Caution

Be sure to read this manual before servicing. To assure safety from fire, electric shock, injury, harmful radiation and materials, various measures are provided in this Hitachi liquid crystal projector. Be sure to read cautionary items described in the manual to maintain safety before servicing.

Service Warning

1. When replace the lamp, to avoid burns to your fingers. The lamp becomes too hot.
2. Never touch the lamp bulb with a finger or anything else. Never drop it or give it a shock. They may cause bursting of the bulb.
3. This projector is provided with a high voltage circuit for the lamp. Do not touch the electric parts of power unit (main), when turn on the projector.
4. Do not touch the exhaust fan, during operation.
5. The LCD module ass'y is likely to be damaged. If replacing to the LCD module ass'y, do not hold the FPC of the LCD module ass'y.

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SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

Liquid Crystal Projector

October 1998 Image & Information Media Systems Division Yokohama Operation
1. Features
- 1.3" polysilicon liquid crystal panel
- 150W UHB lamp
- Video input compatible with NTSC/PAL/SECAM video signals
- RGB input compatible with IBM® PCs, Macintosh® and NEC® PC98 computer signals
- Power zoom and power focus
- 2 VIDEO IN systems, 2 RGB IN systems, and 1 RGB OUT system
- RS232C communication
- Mouse emulation

2. Specifications

<table>
<thead>
<tr>
<th>Liquid crystal panel</th>
<th>Drive system</th>
<th>TFT active matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel size</td>
<td>1.3inches</td>
<td></td>
</tr>
<tr>
<td>Number of pixels</td>
<td>1024 (H) x 768 (V)</td>
<td></td>
</tr>
<tr>
<td>Lamp</td>
<td>UHB lamp 150W</td>
<td></td>
</tr>
<tr>
<td>Video input</td>
<td>System</td>
<td>NTSC, 4.43NTSC, PAL, M-PAL, or SECAM</td>
</tr>
<tr>
<td></td>
<td>Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Composite</td>
<td>1.0Vp-p (75Ω termination)</td>
</tr>
<tr>
<td></td>
<td>Y/C</td>
<td>1.0Vp-p (75Ω termination)</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>0.286Vp-p (NTSC burst signal, 75Ω termination)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.3Vp-p (PAL/SECAM burst signal, 75Ω termination)</td>
</tr>
<tr>
<td>RGB input / output</td>
<td>Video signal</td>
<td>Analog RGB input</td>
</tr>
<tr>
<td></td>
<td>Sync signal</td>
<td>0.7Vp-p (75Ω termination)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H/V separate or H/V composite,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TTL level</td>
</tr>
<tr>
<td>Audio</td>
<td>Input</td>
<td>200mVrms, 20kΩ or less</td>
</tr>
<tr>
<td></td>
<td>Output</td>
<td>0–200mVrms, 1kΩ</td>
</tr>
<tr>
<td>Speaker output</td>
<td></td>
<td>2W + 2W (stereo)</td>
</tr>
<tr>
<td>Power supply</td>
<td></td>
<td>AC100–120V/2.9A, AC220–240V/1.3A (50/60Hz)</td>
</tr>
<tr>
<td>Power consumption</td>
<td></td>
<td>250W</td>
</tr>
<tr>
<td>Dimensions</td>
<td></td>
<td>404 (W) x 162 (H) x 312 (D) mm</td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td>8kg</td>
</tr>
<tr>
<td>Temperature range</td>
<td>Operation</td>
<td>0–35°C</td>
</tr>
<tr>
<td></td>
<td>Storage</td>
<td>-20–60°C</td>
</tr>
<tr>
<td>Accessories</td>
<td>Remote control</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Battens LR6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Power cord</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Stereo mini cable</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>MAC adapter</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>RGB signal cable</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Video/Audio cable</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Mouse cable</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>S-Video cable</td>
<td>1</td>
</tr>
</tbody>
</table>
3. Names of each part

●Main unit

- Speaker
- Handle
- Cooling fan (exhaust)
- Lens
- Remote control sensor
- Lens cover lever

●Operation section

- **ON indicator**
  This blinks in the standby mode and lights in the operation mode.

