

# PROJECTOR

## D5500 Serial SERVICE MANUAL (Rev.00)



# DLP DIGITAL PROJECTOR Rev.00

**Model Name: D5500 Serial**

Revision	Description	Date
00	Preliminary	07/28/2008

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# 1.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.

## 1-1. 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.

## 1-2. Lamp

During current conduction, the lamp is in the high-temperature state. In this case, pay careful attention because a high voltage is used. When replacing a lamp, replace it after confirming that the lamp has gotten cold sufficiently.

## 1-3. Lens

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

## 2. SPECIFICATIONS

This section provides technical information about the projector's performance.

### 2-1. Optical Specifications

Item	Description
Projection system	Single DLP® chip, 5 segment color wheel
Resolution	1024 x 768 pixels* (up to UXGA @ 60 Hz, up to SXGA+ @ 60 Hz on DVI-D)
Lamp	260 W AC (230 W in Eco mode), Dual lamp system
Image size (diagonal)	50" - 200" / 1.27m - 5.08m (GC805G) 40" - 500" / 1.02m – 12.7m (GB942G, GB940G, GB949G, GB957G)
Lens options	GC805G: Power focus, throw ratio 0.77:1, F2.0, f=11.4 mm GB942G: Power zoom and focus, throw ratio 1.33-1.79:1, F1.8-2.3, f=19.3-25.8 mm GB940G: Power zoom and focus, throw ratio 1.78-2.35:1, F1.7-1.9, f=26-34 mm GB949G: Power zoom and focus, throw ratio 2.22-4.43:1, F2.1-2.9, f=32-63 mm GB957G: Power zoom and focus, throw ratio 4.43-8.3:1, F2.2-3.1, f=63.5-117.4 mm
Lens shift	Vertical + 0.5V, Horizontal +/- 0.1H (GB942G, GB940G, GB949G, GC805G)

\*Effective pixels are more than 99.99%

## 2-2. Electrical Specifications

Item	Description
Inputs	1 Analog RGB (Mini D-Sub 15P), 1 Analog RGB R/Cr, G/Y, B/Cb, H, V (BNC x 5), 1 Digital RGB (DVI-D 24P), 1 Component Y, Cb/Pb, Cr/Pr (RCA x 3), 1 Component (Mini D-Sub 15P) shared with COMPUTER 1 IN, 1 S-Video (Mini DIN 4P), 1 Video, 3 Stereo Mini Audio, 2 (L/R) RCA Audio.
Outputs	1 RGB (Mini D-Sub 15P), 1 Stereo Mini Audio, 1 Screen Trigger
Control	1 PC Control Port (D-Sub 9P)
USB Port	1 B Type (for Service)
LAN Port	RJ-45
Video Compatibility	NTSC, NTSC4.43, PAL, PAL-60/N/M/B/G/H/I), SECAM, HDTV: 1080i, 720p, SDTV: 576p, 576i, 480p, 480i
Scan Rate	Horizontal: 15 kHz, 31 to 90 kHz (RGB: 31 kHz or over) Vertical: 50 Hz to 85 Hz
Video Bandwidth	RGB: 100 MHz (-3dB)
Color Reproduction	16.7 million colors simultaneously, Full color
Horizontal Resolution	NTSC / NTSC4.43 / PAL / PAL-M / PAL-N / PAL60: 540 TV lines SECAM: 300 TV lines RGB: 1024 dots (H) x 768 dots (V)
External Control	RS232, IR, LAN
Sync Compatibility	Separate Sync / Composite Sync / Sync on G
Built-in Speakers	3W x 2
Power Requirement	100 - 240V AC, 50/60Hz
Input Current	7.7A
Power Consumption	655W in Dual Lamp Normal mode / 580W in Dual Lamp Eco mode 350W in Single Lamp Normal mode / 315W in Single Lamp Eco mode < 30W in Standby mode Normal < 5W in Standby mode Power saving

## 2-3. Mechanical Specifications

Item	Description
Dimensions	19.9" (W) x 7.6" (H) x 15.2" (D) 505 mm (W) x 192 mm (H) x 385 mm (D) (not including protrusions)
Weight	45.1 lbs/20.5 kg

## 2-4. Environmental Considerations

Item	Description
Operational Temperatures	41° to 104°F / 5° to 40°C, 10% to 90% humidity (non-condensing)
Storage Temperatures	14° to 140°F (-10° to 60°C), 5% to 90% humidity (non-condensing)

### Optional Parts

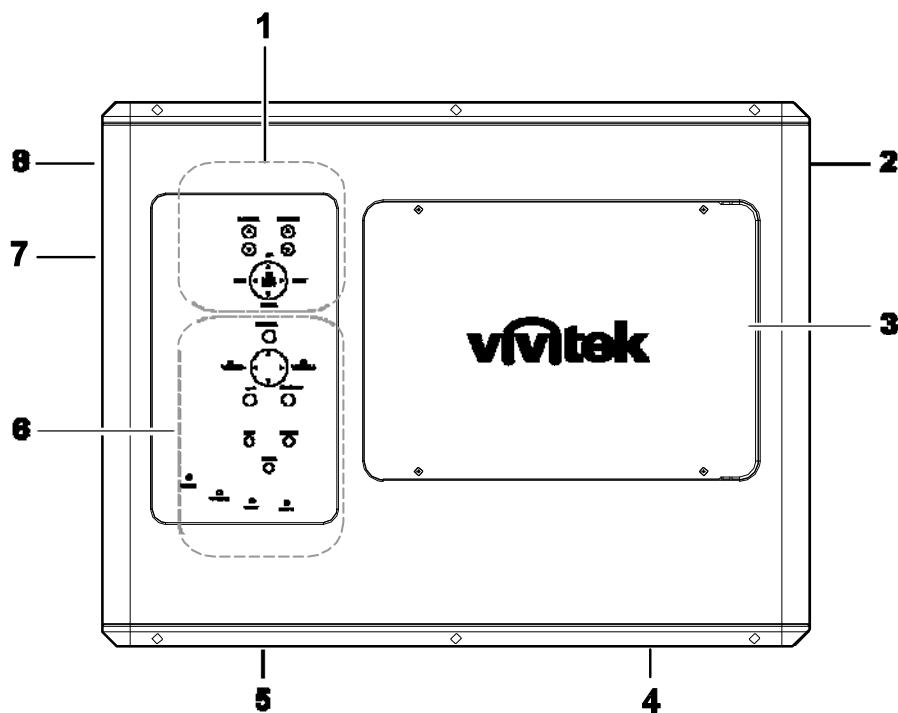
The parts listed below are optionally available. When ordering those parts, specify the item name and Model No. to the sales dealer

Standard Zoom Lens : GB940G  
Long Zoom Lens : GB949G  
Ultra Long Zoom Lens : GB957G  
Short Zoom Lens : GB942G  
Fixed Short Zoom Lens : GC805G

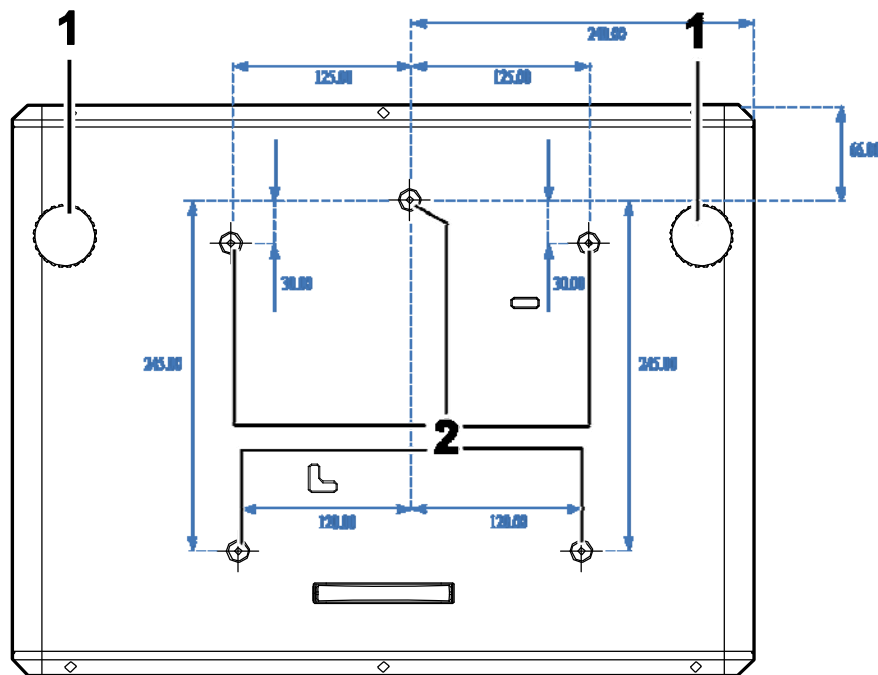


## 2-5. Views of projector parts

### 1. Top view



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Lens control panel	See Lens Controls	
2.	Right-hand speaker	Right-hand speaker	
3.	Lamp cover	Remove cover to replace lamp or color wheel	
4.	Exhaust vent	Exhaust vent – do not obstruct	
5.	Rear intake vent	Rear cooling intake – do not obstruct	
6.	OSD control panel	See OSD Controls and Status LEDs	
7.	Left intake vent	Left-hand cooling intake – do not obstruct	
8.	Left-hand speaker	Left-hand speaker	

**2. Bottom view**

ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Height adjusters	Adjust projection height	
2.	Ceiling support holes	Contact your dealer for information on mounting the projector on a ceiling	

**Note:**

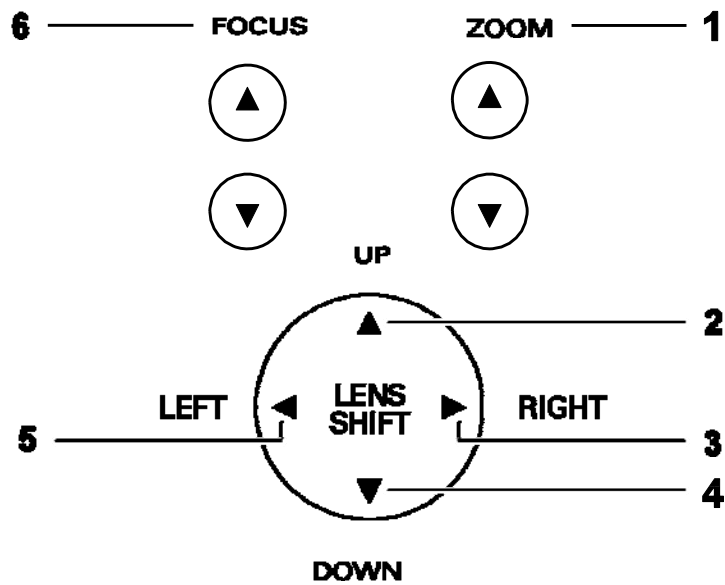
When installing, ensure that you use only UL Listed ceiling mounts.

**Caution:**

With ceiling installation, use approved mounting hardware & M4 screws; maximum depth of screw: 12 mm; distance from ceiling/ wall: 20 cm (0.7 feet) for proper ventilation; distance from fluorescent lamps: at least 1 m (3 feet) front and back of the projector. For permanent installations, follow local codes.

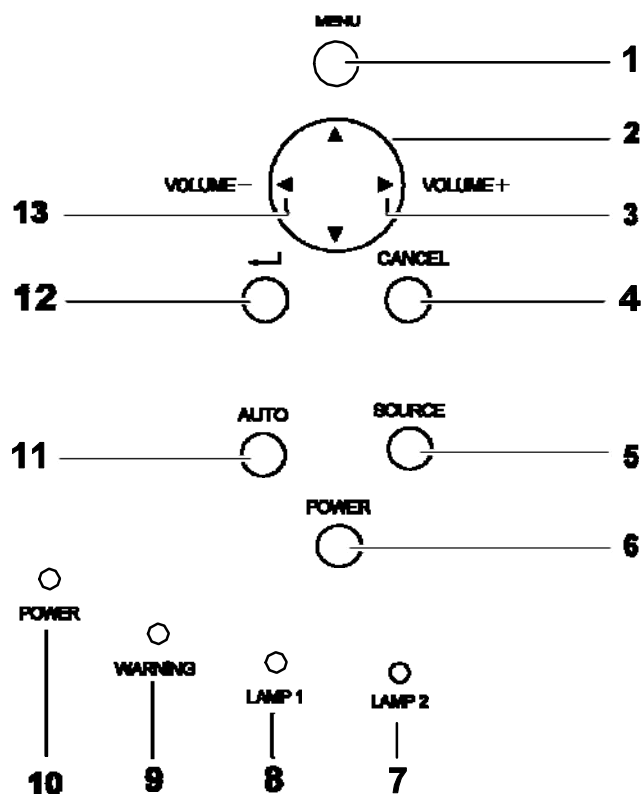
## 2-6. Top Features

### 1. Lens Controls




ITEM	LABEL	DESCRIPTION
1.	ZOOM	Increase/decrease projected image size
2.	UP CURSOR	Move image left, right, up, or down
3.	RIGHT CURSOR	
4.	DOWN CURSOR	
5.	LEFT CURSOR	
6.	FOCUS	Focus the projected image

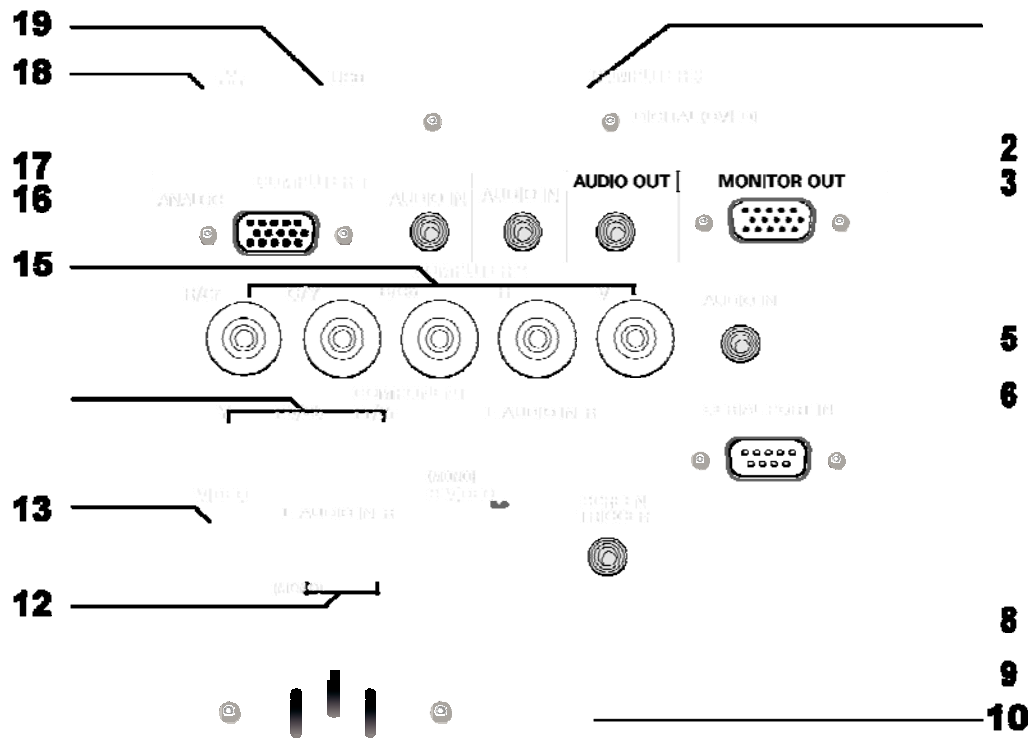
## 2. OSD Controls and Status LEDs



ITEM	LABEL	DESCRIPTION		SEE PAGE:
1.	MENU	Open / Close the OSD		
2.	UP/ DOWN/ LEFT/ RIGHT BUTTONS	Navigate and change settings in the OSD		
3.	RIGHT CURSOR/ VOLUME INCREASE	Increase volume		
4.	CANCEL	Exit the On-Screen Display (OSD)		
5.	SOURCE	Detects the input device		
6.	POWER	Turn the projector on or off (main power switch must be turned on first). Press to place the projector in standby mode.		
7.	LAMP 2 (LED)	Green	See Indicator Messages	
		Flashing		
8.	LAMP 1 (LED)	Green	See Indicator Messages	
		Flashing		
9.	WARNING (LED)	Green	See Indicator Messages	
		Red		
		Orange		
		Flashing		

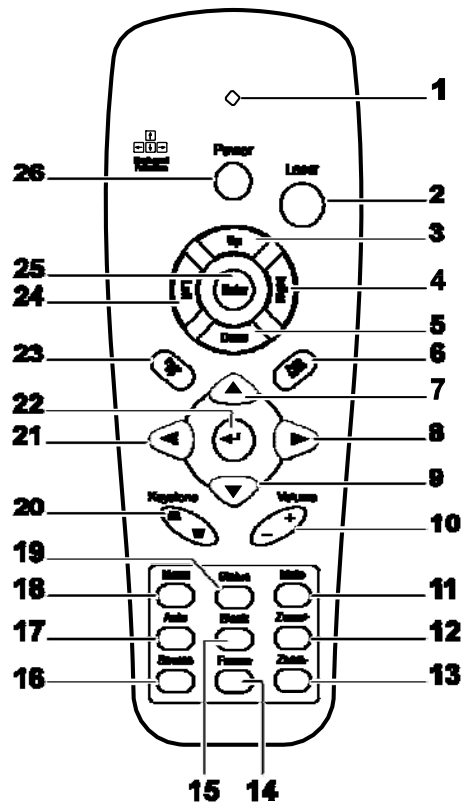
ITEM	LABEL	DESCRIPTION		SEE PAGE:
10.	POWER (LED)	Green	See Indicator Messages	
		Orange		
		Flashing		
11.	AUTO	Optimize image size, position, and resolution		
12.		Select or change settings in the OSD		
13.	LEFT CURSOR/VOLUME DECREASE	Decrease volume		

## 2-7. Terminal Panel Features



ITEM	LABEL	DESCRIPTION
1.	COMPUTER 3 IN	Connect the DVI-D cable (not supplied) from a computer
2.	AUDIO IN COMPUTER 3	Connect the audio cable (not supplied) from the input device
3.	AUDIO OUT	Audio loop-thru
4.	MONITOR OUT	Connect to a monitor
5.	AUDIO IN COMPUTER 2	Connect the audio cable (not supplied) from the input device
6.	AUDIO IN [L (MONO)/R] (COMPONENT)	Connect an RCA audio cables (not supplied) from the input device right and left channels
7.	SERIAL PORT IN	Installation control
8.	SCREEN TRIGGER	When connected to the screen through a commercially available cable, the screen deploys automatically on start up of the projector. The screen retracts when the projector is powered off (see notes below)
9.	S-VIDEO	Connect a commercially available S-video cable from a video device
10.	POWER SWITCH	Turn on/off the projector
11.	AC IN	Connect the supplied power cable
12.	AUDIO IN [L(MONO)/R]	Connect RCA audio cables (not supplied) from the input device right and left channels. This audio jack is shared with S-Video input.
13.	VIDEO IN	Connect a composite video cable (not supplied) from a video device to the yellow RCA jack
14.	COMPONENT IN (Y,Pb/Cb, Pr/Cr)	Connect a component video enabled device
15.	COMPUTER 2 IN (R/Cr, G/Y, B/Cb, H, V)	Connect RGBHV or Component signal from computer or component video enabled device
16.	COMPUTER 1 IN	Connect a VGA cable (supplied) from a computer
17.	AUDIO IN(COMPUTER 1)	Connect the audio cable (not supplied) from the input device
18.	LAN	Connect a LAN cable (not supplied) from a computer
19.	SERVICE	Connect the USB cable (not supplied) from a computer. For service personnel only.

## 2-8. Remote Control Parts



### **Important:**

1. Avoid using the projector with bright fluorescent lighting turned on. Certain high-frequency fluorescent lights can disrupt remote control operation.

2. Be sure nothing obstructs the path between the remote control and the projector. If the path between the remote control and the projector is obstructed, you can bounce the signal off certain reflective surfaces such as projector screens.

3. The buttons and keys on the projector have the same functions as the corresponding buttons on the remote control. This user's manual describes the functions based on the remote control.

ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Status LED	Lights when the remote control is used	
2.	Laser	Use as on screen pointer. DO NOT POINT IN EYES.	
3.	Up	Up arrow when connected through USB to a PC	
4.	Right	Right arrow when connected through USB to a PC	
5.	Down	Down arrow when connected through USB to a PC	
6.	Page Down	Page down when connected through USB to a PC	



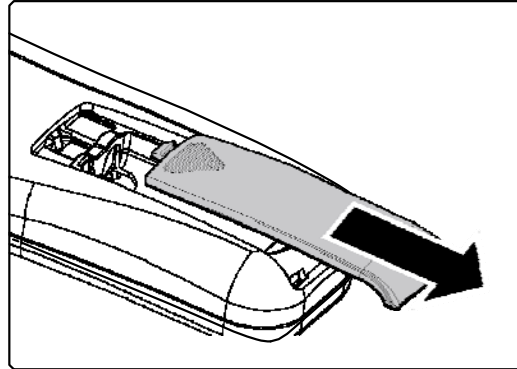
ITEM	LABEL	DESCRIPTION	SEE PAGE:
7.	Up cursor	Navigates and changes settings in the OSD	
8.	Right cursor	Navigates and changes settings in the OSD	
9.	Down cursor		
10.	Volume +/-	Adjusts volume	
11.	Mute	Mutes the built-in speaker	
12.	Zoom+	Zoom in	
13.	Zoom-	Zoom out	
14.	Freeze	Freeze/unfreezes the on-screen picture	
15.	Blank	Makes the screen blank	
16.	Source	Detects the input device	
17.	Auto	Auto adjustment for phase, tracking, size, position	
18.	Menu	Opens the OSD	
19.	Status	Opens the OSD Status menu (the menu only opens when an input	
20.	Keystone top/bottom	Corrects image-trapezoid (wider top/bottom) effect	
21.	Left cursor	Navigates and changes settings in the OSD	
22.	Enter	Changes settings in the OSD	
23.	Page Up	Page up when connected through USB to a PC	
24.	Left	Left arrow when connected through USB to a PC	
25.	Enter	Enter key when connected through USB to a PC	
26.	Power	Turns the projector on or off	

**Note:**

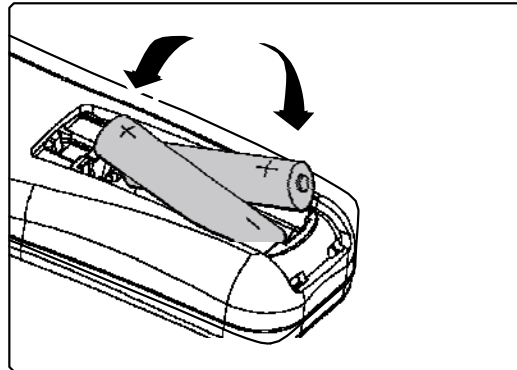
*The remote control can only interface with a computer when connected to the computer through a USB cable connection. The computer cable connects a computer to the projector for display purposes only.*

## 2.9. Inserting the Remote Control Batteries

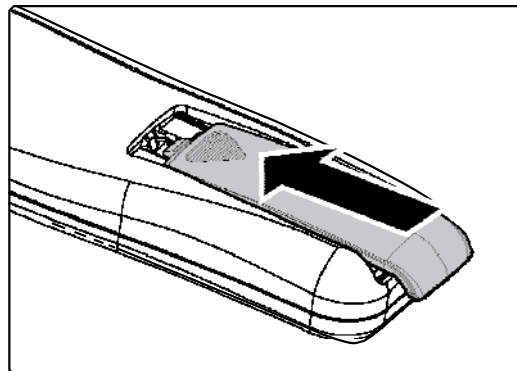
1. Remove the battery compartment cover by sliding the cover in the direction of the arrow.



2. Insert the supplied batteries taking note of the polarity (+/-) as shown here.

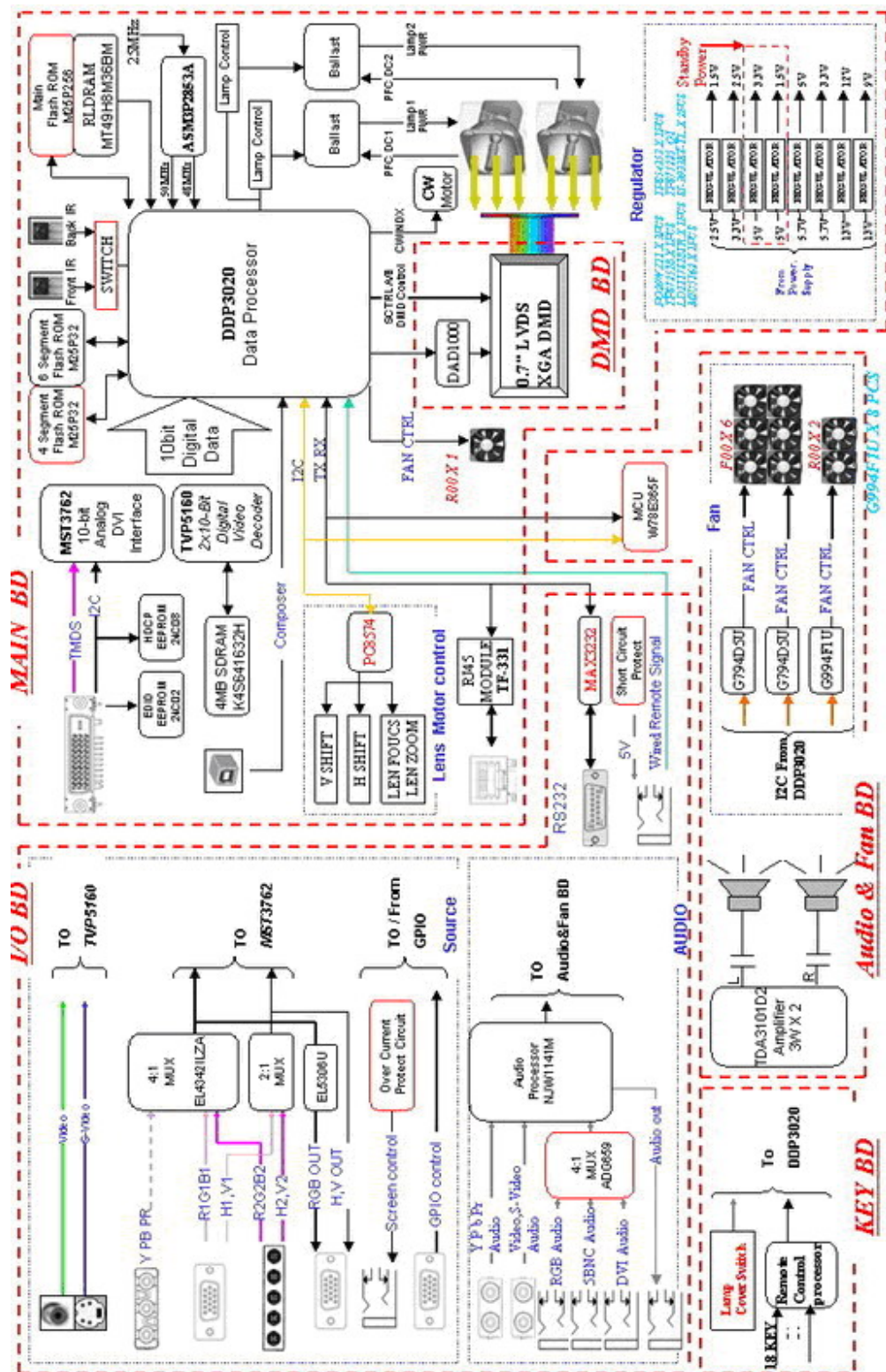


3. Replace the cover.

**Caution:**

1. **Only use AAA batteries. (Alkaline is better).**
2. **Dispose of used batteries according to local ordinance regulations.**
3. **Remove the battery when not using the projector for prolonged periods.**

## 2-10. Block Diagram



## 2-11. Explanation of the block diagrams

### 1. Input signal processing

#### 1-1.RGB & Component & DVI input system

The RGB(5BNC) and COMPONENT input signals are led through the multiplexer circuit. After these signals and DVI signal have been converted into 10-bit digital signals of RGB each at the A/D converter (U201) incorporated in the VIDEO amplifier, the resultant signals are output to the scaler (U400).

#### 1-2.Video input system

The VIDEO input and S-VIDEO input signals are decoded into the Y/CbCr (brightness and chroma) signals at the video decoder (U702). The decoded signals are further converted into 10-bit digital signals of Y/ CbCr, and then output to the scaler (U400).

### 2. Digital video signal processing

#### 2-1.Scaler (U400)

- The Y/CbCr signals are processed for picture quality improvement and matrix processing at the Scaler circuit, and then converted into the RGB signals.
- The RGB and VIDEO input signals are switched over at the selector. After passing through the signal adjusting circuit of color space processing, auto-adjustment, etc., these signals are written in the RLDRAM.
- The video signals called up from the RLDRAM, pass through the definition converter circuit, ON-screen display, error diffusion circuit for DLP, V-T compensator circuit, and such signal processing circuits, and are then output to the optical engine unit (DLP formatter board).
- In the frame memory consisting of the RLDRAM and the FIFO located in the scaler, frequency conversion is conducted for the WRITE system and the READ system. Therefore, the video signals can be output to the optical engine unit (DLP formatter board) always at the constant timing.
- According to the conditions of projector installation, the trapezoidal distortion compensation of the video signals are also effected through the frame memory.

### 3. Audio signal processing

- The audio output is generated from the speakers via the amplifier (U900) provided with a volume control.
- The volume control is conducted by the DC output from the D/A converter (U900).

### 4. System control

The scaler (U400) controls all of this system.

### 5. Power circuit

#### 1. Main power supply

- In the state of standby, the power is supplied 5V to the scaler, scaler peripheral ICs, and FLASHROM.
- After the power is ON, the power at 2.5V, 3.3V, 5.7V and 13V is fed to the analog circuit, fan, formatter board, etc.

