Service Manual

ViewSonic PJD6531w

Model No. VS12476

DLP Projector

Revision History

Revision	SM Editing Date	ECR Number	Description of Changes	Editor
1a	04/13/10		All content on this SM had approved by PE, Charles	Sophia Kao

Table of Contents

1 System Introduction

1.1 Technical Specification

Display system	Single 0.65" DLP panel
Resolution	WXGA (1280 x 800)
Zoom	1.2X
F/No.	2.55
Focal length	21 - 25.6mm
Screen size	40" – 150"
Lamp	230W
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 2, HDMI 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, LAN x 1
Speaker	5 watt x 2
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, 3.7A
Power consumption	290 W
Dimension (W x D x H)	279.5 x 218 x 105 mm (11.0 x 8.6 x 4.1 inches)
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
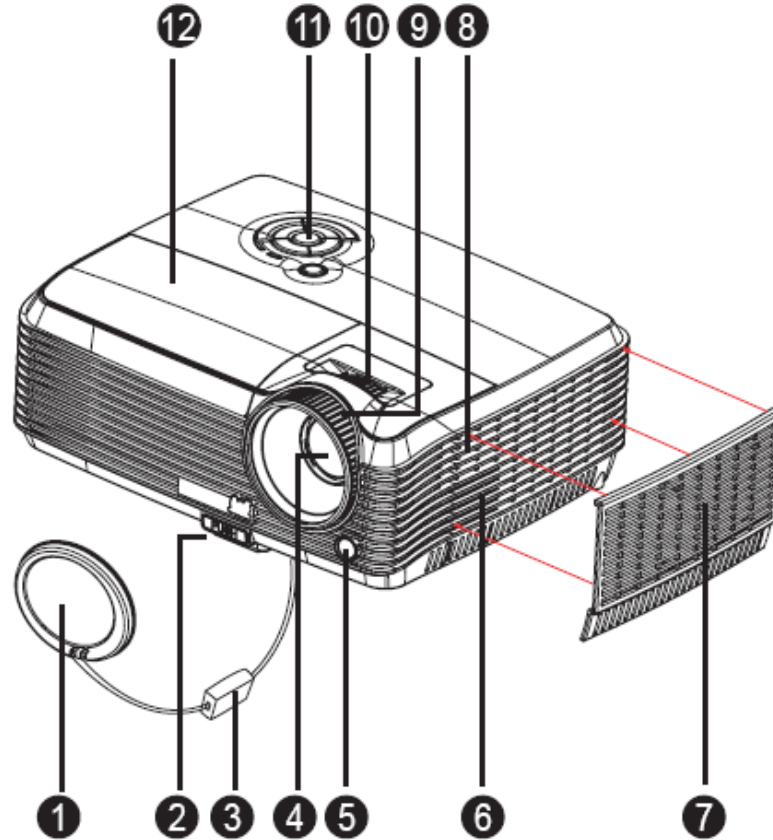
1. Lens cap	7. Fil ter cover
2. Elevator button	8. Speaker
3. Lens cap strap	9.Focus ring
4. Projection lens	10.Zoom ring
5. Front IR remote control sensor	11.Control panel
6. Ventilation holes (intake)	12.Lamp cover

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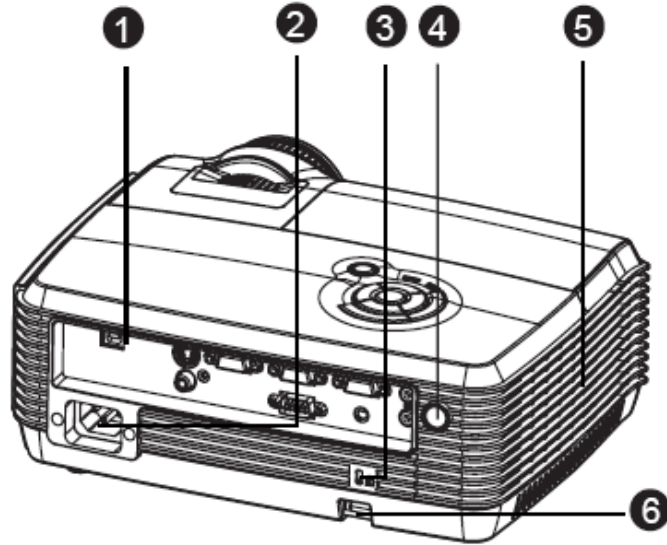
1. Connection ports
2. AC power socket
3. Kensington lock
4. Rear IR remote control sensor
5. Ventilation holes (exhaust)
6. Security bar

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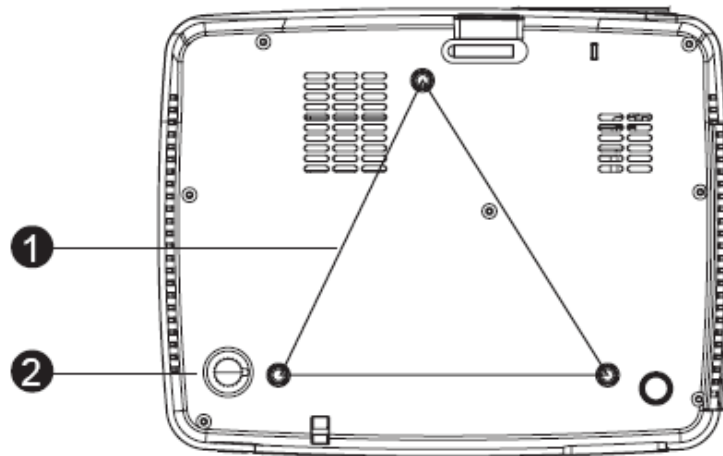
1. Ceiling mount (M4*6)
2. Tilt-adjustment feet

B. Button function and LED indicator
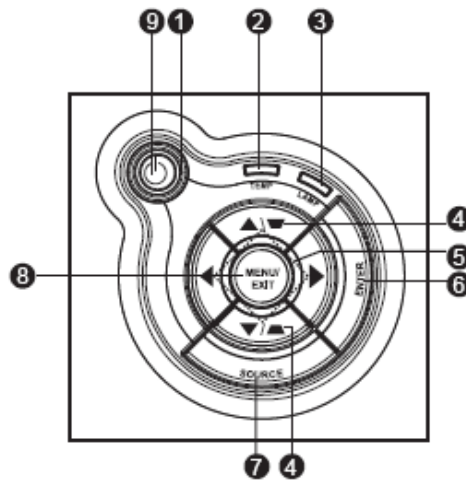
LED

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
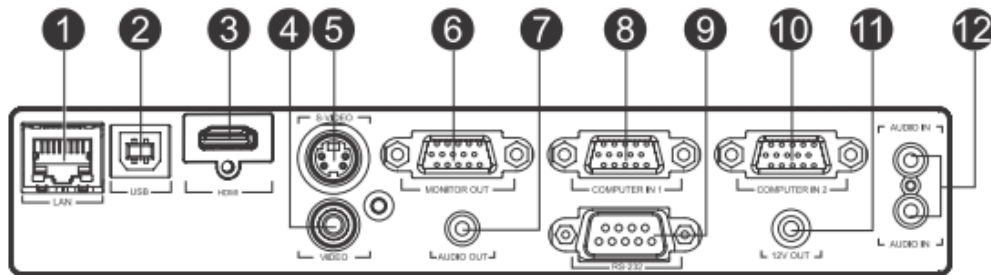
1. **LAN**

   For network control.

2. **USB**

   This connector is for firmware update and mouse function support.

3. **VIDEO**

   Connect composite video output from video equipment to this jack.

4. **S-VIDEO**

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

5. **MONITOR OUT**

   Connect to a computer display, etc.

6. **AUDIO OUT**

   Connect to a speaker or other audio input equipment.

7. **COMPUTER IN 1**

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

8. **RS-232**

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

9. **COMPUTER IN 2**

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

10. **12V OUT**

    12V DC out

11. **AUDIO IN**

    Connect an audio output from video equipment to this jack. The upper AUDIO IN is Audio 1, and the lower one is Audio 2. When Audio 1 is turned on, Audio 2 will turn off automatically and vice versa.

D. Remote Control

① POWER
Turn the projector on or off.

② VGA1
Select analog RGB signal from COMPUTER IN 1 terminal.

③ Source
Manually select an input source.

④ Enter
Confirmed selections.

⑤ Keystone+ / -
Adjust image distortion caused by tilting the projector.

⑥ ViewM
Switch in between high brightness performance or Accuracy color performance.

⑦ Freeze
Press "Freeze" to pause the screen image. Press again to cancel the freeze function.

⑧ Mouse
Switch between OSD control and Mouse control (Apply to Navigation buttons, Enter/Mouse Left Click, and Exit/Mouse Right Click buttons).

⑨ Laser
Aim the remote at the viewing screen, press and hold this button to activate the laser pointer.

⑩ VGA2
Select analog RGB signal from COMPUTER IN 2 terminal.

⑪ Video
Select video signal from video equipment.

⑫ Auto
Resynchronize the projector to the input signal from a computer. This function is available for computer mode only.

⑬ MENU
Display on-screen display menus.
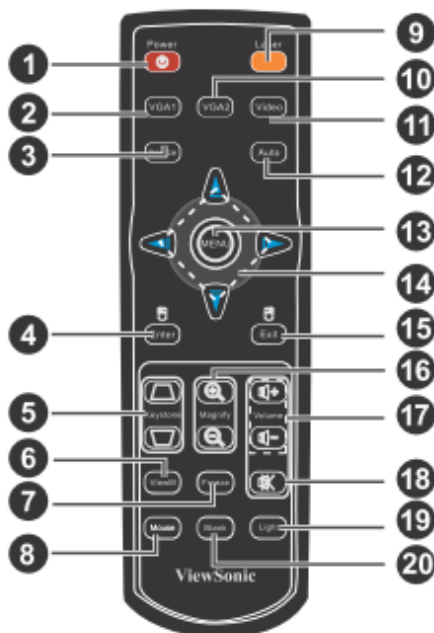
⑭ Four directional buttons
Use four directional buttons to select items or make adjustment to your selection.

⑮ Exit
Exit OSD Menu.

⑯ Magnify
Zoom in and out the images.

⑰ Volume + / -
Adjust the volume level.

⑱ Mute
Cut off the sound temporarily. Press again to cancel the Mute function.

⑲ Light
Enable backlit functions of the remote control's buttons.

⑳ Blank
Cut off the screen temporarily. Press again to cancel the Blank Screen function.

1.3   PJD6531w 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 230/0.8 E20.8 open type
	Identcode : A 598 09C
Type driver	PT VIP O3 MID(230W)-UNISHAPE
	Identcode : A581 152 (lock type,Gen5,VC) or
	A581 146 (lock type,Gen5,VC,DL) or
	A584 924(lock type,Gen5,VC,HF)

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

Initial Characteristics

	nominal	tolerance
Input Voltage	380V DC	320…400V DC
Standby(non-operating)		120…400V DC
Max. input voltage ripple	30V_{pp}@ 100-120Hz	
Max. input current ripple	1Ar ms@40-300kHz	
Input Wattage	max.260W@230W lamp wattage	
Input Wattage standby operation	1, 7W type@380V DC	
Output Wattage		
nominal	230W	±3% [7]
DIM mode	1 90W	±3% [6]
controlled by UART	190W…230W in step with of 1/128 of nominal power	
Output current limitation	4.0A(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 acous tic 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 rightl y. The Start Control Input and the Flag Output are mains isolated.
Output Protection	short circuit +output / - output for max. 10s
	No protection for output short to GND
Safety Standards	IEC6 0950, UL60950

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 appro val 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 duri ng 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. It s 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 la mp, 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 p ressure. 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 a nd 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 o pened.
- ♦ 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   PJD6531w System Block Diagram
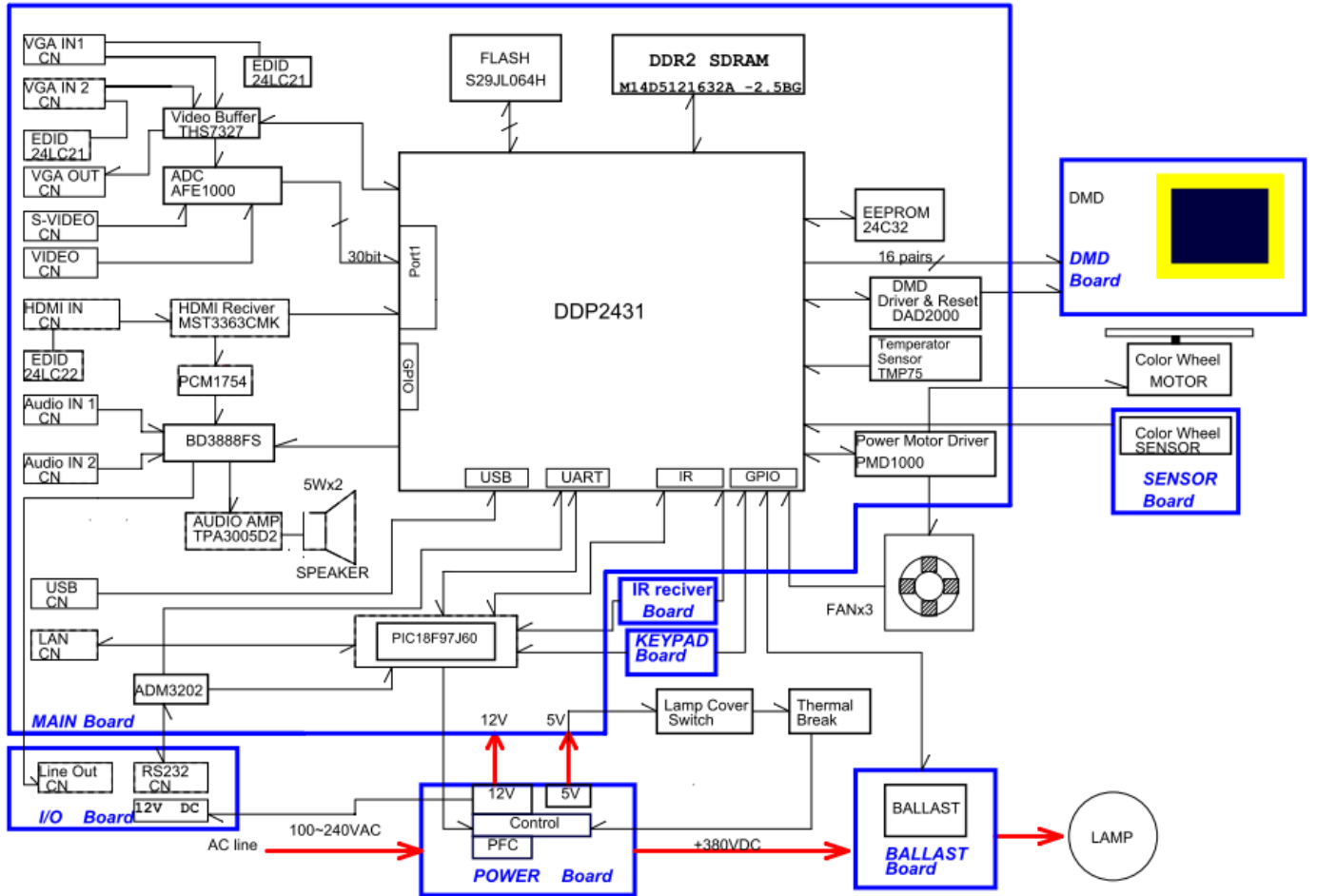
2 Firmware Upgraded Flow

The following sections list the required software, hardware, and procedures to upgrade your ViewSonic projector firmware.

WARNING

During the firmware download, do not disconnect the USB cable, shut down your computer nor turn off your projector. This will corrupt the flash memory, and you may have to send in your projector to recover the flash memory. .

1. Hardware and Software

- Computer Window® XP or later
- USB Type A to Type B Cable
- Power Cord
- DLP Composer Lite™ v9.2

- **Set Projector in firmware update mode**
    1. Push Enter bottom + Power Button then plug in Power cord (the lamp and Temp indicator will show flashing)
    2. Plug USB cable to PC (or laptop)
    3. Execute composer lite software for firmware update

2. Software Installation Procedures (DLP Composer™ Lite v9.2)

1. Double-click **[DLP Composer Lite v9.2 Setup.exe].**
2. Click **[Next]** to continue the installation.
3. On the **[License Agreement]** screen, scroll down 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.
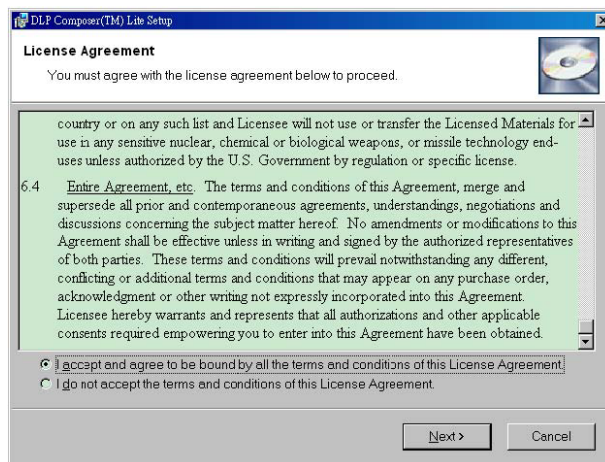
4. On the Select **[Installation Type]** screen, select **[ALL]** and click **[Next]** to continue the installation.