- **STANDBY/ON button**
  Power ON/OFF button.
  OFF sets the unit in standby mode.

- **LAMP indicator**
  This lights when the lamp does not light.

- **TEMP indicator**
  This lights when temperature inside the projector is too high.

- **INPUT button**
  To select the input source.
  ![Input Sources](RGB1 → RGB2 → VIDEO1 → VIDEO2)

- **MUTE button**
  Adjusts picture size.

- **FOCUS button**
  Adjusts focus.

- **MENU button**
  Picture adjustments.

- **RESET button**
  Resets unit to factory settings.

●Input terminal section

- **VIDEO input terminal**
  S-VIDEO input terminal
  Mini DIN-4pin connector (1/2)

- **RGB input terminal**
  D-sub 15pin socket terminal (1/2)
  AUDIO input terminal
  Stereo mini jack (1/2)

- **RGB output terminal**
  D-sub 15pin socket terminal
  AUDIO output terminal (RGB/VIDEO)
  Stereo mini jack

- **CONTROL terminal**
  D-sub 15pin socket terminal

- **AUDIO input terminal**
  Stereo mini jack (1/2)

- **AUDIO output terminal**
  Stereo mini jack (RGB/VIDEO)

- **AC IN socket**
  Connect the provided power cord.

- **MAIN POWER switch**
  Main power ON/OFF switch.
  I : ON
  O : OFF
Remote control transmitter

STANDBY / ON button
Power ON/OFF button. Off sets the unit in standby mode.

FOCUS button
Adjusts focus.

ZOOM button
Adjusts picture size.

POSITION button
Moves the picture by DISK PAD after pressed the POSITION button.

DISK PAD
When displays the on-screen menus, selects or adjusts the menu items.
When removes the on-screen menus,

MENU ON button
Displays the on-screen menus.

BLANK ON button
The blank screen is displayed by pressing BLANK.
And the blank screen will be revealed by pressing BLANK again.

INPUT SELECT button
Selects the input source.

MUTE button
VOLUME button
Adjusts volume.

LASER on
MOUSE LEFT button

RESET / RIGHT button
When displays the on-screen menus, resets the menu item to factory settings.
When removes the on-screen menus, works as right quick button.

MOUSE ON button
Mouse starts
- Menu off
  - Back light of MENU OFF button off,
- Position off
  - Back light of POSITION ON button off
- Blank off

TIMER ON / OFF button
Displays or removes the time setting menu item TIMER.
When the blank screen is displayed, TIMER can not be displayed.

Function for service

<table>
<thead>
<tr>
<th>Function</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displayed the operating time of the lamp</td>
<td>Press the RESET button of the projector or the TIMER button of the remote control, for 3 seconds.</td>
</tr>
<tr>
<td>Reset the operating time of the lamp</td>
<td>Press the RESET button of the projector or the remote control, for 3 seconds. (During be displayed the operating time of the lamp.)</td>
</tr>
<tr>
<td>Displayed the operating time of the projector</td>
<td>Press the MUTE button of the projector or the remote control, for 3 seconds. (During be displayed the operating time of the lamp.)</td>
</tr>
</tbody>
</table>

When replacing the lamp, Reset the operating time of lamp.

Reset the lamp timer:

Please carry out the following operation within 10 minutes from power on, if you replaced the lamp after 2,000 hours.

1) Press the RESET button on projector for 3 seconds or remote control TIMER button for 3 seconds and display the total lamp used time.
2) Press the RESET button on projector or remote control MENU ON button during displaying the lamp used time.
3) Select the "0" on the screen using the MENU ( ) button or DISK PAD.

LAMP 1501 hr

LAMP 1501 [ ]-0 [ ]CANCEL
Caution  Cautions on use of the laser pointer.

- The laser pointer on the remote control unit radiates the laser beam from the laser aperture.
- Do not stare directly into the laser aperture or radiate the laser beam to order persons as the laser emitted is a class II laser and it could damage your vision, etc. Especially pay attention if children are present.
- The three under labels are caution labels for the laser beam.
Message table

On-screen display
The following messages are displayed on the screen.