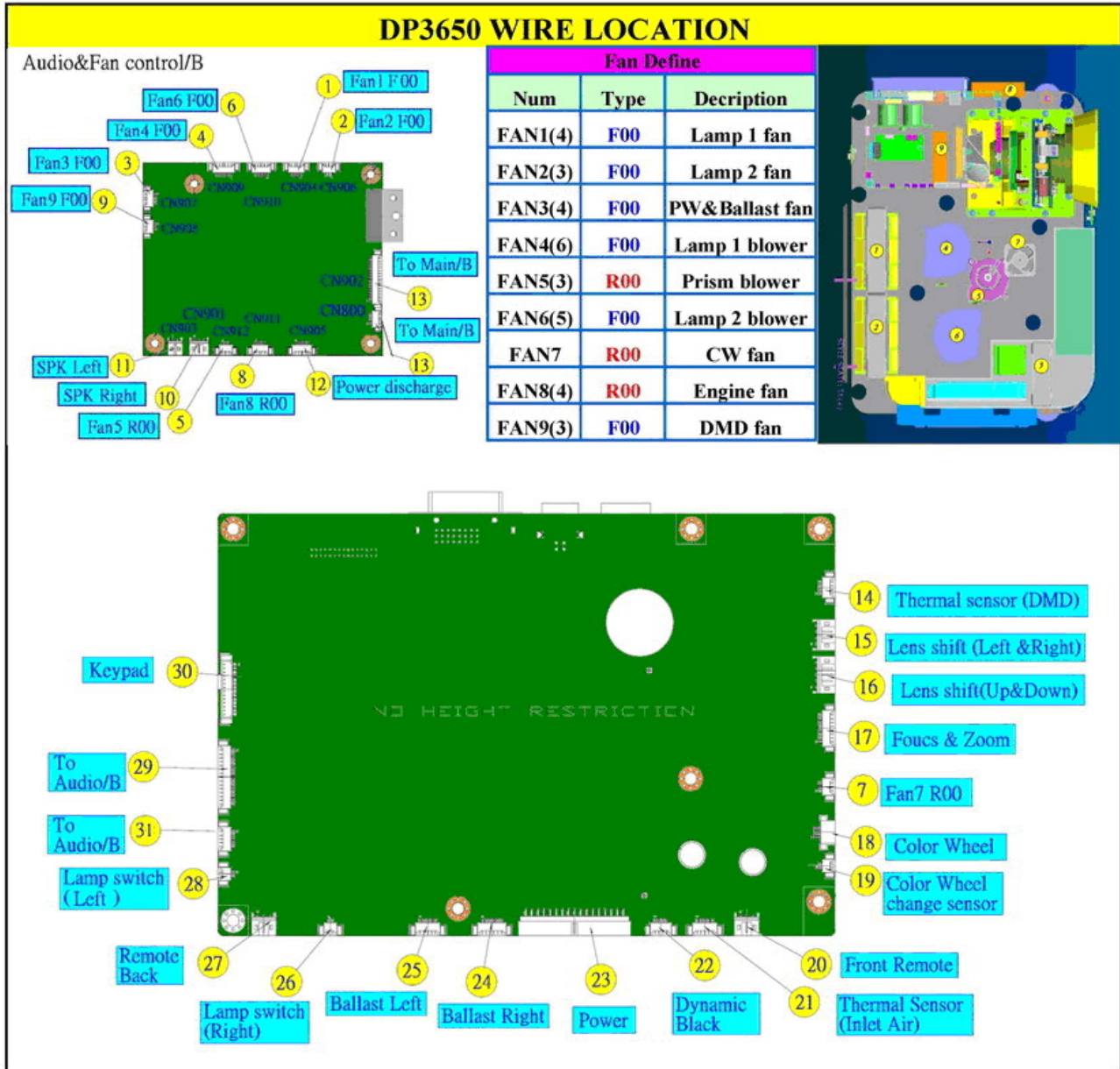
#### 2. Lamp power supply

- The lamp is lit with POWER ON.
- Unlighting detection is performed.

### 6. Safety design

- Fan circuit detection
- Lamp cover detection
- Lamp house temperature detection
- Thermal protector for the lamp power supply
- Lamp replacing time

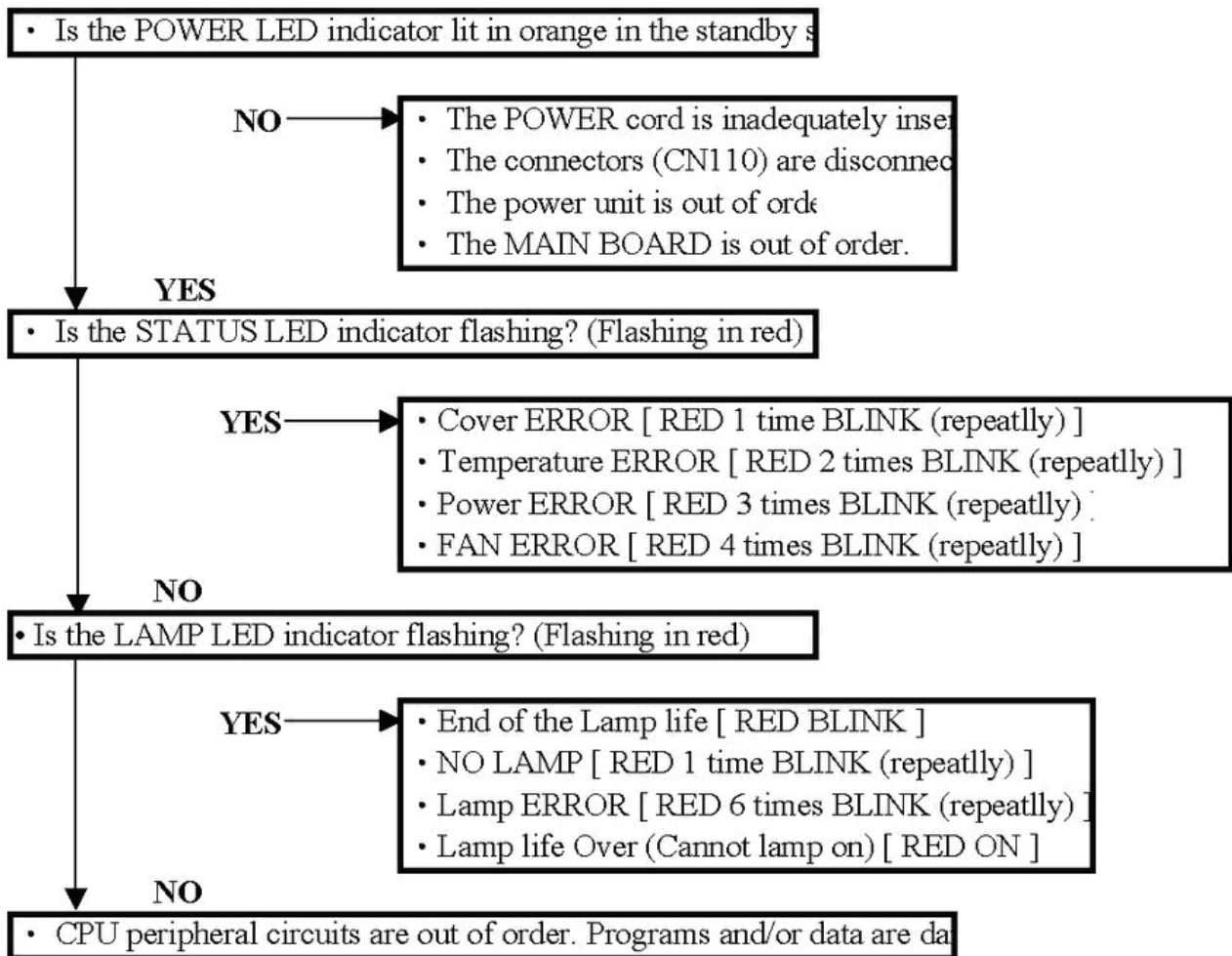
## 2-12. Wire Location



### 3. TROUBLE SHOOTING

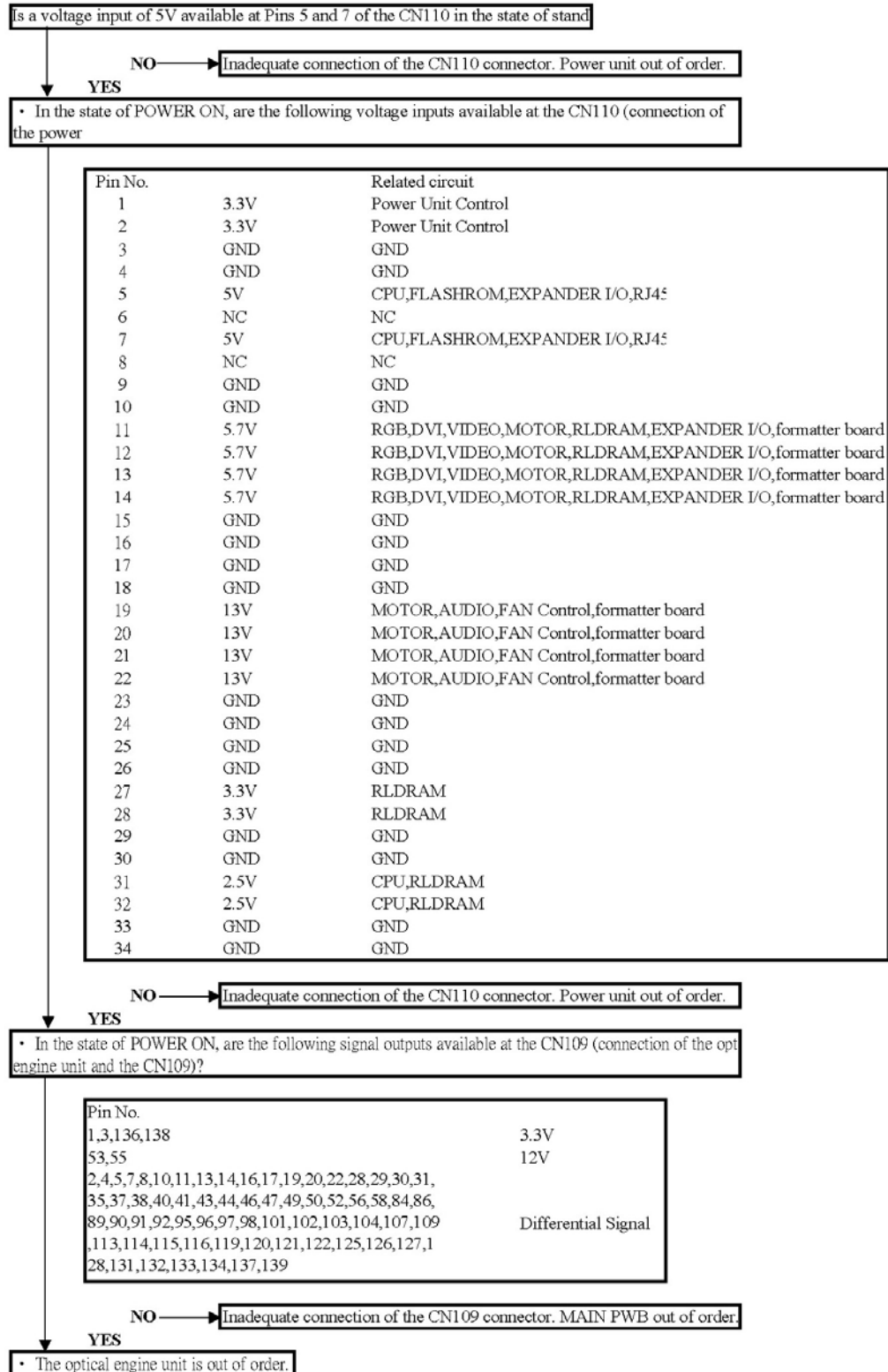
#### 3-1. Operation check

By making operation checks under normally operating conditions, a certain degree of judgment is possible on errors. Prior to the removal of the top cover, check the POWER indicator and the STATUS indicator.

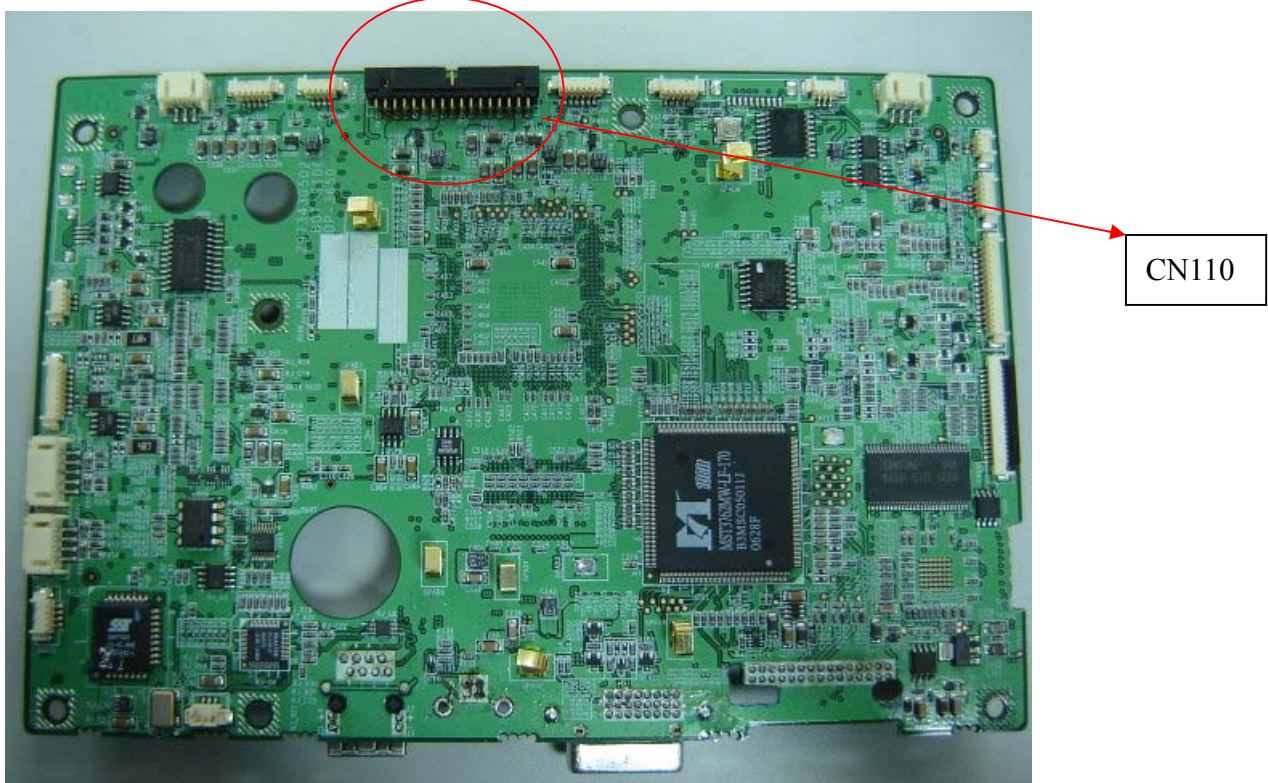




### 3-2. Main Board check







### 3-3. LED State Indications

Power LED			
Projector Status	LED Condition	LED Sequence	Projector Condition
AC Off	OFF	OFF	OFF
Cooling	ORANGE BLINK	0.5sON > 0.5sOFF	After Power OFF
Power up sequence	GREEN BLINK	0.5sON > 0.5sOFF	Start up
Standby / Idle	ORANGE ON	ON	Standby
Power ON	GREEN ON	ON	ON

WARNING LED			
Projector Status	LED Condition	LED Sequence	Projector Condition
Normal Condition	OFF	OFF	Power ON
Cover ERROR	RED 1 time BLINK (repeatedly)	0.5sON > 2.5sOFF	ERROR
Temperature ERROR	RED 2 times BLINK (repeatedly)	$(0.5sON > 0.5sOFF) * 2 > 2.0sOFF$	ERROR
Power ERROR	RED 3 times BLINK	$(0.5sON > 0.5sOFF) * 3 > 2.0sOFF$	ERROR
FAN ERROR	RED 4 times BLINK (repeatedly)	$(0.5sON > 0.5sOFF) * 4 > 2.0sOFF$	ERROR
Keylocked (when push key)	ORANGE light up	ON	Keylock function enable
Standby (Power-saving)	OFF	OFF	Standby (Power-saving)
Standby (Normal)	GREEN LIGHT	ON	Standby (Normal)

Lamp LED			
Projector Status	LED Condition	LED Sequence	Projector Condition
Lamp Off	OFF	OFF	Lamp Off
End of the Lamp life	RED BLINK	0.5sON > 0.5sOFF	Replace Lamp
NO LAMP	RED 1 time BLINK (repeatedly)	0.5sON > 2.5sOFF	ERROR
Lamp ERROR	RED 6 times BLINK (repeatedly)	$(0.5sON > 0.5sOFF) * 6 > 2.0sOFF$	ERROR
Cooling Lamp	ORANGE BLINK	0.5sON > 0.5sOFF	Switching Lamp 1 & 2
Re-Light up sequence	GREEN BLINK	0.5sON > 0.5sOFF	Start up
Lamp life Over	RED ON	ON	Replace Lamp
Eco mode	ORANGE ON	ON	Power ON
Normal mode	GREEN ON	ON	Power ON



## 4. DISASSEMBLY AND ASSEMBLY

### Removing the Lamp Cover and Lamp Module



Look the full set projector.



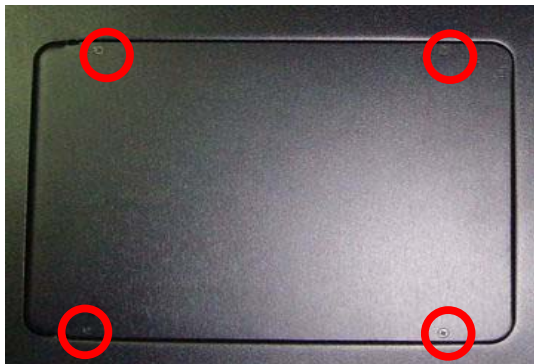
Look at the IO side.



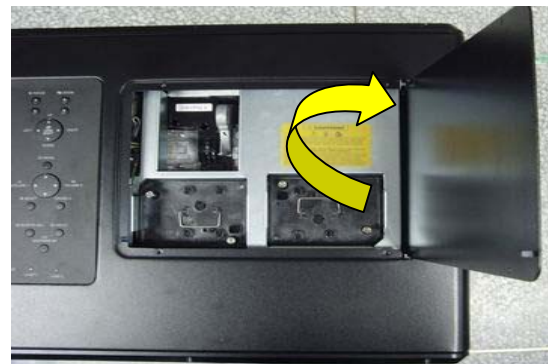
Look at the keypad of top side.



Look at the keypad of top side.



Loose these four screws.

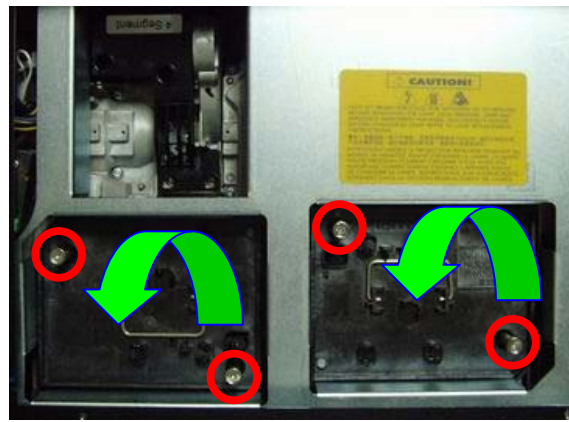


Remove and take out the lamp cover.

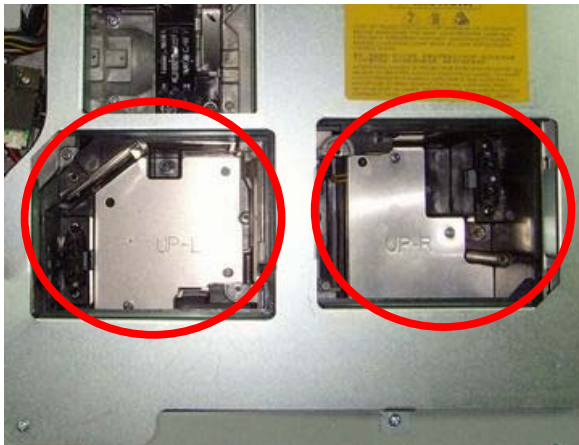
## Removing the Lamp Cover and Lamp Module



Look at the top side.



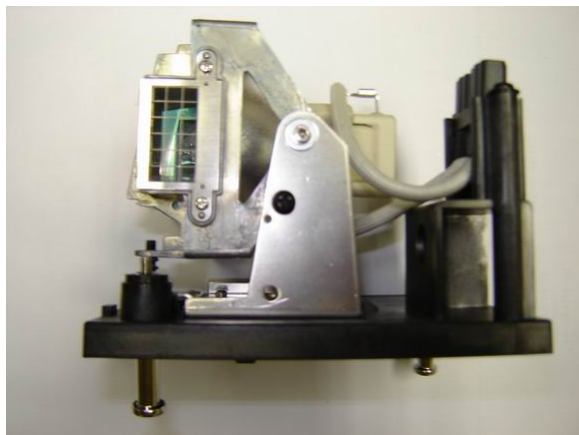
Loose these four screws and take out.



Remove the lamp modules (upward view).



Look the Lamp.

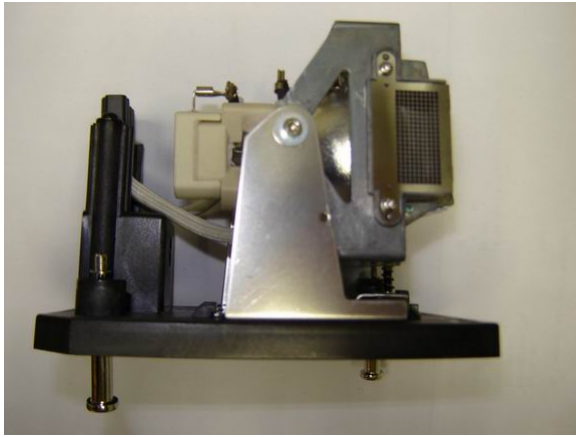


Look the Lamp.



Look the Lamp.

## Removing the Lamp Module and Front cover



Look the Lamp.



Look the Lamp.



Remove the ten screws.



Look the screws.



Remove the front cover.



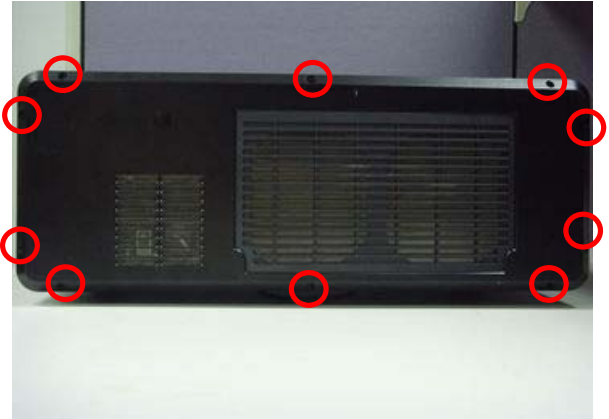
Front side views.



## Removing the Back & Top cover



**Back cover view.**



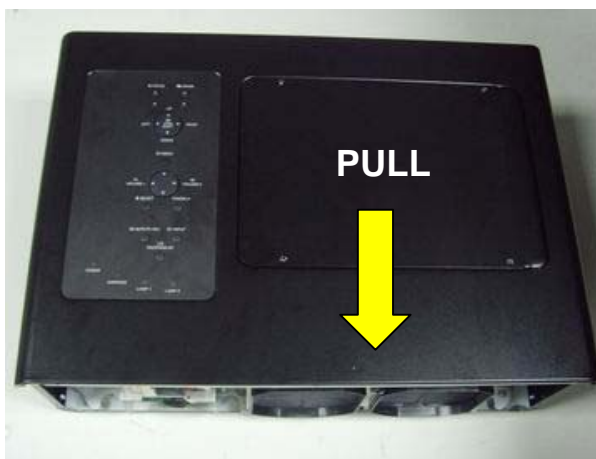
**Remove the ten screws.**



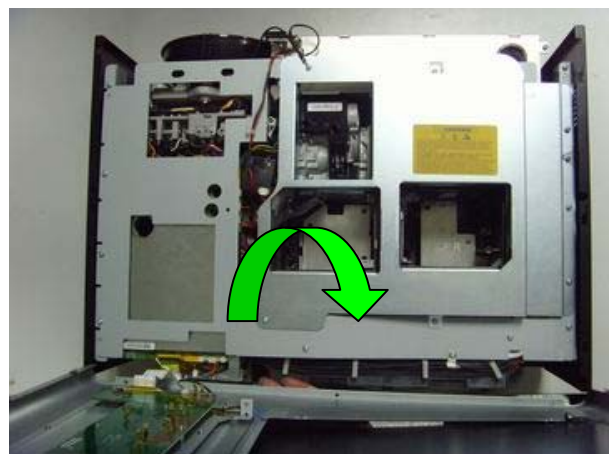
**Remove the back cover.**



**Back side view.**



**Pull the top cove in this direction.**



**Then remove the Top cover.**

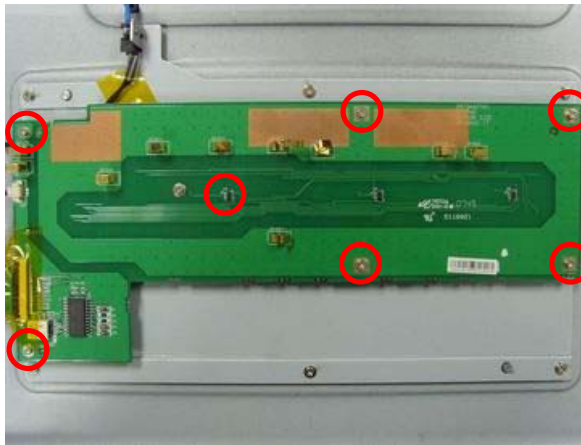
## Removing the Top cover & Keypad board



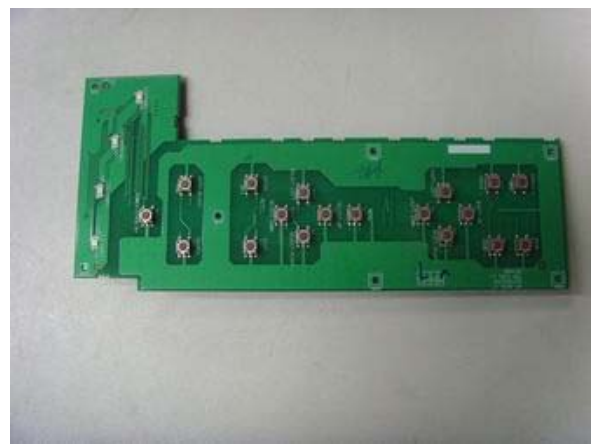
Remove the FCC Cable from the keypad side.



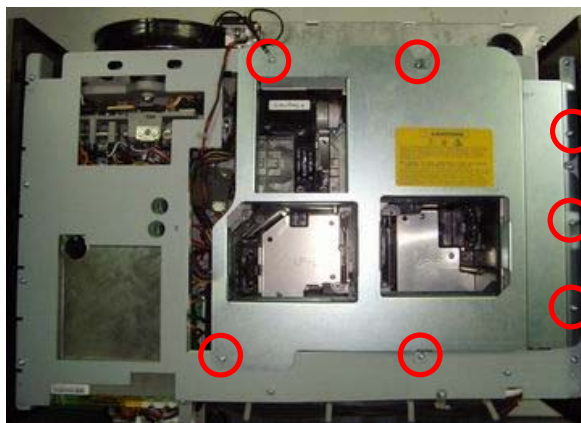
Look the top cover & keypad BD.



Remove the 7 screws.



Then remove the keypad BD.

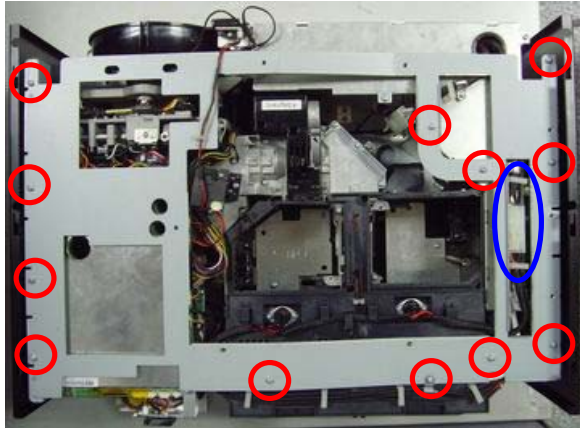


Remove the 7 screws.

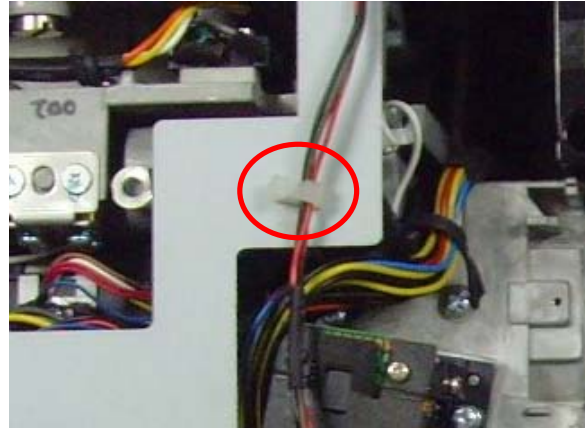


Remove the shield.

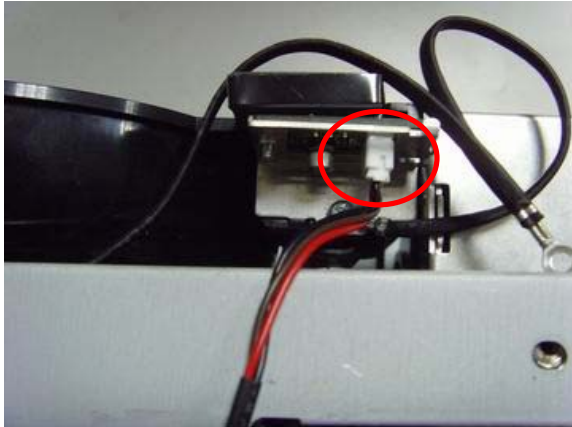
## Removing the Top cover Shield



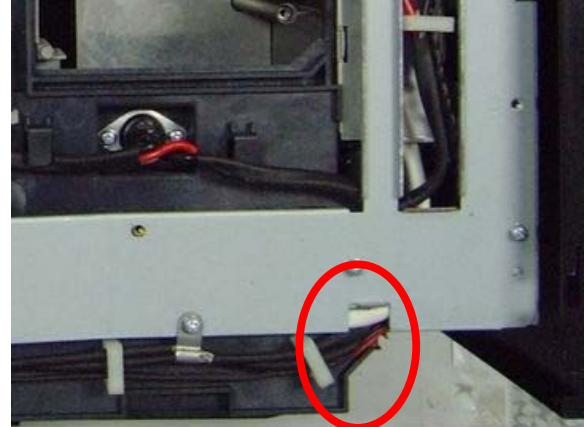
Remove the twelve screws, and careful and check this place when you assembled.



