SERVICE MANUAL

BARCO RLM W8

Version	Description	Date
00	Initiation	Aug. 17, 2010

BARCO RLM W8 Projector

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This equipment includes parts and assemblies sensitive to damage from electrostatic discharge. Use caution to prevent damage during all service procedures.

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● Introduction of the product & Safety precautions

BARCO (RLM W8) is compact WUXGA (1920 x 1200 Widescreen Ultra Extended Graphics Array), and 3-Chip DLP™ high-definition images projector. It shares a common mechanical, electrical, and optical platform.

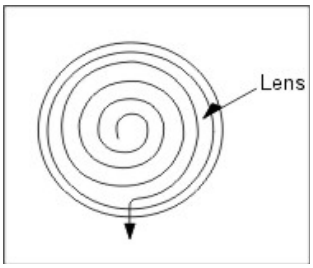
BARCO (RLM W8) is designed with 0.67" DMD (Digital Micro mirror Device) with 330W dual lamp.

1. Cleaning the Projector

A). Cleaning the projector to remove dust and grime will help ensure trouble-free operation.

1). Be sure to turn off and unplug the projector at least 30 minutes before cleaning.
Failure to do so could result in a severe burn.
2). Use only a dampened cloth when cleaning.
Do not allow water to enter the ventilation openings on the projector.
3). If a little water gets into the projector interior while cleaning,
leave unplugged in a well-ventilated room for several hours before using.
4). If a lot of water gets into the projector interior when cleaning, have the projector serviced.

B). Cleaning the Projection Lens



*When dust and fingerprints, etc. are on the lens surface, use the designated glass cleaner (toraysee) to remove it as shown in the figure at the right. For fingerprints and other soiling that are difficult to remove with a dry cloth, use a designated glass cleaner (toraysee) which has been moistened in water and then use a dry cloth to dry it off. Or, apply a little optic lens cleaner to a clean soft cloth. (Do not apply the cleaner directly to the lens.) Then, lightly wipe the lens in a circular motion.

Caution:

*The projection lens surface has a special coating.

1. Do not use abrasive cleaners and detergents or solvents on the surface.
2. To prevent discoloration or fading, avoid getting cleaner on the projector case

C). Cleaning the Main Unit

1. Clean with a soft fuzz-free cloth. In case of severe soiling, use a well-wrung cloth dipped in a neutral agent to remove soiling and then finish with a dry cloth.

*Do not clean with thinner, benzene or similar agents as this could lead to deterioration or peeling of paint.

2. In case of dust in suction or exhaust holes or the interior, disassemble the main unit and use air to remove the dust from the inside.

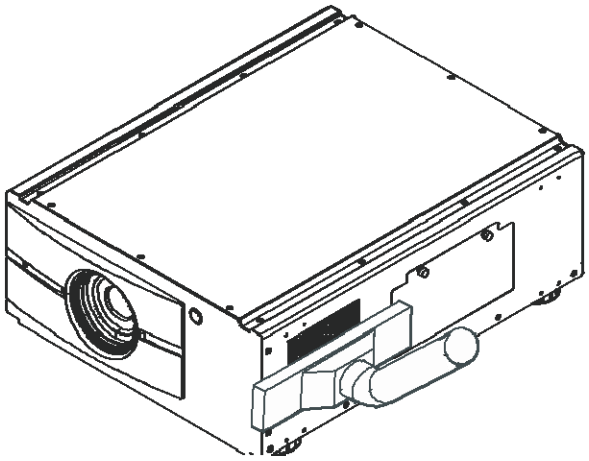
D). Cleaning the filters

In order to keep the interior of the projector clean, the projector is equipped with a filter to keep out dust and other small particles. Normally, it is recommended that you change the projector's filter around 500 hours of projector operation at least. If you are operating the projector in a dusty environment, it is recommended that you clean the filter more often. When used in fog machine environment, a filter change is recommended on a regular base.

The interval is depending on the smoke density.

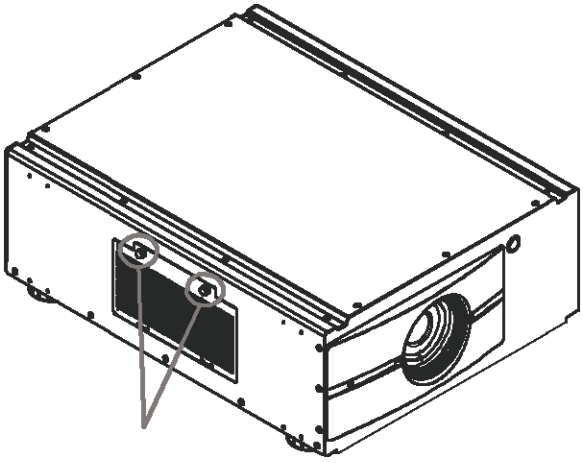
Dust clogs at the filter will prevent the projector from drawing cool air to lower the internal temperature. This could lead to overheating and cause the projector to malfunction or become damaged.

Use a vacuum cleaner to clean the ventilation slots.



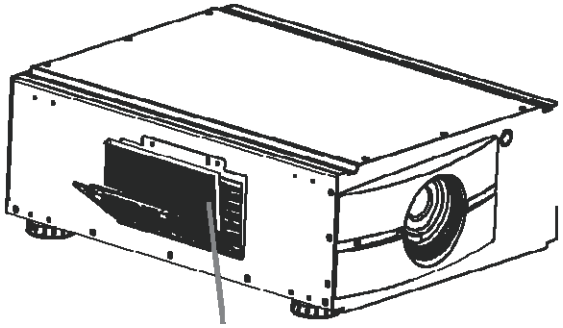
To clean the filter at the ventilation slots, refer to the following illustration:

Step1: **Loosen the two screws on the cover of the ventilation slot.**



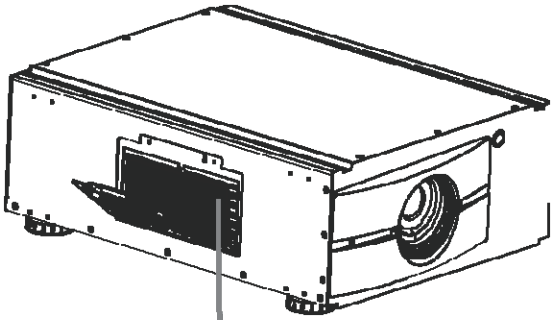
Loosen the 2 screws

Step2: **Remove the dirty filter; you can clean it directly using water. Leave it to dry before replacing it for further use. If the filter is broken or greasy, please replace it by a new one. (Filter Part nr: R9899704).**



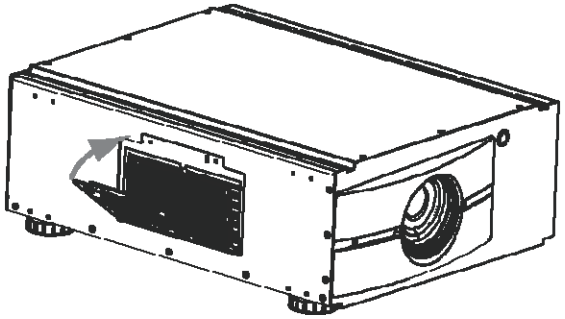
Take out the filter and clean it

Step3: **Insert the clean filter.**

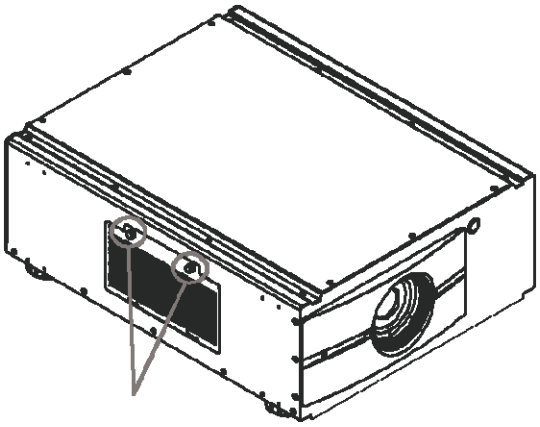


Put the clean filter inside the cover

Step4: **Reattach the filter cover and tighten the two screws.**



Close the filter cover



Then, fasten the two screws

E). Lamp Replacement

The lifecycle of ordinary projection lamp typically lasts for 1500 hours before requiring replacement (different lamp configurations will affect lamp life). From the OSD Menu, you can go to LAMPS

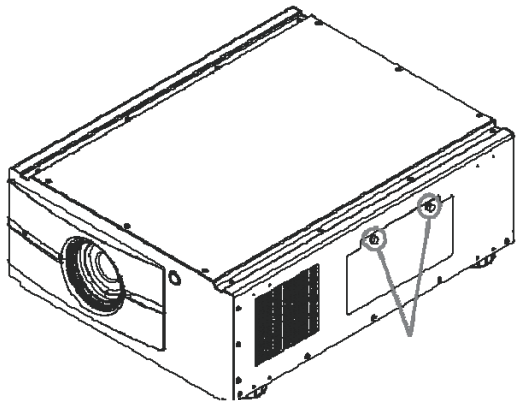
→ Lamp1 or 2 Run Time to check how long a lamp has been used. You should also replace the lamp when the projected image gets noticeably darker. Contact your local dealer to purchase new certified lamps for your projector.

To replace the projector lamp

Step1: **Turn off the projector and unplug the power cord. Let the projector cool for approximately 15 minutes before removing the lamp module for replacement.**

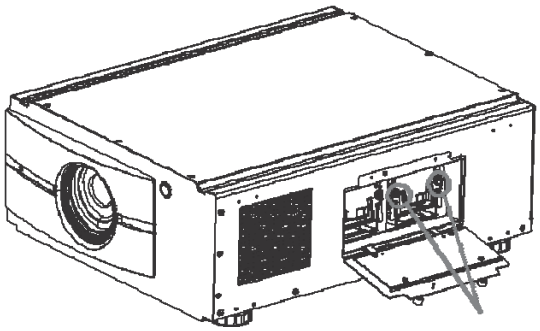
When you turn off the projector, the lamp inside the projector will still be very hot (approximately 200 ~ 300°C). If you attempt to replace the lamp without allowing the projector to cool, you could risk scalding yourself. This is why you should wait for no less than 15 minutes for the lamp to cool down in order to perform the replacement safely.

Step2: **Loosen the Lamp cover.**



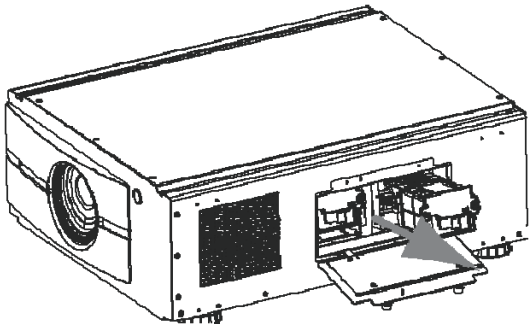
Loosen the 2 screws

Step3: **Use screwdriver to loosen the screws as shown in the illustration.**



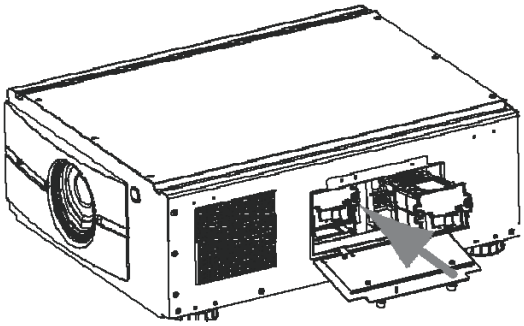
Loosen the 2 screws

Step4: **Grasp the metal rod on the lamp cover and pull the lamp out.**

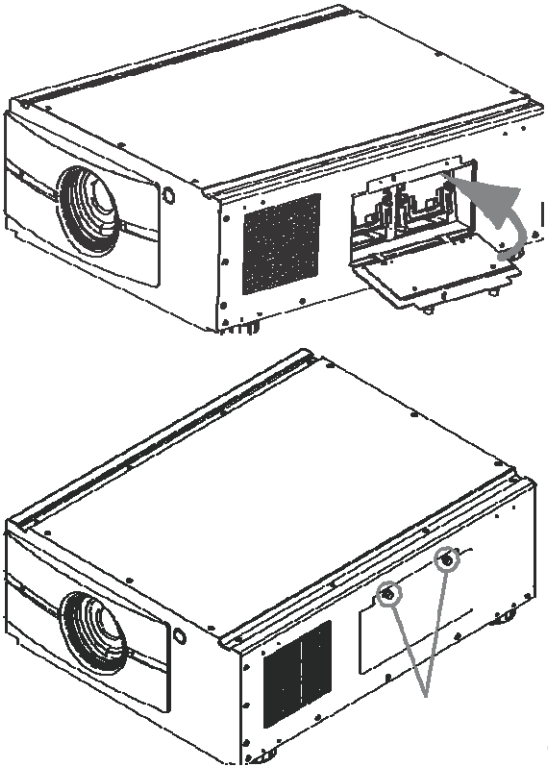


Pull the two Lamps

Step5: **Insert the new lamp in the direction shown in the illustration into the lamp assembly; tighten the two screws using a screw diver and make sure the lamp is firmly secured to prevent the lamp from shaking or poor contact.**
(Lamp Part nr: R9832750).



Step6: **Replace the lamp cover and firmly secure the two screws on the lamp cover.**



Tightly lock the two screws

Step7: **Reconnect power to the projector and reset the lamp usage timer. Refer to OSD Menu description → Service → Lamp1, 2 Run Time.**

2. Compliance of Safe Repair

Be sure to read this Service Manual before providing services. In the projector, full consideration is taken to ensure the safety for a fire, electric shock, injury, harmful radiation, and substance. Therefore, observe the notice described in this Service Manual so that the safety is kept when providing services. Moreover, be sure to observe the notice described in the Instruction Manual. Pay attention to the following during service inspection.

2-1. Cautions during disassembling and assembling

1) This equipment contains parts under high voltage. When making repairs, etc. Be sure to pull out the power plug beforehand to insure safety.
2) Parts may be very hot immediately after use. Make sure the equipment has cooled off sufficiently before carrying out repairs.
3) Make sure that parts and screws and wiring, etc. are returned to their original positions. Tube, tape and other insulation materials have been used for safety reasons. The internal wiring has been designed to avoid direct contact with hot parts or parts under high voltage when using clamps or other tools.
4) The parts used in this device have special safety features such as flame-resistance and anti-voltage properties. When replacing parts, always use parts supplied from the factory.
5) After finishing operations make sure that all parts and wires have been returned to their original position and that there has been no deterioration of the area around the location that was worked on.
6) Be sure to use an earth band (wrist band) during repair and inspection.

2-2. Lens

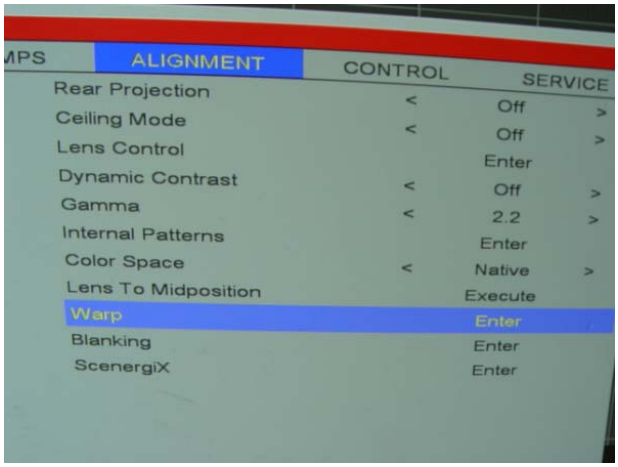
Do not look through a lens during projection. This damages your eyes.

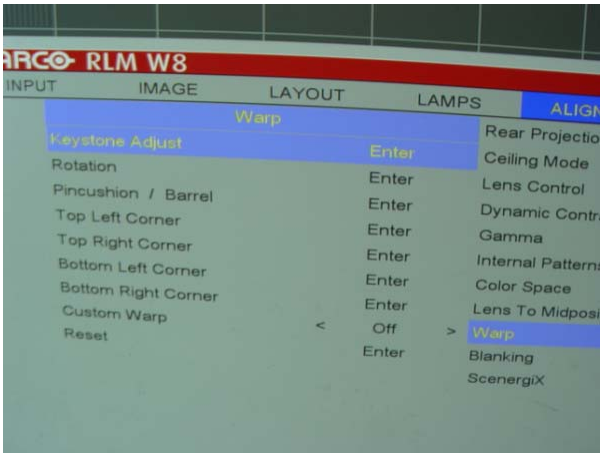
■ Technical Specification

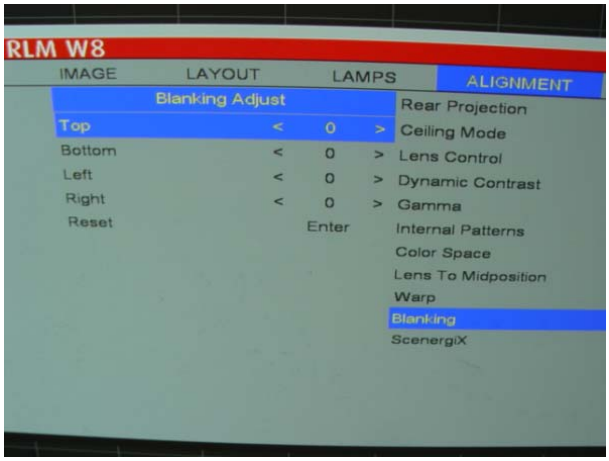
Technical Specification

Feature		
Product Name	BARCO RLM W8	
Dimensions	670(L) x 517(W) x 247(H)	mm
Weight	< 26	Kg
DMD Tech.	TI DLP WUXGA 0.67" 3- Chip DC3 DMD	
Resolution	WUXGA (1920 x 1200)	
Lamp	330 x 2 UHP	W
Brightness	6300 ANSI (6600 center) (+/-10%)	Lumen
Lens Shift	Manual - Vertical Lens Shift: + 120% & - 100% - Horizontal Shift: ± 30%	
Zoom & Focus Operation	Zoom & Focus by remote control or local control through OSD and by projector toolset or web browser	
Projection Screen Size	> 8 ~ 30 / 2.4 ~ 9.1	Feet/Meter
Aspect Ratio	(Native) 16: 10	
Input/Output Terminals	1. HDMI (V1.3) x 2 2. Component 1 (YUV1) - 3 RCA x 1 3. Component 2 (YUV2) - 5 BNC x 1 4. D-sub 15 pin RGB (VGA) x 1 5. S-Video x 1	

	6. Composite (Video)- 1 RCA x 1 7. RS-232C IN x 1 8. 12V TRIGGER x 2 9. IR ext. x 1 10.10/100 BASE-T (RJ-45) x 1 11. SDI IN & SDI OUT	
Communication/Control Terminals	1. RS-232C (D-sub 9 pins connector) (38400KB) 2. 10/100 BASE-T (Network)	
Thermal Sensor	Inlet NTC x 1 Outlet NTC x 1	
IR Sensor	Front x 1 Rear x 1	
AC Input Voltage	90 ~240	VAC
Input Current	Max 8 A	A
Noise Level	Normal mode =< 42dB (A) Eco mode =< 37dB (A)	dB
Power Consumption	220 V: Normal Mode 690~730 ECO Mode 800~840 < 2 W Standby	W
Operation Condition	0 ~40 Ambient	℃
	Humidity: 90%	RH
Storage Condition	-20~60	℃
	Humidity: 90%	RH


MPS
ALIGNMENT
CONTROL
SERVICE
Rear Projection
Ceiling Mode
Lens Control
Dynamic Contrast
Gamma
Internal Patterns
Color Space
Lens To Midposition
Warp
Blanking
ScenergiX
Off
Off
Enter
Off
2.2
Enter
Native
Execute
Enter
Enter
Enter

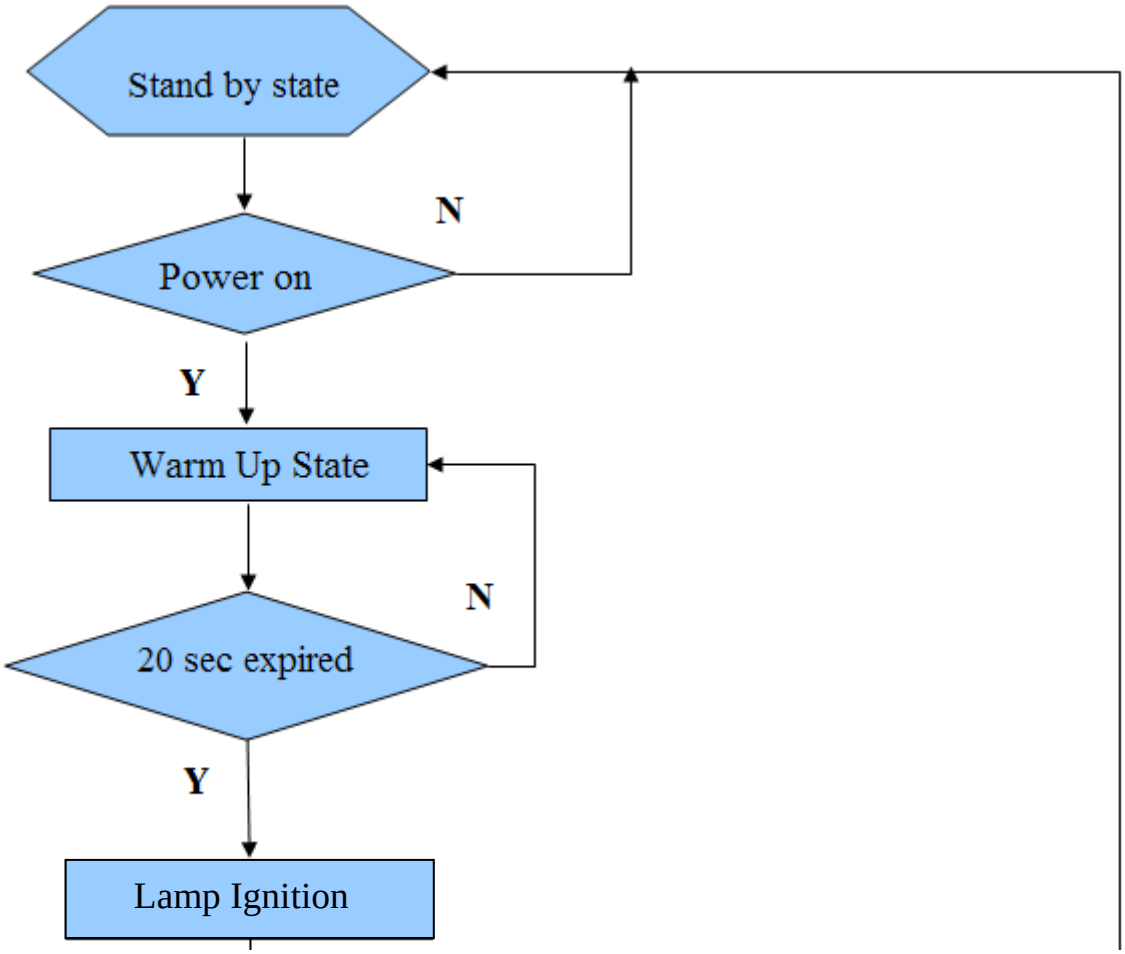

RLM W8
INPUT
IMAGE
LAYOUT
LAMPS
Warp
Keystone Adjust
Rotation
Pincushion / Barrel
Top Left Corner
Top Right Corner
Bottom Left Corner
Bottom Right Corner
Custom Warp
Reset
Enter
Off
Rear Projectio
Ceiling Mode
Lens Control
Gamma
Color Space
Warp
Blanking
ScenergiX

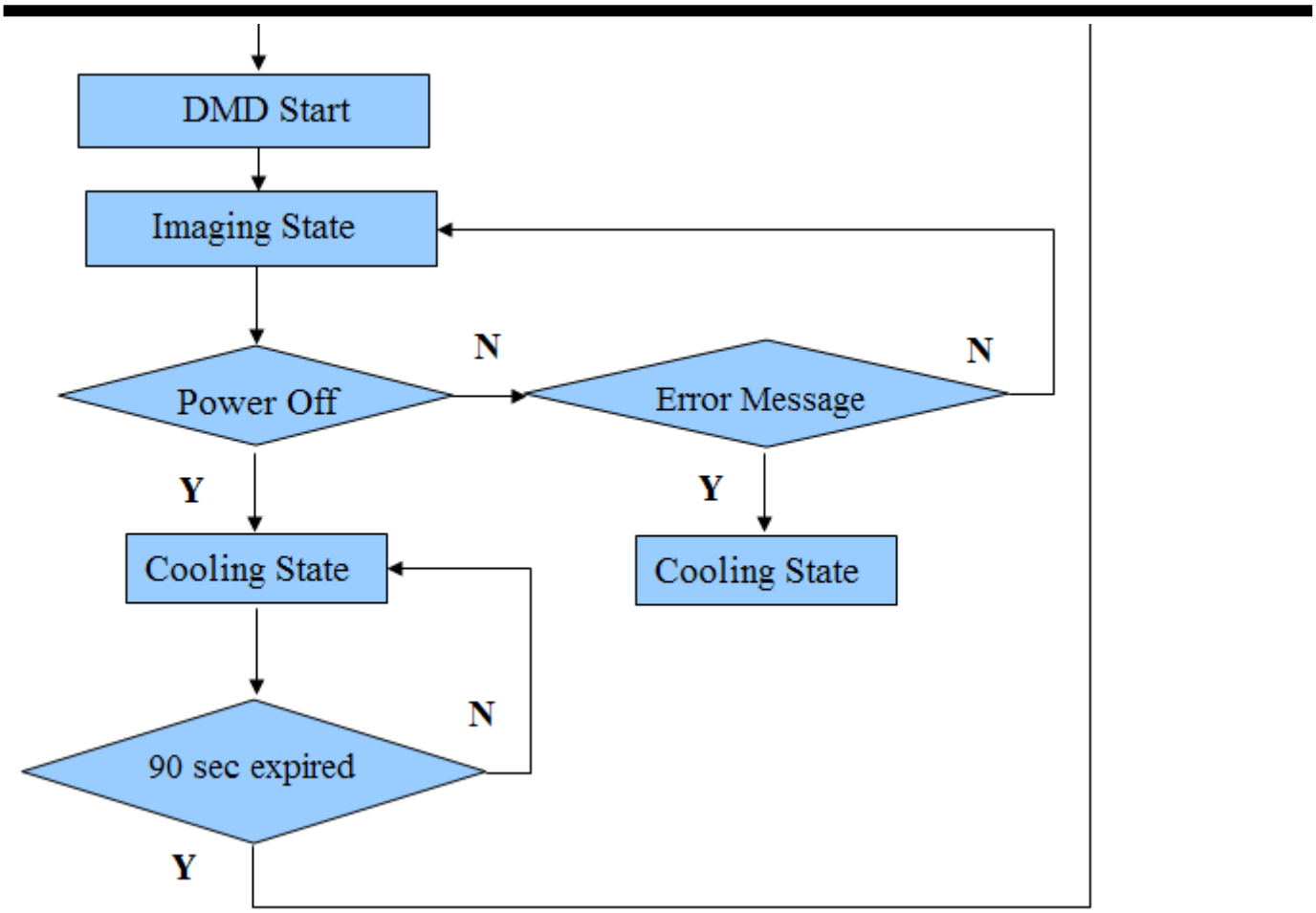

RLM W8
IMAGE
LAYOUT
LAMPS
ALIGNMENT
Blanking Adjust
Top
Bottom
Left
Right
Reset
0
Enter
Rear Projection
Ceiling Mode
Lens Control
Dynamic Contrast
Gamma
Internal Patterns
Color Space
Lens To Midposition
Warp
Blanking
ScenergiX


RLM W8
IMAGE
LAYOUT
LAMPS
ScenergiX
Status
White Level
Black Level
Reset
Adjust Lines
Off
Rear Projectio
Ceiling Mode
Lens Control
Gamma
Color Space
Warp
Blanking
ScenergiX

System Flow chart

System status




DMD Start
Imaging State
Power Off
N
Error Message
N
Y
Y
Cooling State
Cooling State
N
90 sec expired
Y

LED Status

The table for the 3 LED indicators as below:

Status	Blue (Standby)	Green (Power)	Red (Issue)
1. Standby			
2. Lamp is approaching end of life		Repeat	Repeat
3. Cooling / Warm up		Repeat	
4. Power on / Normal			
5. Lamp fail			Repeat
6. Lamp door open			Repeat
7. Fan fail			Repeat
8. Over Temperature			Repeat
9. System Error			

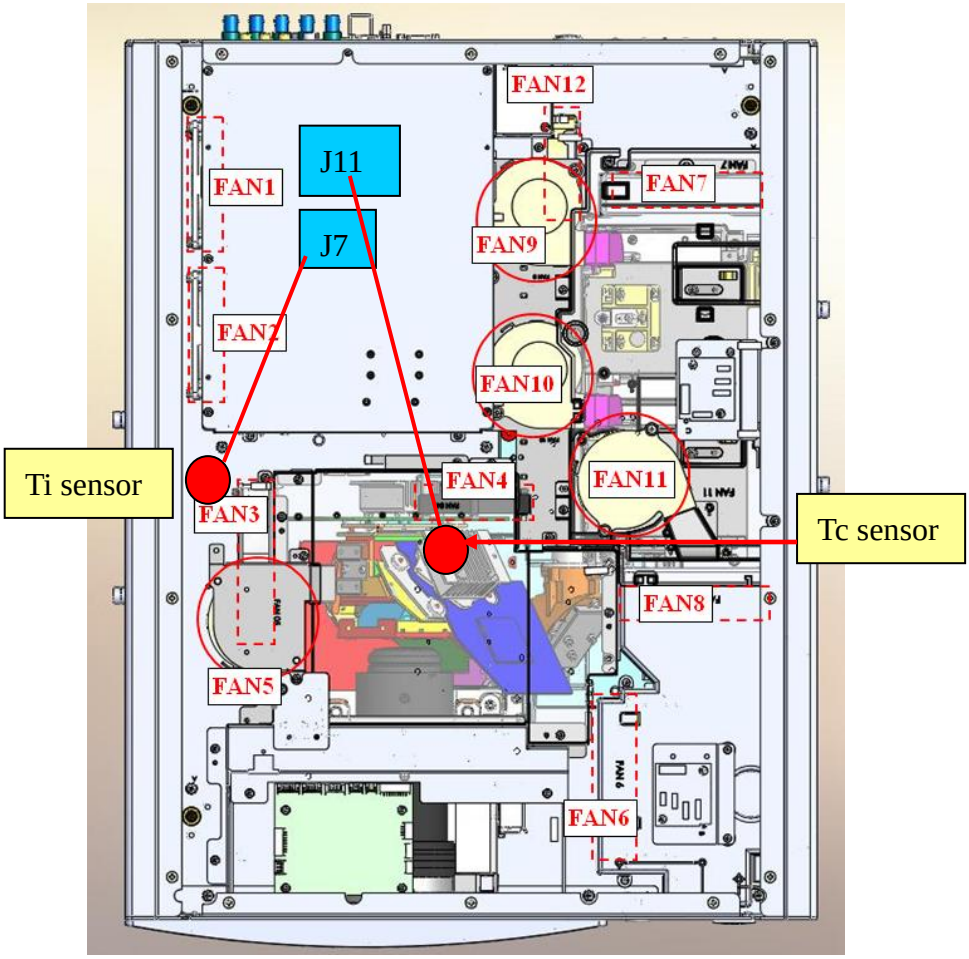
Remark:

The time period of each step in the above LED blinking pattern is 500 milliseconds, e.g., for "Cooling / Warm up" state, the green LED will ON for 500 milliseconds, and then OFF 50 milliseconds, and then repeat the above LED pattern.

Error Code Description list

Barco RLM W8 error message			
No.	**Error Message**	**Led status**	**Description**
0	ErrMsgOverTempInlet:	7	Inlet (Ti) sensor over temperature (53 C)
1	ErrMsgOverTempDMD:	7	DMD(Tc) sensor over temperature(69 C)
2	ErrMsgOverTempLamp1:	7	Lamp 1 over temperature
3	ErrMsgOverTempLamp2:	7	Lamp 2 over temperature
4	ErrMsgOverTempBallast1:	7	Ballast 1 over temperature
5	ErrMsgOverTempBallast2:	7	Ballast 2 over temperature
6	ErrMsgFanInitError:	8	Fan error in powering on the projector
7	ErrMsgFan1RotateError:	6	Fan 1 rotation error
8	ErrMsgFan2RotateError:	6	Fan 2 rotation error
9	ErrMsgFan3RotateError:	6	Fan 3 rotation error
10	ErrMsgFan4RotateError:	6	Fan 4 rotation error
11	ErrMsgFan5RotateError:	6	Fan 5 rotation error
12	ErrMsgFan6RotateError:	6	Fan 6 rotation error
13	ErrMsgFan7RotateError:	6	Fan 7 rotation error
14	ErrMsgFan8RotateError:	6	Fan 8 rotation error
15	ErrMsgDMDInitFail:	8	DDP3021 communication failure in powering on the projector
16	ErrMsgLampInitFail:	4	When one lamp fails and one lamp successes on starting the projector, it will takes 6 times to ignite the fail lamp to make sure the lamp is really failed
17	ErrMsgLampLitFail:	4	Lamp 1 shut down while system is working
18	ErrMsgBallastUartError:	8	Ballast 1 UART communication failure
19	ErrMsgExGpioFail:	8	PCF 8575 external GPIO communication failure
20	ErrMsgInterLockOpen:	5	Lamp door open when system is powered on
21	ErrMsgGF9450NoResponse:	8	Gennum SPI communication failure in powering on the projector
22	ErrMsgSystemI2cFail:	8	System hardware I2C communication failure
23	ErrMsgSoftwareI2cFail:	8	System software I2C communication failure
24	ErrMsgEepromFail:	8	EEPROM check failure
25	ErrMsgEdidFail:	8	EDID check failure
26	ErrMsgEepVersionFail:	8	EEPROM version check failure
27	ErrMsgRstGennum:	8	GSPI bus communucation failure but not entering error state (only being recorded in log)
28	ErrMsgFan9RotateError:	6	Fan 9 rotation error
29	ErrMsgFan10RotateError:	6	Fan 10 rotation error

30	ErrMsgFan11RotateError:	6	Fan 11 rotation error
31	ErrMsgFan12RotateError:	6	Fan 12 rotation error
32	ErrMsgLamp2LitFail:	4	Lamp 2 shut down while system is working
33	ErrMsgBallast2UartError:	8	Ballast 2 UART communication failure
34	ErrMsgGtInletTp:	8	Reserved
35	ErrMsgGtDmdTp:	8	Reserved
36	ErrMsgInletTempSensorFail:	8	Inlet(Ti) temperature sensor reading failure (possibly the sensor not connected)
37	ErrMsgDMDTempSensorFail:	8	DMD(Tc) temperature sensor reading failure (possibly the sensor not connected)
38	ErrMsgGeoSystemFail	8	Geo w2 detect error



As all above Led display and error code, they will be checked in the Error Mode when system gets error or problem.

When there are two conditions as below appearing, you must enter Error Mode.

1. **Lamp Extinguish**
2. **After system light "Red" Led, then it will enter Error Mode once system get error message again. (Ex: When Lamp A light "Red" Led, it will switch to Lamp B. Once Lamp B gets any error message, system will enter Error Mode.)**

The projector would echo the following messages as follow for"op prerr ":

op prerr

OPPRERRErrMsg:

1 SYS: 0015 .

2 SYS: 0017

3 >>> BErr= 0063

4 sys: 0032Run*LS

5 >>> BErr = 0063

6 sys: 0032Init*LS

7 >>> BErr= 0000

Illustrate above messages as follow:

1 SYS: 0015..... (the projector is shut down because of error code 15)

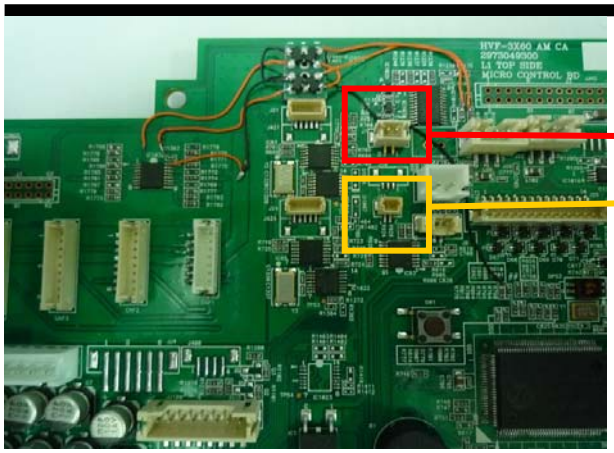
2 SYS: 0017 .....(the projector is shut down because first lamp lite fail, lamp lite Error as below "3 >>>BErr = XXXX")

3 >>> BErr= XXXX .....(XXXX is the ballast error code.. usually cause the lamp fail <above SYS: 0017 >)

4 sys: 0032Run*LS .....(the lamp is swap when projector is running because lamp lite fail, projector is still working on single lamp mode with led flash 1 times per second)

6 sys: 0032Init*LS .....(the lamp is swap to one lamp mode on projector initial lamp process , projector is still working on single lamp mode with led flash 1 times per second)

Please refer to Error Code Description list for other error issue



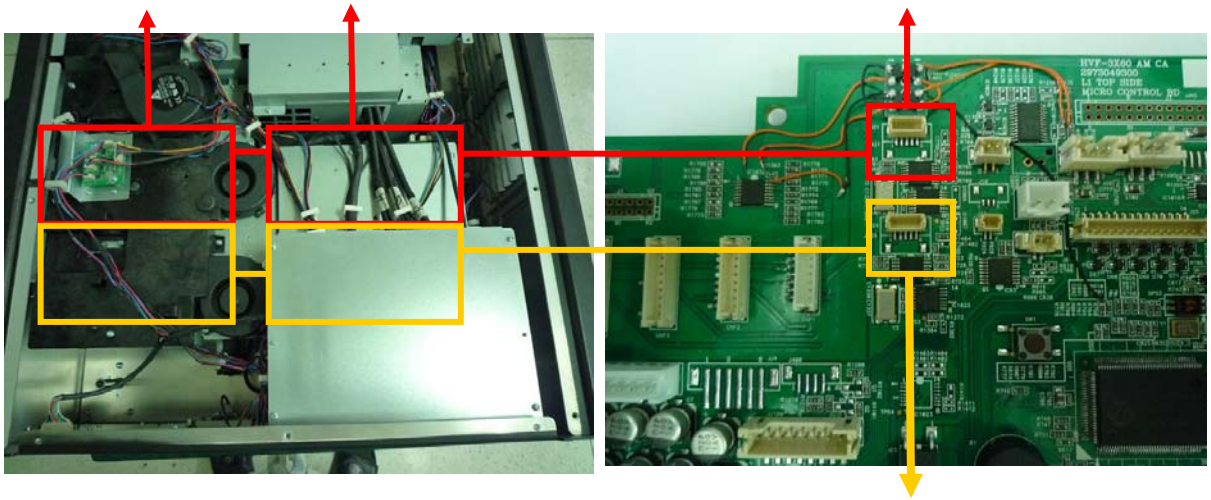
J7: Inlet (Ti) sensor

J11: DMD (Tc) sensor

LAMP

BALLAST BD

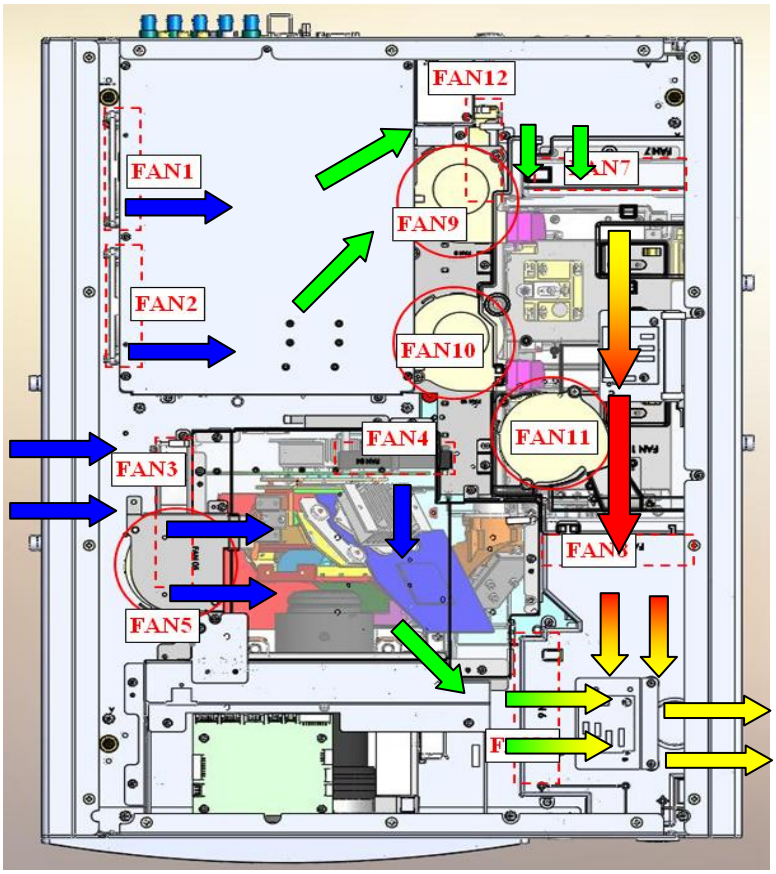
J21: Lamp A



J24: Lamp B

FAN Status

Fan No.	Function	Type	CN - BD	Connect
FAN 1	Power Fan A		CNF1 - FAN A BD	CN9801
FAN 2	Power Fan B			CN9802
FAN 3	R/G DMD Fan			CN9803
FAN 5	Prism Cooling Fan			CN9804
FAN 4	B DMD Fan		CNF2 - FAN B BD	CN9806
FAN 6	Engine Exhaust Fan			CN9807
FAN 8	Lamps Exhaust Fan			CN9808
FAN 11	FAN 8 hub take care			CN9809
FAN 9	Lamp B Blower		CNF3 - FAN C BD	CN9811
FAN 10	Lamp A Blower			CN9812
FAN 7	Lamps Cooling Fan			CN9813
FAN 12	Rod cooling			CN9814



RS-232 command of Fans Control statement as below:

Op fan1~ fan12 = x , where x is the value about the fan speed, it can be setting
Op fan1~fan12 ? , it can be get fan speed
Op fan.all ? , it can be get all the fan speed.
op prerr , check last error code
op chevi = 0 , it can be set fan speed without check environment.