<table>
<thead>
<tr>
<th>CHANGE THE LAMP</th>
<th>Lamp has 1,900 hours on it and may need to be changed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;CALL A MAINTENANCE PERSON.&quot;</td>
<td></td>
</tr>
<tr>
<td>&quot;THE POWER WILL TURN OFF AFTER 20 HR.&quot;</td>
<td></td>
</tr>
<tr>
<td>&quot;CHANGE THE LAMP&quot;</td>
<td>Lamp has 1,980 hours on it. See P.4 &quot;Reset the lamp timer&quot;</td>
</tr>
<tr>
<td>&quot;CALL A MAINTENANCE PERSON.&quot;</td>
<td></td>
</tr>
<tr>
<td>Blinking of &quot;CHANGE THE LAMP&quot;</td>
<td>When the lamp has 2,000 hours or more on it, the message will blink, and the power will turn off after 10 minutes.</td>
</tr>
<tr>
<td>NO INPUT IS DETECTED</td>
<td>Signal is not input.</td>
</tr>
<tr>
<td>SYNC IS OUT OF RANGE</td>
<td>The horizontal frequency of the input signal exceeds the range of the projector, it cannot be displayed.</td>
</tr>
</tbody>
</table>

Indicator display
The ON indicator, LAMP indicator and TEMP indicator will light or blink in the following cases.

<table>
<thead>
<tr>
<th>Indicator status</th>
<th>Meaning</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON indicator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lights green</td>
<td>Standby mode</td>
<td></td>
</tr>
<tr>
<td>Blinks green</td>
<td>During warming up</td>
<td></td>
</tr>
<tr>
<td>Lights green</td>
<td>During operation</td>
<td></td>
</tr>
<tr>
<td>Blinks green</td>
<td>During cooling down</td>
<td></td>
</tr>
<tr>
<td>LAMP indicator</td>
<td>Lights red</td>
<td>Lamp cannot light</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cool projector by power off for 20 minutes.</td>
</tr>
<tr>
<td>TEMP indicator</td>
<td>Lights red</td>
<td>Temperature inside too high</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Correctly reinstall so as not to block ventilation holes.</td>
</tr>
<tr>
<td></td>
<td>Blinks red</td>
<td>Cooling fan accidented</td>
</tr>
<tr>
<td></td>
<td></td>
<td>call a maintenance person.</td>
</tr>
</tbody>
</table>

*When the LAMP indicator lights, turn the power off. If the problem cannot be recovered, contact your dealer.
4. Adjustment

4 - 1  Position to be adjusted
4 - 2 White balance adjustment

Preparations for adjustment
① Apply heat-running for 10 minutes or more before adjustment.
② Project 40" size image with the "+" ZOOM button set to max.

Adjustment procedure
① Input 16 steps monochrome green at 0.7Vp-p with a timing signal at XGA VESA (60).
② Adjust R665 (W SUB CONTRAST) and R668 (W SUB BRIGHT) so that brightness of 16 steps is best, ......visual check.
③ Input black pattern at 0.21Vp-p with a timing signal of XGA VESA (60).
④ Adjust R970 (R SUB BRIGHT) and R970 (B SUB BRIGHT) so that the chromaticity at the center of the picture is X=0.30±0.01, Y=0.34±0.01 (Low-brightness white balance) using Minolta CL-100.

4 - 3 Convergence adjustment

Preparations for adjustment
① Apply heat-running for 10 minutes or more before adjustment.
② Input a cross-hatch signal to the RGB input terminal with a timing signal of XGA VESA (60).
③ Project about a 40" size image and adjust H.PHASE so that the vertical lines of cross-hatch pattern are seen most clear.
④ Loosen 2 screws ③ of both the R and B panel's metal fittings. (See Figs.4 - 1 and 4 - 2.)
(Note) Do not loosen screws ③ too much. If they are loosened too much, the convergence may drift when they are tightened.
(Note) Exclusive tools are required to adjust convergence.