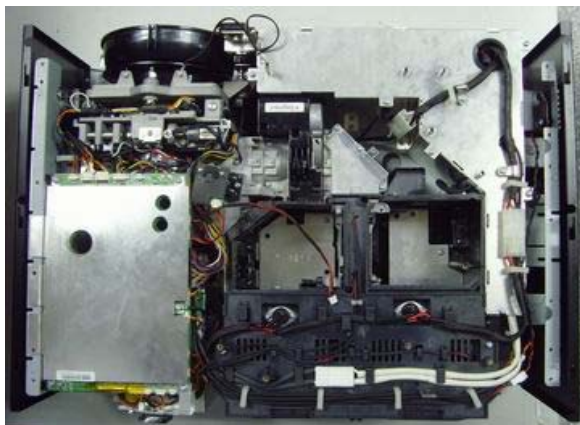
Check this hook-buckle when you assemble that.



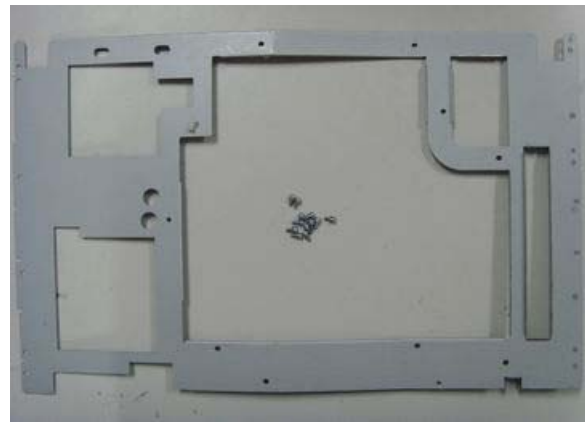
Disconnect.



Careful this area and check this place when you assemble this plate.



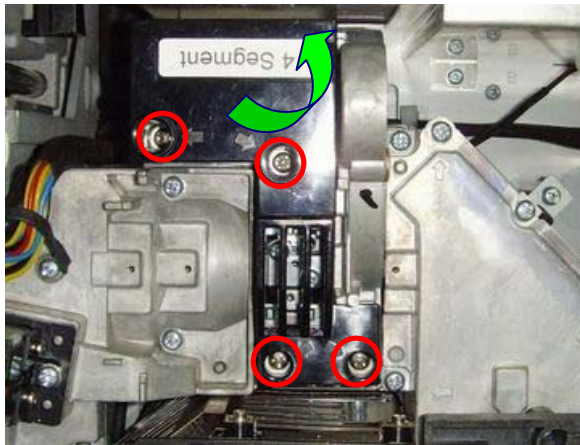
Then remove the top cover shield.



Top cover shield & screws.



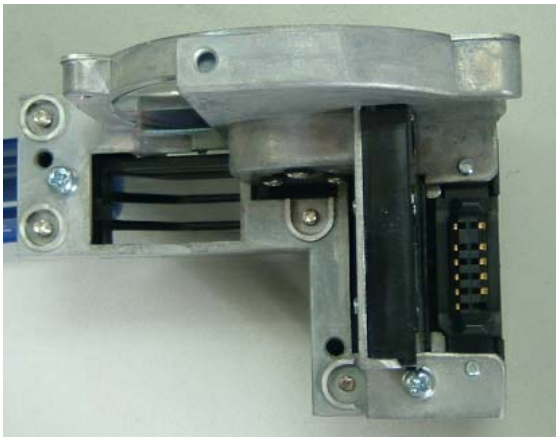
## Replace the color wheel



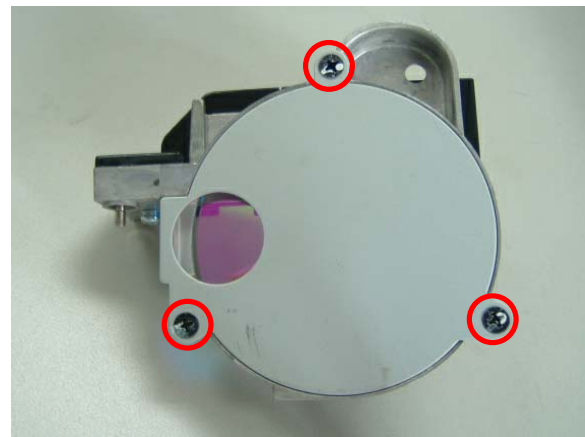
**Remove the four screws and take away.**



**Review the color wheel.**



**Review the color wheel.**



**Remove the three screws.**



**Remove the three screws and take this case away.**

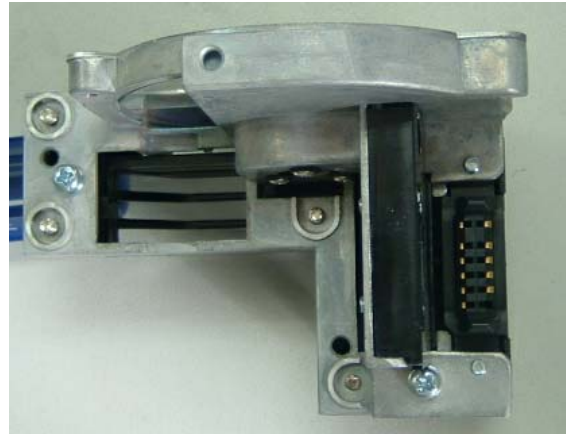


**Color wheel module off.**

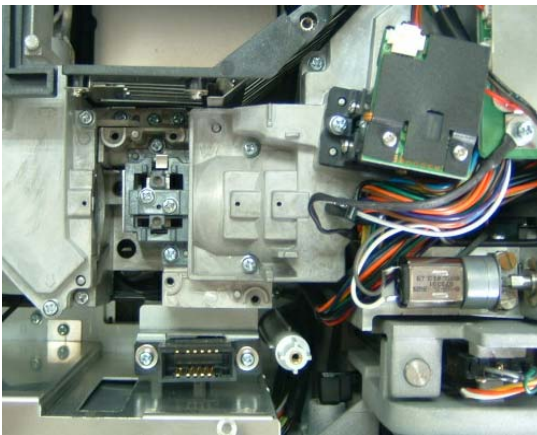
## Replace the color wheel and Removing the Lens



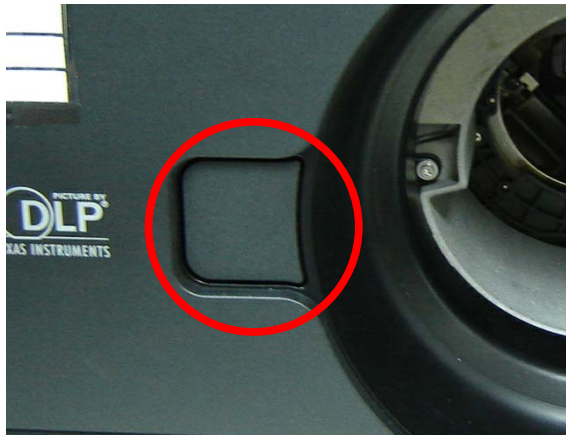
**Review the color wheel.**



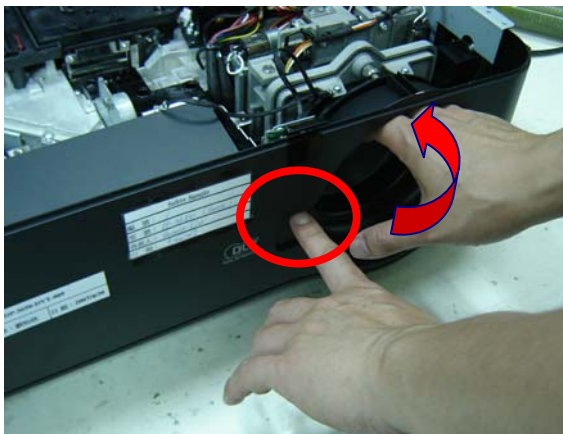
**Review the color wheel.**



**Color wheel module off.**



**Look at the Lens release button.**



**Push the Lens release button, Turn anti-Clockwise and pulled the lens away.**



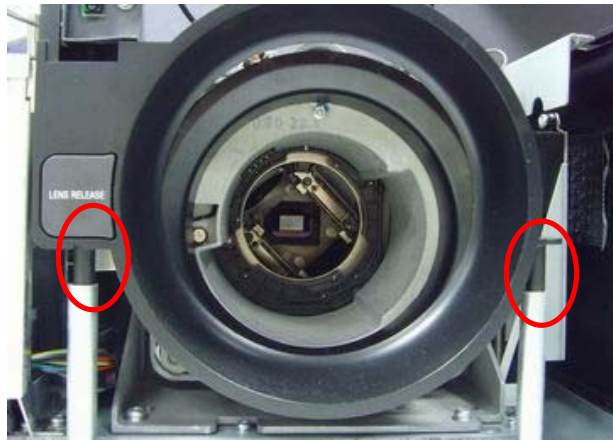
**The Optical Lens review.**



## Removing the Lens cap & lens ring



**Remove the screw.**



**Remove the Lens cap & front IR assy.**



**Disassemble the Lens cap & IR assy.**



**Front IR BD views.**

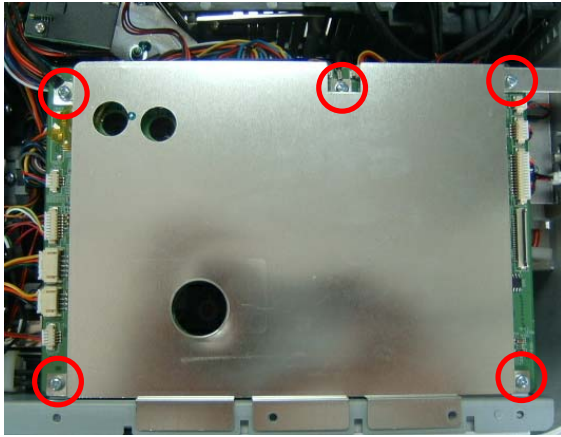


**Remove this screw.**



**Take off the lens ring.**

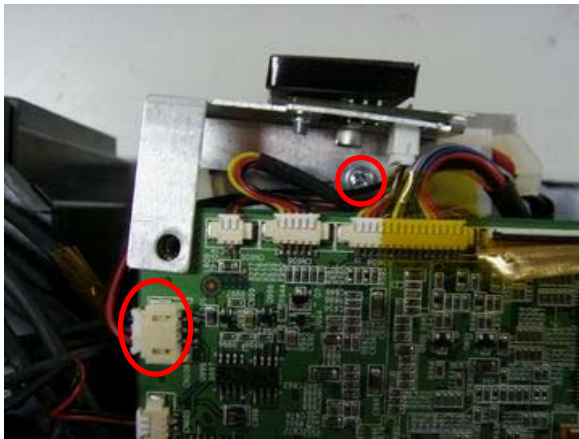
## Removing the Main Board



**Remove the five screws.**



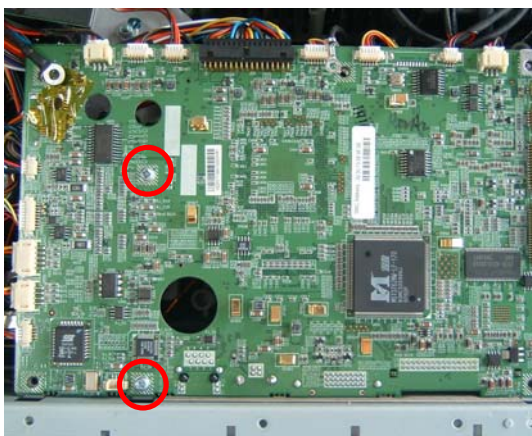
**Then take off the shield.**



**Remove the screw & disconnect the wire.**



**Disassemble the back IR assy.**



**Remove these two screws.**



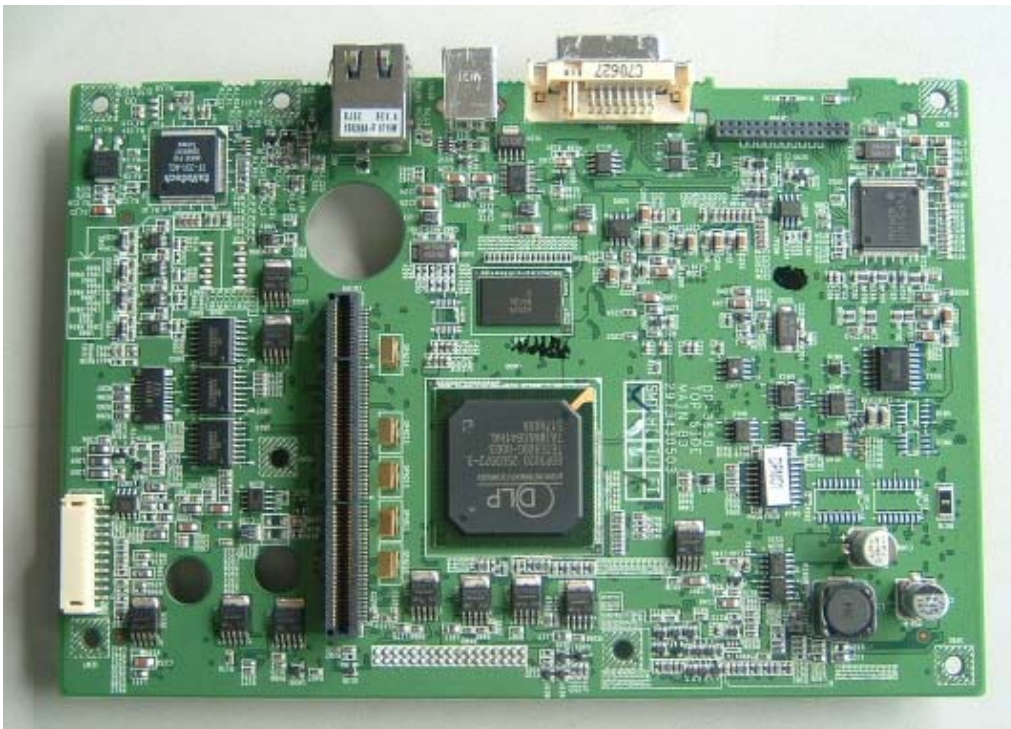
**Remove the two hexagonal bolts then take off the main BD.**



## Review the Main Board



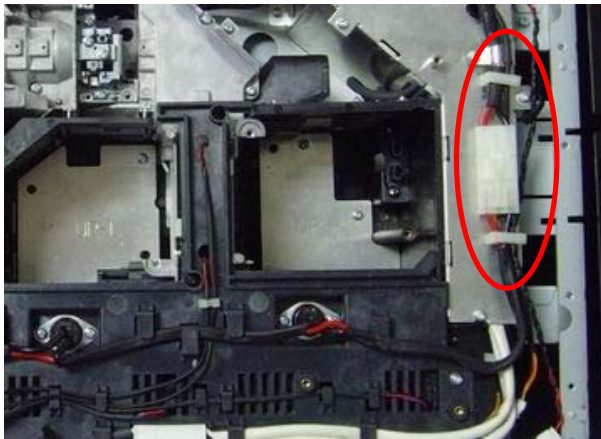
**Review the Main Board Top side.**



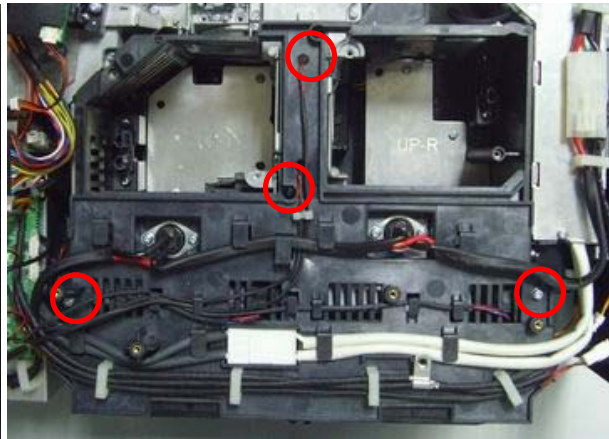
**Review the Main Board Bottom side.**



## Removing the Lamp cover



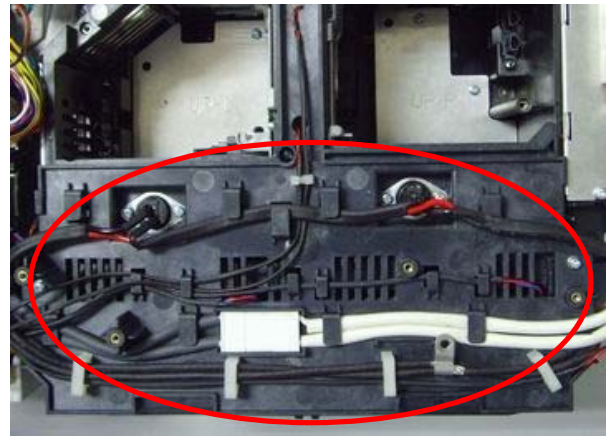
**Unplug these two hook-buckles, then disconnect.**



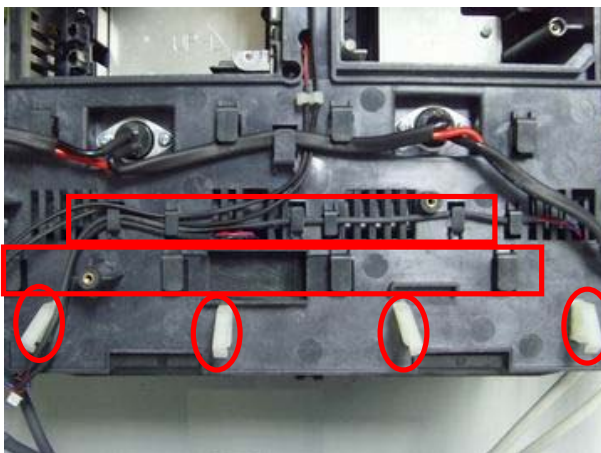
**Remove these four screws.**



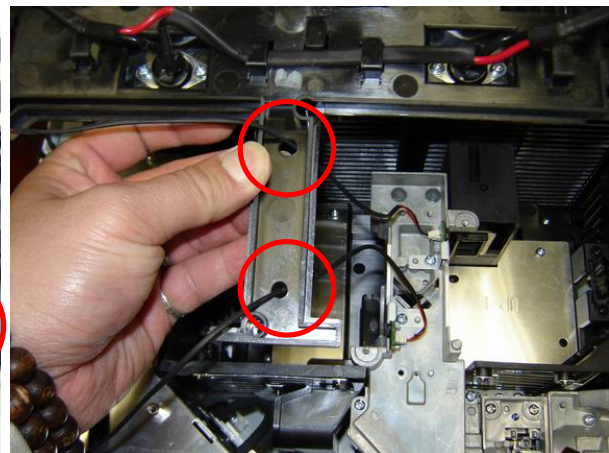
**Review the screws.**



**Arrange the wires as picture when you assemble it.**



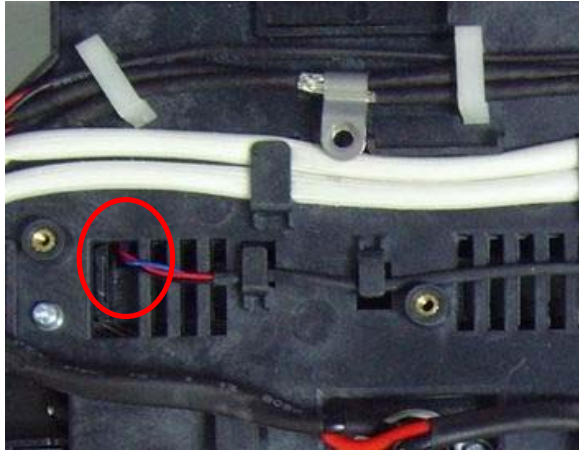
**Unplug these four hook-buckles and careful the assembly.**



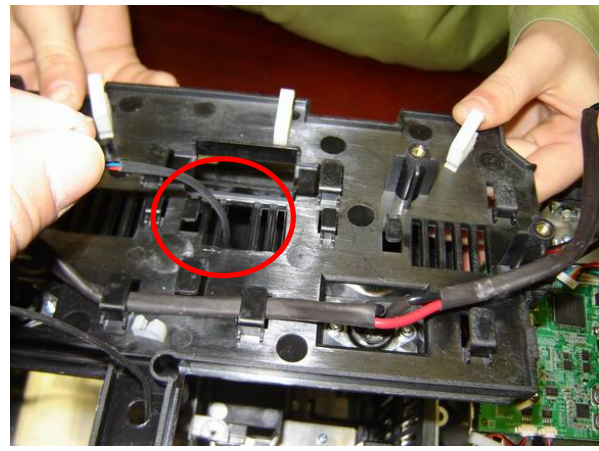
**Careful and check this place when you assembled.**



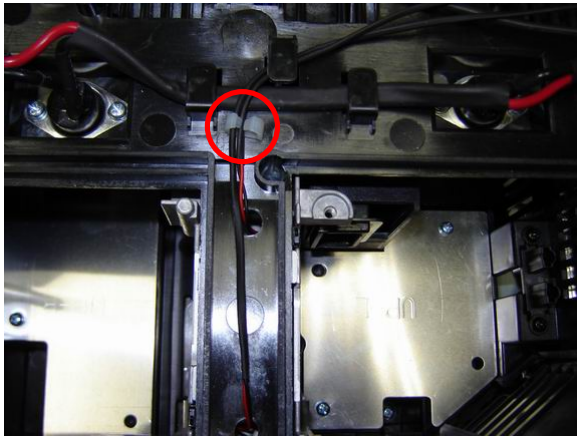
## Removing the Lamp cover & Lamp module



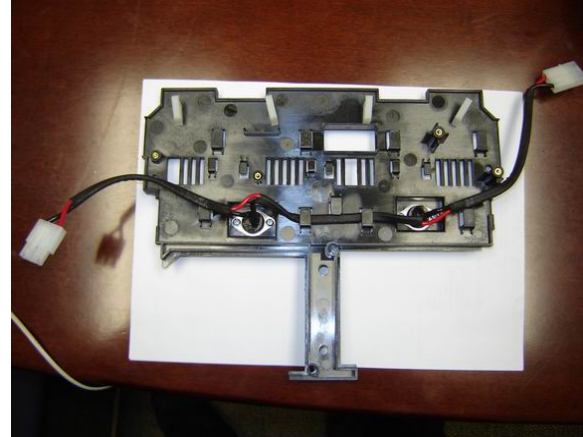
**Careful and check this place when you assembled.**



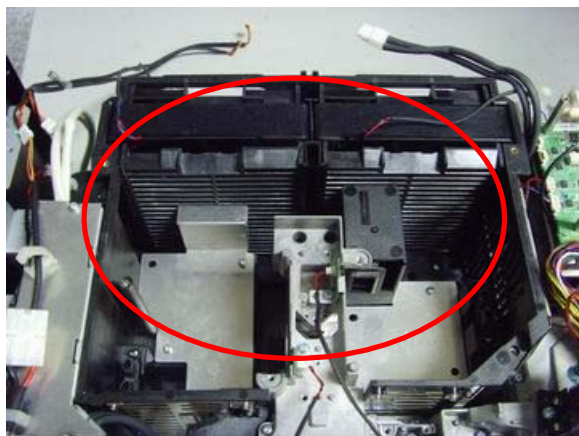
**Careful and check this place when you assembled.**



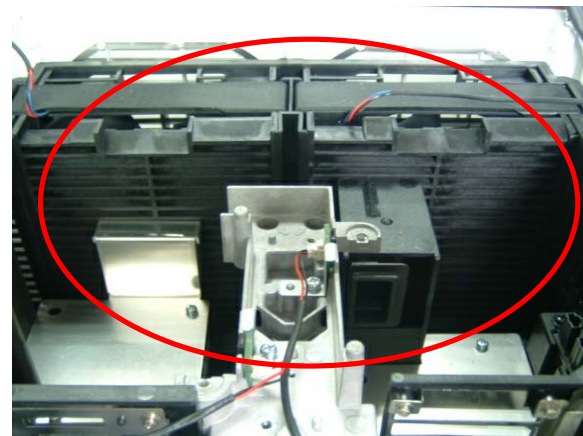
**Unplug and check this hook-buckle.**



**Review the Lamp cover.**

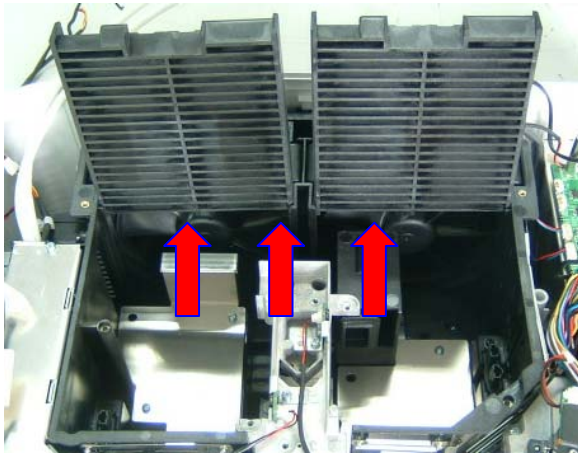


**The Lamp cover off.**

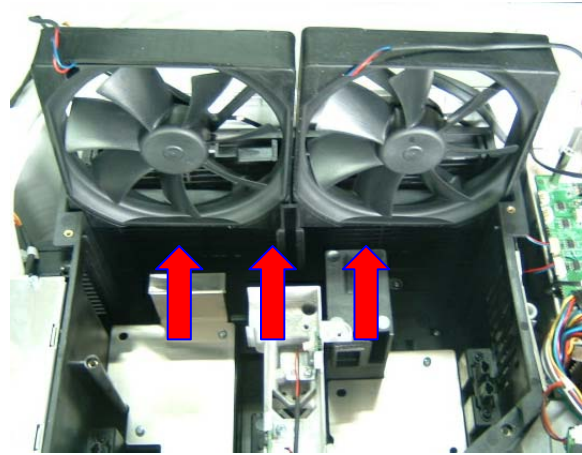


**View the Fan module area.**

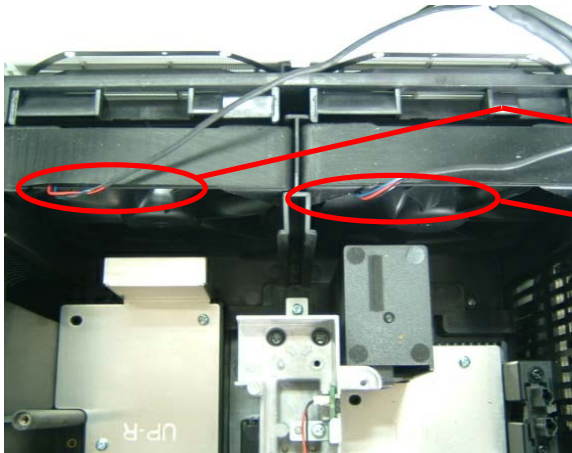
## Removing the FAN module



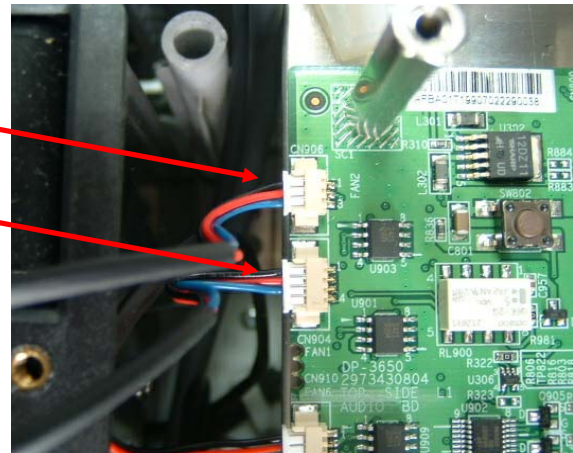
**Take these two sets away.**



**Take these two fans away.**



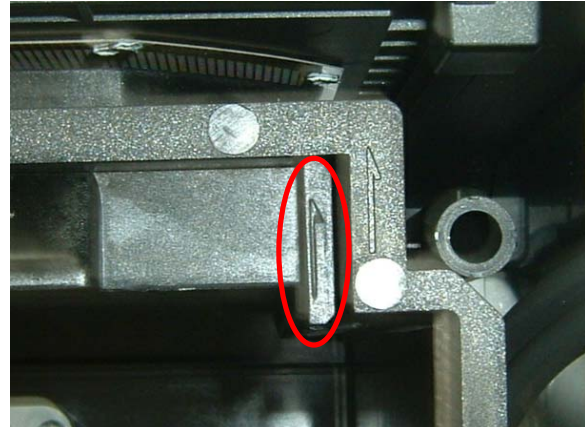
**Care the fan wire assembly.**



**See the connector location.**



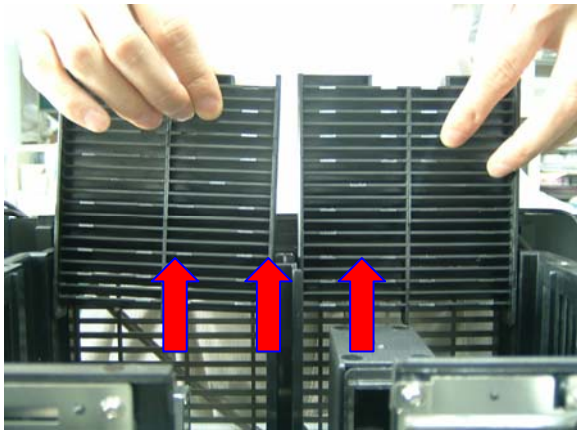
**Be careful the two side of arrow mark direction.**



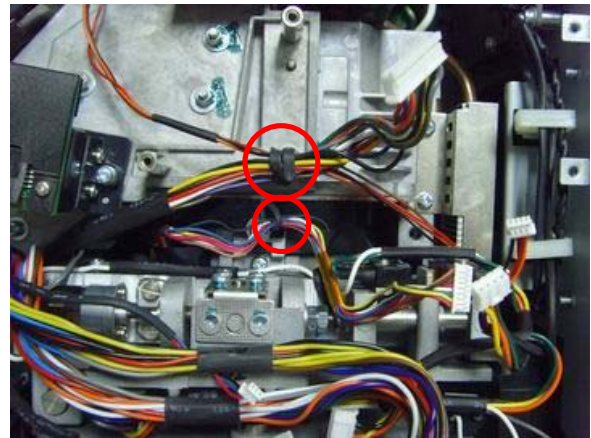
**Be careful the two side of arrow mark direction.**



