Service Manual

ViewSonic PJD6211

Model No. VS12618

DLP Projector

(PJD6211_SM Rev. 1b Nov. 2009)

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Revision History

Revision	SM Editing Date	ECR Number	Description of Changes	Editor
1a	07/15/09		Initial Release (NO BOM by PE approval)	Sophia Kao
1b	11/04/09		Update Lamp hours reset procedure / RSPL	Sophia Kao

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1. System Introduction

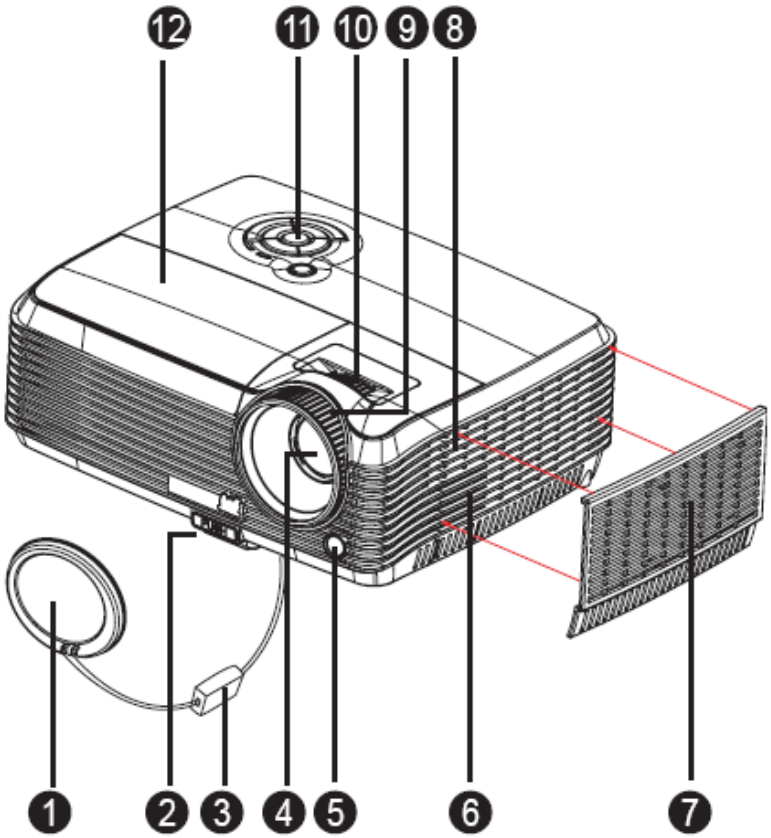
1.1 Technical Specification

Display system	Single 0.55" DLP panel
Resolution	XGA (1024 × 768)
Zoom	1.1X
F/No.	2.51 - 2.69
Focal length	21.95 - 24.18mm
Screen size	30" – 300"
Lamp	180W
Input terminal	D-Sub 15-pin x 2, S-VIDEO x 1, VIDEO x 1, Audio signal input (3.5 mm stereo mini jack) x 1
Output terminal	D-Sub 15 pin x 1, Audio signal output (3.5 mm stereo mini jack) x 1, 12-Vdc trigger output x 1
Control terminal	RS-232 x 1, USB x 1
Speaker	2 watt x 1
Video compatibility	NTSC, NTSC 4.43 PAL, PAL-N, PAL M SECAM, HDTV (480p, 576p, 720p, 1080i/p), Composite video
Scanning frequency Horizontal frequency Vertical frequency	 31 - 80 KHz 50 - 120 Hz
Environment	Operating: Temperature: 0°C to 40°C Humidity: 30%-85% Storage: Temperature: -20°C to 60°C Humidity: 30%-85%
Power requirement	AC 100-240 V, 50 - 60 Hz, 2.5A
Power consumption	240 W
Dimension (W x D x H)	279.5 x 218 x 105 mm
Weight	2.7 kg (6lb)
Note: Design and Specifications are subject to change without prior notice.	

1.2 Location of features, Controls, and I/O

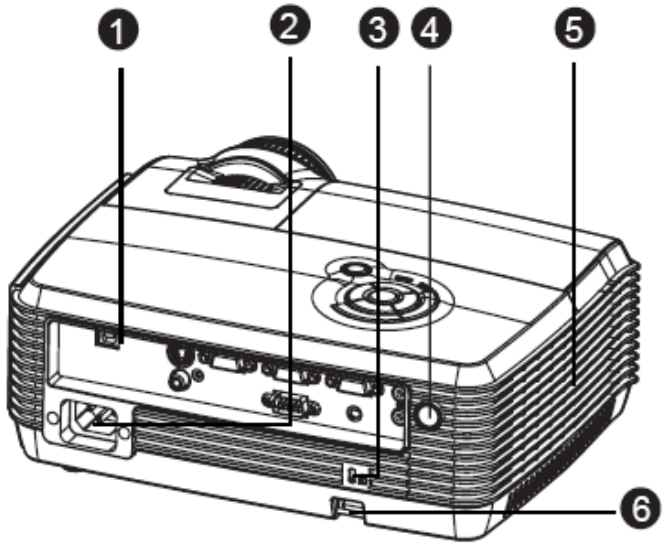
A. Projector overview

Front View



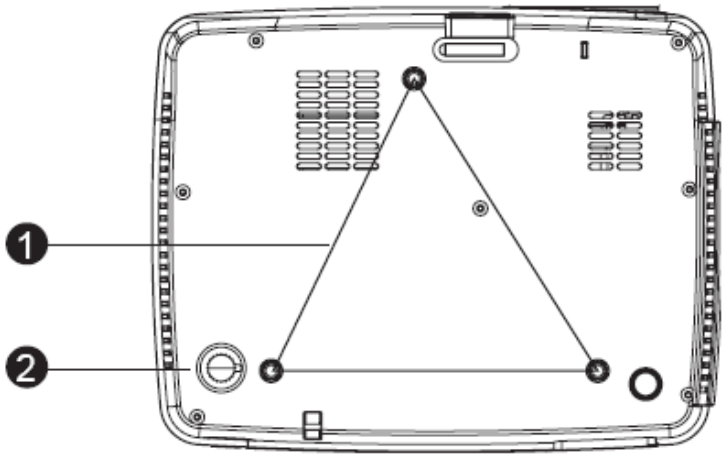
1. Lens cap
2. Elevator button
3. Lens cap strap
4. Projection lens
5. Front IR remote control sensor
6. Ventilation holes (intake)
7. Filter cover
8. Speaker
9. Focus ring
10. Zoom ring
11. Control panel
12. Lamp cover

Real View



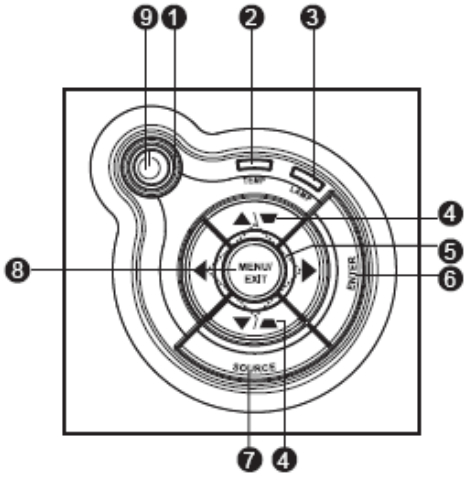
1. Connection ports
2. AC power socket
3. Kensington lock
4. Rear IR remote control sensor
5. Ventilation holes (exhaust)
6. Security bar

Bottom View



1. Ceiling mount (M4*6)
2. Tilt-adjustment feet

B. Button function and LED indicator



LED

1. **Power** (Power LED indicator)
2. **Temp** (Temperature LED indicator)
3. **Lamp** (Lamp LED indicator)

Button function

4. **Keystone**

   Manually correct distorted images resulting from an angled projection.

5. **Four directional buttons**

   Use four directional buttons to select items or make adjustments to your selection.

6. **Enter**

   Enter to sub-menu and confirm the menu selection.

7. **Source**

Manually select an input source.

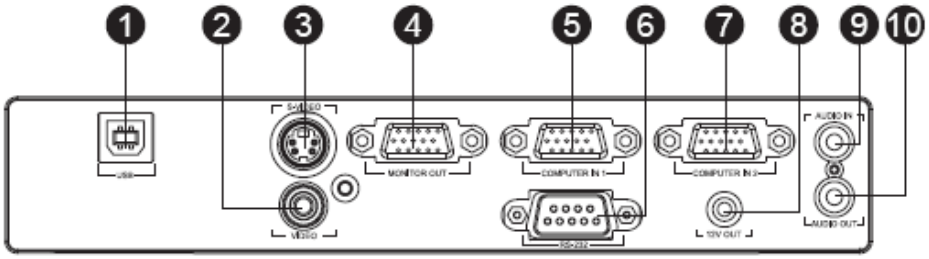
8. **Menu/EXIT**

Display or exit the on-screen display menus.

9. **Power**

   Turn the projector on or off.

C. Connection ports



1. USB

This connector is for firmware update and mouse function support.

2. Video

Connect composite video output from video equipment to this jack.

3. S-Video

Connect S-Video output from video equipment to this jack.

4. MONITOR Out

Connect to a computer display, etc.

5. COMPUTER IN 1

Connect image input signal (analog RGB or component) to this jack.

6. RS-232

When operating the projector via a computer, connect this to the controlling computer's RS-232C port .

7. COMPUTER IN 2

Connect image input signal (analog RGB or component) to this jack.

8. 12V OUT

Control a motorized screen or similar accessory device.

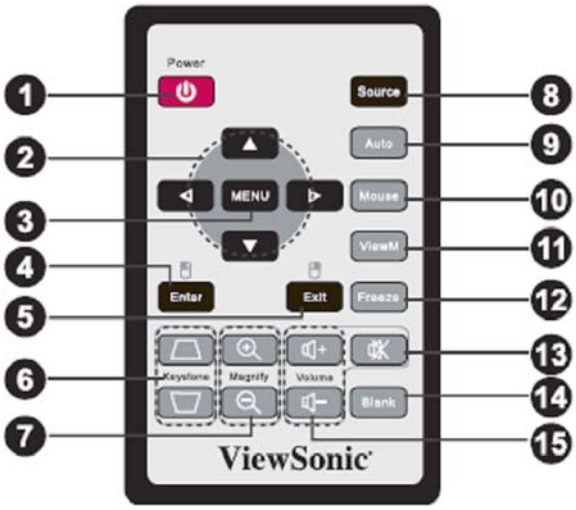
9. Audio IN

Connect an audio output from video equipment to this jack.

10. Audio OUT

Connect to a speaker or other audio input equipment.

D. Remote Control



❶ **POWER**
Turn the projector on or off.

❷ **Four directional buttons**
Use four directional buttons to select items or make adjustments to your selection.

❸ **MENU**
Display or exit the on-screen display menus.

❹ **Enter**
Confirmed selections.

❺ **Exit**
Exit OSD Menu.

❻ **Keystone+ / -**
Adjust image distortion caused by tilting the projector.

❼ **Magnify**
Zoom in and out the images.

❽ **Source**
Manually select an input source.

❾ **Auto**
Resynchronize the projector to the input signal from a computer. This function is available for computer mode only.

❿ **Mouse**
Switch between OSD control and Mouse control (Apply to Navigation buttons, Enter/Mouse Left Click, and Exit/Mouse Right Click buttons).

⓫ **ViewM**
Switch in between high brightness performance or Accuracy color performance.

⓬ **Freeze**
Press "Freeze" to pause the screen image. Press again to cancel the freeze function.

⓭ **Mute**
Cut off the sound temporarily. Press again to cancel the Mute function.

⓮ **Blank**
Cut off the screen temporarily. Press again to cancel the Blank Screen function.

⓯ **Volume + / -**
Adjust the volume level.

1.3 PJD6211 Lamp Specification

Product Scope

The product is a lamp system consisting of a short arc burner within a reflector and electronic lamp driver.

Type lamp	P-VIP 180/0.8 E20.8 open type
	Identcode : A 599 899
Type driver	PT VIP O3 MID(180W)-UNISHAPE
	Identcode : A581 105 (lock type,Gen5,VC,SL)
	A581 111 (lock type,Gen5,VC,DL)

The lamp must be operated with the OSRAM lamp driver only.

Initial Characteristics

	nominal	tolerance
Input Voltage	380V DC	3 20…400V DC
Standby(non-operating)		120…400V DC
Max. slew rate of input voltage		
During switch on	30V /μs	
Input Current	0.55A	
Max. input voltage ripple	$30V_{pp}$@ 100-120Hz	
Max. input current ripple	1Arms@40 -300kHz	
Input Wattage	max.210W@180W lamp wattage	
Input Wattage standby operation	1, 7W @380V DC	
Output Wattage		
nominal	180W	±3% [7]
DIM mode	1 60W	±3% [6]
controlled by UART	160W…180W	in step with of 1/128 of nominal power
Output current limitation	3.4A(RMS)	±5%
Ignition pulse	typ.2.6kVpeak symm.	2.4 …3.5 kVpeak
Ignition Phase Duration	typ.3. 5s	max.6 s
Enable-Disable-Enable Cycle	15 s minimum	
Acoustic sound pressure level	typical acoustic sound pressure level 36 dB(A),maximum 38dB(A) at 25cm measuring distance; measured in ste ady state lamp operation [8]	
Acoustic sound power level	typical acoustic sound power level 32 dB(A) acc. to EN ISO 3744; measured in steady state lamp operation [7]	
Switch-off lamp voltage	140V	±5V
Cooling method	forced air cooling at ≧1.5 m/s minimum	
Thermal Protection	Tc1 switch point 90℃	±5℃

Safety Protections	The lamp connections are not mains isolated, The lamp can be switched on via the Start Control Input signal(SCI). A Flag Output signal indicates if the lamp has lit rightly. The Start Control Input and the Flag Output are mains isolated.

Note:

[7] Measured at real lamp load. Deviations will occur on all kind of artificial loads (e.g. resistor)

[8] Measured with RGB waveform. The noise deviation from customer generated UNISHAPE waveforms should be controlled by the official approval process.

Attention for handling

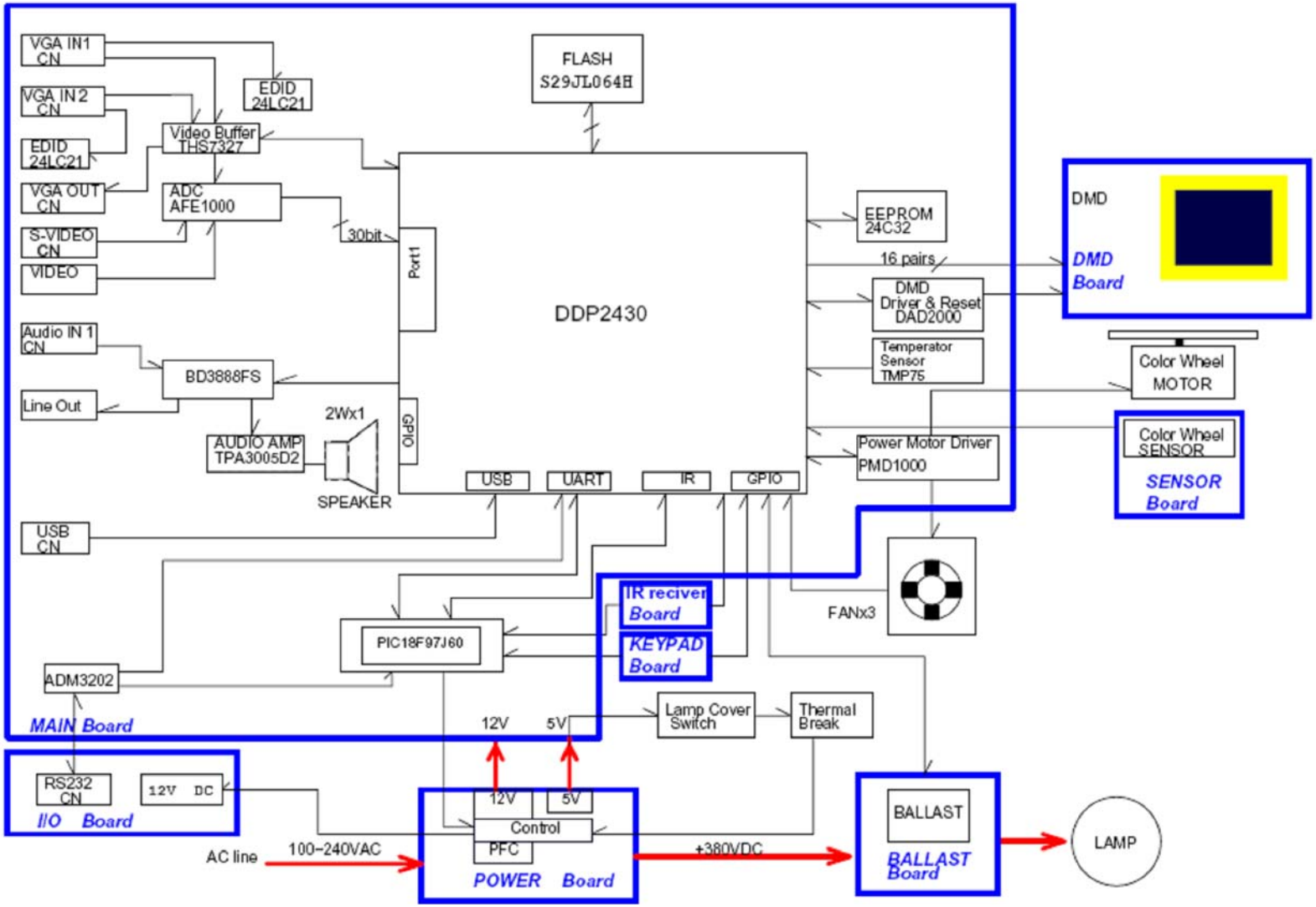
- Do not touch the lamp until it has cooled completely, because the lamp is very hot during operation and immediately after turned off.
- The lamp has to be fixed firmly to the base or socket.
- Turn off the power supply during maintenance.
- Do not hold the lamp except outer surface of the reflector.
- Wear protective gloves and eyeglasses when handling the lamp.
- Any unusual shock or vibration to the lamp should be avoided.
- The lamp contains the mercury. Its breakage might cause mercury to flow out of the reflector. Please manage provision at the customer's product.
- Do not pull the lead wire and plug by more than 24.5N.
- Please be careful of handling the lamp because it is made of glass.
- Please notice for keeping or handling the lamp, because there is a projection of this lamp with reflector ahead.
- Do not touch the bulb and the mirror area of the reflector.

