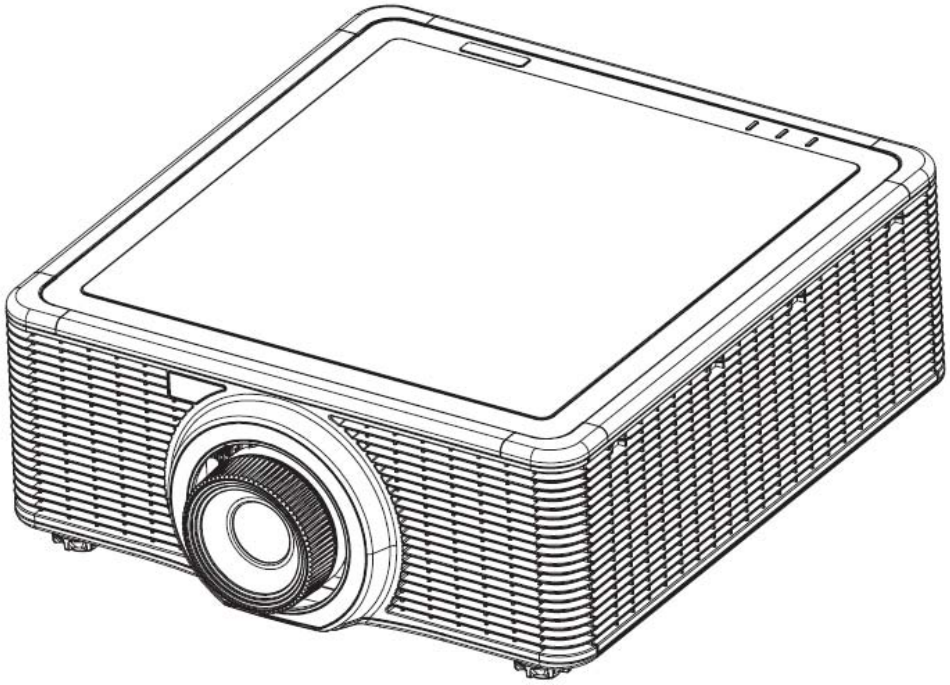
SERVICE MANUAL



EK-620U/EK-621W

Date	Revise Version	Description
2017.3.10	V1.0	Initial Issue

Preface

This manual is applied to EK-620U/EK-621W projection system.The manual gives you a brief description of basic technical information to help in service and maintain the product.

Your customers will appreciate the quick response time when you immediately identify problems that occur with our products.We expect your customers will appreciate the service that you offer them.

This manual is for technicians and people who have an electronic background.Please send the product back to the distributor for repairing and do not attempt to do anything that is complex or not mentioned in the troubleshooting.

Note: The information found in this manual is subject to change without prior notice.Any subsequent changes made to the data herein will be incorporated in future edition.

EK-620U/EK-621W Service Manual

Manual Version Rev 1.0

Table of Content

Chapter 1

Introduction

1-1 Highlight

No	Item	Description	
		EK-620U	EK-621W
1	Dimensions (W x H x D)	484 x 181 x 509 mm (without lens, w/o elevators)	
2	Weight (kg)	23.4 kg Net Weight (w/o lens) 24.4 kg Net Weight (with A02 lens) 27.9 kg Gross Weight with package (w/o lens)	
3	Power Supply	765W (110V) AC 100 - 240 V (50Hz / 60Hz) Stand-by Mode: <0.5W	
4	Keystone Correction	Horizontal: +/- 20 degrees Vertical:+/- 20 degrees	
5	Brightness	Normal Mode: 6500 lm Eco Mode: 3250 lm	
6	Throw Ratio AH-A22010A (A15) AH-A22020 (A01) AH-A22050 (A06) AH-A21010 (A03) AH-A23010 (A13)	 0.75 ~ 0.95 0.95 ~ 1.22 1.22 ~ 1.53 1.52 ~ 2.92 2.90 ~ 5.50	 0.79 ~ 1.00 1.00 ~ 1.28 1.28 ~ 1.61 1.60 ~ 3.07 3.04 ~ 5.78
7	Lens Shift	Horizontal: +/- 15%,Vertical: +/-50%	
8	Uniformity	Typical 90%,Minimum85%(JBMA)	
9	Laser	Normal mode:20,000 hours ,ECO mode:35000 hours	
10	DMD Chip	0.67”WUXGA DMD, Type A, DC3	0.65”WXGA DMD, Type A, DC3
11	I/O Terminal	1 x HDMI (version1.4) (with locking screw) 1 x DVI-D (only support digital signal) 1 x VGA IN(D-Sub 15pin) (Computer In) 1 x HDBaseT 1 x HDMI Out (version1.4) (with locking screw) 1 x VGA Out 1 x 3D SYNC Out	

No	Item	Description	
		EK-620U	EK-621W
12	Control Terminal	1 x RS232 (D-sub 9 pin) (PC Control) 1 x Wired in (3.5mm phone jack) (Remote In) 1 x USB type A (for WiFi dongle purpose) 1 x Mini USB (for LAN FW upgrade only) (Service) 1 x RJ45 (LAN)	
13	Native Resolution	1920 x 1200	1280 x 800
14	Filter Wheel	4 Segment—RYGB; Filter Diameter: 67 mm FW Speed: 7200 rpm (x2) / 10800 rpm (x3)	
15	Operating Temperature	0~2500 ft: 5~40 ℃ 2500~5000 ft: 5~35 ℃ 5000~10000 ft: 5~30 ℃	

1-2 Compatible Mode

VGA Analog

- PC Signal

Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]
VGA	640 x 480	60	31.47
VGA	640 x 480	72	37.86
VGA	640 x 480	75	37.5
VGA	640 x 480	85	43.27
SVGA	800 x 600	56	35.2
SVGA	800 x 600	60	37.88
SVGA	800 x 600	72	48.08
SVGA	800 x 600	75	46.88
SVGA	800 x 600	85	53.67
XGA	1024 X 768	60	48.36
XGA	1024 X 768	70	56.48
XGA	1024 x 768	75	60.02
XGA	1024 x 768	85	68.67
SXGA	1152 x 864	70	63.8
SXGA	1152 x 864	75	67.5
SXGA	1152 x 864	85	77.1
SXGA	1280 x 1024	60	63.98
SXGA	1280 x 1024	72	77.9
SXGA	1280 x 1024	75	79.98

Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]
SXGA	1280 x 1024	85	91.15
Quad VGA	1280 x 960	60	60
Quad VGA	1280 x 960	75	75
SXGA+	1400 x 1050	60	65.32
UXGA	1600 x 1200	60	75
WUXGA(RB)	1920 x 1200	60	74.038
PowerBook G4	640 x 480	60	31.5
PowerBook G4	640 x 480	66.6(67)	35
PowerBook G4	800 x 600	60	37.88
PowerBook G4	1024 x 768	60	48.36
PowerBook G4	1152 x 870	75	68.68
PowerBook G4	1280 x 960	75	75.2
i Mac DV(G3)	1024 x 768	75	60.3

- Extended Wide timing

Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]
WSVGA	1024 x 600	60	37.3
WXGA	1280 x 768	60	44.78
WXGA	1280 x 768	75	60.29
WXGA	1280 x 768	85	68.63
WXGA	1280 x 720	60	44.8
WXGA	1280 x 800	60	49.6
WXGA	1366 x 768	60	47.71
WXGA+	1440 x 900	60	55.9
WSXGA	1680 x 1050	60	65.3
WUXGA	1920 x 1080-RB	60	66.6
WUXGA	1920 x 1080-EIA	60	67.5

- Component signal

Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]
480i	720 x 480	59.94(29.97)	27
480p	720 x 480	59.94	31.47
576i	720 x 576	50(25)	27
576p	720 x 576	50	31.25
720p	1280 x 720	60	45
720p	1280 x 720	50	37.5
1080i	1920 X 1080	60(30)	33.75
1080i	1920 X 1080	50(25)	33.75
1080p	1920 x 1080	60	67.5
1080p	1920 x 1080	50	56.25

HDMI - PC Signal

- PC Signal

Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]
VGA	640 x 480	60	31.47
VGA	640 x 480	72	37.86
VGA	640 x 480	75	37.5
VGA	640 x 480	85	43.27
SVGA	800 x 600	56	35.2
SVGA	800 x 600	60	37.88
SVGA	800 x 600	72	48.08
SVGA	800 x 600	75	46.88
SVGA	800 x 600	85	53.67
XGA	1024 x768	60	48.36
XGA	1024 x768	70	56.48
XGA	1024 x768	75	60.02
XGA	1024 x768	85	68.67
SXGA	1152 x 864	70	63.8
SXGA	1152 x 864	75	67.5
SXGA	1152 x 864	85	77.1

Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]
SXGA	1280 x 1024	60	63.98
SXGA	1280 x 1024	72	77.9
SXGA	1280 x 1024	75	79.98
SXGA	1280 x 1024	85	91.15
Quad VGA	1280 x 960	60	60
Quad VGA	1280 x 960	75	75
SXGA+	1400 x 1050	60	65.32
UXGA	1600 x 1200	60	75
PowerBook G4	640 x 480	60	31.5
PowerBook G4	640 x 480	66.6(67)	35
PowerBook G4	800 x 600	60	37.88
PowerBook G4	1024 x 768	60	48.36
PowerBook G4	1152 x 870	75	68.68
PowerBook G4	1280 x 960	75	75.2
i Mac DV(G3)	1024 x 768	75	60.3
WUXGA(RB)	1920 x 1200	60	74.038

- HDMI - Extended Wide timing

Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]
WSVGA	1024 x 600	60	37.3
WXGA	1280 x 768	60	47.78
WXGA	1280 x 768	75	60.29
WXGA	1280 x 768	85	68.63
WXGA	1280 x 720	60	44.8
WXGA	1280 x 800	60	49.6
WXGA	1366 x 768	60	47.71
WXGA+	1440 x 900	60	55.9
WSXGA	1680 x 1050	60	65.3
WUXGA	1920x1080-RB	60	66.6
WUXGA	1920x1080-EIA	60	67.5
WUXGA	1920x1200-RB	59.95	74.04

- HDMI - Video Signal

Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]
480i	720 x 480	59.94(29.97)	27
480p	720 x 480	59.94	31.47
576i	720 x 576	50(25)	27
576p	720 x 576	50	31.25
720p	1280 x 720	60	45
720p	1280 x 720	50	37.5
1080i	1920 X 1080	60(30)	33.75
1080i	1920 X 1080	50(25)	33.75
1080p	1920 x 1080	60	67.5
1080p	1920 x 1080	50	56.25
1080p	1920 x 1080	23.97/24	27

Note: If the Computer Compatibility supportive signal is different from User's Manual, please refer to User's Manual.

Chapter 2

Disassembly Process

2-1 Equipment Needed & Product Overview

1. Screw Bit (+) :105
2. Screw Bit (+) :107
3. Screw Bit (-) :107
4. Hex Sleeves 5 mm
5. Tweezers
6. Knife
7. Projector

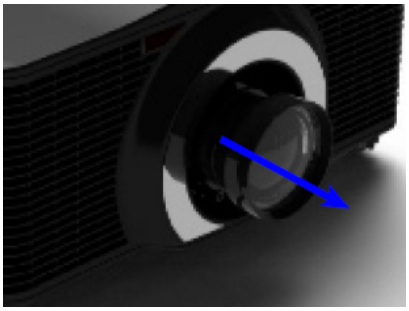
** Before you start:*

- This process is protective level II. Operators should wear electrostatic chains.

- When disassemble Engine module , please notice that it require specific environmental conditions (clean room).

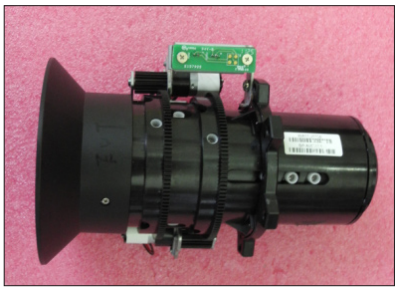
2-2 Disassemble Projector Lens

1. Remove the lens cover (as blue arrow).



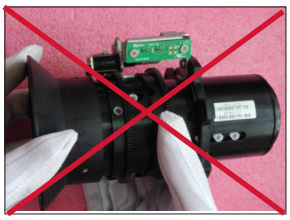
Lens cover

2. Rotate the lens carefully (as red arrow), then remove it out carefully.

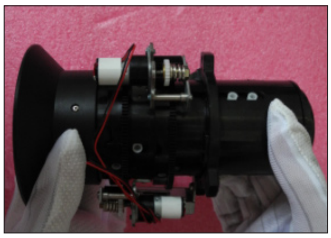


Projector lens

Note: - Please hold lens module in the right way.
- Be careful not to dirty the glass of the lens module.
- Be careful not to touch the motor of the lens module



Wrong

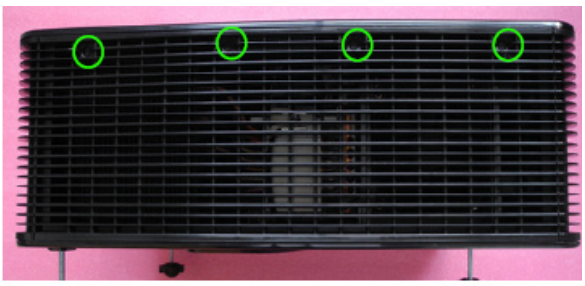


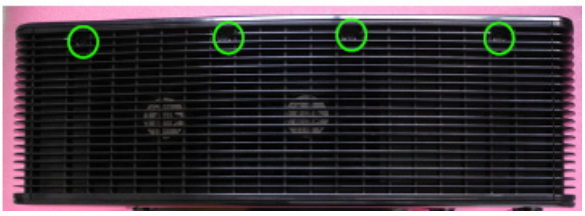
Right

2-3 Disassemble Top Cover

1. Loosen 4 black screws (as red circle).

2. Loosen 8 screws (as green circle).

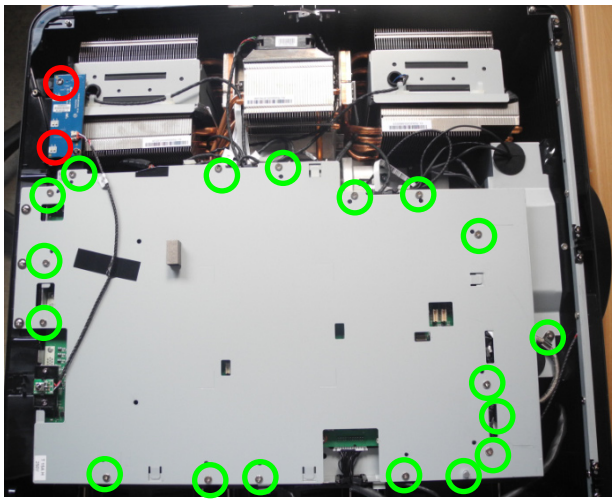




3.Take the top cover module out.