Ex.
Op fan5 = 2500
OP FAN5 = 2500 <- ACK

Ex.
Op fan5 ?
OP FAN5 = 2500

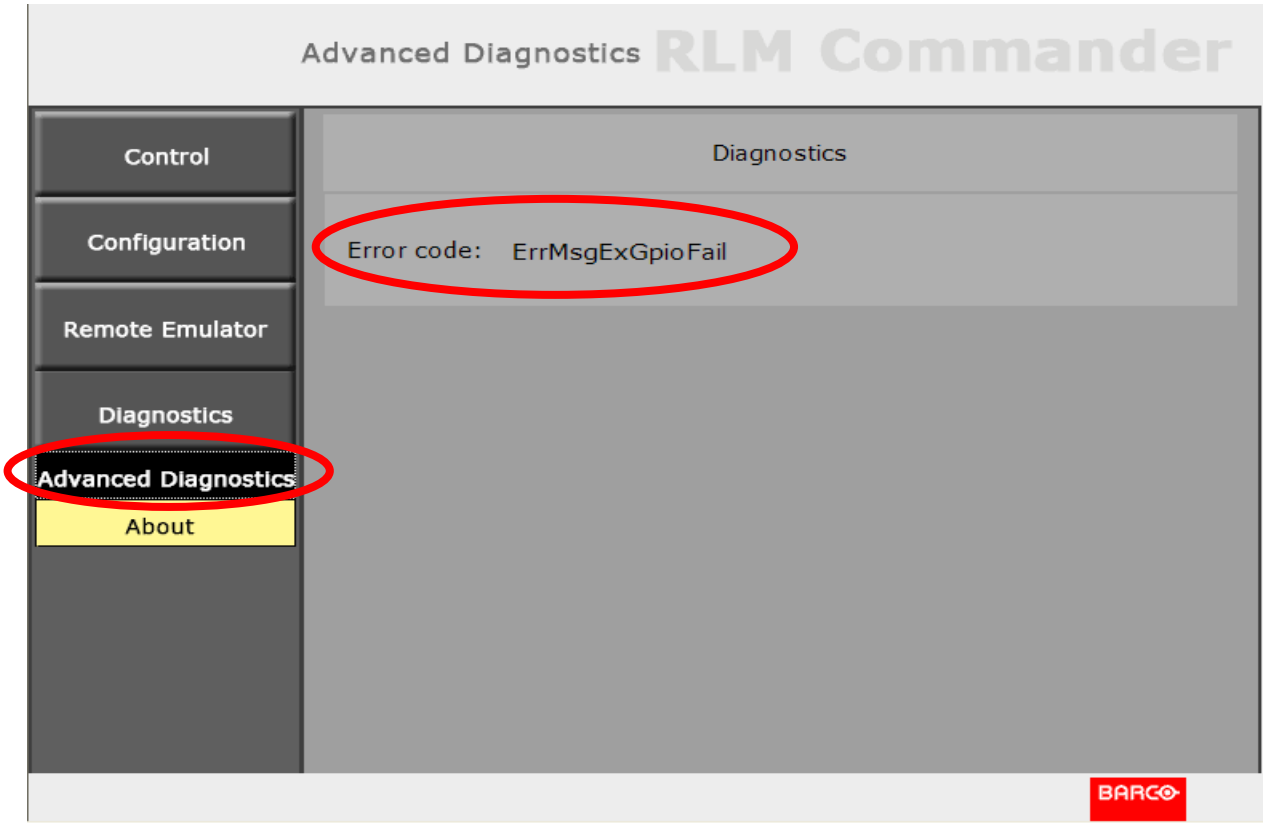
Ex.
Op fan.all ?
OP FAN1 = 1000 <-ACK
.
.
.
OP FAN12=2000

Ex. Use command to check last error code
"op prerr"
1. 10 <-ACK last
2. 5 <-ACK last sec

Please follow below three kinds of error debugging to get error code:

- Use RS-232 command to get error code for debugging, please kindly refer to Page 45 (RS-232 Communication) for set-up and debugging.

- Use web browser (RJ-45) to get error code for debugging. The web browser can be used to check the error code and root cause of the problem. The web browser set up configuration is as below, please press "Diagnostics" – "Advanced Diagnostics" to get error code as below interface mark:



- Use Projector toolset to get error code for debugging. Projector toolset can also be used to trouble shoot the projector.

Timing Chart

Supported Signal Timings (DVI)

Signal Type	Resolution	Frame rate	Video	S-video	SCART	Y-Pr-Pb	BNC - RGBHV	BNC - YUV	HD15 - RGBHV	HD15 - YUV	HDMI - RGB (EIA Timing)	HDMI - YUV 8-bit (EIA Timing)
PC	640x480	59.94					x		x		x	
	640x480	74.99					x		x		x	
	640x480	85					x		x		x	
	800x600	60.32					x		x		x	
	800x600	75					x		x		x	
	800x600	85.06					x		x		x	
	848x480	47.95					x		x		x	
	848x480	59.94					x		x		x	
	1024x768	60					x		x		x	
	1024x768	75.03					x		x		x	
	1024x768	85.03					x		x		x	
	1280x720	47.95					x		x		x	
	1280x1024	60.02					x		x		x	
	1280x1024	75.02					x		x		x	
	1280x1024	85.02					x		x		x	
	1600x1200	60					x		x		x	
	1920x1080	47.95					x		x		x	
	1680x1050	59.94					x		x		x	
	1920X1200RB	60					x		x		x	
	1920X1200	50					x		x		x	
	1400X1050	60					x		x		x	
Apple Mac	640x480	66.59					x		x		x	
	832x624	74.54					x		x		x	
NTSC	NTSC (M, 4.43)	59.94	x	x								
PAL	PAL (B,G,H,I)	50	x	x								
	PAL (N)	50	x	x								
	PAL (M)	59.94	x	x								
SECAM	SECAM (M)	50	x	x								
SDTV	RGBS	50			x							
	1440x480i	60									x	x
	1440x576i	50									x	x

	480i	59.94				x						
	576i	50				x						
EDTV	480p	59.94				x	x	x	x	x	x	x
	576p	50				x	x	x	x	x	x	x
HDTV	1035i	60				x	x	x	x	x	x	x
	1080i	50				x	x	x	x	x	x	x
	1080i (Aus)	50				x	x	x	x	x	x	x
	1080i	59.94				x	x	x	x	x	x	x
	1080i	60				x	x	x	x	x	x	x
	720p	50				x	x	x	x	x	x	x
	720p	59.94				x	x	x	x	x	x	x
	720p	60				x	x	x	x	x	x	x
	1080p	23.98				x	x	x	x	x	x	x
	1080p	24				x	x	x	x	x	x	x
	1080p	25				x	x	x	x	x	x	x
	1080p	29.97				x	x	x	x	x	x	x
	1080p	30				x	x	x	x	x	x	x
	1080p	50				x	x	x	x	x	x	x
	1080p	59.94				x	x	x	x	x	x	x
	1080p	60				x	x	x	x	x	x	x

Timing name	Freq. H(KHz)	Freq. V(Hz)	Clock (M Hz)	H period	H display	H Sync	H backp	V Total	V display	V Sync	V backp
640*480-60	31.47	59.93	25.175	800	640	96	40	525	480	2	25
640*480-75	37.5	75	31.5	840	640	64	120	500	480	3	16
640*480-85	43.27	85.01	36	832	640	56	80	509	480	3	25
800*600-60	37.88	60.32	40	1056	800	128	88	628	600	4	23
800*600-75	46.88	75	49.5	1056	800	80	160	625	600	3	21
800*600-85	53.67	85.06	56.25	1048	800	64	152	631	600	3	27
848*480-47.95	23.674	47.95	25	1056	848	80	104	497	480	5	9
848*480-59.94	29.83	59.94	31.5	1056	848	80	104	500	480	5	12
1024*768-60	48.36	60	65	1344	1024	136	160	806	768	6	29
1024*768-75	60.02	75.03	78.75	1312	1024	96	176	800	768	3	28
1024-768-85	68.88	85.03	94.5	1376	1024	96	208	808	768	3	36
1280*720-47.95	35.531	47.95	57.987	1632	1280	128	176	741	720	3	17
1280*1024-60	63.98	60.02	108	1688	1280	112	248	1066	1024	3	38
1280*1024-75	79.98	75.02	135	1688	1280	144	248	1066	1024	3	38
1280*1024-85	91.15	85.02	157.5	1728	1280	160	224	1072	1024	3	44
1600*1200-60	75	60	162	2160	1600	192	304	1250	1200	3	46
1920*1080-47.95	53.225	47.95	135.403	2544	1920	200	312	1110	1080	3	26
1680*1050-59.94	65.179	59.94	146	2240	1680	176	280	1089	1050	6	30
640*480-66	35	66.67	30.24	864	640	64	96	525	480	3	39
832*624-74.5	49.72	74.55	57.28	1152	832	64	224	667	624	3	39
NTSC (M)	15.734	59.94	13.5	—	—	—	—	—	—	—	—
NTSC (4.43)	15.734	59.94	13.5	—	—	—	—	—	—	—	—
PAL (B,G,H,I)	15.625	50	13.5	—	—	—	—	—	—	—	—
PAL (N)	15.625	50	13.5	—	—	—	—	—	—	—	—
PAL (M)	15.734	60	13.5	—	—	—	—	—	—	—	—
SECAM (M)	15.625	50	13.5	—	—	—	—	—	—	—	—
RGBS		50									
1440x480i	15.73	60	27	1716	1440	124	114	262	240	3	16
480i	15.734	59.94	13.5	858	712	63	63	262	242	3	14
1440x576i	15.62	50	27	1728	1440	126	138	312	288	3	20
576i	15.625	50	13.5	864	702	63	79	312	287	2.5	20
480p	31.47	59.94	27	858	720	62	60	525	480	6	30
576p	31.25	50	27	864	720	64	68	625	576	5	39
1920X1200RB	74.04	59.95	154	2080	1920	32	80	1235	1200	6	26

1920X1200	61.816	49.93	158.25	2560	1920	200	320	1238	1200	6	29
1400X1050	65.517	59.98	121.75	1864	1400	144	232	1089	1050	4	32
1035i	33.75	60	74.25	2200	1920	44	148	562	517	5	35
1080i	28.13	50	74.25	2640	1920	44	148	562	540	5	15
1080i (Aus)	31.25	50	72	2304	1920	168	184	625	540	5	57
1080i	33.75	59.94	74.176	2200	1920	44	148	562	540	5	15
1080i	33.75	60	74.25	2200	1920	44	148	562	540	5	15
720p	37.5	50	74.25	1980	1280	40	220	750	720	5	20
720p	44.96	59.94	74.176	1650	1280	40	220	750	720	5	20
720p	45	60	74.25	1650	1280	40	220	750	720	5	20
1080p	26.97	23.98	74.175	2750	1920	44	148	1125	1080	5	36
1080p	27	24	74.25	2750	1920	44	148	1125	1080	5	36
1080p	28.13	25	74.25	2640	1920	44	148	1125	1080	5	36
1080p	33.72	29.97	74.175	2200	1920	44	148	1125	1080	5	36
1080p	33.75	30	74.25	2200	1920	44	148	1125	1080	5	36
1080p	56.25	50	148.5	2640	1920	44	148	1125	1080	5	36
1080p	67.43	59.94	148.352	2200	1920	44	148	1125	1080	5	36
1080p	67.5	60	148.5	2200	1920	44	148	1125	1080	5	36

Remote Control Use

Projector Remote Control

Below table lists the IR codes that the product is compatible with and capable of responding to. Note that there are a number of functions that are not available on the included remote. These non-remote functions are provided so that maximum functionality is available from third-party control systems and programmable remotes. Regardless of whether or not the function is included on the remote, all functions must be validated to show that they do work properly. “Keynames” refer to the RS232 codes in the next section.

As shown in table, there are two complete sets of remote codes specified as Code 1 and Code 2. Through the on-screen menu, the projector can be set to either set. The reason for two sets is to allow control of more than one product in the same room without interference. The included remote control can be switched between the two sets as well (see procedure below).

The projector and remote control will use the NEC IR protocol with the custom code of 0x06F9. Some details of the protocol are as follows:

- The modulation frequency is 38kHz.
- Each pulse consists of an on time and an off time. There are 4 types of pulses
- Leader pulse = 9ms “on” + 4.5 ms “off” = 13.5ms
- Repeat pulse= 9ms “on” + 2.25 ms “off” = 11.25 ms
- 0 pulse = .56ms “on” + .56ms “off” = 1.12ms
- 1 pulse = .56ms “on” + .1.68ms “off” = 2.24ms
- A key code will be a leader followed by 32 data pulses. The first 16 comprise the custom code 0x06F9. The next 16 are the key data (8 bits) followed by the complement of the key data.
- A key held down will generate a repeat pulse only.

Table : Barco IR Codes & Keynames

No.	Code 1	Code 2	RS232 Keyname	Remote Button	Description
0-1	0x01	0xB7	`power.on`		Turn power on.

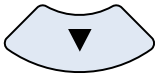
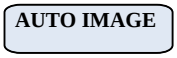
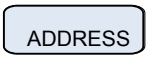
Table : Barco IR Codes & Keynames					
No.	**Code 1**	**Code 2**	**RS232 Keyname**	**Remote Button**	**Description**
0-2	0x09	0xB9	`power.off`		Turn power off.
0-3	0x15	0xBA	`menu`		Bring up or cancel menu display.
0-4	0x17	0xBB	`enter`		Keypad enter.
0-5	0x18	0xBC	`cur.down`		Keypad down arrow.
0-6	0x1A	0xBD	`cur.up`		Keypad up arrow.
0-7	0x1D	0xBE	`cur.left`		Keypad left arrow.
0-8	0x1F	0xBF	`cur.righ`		Keypad right arrow.
0-9	0x80	0xC0	`bright`		Bring up or cancel brightness slider.
0-10	0x81	0xC1	`contrast`		Bring up or cancel contrast slider.
0-11	0x82	0xC2	`sharp`		Bring up or cancel sharpness slider.
0-12	0x83	0xC3	`tint`		Bring up or cancel tint slider.
0-13	0x85	0xC5	`phase`		Bring up or cancel phase slider.
0-14	0x8B	0xCB	`src.1`		Switch the active source to source 1.
0-15	0x8C	0xCC	`src.2`		Switch the active source to source 2.

Table : Barco IR Codes & Keynames					
No.	**Code 1**	**Code 2**	**RS232 Keyname**	**Remote Button**	**Description**
0-16	0x8D	0xCD	src.3		Switch the active source to source 3.
0-17	0x8E	0xCE	src.4		Switch the active source to source 4.
0-18	0x8F	0xCF	src.5		Switch the active source to source 5.
0-19	0x93	0xD3	saturat		Switch to the next color sturation mode.
0-20	0x98	0xD8	pause		Switch the pause key.
0-21	0x99	0xD9	text		Switch the text on/off mode.
0-22	0x9A	0xDA	auto.img		Switch the auto image key.
0-23	0x9D	0xDD	asp.sw		Switch to the next aspect ratio.
0-24	0xA3	0xE3	pip.sw		Switch to next “PIP Select” state.
0-25	0xAA	0xEA	pip.swap		Swap the PIP image with the active source image.
0-26	0xAD	0xED	address		Activates remote backlighting only when pressed momentarily. When held for 5 seconds or more the IR code for toggling the projector IO light will be transmitted.

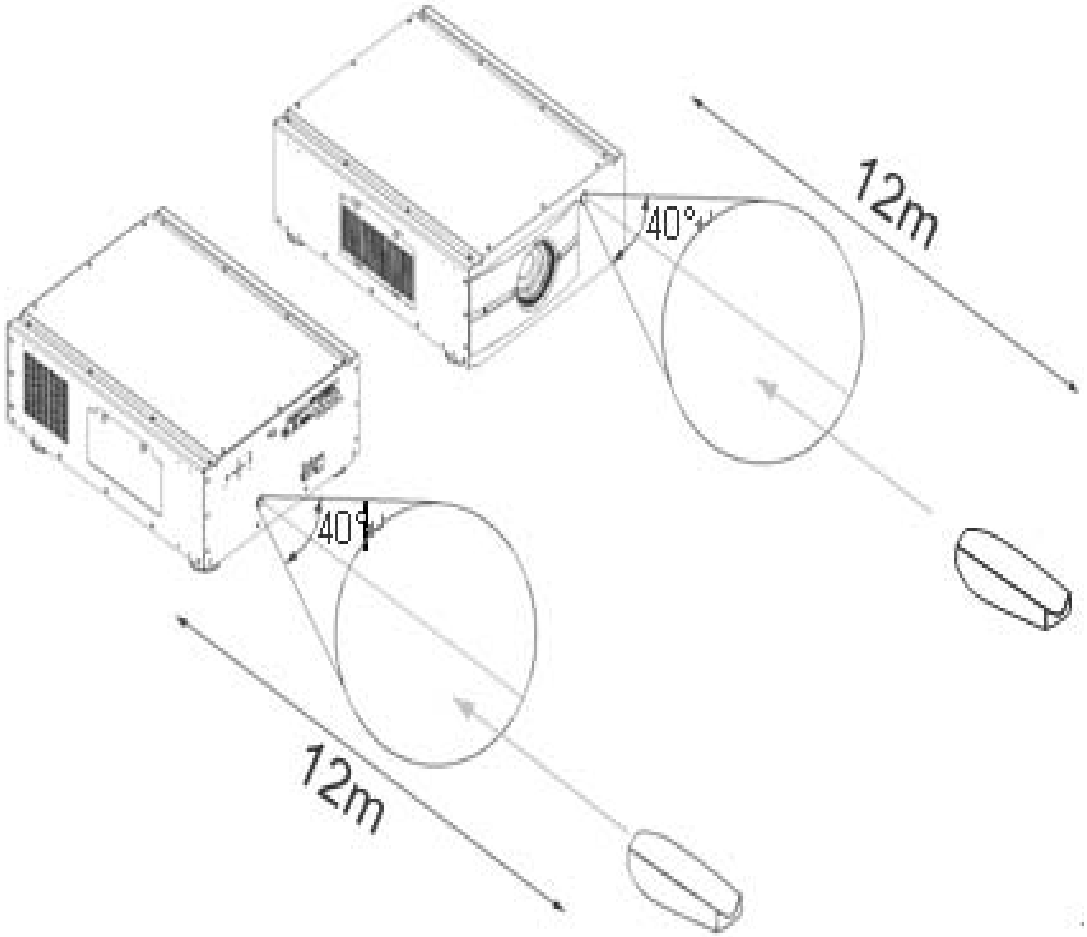
For the included remote control, the following is required:

- The projector and the remote shall be designed together to have a 40 feet range from the front of the projector and a 20 feet range from the top.
- The dispersion angle from the IR emitter(s) shall be at least 15 degrees.
- There are 2 independent sets of NEC HEX codes with identical control (identified as Code 1 and Code 2 in Table).
    - The method to switch the remote to the other code set is to hold down the "**Address**" and "Enter" keys simultaneously for 5 seconds. While these two keys are pressed there will be no IR transmission. When the code set has changed the remote will blink the back-lighting once as a visual confirmation of the change.
- The buttons are to be back-lighted with red (625-670nm) LEDs. The back-lighting will turn on after any key press. The back-lighting will turn off during IR transmission as feedback that a key is being pressed and that transmission is occurring. The backlighting will stay on for 10 seconds after any key is pressed or until the "**Address**" button is pressed again. Key icons and text must be clearly visible from 2 feet away when the back-lighting is on in a dark room.
- The key trip force shall be 135 +/- 35 grams
- 2 AA batteries to be used. The lifetime of the remote should be approximately 6 months under normal use conditions with alkaline batteries.
- The remote control button layout is shown in Figure 1.

Figure 1: IR Remote Control Layout

For the projector IR interface, the following is required:

- The projector and the remote shall be designed together to have a minimum 40 feet range from the front of the projector and a minimum 20 feet range from the top.
- The IR receivers should be placed so that the projector has an angular range as shown in Figure 2.

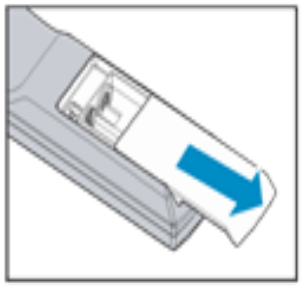


Note: Avoid placing the remote control at places of high temperature or humidity as it could cause the remote control to malfunction..

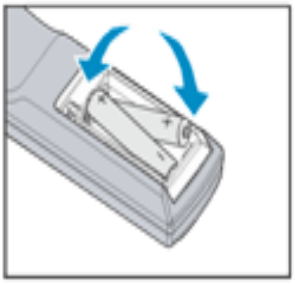
Figure 2: IR Reception Angles

Remote Control Installation

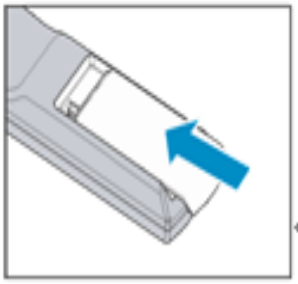
Remove the cover by sliding it in the direction indicated by the arrow.



Insert two new AA batteries (observe the polarity).



Replace the cover.



Note1: Be sure to insert the batteries in the corresponding orientations to match the polarities.

Note2: Do not mix new batteries with used batteries as it would shorten the life of new batteries or cause leakage.

Note3: Only used AA batteries as instructed; do not attempt to insert different types of batteries into the remote control.

Note4: If the remote is going to be unused for long periods of time, be sure to remove the batteries to prevent leakage, which could damage the remote control.

Note5: The liquid contents in the batteries is harmful to the skin; do not touch the leakage with your bare hands directly. When installing fresh batteries, be sure to clean up the leakage thoroughly.

Note6: Under most circumstances, you only need to point the remote control towards the screen and the IR signal would be reflected off the screen and picked up by the IR sensor on the projector.But under specific circumstances, the projector may fail to receive signals from the remote control due to environmental factors.When this happens, orient the remote control at the projector and try again.

Note7: If the range of effective remote control signal reception decreases or if the remote control stops working, replace the batteries.

Note8: If the infrared receiver is exposed to fluorescent lamp or strong sunlight, the remote control may not operate normally.

Note9: Refer to the regulations enforced by your local government on the disposal of used batteries; improper disposal could damage the environment.

Software Download Process

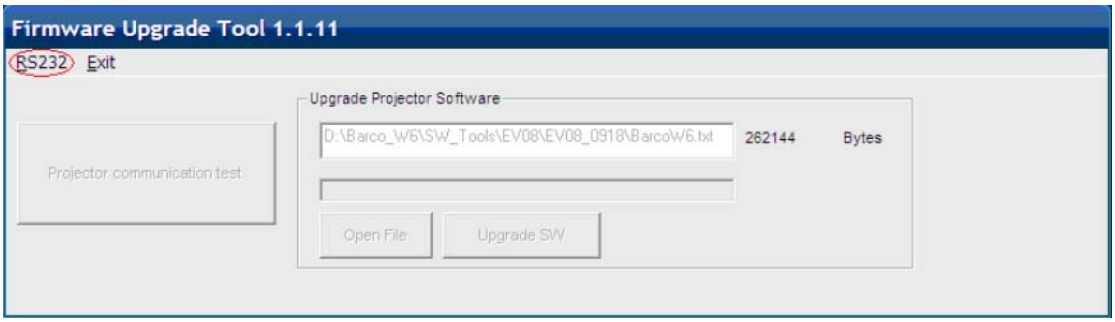
Projector firmware Download procedures

1. Firmware downloads procedure:

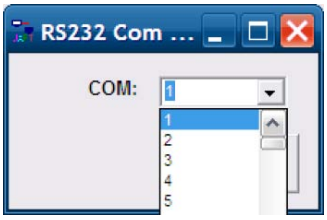
1-1. Connect the AC power of the projector and have the projector in standby mode.

1-2. Connect the RS-232 cable between the projector and the PC.

1-3. Open the Firmware Upgrade Tool accompanied with the firmware release.

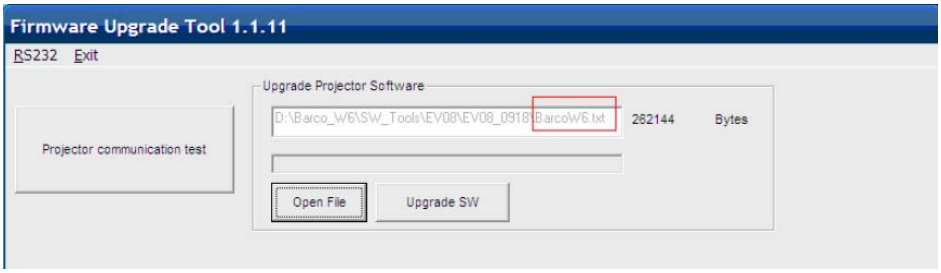


1-4. Click the RS232 from menu to select the correct COM port number corresponding to the connection.

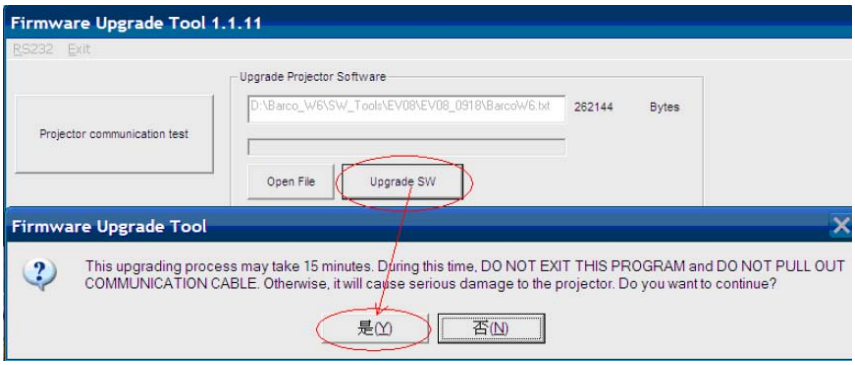


1-5. Click the "Projector communication test" button for testing the communication with the projector. If everything is OK, the following dialog box will be shown.

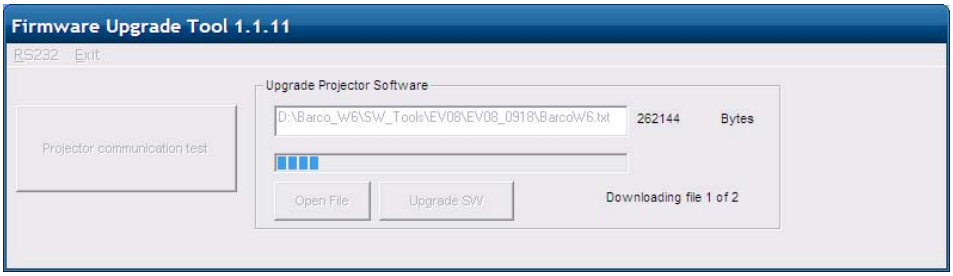
1-6. Click the "Open File" button to activate the file selection dialog box and select BarcoW8.txt (or BarcoW8.txt) file under the same folder of the firmware release.



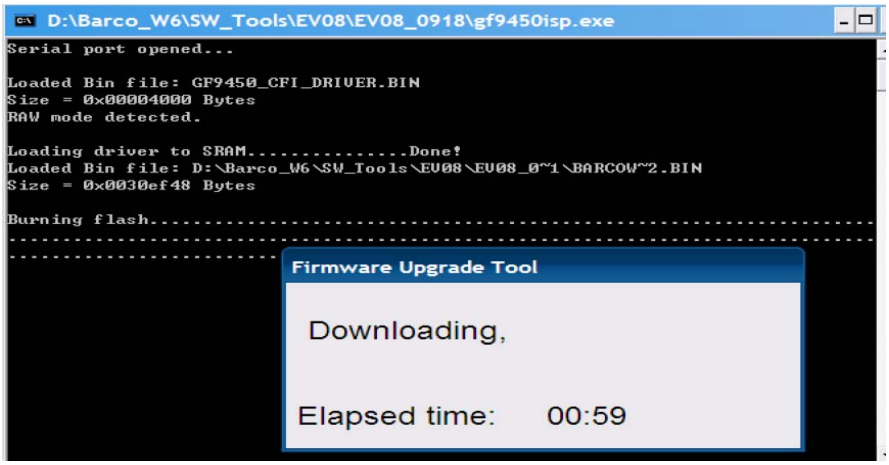
1-7. Click "Upgrade SW" to start the firmware upgrades process. Prior to the firmware upgrade process, you will be prompted with a warning dialog box for confirmation and click "Yes" to proceed the firmware upgrade process.



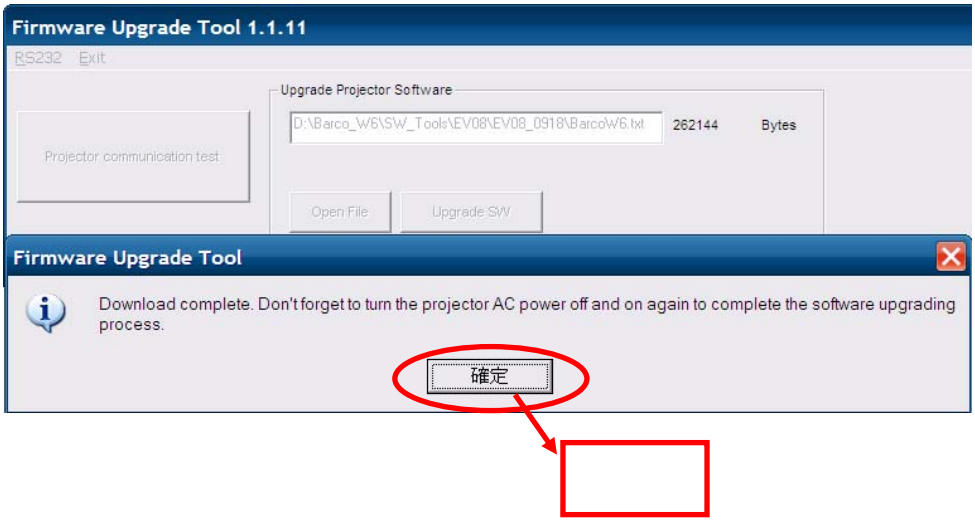
1-8. The firmware upgrade process indicator of Micro-Control board (The 1st part of this firmware upgrade process) will be shown as follows,



1-9. After finishing the firmware upgrade of the Micro-Control board (1st part), the firmware upgrade process of the video board (2nd part) will be started after then. A DOS command box with the ISP program will be activated and shown as follows,



1-10. Depending on the file size of the firmware, it may take about 12 ~ 25 minutes before the firmware upgrading can be finished. The following dialog box will be shown after finishing the firmware upgrade process. Click "OK" button and "Exit" from the menu to exit from the whole firmware upgrade process.



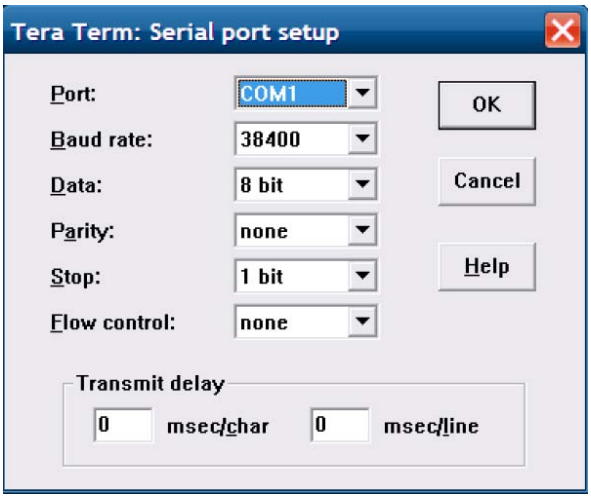
1-11. After finishing the firmware upgrade process, please recycle the AC power.

2. Firmware downloads procedure for sxW2 part:

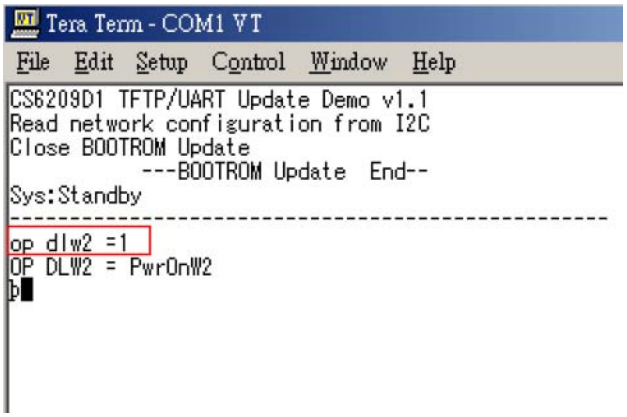
2-1. Connect the AC power of the projector and have the projector in standby mode.

2-2. Connect the RS-232 cable between the projector and the PC.

2-3. Open a terminal program (e.g. Tera Term) with the following setting, baud rate 38400, Databit: 8, Parity: none, Stop: 1 bit, Flow control: none.

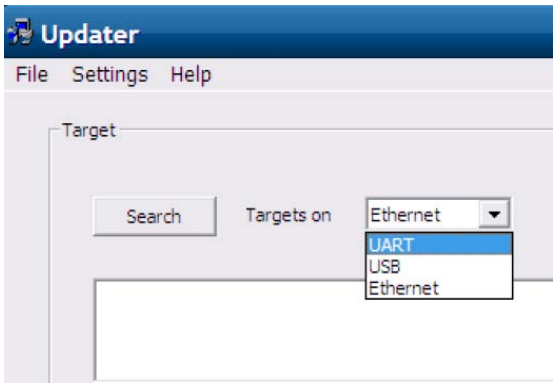


2-4. Input the command "op dlw2 = 1" on the terminal

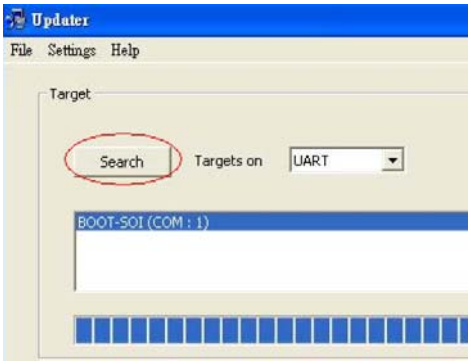


2-5. Close and Exit the terminal program.

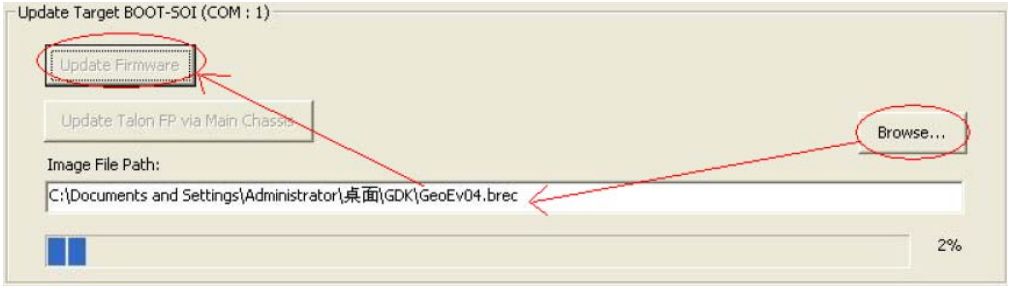
2-6. Activate the sxW2 firmware Updater program for the firmware upgrade of sxW2 chip. And select "UART" in the "Targets on"



2-7. Click "Search" button, the available COM port (likes COM:1) will be listed after searching and shown as follows



2-8. Click on the available COM port (e.g. COM: 1 in this example) and select the target firmware (Image File) by clicking the "Browse …" button.



2-9. After selecting the firmware file, press the "Update Firmware" to start the firmware upgrade process.

2-10. The firmware upgrade status will be shown on the status bar of the firmware updater to indicate the progress of this firmware download.

2-11. After finishing the firmware download, please recycle the AC switch to finish the overall firmware download process of sxW2.

3. Firmware downloads procedure for RJ-45 module:

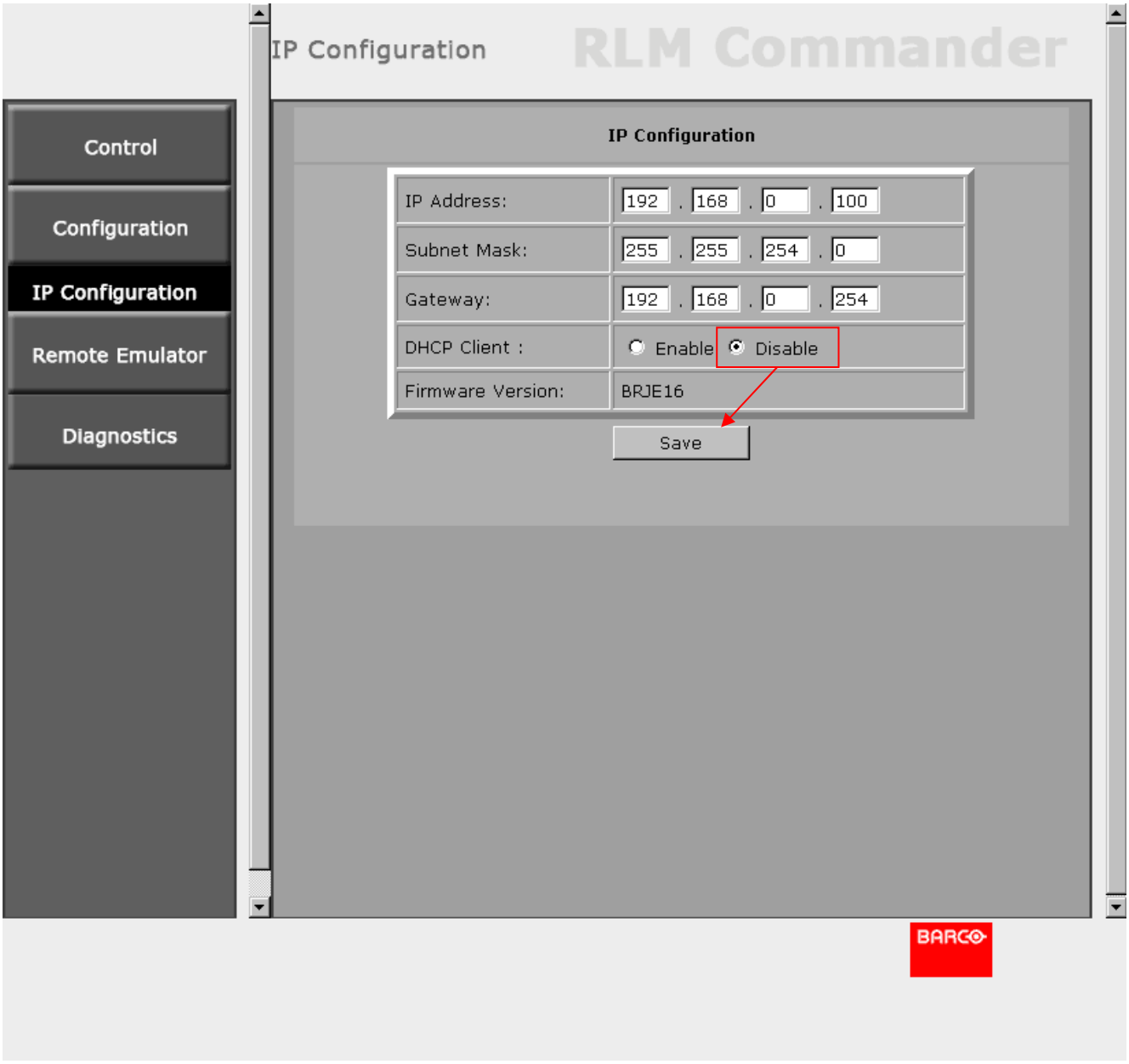
3-1. Connect the AC power of the projector and have the projector in standby mode.

3-2. Connect the RJ-45 cable between the projector and the PC. And make sure that the two LEDs of the RJ-45 module are lit after connecting the RJ-45 cable between the PC and the projector. If the LEDs are not lit, please send the RS command "eco.net.pow = 0" on the terminal to turn on the RJ-45 module.

3-3. Properly setup the IP for the PC and make sure that the PC and the projector are in the same subnet. For example, the default IP of the projector is 192.168.0.100. So the IP of the PC should be set as 192.168.0.99 for example.

3-4. Key in the projector IP on the web browser (the recommended web browser is IE 6.0 or later version, the default IP is 192.168.0.100) to see the embedded webpage. The IP can be accessed via the RS command "op net.ipaddr ?" with a terminal program.

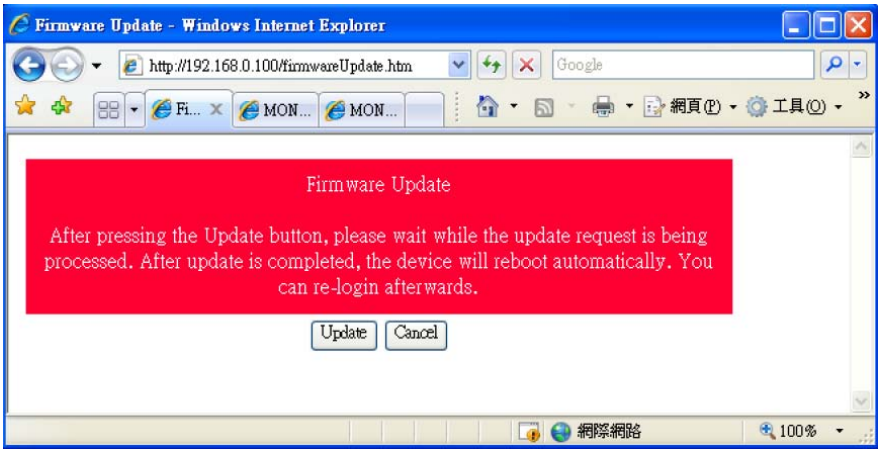
3-5. Make sure the DHCP is "Disable", if current state is "Enable", switch it to "Disable" and click "Save" button to save the setting.



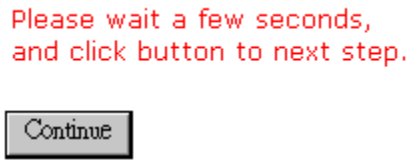
3-6. Key in the IP address and followed by "/firmwareUpdate.htm" on the URL box as below to activate the firmware update procedure

http://192.168.0.100/firmwareUpdate.htm

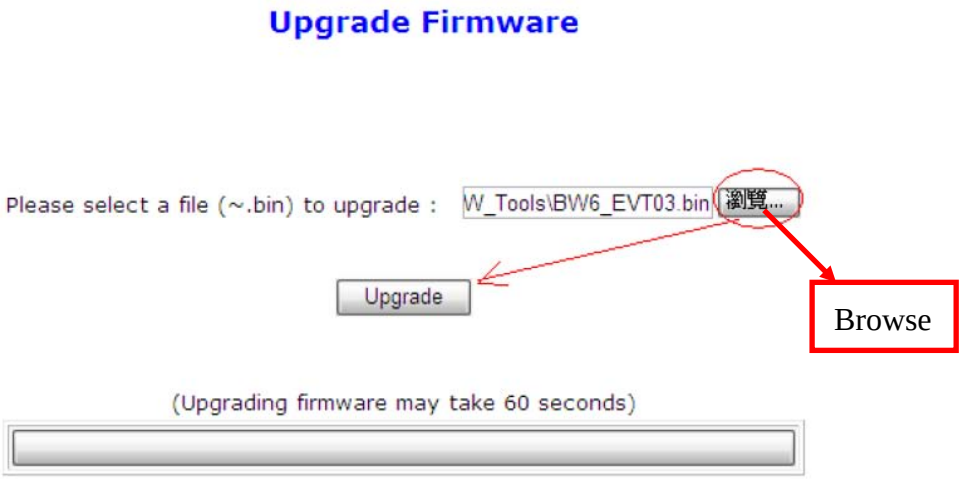
And click the "Update" button to start the firmware upgrade process.