Adjustment procedure
① Regarding the G panel as standard, adjust the convergence at the picture center of the R panel using ④ for the vertical direction, ⑤ for the horizontal direction.
② Adjust the convergence at the edge of the picture using ⑥.
③ Then, regarding the G panel as standard, adjust the convergence of B panel in the same procedure as ① and ②.
④ Repeat steps ① to ③ and adjust so that convergence of whole picture satisfy the following values.

<table>
<thead>
<tr>
<th></th>
<th>Adjustment value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal</td>
<td>±1 dot</td>
</tr>
<tr>
<td>Vertical</td>
<td>±1 dot</td>
</tr>
</tbody>
</table>

⑤ Tighten 4 screws ⑦ to fix panels.
4 - 4 Sensor adjustment

Preparations for adjustment
① Apply heat-running for 10 minutes or more before adjustment.

Adjustment procedure
Adjust RT04 to get following values.
0.020 ± 0.002 [V]
(Connect ♦ side to TP1 and ◇ side to TP2 by digital meter.)
5. Troubleshooting

Power can not be turned on

Is the input voltage applied to the Power unit?

YES

Are voltage input at pins ①, ③, ④, ⑥, ⑦ of ETOW on the PWB ass'y signal?

YES:
① +12V
② +17V
④ +13.5V
⑥ +6.3V
⑦ -6V

PWB ass'y signal

NO

AC inlet
Power switch
PWB ass'y filter

NO

Power unit (circuit)

Lamp does not light

What is the state of LAMP indicator?

Light

Not light

Change the lamp

Light

Not light

Power unit (ballast)

Is pin ① of EBAR on the PWB ass'y signal set to "H"?

YES: "H" =5V

Power unit (ballast)

NO

PWB ass'y signal
Picture is not displayed only when the VIDEO signal is input.

Is picture displayed both selected VIDEO1 and VIDEO2?

Is the 1/2 selected signal changed at pin ⑧ of PVID on the PWB ass'y input terminal VIDEO?

③ "L"=VIDEO1, "H"=VIDEO2 ("H"=5V)

PWB ass'y signal

Is a voltage input at pin ③ of PVID on the PWB ass'y input terminal VIDEO?

⑩ +5V

PWB ass'y signal

Are the input signals output at pins ①, ③, ⑤ of PVID on the PWB ass'y input terminal VIDEO?

① Video signal
③ Y signal
⑤ C signal

PWB ass'y input terminal VIDEO

PWB ass'y signal
Picture is not displayed
(both RGB and VIDEO input)

Are voltage input at pins ①, ③, ④, ⑥, ⑦ of ETOW on the PWB ass'y signal?

NO

YES
① +12V
② +17V
③ +13.5V
④ +6.3V
⑦ -8V

Power unit (circuit)

Is a voltage input at pins ②, ④, ⑥, ⑧, ⑩ of PSD4 on the PWB ass'y drive?

NO

YES
② -5V
④ +12V
⑥ +5V
⑧ +6.3V
⑩ +16.5V

PWB ass'y signal

Are voltage input at pins ⑦ of PSD5 on the PWB ass'y drive?

NO

YES
⑦ CLK1

PWB ass'y signal
No sound

No sound when RGB signal input
(Sound is heard when VIDEO signal input)

- Are the audio signal output at pins ⑤ of PIA1 on the PWB ass'y input terminal RGB?
  - NO
    - PWB ass'y input terminal RGB
  - YES
    - ⑤ Audio L, ⑤ Audio R
    - PWB ass'y signal

No sound when VIDEO signal input
(Sound is heard when RGB signal input)

- Are the audio signal output at pins ⑤,① of PVD1 on the PWB ass'y input terminal VIDEO?
  - NO
    - PWB ass'y input terminal VIDEO
  - YES
    - ⑤ Audio L, ① Audio R
    - PWB ass'y signal

No sound both RGB and VIDEO signal input

- Is the audio L signal output at pin ② of ESPL, and audio R signal output at pin ③ of ESPR on the PWB ass'y signal?
  - NO
    - Speaker
  - YES
    - PWB ass'y signal
Can not control to mouse or RS232C

Are the input signals output at pins of PIM4 on the PWB input terminal RGB?