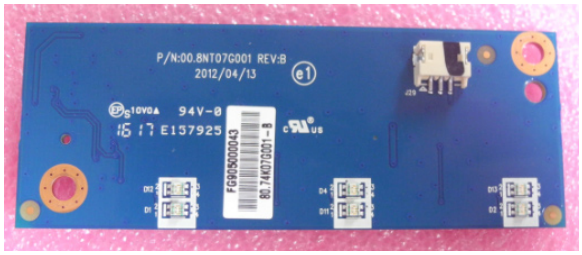
2-4 Disassemble Main Board Module

1. Take out the top IR board from the hook.

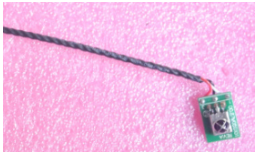


2. Loosen 18 screws to disassemble top shielding (as green circle).

3. Loosen 2 screws to disassemble LED board (as red circle).



LED board

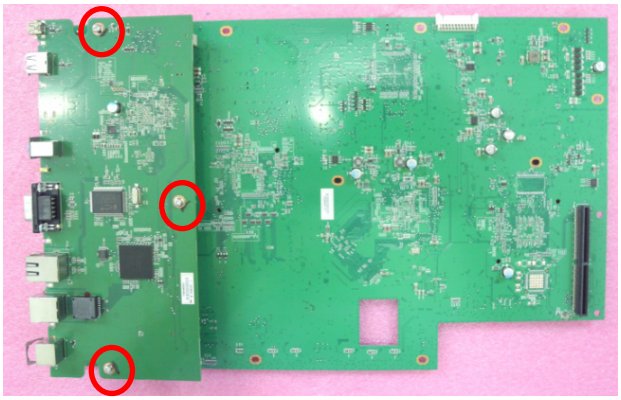


IR board

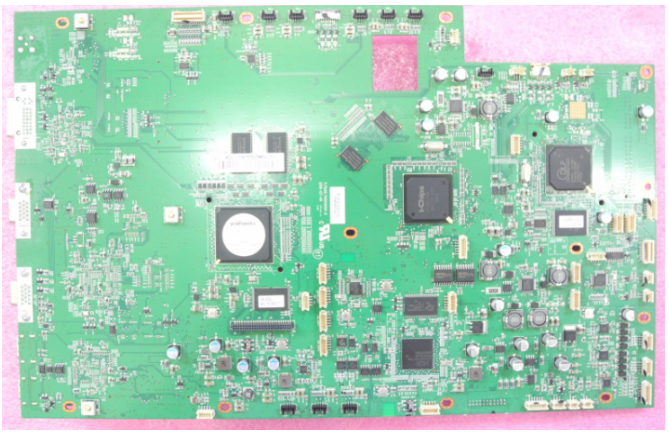
4. Loosen 3 screws and 10 hexes (as red circle).

5.Loosen 9 screws to disassemble main board (as green circle).

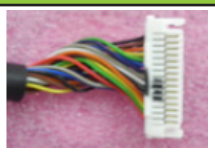
6.Loosen 3 screws to disassemble IO board (as red circle).

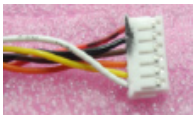
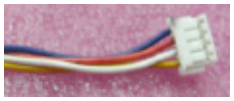


IO board



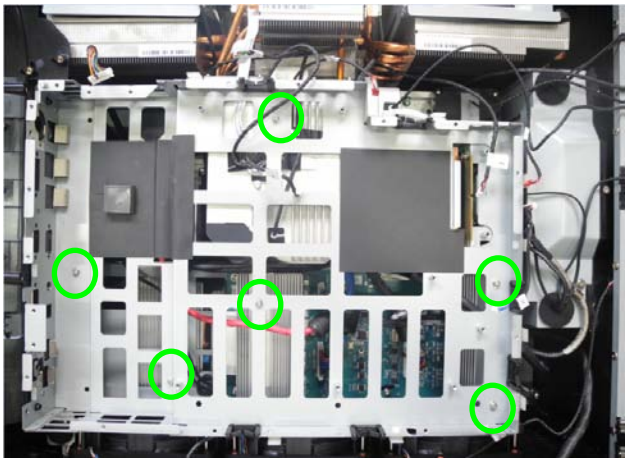
Main board

Item	Male Connector on Connector Board	The key feature	Figure
J5	KEYPAD CONN	White connector (30 pin)	
J35/J34	FAN10/FAN4	Composed of black,blue,gray,red wires white connector (4pin)	
J33/J32	FAN9/FAN8	Composed of black, green, gray, and red wires, white connector (4 pin)	
J23	P/W FPC	FPC	

Item	Male Connector on Connector Board	The key feature	Figure
J38	FAN6	Composed of black, green, gray, and red wires, a white connector (4 pin)	
J25	F/W SENSOR	Composed of white, black, and red wires, a red connector (3 pin)	
J22	F/W FPC	FPC	
J44/J47	H SENSOR L/ V SENSOR B	Composed of two white wires, a white connector (2 pin)	
J14	LIGHT SENSOR 2	Composed of white, yellow, pink, brown, black, and red wires, a white connector (6 pin)	
J48	LD DRIVER	Composed of a white connector, and a black wire tube (20 pin)	
J46	V SENSOR T	Composed of two blue wires, a white connector, a black wire tube (2 pin)	
J43	H SENSOR R	Composed of two red wires, a white connector, a black wire tube (2 pin)	
J45/J42	V POWER/ H POWER	Composed of yellow, white, red, and blue wires, a white connector (4 pin)	

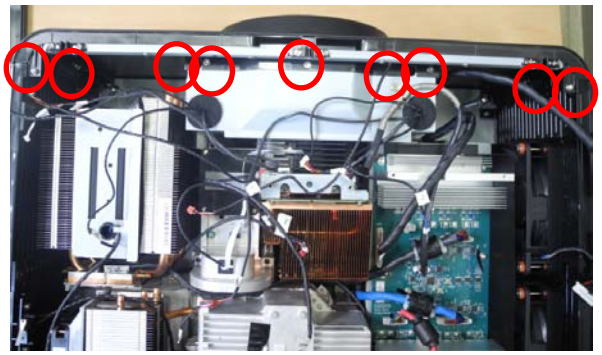
Item	Male Connector on Connector Board	The key feature	Figure
J39	ZOOM/FOCUS	Composed of white, yellow, pink, brown, black, and red wires (six pin)	
J8	FRONT IR	Composed of red, black, and white wires, a green connector (3 pin)	
J9	LIGHT SENSOR	Composed of black, yellow, and red wires, a white connector (6 pin)	
J1	LVPS	Composed of a white connector, and a black wire tube (22 pin)	
J24	P/W SENSOR	Composed of white, black, and red wires, a red connector (3 pin)	
J36/J37 J31/J30 J29	FAN7/FAN5/FAN3/ FAN2 FAN1	Composed of black, blue, gray, and brown wires, a white connector (4 pin)	

7.Loosen 6 screws to disassemble bottom shielding (as green circle).



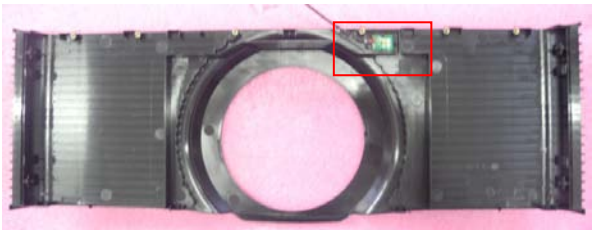
2-5 Disassemble Front Cover

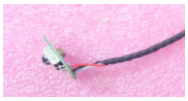
1.Loosen 9 screws to disassemble front cover (as red circle).



2.Loosen 6 screws to disassemble bracket (as green circle).

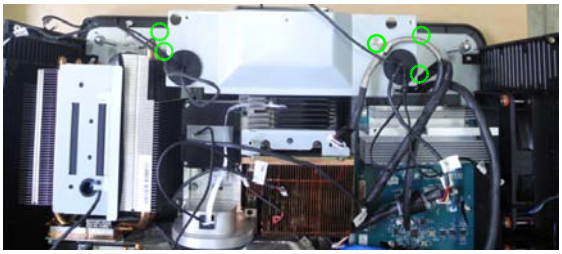
3. Take out the front IR (as red rectangle).





Front Cover *IR*

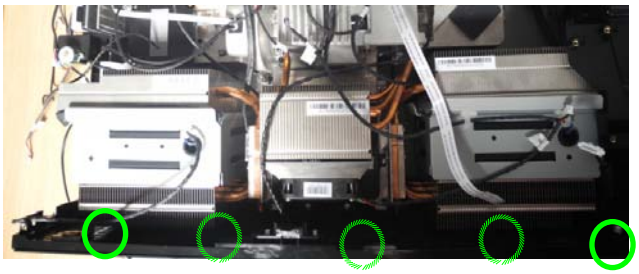
4.Loosen 5 screws to disassemble front shielding (as green circle).



2-6 Disassemble Left Cover

1.Take out the interlock switch (as red rectangle).

2.Loosen 5 screws to disassemble left cover (as green circle).



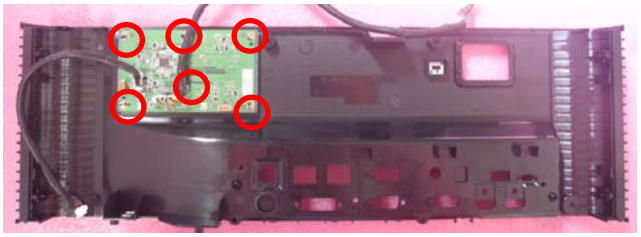
Left Cover

2-7 Disassemble IO Cover

1.Loosen 3 screws (as red circle).

2.Loosen 2 screws (as green circle).

3.Loosen 6 screws to separate IO cover and keypad board (as red circle).



IO Cover

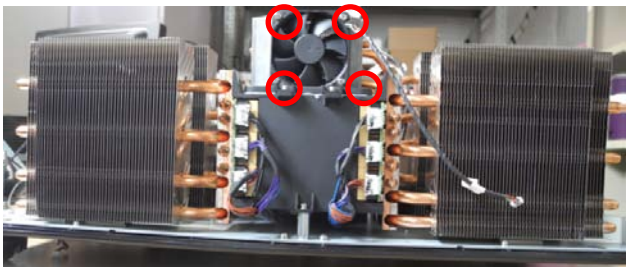
Rubber

KeyPad

2-8 Disassemble Engine Module

1.Loosen 4 screws to disassemble fan5& fan7 (as green circle).

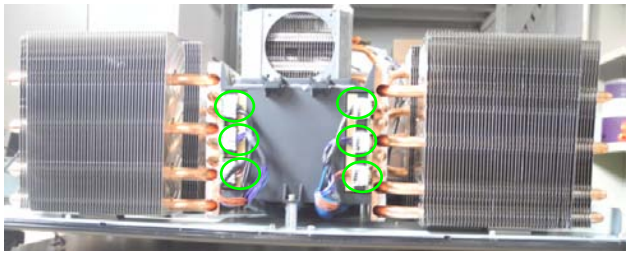
2.Loosen 4 screws to disassemble fan6 (as red circle).



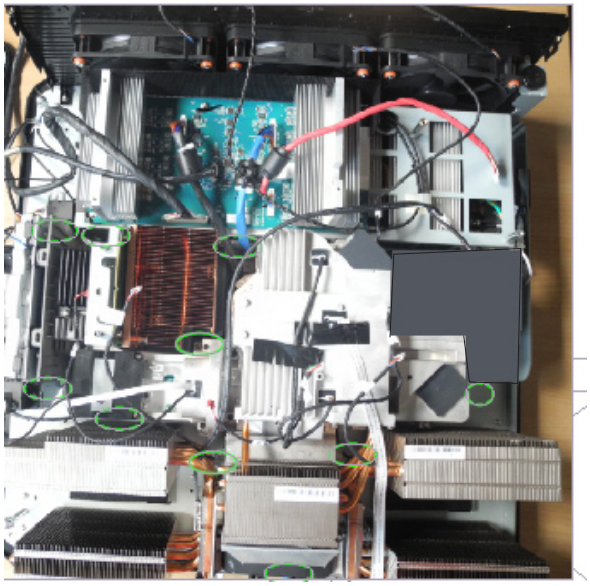
Fan5&Fan7

Fan6

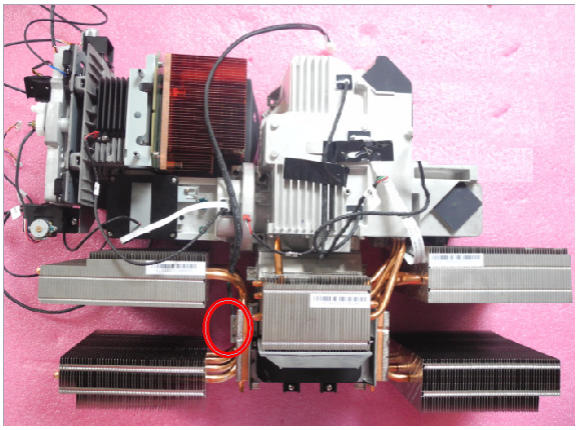
3.Unplug 6 connectors (as green circle).



4.Loosen 10 screws to disassemble the engine module (as green circle).

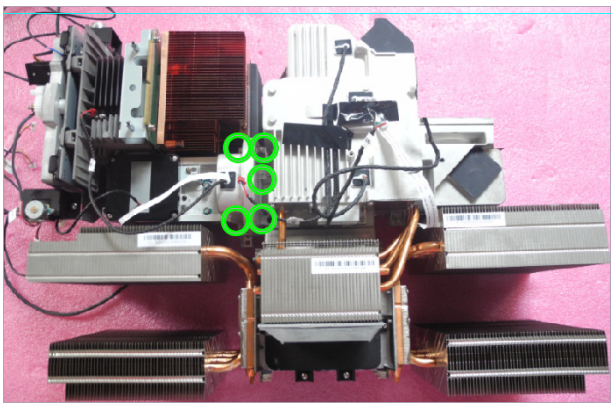


5.Loosen 1 screws to disassemble the thermal switch (as red circle).



