

DATA PROJECTOR

DP-3510 YYDA & DP-2510 YYDA

SERVICE MANUAL (rev.00)



DLP DIGITAL PROJECTOR

Model Name : DP-3510 YYDA & DP-2510 YYDA

| Revision | Description | Date |
|----------|-------------|------------|
| rev.00 | Preliminary | 11/30/2007 |
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1. COMPLIANCE OF SAFE REPAIR

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

Pay attention to the following items during service inspection.

1.1 Cautions during disassembling and assembling

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

1.2 Lamp

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

1.3 Lens

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

2. SPECIFICATIONS

2-1. Summary Specifications

| | | |
|-------------------------------------|---|---------------------------------|
| Model | DS325-JD | DX325-JD |
| Display type | TI DMD Type X, 0.55 inches, SVGA | TI DMD Type X, 0.55 inches, XGA |
| Resolution | SVGA 800x600 Native | XGA 1024x768 Native |
| Projection distance | 1.5 meters ~ 10 meters | |
| Projection screen size | 0.86 to 6.6 meters (34 to 260 inches) | |
| Projection lens | Manual focus / Manual zoom | |
| Zoom ratio | 1.15:1 | |
| Vertical keystone correction | +/- 30 degrees | |
| Projection methods | Desktop front/rear | |
| Data compatibility | IBM PC or compatibles (VGA, SVGA, XGA, SXGA, UXGA), Mac | |
| SDTV/EDTV/ HDTV | 480i, 576i, 480p, 576p, 720p, 1080i | |
| Video compatibility | NTSC/NTSC 4.43, PAL (B/G/H/I/M/N 60), SECAM | |
| H-Sync | 15, 31 - 70 KHz | 15, 31 - 90 KHz |
| V-Sync | 50 - 85 Hz | |
| Safety certification | FCC-B, UL, cUL, TUV, CB, CE, GOST SABS, IRAM, MIC, EK | |
| Operation temperature | 5° ~ 35°C | |
| Dimensions | 220 mm (W) x 71 mm (H) x 178 mm (D) | |
| AC Input | AC Universal 100 ~ 240, Typical @ 110 VAC (100~240)±10% | |
| Power consumption | Typical 260W (standard mode); Typical 210W (ECO mode) | |
| Stand By | < 5 watts | |
| Lamp | Normal Mode: 200W; Eco Mode: 160W | |
| Audio speaker | 1W / 4 ohm mono speaker | |
| PC | RGB | |
| Video | Composite video (RCA X 1) | |
| | S-Video (Mini-DIN) | |
| Audio | Mini-jack | |
| Security | Kensington lock | |

2-2.DMD Specifications

| | Unit | Min. | Max. | Typical | Notes |
|-----------------------------|-------|------|------|---------------------------|-------|
| DMD type (DP-2510) | | | | TI 0.55" SVGA 12 deg LVDS | |
| Number of Columns (DP-2510) | Pixel | | | 800 | |
| Number of Rows (DP-2510) | Pixel | | | 600 | |
| DMD type (DP-3510) | | | | TI 0.55" XGA 12 deg LVDS | |
| Number of Columns (DP-3510) | Pixel | | | 1024 | |
| Number of Rows (DP-3510) | Pixel | | | 768 | |
| Panel Operating Temp. | °C | 10 | 65 | | |
| Ambient Temp | °C | | | 25 | |

2-3.Color Wheel

| Spec. | Unit | Min. | Max. | Typical | Notes |
|---------------|------|------|------|---------|-----------------------|
| Color Segment | | | | RYGWB | 82/29/80/91/78 (44mm) |

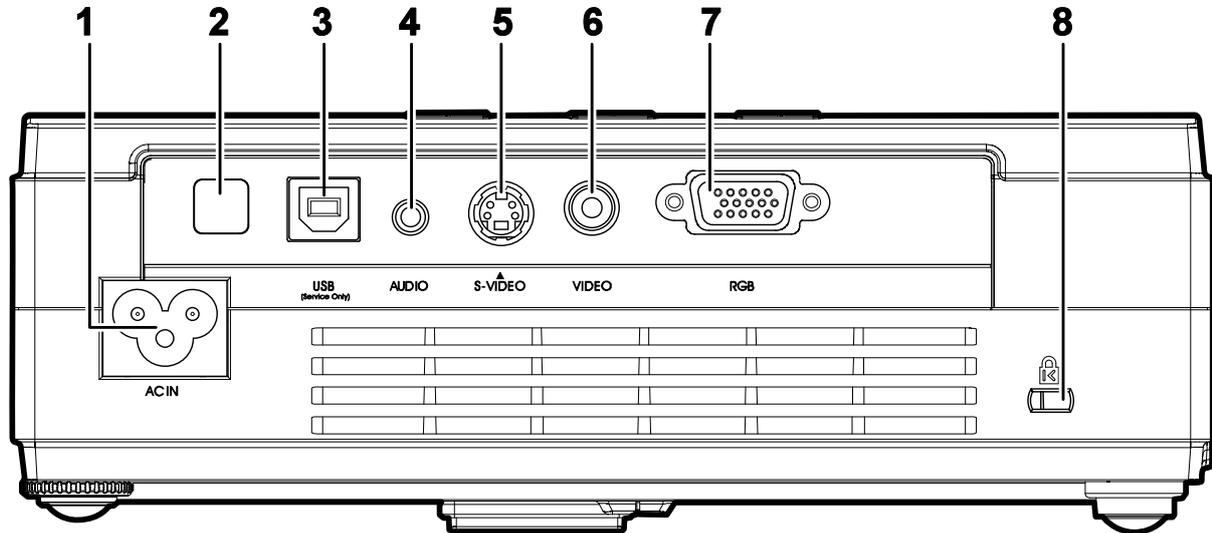
2-4. Lamp

| Spec. | Unit | Min. | Max. | Typical | Notes |
|-------------------------|------|------|------|---------------------------------------|--|
| Lamp Type | | | | MH-SA20D-SHP114 | |
| Driver | | | | PWB Assy Power Ballast Board DP-3510 | Delta p/n: 5600600579 |
| Soft start Current | A | 2.4 | 2.8 | 2.6 | |
| Maximum Warm-UP Current | A | 4.0 | 4.6 | 4.3 | |
| Reflector Type | | | | FEX92 | |
| Lamp Output Power | W | | | 200W+/-5% (Normal) 160W+/-5% (ECO) | @Vo from 50V to 120V @Vo from 50V to 120V |

2-5. Input/output connectors

| | |
|-----------------|--------------------------------|
| PC | VGA |
| | USB (Service Only) |
| Video | Composite video (RCaX1) |
| | S-Video (Mini-DIN) |
| Audio | Mini-jack |
| Security | Kensington slot |

2-6. I/O Ports Illustration about Projector

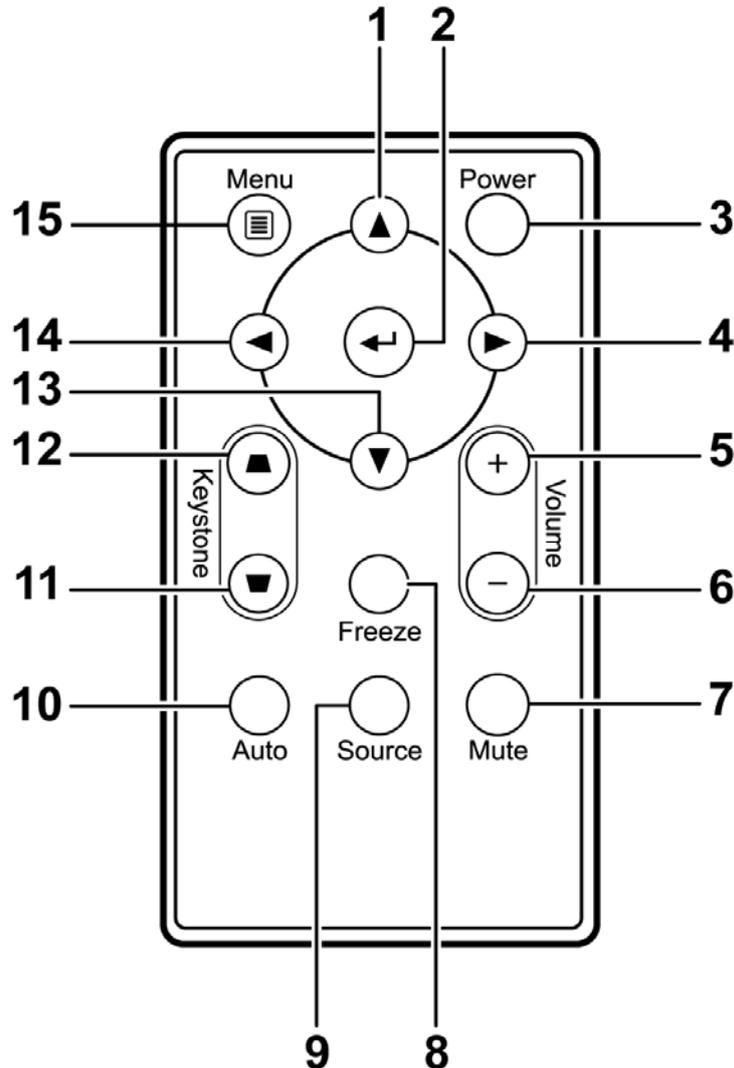


| ITEM | LABEL | DESCRIPTION |
|------|---|---|
| 1. | AC IN | Connect the power cord |
| 2. | Rear IR receiver (Optional) | Receiver for IR signal from remote control |
| 3. | USB (Service Only) | Connect the USB cable from a computer (service only) |
| 4. | AUDIO | Connect the audio cable from the input device |
| 5. | S-VIDEO | Connect the S-Video cable from a video device |
| 6. | VIDEO | Connect a composite video cable from a video device |
| 7. | RGB | Connect the computer cable from a computer |
| 8. |  (Security Lock) | Secure to permanent object with a Kensington® Lock system |

Note:

If your video equipment has both S-VIDEO and RCA jacks (composite video) connect to the S-VIDEO connector. S-VIDEO provides a better quality signal

2-7. Remote Control Parts



Important:

1. Avoid using the projector with bright fluorescent lighting turned on. Certain high-frequency fluorescent lights can disrupt remote control operation.
2. Be sure nothing obstructs the path between the remote control and the projector. If the path between the remote control and the projector is obstructed, you can bounce the signal off certain reflective surfaces such as projector screens.
3. The buttons and keys on the projector have the same functions as the corresponding buttons on the remote control. This user's manual describes the functions based on the remote control.

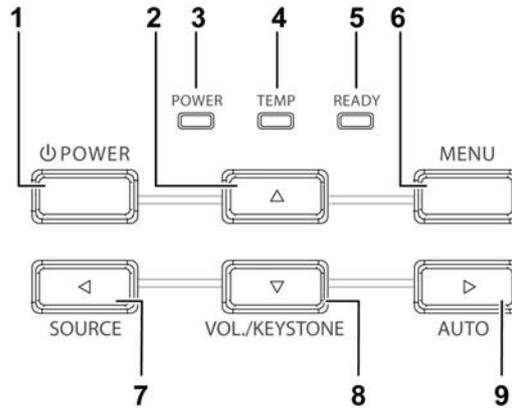
| ITEM | LABEL | DESCRIPTION |
|------|-----------------|---|
| 1. | Up cursor | Navigates and changes settings in the OSD |
| 2. | Enter | Changes settings in the OSD |
| 3. | Power | Turns the projector On or Off |
| 4. | Right cursor | Navigates and changes settings in the OSD |
| 5. | Volume + | Increase volume |
| 6. | Volume - | Decrease volume |
| 7. | Mute | Mutes the built-in speaker |
| 8. | Freeze | Freeze/unfreezes the on-screen picture |
| 9. | Source | Detects the input device |
| 10. | Auto | Auto adjustment for frequency, tracking, size, position |
| 11. | Keystone top | Corrects image trapezoid (wider bottom) effect |
| 12. | Keystone bottom | Corrects image-trapezoid (wider top) effect |
| 13. | Down cursor | Navigates and changes settings in the OSD |
| 14. | Left cursor | Navigates and changes settings in the OSD |
| 15. | Menu | Opens the OSD |

Remote Control Operating Range

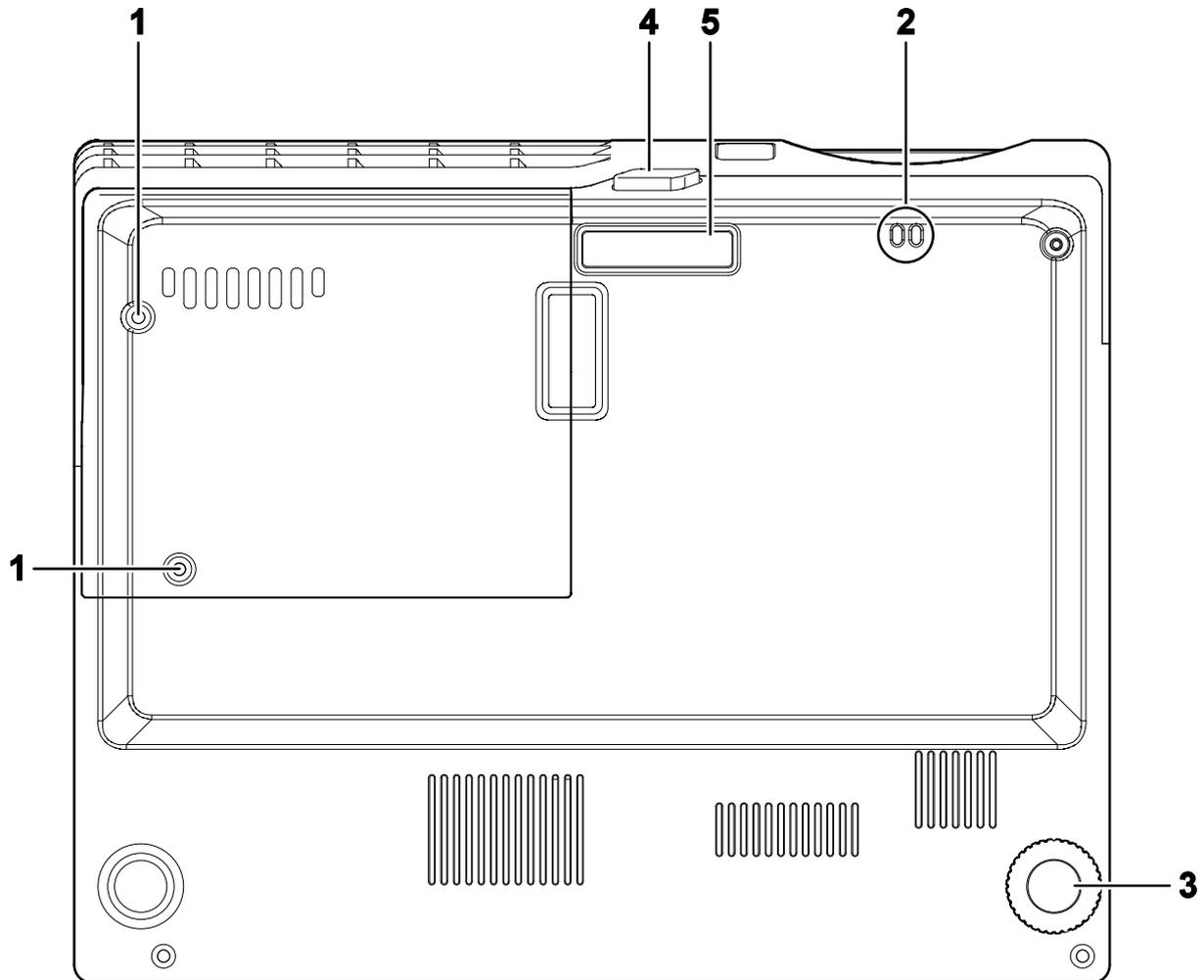
The remote control uses infrared transmission to control the projector. It is not necessary to point the remote directly at the projector. Provided you are not holding the remote perpendicular to the sides or the rear of the projector, the remote will function well within a radius of about 7 meters (23 feet) and 15 degrees above or below the projector level. If the projector does not respond to the remote control, move a little closer.

2-8. Key Pad

Top view—On-screen Display (OSD) buttons and LEDs



| ITEM | LABEL | DESCRIPTION | |
|------|---------------------------------|---|--|
| 1. | ⏻ (POWER) | Turns the projector On or Off | |
| 2. | ▲ (Up cursor) | Navigates and changes settings in the OSD | |
| 3. | POWER LED | on | LED Green still on |
| | | stand-by mode | LED Flashing Green off 2.5s / on 1s |
| | | Warming up mode | LED Flashing Green off 2.5s / on 1s |
| | | Off (cooling down) | LED Flashing Green 10s => LED Green off |
| 4. | TEMP LED | On | System over temperature |
| | | Off | Normal State |
| 5. | READY LED | Orange | Lamp is ready to be powered-on. |
| | | Flashing | Lamp not ready (Warm-up/shutting down/cooling) |
| 6. | MENU | Open and exits the OSD buttons | |
| 7. | ◀ (Left cursor) / SOURCE/ | Detects the input device Navigates and changes settings in the OSD | |
| 8. | ▼ (Down cursor) / VOL./KEYSTONE | Quick Menu – For Keystone, Audio Volume Navigates and changes settings in the OSD | |
| 9. | ▶ (Right cursor) / AUTO/ | Optimizes image size, position, and resolution Navigates and changes settings in the OSD | |

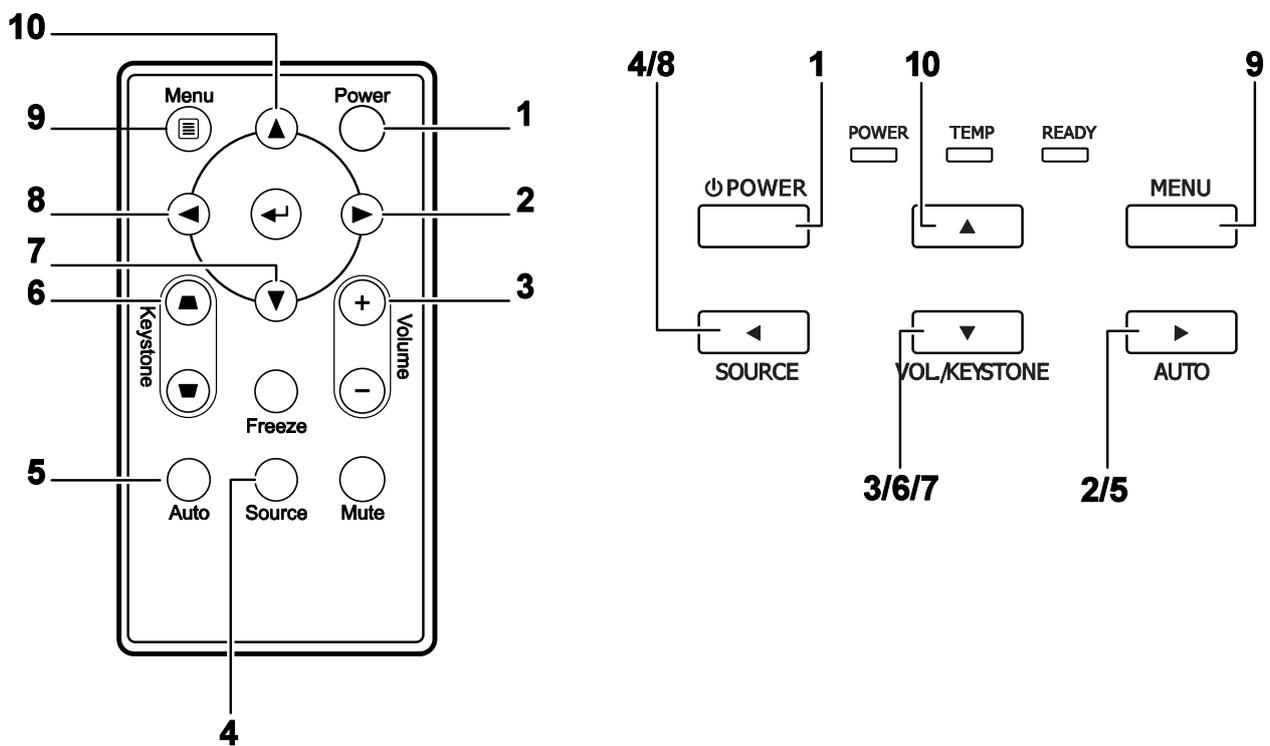
2-9. Bottom view

| ITEM | LABEL | DESCRIPTION |
|------|------------------------|---|
| 1. | Lamp cover | Remove when changing the lamp. |
| 2. | Lens cap hook | To fasten the lens cap cover. |
| 3. | Tilt adjustor | Rotate adjuster lever to adjust angle position. |
| 4. | Height adjustor button | Push to release adjustor. |
| 5. | Height adjustor | Adjustor drops down when adjuster button is pushed. |

2.10 Projector and Remote Control Buttons

The projector can be operated using the remote control or the buttons on the top of the projector. All operations can be carried out with the remote control; however, the buttons on the projector are limited in use. The following illustration shows the corresponding buttons on the remote control and on the projector.

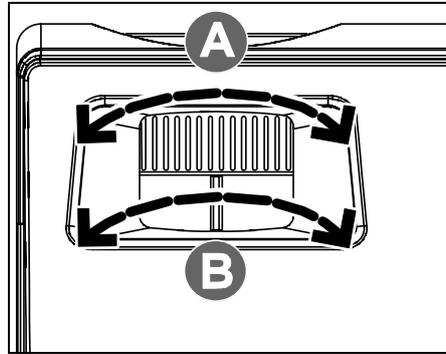
Remote Control



Some buttons on the projector have multiple functions. For example, item 3/6/7 on the projector functions as the keystone button, volume adjuster, and as the down cursor key.