Attention for use

- Do not close or cover the lamp with any flammable stuff.
- During operation, the lamp is under extremely high pressure. Please manage provision at the customer's product to prevent fragments of bulb and mercury from flowing out of it. If the lamp bursts in case of an emergency, the sound will be occurred.
- Lamp operation should be with the specified lamp driver and the system ONLY.
- Do not look at the lamp directly during operations.
- Do not expose your skin directly. We recommend to you to put on something for protection for your skin. For example, long sleeve shirt, gloves, glassed and so on.
- Do not modify the lamp and never use a lamp that has been modified.
- Any unusual shock or vibration to the lamp should be avoided during operation.
- Do not use any broken lamps.
- Dispose of used lamps according to your local instruction.
- Do not turn on the lamp while the system is opened.

- The lamp contains mercury. If the lamp bursts during operation ventilate the area sufficiently to avoid inhaling harmful mercury fumes.
- Use the lead below 200 ° C to prevent a deterioration of cladding clad of the fluorocarbon resin.
- The lead wire insulation clad shouldn't touch the reflector.
- Exchange the lamp that has already passed the life time immediately.

1.4 PJD6211 System Block Diagram



2. Firmware Upgraded Flow

This chapter provides the information regarding relevant equipments and upgrading procedure for firmware upgrade.

Note:

1. Please check the firmware and composer version before any f irmware upgrade procedures. During firmware download period, plea se do not shut down PC or projector, this will cause flash memory's damage. And need to return the unit to manufacturer for flash memory recovery.
2. Computer for operation must be Window XP or more advanced.

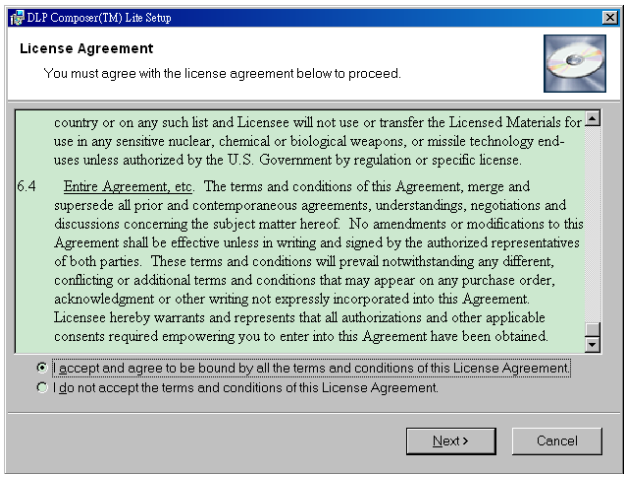
2.1 Setup Tool/Equipment

- Computer
- USB Cable (See the picture)
- Power Cord

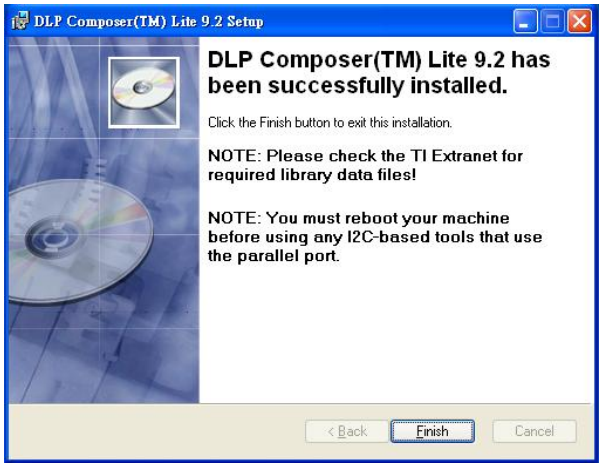
2.2 Upgrading Procedure

Installing [DLP Composer (TM) Lite]

1. Double-click **[DLP Composer Lite v9.2 Setup.exe].**
2. Installation starts. Click **[Next]** to continue the installation process.
3. On the **[License Agreement]** screen, move the scroll bar on the right to the bottom, select **[I accept and agree to be bound by all the terms and conditions of this License Agreement]**, and click Next to continue the installation process.
4. On the Select **[Installation Type]** screen, select **[ALL]** and click **[Next]** to continue the installation process.

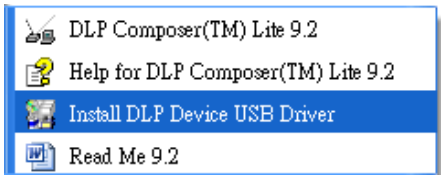


5. When the installation is finished, click **[Finish]** and reboot the PC. (A shortcut to DLP Composer (TM) Lite is created on the desktop.)

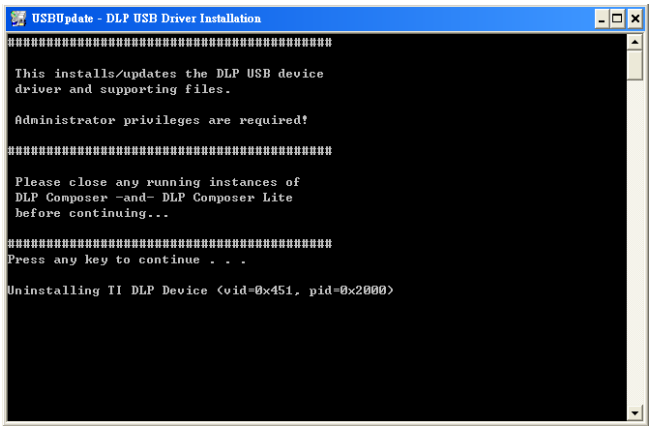


USB Support - Installation (All Platforms)

This release includes support for a USB communications interface to DDP2 230/DDP2430 based projectors. The setup program includes the files needed to install USB support. After DLP Composer™ Lite is installed, to install the USB support, choose the "Install DLP Device USB Driver" icon under "DLP Composer ™ Lite" in your Start menu.



Follow the instruction on the screen to press any key and wait for the installation done.

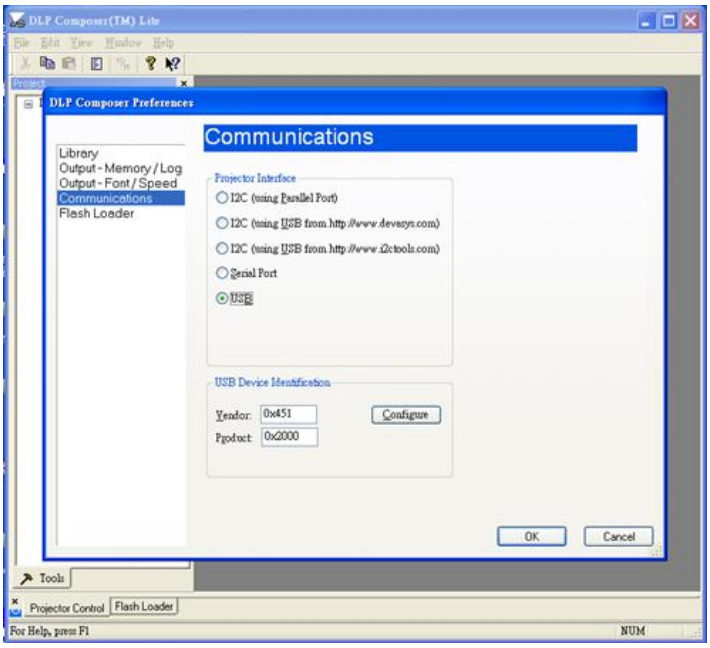


And copy the file "FlashDeviceParameters.txt" into the C:\ Program Files\ DLP Composer Lite X.X

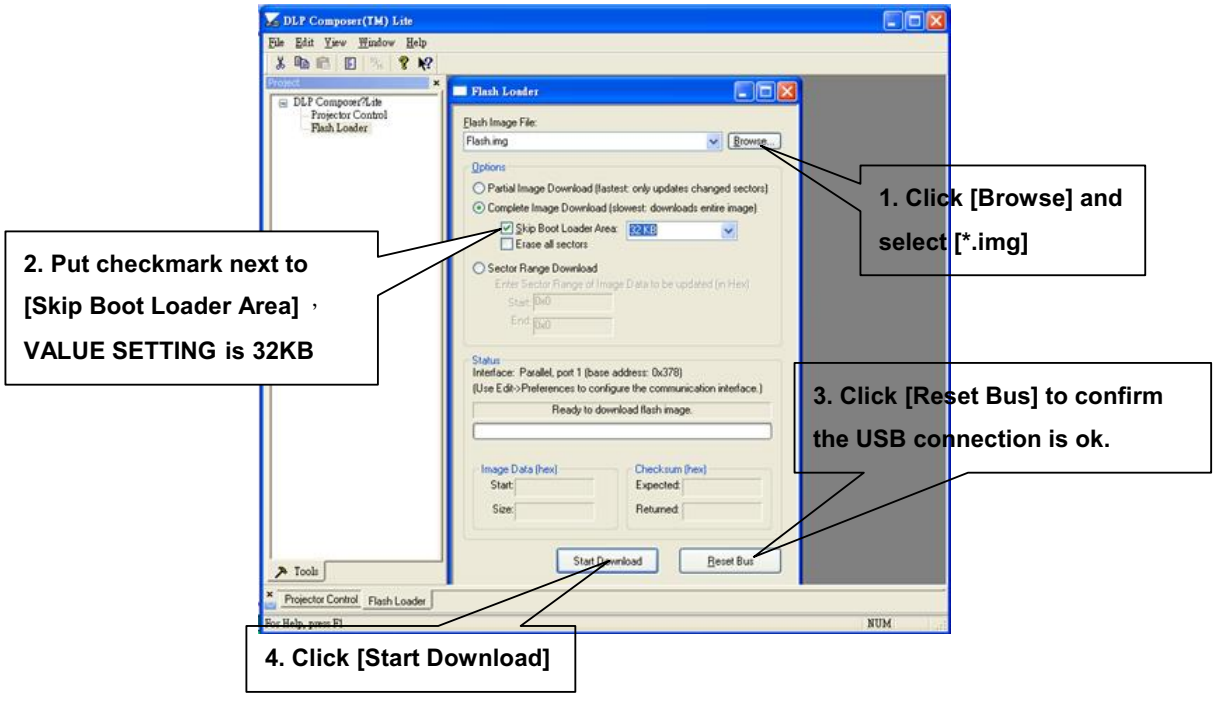
Operating procedure

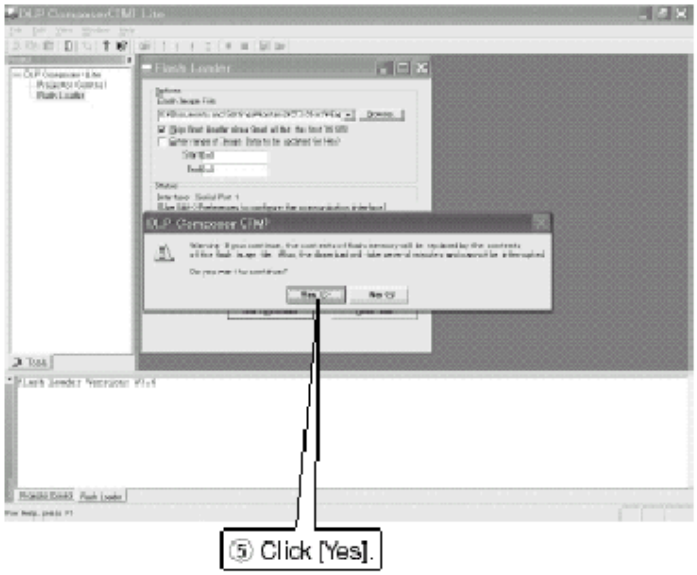
1. Connect the Projector and PC via USB cable.
2. Double-click **[DLP Composer (TM) Lite 9.2].** The following screen will appear.

3. Select **[Edit]/ [Preferences]/ [Communications]** to check **USB** in **[Projector Interface]**.
4. Set the items on the **[Vendor 0x451, Product 0x2000]** of **[USB Device Identification].**
5. Click **[OK].**



6. Move the cursor to **[Flash Loader]** on the Project window of **[DLP Composer Lite]**. (The **[Flash Loader]** screen will appear.)
7. Click **[Browse]** and select where the firmware **[xxxxxxxxx.img]** is for download.
8. Make sure **[Skip Boot Loader Area]** is with a check.
9. Press **Menu** and **Power** buttons constantly and then give power supply (switch power on). Temp LED and Lamp LED will become amber. That indicates the projector is in the download mode. At this moment, you can release these two buttons.
10. Click **[Reset Bus]** firstly to check if USB connects well.
11. Click **[Start Download]**. When the dialog box is displayed, click **[Yes]**.