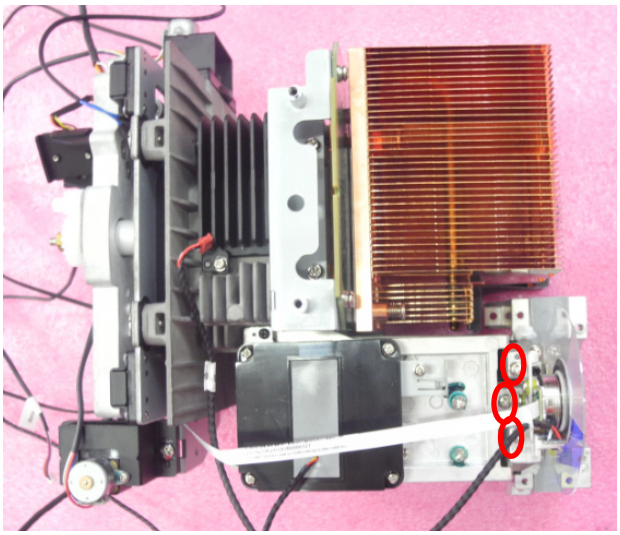
Thermal Switch

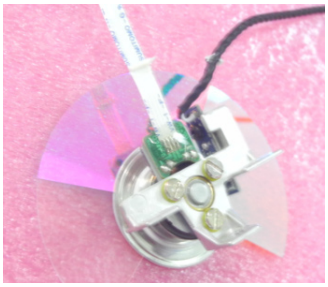
6.Remove the glue,then loosen 5 screws to separate the filter cover and combiner module (as green circle).



Combiner Module

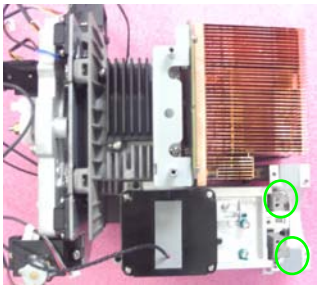
7.Loosen 3 screws to disassemble filter wheel module (as red circle).

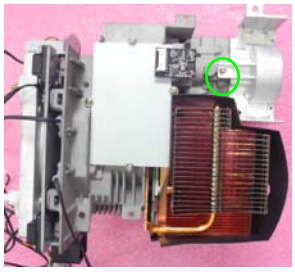




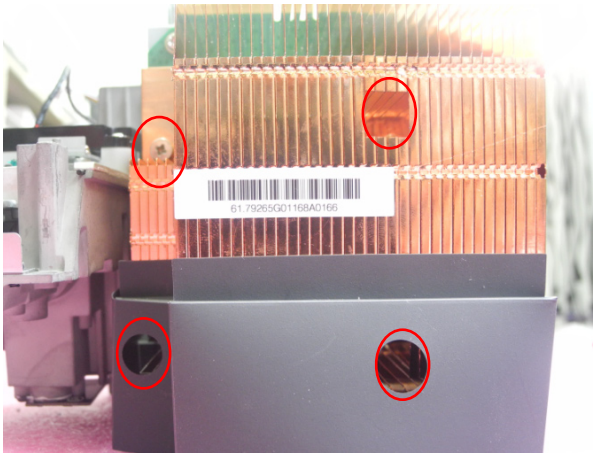
Filter Module

8.Loosen 3 screws to disassemble filter bottom cover (as green circle).

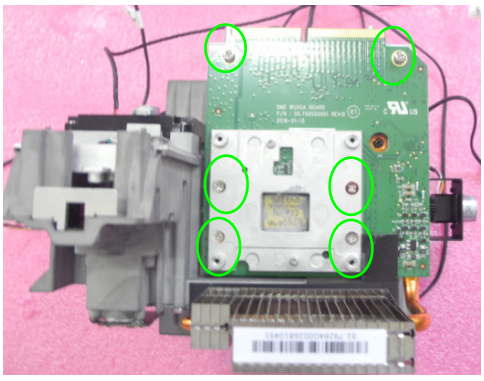




9.Loosen 4 screws to disassemble DMD heatsink (as red circle).



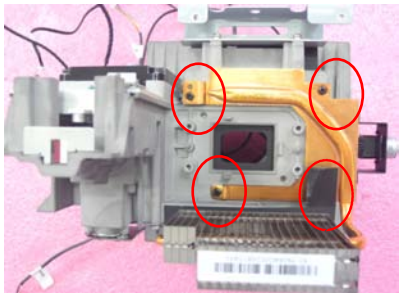
10.Loosen 6 screws to disassemble DMD board (as green circle).



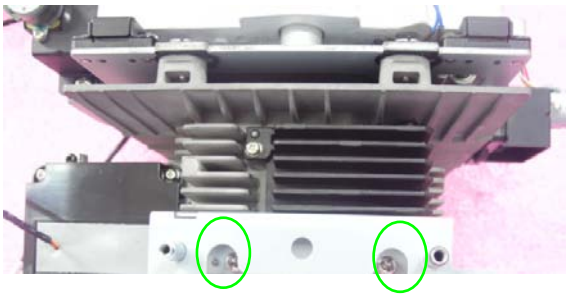
DMD Board

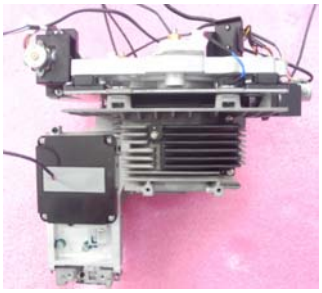
DMD

11.Loosen 4 screws to disassemble DMD board (as red circle).



12.Loosen 2 screws to disassemble bracket (as green circle).

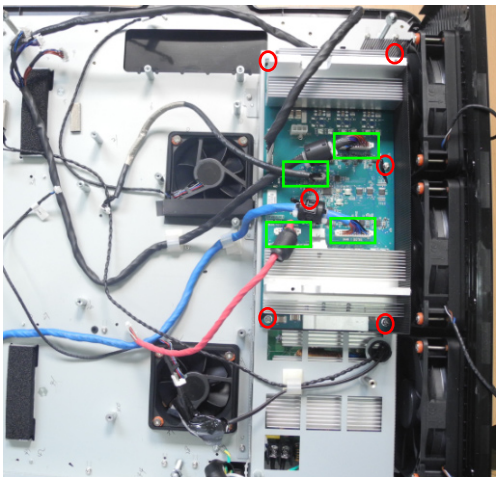




Engine Module

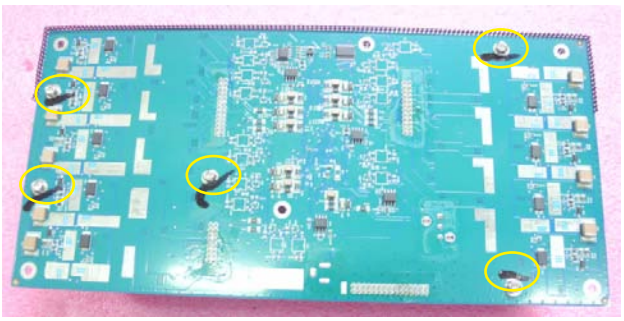
2-9 Disassemble LVPS

1.Unplug 4 connectors (as green rectangle).



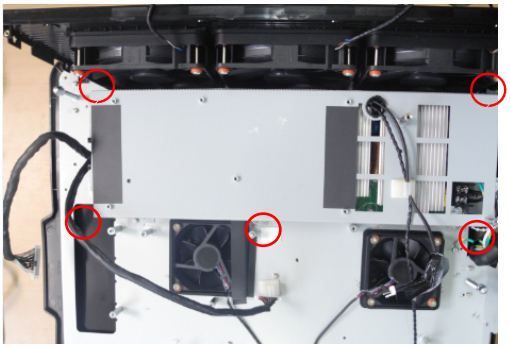
2.Loosen 6 screws to disassemble LD driver board (as red circle).

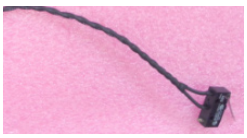
3.Loosen 5 screws to separate LD driver board and heatsink (as yellow circle).



LD Driver Module

4.Loosen 5 screws to disassemble shielding and unplug all connectors (as red circle).





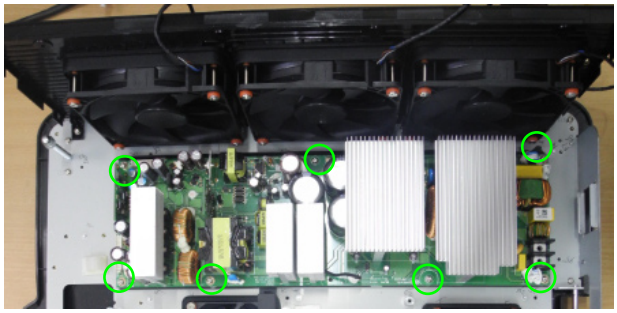
Interlock Switch

5.Rotate the cap take out the fuse (as green square) and loosen 5 screws to disassemble AC (as red circle).

AC

Fuse

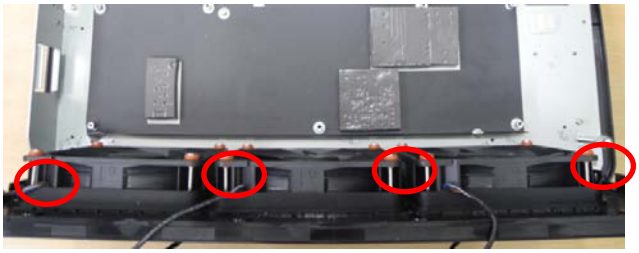
6.Loosen 7 screws to disassemble LVPS (as green circle).



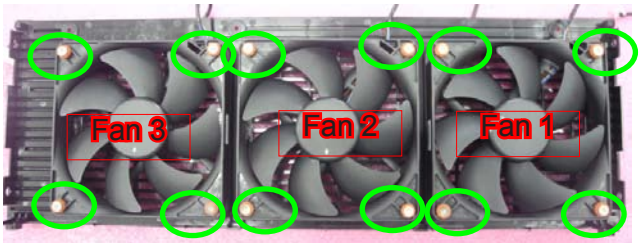
LVPS

2-10 Disassemble Bottom Cover Module

1.Loosen 4 screws to disassemble right cover (as red circle).



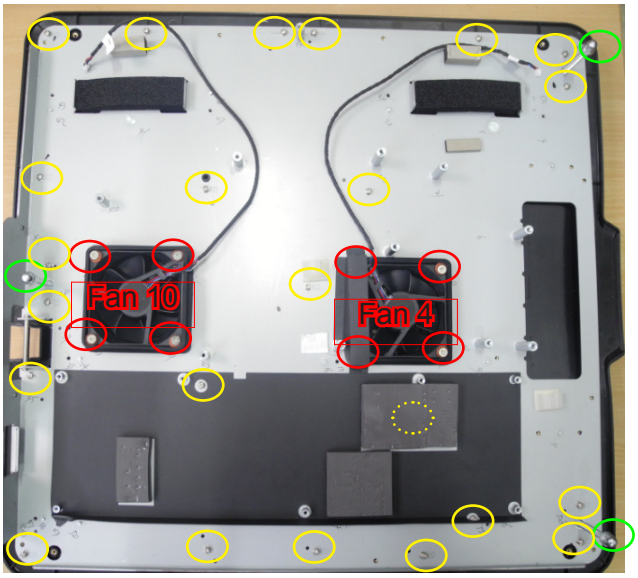
2.Loosen 12 screws to disassemble fan3 & fan2 & fan1 (as green circle).



Fan1&Fan2&Fan3

Right Cover

3.Loosen 8 screws to disassemble fan4 & fan10 (as red circle).

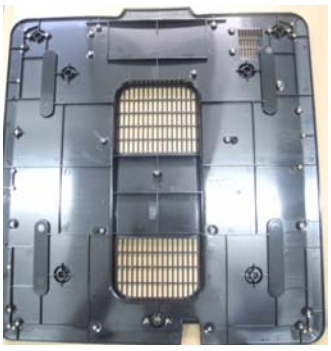


4.Loosen 3 screws to disassemble 3 foot (as green circle).

Fan4&Fan10

Foot

5.Loosen 23 screws to disassemble the bottom cover (as yellow circle).



