Model Sirius-PJ2

Machine Codes:
Y076/Y077/Y078

Field Service Manual

June, 2015

Important Safety Notices

⚠CAUTION

- RISK OF ELECTRIC SHOCK DO NOT OPEN
- TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

	This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.
	This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

⚠WARNING

- HEAT SINK MAY BE ENERGIZED. TEST BEFORE TOUCHING.
- The heat sink located on the power board is electrified. A ⚠ mark is attached to the primary heat sink. Pay attention to this area.

During servicing carefully observe the following.

1. OBSERVE ALL PRECAUTIONS

   Items and locations that require special care during servicing, such as the cabinet, chassis, and parts are labelled with individual safety instructions. Carefully comply with these instructions and all precautions in the instruction manual.

2. BE CAREFUL OF ELECTRIC SHOCK

   The chassis carries an AC voltage. If you touch the chassis while it is still live, you will get a severe shock. If you think the chassis is live, use an isolating transformer or gloves, or pull out the plug before replacing any parts.

3. USE SPECIFIED PARTS

   The components have been chosen for minimum flammability and for specific levels of resistance value and ability to withstand voltage. Replacement parts must match these original specifications. Parts whose specifications are particularly vital to safe use and maintenance of the set are marked ⚠ on the circuit diagrams and parts list.

   Substitution of these parts can be dangerous for you and the customer, so use only specified parts.

4. REMOUNT ALL PARTS AND RECONNECT ALL WIRES AS ORIGINALLY INSTALLED

   For safety, insulating tape and tubes are used throughout, but some lift-off parts on the printed wiring board require special attention.

All wires are positioned away from high-temperature and high-voltage parts, and, if removed for servicing, they must be retuned precisely to their original positions.

5. LAMP

   Be very careful of the lamp because it generates high heat while it is used at high voltage. When replacing the bulb, make sure it is cool enough.

6. LENS

   Do not look into the lens during projection. This is important to avoid damage to the eyes.

7. SERVICING

   At the time of repair or inspection services, use an earth band (wrist band), without fail.

8. RUN A COMPLETE SAFETY CHECK AT THE COMPLETION OF SERVICING

   After completion of servicing, confirm that all screws, parts, and wiring, removed or disconnected for servicing, have been returned to their original positions. Also examine if the serviced sections and peripheral areas have suffered from any damage as a result of servicing. In addition, check the insulation between external metallic parts and the blades of wall outlet plugs. This examination is indispensable in confirming complete establishment of safety.

   Insulation check:

   Pull out the plug from the wall outlet to disconnect the connection cable. Then turn on the POWER switch. Use a 500V ohmmeter (Note 2) and make sure that the insulation resistance is 1MΩ or more between each terminal of the plug and exposed external metal (Note 1). If the measured value is below the specified level, then it is necessary to inspect and fix the machine.

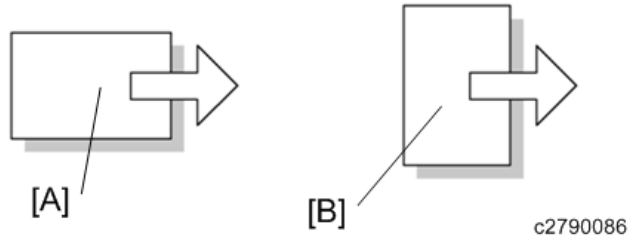
   Note 1: Exposed external metal....RGB input terminals, control terminals, etc.

   Note 2: If a 500V ohmmeter is not available for an unavoidable reason, then use a circuit tester or the like for inspection.

Symbols, Abbreviations and Trademarks

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

	Screw
	Shoulder screw
	Black screw (TCRU)
	Connector
	FFC (Flat Film Connector)
	Harness clamp
	Clip
	E-ring
	C-ring
	Timing belt
	Spring
SEF	Short edge feed
LEF	Long edge feed



[A] Short edge feed [SEF]

[B] Long edge feed [LEF]

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The product names of Windows 7 are as follows:

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- Microsoft® Windows® 7 Professional
- Microsoft® Windows® 7 Ultimate
- Microsoft® Windows® 7 Enterprise

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1. Product Information

Specifications

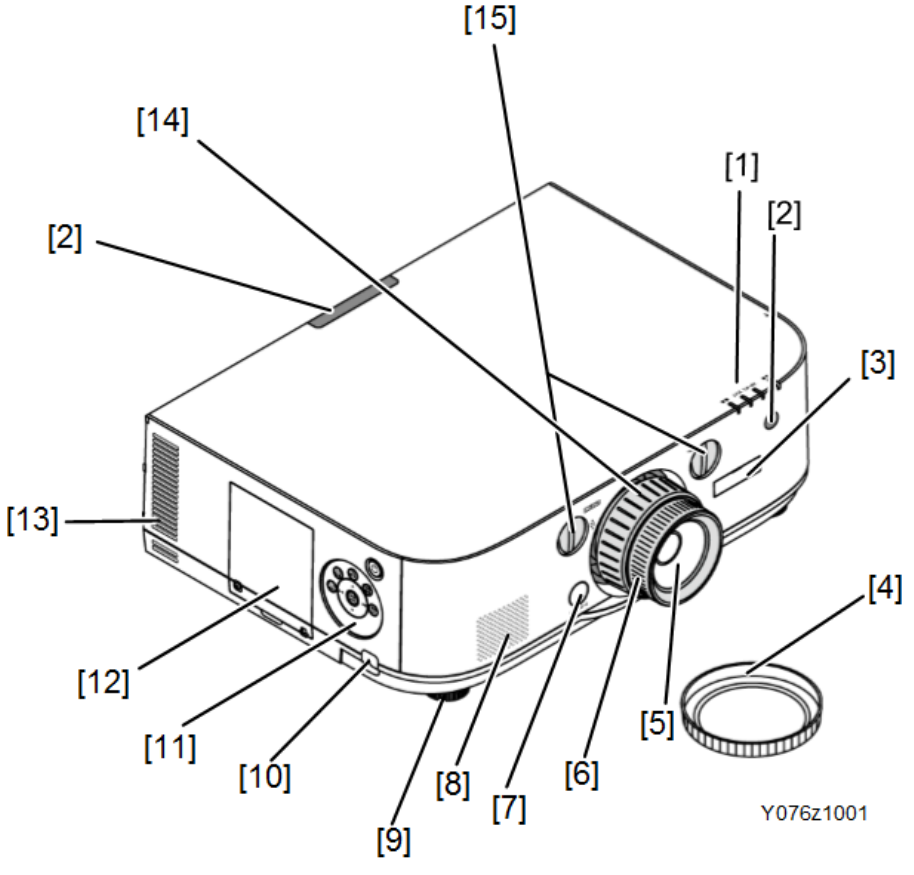
See "Appendices" for the following information:

- General Specifications

Overview

Front and Top View

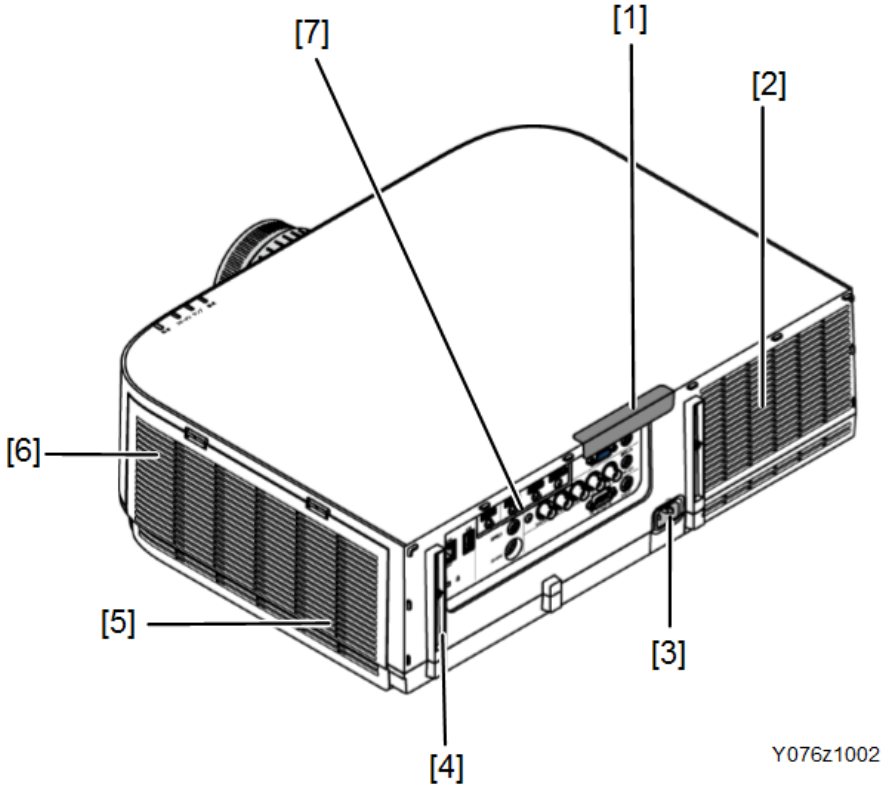
The lens is sold separately. The description below is for when the Standard Lens Type 1 lens is mounted.