- NO
  - PWB ass'y input terminal RGB

- YES
  - Pin No | RS232C | PS/2 | ADB | Serial
  - 1      |        |      |     | TDM
  - 2      | CLK    | SDATA|     |     
  - 3      | DATA   |      |     |     
  - 6      | SELO   | SEL0 | SEL0|     
  - 7      | SEL1   | SEL1 | SEL1|     
  - 8      | READY  |      |     |     
  - 10     | GND    | GND  | GND | GND  
  - 12     |        |      | +5V | +5V  
  - 13     | RDP    |      |     |     
  - 14     | TDP    |      |     |     

Are the signals input at pins 3, 4, 5 of PMS2 on the PWB ass'y signal?

- NO
  - PWB ass'y mother

- YES
  - ③Mouse
  - ④TD
  - ⑤RD

PWB ass'y signal
Signal waveforms of P501, P601 and P701 (Input signal is VGA3)

1. PSIG (Uniformity Signal)

2. HST

3. PCG

4. VST

5. ENB

6. VIDEO SIGNAL

7. HST

8. HCK1, HCK2

9. COM

10. VCK

---

- 17 -
6. Service points

6 - 1 Removing the lamp
1. Loosen screw A1 and remove the lamp cover.
2. Loosen 3 screws A2 and remove the lamp.

Caution: After change the new lamp, tighten 3 screws A2.
If 3 screws are loose, the unit may be broken
by incomplete connection of the lamp.
Lamp becomes too hot. To avoid burns to
your finger.
Turn the power off and let the projector cool.
After change the new lamp, reset the
operating time of the lamp.

6 - 2 Removing the PWB ass'y drive, the lens prism unit, the LCD module ass'y, The front cover ass'y and exhaust fan, the handle (Fig. 6 - 2)

(1) Removing the PWB ass'y drive.
1. Remove 5 screws B1 and remove the upper case ass'y and disconnect the operation panel connector.
2. Remove 7 screws B0 and remove the upper shield case.
3. Disconnect 2 connectors for speaker from PWB ass'y signal.
4. Release the lock of the connector housing and disconnect the FPC of the LCD module ass'y.
5. Remove 4 screws B2 and disconnect 3 connectors and remove the PWB ass'y drive.

(2) Removing the lens prism unit.
1. Remove the PWB ass'y drive.
   (Refer to Item 6 - 2 (1).)
2. Disconnect 2 connectors for motor from the PWB ass'y signal.
3. Remove 4 screws B3 and remove the lens prism unit with DC motors.
4. Remove 2 screws B4 and remove the DC motor ass'y from lens prism unit.

(3) Remove the LCD module ass'y.
1. Remove the lens prism unit with DC motor.
   (Refer to steps 1 and 3 of Item 6 - 2 (2).)
2. Remove 3 screws B5 and remove the LCD module ass'y.