3-7. The following message will be shown on the display, click "Continue" button to proceed

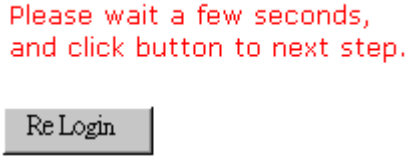


3-8. Press the "Browse" button and locate the firmware (binary code) to be upgraded. Then press the "Upgrade" button to proceed the download process.



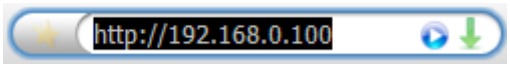
3-9. Wait until the firmware upgrade process finished.

3-10. The following message will be shown after the firmware upgrade procedure. Just press the "Re Login" button to finish the whole firmware upgrade process of RJ-45 module.

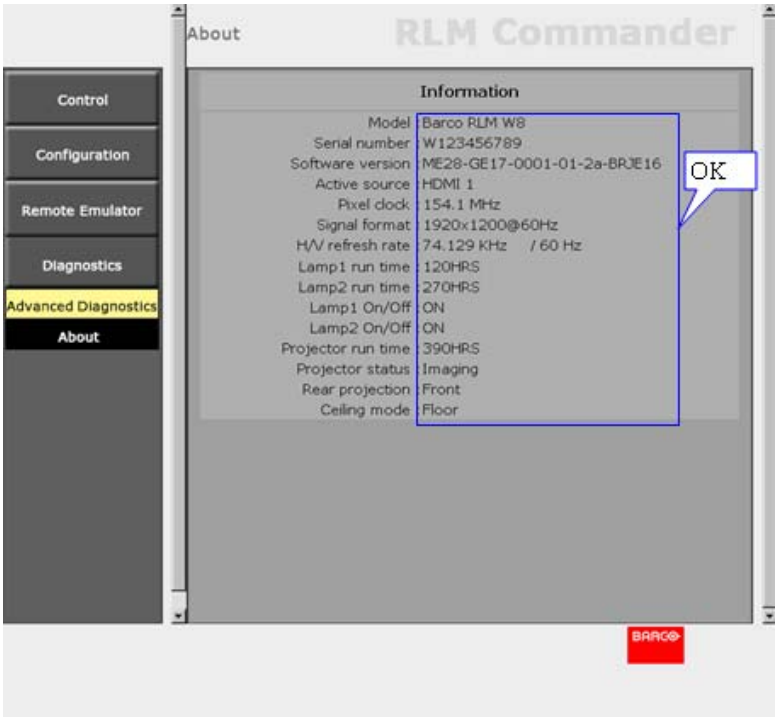


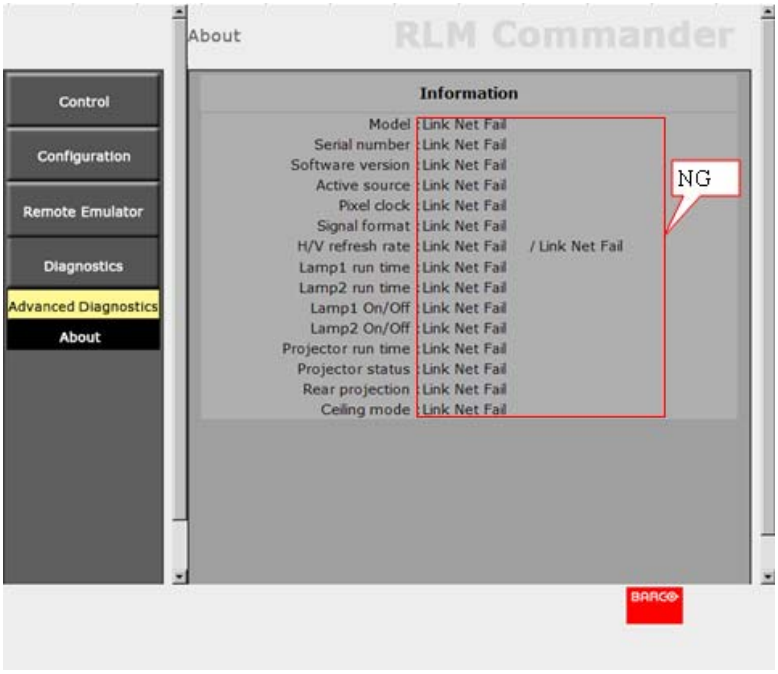
3-11. RJ-45 Test procedures

Key in your Projector IP to web browser



Information

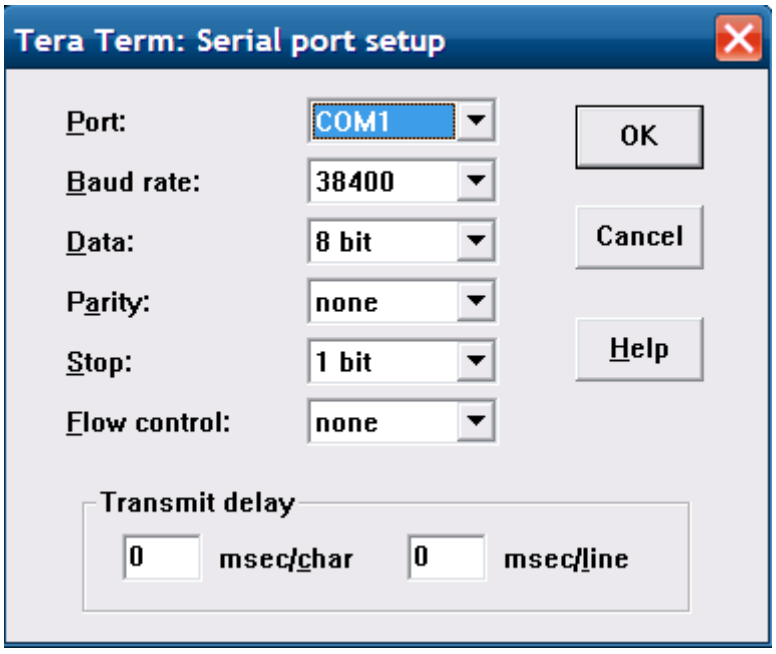




4. Barco RLM W6/W8 Ballast Firmware upgrade procedure

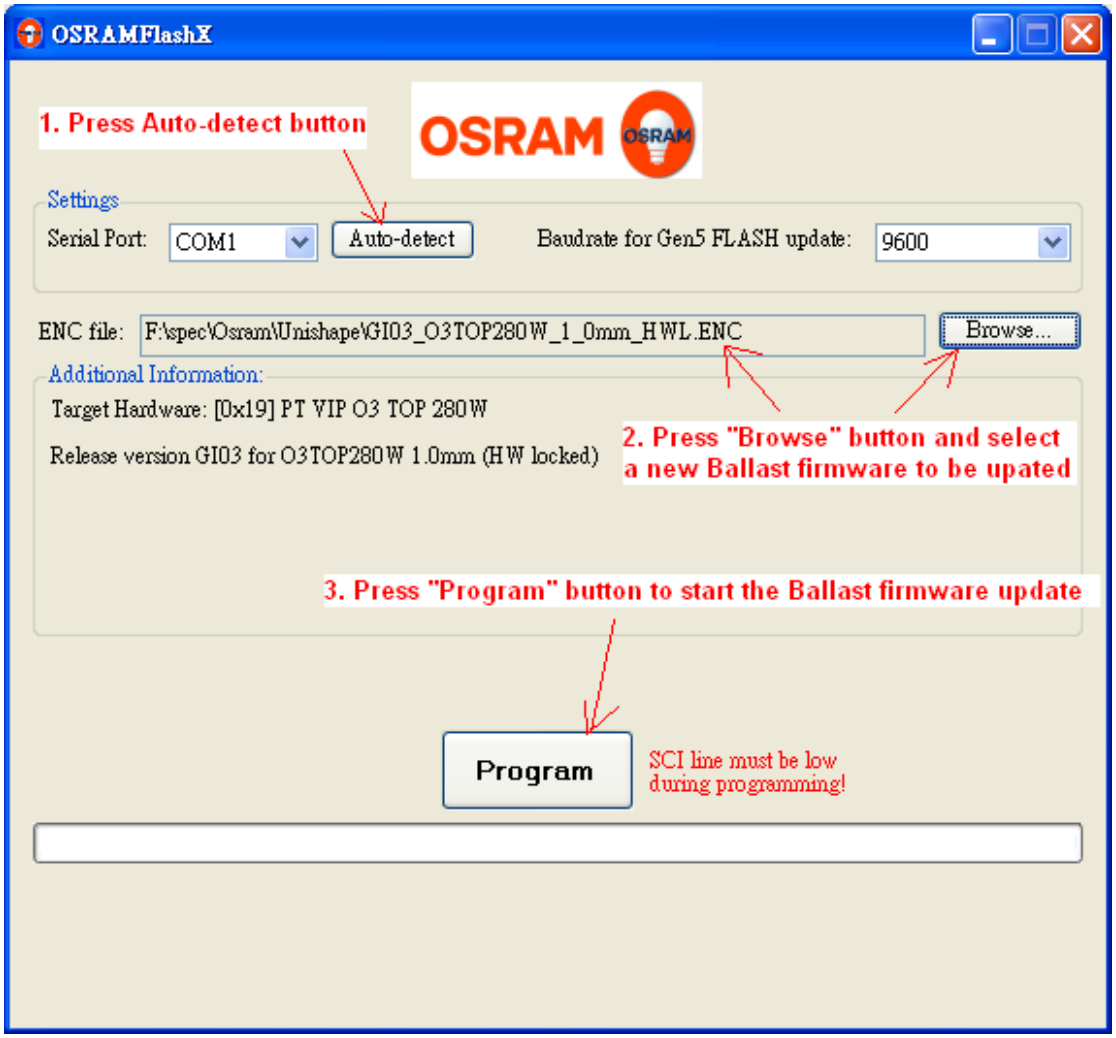
Ballast Firmware upgrade procedure:

1. Before proceeding the following ballast firmware upgrade procedure, please download and install Osram Unishape tool (OsramFlashX) from Osram Website.
2. Connect the AC power of the projector and have the projector in standby mode.
3. Connect the RS-232 cable between the projector and the PC and make sure that the “Projector Control” is configured as “RS232”, if not, please use the hotkey to switch the “Projector Control” as “RS232”.
4. Open a terminal program (e.g. Tera Term) with the following setting, baud rate 38400, Databit:8, Parity: none, Stop:1 bit, Flow control: none.



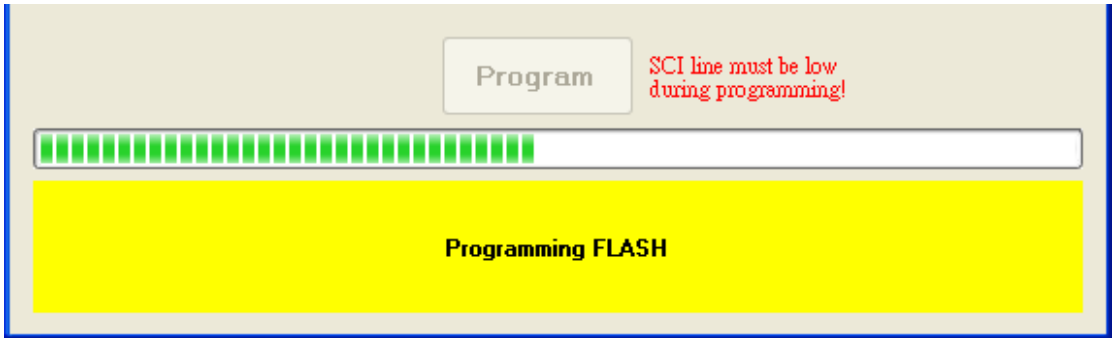
5. Power on the projector and wait for the completion of the powering on sequence. It takes about 90 seconds for the completion of the powering on sequence.
6. Input the command “op dlba1” on the terminal and then disconnect the connection and close the terminal program.

7. Activate Osram Unishape Flash tool (OsramFlashX) and press the “Auto-detect” button to find the communication port with the ballast. As shown in the following diagram, COM1 is detected as the communication port to talk to the ballast.

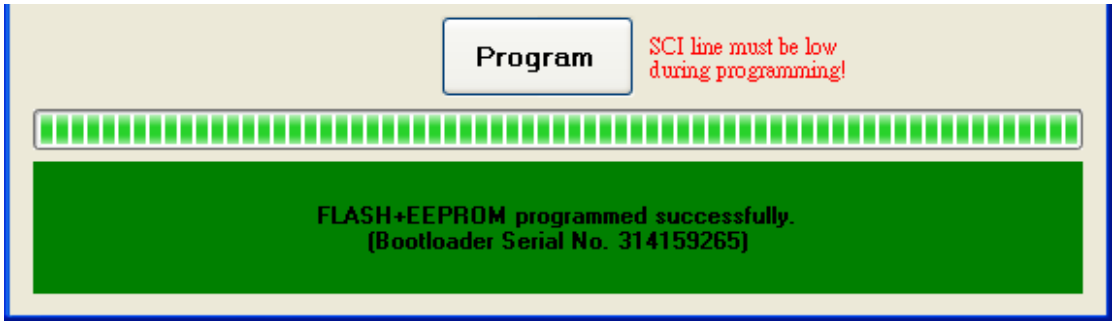


8. Press “Browse” button and then locate and select the new ballast firmware to be flashed.

9. Press “Program” button to start the ballast firmware update. While the firmware update process is proceeding, you will see a progress indicator as follows.



10. Wait until the firmware update process finished as follows,

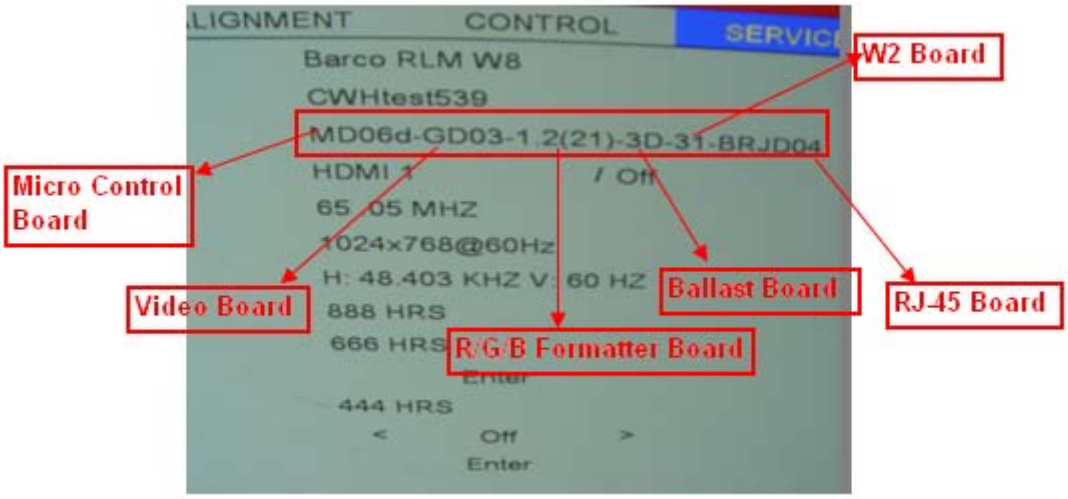


11. Switch off the AC power of the projector.

12. Repeat the above steps #2 ~ #11 for the firmware upgrade of the other ballast and in step #6, please input the command “op dlba2” to specify ballast2 as the target ballast to be updated. The other steps are the same.

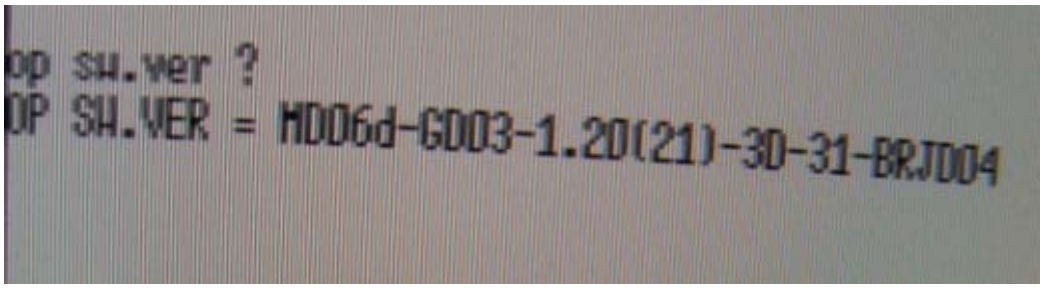
After finishing downloading all software in projector, please go to OSD to check your revision confirmation or go to RS-232 to command for confirmation.

(A). OSD

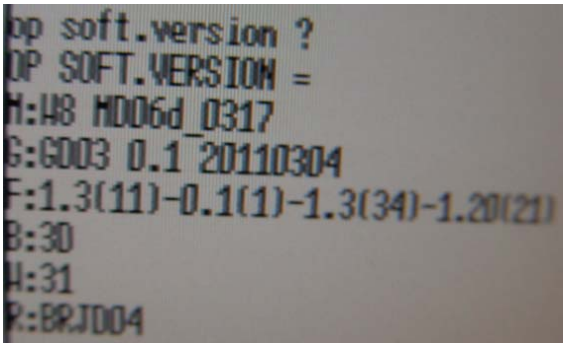


(B). RS-232

Please key in "op sw.ver ?" And, you can get all software revision.



Or, please key in "op soft.version ?" And, you can get more detail software revision.



RS-232 Communication

RS-232 Operation Executive Command

Interface and Requirements

The RS-232 Commands use only ASCII characters which can be entered using a typical terminal emulator like Windows HyperTerminal with the following setting:

Bits per second: 38400
Data bits: 8
Parity: None
Stop bits: 1
Flow control: None

Note that each input character will be echoed on the terminal by MCU and there is no need to set the local echo "ON" with the terminal setting.

System Operation commands.

The Operation commands tell the projector what to do. All commands start with 2 letters: "op" for operations commands, and a space [SP] then following a control command then finally the value wants to read, set, increase or decrease. All commands must end with a carriage return (ASCII hex 0D), shown as [CR] below. The syntax for operations commands is as follows:

op[SP]<operation command>[SP]<Setting Value>[CR]

For all but Execute functions the response from the projector will be the command and "= <value>" where <value> is the current value or "NA" if the value is not available. For Execute functions the response will be the same command. All responses will be in CAPS. Please refer to the following table for command list and examples:

System Operation command:

Operation	Commands	Values
Set	= <value>	Makes the unit take that value.
Get	?	Asks what the current value is.
Increment	+	Adds 1 to the current value.
Decrement	-	Subtracts 1 from the current value.

Operation	Commands	Values
Execute	(none)	Performs an action such as a reset.

Motor operation command:

For motor control like lens shift, focus and zoom, the parameters "+" and "-" are defined as follows.

Command item	command	System Action
focus	+ -	+ => Focus Near, - => Focus Far
zoomio	+ -	+ => Zoom out - => Zoom in
vert.offset	+ -	+ => Up - => Down
horiz.offset	+ -	+ => Right - => Left
Lens.center	(execute)	Midposition shift

Get operations command example:

Input: **op bright ? [CR]**
System Response: **OP BRIGHT = 100**

Increase & Decrease operations command examples:

Input: **op bright + [CR]**
System Response: **OP BRIGHT = 101**

Input: **op bright - [CR]**
Response: **OP BRIGHT = 126**

Set operations command example:

Input: **op bright = 127 [CR]**
System Response: **OP BRIGHT = 127**

Execute command example:

Input: **op auto.img [CR]**

Response: **OP AUTO.IMG**

The list of valid operation commands for Barco RLM W8 is shown in below Table.

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
1-1	**input.sel**	**= ?**	**0 = HDMI 1** **1 = HDMI 2** **2 = RGB D-15** **3 = YUV 1** **4 = RGBHV/YUV2** **5 = Composite Video** **6 = S-Video** **7 = RGB-S** **8 = SDI/HDSDI/3G**	**Note1; Note3**
1-2	**input.lock**	**= ?**	**0 = Auto** **1 = 48 Hz** **2 = 50 Hz** **3 = 60 Hz**	**Note2**
1-3	**auto.powoff**	**= ?**	**0 = Off** **1 = On**	**Note1**
1-4	**auto.powon**	**= ?**	**0 = Off** **1 = On**	
1-5	**no.signal**	**= ?**	**0 = Logo** **1 = Blue** **2 = Black** **3 = White**	**Note1**
1-6	**vid.std**	**= ?**	**0 = Auto** **1 = PAL** **2 = SECAM** **3 = NTSC**	**Note2; Note4**
1-7	**auto.imgadj**	**= ?**	**0 = Off** **1 = Auto** **2 = Always**	**Note2**
2-1	**contrast**	**= ? + -**	**0 - 200**	**Note2**
2-2	**bright**	**= ? + -**	**0 - 200**	**Note2**

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
2-3	saturat	= ? + -	0 - 200	Note2; Note4
2-4	tint	= ? + -	0 - 200	Note2; Note4
2-5	sharp	= ? + -	0 - 200	Note2
2-6	nr	= ? + -	0 - 200	Note2
2-7	color.temp	= ?	0 = 3200K 1 = 5400K 2 = 6500K 3 = 9300K 4 = Native	Note2; Note8
2-8	red.offset	= ? + -	0-200	Note2
2-9	green.offset	= ? + -	0-200	Note2
2-10	blue.offset	= ? + -	0-200	Note2
2-11	red.gain	= ? + -	0-200	Note2
2-12	green.gain	= ? + -	0-200	Note2
2-13	blue.gain	= ? + -	0-200	Note2
2-14	aspect	= ?	0 = 5:4 1 = 4:3 2 = 16:10 3 = 16:9 4 = 1.88 5 = 2.35 6 = Letterbox 7 = Native 8 =Unscaled	Note2; Note5
2-15	h.total	= ? + -	0-200	Note2 ; Note7
2-16	h.pos	= ? + -	0-200	Note2
2-17	h.phase	= ? + -	0-200	Note2; Note7
2-18	v.pos	= ? + -	0-200	Note2
2-19	auto.img	(execute)		Note2
2-20	Color.space2	= ?	0 = Auto 1 = YUV HD 2 = YUV STD 3 = RGB-PC(0-255) 4 = RGB-Video(16-255)	Note2

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
3-1	**zoom**	**= ?**	**0 = Off** **1 = Crop** **2 = Zoom**	**Note2; Note6**
3-2	**pip.sel**	**= ?**	**1 = HDMI 1** **2 = HDMI 2** **3 = RGB D-15** **4 = YUV 1** **5 = RGBHV/YUV2** **6 = Composite Video** **7 = S-Video** **8 = RGB-S** **9 = SDI/HDSDI/3G**	**Note1;** **Note9;** **Please refer to appendix 1 for the valid main/pip source selection**
3-3	**pip.pos**	**= ?**	**0 = Top left** **1 = Top right** **2 = Bottom left** **3 = Bottom right** **4 = Split L-R**	**Note1;** **Note10**
3-4	**pip**	**= ?**	**0 = Off** **1 = On**	**Note1**
4-1	**lamp.mode**	**= ?**	**0 = Economy** **1 = Standard** **2 = Dimming**	**Note2**
4-2	**lamps**	**= ?**	**0 = Single** **1 = Dual**	**Note1;** **Note11**
4-3	**altitude**	**= ?**	**0 = Off** **1 = On**	**Note1**
4-4	**lamp.pwr**	**= ?**	**0-19 (85 % ~100.0 %)**	**Note2**
4-5	**lamp1.stat**	**?**	**0 = Off** **1 = On**	**Note1**
4-6	**lamp2.stat**	**?**	**0 = Off** **1 = On**	**Note1**
5-1	**rear.proj**	**= ?**	**0 = front** **1 = rear**	**Note1**

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
5-2	**ceil.mode**	**= ?**	**0 = floor** **1 = ceiling**	**Note1**
5-3	**zoomio**	**+ -**	**+ = Zoom out** **- = Zoom in**	**Motor command;** **Note1**
5-4	**focus**	**+ -**	**+ = Focus Near** **- = Focus Far**	**Motor command;** **Note1**
5-5	**vert.offset**	**+ -**	**+ = Up** **- = Down**	**Motor command;** **Note1**
5-6	**horiz.offset**	**+ -**	**+ = Right** **- = Left**	**Motor command;** **Note1**
5-7	**dyna.cont**	**= ?**	**0 = Off** **1 = On**	**Note2**
5-8	**gamma**	**= ?**	**0 = 1.8** **1 = 2.0** **2 = 2.2** **3 = 2.35** **4 = 2.5**	**Note2**
5-9	**int.ptrn**	**= ?**	**0 = Off** **1 = Color Bars** **2 = Hatch** **3 = Burst** **4 = Red** **5 = Green** **6 = Blue** **7 = White** **8 = Black** **9 = TI-Red** **10 = TI-Green** **11 = TI-Blue** **12 = TI-Ramp**	**Note1**
5-10	**color.space**	**= ?**	**0 = Native** **1 = EBU** **2 = SMPTE** **3 = Custom**	**Note2**

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
5-10a	**Lens.center**	**(execute)**		**Note1**
5-11	**h.keystone**	**= ? + -**	**-350~+350**	**Note1; Note15**
5-12	**v.keystone**	**= ? + -**	**-200~+200**	**Note1; Note15**
5-13	**warp.rotat**	**= ? + -**	**-20~ +20(in ¼° unit)**	**Note1**
5-14	**warp.pinbrl**	**= ? + -**	**-100 ~ +100**	**Note1**
5-16	**warp.tlc.x** **warp.tlc.y**	**= ? + -**	**'x: -192 ~ +192** **'y: -120 ~ +120**	**Note1**
5-17	**warp.trc.x** **warp.trc.y**	**= ? + -**	**'x: -192 ~ +192** **'y: -120 ~ +120**	**Note1**
5-18	**warp.blc.x** **warp.blc.y**	**= ? + -**	**'x: -192 ~ +192** **'y: -120 ~ +120**	**Note1**
5-19	**warp.brc.x** **warp.brc.y**	**= ? + -**	**'x: -192 ~ +192** **'y: -120 ~ +120**	**Note1**
5-19a	**warp.reset**	**(execute)**		**Note1**
5-19b	**w2.recover**	**(execute)**		**Note1**
5-20	**blank.top**	**= ? + -**	**0 ~ 360**	**Note1**
5-21	**blank.btm**	**= ? + -**	**0 ~ 360**	**Note1**
5-22	**blank.left**	**= ? + -**	**0 ~ 534**	**Note1**
5-23	**blank.right**	**= ? + -**	**0 ~ 534**	**Note1**
5-23a	**blank.rst**	**(execute)**		**Note1**
5-24	**scen.stat**	**= ?**	**0 = Off** **1 = On**	**Note1**
5-25	**scen.wht.top** **scen.wht.btm**	**= ? + -**	**0 ~ 500**	**Note1 ; Note 16**
5-26	**scen.wht.left** **scen.wht.right**	**= ? + -**	**0 ~ 800**	**Note1 ; Note 16**
5-27	**scen.blk.top** **scen.blk.btm**	**= ? + -**	**0 ~ 32**	**Note1; Note 17 multiple of 8;the adjustable range and 8-multiple restrictions are per Geo Semi'specification.**

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
5-28	**scen.blk.left** **scen.blk.right**	**= ? + -**	**0 ~ 32**	**Note1 ; Note 17 multiple of 4;the adjustable range and 4-multiple restrictions are per Geo Semi'specification.**
5-29	**scen.red**	**= ? + -**	**0 ~ 32**	**Note1**
5-30	**scen.green**	**= ? + -**	**0 ~ 32**	**Note1**
5-31	**scen.blue**	**= ? + -**	**0 ~ 32**	**Note1**
5-32	**scen.all**	**= ? + -**	**0 ~ 32**	**Note1;Note18**
5-33	**scen.reset**	**(execute)**		**Note1**
5-34	**scen.adl**	**= ?**	**0 = Off** **1 = On**	**Note1**
6-1	**ir.addr**	**= ?**	**0 = remote code 1** **1 = remote code 2**	
6-2	**eco.net.pow**	**= ?**	**0 = Off (RJ45 Power On)** **1 = On (RJ45 Power Off)**	
6-3	**proj.ctrl**	**= ?**	**0 = rs232** **1 = network**	**Note12**
6-4	**net.ipaddr**	**= ?**	**<string>**	
6-5	**net.subnet**	**= ?**	**<string>**	
6-6	**net.gateway**	**= ?**	**<string>**	
6-7	**net.dhcp**	**= ?**	**0 = Off** **1 = On**	
6-8	**menu.pos**	**= ?**	**0 = Top left** **1 = Top right** **2 = Bottom left** **3 = Bottom right** **4 = center**	**Note1**
6-9	**startup.logo**	**= ?**	**0 = Off** **1 = On**	
6-10	**startup.chime**	**= ?**	**0 = Off** **1 = On**	

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
6-11	**btn.1**	**= ?**	**0 = HDMI 1** **1 = HDMI 2** **2 = RGB D-15** **3 = YUV 1** **4 = RGBHV/YUV2** **5 = Composite Video** **6 = S-Video** **7 = RGB-S** **8 = SDI/HDSDI/3G**	
6-12	**btn.2**	**= ?**	**0 = HDMI 1** **1 = HDMI 2** **2 = RGB D-15** **3 = YUV 1** **4 = RGBHV/YUV2** **5 = Composite Video** **6 = S-Video** **7 = RGB-S** **8 = SDI/HDSDI/3G**	
6-13	**btn.3**	**= ?**	**0 = HDMI 1** **1 = HDMI 2** **2 = RGB D-15** **3 = YUV 1** **4 = RGBHV/YUV2** **5 = Composite Video** **6 = S-Video** **7 = RGB-S** **8 = SDI/HDSDI/3G**	

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
6-14	**btn.4**	**= ?**	**0 = HDMI 1** **1 = HDMI 2** **2 = RGB D-15** **3 = YUV 1** **4 = RGBHV/YUV2** **5 = Composite Video** **6 = S-Video** **7 = RGB-S** **8 = SDI/HDSDI/3G**	
6-15	**btn.5**	**= ?**	**0 = HDMI 1** **1 = HDMI 2** **2 = RGB D-15** **3 = YUV 1** **4 = RGBHV/YUV2** **5 = Composite Video** **6 = S-Video** **7 = RGB-S** **8 = SDI/HDSDI/3G**	
6-16	**trig.1**	**= ?**	**0 = 5:4** **1 = 4:3** **2 = 16:10** **3 = 16:9** **4 = 1.88** **5 = 2.35** **6 = Letterbox** **7 = Native** **8 = Unscaled** **9 = Auto**	**Note1**

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
6-17	**trig.2**	**= ?**	**0 = 5:4** **1 = 4:3** **2 = 16:10** **3 = 16:9** **4 = 1.88** **5 = 2.35** **6 = Letterbox** **7 = Native** **8 = Unscaled** **9 = Auto**	**Note1**
6-18	**auto.src**	**= ?**	**0 = Off** **1 = On**	**Note1**
6-19	**lang**	**= ?**	**0 = English** **1 = French** **2 = Spanish** **3 = German** **4 = Portuese** **5 = Chinese Simplified** **6 = Chinese Traditional** **7 = Japanese** **8 = Korean**	
7-1	**model**	**?**	**<string>**	
7-2	**ser.no**	**?**	**<string>**	
7-3	**sw.ver**	**?**	**<string>**	**Note13**
7-4	**act.src**	**?**	**0 = HDMI 1** **1 = HDMI 2** **2 = RGB D-15** **3 = YUV 1** **4 = RGBHV/YUV2** **5 = Composite Video** **6 = S-Video** **7 = RGB-S** **8 = SDI/HDSDI/3G**	**Note1**

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
7-5	pip.src	?	0 = Off 1 = HDMI 1 2 = HDMI 2 3 = RGB D-15 4 = YUV 1 5 = RGBHV/YUV2 6 = Composite Video 7 = S-Video 8 = RGB-S 9 = SDI/HDSDI/3G	Note1
7-6	pixel.clock	?	<string>	In MHz ; Note2
7-7	signal	?	<string>	Note2
7-8	h.refresh	?	<string>	Note2
7-9	v.refresh	?	<string>	Note2
7-10	lamp1.hours	?	<string>	
7-11	lamp2.hours	?	<string>	
7-12	lamp1.reset	(execute)		
7-13	lamp2.reset	(execute)		
7-14	proj.runtime	?	<string>	
7-15	blue.only	= ?	0 = Off 1 = On	Note1
7-16	fact.reset	(execute)		
8-1	CS_cust_Rx	= ?	000 ~ 999	P7 Command; Note1
8-2	CS_cust_Ry	= ?	000 ~ 999	P7 Command; Note1
8-3	CS_cust_Gx	= ?	000 ~ 999	P7 Command; Note1
8-4	CS_cust_Gy	= ?	000 ~ 999	P7 Command; Note1
8-5	CS_cust_Bx	= ?	000 ~ 999	P7 Command; Note1
8-6	CS_cust_By	= ?	000 ~ 999	P7 Command; Note1
8-7	CS_cust_Wx	= ?	000 ~ 999	P7 Command; Note1
8-8	CS_cust_Wy	= ?	000 ~ 999	P7 Command; Note1
8-9	CS_cust_Cx	= ?	000 ~ 999	P7 Command; Note1
8-10	CS_cust_Cy	= ?	000 ~ 999	P7 Command; Note1
8-11	CS_cust_Mx	= ?	000 ~ 999	P7 Command; Note1

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
8-12	**CS_cust_My**	**= ?**	**000 ~ 999**	**P7 Command; Note1**
8-13	**CS_cust_Yx**	**= ?**	**000 ~ 999**	**P7 Command; Note1**
8-14	**CS_cust_Yy**	**= ?**	**000 ~ 999**	**P7 Command; Note1**
0.1	**picture.mute**	**= ?**	**0 = Off** **1 = On**	
0.2	**power.on**	**(execute)**		
0.3	**power.off**	**(execute)**		
0.4	**text.mode**	**= ?**	**0 = Off** **1 = On**	**Note14**
0.5	**status**	**?**	**0 = standby** **1 = warm up** **2 = imaging** **3 = cooling** **4 = warning**	

Barco RLM W8 Operation Commands				
Command Item	**Operation**	**Commands**	**Values**	**Notes**
0.6	**errcode**	**?**	**0=ErrMsgOverTempInlet: 1=ErrMsgOverTempDMD: 2=ErrMsgOverTempLamp1: 3=ErrMsgOverTempLamp2: 4=ErrMsgOverTempBallast1: 5=ErrMsgOverTempBallast2: 6=ErrMsgFanInitError: 7=ErrMsgFan1RotateError: 8=ErrMsgFan2RotateError: 9=ErrMsgFan3RotateError: 10=ErrMsgFan4RotateError: 11=ErrMsgFan5RotateError: 12=ErrMsgFan6RotateError: 13=ErrMsgFan7RotateError: 14=ErrMsgFan8RotateError: 15=ErrMsgDMDInitFail: 16=ErrMsgLampInitFail: 17=ErrMsgLampLitFail: 18=ErrMsgBallastUartError: 19=ErrMsgExGpioFail: 20=ErrMsgInterLockOpen: 21=ErrMsgGF9450NoResponse: 22=ErrMsgSystemI2cFail: 23=ErrMsgSoftwareI2cFail: 24=ErrMsgEepromFail: 25=ErrMsgEdidFail: 26=ErrMsgEepVersionFail: 27=ErrMsgRstGennum: 28=ErrMsgFan9RotateError: 29=ErrMsgFan10RotateError: 30=ErrMsgFan11RotateError: 31=ErrMsgFan12RotateError: 32= ErrMsgLamp2LitFail: 33= ErrMsgBallast2UartError: 34=ErrMsgGtInletTp: 35=ErrMsgGtDmdTp, 36=ErrMsgInletTempSensorFail, 37=ErrMsgDMDTempSensorFail, 38=ErrMsgGeoSystemFail**	
0.7	**f.search**	**= ?**	**0 = F1 Search 1 = F2 Search (default)**	

REMARK: An input command will get back with "NA" when the input command is "Not Applicable" in some specific conditions.

Note1: Not applicable in standby mode.

Note2: Not applicable in standby mode or without signal locked.

Note3: Not applicable when picture mute is on.

Note4: Only valid when source is one of Composite, S-Video and RGB-S.

Note5: Native aspect ratio is not applicable when zoom is set to "Zoom", Letterbox aspect ratio is not applicable when the input format is one of formats as listed in appendix 2.

Note6: Selection "Zoom" is not applicable when aspect ratio is set to Native.

Note7: Only applicable when source is one of RGB D-15, YUV1 and RGBHV/YUV2.

Note8: Not applicable when color space is set to custom.

Note9: pip.sel can NOT be set to 0.

Note10: Not applicable when pip is off.

Note11: Not applicable when lamp is cooling.

Note12: Not applicable when eco.net.pow is on.

Note13: Only MCU version number will be read back in standby mode.

Note14: Not applicable when the internal pattern is displayed.

Note15: The summation of the absolute value of h.keystone and v.keystone should not be greater than 350.

Note16: Per Geo Semi's specification, the minimum blend size is 200, values in the range 1 ~ 99 are not allowed if no 4-corner adjustment, values in the range 1~ 199 are not allowed if there is 4-corner adjustment.

Note17: Per Geo Semi's specification, black level (position) adjustment will only work with an active white level setting on the corresponding side.

Note18: When scen.red, scen.green, scen.blue values are not equal, the command will get back "NA" in reading.