12. Wait for the Completion of Burning and then remove Power Cord and USB Burning Cord.

3. Machine Disassembly and Replacement

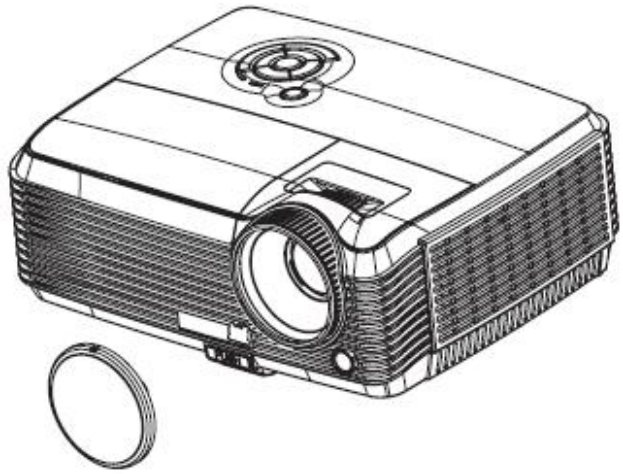
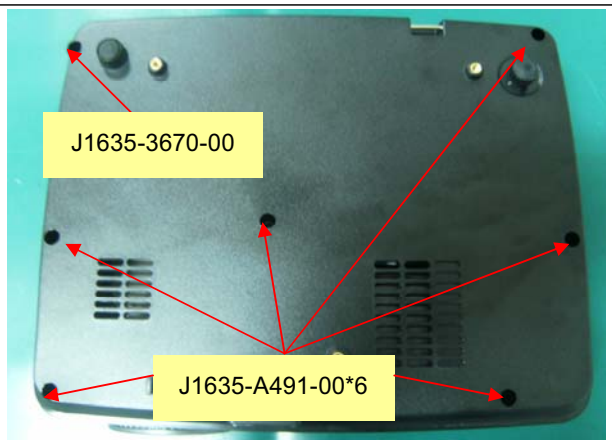
3.1 Tools

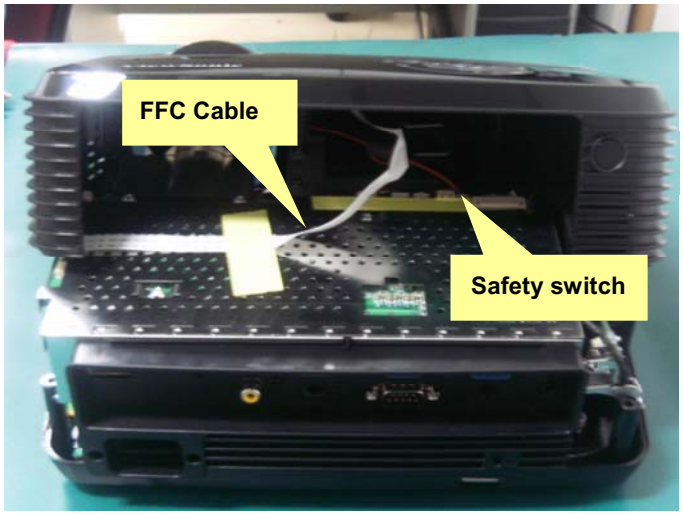
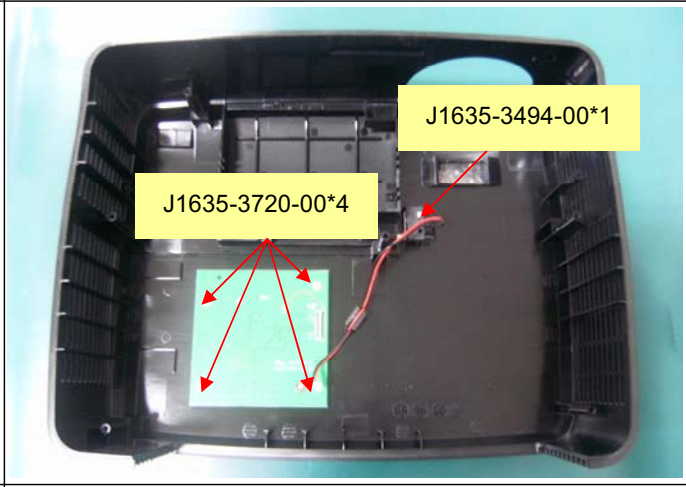
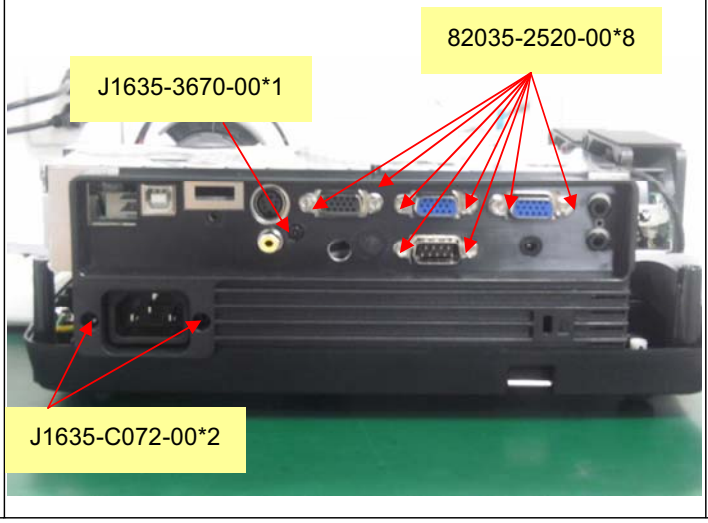
Item	Photo
Long Nose Nipper	
Hex Sleeves 5mm	
Screw Bit(+):107 Screw Bit(+):101 Screw Bit(+):102	
Anti-static wrist strap	
Anti-static wrist gloves	

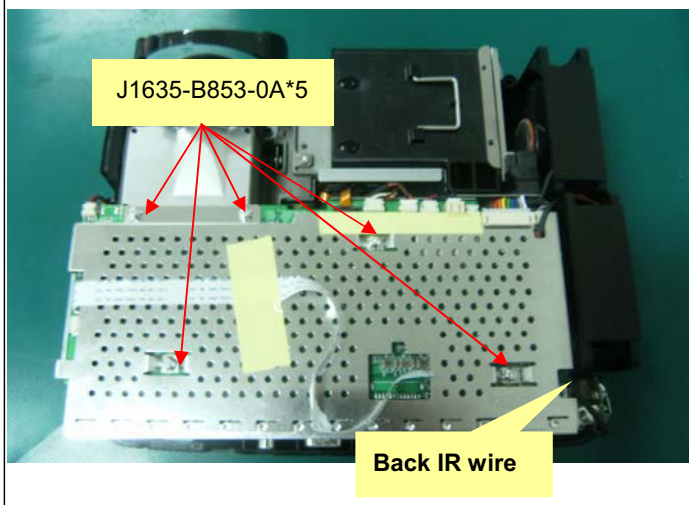
3.2 Disassembly Procedure

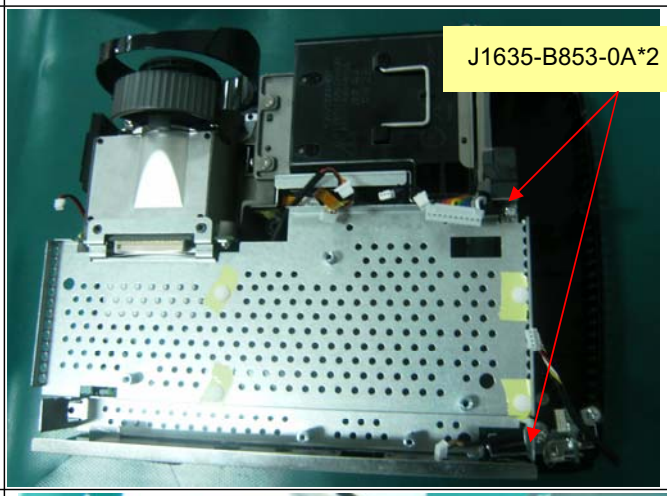
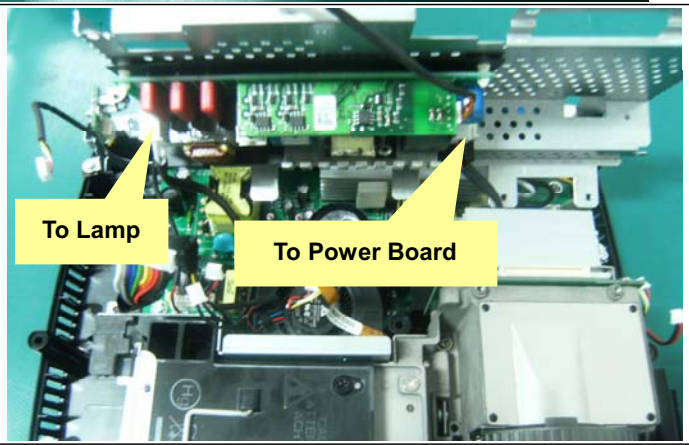
Warning

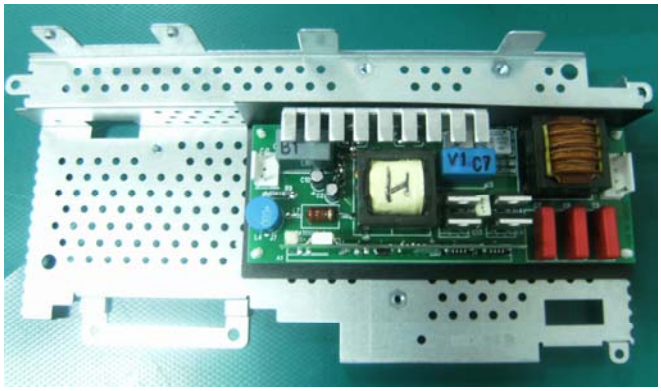
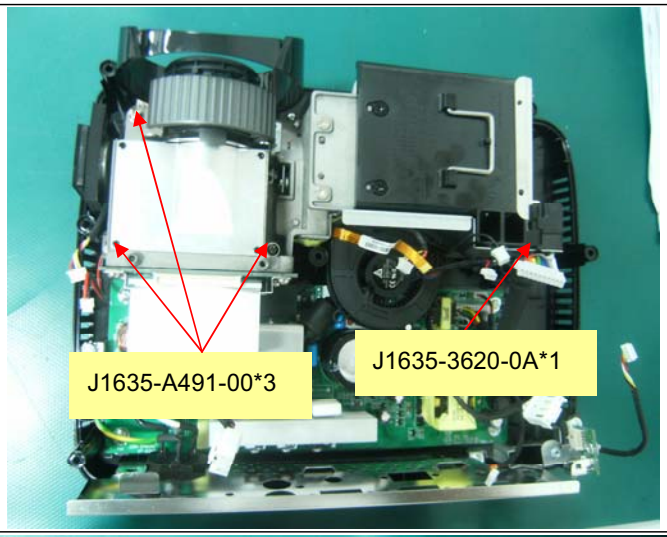
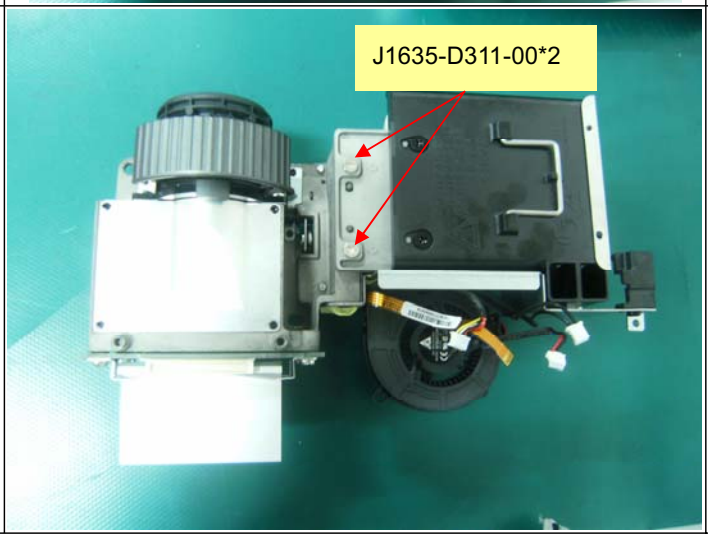
- Put on the Static Electricity Ring when starting for repair.
- Repair Environment suggest in Clean-room class 10000. Do not remove Optical Engine or DMD panel outside the clean room. Please return the optical engine to supplier if your repair condition can not meet the requirement.
- While screwing or unscrewing screws, please keep the screwdriver straight. Keeping screwdriver inclined will damage the screw holes.
- Please turn off the power before replacing any parts.
- Please wait for the projector lamp cooling down and turn off the power before changing it. Never touch or hit the lamp module when replacing the lamp.
- When you replace the projector lamp, never touch the new lamp with your bare hands. The invisible residue left by the oil on your hands may shorten the lamp life. Use lint-free gloves or finger cots are recommended.

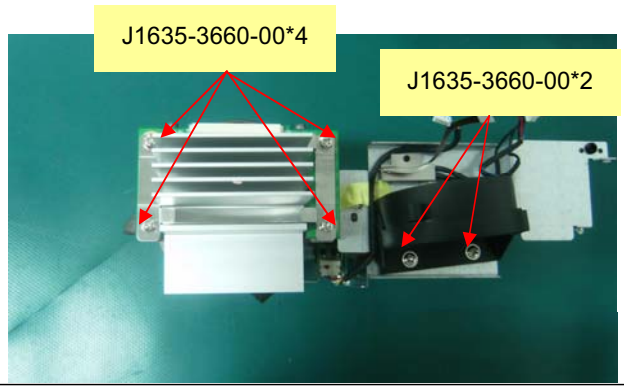
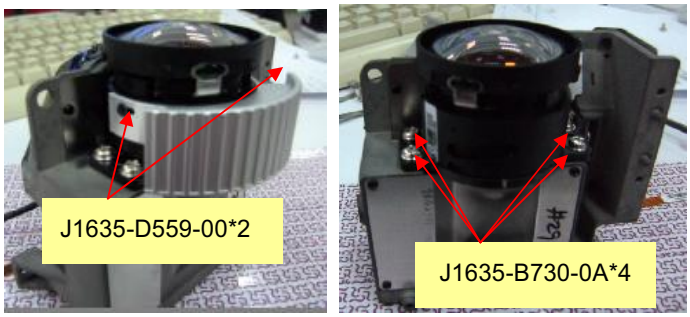
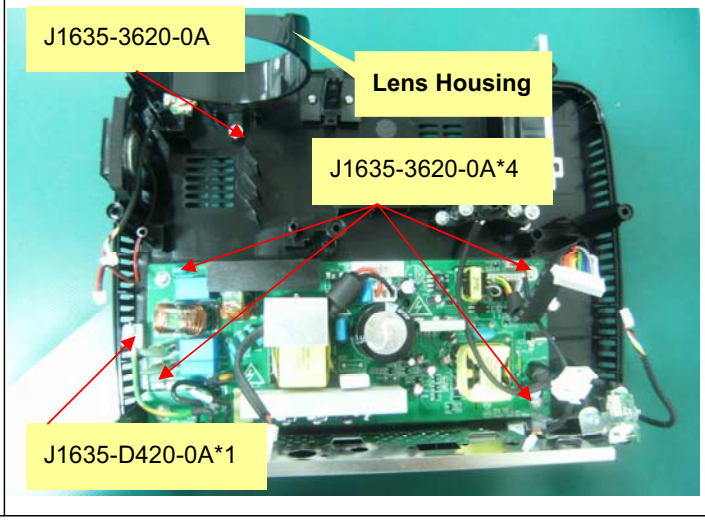
Step	Figure	Description
1		Press the power button to shutdown the projector and disconnect the power cord. If the lamp is hot, please do not start any procedure until the projector lamp cools down. Flip the projector and remove the lens cover.
2		1. Flip the projector on the table. 2. Remove the screws J1635-A491-00*6 and J1635-3670-00*1 on the Bottom cover as shown.
3		Rotate the Focus Ring by forward sequence to take it off from the unit.

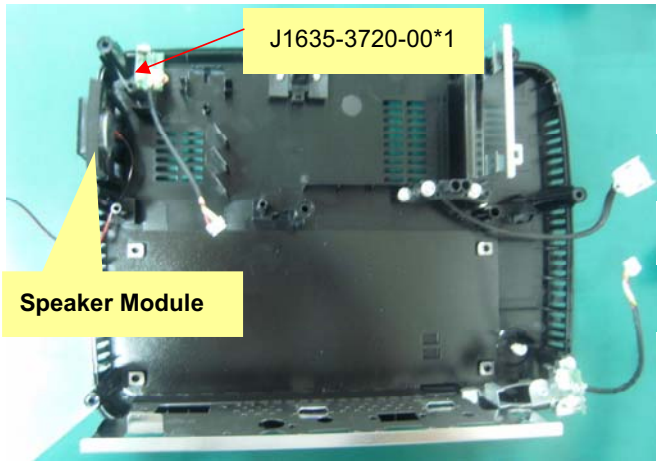
Step	Figure	Description
4		1. Disconnect the FFC cable and safety switch between top cover and main board. 2. Raise the Top Cover.
5		1. Loosen the one screw to remove the safety switch. 2. Remove four screws to lift up the keypad board.
6		1. Remove all screws as shown. 2. Remove the IO cover.

Step	Figure	Description
7		1. Remove the five screws on the Main Board. 2. Remove the metal sheet of Main Board. Note: The Back IR wire is connected to Main Board through the hole on metal sheet.
8		Remove the two Fan Modules.
9		1. Show you what the connector should be. 2. Remove all wires. 3. Remove the Main Board.