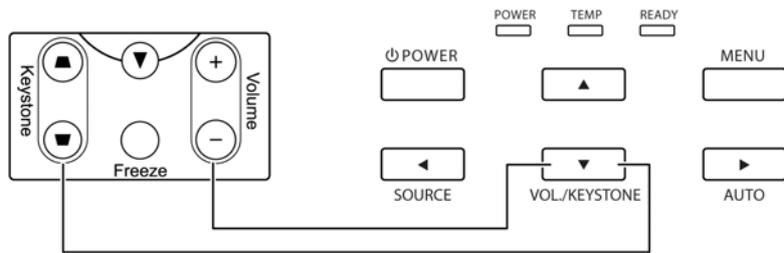
2.11 Adjusting the Zoom, Focus and Keystone

- 1. Use the **Image-zoom** control (on the projector only) to resize the projected image and screen size **B**.



- 2. Use the **Image-focus** control (on the projector only) to sharpen the projected image **A**.

- 3. Use the **KEYSTONE** buttons (on the projector or the remote control) to correct image-trapezoid (wider top or bottom) effect.



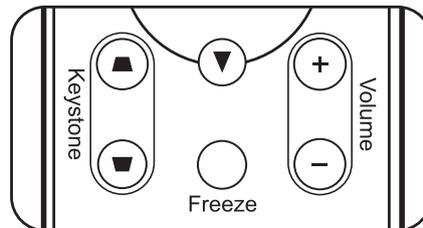
Remote control and OSD panel

- 4. The keystone control appears on the display.

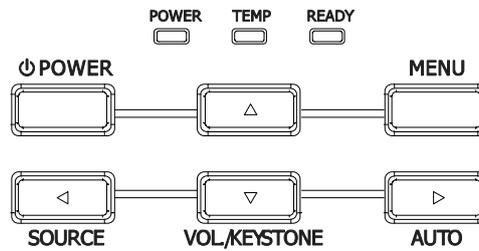


2.12 Adjusting the Volume

1. Press the **VOLUME +/-** buttons on the remote control.
The volume control appears on the display.



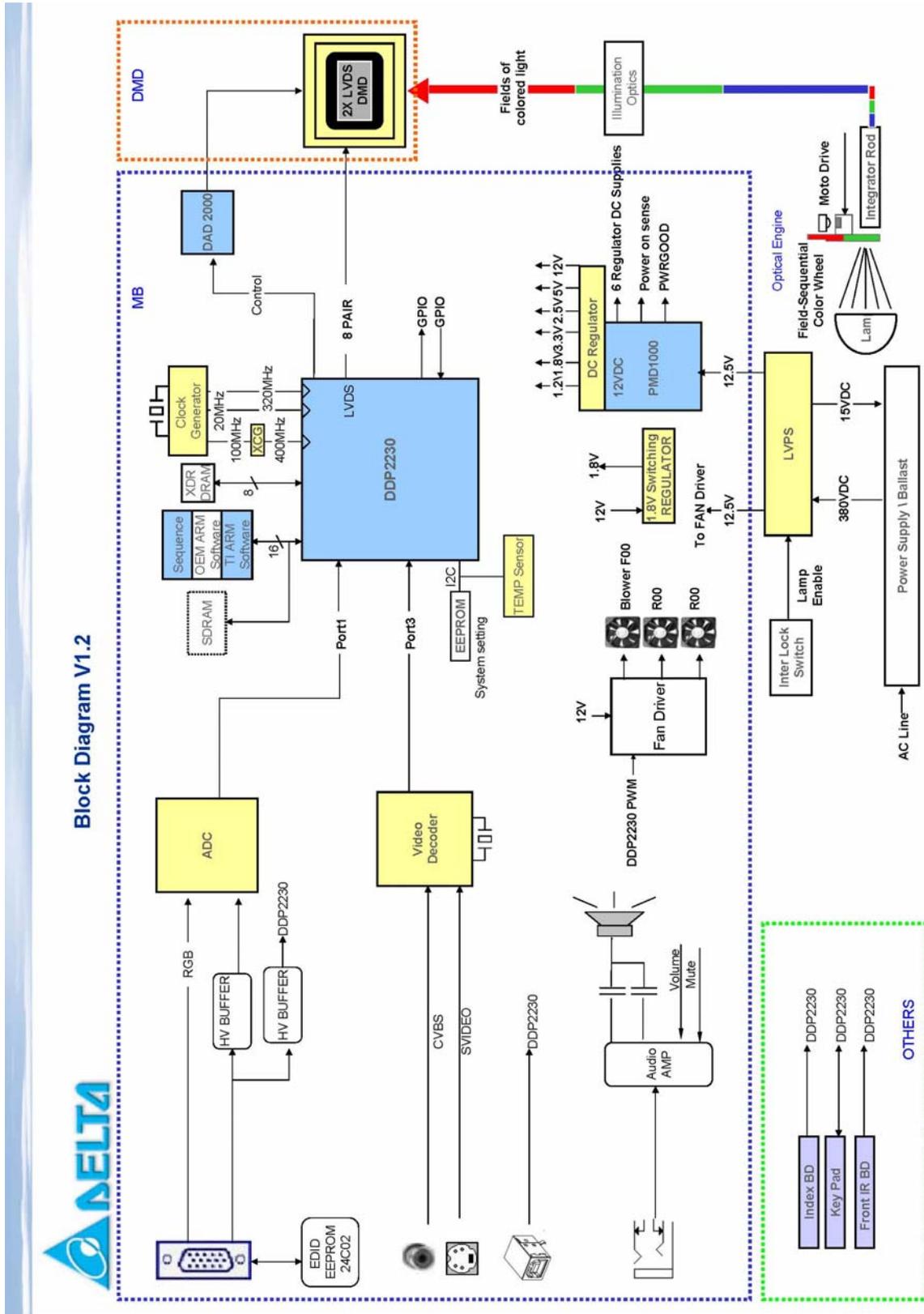
2. Press the **Down Cursor** button on the keypad to adjust **Volume +/-**.



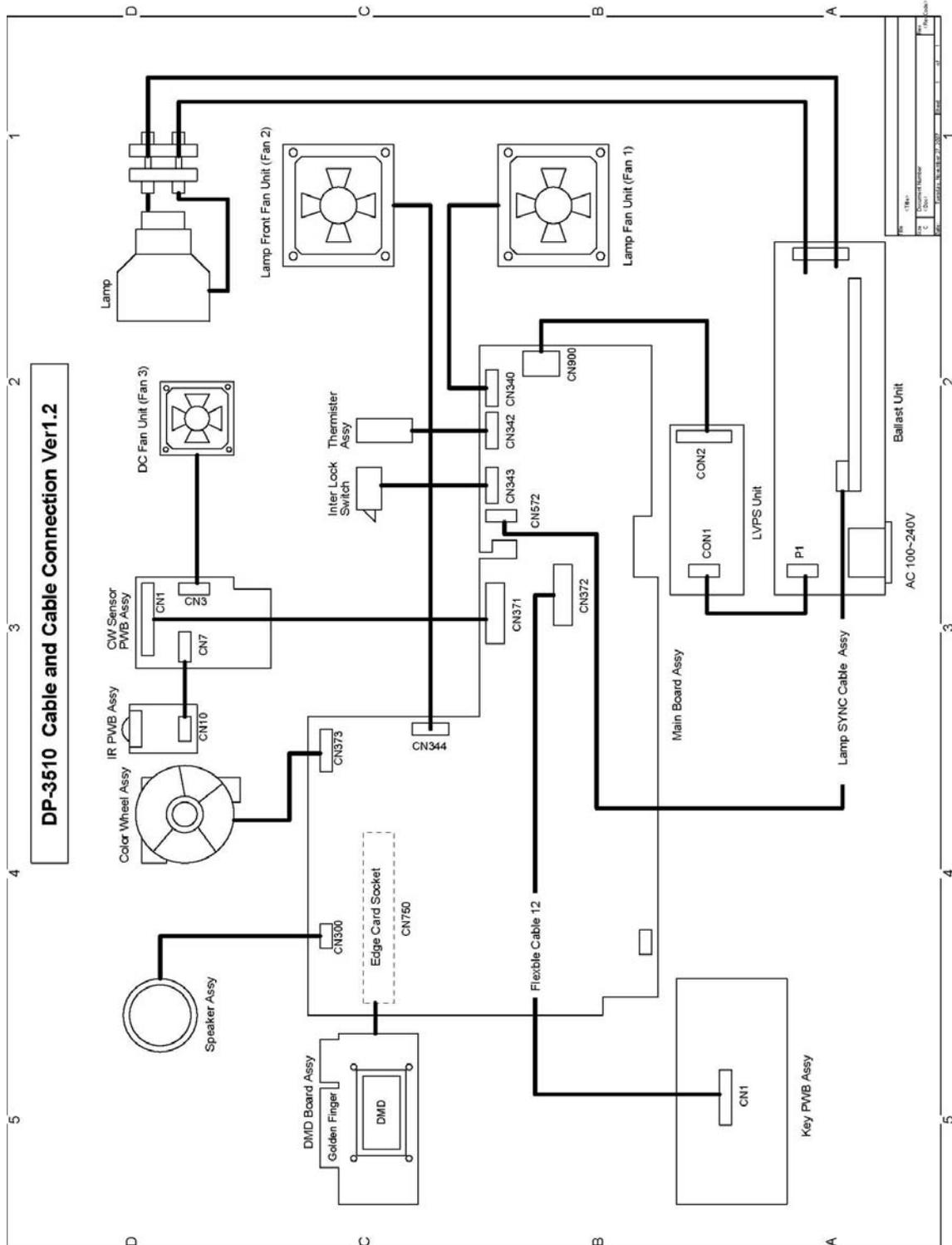
3. Press the **MUTE** button to turn off the volume (This feature is available only on the remote).



2-13. Block Diagram



2.14 Wire diagram

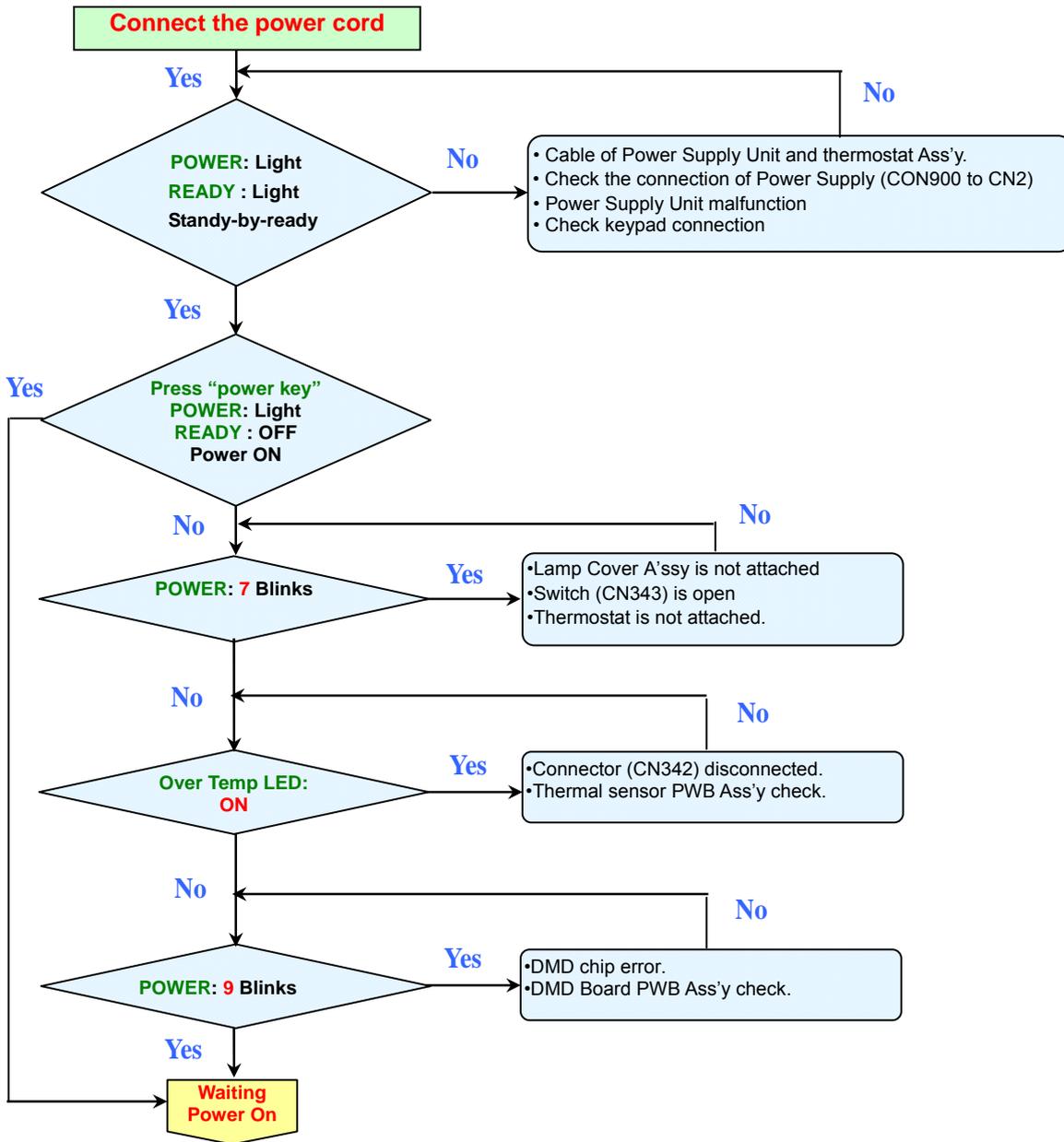


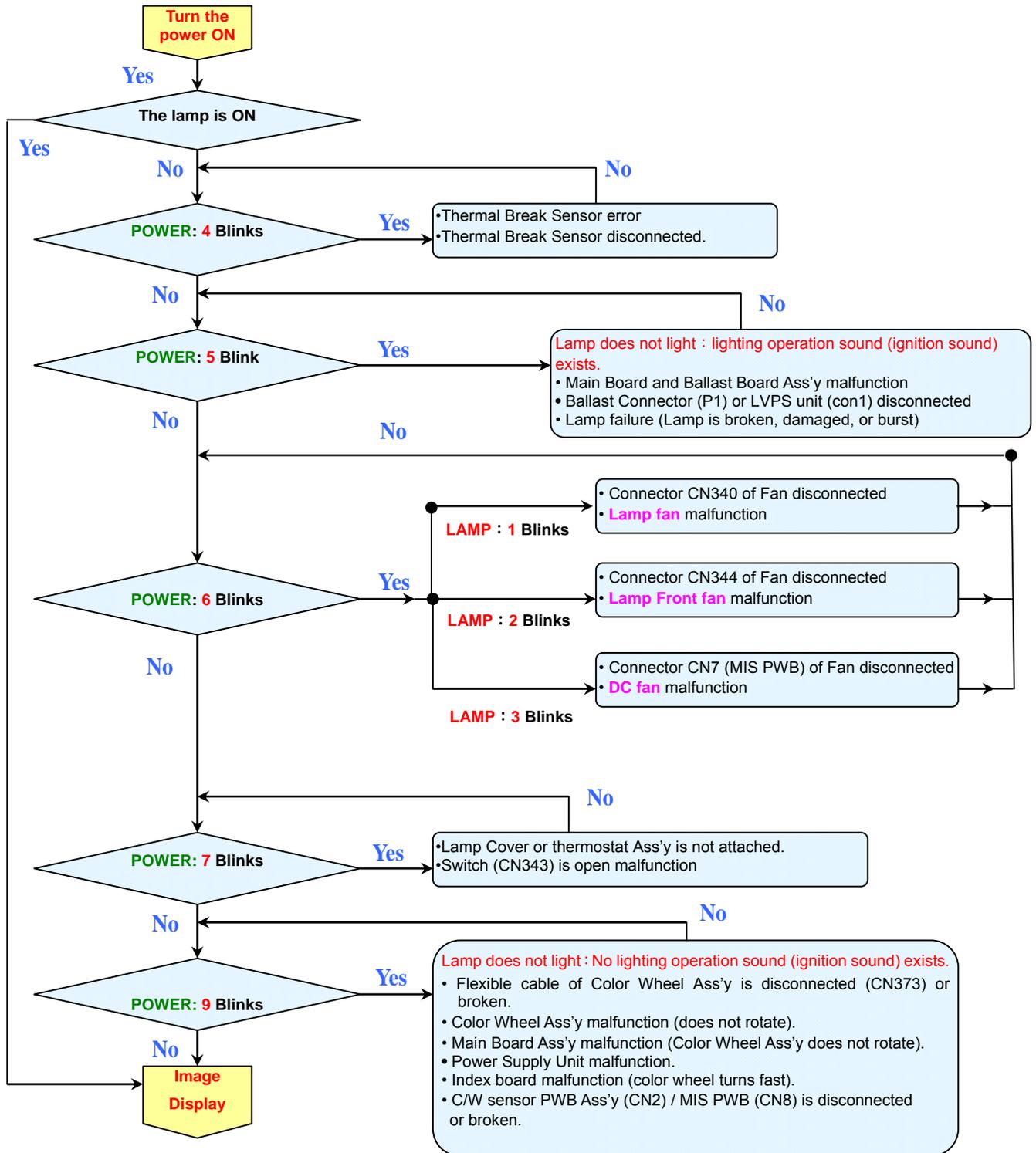
DP-3510 Cable and Cable Connection Ver1.2

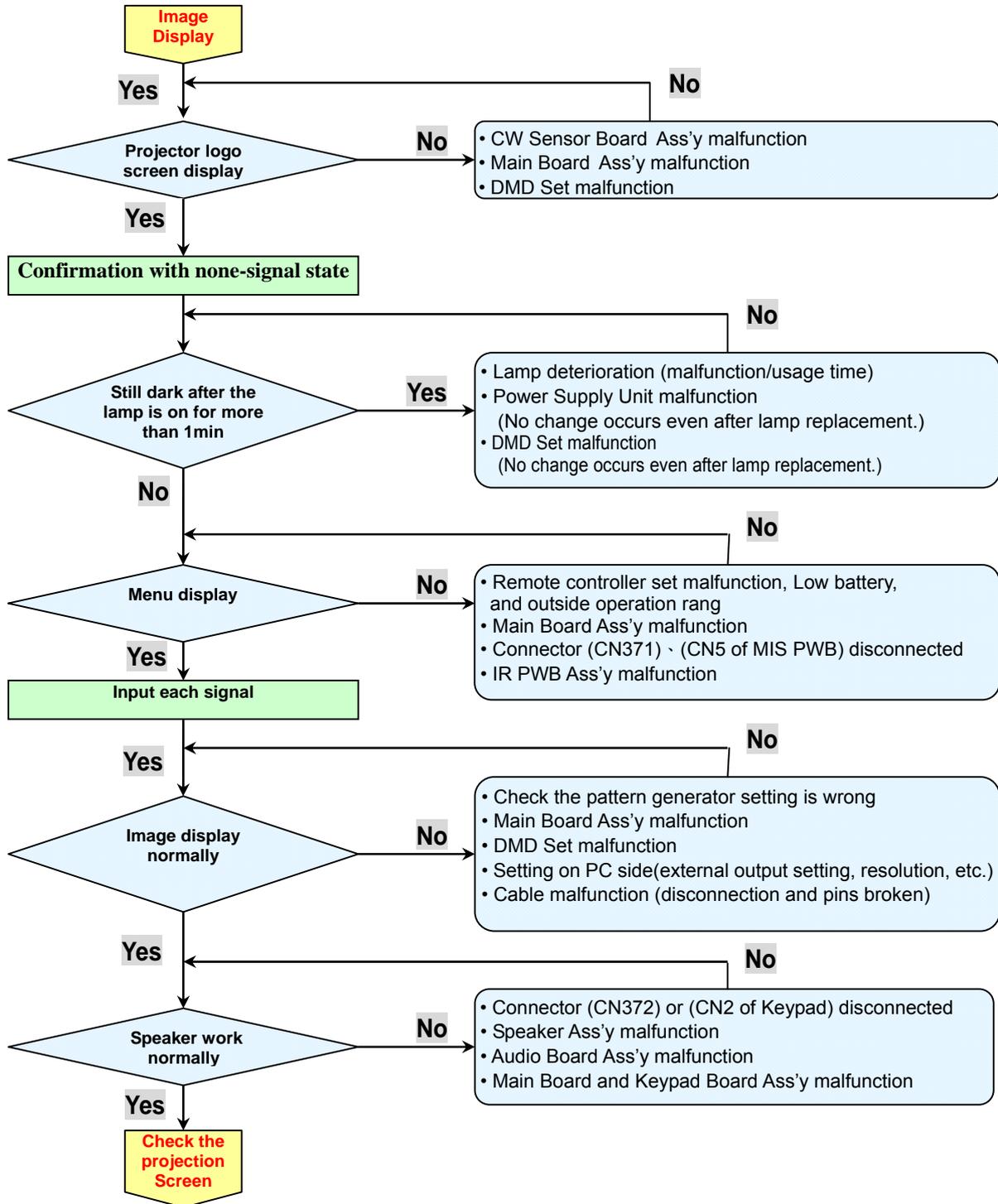
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|-----------|--------------|
| Rev. | 1184+ |
| Doc. No. | DP-3510 YYDA |
| Doc. Name | DP-3510 YYDA |
| Doc. Date | 2007/11/30 |
| Doc. Ver. | 1.0 |

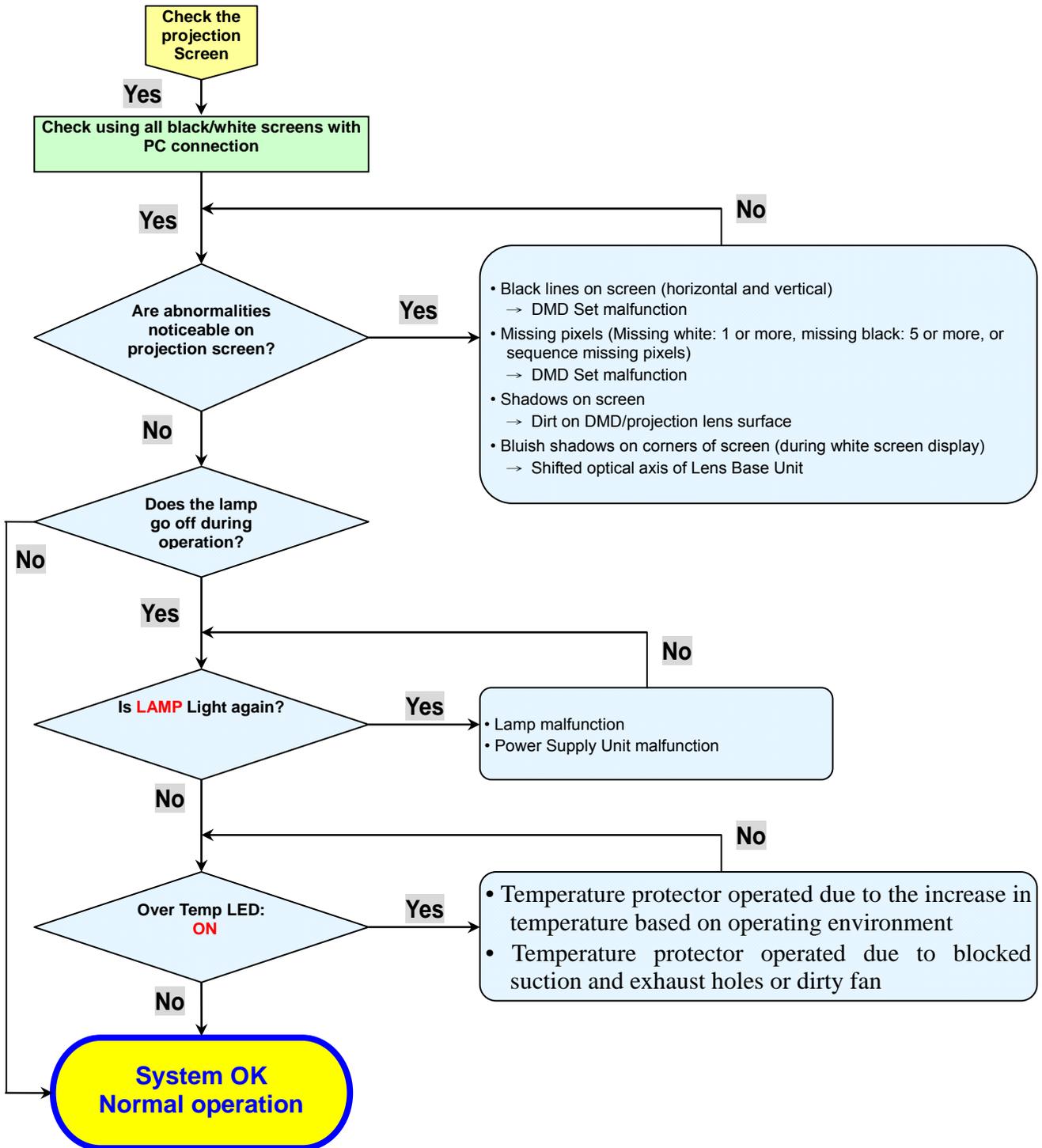
3. TROUBLE SHOOTING v1.1

By checking operations during normal usage time, it is possible to carry out judgments on malfunction to a certain extent. Carry out the following checks before disassembling the equipment.