Appendix 1:

		Main Select								
		HDMI 1	HDMI 2	RGB D-15	YUV 1	RGBHV / YUV 2	Composite Video	S-Video	RGB-S	SDI/HDSDI/3G
PIP Select	HDMI 1		-	O	O	O	O	O	O	-
	HDMI 2	-		O	O	O	O	O	O	-
	RGB D-15	O	O		-	-	O	O	O	O
	YUV 1	O	O	-		-	O	O	-	O
	RGBHV / YUV 2	O	O	-	-		O	O	-	O
	Composite Video	O	O	O	O	O		-	-	O
	S-Video	O	O	O	O	O	-		-	O
	RGB-S	O	O	O	-	-	-	-		O
	SDI/HDSDI/3G	-	-	O	O	O	O	O	O	
O	Source Available									
-	NA									

Appendix 2:

Input Format:

640x480_75Hz_VGA:

640x480_85Hz_VGA:

800x600_75Hz_SVGA:

800x600_85Hz_SVGA:

1024x768_75Hz_XGA:

1024x768_85Hz_XGA:

1280x1024_75Hz_SXGA:

1280x1024_85Hz_SXGA:

1400x1050_75Hz

Appendix 3:

The allowable combinations of warp, blanking and ScenergiX were summarized as the following table

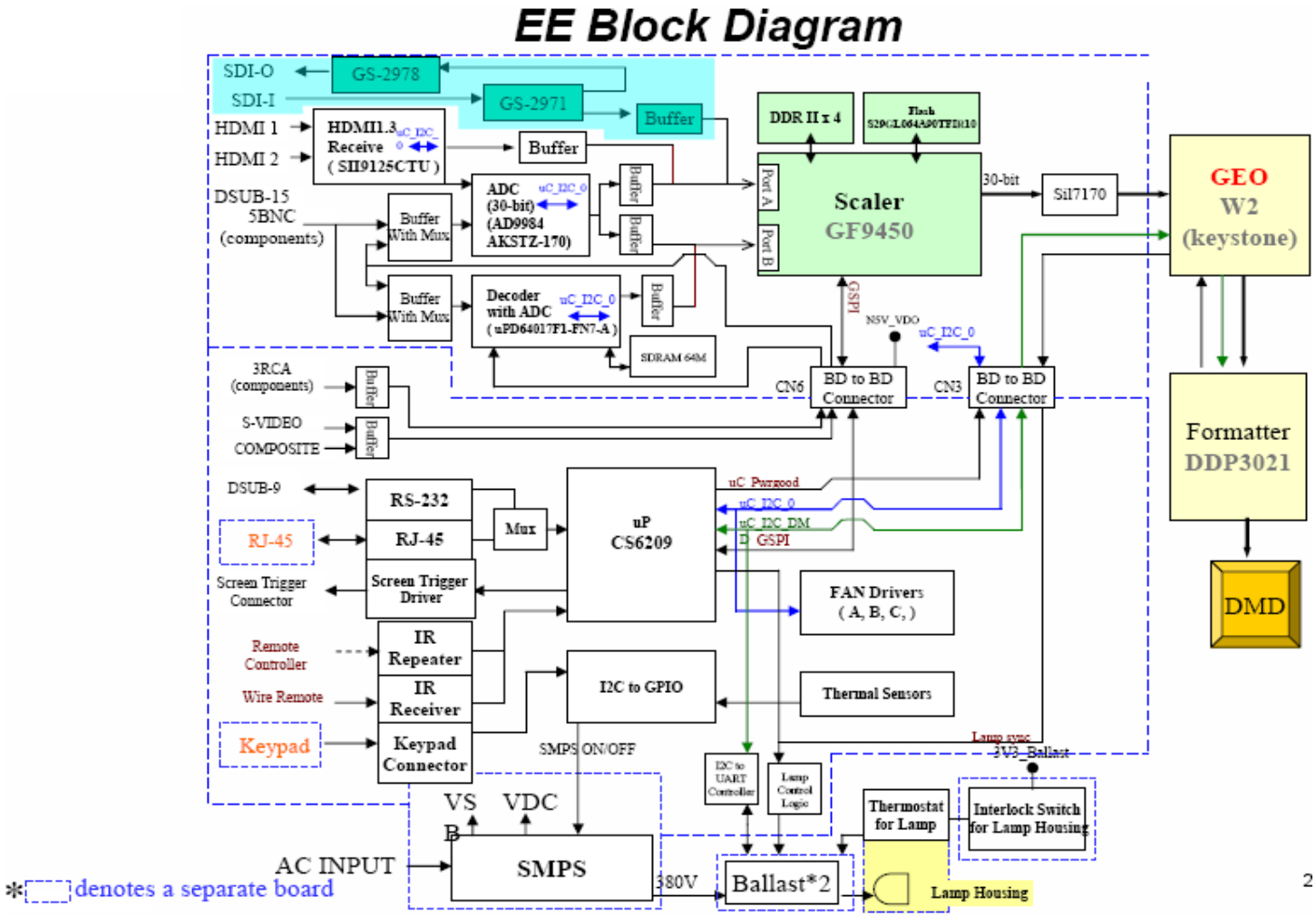
X indicates a not-allowed combination

OK indicates a allowed combination

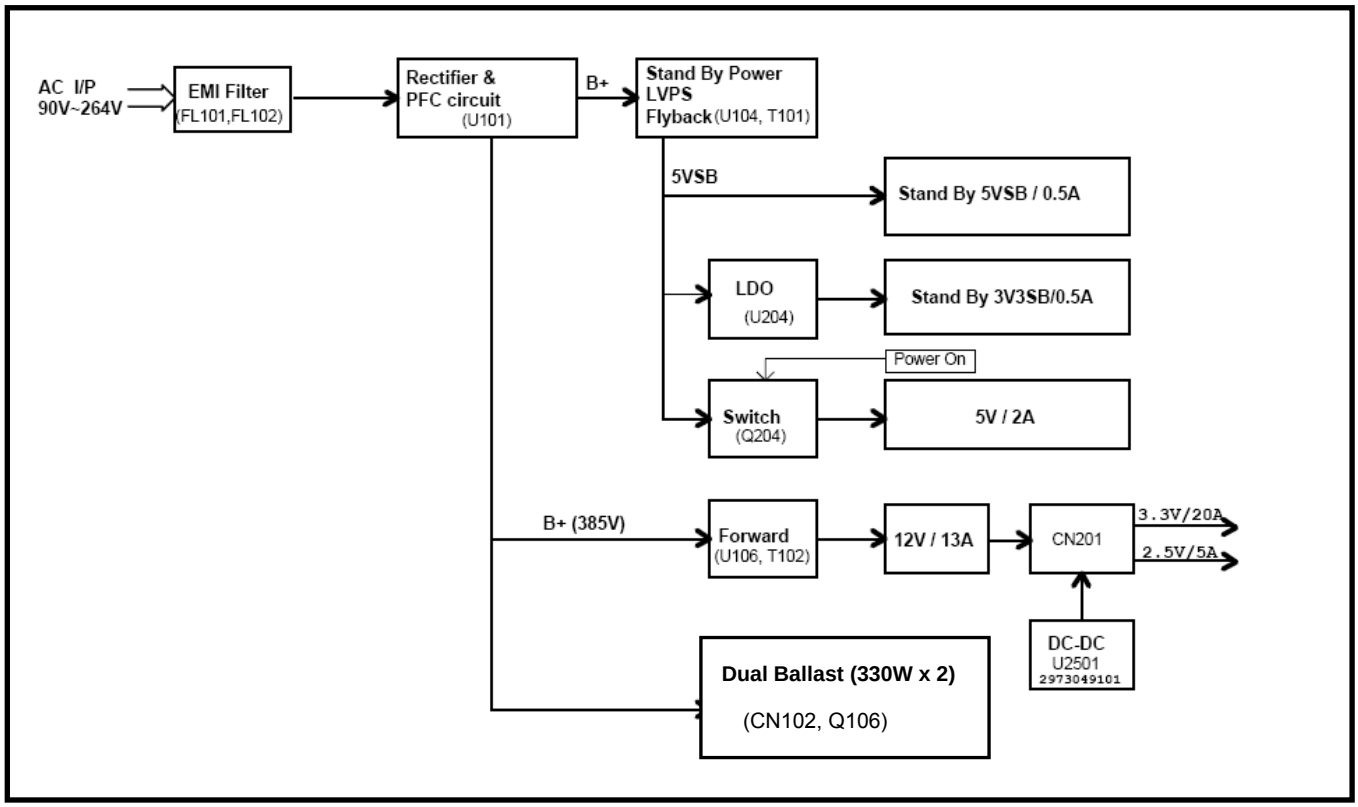
								ScenergiX		
								White Level		Black Level
			Keystone	Rotation	Pin/Barrel	4-corner	blanking	Top/Bottom or Left/Right only	Blend along corners	Black Level
		Keystone		X	X	X	X	X	X	X
		Rotation	X		X	X	X	X	X	X
		Pin/Barrel	X	X		X	X	X	X	X
		4-corner	X	X	X		OK	OK	OK	X
		blanking	X	X	X	OK		OK	OK	OK
ScenergiX	White Level	Top/Bottom or Left/Right only	X	X	X	OK	OK			OK
		Blend along corners	X	X	X	OK	OK			X
	Black Level	Black Level	X	X	X	X	OK	OK	X	

● Block Diagram

■ All Function



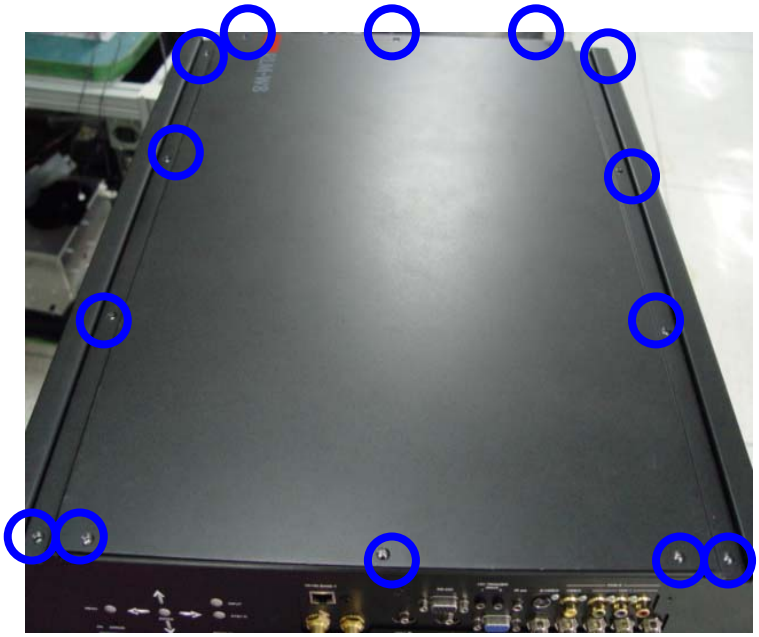
■ Power Function



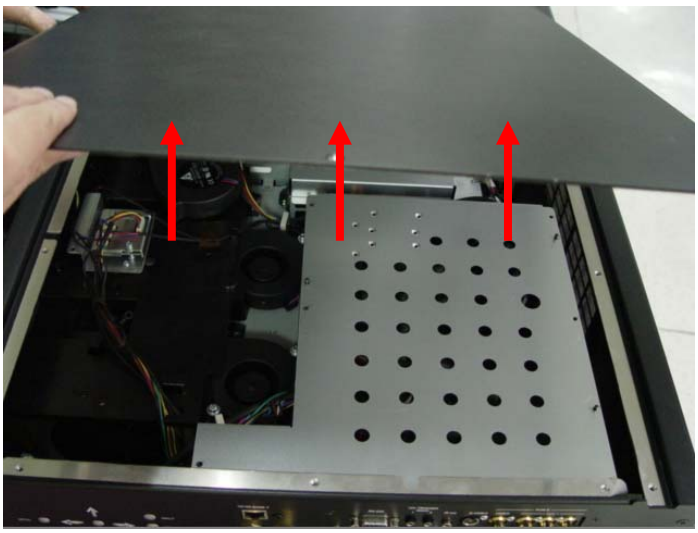
Replacing Procedures

1. Top cover disassembly

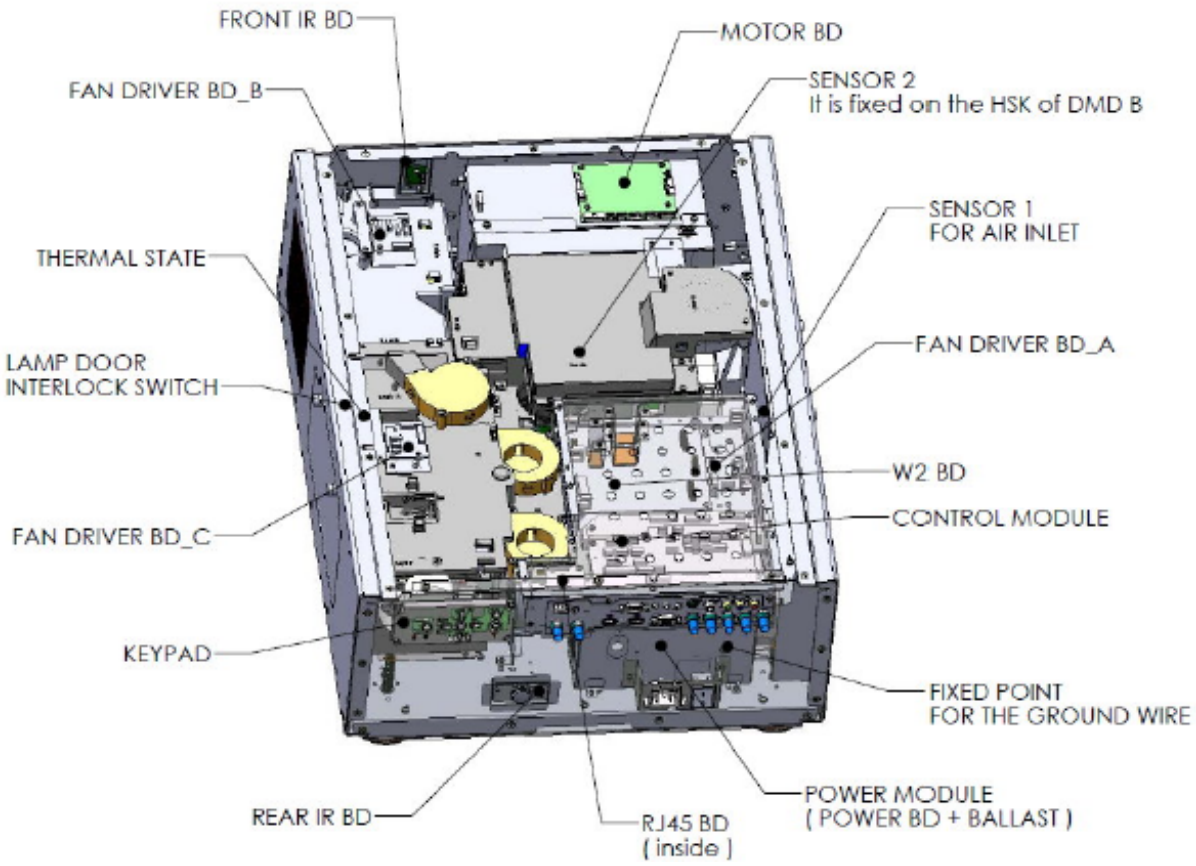
1. Loosen the 14 pcs M4*6 screws.



2. Open the top cover and take off the top cover.

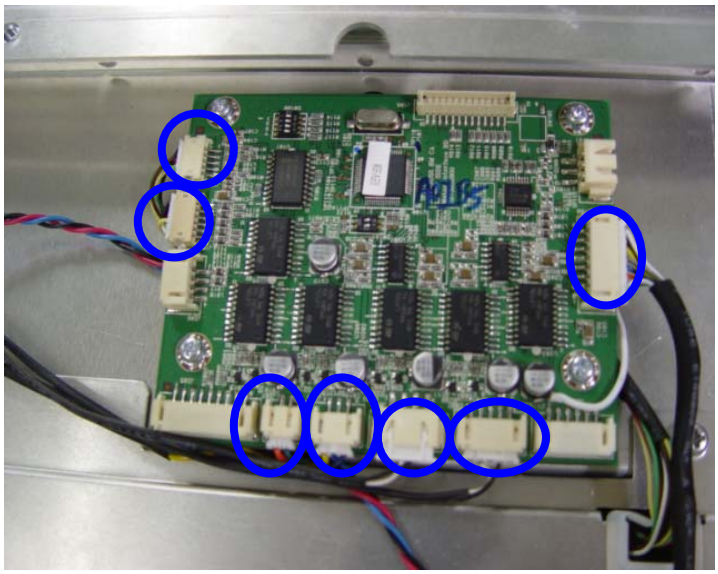


Board Location

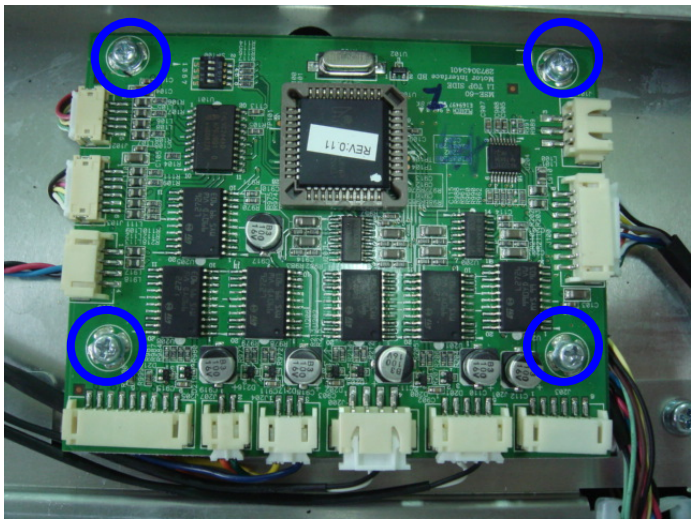


2. Exchange Motor board

1. Unplug the 7 pcs connectors on the motor board.

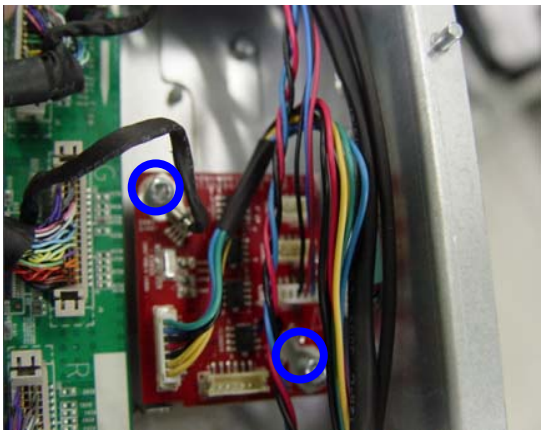


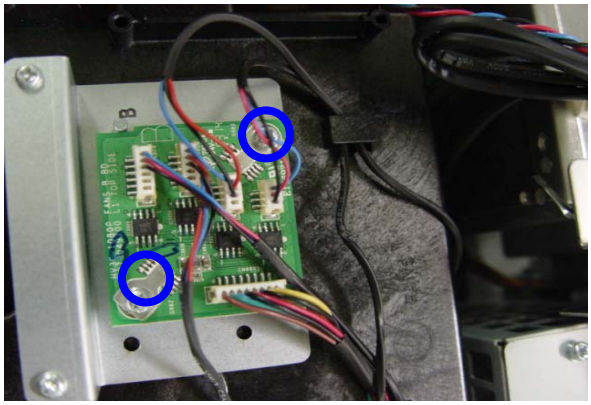
2. Loosen the 4 pcs M3*6 screws then you can exchange motor board.

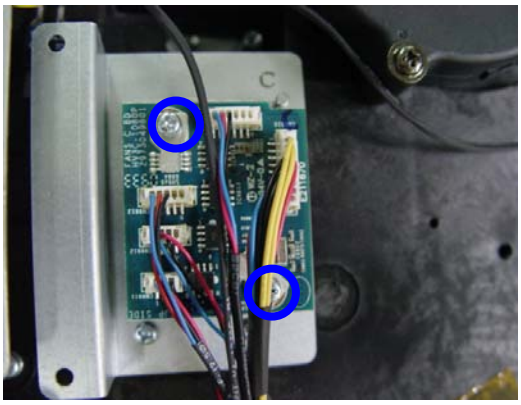


3. Exchange Fan A / Fan B / Fan C board

1. Loosen each 2 pcs M3*6 screws then you can exchange Fan A / Fan B / Fan C board.

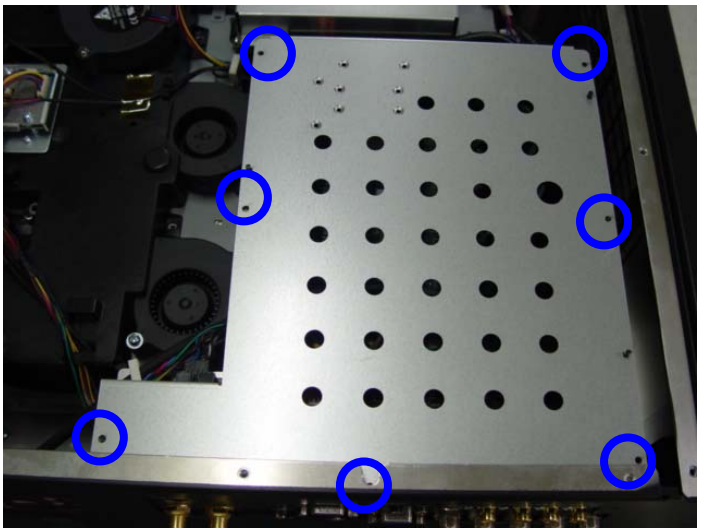




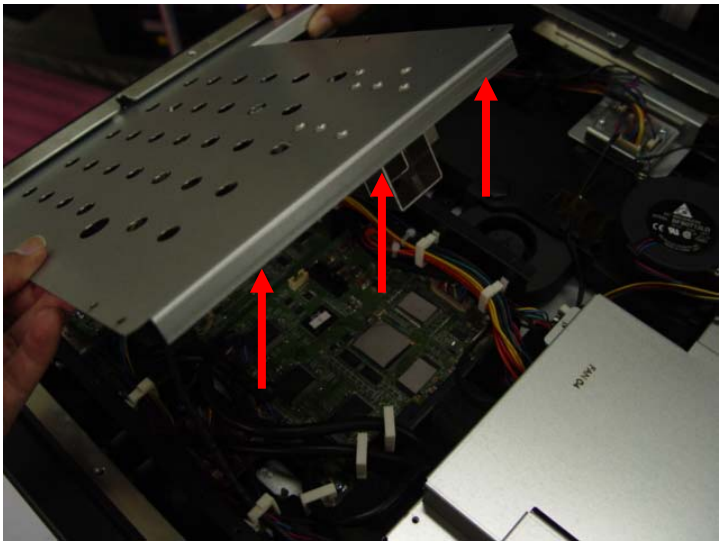


4. Exchange Micro control board / Video board / W2 board / RJ-45 board / Keypad board / IR board

1. Loosen 7 screws then take off the cover bracket.



2. Open the cover of control module and take off it.

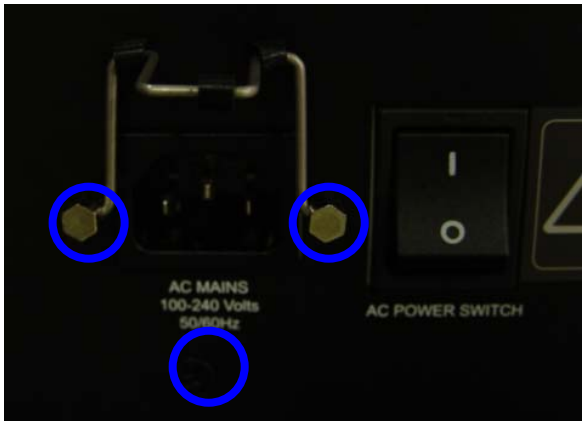


3. Loosen 4 pcs M4*6 screws on the right side of back cover.

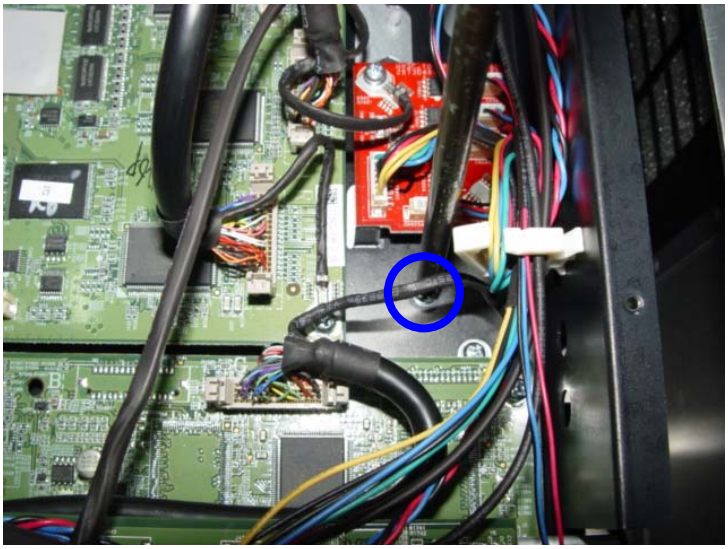
4. Loosen 3 pcs M4*6 screws on the terminal side of back cover.

5. Loosen 4 pcs M4*6 screws on the left side of back cover.

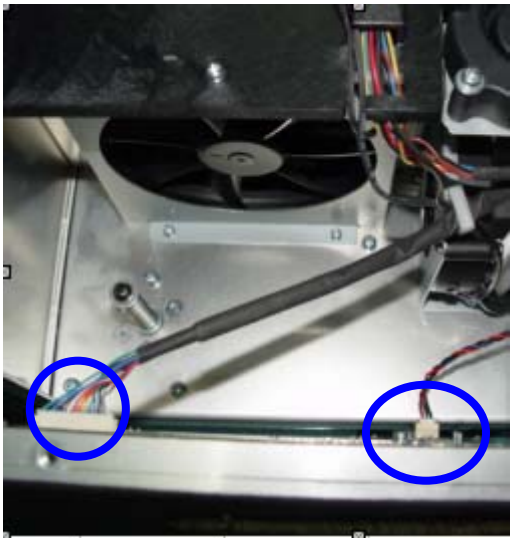
6. Loosen 2 pcs long hex-screws on the AC power of back cover and 2 pcs M4*6 screws on the bottom of back cover.



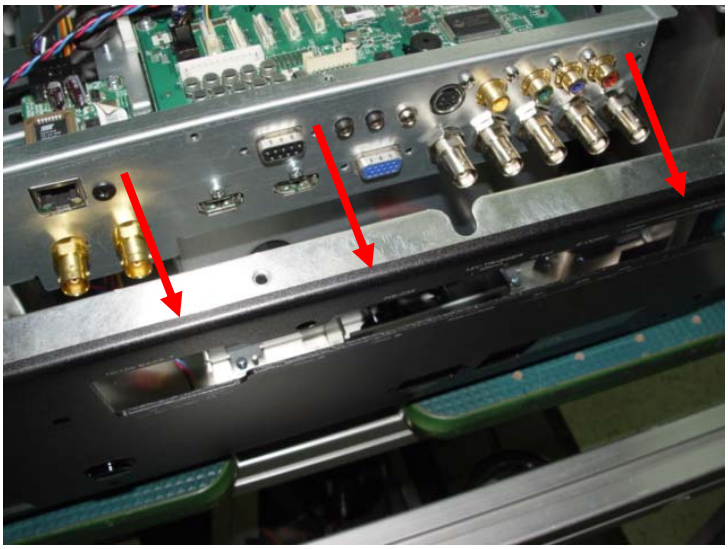
7. Loosen 1 pc M4*6 screw on the control module.



8. Unplug the 2 pcs connectors from back cover, and then tear down the back cover.

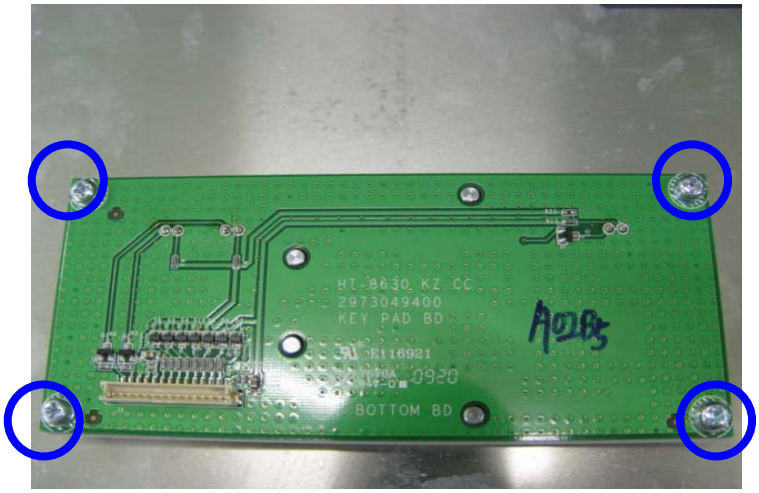


9. Pull the rear cover and take off it.

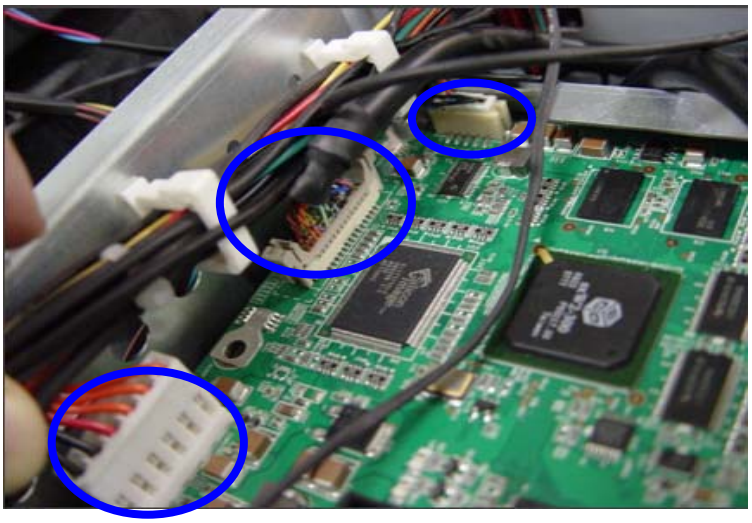


10. Loosen 1 pc M3*6 screw on the back cover, and then tear down the back IR board.

11. Loosen 4 pcs M3*6 screws on the back cover, and then tear down the Keypad board.

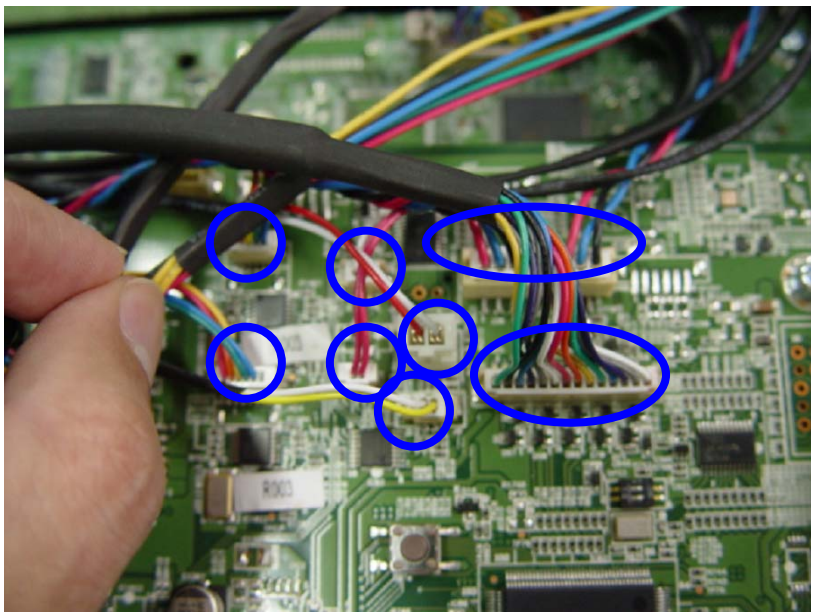


12. Unplug the 3 pcs connectors on the left side of W2 board.

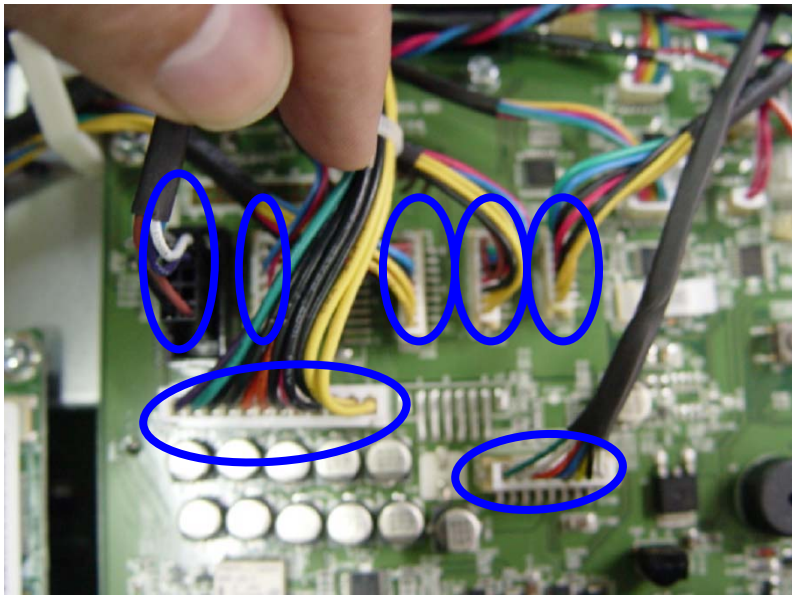


13. Unplug the 3 pcs connectors on the right side of W2 board.

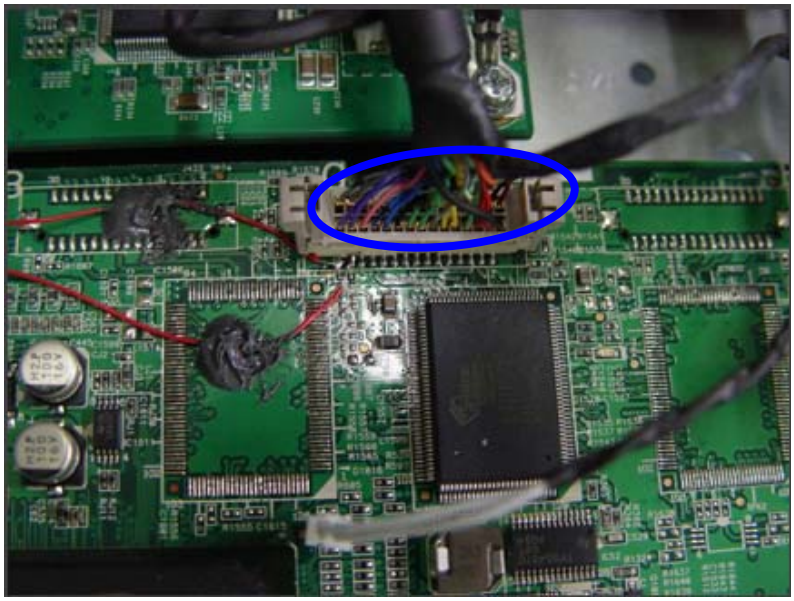
14. Unplug the 8 pcs connectors on the right side of Micro control board.



15. Unplug the 7 pcs connector on the left side of Micro control board.

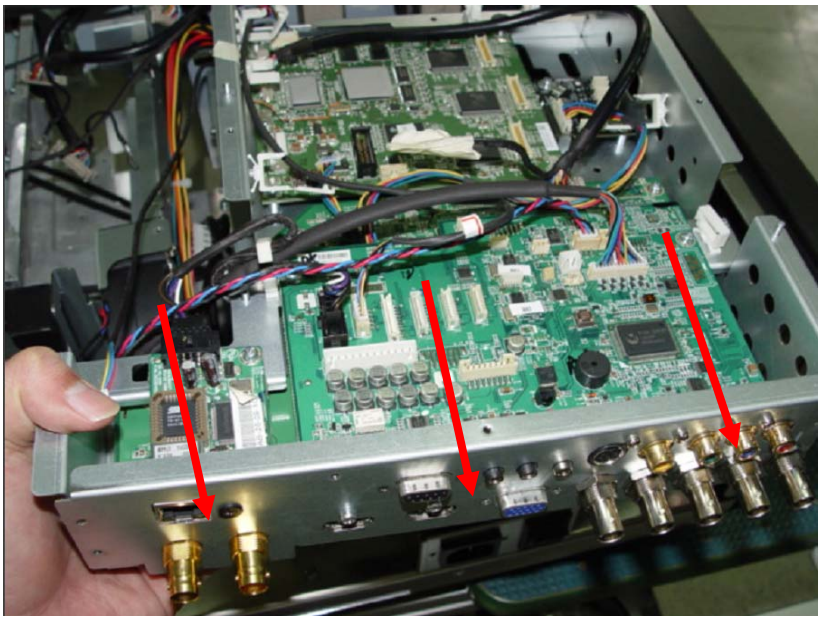


16. Unplug the 1 pc connector on the video board.

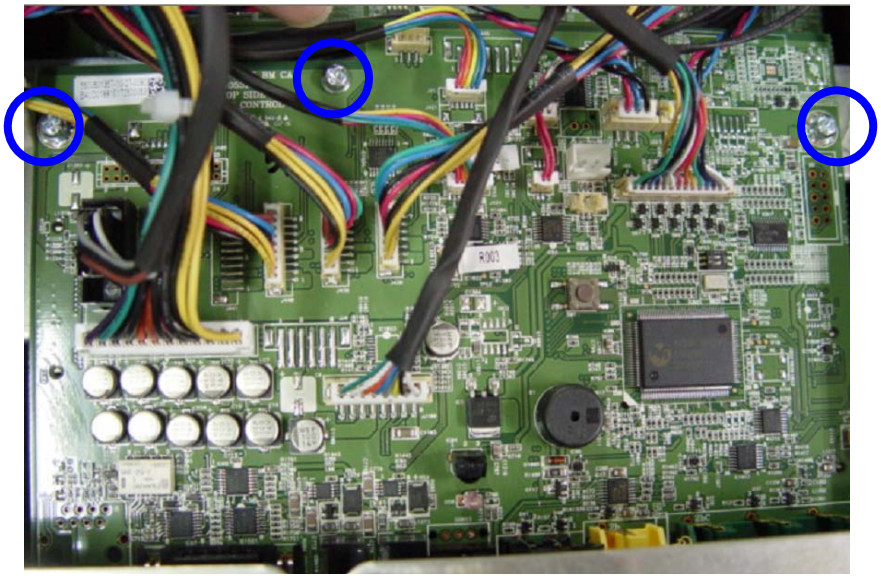


17. Loosen the 16 pcs screws on the rear cover.

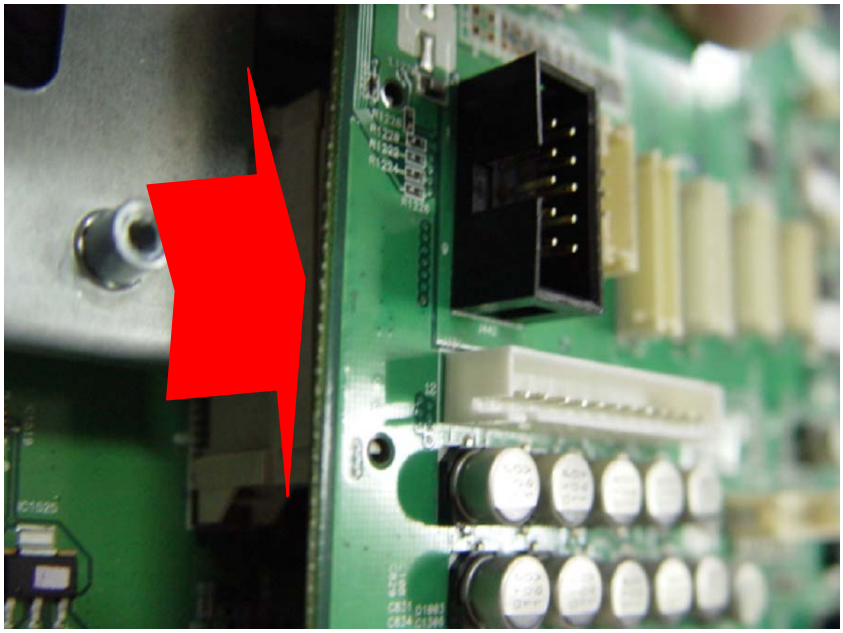
18. Pull the whole control module.



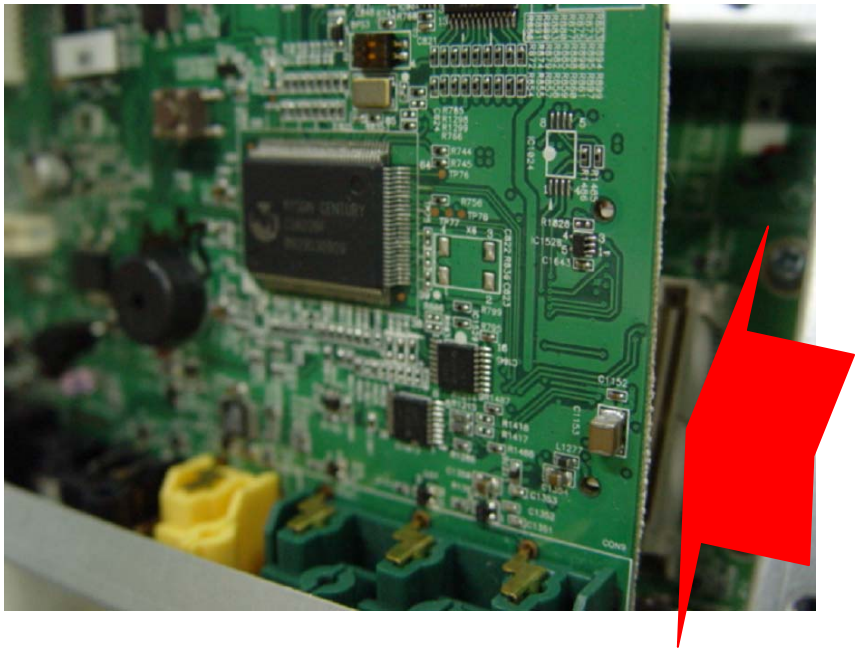
19. Loosen the 3 pcs M3*6 screws on the Micro control board.



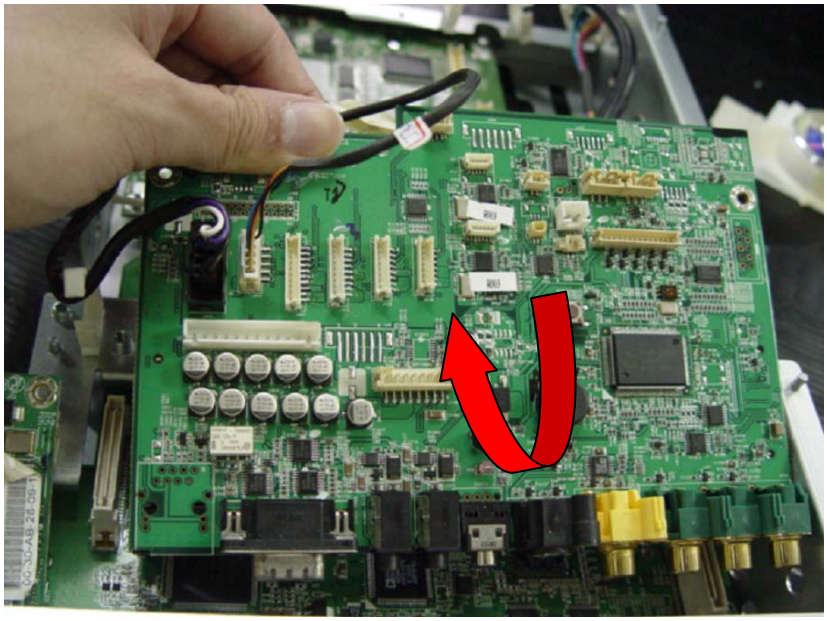
20. Disconnect the left connector under Micro control board.



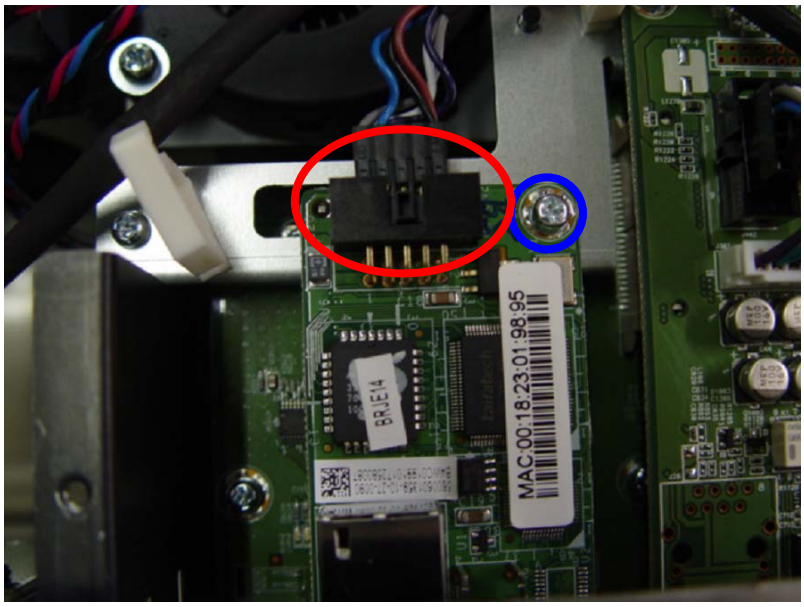
21. Disconnect the right connector under Micro control board.



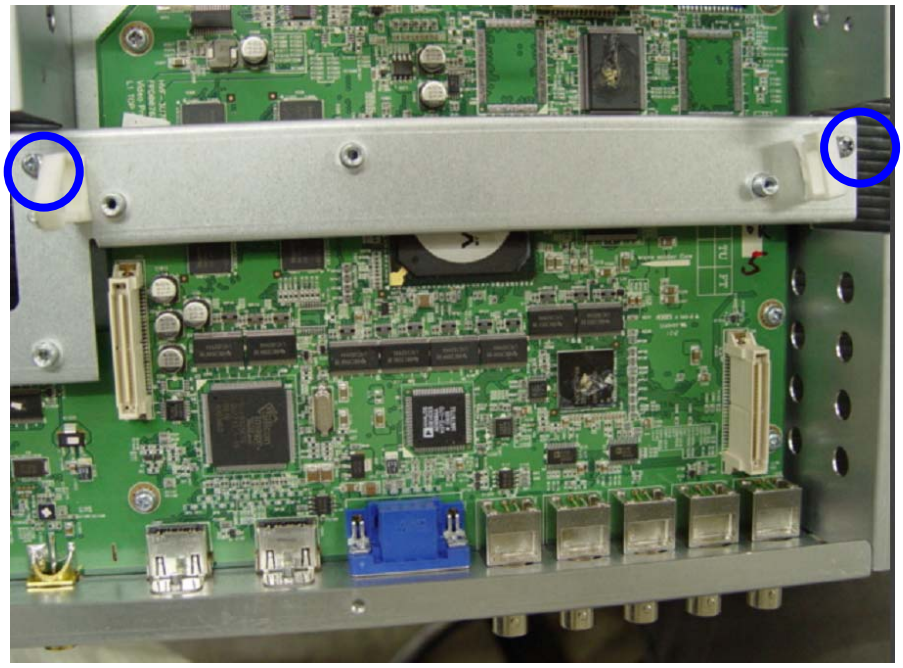
22. Pull the Micro control board.