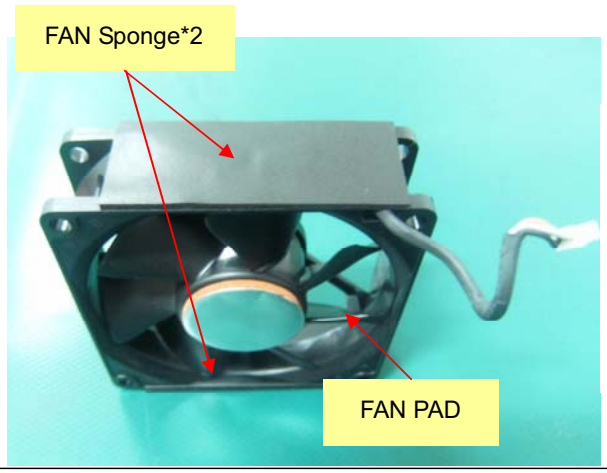
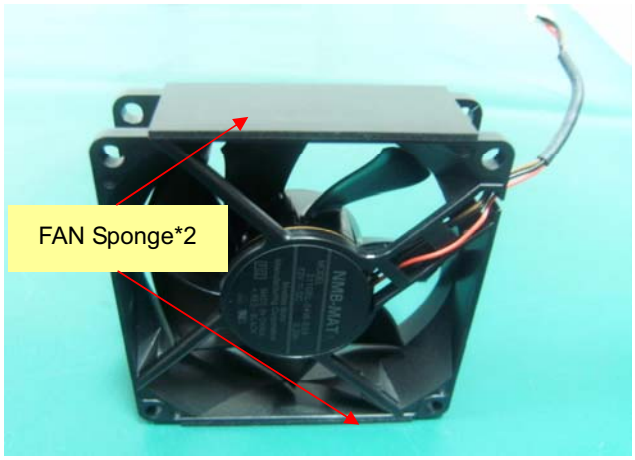
Step	Figure	Description
10		1. Loosen the two screws as shown and remove all wires on RS232 Board. 2. Remove the RS232 Board.
11		Loosen the two screws as shown to remove the metal sheet of Ballast.
Note		Note: 2 wires have been connected to Ballast. Disconnect these 2 wires before remove the metal sheet.

Step	Figure	Description
12		Release the four pillars by Long Nose Nipper to remove the Ballast.
13		1. Remove the screws on the optical engine. 2. Remove the optical engine module.
14		Loosen the two screws and remove the lamp module from optical engine. Note: Those screws and mesh are included in the Lamp module.

Step	Figure	Description
15		1. Loosen the two screws on the OE Fan. 2. Remove the Fan. 3. Loosen the four screws on DMD Board. 4. Remove the heat sink and DMD Board.
16		1. Loosen the two screws on the Zoom Ring. 2. Remove the Zoom Ring. 3. Loosen the four screws on the Lens. 4. Remove the Lens carefully.
17		1. Loosen the one screw and remove the Lens Housing. 2. Loosen the screws on the Power Board and then remove the Power module from Bottom Cover.

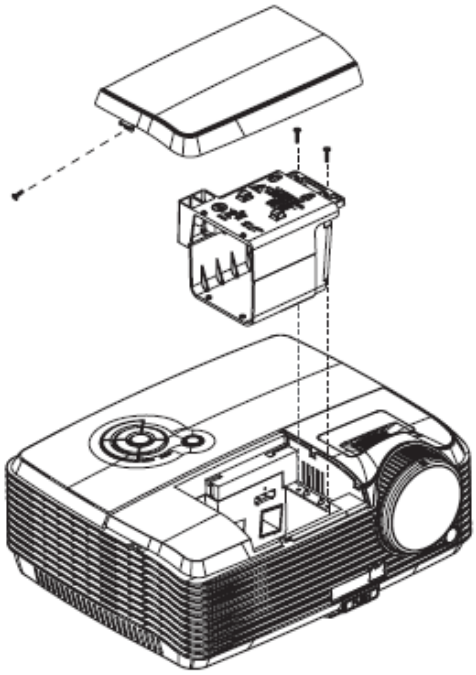
Step	Figure	Description
18		1. Remove Speaker Module. 2. Loosen the screws and remove front and back IR.

3.3 Assembly FAN Module

Step	Figure	Description
1		Assemble FAN2(J2394-0101-01): 1. Paste the FAN PAD (P4E38-1070-00) on the middle of it. 2. Paste the FAN Sponge*2 (P4R38-1530-00) on the top and bottom of it as picture shown.
2		Assemble FAN1(J2394-0101-00): Paste the FAN Sponge*2 (P4R38-1530-00) on the two edges of it as picture shown.

3.4 Disassembly Lamp Module

As the projector operates over time, the brightness of the projector lamp gradually decreases and the lamp becomes more susceptible to breakage. We recommend replacing the lamp if a warning message is displayed. Do not attempt to replace the lamp yourself. Contact the qualified service personnel for replacement.

Step	Figure	Description
1	**Note: Turn on the projector. If the lamp does not turn on after the warm-up period, please reinstall the lamp.** 	1. Turn off the projector. 2. If the projector is installed in a ceiling mount, remove it. 3. Unplug the power cord. 4. Loosen the screw in the side of the lamp cover and remove the cover. 5. Remove the screws from the lamp module, raise the handle, and lift out the module. 6. Insert the new lamp module into the projector and tighten the screws. 7. Replace the lamp cover and tighten the screw. 8. Turn on the projector. If the lamp does not turn on after the warm-up period, try reinstalling the lamp. 9. Reset the lamp hour. Refer to the “Setting” menu.

4. Troubleshooting and Verifying the Repair

This chapter provides technicians with electronic background how to maintain the product. Moreover, you can get the appropriate operation to solve some complicated problems of component repairing and professional problems.

4.1 Troubleshooting

Warning

- Do not directly look into the lens to avoid eyesight damages.
- The projector is equipped with ventilation holes (intake) and ventilation holes (exhaust). Do not block or place anything near these slots, or internal heat build-up may occur, causing picture degradation or damage to the projector.

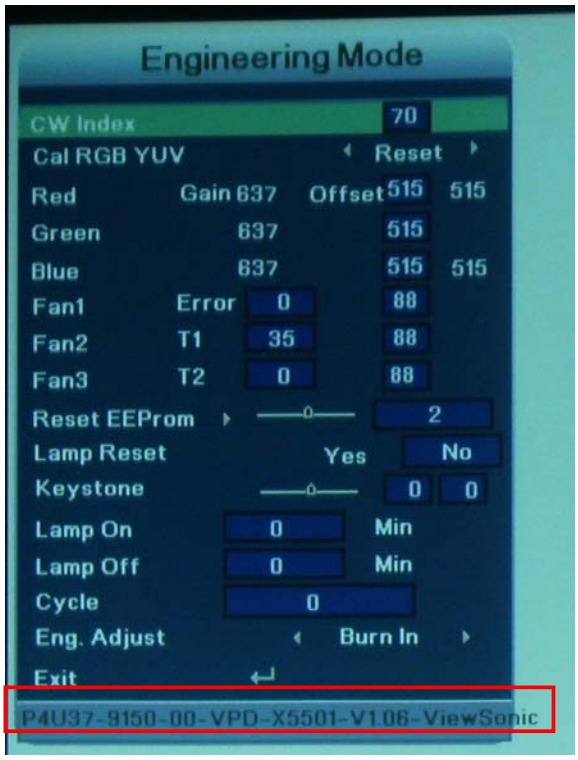
Confirm Software and hardware

(1) Confirm FW version is latest and lamp hours.

How to enter Engineering Mode?

-Open the Main menu and move the color bar to “setting” item, and then press right button to enter sub-menu. Move down the color bar to “Lamp Hours” item, press the direction keypad following the actions below:

Right once, left twice, right three times, left four times ; Then you will enter the Engineering Mode.)



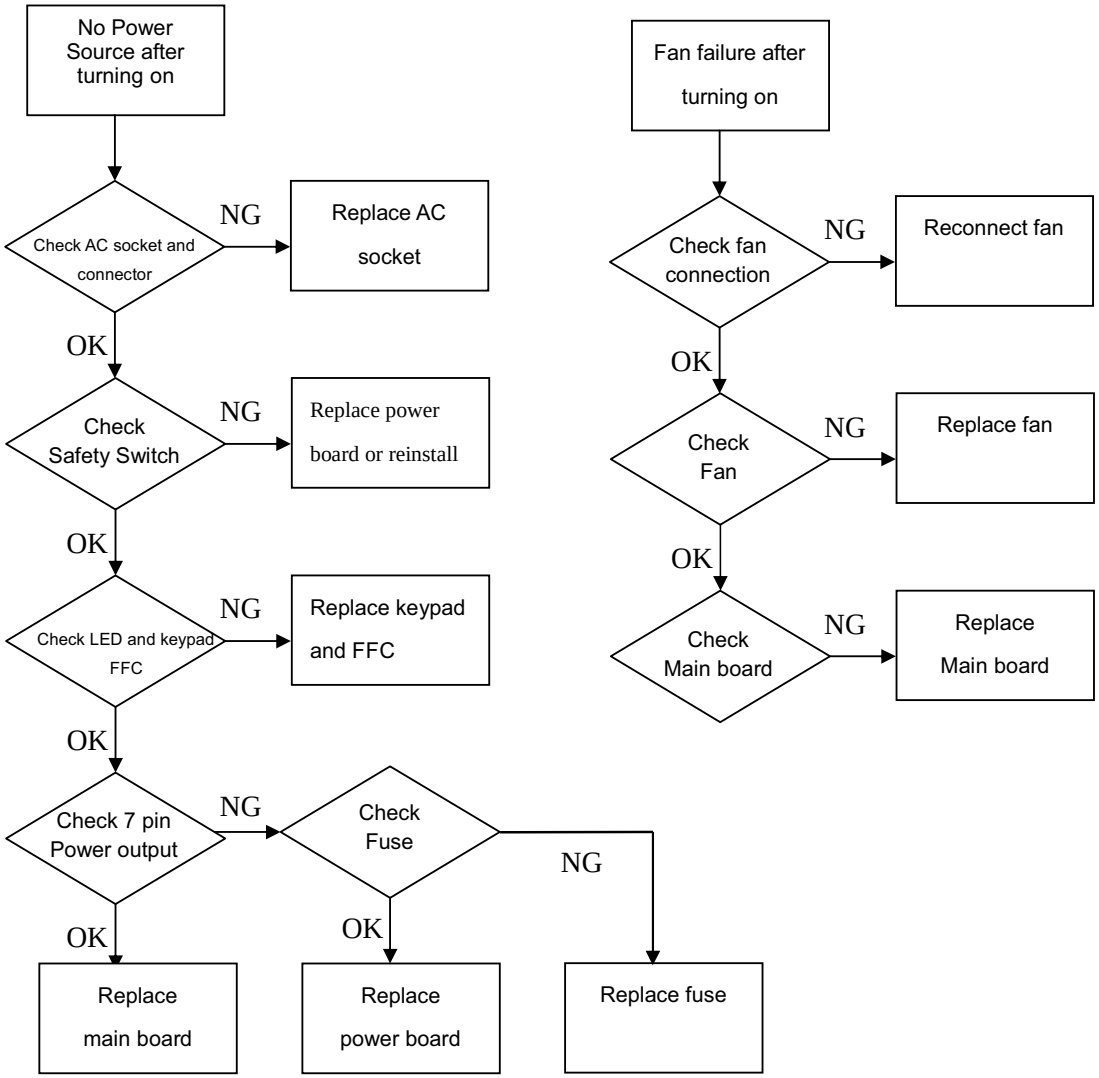
Note: This FW version is just for reference.

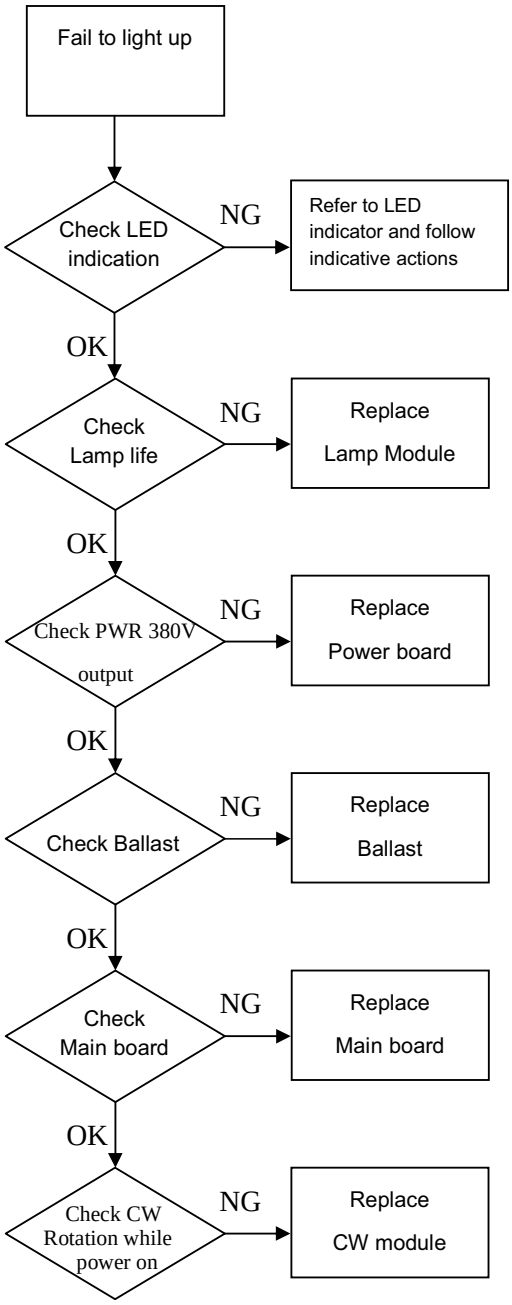
(2) Confirm LED indicator

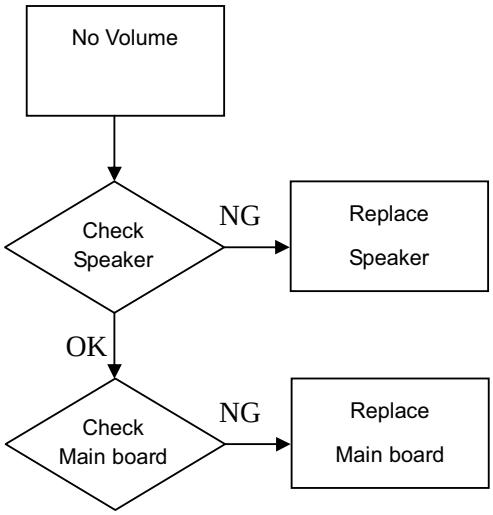
LED Type	Color	Status	Meaning
Power LED	Blue	Solid(LED× 1)	The projector is in standby mode.
Lamp LED	Off	Off	
Temp LED	Off	Off	
Power LED	Blue	Solid(LED× 2)	Powering up
Lamp LED	Off	Off	
Temp LED	Off	Off	
Power LED	Blue	Solid(LED× 2)	Normal operation
Lamp LED	Off	Off	
Temp LED	Off	Off	
Power LED	Blue	Flash(LED× 2)	Power-down
Lamp LED	Off	Off	
Temp LED	Off	Off	
Power LED	Blue	Solid(Full brightness)	The projector system has some problems with its fans, so the projector cannot start up.
Lamp LED	Red	Solid	
Temp LED	Red	Flash	
Power LED	Blue	Solid(Full brightness)	The lamp is in good condition and is projecting at maximum brightness.
Lamp LED	Off	Off	
Temp LED	Off	Off	
Power LED	Blue	Solid(Full brightness)	The lamp has reached its end of life and must be changed soon. The lamp will continue to operate until it fails. Change the lamp. If the lamp is off, then the ballast will become malfunction.
Lamp LED	Off	Solid	
Temp LED	Off	Solid	
Power LED	Blue	Flash(Full brightness)	The projector is shutting and the fan motor is cooling the lamp for shutdown. Do not unplug the power cord or turn the power off before the Lamp LED changes to flashing. The fan mo tor will turn off when the lamp has cooled.
Lamp LED	Red	Solid	
Temp LED	Red	Solid	
Power LED	Blue	Solid(Full brightness)	Temperature is too high. The lamp will turn off. The fan motor is cooling the lamp.
Lamp LED	Red	Flash	
Temp LED	Red	Off	
Power LED	Off	Off	The lamp ignition failed. If temperature is too high, the fans will cool the lamp.
Lamp LED	Red	Solid	
Temp LED	Red	Solid	

Note: Swapping modules that may be defective with others known to be good is generally an ideal way to find the module responsible for the problem. A failure symptom is rarely caused by more than one module, so you will not usually need to replace more than one to correct a particular failure. Whatever main board, ballast, IR board, power board, lamp module or optica l engine are all suitable to check by swapping modules.