Common problems and solutions

These guidelines provide tips to deal with problems you may encounter while using the projector. If the problem remains unsolved, contact your dealer for assistance.

Often after time spent troubleshooting, the problem is traced to something as simple as a loose connection.

Check the following before proceeding to the problem-specific solutions.

- *Use some other electrical device to confirm that the electrical outlet is working.*
- *Ensure the projector is turned on.*
- *Ensure all connections are securely attached.*
- *Ensure the attached device is turned on.*
- *Ensure a connected PC is not in suspending mode.*

Ensure a connected notebook computer is configured for an external display. (This is usually done by pressing an Fn-key combination on the notebook.)

Image Problems

Problem: No image appears on the screen

1. Verify the settings on your notebook or desktop PC.
2. Turn off all equipment and power up again in the correct order.

Problem: The image is blurred

1. Adjust the **Focus** on the projector.
2. Press the **Auto** button on the remote control or projector.
3. Ensure the projector-to-screen distance is within the 10-meter (33-feet) specified range.
4. Check that the projector lens is clean.

Problem: The image is wider at the top or bottom (trapezoid effect)

1. Position the projector so it is as perpendicular to the screen as possible.
2. Use the Keystone button on the remote control or projector to correct the problem.

Problem: The image is reversed

Check the **Projection** setting on the **Installation I** menu of the OSD.

Problem: The image is streaked

1. Set the **Frequency** and **Tracking** settings on the **Computer** menu of the OSD to the default settings.
2. To ensure the problem is not caused by a connected PC's video card, connect to another computer.

Problem: The image is flat with no contrast

Adjust the **Contrast** setting on the **Image** menu of the OSD.

Problem: The color of the projected image does not match the source image.

Adjust the **Color Temperature** and **Gamma** settings on the **Image** menu of the OSD.

Lamp Problems

Problem: There is no light from the projector

1. Check that the power cable is securely connected.
2. Ensure the power source is good by testing with another electrical device.
3. Restart the projector in the correct order and check that the Power LED is green.
4. If you have replaced the lamp recently, try resetting the lamp connections.
5. Replace the lamp module.
6. Put the old lamp back in the projector and have the projector serviced.

Problem: The lamp goes off

1. Power surges can cause the lamp to turn off. Re-plug power cord. When the Ready LED is on, press the power button.
2. Replace the lamp module.
3. Put the old lamp back in the projector and have the projector serviced.

Remote Control Problems

Problem: The projector does not respond to the remote control

1. Direct the remote control towards remote sensor on the projector.
2. Ensure the path between remote and sensor is not obstructed.
3. Turn off any fluorescent lights in the room.
4. Check the battery polarity.
5. Replace the batteries.
6. Turn off other Infrared-enabled devices in the vicinity.
7. Have the remote control serviced.

Audio Problems

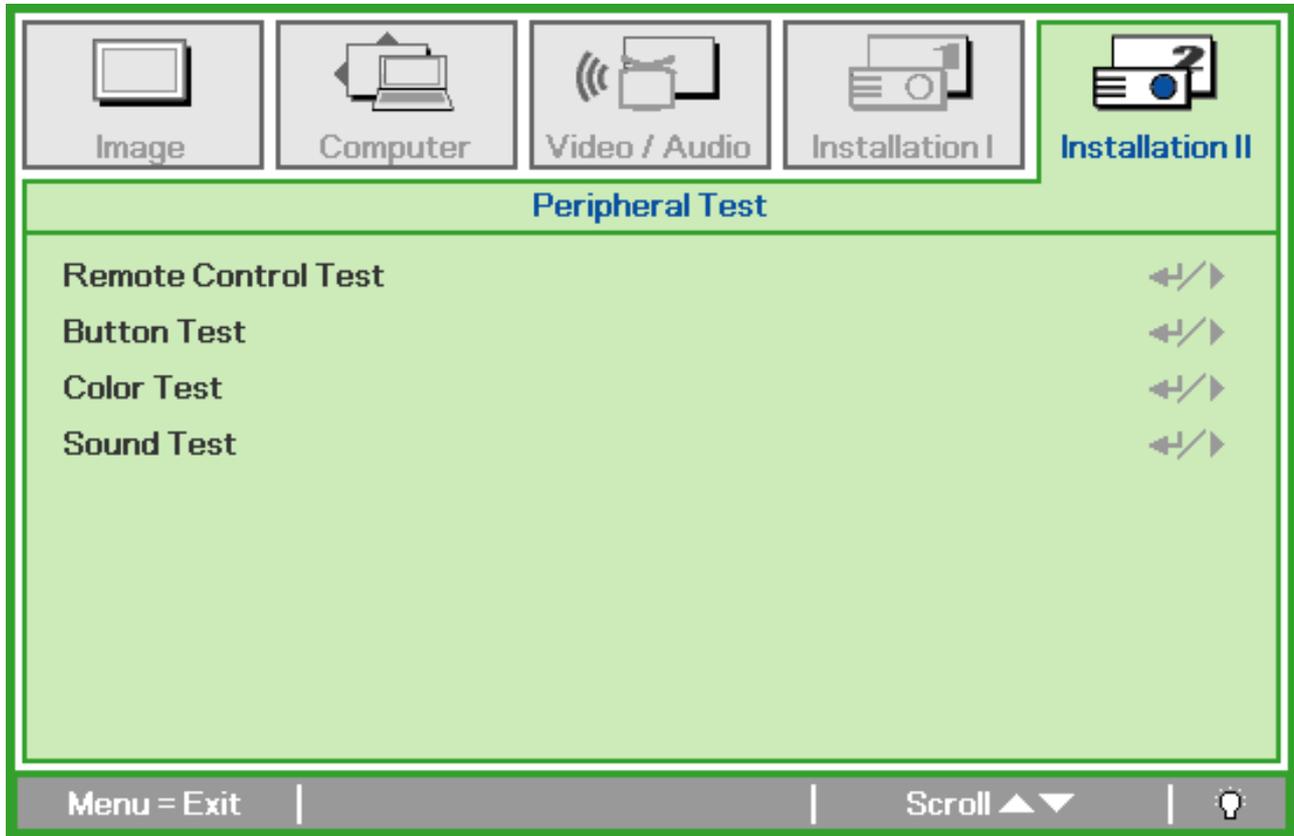
Problem: There is no sound

1. Adjust the volume on the remote control.
2. Adjust the volume of the audio source.
3. Check the audio cable connection.
4. Test the source audio output with other speakers.
5. Have the projector serviced.

Problem: The sound is distorted

1. Check the audio cable connection.
2. Test the source audio output with other speakers.

Peripheral Test



| ITEM | DESCRIPTION |
|---------------------|---|
| Remote Control Test | Press ↵ (Enter) / ▶ to test the IR remote controller for diagnostic. |
| Button Test | Press ↵ (Enter) / ▶ to test the button on keypad. |
| Color Test | Press ↵ (Enter) / ▶ to select different colors on screen. |
| Sound Test | Press ↵ (Enter) / ▶ to test the sound function of the internal speaker. |

4.DISASSEMBLY AND ASSEMBLY

Removing the Lamp Cover and Lamp Module

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Y



Look the full set projector.



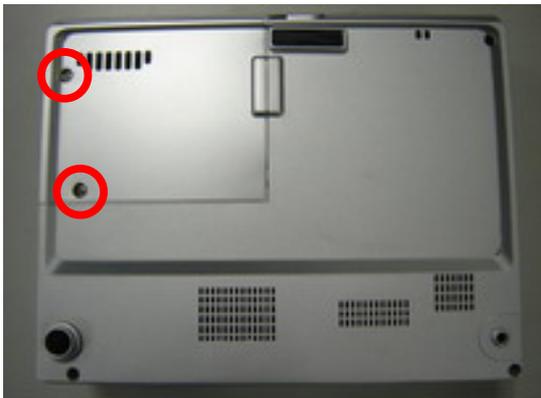
Look at the IO side.



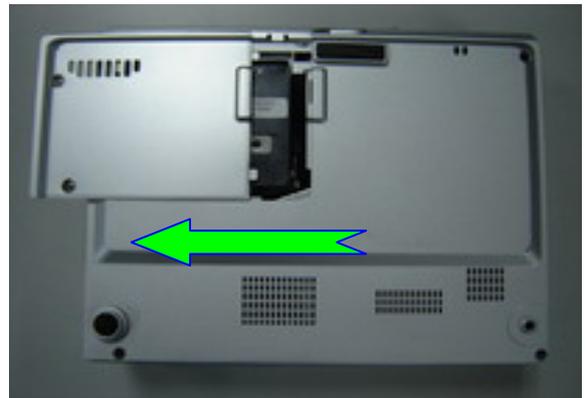
Look at the keypad of top side.



Look at the keypad of top side.



Loose these two screws.



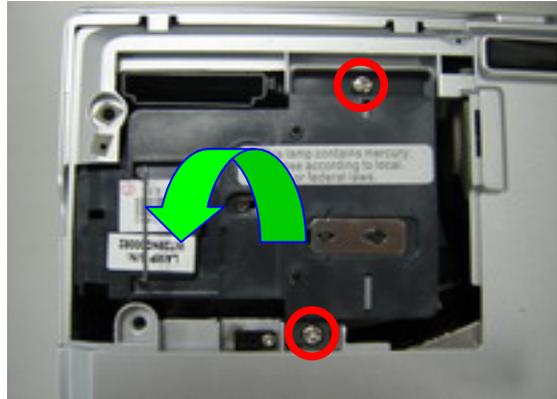
Remove and take out the lamp cover.

Removing the Lamp Cover and Lamp Module

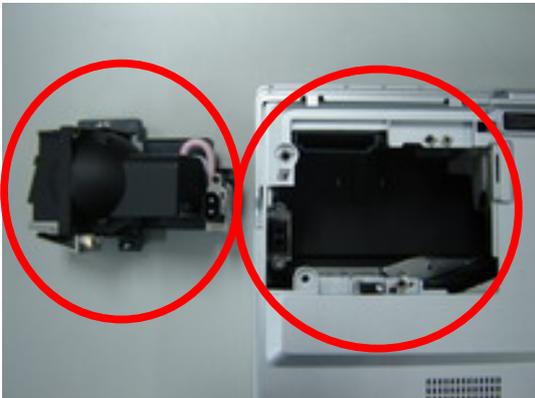
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Look at the top side.



Loose these two screws and take out.



Remove the lamp modules (upward view).



Look the Lamp #1.



Look the Lamp #2.



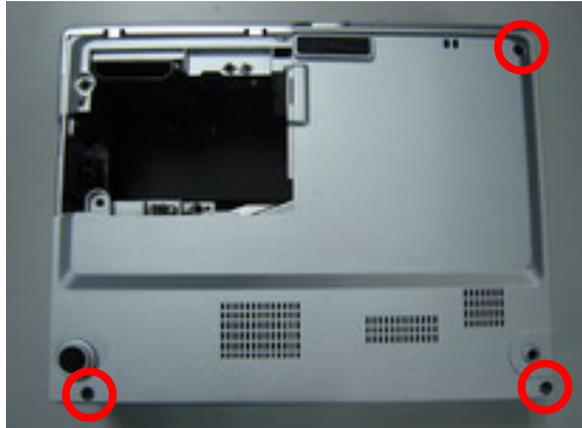
Look the Lamp #3.

Removing the Lamp Module and Top Cover

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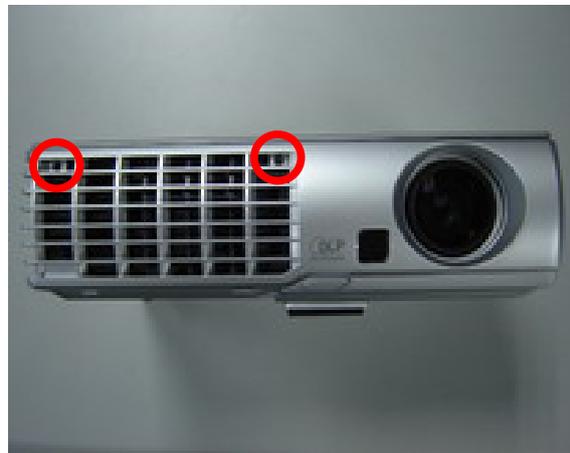
Look the Lamp #4.



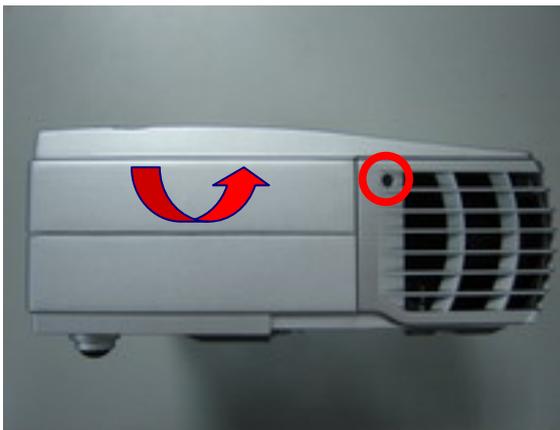
Remove the three screws.



Look the screws (S01).



Remove the two screws.



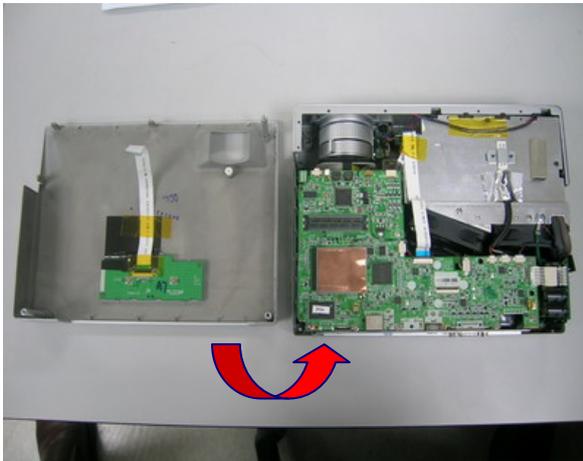
Remove the screw and top cover.



Look the screws(S02).

Removing the Top Cover and Keypad Board

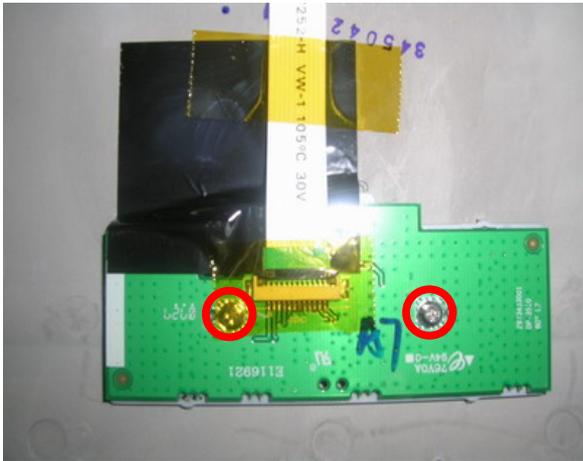
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Look at the keypad and set side.



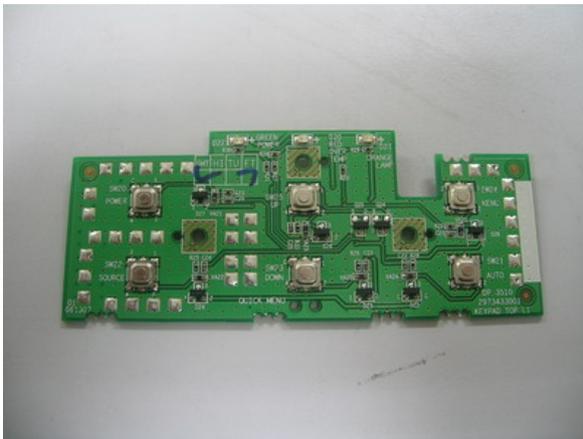
Look at the FFC cable.



Remove the two screws and Keypad board take off.



Remove the Keypad board.



Keypad board review.



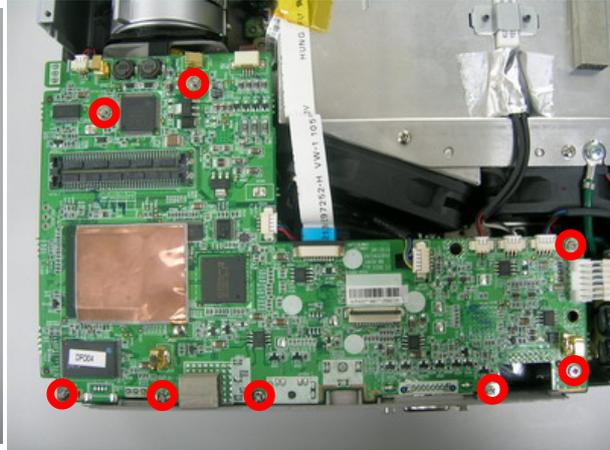
Look the screws(S03).

Removing the Main Board

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Full set review.



Remove the 8 piece screws.



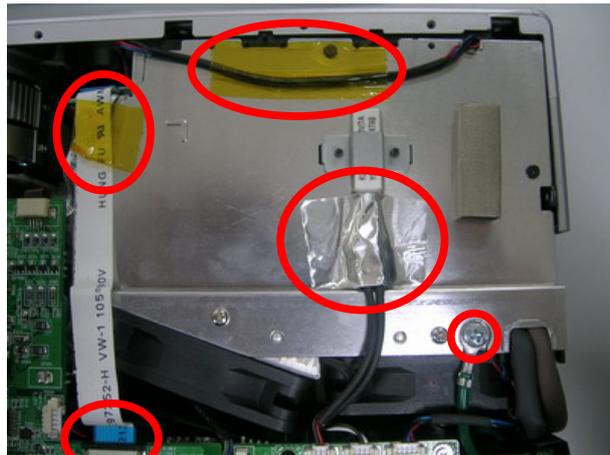
Look the screws(S04).



Remove the two hexagonal screws.



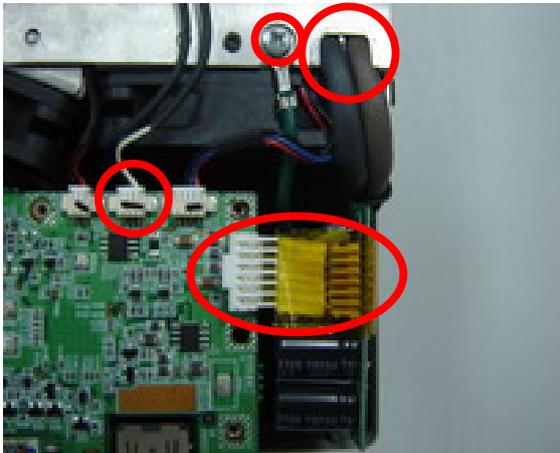
Look the screws(S05).