No.	Name
1	Indicator Section
2	Remote Sensor (located on the front and the rear)
3	Securing lever cover
4	Lens Cap (The optional lens is shipped with the lens cap.)

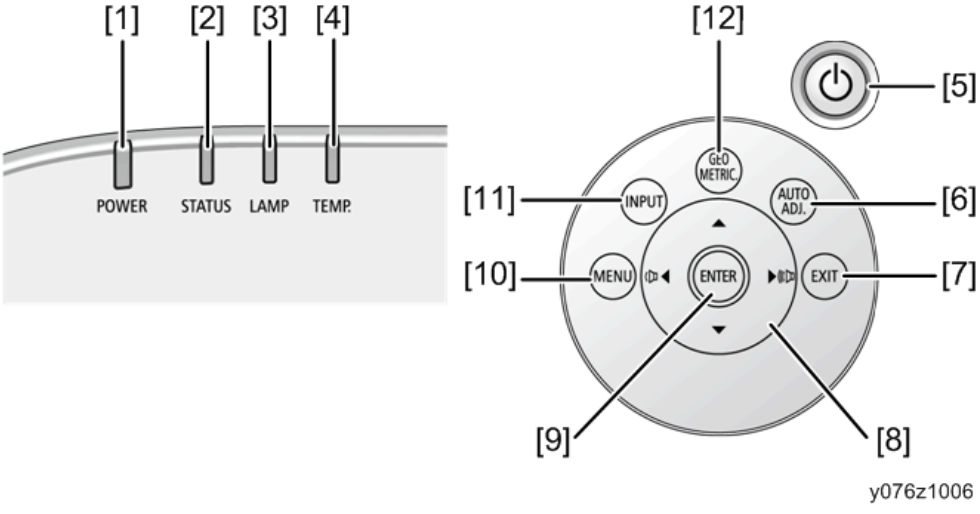
No.	Name
5	Lens
6	Focus Ring
7	Lens Release Button
8	Monaural Speaker (10 W)
9	Adjustable Tilt Foot
10	Security Bar
11	Controls
12	Lamp Cover
13	Exhaust vent
14	Zoom Lever/Zoom Ring
15	Lens Shift Dial (vertical/horizontal)

Rear View



No.	Name
1	Remote Sensor (located on the front and the rear)
2	Exhaust vent
3	AC IN Terminal
4	Built-in Security Slot
5	Intake vent / Filter Cover
6	USB (LAN) Port (located inside the projector)
7	Terminals

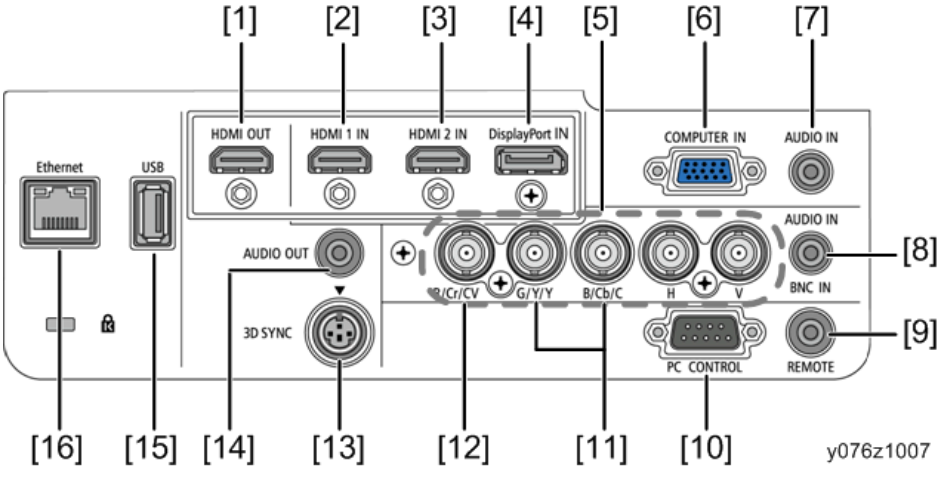
Control Panel/ Indicator



No.	Name	Function
1	POWER Indicator	When power is ON, the POWER indicator lights up in blue. If the standby mode is set to "Normal" and the projector is in standby mode, the POWER indicator lights up in red.
2	STATUS Indicator	If the standby mode is set to "Normal" and the projector is in standby mode, the STATUS indicator is OFF. The indicator lights up or flashes when the button has been pressed while the projector is in key lock mode or the projector has a problem.
3	LAMP Indicator	Indicates the lamp status and replacement grace period.
4	TEMP. Indicator	Lights up in orange when the surrounding temperature is high.
5	Power Button	Turns the projector on and then off (standby). To turn the projector off (standby), then press the Power button one time. When the confirmation message appears on the screen, press the Power button again.
6	AUTO ADJ. Button	Auto adjustment for Computer (Analog RGB), HDMI 1, HDMI 2, DisplayPort projecting.

No.	Name	Function
7	EXIT Button	Returns to the previous hierarchical menu in the currently displayed on-screen menu. When the cursor is placed over the main menu, the menu closes. When a confirmation message appears, the operation is canceled.
8	▲▼◀▶/ Volume Buttons	• While an on-screen menu is displayed, use the ▲, ▼, ◀, and ▶ buttons to select the item to set or adjust. • If no on-screen menu is displayed, use the ◀ and ▶ buttons to adjust the volume.
9	ENTER Button	Proceeds to the next hierarchical menu in the currently displayed on-screen menu. Applies the selected item while the confirmation message is displayed.
10	MENU Button	Displays an on-screen menu for setting or adjusting a variety of items.
11	INPUT Button	Selects the signal input. Pressing the INPUT button briefly displays the "INPUT" screen. Pressing the INPUT button for one second or longer checks the signal inputs automatically in the following order: HDMI 1 → HDMI 2 → DisplayPort → BNC → BNC(CV) → BNC(Y/C) → COMPUTER → USB-A. When the projector detects a signal input, it projects the input signal.
12	Geometric. Button	Displays the “GEOMETRIC CORRECTION” screen of the on-screen menu. Corrects horizontal and vertical keystone distortions.

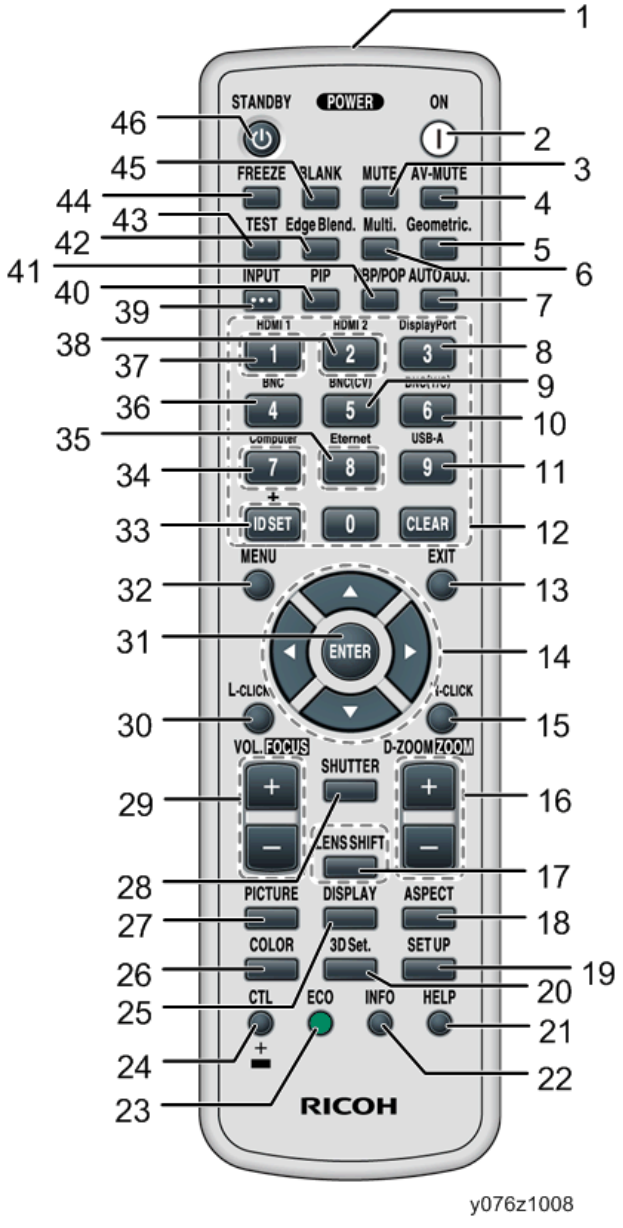
Names of the Terminals on the Rear Panel