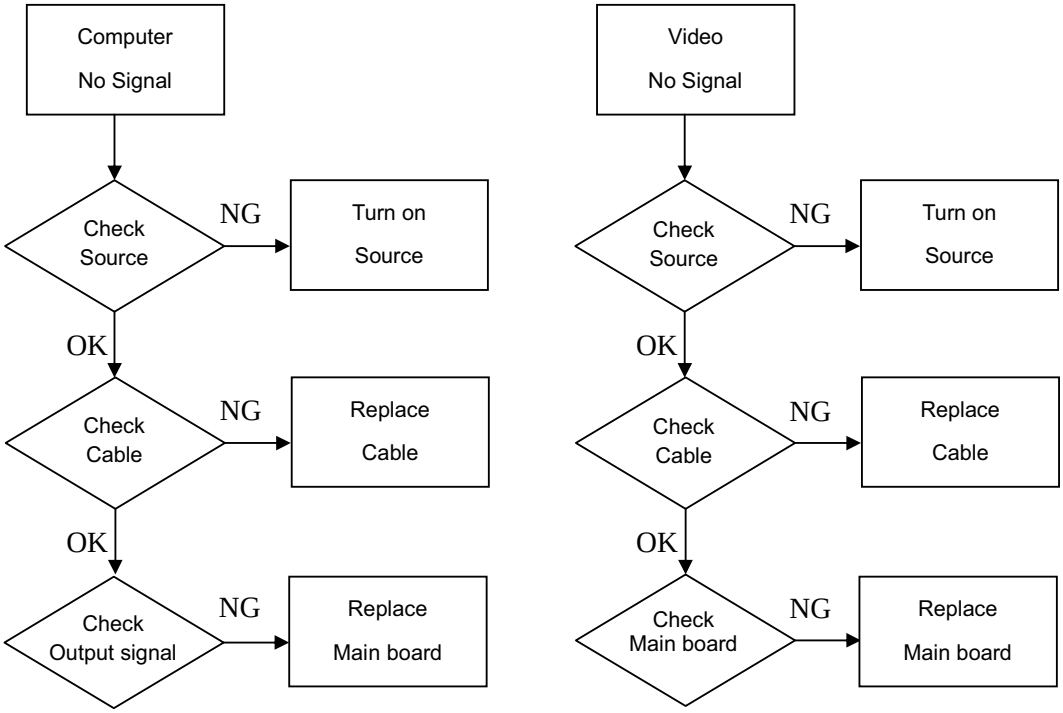
Power Source Troubleshooting:




Fail to light up
Check LED indication
NG
Refer to LED indicator and follow indicative actions
OK
Check Lamp life
NG
Replace Lamp Module
OK
Check PWR 380V output
NG
Replace Power board
OK
Check Ballast
NG
Replace Ballast
OK
Check Main board
NG
Replace Main board
OK
Check CW Rotation while power on
NG
Replace CW module


No Volume
Check Speaker
NG
Replace Speaker
OK
Check Main board
NG
Replace Main board

Signal Troubleshooting



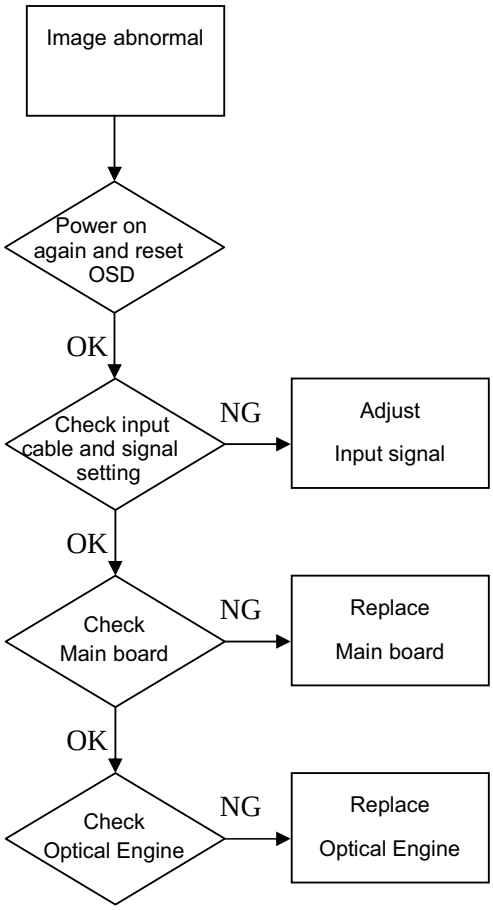
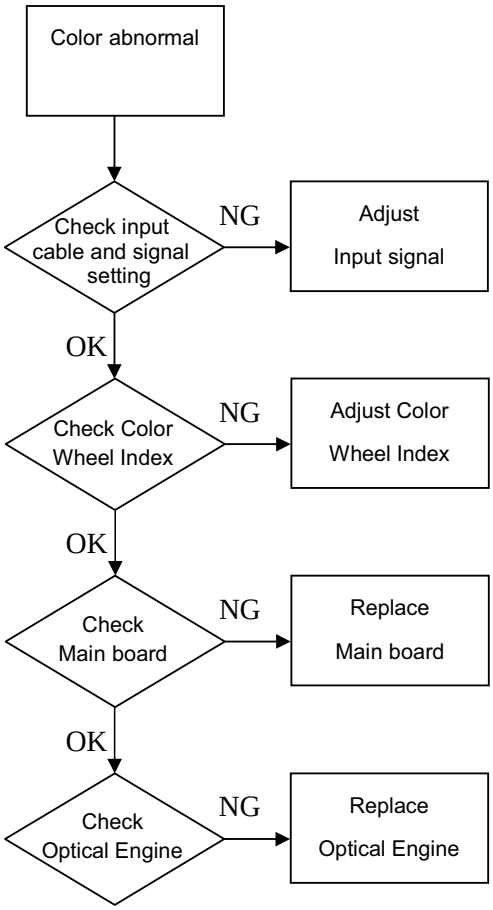
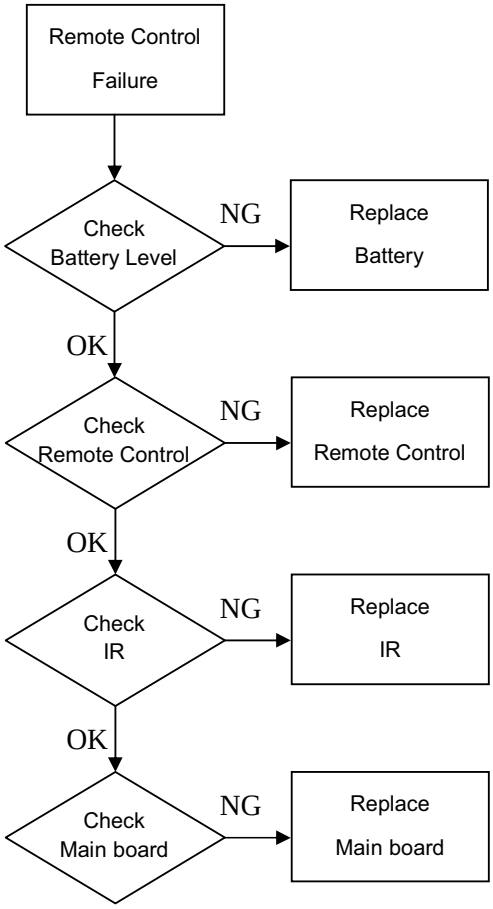
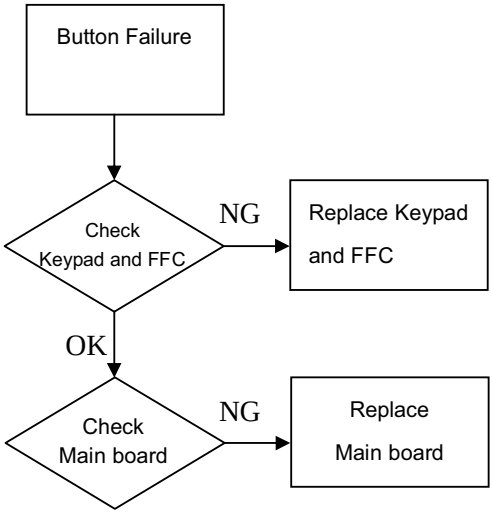


Image abnormal
Power on again and reset OSD
OK
Check input cable and signal setting
NG
Adjust Input signal
OK
Check Main board
NG
Replace Main board
OK
Check Optical Engine
NG
Replace Optical Engine


Color abnormal
Check input cable and signal setting
NG
Adjust Input signal
OK
Check Color Wheel Index
NG
Adjust Color Wheel Index
OK
Check Main board
NG
Replace Main board
OK
Check Optical Engine
NG
Replace Optical Engine

Operation Function Troubleshooting





4.2 Verifying the Repair

After repairing projector (Dissembling and assembling projector), Repair center should verify the quality of repaired unit.

(1) Check Logo

Check Logo is correct after power on projector.

(2) Signal test (Each I/O can function normally)

Connect all connector to the jacks one after the other to check whether each channel can project normally.

I/O port	**Monitor In (VGA)**
Test Equipment	Standard Pattern generator (Ex. Quantum data)
Signal format	1024*768 60Hz

I/O port	**Video**
Test Equipment	Standard Pattern generator (Ex. Quantum data) or DVD player
Signal format	NTSC

I/O port	**S-Video**
Test Equipment	Standard Pattern generator or DVD player
Signal format	480i

I/O port	**USB**

Test Equipment	PC and Remote controller
Test method	1. Connect PC (laptop) VGA output to projector. Set PC (laptop) output signal to projector 2. Connect projector USB to PC. Press remote controller page up/down to scroll presentation file up and down (ex Microsoft office series)

I/O port	**Audio input**
Test Equipment	Connect audio input to audio output of DVD player
Signal format	480i

(3) Operation test

Buttons operation

Button description	Test criteria
Power button	1. Mechanical motion (Up & Down) should be free from getting stuck when pressing the button 2. Press “power” button and projector will switch on
Menu	1. Mechanical motion (Up & Down) should be free from getting stuck when pressing the button. 2. Press Menu button can make projecto r function normally.
4-way button	1. Mechanical motion (Up & Down) should be free from getting stuck when pressing the 4-way button. 2. Press 4-way button can be used to scroll through OSD (On - Screen Display) menus and make adjustments.
Source	1. Mechanical motion (Up & Down) should be free from getting stuck when pressing the button 2. Press Source button manually selects an input source

Foot adjuster operation

Foot adjuster.	Test criteria
Foot adjuster button	Foot adjusters should stretch downward smoothly by pressing the foot adjuster buttons on the two sides

Zoom ring and Focus ring

Ring	Test criteria
Zoom ring	Mechanical motion of rotating Zoom ring to the end of right and left by hand should be free from getting stuck.
Focus ring	The feeling of rotating Focus ring to the end of right and left by hand should free from seizing

(4) Image Quality

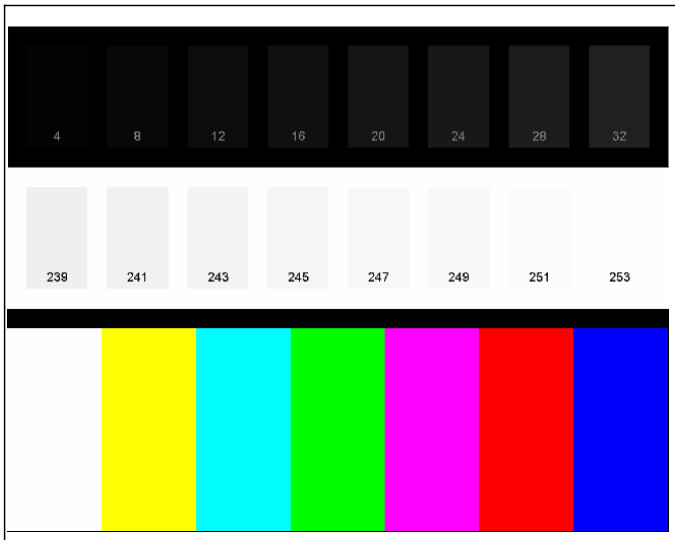
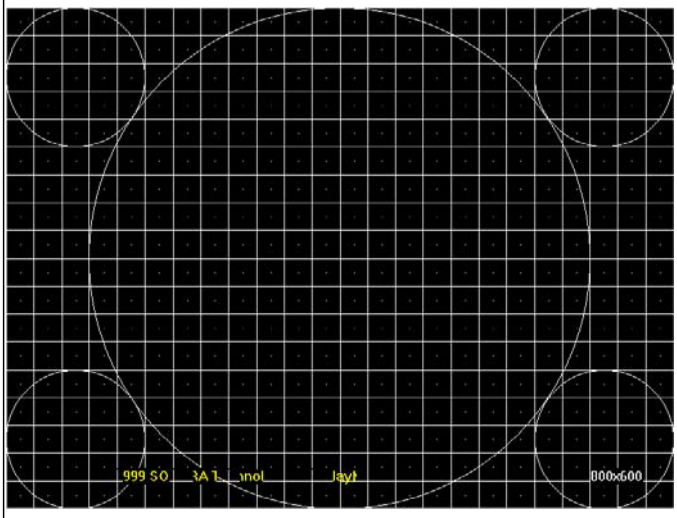
Projected image size: 60 inches (diagonal length)

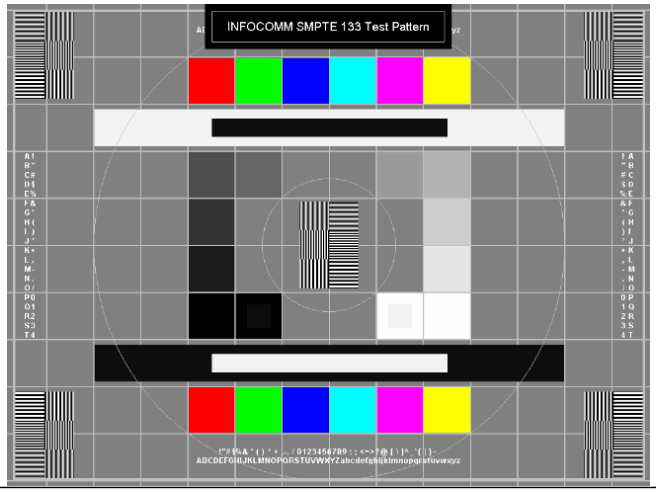
Zoom ring: Adjust zoom ring to wide (Maximum projection size)

VGA

I/O port	Monitor In (VGA)
Test Equipment	Standard Pattern generator (Ex. Quantum data)
Signal format	1024*768 60Hz
Projected image size	60” in diagonal length

Test Pattern	Test criteria
  	**ANSI Brightness** Apparent color strip, bend and streak corner on the projected image are not allowable.

	**Extreme Gray-Scale** --0 represents full black, 255 represents full white. --Distinguishing the gray from black at the value of 32 and the gray from white at the value of 239 easily are acceptable.
	**Circular Geometry, Cross hatch and Dots** 1. The four lines of outer frame should not only be existent but also distinguishable. 2. The dots in the square should be distinguishable.
	**Scaled Text (Resolution)** 1. Rotate Zoom ring to wide mode (Maximum projected image) 2. Fix projector to set diagonal length of projected image to 60”. 3. Adjust focus ring to make resolution of 4 corners and center are balanced. 4. Check the characters should be recognized easily. 5. Rotate Zoom ring to tele mode (Minimum projected image) 6. Adjust focus ring to make resolution of 4 corners and center are balanced. 7. Check the characters should be recognized easily.

	**INFOCOMM SMPTE 133** 1. The intervals of center thin white and black bars should be distinct. 2. The squares around the small circle in the center show the transition of full white to full black.

S-Video

I/O port	S-Video
Test Equipment	Standard Pattern generator (Ex. Quantum data)&DVD player
Signal format	480i
Criteria	No apparent color deviation on the projected image

Video

I/O port	Video
Test Equipment	Standard Pattern generator (Ex. Quantum data)&DVD player
Criteria	No apparent color deviation on the projected image

(5) Resolution

I/O port	VGA
Test Equipment	PC
Test Method	1. Rotate Zoom ring to wide mode (Maximum projected image) 2. Fix projector to set diagonal length of projected image to 60 ". 3. Adjust focus ring to make resolution of 4 corners and center are balanced. 4. Check the characters should be recognized easily. 5. Rotate Zoom ring to tele mode (Minimum projected image) 6. Adjust focus ring to make resolution of 4 corners and center are balanced. 7. Check the characters should be recognized easily.