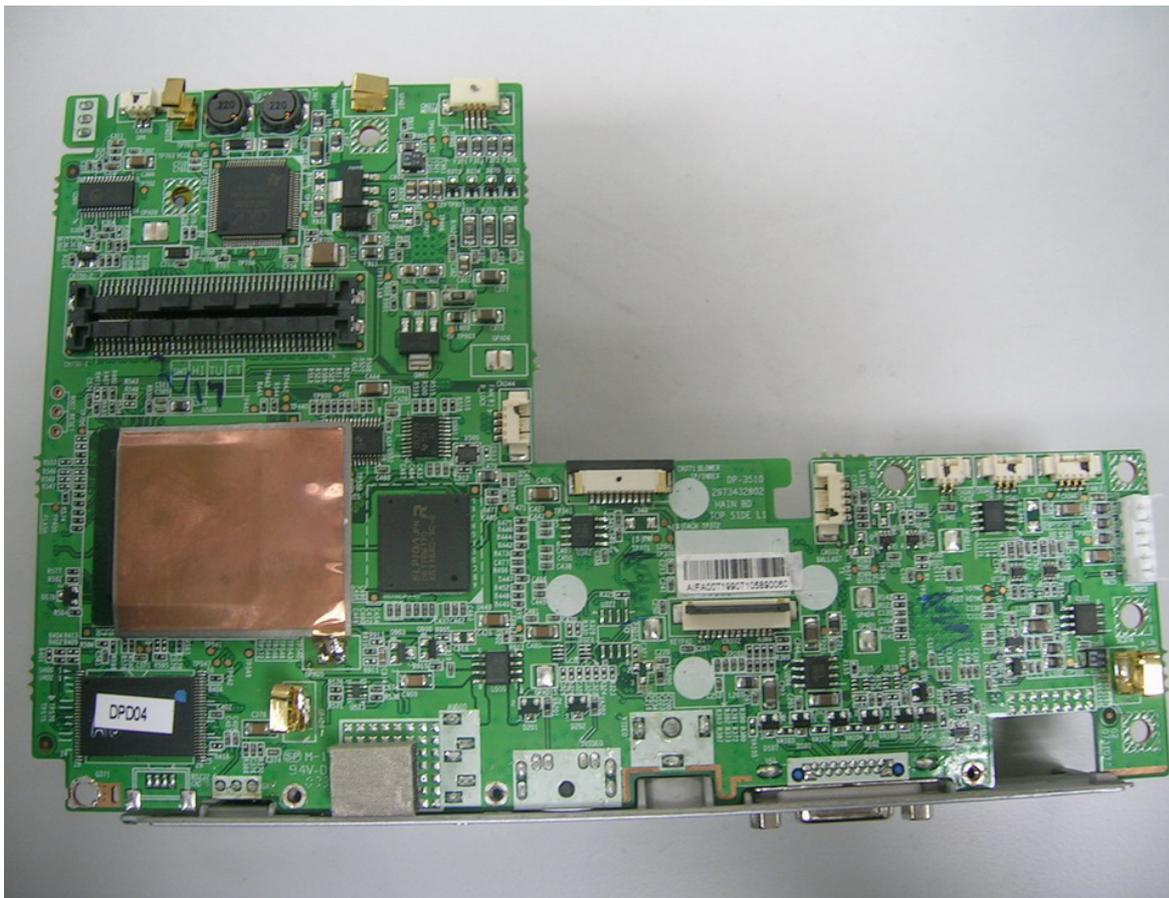
Careful this area and check this place when you assemble this plate.

Main Board Review

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S
E
M
B
L
Y



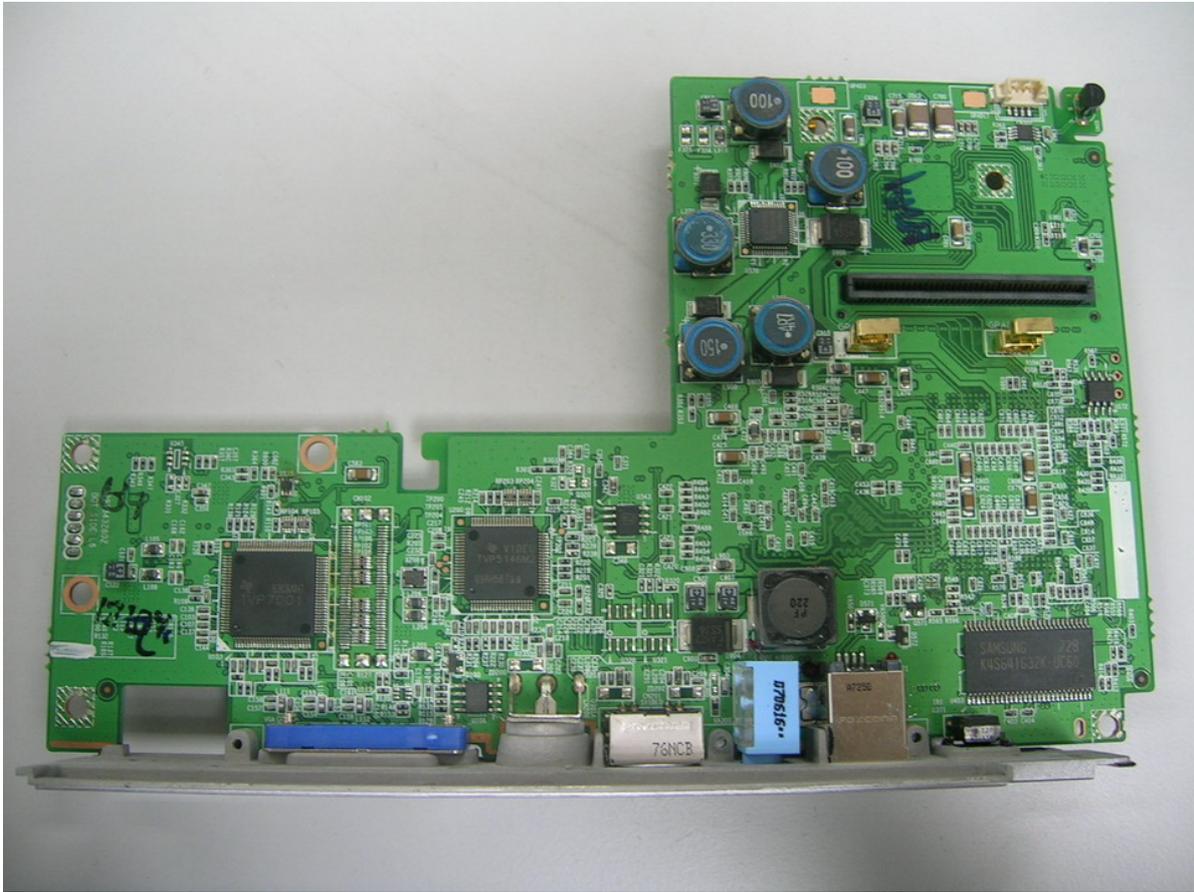
Careful this area and check this place when you assemble this plate.



Main Board Review #Top side

Main Board Review

D
I
S
A
S
S
E
M
B
L
Y



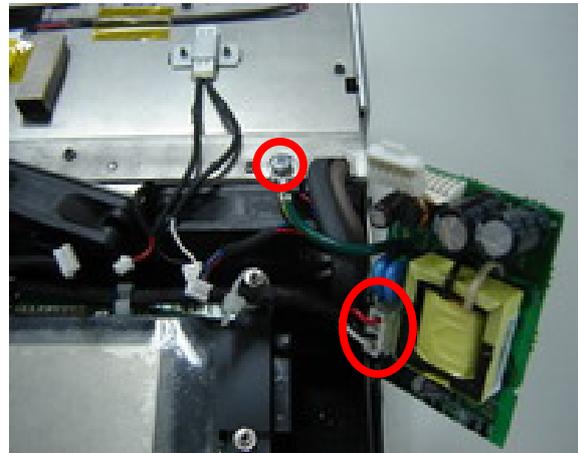
Main Board Review #Bottom side

Removing the Power Board

D
I
S
A
S
S
E
M
B
L
Y



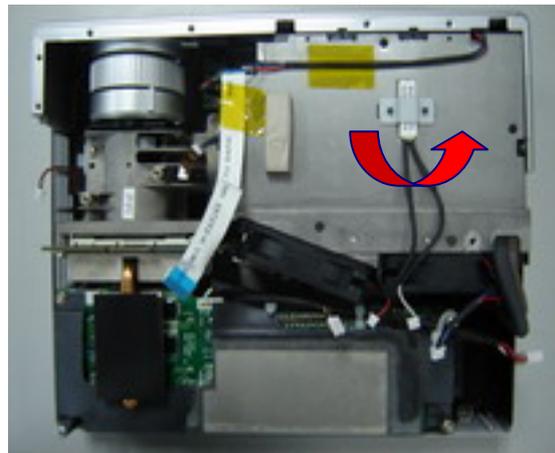
Review the IO plant.



Remove the screw and connector lets the power board (LVPS unit) take off.



Review the power board (LVPS unit) and screw (S07)



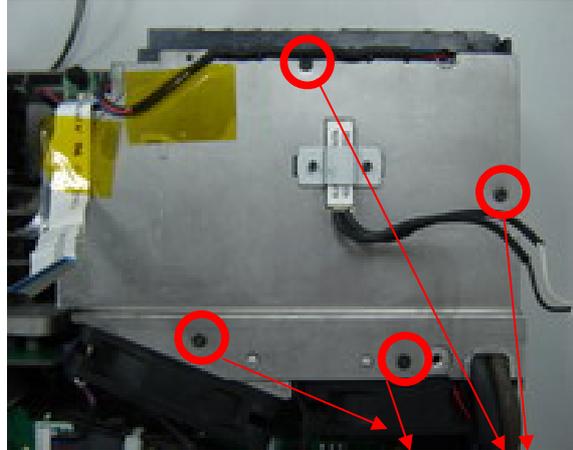
Remove the front case.

Removing the Front Case & Removing the Top Cover Shield

D
I
S
A
S
S
E
M
B
L
Y



Review the front case and set.



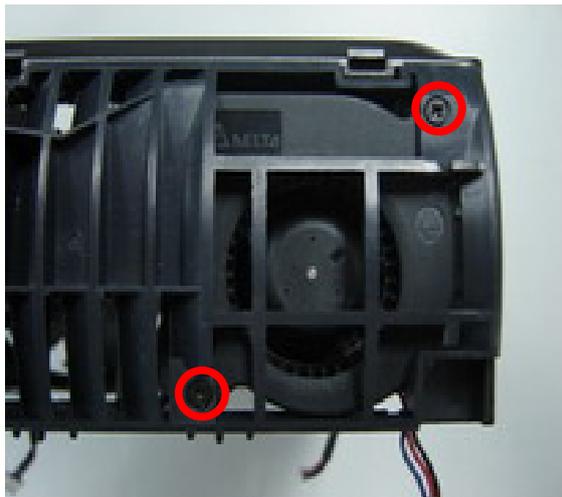
Remove the four screws(S08-2 & S08-1).



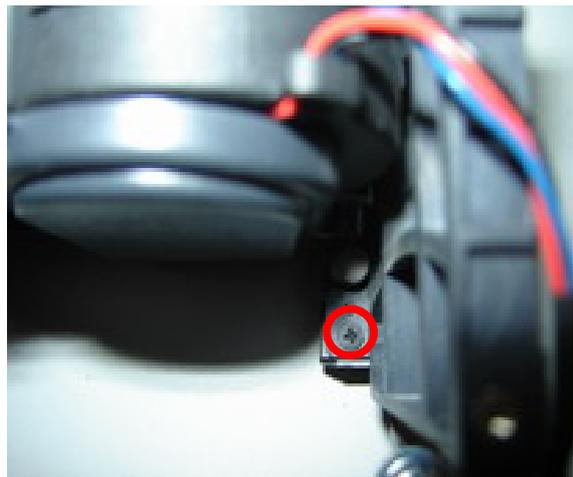
Review the Shield plant.



Review these four screws.



Remove the two screws and lets the fan take off (S09).



Remove the screw (S10).

Removing the Fans Module

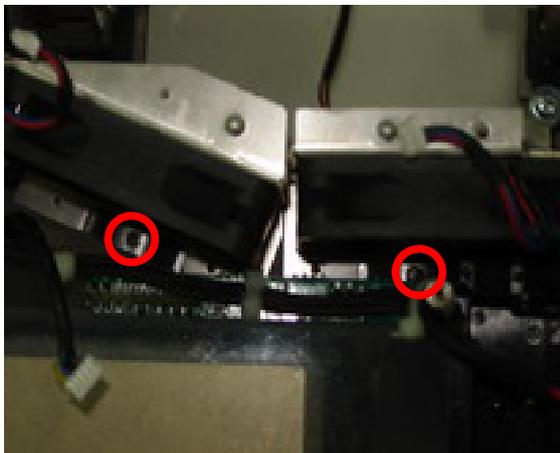
DISASSSEMBLY



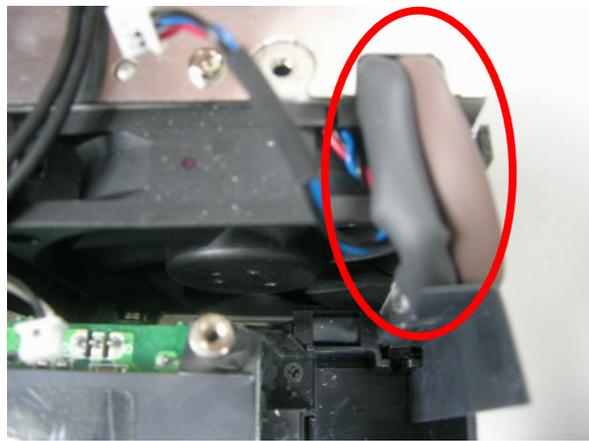
Remove the screw and fan module (S11).



Review the fan module and screws.



Remove the two screws.



Arrange the wires as picture when you assemble it.



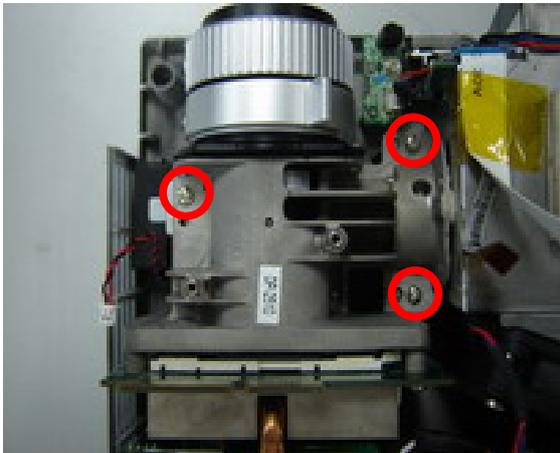
Take off the Fan module and review the screws (S12).



Remove the four screws and replace the fans (S13).

Removing the Optical Engine & Power Board

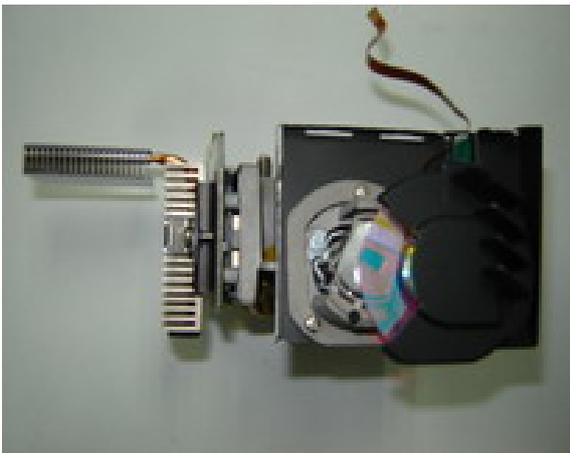
D
I
S
A
S
S
E
M
B
L
Y



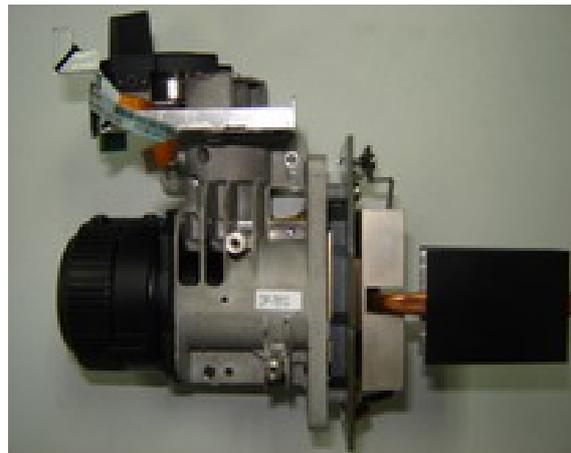
Remove the Three screws and take off the optical module.



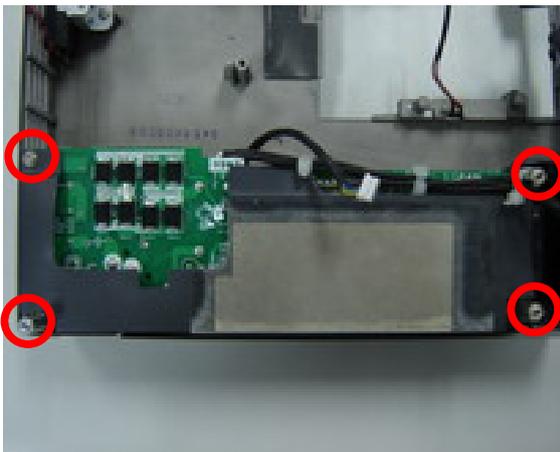
Review the three screws (S14).



Review the optical module #1.



Review the optical module #2.



Remove the four screws.



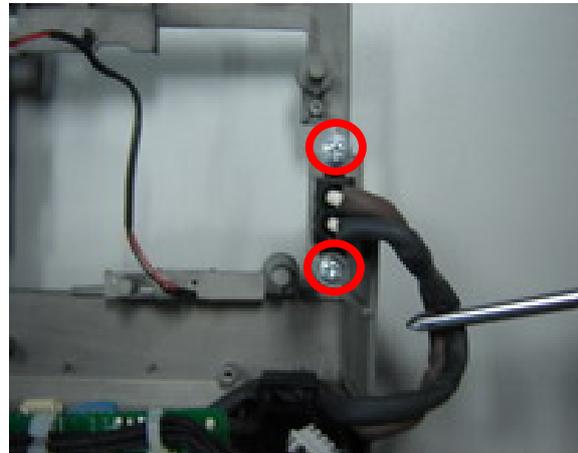
Review the four screws (S15/16/17).

Removing the Power Board

D
I
S
A
S
S
E
M
B
L
Y



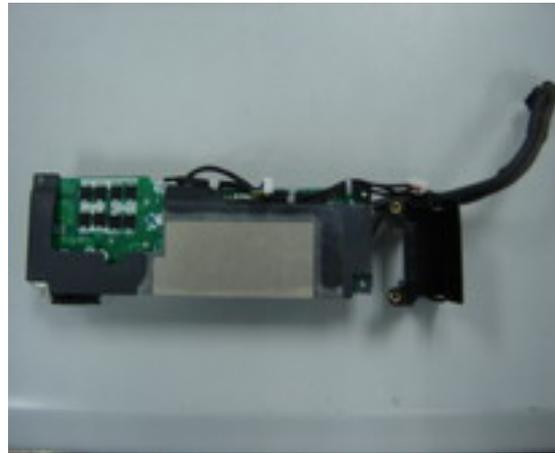
Remove the two screws (S18).



Remove the two screws (S19).



Review the four screws.



Review the power module (Ballast) #1.



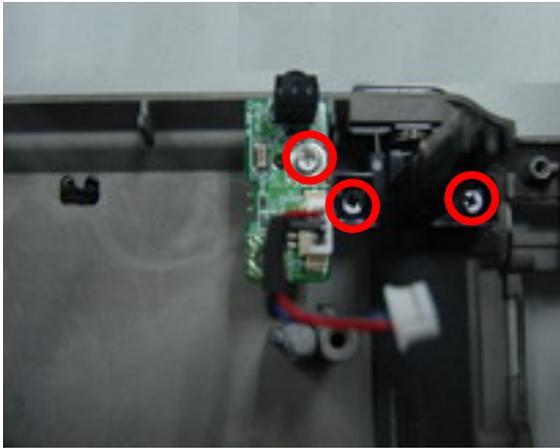
Review the power module (Ballast) #2.



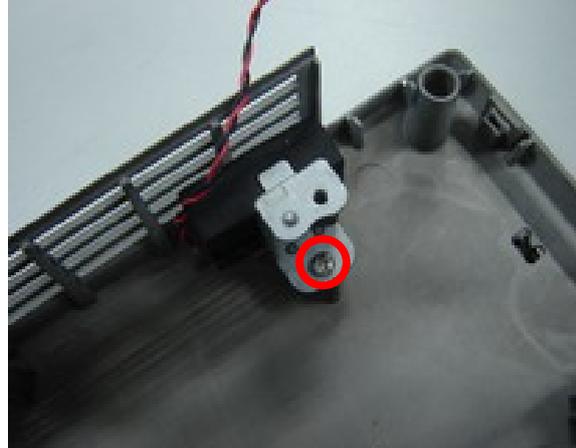
Review the Bottom case.

Removing the IR Board / Adj Foot / Speak Module / Inter-lock switch / Lens Cap

D
I
S
A
S
S
E
M
B
L
Y



Remove the three screws and replace the IR board and Adj foot (S20/21).



Remove the screw and replace the speak module (S22).



Review the inter-lock switch board.



Remove the screw and replace the inter-lock switch board (S23).

