamps and 2 safety cords 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 2 SAFETY CORDS through 4 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 is secure and is strong enough to support a weight of XL 1200.
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

LAMP   REFLECTER

NUT

Lock the yoke before fitting/replacing the lamp.
Loosen 4 screws and open the back covers, you can see the structure as shown in the figure above.
Loosen 2 nuts at the both ends of lamp and take out the worn-out lamp. Suggest to free one end after another.
Fit new lamp and fasten 2 screws at the both ends of lamp. **Note:** don't touch the bulb of the new lamp with bare hand so as not to influence the beam output; the PST (pumping stem tip off) on the bulb facing the rear cover with fans perpendicularly and being not in the beam's way is a must and aids cooling.
Close the rear cover and fasten 4 screws.
NOTE: The convex of the nuts should face to the side when fitting the lamp.
WARNING: The MSR series are high-pressure lamps with external igniters (⚠). Care should always be taken when handling these lamps. Always read the manufacturers "Instructions for use" enclosed with the lamp.

POWER SUPPLY-MAINS
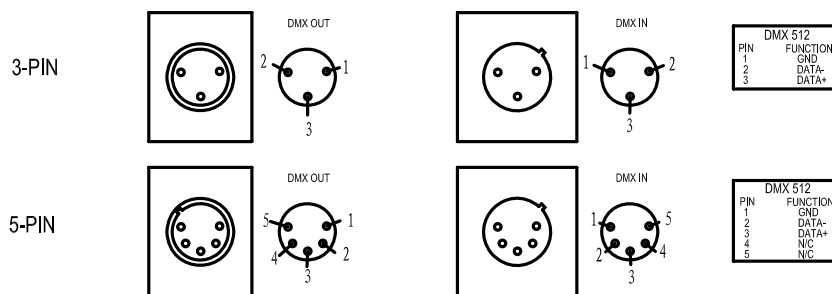
Connect the power cord as follows:

    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

3-PIN	DMX OUT	DMX IN	DMX 512

	PIN	FUNCTION
	1	GND
	2	DATA-
	3	DATA+

5-PIN	DMX OUT	DMX IN	DMX 512

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

Connection between controller and projector and between one projector and another must be made with a 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 1200 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 IN | DMX OUT | DMX IN | DMX OUT | DMX IN | DMX OUT |

DMX IN FROM
CONTROLLER
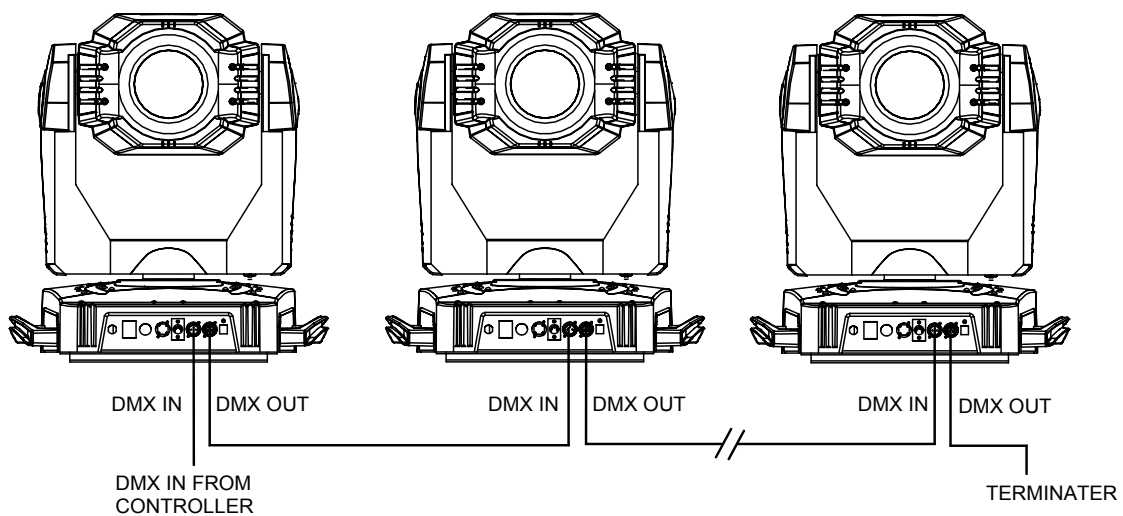
TERMINATER

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.
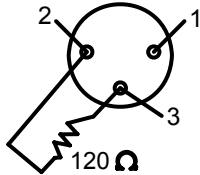
The DMX terminator is simply an XLR connector with a 120Ω (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. The connections are illustrated below.
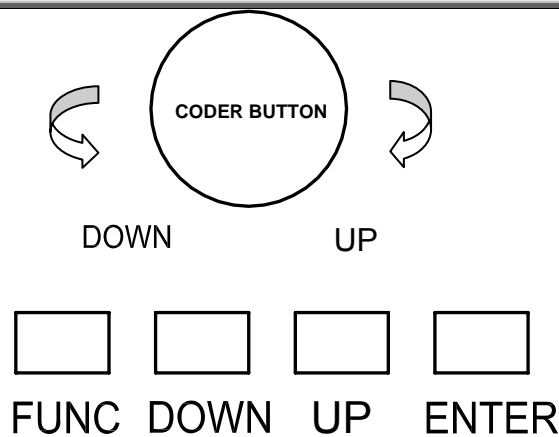
DMX TERMINATOR

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.