5. When the installation is finished, click **[Finish]** and reboot the computer.
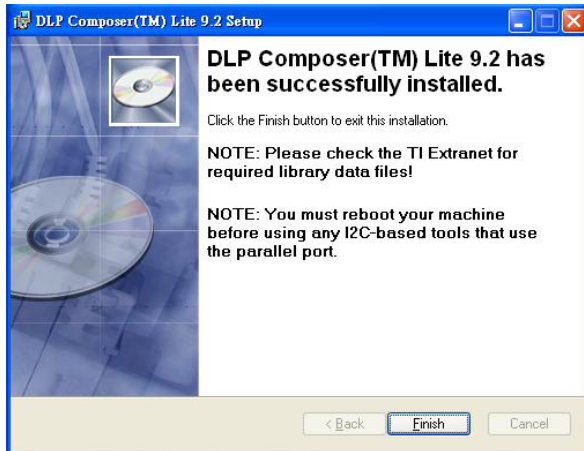
6. A shortcut to DLP Composer™ Lite v9.2 is created on the desktop.

3. USB Driver Installation

1. After the DLP Composer™ Lite v9.2 has been installed, choose "Install DLP Device USB Driver" under Start\All Programs\DLP Composer™ Lite 9.2 on your computer.

2. Follow the instructions given on the screen below.
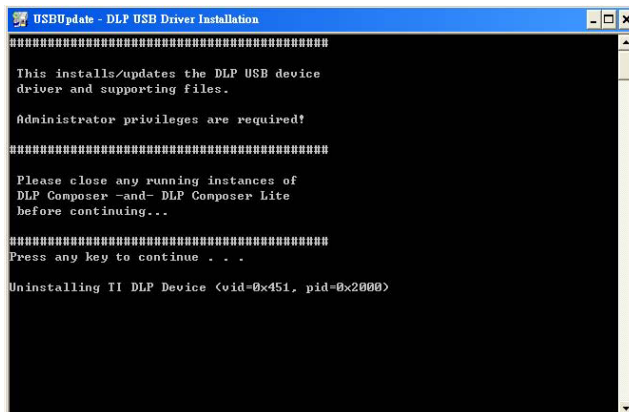
3. Copy the file "FlashDeviceParameters.txt" into the "C:\ Program Files\ DLP Composer Lite 9.2" folder.

4. Firmware Updating Procedures

1. Connect the Type B USB connector from the projector to the computer with Type A.
2. Double-click **[DLP Composer™ Lite 9.2].**

3. Select **[Edit]/ [Preferences]** on the top menu bar. For **[Communications]**, select **USB** as the **Projector Interface**.
4. Under **[USB Device Identification]**, verify that the USB Vendor ID and product code are **Vendor 0x451** and **Product 0x2000**.
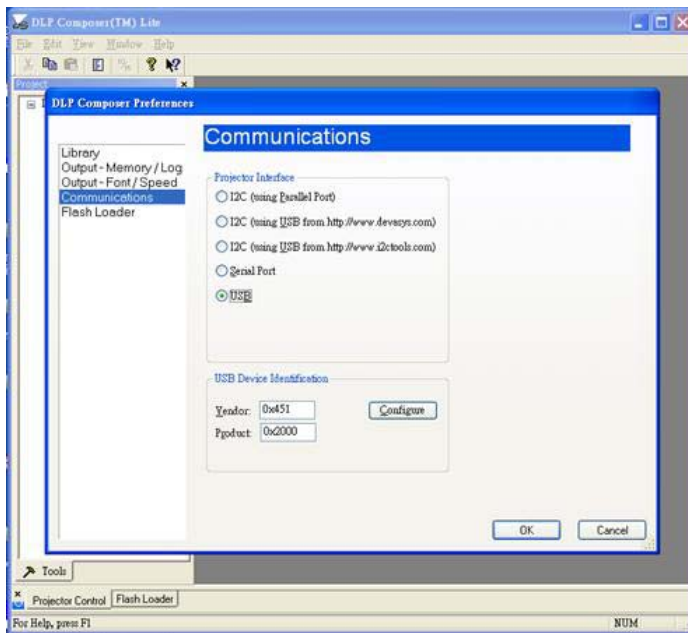
5. Click **[OK]** to proceed.

6. Under the **[DLP Composer Lite]** screen, select **[Flash Loader]**. The **Flash Loader** screen appears.

2. Put checkmark next to [Skip Boot Loader Area], VALUE SETTING is 32KB

1. Click [Browse] and select [*.img]

3. Click [Reset Bus] to confirm the USB connection is ok.

4. Click [Start Download]

7. Click **[Browse]** and select the firmware **[xxxxxxxxx.img]** file to update your projector.
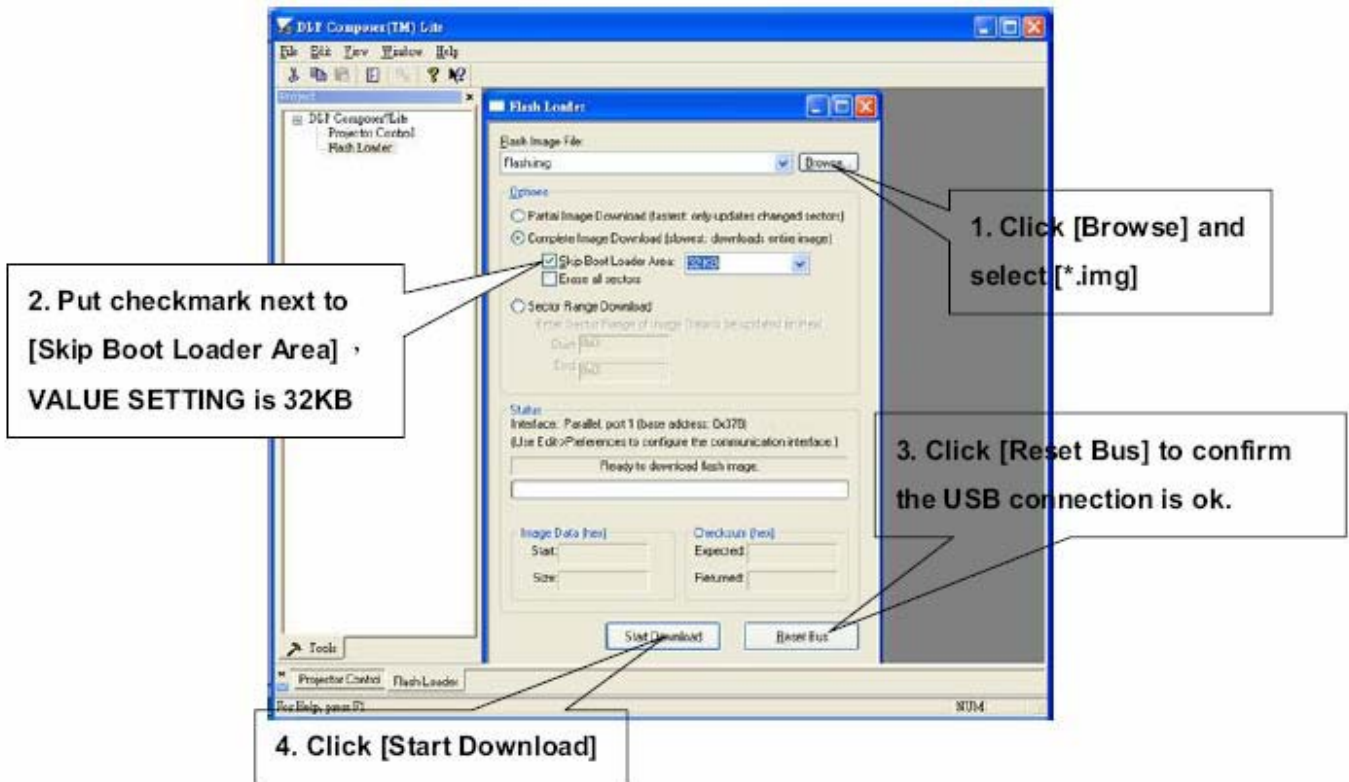8. Make sure **[Skip Boot Loader Area]** is checked, and its value is **[32KB]**.
9. Press and hold the **Enter** and **Power** buttons simultaneously on the projector keypad and then plug in the power cord on the projector until the projector Temp LED and Lamp LED are lit up. This indicates that the projector is in the firmware download mode.
10. Click **[Reset Bus]** to reset and verify good USB connection.
11. Click **[Start Download]**.

12. On the warning dialog box message below, click **[Yes]** to continue.
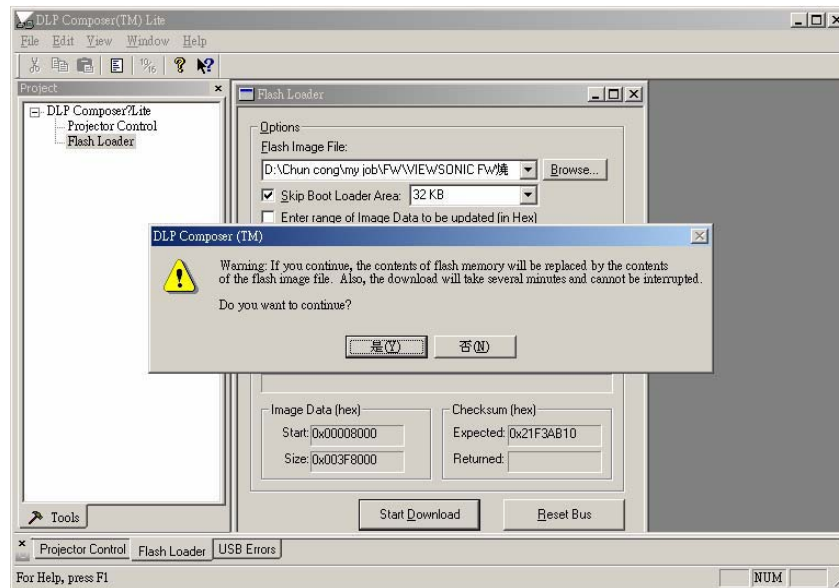
13. The projector will restart to indicate the completion of the firmware update process.
14. Disconnect the USB cable and power cord from the projector. Reconnect the power cord and power on the projector.
15. Press **Menu** on the projector keypad, scroll down and select **Factory Default**. Then, select **Yes** and press **Enter**.