Appendix. Screw torque

| item-S | Screw Type | P/N | Screw Driver Torque (kg-cm) |
|--------|----------------|------------|-----------------------------|
| 1 | M2.5x0.45x6 | 3105142300 | 2.2~2.8 |
| 2 | M2x0.4x4 | 31051473xx | 1.7~2.3 |
| 3 | M2x0.4x5.3 | 31052705xx | 1.7~2.3 |
| 4 | M2x0.4x5.3 | 31052705xx | 1.7~2.3 |
| 5 | HEX 4.7x4 F | 34614317xx | 2.7~3.3 |
| | | | |
| 7 | M2x0.4x4 | 31051473xx | 1.7~2.3 |
| 8-1 | M2x0.4x4 | 31051473xx | 1.7~2.3 |
| 8-2 | M2.5x0.45x6 | 3105142300 | 2.2~2.8 |
| 9 | M2x0.4x25 | 31052703xx | 1.7~2.3 |
| 10 | M2x0.4x4 | 31051473xx | 1.7~2.3 |
| 11 | M2x0.4x4 | 31051473xx | 1.7~2.3 |
| 12 | M2.5x0.45x6 | 3105142300 | 2.2~2.8 |
| 13 | M2.5x0.45x18.8 | 31053662xx | 1.7~2.3 |
| 14 | M3x0.5x5 | 31053108xx | 4.3~5.5 |
| 15 | M2x0.4x5.3 | 31052705xx | 1.7~2.3 |
| 16 | HEX 4.6x20 | 34614710xx | 1.7~2.3 |
| 17 | HEX 4.6x17 | 34614687xx | 1.7~2.3 |
| 18 | M2x0.4x4 | 31051473xx | 1.7~2.3 |
| 19 | M3x0.5x5 | 31001007xx | 2.7~3.3 |
| 20 | M2x0.4x5.3 | 31052705xx | 1.7~2.3 |
| 21 | M2x0.4x4 | 31051473xx | 1.7~2.3 |
| 22 | M2.5x0.45x6 | 31051423xx | 2.2~2.8 |
| 23 | M2x0.4x4 | 31051473xx | 1.7~2.3 |

5. Flash Upgrade Flow

5-1.

Projector USB Drivers Installation Guide

Ver 6.0.0.4

The document is to describe a Windows application software “**Flash-Tool**” for projector firmware. Its main purpose is to provide a detailed procedure of upgrading the application software of a DLP projector. The system requirement and the installation procedure of “**Flash-Tool**” are also included in the document.

NOTE:

User must have administrative privileges on the target computer in order to install the driver. (The installation target directory must not be write-protected.)

User also required having the basic knowledge of Windows application installation.

Attention: This utility is for DLP™ DDP2000/2230 series projectors only.

System Requirement

- IBM compatible PC.
- Windows XP-SP2 operating system.

Install Flash-Tool to PC

Run the “Digital Zoom Projector Flash Tool Vx.y.msi”, that will automatically launch the USB drivers update. The following pictures are illustrating the process of the USB Driver installation.

Start-up page:



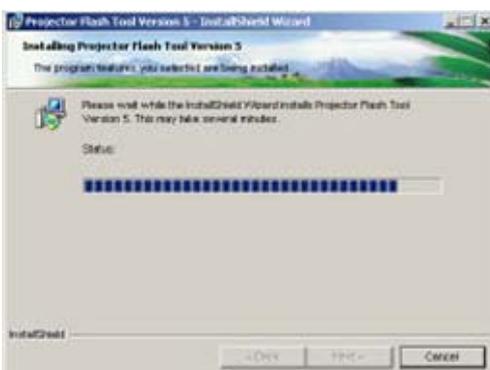
- Click on the “**Next**” button to continue
- OR
- Click on the “**Cancel**” button to cancel the installation

Driver Destination:

- Click on the “**Change**” button to change the default directory for saving the driver file somewhere else.
- or
- Click on the “**Back**” button to return to the previous page
- or
- Click on the “**Cancel**” button to cancel the installation

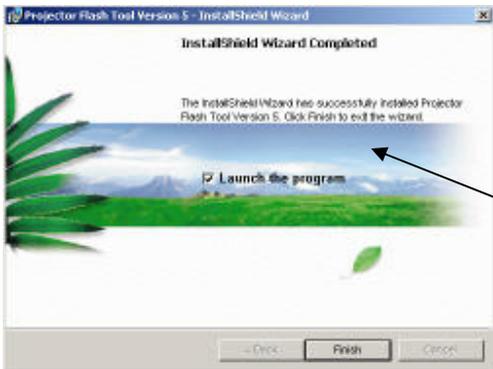
Ready to Install:

- Click on the “install” button to start the driver installation.
- or
- Click on the “**Back**” button to return to the previous page
- or
- Click on the “**Cancel**” button to cancel the installation

Installation in Progress:

- Please wait for the installation to complete.

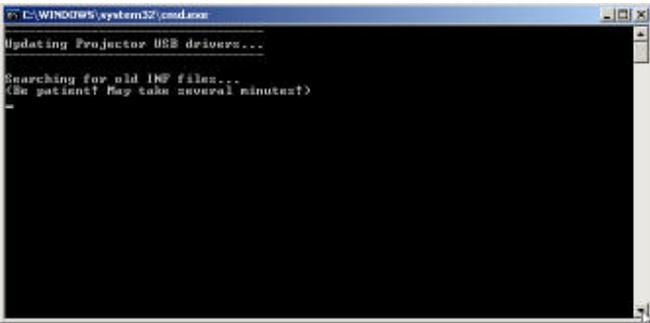
Installation Completed:



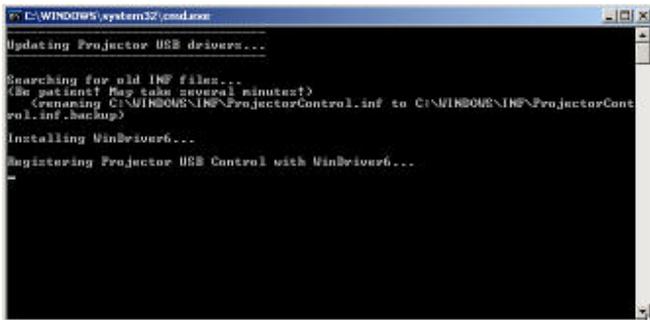
- Click on the **“Finish”** button with the **“Launch”** checkbox checked so that the Install Wizard will start the USB driver (INF) update.

Launch the driver update

Note: The USB driver (INF) update may take a few minutes depending your computer’s performance, and number of driver files. All dialogs will be automatically closed when the installation is completed.

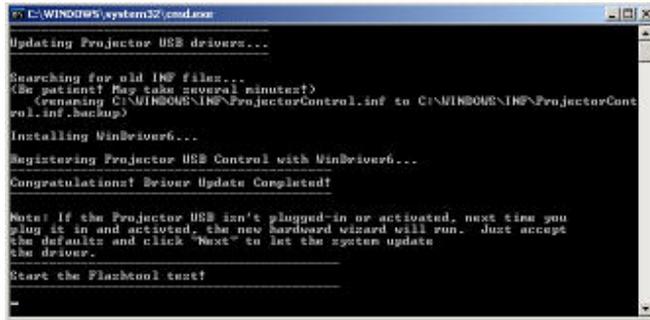


The Install Wizard is searching for the old driver files to be replaced with the new ones.

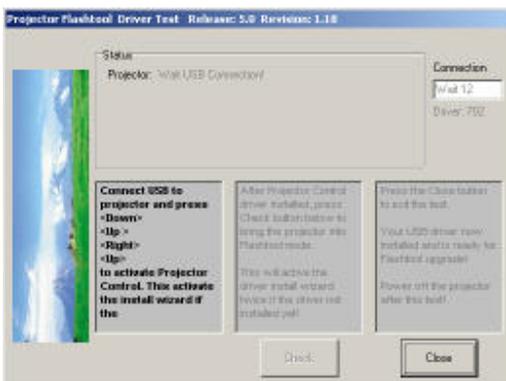


- Remove the USB cable between PC and projector if it is connected.

The WinDrive USB drivers will be installed and registered to the system.



When finished, a test application will execute automatically with Windows hardware wizard for all necessary USB drivers.



- Connect the USB cable

If the driver test application does not launch automatically, run the "Launch FlashToolBL.exe" from installed shortcut at Program> Digital Zoom Projector> projector flashtool> Launch FlasToolBL.exe

- Make sure that the USB cable is firmly connected between projector and computer
- Connect the power cord to the projector, and move the power switch in its ON position (if available) so that projector is in the STAND-BY mode.
- Press **<Down>**, **<Up>**, **<Right>**, **<Up>** key in sequence using keypad buttons, or using the IR remote controller for those with limited keypads. The power and lamp LED shall blink and the Projector Control mode will be enabled.



The New Hardware Wizard launches for **the first time**. Windows detects a new USB device attached.

- Select “No, not this time”
 - Click on the **“Next”** button to continue
- (This dialog may change on different Windows version)



- Select “Install the software automatically”
- Click on the **“Next”** button to continue

* In case the wizard cannot find the driver (the ProjectorControl.inf), please select the other advanced option and specify the driver location manually. (Normally at C:\Program Files\Digital Zoom Projector\Projector Flash Tool)



Windows updates the USB Projector Control driver when found

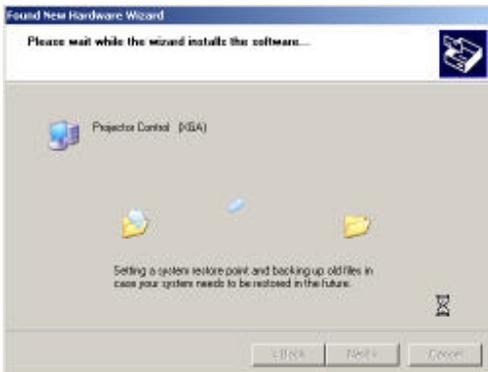
The Windows New Hardware Wizard will launch again for the second USB Projector Control.



- Select “No, not this time”
- Click on the “Next” button to continue



- Select “Install the software automatically”
 - Click on the “Next” button to continue
- * In case the wizard cannot find the driver (the [ProjectorControl.inf](#)), please select the other advanced option and specify the driver location manually. (Normally at [C:\Program Files\Digital Zoom Projector\Projector Flash Tool](#))

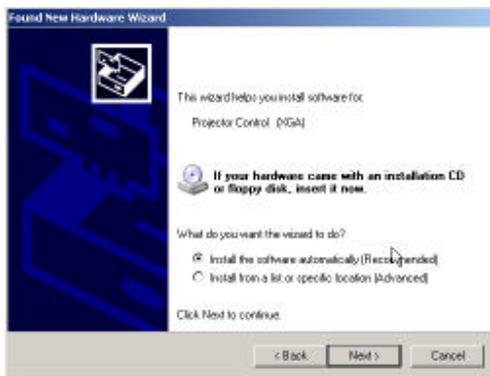


Windows updates the USB Projector Control driver when found



The New Hardware Wizard launches, and Windows detects a new USB device attached.

- Select “No, not this time”
- Click on the “**Next**” button to continue



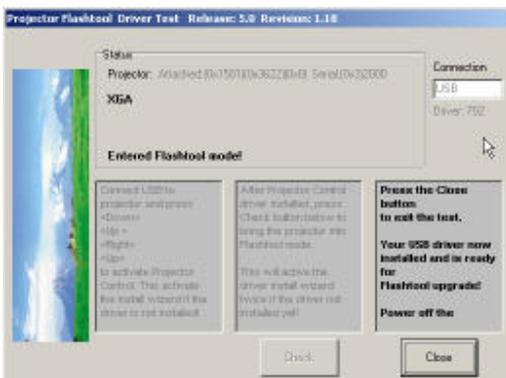
- Select “Install the software automatically”
 - Click on the “**Next**” button to continue
- * In case the wizard cannot find the driver (the [ProjectorControl.inf](#)), please select the other advanced option and specify the driver location manually. (Normally at [C:\Program Files\Digital Zoom Projector\Projector Flash Tool](#))



Windows updates the USB Projector Control driver when found



Windows completes the new hardware wizard.
Press the **“Finish”** button to exit



Congratulations!

- Power off the projector now

Your driver has been checked and works for Flash-Tool.

Appendix-A

How to clear the USB enumeration registry?

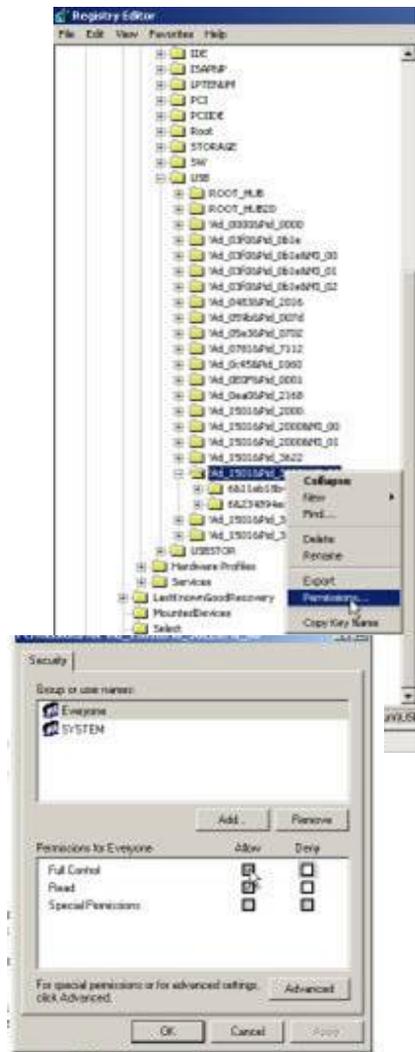
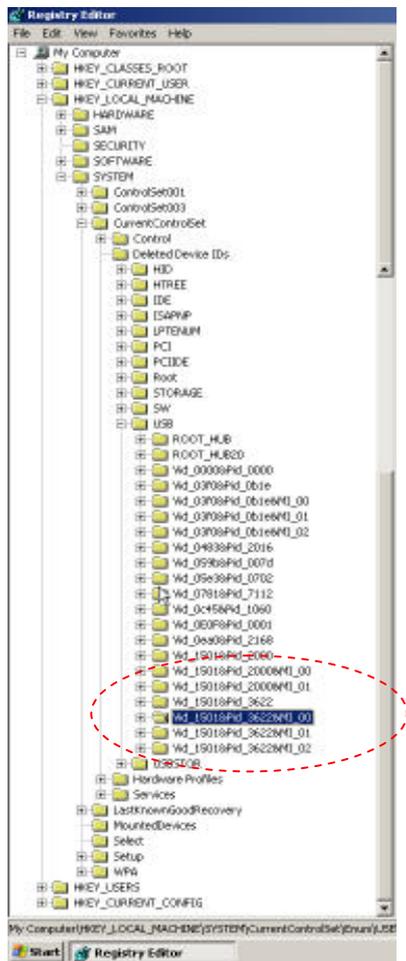
Run "regedit" and select the following items

HKEY_LOCAL_MACHINE->SYSTEM->CurrentControlSet->Enum->USB->

| | |
|----------------------|---------------------------------|
| The E400/AV/DP2601 | <u>VID 1501&Pid 2601xxx</u> |
| The AV/DP2618 series | <u>VID 1501&Pid 2618xxx</u> |
| The AV/DP3618 series | <u>VID 1501&Pid 3618xxx</u> |
| The DP3602 series | <u>VID 1501&Pid 3602xxx</u> |
| The DP3616 series | <u>VID 1501&Pid 3616xxx</u> |
| The DP3622 series | <u>VID 1501&Pid 3622xxx</u> |
| The PR301x series | <u>VID 1501&Pid 2617xxx</u> |
| The PR302x series | <u>VID 1501&Pid 3617xxx</u> |
| The PR50xx series | <u>VID 1501&Pid 3622xxx</u> |
| The EP77x series | <u>VID 1501&Pid 3622xxx</u> |
| The DDP2230 series | <u>VID 1501&Pid 2230xxx</u> |

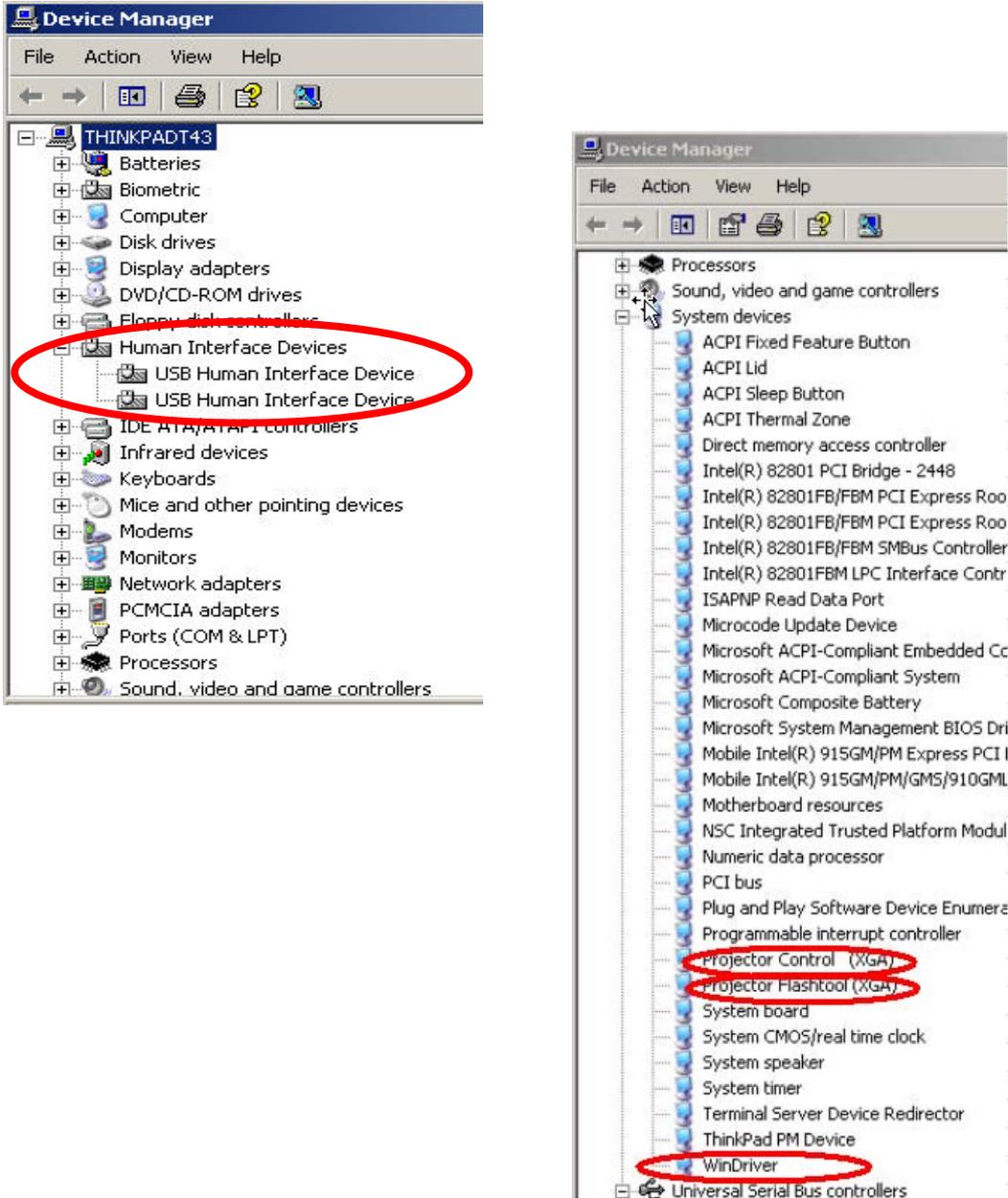
...

Press <Delete> and remove these registries. (You need the read/write privilege of the Windows registry to delete it. Select the item and click right mouse will lead you to the Permissions dialog for applying the security options)



Appendix-B Projector USB status on Windows Device Manager

The USB HID device will be installed automatically via Windows' USB hot-plug mechanism.



The Projector Control will be dynamically installed after entering the maintenance mode (Press <down>, <up>, <right>, <up> key in sequence); The Projector Flashtool will be dynamically installed when starting the flash upgrading by Flashtool or FlashtoolIBL utility.

The WinDriver is the root driver for both Projector Control and Flashtool.

5-2.**DLP Projector Flash-Tool (firmware) User Guide****Ver 6.0.0.4**

The document is to describe a Windows application software “**Flash-Tool**” for projector firmware. Its main purpose is to provide a detailed procedure of upgrading the application software of a DLP projector. The system requirement and the installation procedure of “**Flash-Tool**” are also included in the document.

NOTE:

User must have administrative privileges on the target computer in order to install the driver. (The installation target directory must not be write-protected.)
User also required having the basic knowledge of Windows application installation.

Attention: This utility is for DLP™ DDP2000/2230 series projectors only.

System Requirement of Flash Tool

- IBM compatible PC.
- Windows XP-SP2 operating system (English).
- Projector with Flash-Tool USB driver installed

Installation of Flash-Tool

- Execute the file of “Digital Zoom Projector Flash Tool Vx.y.msi”.

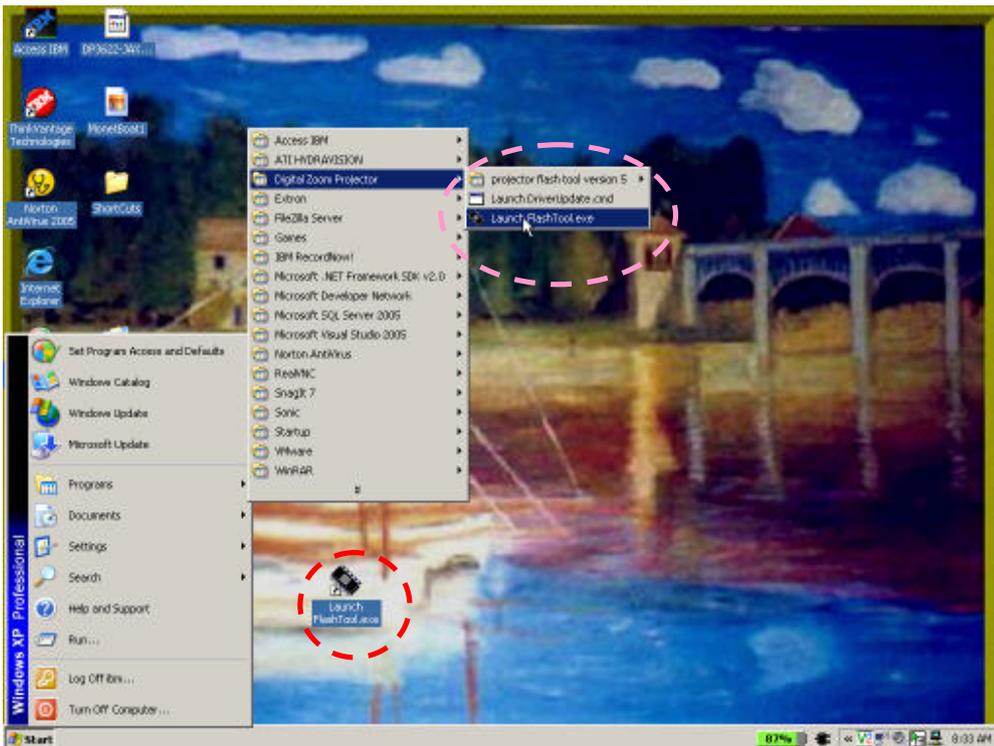
Note: If your projector USB driver is not installed yet, please refer to the USB driver installation guide for further details.