PIN 2   PIN 3
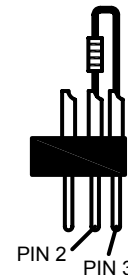
SETUP OPTIONS-PROJECTOR CONFIGURATION

CODER BUTTON

DOWN   UP

FUNC DOWN UP ENTER

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 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.

Press button UP or DOWN   if you want to browse through the various Setup Options. There are 8 option codes from **DMX Address** to **Lamp Manual Control**, and each code has a specific function. If you turn the coder knob clockwise, the function like as button UP . On the contrary, the function like as button DOWN .

Press button ENTER to save your settings or enter the next menu. There is same function if you push the coder knob. 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 1200 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 1200 has 3 DMX modes. There are standard mode, extended mode and short mode. For example standard mode has 29 channels, so set the No. 1 projector's address 001, No. 2 projector's address 030, No. 3 projector's address 059, No. 4 projector's address 088, and so on.

Launch the projector. Press button ENTER or coder knob 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.

OPERATION MENU

1st LEVEL	2nd LEVEL	3rd LEVEL	4th LEVEL
PR LIGHTING XL SERIES XL 1200	DMX Address=001		
DMX Address	DMX Address (001-512)		
Reset	Reset Are You Sure?		
Config Settings	DMX Mode	DMX Mode Standard 16	
		DMX Mode Extended 16	
		DMX Mode Short 8	
	Lamp Control	Lamp Control By Control Channel	
		Lamp Control By Power On	
		Lamp Control By DMX Present	
	Factory Settings **(Press button DOWN/UP/ENTER at the same time to enter the sub-menu)**	Fixture type **(WARNING：Never change the fixture type or the system will be damaged!)**	Fixture type= XL 1200
			Fixture type= XL 700
			Fixture type= XL 575
			Fixture type= XL 1200 FS
			Fixture type= XL 1200 Wash
			Fixture type= XL 700 Wash
			Fixture type= XL 1800
Option Settings	Colour Positions	Colour Positions STEPPED	
		Colour Positions LINEAR	
	F-Gobo Positions	F-Gobo Positions STEPPED	
		F-Gobo Positions LINEAR	
	Pan DMX Invert	Pan DMX Invert OFF	
		Pan DMX Invert ON	
	Tilt DMX Invert	Tilt DMX Invert OFF	
		Tilt DMX Invert ON	
	Pan Tilt Swap	Pan Tilt Swap OFF	
		Pan Tilt Swap ON	
	Dimmer Invert	Dimmer Invert OFF	
		Dimmer Invert ON	
	Iris Invert	Iris Invert OFF	
		Iris Invert ON	
	Zoom Invert	Zoom Invert OFF	
		Zoom Invert ON	

	CMY Invert	CMY Invert OFF	
		CMY Invert ON	
	CTO Invert	CTO Invert OFF	
		CTO Invert ON	
	Defaults	Defaults OFF	
		Defaults Restore Defaults	
Display Options	Display Mode	Display On Always	
		Display Off After Delay	
	Display Dimming	Disp Dim Level Min	
		Disp Dim Level 1	
		Disp Dim Level 2	
		Disp Dim Level 3	
		Disp Dim Level 4	
		Disp Dim Level 5	
		Disp Dim Level 6	
		Disp Dim Level 7	
		Disp Dim Level 8	
		Disp Dim Level 9	
		Disp Dim Level Full	
	Display Contrast	Display Contrast XXX(1~36, Default is 16)	
	Display Language	Language = English	
		Language = Chinese	
Information	Lamp Hours	Lamp Hours = XX	Reset Lamp Hours Are You Sure?
	Total Hours	Total Hours = XX	
	Temperature	Display Board	Display Board = XX℃
		Driver Board 1	Driver Board 1 = XX ℃
		Driver Board 2	Driver Board 2 = XX ℃
		Driver Board 3	Driver Board 3 = XX ℃
		Driver Board 4	Driver Board 4 = XX ℃
		Pan and Tilt	Pan and Tilt = XX ℃
		Head Sensor	Head Sensor= XX ℃
	Software Version	Display Board	Display Board = X.X.X
		Driver Board 1	Driver Board 1 = X.X.X
		Driver Board 2	Driver Board 2 = X.X.X
		Driver Board 3	Driver Board 3 = X.X.X
		Driver Board 4	Driver Board 4 = X.X.X
		Pan and Tilt	Pan and Tilt = X.X.X

		Power Board	Power Board = X.X.X
	View DMX values	DMX Channel 1=0	
Test Modes	Factory Setup	Factory Setup OFF	
		Factory Setup ON	
	Self Test	Self Test OFF	
		self test ON	
Lamp Manual Control	Lamp Status	Status = XXX Control = X	
	Turn Lamp On		
	Turn Lamp Off		

ERROR MESSAGES

In the course of launch, XL 1200 examines automatically whether there are errors and if there are, it will display information as follows:

Display	Message
Sensor Err S1-M1	Colour wheel (1# drive board motor 1) error
Sensor Err S1-M2	CTO (1# drive board motor 2) error
Sensor Err S1-M3	CYM-cyan (1# drive board motor 3) error
Sensor Err S1-M4	CYM-yellow (1# drive board motor 4) error
Sensor Err S1-M5	CYM-magenta (1# drive board motor 5) error
Sensor Err S2-M3	Fixed Gobo wheel (2# drive board motor 3) error
Sensor Err S2-M4	Rotating Gobo wheel 1 (2# drive board motor 4) error
Sensor Err S2-M5	Gobo rotation 1 (2# drive board motor 5) error
Sensor Err S3-M1	Rotating Gobo wheel 2 (3# drive board motor 1) error
Sensor Err S3-M2	Gobo rotation 2 (3# drive board motor 2) error
Sensor Err S3-M3	Prism (3# drive board motor 3) error
Sensor Err S3-M4	Prism rotation (3# drive board motor 4) error
Sensor Err S3-M5	Focus (3# drive board motor 5) error
Sensor Err S3-M6	Zoom (3# drive board motor 6) error
Sensor Err S4-M1	Effects wheel (4# drive board motor 1) error

REPLACING GOBOS

FROST
EFFECT WHEEL
FIXED GOBO WHEEL
ROTATING GOBO WHEEL 2
ROTATING GOBO WHEEL 1
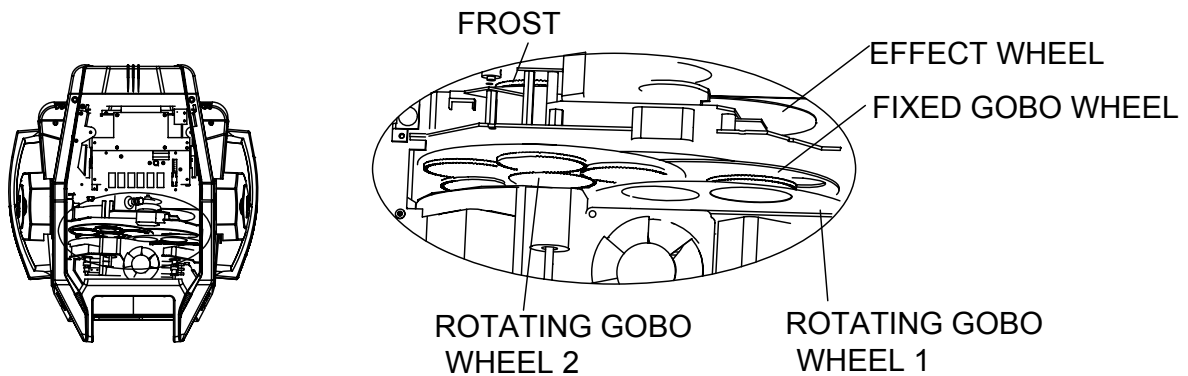
Disconnect the fixture from power. Lock Tilt. Carefully lift off the cover by undoing the 6 screws.

For gobos replacement on the fixed gobo: Remove the gobo and insert the new one into the position by hands.

For gobos replacement on the rotating gobo wheel: 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 6 screws.

DMX PROTOCOL

Short mode	Standard mode	Extended mode	FUNCTION	DMX	DESCRIPTION
1	1	1	Strobe	000-010	Black
				011-025	Open
				026-225	Strobe speed from slow to fast
				226-255	Open
2	2	2	Dimmer	000-007	Black
				008-255	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	Yellow+ Magenta=Red
				036-054	Yellow
				055-073	Yellow+ Cyan=Green
				074-092	Cyan
				093-110	Cyan+ Magenta=Blue
				111-128	Magenta
				129-255	CYM colour mixing from slow to fast
4	4	5	CYM-Cyan	000-255	Cyan (Linear 0-100%)
		6	CYM-Cyan Fine	000-255	Cyan in 16 Bit precision
5	5	7	CYM-Yellow	000-255	Yellow (Linear 0-100%)
		8	CYM-Yellow Fine	000-255	Yellow in 16 Bit precision
6	6	9	CYM-Magenta	000-255	Magenta (Linear 0-100%)
		10	CYM-Magenta Fine	000-255	Magenta in 16 Bit precision
7	7	11	CTO	000-255	Linear adjust from high to low
		12	CTO Fine	000-255	CTO in 16 Bit precision
8	8	13	Colour Wheel	000-016	White
				017-024	White/colour 1
				025-032	Colour 1
				033-040	Colour 1/colour 2
				041-048	Colour 2
				049-056	Colour 2/colour 3
				057-064	Colour 3
				065-072	Colour 3/colour 4
				073-080	Colour 4
				081-088	Colour 4/colour 5
				089-096	Colour 5
				097-104	Colour 5/colour 6
				105-112	Colour 6
				113-120	Colour 6/colour 7
				121-127	white
				128-133	Rainbow rotation speed 1 (slowest)
				134-139	Rainbow rotation speed 2
				140-145	Rainbow rotation speed 3
				146-151	Rainbow rotation speed 4