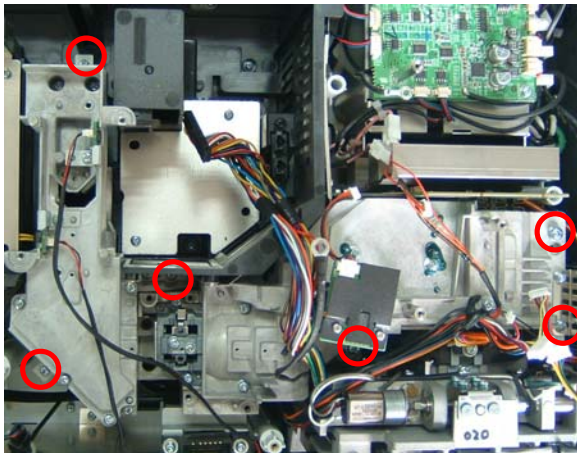
## Removing the Fan module & Optical module



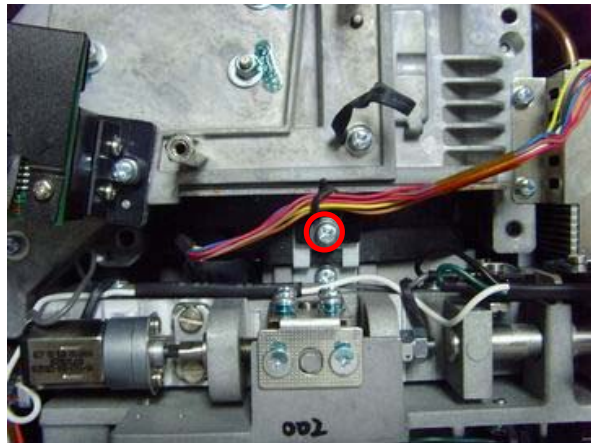
**Take these two sets away.**



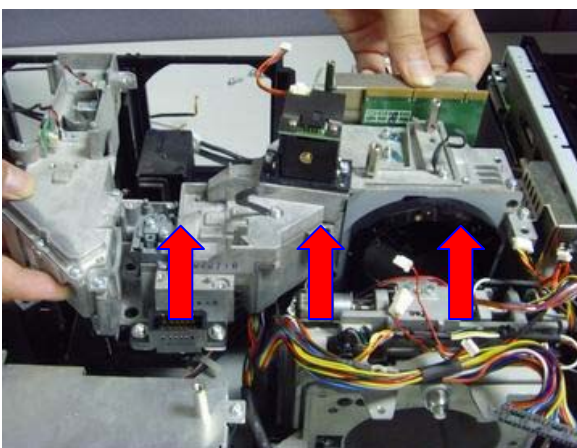
**Be careful the hook-buckles.**



**Remove these six screws.**



**Remove the screw.**

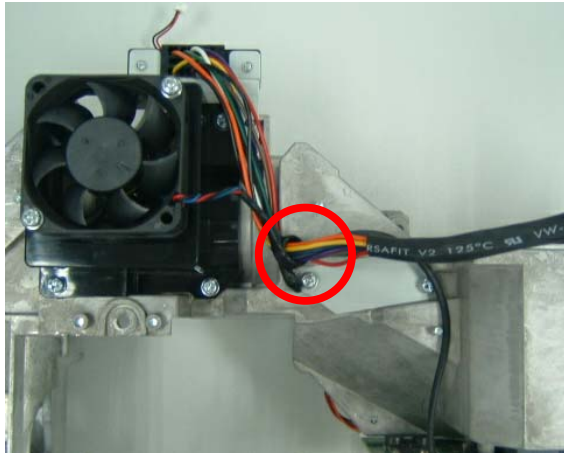


**Then Remove the Optical engine module.**

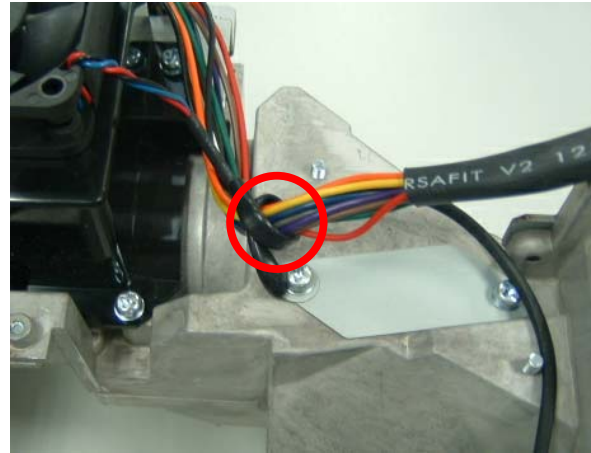


**Review the screws.**

# Removing the Optical module & Lens Shift / motor module



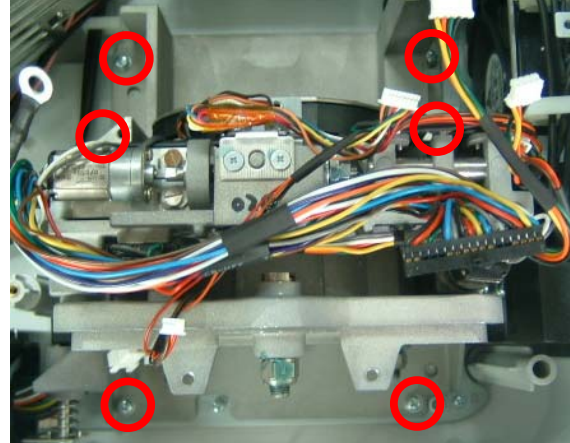
Careful and check this place when you assembled.



Careful and check this place when you assembled.



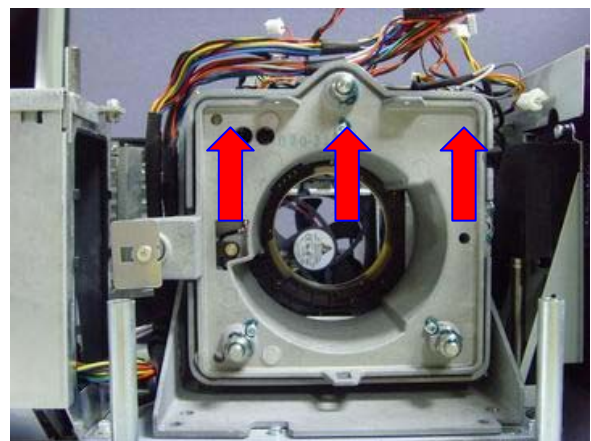
The Optical module off.



Remove these six screws.



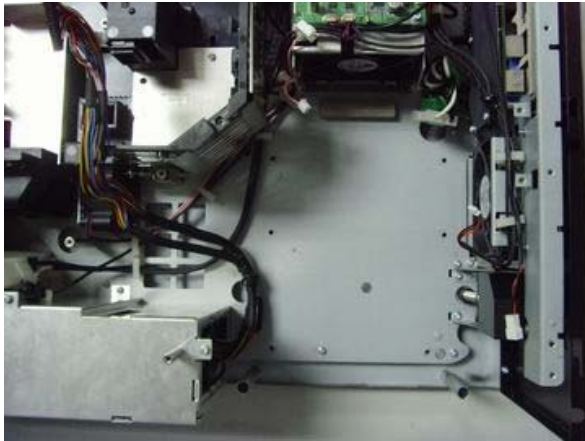
Review the screws.



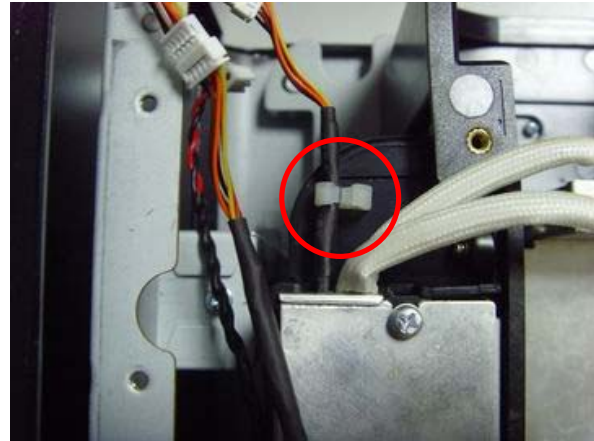
Remove the Lens Shift / motor module.



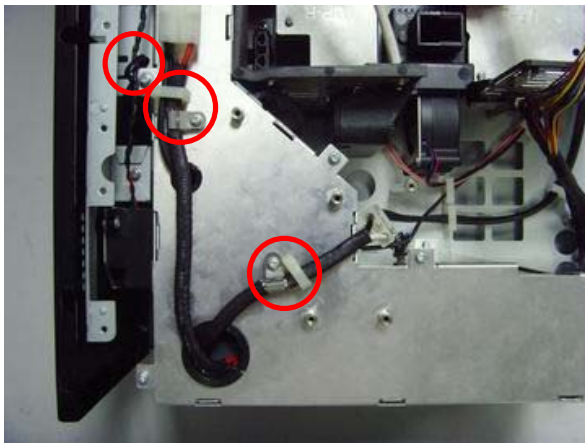
## Remove the Lens Shift / motor module and Power shield



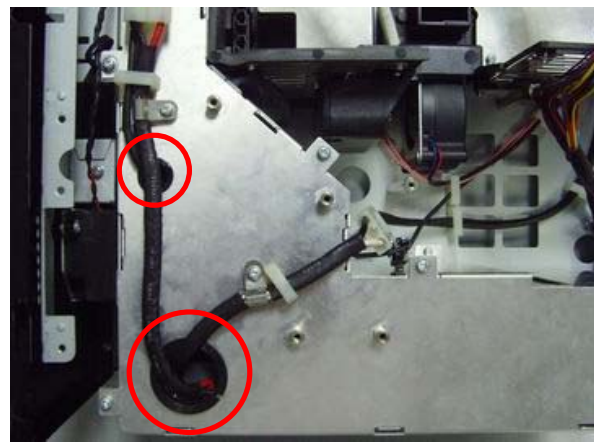
**The Lens Shift / motor module off.**



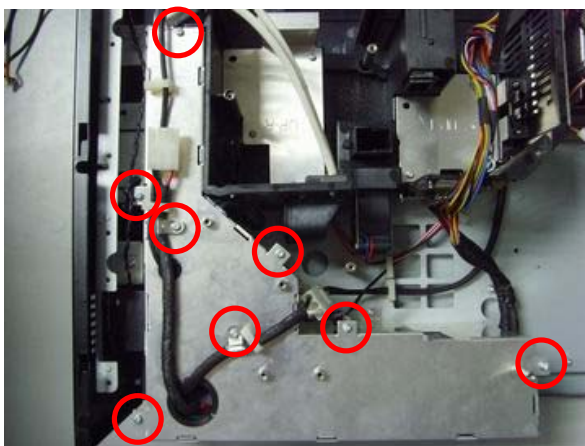
**Careful and check this place when you assembled.**



**Careful and check this place when you assembled.**



**Careful and check this place when you assembled.**

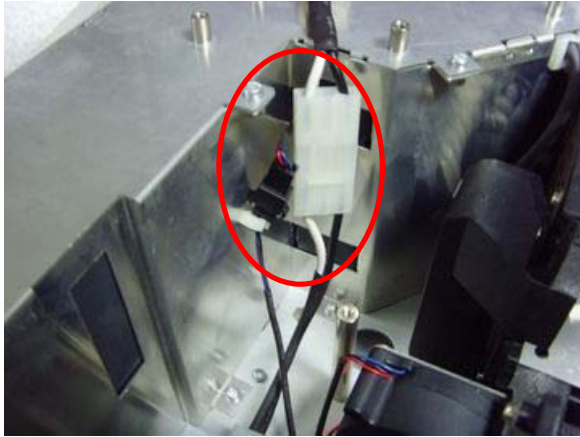


**Remove these 8 screws**

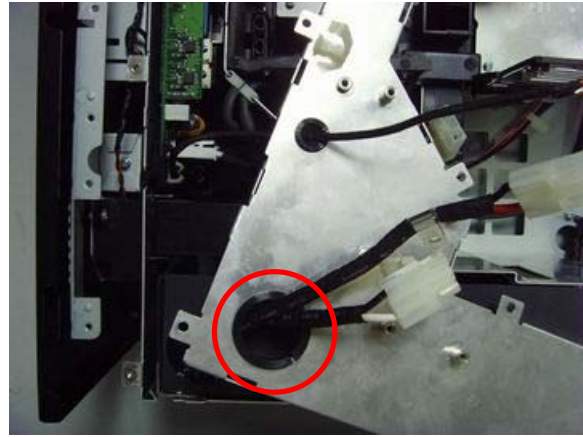


**Review the screws.**

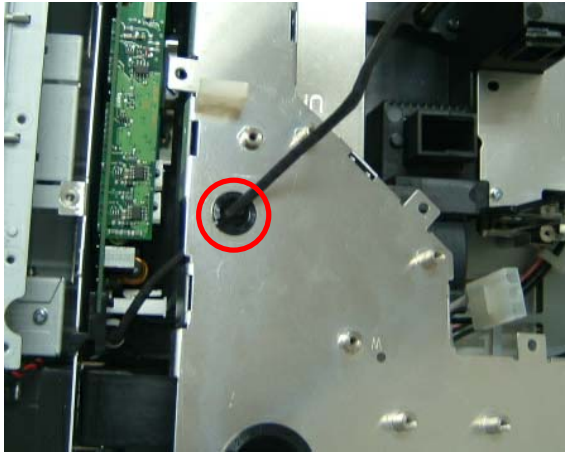
## Removing the Power shield & Lamp holder



Arrange the wires as picture when you assemble it.



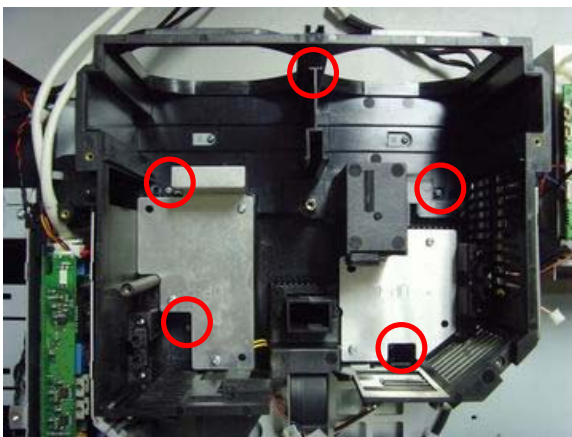
Careful and check this place when you assembled.



Careful and check this place when you assembled.



Review the Power Shield.



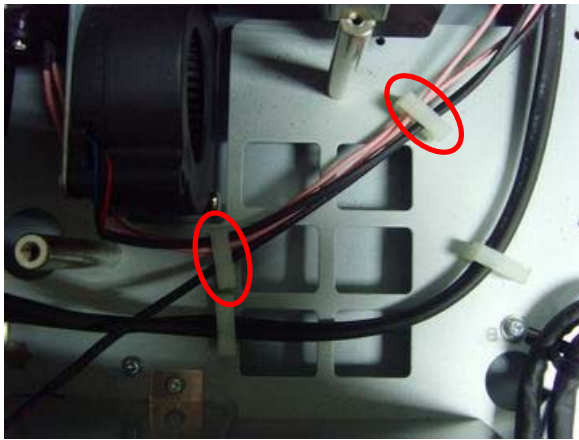
Remove these five screws.



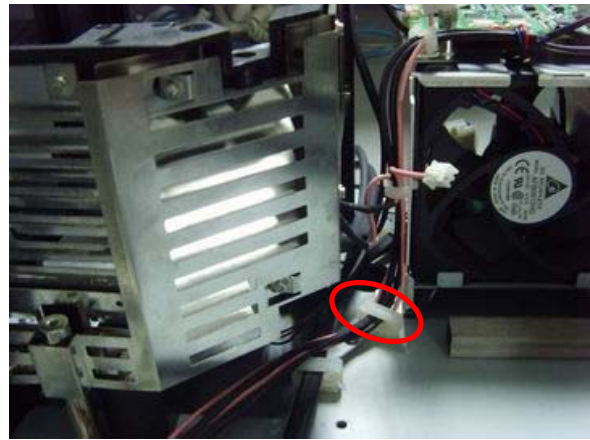
Review the screws.



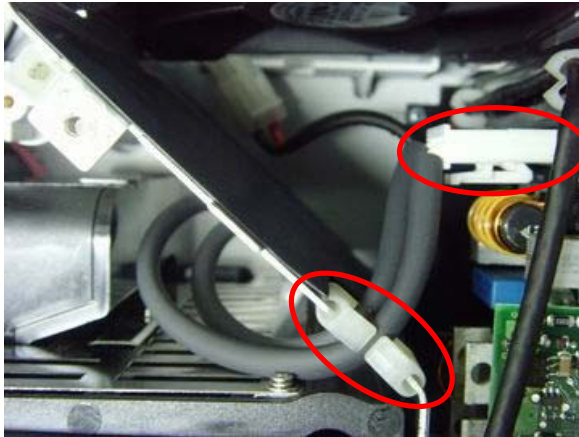
## Removing the Lamp holder and Take care the assembly



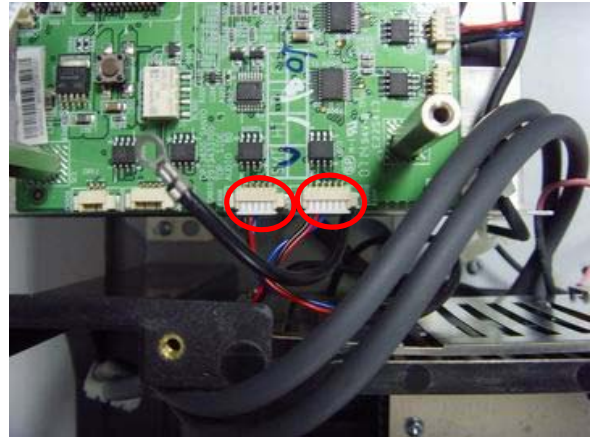
**Arrange the wires as picture when you assemble it.**



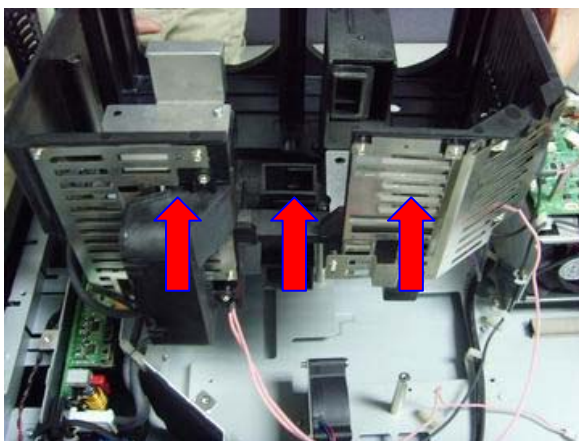
**Arrange the wires as picture when you assemble it.**



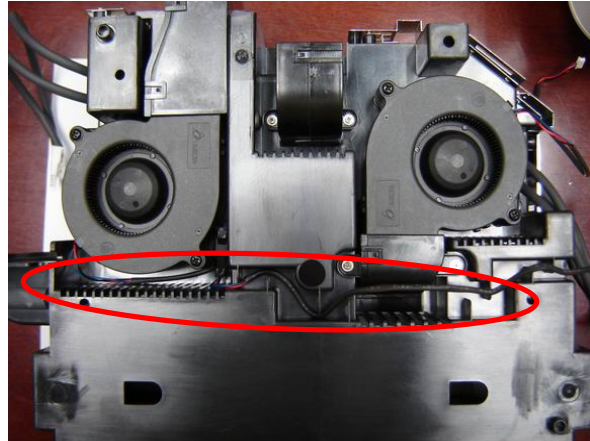
**Disassemble this connector.**



**Disconnect the connectors.**

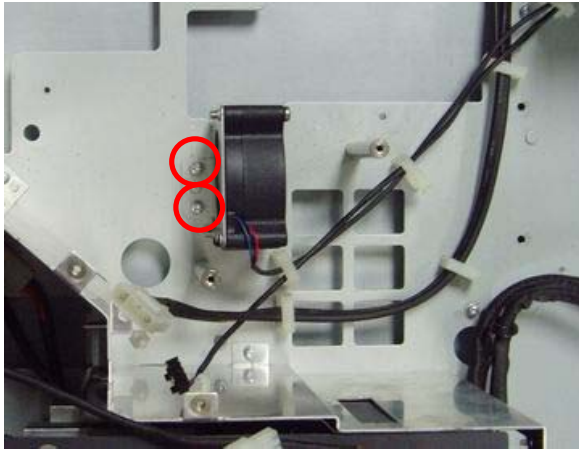


**Then remove the Lamp holder module.**



**Careful and check this place when you assembled.**

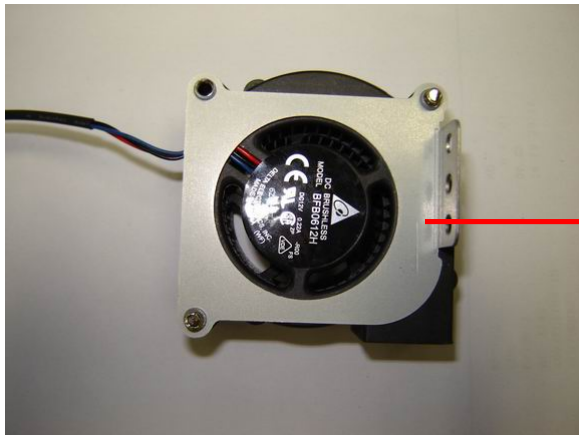
## Removing the blown Fan & Power Fan



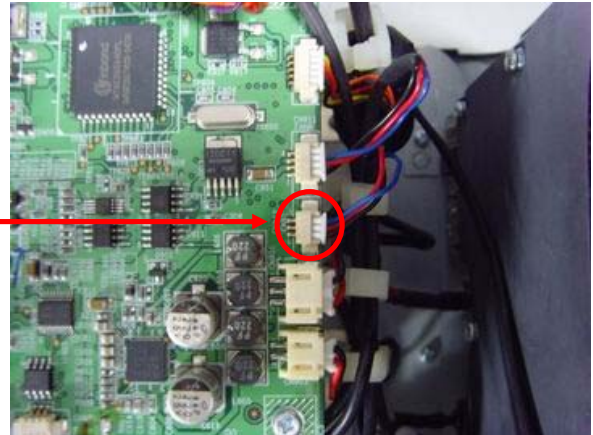
**Remove the two screws.**



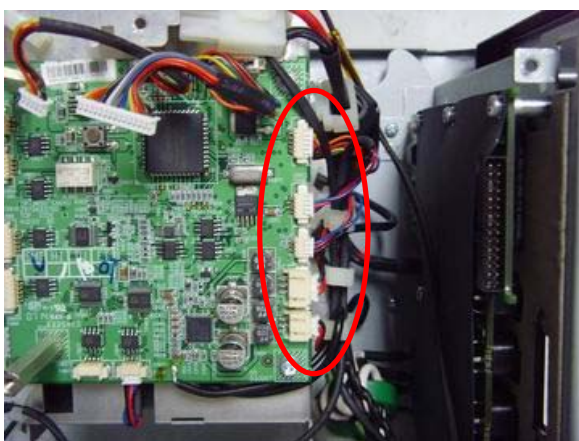
**Review the screws.**



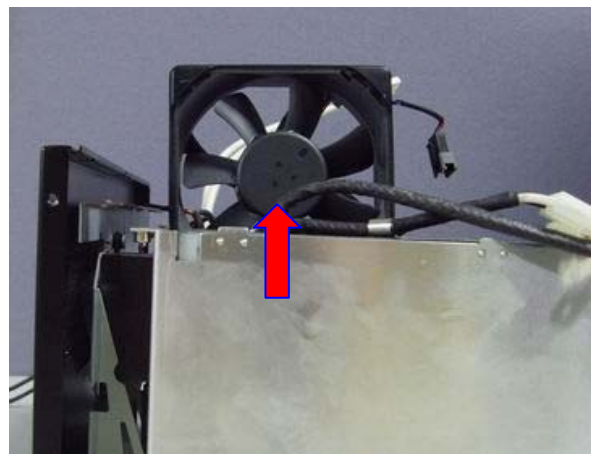
**Review the Fan.**



**See the connector location.**



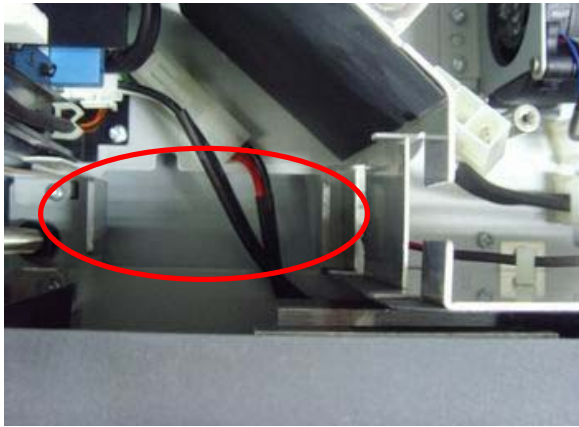
**Arrange the wires as picture when you assemble it.**



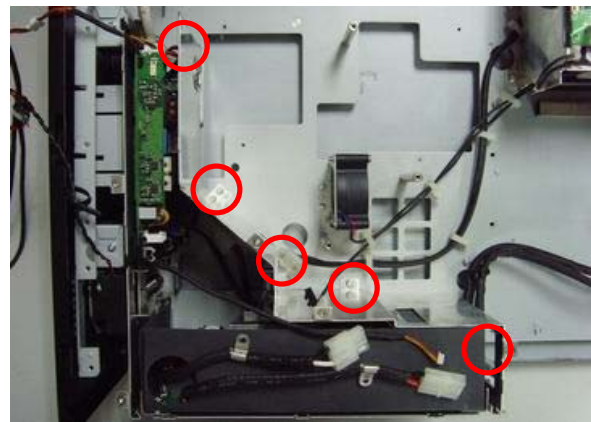
**Remove the Power Fan.**



## Removing the power fan & ballast shield



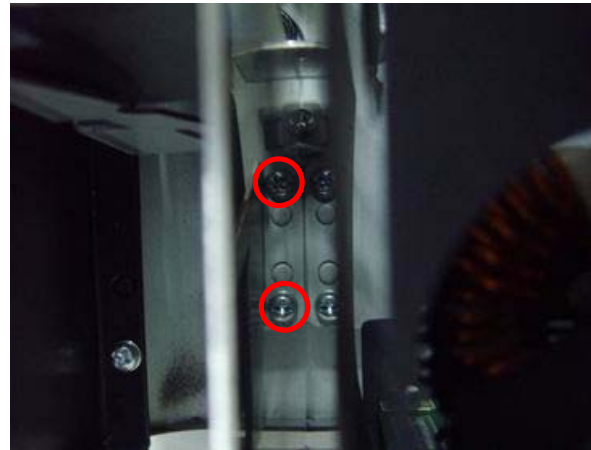
**View the Fan off.**



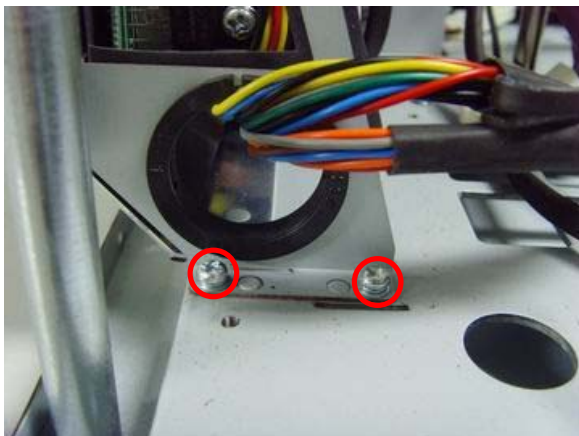
**Remove the five screws, then take off the shield.**



**Review the screws.**



**Remove the two screws.**

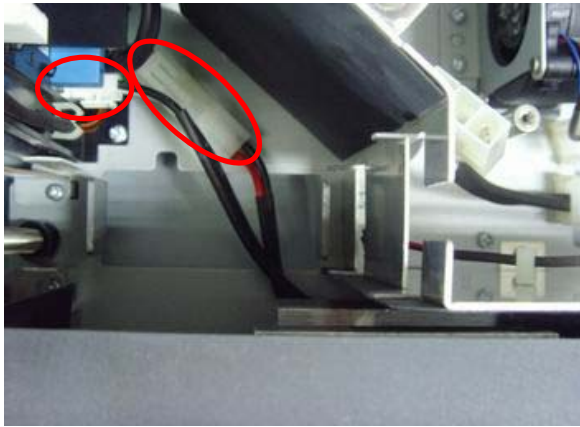


**Remove the two screws.**



**Review the screws.**

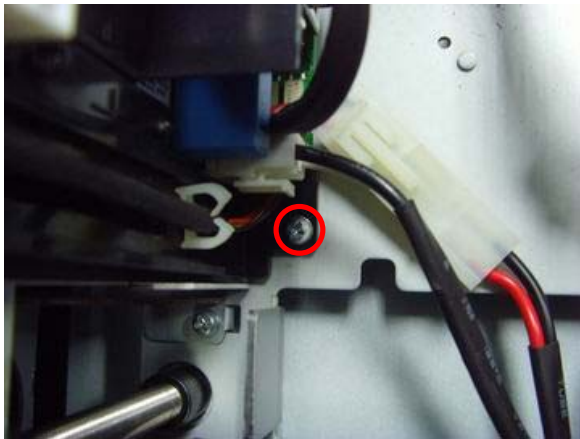
## Removing the power Assy & ballast Assy