No.	Name
1	HDMI OUT Connector (Type A)
2	HDMI 1 IN Connector (Type A)
3	HDMI 2 IN Connector (Type A)
4	DisplayPort IN Connector
5	BNC Input Connectors (BNC × 5)
6	COMPUTER IN/ Component Input Connector (Mini D-Sub 15 Pin)
7	COMPUTER AUDIO IN Mini Jack (Stereo Mini)
8	BNC AUDIO IN Mini Jack (Stereo Mini)
9	REMOTE Connector (Stereo Mini) (not available on this series of projectors)
10	PC CONTROL Port (D-Sub 9 Pin)
11	BNC (Y/C) Input Connector (BNC × 2)
12	BNC (CV) Input Connector (BNC × 1)
13	3D SYNC Connector (Mini DIN 4 Pin)
14	AUDIO OUT Mini Jack (Stereo Mini)
15	USB-A Port (Type A)

No.	Name
16	Ethernet Port (RJ-45)

Part Names of the Remote Controller



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No.	Name	Function
1	Infrared Transmitter	The infrared signal is transmitted from here. Point the remote control toward the remote sensor on projector.
2	Power On Button	Confirm that the projector is in standby (the POWER indicator is lit in red*), and then turn it on. * When standby mode is set to "Normal".
3	MUTE Button	Press this button to turn off the sound for a short period of time. Press again to restore the sound.
4	AV-MUTE Button	Turns off both video and audio temporarily. Pressing the button again turns the video and audio back on.
5	Geometric. Button	Displays the “GEOMETRIC CORRECTION” screen of the on-screen menu. Corrects horizontal and vertical keystone distortions.
6	Multi. Button	Displays the “MULTI SCREEN” menu to adjust the color adjustment and projection area for each projector when using the multi-screen function.
7	AUTO ADJ. Button	Auto adjustment for Computer (Analog RGB), HDMI 1, HDMI 2, DisplayPort projecting.
8	DisplayPort Button	Selects the DisplayPort input.
9	BNC(CV) Button	Selects BNC (CV) Input (Composite Video Signal).
10	BNC(Y/C) Button	Selects BNC (Y/C) Input (S-Video Signal).
11	USB-A Button	Selects the viewer.
12	Numeric Keypad Button/ CLEAR Button	The remote controller that comes with this projector can be used to control multiple projectors. These buttons are used to enter the ID (or set the control ID) of an individual projector. The CLEAR button can be used to clear the set control ID.
13	EXIT Button	Returns to the previous hierarchical menu in the currently displayed on-screen menu. When the cursor is placed over the main menu, the menu closes. When a confirmation message appears, the operation is canceled.
14	▲▼◀▶ Button	Used to navigate an on-screen menu or to adjust the screen position when using partial zoom buttons to zoom in on the screen.

No.	Name	Function
15	R-CLICK Button	(not available on this series of projectors)
16	D-ZOOM/ZOOM (+) (−) Button	Use this button to zoom in or out. ("ZOOM" Button does not work on this series of projectors)
17	LENS SHIFT Button	(not available on this series of projectors)
18	ASPECT Button	Displays the aspect ratio selection screen.
19	SETUP Button	Displays the "SETUP" menu for the installation settings.
20	3D Set. Button	Displays the "3D SETTINGS" menu for selecting 3D input signal formats.
21	HELP Button	Displays the "INFO." menu.
22	INFO Button	Displays information of "SOURCE(1)".
23	ECO Button	Displays the economy mode selection screen.
24	CTL Button	(not available on this series of projectors)
25	DISPLAY Button	Displays the "DISPLAY" menu to set/adjust picture display.
26	COLOR Button	Corrects the color for all signals. Adjusts the tone for the colors red, green, blue, yellow, magenta and cyan.
27	PICTURE Button	Displays the "PICTURE" menu for adjusting the projected image.
28	SHUTTER Button	(not available on this series of projectors)
29	VOL./FOCUS (+)(−) Button	Adjusts the volume of the internal speaker. Also adjusts the volume of the output sent to the audio output port. (Focusing is not available on this series of projectors)
30	L-CLICK Button	(not available on this series of projectors)
31	ENTER Button	Proceeds to the next hierarchical menu in the currently displayed on-screen menu. Applies the selected item while the confirmation message is displayed.
32	MENU Button	Displays an on-screen menu for setting or adjusting a variety of items.

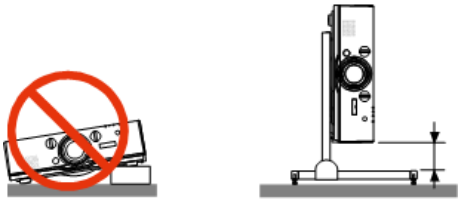
No.	Name	Function
33	ID SET Button	The remote controller that comes with this projector can be used to control multiple projectors. This button is used to set the control ID of an individual projector.
34	Computer Button	Selects the COMPUTER input.
35	Ethernet Button	Selects the Ethernet input.
36	BNC Button	Selects BNC Input (Analog RGB or Component Signal).
37	HDMI 1 Button	Selects the HDMI 1 input.
38	HDMI 2 Button	Selects the HDMI 2 input.
39	INPUT Button	Pressing the INPUT button briefly displays the "INPUT" screen. Pressing the INPUT button for one second or longer checks the signal inputs automatically in the following order: HDMI 1 → HDMI 2 → DisplayPort → BNC → BNC(CV) → BNC(Y/C) → COMPUTER → USB-A. When the projector detects a signal input, it projects the input signal.
40	PIP Button	Press to project the sub-screen inside the main display, and to display the menu for selecting the input terminal for the sub-screen.
41	PBP/POP Button	Press to project the main screen and sub-screen side by side, and to display the menu for selecting the input terminal for the sub-screen.
42	Edge Blend. Button	Press this button to make the edges (boundaries) of the projection screen indistinguishable.
43	TEST Button	Displays the test pattern.
44	FREEZE Button	Displays the current video image as a still image. Pressing the button again returns to normal video display.
45	BLANK Button	Press this button to blank the picture for a short period of time. Press again to restore the picture.
46	STANDBY Button	Pressing the STANDBY button once displays the power-off confirmation message. Pressing the ENTER button or STANDBY button again turns the projector off (standby).

2. Installation

Installation Requirements

⚠WARNING

- Do not cover the lens with the lens cap or equivalent while the projector is on. Doing so can lead to melting of the cap due to the heat emitted from the light output.
- Do not place any objects which are easily affected by heat in front of the projector lens. Doing so could lead to the object melting from the heat that is emitted from the light output.



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Do not use the projector with it leaning to the left or right. This may result in a malfunction. However, portrait installation is possible* (when a custom-designed stand is made). For portrait installation, install the projector with the intake vent at the bottom and leave a space of at least 130 mm below the intake vent.

Fire and Shock Precautions

- Ensure that there is sufficient ventilation and that vents are unobstructed to prevent the build-up of heat inside the projector. Allow at least 4 inches (10cm) of space between the projector and a wall.
- Do not try to touch the ventilation outlet on the left front (when seen from the front) as it can become heated while the projector is turned on and immediately after the projector is turned off. Parts of the projector may become temporarily heated if the projector is turned off with the Power button or if the AC power supply is disconnected during normal projector operation.