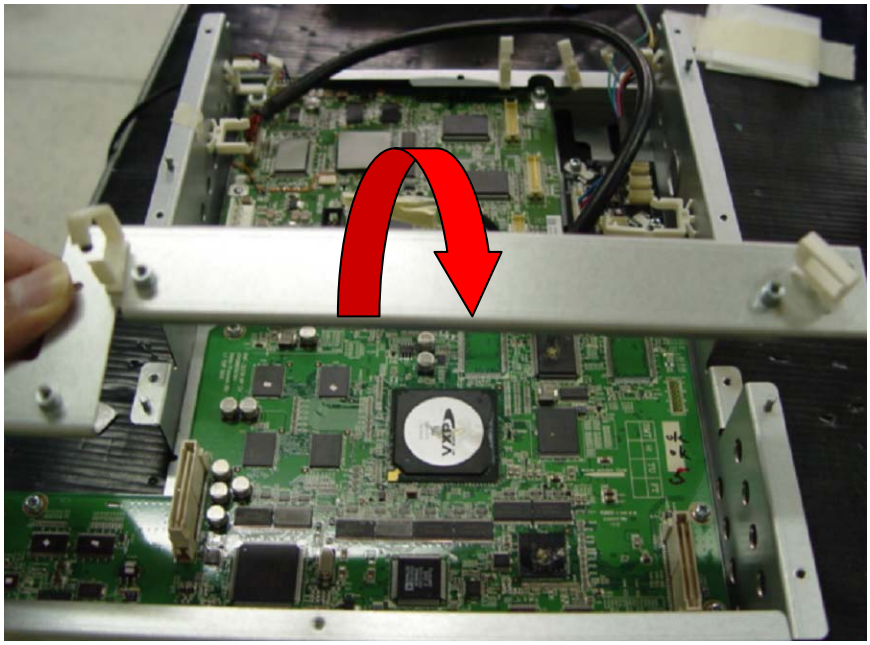
23. Unplug the connector and loosen 1 pc M3*6 screws on the RJ-45 board.



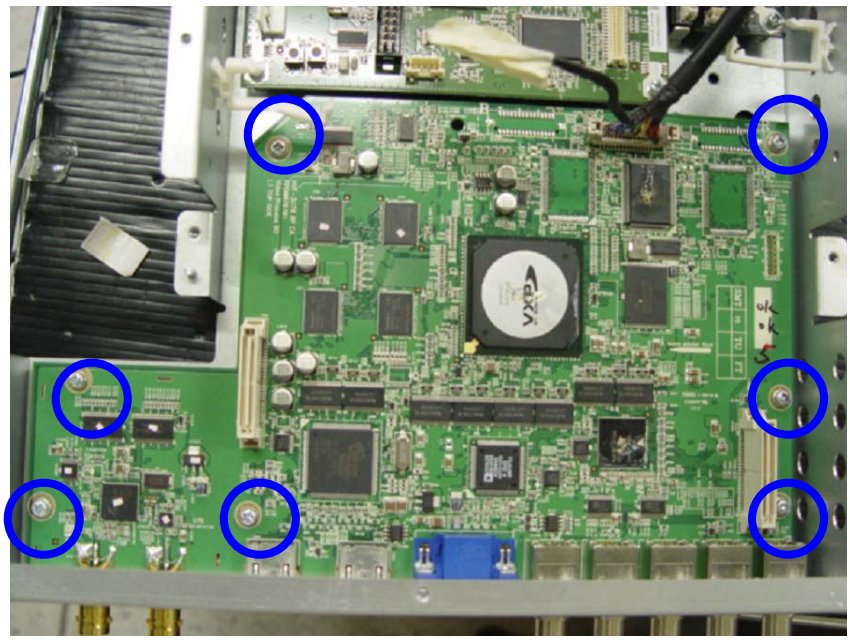
24. Loosen 2 pcs M3*6 screws on the bracket.



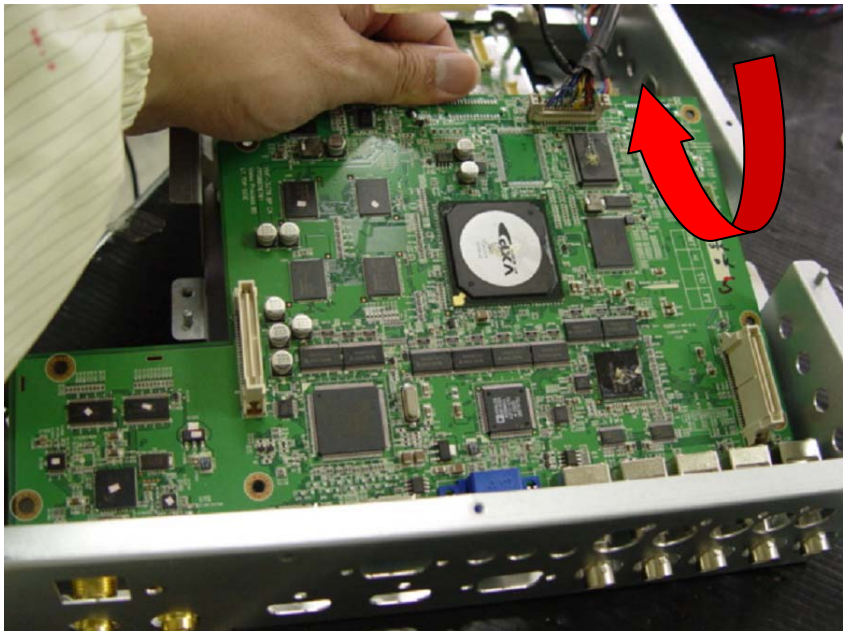
25. Strip down the bracket from control module.



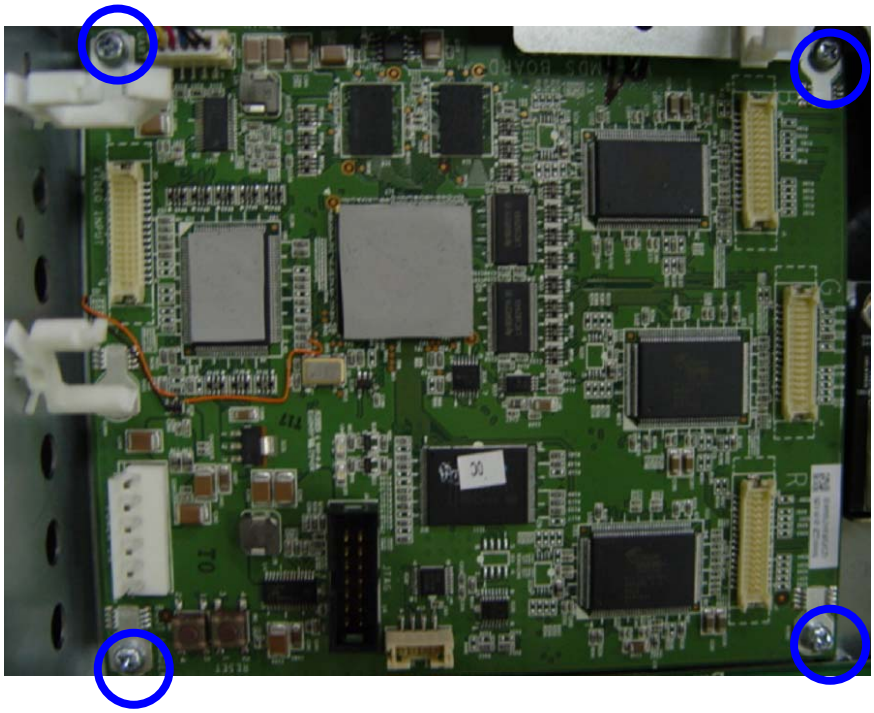
26. Loosen the 7 pcs M3*6 screws on the video board.



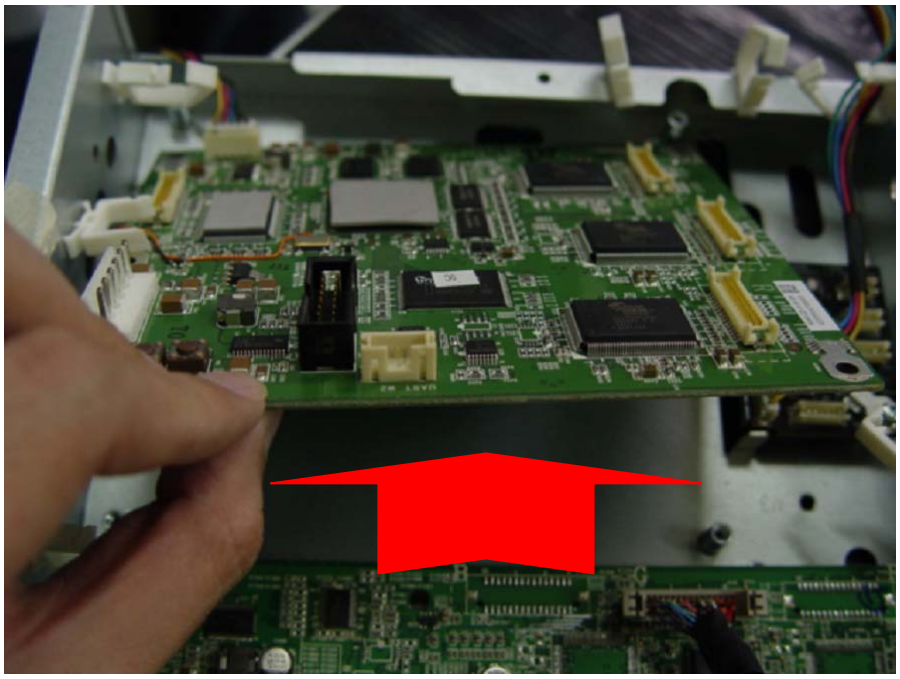
27. Strip down the video board.



28. Loosen the 4 pcs M3*6 screws on the W2 board.

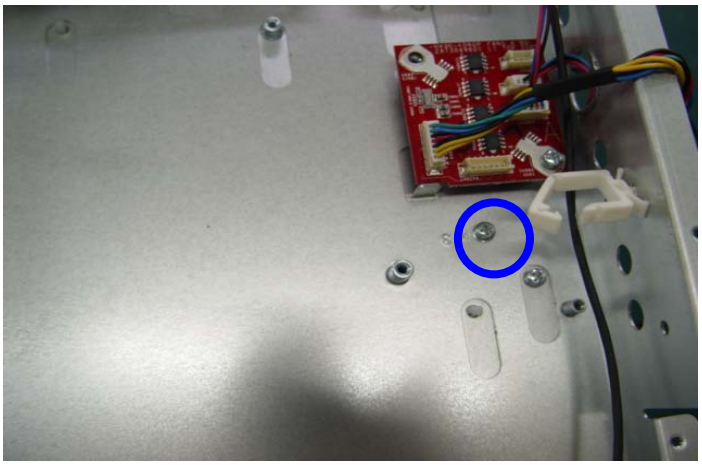


29. Strip down the W2 board.

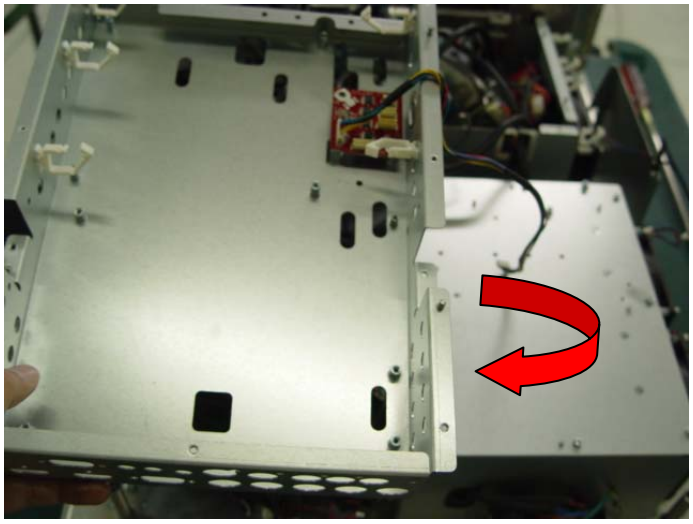


5. Exchange ballast board / power board

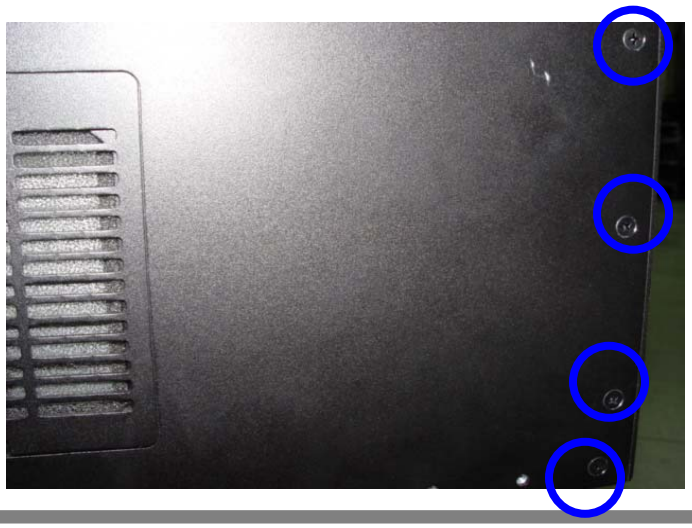
1. Remove the 1 pc M3*6 screws on the bracket.



2. Tear down and take off the bracket.

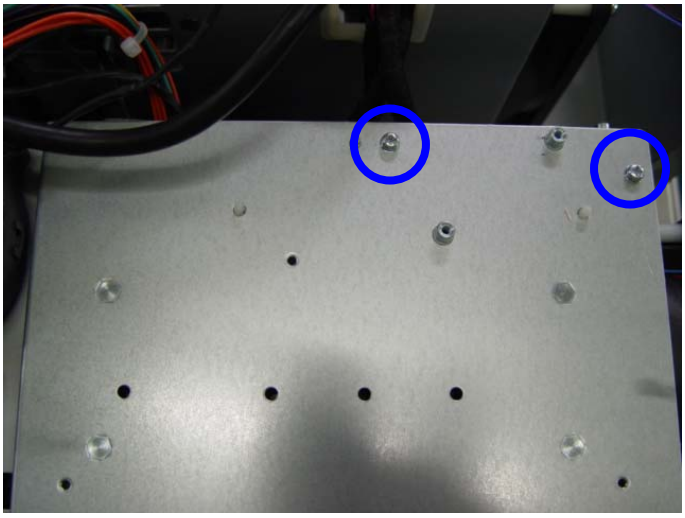


3. Loosen the 4 pcs M4*6 screws on right of right side cover of projector.

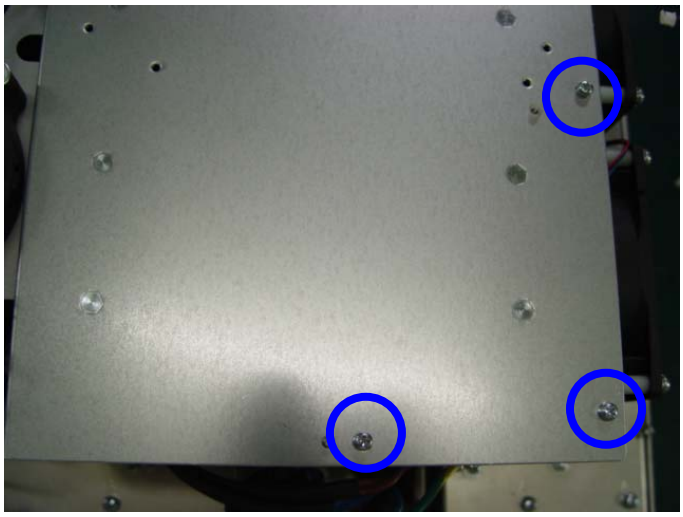


4. Loosen the 4 pcs M4*6 screws on bottom of right side cover of projector.

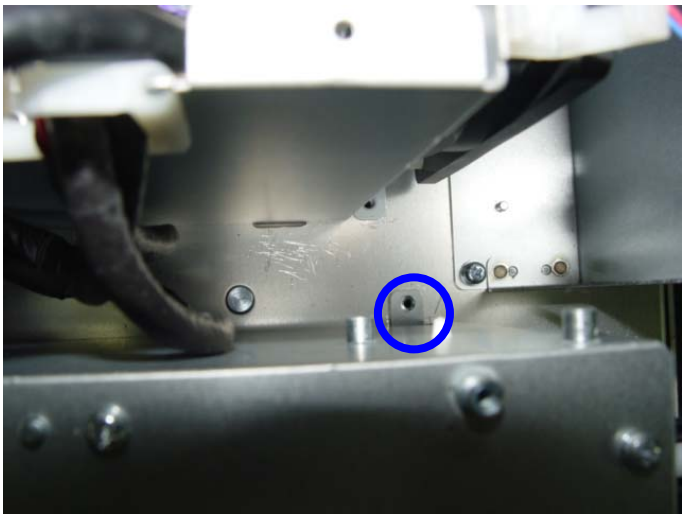
5. Loosen the 2 pcs M3*6 screws on surface of power module.



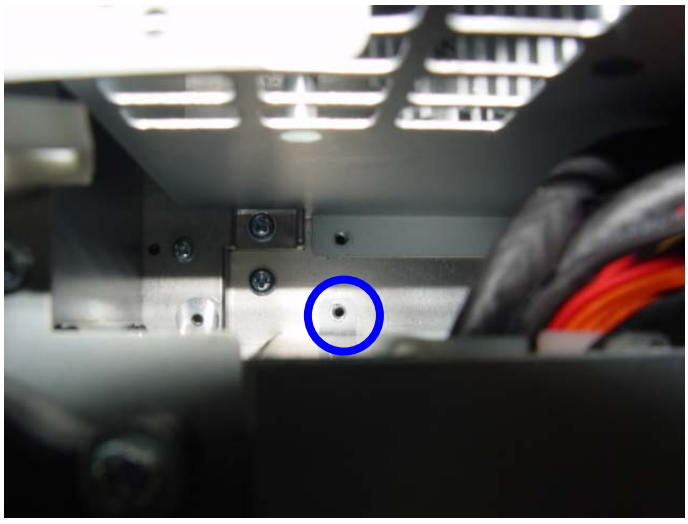
6. Loosen the other 3 pcs M3*6 screws on surface of power module.



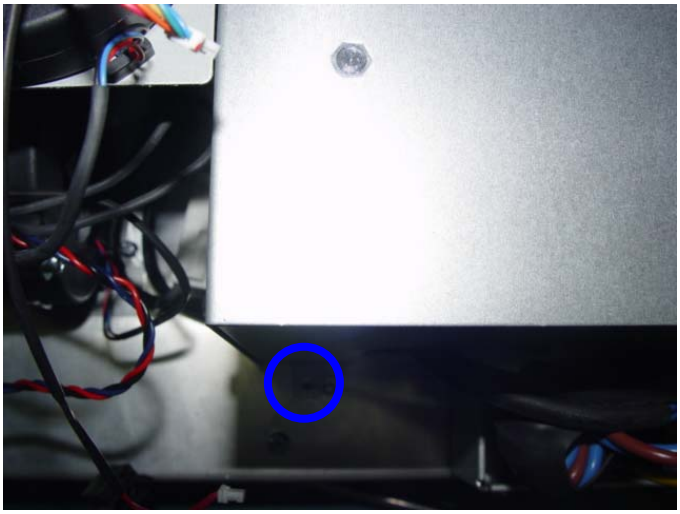
7. Loosen the 1 pc M3*6 screws on top right root of power module.



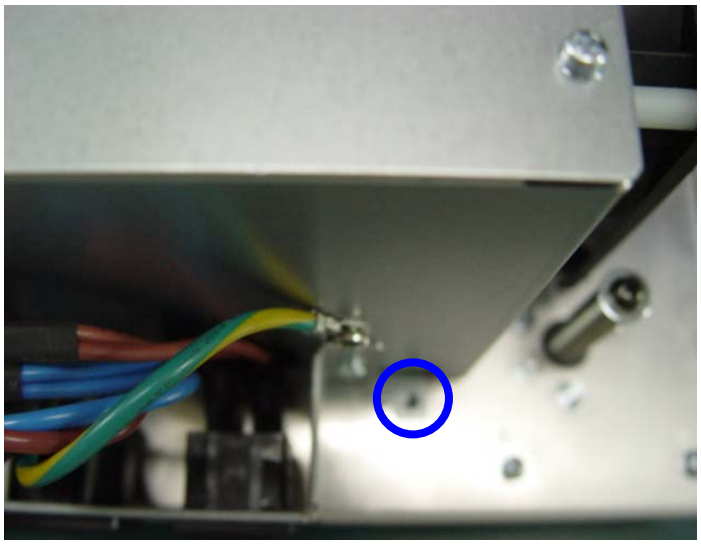
8. Loosen the 1 pc M3*6 screw on top left root of power module.



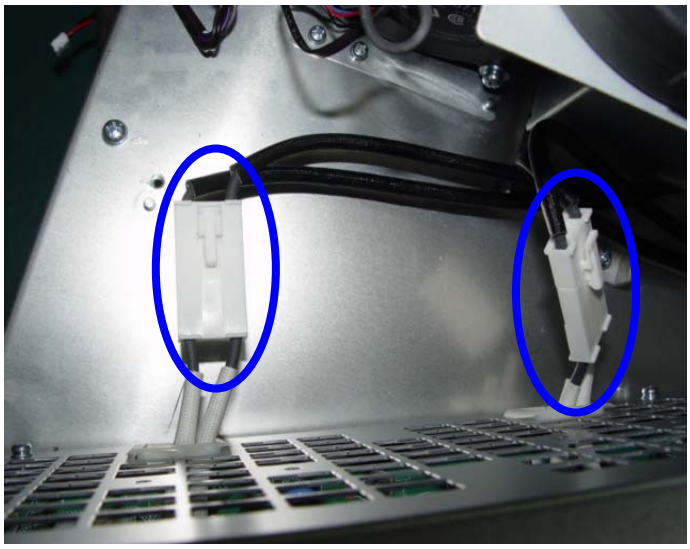
9. Loosen the 1 pc M3*6 screw on down left root of power module.



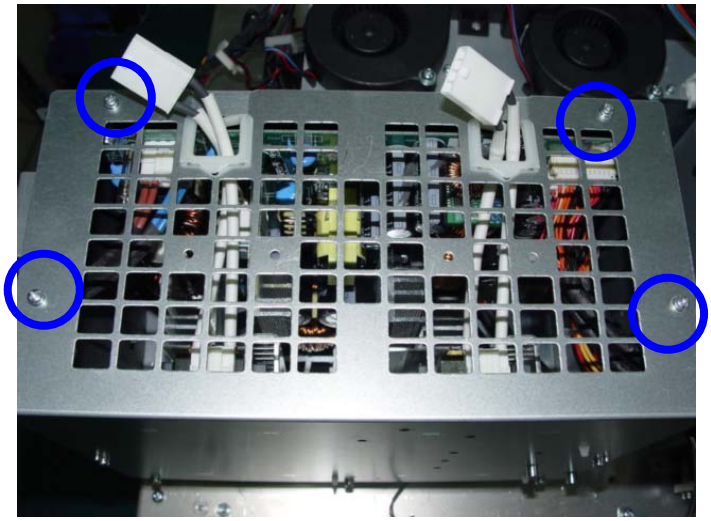
10. Loosen the 1 pc M3*6 screw on down right root of power module.



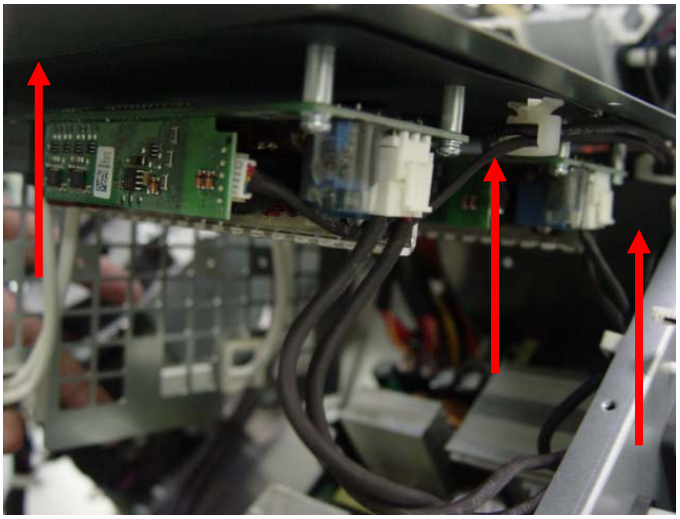
11. Unplug the 2 pcs lamp high-voltage connectors from power module.



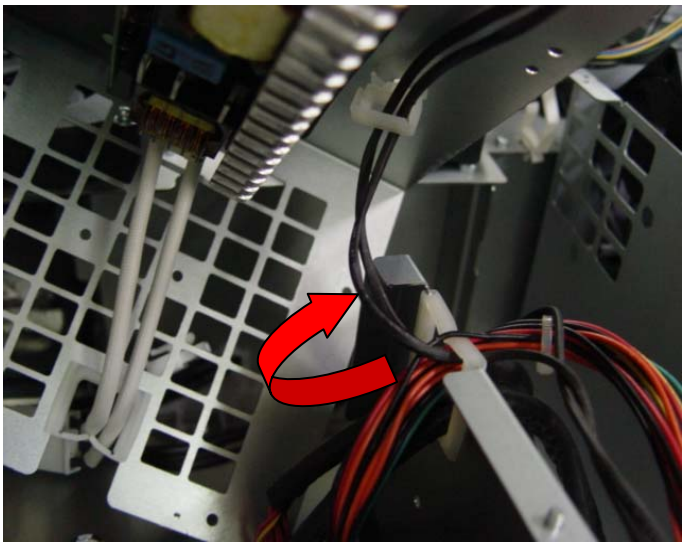
12. Loosen the 4 pcs M3*6 screws on side of power module.



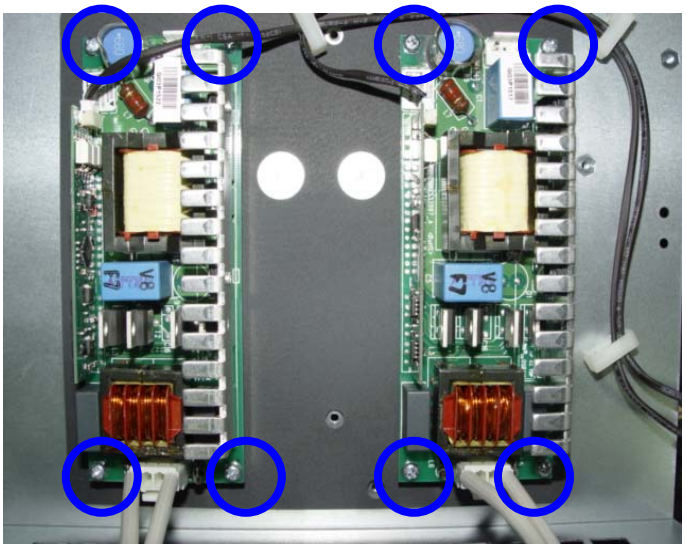
13. Open the top cover of power module upward.



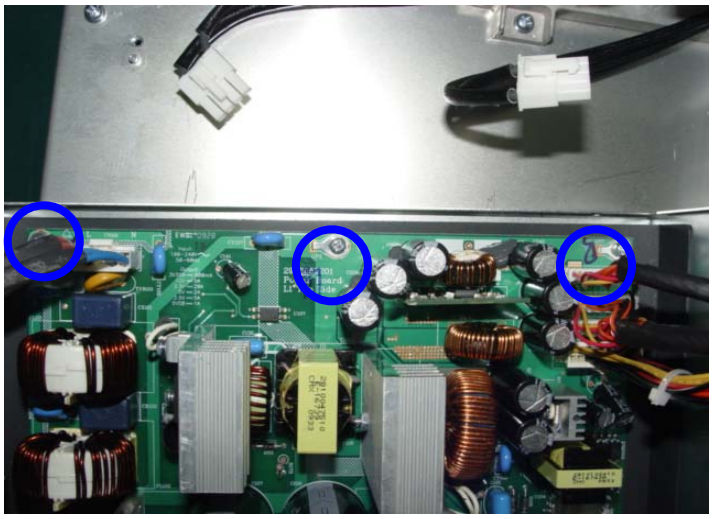
14. Be careful to pull the wire from indentation of power module.



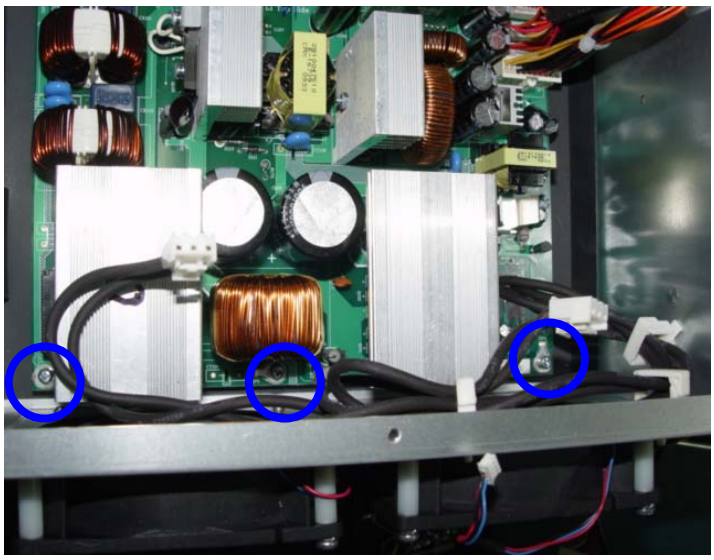
15. Unplug the 8 pcs M3*6 screws and tear down the 2 pcs ballasts.



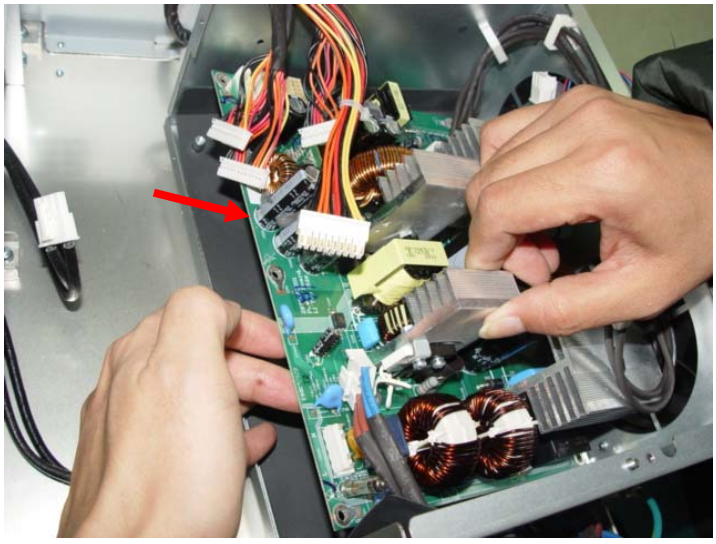
16. Loosen the 3 pcs M3*6 screws on the top of power board.



17. Loosen the 3 pcs M3*6 screws on the down of power board.



18. Tear down power board from power module.

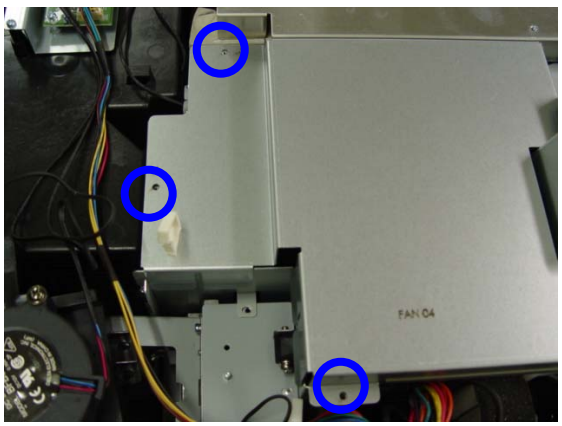


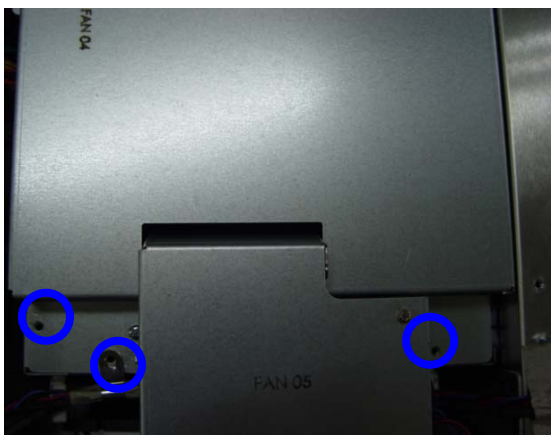
6. Exchange DMD Engine / Integrator System Assembly

1. Loosen the 4 pcs M4*6 screws on the left of left side cover of projector.

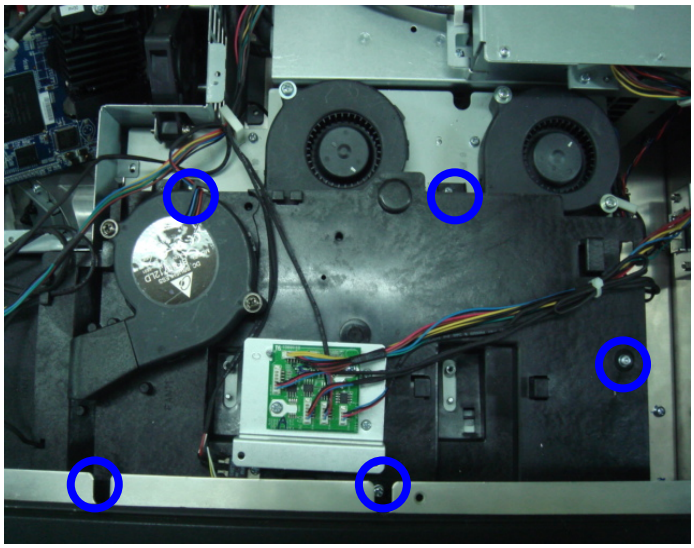
2. Loosen the 4 pcs M4*6 screws on the down of left side cover of projector.

3. Loosen 6 pcs M3*6 screws to remove bracket.

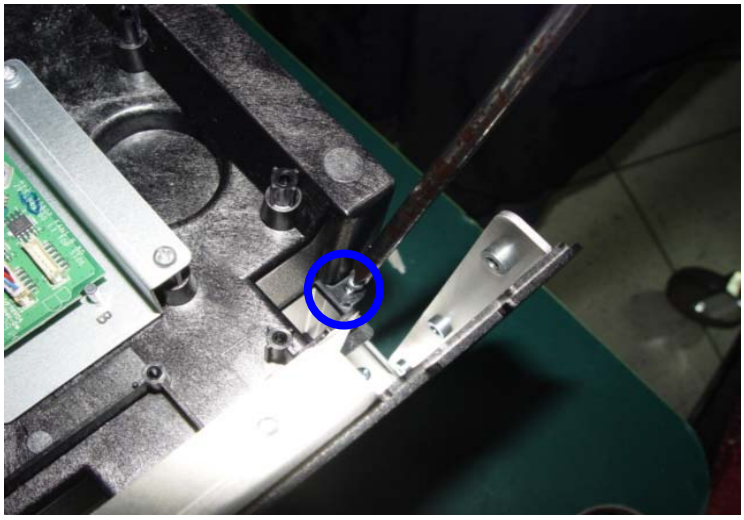




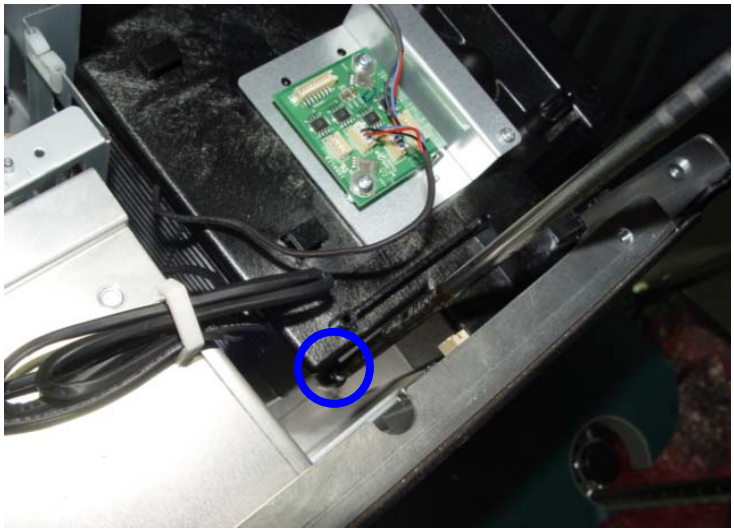
4. Loosen 5 pcs φ3*6 screws and take off the bracket.



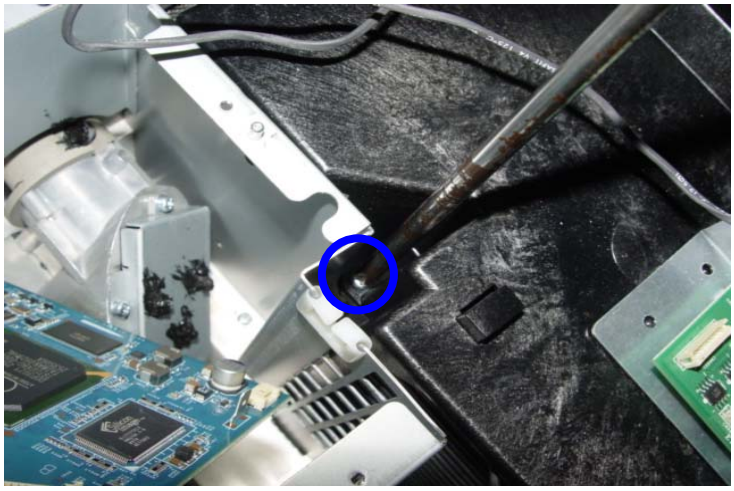
5. Loosen the 1 pc M3*6 screw near the front of Fan B board.



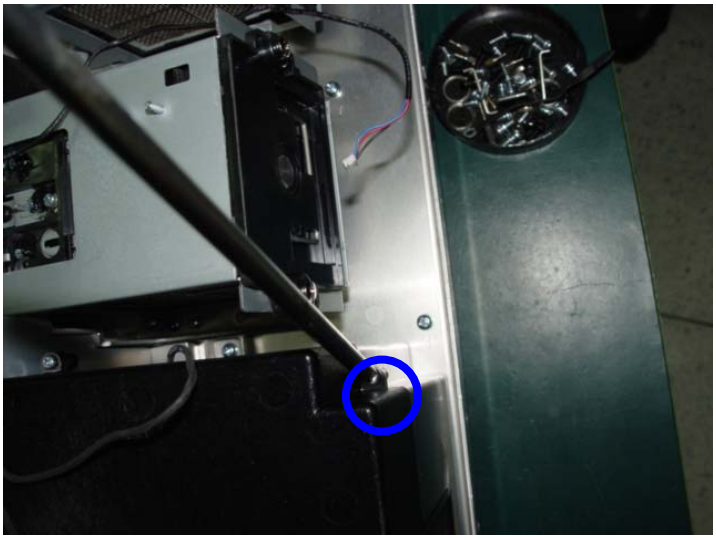
6. Loosen another 1 pc M3*6 screw near the front of Fan B board.



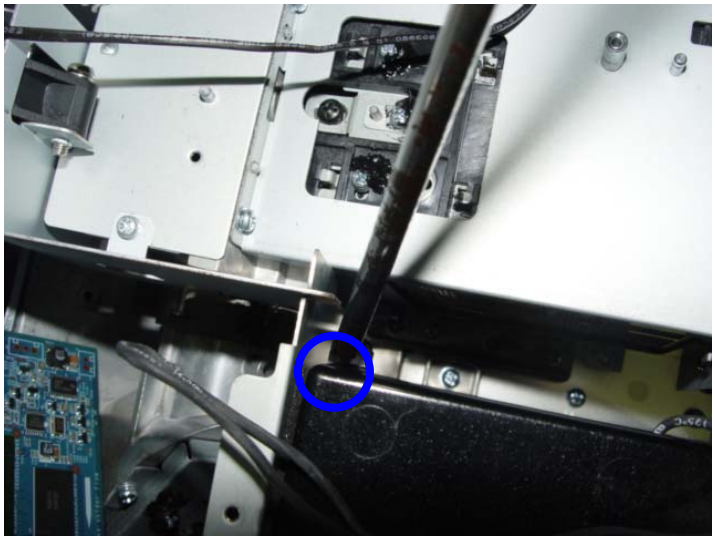
7. Loosen 1 pc M3*6 screw near the back of Fan B board.



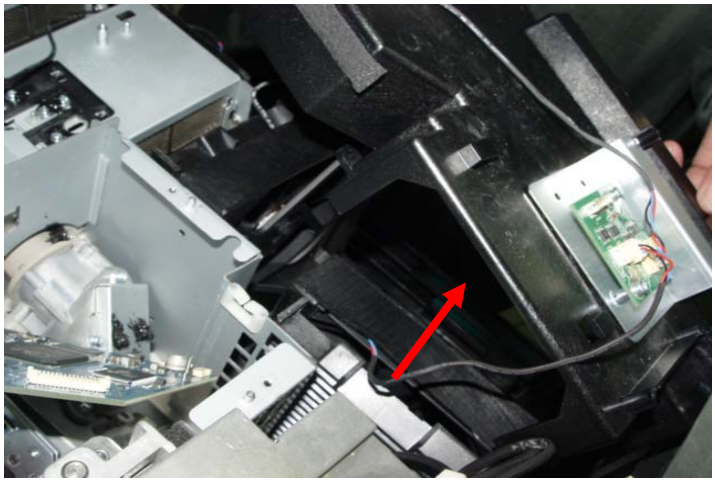
8. Loosen another 1 pc M3*6 screw near the back of Fan B board.



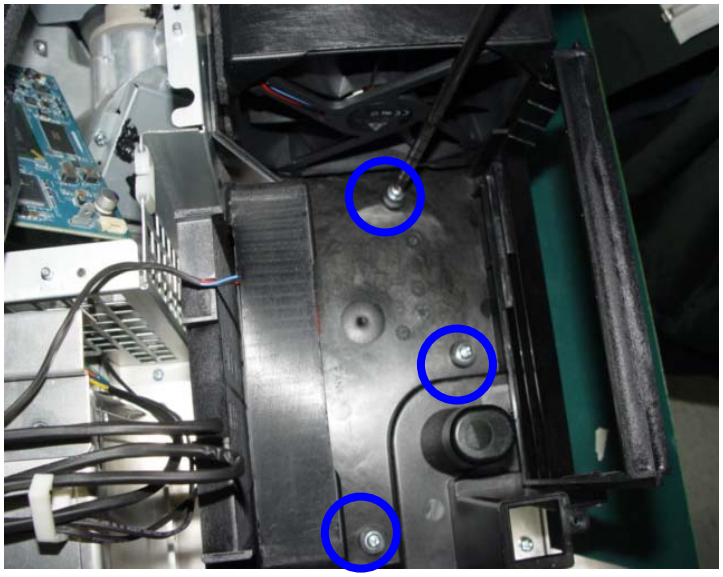
9. Loosen another 1 pc M3*6 screw near the back of Fan B board.