**Disconnect the connectors.**



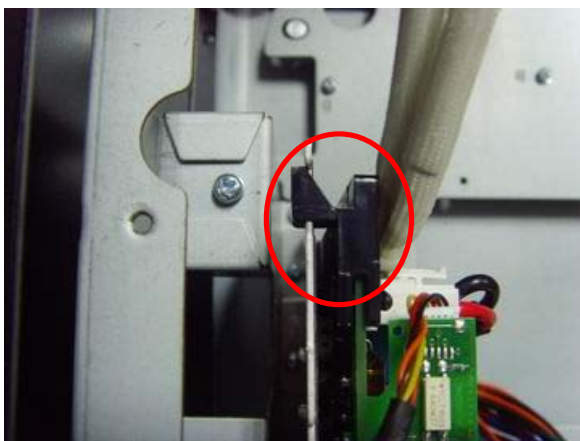
**Then take off the power Assy.**



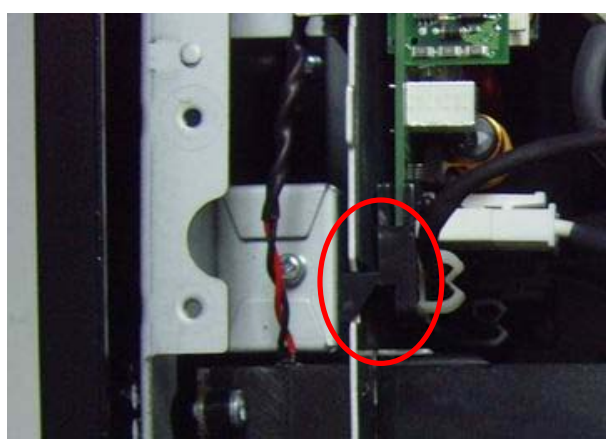
**Remove the screw.**



**Remove the screw**



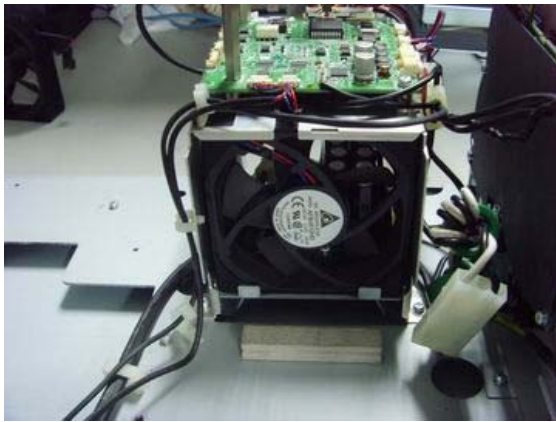
**Careful and check this place when you assembled.**



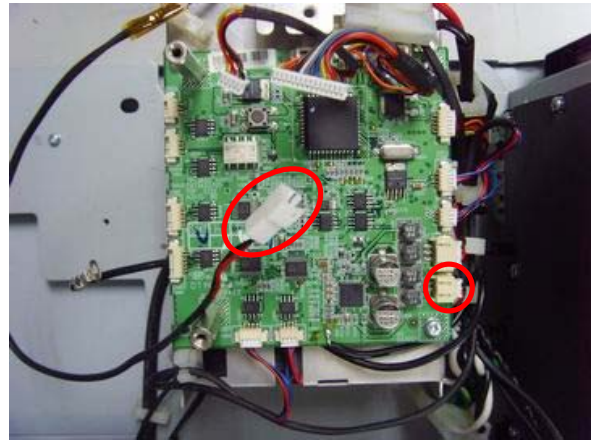
**Careful and check this place when you assembled.**



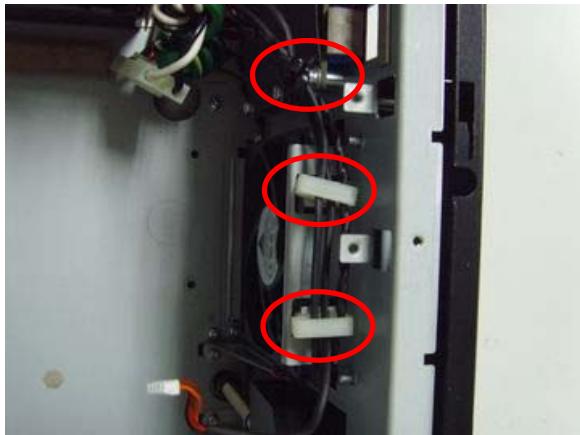
## Remove Audio Board and Module



**Review the Audio module.**



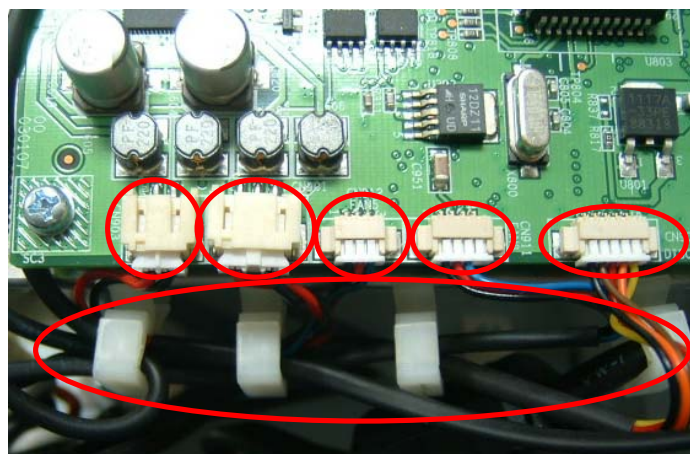
**Careful and check this wire when you assembled.**



**Arrange the wires as picture when you assemble it.**

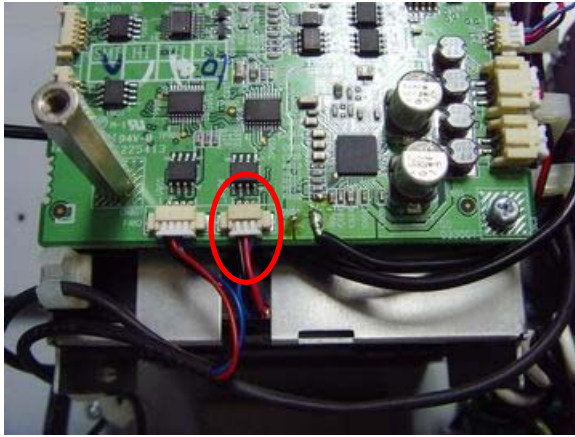


**Arrange the wires as picture when you assemble it.**

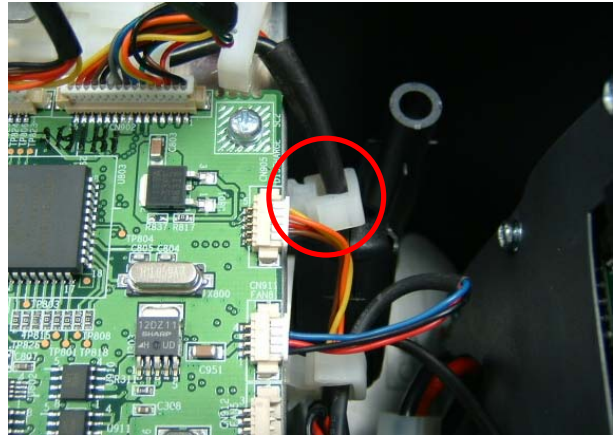


**Arrange the wires as picture when you assemble it.**

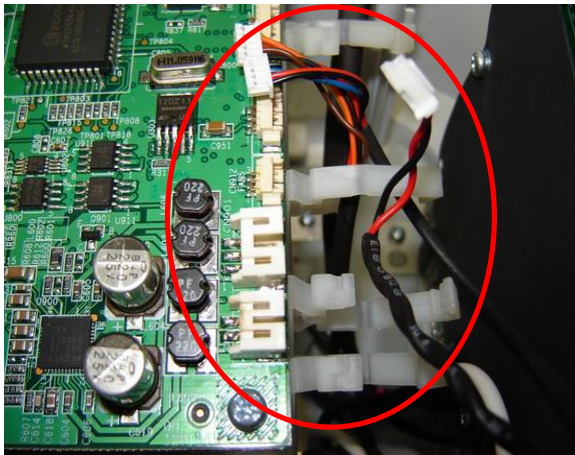
## Remove Audio Board and Module



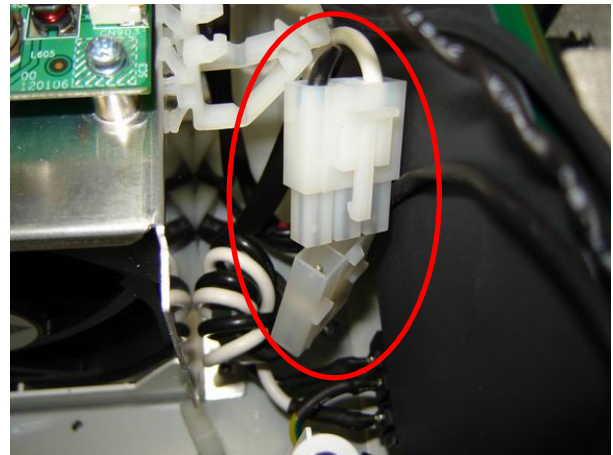
Careful and check this place when you assembled.



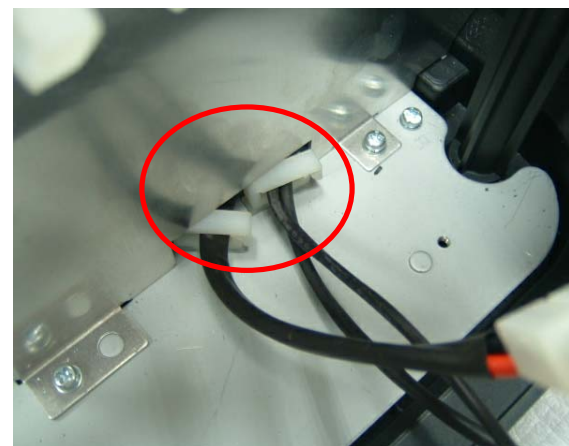
Arrange the wires as picture when you assemble it.



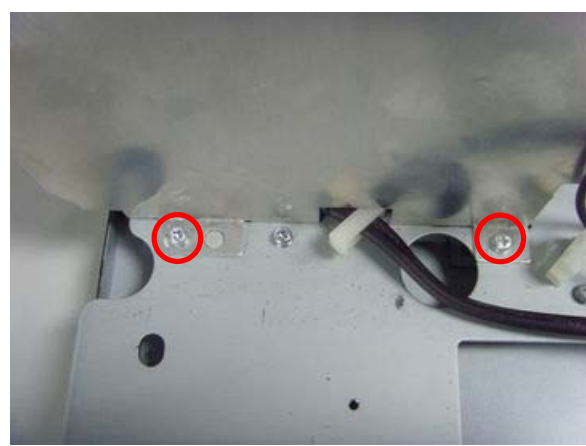
Remove the all hook-buckle.



Disconnect the connector.



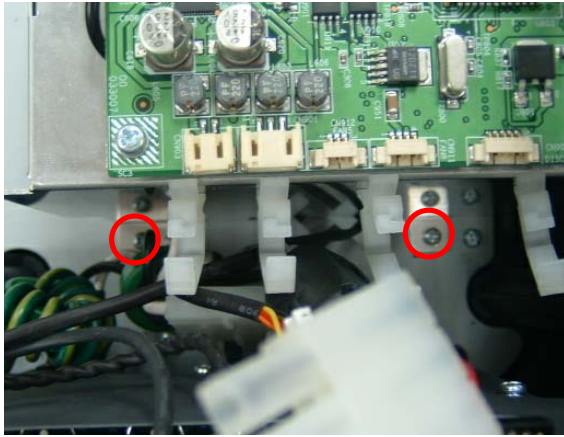
Arrange the wires as picture when you assemble it.



Remove these two screws.



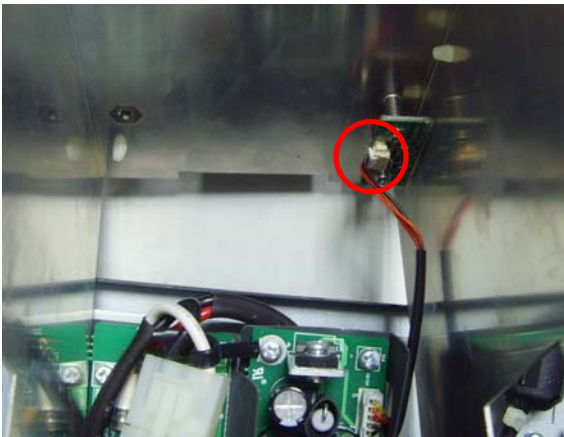
## Remove Audio Board / Module and IO Board



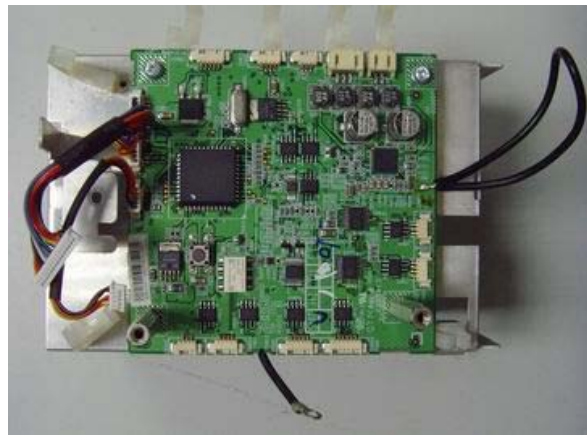
**Remove these two screws.**



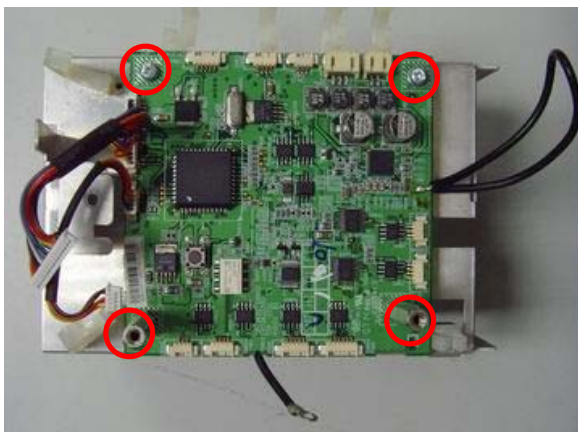
**Review the screws.**



**Disconnect the connector.**

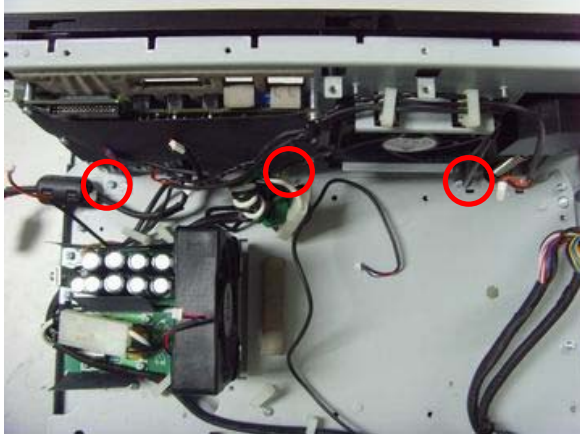


**Remove the Audio module.**



**Remove the two screws & hexagonal bolts.**

## Remove IO Board



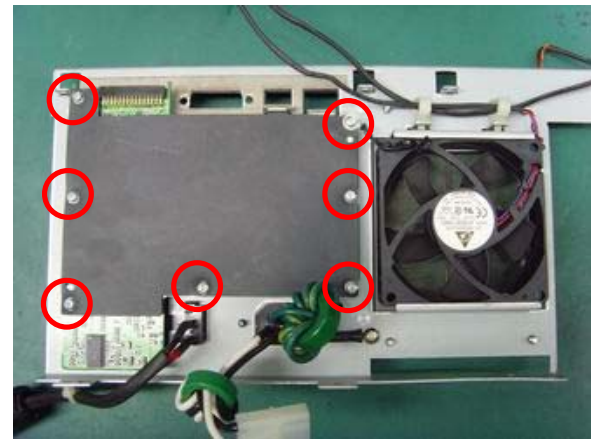
**Remove these three screws.**



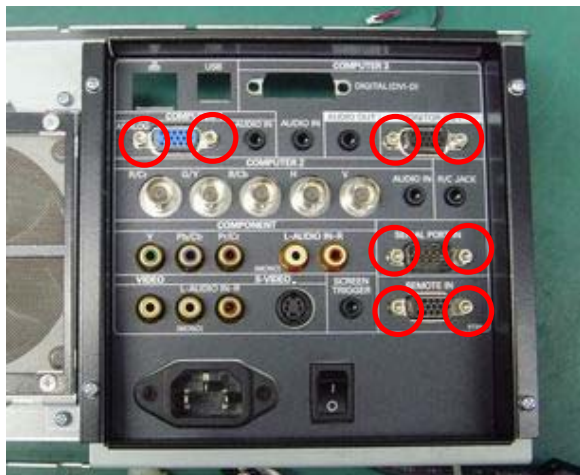
**Review the screws.**



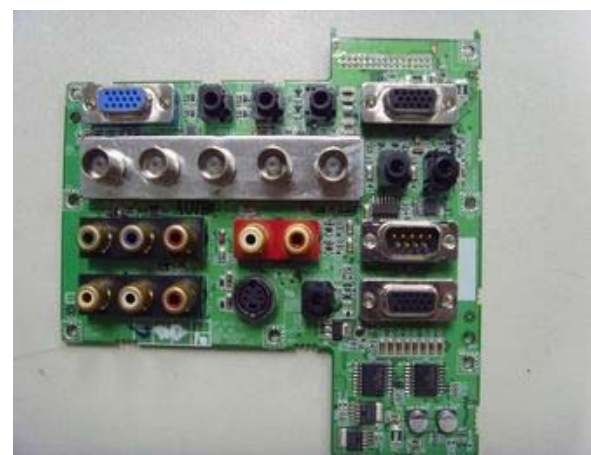
**Then remove the IO BD Assy.**



**Remove the seven screws.**

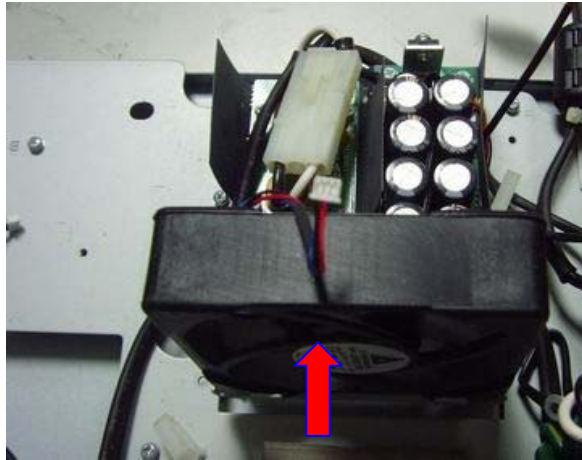


**Remove the eight hexagonal bolts.**

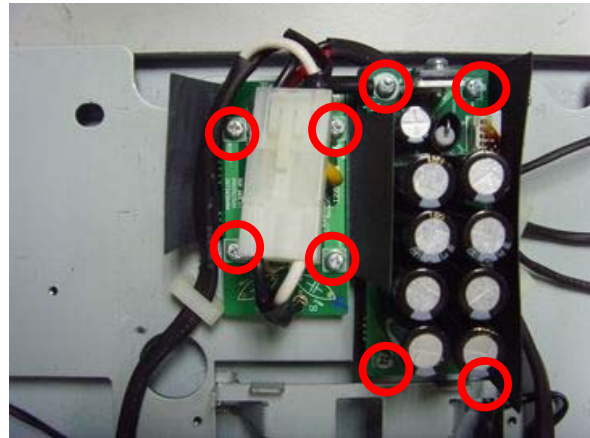


**Remove the IO BD.**

## Remove the protection BD & the speaker



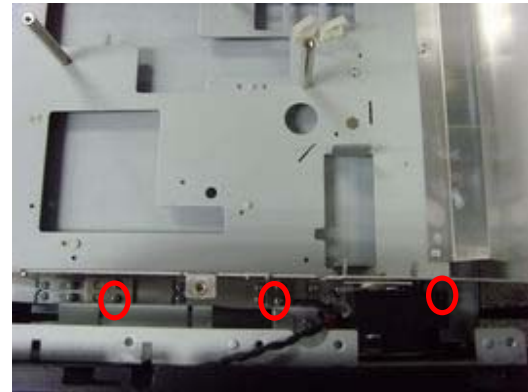
**Remove the Fan.**



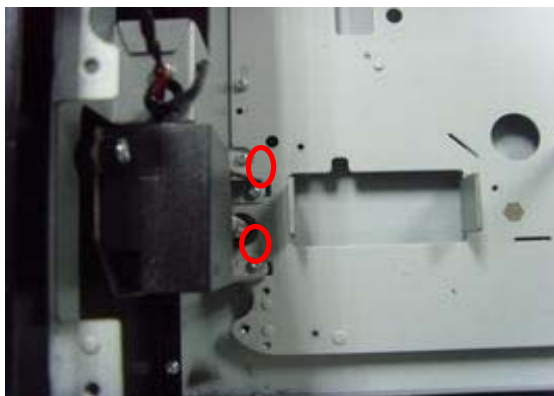
**Remove these 8 screws and the Transformer & Power saving Board take away.**



**Remove the two screws and take away the L speaker.**



**Remove the three screws and take away the shield.**



**Remove the two screws and take away the R speaker.**



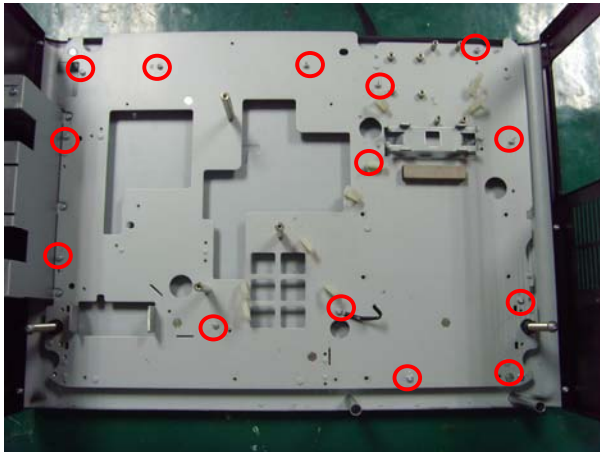
## Remove BD ADJ FOOT & Bottom shield



**Remove the two screws and take away the ADJ foot.**



**Review the ADJ FOOT and screw.**



**Remove these 14 screws and take away the Bottom shield.**



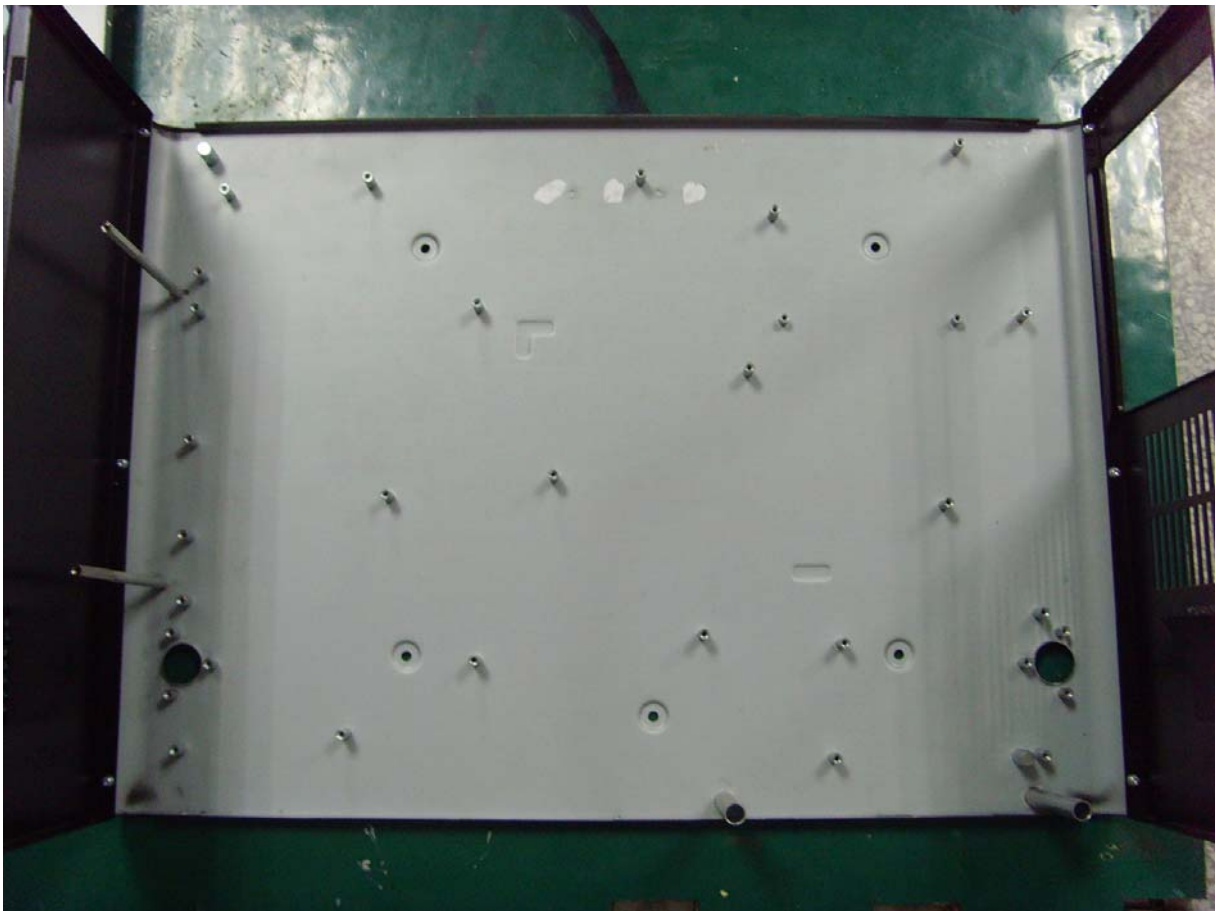
**Remove these screws and take away the three parts.**



**Review these parts and screws.**

## Review the Bottom case

D  
I  
S  
A  
S  
S  
E  
M  
B  
L  
Y



**Review the Bottom case.**

**Appendix. Screw torque for D5500**

<b>Page</b>	<b>Screw Type</b>	<b>P/N</b>	<b>Screw Driver Torque (kg-cm)</b>
<b>29</b>	<b>M3*L8</b>	<b>3100330800</b>	<b>3.5~4.0</b>
<b>32</b>	<b>M3*L8</b>	<b>3100300800</b>	<b>3.5~4.0</b>
<b>35</b>	<b>M4*L10</b>	<b>3109020700</b>	<b>5.5~6.0</b>
<b>38</b>	<b>M3*L8</b>	<b>3100300800</b>	<b>3.5~4.0</b>
<b>41</b>	<b>M3*L10</b>	<b>3100301000</b>	<b>3.5~4.0</b>
<b>41</b>	<b>M4*L16</b>	<b>3105120300</b>	<b>5.5~6.0</b>
<b>42</b>	<b>M4*L12</b>	<b>3102301200</b>	<b>5.5~6.0</b>
<b>46</b>	<b>M3*L8</b>	<b>3100300800</b>	<b>3.5~4.0</b>
<b>47</b>	<b>M3*L8</b>	<b>3100300800</b>	<b>3.5~4.0</b>
<b>51</b>	<b>M3*L8</b>	<b>3100300800</b>	<b>3.5~4.0</b>
<b>52</b>	<b>M3*L8</b>	<b>3100300800</b>	<b>3.5~4.0</b>
<b>54</b>	<b>M3*L8</b>	<b>3100300800</b>	<b>3.5~4.0</b>

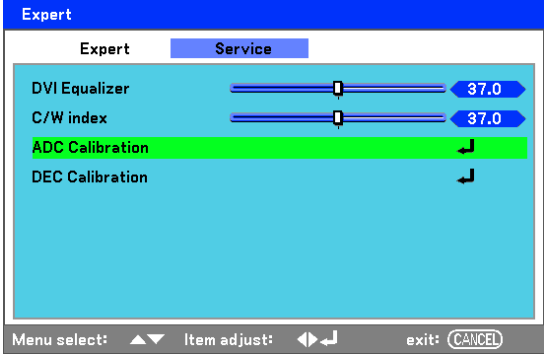
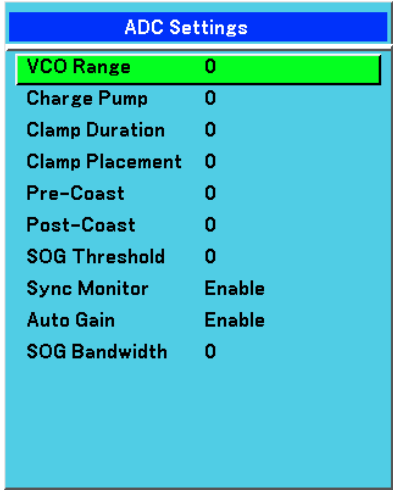
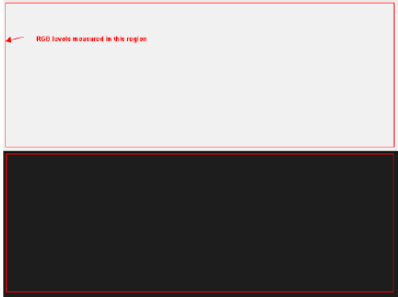


## 5. Adjustment

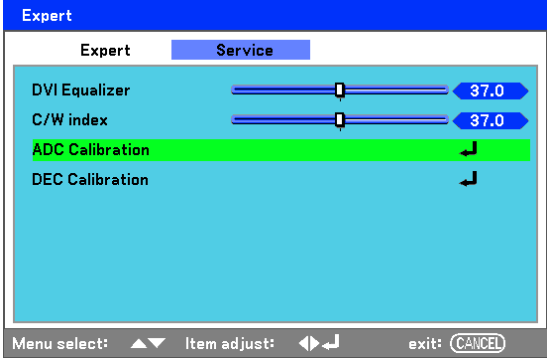
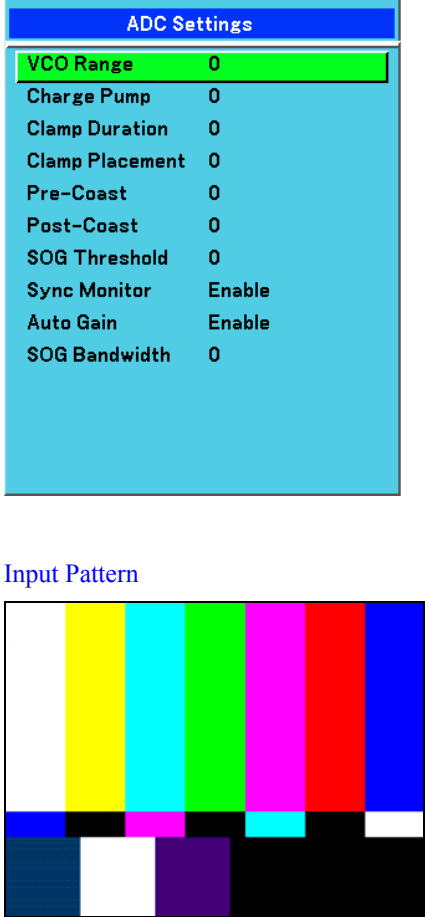
### 5-1 .Step of Into Service mode