Bottom Cover

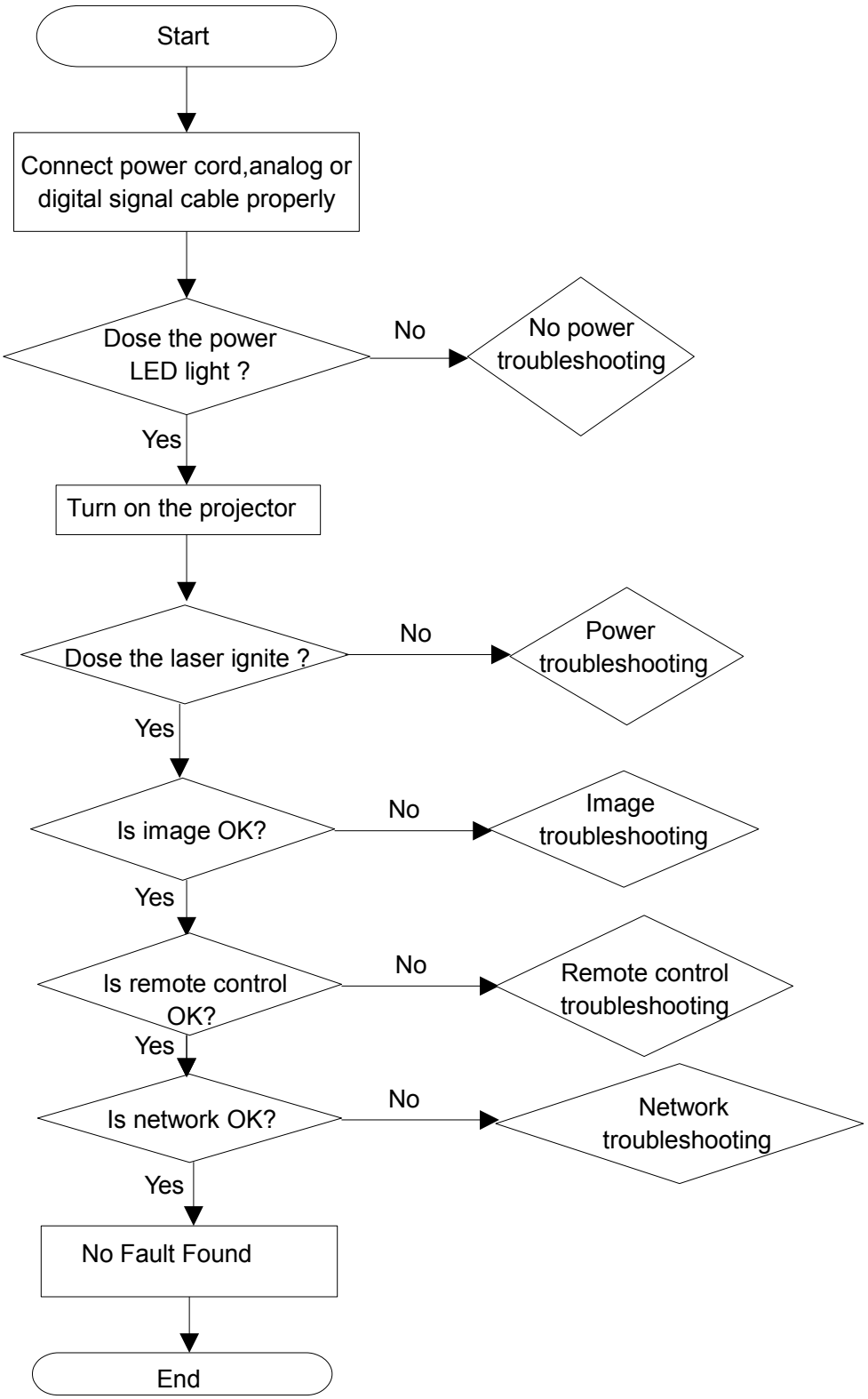
Chapter 3

Troubleshooting

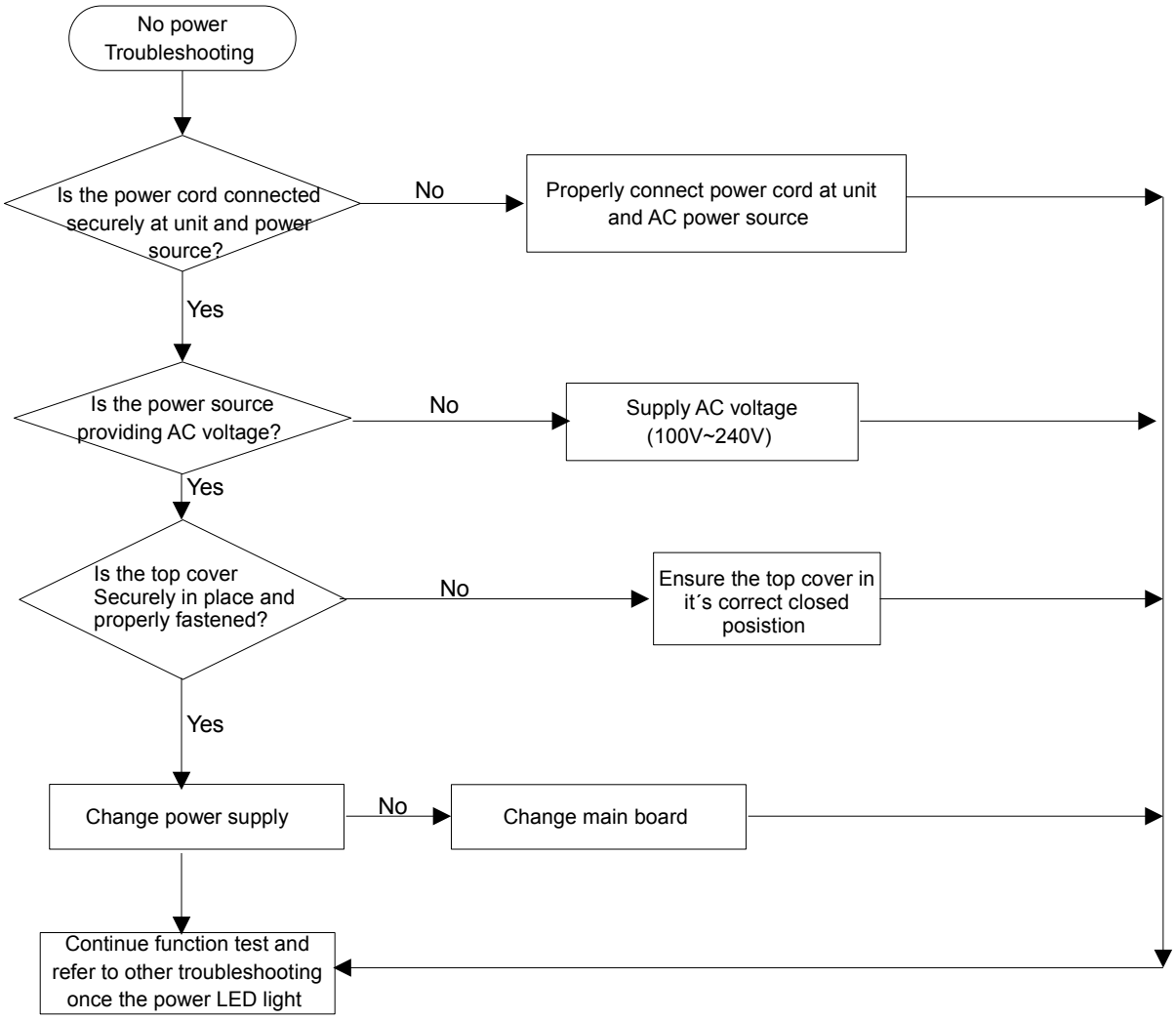
3-1 LED Lighting Message

Message	Light LED	Status LED			AV Mute LED	
	Green	Green	Orange	Red	Green	Orange
Standby State	-	Flashing	-	-	-	-
Power on (Warm up)	-	-	Flashing	-	-	-
Power on & Laser diode on	Steady	Steady	-	-	Steady	-
Power off (Cooling down)	-	-	Flashing	-	-	-
AV mute is off (Image is displayed)	Steady	Steady	-	-	Steady	-
AV mute is on (Image is black)	Steady	Steady	-	-	-	Steady
Projector communication	Steady	Flashing	-	-	Steady	-
Firmware upgrade	-	Flashing	Flashing	-	-	-
Error (Over temperature)	-	-	-	Steady	-	-
Error (Fan failure)	-	-	-	Flashing	-	-