				152-157	Rainbow rotation speed 5
				158-163	Rainbow rotation speed 6
				164-169	Rainbow rotation speed 7
				170-175	Rainbow rotation speed 8
				176-181	Rainbow rotation speed 9
				182-187	Rainbow rotation speed 10
				188-195	Stop in current position
				196-201	Rainbow reverse rotation speed 1(slowest)
				202-207	Rainbow reverse rotation speed 2
				208-213	Rainbow reverse rotation speed 3
				214-219	Rainbow reverse rotation speed 4
				220-225	Rainbow reverse rotation speed 5
				226-231	Rainbow reverse rotation speed 6
				232-237	Rainbow reverse rotation speed 7
				238-243	Rainbow reverse rotation speed 8
				244-249	Rainbow reverse rotation speed 9
				250-255	Rainbow reverse rotation speed 10
9	9	14	Iris	000-135	Iris from large to small (0-100%)
				136-231	Macro
				232-255	Minimal
		15	Iris Fine	000-255	Iris n 16 Bit precision
10	10	16	Fixed Gobo Wheel	000-016	Clear
				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
				128-132	Reverse rotation speed 1 (slowest)
				133-135	Reverse rotation speed 2
				136-138	Reverse rotation speed 3
				139-141	Reverse rotation speed 4
				142-144	Reverse rotation speed 5
				145-147	Reverse rotation speed 6
				148-150	Reverse rotation speed 7(fastest)
				151-153	Rotation speed 1 (slowest)
				154-156	Rotation speed 2
				157-159	Rotation speed 3
				160-162	Rotation speed 4
				163-165	Rotation speed 5
				166-168	Rotation speed 6
				169-171	Rotation speed 7(fastest)
				172-174	Gobo 1 shake 1(slowest)
				175-177	Gobo 1 shake 2
				178-180	Gobo 1 shake 3
				181-183	Gobo 1 shake 4 （fastest）
				184-186	Gobo 2 shake 1(slowest)
				187-189	Gobo 2 shake 2
				190-192	Gobo 2 shake 3
				193-195	Gobo 2 shake 4 （fastest）
				196-198	Gobo 3 shake 1(slowest)
				199-201	Gobo 3 shake 2
				202-204	Gobo 3 shake 3
				205-207	Gobo 3 shake 4 （fastest）

				208-210	Gobo 4 shake 1(slowest)
				211-213	Gobo 4 shake 2
				214-216	Gobo 4 shake 3
				217-219	Gobo 4 shake 4（fastest）
				220-222	Gobo 5 shake 1(slowest)
				223-225	Gobo 5 shake 2
				226-228	Gobo 5 shake 3
				229-231	Gobo 5 shake 4（fastest）
				232-234	Gobo 6 shake 1(slowest)
				235-237	Gobo 6 shake 2
				238-240	Gobo 6 shake 3
				241-243	Gobo 6 shake 4（fastest）
				244-246	Gobo 7 shake 1(slowest)
				247-249	Gobo 7 shake 2
				250-252	Gobo 7 shake 3
				253-255	Gobo 7 shake 4（fastest）
11	11	17	Rotating Gobo Wheel 1	000-021	white
				022-042	Gobo1
				043-064	Gobo 2
				065-085	Gobo 3
				086-106	Gobo 4
				107-127	Gobo 5
				128-134	Rotation speed 1 (slowest)
				135-142	Rotation speed 2
				143-149	Rotation speed 3
				150-156	Rotation speed 4 (fastest)
				157-163	Reverse rotation speed 1 (slowest)
				164-170	Reverse rotation speed 2
				171-177	Reverse rotation speed 3
				178-184	Reverse rotation speed 4(fastest)
				185-191	Gobo 1 shake slow
				192-198	Gobo 1 shake fast
				199-205	Gobo 2 shake slow
				206-212	Gobo 2 shake fast
				213-219	Gobo 3 shake slow
				220-226	Gobo 3 shake fast
				227-233	Gobo 4 shake slow
				234-240	Gobo 4 shake fast
				241-247	Gobo 5 shake slow
				248-255	Gobo 5 shake fast
12	12	18	Gobo rotation 1	000-120	0~540°index
				121-127	Rotation speed 1 (slowest)
				128-135	Rotation speed 2
				136-143	Rotation speed 3
				144-151	Rotation speed 4
				152-159	Rotation speed 5
				160-167	Rotation speed 6
				168-175	Rotation speed 7
				176-183	Rotation speed 8 (fastest)
				184-191	Stop rotating
				192-199	Reverse rotation speed 1 (slowest)
				200-207	Reverse rotation speed 2
				208-215	Reverse rotation speed 3
				216-223	Reverse rotation speed 4
				224-231	Reverse rotation speed 5
				232-239	Reverse rotation speed 6
				240-247	Reverse rotation speed 7
				248-255	Reverse rotation speed 8 (fastest)
	13	19	Gobo rotation 1 Fine	000-255	Gobo rotation in 16 Bit precision
13	14	20	Rotating Gobo Wheel 2	000-021	white
				022-042	Gobo1