5-3. Start with Flash-Tool

The section is to illustrate the procedure to upgrade the application software of a DLP projector.

Step 1: Launch the “FlashTool.exe” from installed shortcut at

Program > Digital Zoom Projector> Launch FlasTool.exe or click on the “Launch FlashTool.exe” shortcut icon on the desktop.



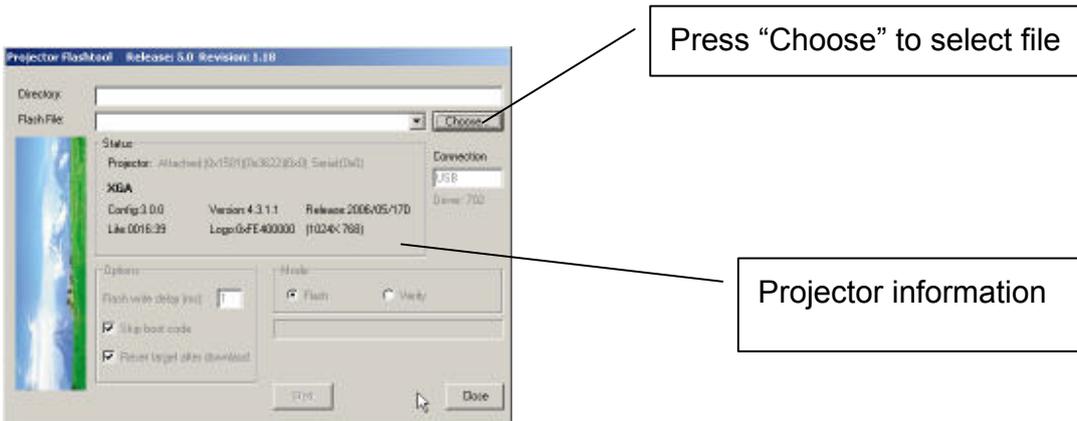
Step 1-1: While executed, a Flash-Tool window shall appear as the following picture.



Step 2: Make sure that the USB cable is firmly connected between projector and computer

Step 3: Connect the power cord to the projector, and move the power switch in its ON position (if available) so that projector is in STAND BY mode.

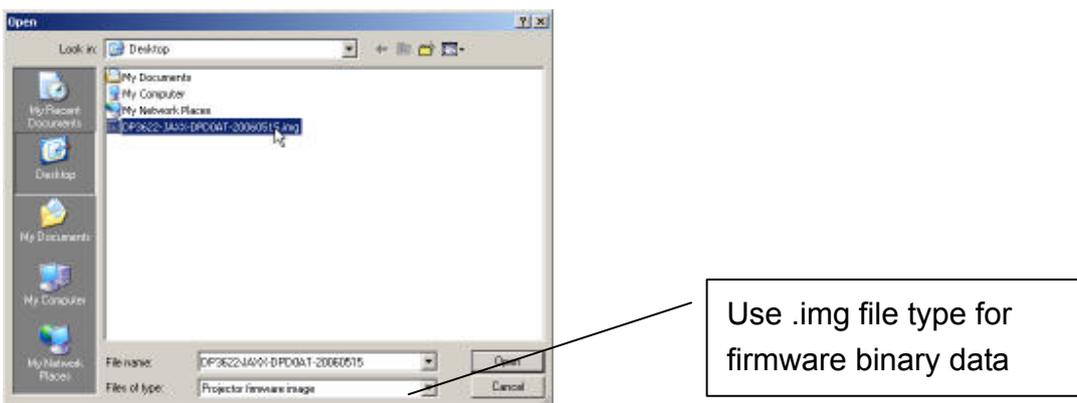
Step 4: Press **<Down>**, **<Up>**, **<Right>**, **<Up>** keys in sequence using keypad buttons, or using the IR remote controller for those with limited keypads. The power and lamp LED shall blink and the **Flash-Tool** mode will be enabled.



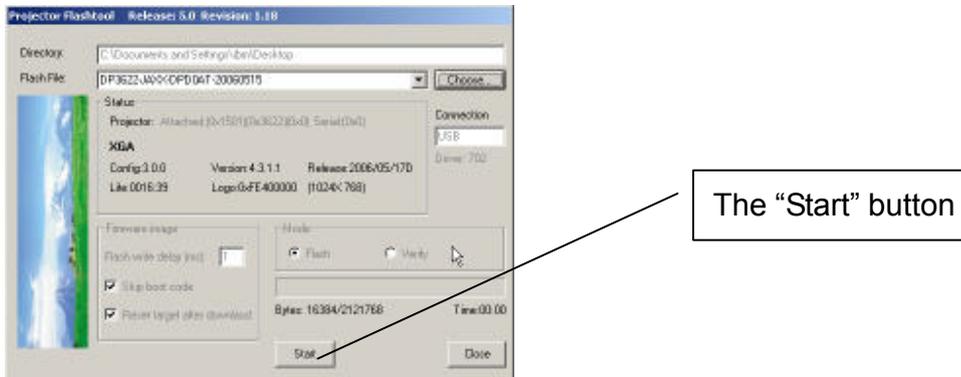
Note:

The Windows hardware wizard will pop up if the USB device driver is not installed. Simply select the recommended options, and let Windows Wizard does the trick.

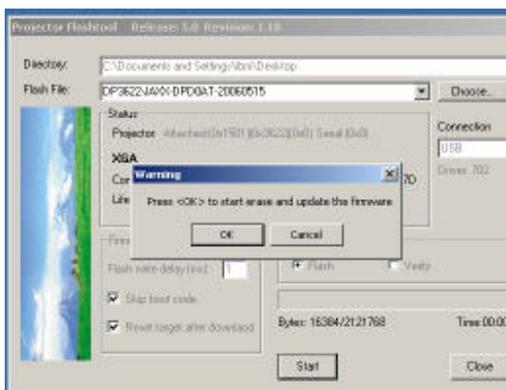
Step 5: Press the "Choose" button to locate the new firmware which can be downloaded from website (for example: DP3622-JAXX-DPD0A.img). Select the desired .img file by either double clicking the file, or pressing the "Open" button:-



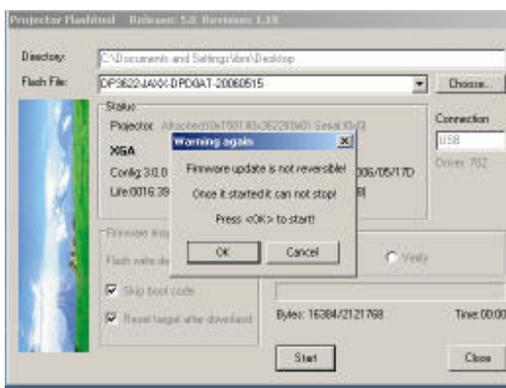
Note: The Flash-Tool will validate the signature of the binary image file for upgrading. The “Start” button will not enable if the binary image is not a valid projector firmware.



Step 6: Press the “Start” button to update the flash with the chosen firmware. A warning message box will appear for confirmation. Press <OK> to continue.

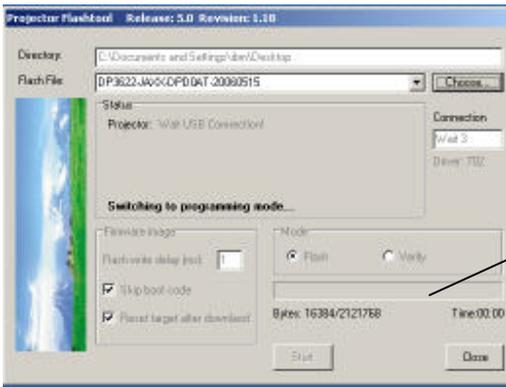


Step 7: When the last warning message box appears, this is the last chance to cancel the update. Press “OK” button to start the firmware update.



Caution:
DO NOT install any USB driver when erasing or upgrading process started.

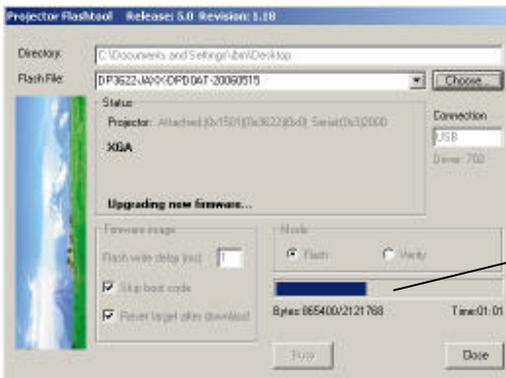
Note: According to the Flash technology, the old firmware will be erased first. Therefore, Flash-Tool will automatically erase the old firmware before upgrading.



Erasing status

Caution:
DO NOT install any USB driver when erasing or upgrading process started.

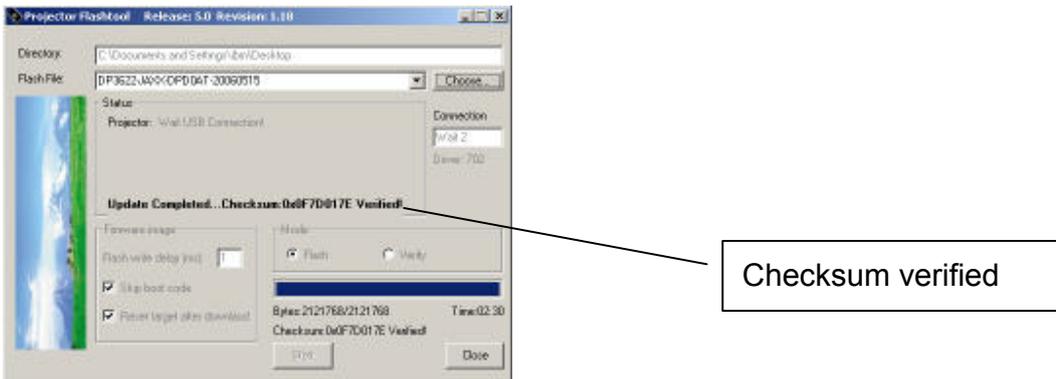
Note: After old firmware is erased, the new firmware upgrading process will start.



Upgrading new firmware



Note: After the new firmware is upgraded, the Flash-Tool will perform the final validation. The dialog shows the checksum with a verification message!

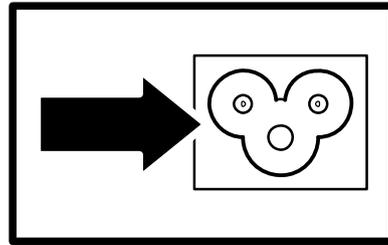


Step 8: When the validation is completed, turn off the projector. Next time when the projector is on, it will execute the new firmware.

5-4. Starting and Shutting down the Projector

1. Connect the power cord to the projector. Connect the other end to a wall outlet.

The  **POWER** and **READY** LEDs on the projector light.

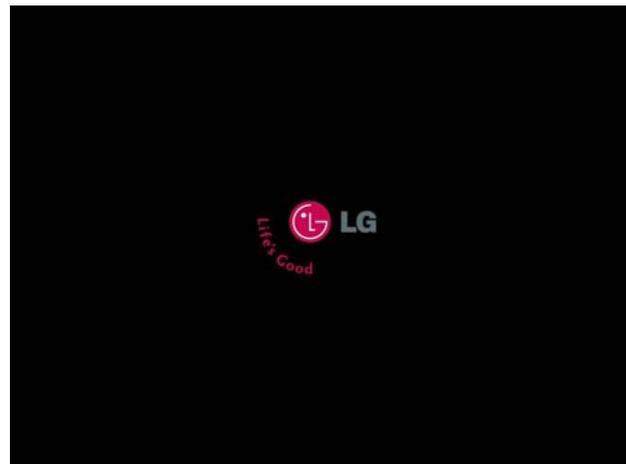


2. Turn on the connected devices.

3. Ensure the Ready LED displays a solid orange and not a flashing orange. Then press the  (**POWER**) button to turn on the projector.

The projector splash screen displays and connected devices are detected.

See Setting an Access Password (Security Lock) if security lock is enabled.



4. If more than one input device is connected, press the **SOURCE** button and use ▲▼ to scroll among devices.

(Component is supported through the RGB to COMPONENT ADAPTER.)



- RGB: Analog RGB
Component: DVD input YCbCr / YPbPr, or HDTV input YPbPr via HD15 connector
- Composite Video: Traditional composite video
- S-Video: Super video (Y/C separated)

5. When the “Power Off? /Press Power again” message appears, press the **POWER** button. The projector turns off.



Caution:

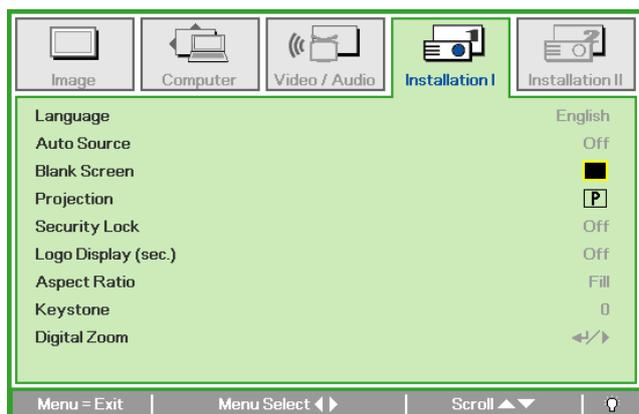
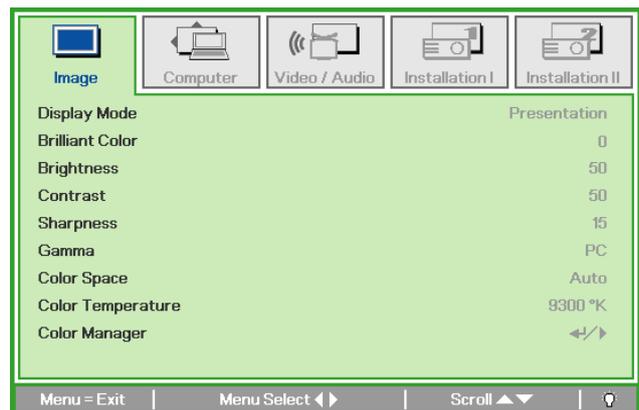
1. Be sure to remove the lens cap before starting projector.
2. Do not unplug the power cord until the Lamp LED (on Cooling mode) stops flashing—indicating the projector has cooled down.

5-5.**Setting an Access Password (Security Lock)**

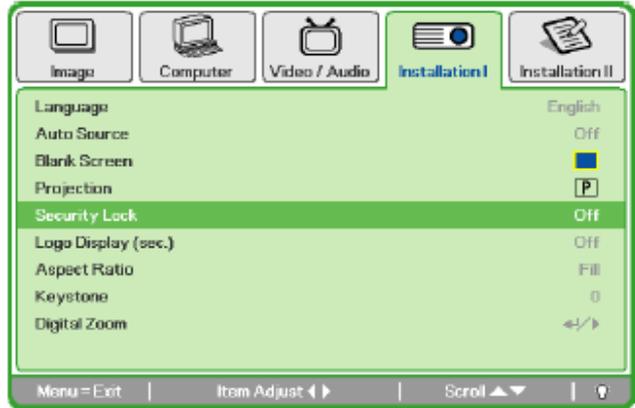
You can use the four (arrow) buttons to set a password and prevent unauthorized use of the projector. When enabled, the password must be entered after you power on the projector.

Keep the password in a safe place. Without the password, you will not be able to use the projector. If you lose the password, contact your reseller for information on clearing the password.

1. Press the **MENU** button to open the OSD menu.
2. Press the cursor ◀▶ button to move to the **Installation I** menu.



- 3. Press the cursor ▲▼ button to select **Security Lock**.



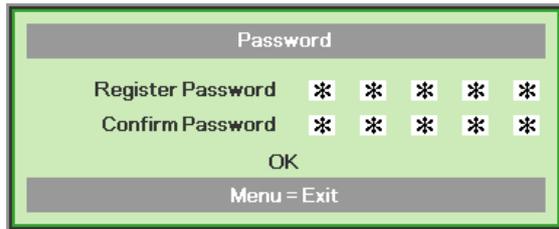
- 4. Press the cursor ◀▶ button to enable or disable security lock function.

A password dialog box automatically appears.

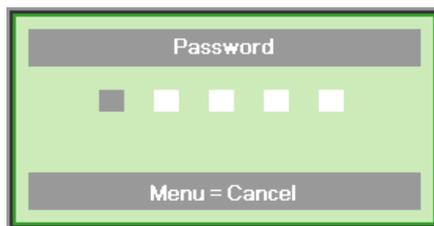
- 5. You can use the cursor buttons ▲▼◀▶ either on keypad or IR remote control for password entry. You can use any combination including the same arrow five times, but not less than five.



Press the cursor buttons in any order to set the password. Select **Menu** to exit the dialog box.



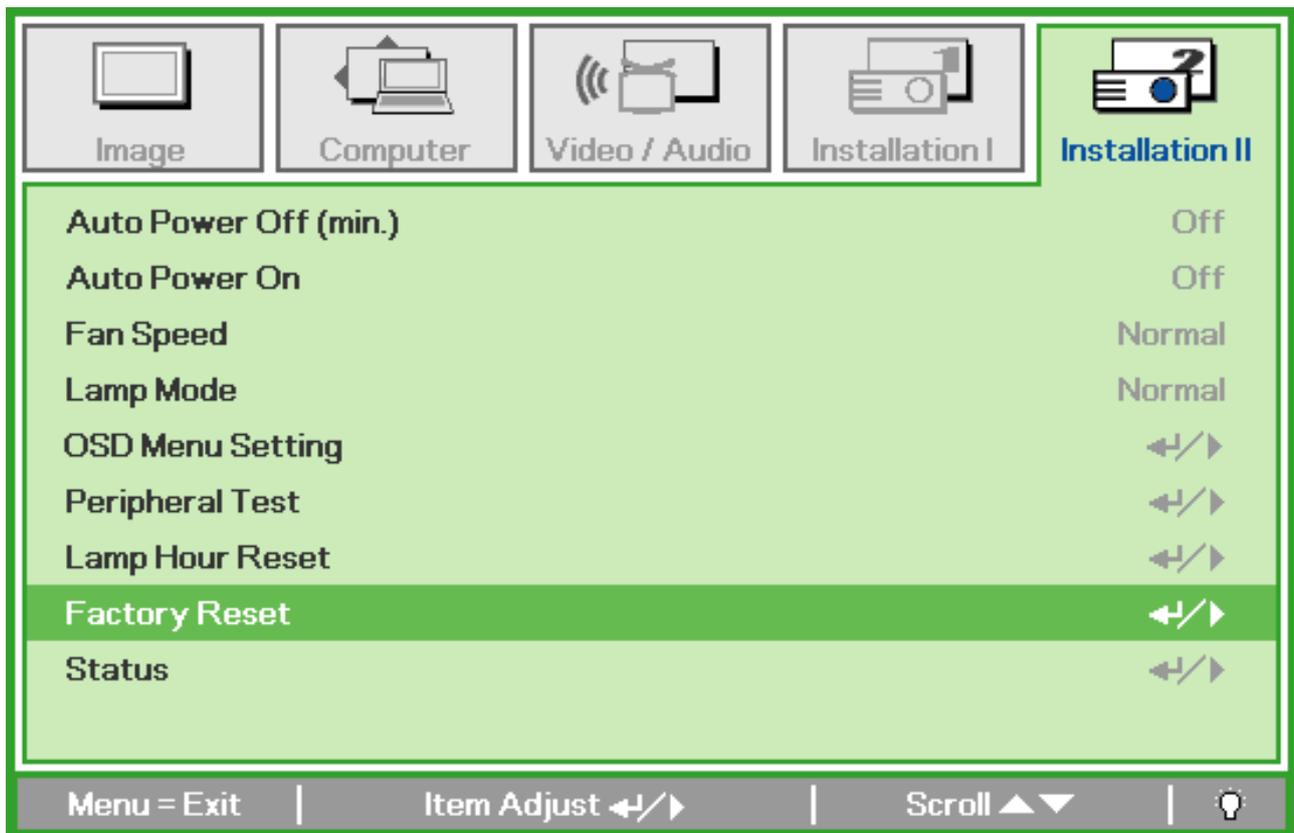
- 6. The password confirm menu appears when user press the power-on key in case the **Security Lock** is enabled. Enter the password in the order you set it at step 5. In case you forget the password, please contact the service center.



Service center will validate the owner and help resetting the password.