3 Machine Disassembly and Replacement
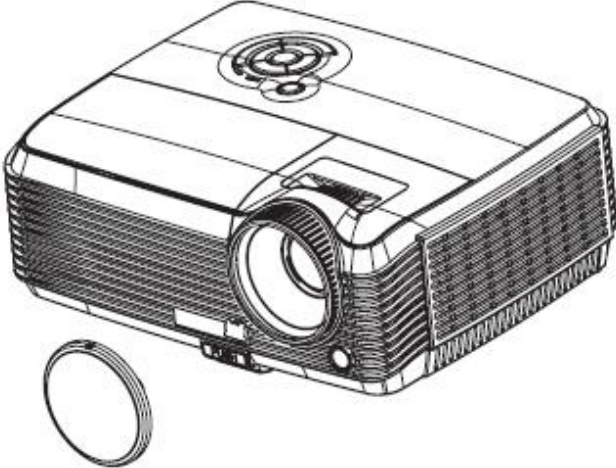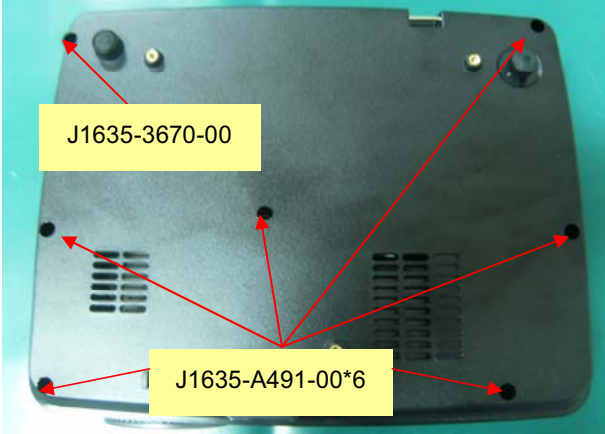
3.1 Tools
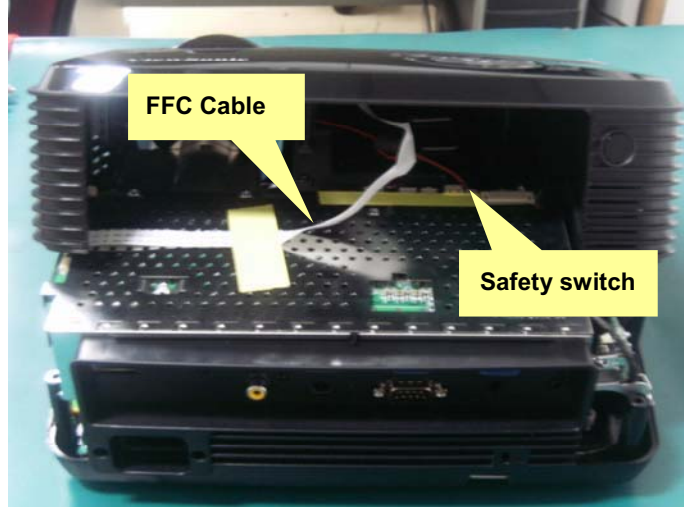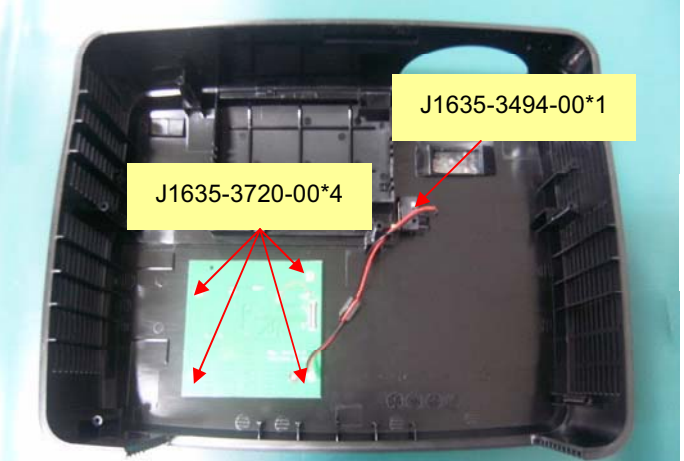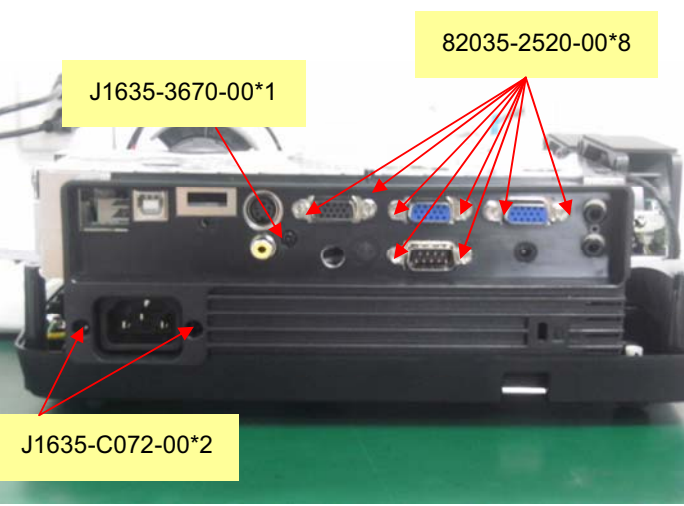
Item	Photo
Long Nose Nipper	
Hex Sleeves 5mm	
Screw Bit(+):107 Screw Bit(+):101 Screw Bit(+):102	
Anti-static wrist strap	
Anti-static wrist gloves	
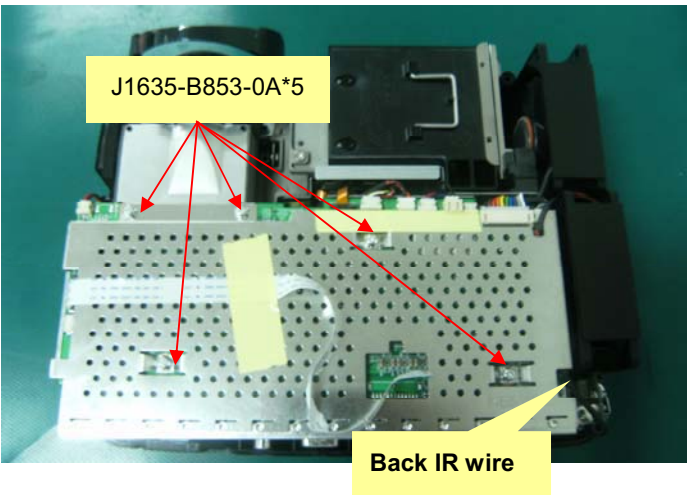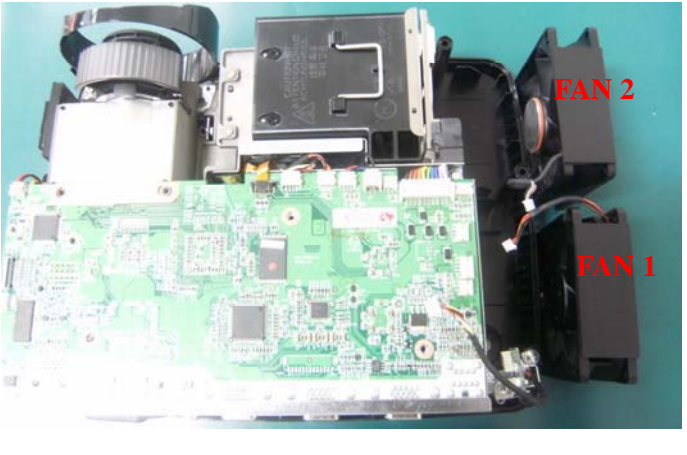
3.2 Disassembly Procedure
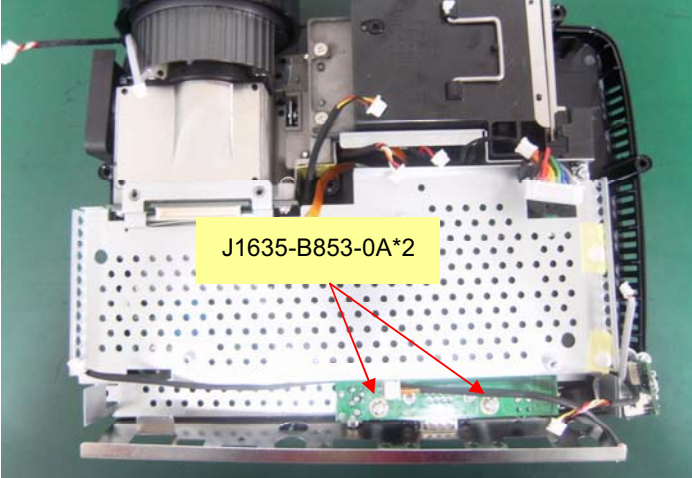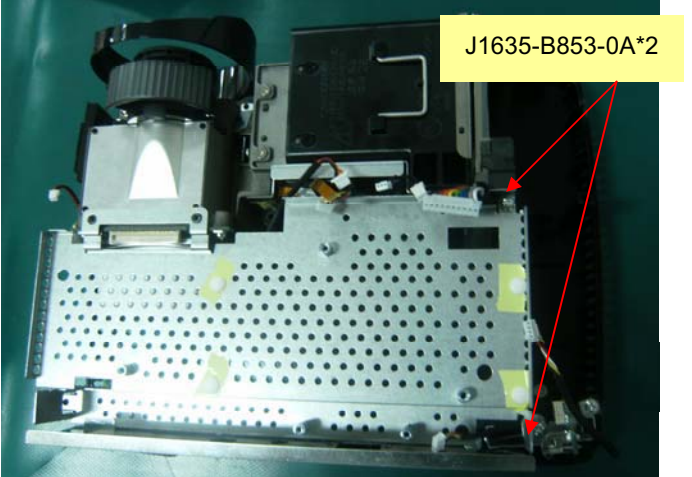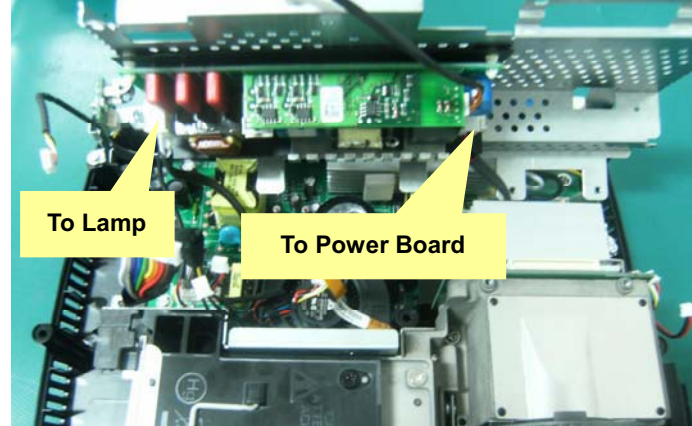
Warning
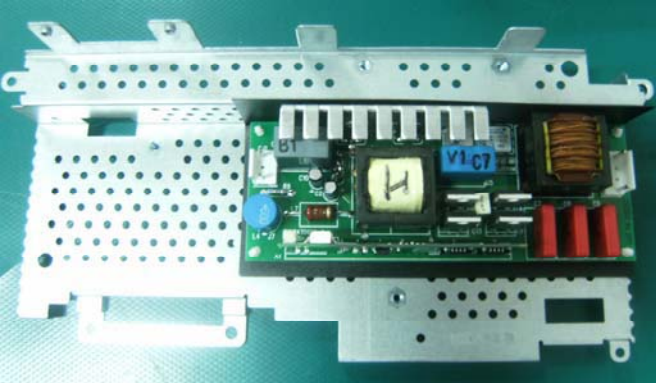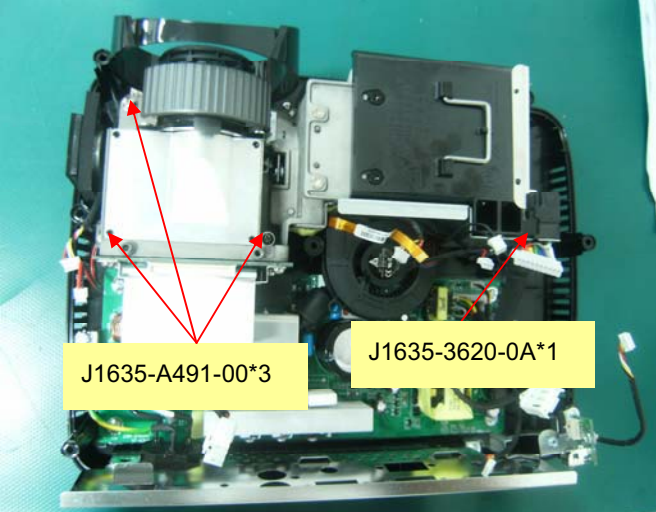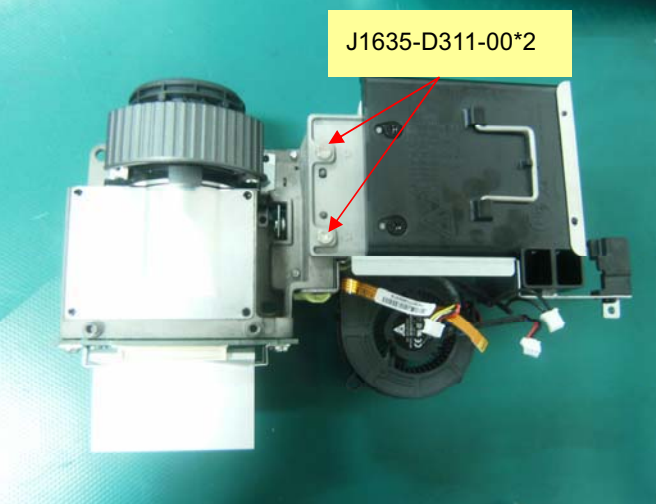
♦ Put on the Static Electricity Ring when starting for repair.

♦ 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.
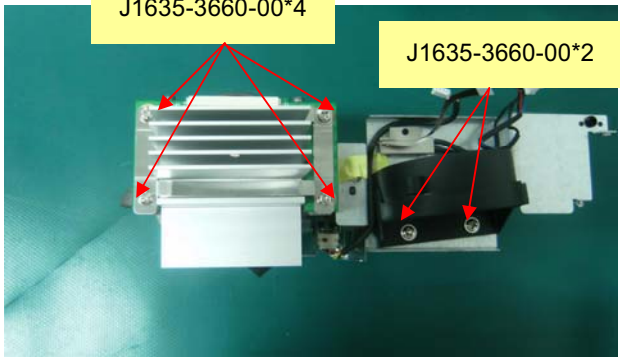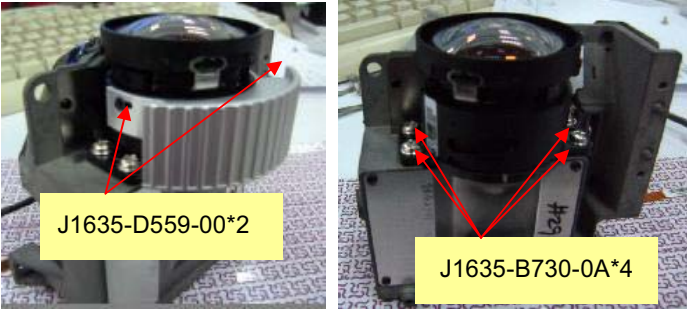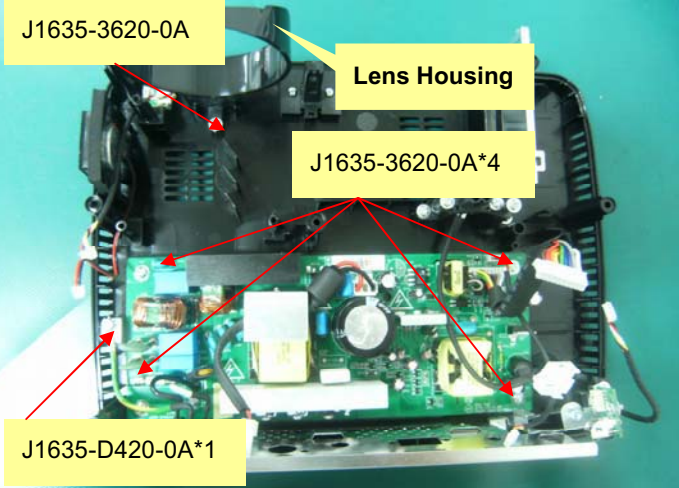
Step	Figure	Description
1		Press the power button to shutdown the projector and disconnect the power cord. If the lamp is hot, please do not start any procedure until the projector lamp cools down. Flip the projector and remove the lens cover.
2	 J1635-3670-00 J1635-A491-00*6	1. Flip the projector on 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.
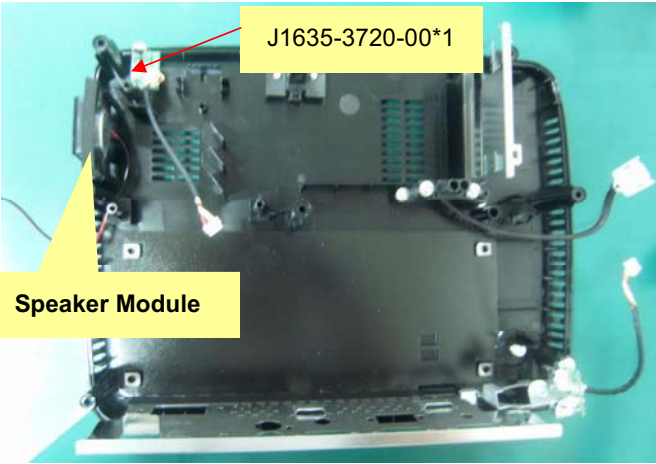
Step	Figure	Description
4	FFC Cable / Safety switch	1. Disconnect the FFC cable and safety switch between top cover and main board. 2. Raise the Top Cover.
5	J1635-3494-00*1 / J1635-3720-00*4	1. Loosen the one screw to remove the safety switch. 2. Remove four screws to lift up the keypad board.
6	82035-2520-00*8 / J1635-3670-00*1 / J1635-C072-00*2	1. Remove all screws as shown. 2. Remove the IO cover.

Step	Figure	Description
7	J1635-B853-0A*5 Back IR wire	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	FAN 2 FAN 1	Remove the two Fan Modules.
9		1. Show you what the connector should be. 2. Remove all wires. 3. Remove the Main Board.
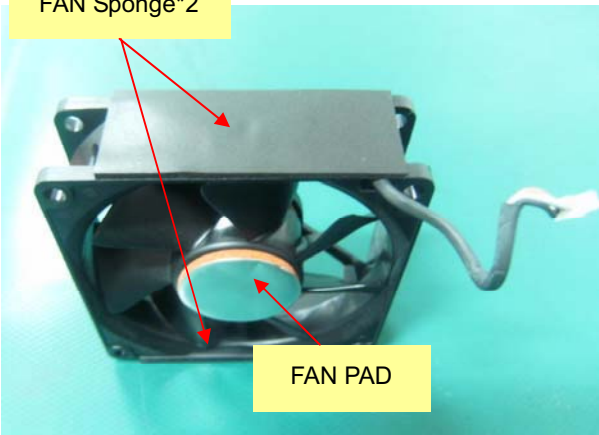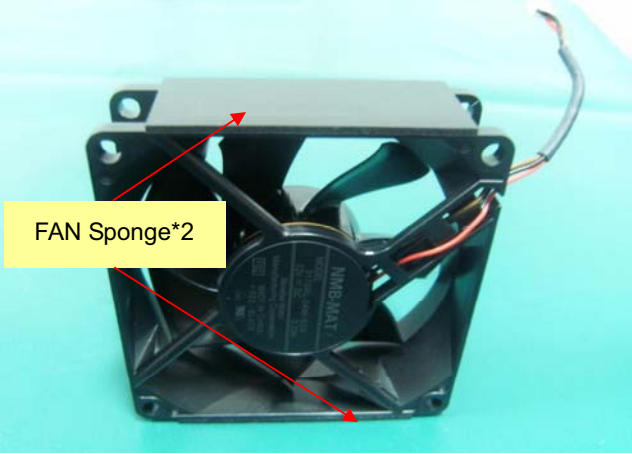
Step	Figure	Description
10	J1635-B853-0A*2	1. Loosen the two screws as shown and remove all wires on RS232 Board. 2. Remove the RS232 Board.
11	J1635-B853-0A*2	Loosen the two screws as shown to remove the metal sheet of Ballast.
Note	To Lamp — To Power Board	Note: 2 wires have been connected to Ballast. 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	J1635-A491-00*3 J1635-3620-0A*1	1. Remove the screws on the optical engine. 2. Remove the optical engine module.
14	J1635-D311-00*2	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	J1635-3660-00*4 J1635-3660-00*2	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	J1635-D559-00*2 J1635-B730-0A*4	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	J1635-3620-0A Lens Housing J1635-3620-0A*4 J1635-D420-0A*1	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.
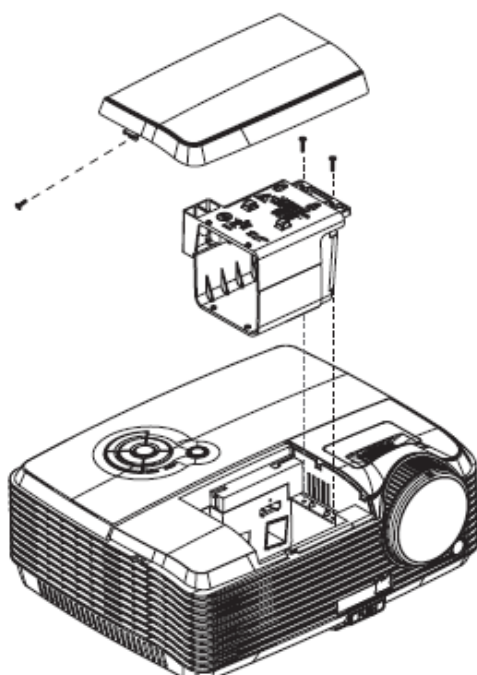
Step	Figure	Description
18	**J1635-3720-00*1** / **Speaker Module**	1. Remove Speaker Module. 2. Loosen the screws and remove front and back IR.