  Use caution when picking up the projector.
- Prevent foreign objects such as paper clips and bits of paper from falling into the projector. Do not attempt to retrieve any objects that might fall into the projector. Do not insert any metal objects such as a wire or screwdriver into the projector. If something should fall into the projector, disconnect it immediately and have the object removed by qualified service personnel.
- Do not place any objects on top of the projector.
- Do not touch the power plug during a thunderstorm. Doing so can cause electrical shock or fire.

- The projector is designed to operate on a power supply of 100-240V AC 50/60 Hz. Ensure that the power supply fits this requirement before attempting to use the projector.
- Do not look into the lens while the projector is on. Serious damage to your eyes could result.
- Keep any items (magnifying glass etc.) out of the light path of the projector. The light path being projected from the lens is extensive, therefore any kind of abnormal object that can redirect light coming out of the lens, can cause an unpredictable outcome such as a fire or injury to the eyes.
- Do not place any objects which are easily affected by heat in front of a projector exhaust vent.

  Doing so could lead to the object melting or getting your hands burned from the heat that is emitted from the exhaust.
- Handle the power cord carefully. A damaged or frayed power cord can cause electric shock or fire.
  - Do not use any power cord other than the one supplied with the projector.
  - Do not bend or tug the power cord excessively.
  - Do not place the power cord under the projector or any heavy object.
  - Do not cover the power cord with soft materials such as rugs.
  - Do not heat the power cord.
  - Do not handle the power plug with wet hands.
- Turn off the projector, unplug the power cord and have the projector serviced by qualified service personnel under the following conditions:
  - When the power cord or plug is damaged or frayed.
  - If liquid has been spilled into the projector, or if it has been exposed to rain or water.
  - If the projector does not operate normally when following the instructions described in the user's manual.
  - If the projector has been dropped or the cabinet has been damaged.
  - If the projector exhibits a distinct change in performance, indicating a need for service.
- Disconnect the power cord and any other cables before carrying the projector.
- Turn off the projector and unplug the power cord before cleaning the cabinet or replacing the lamp.
- Turn off the projector and unplug the power cord if the projector is not to be used for an extended period of time.
- When using a LAN cable:

  For safety, do not connect to a connector for peripheral device wiring that might have excessive voltage.

⚠CAUTION

- Do not use the tilt-foot for purposes other than originally intended. Misuses such as gripping the tilt-foot or hanging on the wall can cause damage to the projector.

- Do not send the projector in the soft case by parcel delivery service or cargo shipment. The projector inside the soft case could be damaged.
- Select [HIGH] in Fan mode if continuing to use the projector for consecutive days. (From the menu, select [SETUP] → [INSTALLATION] → [FAN MODE] → [HIGH].)
- Before using Direct Power Off, be sure to allow at least 20 minutes immediately after turning on the projector and starting to display an image.
- Do not unplug the power cable from the wall outlet or projector when the projector is powered on. Doing so can cause damage to the AC IN connector of the projector and (or) the prong plug of the power cable.
  To turn off the AC power supply when the projector is powered on, use a power strip equipped with a switch and a breaker.
- Do not turn off the AC power for 60 seconds after the lamp is turned on and while the Power indicator is blinking blue. Doing so could cause premature lamp failure.

Caution on Handling the Optional Lens

When shipping the projector with the lens, remove the lens before shipping the projector. Always attach the dust cap to the lens whenever it is not mounted on the projector. The lens and the lens shift mechanism may encounter damage caused by improper handling during transportation.

Do not hold the lens part when carrying the projector.

Doing so could cause the focus ring to rotate, resulting in accidental dropping of the projector.

Lamp Replacement

- Use the specified lamp for safety and performance.

Note

- **For US Residents**
- LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE OR FEDERAL LAWS.

⚠CAUTION

- DO NOT TOUCH THE LAMP immediately after it has been used. It will be extremely hot. Turn the projector off and then disconnect the power cord. Allow at least one hour for the lamp to cool before handling.
- When removing the lamp from a ceiling-mounted projector, make sure that no one is under the projector. Glass fragments could fall if the lamp has been burned out.

This product contains substances which are harmful to humans and the environment.

- The lamp contains mercury.

Please dispose of this product or used lamps in accordance with local regulations.

- Notes for Residents

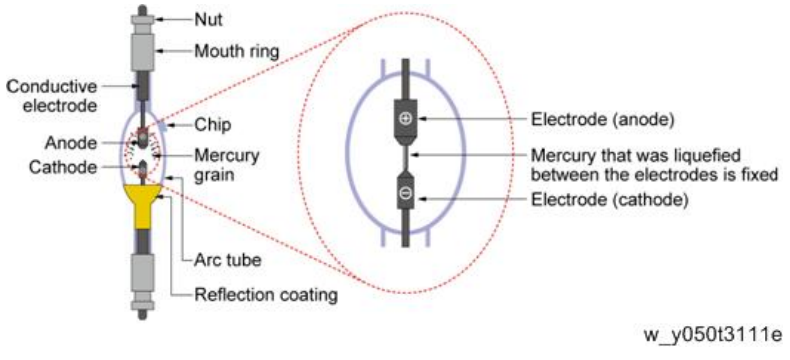
  The lamp is this product contains mercury. Please dispose according to Local, State or Federal laws.

Mercury bridge

This projector uses a high-pressure mercury lamp as a light source. Mercury is used inside, which is in a liquid state at normal temperature, and in a gasified state when the lamp is lit.

The gasified mercury returns to a liquid state when the lamp is turned off. At that time, there are very rare cases where the liquefied mercury adheres between the electrodes, which may cause a short-circuit between the electrodes. This phenomenon is called a "mercury bridge". (See the diagram below)

In such a case, the lamp cannot be lit. Generally, this problem tends to occur when the power is forcibly turned off (Example: Disconnecting the AC cable while the power is on, power outage occurring, breaker being thrown).



About High Altitude Mode

- Set [FAN MODE] to [HIGH ALTITUDE] when using the projector at altitudes approximately 5500 feet/1700 meters or higher.

  Using the projector at altitudes approximately 5500 feet/1700 meters or higher without setting to [HIGH ALTITUDE] can cause the projector to overheat and the protector could shut down. If this happens, wait a couple of minutes and turn on the projector.

- Using the projector at altitudes less than approximately 5500 feet/1700 meters and setting to [HIGH ALTITUDE] can cause the lamp to overcool, causing the image to flicker. Switch [FAN MODE] to [AUTO].
- Using the projector at altitudes approximately 5500 feet/1700 meters or higher can shorten the life of optical components such as the lamp.