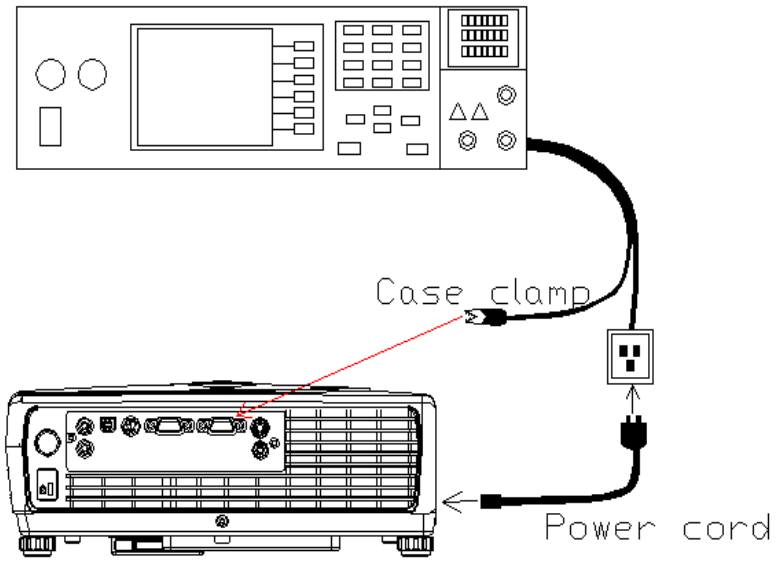
(6) Front and Rear infrared sensor

Device	Front and Rear infrared
Test Equipment	Remote controller
Test method	1. Cover front sensor and operate remote controller to test rear sensor 2. Cover rear sensor and operate remote controller to test front sensor

(7) Brightness measurements

Test items	Brightness measurements
Test Equipment	Chroma automatic system (The alterna tive is CL-200)
Test method	Measure 9 points
Criteria	Marketing spec 20% off

(8) Safety test equipments

Test items	Safety test
Test Equipment	Safety analyzer
Test method	1. Clamp the metal shell of VGA connector 2. Plug the power cord to socket 
Test criteria	GND 30A 3sec 100m Ω DCW 2506V 1sec 10000uA Single Step OFF

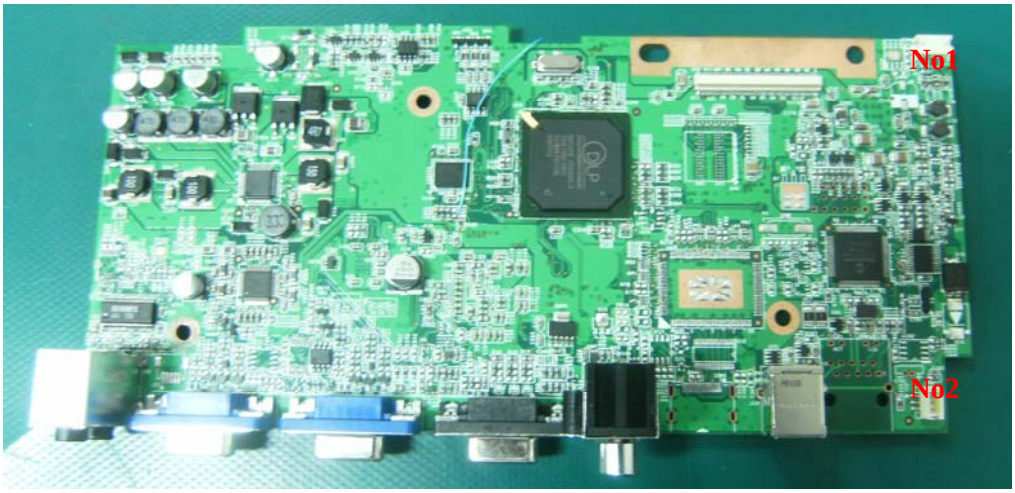
(9) Cosmetic standard for repaired projector

Follow cosmetic standard for repair center.

5. Connector Information

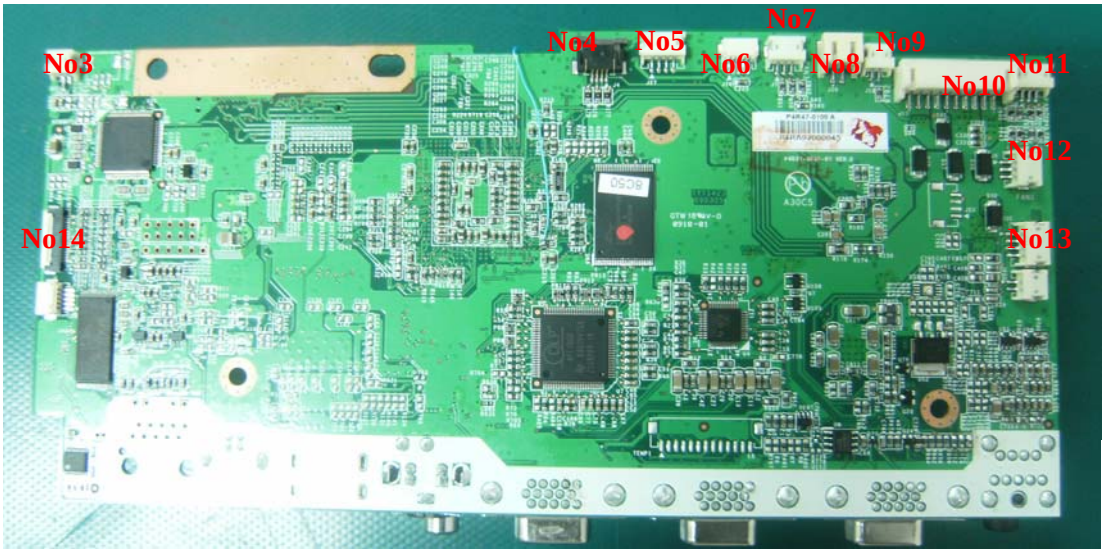
This section provides each connector location on boards and function of each board. They will be useful for your detecting the defective boards.

5.1 Main Board



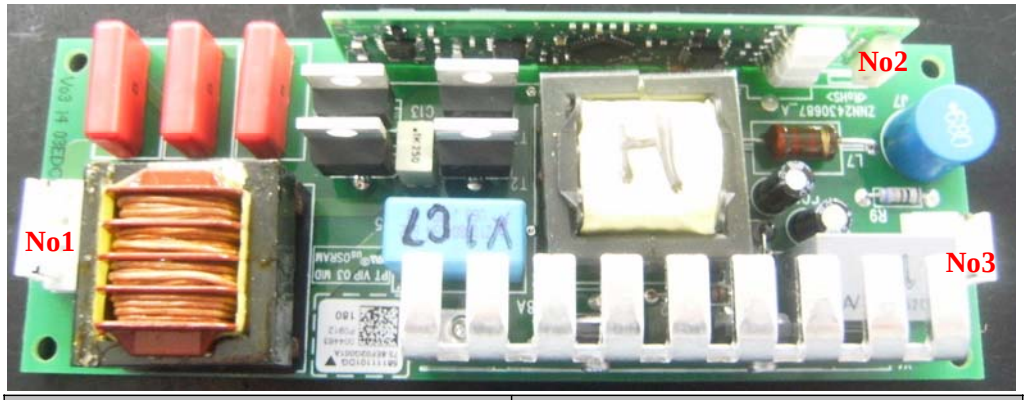
Connector	Description
No 1	Front IR
No 2	Connect to RS232 Board

5.2 The backside of Main Board



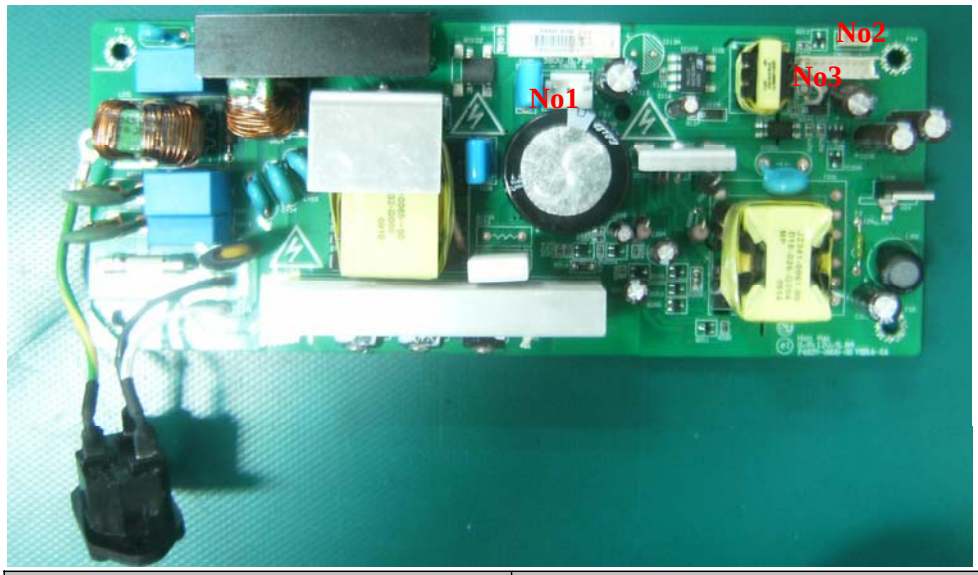
Connector	Description
No 3	Speaker
No 4	Color Wheel control
No 5	Color Wheel Sensor
No 6	Ignite signal connected to Ballast
No 7	Lamp FAN
No 8	Thermal sensor
No 9	Safety switch
No 10	Main Board Power Supply
No 11	FAN2
No 12	FAN1
No 13	Back IR
No 14	Keypad control

5.3 Ballast Board



Connector	Description
No 1	Lamp power supply
No 2	Ignite signal connected to Main board
No 3	High Voltage Power supply

5.4 Power Board



Connector	Description
No 1	380V output for ballast
No 2	12V output for RS232 board
No 3	12V/5V output for Main board

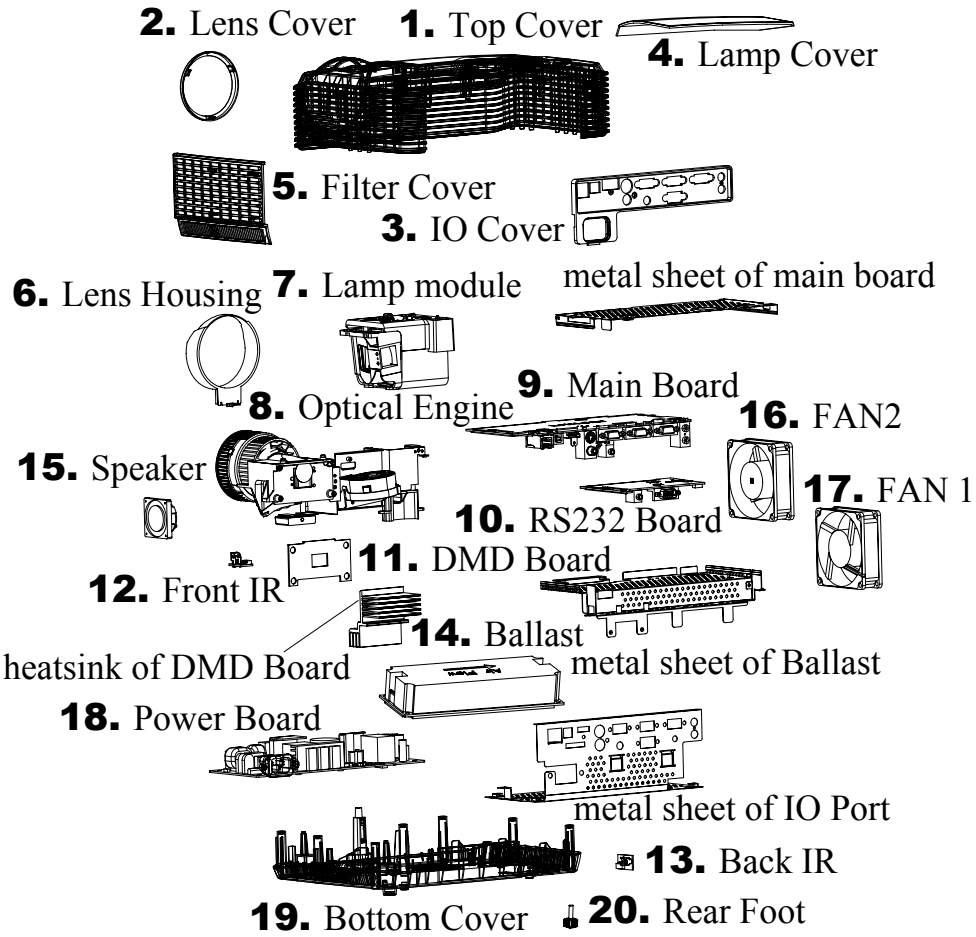
6. FRU (Field Replaceable Unit) List

Introduction

This section is a list of all the FRU removal . Following the FRU table of contents is an enlarged view of the entire projector, which shows the primary FRUs in the projector.

When working on the projector, use appropriate anti -static precautions such as anti -static mats, wrist straps and grounded work surfaces. Failure to do this can destroy static -sensitive components and make the product inoperable.

6.1 Mechanical Drawing



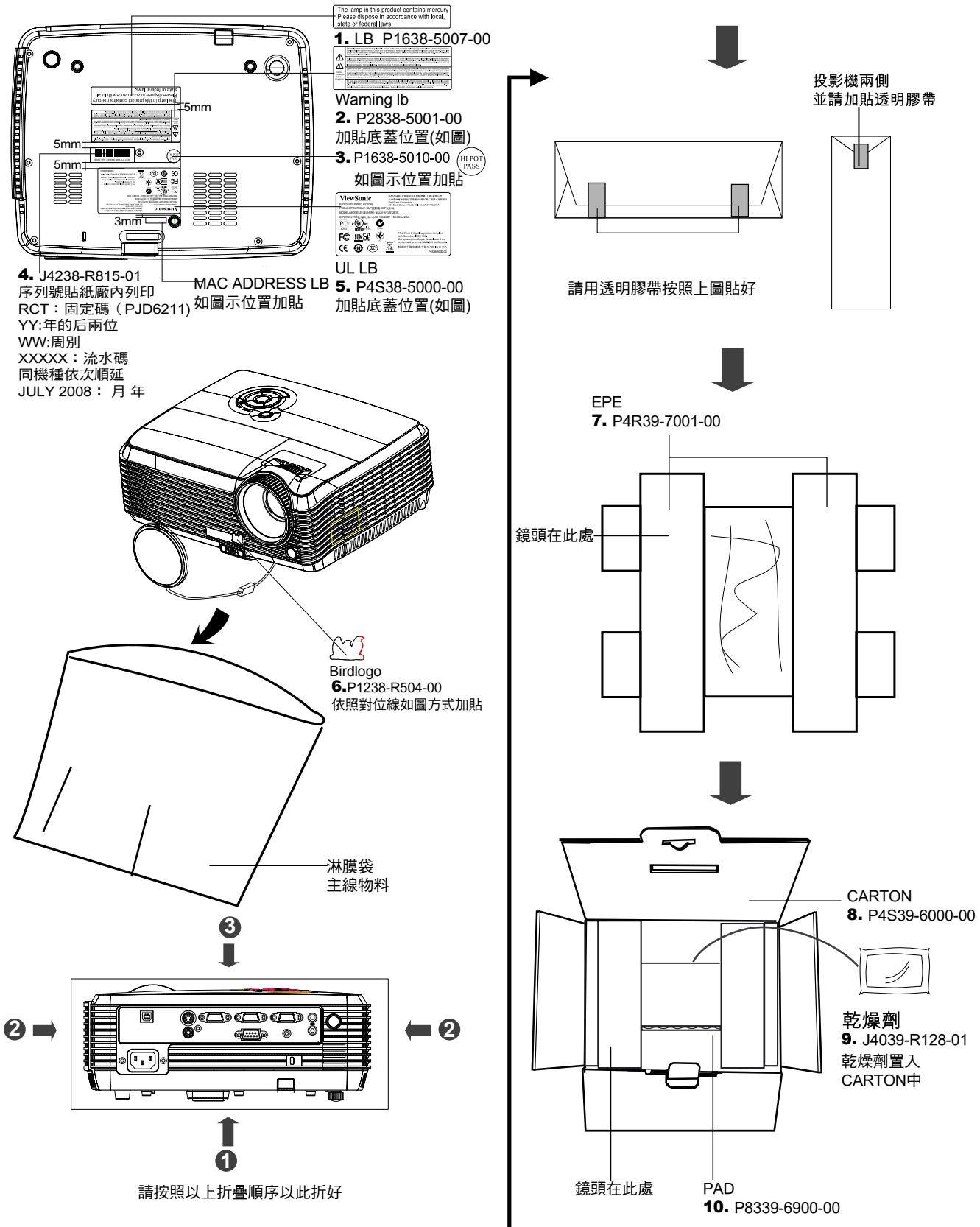
EXPLODED PARTS LIST (PJD6211)