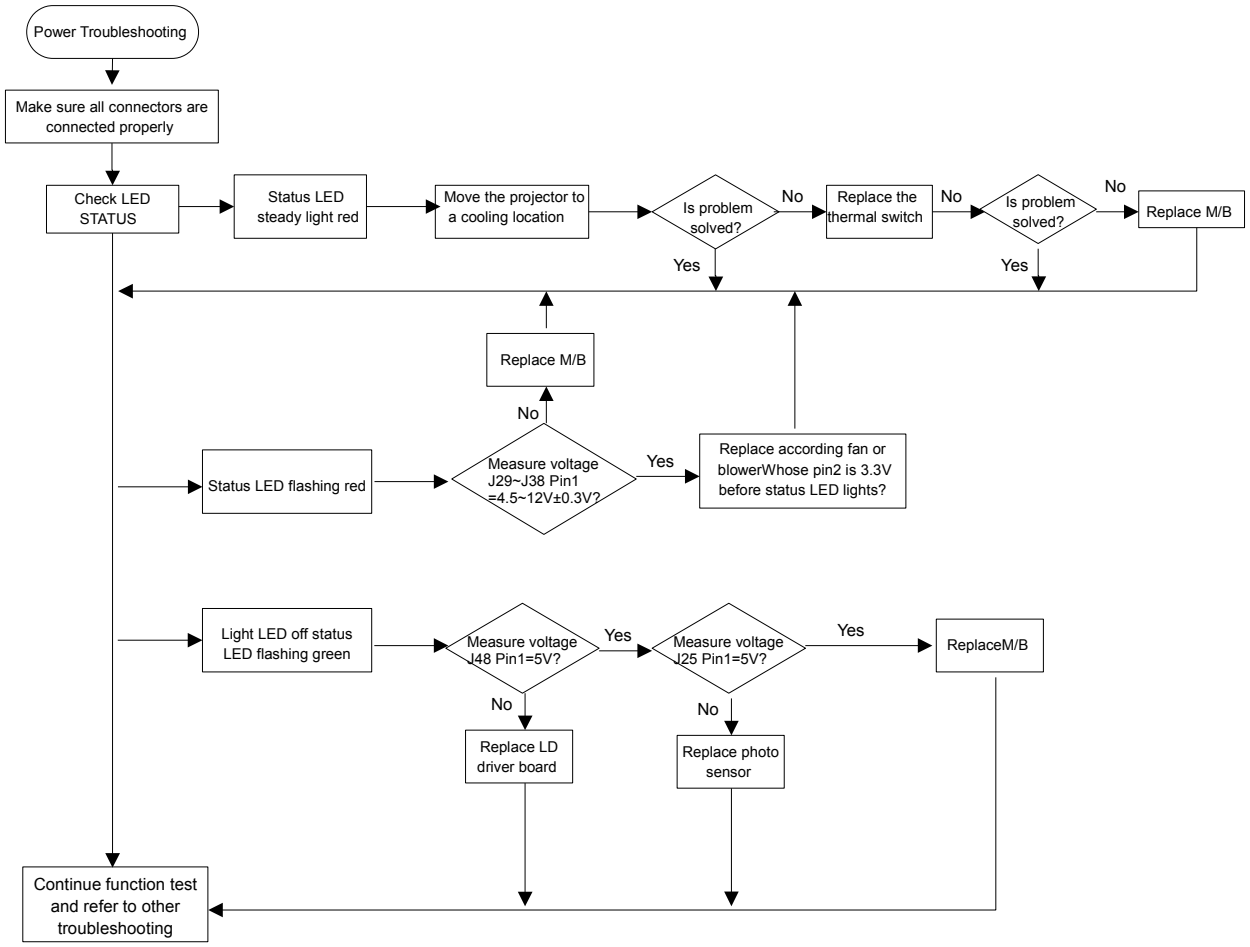
3-2 Main Procedure



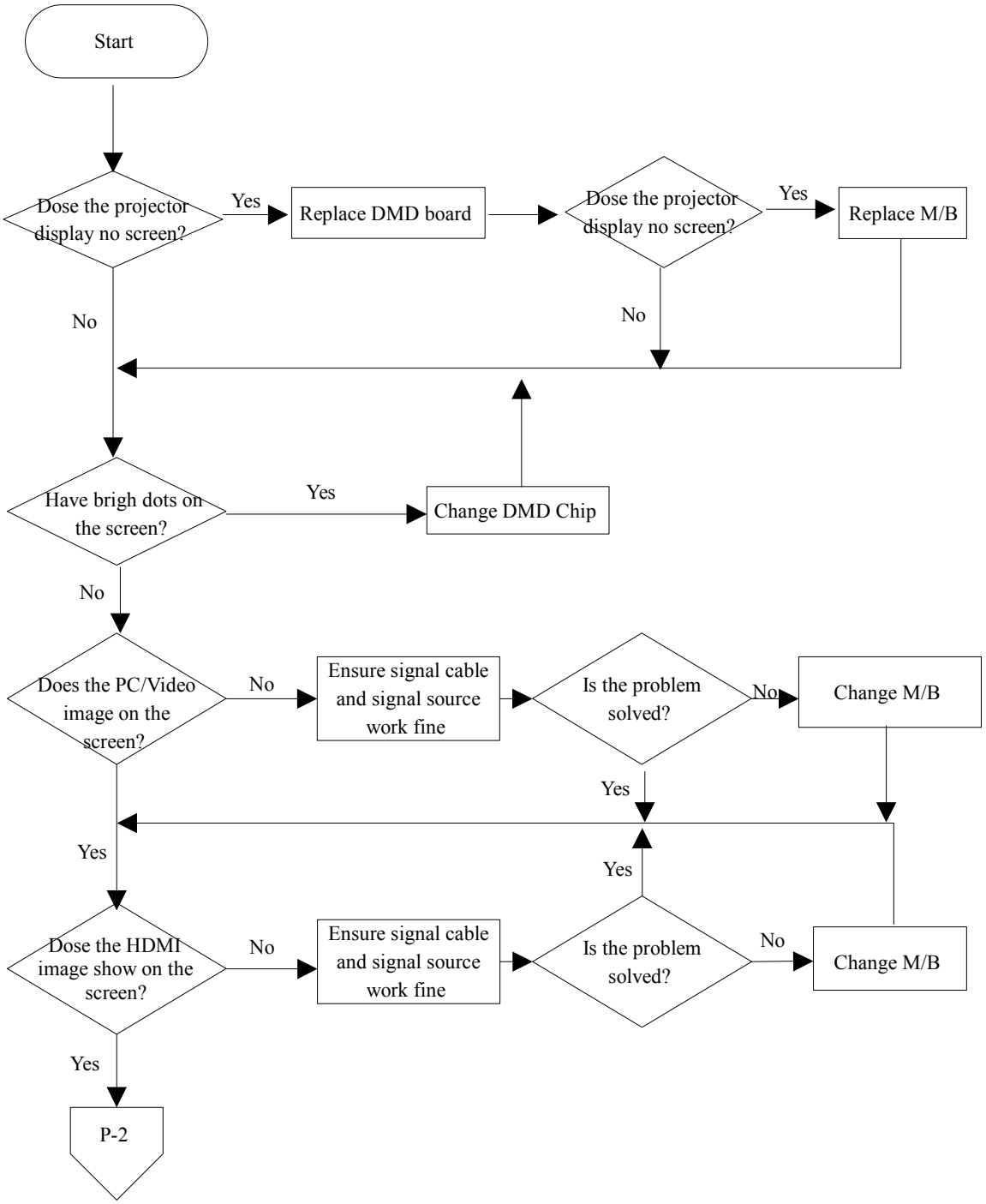
3-3 No Power Troubleshooting



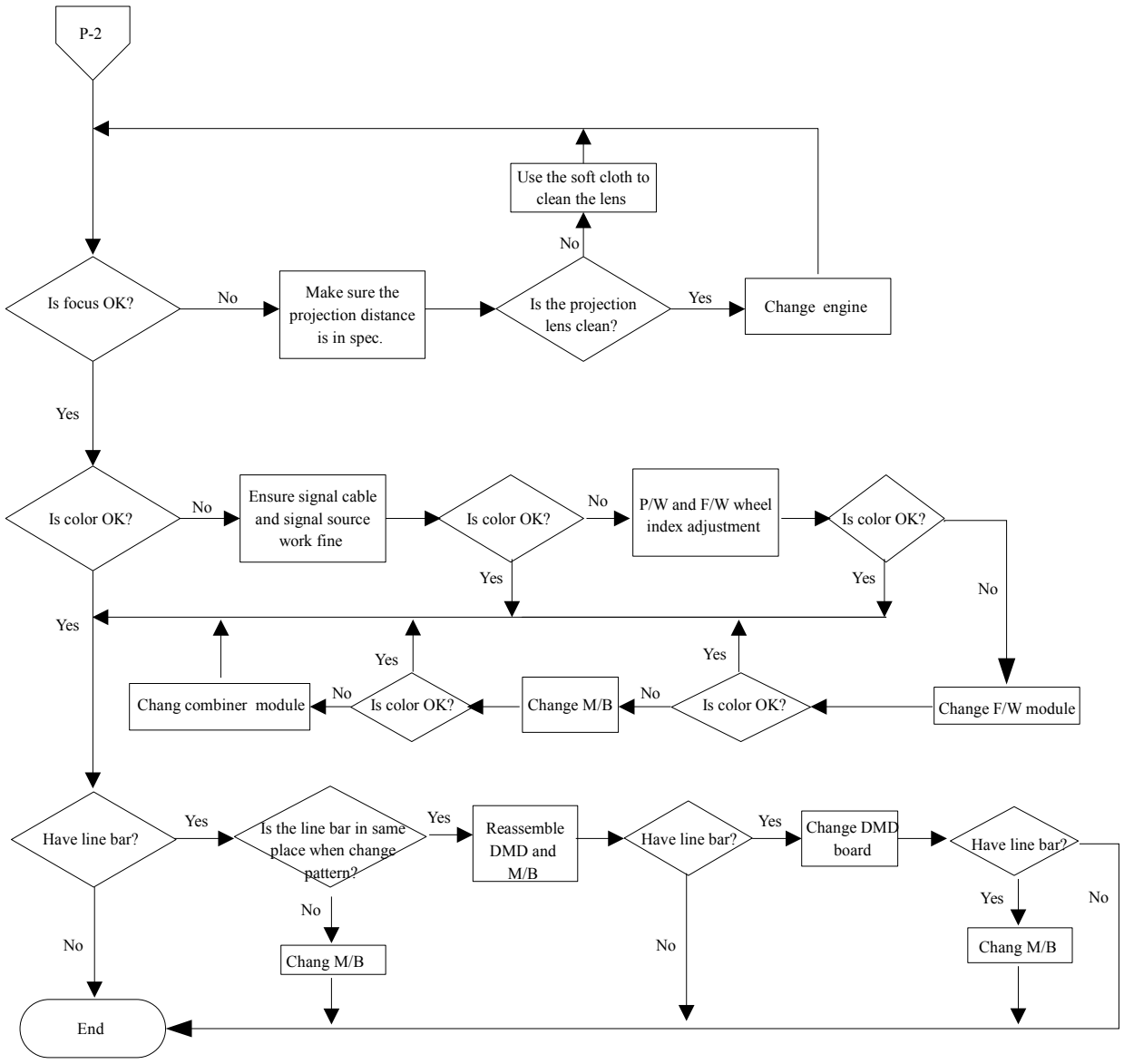
3-4 Power Troubleshooting



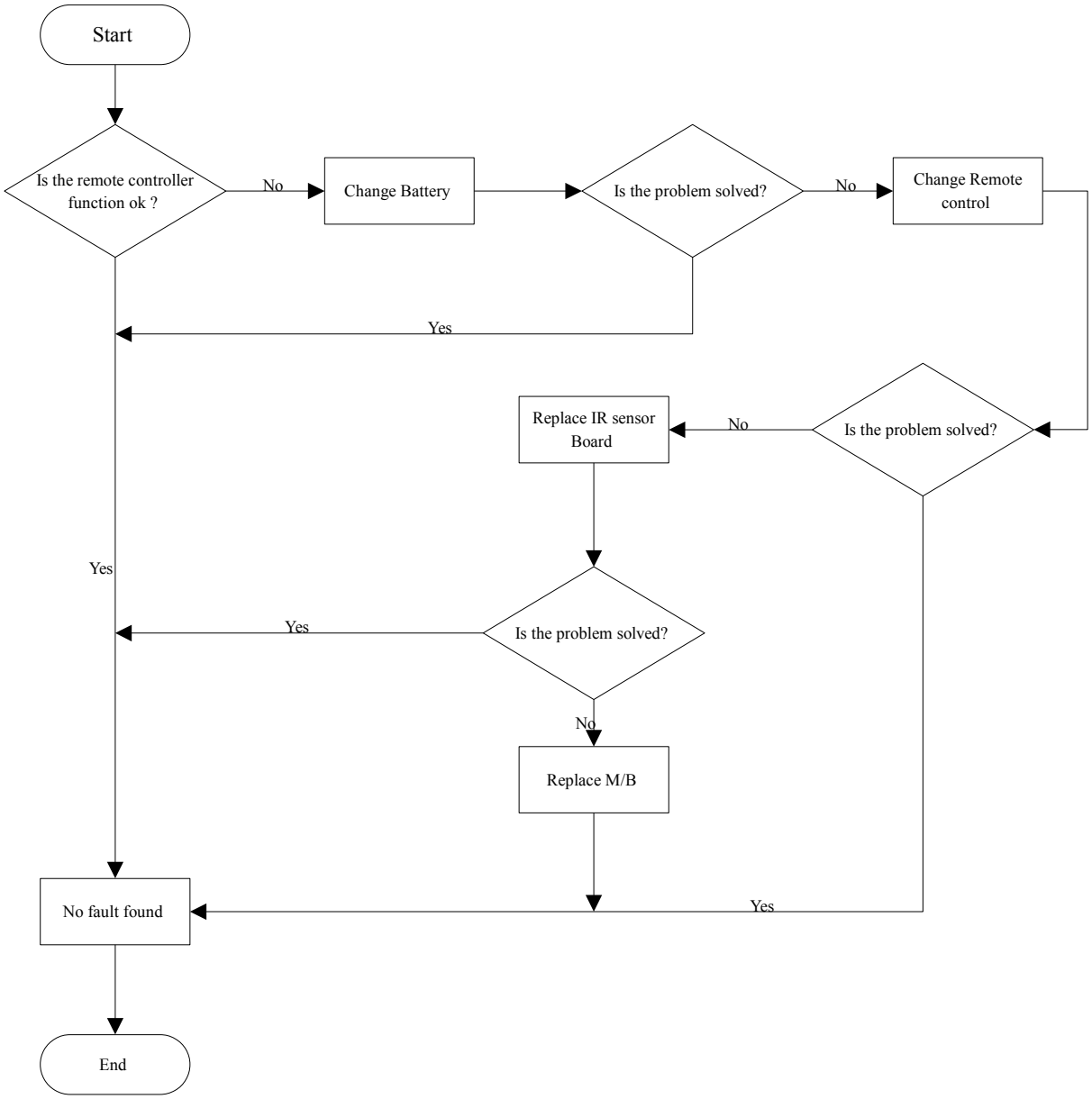
3-5 (1/2) Image Troubleshooting



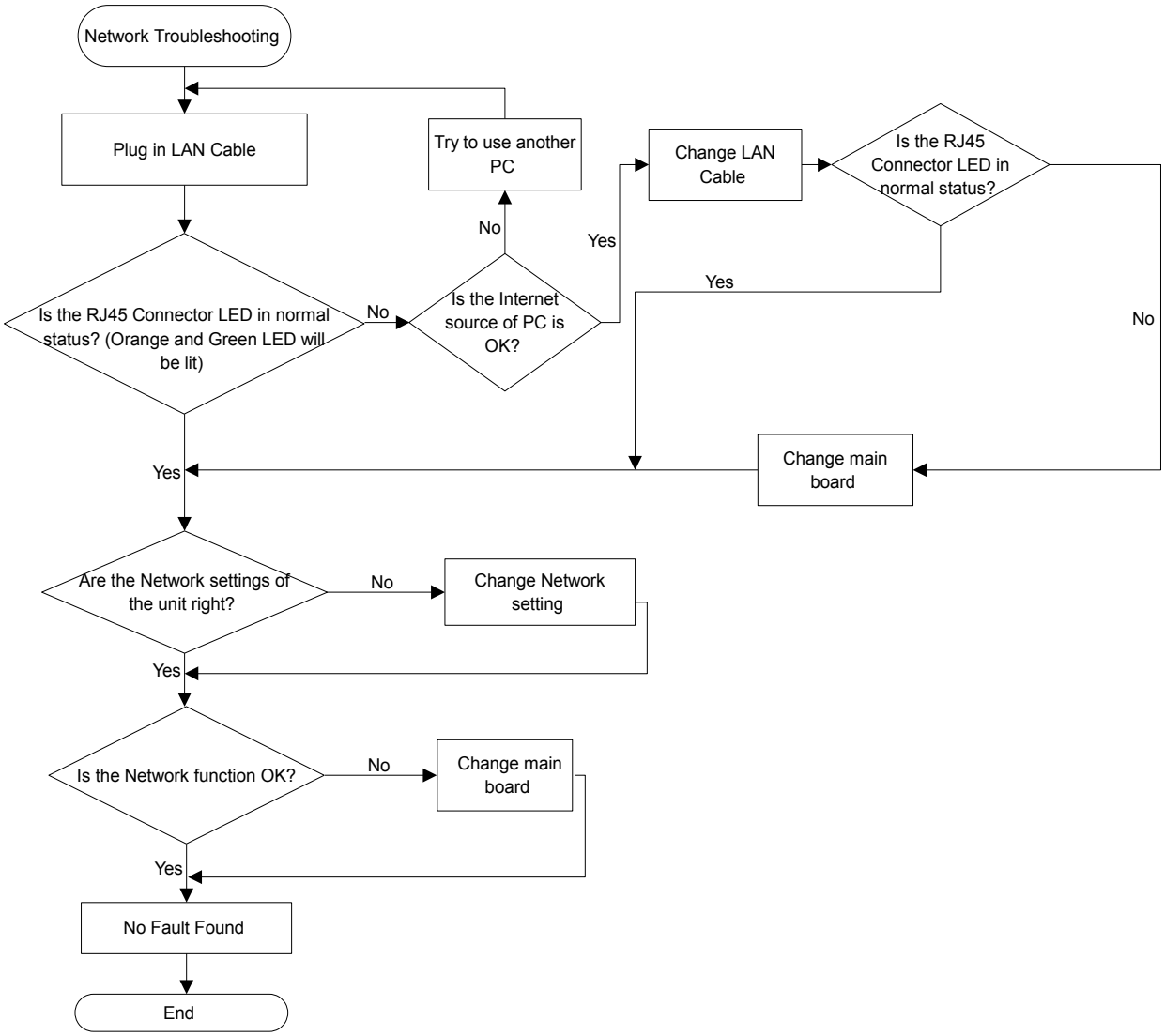
3-5 (2/2) Image Troubleshooting



3-6 Remote Troubleshooting



3-7 Network Troubleshooting



Chapter 4

Test&Inspection

4-1 Test Equipment Needed

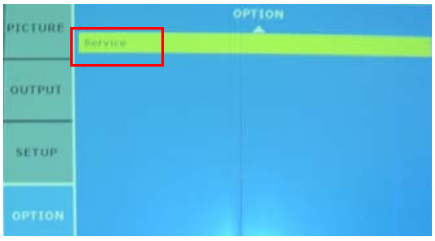
- PC with HDTV resolution
- DVD player with Multi-system, equipped “Component”, “S-Video”, “Composite” and “ HDMI”.
- HDTV Source (480P, 720P, 1080P)
- Quantum Data 802B or CHROMA 2327 (Color Video Signal & Pattern Generator)

4-2 Service Mode

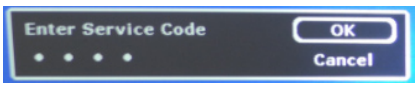
1.Enter the service mode

- Turn on the projector

- Press “Menu” button on Remote Controller or Keypad,choose “OPTION”

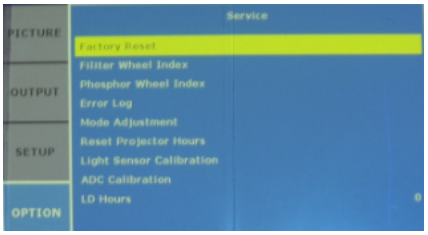


- Choose “SERVICE”



- Enter the code “1,5,9,0” by remote controller or Press the button “LEFT +DOWN+RIGHT+UP” by keypad to access service mode.

- Press “Enter” to get into service mode.



2.Service mode

Item	Label	Description
1	Factory Reset	Restore all settings to their default value,It will not reset network
2	Filter Wheel Index	Adjust the R/G/B value to get perfect image when image loss some kinds of color
3	Phosphor Wheel Index	Adjust the R/G/B value to get perfect image when image loss some kinds of color
4	Error Log	Record the times of the failure of power on of projector
5	Mode Adjustment	Image adjustment of vertical and horizontal position
6	Reset Projector Hours	Reset Projector Hours
7	Light Sensor Calibration	Choose this function to execute ABC calibration
8	ADC Calibration	Choose this function to execute ADC calibration
9	LD Hours	Record the LD Hours

4-3 Factory Reset

After final QC step, we have to erase all saved change again and restore the OSD default setting. The following actions will allow you to erase all end-users' settings and restore the default setting:

- Please get into service mode

- Select "Factory Reset"

- Press "Enter"

4-4 Calibration

1. Lens Calibration

Note: Always perform a Lens Calibration after repairing the projector.

Inspection Item - Check if the Lens Shift Module is moving smoothly.

Criteria - If the Lens Shift Module is not moving smoothly or sound noising,please replace the light engine module.

Procedure - Place the projector on a clean horizontal surface.

- On the Remote, press Menu >SETUP>Lens Function.
- Select Lens Calibration.
- Press Enter.

2. ABC Calibration

Note: Always perform ABC Calibration after repairing the engine or main board.

- Please get into service mode

- Select "Light Sensor Calibration"

- Press "Enter"

At last it will display "done" or "unsuccessful",

"done" means calibration pass ,"unsucessful" means calibration NG.

3. ADC Calibration

Note: After replacing main board, please execute ADC calibration.

Procedure
- Test equipment: video generator.
- Test signal:1920x1200@60Hz
- Test pattern: Grays 16.
- Input the signal from VGA port.
- Get into service mode.
- Select “ADC Calibration”.
- Press “Auto” key to execute the ADC calibration.

16 Gray

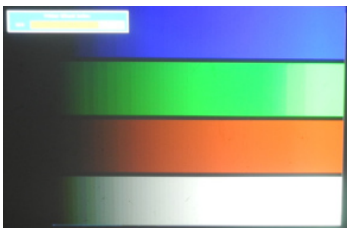
Criteria
- If there is noise on the screen, the product is considered as failure product.
- The screen appears normal, it shouldn’t appear any abnormal condition, such as lines and so on.

4. Wheel Index Adjustment

Note: After replacing main board,engine,filter wheel,combiner or update FW please execute phosphor and filter wheel index adjustment.

(1) Phosphor Wheel Index Adjustment:

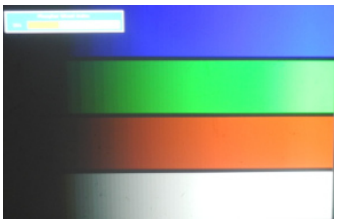
Procedure
- Project the 64 Gray RGBW pattern.
- Test timming:WUXGA 1920 x 1200 @60Hz
- Enter Service Mode,Click Phosphor wheel Index.
- Adjust the index upwards until blue does not appear smooth,record the a index value.
- Adjust the index downwards until blue does not appear smooth,record the b index value.
- Set the index value to (a+b)/2.



Criteria
- Blue Color in 64 Gray RGBW appear sharp and clear,no noise is visible on the screen.

(2) Filter Wheel Index Adjustment:

Procedure
- Project the 64 Gray RGBW pattern.
- Test timming:WUXGA 1920 x 1200 @60Hz
- Enter Service Mode,Click Filter wheel Index.
- Adjust the index upwards until blue &red does not appear smooth,record the a index value.