3.3 Assembly FAN Module

Step	Figure	Description
1	**FAN Sponge*2** / **FAN PAD**	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	**FAN Sponge*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 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.)
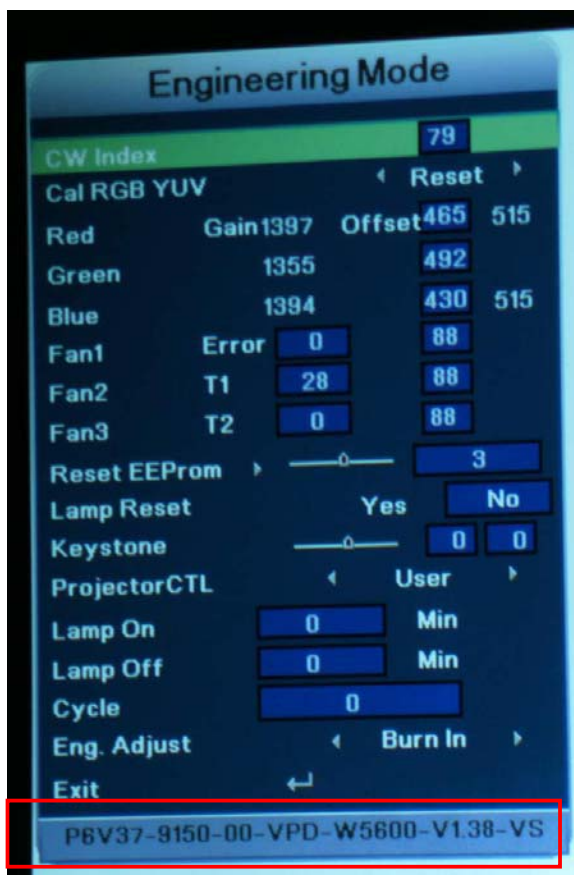
Note: This FW version is just for reference.

(2) Confirm LED indicator

LED Type	Color	Status	Meaning
Power LED	Blue	Solid	The projector is in standby mode.
Lamp LED	Off	Off	
Temp LED	Off	Off	
Power LED	Blue	Solid	Powering up
Lamp LED	Off	Off	
Temp LED	Off	Off	
Power LED	Blue	Solid	Normal operation
Lamp LED	Off	Off	
Temp LED	Off	Off	
Power LED	Blue	Flash	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 motor 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 optical engine are all suitable to check by swapping modules.

Power Source Troubleshooting:

```
┌──────────────┐                                    ┌──────────────┐
│  No Power    │                                    │ Fan failure  │
│ Source after │                                    │  after       │
│ turning on   │                                    │ turning on   │
└──────┬───────┘                                    └──────┬───────┘
       │                                                   │
       ▼                      NG   ┌──────────────┐        ▼                 NG  ┌──────────────┐
   ◇ Check AC  ────────────────▶  │ Replace AC   │    ◇ Check fan ────────────▶ │ Reconnect fan│
    socket and                    │   socket     │     connection              └──────────────┘
    connector                     └──────────────┘
       │ OK                                              │ OK
       ▼                      NG   ┌──────────────┐        ▼                 NG  ┌──────────────┐
   ◇ Check   ──────────────────▶  │ Replace power│    ◇ Check  ───────────────▶ │ Replace fan  │
    Safety Switch                 │ board or     │       Fan                   └──────────────┘
       │                          │ reinstall    │
       │ OK                       └──────────────┘       │ OK
       ▼                      NG   ┌──────────────┐        ▼                 NG  ┌──────────────┐
   ◇ Check LED and ───────────▶   │ Replace keypad│   ◇ Check  ───────────────▶ │ Replace      │
     keypad FFC                   │ and FFC      │      Main board              │ Main board   │
       │                          └──────────────┘                             └──────────────┘
       │ OK
       ▼           NG        ◇ Check           NG
   ◇ Check 7 pin ───────────▶  Fuse ──────────────────┐
     Power output                │                     │
       │                         │ OK                  │
       │ OK                      ▼                     ▼
       ▼              ┌──────────────┐     ┌──────────────┐     ┌──────────────┐
  ┌──────────────┐    │ Replace      │     │ Replace fuse │
  │ Replace      │    │ power board  │     └──────────────┘
  │ main board   │    └──────────────┘
  └──────────────┘
```

Fail to light up

```
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

```
No Volume
        │
        ▼
Check Speaker ──NG──► Replace Speaker
        │ OK
        ▼
Check Main board ──NG──► Replace Main board
```

Signal Troubleshooting

Computer No Signal flowchart:

Computer No Signal → Check Source → NG → Turn on Source

Check Source → OK → Check Cable → NG → Replace Cable

Check Cable → OK → Check Output signal → NG → Replace Main board

Video No Signal flowchart:

Video No Signal → Check Source → NG → Turn on Source

Check Source → OK → Check Cable → NG → Replace Cable

Check Cable → OK → Check Main board → NG → Replace Main board

Image abnormal

```
┌─────────────────┐
│  Image abnormal │
└─────────────────┘
         │
         ▼
    ◇ Power on ◇
    ◇ again and reset ◇
    ◇ OSD ◇
         │ OK
         ▼
    ◇ Check input ◇      NG    ┌──────────────┐
    ◇ cable and signal ◇ ────▶ │    Adjust    │
    ◇ setting ◇                │ Input signal │
         │ OK                  └──────────────┘
         ▼
    ◇ Check ◇           NG    ┌──────────────┐
    ◇ Main board ◇ ────────▶  │   Replace    │
         │ OK                 │  Main board  │
         ▼                    └──────────────┘
    ◇ Check ◇           NG    ┌──────────────┐
    ◇ Optical Engine ◇ ────▶  │   Replace    │
                              │Optical Engine│
                              └──────────────┘
```

Color abnormal

```
┌─────────────────┐
│  Color abnormal │
└─────────────────┘
         │
         ▼
    ◇ Check input ◇      NG    ┌──────────────┐
    ◇ cable and signal ◇ ────▶ │    Adjust    │
    ◇ setting ◇                │ Input signal │
         │ OK                  └──────────────┘
         ▼
    ◇ Check Color ◇     NG    ┌──────────────┐
    ◇ Wheel Index ◇ ───────▶  │ Adjust Color │
         │ OK                 │  Wheel Index │
         ▼                    └──────────────┘
    ◇ Check ◇           NG    ┌──────────────┐
    ◇ Main board ◇ ────────▶  │   Replace    │
         │ OK                 │  Main board  │
         ▼                    └──────────────┘
    ◇ Check ◇           NG    ┌──────────────┐
    ◇ Optical Engine ◇ ────▶  │   Replace    │
                              │Optical Engine│
                              └──────────────┘
```

Operation Function Troubleshooting