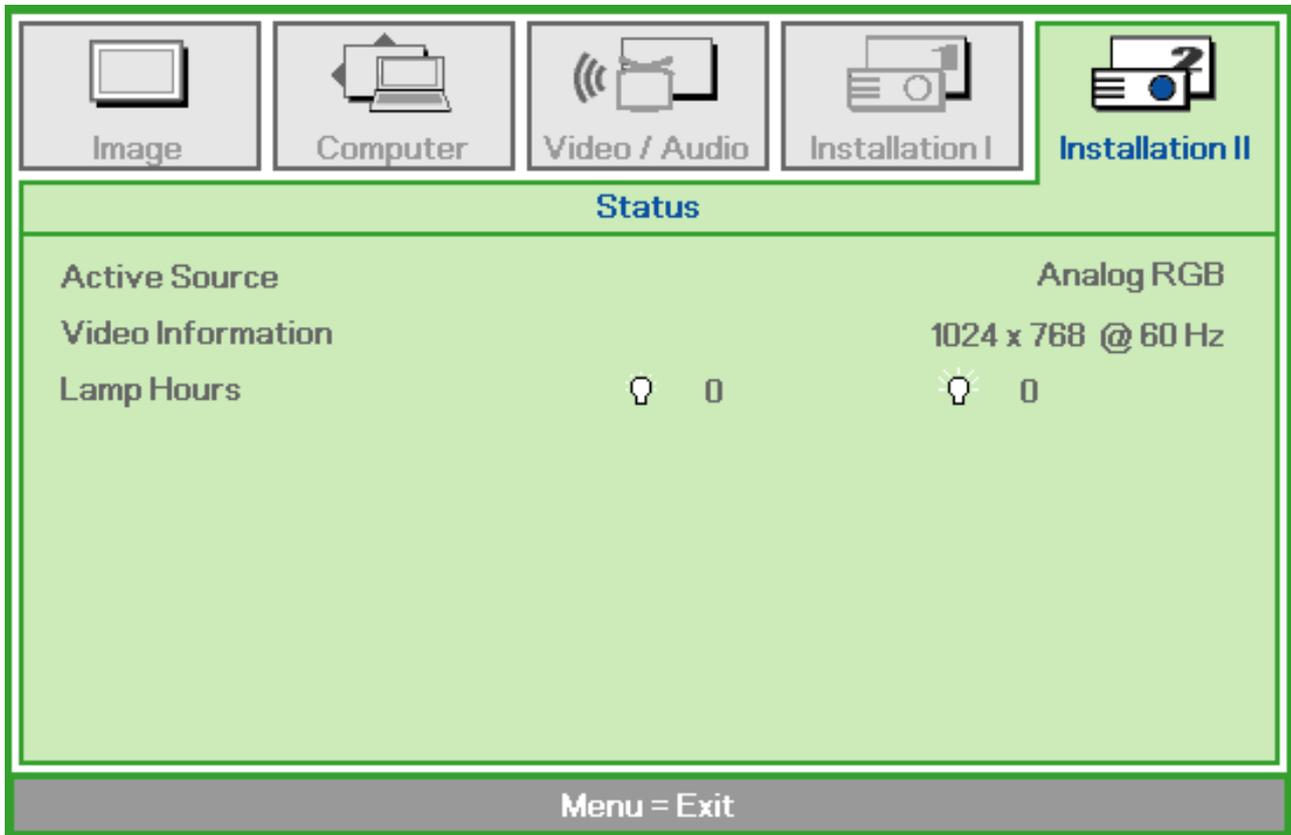
5-6.**Factory Reset**

Press the cursor ▲▼ button to move up and down in the **Installation II** menu. Select the **Factory Reset** sub menu and press ← (Enter) / → to reset all the menu items to the factory default values.



5-7. Status

Press the cursor ▲▼ button to move up and down in the **Installation II** menu. Select the **Installation II** sub menu and press ← (Enter) / ► to enter the **Status** sub menu.



| ITEM | DESCRIPTION |
|-------------------|---|
| Active Source | Display the activated source. |
| Video Information | Displays resolution/video information for RGB source and color standard for Video source. |
| Lamp Hours | Lamp hour used information is displayed. ECO and Normal counter are separated. |

6. Color Wheel Index, DMD Contrast and Brightness Adjustment @ RGB source

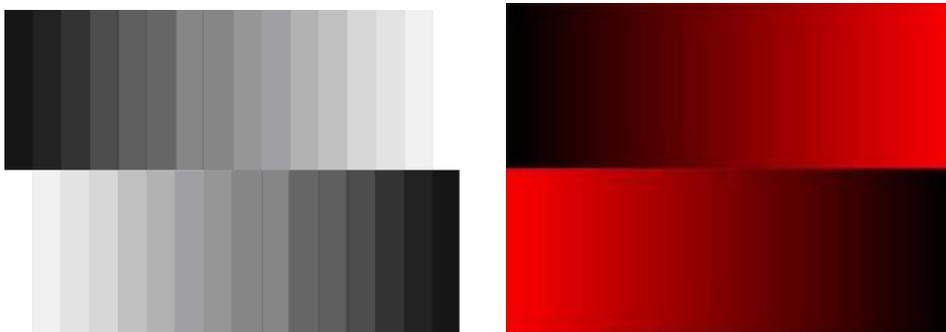
- A. Switch Timing to "1024x768 @ 60HZ"
- B. To turn on the OSD screen, and into "Lamp Hour Reset Page"
Then press "enter"=>"enter"=>"up"=>"down"=>"left"=>"right"
- B. In Service mode.



- C. Switch to the Pattern 48 "32 Gray Scale".
- D. Select "CW INDEX Delay Time".
The adjustment range is 0~719.
- E. Switch Pattern 47 "16 Gray Scale". Fine-tune until the gray scale still distinct. Decrease the color to the minimum. Then switch pattern 48 "32 Gray Scale", tune off G, B channel, check the smooth in brighter level of the R 32 ramp. If not, fine tune "CW INDEX Delay Time" until R 32 ramp smooth.

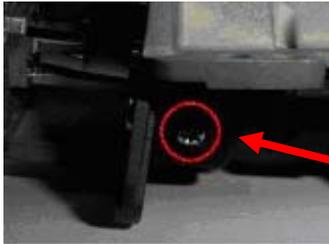
Brightness and Contrast need to measure with RGB source

"1024x768 @ 60HZ"



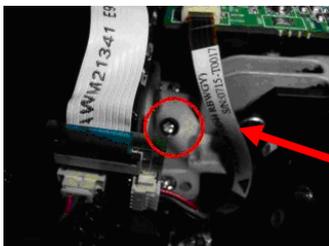
7. Color Border Adjustment

Step 1 : Adjust integration rod screw to eliminate color edge @ White pattern



1. Adjust the hexagonal screw in order to right and lift side color border disappeared. (Enable just disappearing of left side color border on the full white pattern)

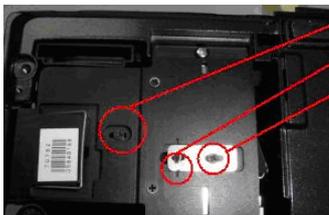
Screw 1



2. Adjust the hexagonal screw in order to up and down side color border disappeared. By the color border is margin value on the down side of full white pattern. (Enable just disappearing of down side color border on the full white pattern)

Screw 2

Step 2 : Adjust lamp module angle to set the maximum brightness measured by CL200



調整螺絲

=> Adjusted screw.

初始位置定位點

=> The initial fixed point.

固定螺絲

=> Fixed screw.

Loosed the fixed screw, CL200 is putted on the left corner of the screen (When full set is putted upside down), to adjust the adjusted screw gets the highest luminance value then fixed the screw in the moment.

8. Projection Lamp

8-1.Replacing the Projection Lamp

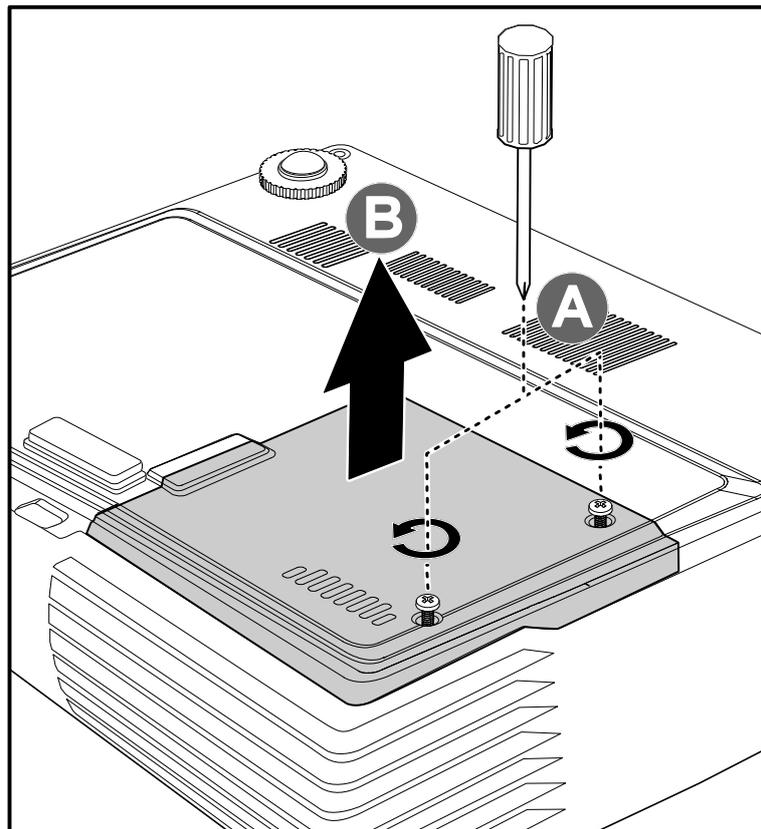
The projection lamp should be replaced when it burns out. It should only be replaced with a certified replacement part, which you can order from your local dealer.

1. The fluorescent lamp used in this product contains a small amount of mercury.
2. Do not dispose this product with general household waste.
3. Disposal of this product must be carried out in accordance with the regulations of your local authority.

Warning:

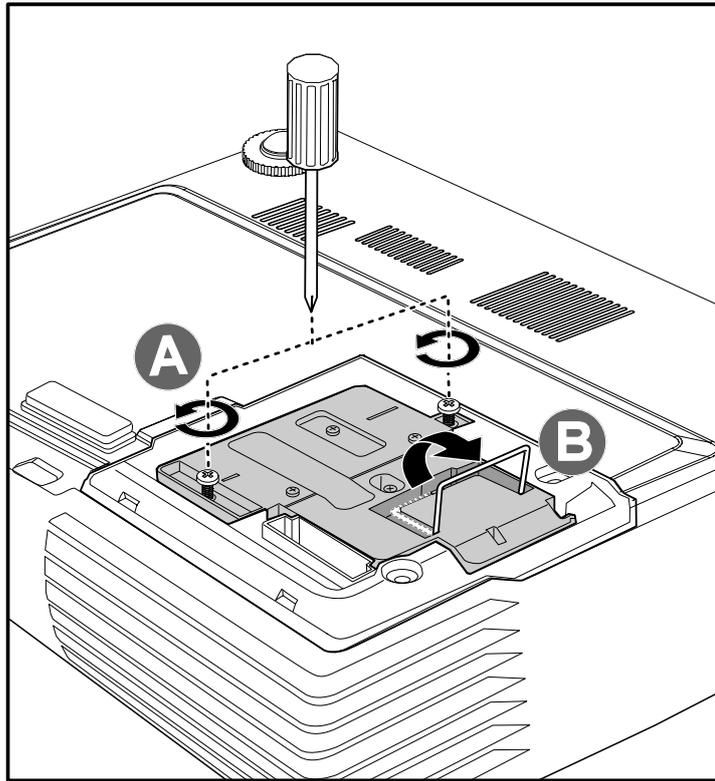
Be sure to turn off and unplug the projector at least 30 minutes before replacing the lamp. Failure to do so could result in a severe burn.

1. Loosen the two captive screws on the lamp compartment cover (A).
2. Remove the lamp compartment cover (B).

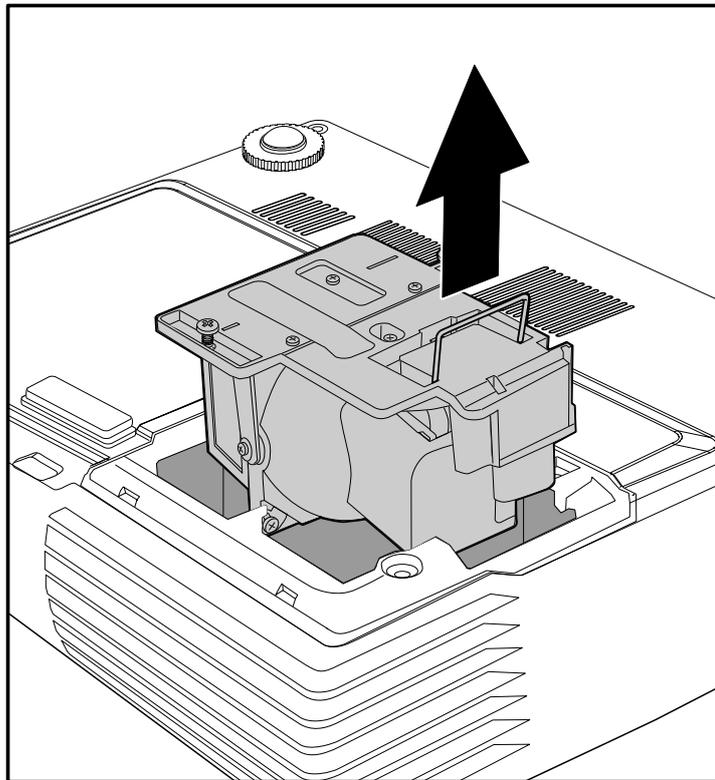


3 Remove the two screws from the lamp module (A).

4 Lift the module handle up (B).

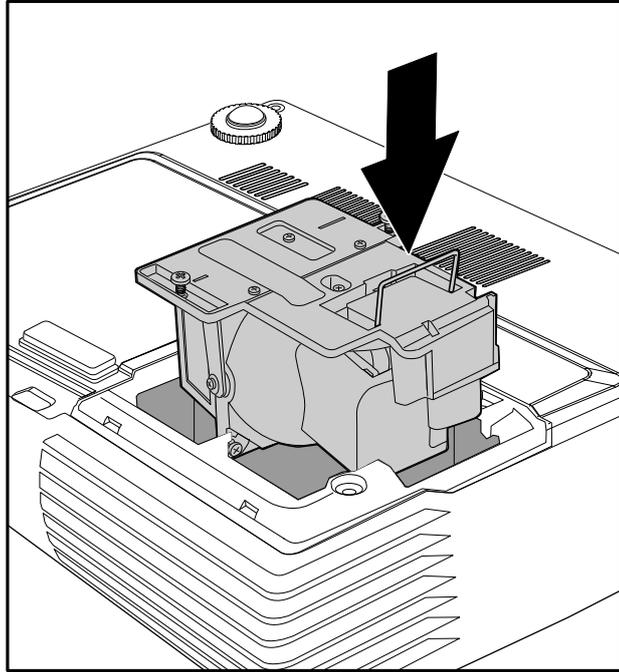


5 Pull firmly on the module handle to remove the lamp module.



- 6 Reverse steps 1 to 5 to install the new lamp module. While installing, align the lamp module with the connector and ensure it is level to avoid damage.

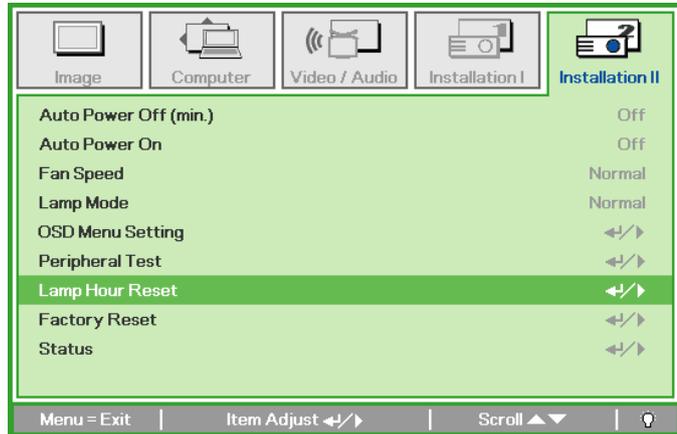
Note: The lamp module must sit securely in place and the lamp connector must be connected properly before tightening the screws.



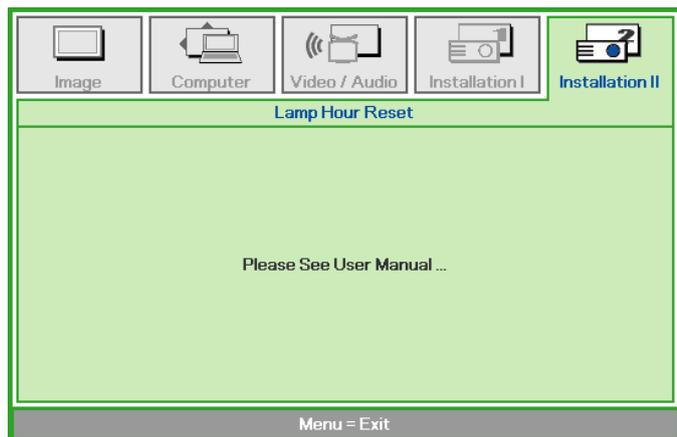
8-2 Resetting the Lamp

After replacing the lamp, you should reset the lamp hour counter to zero. Refer to the following:

1. Press the **MENU** button to open the OSD menu.
2. Press the cursor ◀▶ button to move to the **Installation II** menu.
3. Press the cursor ▲▼ button to move down to **Lamp Hour Reset**.



4. Press the cursor ▶ or ◀ button.
A message screen appears.
5. Press ▼ ▲ ◀ ▶ buttons to reset the lamp hour.
6. Press the menu button to get back to the **Installation II**.



9. Cleaning

9-1. Cleaning the Projector

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

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

9-2. Cleaning the Lens

You can purchase optic lens cleaner from most camera stores. Refer to the following to clean the projector lens.

1. Apply a little optic lens cleaner to a clean soft cloth.
(Do not apply the cleaner directly to the lens.)
2. **Lightly wipe the lens in a circular motion.**

Caution:

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

9-3. Cleaning the Case

Refer to the following to clean the projector case.

1. **Wipe off dust with a clean dampened cloth.**
2. **Moisten the cloth with warm water and mild detergent (such as used to wash dishes), and then wipe the case.**
3. Rinse all detergent from the cloth and wipe the projector again

Caution:

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

10. SERVICE NOTE

10-1. Cleaning

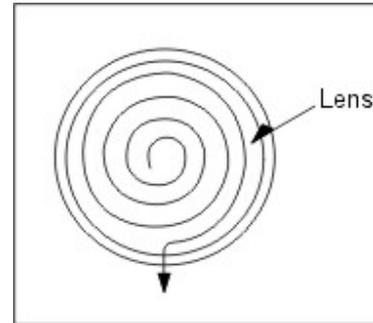
Carry out cleaning of the main unit and interior when replacing the lamp or making inspections.

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

1) Cleaning the Projection Lens

*When dust and fingerprints, etc. are on the lens surface, use the designated glass cleaner to remove as shown in the figure at the right. For fingerprints and other soiling that are difficult to remove with a dry cloth, use a designated glass cleaner which has been moistened in water and then use a dry cloth to dry it off.

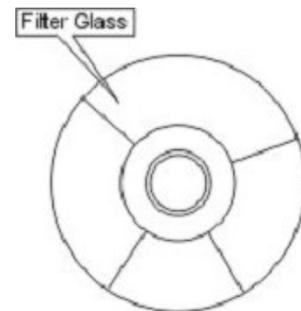
*The projection lens surface has a special coating. Do not use detergents or solvents on the surface.



2) Cleaning the Color Wheel Assy

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

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



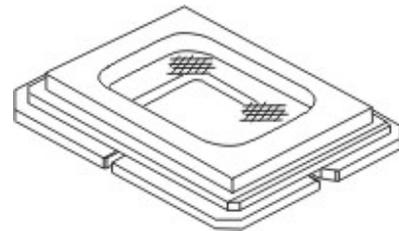
3) Cleaning the DMD

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

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

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

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



4) Cleaning the Reflecting Mirror

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

*Do not clean other than with air.

5) Cleaning the Main Unit

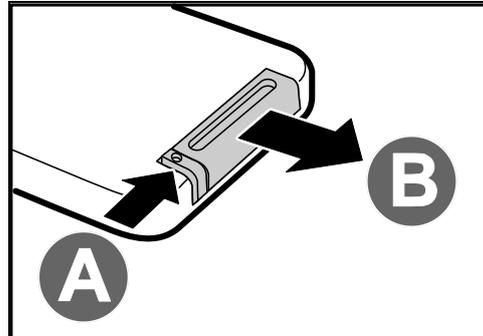
*Clean with a soft fuzz-free cloth. In case of severe soiling, use a well-wrung cloth dipped in a neutral agent to remove soiling and then finish with a dry cloth.

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

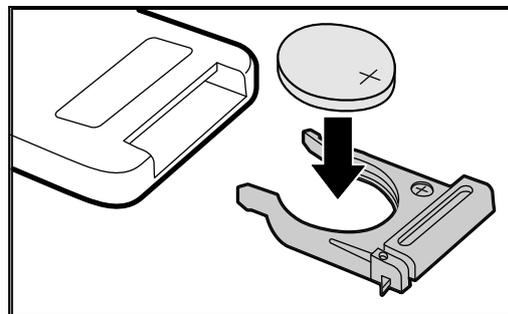
*In case of dust in suction or exhaust holes or the interior, disassemble the main unit and use air to remove the dust from the inside.

10-2. Inserting the Remote Control Batteries

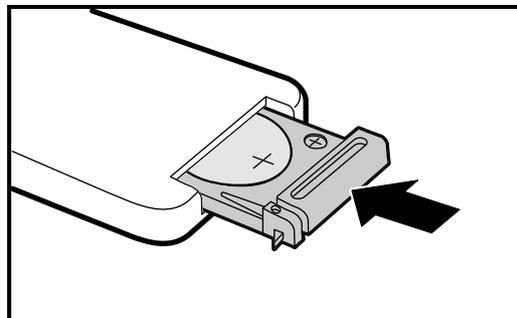
1. Remove the battery compartment cover by sliding the cover in the direction of the arrow. (A) Pull out the cover. (B)



2. Insert the battery with the positive side facing up.



3. Replace the cover.



Caution:

1. Only use a 3V lithium battery (CR2025)
2. Dispose of used batteries according to local ordinance regulations.
3. Remove the battery when not using the projector for prolonged periods.