- Adjust the index downwards until blue & red
  does not appear smooth,record the b index value.
- Set the index value to (a+b)/2.

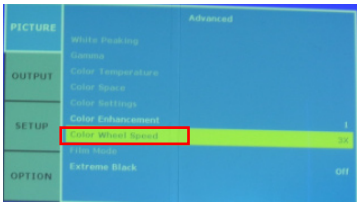
Criteria

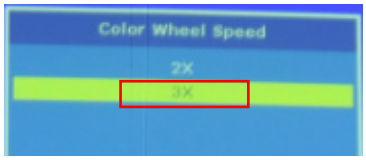
- Blue & Red Color in 64 Gray RGBW appear
  sharp and clear,no noise is visible on the screen.

(3) Get into color wheel speed 3X to repeat (1) and (2) steps

Procedure

- Press "Menu"
- Select "PICTURE"
- Select "Advance"
- Select "Color Wheel Speed"
- Select "3X"
- Press "Enter"





Note:

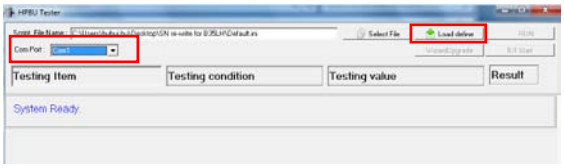
When finished the wheel index please set the color wheel speed back to 2X.

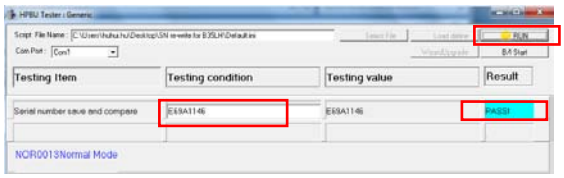
4-5 Re-write SN

Note: After replacing main board re-write SN is needed.

Procedure - Plug in the power cord.

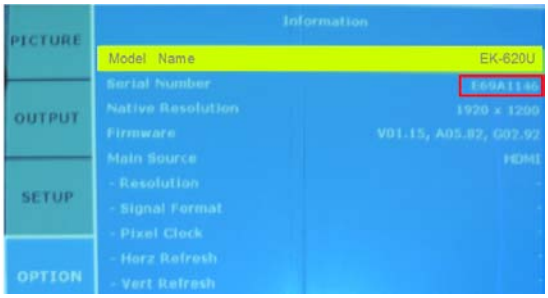
- Connect projector and PC by RS232 cable.
- Download the SN rewrite for B35LH tool.
- Open the projector.
- Open the tool,then click "SN Tool"
- Choose the Com port which you are using, and click “Load define”
- Then key in the Serial Number, for example“E69A1146”. Then click “RUN” to re-write SN. Then the “Pass” message will be shown on the window.





Inspection item

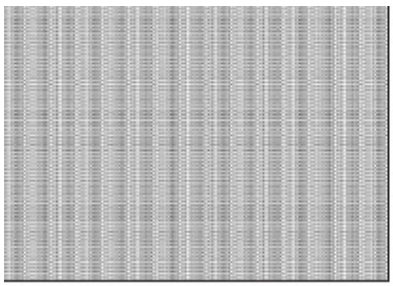
- Press “MENU->OPTION->Information"
- Check the serial number.



4-6 Adjustment

1. Focus Adjustment

Note: This step must be done only when the optical engine module is changed.

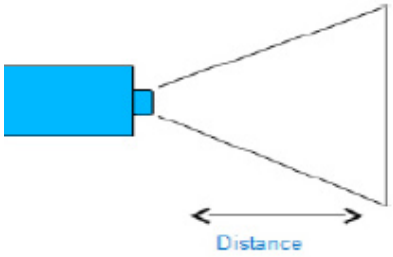


Full screen

Inspection item - Check the focus under the pattern of full screen by the distance of 2.5m.

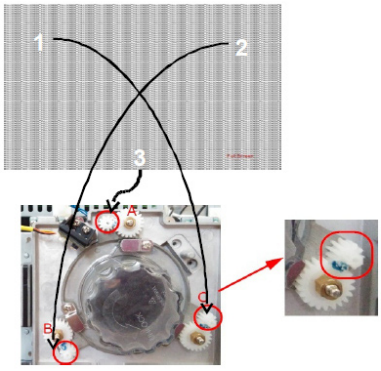
Criteria - Unbalance<=30cm

Procedure - If the unbalance is over 50cm,pls do the focus adjustment as below procedure.



1) Back focus ensure

- Change to “Full Screen” pattern, adjust the lens room widest, adjust the focus fuzzy, then measure the minmum imaging distance,confirm whether the distance value in the lens specifications of +/- 3cm.
- If not, adjust the three setscrew to the specification.
- If yes, go to next step to do bore sight adjustment.



2) Bore sight adjustment.

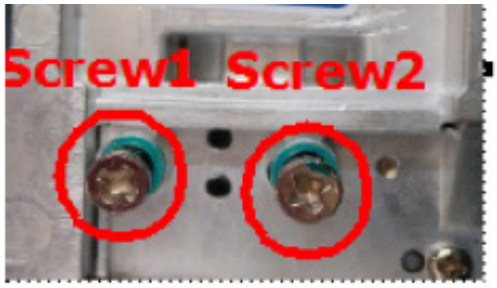
- Use focus button to adjust focus to make position 3 in focus.
- Once position 3 is in focus, check position1 If position 1 is not in focus, use focus up or down key to adjust focus till it is in focus.
- If pressing focus up key can focus position1,

adjust setscrew C clockwise. If pressing down key can focus position 1, adjust set screw C counterclockwise.

- Refocus position 3 and see if position 1 is also in focus. If not, repeat step 1 to 3.
- Adjust position 2 is the same method as position 1.
- Repeat step till positions 1, 2 and 3 are in focus at the same time.

2.ROD Adjustment

- Environment Adjustment
- The distance between the engine and the screen is 2.00 M.
- This process should be done in the dark environment (under 2 Lux).
- Procedure Adjustment
- Change the screen to “white screen.”
- Adjust the rod by using the screws on the engine module to re-adjust the image. (“screw 1“ should be adjusted first,and then “screw 2“. Adjust until the yellowish or bluish parts disappear.)



Chapter 5

Firmware Upgrade

Section 1 : Scalar/MCU/Formatter/LAN FW upgrade

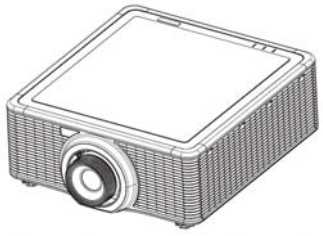
5-1-1 Equipment Needed

Software :

- EIKI B35LD+ Upgrade Firmware Wizard .zip

Hardware :

- Projector
- Power Cord
- RJ45 cable(CAT-5e)
- PC or Laptop with Windows XP/7



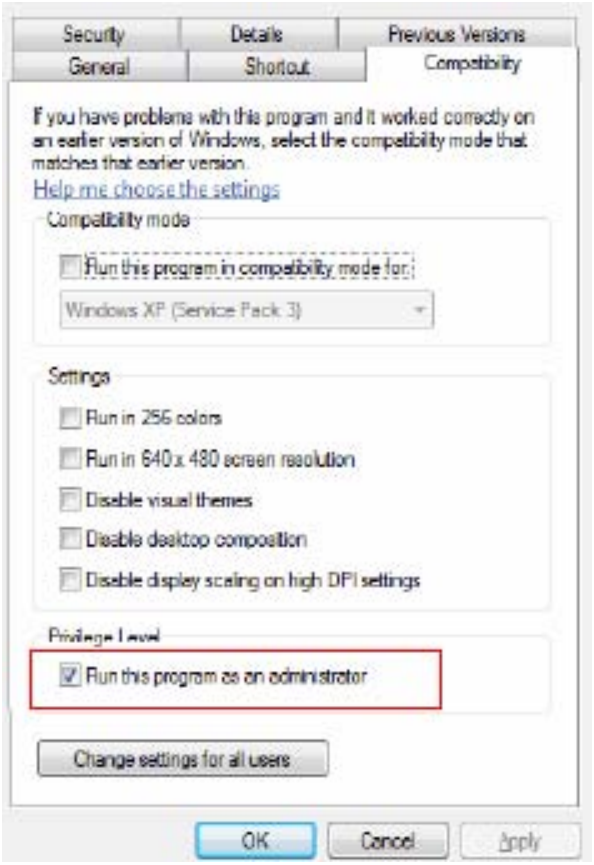
5-1-2 Firmware Upgrade Procedure

1.Windows Setting

- Close Windows firewall.

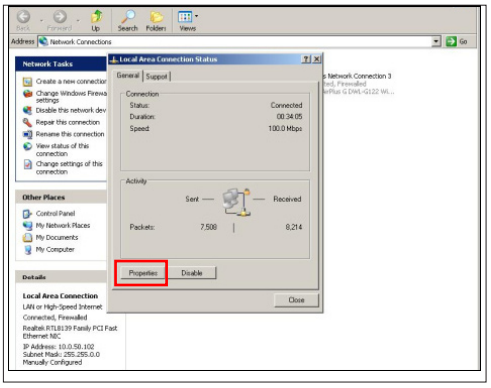
- Set HDD sleep timer larger than two hours.

- Run as administrator in case of Windows 7 system.

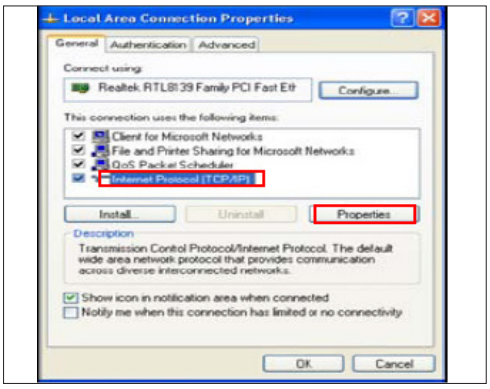


2.Network Setting

- Double click the “Local area connection”, choose “Properties”.

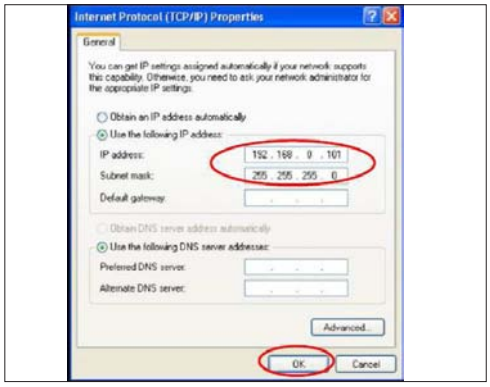


- Select “Internet protocol (TCP/IP)”, then click “Properties”.



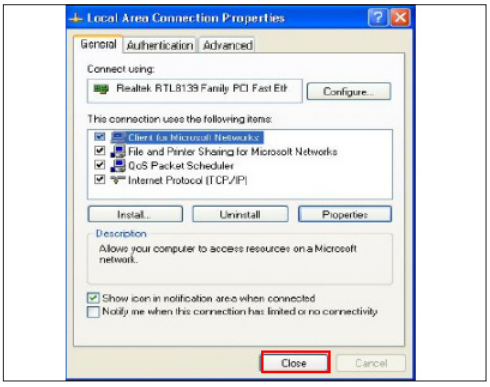
- Modify the IP address to 192.168.0.101, and modify Subnet mask to 255.255.255.0.

Note: The HOST ID (192.168.0.XXX) of PC IP address must be different from the projector IP address written down.

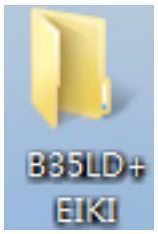


- Click "OK".

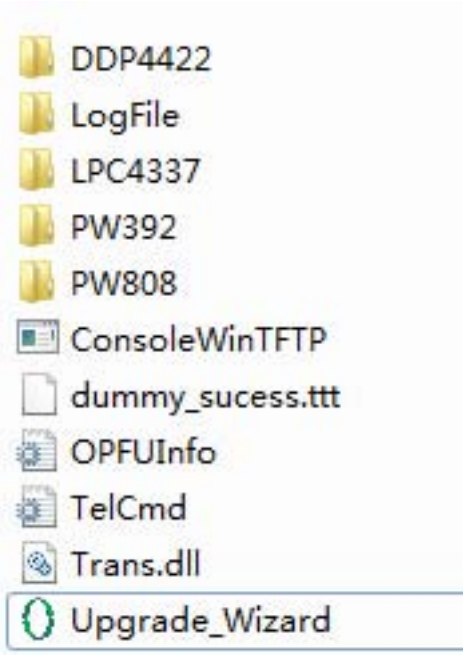
- Click "Close" to quit the setting screen.



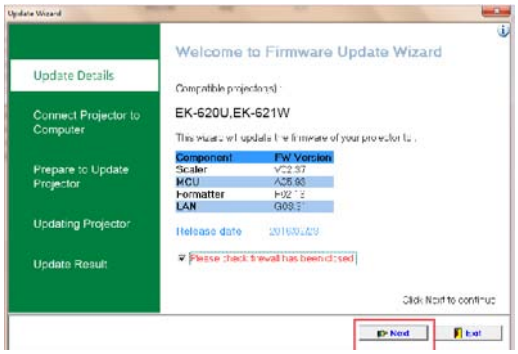
3. Download the latest firmware program file from the website, Unzip the file to the desktop and open the folder created.



4. Execute the Upgrade_Wizard.exe.

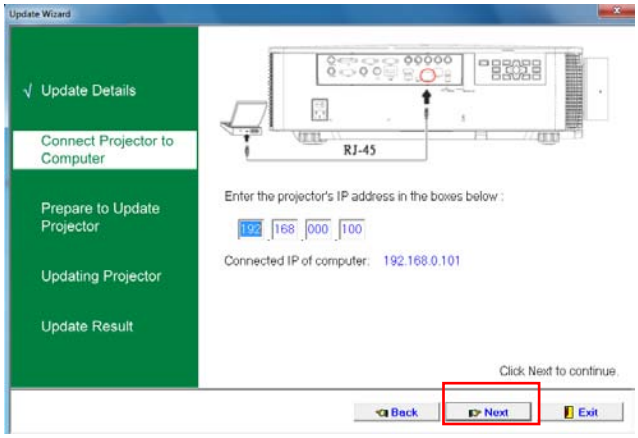


5. Select “please check firewall has been cloesd”.
   - Click “next”.



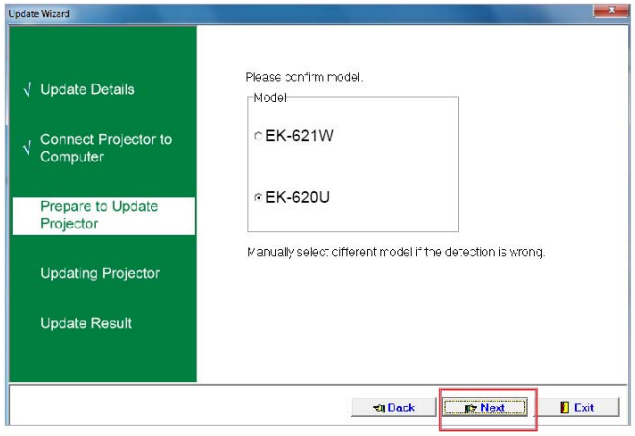
6.Connect projector to computer by RJ-45, turn on projector.