Step1	Using the remote controller and press key as below method to enter the service mode.											
	<table><tr><th>Function</th><th>PJ Key or RC</th><th>How to enter</th><th>How to release</th></tr><tr><td rowspan="2">Service</td><td>PJ Key</td><td>Menu 10sec → SELECT Key 10sec</td><td rowspan="2">PJ ON&amp;Stand-by Key, R/C Power ONKey or StandbyKey</td></tr><tr><td>RC</td><td>MENU 20sec</td></tr></table>	Function	PJ Key or RC	How to enter	How to release	Service	PJ Key	Menu 10sec → SELECT Key 10sec	PJ ON&Stand-by Key, R/C Power ONKey or StandbyKey	RC	MENU 20sec	
Function	PJ Key or RC	How to enter	How to release									
Service	PJ Key	Menu 10sec → SELECT Key 10sec	PJ ON&Stand-by Key, R/C Power ONKey or StandbyKey									
	RC	MENU 20sec										
Step2	Open Main menu and select “Expert ” item to enter the expert menu as right side picture.	<div><div>Input Adjust Volume Setting Information Reset Expert</div><div><div>Expert</div><div><div>ExpertService</div><div>DVI Equalizer37.0</div><div>C/W index37.0</div><div>ADC Calibration</div><div>DEC Calibration</div></div><div>Menu select: ▲▼ Item adjust: ◀▶ exit: CANCEL</div></div></div>										

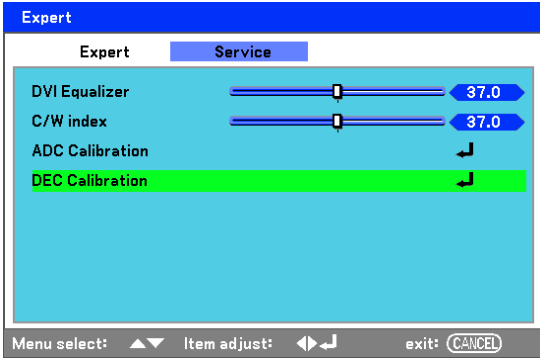
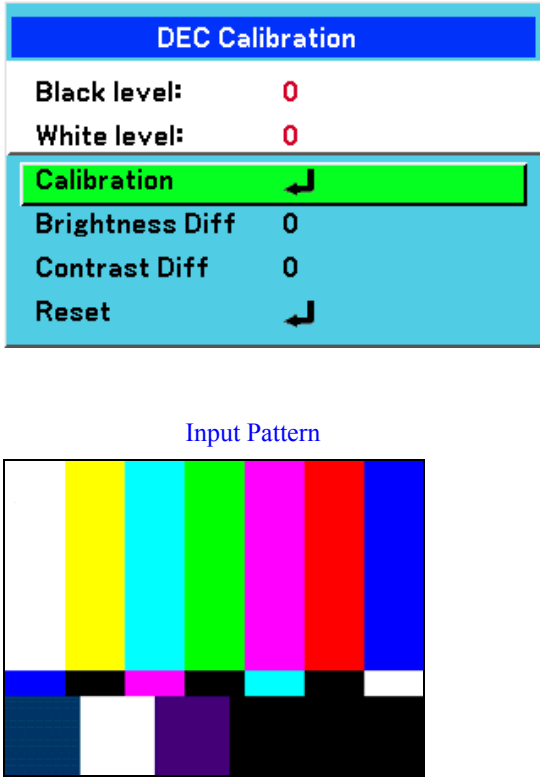
## 5-2. Calibrate VGA (1024 x 768 @ 60Hz)

<p><b>Step1</b></p>	<p>Select <b>ADC Calibration</b> Item and press “Select” key , and then you will see the picture as follow °</p>	 <p>The screenshot shows the 'Expert' menu with 'Service' selected. The 'ADC Calibration' option is highlighted in green. Other options include 'DVI Equalizer' and 'C/W index' with sliders set to 37.0, and 'DEC Calibration'.</p>
<p><b>Step2</b></p>	<p>Select “Calibration”. In this menu input pattern with White(240,240,240) and Black(16,16,16) for calibrate VGA Source . After input ready press “Select” key to calibration, or if you won’t do calibration just press “Menu” key to leave °</p>	 <p>The screenshot shows the 'ADC Settings' menu. The 'VCO Range' is set to 0. Other settings include 'Charge Pump', 'Clamp Duration', 'Clamp Placement', 'Pre-Coast', 'Post-Coast', 'SOG Threshold', 'Sync Monitor', 'Auto Gain', and 'SOG Bandwidth'.</p> <p><b>Input Pattern</b></p>  <p>The diagram shows a white rectangle on a black background. A red arrow points to the white rectangle with the text 'RGB levels measured in this region'.</p>

### 5-3. Calibrate YUV

<p><b>Step1</b></p>	<p>In Service Mode Select <b>ADC Calibration</b> Item and press “<b>Select</b>” key , and then you will see the picture as follow °</p>	 <p>The screenshot shows the 'Expert' menu with the 'Service' tab selected. The menu items are: DVI Equalizer (set to 37.0), C/W index (set to 37.0), <b>ADC Calibration</b> (highlighted in green), and DEC Calibration. At the bottom, there are controls for 'Menu select' (up/down arrows), 'Item adjust' (left/right arrows), and an 'exit: CANCEL' button.</p>
<p><b>Step2</b></p>	<p>Select “Calibration”. In this menu input pattern with 75% SMPTE pattern for calibrate YUV Source and notice that the input source must be <b>480p format</b> °</p> <p>After input ready press “<b>Select</b>” key to proceed, or if you won’t do calibration just press “<b>Menu</b>” key to leave °</p>	 <p>The screenshot shows the 'ADC Settings' menu with the following options: VCO Range (0), Charge Pump (0), Clamp Duration (0), Clamp Placement (0), Pre-Coast (0), Post-Coast (0), SOG Threshold (0), Sync Monitor (Enable), Auto Gain (Enable), and SOG Bandwidth (0). Below the menu is the 'Input Pattern' test pattern, which consists of a grid of colored squares: yellow, cyan, magenta, red, blue, and black.</p>

## 5-4. Calibrate Video

<p><b>Step1</b></p>	<p>In Service Mode Select <b>DEC Calibration</b> Item and press “<b>Select</b>” key , and then you will see the picture as follow °</p>	 <p>The screenshot shows the 'Expert' menu with the 'Service' tab selected. The menu items are: DVI Equalizer (set to 37.0), C/W index (set to 37.0), ADC Calibration (with a right arrow), and DEC Calibration (highlighted in green with a right arrow). At the bottom, there are navigation controls: 'Menu select:' with up/down arrows, 'Item adjust:' with left/right arrows, and 'exit:' with a 'CANCEL' button.</p>
<p><b>Step2</b></p>	<p>Select “Calibration”. In this menu input pattern with 75% SMPTE pattern for calibrate video source and notice that the input source must be <b>NTSC format</b> °</p> <p>After input ready press “<b>Select</b>” key to proceed, or if you won’t do calibration just press “<b>Menu</b>” key to leave °</p>	 <p>The top screenshot shows the 'DEC Calibration' menu with the following options: 'Black level:' (0), 'White level:' (0), 'Calibration' (highlighted in green with a right arrow), 'Brightness Diff' (0), 'Contrast Diff' (0), and 'Reset' (with a right arrow). Below this is a test chart titled 'Input Pattern' which displays a 75% SMPTE color bar with various color patches (yellow, cyan, magenta, red, blue, black, white, and purple) used for video calibration.</p>

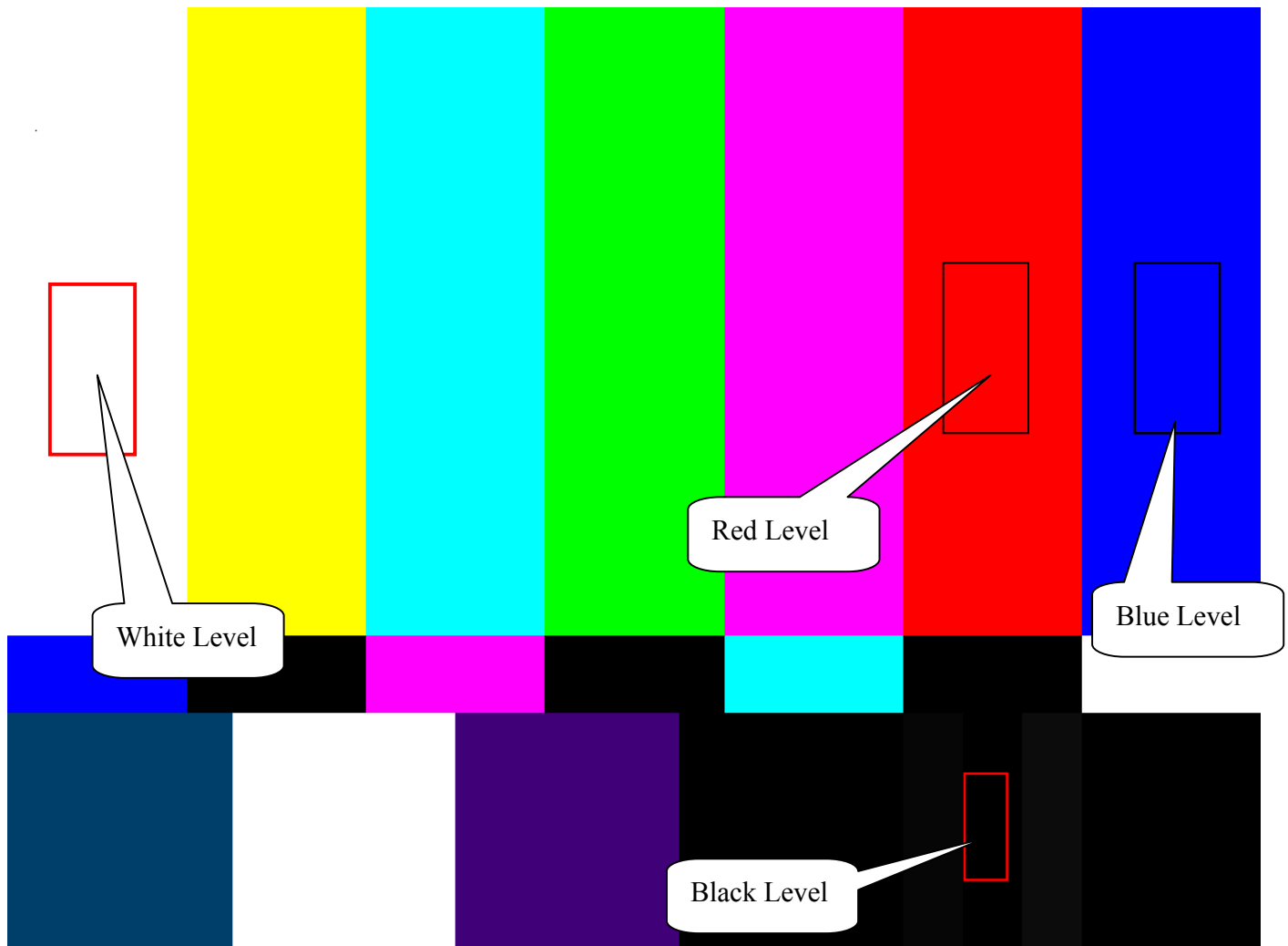


## YUV Calibration:

Test Equipment: VG-828

Input Timing: 480P (Timing 953)

Input Pattern: SMPTE Color Bar(Pattern 984)

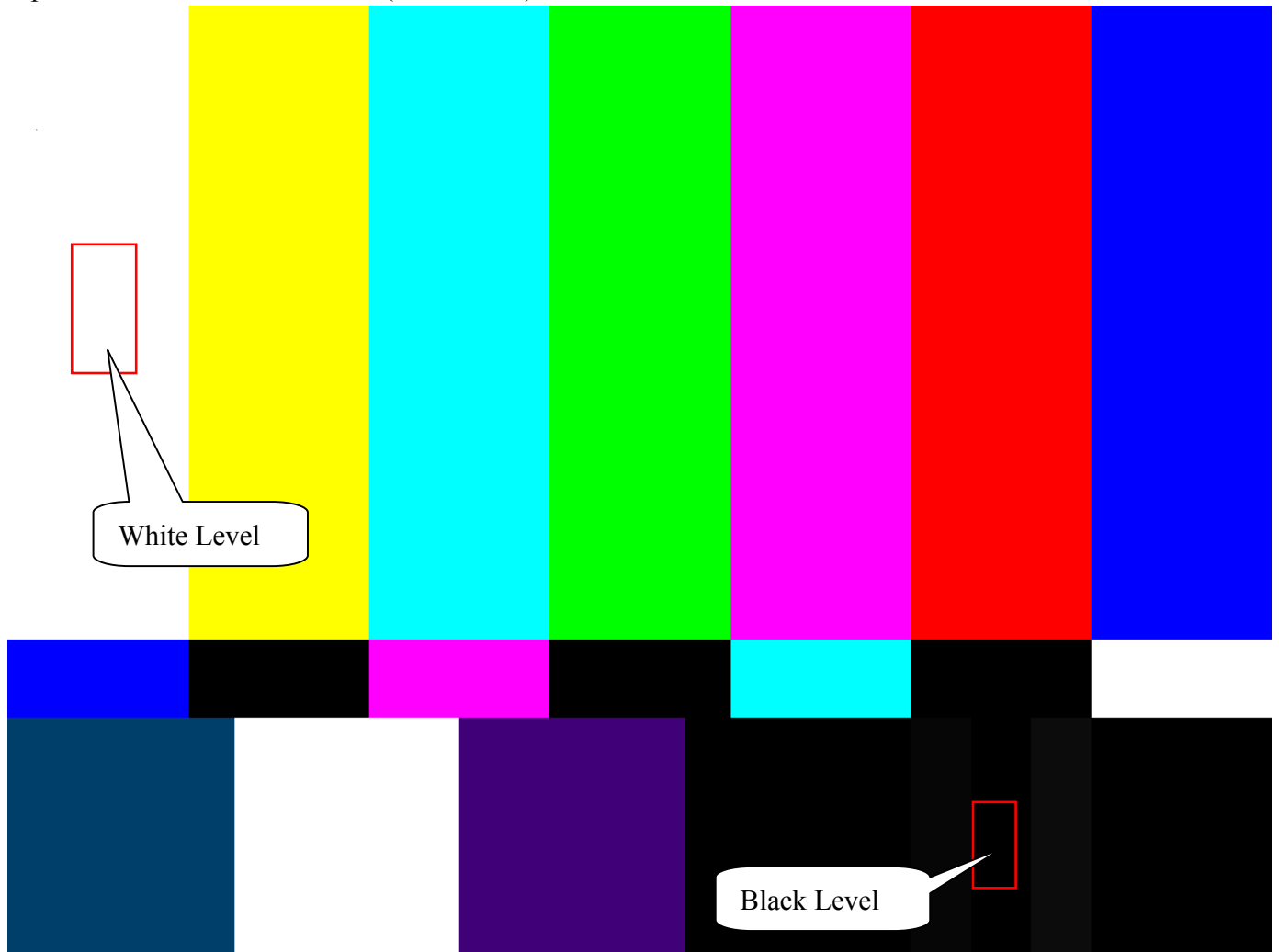


## Video Calibration:

Test Equipment: VG-828

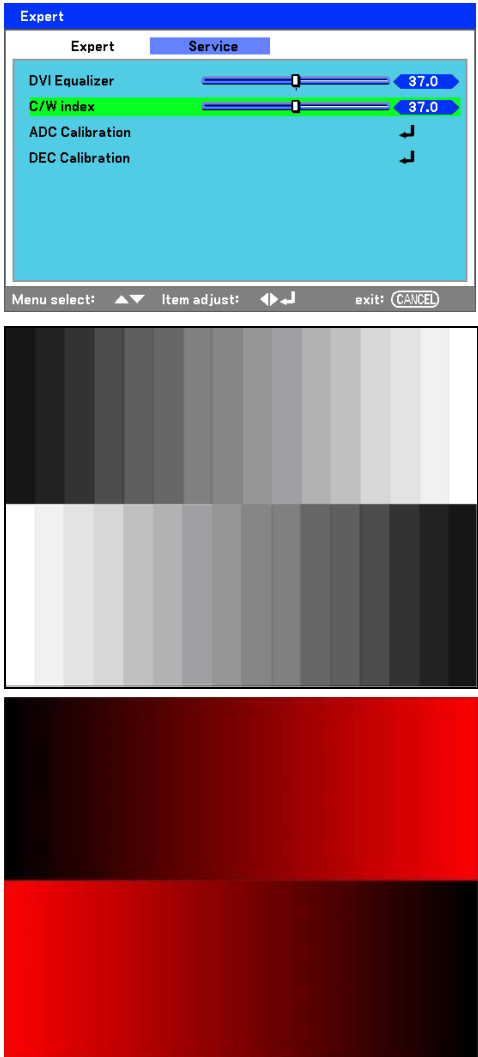
Input Timing: NTSC (Timing 946)

Input Pattern: SMPTE Color Bar(Pattern 984)



## 5-5. Color Wheel Index Adjustment

Step1	Using the remote controller and press key as below method to enter the service mode.											
	<table><tr><th>Function</th><th>PJ Key or RC</th><th>How to enter</th><th>How to release</th></tr><tr><td rowspan="2">Service</td><td>PJ Key</td><td>Menu 10sec → SELECT Key 10sec</td><td rowspan="2">PJ ON&amp;Stand-by Key, R/C Power ONKey or StandbyKey</td></tr><tr><td>RC</td><td>MENU 20sec</td></tr></table>	Function	PJ Key or RC	How to enter	How to release	Service	PJ Key	Menu 10sec → SELECT Key 10sec	PJ ON&Stand-by Key, R/C Power ONKey or StandbyKey	RC	MENU 20sec	
Function	PJ Key or RC	How to enter	How to release									
Service	PJ Key	Menu 10sec → SELECT Key 10sec	PJ ON&Stand-by Key, R/C Power ONKey or StandbyKey									
	RC	MENU 20sec										
Step2	Open Main menu and select “Expert ” item to enter the expert menu as right side picture.	<div><p>Input Adjust Volume Setting Information Reset <b>Expert</b></p></div> <div><p>Expert</p><p>Expert    Service</p><p>DVI Equalizer    37.0</p><p>C/W index    37.0</p><p>ADC Calibration    ↵</p><p>DEC Calibration    ↵</p><p>Menu select: ▲▼    Item adjust: ⬅➡    exit: CANCEL</p></div>										

<p><b>Step3</b></p>	<p>Select “Color Wheel Index” (The default value is <b>29</b>. The range is 0~360.) In this menu input pattern with “16 Gray Scale”. Fine-tune until the gray scale still distinct. Decrease the color to the minimum. Then switch “256 Gray Scale”, tune off G, B channel, check the smooth in brighter level of the R 256 ramp. If not, fine tune until R 256 ramp smooth.</p> <p><b>[Notice]</b>  <b>This Color Wheel Index value will be setting to the projector’s control board. If change projector’s control board, the Color Wheel Index value must be re-adjusted by service engineer.</b></p>	 <p>The screenshot shows the projector's service menu. The 'Expert' tab is selected, and the 'Service' sub-tab is active. The menu items are: DVI Equalizer (slider at 37.0), C/W Index (slider at 37.0, highlighted in green), ADC Calibration (arrow icon), and DEC Calibration (arrow icon). Below the menu is a 16-step gray scale and a 256-step color ramp.</p>
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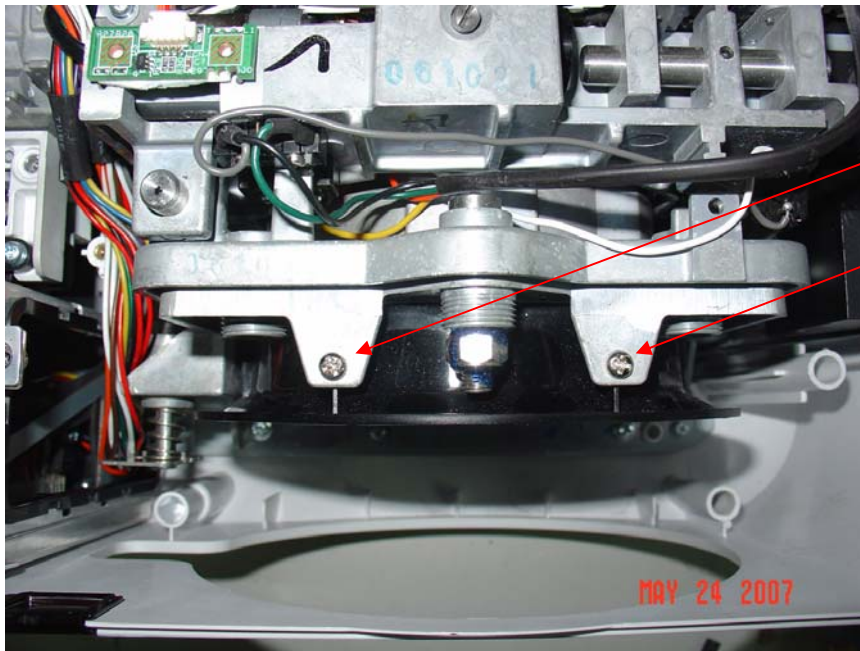
## 5-6. Focus Adjustment

### 1. Remove the cosmetic lens cover (A)

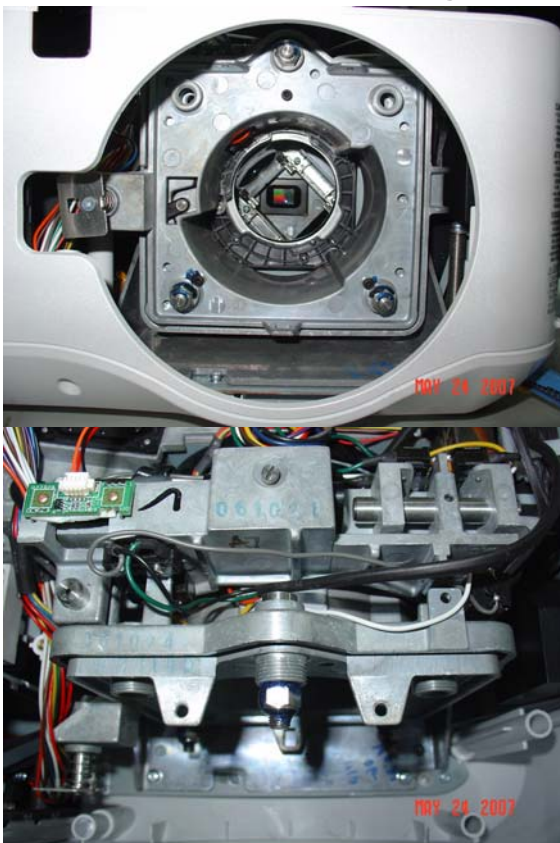


### 2. Remove the cosmetic lens cover (B)

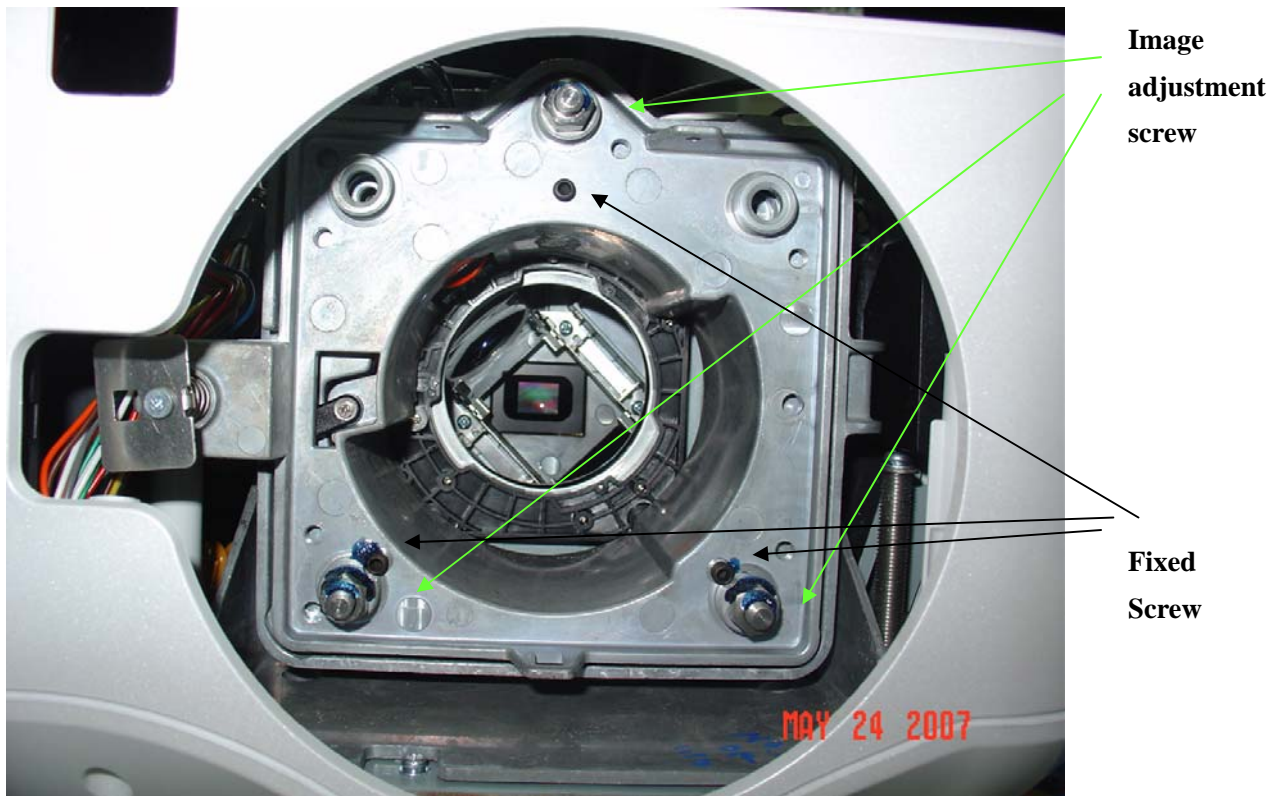


**3. Remove the cosmetic lens cover (B) by screw**

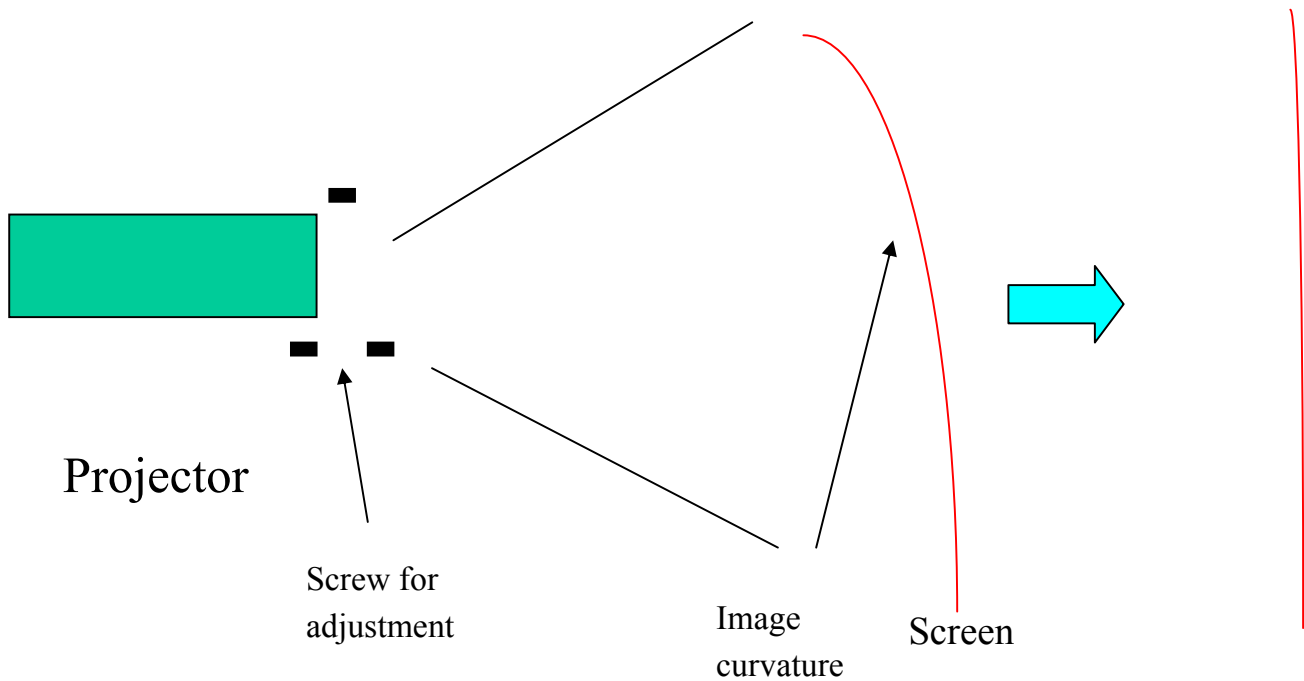
Screw

**4. Without Cosmetic Cover Figure**

## 5. The adjustment structure of lens mount



## 6. The function of lens mount adjustment



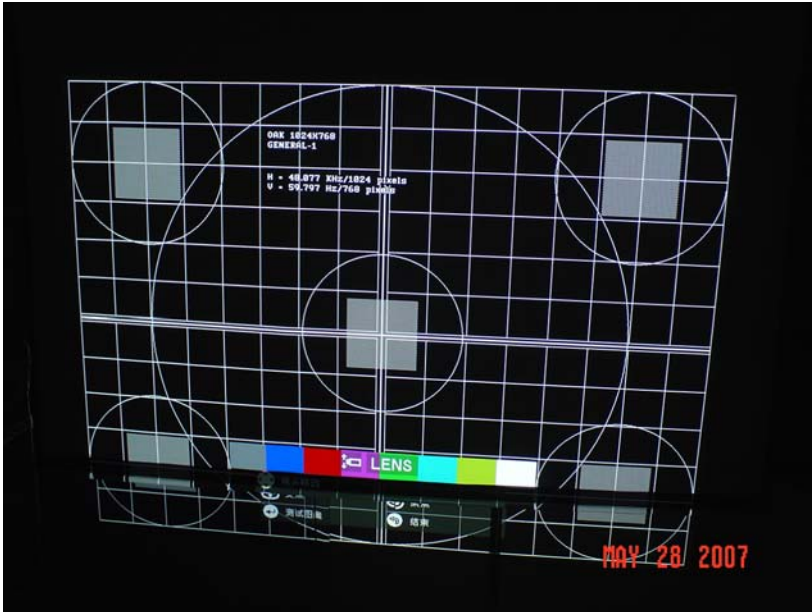
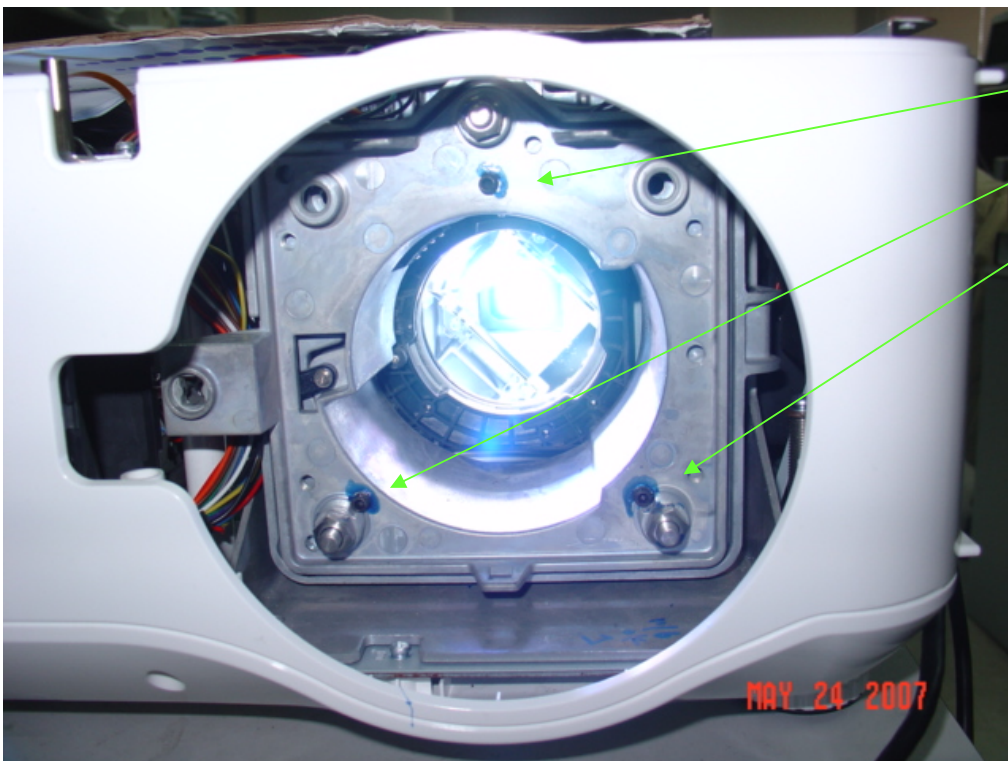
## 7. Adjustment Procedure

- Move projection lens to be at center position of DMD
- Rotate fixed screw counterclockwise around 15 to 30 degree (loosen it)
- Adjust the image adjustment screw to make image on screen from corner position to center position to be clear
- Tighten the fixed screw



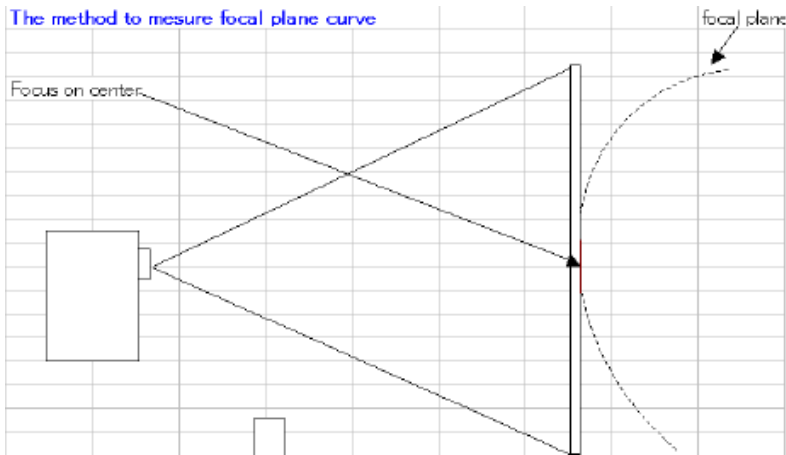
**(A) Move PJ Lens at center position of DMD**

Input projector with cross pattern, then zoom-in and zoom out projection lens that center cross image overlap by adjusting lens shift.