				043-064	Gobo 2
				065-085	Gobo 3
				086-106	Gobo 4
				107-127	Gobo 5
				128-134	Rotation speed 1 (slowest)
				135-142	Rotation speed 2
				143-149	Rotation speed 3
				150-156	Rotation speed 4 (fastest)
				157-163	Reverse rotation speed 1 (slowest)
				164-170	Reverse rotation speed 2
				171-177	Reverse rotation speed 3
				178-184	Reverse rotation speed 4 (fastest)
				185-191	Gobo 1 shake slow
				192-198	Gobo 1 shake fast
				199-205	Gobo 2 shake slow
				206-212	Gobo 2 shake fast
				213-219	Gobo 3 shake slow
				220-226	Gobo 3 shake fast
				227-233	Gobo 4 shake slow
				234-240	Gobo 4 shake fast
				241-247	Gobo 5 shake slow
				248-255	Gobo 5 shake fast
14	15	21	Gobo rotation 2	000-120	0~540°index
				121-127	Rotation speed 1 (slowest)
				128-135	Rotation speed 2
				136-143	Rotation speed 3
				144-151	Rotation speed 4
				152-159	Rotation speed 5
				160-167	Rotation speed 6
				168-175	Rotation speed 7
				176-183	Rotation speed 8 (fastest)
				184-191	Stop rotating
				192-199	Reverse rotation speed 1 (slowest)
				200-207	Reverse rotation speed 2
				208-215	Reverse rotation speed 3
				216-223	Reverse rotation speed 4
				224-231	Reverse rotation speed 5
				232-239	Reverse rotation speed 6
				240-247	Reverse rotation speed 7
				248-255	Reverse rotation speed 8 (fastest)
	16	22	Gobo rotation 2 Fine	000-255	Gobo rotation in 16 Bit precision
15	17	23	Prism / Frost	000-143	Frosting from slight to strong (0~100%)
				144-200	Prism 1
				201-255	Prism 2
16	18	24	Prism rotation	000-120	Prism index （0~540°）
				121-127	Reverse rotation speed 1 (slowest)
				128-135	Reverse rotation speed 2
				136-143	Reverse rotation speed 3
				144-151	Reverse rotation speed 4
				152-159	Reverse rotation speed 5
				160-167	Reverse rotation speed 6
				168-175	Reverse rotation speed 7
				176-183	Reverse rotation speed 8 (fastest)
				184-191	Stop in current position
				192-199	Rotation speed 1 (slowest)
				200-207	Rotation speed 2
				208-215	Rotation speed 3
				216-223	Rotation speed 4
				224-231	Rotation speed 5
				232-239	Rotation speed 6
				240-247	Rotation speed 7

				248-255	Rotation speed 8 (fastest)
17	19	25	Effect Wheel	000-020	White
				021-255	Wheel full into beam gradually
18	20	26	Effect Wheel Rotation	000-125	Rotation speed from fast to slow
				126-141	Stop in current position
				142-255	Reverse rotation speed from slow to fast
19	21	27	Focus	000-255	Linearly focusing
		28	Focus Fine	000-255	Focus in 16 precision
20	22	29	Zoom	000-255	From large to small
		30	Zoom Fine	000-255	Zoom in 16 precision
21	23	31	Beam Angle Lens	000-255	Wide Beam angle lens insert
22	24	32	Pan	000-255	Pan rotation 450°
	25	33	Pan Fine	000-255	Pan rotation in 16 precision
23	26	34	Tilt	000-255	Tilt rotation 270°
	27	35	Tilt Fine	000-255	Tilt rotation in 16 precision
	28	36	Pan & Tilt speed	000-255	Pan&Tilt speed from fast to slow
24	29	37	Control	000-048	Reserved
				049-080	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 self test mode
	Green	Reserved

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	➤ 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-2910）:   100V/120V/200V/220V/230V/240V AC，50/60Hz

Magnetic ballast（PR-2910M）:   230V AC，50/60Hz

           Options: 200/220/240V AC，50/60Hz

POWER CONSUMPTION:

Electronical ballast（PR-2910）:   1500W@220V

Magnetic ballast（PR-2910M）:   1600W@220V

LAMP:

PHILIPS	MSR Gold 1200 SA/2 DE
Colour Temperature	7500°K
Socket	SFc10-4，double ended
Manufacturers Rated Lamp Life	750 Hours replacement
Or	
OSRAM	HMI 1200 W/S
Colour Temperature	6000°K
Socket	SFc10-4，double ended
Manufacturers Rated Lamp Life	750 Hours replacement

COLOURS:

Smooth CYM colour mixing system with macros

1 wheel with 6 dichroic colour filters plus white

With variable speed bi-directional rainbow effect

Step/linear colour changing is available

COLOUR TEMPERATURE CORRECTION:

Linearly colour temperature correction

GOBOS:

2 Rotating gobo wheels:

5 interchangeable gobos+ white, glass or metal gobos can be fixed

Indexable, bi-directionally rotatable at variable speeds

1 Fixed gobo wheel :

7 interchangeable gobos+ white

bi-directional wheel scrolling at variable speeds

Gobo diameter: Φ36.3mm

Gobo image diameter: Φ31.5mm

PRISM/ FROST:

1x linear lens, 1x3 facet prism, indexable, bi-directionally rotatable at variable speeds. linearly frost effect

Frost linearly adjustable 0-100%

EFFECT FILTERS:

1 interchangeable gobo effect wheel scrolling at variable speeds

FOCUS:

DMX controlled focus

DIMMER:

0-100% linearly adjustable

SHUTTER:

Double shutter blades, 0.3~12 F.P.S

Macros

HEAD MOVEMENT:

Pan 450º, Tilt 270º with auto position correction

BEAM ANGLE:

12°～40°

CONTROL:

DMX512, 3 pin, 5 pin interfaces

24 channels in short mode, 29 channels in standard mode, and 37 channels in extended mode.

Self-test mode

OTHER FUNCTIONS:

Adjustable Pan & Tilt speed

Fixture and lamp usage time display

LCD display with English and Chinese language menu

Energy saving function of the ballast

Built-in analyzer for easy fault finding, error messages

Built-in demo sequences

Setup options by chargeable battery inside without power connection.