ViewSonic Model Number: VS12618

Rev: 1a

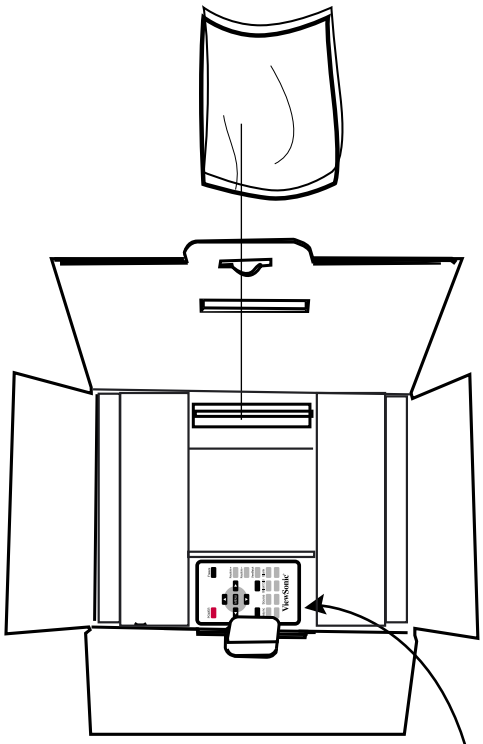
Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1	C-00009631	P4S84-4500	Top Cover	1
2	C-00009638	P4E34-4650-00	Lens Cover	1
3	C-00009633	P4S84-4530	IO Cover	1
4	C-00009630	P4R84-4520	Lamp Cover	1
5	C-00009635	P4R34-4600-00	Filter Cover	1
6	C-00009634	P4R34-4570-00	Lens Housing	1
7	RLC-050	P4R84-2400	Lamp Module	1
8	E-00009492	P4S84-2200	Optical Engine	1
9	B-00009697	P4S84-7100	Main Board	1
10	B-00009701	P4R47-6101	RS232 Board	1
11	B-00009703	P4D47-6100	DMD Board	1
12	B-00008158	P3747-5101	FIR Board	1
13	B-00009700	P4R47-5101	BIR Board	1
14	B-00009702	P4R84-9000	Ballast	1
15	E-00009495	J2413-0092-00	Speaker	1
16	M-00008342	J2394-0101-01	Fan2	1
17	M-00008212	J2394-0101-00	Fan1	1
18	B-00009698	P4U84-8100	Power Board	1
19	C-00009632	P4R84-4510	Bottom Cover	1
20	M-00008344	P4E38-1570-00	Rear Foot	1

6.2 Packing drawing

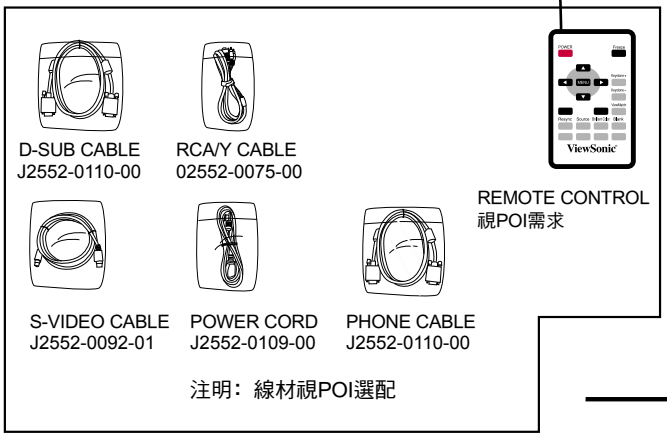


SHEET
11. P4R39-4800-00
QG
12. P4R39-4000-00
CD
13. P4R39-A000-00
入膠袋后放入
卡板中間槽位中

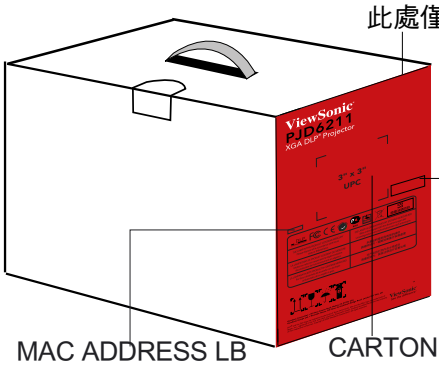
HDPE BAG
14. 04039-R157-01



所有線材和電池一起放入
15. J4039-R184-01後放於此處
遙控器放在最上面

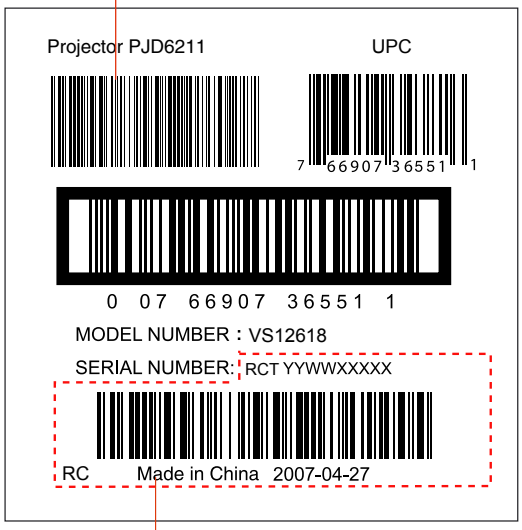


OUTER CARTON
16. P4S39-6000-00印
刷面請以實物為准
此處僅供參考



CARTON LB
J4238-5006-00 廠內列印內容具體內容如下.

此虛線框內廠內列印條碼內容為
Projector PJD6211 (Code128)



此虛線框內廠內列印
條碼內容為
RCTYYWWXXXXX (YY: year, WW: week)
RCT表示PJD6211
XXXXX為流水碼
CODE128
2007-04-27 為生產年月日
"RC"為出貨向別
M: VSA
E: VSE
P: VSI
G: VSCN

PACKING PART LIST (PJD6211)

ViewSonic Model Number: VS12618

Rev: 1a

Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1	NA	P1638-5007-00	LB	1
2	NA	P2838-5001-00	WARNING LB	1
3	NA	P1638-5010-00	LB	1
4	NA	J4238-R815-01	SERIAL LB	1
5	NA	P4S38-5000-00	UL LB	1
6	NA	P1238-R504-00	LB	1
7	P-00009637	P4R39-7001-00	EPE	1
8&16	P-00009636	P4S39-6000-00	CARTON	1
9	P-00008880	J4039-R128-01	DESICCANT	1
10	P-00008722	P8339-6900-00	PAD	1
11	NA	P4R39-4800-00	SHEET	1
12	DC-00009666	P4S39-4000-00	QG	1
13	DC-00009667	P4R39-A000-00	CD-ROM	1
14	P-00008410	J4039-R157-01	PE.BAG	1
15	P-00008794	J4039-R184-01	PE.BAG	1
16	NA	P0N38-5013-00	CARTON LB	1
17	NA	J4238-5006-00	LB	1

7. Maintenance

The projector needs proper maintenance. You should keep the lens clean as dust, dirt or spots will project on the screen and diminish image q uality. If any other parts need replacing, contact your dealer or qualified service personnel. When cleaning any part of the projector, always switch off and unplug the projector first.

Warning:

Never open any of the covers on the projector. Dangerous electrical volta ges inside the projector can cause severe injury. Do not attempt to service this product yourself. Refer all servicing to qualified service personnel.

Cleaning the Lens

Gently wipe the lens with lens cleaning paper. Do not touch the lens with your hands.

Cleaning the Projector Housing

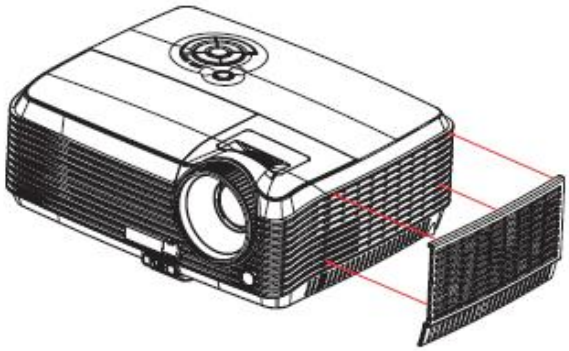
Gently wipe with a soft cloth. If dirt and stains are not easily removed, use a soft cloth damped with water, or water and neutral detergent, and wipe dry with a soft, dry cloth.

Cleaning the Filter Cover

The filter cover, which is located at the side of the projector, should be cleaned after every 100 hours of use. If it is not cleaned periodically, it can become clogged with dust and prevent the projector from being ventilated properly. This can cause over heating and damage the projector.

To clean the filter cover:

1. Switch the projector off and unplug the AC power cord from the wall socket.
2. Remove the filter cover as the illustration shown.
3. Clean the filter cover.
   - To clean the filter cover, you are advised to use a small vacuum cleaner designed for computers and other office equipment.
   - If the filter cover is torn, replace it.
4. Replace the filter cover.
5. Attach the filter cover.
6. Plug the power back into the projector.



8. Recommended Spare Parts List

RECOMMENDED SPARE PARTS LIST (PJD6211)

ViewSonic Model Number: VS12618
Serial No. Prefix: RCT
Rev: 1b

Item	Category	Part Name	Description	ECR/ECN	ViewSonic P/N	Ref. P/N	Ref. NO	Compatibility	Location
1	**Accessories:**	LAMP	LAMP-MODULE-ASY-180W-SPARE PART_VPD-X5400_ROHS		RLC-050	P4R84-2400			
2	**[Adapter, Remote**	Remote Controller	BATTERY_MODULE_SPARE PARTS_VIEWSONIC_VPD-X5400_ROHS(with package)		A-00008487	P4R84-3000		Second source	
4	**Controller, Power**	Power Cord	POWER CORD (AUSTRALIA)_(SAA)YP-35/YC-12_YUNG LI_ROHS		A-00008060	J2552-0053-00			
5	**Cord, External**	Power Cord	POWER CORD(CHINA)_ YP-03/YC-12_YUNG LI_ROHS		A-00008056	J2552-0106-00			
6	**Cables]**	Power Cord	POWER CORD(EUROPE)_ YP-22/YC-12_YUNG LI_ROHS		A-00008057	J2552-0107-00			
7		Power Cord	POWER CORD (SOUTH AFRICA)_ YP-80/YC-12_YUNG LI_ROHS		A-00008233	J2552-0056-01			
8		Power Cord	POWER CORD(UK)_ YP-61/YC-12_YUNG LI_ROHS		A-00008058	J2552-0108-00			
9		Power Cord	POWER CORD(USA)_ UL(YP-12/YC-12)_ YUNG LI_ROHS		A-00008059	J2552-0109-00			
10		RS232 Cable	DB9P TO DB9P CABLE_L1500_P35251A-05_PAN_ROHS		CB-00009062	J2552-0208-00			
11		RGB to component adapter	VGA-15P-6P CABLE_P4724-08_PAN_ROHS		CB-00008906	J2552-0212-00			
12		Signal Cable (VGA)	VGA-15P CABLE_P3842-06_PAN_ROHS		CB-00008710	J2552-0072-03			
13	**PC Board**	Main Board	MAIN_DIP_PCB_ASY_SPARE PARTS_VPD-X5500_ROHS		B-00009697	P4S84-7100			
14	**Assembly: [All**	Power Board	POWER BOARD_SPARE PARTS_VPD-X5501_ROHS		B-00009698	P4U84-8100			
15	**PCBA]**	Key Pad	KEYPAD_DIP_PCB_ASY_VPD-X5500_ROHS		B-00009699	P4S47-7100			
16		FIR Board	FIR_DIP_PCB_ASY_PD-X702_ROHS		B-00008158	P3747-5101			
17		BIR Board	BIR_DIP_PCB_ASY_P4R/VPD-X5400_ROHS		B-00009700	P4R47-5101			
18		RS232 Board	RS232_DC_DIP_PCB_ASY_VPD-X5400_ROHS		B-00009701	P4R47-6101			
19		Ballast	OSRAM-BALLAST-180W-SPARE PART_VPD-X5400_ROHS		B-00009702	P4R84-9000			
20		DMD Board	DMD450_DIP_PCB_ASY_TPD-S5500_ROHS		B-00009703	P4D47-6100			
21		Cw Sensor Board	CW_DIP_PCB_ASY_PD-S550_ROHS		B-00009081	P0F47-5100			
22	**Cabinets:**	Lamp Cover	LAMP COVER_SPARE PARTS_VPD-X5400_ROHS		C-00009630	P4R84-4520			
23	**[Front Bezel, All**	Top Cover	TOP COVER_SPARE PARTS_VPD-X5500_ROHS		C-00009631	P4S84-4500			
24	**Covers, Base**	Bottom Cover	BOTTOM COVER_SPARE PARTS_VPD-X5400_ROHS		C-00009632	P4R84-4510			
25	**Assembly]**	IO Cover	I/O COVER_SPARE PARTS_VPD-X5500_ROHS		C-00009633	P4S84-4530			
26		Lens Housing	LENS HOUSING_VPD-X5400_00_NO PAINTING_ROHS		C-00009634	P4R34-4570-00			
27		Filter Cover	FILTER COVER_VPD-X5400_00_NO PAINTING_ROHS		C-00009635	P4R34-4600-00			
28		ZOOM RING	ZOOM RING_VPD-X5400_99_FOR PAINTING_ROHS		C-00009636	P4R34-4550-99			
29		FOCUS RING	RINGS SPARE PARTS_VPD-X5400_ROHS		C-00009637	P4R84-4540			
30		Lens Cover	LENS CAP_TPD-X5500_00_NO PAINTING_ROHS		C-00009638	P4E34-4650-00			
31	**Cables: [All internal Cables/wires]**	Wire	CONN FPC_0.5PITCH_20PIN_A20240C3344NB_ENTERY_BOTTOM_ROHS(top cover to main board)		CB-00009052	J2471-0300-00			
32		Wire	WIRE ASSY_CON-SW_1102003-202_MSK_ROHS(top cover to main board)	VS-E090256 Added on 10/15/09	CB-00009055	J2595-0366-00			
33		Wire	WIRE CON-CON_1102003-182_MSK_4PIN_L120MM_1571#28_ROHS(color wheel to main board)		CB-00009053	J2595-0325-00			
34		Wire	WIRE CON-CON_1102003-236_MSK_4PIN_L105MM_1571#28_ROHS(color wheel to main board)	VS-E090251 Added on 10/15/09	CB-00009158	J2595-0368-01			
35		Wire	WIRE CON-CON_1102003-231_MSK_10PIN-2*8PIN_L115MM_1007#24_ROHS(power board to main board)		CB-00009054	J2595-0407-00			
36		Wire	WIRE CON-CON_1102003-98_MSK_2PIN_L140MM_1015#22_ROHS(power board to ballast)		CB-00008469	J2595-0218-00			
37		~~Wire~~	~~WIRE ASSY_CON-SW_1102003-202_MSK_ROHS(top cover to main board)~~		~~CB-00009055~~	~~J2595-0366-00~~			
38		Wire	WIRE CON-CON_1102003-203_MSK_4PIN_L115MM_1571#28_ROHS(IR to main board)		CB-00009056	J2595-0367-00			
39		Wire	WIRE LAMP-BALA_01800138R_AVERTRONICS_2PIN_L135MM_3239V#20_ROHS(Ballast to Lamp)		CB-00009057	J2595-0277-00			
40		Wire	WIRE CON-MOTOR PROTECTOR_2PIN_L65MM_1332#24_ROHS(温控开关)		CB-00009058	J2595-0346-00			
41		~~Wire~~	~~WIRE CON-CON_1102003-207_MSK_3PIN_L185MM_1571#28_ROHS(RS232 Board to main board)~~	VS-E090206 Replaced on 10/15/09	~~CB-00009059~~	~~J2595-0371-00~~			
42		Wire	WIRE CON-CON_1102003-235_MSK_3PIN_L185MM_1571#28_ROHS(RS232 Board to main board)		CB-00009156	J2595-0371-01			
43		Wire	WIRE CON-CON_1102003-206_MSK_5PIN_L95MM_1571#28_ROHS(Ballast to main board)		CB-00009060	J2595-0370-00			
44		Wire	WIRE CON-CON_1102003-205_MSK_4PIN_L130MM_1571#28_ROHS(power board to RS232 board)		CB-00009061	J2595-0369-00			
45	**Documentation:**	Qucik Start Guide (QSG)	QG_VIEWSONIC_VPD-X5500_GLOBAL_ROHS		DC-00009666	P4S39-4000-00			
46	**[Quick Start**	User's Guide (CD ROM)	CD ROM_VIEWSONIC_VPD-X5400_GLOBAL_ROHS		DC-00009657	P4R39-A000-00			
47	**Guide, CD Rom;**	Label / Sticker	C/T LB_NO BRAND_GLOBAL_ROHS		DC-00008794	J4238-5069-00			
48	**Electronic**	~~Optical Engine~~	~~OPTICAL ENGINE ASY(WITHOUT LAMP)SPARE PARTS_VPD-X5500_ROHS~~	VS-E090258 Replaced on 10/15/09	~~E-00009492~~	~~P4S84-2200~~			
49	**Components:**	Optical Engine	OPTICAL ENGINE ASY(WITHOUT LAMP)9G SVDMD SPARE PARTS_VPD-X5500_ROHS(for 9G)		E-00009552	P4S84-2201			
50	**[Optical Engine,**	Color Wheel	COLOR-WHEEL MODULE_SPARE PARTS_VDP-X5400_ROHS		E-00009493	P4R84-2600			
51	**Speaker, Color**	~~Lens~~	~~LENS ASY_SPARE PARTS_VPD-X5600_ROHS~~		~~E-00009494~~	~~P4T84-6200~~			
52	**Wheel]**	Lens	LENS ASY_SPARE PARTS_VPD-X5400_ROHS(for 9G)		E-00009652	P4R84-6200			
53		Speaker	SPEAKER_P28KC16-9-7JS-2_VECO_ROHS		E-00009495	J2413-0092-00			
54	**Hardware: [Screw,**	Screw	HEXAGON-HEAT-BOLT-4_MPD-S651_3M_ROHS		HW-00008066	B2035-2520-00			
55	**Bracket, Hinge]**	Screw	SCREW_TP_3_10_A_2_D=5.5_BLACK_NONE_ROHS		HW-00008860	J1635-3670-00			
56		Screw	SCREW_M_3_8.0_E_1.5_D=5.0_BLACK_NL_ROHS		HW-00008861	J1635-C072-00			
57		Screw	SCREW-WASHER_TP_2_4_D_1_D=3.2_NI_NONE_SUS_ROHS		HW-00008043	J1635-3720-00			
58		Screw	SCREW_M_2_5_A_D=3_A0.8_BLACK_HEAT-TREATMENT_ROHS		HW-00008862	J1635-2250-00			
59		Screw	SCREW-WASHER_M_4_6_A_2.6_D=7_ZN_NONE_SUS_ROHS		HW-00008863	J1635-D420-0A			
60		Screw	SCREW-WASHER_TP_3_6_D_2.6_D=5.4_ZN_NONE_SUS_ROHS		HW-00008864	J1635-3620-0A			
61		Screw	SCREW-WASHER_TP_3_10_D_7_D=5.3_NI_NONE_SUS_ROHS		HW-00008345	J1635-A491-00			
62		Screw	SCREW+WASHER_M_3_6_D_2_D=5.3_ZN_NONE_SUS_ROHS		HW-00008865	J1635-B853-0A			
63		Screw	SCREW_TP_1.8_3_E_0.3_D=4.5_BLACK_NONE_ROHS		HW-00008866	J1635-D559-00			
64		Screw	SCREW_TP_2_10_A_1.2_D=3.5_NI_NONE_ROHS		HW-00008867	J1635-3494-00			
65	**Miscellaneous:**	Fan	FAN_3110RL-04W-S59-F00(L=60MM)_NMB_ROHS		M-00008212	J2394-0101-00			
66	**[Switch, Fan,**	Fan	FAN_3110RL-04W-S59-F03(L=60MM)_NMB_ROHS		M-00008342	J2394-0101-01			
67	**Rubber Foot,**	Fan	FAN_BFB0512VHD-8L07(L=65MM)_DELTA_ROHS		M-00008343	J2394-0117-00			
68	**Logo]**	Rear Foot	FOOT-REAR_TPD-X5500_ROHS		M-00008344	P4E38-1570-00			
69	**Packing Material:**	Carton	CARTON_VIEWSONIC_VPD-X5500_GLOBAL_ROHS		P-00009636	P4S39-6000-00			
70	**[Box, Foam, Bags]**	Pad	PAD_PREMIER_PD-S650_GLOBAL_ROHS		P-00008722	P8339-6900-00			
71		Foam	EPE_NO_VPD-X5400_FOR BODY WITHOUT BAG_ROHS		P-00009637	P4R39-7001-00			
72		Pe Bag	PE BAG_ NO BRAND_298MM*190MM_ROHS		P-00008794	J4039-R184-01			
73		Pe Bag	PE BAG_ NO BRAND_GLOBAL_ROHS		P-00008410	J4039-R157-01			
74		Desiccant	DESICCANT_NO BRAND_50G-CLAY_ROHS		P-00008880	J4039-R128-01			
75	**Plastics: [Pedestal,**	Metal Dome	METAL DOME P4R_VPD-X5400_ROHS		PL-00008690	P4R38-1510-00			
76	**Plate, Button, etc.]**	FAN PAD	FAN PAD_TPD-X5500_ROHS		PL-00008691	P4E38-1070-00			
77		FAN SPONGE	FAN SPONGE P4R_VPD-X5400_ROHS		PL-00008692	P4R38-1530-00			