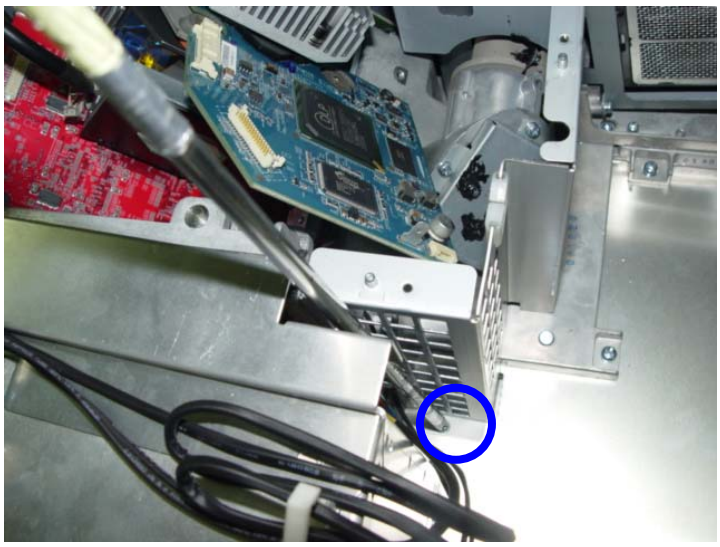
10. Take off the top cover module of air output.



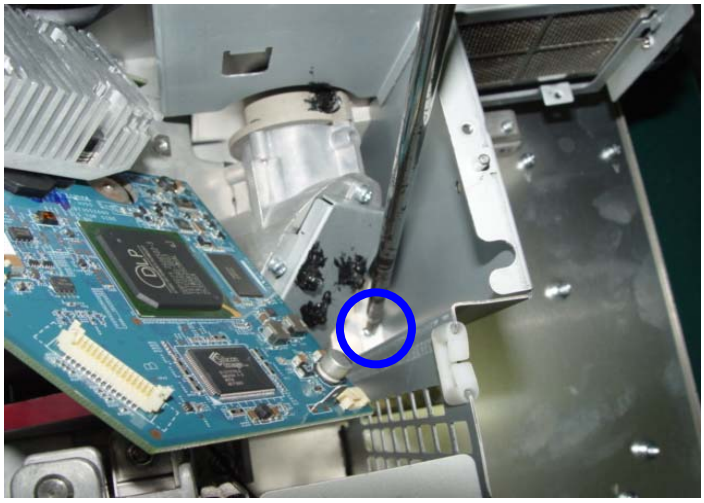
11. Loosen 3 pcs M4*10 screw and take off the bottom cover module of air output.



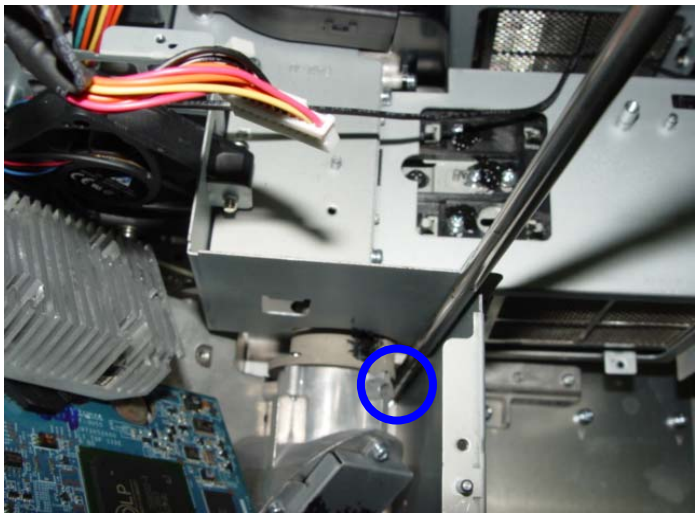
12. Loosen 1 pc M3*6 screw on bracket of FIP.



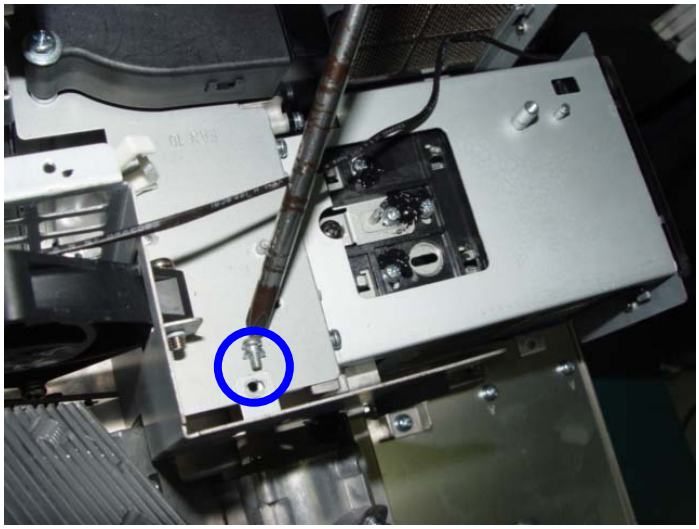
13. Loosen another 1 pc M3*6 screw on bracket of FIP.



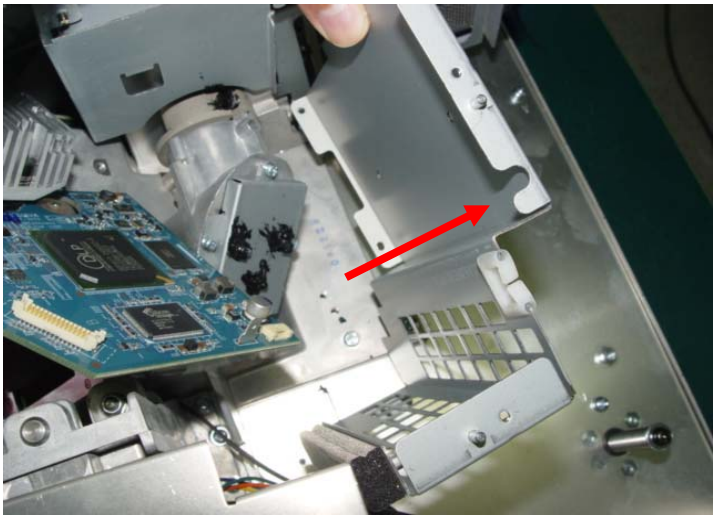
14. Loosen another 1 pc M3*6screw on bracket of FIP.



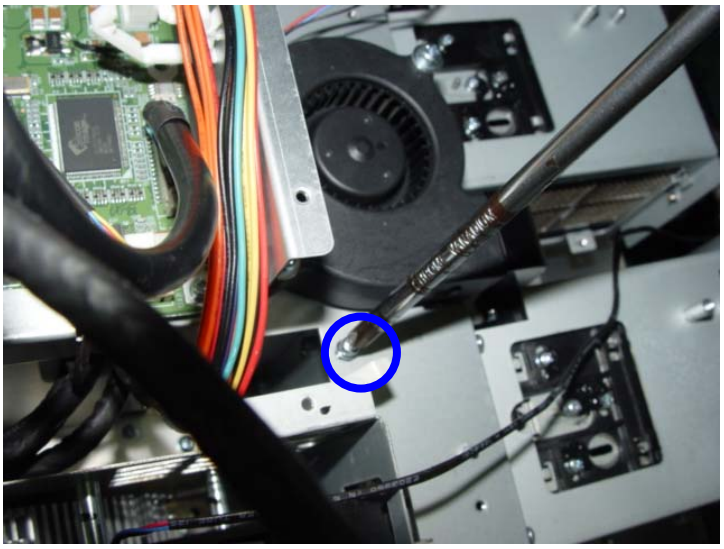
15. Loosen 1 pc M3*6 screw on the bracket of Fan 9 & Fan10 board.



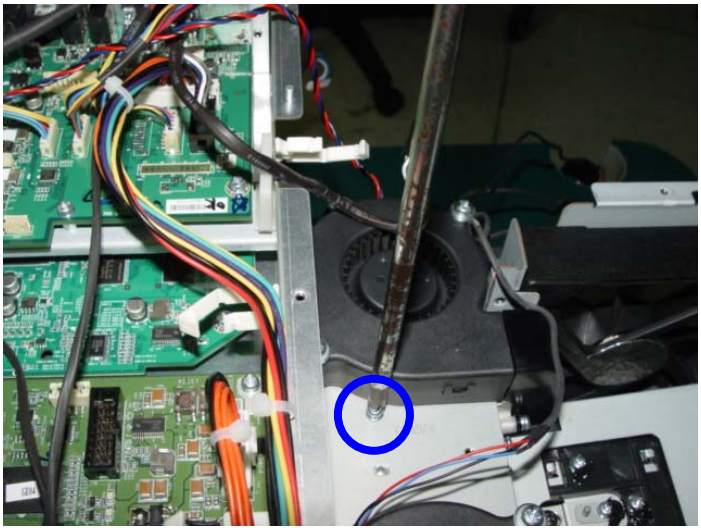
16. Take off the bracket of FIP.



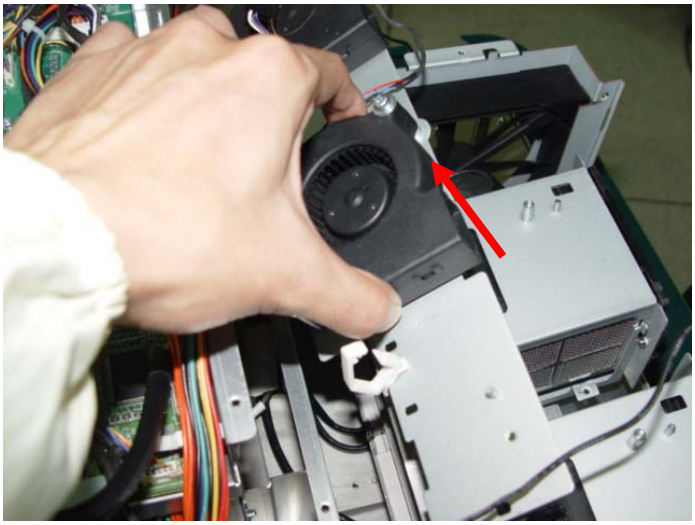
17. Loosen 1 pc M3*6 screw on the bracket of Fan 9 & Fan10 board.



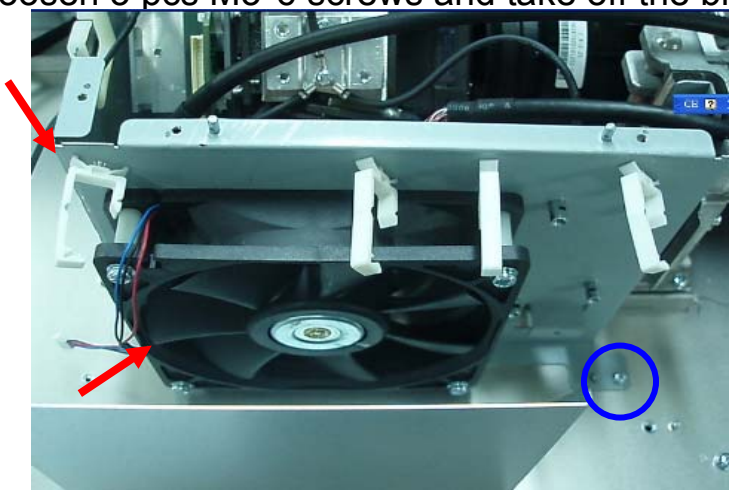
18. Loosen 1 pc M3*6 screw on the bracket of Fan 9 & Fan10 board.



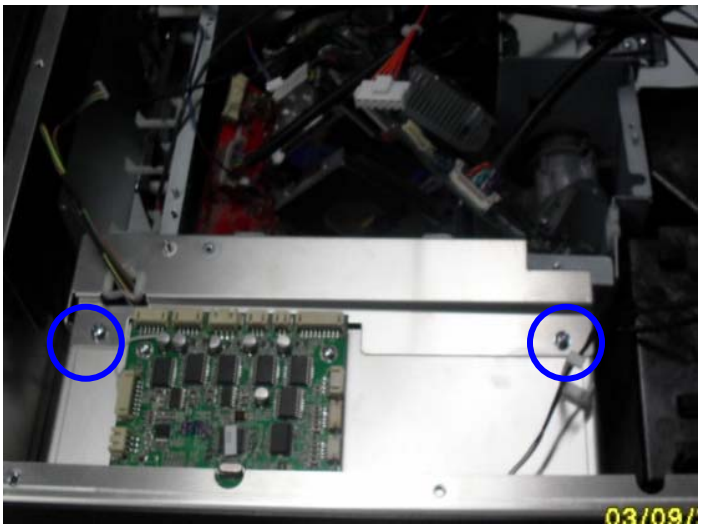
19. Take off the bracket of Fan 9 & Fan10 board.



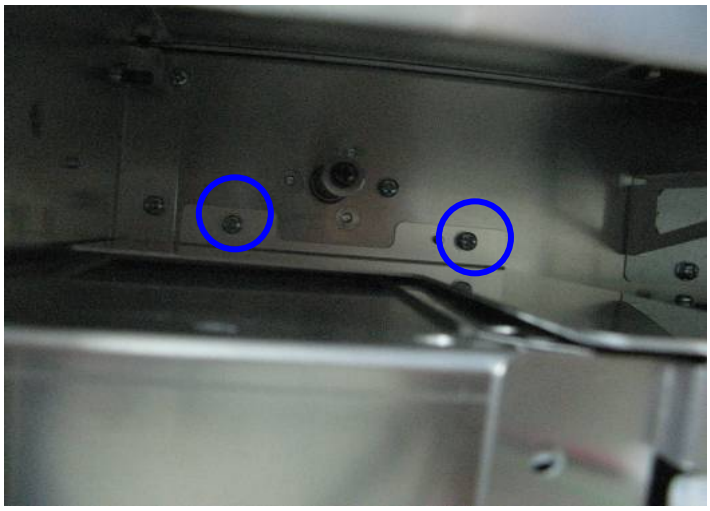
20. Loosen 3 pcs M3*6 screws and take off the bracket of FIP.



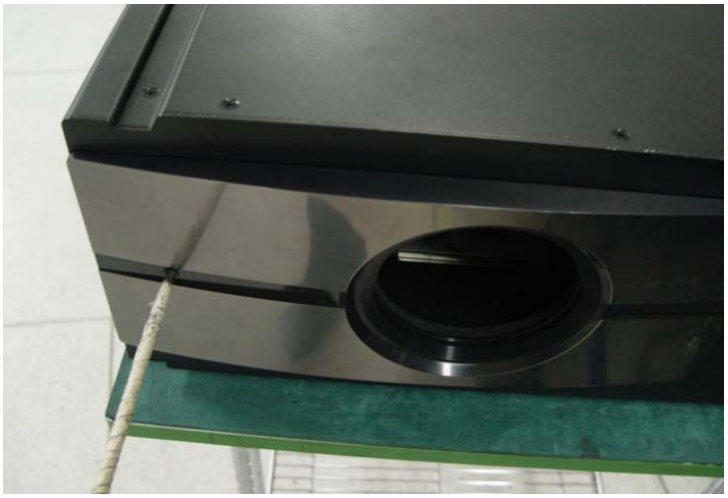
21. Loosen 2 pcs M4*10 screws on Lens Mount cover.



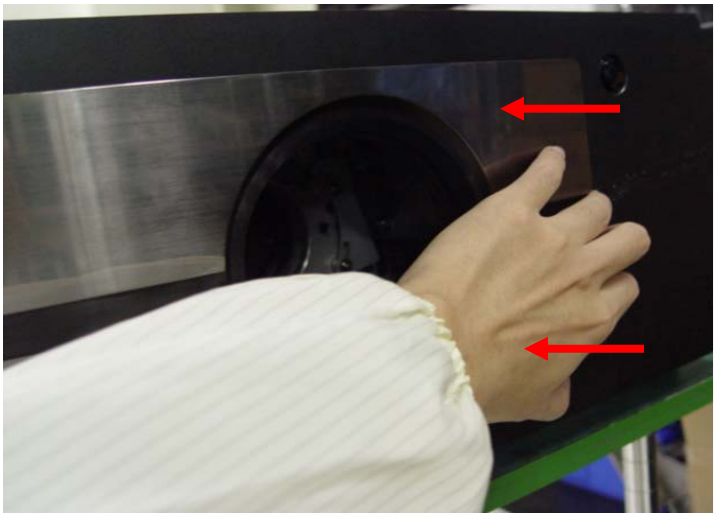
22. Loosen 2 pcs M4*10 screws on bottom of Lens Mount cover.



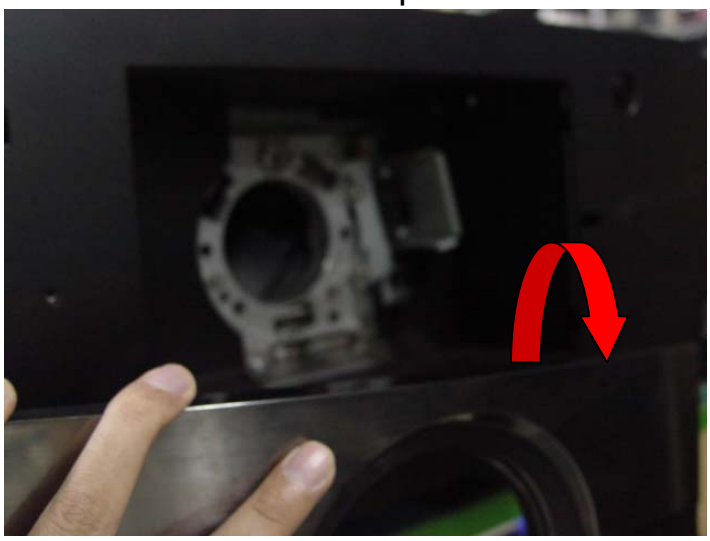
23. Loosen 1 pc M4*8 screws to remove front panel.



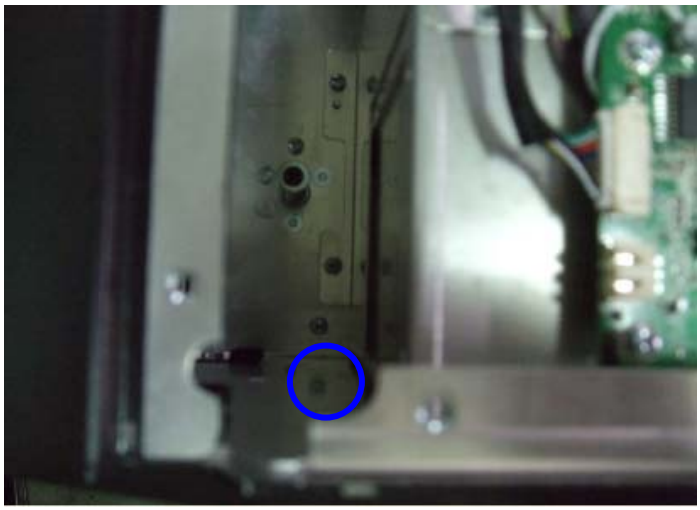
24. Push the small front panel from right to left.

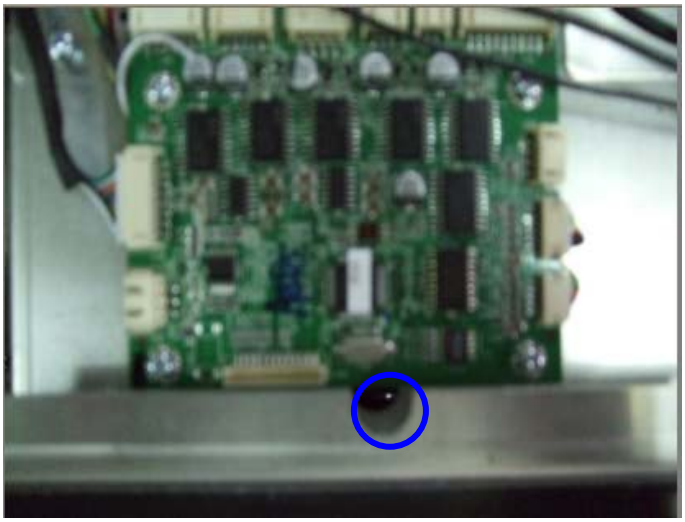


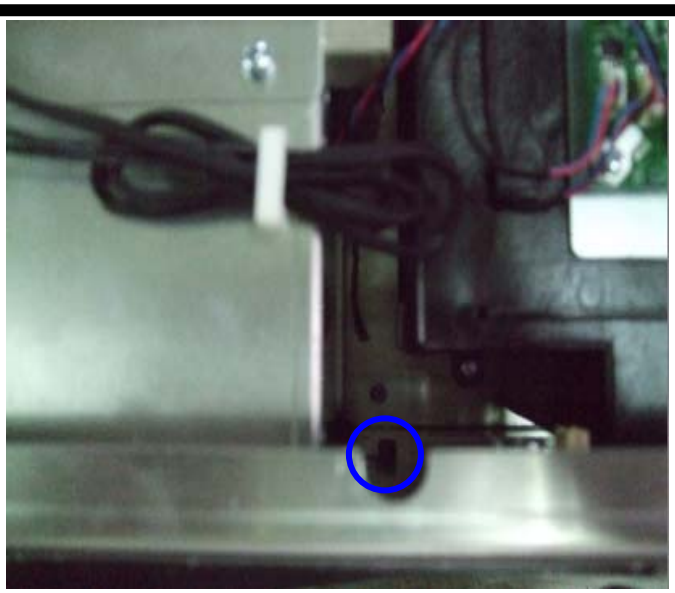
25. Tear down the small front panel.

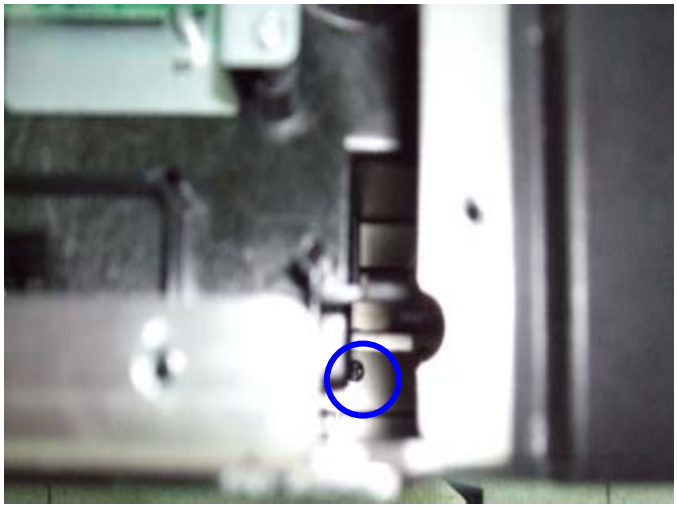


26. Loosen 4 pc M3*6 screws on bottom of front cover, then take off the front cover.

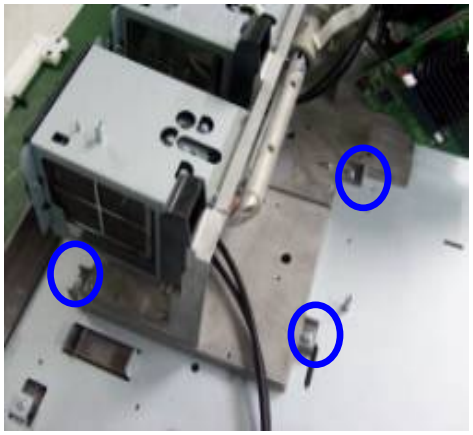




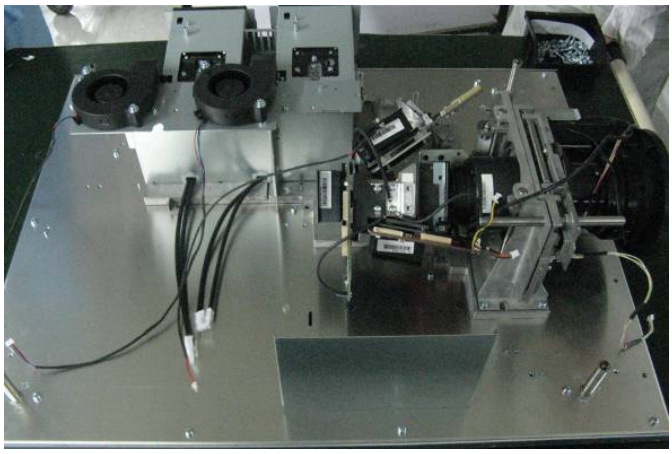




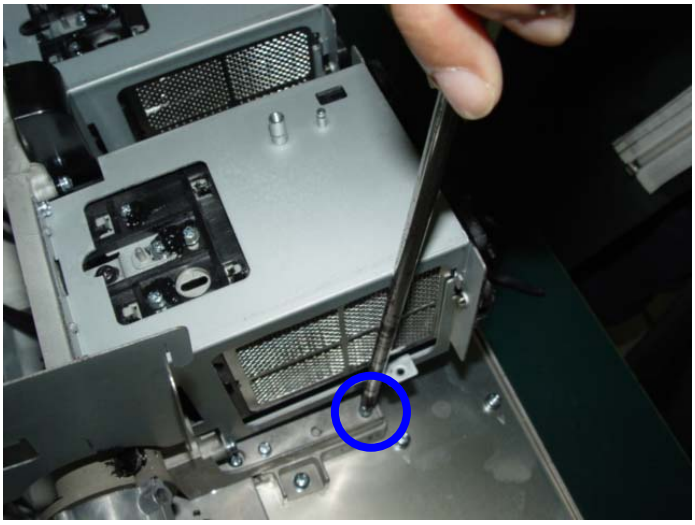
27.Loosen 7 pcs M4*10 screws on the bottom of DMD engine.



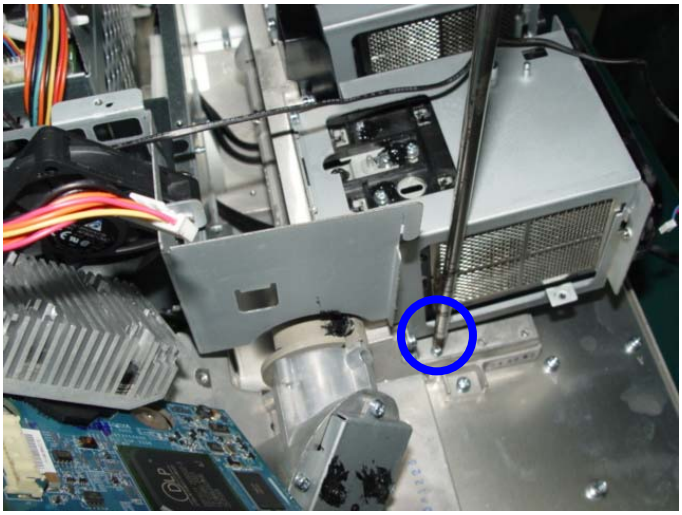
28. Tear down the DMD engine.



29. Loosen 1 pc M3*6 screw on the front of Lamp module base.



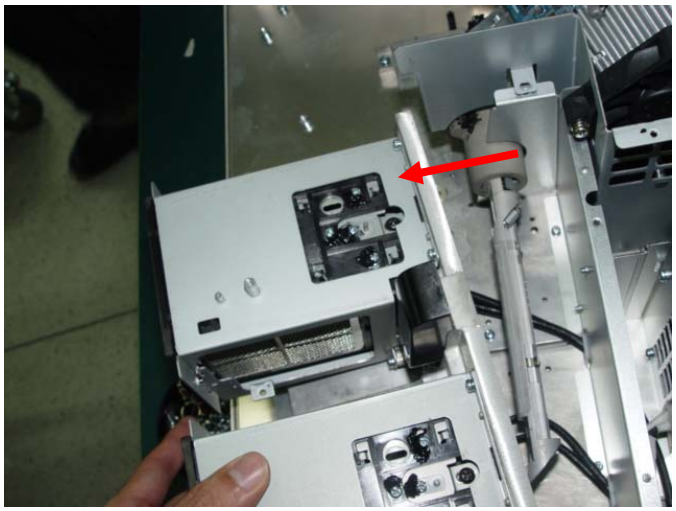
30. Loosen another 1 pc M3*6 screw on the front of Lamp module base.



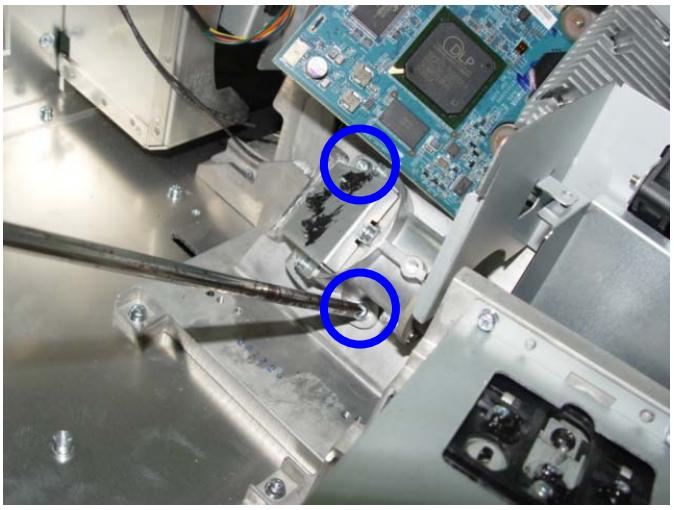
31. Loosen 1 pc M3*6 screw on the back of Lamp module base.

32. Loosen another 1 pc M3*6 screw on the back of Lamp module base.

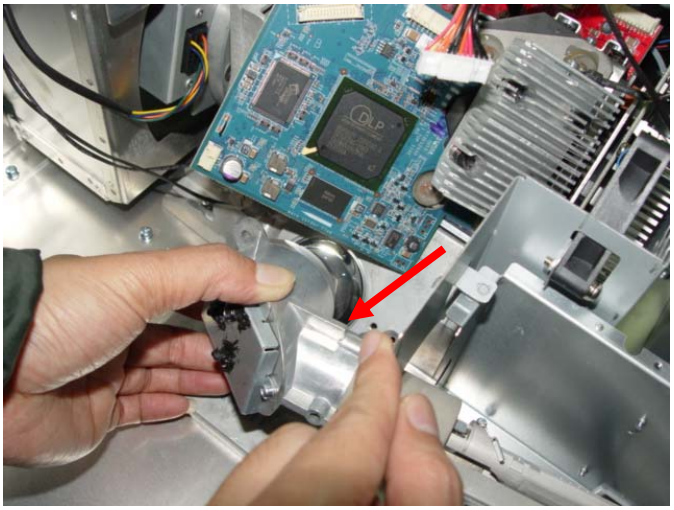
33. Pull the Lamp module base toward left.



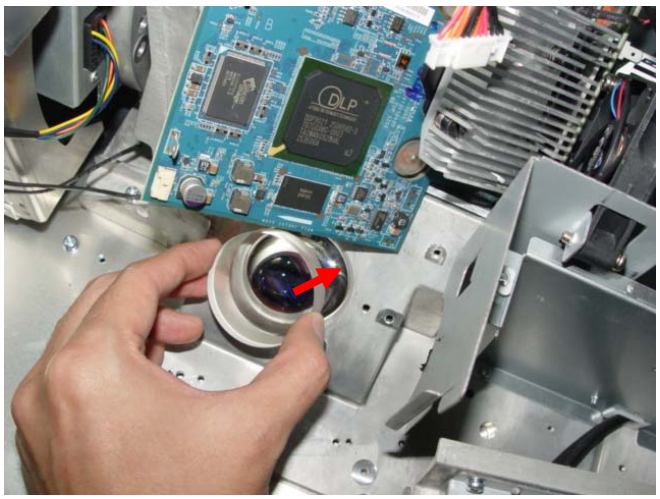
34. Loosen the 2 pcs M3*6 screws on the illumination system assembly.



35. Take off and pull the integrator system assembly.



36. Put back relay Lens on illumination base.

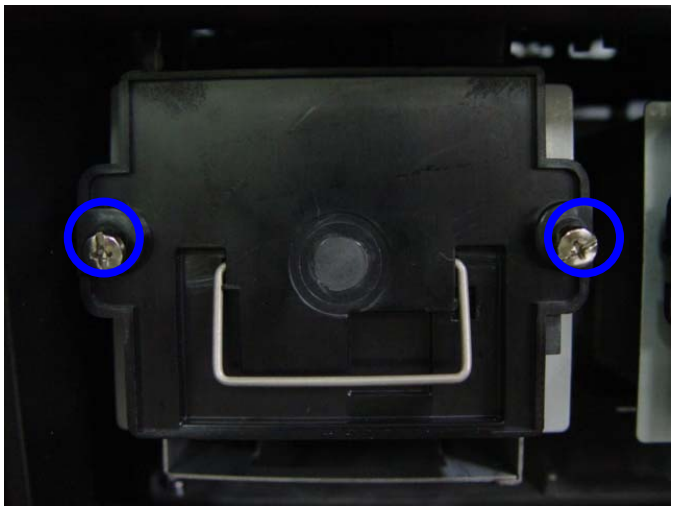


** Note:
When we take off integrator system assembly, the relay Lens will be adhered to integrator system assembly. Thus, we need to take off relay Lens from integrator system assembly. Then, we must clean any dust, dirt and fingerprint, and put back.

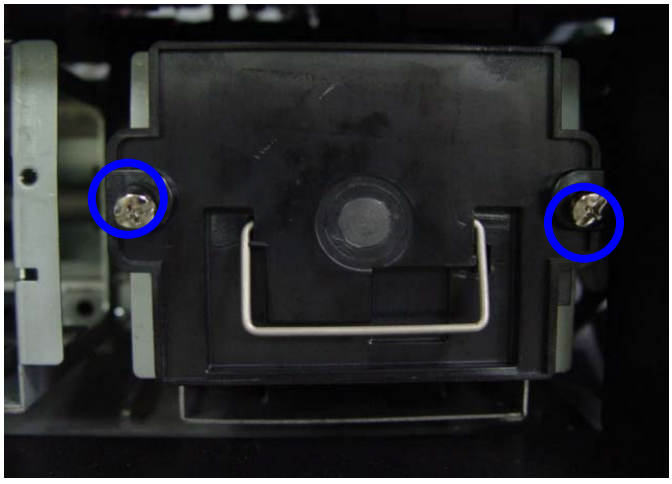
7. Exchange Lamp Module

1. Loosen the 2pcs screws on the left side Lamp cover of projector, then and open the Lamp cover.

2. Loosen the 2pcs screws on the left Lamp, and pull the left Lamp module.

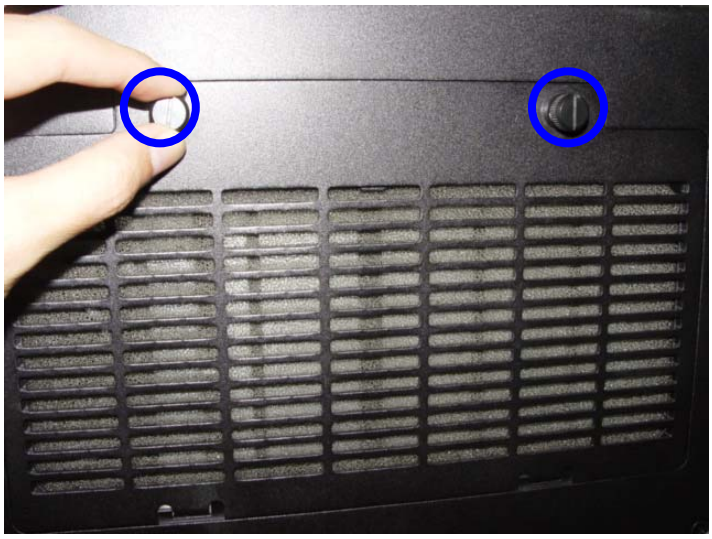


3. Loosen the 2pcs screws on the right Lamp, and pull the right Lamp module.

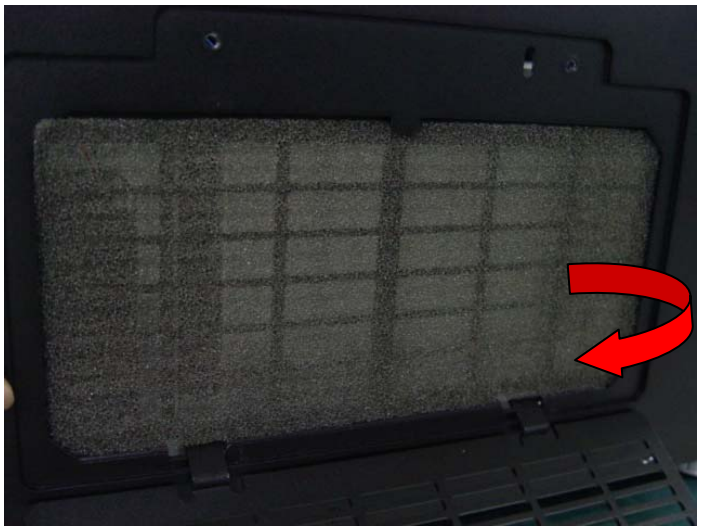


8. Exchange Projector Filter

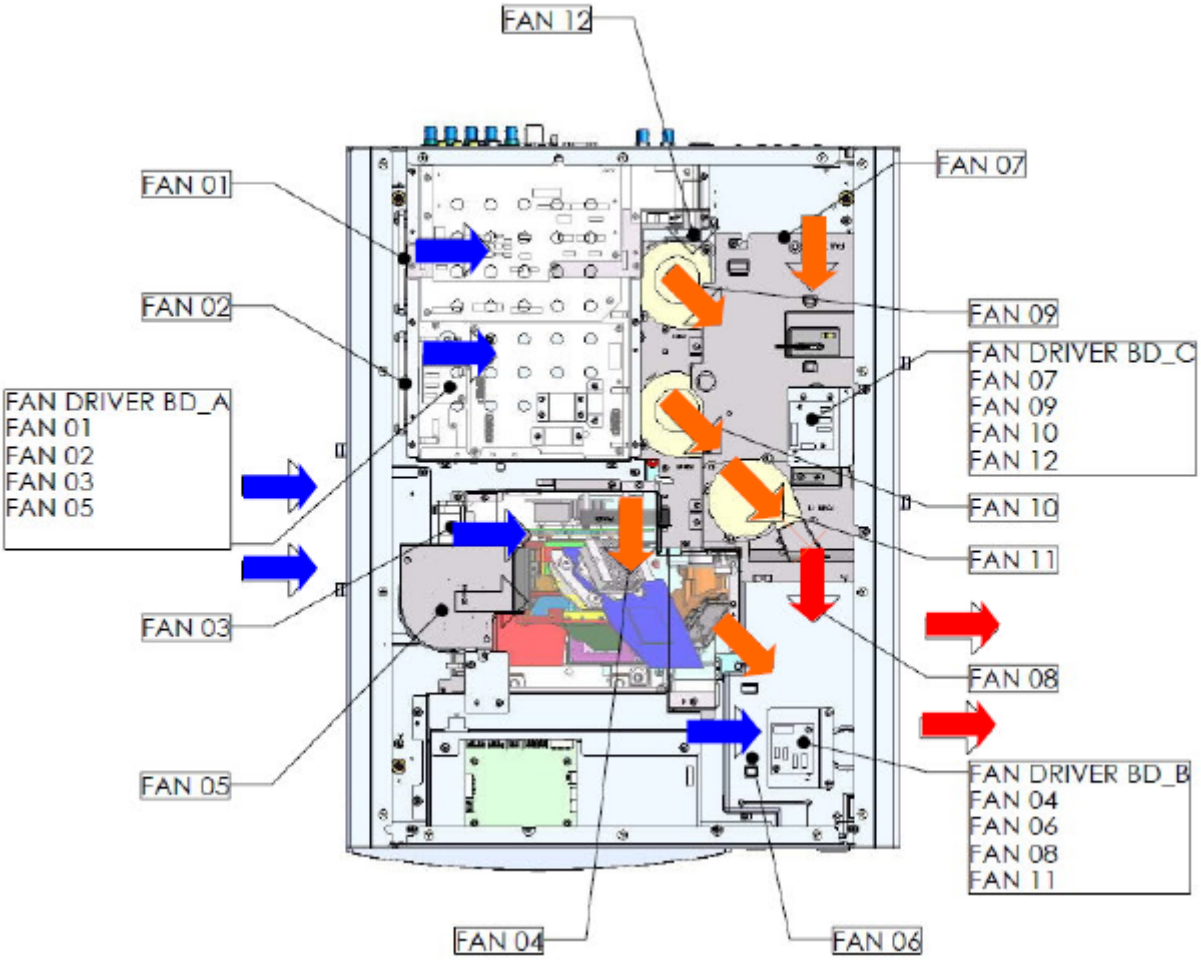
1. Loosen the 2pcs screws on the right side filter cover of projector, then and open the Lamp cover.