- Click "next".

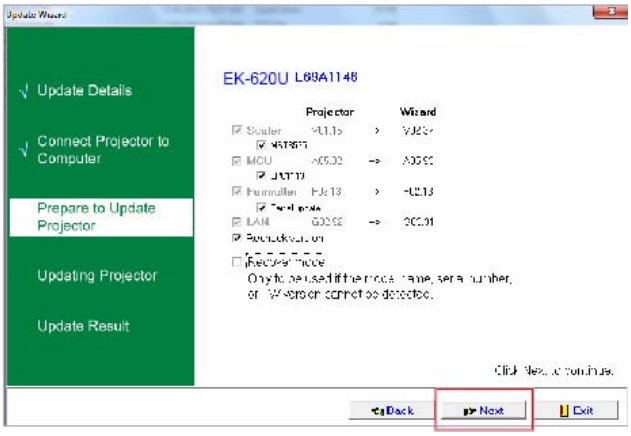


7.Prepare to update projector.

- Cleck "next".



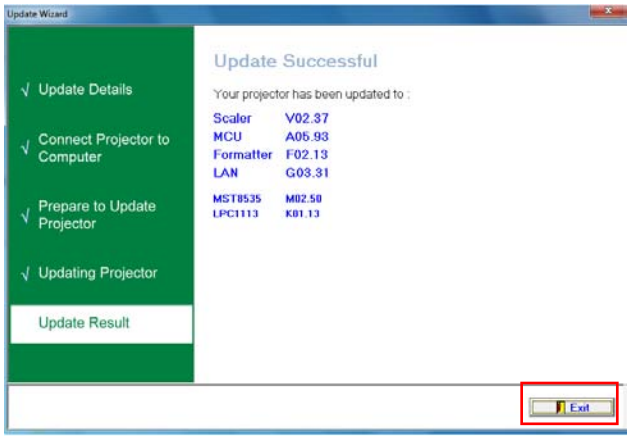
- Cleck "next".



8. Update projector takes about 1 hour

During the update:

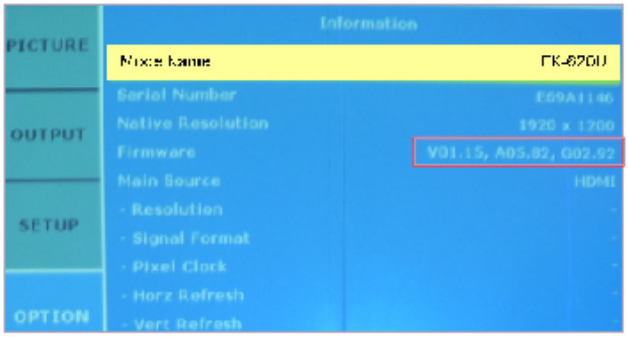
- Do not start or exit any programs on the computer.
- Do not turn off the projector or computer.
- Do not connect or disconnect any cables or power cords.



9. At last "Update successful" shows on the screen,click"exit",then turn off the projector.

10. Re-power on the projector

- press "Menu"
- Select"OPTION"
- Select"Information"
- Press "Enter" to check the FW Version.

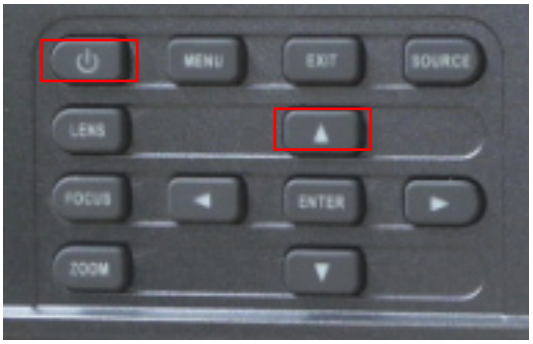


Section 2: Recovery Mode

5-2-1 Recovery of LAN

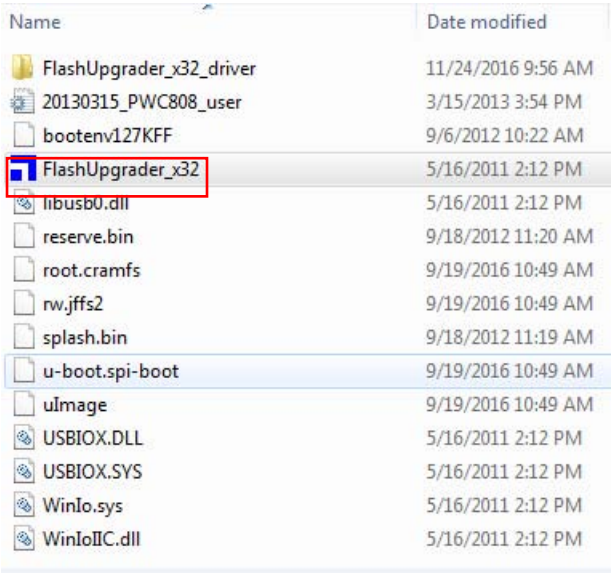
Note: If the LAN recovery in previous page is not work, Clear TFTP upgrade setting of PW808.

1. Set up
   - AC Power on the projector, let projector in standby mode.
   - Pressing ‘’ Up” key then pressing ‘’ Power “key.
   - When you see the RJ45’s LED is flashing twice
   - Connect projector with Mini USB cable to PC.

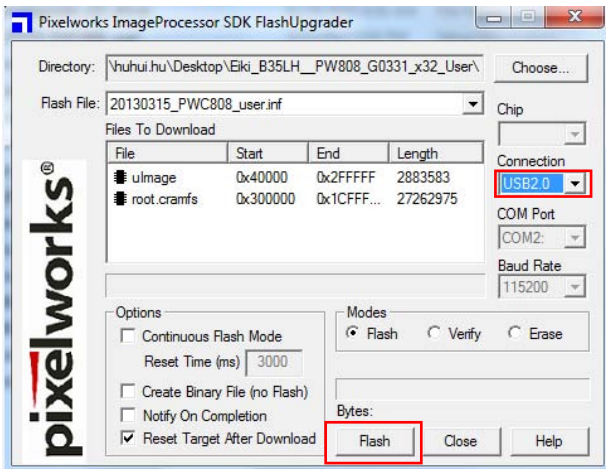


2. Please download the latest firmware program file from website, Unzip the file and keep on your desktop.
   - Double click the folder.
   - Choose the upgrade file based on the system of PC.
   - 64-bit system execute FlashUpgrader_x64.exe
   - 32-bit system execute FlashUpgrader_x32.exe
   - Unzip the file.

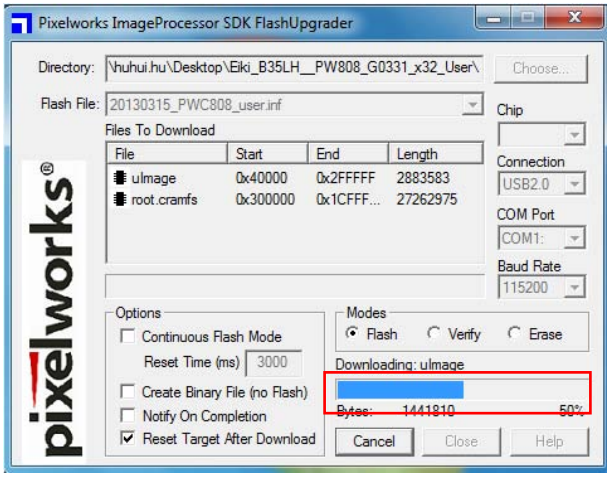
3. Choose “FlashUpgrader.exe” Program.
   - Double click “FlashUpgrader.exe” to execute FlashUpgrader setup.



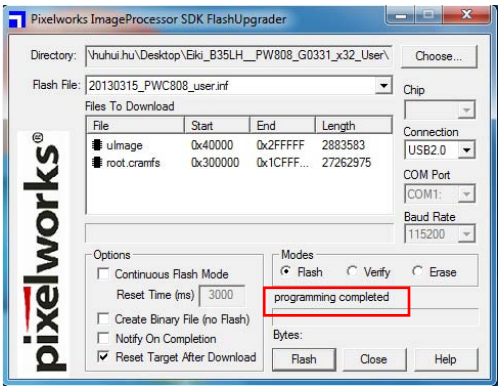
4. Choose “USB 2.0”,then click “Flash” button to start FW upgrade.



5. Then will show upgrade progress bar.



6. Waiting for about several minutes, it shall be upgraded done,on the way there will be suspected stuck motionless, please do not forced to shut down.
7. When appear “ Programming completed”, PW808 firmware upgrade procedure is finished.



Note:

(1) The laser will not operate.

(2) After upgrade finished, remove the power code.

(3) 32-bit system need to install mini-USB driver manually.

-Right-click "computer"

-Click" Manage"

-Click"Device Manager"

-Righter-click "Unknown Manager"

-Install the driver

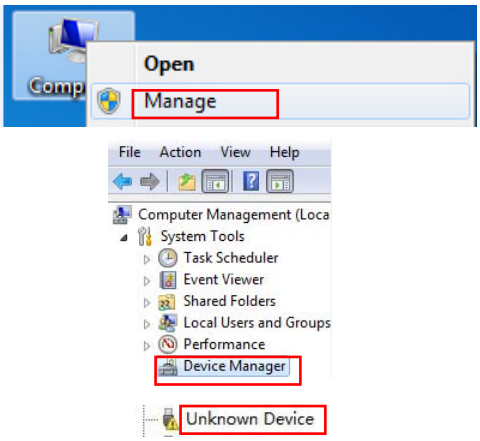
-Click "Browse my computer for driver software"

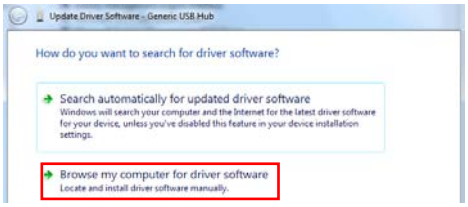
-Click "Browse"

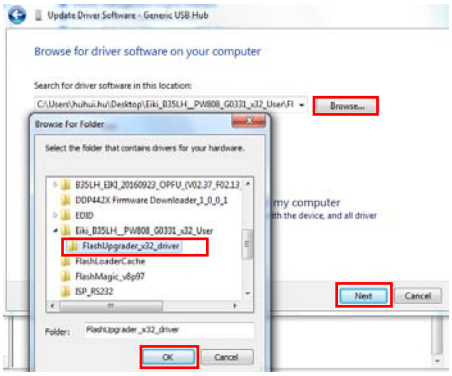
-Select "FlashUpgrader_x32_driver"

-Click "OK"

-Click "Next"







5-2-2 : Recovery of Formatter / Scalar / LAN / MCU

Note: If upgrade fail, select restore, the upgrade will follow the last setting and jump to the page“Upgrading in progress” directly.

1. Execute the Upgrade_Wizard.exe.

2. Click Run as admin and Close firewall.

3. Select Restore

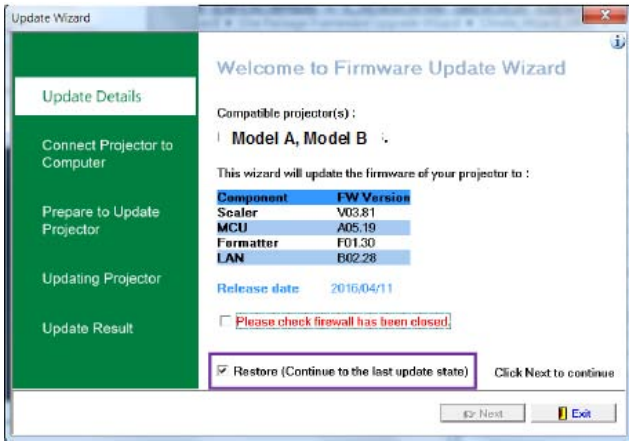
4. Click next.

5. Connect the projector to AC and power it on.

6. When the source message is displayed on the bottom left of the projected image, click Next.

7. Choose upgrade items, then click next

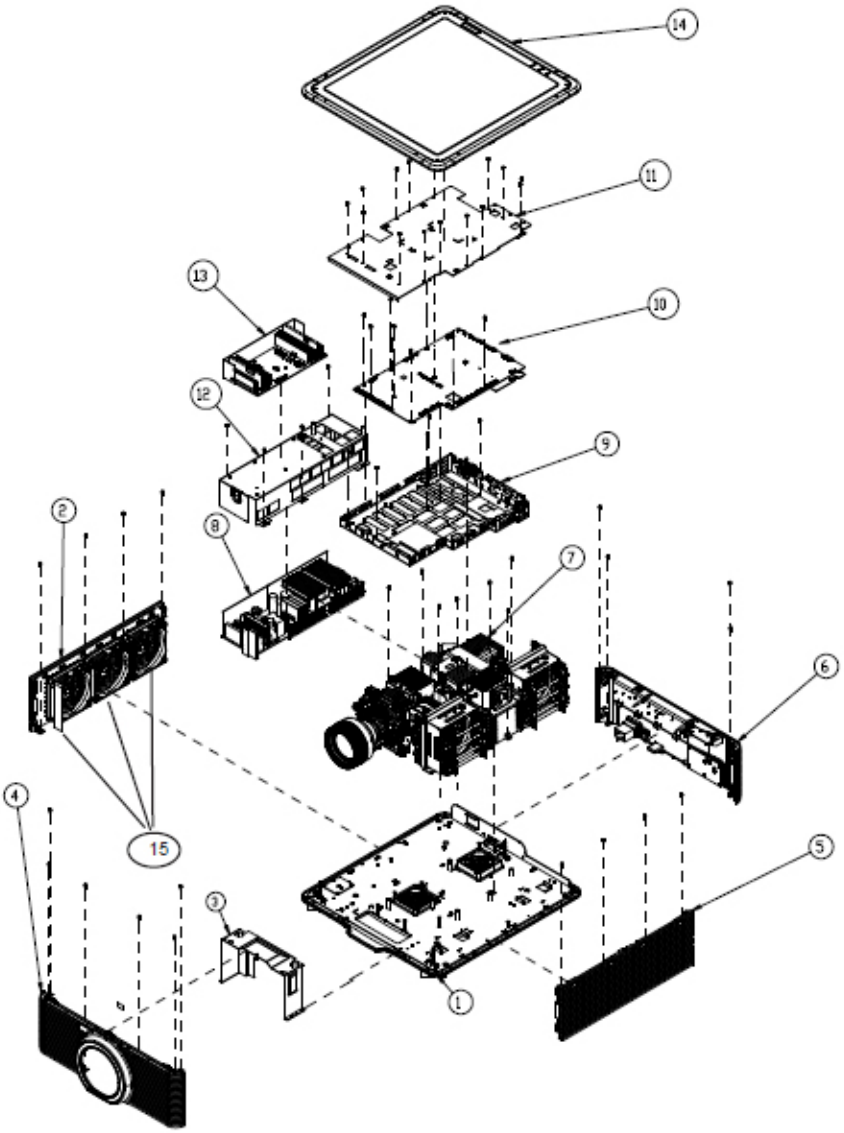
8. Updating result
   - When firmware recovery completes, will shows“Update Successful”.