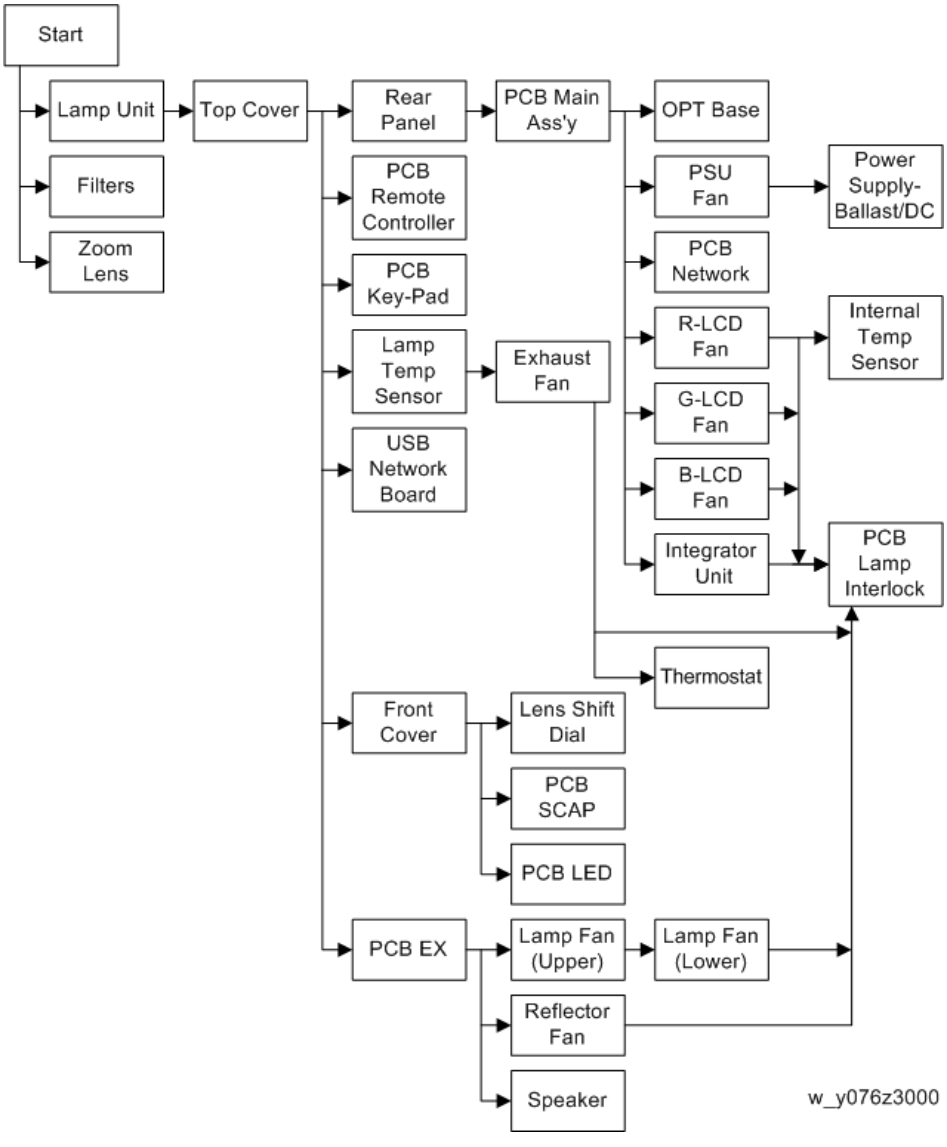
3. Replacement and Adjustment

Replaceable Part Hierarchy

The flow chart below shows what parts must be removed to access each replaceable part in the projector.

The parts on the first level (e.g., Lamp cover) are accessible without removing any other parts.

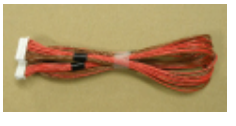
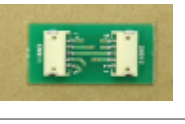
The more levels down that a part is, the more parts must be removed in order to access it.

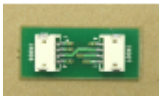


Special Tools

- RS232C cable (Cross)
- LAN cable (Category 5 or higher)

Jigs for adjustment of the optical axis

Item name	Application	Q'ty	Part No.	Appearance
Extension connector (92P)	For LCD PANEL (For PJ WU6181N)	3	Y0785213	
Extension connector PWB (92P)	For LCD PANEL (For PJ WU6181N)	3	Y0785214	
Extension connector (57P)	For LCD PANEL (For PJ WX6181N / PJ X6181N)	3	Y0785215	
Extension connector PWB (57P)	For LCD PANEL (For PJ WX6181N / PJ X6181N)	3	Y0785216	
Extension connector (18P)	For Power supply (PS UNIT) (POPS : 600mm)	1	Y0135211	
Extension connector PWB (18P)	For Power supply (PS UNIT)	1	Y0135212	
Extension connector (5P)	For Power supply (BS UNIT) (POLM : 900mm)	1	Y0135207	
Extension connector PWB (5P)	For Power supply (BS UNIT)	1	Y0135208	

Item name	Application	Q'ty	Part No.	Appearance
Extension connector (4P)	For SCAP PWB (POSCAP : 900mm) For FAN (POFAN2 : 900W)	2	Y0135205	
Extension connector PWB (4P)	For LCAP PWB For FAN	2	Y0135206	
Extension connector (3P)	For FAN (POFAN1/ POFAN3/POFAN4/ POFAN8:900mm)	4	Y0135203	
Extension connector PWB (3P)	For FAN	4	Y0135204	
Extension connector (2P)	For THERMISTOR (POTH1/ POTH3 : 900mm)	2	Y0135201	
Extension connector PWB (2P)	For THERMISTOR	2	Y0135202	
IRIS UNIT *1	For IRIS UNIT (POMO)	1	Y0783111	
SPACER FL T0.1 (PB52) *2	Spacer for FL adjustment (this is one of the optical axis adjustments)	–	Y0133120	
SPACER FL T0.2 (PB52) *2		–	Y0133121	
SPACER FL T0.3 (PB52) *2		–	Y0133122	
SPACER FL T0.5 (PB52) *2		–	Y0133123	
SPACER FL T1.0 (PB52) *2		–	Y0133124	

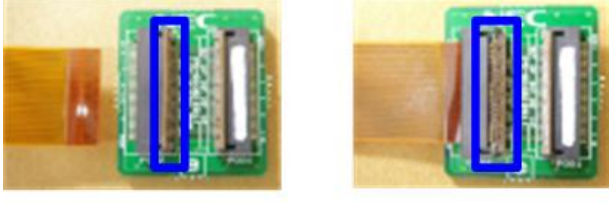
Item name	Application	Q'ty	Part No.	Appearance
SPACER RL2 T0.1 (PB52) *2	Spacer for RL2 adjustment (this is one of the optical axis adjustments)	–	Y0133125	
SPACER RL2 T0.2 (PB52) *2		–	Y0133126	
SPACER RL2 T0.3 (PB52) *2		–	Y0133127	
SPACER RL2 T0.5 (PB52) *2		–	Y0133128	
SPACER RL2 T1.0 (PB52) *2		–	Y0133129	

*1: IRIS UNIT is not a mandatory service tool. It can be take out from the projector when you perform the optical parts adjustment.

*2: The numbers, such as 0.1 shows the thickness. 0.1 means 0.1mm, 0.5 represents the thickness of 0.5mm.

Cautions:

- How to install the FFC cable



y0131026

Photo seen from above

y0131027

Insert the FFC cable in the relevant connector on the PWB.

Let the embossed part (framed part in blue, shown below) fall down in the direction of the red arrow.

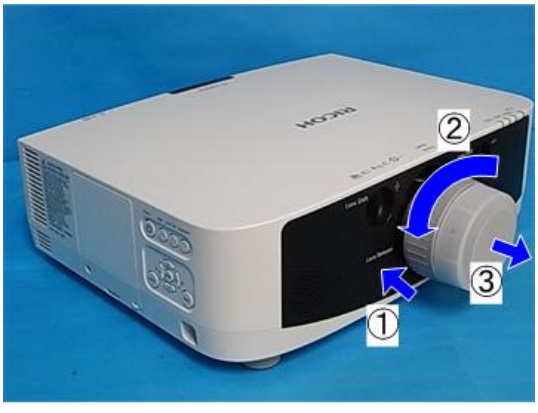
* The embossed part for fixing the FFC cable is fragile. Handle it with care when installing or removing the FFC cable.

Parts Replacement

Zoom Lens

1. **Zoom lens**

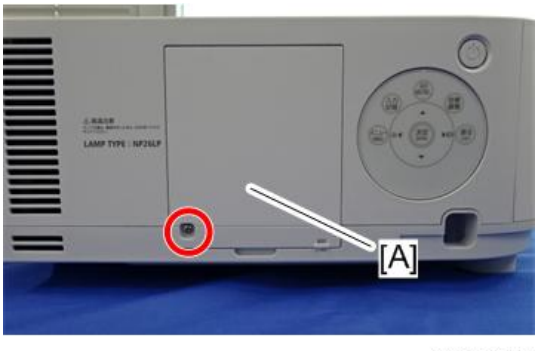
   Remove in the order 1 to 3.