2. Take out inside filter of projector.



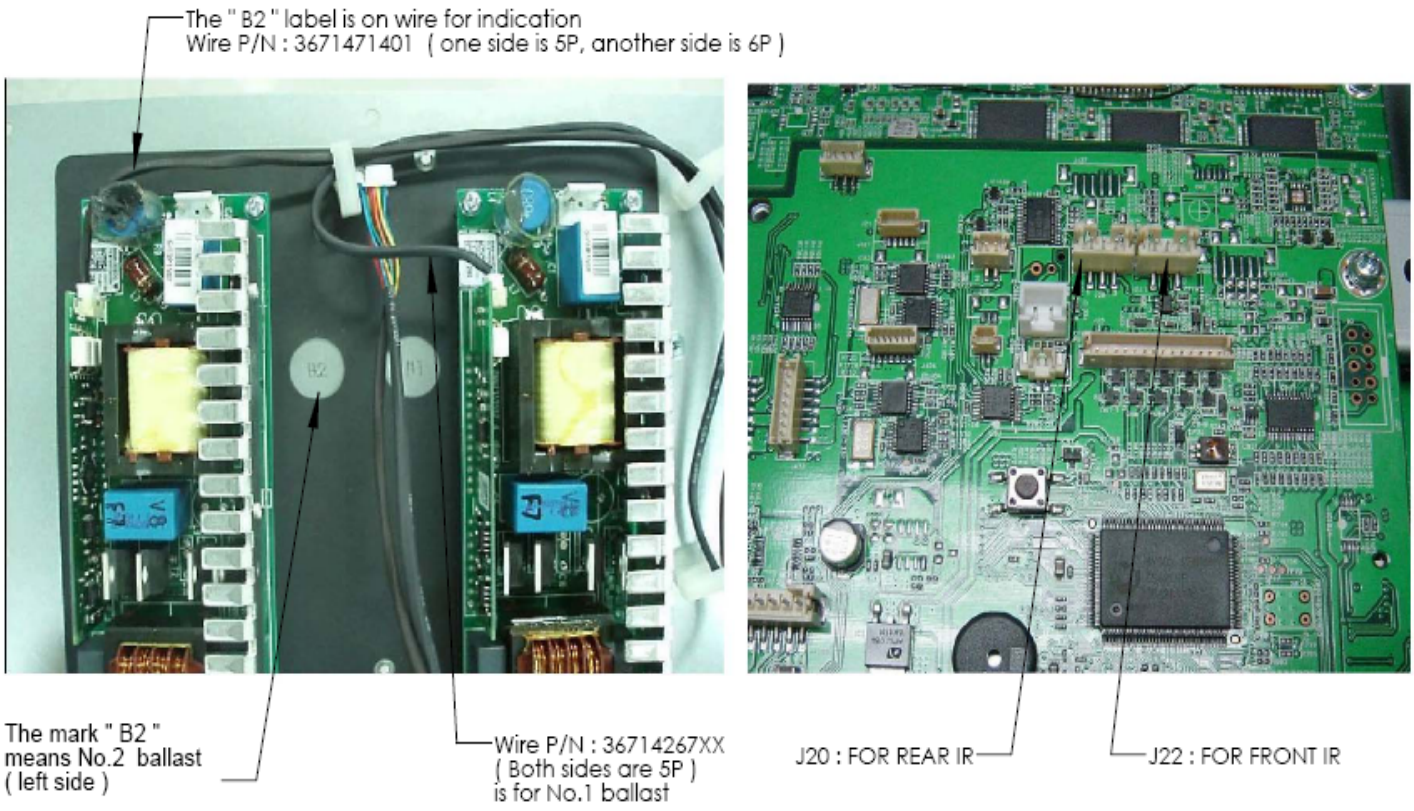
Fan Location



Fan No.	Function	CN - BD	Connect
FAN 1	Power Fan A	CNF1 - FAN A BD	CN9801
FAN 2	Power Fan B		CN9802
FAN 3	R/G DMD Fan		CN9803
FAN 5	Prism Cooling Fan		CN9804
FAN 4	B DMD Fan	CNF2 - FAN B BD	CN9806
FAN 6	Engine Exhaust Fan		CN9807
FAN 8	Lamps Exhaust Fan		CN9808
FAN 11	FAN 8 hub take care		CN9809
FAN 9	Lamp B Blower	CNF3 - FAN C BD	CN9811
FAN 10	Lamp A Blower		CN9812
FAN 7	Lamps Cooling Fan		CN9813
FAN 12	Rod cooling		CN9814

■ Wire Clip & Dressing

(A)



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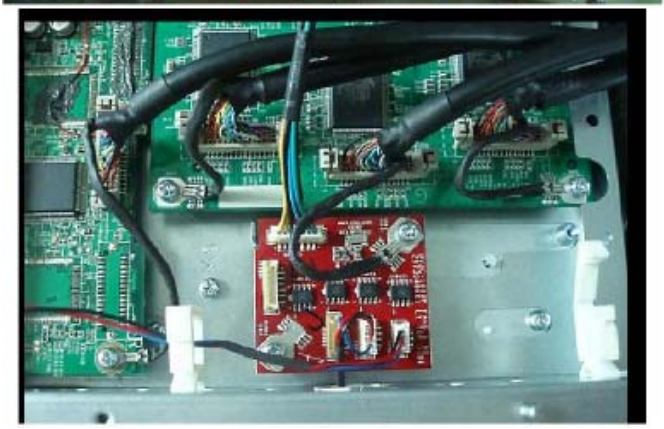

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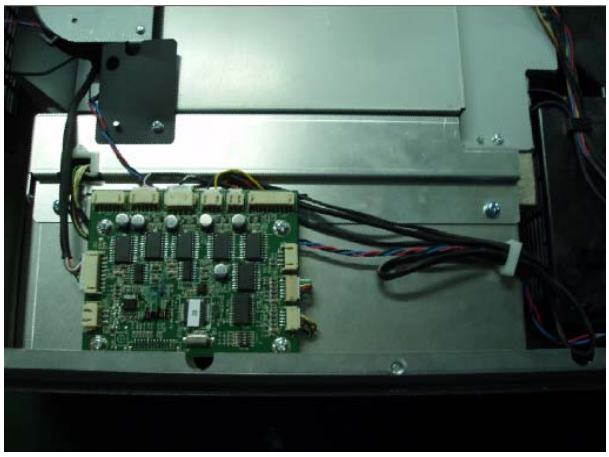
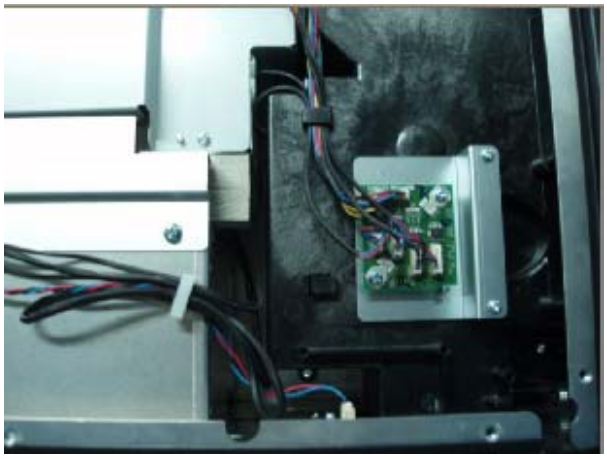
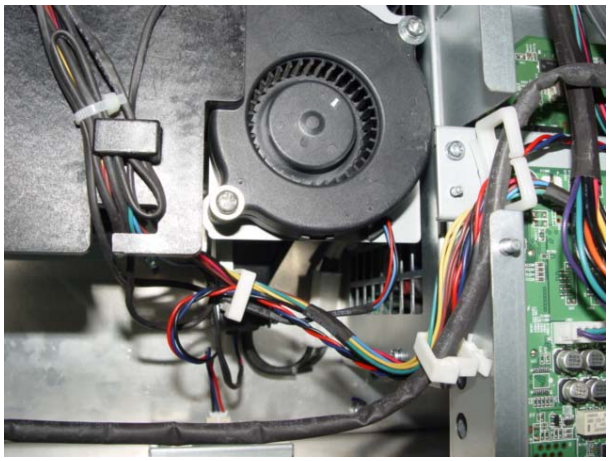
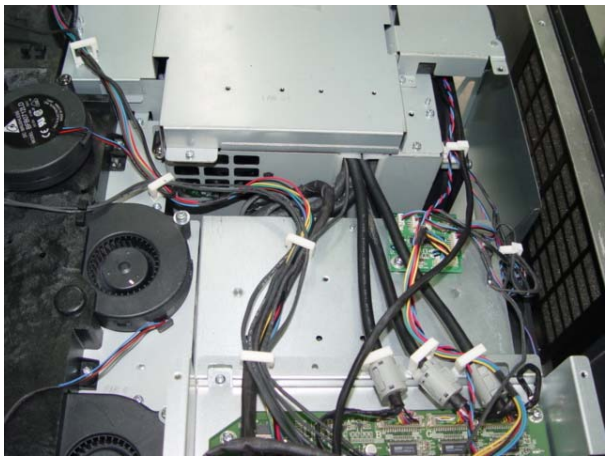


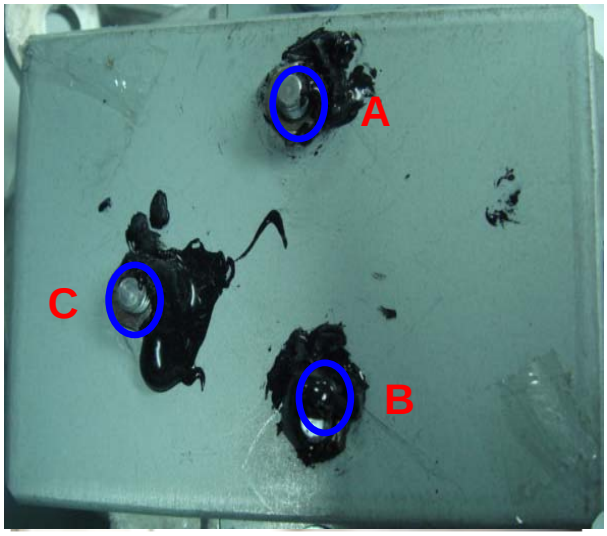




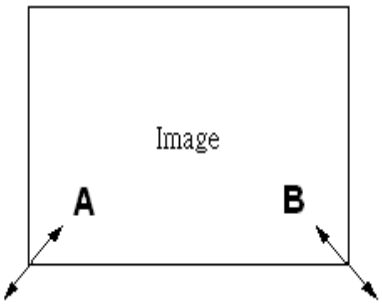


■ Folding Mirror Adjustment

1. Disassembly the top cover.
2. Check the full-white image where color band is, and slight adjust fixed-nut to remove it.
3. When finish adjusted, add TB1401B glue on the nuts to fix it.



Adjust by hex-sleeve



3-1. To adjust nut A to move the image left-down and right-up

3-2. To adjust nut B to move the image left-up and right-down

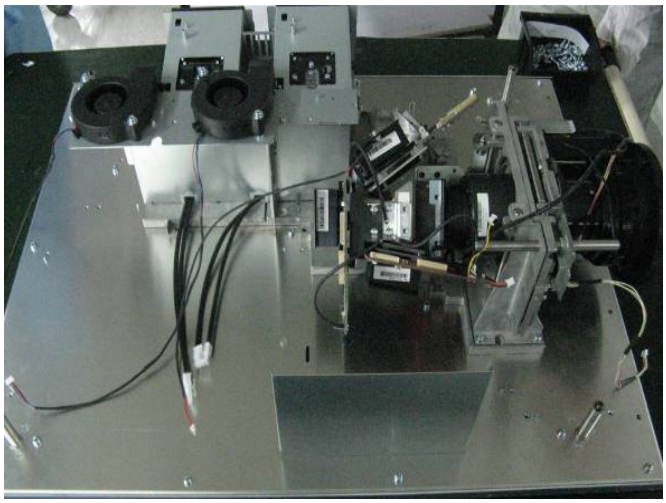
3-3. Nut C is to confirm the reflector default position
(The distance from bracket to top of screw is 6.5mm ,
It's almost appear 5-scale of screw)

Kit definition & Pictures

Projector spare part

No.	Part Nr.	Parts Description
1		BME RLM W8 LAMP - HOUSING ASSY
2		BME RLM W8 INTEGRATOR ASSY
3		BME RLM W8 DLP ENGINE MOD ASSY
4		BME RLM W8 PWB ASS R FORMATTER
5		BME RLM W8 PWB ASS G FORMATTER
6		BME RLM W8 PWB ASS B FORMATTER
7		BME RLM W8 HORI. SENSOR BOARD
8		BME RLM W8 VERT. SENSOR BOARD
9		BME RLM W8 MOTOR DRIVER BOARD
10		BME RLM W8 VIDEO BOARD
11		BME RLM W8 MICRO CONTROL BOARD
12		BME RLM W8 FAN DRIVER BOARD A
13		BME RLM W8 FAN DRIVER BOARD B
14		BME RLM W8 FAN DRIVER BOARD C
15		BME RLM W8 IR BOARD
16		BME RLM W8 KEYPAD BOARD
17		BME RLM W8 RJ-45 BOARD
18		BME RLM W8 W2_TMDS BOARD
19		BME RLM W8 POWER BOARD
20		BME RLM W8 LMP DRVR OSRAM 330W
21		TOP COVER
22		FILTER

23		FAN 01 - POWER FAN A
24		FAN 02 - POWER FAN B
25		FAN 03 - R & G DMD FAN
26		FAN 04 - B DMD FAN
27		FAN 05 - PRISM COOLING FAN
28		FAN 06 - ENGINE EXHAUST FAN
29		FAN 12 - ROD COOLING FAN
30		FAN 07 - LAMP COOLING FAN
31		FAN 08 - LAMP EXHAUST FAN
32		FAN 09 - LAMP 2 BLOWER FAN
33		FAN 10 - LAMP 1 BLOWER FAN
34		FAN 11 - FAN 8 HUB TAKE CARE
35		FRONT PANEL
36		REAR PANEL
37		AC POWER CORD 3P 3G*0.75 mm^2 L1830 BLK (CHINA)
38		AC POWER CORD 3P #14 * 3C L2500 BLK (USA)
39		POWER CORD EUROPEAN L=250 CM (EUROPE)
40		REMOTE CONTROLLER 26KEYS (w/o battery)
41		END BLOCK EPE TOP REAR 650 * 243.5 * 175 WHT
42		END BLOCK EPE TOP FRONT 650 * 243.5 * 175 WHT
43		BAG PE 710 * 570 *580 WHT
44		END BLOCK EPE BOTTOM REAR 650 * 243.5 * 185
45		END BLOCK EPE BOTTOM FRONT 650 * 243.5 * 185
46		CARTON CRGD PAPER 814*653*364
47		BME RLD LENS MODIFICATION KIT
48		BME RLM W8 LIGHT SHUTTER

1	2
	
3	**4**
	
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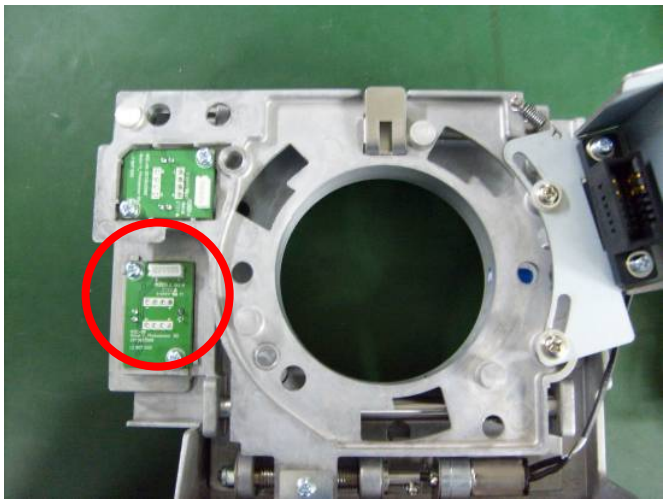	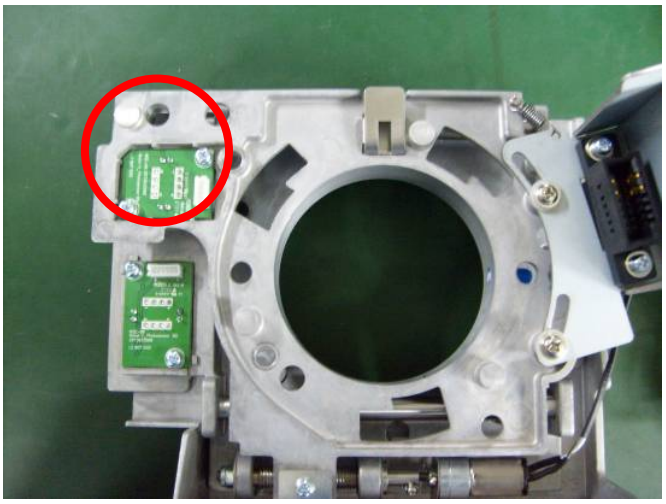
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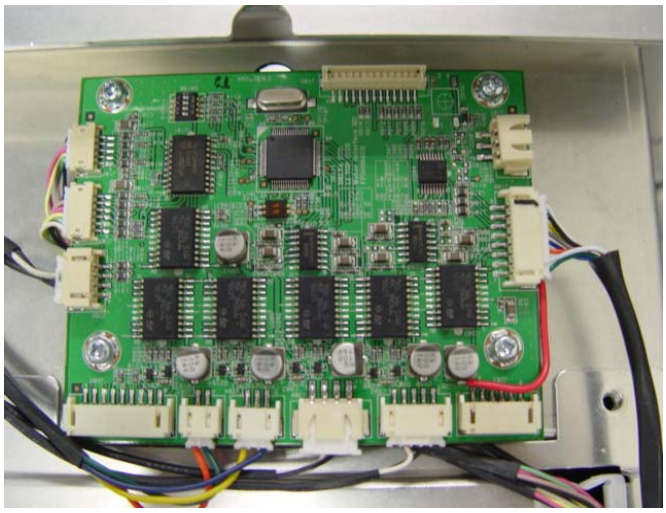	
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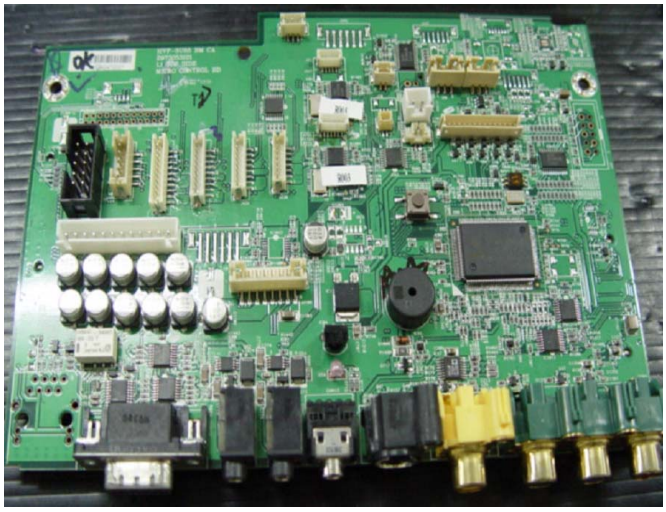	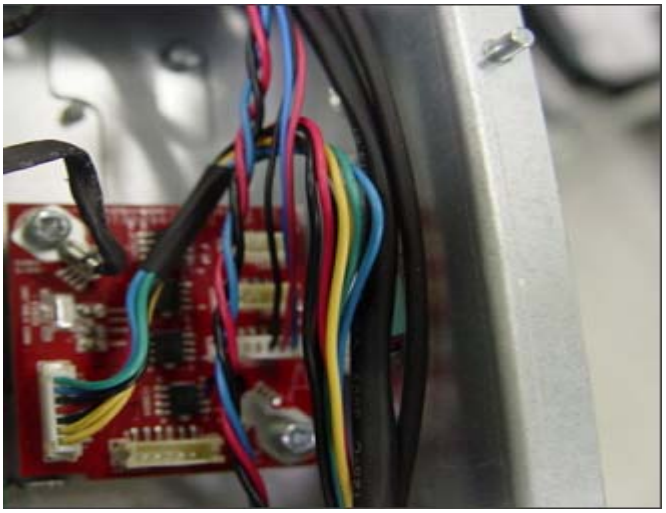

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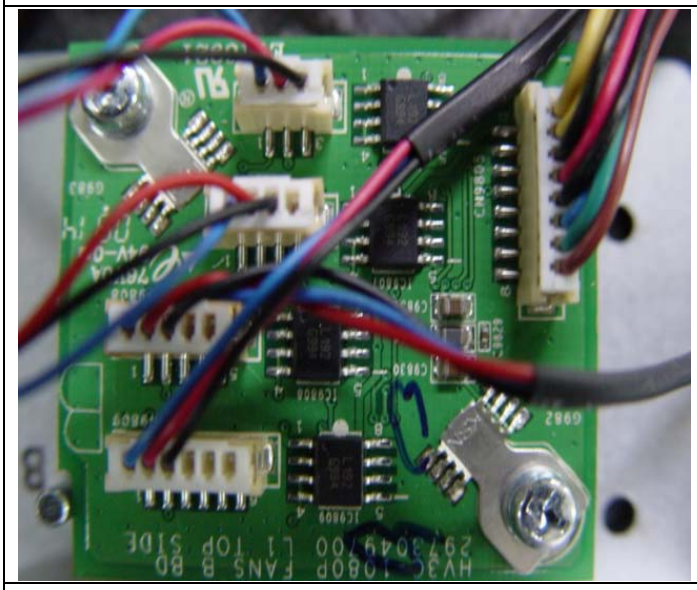	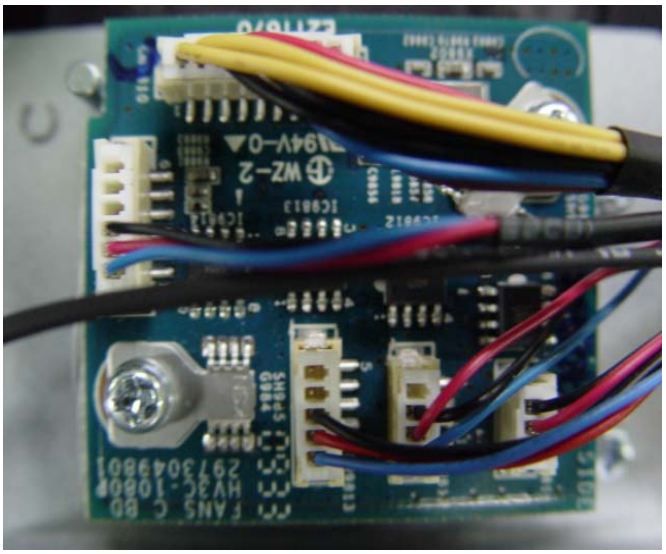
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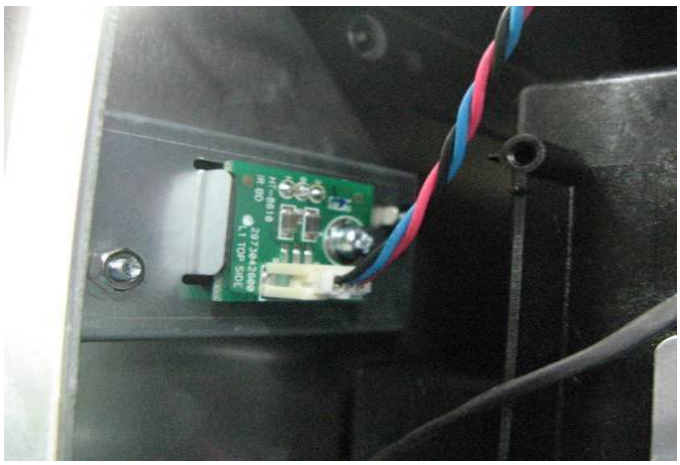	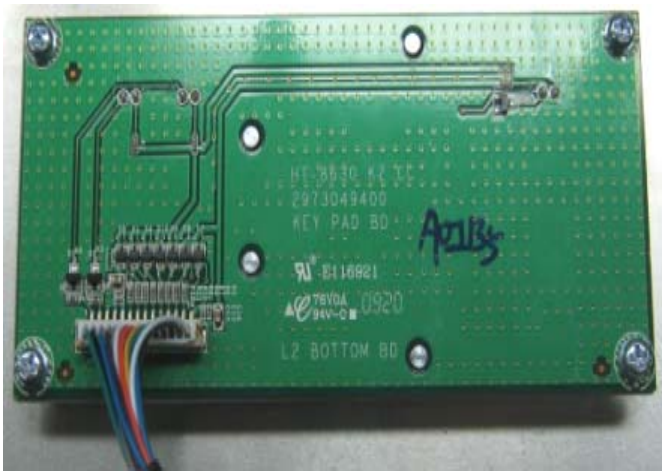
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	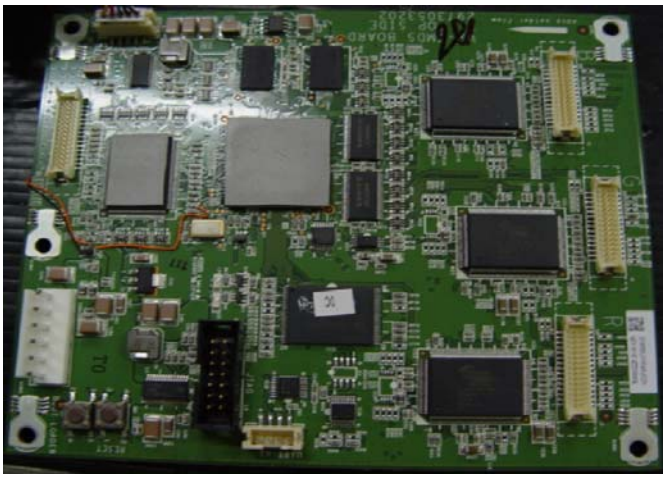

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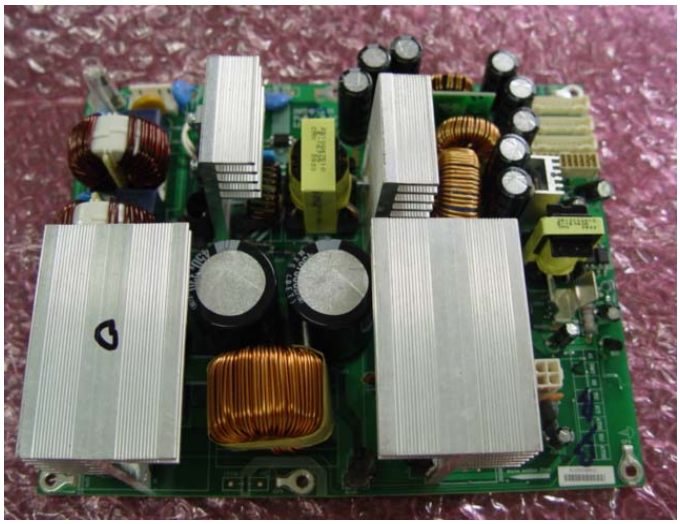	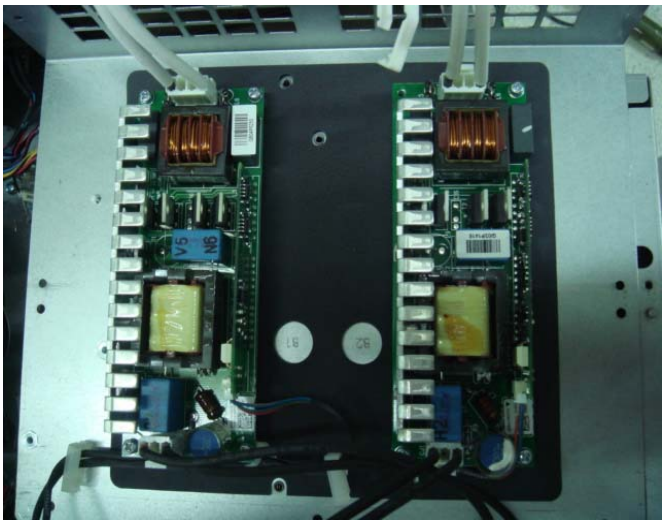
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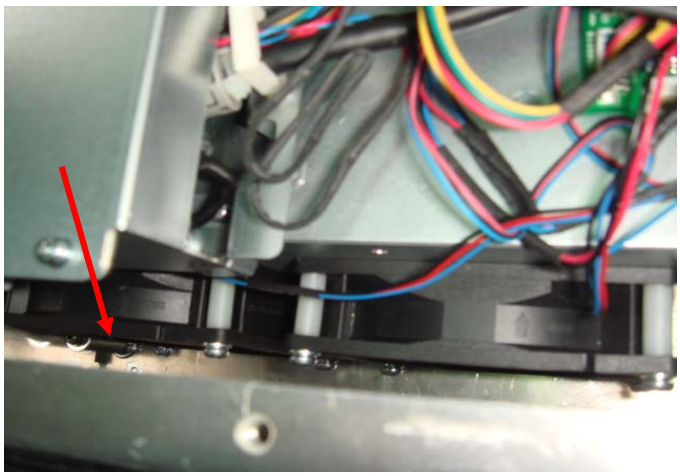	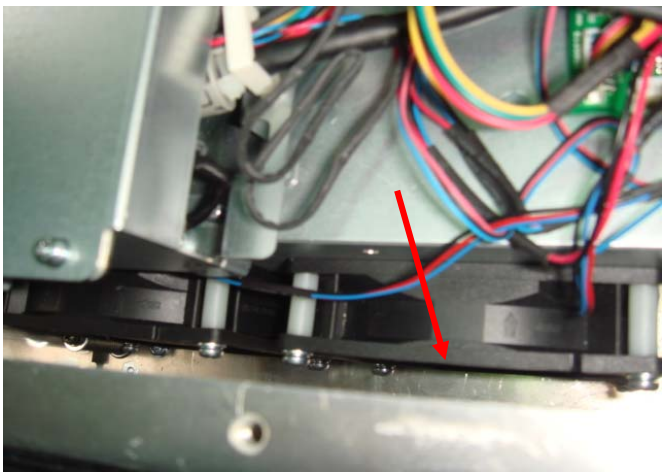

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	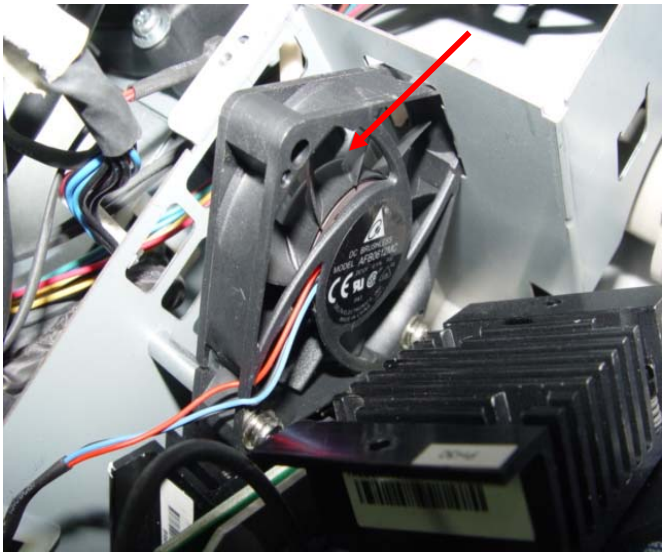
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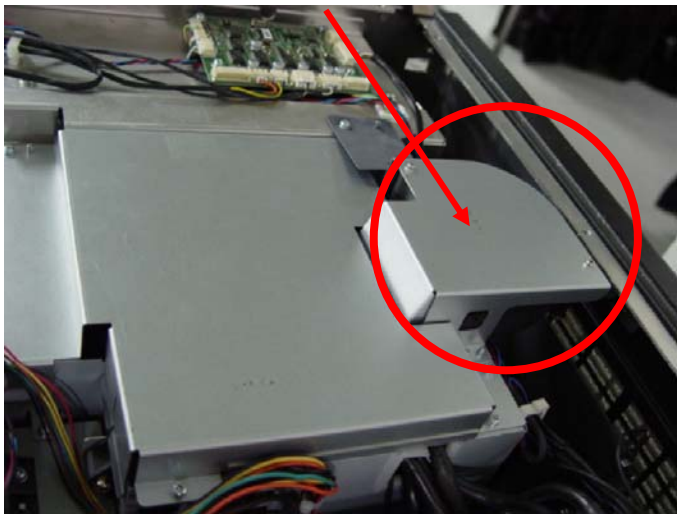	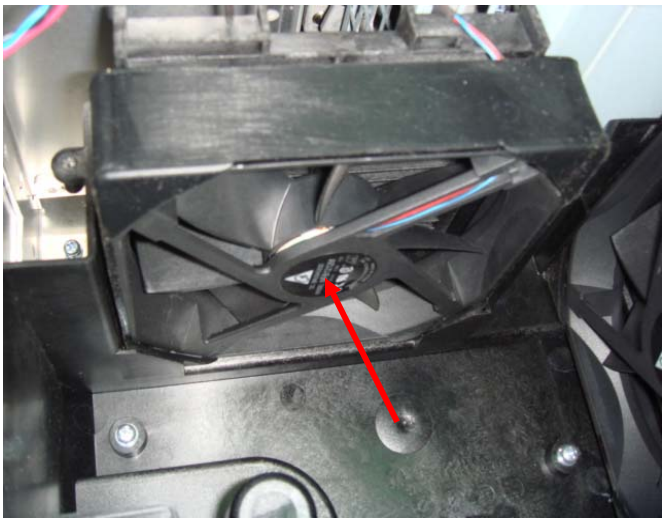
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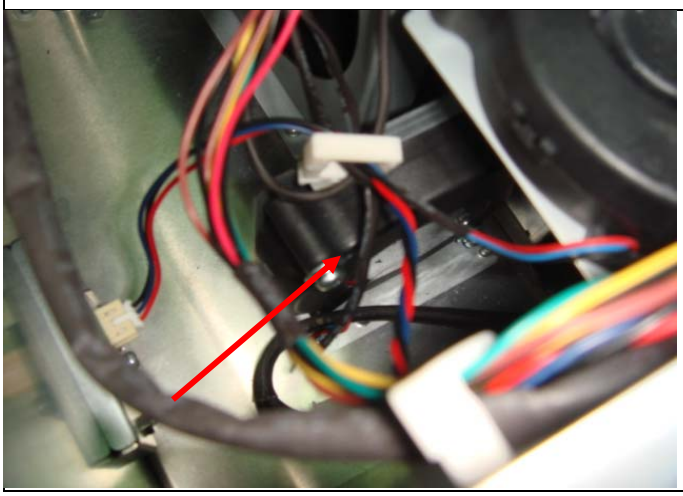	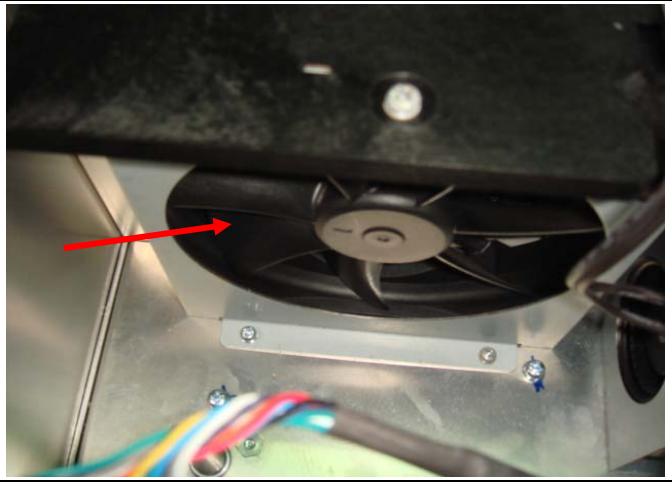

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	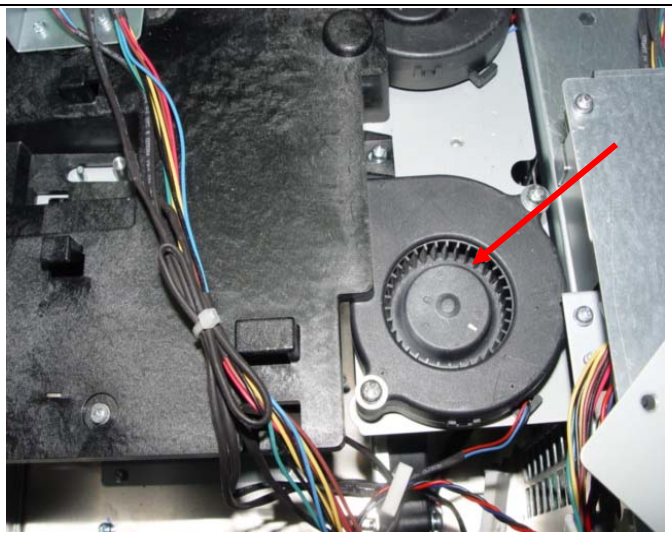
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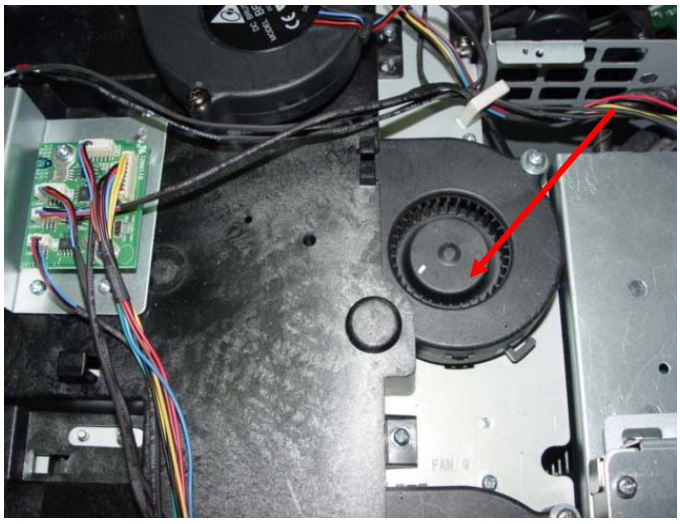	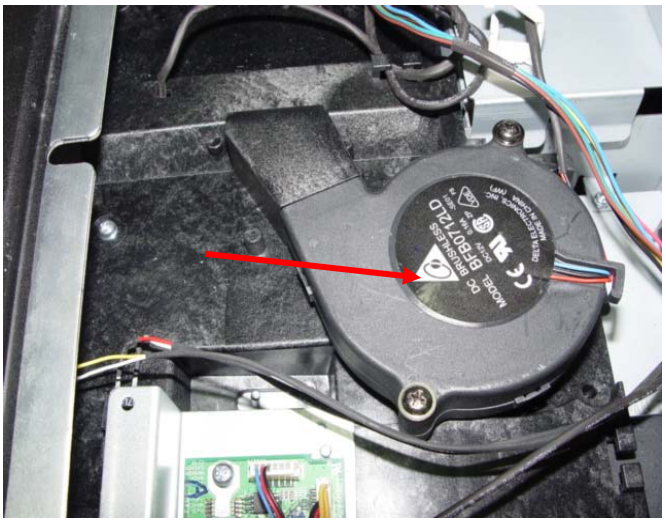
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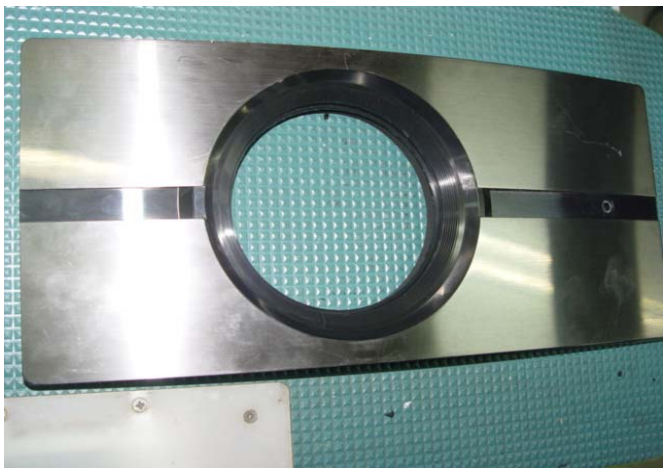	

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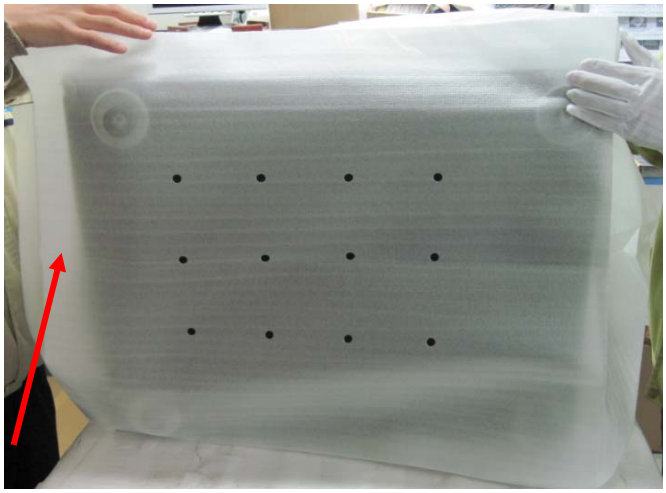
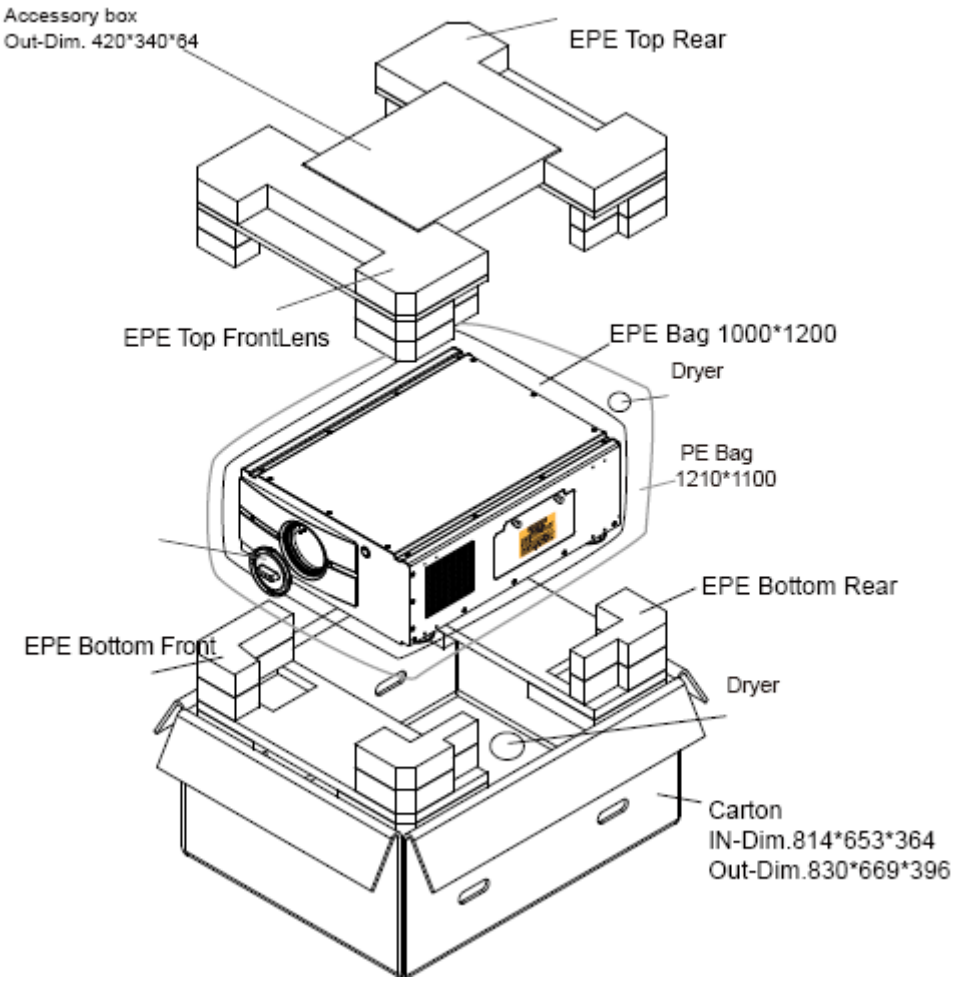
39	**40**
	