**(B) Rotate fixed screw counterclockwise around 15 to 30 degree (loosen it)**

**Fixed  
Screw**

(C1) Adjust image adjustment screw to make image on screen from corner position to center position to be clear

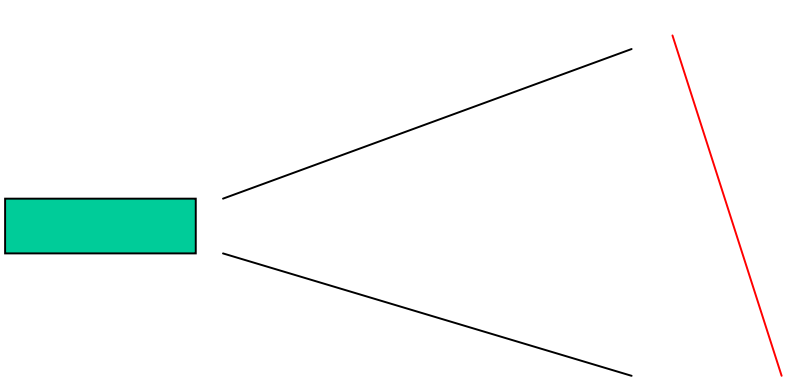


### Image Criteria

Pixel Shape is clear

Coma flare is less than 2.5 pixel

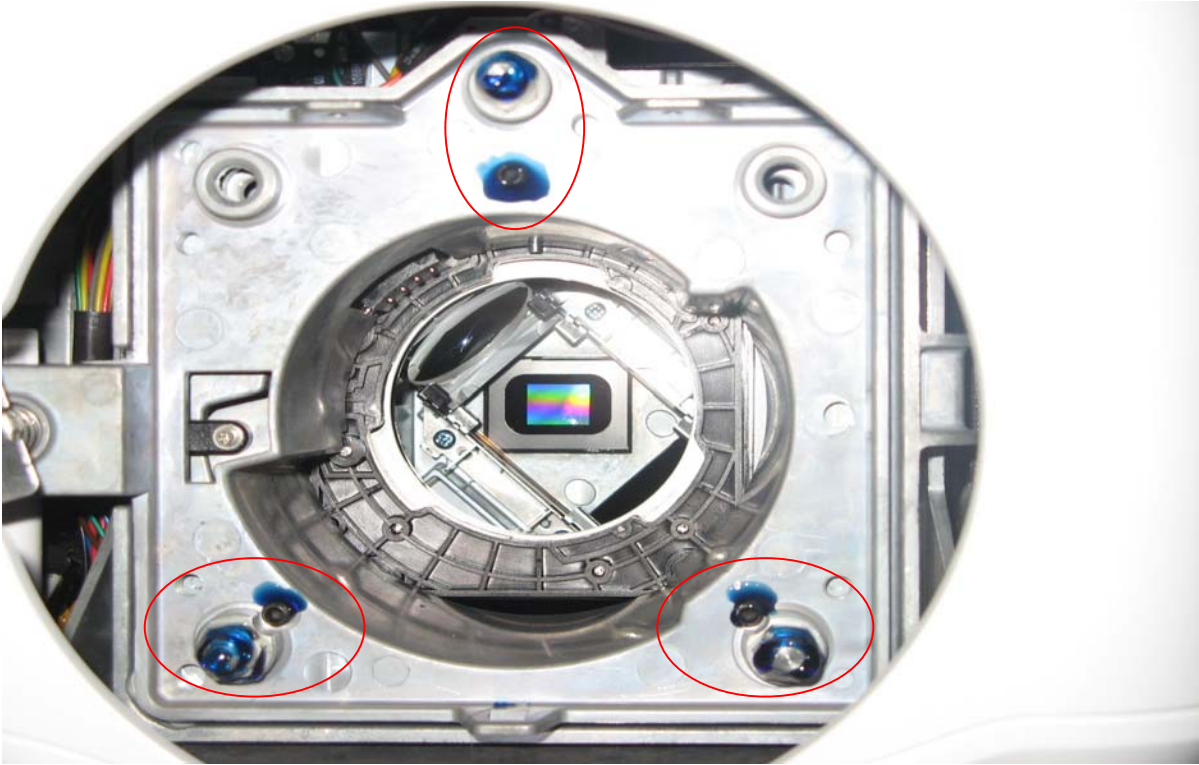
(C2) Adjustment Hint



If upper area image on screen is ahead of screen then rotate image adjustment screw clockwise of upper screw



(D) Tighten fixed screw then glue it



## 6. Security Notice

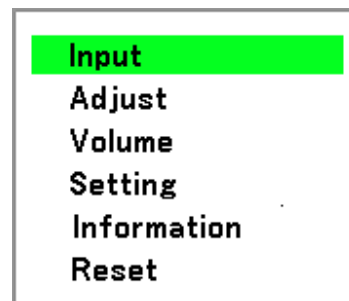
### 6-1. Preventing the Unauthorized Use of the Projector

The projector has an inbuilt security feature to lock the OSD control panels and deny remote control operation. The security feature has no default keyword; in the first instance of enabling the security feature, the user must define a keyword.

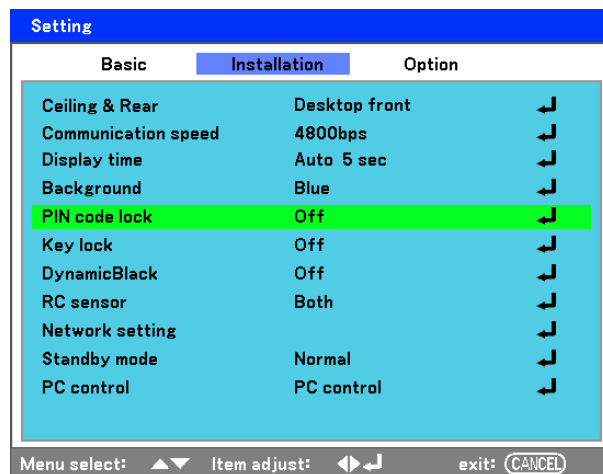
#### Locking the Projector

To setup the security keyword, refer to the following guide.

1. Press **Menu** on the OSD control panel on the projector or remote control to display the **Main Menu**. Scroll to the **Setting** menu using **▲** or **▼** and press **Select**.

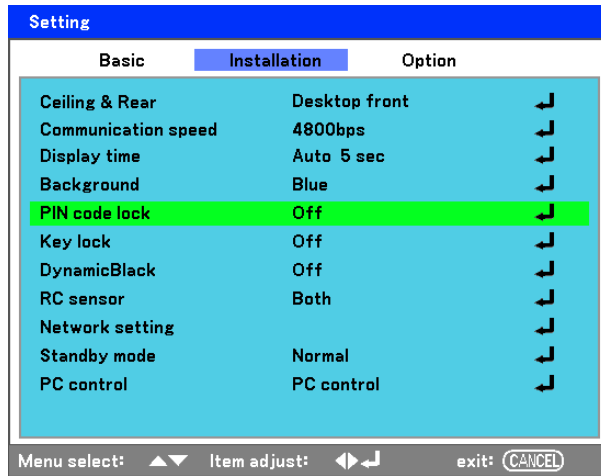


2. The **Setting** menu is displayed. Select the **Installation** tab using **◀** or **▶** and select **PIN code lock** using **▲** or **▼**. Press **Select**.

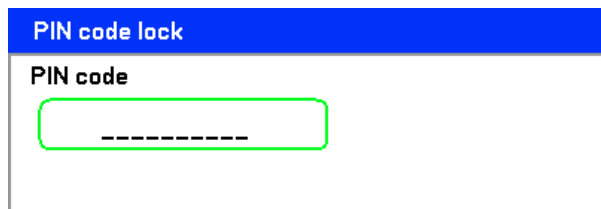




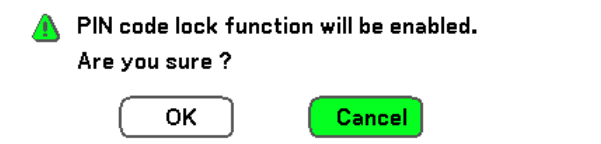
3. You are prompted to enable the PIN code lock Function. Select **OK** and press **Select**.  
Select **On** using the ▼ button.



4. The PIN code lock window is displayed. Enter a keyword between 4 and 10 characters using ▲▼◀▶. Press **Select**.



5. Once a successful keyword is entered, a confirmation screen is displayed. Enter the same password as the previous step and write it down for later reference. Press **Select**. A security activation message is displayed. Select **Cancel** to return to the **Setting** menu or select **OK** to enable PIN code lock.



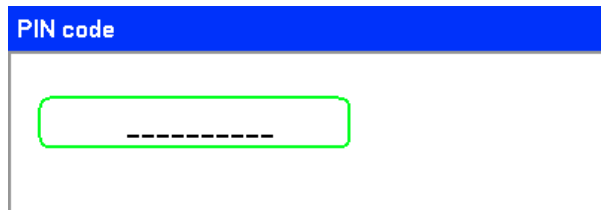
## 6-2. Unlocking the Projector

To unlock the projector, refer to the following guide.

1. When the projector is locked, either by request during operation or at start up, the locked message is displayed.

Projector is locked ! Enter your keyword.

2. To unlock the projector, press **Menu** on the control panel or remote control. The keyword window is displayed. Enter the previously defined keyword to activate the projector.



## 6-3. Security Function Notice

if you are not know the PIN code lock or key lock code and required to repair the projector, or a customer forgot the security code, you can use the special key to release these function. See as follows description:

	Function	PJ Key or RC	Keys
Security Reset	PIN code lock / Key lock	PJ Key	Auto PC 20sec

## 7. Circuit Protections

This projector provides the following circuit protections to operate in safety.

If the abnormality occurs inside the projector,

it will automatically turn off by operating one of the following protection circuits.

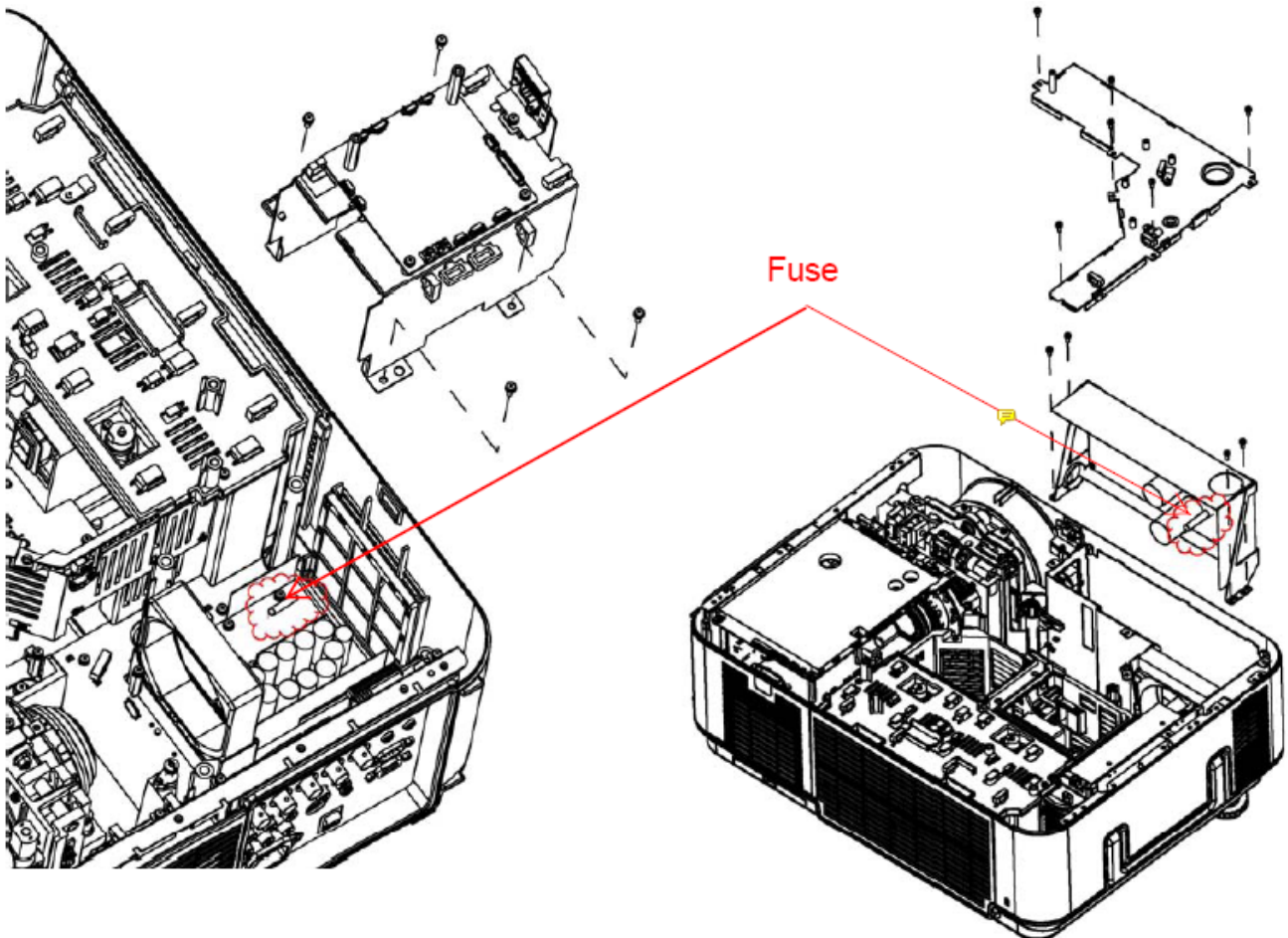
### 7-1. Fuse

Two fuse are located inside of the projector.

a. Protection Board.

b. Power Board.

When the POWER indicator is not lightning, the fuse may be opened.

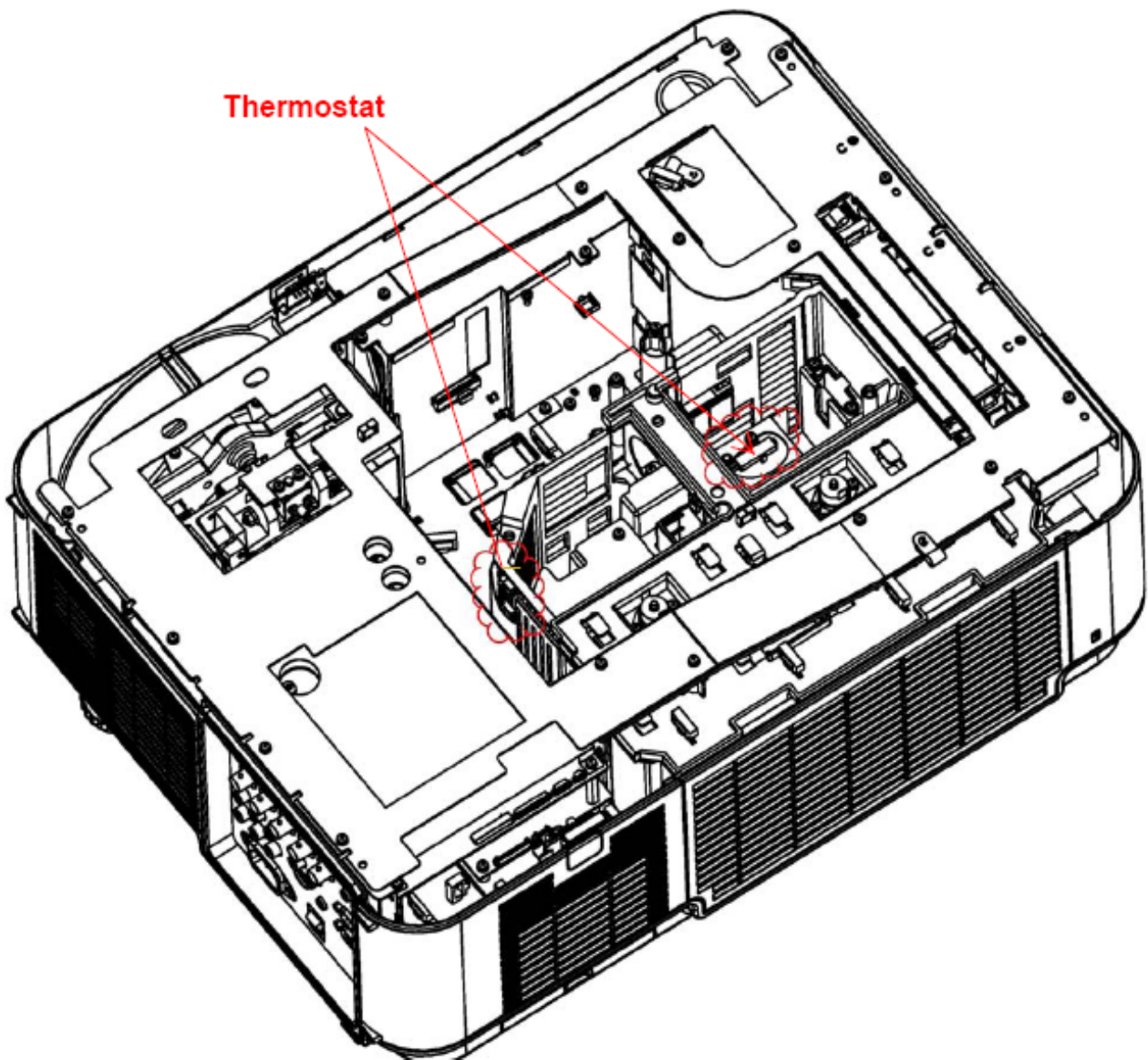


## 7-2. Thermostat

There are two thermostat inside of the projector to detect the internal temperature rising abnormally.

When the internal temperature reaches near 120°C, the thermostat opens to stop the operation of the main board circuit.

The thermostats will automatically return to normal condition when the internal temperature becomes normal (about 75°C).

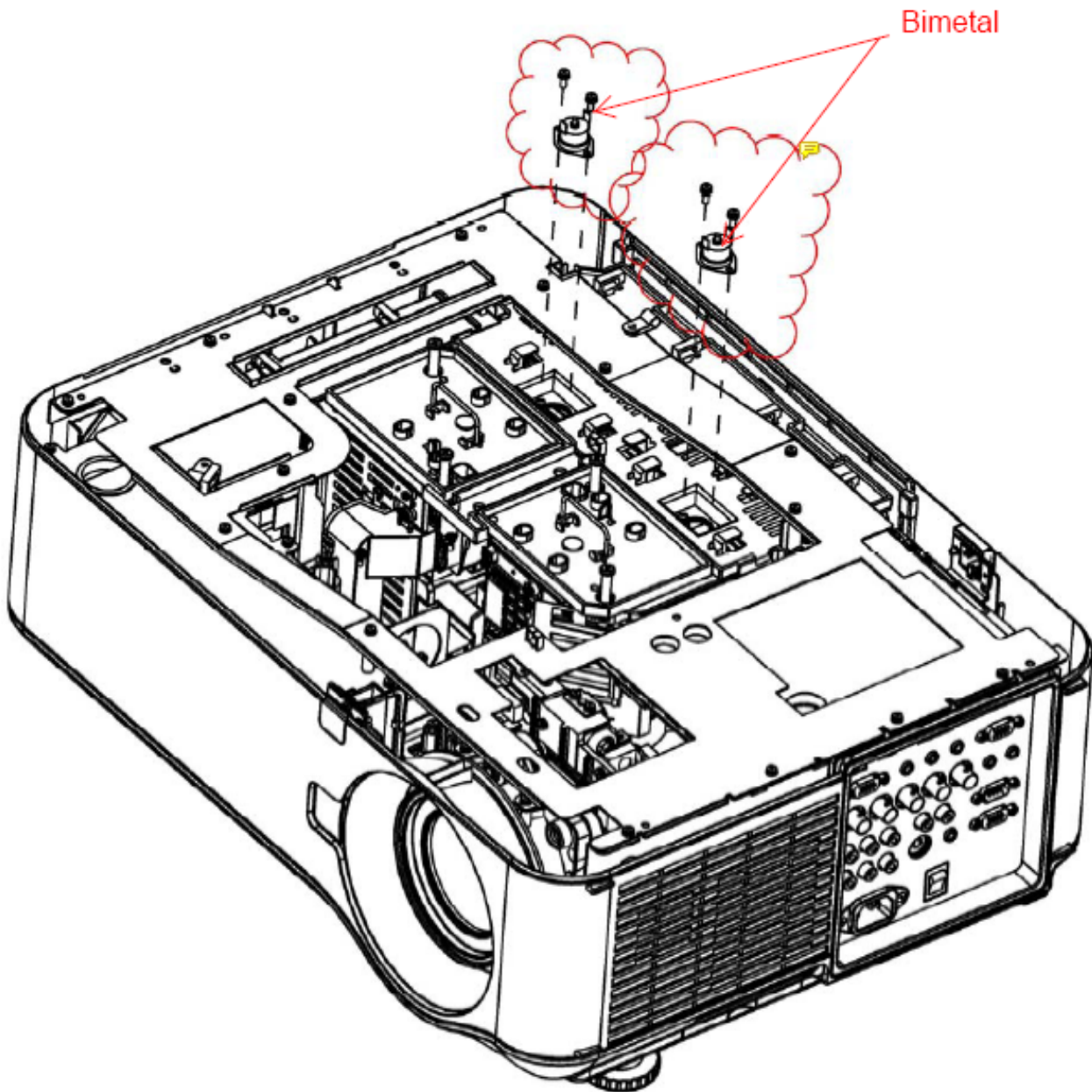




### 7-3. Bimetal

There are two bimetal inside of the projector to detect the lamp temperature rising abnormally. When the lamp1 temperature reaches near  $110^{\circ}\text{C}$  or lamp2 temperature reaches near  $130^{\circ}\text{C}$ , the bimetal opens to stop the operation of the power supply circuit.

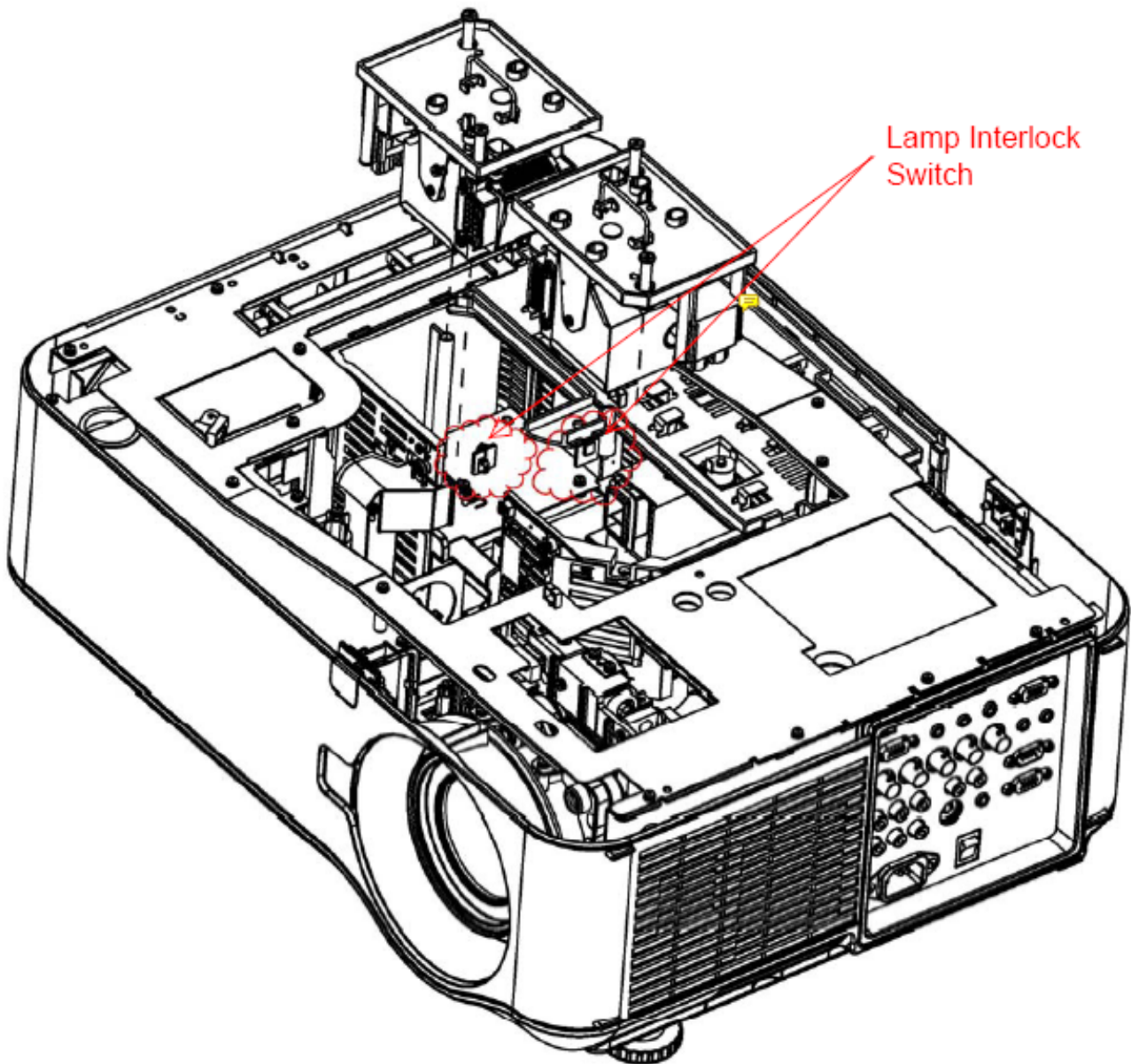
The bimetal will automatically return to normal condition, when the lamp temperature becomes normal (about lamp1= $85^{\circ}\text{C}$ , lamp2= $105^{\circ}\text{C}$ ).



#### 7-4. Lamp Interlock Switch

The lamp interlock switch cuts off the drive signal to the lamp circuit when the lamp cover is removed or not closed completely.

After opening the lamp cover for replacing the lamp ass'y, place the lamp cover correctly otherwise the projector can not turn on.



## 8. Maintenance

### 8-1. Cleaning the projector

#### 1. Cleaning the Cabinet

Refer to the following guide to clean the projector cabinet.

1. Wipe off dust with a clean dampened cloth.
2. Moisten the cloth with warm water and mild detergent and wipe the cabinet.
3. Rinse all detergent from the cloth and wipe the projector again.