y0131086

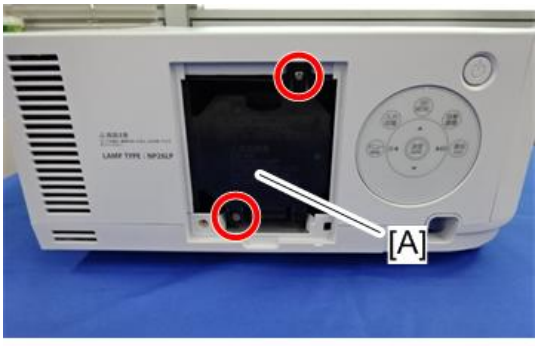
Lamp Unit

1. **Loosen the screw and remove the Lamp cover [A] (×1).**



y076z3000

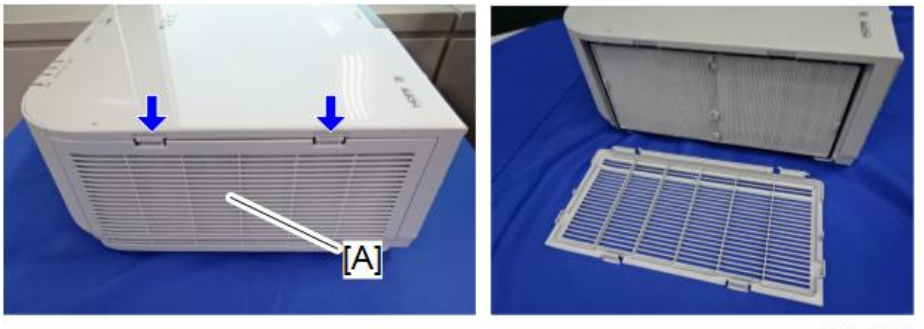
2. **Loosen the screws and remove the Lamp unit [A] (×2).**



y076z3001

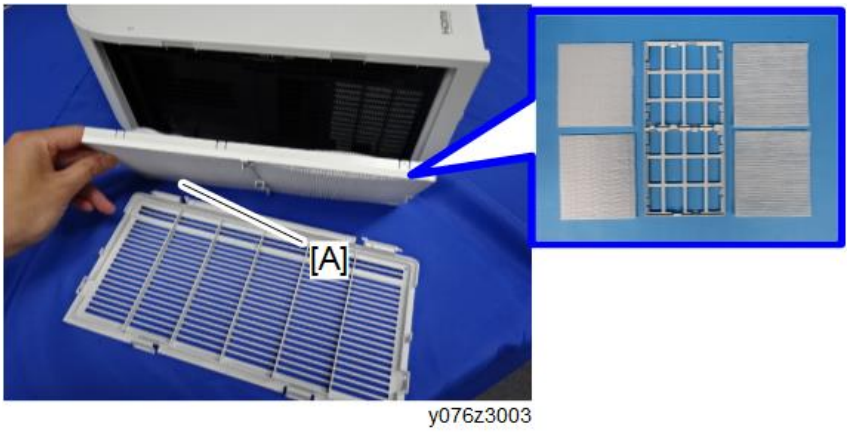
Filters

1. **Remove the Filter cover [A].**



y076z3002

2. **Remove the Filters [A].**



y076z3003

Top Cover

⚠CAUTION

- Before removing the top cover, make sure to remove the lamp unit. (Failure to do so may cause a problem to occur when reassembling the projector.)
- The PCB KEY-PAD [A] and the PCB EX [B] attached to the TOP COVER are connected through a cable. Therefore, removing the top cover should be done with utmost care.

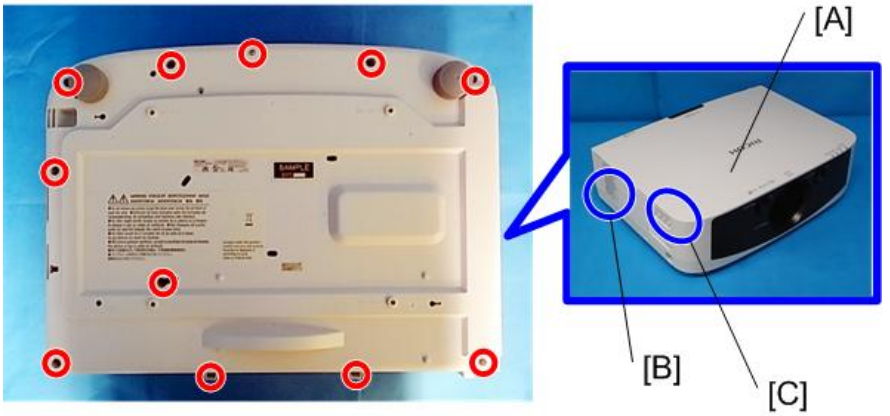
1. **Remove the Lamp unit (page 31).**
2. **Remove the Filters (page 32).**
3. **Loosen the screw.**

y0131091

4. **Top cover [A] (×11)**

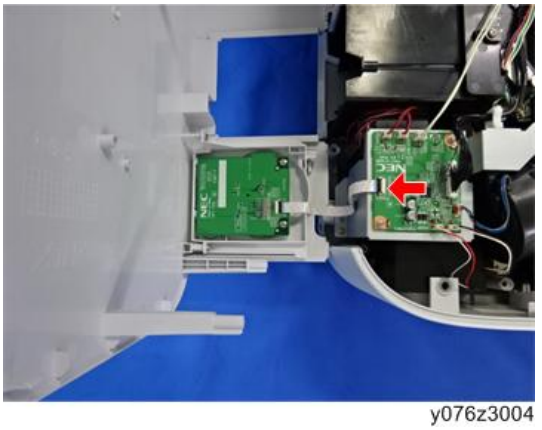
   [B]: It might be difficult to remove the cover due to projections inside the chassis. Be careful not to damage the cover or other parts when removing the cover from inside the chassis.

   [C]: There is a cable connecting the Top Cover to the main unit. Exercise care when removing the Top Cover. (See the steps below.)



y0131092

5. Disconnect the cable (×1).

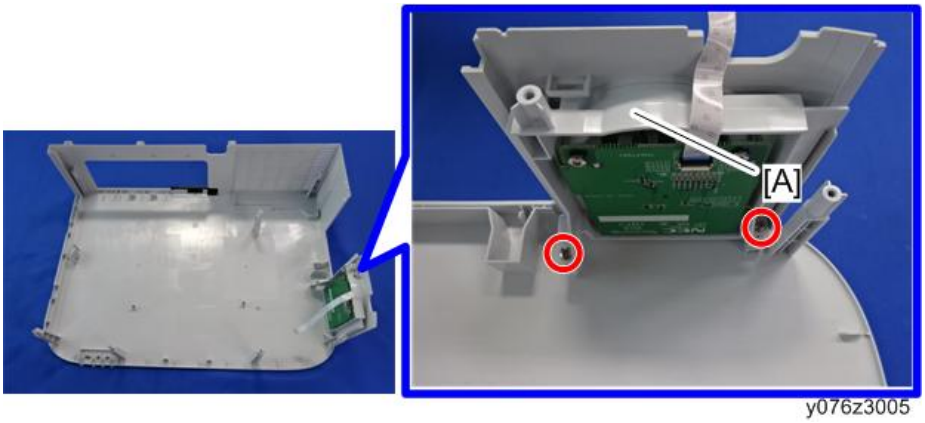


y076z3004

PCB Key-Pad

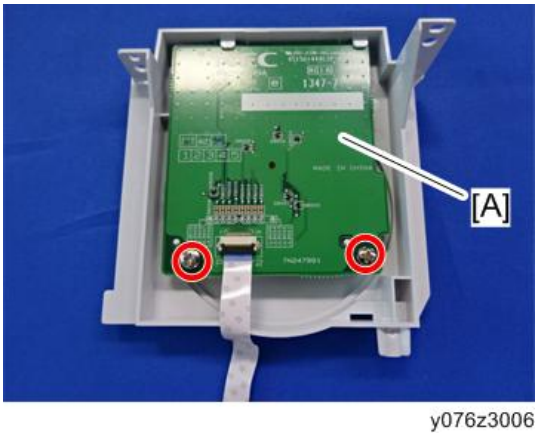
1. Top cover (page 33).