10-3. Power & READY LED Blink Code Message

LED Error Messages

| ERROR CODE MESSAGES | POWER LED BLINK | OVER TEMP LED | READY LED BLINK |
|----------------------------|-----------------|---------------|-----------------|
| Over temperature | 0 | ON | 0 |
| Thermal break status error | 4 | 0 | 0 |
| Lamp error | 5 | 0 | 0 |
| Fan1 error | 6 | 0 | 1 |
| Fan2 error | 6 | 0 | 2 |
| Fan3 error | 6 | 0 | 3 |
| Lamp door open | 7 | 0 | 0 |
| DMD error | 8 | 0 | 0 |
| Color wheel error | 9 | 0 | 0 |

In the event of an error, please disconnect the AC power cord and wait for one (1) minute before restarting the projector.

10-4. Factory Preset Display Modes

The projector can display several resolutions. The following table outlines the resolutions that can be displayed by the projector.

| Signal | Resolution | H-Sync (KHz) | V-Sync (Hz) | Composite / S-Video | Component | RGB |
|------------|------------|-----------------|----------------|------------------------|-----------|-----|
| NTSC | — | 15.734 | 60.0 | ○ | — | — |
| PAL/SECAM | — | 15.625 | 50.0 | ○ | — | — |
| VESA | 640 x 350* | 31.5 | 70.0 | — | — | ○ |
| | 640 x 350* | 37.9 | 85.0 | — | — | ○ |
| | 640 x 400* | 37.9 | 85.0 | — | — | ○ |
| | 640 x 480 | 31.5 | 60.0 | — | — | ○ |
| | 640 x 480 | 37.9 | 72.0 | — | — | ○ |
| | 640 x 480 | 37.5 | 75.0 | — | — | ○ |
| | 640 x 480 | 43.3 | 85.0 | — | — | ○ |
| | 800 x 600 | 35.2 | 56.0 | — | — | ○ |
| | 800 x 600 | 37.9 | 60.0 | — | — | ○ |
| | 800 x 600 | 48.1 | 72.0 | — | — | ○ |
| | 800 x 600 | 46.9 | 75.0 | — | — | ○ |
| | 800 x 600 | 53.7 | 85.0 | — | — | ○ |
| | 1024 x 768 | 48.4 | 60.0 | — | — | ○ |
| | 1024 x 768 | 56.5 | 70.0 | — | — | ○ |
| | 1024 x 768 | 60.0 | 75.0 | — | — | ○ |
| | 1024 x 768 | 68.7 | 85.0 | — | — | ○ |
| 1440 x 900 | 55.6 | 60.0 | — | — | ○ | |

| Signal | Resolution | H-Sync (KHz) | V-Sync (Hz) | Composite / S-Video | Component | RGB |
|-----------------|--------------|-----------------|----------------|------------------------|-----------|-----|
| | 1280 x 1024 | 63.98 | 60.0 | — | — | ○ |
| | 1280 x 1024 | 79.98 | 75.0 | — | — | ○ |
| | 1400 x 1050 | 65.3 | 60.0 | — | — | ○ |
| | 1400 x 1050 | 64.7 | 60.0 | — | — | ○ |
| | 1600 x 1200* | 75.0 | 60.0 | — | — | ○ |
| Apple Macintosh | 640 x 480 | 34.98 | 66.66 | — | — | ○ |
| | 640 x 480 | 35.0 | 66.68 | — | — | ○ |
| | 832 x 624 | 49.725 | 74.55 | — | — | ○ |
| | 1024 x 768 | 60.24 | 75.0 | — | — | ○ |
| | 1152 x 870 | 68.68 | 75.06 | — | — | ○ |
| SDTV | 480i | 15.734 | 60 | — | ○ | — |
| | 576i | 15.625 | 50 | — | ○ | — |
| EDTV | 480p | 31.469 | 60 | — | ○ | — |
| | 576p | 31.25 | 50 | — | ○ | — |
| HDTV | 720p | 37.5 | 50 | — | ○ | — |
| | 720p | 45.0 | 60 | — | ○ | — |
| | 1080i | 33.8 | 60 | — | ○ | — |
| | 1080i | 28.1 | 50 | — | ○ | — |

○: Supported frequency

—: Frequency not supported

*: Displayable level

* The resolution of the panel for the DS325 is 800 x 600 and 1024 x 768 for the DX325. Resolution other than native resolution may display with uneven size of text or lines.

* HDTV timing: DVD player (main source), VG828 (secondary source).

11. EDID Data**A. DS325-JD (DP-2510 YY DA)**

EDID Version # 1, Revision # 3
DDCTest For : GSM DS325-JD

128 BYTES OF EDID CODE :

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-----|----|----|----|----|----|----|----|----|----|----|
| 0 | 00 | FF | FF | FF | FF | FF | FF | 00 | 1E | 6D |
| 10 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 11 | 01 | 03 |
| 20 | 0E | 00 | 00 | 78 | 2A | 45 | B9 | A2 | 5C | 4A |
| 30 | 8F | 22 | 12 | 4D | 57 | BF | EF | 80 | 31 | 59 |
| 40 | 45 | 59 | 61 | 59 | 81 | 00 | 81 | 4F | 81 | 80 |
| 50 | 90 | 40 | 95 | 00 | A0 | 0F | 20 | 00 | 31 | 58 |
| 60 | 1C | 20 | 28 | 80 | 14 | 00 | 00 | 00 | 00 | 00 |
| 70 | 00 | 18 | 00 | 00 | 00 | FF | 00 | 0A | 20 | 20 |
| 80 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 90 | 00 | 00 | 00 | FD | 00 | 2F | 55 | 0F | 64 | 0E |
| 100 | 00 | 0A | 20 | 20 | 20 | 20 | 20 | 20 | 00 | 00 |
| 110 | 00 | FC | 00 | 44 | 53 | 33 | 32 | 35 | 2D | 4A |
| 120 | 44 | 0A | 20 | 20 | 20 | 20 | 00 | 0C | | |

- (08-09) ID Manufacturer Name _____ = GSM
(11-10) Product ID Code _____ = 0101(Hex), 257(Dec)
(12-15) Last 5 Digits of Serial Number _____ = 16843009(Dec), 01010101(Hex)
(16) Week of Manufacture _____ = 1
(17) Year of Manufacture _____ = 2007
(18) EDID Version Number _____ = 1
(19) EDID Revision Number _____ = 3

(20) VIDEO INPUT DEFINITION :

Analog Signal
0.700V/0.300V
Separate
Composite
Sync on Green

- (21) Maximum Horizontal Image Size _____ = 0 mm
(22) Maximum Vertical Image Size _____ = 0 mm
(23) Display Gamma _____ = 2.20

(24) DPMS and Supported Feature(s) :

Preferred Timing Mode
Active Off
RGB Color Display

(25-34) CHROMA INFO :

RedX : 0.634
RedY : 0.359
GreenX : 0.290
GreenY : 0.560
BlueX : 0.135
BlueY : 0.073
WhiteX : 0.303
WhiteY : 0.341

(35) ESTABLISHED TIMING I :

Company Confidential

LGE _____

Delta _____

720 X 400 @ 70Hz (IBM,VGA)
640 X 480 @ 60Hz (IBM,VGA)
640 X 480 @ 67Hz (Apple,Mac II)
640 X 480 @ 72Hz (VESA)
640 X 480 @ 75Hz (VESA)
800 X 600 @ 56Hz (VESA)
800 X 600 @ 60Hz (VESA)

(36) ESTABLISHED TIMING II :
800 X 600 @ 72Hz (VESA)
800 X 600 @ 75Hz (VESA)
832 X 624 @ 75Hz (Apple, Mac II)
1024 X 768 @ 60Hz (VESA)
1024 X 768 @ 70Hz (VESA)
1024 X 768 @ 75Hz (VESA)
1280 X 1024 @ 75Hz (VESA)

(37) Manufacturer's Reserved Timing :
1152 X 870 @ 75Hz (Apple, Mac II)

(38-53) Standard Timing Identification :
640 X 480 @ 85Hz
800 X 600 @ 85Hz
1024 X 768 @ 85Hz
1280 X 800 @ 60Hz
1280 X 960 @ 75Hz
1280 X 1024 @ 60Hz
1400 X 1050 @ 60Hz
1440 X 900 @ 60Hz

(54- 71) Detailed Timing / Descriptor Block 1 :
800 X 600 : Pixel Clock : 40 MHz

Horizontal Image Size : 0 mm
Refreshed Mode : Non-Interlaced

Vertical Image Size : 0 mm

Horizontal :

Active Time : 800 pixels Blanking Time : 256 pixels
Sync Offset : 40 pixels Sync Pulse Width : 128 pixels
Border : 0 pixels

Vertical :

Active Time : 600 lines Blanking Time : 28 lines
Sync Offset : 1 lines Sync Pulse Width : 4 lines
Border : 0 lines

None(Normal)

Digital Separate, Horizontal Polarity (-) Vertical Polarity (-)

(72- 89) Detailed Timing / Descriptor Block 2 :

Monitor Serial Number :

(90-107) Detailed Timing / Descriptor Block 3 :

Monitor Range Limits :

Horizontal Freq. : 15-100 kHz
Vertical Freq. : 47-85 Hz
Pixel Clock : 140 MHz

(108-125) Detailed Timing / Descriptor Block 4 :

Monitor Name :

DS325-JD

(126) No Extension EDID Block(s)

(127) CheckSum is OK

Modify time : 2007/05/24 14:27:42

B. DX325-JD (DP-3510 YY DA)

EDID Version # 1, Revision # 3
DDCTest For : GSM DX325-JD

128 BYTES OF EDID CODE :

0 1 2 3 4 5 6 7 8 9

| | | | | | | | | | | |
|-----|----|----|----|----|----|----|----|----|----|----|
| 0 | 00 | FF | FF | FF | FF | FF | FF | 00 | 1E | 6D |
| 10 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 11 | 01 | 03 |
| 20 | 0E | 00 | 00 | 78 | 2A | 45 | B9 | A2 | 5C | 4A |
| 30 | 8F | 22 | 12 | 4D | 57 | BF | EF | 80 | 31 | 59 |
| 40 | 45 | 59 | 61 | 59 | 81 | 00 | 81 | 4F | 81 | 80 |
| 50 | 90 | 40 | 95 | 00 | 64 | 19 | 00 | 40 | 41 | 00 |
| 60 | 26 | 30 | 18 | 88 | 36 | 00 | 00 | 00 | 00 | 00 |
| 70 | 00 | 18 | 00 | 00 | 00 | FF | 00 | 0A | 20 | 20 |
| 80 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 90 | 00 | 00 | 00 | FD | 00 | 2F | 55 | 0F | 64 | 0E |
| 100 | 00 | 0A | 20 | 20 | 20 | 20 | 20 | 20 | 00 | 00 |
| 110 | 00 | FC | 00 | 44 | 58 | 33 | 32 | 35 | 2D | 4A |
| 120 | 44 | 0A | 20 | 20 | 20 | 20 | 00 | 2D | | |

- (08-09) ID Manufacturer Name _____ = GSM
(11-10) Product ID Code _____ = 0101(Hex), 257(Dec)
(12-15) Last 5 Digits of Serial Number _____ = 16843009(Dec), 01010101(Hex)
(16) Week of Manufacture _____ = 1
(17) Year of Manufacture _____ = 2007
(18) EDID Version Number _____ = 1
(19) EDID Revision Number _____ = 3

(20) VIDEO INPUT DEFINITION :

Analog Signal
0.700V/0.300V
Separate
Composite
Sync on Green

- (21) Maximum Horizontal Image Size _____ = 0 mm
(22) Maximum Vertical Image Size _____ = 0 mm
(23) Display Gamma _____ = 2.20

(24) DPMS and Supported Feature(s) :

Preferred Timing Mode
Active Off
RGB Color Display

(25-34) CHROMA INFO :

RedX : 0.634
RedY : 0.359
GreenX : 0.290
GreenY : 0.560
BlueX : 0.135
BlueY : 0.073
WhiteX : 0.303
WhiteY : 0.341

(35) ESTABLISHED TIMING I :

720 X 400 @ 70Hz (IBM,VGA)
640 X 480 @ 60Hz (IBM,VGA)
640 X 480 @ 67Hz (Apple,Mac II)
640 X 480 @ 72Hz (VESA)
640 X 480 @ 75Hz (VESA)
800 X 600 @ 56Hz (VESA)
800 X 600 @ 60Hz (VESA)

(36) ESTABLISHED TIMING II :
800 X 600 @ 72Hz (VESA)
800 X 600 @ 75Hz (VESA)
832 X 624 @ 75Hz (Apple, Mac II)
1024 X 768 @ 60Hz (VESA)
1024 X 768 @ 70Hz (VESA)
1024 X 768 @ 75Hz (VESA)
1280 X 1024 @ 75Hz (VESA)

(37) Manufacturer's Reserved Timing :
1152 X 870 @ 75Hz (Apple, Mac II)

(38-53) Standard Timing Identification :
640 X 480 @ 85Hz
800 X 600 @ 85Hz
1024 X 768 @ 85Hz
1280 X 800 @ 60Hz
1280 X 960 @ 75Hz
1280 X 1024 @ 60Hz
1400 X 1050 @ 60Hz
1440 X 900 @ 60Hz

(54- 71) Detailed Timing / Descriptor Block 1 :
1024 X 768 : Pixel Clock : 65 MHz

Horizontal Image Size : 0 mm Vertical Image Size : 0 mm
Refreshed Mode : Non-Interlaced

Horizontal :

| | | | |
|---------------|-------------|--------------------|------------|
| Active Time : | 1024 pixels | Blanking Time : | 320 pixels |
| Sync Offset : | 24 pixels | Sync Pulse Width : | 136 pixels |
| Border : | 0 pixels | | |

Vertical :

| | | | |
|---------------|-----------|--------------------|----------|
| Active Time : | 768 lines | Blanking Time : | 38 lines |
| Sync Offset : | 3 lines | Sync Pulse Width : | 6 lines |
| Border : | 0 lines | | |

None(Normal)

Digital Separate, Horizontal Polarity (-) Vertical Polarity (-)

(72- 89) Detailed Timing / Descriptor Block 2 :

Monitor Serial Number :

(90-107) Detailed Timing / Descriptor Block 3 :

Monitor Range Limits :

Horizontal Freq. : 15-100 kHz

Vertical Freq. : 47-85 Hz

Pixel Clock : 140 MHz

(108-125) Detailed Timing / Descriptor Block 4 :

Monitor Name :

DX325-JD

(126) No Extension EDID Block(s)

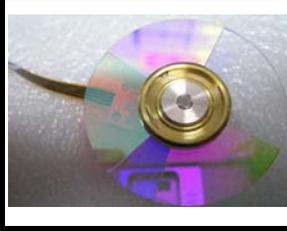
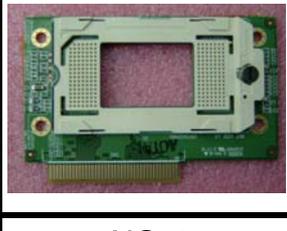
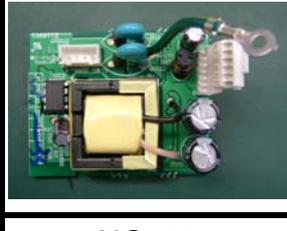
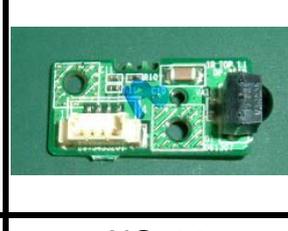
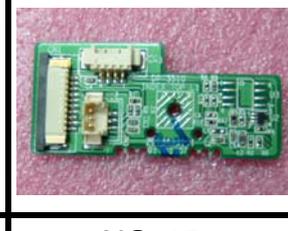
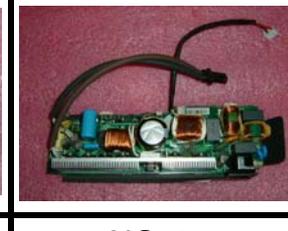
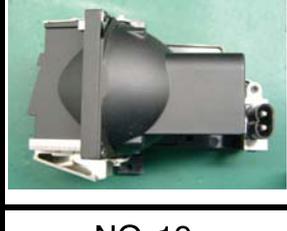
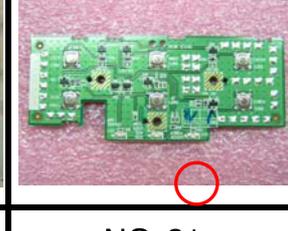
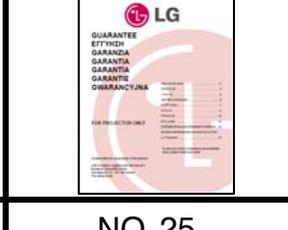
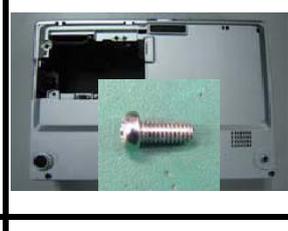
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DS325&DX325 (DP-2510 & DP-3510) Parts List

Ver.03 2007/12/04

| Photo | LG P/N | P/N | DESCRIPTION | For DS325 | For DX325 |
|-------|-------------|--------------|--|-----------|-----------|
| 1 | ACQ36734801 | 3450427302 | COVER MG ALLOY TOP | V | V |
| 2 | ABQ36744401 | 3450427102 | COVER MG ALLOY BOTTOM | V | V |
| 3 | AGU36744601 | 3450427203 | COVER MG ALLOY IO | V | V |
| 4 | ACQ36744701 | 3392066501 | FRONT COVER PC 94V0 GRAY | V | V |
| 5 | ACQ36744801 | 3392066902 | LAMP DOOR PC 94V0 GRAY | V | V |
| 6 | MCK42367501 | 3398038101 | LENS CAP+WIRE ASSY DP-3510LGE | V | V |
| 7 | MDJ42498301 | 3250705700 | PLATE CW GLASS 44 | V | V |
| 8 | EAL32377709 | 3620429711 | DC FAN ASSY BFB04512MD-SE00 L140/80 45 B | V | V |
| 9 | EAL32377708 | 3622607111 | DC FAN ASSY NUB0612HB-R00 L40/10 60 | V | V |
| 10 | EBR43288501 | 5600600615 | PWB ASSY MAIN BOARD J5P-05 | V | X |
| 11 | EBR43310701 | 5600600610 | PWB ASSY MAIN BOARD J5P-03 | X | V |
| 12 | EBR43289901 | 5600600576 | PWB ASSY DMD BOARD J5P-01 | V | V |
| 13 | EBR43289801 | 5600600588 | PWB ASSY LVPS BOARD DP-3510 | V | V |
| 14 | EBR43289701 | 5600600581 | PWB ASSY IR BOARD J5P-01 | V | V |
| 15 | EBR43289401 | 5600600574 | PWB ASSY INDEX BOARD J5P-01 | V | V |
| 16 | EBR43310501 | 5600600579 | PWB ASSY POWER-BALLAST BOARD DP-3510 | V | V |
| 17 | MFB42497701 | 5811100348-S | OPTICAL MODULE 0.55" SVGA ASSY DP-2510 | V | X |
| 18 | MFB42498101 | 5811100349-S | OPTICAL MODULE 0.55" XGA ASSY DP-3510 LG | X | V |
| 19 | EBT43485101 | 5811100413-S | LAMP MODULE J5P ASSY DP-3510 | V | V |
| 20 | MAY42368101 | 3513569000 | CARTON PAPER 424*339*169 | V | V |
| 21 | EBR43310301 | 5600600578 | PWB ASSY KEYPAD BOARD J5P-01 | V | V |
| 22 | EAD43387601 | 3090231400 | AC POWER CORD 2P 3G*0.75mm^2 L1800 BLK | V | V |
| 23 | EAD43411301 | 3080425001 | CABLE SIGNAL D-SUB D-SUB L2000 BLK | V | V |
| 24 | SAC30190903 | 3534038300 | CD SOFTWARE PACKING ASSY DP-3510 | V | V |
| 25 | MBM36259605 | 5010069500 | MANUAL WARRANTY J5P 3LB LGE | V | V |
| 26 | MAF42368001 | 3523500700 | CARRYING CASE POLYESTER 308*260*97 | V | V |
| 27 | MKJ42367901 | 5041815700 | REMOTE CONTROLLER 15KEYS DP-2616/5616 JY | V | V |
| 28 | MFA42499601 | 3392067000 | ADJ FOOT FRONT PC 94V0 GRAY | V | V |
| | MFA42499701 | 3245020200 | FOOT SIRUB 94V0 31.4*7.4*4 BLK | V | V |
| 29 | MEG42520801 | 3461431703 | Hexagonal Screw STAND OFF S18C HEX 4.7*4 F #4-40 M #4-40 | V | V |
| 30 | MEG42522001 | 3105142300 | SCREW (Fix Top cover & Bottom Case) SCREW M M2.5*0.45*6 PAN C S18C NI | V | V |
| 31 | MEG42522101 | 3105270500 | SCREW(Fix Main B/D) SCREW M M2*0.4*5 FF C S+P S20C NI | V | V |

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| NO. 1 | NO. 2 | NO. 3 | NO. 4 | NO. 5 |
|  |  |  |  |  |
| NO. 6 | NO. 7 | NO. 8 | NO. 9 | NO. 10 & 11 |
|  |  |  |  |  |
| NO. 12 | NO. 13 | NO. 14 | NO. 15 | NO. 16 |
|  |  |  |  |  |
| NO. 17 & 18 | NO. 19 | NO. 20 | NO. 21 | NO. 22 |
|  |  |  |  |  |
| NO. 23 | NO. 24 | NO. 25 | NO. 26 | NO. 27 |
|  |  |  |  | |
| NO. 28 | NO. 29 | NO. 30 | NO. 31 | |