41	**42**
	

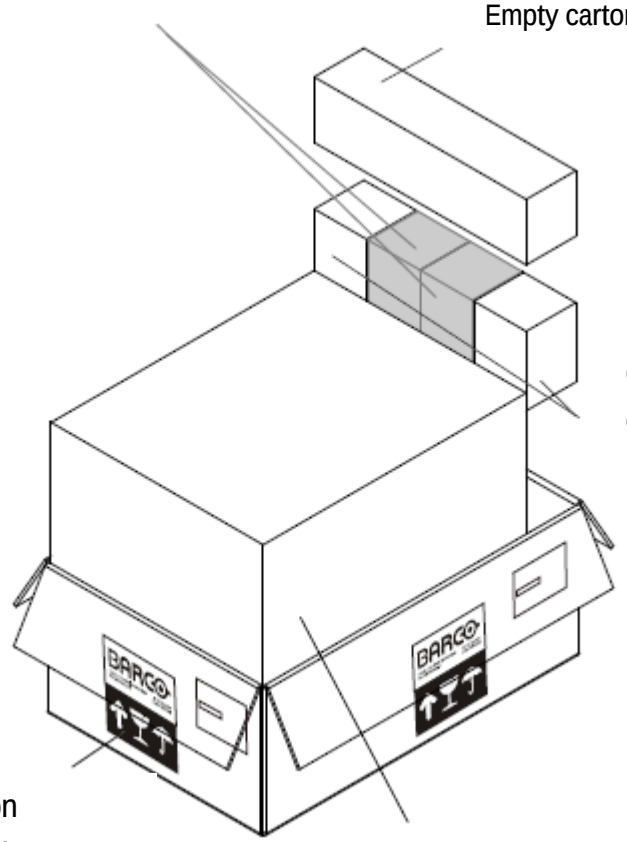
43	44
	
45	**46**
	
47	**48**
Please refer to Page 136 ~ Page 141	

Unpack the unit



Carton inside Lamp

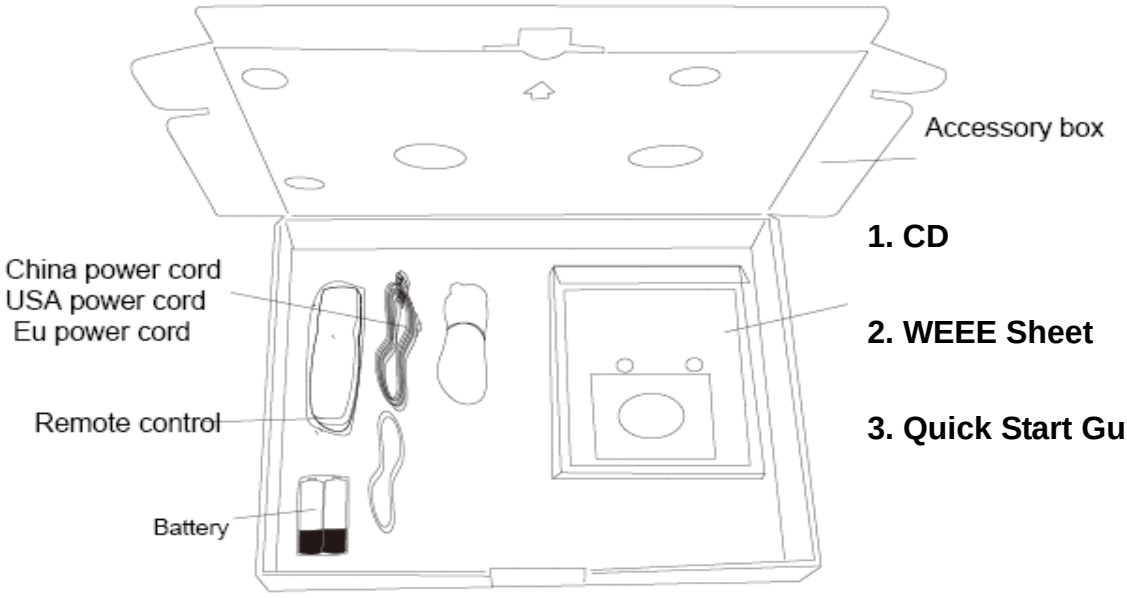
Carton
Out - Dim. 669*157*175
Empty carton inside nothing



Carton
Out - Dim. 157*165*217
Empty carton inside nothing

Carton
IN - Dim.
990*673*400
Out - Dim.
1006*689*432

Carton inside W6 projector



1. CD

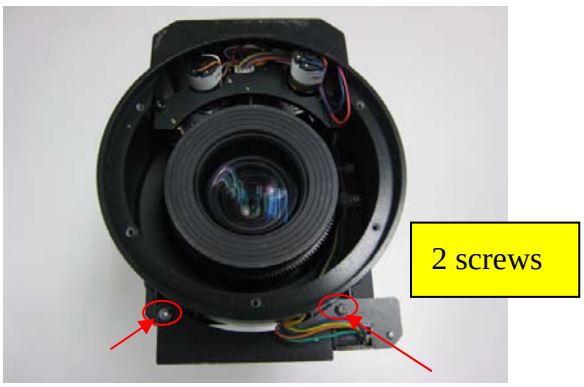
2. WEEE Sheet

3. Quick Start Guide

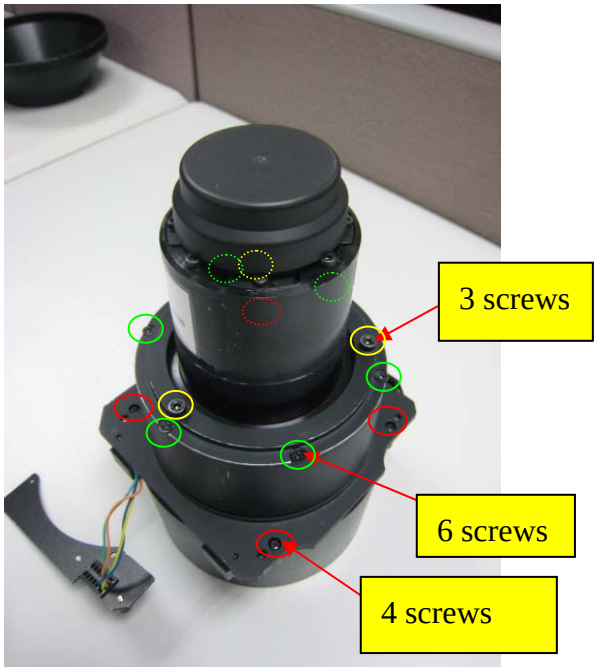
■ Lens part Assembly & Disassembly procedure

Task 1: Disassembly the RLD lens

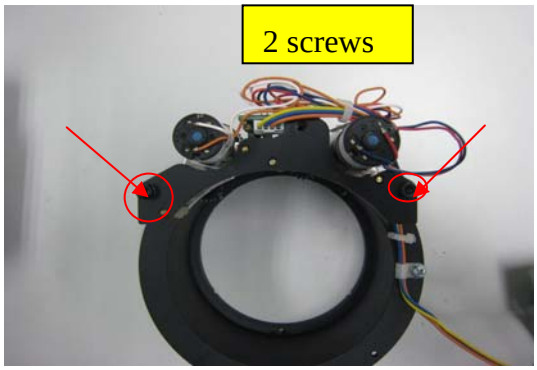
Step 1: Disassembly the front cover and motor bracket

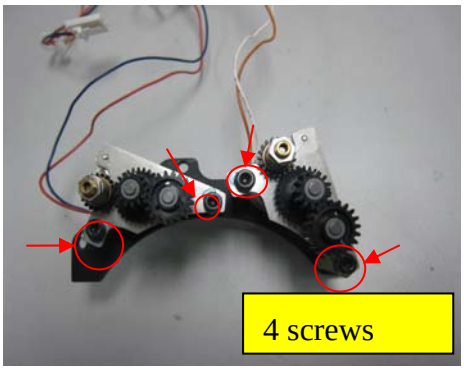


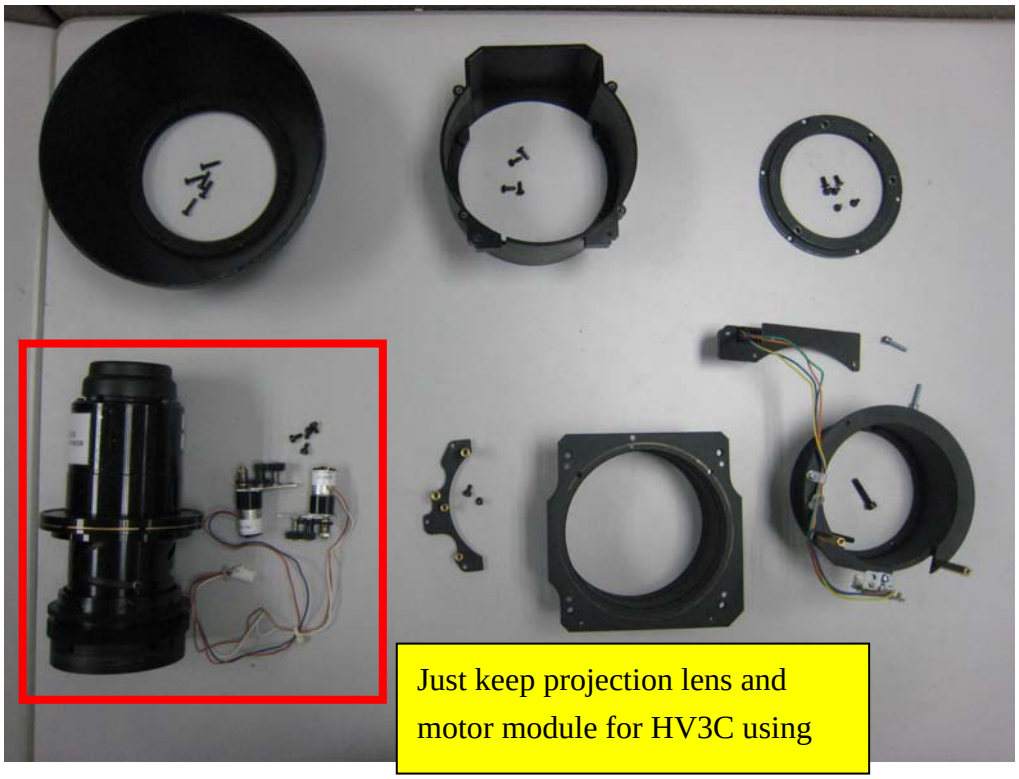
Step 2: Disassembly lens flange and motor cover



Step 3: Disassembly motor module

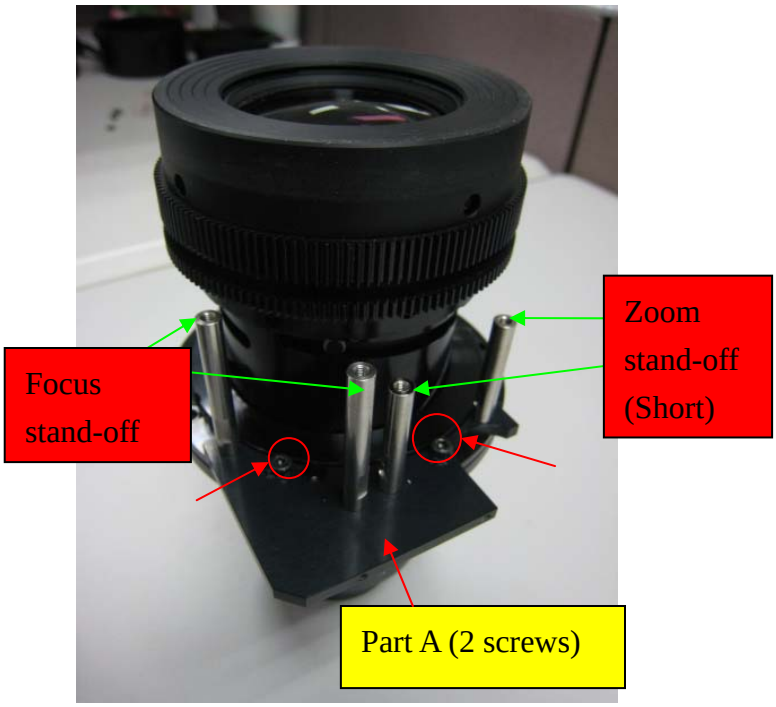




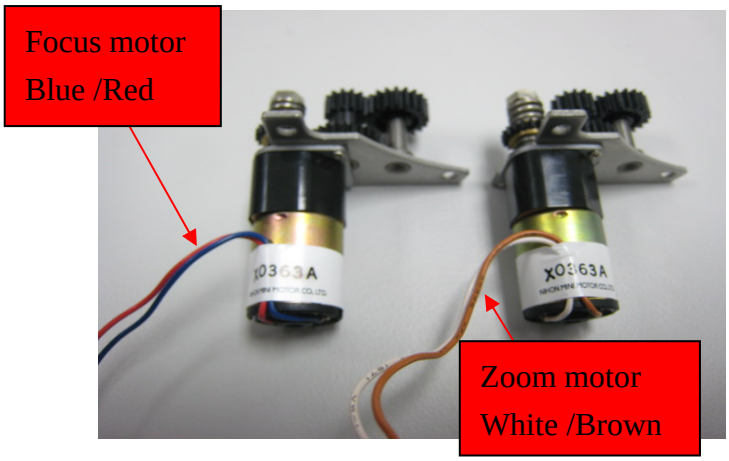


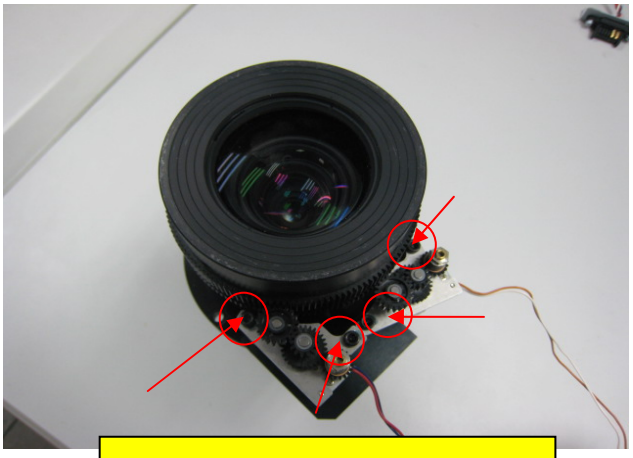
Task 2: BARCO RLM W Lens.

Step 1: Assembly motor bracket

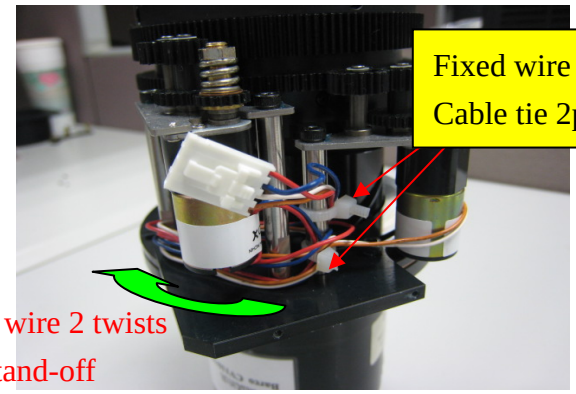


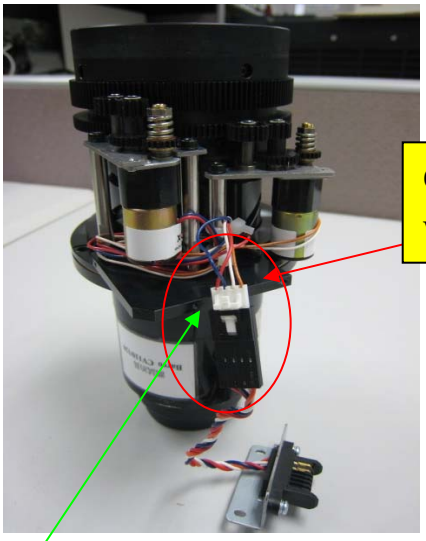
Step 2: Assembly motor module



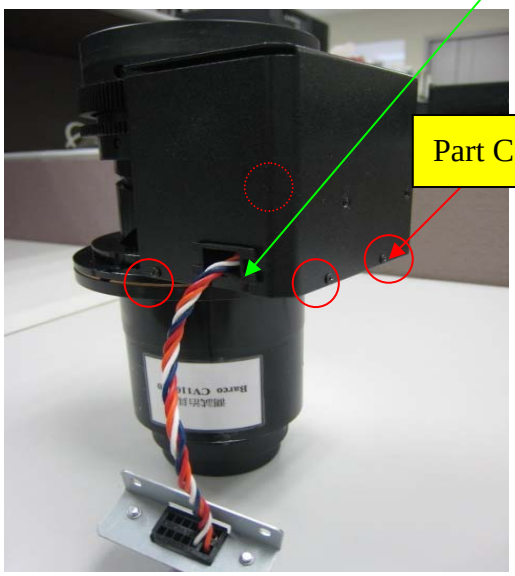


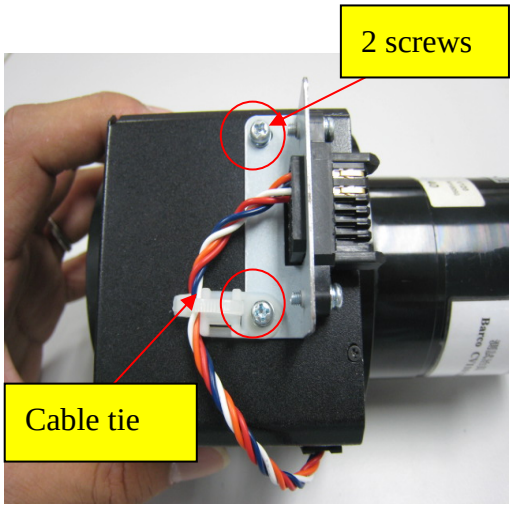
Step 3: Assembly motor connector and motor cover



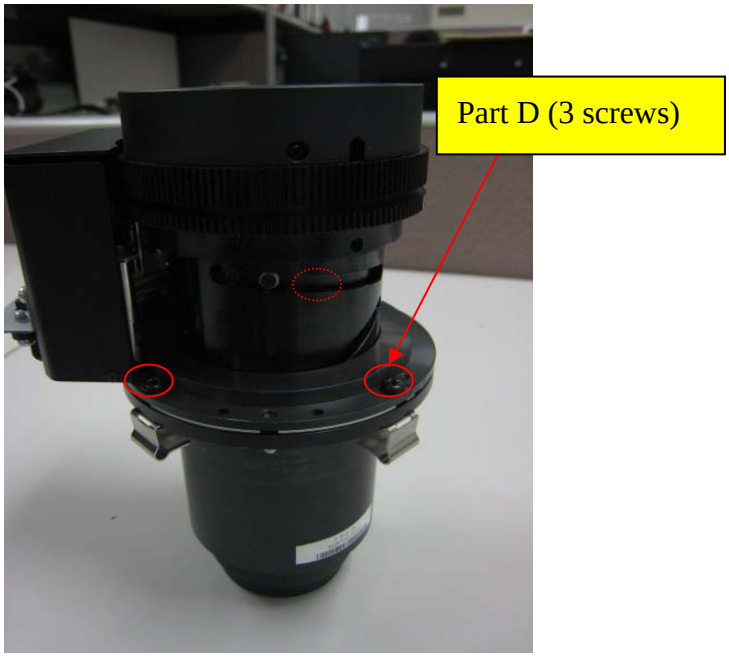


Connector hide in cover

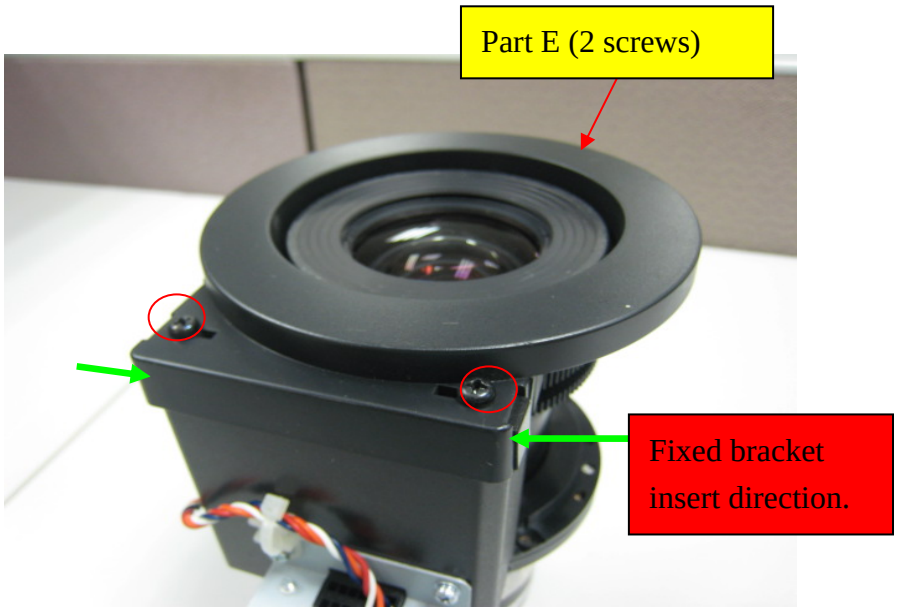




Step 4: Assembly lens Clip



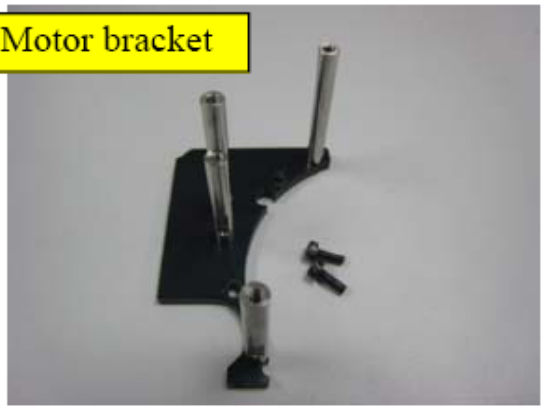
Step 5: Assembly Lens cover



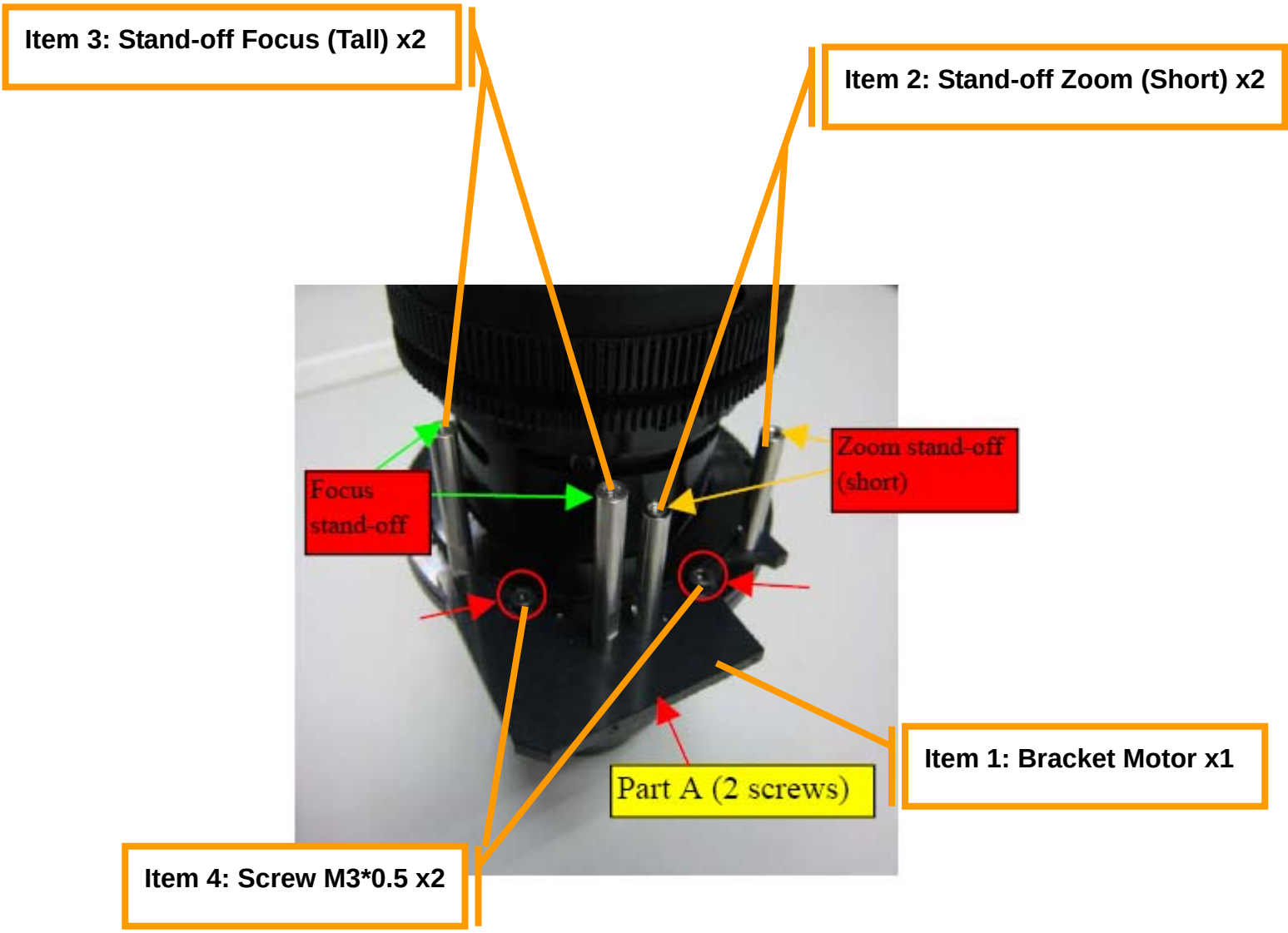
Finish photo:

■ Lens part list

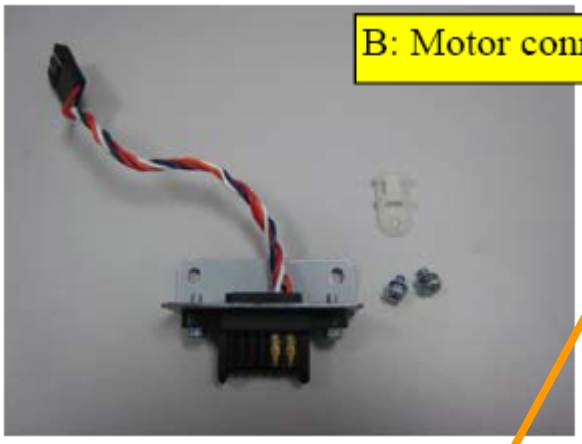
Consign Part list



	Item	Description	QPA
Part A	1	Bracket Motor	1
	2	Stand-off Zoom	2
	3	Stand-off Focus	2
	4	Screw M3*0.5	2

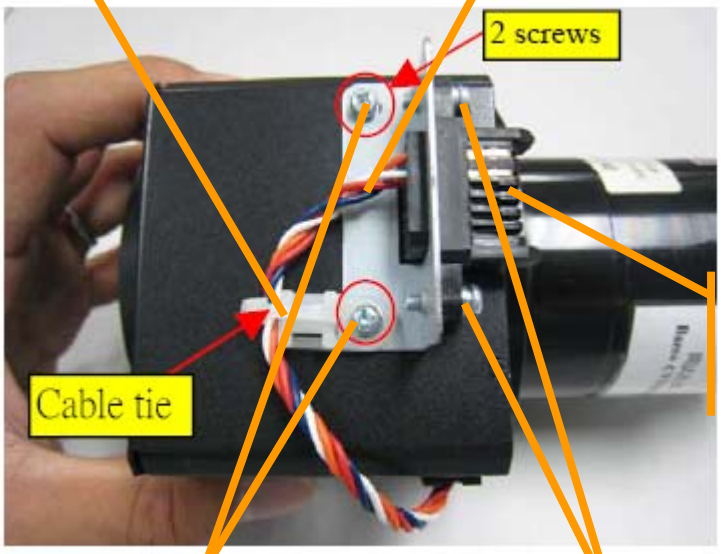


	Item	Description	QPA
Part B	1	Cable motor connector	1
	2	Bracket Connector	1
	3	Wire Saddle	1
	4	Screw M3*0.5*6	2
	5	Screw M3*0.5*10	2



Item 1:
Cable motor connector x 1

Item 3: Wire Saddle x1

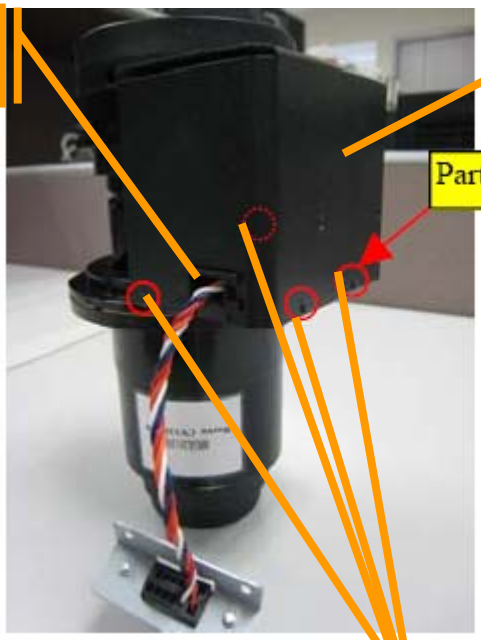


Item 2:
Bracket Connector x1

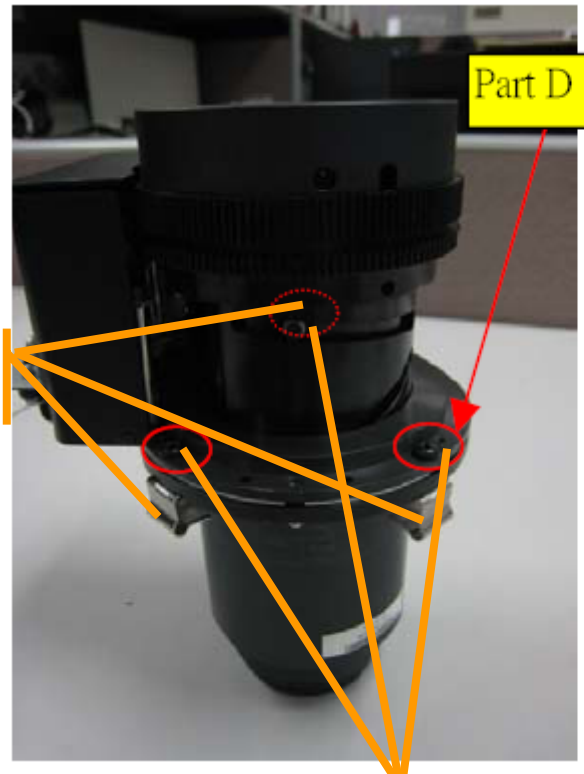
Item 4: Screw M3*0.5*6 x2

	Item	Description	QPA
Part C	1	Motor cover	1
	2	Wire saddle	1
	3	Screw M2*0.4	4

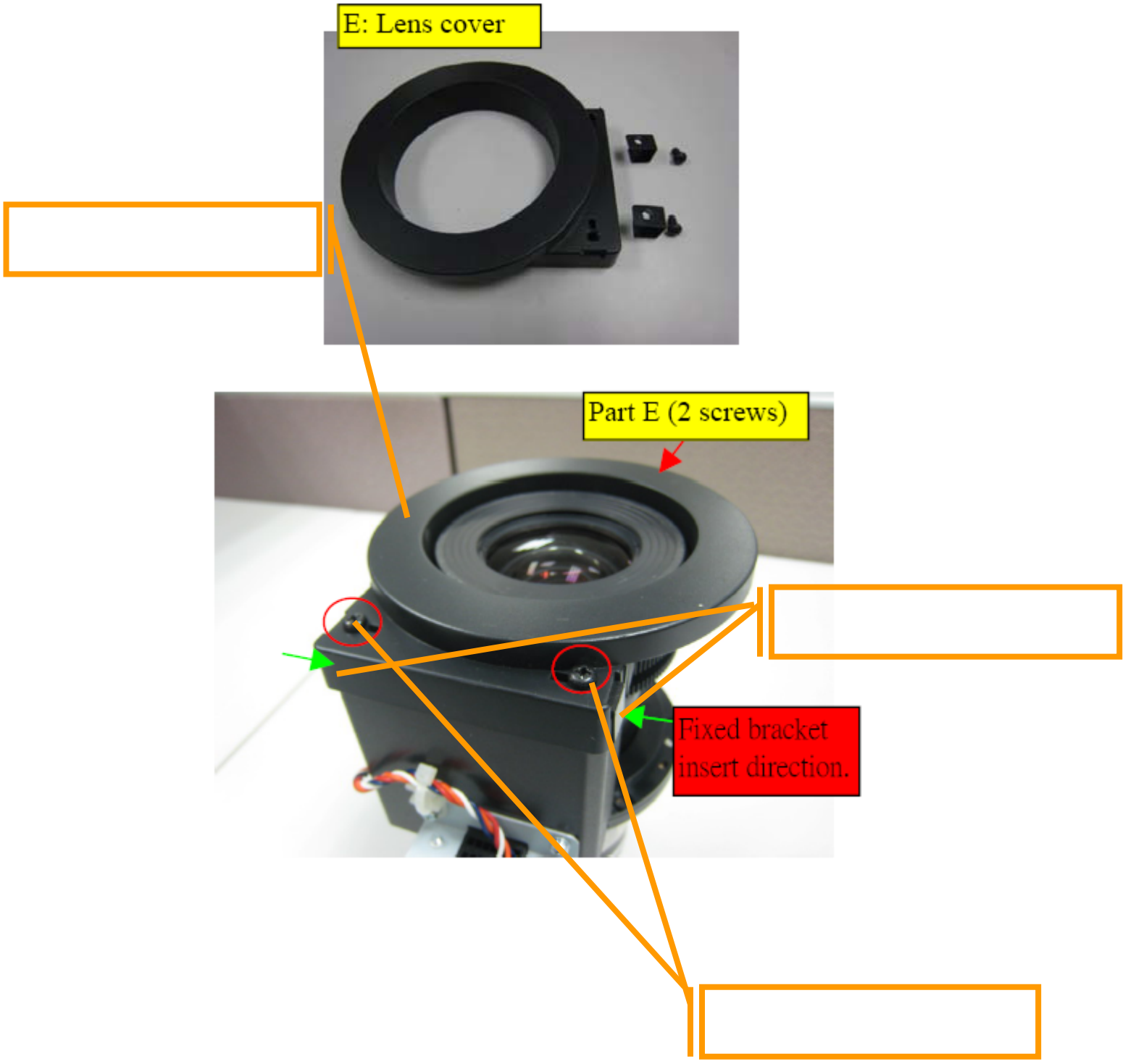
C: Motor cover



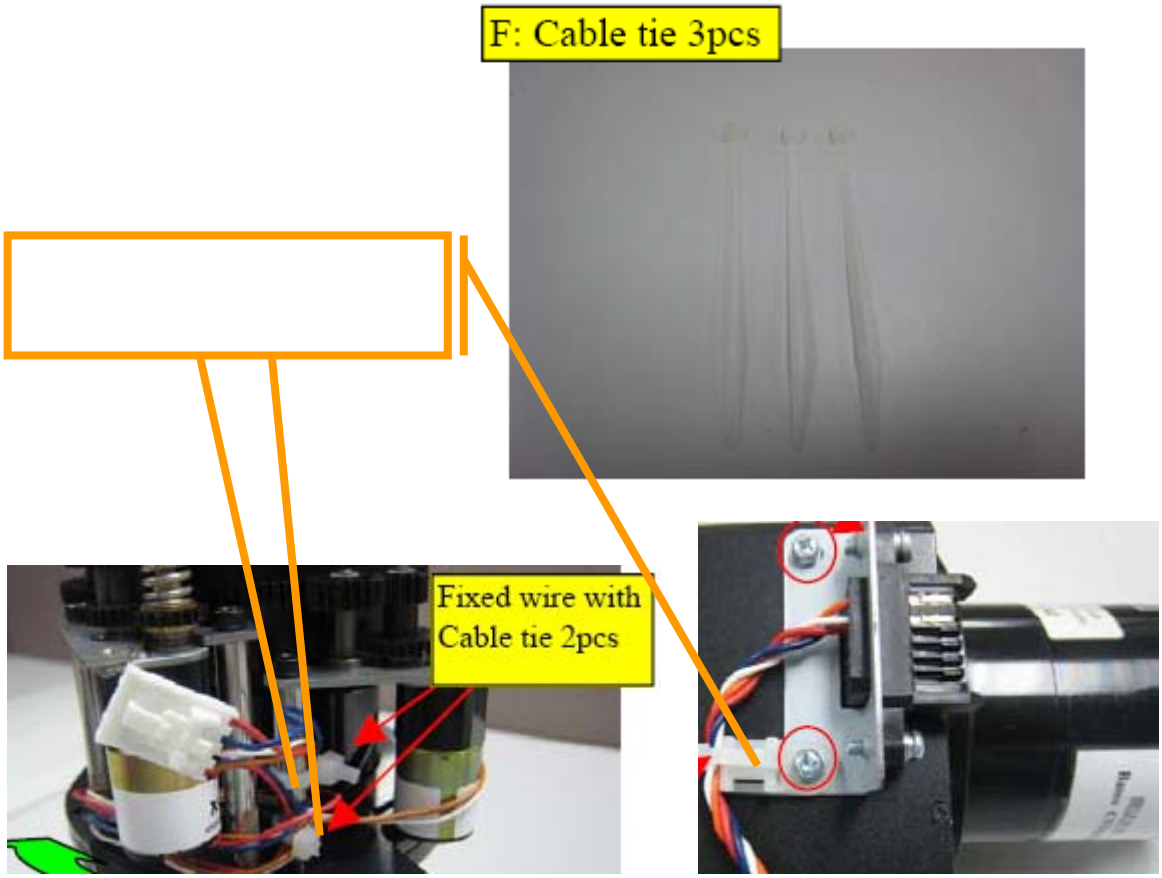
	Item	Description	QPA
Part D	1	Clip lens assy	3
	2	Screw M4*0.7	3



	Item	Description	QPA
Part E	1	Lens cover	1
	2	Clip fixed cover	2
	3	Screw M4*0.7	2

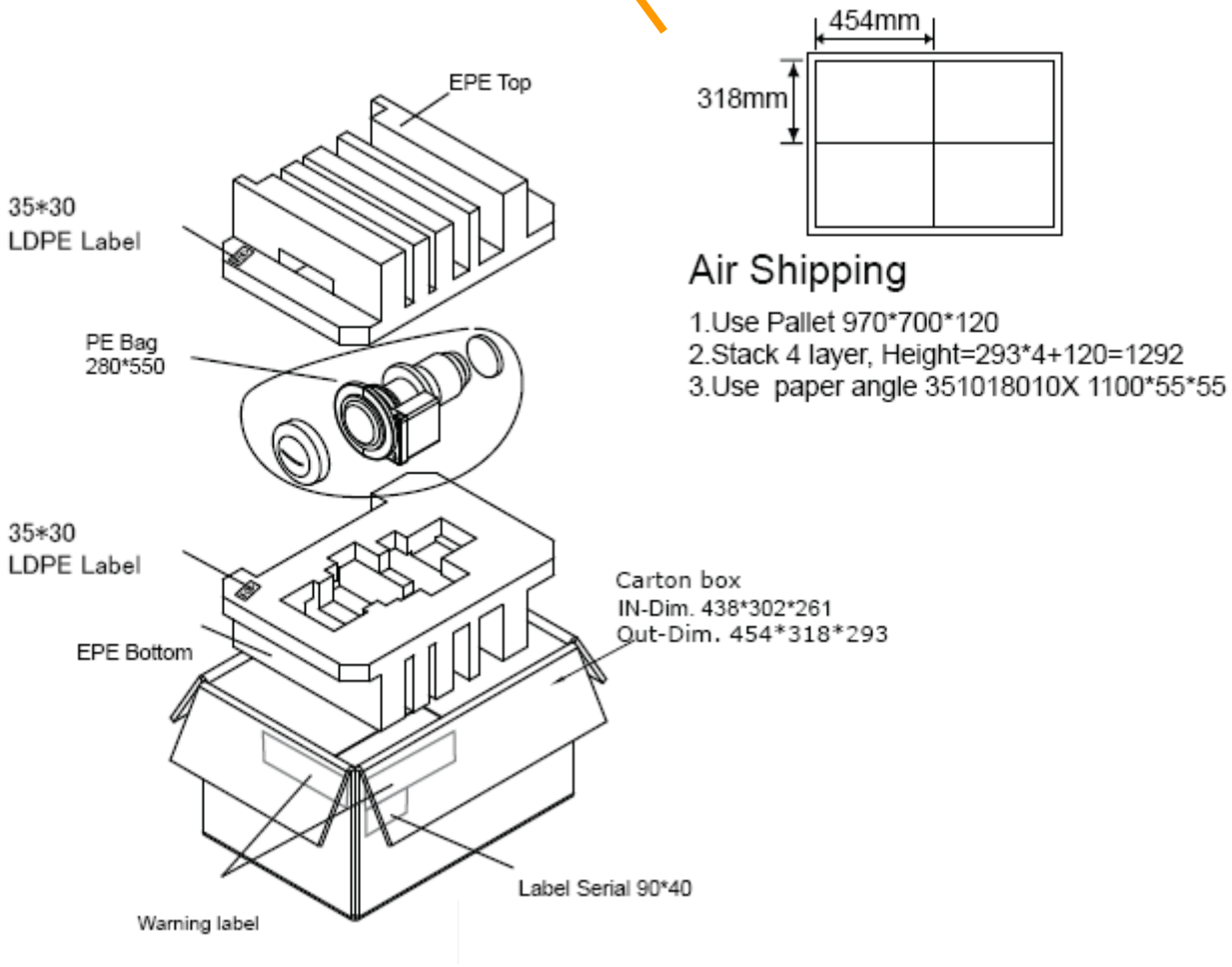


	Item	Description	QPA
Part F	1	Cable Tie	3
	2	Packing Box	1



Item 2: Packing Box x 1

These are total Projection Lens packing material only for BARCO.



BARCO P/N	DESCRIPTION
R9832740	PROJ LENS FIXED 0.8-1.0 F2.5
R9832741	PROJ LENS FIXED 1.2 F2.5
R9832742	PROJ LENS ZOOM 1.5-1.8 F2.5 G80
R9832743	PROJ LENS ZOOM 1.8-2.25 F/2.5 G100
R9832744	PROJ LENS ZOOM 2.25-3.0 F2.3 G200
R9832745	PROJ LENS ZOOM 3.0-4.5 F2.5 G400
R9832746	PROJ LENS ZOOM 4.5-7.0 F2.5 G500