```
┌──────────────┐                                    ┌──────────────┐
│Remote Control│                                    │Button Failure│
│   Failure    │                                    │              │
└──────┬───────┘                                    └──────┬───────┘
       │                                                   │
       ▼                                                   ▼
    ╱Check╲      NG   ┌──────────┐                   ╱  Check  ╲   NG  ┌──────────────┐
   ╱Battery ╲────────▶│ Replace  │                  ╱Keypad and╲──────▶│Replace Keypad│
   ╲ Level  ╱         │ Battery  │                  ╲   FFC    ╱        │   and FFC    │
    ╲    ╱            └──────────┘                   ╲       ╱          └──────────────┘
     │OK                                               │OK
     ▼                                                 ▼
    ╱Check ╲      NG   ┌──────────────┐              ╱  Check ╲    NG   ┌──────────┐
   ╱Remote  ╲─────────▶│   Replace    │             ╱Main board╲───────▶│ Replace  │
   ╲Control ╱          │Remote Control│             ╲         ╱         │Main board│
    ╲     ╱            └──────────────┘              ╲      ╱           └──────────┘
     │OK
     ▼
    ╱Check╲      NG   ┌──────────┐
   ╱  IR   ╲─────────▶│ Replace  │
   ╲      ╱           │   IR     │
    ╲    ╱            └──────────┘
     │OK
     ▼
    ╱Check ╲      NG   ┌──────────┐
   ╱Main    ╲─────────▶│ Replace  │
   ╲board   ╱          │Main board│
    ╲     ╱            └──────────┘
```
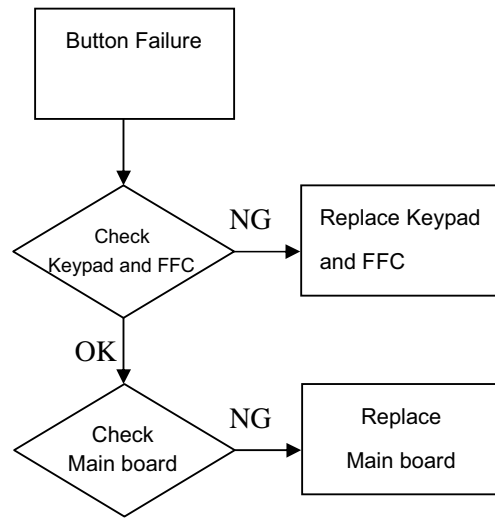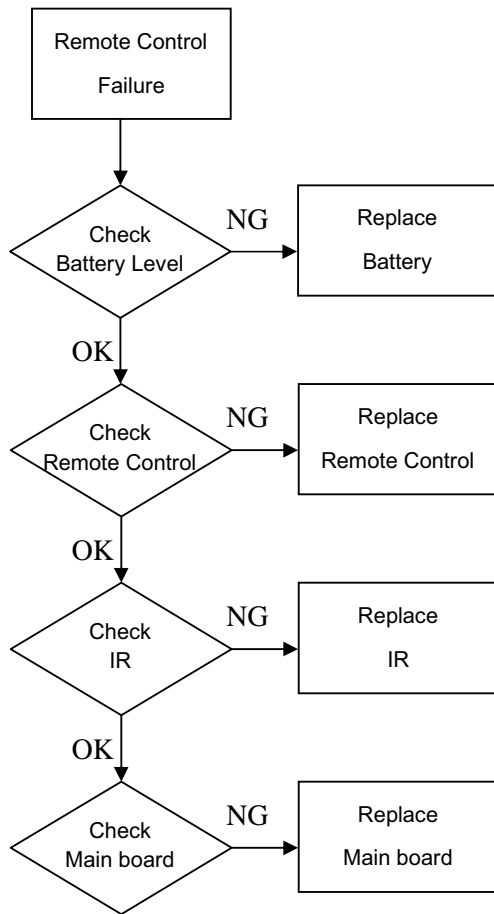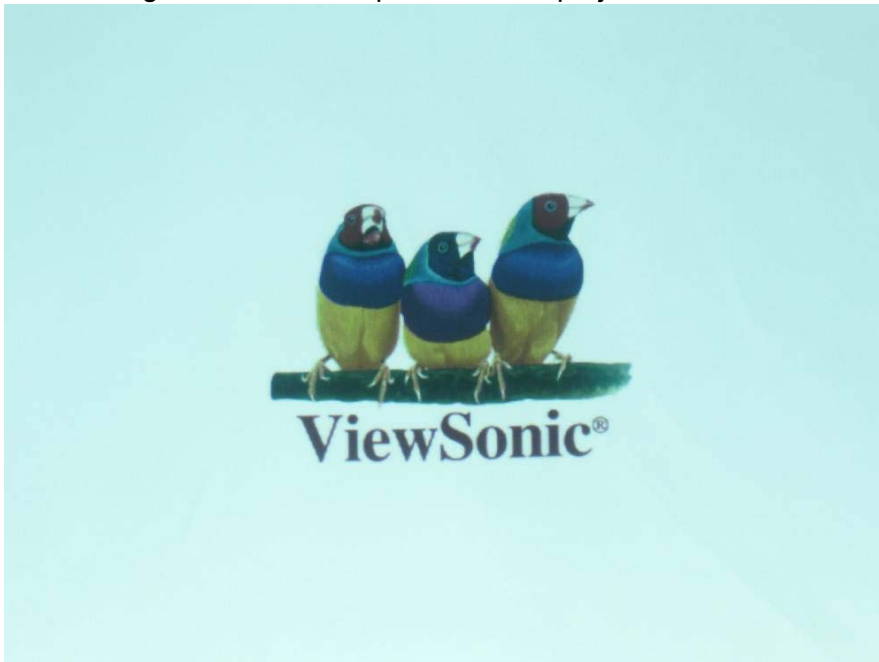
4.2 Verifying the Repair

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 the 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

I/O port	HDMI
Test Equipment	HDMI source device
Signal format	480p

(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 projector 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	**ANSI Brightness** Apparent color strip, bend and streak corner on the projected image are not allowable.
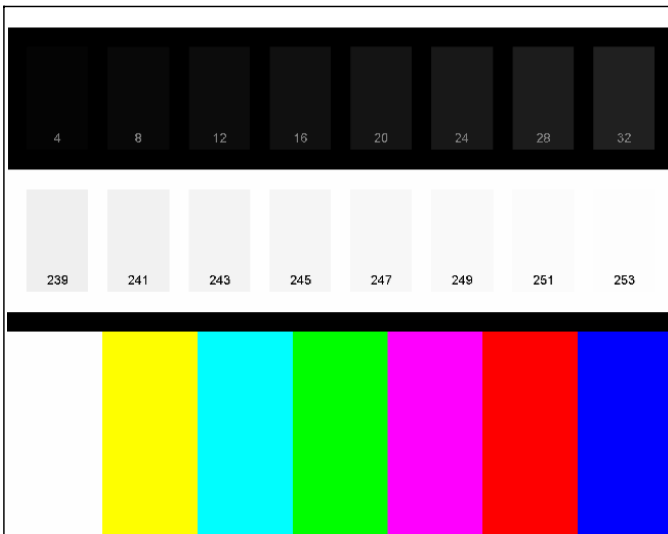
Extreme Gray-Scale

--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.
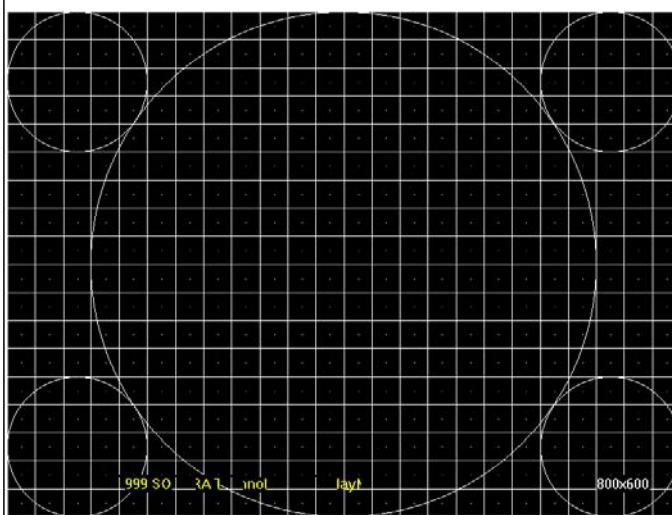

Circular Geometry, Cross hatch and Dots

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.
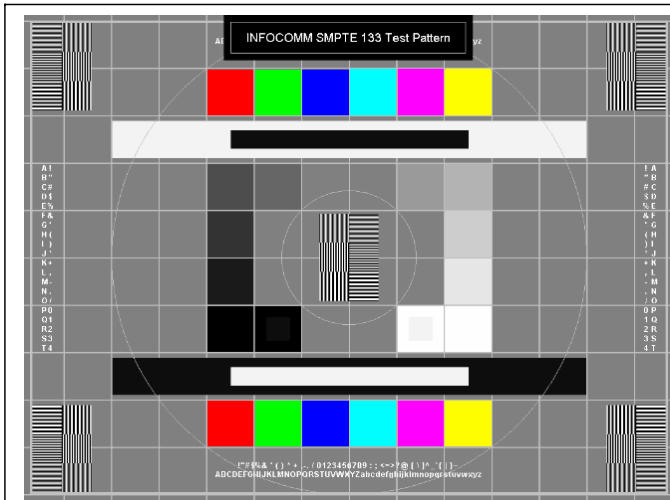
INFOCOMM SMPTE 133

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

HDMI

I/O port	HDMI
Test Equipment	HDMI source device
Signal format	480p
Criteria	No apparent color deviation on the projected image nor abnormal voice.

(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 he characters should be recognized easily. 5. Rotate Zoom ring to tele mode (Minimum projected image)

		6. Adjust focus ring to make re solution 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 remo te 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 alternative is CL -200)
Test method	Measure 9 points
Criteria	Marketing spec 20% off

(8) 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
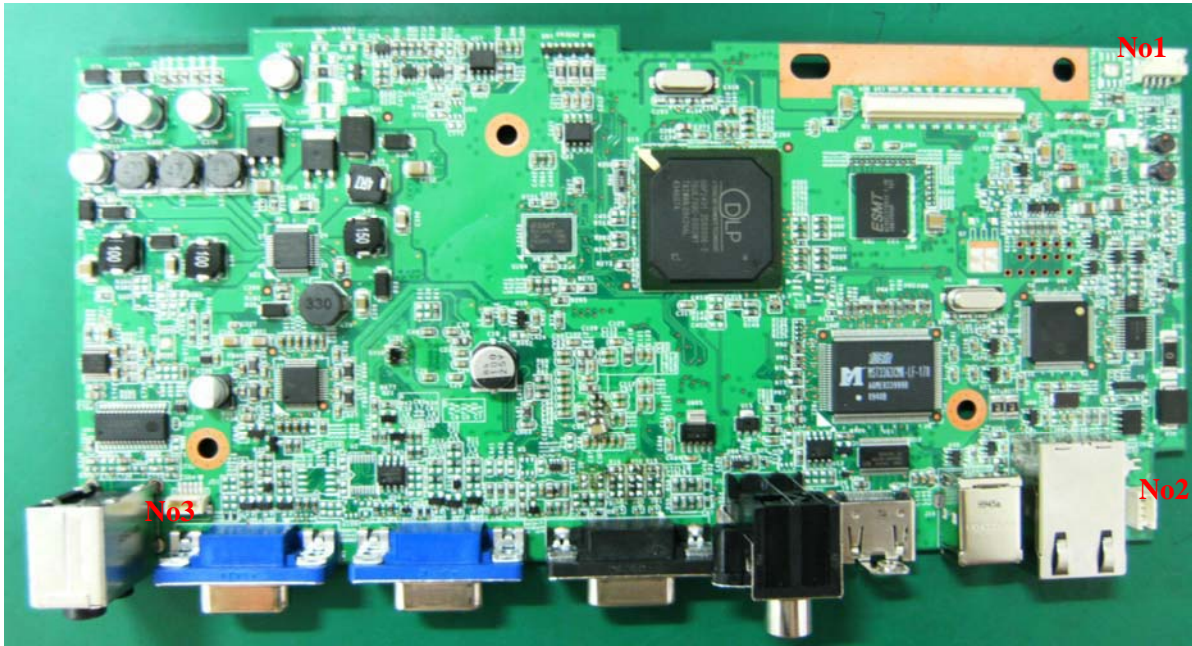
Connector	Description
No 1	Front IR
No 2	Connect to RS232 Board(RS232 signal)
No 3	Connect to RS232 Board(Audio signal)

5.2 The backside of Main Board
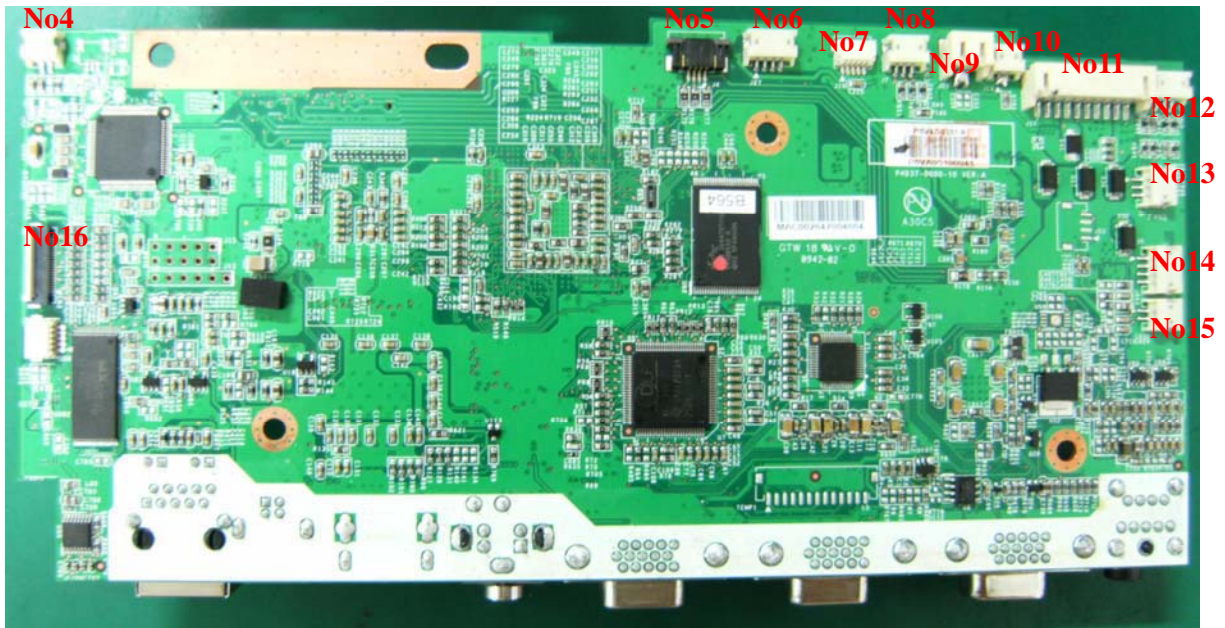
Connector	Description
No 4	Front Speaker
No 5	Color Wheel control
No 6	Color Wheel Sensor
No 7	Ignite signal connected to Ballast
No 8	Lamp FAN(FAN3)
No 9	Thermal sensor
No 10	Safety switch
No 11	Main Board Power Supply
No 12	FAN2
No 13	FAN1
No 14	Back IR
No 15	Back Speaker
No 16	Keypad control

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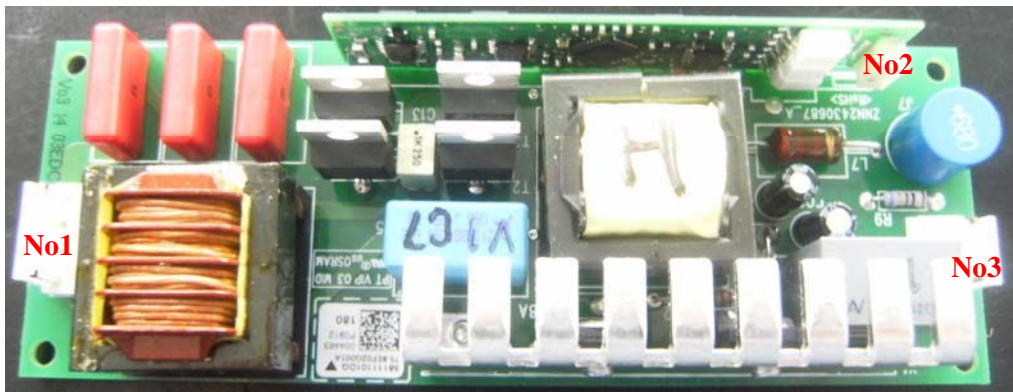
Connector	Description
No 1	Lamp power supply
No 2	Ignite signal connected to Main board
No 3	High Voltage Power supply

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

2.Lens Cover

4.Lamp Cover

1.Top Cover

5.Filter Cover

3. IO Cover

7.Lamp module

metal sheet of main board

6.Lens Housing

9.Main Board

17.FAN2

8.Optical Engine

10.RS232 Board

18.FAN 1

15.Front Speaker

11.DMD Board

12.Front IR

heat sink of DMD Board

metal sheet of Ballast

14. Ballast

metal sheet of IO Port

19.Power Board

16.Back Speaker

13.Back IR

20.Bottom Cover

21.Rear Foot
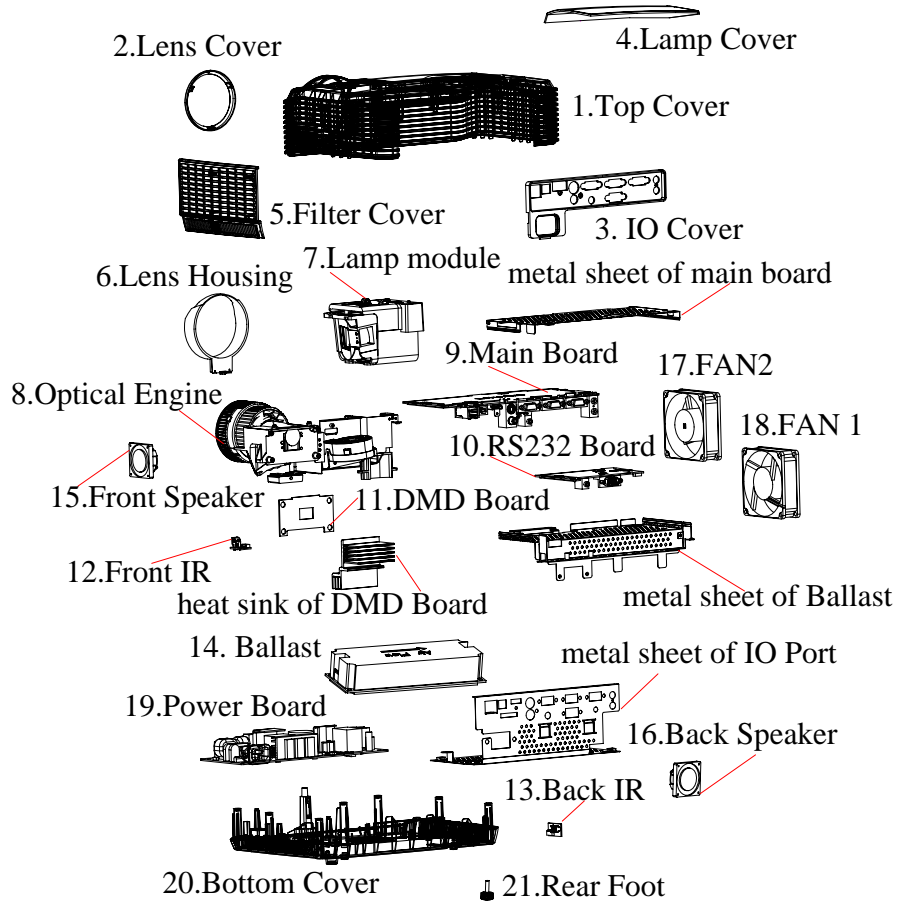
EXPLODED PARTS LIST (PJD6531w)

ViewSonic Model Number: VS12476

Rev: 1a

Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1	C-00010149	P6V84-4500	Top Cover	1
2	C-00009638	P4E34-4650-00	Lens Cover	1
3	n/a	P4T84-4530	IO Cover	1
4	C-00009630	P4R84-4520	Lamp Cover	1
5	C-00009635	P4R34-4600-00	Filter Cover	1
6	PL-00008833	P4R34-4570-00	Lens Housing	1
7	RLC-049	P4T84-2400	Lamp Module	1
8	E-00010054	P6V84-2200	Optical Engine	1
9	B-00010218	P6V84-7100	Main Board	1
10	B-00009750	P4S47-6101	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-00009753	P4T84-9000	Ballast	1
15	E-00009557	P4T84-0001	Front Speaker	1
16	E-00009558	P4T84-0002	Back Speaker	1
17	M-00008342	J2394-0101-01	Fan2	1
18	M-00008212	J2394-0101-00	Fan1	1
19	B-00009752	P4S84-8100	Power Board	1
20	C-00009632	P4R84-4510	Bottom Cover	1
21	M-00008344	P4E38-1570-00	Rear Foot	1

6.2 Packing drawing
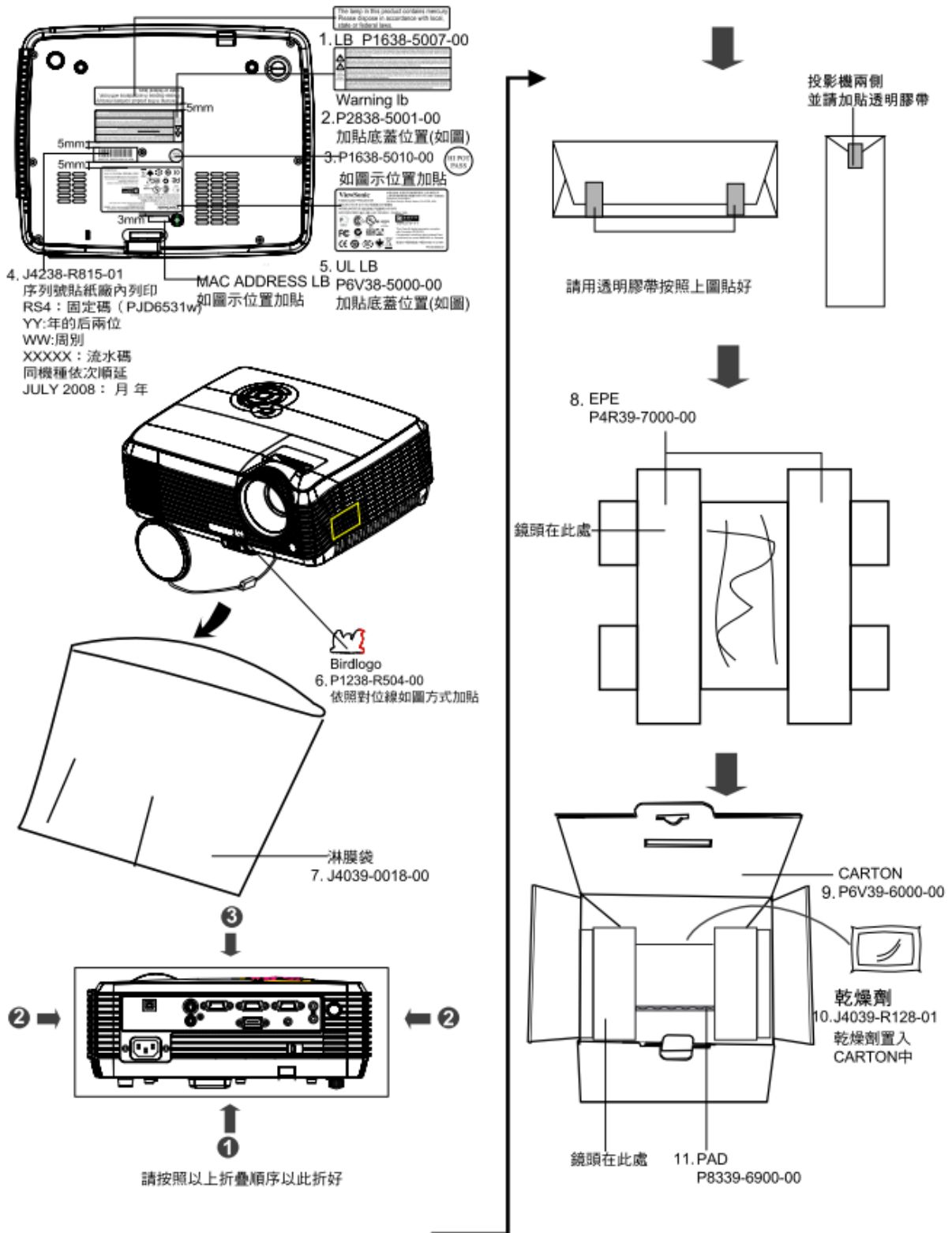
12.3D-INSERT SHEET
P6V39-4800-00
13. INSERT SHEET
P6V39-4801-00
QG
14. P4R39-A001-01
QG
15. P6V39-4000-00
CD
16. P6V39-A000-00
入膠袋后放入卡板中間槽位中
17. P4T39-3000-00
POUCH放于此處

18. HDPE BAG
04039-R157-01

OUTER CARTON

20. P6V39-6000-00印
刷面請以實物為准
此處僅供參考

MAC ADDRESS LB
主線提供
如圖示加貼,與下面框線
距離3mm,左邊對齊框線

CARTON LB
21. J4238-5006-00

CARTON LB
J4238-5006-00 廠內列印內容具體內容如下.

此處線框內廠內列印條碼內容為
Projector PJD6531w (Code 128)

Projector PJD6531w   UPC

7 66907 42371 6

0 07 66907 42371 6

MODEL NUMBER : VS12476
SERIAL NUMBER: RS4 YYWWXXXXX

RC   Made in China 2007-04-27

此虛線框內廠內列印
條碼內容為
RS4YYWWXXXXX (YY: year, WW: week)
RS4表示PJD6531wXXXXX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

所有線材和電池一起放入19.
J4039-R184-01後放於此處
遙控器放在最上面

Betteries
須放入塑料袋中
具體視POI需求

D-SUB CABLE
J2552-0110-00

RCA/Y CABLE
02552-0075-00

REMOTE CONTROL
視POI需求

S-VIDEO CABLE
J2552-0092-01

POWER CORD
J2552-0109-00

PHONE CABLE
J2552-0110-00

注明：線材視POI選配

PACKING PART LIST (PJD6531w)

ViewSonic Model Number: VS12476

Rev: 1a

Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1	n/a	P1638-5007-00	LB	1
2	n/a	P2838-5001-00	WARNING LB	1
3	n/a	P1638-5010-00	LB	1
4	n/a	J4238-R815-01	SERIAL LB	1
5	n/a	P6V38-5000-00	UL LB	1
6	n/a	P1238-R504-00	LB	1
7	n/a	J4039-0018-00	EPE BAG	1
8	P-00009685	P4R39-7000-00	EPE	1
9&20	P-00010191	P6V39-6000-00	CARTON	1
10	n/a	J4039-R128-01	DESICCANT	1
11	M-00008389	P8339-6900-00	PAD	1
12	n/a	P6V39-4800-00	3D-INSERT SHEET	1
13	n/a	P6V39-4801-00	INSERT SHEET	1