Appendix A (Exploded Image)

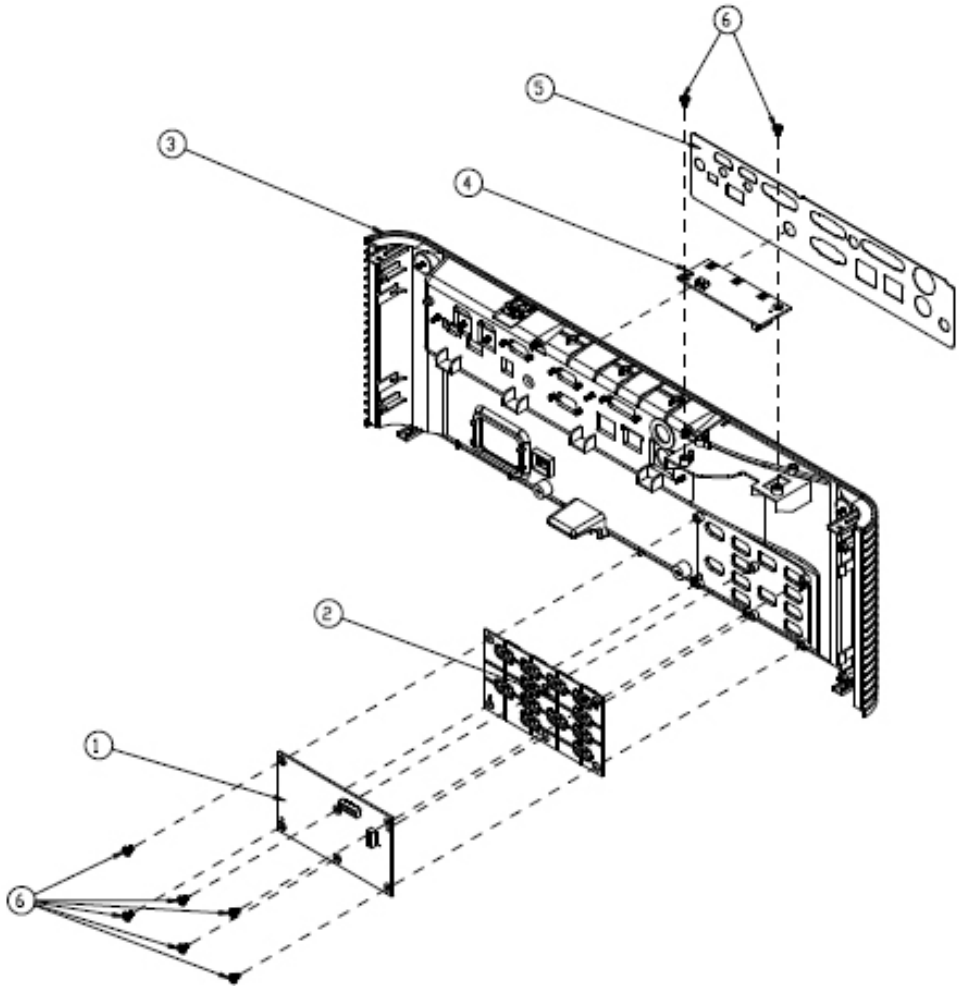
Note: This chapter is only designed to show the exploded image of the projector.For updated part numbers,please refer to RSPL report.Here we take EK-620U for example.

D.C.



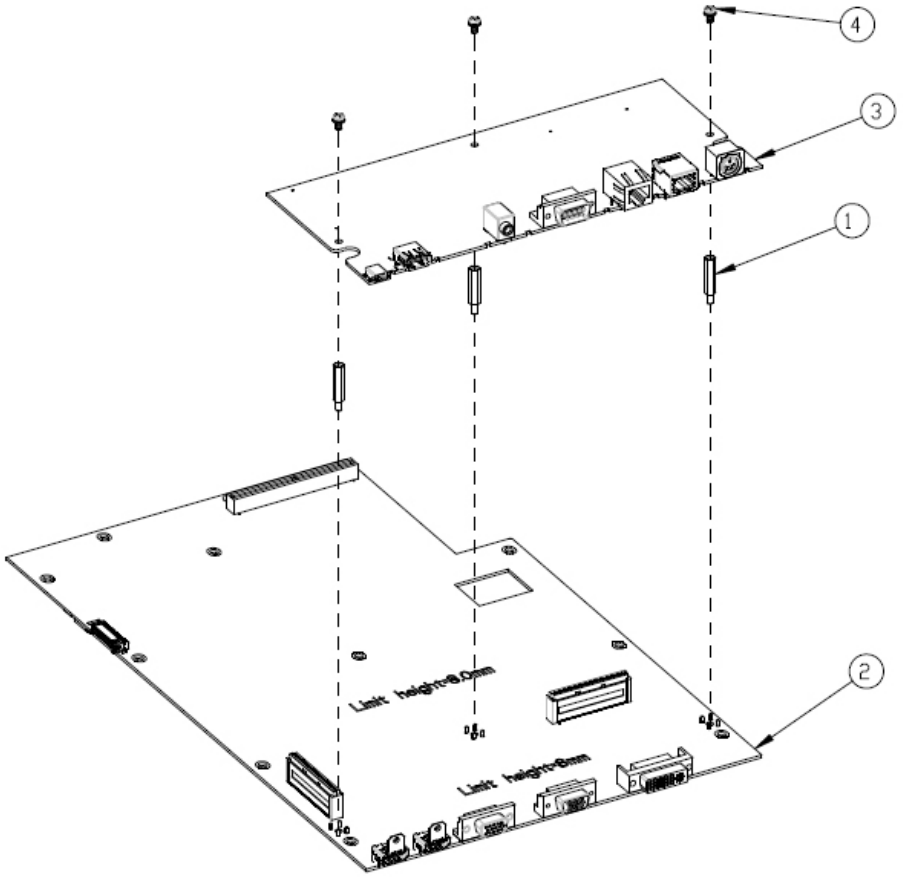
Item	P/N	Description	Parts Supply
1	51.70M06G011	COVER BOTTOM BLACK B35LH	V
2	51.74K04G001	COVER RIGHT B35LH	V
3		ASSY FRONT COVER MODULE B35LH	
4	51.74K51G001	RING FRONT COVER B35LD+	V
5	75.74K05G001	ASSY COVER LEFT B35LH	V
6	See The Page “III” Rear Cover		
7	See The Page “V” Assy Engine Module		
8	75.792P1G001	POWER SUPPLY AD-1201W,TERMINAL 380*115*65mm,DL,T-SW	V
9		ASSY MB BOTTOM SHIELDING	
10	See The Page “IV” Main Board		
11		MB TOP SHILEDING B35LH	
12		SHIELDING LVPS B35LH	
13	80.74K09G011	PCBA DRIVER BOARD ASSY FOR B35LD+ PROJECT	V
14	61.74K03G003	COVER TOP METAL B35LH	V
15	49.79202G002	FAN SUNON 120X25mm /PWM CONTROL/ A35LH & A70LH	V

Rear Cover



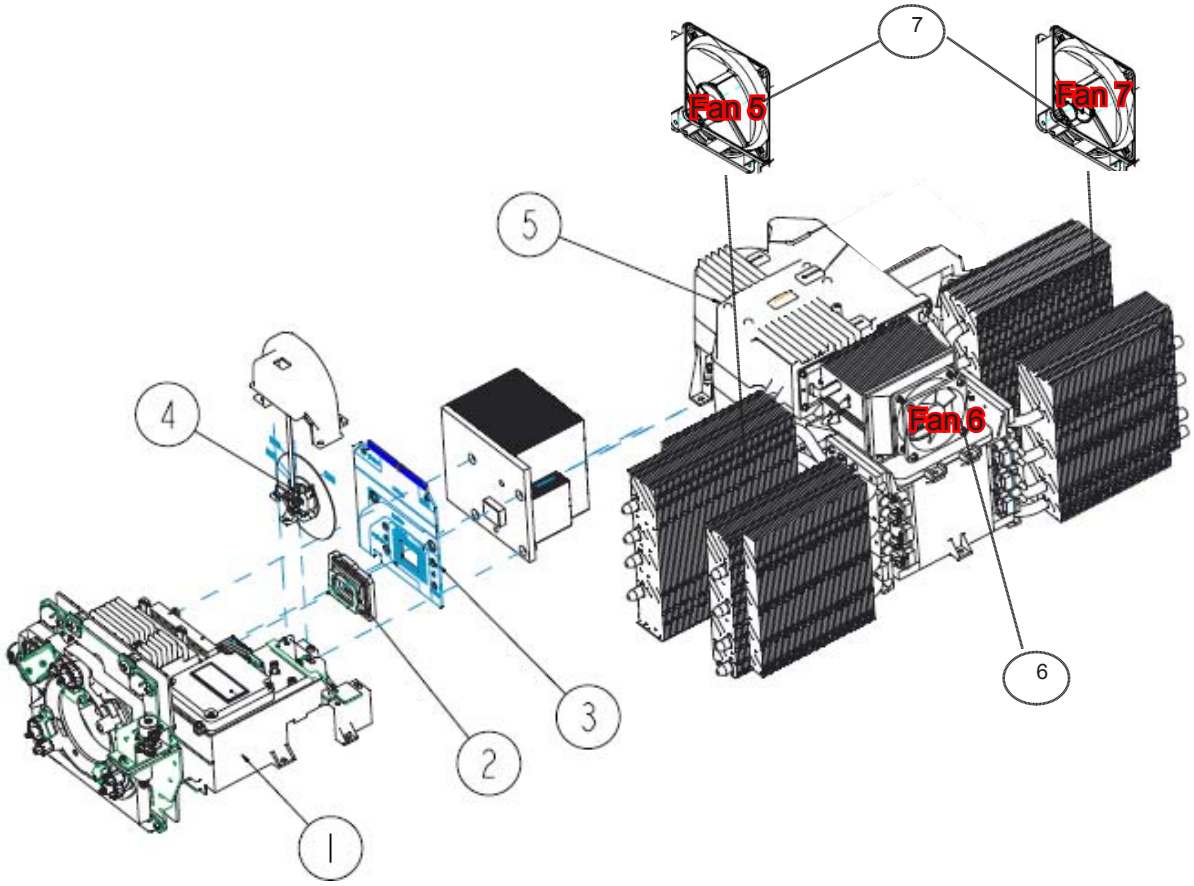
Item	P/N	Description	Parts Supply
1	80.74K03G001	PCBA KEYPAD BD FOR B35LH	V
2	52.74K03G001	KEYPAD RUBBER B35LH	V
3	70.74K30GR01	ASSY IO COVER FOR 74K	V
4	80.74K07G001	PCBA LED BD FOR B35LH	V
5		LABEL IO EIKI B35LH	
6		SCREW PAN MECH	

Main Board



Item	P/N	Description	Parts Supply
1		HEX SPACER M3-3.0 W5 L20.0	
2	80.74K01G012	PCBA MAIN BOARD ASSY FOR B35LD+ EK-620U WUXGA PRO-JECTOR	V
3	80.74K06G011	PCBA IO BD ASSY FOR B35LD+ PROJECTOR	V
4		SCREW PAN MECH W/SF M3*6	

Assy Engine Module



Item	P/N	Description	Parts Supply
1	70.76P05GR01	ASSY ENGINE MODULE FOR 76P	V
2	48.8CGDMGD01	DMD 1920*1200 PIXEL 0.67” WUXGA 2xLVDS TYPE A DC3-7;TI	V
3	80.79202G001	PCBA WUXGA DMD BD FOR A35LH PROJECT	V
4	70.73G23GR01	ASSY FILTER WHEEL MODULE WITHOUT RED LD FOR 73G (SERVICE)	V
5	70.74L60GR01	ASSY COMBINER MODULE FOR EK-620 SERIES(SERVICE)	V
6	49.79204G002	FAN SUNON, 55mmx55mmx15mm, TWO BALL, AXIAL FAN, PWM CONTROL	V
7	49.79202G002	FAN SUNON 120X25mm /PWM CONTROL/ A35LH & A70LH	V

Appendix B (Error Log)

Error type	Error log	Description
Fan Fail	System fan(FANX) Lock	FANX Lock Occur (FANX :FAN1~FAN10)
Normal shutdown	Auto Shutdown	Auto Shutdown After Reach The Setting Time
	Sleep Shutdown	
Lan fail	Lan fail then restart	Detect Lan Fail and Restart Lan
	LAN Watch Dog Restart	
LD bank broad	LD Driver A Fail	LD Driver A Fail
	LD Driver A Over Temperature	LD Driver A Over Temperature
	LD Driver A Unexpected Off	LD Driver A Unexpected Off
	LD Driver Shutdown	LD Driver Shutdown
	LD XX_1 Shunt Circuit Warning	LD XX_1 Shunt Circuit Warning (LD XX:LD B1~B6)
	LD XX_2 Shunt Circuit Warning	LD XX_2 Shunt Circuit Warning (LD XX:LD B1~B6)
	LD Over Temperature Shutdown	LD Over Temperature Shutdown
	Warning! BANK X High Temperature	Detect BANK X Temperature High (BANKX: BANK1~BANK6)
	BANK X Over Temperature	Detect BANK X Over Temperature (BANKX: BANK1~BANK6)
DMD temperature	Warning! DMD High Temperature	Detect DMD Temperature High
	DMD Over Temperature	Detect DMD Over Temperature
Other problems	TEC Current Abnormal	Detect Current Abnormal
	Format Board Power On Fail	Detect Format Board Power On Fail
	Over Temperature	Detect Thermal Sensor Overheat
	Color Wheel Unexpected Stop	Detect Color Wheel Unexpected Stop

BANK	LD	LD Color
1	B1	Blue
2	B2	Blue
3	B3	Blue
4	B4	Blue
5	B5	Blue
6	B6	Blue