Remark 1: Above listed items are examples, supplier can expand the rows to add more necessary items.
Remark 2: All revised RSPLs with newly added items or any change made should be highlighted and correlated with the ECN/ECR approved by ViewSonic Corporation. This is to eliminate repeated cross checks of each item between this version and prior versions.

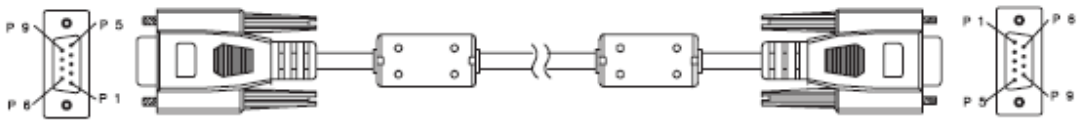
Appendix A: RS-232 Command and Configuration

Baud Rate: 19200 Parity Bit: none

Data Bit: 8 Stop Bit: 1 Assign Port: COM1

Name	Operation type	CRS	Header	Command	Response
Power	ON	BE,EF,10,05,00	C6,FF	11,11,01,00,01,00	06
	OFF	BE,EF,03,06,00	DC,DB	69,00,00,00,00,00	06
Source	Computer (Analog RGB)	BE,EF,03,19,00	19,29	01,47,05,CC,CC,00	06
	YCbCr	BE,EF,03,19,00	89,E8	01,47,05,CC,CC,00	06
	S-Video	BE,EF,03,19,00	E8,69	01,47,05,CC,CC,00	06
	Composite Video	BE,EF,03,19,00	78,A8	01,47,05,CC,CC,00	06
	HDTV (Y-Pb-Pr)	BE,EF,03,19,00	DA,A8	01,47,05,CC,CC,00	06
OSD	Menu	BE,EF,02,06,00	E9,D3	30,00,00,00,00,00	06
	Up	BE,EF,02,06,00	6D,D2	34,00,00,00,00,00	06
	Down	BE,EF,02,06,00	0B,D2	32,00,00,00,00,00	06
	Left	BE,EF,02,06,00	DA,D3	33,00,00,00,00,00	06
	Right	BE,EF,02,06,00	38,D2	31,00,00,00,00,00	06
ECO	On	BE,EF,03,06,00	EF,DB	6A,00,00,00,00,00	06
	Off	BE,EF,03,06,00	3E,DA	6B,00,00,00,00,00	06
Auto Source	On	BE,EF,03,06,00	89,DB	6C,00,00,00,00,00	06
	Off	BE,EF,03,06,00	58,DA	6D,00,00,00,00,00	06
Source		BE,EF,02,06,00	57,D0	2E,00,00,00,00,00	06
Auto-Sync		BE,EF,02,06,00	86,D1	2F,00,00,00,00,00	06
Blank Screen(Video)		BE,EF,02,06,00	DF,DF	66,00,00,00,00,00	06
Keystone	Keystone	BE,EF,02,06,00	3D,DE	64,00,00,00,00,00	06
	Up	BE,EF,03,06,00	10,DB	65,00,00,00,00,00	06
	Down	BE,EF,03,06,00	23,DB	66,00,00,00,00,00	06
Volume	Volume +	BE,EF,02,06,00	F1,DE	68,00,00,00,00,00	06
	Volume -	BE,EF,02,06,00	20,DF	69,00,00,00,00,00	06
Image		BE,EF,03,06,00	F2,DA	67,00,00,00,00,00	06
Aspect Ratio		BE,EF,03,06,00	0D,DA	68,00,00,00,00,00	06
Factory Reset		BE,EF,03,06,00	6B,DA	6E,00,00,00,00,00	06
Lamp Hour		BE,EF,03,06,00	BA,DB	6F,00,00,00,00,00	Lamp Hour
Firware Version		BE,EF,03,06,00	D5,D9	70,00,00,00,00,00	Version

System Status	BE,EF,03,06,00	04,D8	71,00,00,00,00,00	03:Projector ON (Normal Mode)



D-Sub 9 pin

1	1 CD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

Wire List

C1	COLOR	C2
1	Black	1
2	Brown	2
3	Red	3
4	Orange	4
5	Yellow	5
6	Green	6
7	Blue	7
8	Purple	8
9	White	9
SHELL	DW	SHELL

Appendix B: IR Control Code

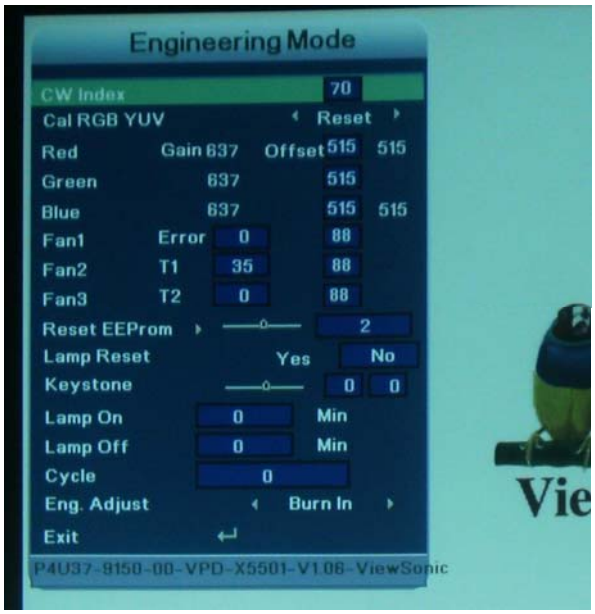
Key	Format	Byte1	Byte2	Byte3	Byte4
Power	NEC	83	F4	13	87
Source	NEC	83	F4	13	02
Up	NEC	83	F4	13	82
Down	NEC	83	F4	13	85
Left	NEC	83	F4	13	83
Right	NEC	83	F4	13	81
MENU	NEC	83	F4	13	84
Auto	NEC	83	F4	13	64
Mouse	NEC	83	F4	13	6B
ViewMatch	NEC	83	F4	13	63
Freeze	NEC	83	F4	13	80
Enter / Mouse Left	NEC	83	F4	13	8c
Exit / Mouse Right	NEC	83	F4	13	8d
KeyS+	NEC	83	F4	13	86
KeyS-	NEC	83	F4	13	8a
Digital Zoom+	NEC	83	F4	13	68
Digital Zoom-	NEC	83	F4	13	6a
Volume+	NEC	83	F4	13	88
Volume-	NEC	83	F4	13	89
Mute	NEC	83	F4	13	8b
Blank	NEC	83	F4	13	8f

Appendix C: How to reset the Lamp Hours(OK)

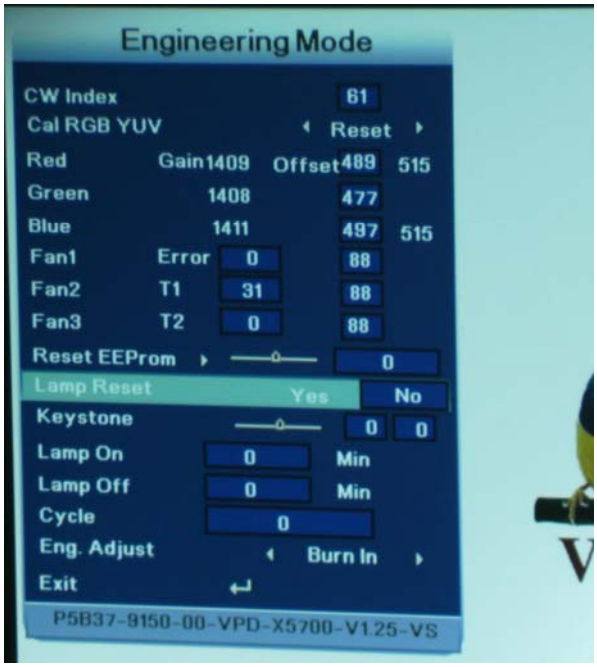
(1) Press “Menu” button to open the Main menu.
(2) Move color bar to “setting” item and then press right button to enter sub -menu.

(3) Move down the color bar to “Lamp Hours” item.

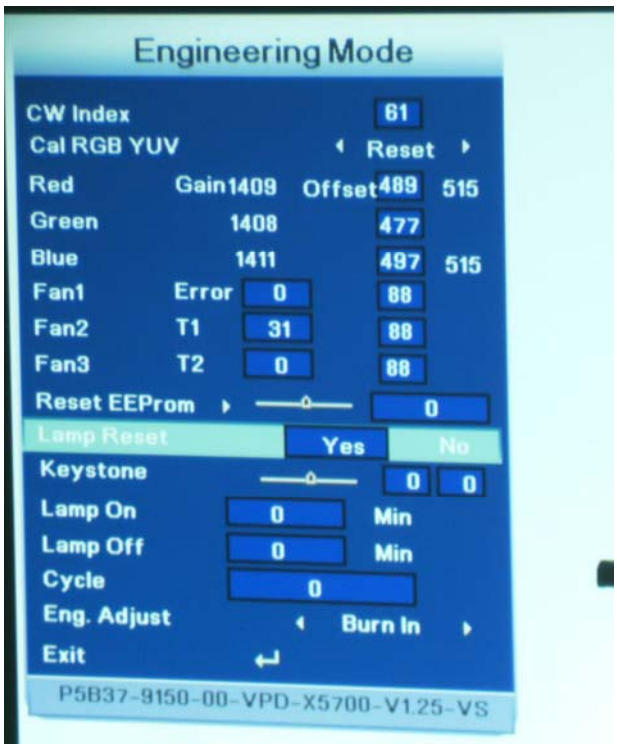
(4) Press the direction keypad following the actions below to enter engineering mode:
Right once, left twice, right three times, left four times.



(5) Move down the color bar to “Lamp Reset” item.



(6)Press left button to select “yes” to reset Lamp Hours .



(7)Then the Lamp Hours would reset to 0 hours.

* Reader's Response*

Dear Readers:
Thank you in advance for your feedback on our Service Manual, which allows continuous improvement of our products. We would appreciate your completion of the Assessment Matrix below, for return to ViewSonic Corporation.

Assessment

A. What do you think about the content of **this** Service Manual?

Unit	*Excellent*	*Good*	*Fair*	*Bad*
1. System Introduction				
2. Firmware Upgraded Flow				
3. Machine Disassembly and Replacement				
4. Troubleshooting and Verifying the Repair				
5. Connector Information				
6. FRU (Field Replaceable Unit) List				
7. Maintenance				
8. Recommend Spare parts List				

B. Are you satisfied with **this** Service Manual?

Item	*Excellent*	*Good*	*Fair*	*Bad*
1. Service Manual Content				
2. Service Manual Layout				
3. The form and listing				

C. Do you have any other opinions or suggestions regarding **this** service manual?

Reader's basic dada:

Name:		Title:	
Company:			
Add:			
Tel:		Fax:	
E-mail:			

After completing this form, please return it to ViewSonic Quality Assurance in the USA at facsimile 1-909-839-7943.