Input signal isolating protection

Network interface (Reserved)
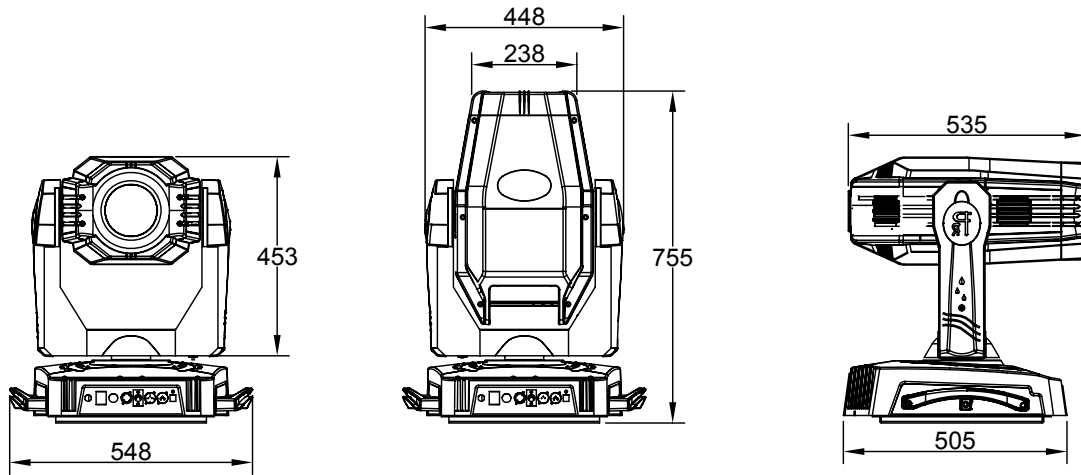
HOUSING:

Composite plastic, IP20

WEIGHT:

Electronical ballast（PR-2910）:   35Kg
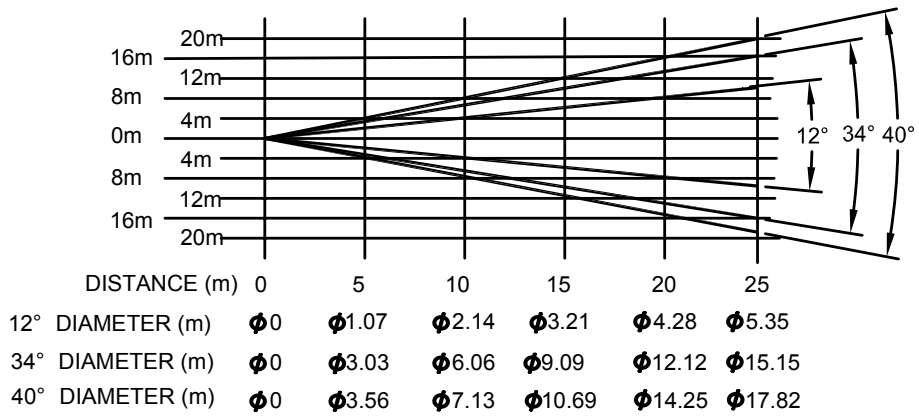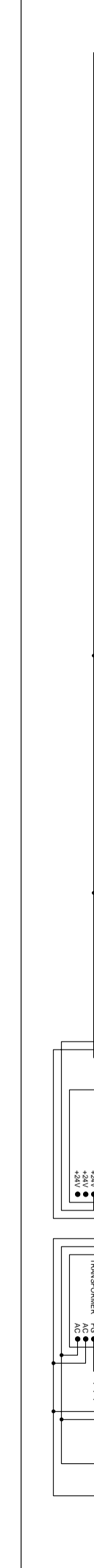
Magnetic ballast（PR-2910M）:   47Kg

SIZES:

See at below

448
238
453
755
535
548
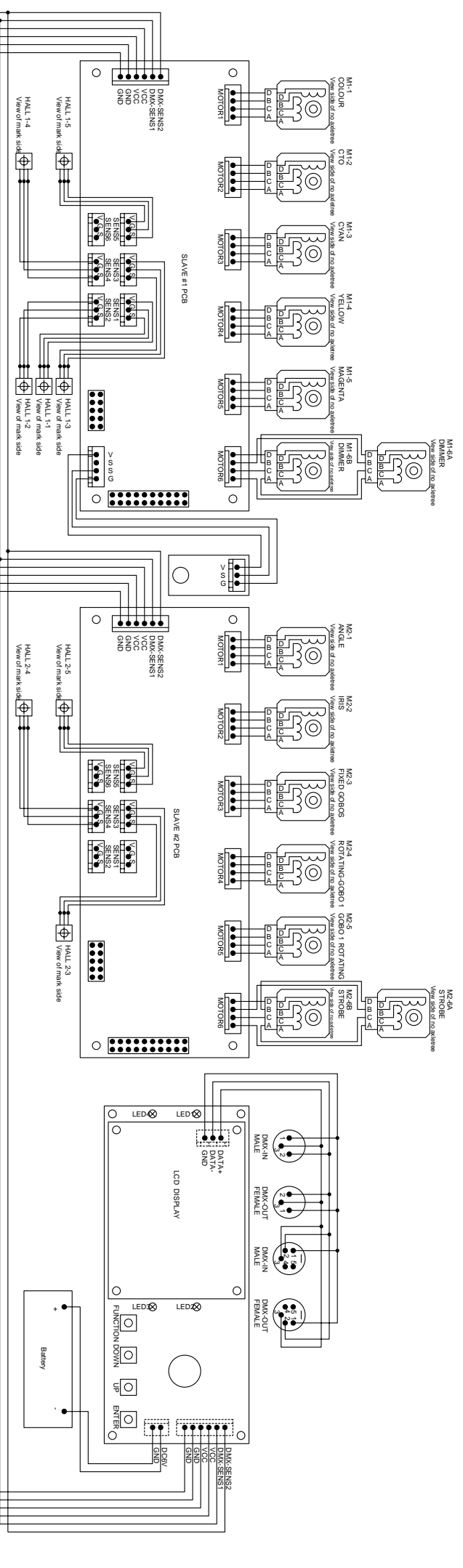505

LIGHT OUTPUT:

40° （lux）	1850	460	200	110	70
34° （lux）	2690	670	300	170	100
12° （lux）	23250	5810	2580	1450	930

20m
16m
12m
8m
4m
0m
4m
8m
12m
16m
20m

12° 34° 40°

DISTANCE (m)	0	5	10	15	20	25
12° DIAMETER (m)	φ0	φ1.07	φ2.14	φ3.21	φ4.28	φ5.35
34° DIAMETER (m)	φ0	φ3.03	φ6.06	φ9.09	φ12.12	φ15.15
40° DIAMETER (m)	φ0	φ3.56	φ7.13	φ10.69	φ14.25	φ17.82
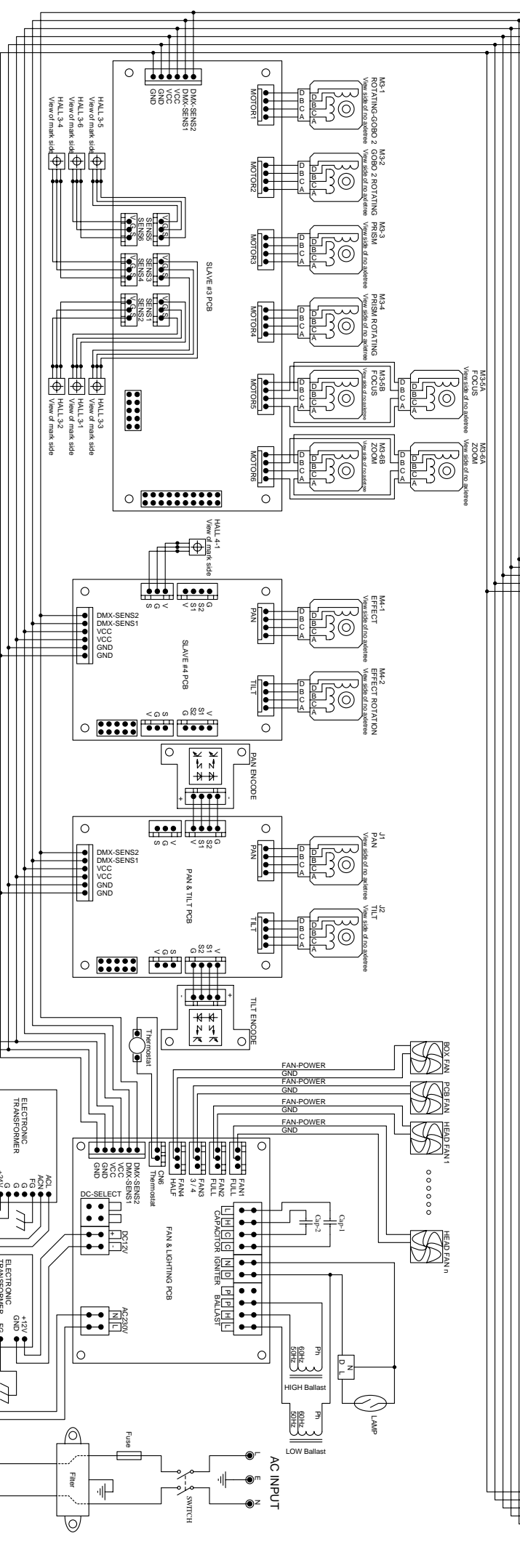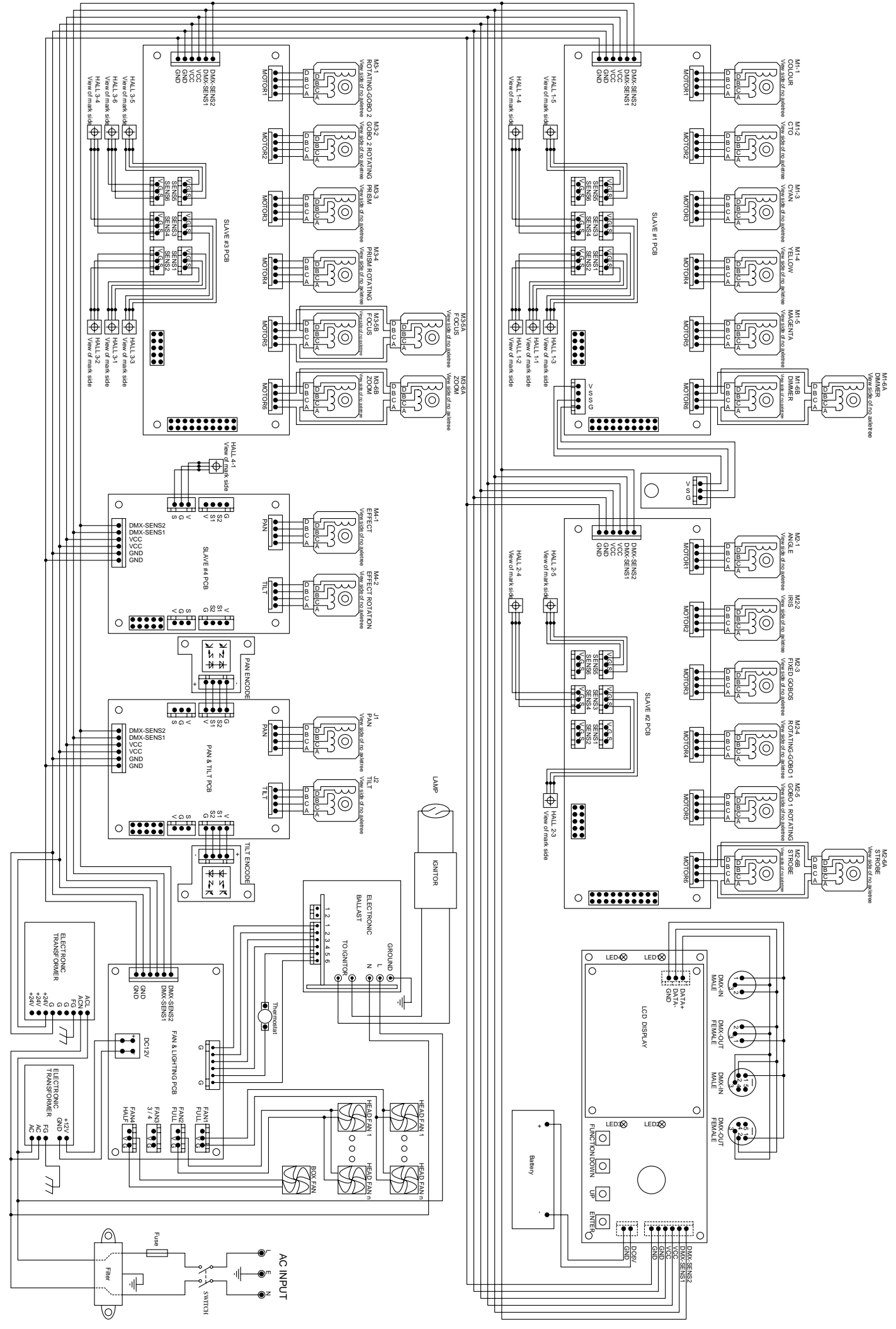
COMPONENT ORDER CODES