2. Remove the Holder [A] (×2).



y076z3005

3. Remove the PCB Key-Pad [A] (×2).

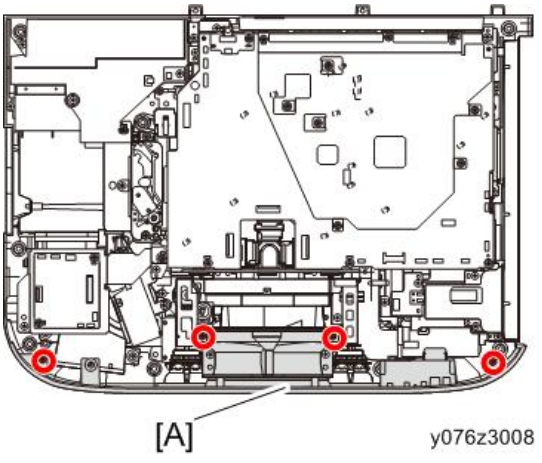


y076z3006

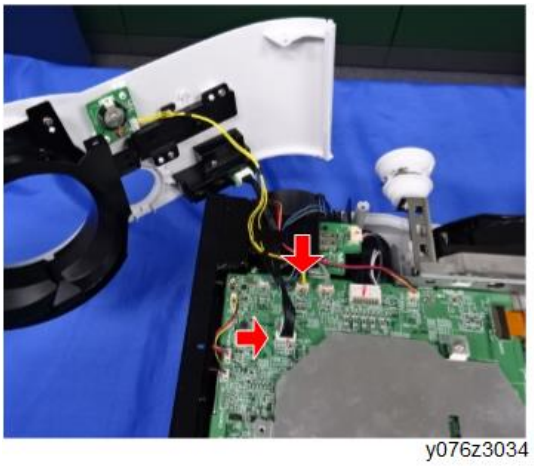
Front Cover

1. Top cover (page 33).

2. Front Cover [A] (×4).



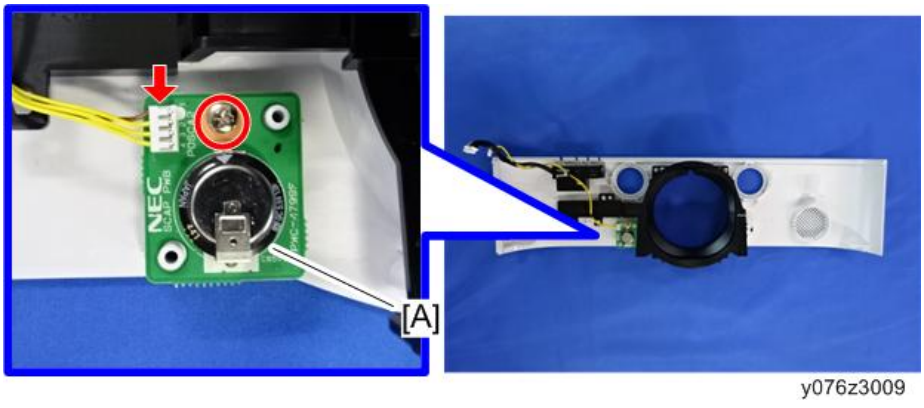
3. Remove the two connectors (×2).



PCB SCAP

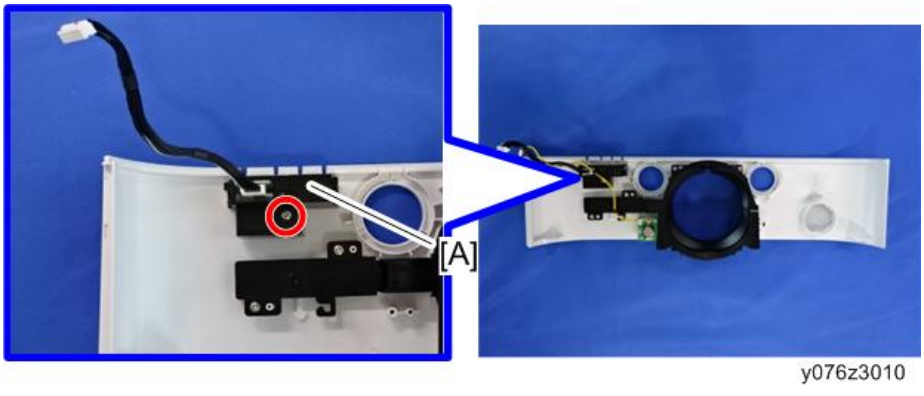
1. Front Cover (page 35).