14	DC-00009956	P4R39-A001-01	CD-ROM (for LAN Software)	1
15	DC-00010294	P6V39-4000-00	QG	1
16	DC-00010295	P6V39-A000-00	CD-ROM	1
17	n/a	P4T39-3000-00	POUCH	1
18	P-00008410	J4039-R157-01	PE.BAG	1
19	P-00008794	J4039-R184-01	PE.BAG	1
21	n/a	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 nee d 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 voltages 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 cle aner 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.
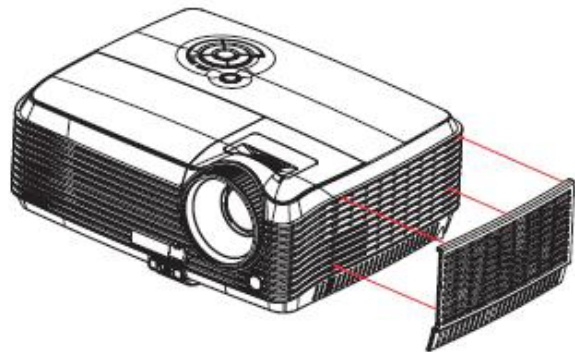
8 Network Control

This feature provides the ability to remo tely control and manage the projector through the network.

Preparation:

1. Connect one end of the internet cable to the LAN connector on projector.

2. Connect the other end of the internet cable to an available RJ-45 connector on your computer.

3. Turn on your projector and computer.

There are two ways to connect to the network control:

A. Auto IP address setting (DHCP : Yes):

1. Enable DHCP from the projector OSD, under Network Config.

■　　When DHCP is enabled, IP Address, Subnet Mask and Gateway information wi ll get from DHCP server automatically.
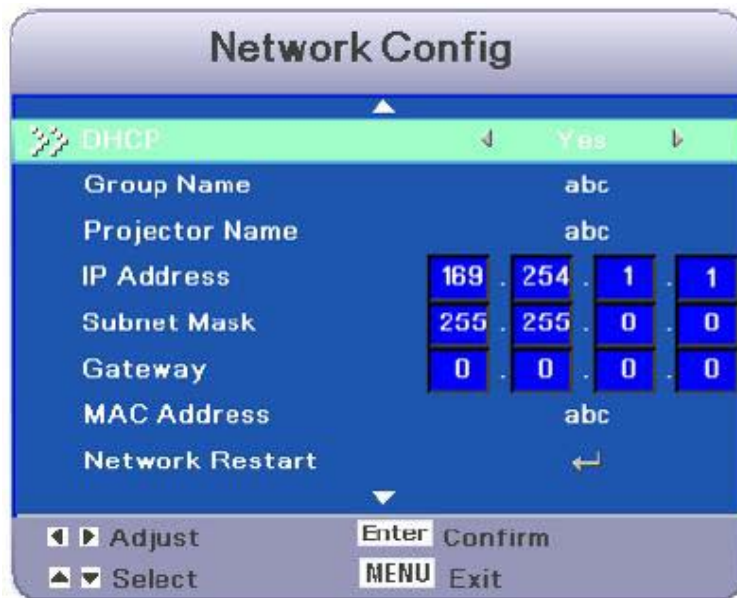
2. Start browser in PC and specify following URL, then click "Go" button.

■　　URL: http:// (Projector IP address)/

■　　For example, if projector IP address is 169.254.1.1, specify URL: http://169.254.1.1/.
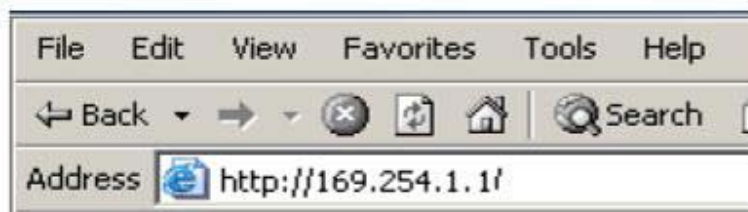
1. If connection succeeds, the login screen is displayed. Enter your User name and Password and click "OK". Below are the factory default settings for administrator, user and passwords.

Item	User name	Password
Administrator	Admin	<blank>
User	User	<blank>

B. Manual IP address setting (DHCP: No):

1. Set IP Address and Subnet Mask under Net work Config.

■ IP Address: Numerical address to identify network computers.

■ Subnet Mask: A numeric value to define the number of bits used for a network address of a divided network (or subnet) in an IP Address.

■ Gateway: A server (or router) to communicate a cross networks (subnets) that are divided by Subnet Mask.
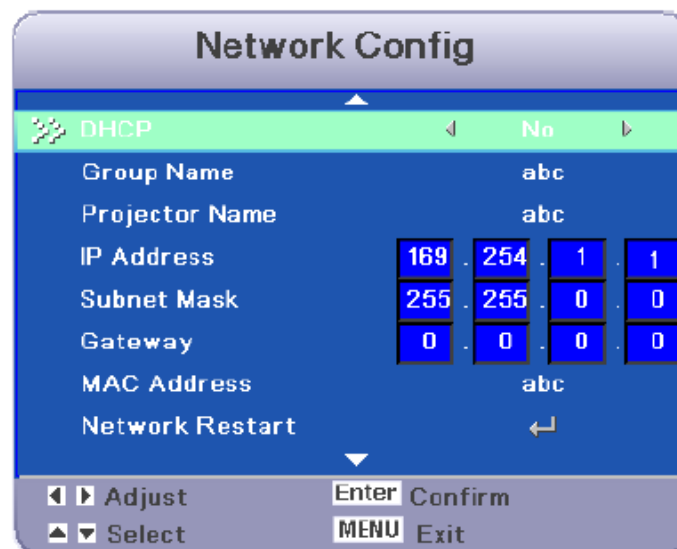
2. From your computer, go to **Start > Settings > Network and Dial -up Connections > Local Area Connection** and right click to select **Properties**.
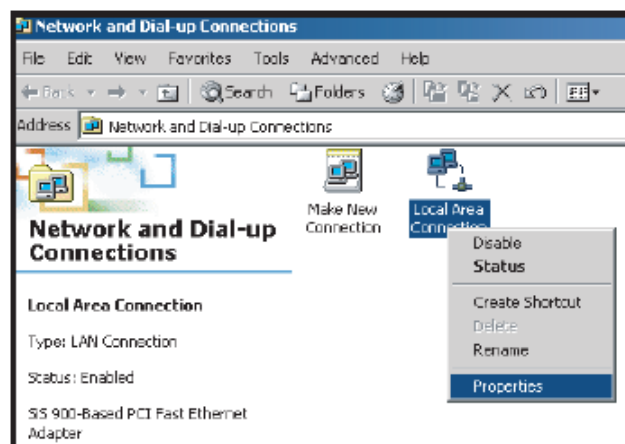
3. Select "**Intel Protocol (TCP/IP)**" and click "Properties".
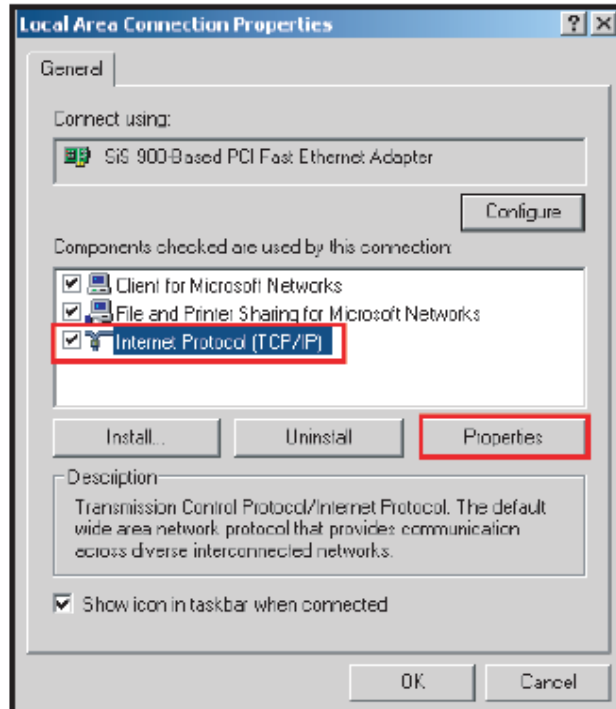
4. Set your PC's IP address, and click **OK**.
- Click "Use the following IP address"
- The network address portion included in the IP address set into your PC should be common with projector's one.
- In this case, projector has "169.254.1.1" IP address, specify "169.254.1.xxx" for PC's IP address. Select from 1 to 254 for "xxx" except 2 for PC.
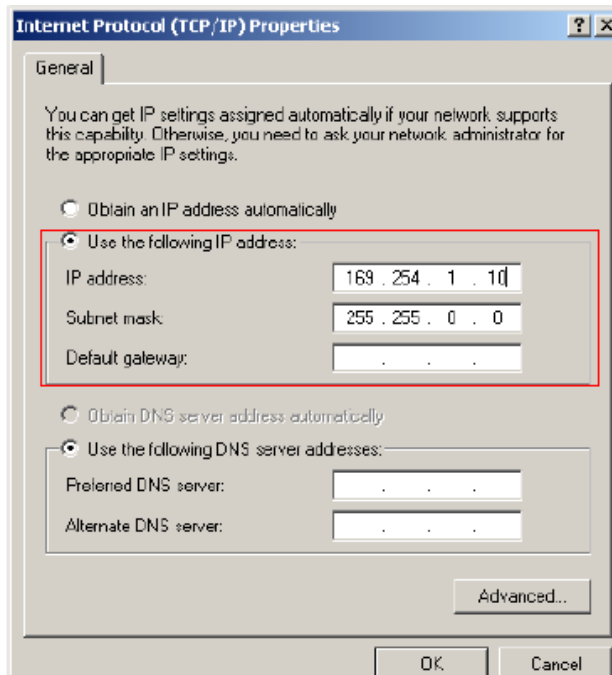
5. Start browser in PC and specify following URL, then click "Go" button.

■ URL: http://(Projector IP address)/
■ For example, if projector IP address is 169.254.1.1, specify URL:http://169.254.1.1/.
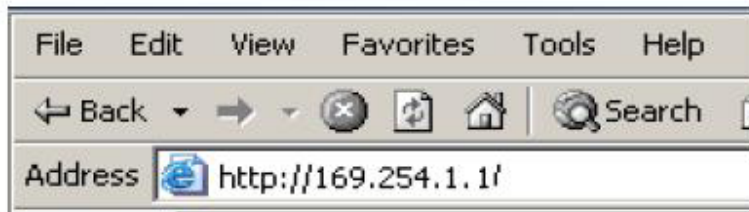
6. If connection succeeds, the login screen is displayed. Enter your User name and Password and click "OK". Below are the factory default settings for administrator, user and passwo rds.

Item	User name	Password
Administrator	Admin	<blank>
User	User	<blank>

Control the projector via a web browser

Login

If the administrator and user passwords are disabled, it will directly go into the status page.

ViewSonic Network control

Status

IP Address:	169.254.1.1
MAC Address:	00:04:a3:00:00:00
Projector Name :	
System Status :	Power Off
Input Status :	1
Lamp Hours:	UDEF!
Filter Hours :	UDEF!
System Temperature :	
Projector Status :	
F/W Version :	>0.1a
Data (mm/dd/yy) :	01/01/00
Time :	08:03
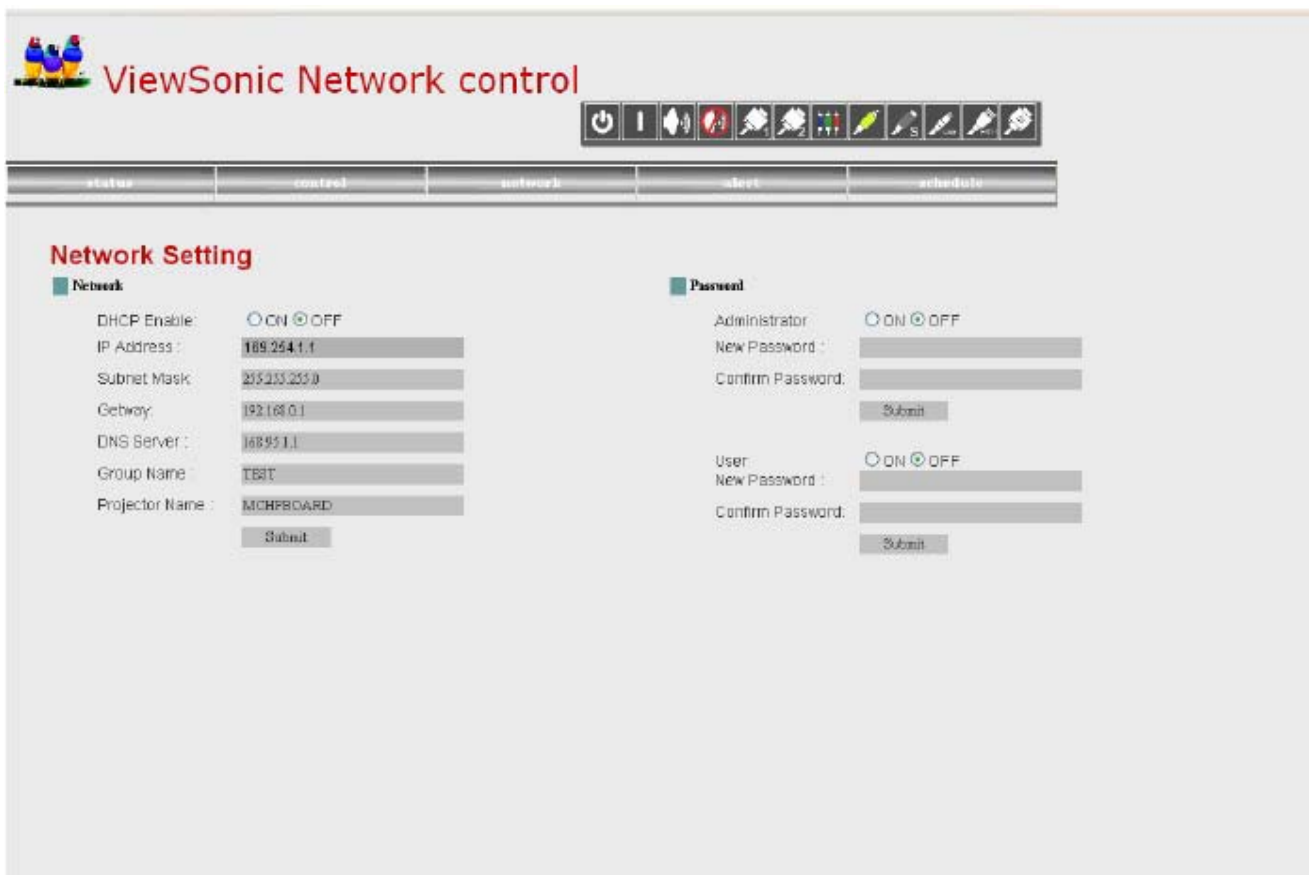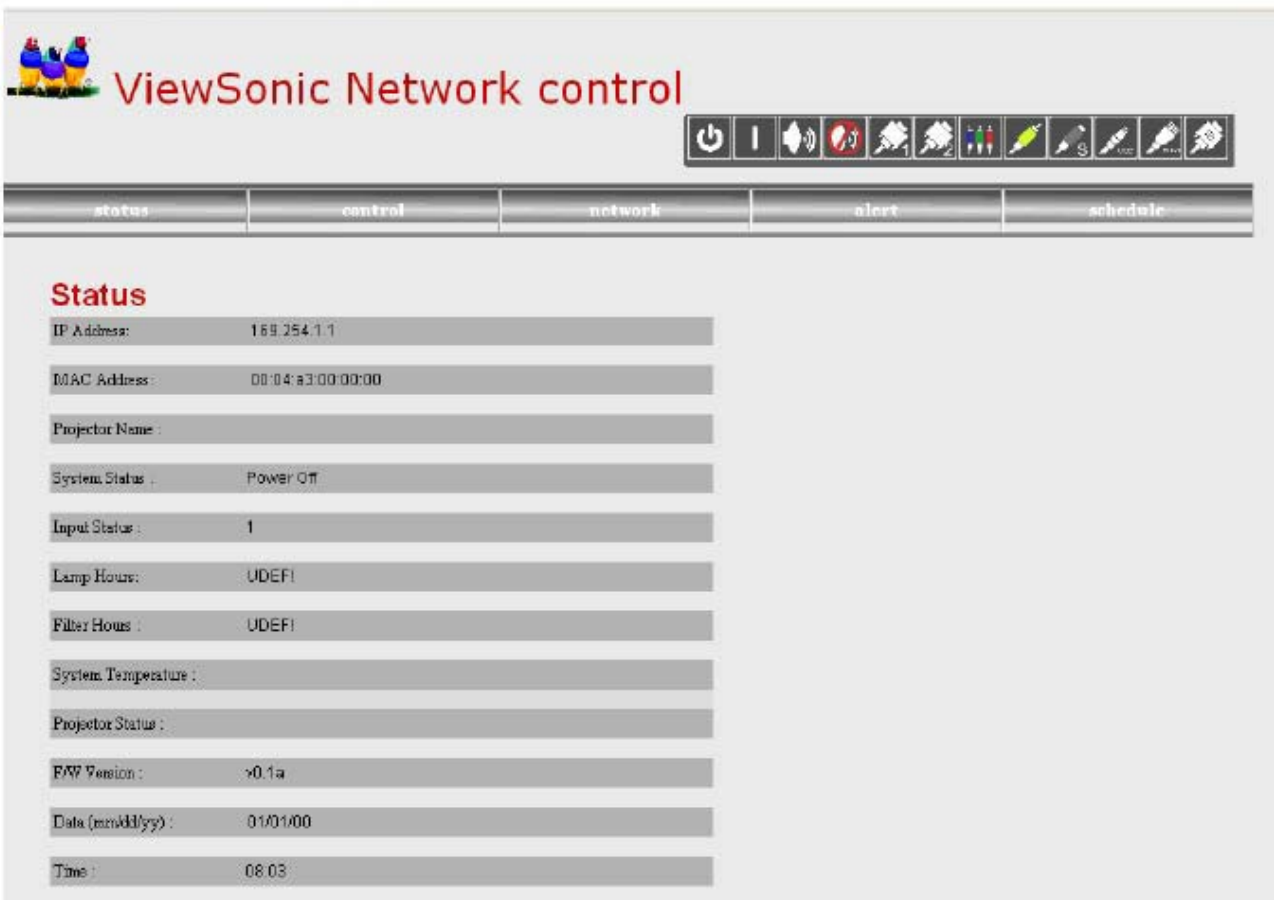
If the Administrator & User passwords are enabled, select your User Name and enter password to login.

Authority on the network control of Administrator & User:

Item	Description	Administrator	User
Status	Show current projector status and network configuration settings.	v	v
Control	Control the projector via network.	v	v
Network Setting	Network configuration & Password setup.	v	x
Alert	Show and setup Alert configurations.	v	x
Schedule	Show and setup Scheduling configurations.	v	v

Status

All screen images in this manual are shown when you login with the Administrator ID.
The image will differ if you login with User ID.

Item	Description
IP Address	Show current IP address.
MAC Address	Show current MAC Address.
Projector Name	Show projector name.
System Status	Show if projector is Powered ON or Standby.
Input Status	Show current input source.
Lamp Hours	Show lamp used hours on current projector.
Filter Hours	Show filter used hours on current projector.
System Temperature	Show system temperature.
Projector Status	Show current projector status, either function normally or error found.
F/W Version	Show projector's F/W version
Date(mm/dd/yy)	Show date set on current projector.
Time	Show time set on current projector *.

Remark:
*If the power has not been supplied for over 36 hours, date and time will be reset.

Control

Item	Description
Basic	
Power Switch	Power On or Power Off the projector via network.
Input Source	Select input source.
Date	Show date set on current projector.
Time	Show time set on current projector*.
Volume	Adjusts the volume setting. (0 - 20)
Mute	Enable or disable the mute function.
Picture	
Brightness	Adjusts the brightness setting. (0 - 100)
Contrast	Adjusts the contrast setting. (0 - 100)
Color Temperature	Selects the color temperature setting.
Keystone	Adjusts the keystone setting. (-40 - +40)
Picture Mode	Selects the picture mode setting.
Aspect Ratio	Selects the aspect ratio setting.
Freeze	Enable or disable the freeze function.
Video Image	
Color	Adjusts the color setting.

Tint	Adjusts the tint setting. (0 - 100)
Sharpness	Adjusts the sharpness setting. (0 - 31)
Computer Image	
Frequency	Adjusts the frequency. (-50 - +50)
Tracking	Adjusts the tracking. (0 - 31)
H Position	Adjusts the horizontal position. (-10 - +10)
V Position	Adjusts the vertical position. (-10 - +10)
Setting	
Menu Position	Adjusts the menu position.
Projection	Selects the projection setting.
Auto Source	Enable or disable the auto source function.
ECO mode	Enable or disable the ECO function.
High Altitude	Enable or disable the high altitude function.
OSD Timeout	Selects the OSD timeout setting.
Language	Selects preferred OSD language.
Factory Default	Enable or Disable factory default.
Option	
ViewMatch	Selects ViewMatch setting.
White Intensity	Adjusts white intensity setting.
Gamma	Adjusts gamma setting.
Signal Type	Selects signal type setting.