(4) Removing the front cover ass'y and exhaust fan.
1. Remove the lens prism unit with DC motor.
   (Refer to steps 1 to 3 of Item 6 - 2 (2).)
2. Remove 3 screws B6 and remove the front cover ass'y (with exhaust fan).
3 Disconnect connector for exhaust fan from PWB ass'y signal.
4 Remove 4 screws B7 and remove the exhaust fan.
(5) Removing the lens shutter unit.
   1. Remove the front cover ass'y.
      (Refer to Item 6 - 2 (4).)
   2. Remove 4 screws B8 and remove the lens shutter unit.
(6) Removing the handle.
   1. Remove the front cover ass'y.
      (Refer to Item 6 - 2 (4).)
   2. Pull out the stick and remove the handle.
6 - 3 Removing Power unit, PWB ass'y signal, PWB ass'y input terminal.
(1) Removing the Power unit (ballast).
   1. Remove the upper case ass'y. (Refer to step 1 to 2
      of item 6 - 2 (1).)
   2. Remove 2 screws C1 and disconnect the lamp
      connector.
   3. Disconnect 4 connectors.
   4. Remove 4 screws C2 and remove the power unit
      holder ass'y.
(2) Removing the power unit (circuit).
   1. Remove the upper case ass'y.
      (Refer to step 1 to 2 of item 6 - 2 (1).)
   2. Remove 1 screws C4 and remove the holder metal.
   3. Remove screw C5 and remove the ground
      connection wire.
   4. Disconnect 2 connectors and remove the power
      unit (circuit).
(3) Removing the PWB ass'y filter.
   1. Remove the upper case ass'y.
      (Refer to steps 1 to 2 of item 6 - 2 (1).)
   2. Disconnect 2 connectors and remove the PWB
      ass'y filter. < Refer to Fig. Remove the PWB ass'y
      Filter >
(4) Removing the PWB ass'y signal.
   1. Remove the PWB ass'y drive.
      (Refer to step 1 to 2 item 6 - 2 (1).)
   2. Disconnect all 8 connectors of PWB ass'y signal.
   3. Remove screw C4 and remove the holder metal.
   4. Remove screw C5 and remove the ground
      connection wire and remove the PWB ass'y signal.
(5) Removing the PWB ass'y input terminal video.
   1. Remove the upper case ass'y.
      (Refer to step 1 to 2 item 6 - 2 (1).)
   2. Remove 2 screws C6 and remove the connector
      and remove the PWB ass'y input terminal video.
(6) Removing the PWB ass'y input terminal RGB.
1. Remove the PWB ass'y signal.
   (Refer to item 6 - 3 (4).)
2. Remove the PWB ass'y input terminal video.
   (Refer to item 6 - 3 (5).)
3. Remove 3 screws C7 and remove I/O terminal holder.
4. Remove screw C8 and remove the ground connection wire from AC inlet.
5. Remove 2 screws C9 and remove the AC inlet holder.
6. Remove 2 screws D5 and remove I/O HOLDER MTL.
7. Remove 8 screws C11 and 2 screws C10 remove the PWB ass'y input terminal RGB.

6 - 4 Removing the dichroic optics unit, intake fan, PWB ass'y mother.

(1) Removing the dichroic optics unit.
1. Remove the lens prism unit.
   (Refer to step 1 to 3 of item 6 - 2 (2).)
2. Remove screw D1 and remove the micro switch.
3. Remove screw D2 and remove the thermal sensor switch.
4. Remove 4 screws D3 and remove the dichroic optics unit.

(2) Removing the intake fan.
1. Remove the dichroic optics unit.
   (Refer to item 6 - 4 (1).)
2. Disconnect connector from the PWB ass'y signal.
3. Remove 4 screws D4 and remove the intake fan.

(3) Removing the PWB ass'y mother.
1. Remove the power unit (filter).
   (Refer to item 6 - 3 (3).)
2. Remove the PWB ass'y signal.
   (Refer to item 6 - 3 (4).)
3. Remove the PWB ass'y input terminal video.
   (Refer to item 6 - 3 (5).)
4. Remove the PWB ass'y input terminal RGB.
   (Refer to item 6 - 3 (6).)
5. Remove 3 screws D5 and remove the PWB ass'y mother.
7. Dust cleaning

(1) Check dust condition

1. Show the white picture on the screen (whose size is 60") to check dust condition.
2. If dust condition is not good, should be clean the LCD module ass'y and the Air filter.

(2) Clean the LCD module ass'y

1. Remove the LCD module ass'y. (Refer Item 6 - 2 (3)).
2. Blow the air on both side of the LCD module by dust blower or air gun.
3. If dusts are still on, wipe it with the special glass cleaning cloth.
4. Fix the LCD module, and check dust condition.
5. If it is OK, adjust convergence. (see 4 - 3)

(3) Clean the air filter

1. Remove the air filter from the bottom of the projector. (see Fig.7 - 1)
2. Wipe the air filter with a cloth moistend with water or neutral detergent, and wipe with a dry cloth.

(1) Remove 1 screws. (2) Remove the air filter.

Fig.7 - 1
8.2 Layout of optical system
9. Wiring diagram
10. Basic circuit diagram
11. Connector connection diagram
### REPLACEMENT PARTS LIST

**PRODUCT SAFETY NOTE**. Components marked with a ▲ have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

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