NAME	PART NO.	QUANTITY	REMARK
POWER SUPPLY	190010098	1	24V
POWER SUPPLY	190010099	1	12V
MAINS FILTER	193020008	1	20A 115/250VAC
THERMOSTAT	190010074	1	150℃
CAPACITOR****	140010043	2	70μF/370V
BALLAST****	040070059	2	230V/50-60Hz, 575W
BALLAST	040070079	1	1200W 90~264V AC
IGNITOR****	040090045	1	575~1200W 6~8KV
IGNITOR	040090043	1	575~1200W
LAMP	100050064	1	MSR 1200 SA/2 DE
TILT DRIVE BELT	290151241	1	HTD-750-3M
PAN DRIVE BELT	290151234	1	HTD501-3M
FAN IN BASE****	030060001	1	KD1208PTS1-6 DC12V/1.8W
FAN IN FRONT SIDE		2	
FAN IN BACK SIDE	030060036	2	DC12V 0.3A
FAN ON THE COVER	030060047	3	DC12V 0.38A
FAN NEAR THE CYM	030060051	2	KDE1205PFV1 11MS
FAN NEAR THE POWER PCB****	030069003	1	DC12V/1.9W
PAN MOTOR	030040089	1	23HS2039L 6.35*25
TILT MOTOR		1	23HS2039L 6.35*25
PRISM ROTATION MOTOR	030040131	1	16HY0002-02L 5*24
ROTATING GOBO WHEEL 1 MOTOR	030040092	1	17HD0013-32L 5*7
ROTATING GOBO WHEEL 2 MOTOR		1	
PRISM/FROST MOTOR		1	
DIMMER MOTOR	030040093	2	17HD0013-33L 5*35
FOCUS MOTOR	030040073	2	17HS5003-03 5*20
ZOOM MOTOR		2	
GOBO ROTATION 1 MOTOR	030040132	1	17HD0013-31L 5*23
GOBO ROTATION 2 MOTOR		1	
CYM MOTOR	030040114	3	16HY7001-30L 5*40
CTO MOTOR		1	
EFFECT WHEEL ROTATION MOTOR		1	
FIXED GOBO WHEEL MOTOR	030040136	1	16HS7002 5*17
COLOUR WHEEL MOTOR		1	
ANGLE LENS MOTOR		1	
SHUTTER BLADE MOTOR	030040116	1	16HY7001-32L 5*15
	030040117	1	16HY7001-33L 5*9
IRIS MOTOR	030040088	1	39BYG501-4A 5*24
EFFECT WHEEL MOTOR	030040118	1	16HY7001-34L 5*12*10
PAN/TILT DRIVE PCB	230020177	1	
MOTOR DRIVE PCB 1	230020178	1	
MOTOR DRIVE PCB 2	230020179	1	
MOTOR DRIVE PCB 3	230020180	1	
MOTOR DRIVE PCB 4	230020181	1	
DISPLAY PCB	230020220	1	
POWER PCB	230020183	1	
POWER PCB****	230020185	1	

NOTE:

**** Only apply to Magnetic ballast.

P/N: 321010233
Last Revision: 24:05:2007