Filter Mode	Selects filter mode setting.
Power Saving	Selects power saving setting.
Start Up Screen	Selects start-up screen setting.
Closed Caption	Selects closed caption setting.
Blank Screen	Selects blank screen setting.

Remark:
*If the power has not been supplied for over 36 hours, date and time will be reset.

Network Setting

Item	Description
Network	
DHCP	Assign an IP address to the projector from the DHCP server automatically or manually.
IP Address	Setup IP address when DHCP is disable.
Subnet Mask	Setup subnet mask when DHCP is disable.
Gateway	Setup gateway when DHCP is disable.
DNS Server	Setup DNS server address when DHCP is disable.
Group Name	Create projector group. (Max length: 6 characters)
Projector Name	Create projector naming of the current projector. (Max length: 15 characters)
Password	
Administrator	Enable or disable administrative password function.
New Password	Setup administrative password. (Max length: 4 characters)
Confirm Password	Re-enter administrative password.
User	Enable or disable user password function.
New Password	Setup user password. (Max length: 4 characters)
Confirm Password	Re-enter user password.

Click "Submit" button to save the settings.

Alert

Item	Description
Email Setting	
To	Setup the mail alert attendee. (Max length: 40 characters)
Cc	Setup the backup mail alert attendee. (Max length: 40 characters)
Subject	Setup the subject of the alert e-mail. (Max length: 30 characters)
From	Setup the sender e-mail address. (Max length: 40 characters)
Server	To enter the SMTP server (Mail server) name of the company. For example: mail.viewsonic.com (Max length: 30 characters)
User Name	Enter user name of the sender's e-mail account. (Max length: 20 characters)
Password	Enter password of the sender's e-mail account. (Max length: 14 characters)
Alert Condition	
Fan Lock	The cooling fan is not operating.
Over Temperature	The projector internal is over heated.
Lamp Fail	The lamp does not light up.
Lamp Time Alert	Lamp is approaching the end of its useful life in full power operation. Replacement is suggested.
Schedule Execution Error	Schedule Execution Error.
Filter Time Alert	Filter is approaching the end of its useful life. Replacement is suggested.

Click "Submit" button to save the settings, then click "Issue Test Mail" to send a test mail to check whether all settings and functions are correct.

Schedule

The schedule function is divided into two scheduling categories, as shown below:

Weekly Schedule: defines the date of each week will execute the command.
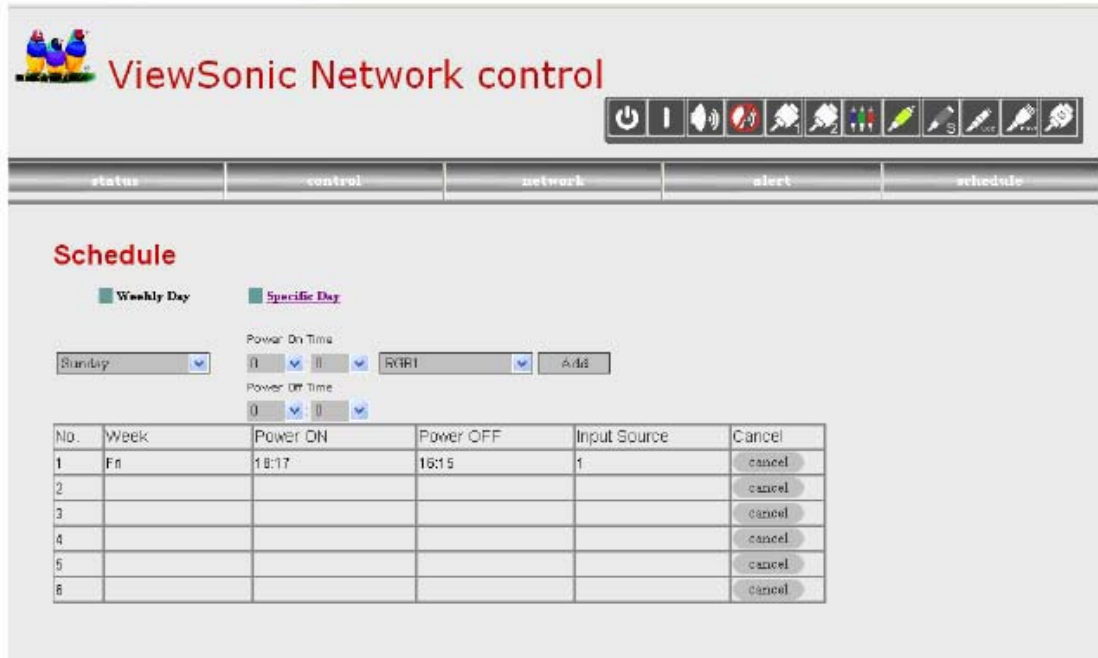
Click "Add" button to create new schedule. To delete schedule, click "Cancel". Specific Day: defines the month and day that will execute the command.
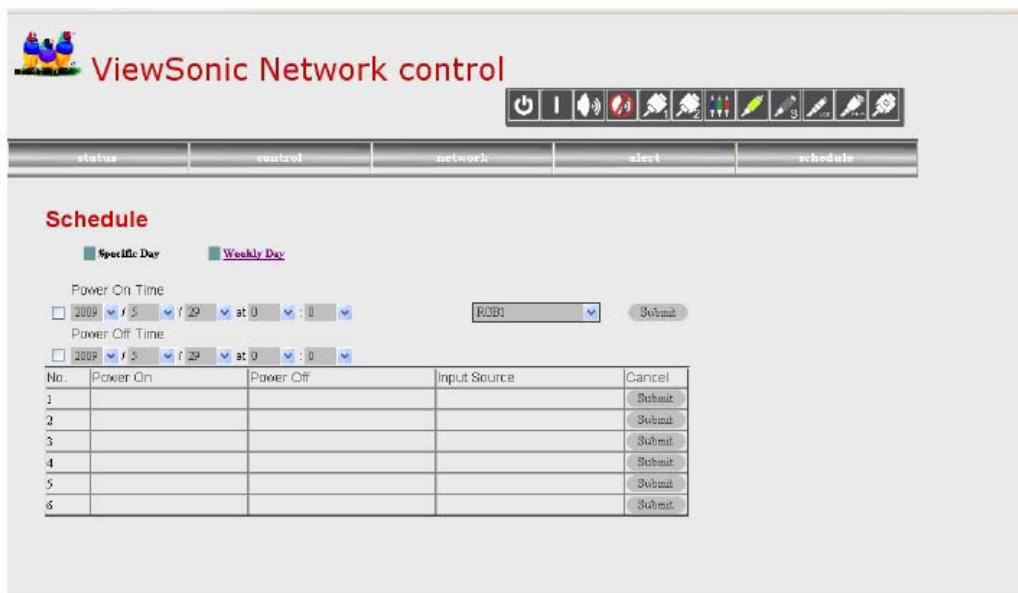
Click "Submit" button to create new schedule. To delete schedule, click "Cancel".

Tips for solving web page problems:

If your web page is not running smoothly, please follow below steps to set the browser.

1. Go to Tools > General and click "Settings".

2. Click "Every visit to the page" and "OK".

PJD6531w

3. Click "OK" to exit "Internet Properties".

PJD6531w

9 Recommended Spare Parts List

RECOMMENDED SPARE PARTS LIST (PJD6531w)

ViewSonic Model Number: VS12476
Serial No. Prefix:RS4
Rev: 1a

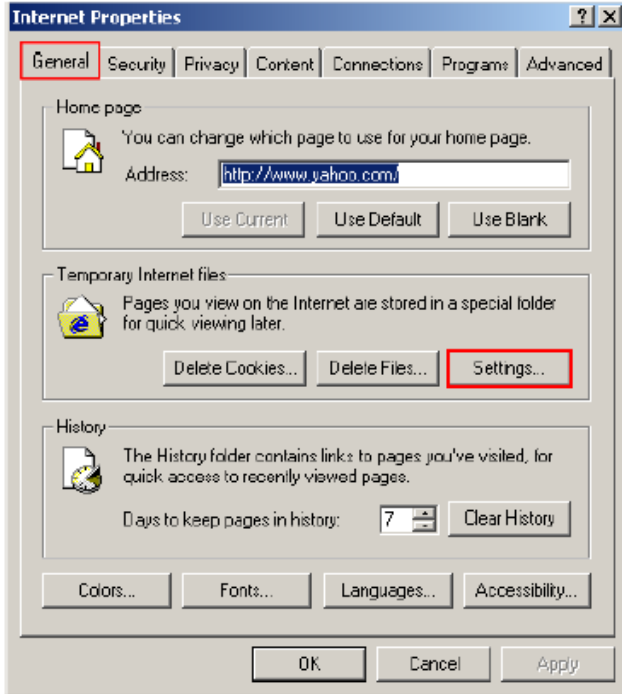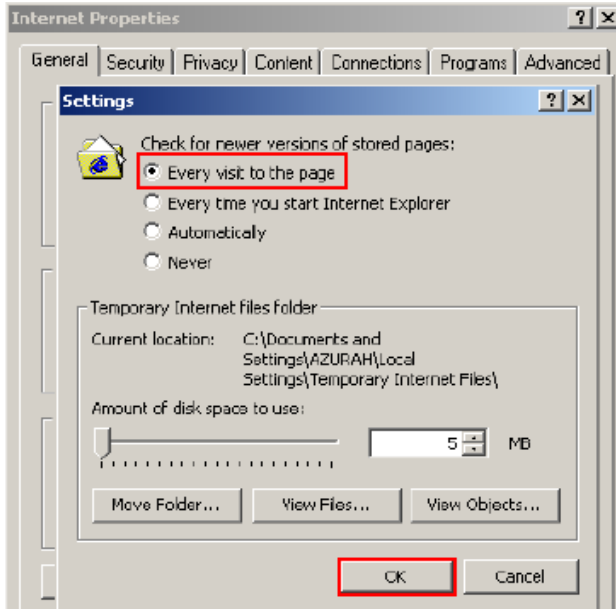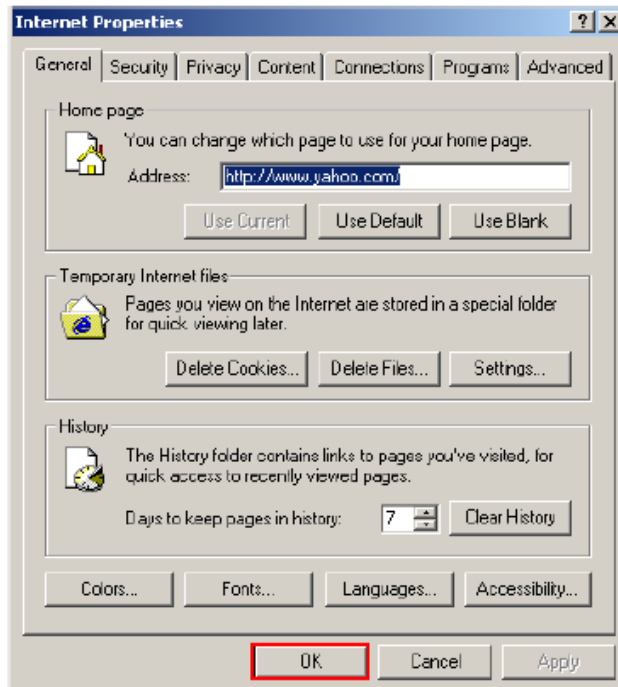| Item	Category	Part Name	Description	ECR/ECN	ViewSonic P/N	Ref. P/N	Ref. NO	Compatibility	Location	Universal number#	Remark
1		LAMP	LAMP-MODULE-ASY-230W-SPARE PART_VPD-X5600_ROHS		RLC-049	P4T84-2400		Main Source			
2		Remote Controller	REMOTE CONTROL_VIEWSONIC_02_VPD-X5400_WITHOUT/B_ROHS		A-00008719	J8947-0292-02		Main Source			
3		Power Cord	POWER CORD (AUSTRALIA)_(SAA)YP-35/YC-12_YUNG LI_ROHS		A-00008060	J2552-0053-00		Main Source			
4		Power Cord	POWER CORD(CHINA)_YP-03/YC-12_YUNG LI_ROHS		A-00008056	J2552-0106-00		Main Source			
5	Accessories: [Adapter,	Power Cord	POWER CORD(EUROPE)_YP-22/YC-12_YUNG LI_ROHS		A-00008057	J2552-0107-00		Main Source			
6	Remote Controller,	Power Cord	POWER CORD (SOUTH AFRICA)_YP-80/YC-12_YUNG LI_ROHS		A-00008233	J2552-0056-01		Main Source			
7	Power Cord, External	Power Cord	POWER CORD(UK)._YP-61/YC-12_YUNG LI_ROHS		A-00008058	J2552-0108-00		Main Source			
8	Cables]	Power Cord	POWER CORD(USA)._UL(YP-12/YC-12)_YUNG LI_ROHS		A-00008059	J2552-0109-00		Main Source			
9		Power Cord	POWER CORD (ARGENTINA)_SP-852+IS-14_I-SHENG_ROHS		A-00008585	J2552-0263-00		Main Source			
10		RS232 Cable	DB9P TO DB9P CABLE_L1500_P35251A-05_PAN_ROHS		CB-00009062	J2552-0208-00		Main Source			
11		Signal Cable	RGB to component adapter, VGA-15P-6P CABLE_P4724-08_PAN_ROHS		CB-00008906	J2552-0212-00		Main Source			
12		Signal Cable	VGA-15P CABLE_P3842-06_PAN_ROHS		CB-00008710	J2552-0072-03		Main Source			
13		Soft Carrying Bag	POUCH_SPARE PARTS_VPD_X5600_ROHS		PJ-CASE-001	P4T84-6000		Main Source			
14		Main Board	MAIN_DIP_PCB_ASY_SPARE PARTS_VPD-W5600_ROHS		B-00010218	P6V84-7100		Main Source			
15		Power Board	POWER BOARD_SPARE PARTS_VPD-X5500_ROHS		B-00009752	P4S84-8100		Main Source			
16		Key Pad	KEYPAD_DIP_PCB_ASY_VPD-X5500_ROHS		B-00009699	P4S47-7100		Main Source			
17	PC Board Assembly: [All	IR Board	FIR_DIP_PCB_ASY_PD-X702_ROHS (Front)		B-00008158	P3747-5101		Main Source			
18	PCBA]	IR Board	BIR_DIP_PCB_ASY_P4R-VPD-X5400_ROHS (Back)		B-00009700	P4R47-5101		Main Source			
19		I/O Board	RS232 Board, RS232_DC_DIP_PCB_ASY_VPD-X5500_ROHS		B-00009750	P4S47-6101		Main Source			
20		Ballast	OSRAM-BALLAST-230W-SPARE PART_VPD-X5600_ROHS		B-00009753	P4T84-9000		Main Source			
21		DMD Board	DMD450_DIP_PCB_ASY_TPD-S5500_ROHS		B-00009703	P4D47-6100		Main Source			
22		Sensor Board	CW SENSOR_DIP_PCB_ASY_IPD-S5530_ROHS		B-00009837	P5E47-5100		Main Source			
23		Lamp Cover	LAMP COVER_SPARE PARTS_VPD-X5400_ROHS		C-00009630	P4R84-4520		Main Source			
24	Cabinets: [Front Bezel,	Top Cover	TOP COVER_SPARE PARTS_VPD-W5600_ROHS		C-00010149	P6V84-4500		Main Source			
25	All Covers, Base	Bottom Cover	BOTTOM COVER_SPARE PARTS_VDP-X5400_ROHS		C-00009632	P4R84-4510		Main Source			
26	Assembly]	IO Cover	I/O COVER_SPARE PARTS_VPD-X5700_ROHS		C-00009786	P5B84-4530		Main Source			
27		Filter Cover	FILTER COVER_VPD-X5400_00_NO PAINTING_ROHS		C-00009635	P4R34-4600-00		Main Source			
28		Lens Cover	LENS CAP_TPD-X5500_00_NO PAINTING_ROHS		C-00009638	P4E34-4650-00		Main Source			
29		Wire	FFC CABLE_A20240C3344NB_ENTERY_0.5PITCH_20PIN_L240MM_ROHS(top cover to main board)		CB-00009052	J2591-0122-00		Main Source			
30		Wire	WIRE CON-CON_1102003-236_MSK_4PIN_L105MM_1571#28_ROHS(color wheel to main board)		CB-00009158	J2595-0368-01		Main Source			