#### CAUTION

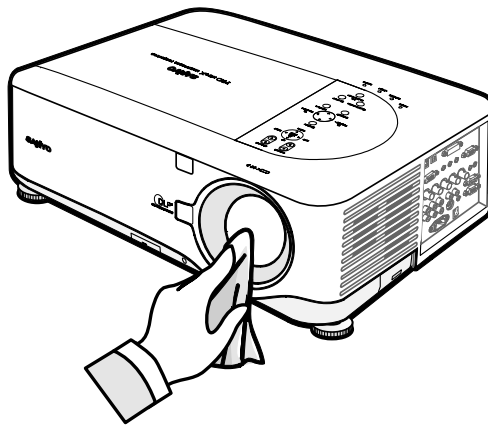


To prevent discoloration or fading of the case, do not use abrasive alcohol-based cleaners.

#### 2. Cleaning the Lens

Refer to the following guide to clean the projector lens.

1. Apply a little optic lens cleaner to a clean, lint free cloth (do not apply the cleaner directly to the lens).
2. Lightly wipe the lens in a circular motion.



#### CAUTION



Do not use abrasive cleaners or solvents.

To prevent discoloration or fading, avoid getting cleaner on the projector case.

### 3. Cleaning the Filters

The projector uses three filters to keep the fans free of dust and other particles, and should be cleaned every 500 hours of operation. In dustier environments, it is recommended to clean the filters more frequently. If the filter is dirty or clogged, your projector may overheat. When the message below is displayed the filters must be cleaned.

**Please clean filter.**

**Note:**

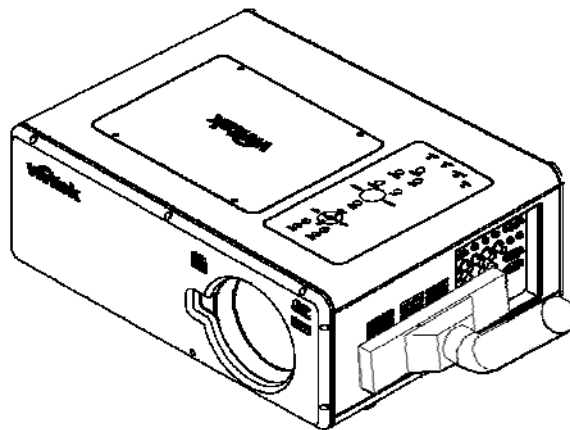
When the **Please clean filter** message is displayed, please clean or replace all three filters at the same time to synchronize the hours used display.

The Filter Message item should be enabled in the Options menu.

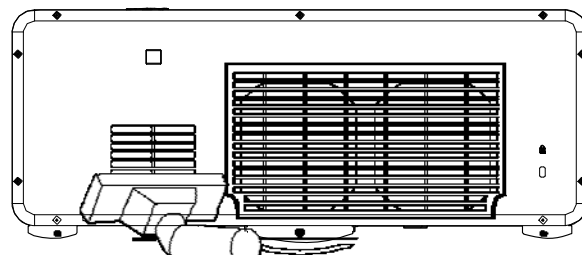
Refer to the following guide to clean the filters.

1. The left-side and rear filters can be cleaned as demonstrated in the following image

**Note:** Only clean the outside of the exhaust vents with a vacuum cleaner.

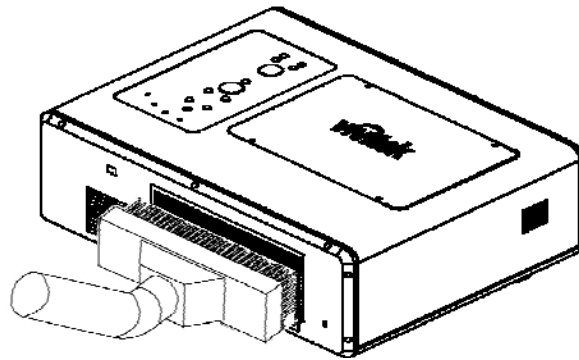


The left-hand filter can be accessed as shown.





2. The rear filter can be accessed as shown.



Once the filters are cleaned, please reset the filter hours via the **Clear Filter Hours** option in the Reset Menu Descriptions and Functions.

**Note:**

*Using the projector without the air filter fitted inside, dirt and dust are sucked into the projector, causing failure.*

#### 4. Cleaning the optical parts

Carry out cleaning of the main unit and interior when replacing the lamp or making inspections.

The glass cleaner used with the following parts is as follows.

Product name : Kei-Dry Wiper 132-S (Kureshia Co., Ltd.)

##### 1) Cleaning the Projection Lens

\*When dust and fingerprints, etc. are on the lens surface, use the designated glass cleaner to remove 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 which has been moistened in water and then use a dry cloth to dry it off.

\*The projection lens surface has a special coating. Do not use detergents or solvents on the surface.

##### 2) Cleaning the Color Wheel Assy

\*The color filter is made of thin glass. Be very careful when handling the filter.

\*In case of fingerprints, etc. on the surface, clean in the same way as the projection lens unit as described in item 1). Do not use detergents as this could cause peeling of the color filter.

##### 3) Cleaning the DMD

\*The DMD surface is glass and can be cleaned. However, avoid scratches as these can have a direct influence on the image.

\*In case of dust on the DMD surface use an air cleaner ( with a device to prevent static, if possible) to clean off the surface.

\*In case of fingerprints, etc., add a small amount of water to the designated glass cleaner and wipe off in one direction. Then use the designated dry glass cleaner to wipe off in the same direction.

\*Do not use absolute alcohol or other substances that could leave streaks after drying.

##### 4) Cleaning the Reflecting Mirror

\*Be careful not to touch the reflecting mirror. The surface is composed of vapor deposition silver and touching it directly with the hands can lead to burnishing.

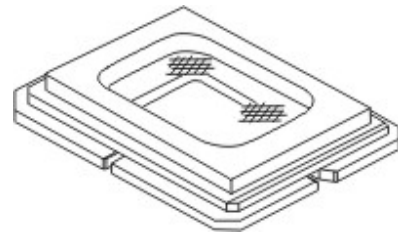
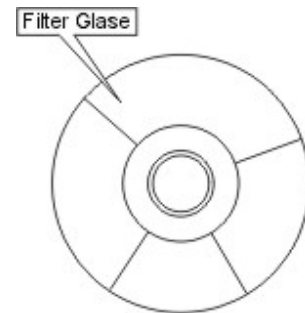
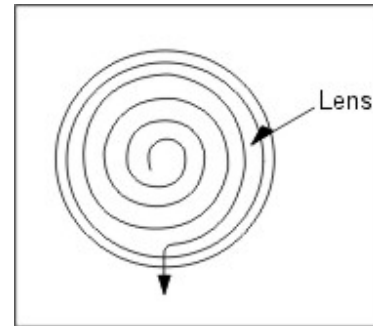
\*Do not clean other than with air.

##### 5) Cleaning the Main Unit

\*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.

\*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.



## 8-2. Replacing Consumable Parts

During the course of normal usage, consumable parts become worn out resulting in reduced performance. The following guides detail how to replace the various consumable parts within the projector quickly and safely.

Before replacing any of the parts, please take note of the following:

- a. Ensure that the projector is turned off and disconnected from the power supply.
- b. Ensure that the projector is in a clean, stable position before replacing parts.
- c. Allow at least one hour after shutdown for the projector to cool before attempting to replace any consumable parts.
- d. Do not interchange Lamp 1 and Lamp 2 after the projector has been used once.
- e. Doing so will not allow the projector to display the correct lamp usage hours.

### 1. Replacing the Lamp

When a lamp reaches the end of its usable life, the following message is displayed. Replace the lamp.

**The lamp has reached the end of its usable life.  
Please replace the lamp.**

The projection lamps should be replaced when they burn out. They should only be replaced with a certified replacement part, contact your local dealer if unsure.

**Note:**

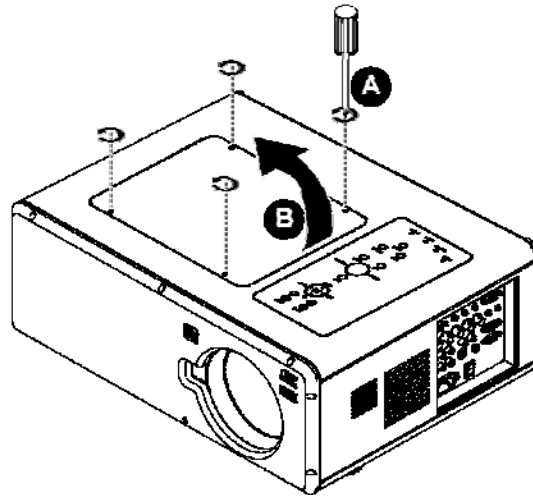
- 1. Lamps are positioned differently. Take care not to force the lamps when replacing.*
- 2. Installation of both lamp modules (Lamp 1 and Lamp 2) is required to operate the projector in dual or single lamp mode. If only a single lamp module is installed, the projector's lamp will not turn on and will appear as a lamp failure*
- 3. Lamps last approximately 2000-2100 hours (2500-2600 hours in Eco mode) and the End of lamp life message is displayed during the lamps' final 100 hours of operational life. Please replace during 2000-2100 hour.*

**Important:**

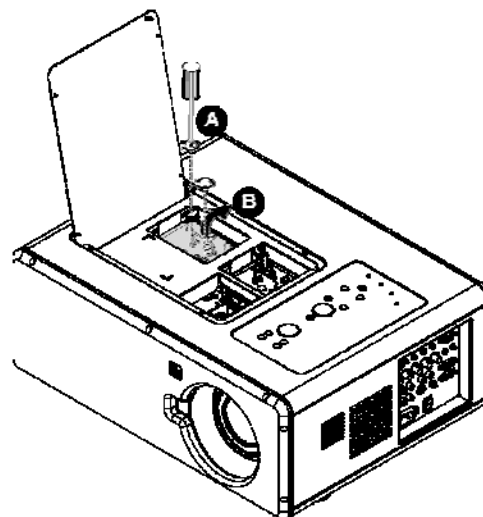
- 1. The lamp contains a certain amount of mercury and should be disposed of according to local ordinance regulations.*
- 2. Avoid touching the glass surface of the new lamp: doing so may shorten its operation life.*
- 3. The lamp's useful life ends and projector could not turn on over 2100 hours. Please have the projector serviced.*

**To replace the lamp, refer to the following guide.**

1. Remove the four screws on the lamp cover (A), and lift the lamp cover as shown (B).

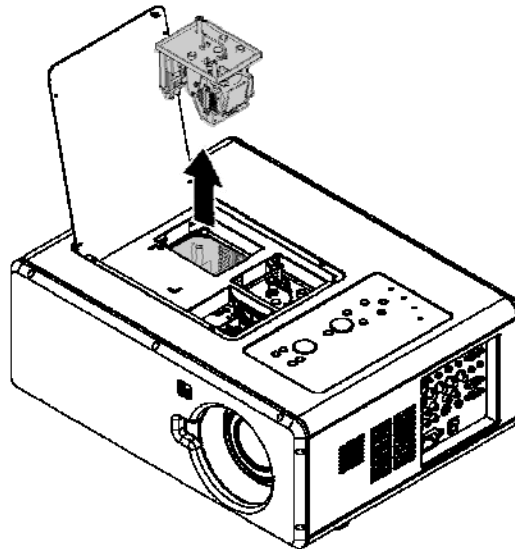


2. Loosen the two captive screws on the lamp module (A). Lift the module handle up as shown (B).

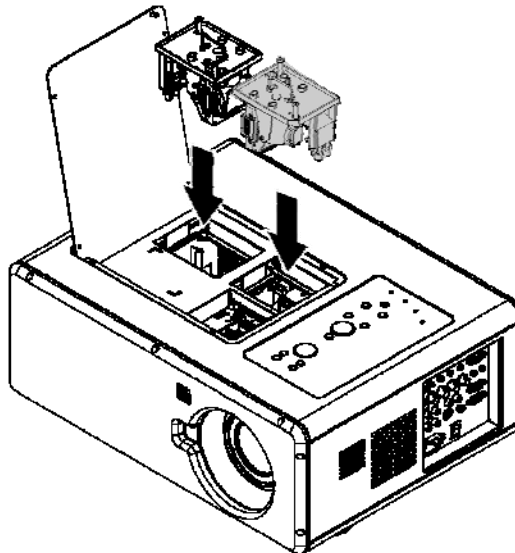




3. Pull firmly on the module handle in the direction shown to remove the lamp.



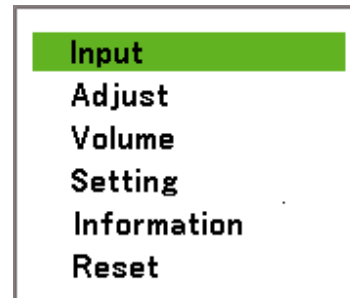
4. Reverse steps 1 to 3 to install the new lamp module and replace the lamp cover.



## 2. Resetting the Lamp Hours Counter

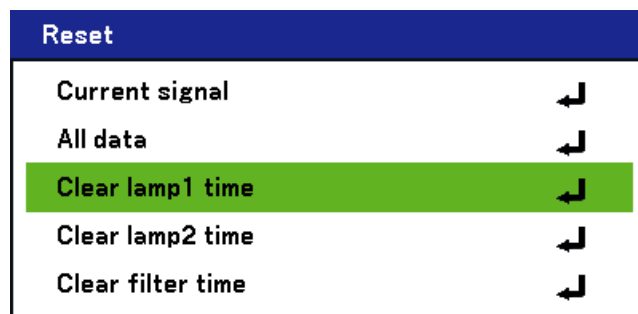
After replacing the lamp(s), the lamp hour counter(s) should be reset to zero. Refer to the following guide:

1. Press the **Menu** button on the OSD control panel or Remote Control to open the **Main** menu.



2. Press the **▲** or **▼** button to move to the **Reset** menu and press **Select**.

3. The **Reset** menu is displayed. Select **Clear Lamp 1** or **Clear Lamp 2** as required using **▲** or **▼** and press **Select**.



4. A confirmation box is displayed. Select **OK** using **◀** or **▶** and press **Select** to reset the selected Lamp hours to zero.



## 9. Factory Preset Display Mod

1.The following table shows compatible signal types, their resolution and frequency refresh rates.

Horizontal: 15kHz, 31kHz to 90 kHz

Vertical: 50 Hz to 85 Hz

SIGNAL		RESOLUTION (DPI)	FREQUENCY REFRESH RATE (KHZ)	FREQUENCY REFRESH RATE (HZ)
NTSC	–	–	15.73	60.00
PAL	–	–	15.63	50.00
PAL60	–	–	15.73	60.00
SECAM	–	–	15.63	50.00
VESA	D	640 x 480	31.47	59.94
MAC	D	640 x 480	35.00	66.67
VESA	D	640 x 480	37.86	72.81
VESA	D	640 x 480	37.50	75.00
VESA	D	640 x 480	43.27	85.01
VESA	D	800 x 600	35.16	56.25
VESA	D	800 x 600	37.88	60.32
VESA	D	800 x 600	48.08	72.19
VESA	D	800 x 600	46.88	75.00
VESA	D	800 x 600	53.67	85.06
MAC	D	832 x 624	49.72	74.55
VESA	D	1024 x 768	48.36	60.00
VESA	D	1024 x 768	56.48	70.07
MAC	D	1024 x 768	60.24	74.93
VESA	D	1024 x 768	60.02	75.03
VESA	D	1024 x 768	68.68	85.00
VESA	D	1152 x 864	67.50	75.00
VESA	D	1280 x 960	60.00	60.00
VESA	D	1280 x 1024	63.98	60.02
VESA	D	1400 x 1050	65.30	60.00
HDTV (1080i)	–	1920 x 1080	33.75	60.00
HDTV (1080i)	–	1920 x 1080	28.13	50.00
HDTV (720p)	–	1280 x 720	45.00	60.00
HDTV (720p)	–	1280 x 720	37.50	50.00
SDTV (576p)	–	–	31.25	50.00
SDTV (480p)	–	–	31.47	59.94

**Note:**

*Images above flagged with "D" are supported by digital signal.*

*An image with higher or lower resolution than the projector's native resolution (1024 x 768) will be compressed.*

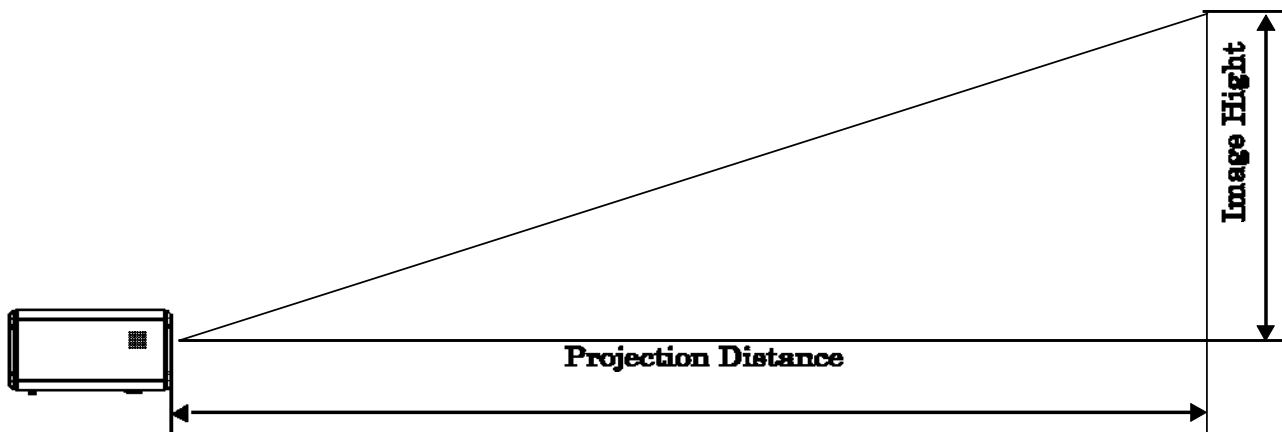
*Some Composite and Sync on Green signals may not be displayed correctly.*

*Signals other than those specified in the table above may not be displayed correctly. If this should happen, change the refresh rate or resolution on your PC. Refer to Display Properties help section of your PC for procedures.*

**2. Throw Distance and Screen Size**

Example of GB940G:

The further your projector is from the screen or wall, the larger the image. The minimum size the image can be is approximately 40 inches (1 m) measured diagonally when the projector is roughly 65 inches (1.7 m) from the wall or screen. The largest the image can be is 500 inches (12.7 m) when the projector is about 843 inches (21.4 m) from the wall or screen





Screen Size						GC805G		GB942G		GB940G	
Diagonal		Width		Height		0.77		1.33 - 1.79		1.78 - 2.35	
						Distance					
[inches]	[m]	[inches]	[m]	[inches]	[m]	[inches]	[m]	[inches]	[m]	[inches]	[m]
40	1.02	32	0.81	24	0.61			41.7 -	1.06 -	55.8 -	1.42 -
50	1.27	40	1.02	30	0.76	30.7	0.78	52.6 -	1.34 -	70.4 -	1.79 -
60	1.52	48	1.22	36	0.91	37.1	0.94	63.5 -	1.61 -	85.0 -	2.16 -
67	1.70	54	1.36	40	1.02	41.6	1.06	71.1 -	1.81 -	95.2 -	2.42 -
72	1.83	58	1.46	43	1.10	44.9	1.14	76.6 -	1.94 -	102.5 -	2.60 -
80	2.03	64	1.63	48	1.22	50.0	1.27	85.3 -	2.17 -	114.1 -	2.90 -
84	2.13	67	1.71	50	1.28	52.6	1.34	89.6 -	2.28 -	120.0 -	3.05 -
90	2.29	72	1.83	54	1.37	56.5	1.44	96.2 -	2.44 -	128.7 -	3.27 -
100	2.54	80	2.03	60	1.52	63.0	1.60	107.0 -	2.72 -	143.3 -	3.64 -
120	3.05	96	2.44	72	1.83	75.9	1.93	128.8 -	3.27 -	172.5 -	4.38 -
150	3.81	120	3.05	90	2.29	95.3	2.42	161.5 -	4.10 -	216.2 -	5.49 -
180	4.57	144	3.66	108	2.74	114.6	2.91	194.1 -	4.93 -	260.0 -	6.60 -
200	5.08	160	4.06	120	3.05	127.6	3.24	215.9 -	5.48 -	289.1 -	7.34 -
210	5.33	168	4.27	126	3.20			226.8 -	5.76 -	303.7 -	7.71 -
240	6.10	192	4.88	144	3.66			259.5 -	6.59 -	347.5 -	8.83 -
261	6.63	209	5.30	157	3.98			282.3 -	7.17 -	378.1 -	9.60 -
270	6.86	216	5.49	162	4.11			292.1 -	7.42 -	391.2 -	9.94 -
300	7.62	240	6.10	180	4.57			324.8 -	8.25 -	435.0 -	11.05 -
350	8.89	280	7.11	210	5.33			379.2 -	9.63 -	507.9 -	12.90 -
400	10.16	320	8.13	240	6.10			433.7 -	11.02 -	580.8 -	14.75 -
450	11.43	360	9.14	270	6.86			488.1 -	12.40 -	653.7 -	16.60 -
500	12.70	400	10.16	300	7.62			542.6 -	13.78 -	726.6 -	18.46 -

Screen Size						GB949G		GB957G	
Diagonal		Width		Height		2.22 - 4.43		4.43 - 8.3	
Distanc									
[inches]	[m]	[inches]	[m]	[inches]	[m]	[inches]	[m]	[inches]	[m]
40	1.02	32	0.81	24	0.61	69.4 -	1.76 -	139.2 -	3.54 -
50	1.27	40	1.02	30	0.76	87.8 -	2.23 -	175.3 -	4.45 -
60	1.52	48	1.22	36	0.91	106.2 -	2.70 -	211.5 -	5.37 -
67	1.70	54	1.36	40	1.02	119.0 -	3.02 -	236.8 -	6.01 -
72	1.83	58	1.46	43	1.10	128.2 -	3.26 -	254.8 -	6.47 -
80	2.03	64	1.63	48	1.22	142.9 -	3.63 -	283.7 -	7.21 -
84	2.13	67	1.71	50	1.28	150.3 -	3.82 -	298.2 -	7.57 -
90	2.29	72	1.83	54	1.37	161.3 -	4.10 -	319.9 -	8.12 -
100	2.54	80	2.03	60	1.52	179.7 -	4.56 -	356.0 -	9.04 -
120	3.05	96	2.44	72	1.83	216.4 -	5.50 -	428.3 -	10.88 -
150	3.81	120	3.05	90	2.29	271.6 -	6.90 -	536.6 -	13.63 -
180	4.57	144	3.66	108	2.74	326.7 -	8.30 -	645.0 -	16.38 -
200	5.08	160	4.06	120	3.05	363.5 -	9.23 -	717.3 -	18.22 -
210	5.33	168	4.27	126	3.20	381.9 -	9.70 -	753.4 -	19.14 -
240	6.10	192	4.88	144	3.66	437.0 -	11.10 -	861.8 -	21.89 -
261	6.63	209	5.30	157	3.98	475.6 -	12.08 -	937.7 -	23.82 -
270	6.86	216	5.49	162	4.11	492.2 -	12.50 -	970.2 -	24.64 -
300	7.62	240	6.10	180	4.57	547.3 -	13.90 -	1078.6 -	27.40 -
350	8.89	280	7.11	210	5.33	639.2 -	16.24 -	1259.2 -	31.98 -
400	10.16	320	8.13	240	6.10	731.1 -	18.57 -	1439.9 -	36.57 -
450	11.43	360	9.14	270	6.86	823.0 -	20.90 -	1620.5 -	41.16 -
500	12.70	400	10.16	300	7.62	914.9 -	23.24 -	1801.2 -	45.75 -

**Caution:**

*Ceiling installation must be done by a qualified professional.*

*Contact your dealer for more information.*

*It is not recommended you install the projector yourself.*

*Only use the projector on a solid, level surface.*

*Serious injury and damage can occur if the projector is dropped.*

*Do not use the projector in an environment where extreme temperature occurs.*

*The projector must be used at temperatures between 41 degrees Fahrenheit (5 degrees Celsius) and 104 degrees Fahrenheit (40 degrees Celsius).*

*Screen damage will occur if the projector is exposed to moisture, dust or smoke.*

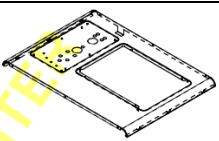





























*Do not cover the vents on the projector. Proper ventilation is required to dissipate heat. Damage to the projector will occur if the vents are covered.*

**10. Spare part list\_ Sanyo ( PDG-DXT10 Series ) v.10**

Item	Type	P/N	Description
01	Cover	3455355500	CASE SECC TOP
02	Cover	3455354701	BRACKET AL LAMP COVER
03	Cover	3455354500	BOTTOM SECC
04	Cover	3455354401	FRONT COVER AL
05	Cover	3455355001	BRACKET AL REAR
06	Cover	3455355800	HANDLE SECC
07	Cover	3455354800	BRACKET SECC IO1
08	Cover	3455355200	BRACKET SECC IO2
09	Button	3392093000	BUTTON1 ABS 94V0 BLK
10	Button	3392050701	BUTTON2 ABS 94V0 BLK
11	Button	3392038904	QUICK BUTTON PC 94V0 BLK
12	Fan Outlet	3392080900	FAN OUTLET PC 94V0 BLK
13	Cap	3392038200	CAP LENS PC 94V0 TRANSPARENT
14	Foot	3392055000	ADJ FOOT R PC 94V0 WHITE
15	Fan	3620039511	DC FAN ASSY NFB1212M-F00 L300/240 120 B
16	Fan	3620039611	DC FAN ASSY NFB1212M-F00 L180/120 120 B
17	Fan	3620631111	DC FAN ASSY BFB0612H-R00 L550/490 60 B
18	Fan	3620842611	DC FAN ASSY AFB0812HD-AF00 L60/20 80 B
19	Fan	3620921011	DC FAN ASSY AFB0912H-AF00 L45/25 92 B
20	Fan	3620427011	DC FAN ASSY AFB04512HB-R00 L280/220 45 B
21	Fan	3620710911	DC FAN ASSY BFB0712HD-AF00 L200/140 70 B
22	Fan	3620921111	DC FAN ASSY BFB0712HD-AF00 L110/50 70 B
23	Fan	3620842511	DC FAN ASSY AFB0812MD-AR00 L320/260 80 B
24	DB	5610010401	DB ASSY H6T
25	Board	5600600344	PWB ASSY INLET THERMAL BD DP-3650
26	Board	5600600340	PWB ASSY DMD THERMAL BD DP-3650
27	Board	5600600389	PWB ASSY DISCHARGE BD DP-3650
28	Board	5600600351	PWB ASSY FRONT IR BD DP-3650
29	Board	5600600823	PWB ASSY AUDIO FAN BD DP-3650
30	Board	5600600379	PWB ASSY POWER BD DP-3650
31	Board	5600600383	PWB ASSY PROTECTION BD DP-3650

32	Board	5600600824	PWB ASSY MAIN BD DP-3650
33	Board	5600600891	PWB ASSY IO BD DP-3650
34	Board	5600600343	PWB ASSY LAMP1 COVER DP-3650
35	Board	5600600345	PWB ASSY LAMP2 COVER BD DP-3650
36	Board	5600600560	KEYPAD BOARD ASSEMBLY
37	Board	5600600360	PWB ASSY BACK IR BD DP-3650
38	Ballast	0990075400	LAMP DRIVER 260W PULSE 4AC O3
39	Lamp	5811100560	MODULE LAMP HOUSING ASSY VIVITEK DP-3650
40	Lens shift	5811100139-S	MODULE LENS SHIFT ASSY DP-3650
41	Optic engine	3797690500	OPTICAL ENGINE ASSY VIVITEK DP-3650
42	CW	5811100565	MODULE CW4 ASSY VIVITEK DP-3650
43	CW	5811100566	MODULE CW6 ASSY VIVITEK DP-3650
44	CW	3250705400	PLATE CW RGBW FPC110 GLASS 65 T0.7
45	CW	3250705300	PLATE CW RGBCMY FPC110mm GLASS 65 T0.7
46	IO label	3205163401	NAME PLATE PC 136.29*136.29 T0.254
47	IR window	3390128800	IR WINDOW PC 94V0 PURPLE
48	Switch	3606004801	SWITCH ASSY DP3650 IO
49	Switch	3606003700	SWITCH ASSY DP-3650 LAMP COVER
50	FFC Cable	3081502700	CABLE FFC L108 WHITE
51	Thermostat	3791026301	THERMOSTAT ASSY DP3650
52	Speaker	3791025100	SPEAKER ASSY R DP3650
53	Speaker	3791025200	SPEAKER ASSY L DP3650
54	Cushion	3501418500	END BLOCK EPE 639*544*198
55	Cushion	3501418600	END BLOCK EPE 639*544*160
56	PE bag	3500957300	BAG PE 450x530x0.06
57	Carton	TBD	Carton Paper
58	CD	TBD	CD SOFTWARE
59	manual	TBD	MANUAL QUICK START
60	Card	5010077201	CARD WARRANTY VIVITEK ENG
61	Remote	5041812501	REMOTE CONTROLLER 27KEYS DP-3618 JA CA
62	Power Code	3090107601	AC POWER CORD 3P #18*3C L1800 BLK



Delta Elec. Inc.		Vivitek		rev.00
				
No. 01	No. 02	No. 03	No. 04	No. 05
				
No. 06	No. 07	No. 08	No. 09	No. 10
				
No. 11	No. 12	No. 13	No. 14	No. 15
				
No. 16	No. 17	No. 18	No. 19	No. 20
				
No. 21	No. 22	No. 23	No. 24	No. 25
				
No. 26	No. 27	No. 28	No. 29	No.30

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Vivitek

rev.00

				
No. 31	No. 32	No. 33	No. 34	No. 35
				
No. 36	No. 37	No. 38	No. 39	No. 40
				
No. 41	No. 42	No. 43	No. 44	No. 45
				
No. 46	No. 47	No. 48	No. 49	No. 50
				
No. 51	No. 52~53	No. 54	No. 55	No. 56
				
No. 57	No. 58	No. 59	No. 60	No. 61

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No. 62				

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Delta\_\_\_\_\_

**11. Required adjustments when the parts replaced**

	● necessary doing in repair center		
	<b>Take Actions</b>		
Replaced	Color Wheel Index Adjustment	Calibrate VGA, YUV & Video Adjustment	Focus Adjustment
Main Board	●	●	
IO Board		●	
Audio Board			
Color Wheel	●		
Optical Engine	●	●	●
Lens Shift			●