31		Wire	WIRE CON-CON_1102003-231_MSK_10PIN-2*9PIN_L115MM_1007#24_ROHS(power board to main board)		CB-00009054	J2595-0407-00		Main Source			
32		Wire	WIRE CON-CON_1102003-98_MSK_2PIN_L140MM_1015#22_ROHS(power board to ballast)		CB-00008469	J2595-0218-00		Main Source			
33		Wire	WIRE ASSY_CON-SW_1102003-202_MSK_ROHS(top cover to main board)		CB-00009055	J2595-0366-00		Main Source			
34	Cables: [All internal	Wire	WIRE CON-CON_1102003-203_MSK_4PIN_L115MM_1571#28_ROHS(IR to main board)		CB-00009056	J2595-0367-00		Main Source			
35	Cables/wires]	Wire	WIRE LAMP-BALA(VPD-X5400)_01800182R_AVERTRONICS_2PIN_L135MM_3239V#20_ROHS(Ballast to Lamp)		CB-00009097	J2595-0363-00		Main Source			
36		Wire	WIRE CON-MOTOR PROTECTOR_2PIN_L65MM_1332#24_ROHS(? ? ?)		CB-00009058	J2595-0346-00		Main Source			
37		Wire	WIRE CON-CON_1102003-235_MSK_5PIN_L185MM_1571#28_ROHS(RS232 Board to main board)		CB-00009156	J2595-0371-01		Main Source			
38		Wire	WIRE CON-CON_1102003-206_MSK_5PIN_L95MM_1571#28_ROHS(Ballast to main board)		CB-00009060	J2595-0370-00		Main Source			
39		Wire	WIRE CON-CON_1102003-205_MSK_4PIN_L130MM_1571#28_ROHS(power board to RS232 board)		CB-00009061	J2595-0369-00		Main Source			
40		Wire	WIRE CON-CON_1102003-234_MSK_5PIN_L120MM_1571#28_ROHS(RS232 Board to main board)		CB-00009094	J2595-0410-00		Main Source			
41		Qucik Start Guide (QSG)	QG_VIEWSONIC_VPD-W5600_GLOBAL_ROHS		DC-00010294	P6V39-4000-00		Main Source			
42	Documentation: [Quick	CD ROM	CD_ROM_VIEWSONIC_VPD-X5400_AP CD_ROHS(for LAN Software)		DC-00009956	P4R39-A001-01		Main Source			
43	Start Guide, CD Rom;	User's Guide (CD ROM)	CD ROM_VIEWSONIC_VPD- W5600_GLOBAL_ROHS		DC-00011295	P6V39-A000-00		Main Source			
44	Label]	Label / Sticker	C/T LB_NO BRAND_ROHS(for Taiwan)		DC-00008794	J4238-5069-00		Main Source			
45		Label / Sticker	CARTON LB_VIEW_SONIC_PJ557D_GLOBAL_ROHS(for China)		DC-00008672	P0N38-5013-00		Main Source			
46		Optical Engine	OPTICAL ENGINE ASY(WITHOUT LAMP)SPARE PARTS_VPD-W5600_ROHS		E-00010054	P6V84-2200		Main Source			
47	Electronic Components:	Color Wheel	COLOR-WHEEL MODULE_SPARE PARTS_VPD-W5600_ROHS		E-00010055	P6V84-2600		Main Source			
48	[Optical Engine, Speaker,	Lens	LENS ASY_SPARE PARTS_VPD-W5600_ROHS		E-00010056	P6V84-6500		Main Source			
49	Color Wheel]	Speaker	SPEAKER_P40KCG08-3-7JS1_SPARE PARTS_FRONT_VPD-X5600_ROHS		E-00009557	P4T84-0001		Main Source			
50		Speaker	SPEAKER_P40KCG08-3-7JS1_SPARE PARTS_BACK_VPD-X5600_ROHS		E-00009558	P4T84-0002		Main Source			
51		Screw	HEXAGON-HEAT-BOLT-4_MPD-S651_3M_ROHS		HW-00008066	82035-2520-00		Main Source			
52		Metal Frame	METAL DOME P4R_VPD-X5400_ROHS		HW-00008927	P4R38-1510-00		Main Source			Keypad film,sticking on the keypad board
53		Screw	SCREW_TP_3_10_A_2_D=5.5_BLACK_NONE_ROHS		HW-00008860	J1635-3670-00		Main Source			
54		Screw	SCREW_M_3_8.0_E_1.5_D=5.0_BLACK_NL_ROHS		HW-00008861	J1635-C072-00		Main Source			
55	Hardware: [Screw,	Screw	SCREW-WASHER_TP_2_4_D_1_D=3.2_NI_NONE_SUS_ROHS		HW-00008043	J1635-3720-00		Main Source			
56	Bracket, Hinge]	Screw	SCREW_M_2_5_A_D=3_A0.8_BLACK_HEAT-TREATMENT_ROHS		HW-00008862	J1635-2250-00		Main Source			
57		Screw	SCREW-WASHER_M_4_6_A_2.6_D=7_ZN_NONE_SUS_ROHS		HW-00008863	J1635-D420-0A		Main Source			
58		Screw	SCREW-WASHER_TP_3_6_D_2.6_D=5.4_ZN_NONE_SUS_ROHS		HW-00008864	J1635-3620-0A		Main Source			
59		Screw	SCREW-WASHER._TP_3_10_D_7_D=5.3_NI_NONE_SUS_ROHS		HW-00008345	J1635-A491-00		Main Source			
60		Screw	SCREW-WASHER_M_3_6_D_2_D=5.3_ZN_NONE_SUS_ROHS		HW-00008865	J1635-B853-0A		Main Source			
61		Screw	SCREW_TP_1.8_3_E_0.3_D=4.5_BLACK_NONE_ROHS		HW-00008866	J1635-D559-00		Main Source			
62		Screw	SCREW_TP_2_10_A_1.2_D=3.5_NI_NONE_ROHS		HW-00008867	J1635-3494-00		Main Source			
63		Fan	FAN_3110RL-04W-S59-F00(L=60MM)_NMB_ROHS		A-00008212	J2394-0101-00		Main Source			
64		Fan	FAN_3110RL-04W-S59-F03(L=60MM)_NMB_ROHS		M-00008342	J2394-0101-01		Main Source			
65		Fan	FAN_BFB0512VHD-8L07(L=65MM)_DELTA_ROHS		M-00008343	J2394-0117-00		Main Source			
66		Ring	FOCUS RING_RINGS-SPARE PARTS_VPD-W5600_ROHS		M-00008577	P6V84-4540		Main Source			
67	Miscellaneous: [Switch,	Ring	ZOOM RING TOP_VPD-W5600_99_FOR PAINTING_ROHS		M-00008578	P6V34-4550-99		Main Source			
68	Fan, Rubber Foot, Logo]	SPONGE	FILTER SPONGE_2 P4R_VPD-X5400_ROHS		M-00008381	P4R38-1590-00		Main Source			
69		FILTER SPONGE	FILTER SPONGE P4R_VPD-X5400_ROHS		M-00008382	P4R38-1580-00		Main Source			
70		PAD	FAN PAD_TPD-X5500_ROHS		M-00008390	P4E38-1070-00		Main Source			
71		Pad	PAD_PREMIER_PD-S650_GLOBAL_ROHS		M-00008389	P8339-6900-00		Main Source			
72		SPONGE	FAN SPONGE P4R_VPD-X5400_ROHS		M-00008393	P4R38-1530-00		Main Source			
73		Rubber Foot	FOOT-REAR_TPD-X5500_ROHS		M-00008344	P4E38-1570-00		Main Source			
74		Carton	CARTON_VIEWSONIC_VPD-W5600_GLOBAL_ROHS		P-00010191	P6V39-6000-00		Main Source			
75	Packing Material: [Box,	Foam	EPE_NO VPD-X5400_FOR BODY_ROHS		P-00009685	P4R39-7000-00		Main Source			
76	Foam, Bags]	Plastic Bag	PE BAG._NO BRAND_298MM*190MM_ROHS		P-00008794	J4039-R184-01		Main Source			
77		Plastic Bag	PE BAG._NO BRAND_GLOBAL_ROHS		P-00008410	J4039-R157-01		Main Source			
78	Plastics: [Pedestal, Plate, Button, etc.]	Housing	LENS HOUSING_VPD-X5400_00_NO PAINTING_ROHS		PL-00008833	P4R34-4570-00		Main Source			

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.

Notice: 1. For some special parts, some photos for identification purpose may be asked by request

2. For all internal cables, there must be some wordings on the "Description" column about where the cable is used (connecting to which two parts)

3. All internal cables/wires should be put in the "Cables" category

4. All external cables should be put in the "Accessories" category

5. Parts relationship (Main/Second source or 1/2/3/4) should be added in the "Compatibility" column

6. If any part for certain product isn't listed in the form, supplier/PE can add it themselves and keep the part name unified.

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

					03:Projector
System Status	BE,EF,03,06,00	04,D8	71,00,00,00,00,00		ON (Normal Mode)
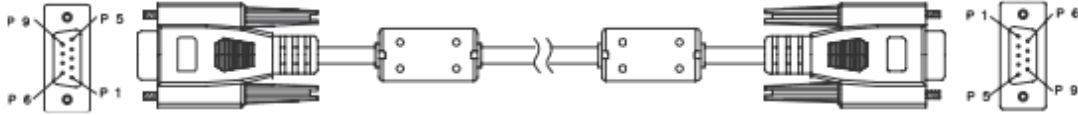
D-Sub 9 pin

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	3
3	Red	2
4	Orange	6
5	Yellow	5
6	Green	4
7	Blue	8
8	Purple	7
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

(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.
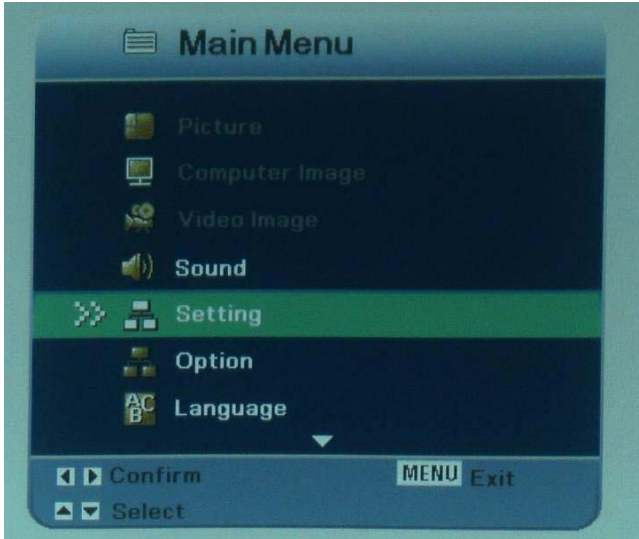
(3) Move down the color bar to "Lamp Hours Reset" item.
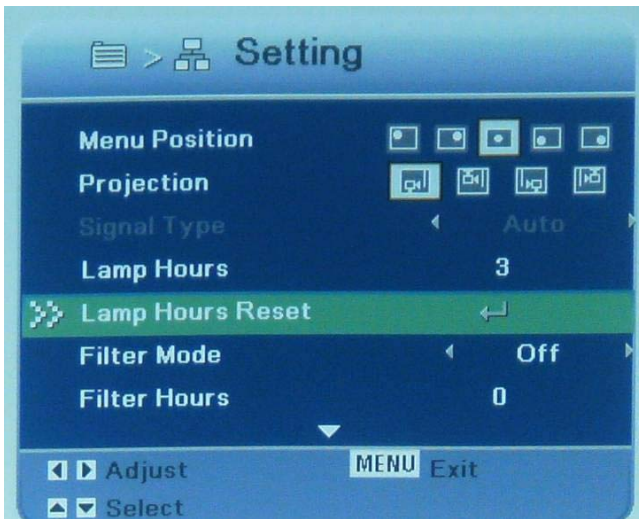
(4) Press right button to enter sub -menu.

(5) Press left button to select "yes" to reset Lamp Hours.

(6)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 Network Control				
9 Recommended 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.