2. Remove the PCB SCAP [A] (×1, ×1).



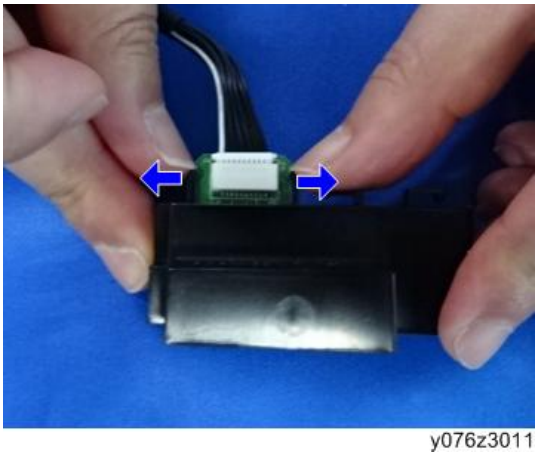
PCB LED

1. Front Cover (page 35).
2. Remove the PCB LED with holder [A] (×1).



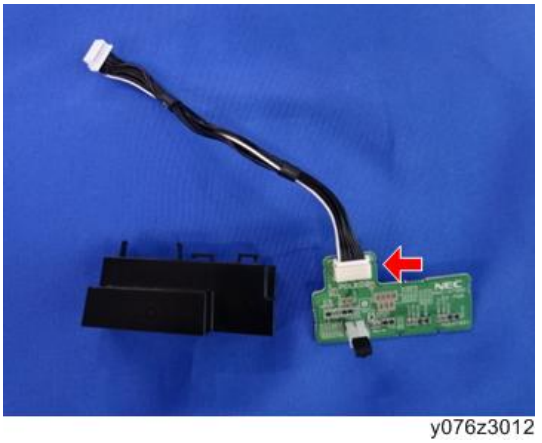
3

3. **Release the tabs to remove the holder as below.**



y076z3011

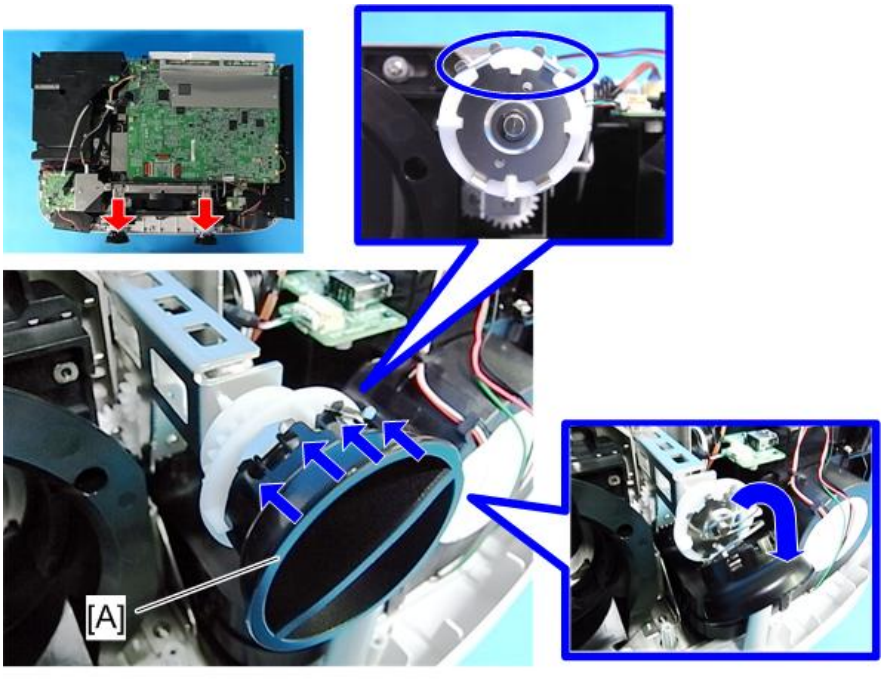
4. **Remove the connector (×1).**



y076z3012

Lens Shift Dial

1. Remove the Lens Shift Dial [A] and spring.



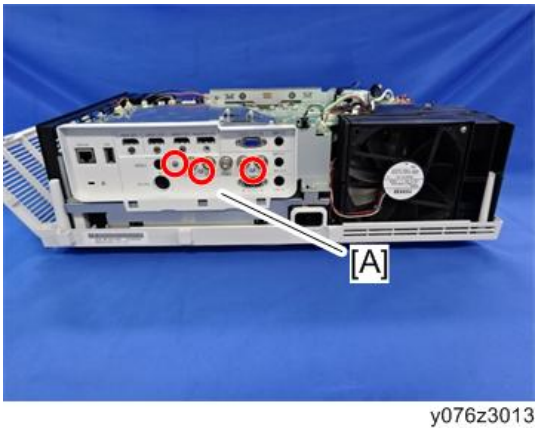
y0131099

y076z3035

Rear Panel

1. Top cover (page 33).

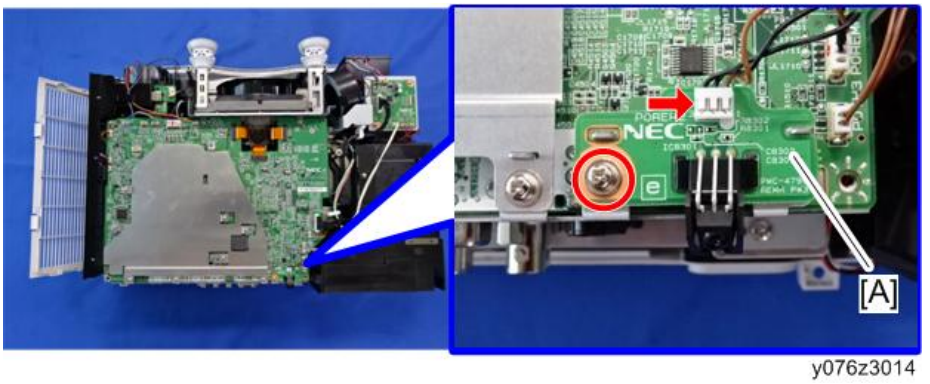
2. Rear panel [A] (×3).



y076z3013

PCB Remote Controller

1. Top cover (page 33).
2. Remove the PCB Remote Controller [A] (×1, ×1).

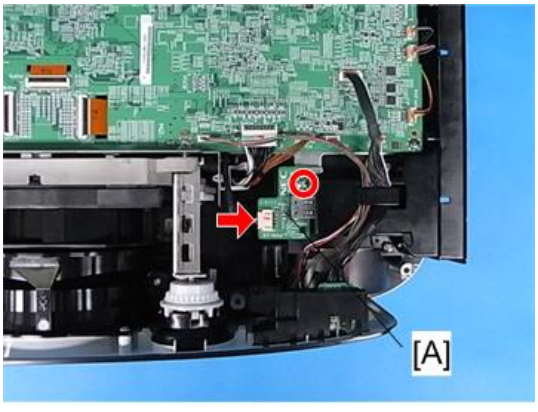


y076z3014

USB Network Board

1. Top cover (page 33).

2. **Remove the USB Network Board (×1, ×1)**



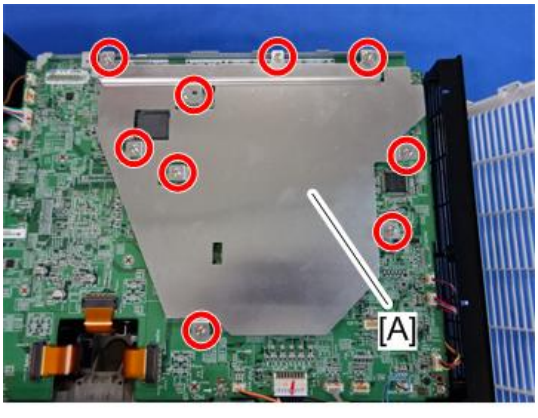
y0131102

PCB Main Ass'y

Note

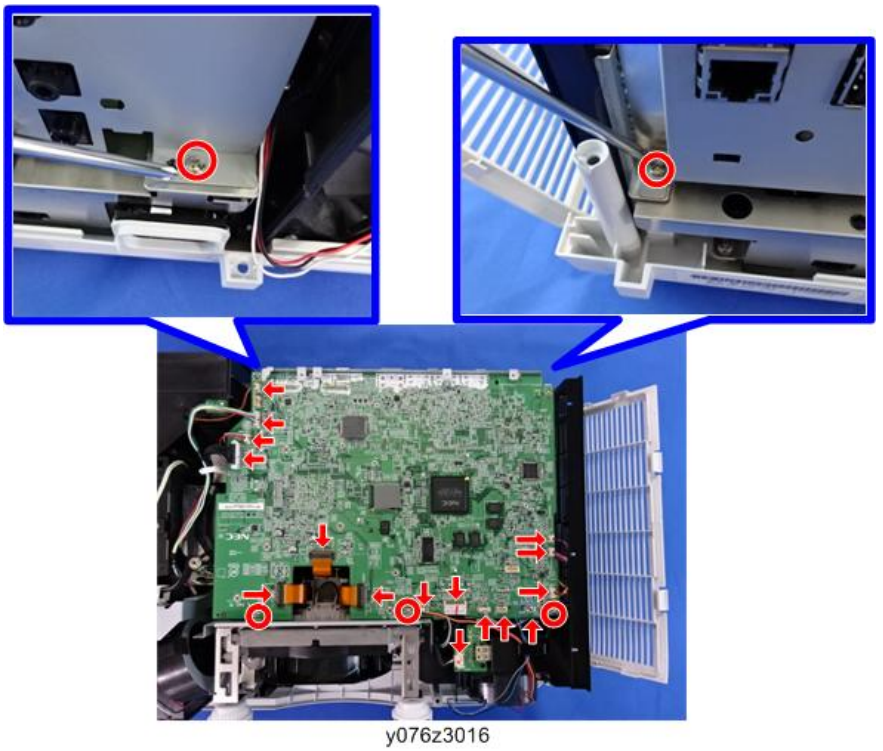
- Replacing the PCB Main Ass'y involves making adjustments to the software (refer to Electrical Adjustment). Before removing the Ass'y, be sure to read (or copy) all data.

1. **Rear panel (page 39).**
2. **Remove the PCB Remote Controller (page 40).**
3. **Remove the bracket [A] (×9).**



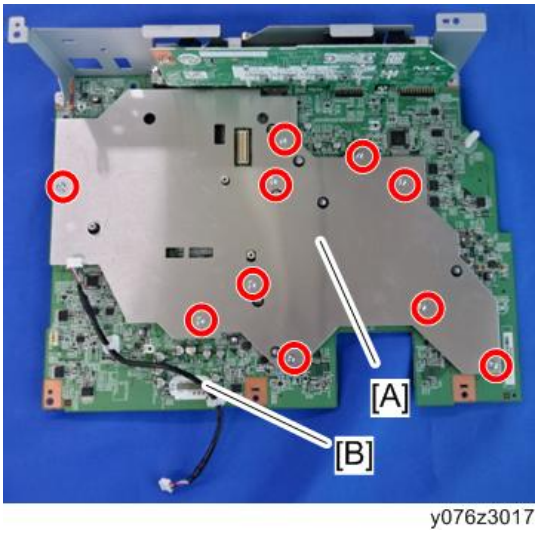
y076z3015

4. Remove the PCB Main Ass'y and PCB Network unit (×5, ×16).



y076z3016

5. Remove the PCB Network (page 43).
6. Remove the bracket [A] and cable [B] (×10).



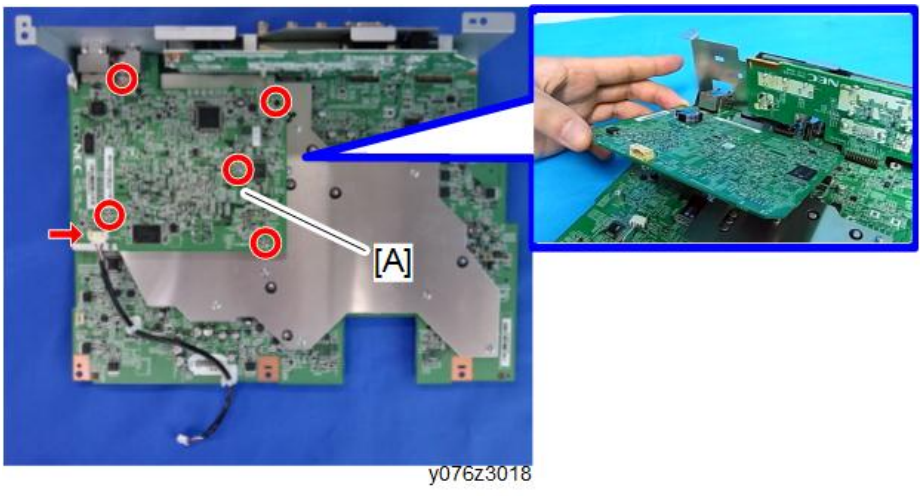
y076z3017

PCB Network

⚠CAUTION

- Keep the PCB Network away from conductive materials such as metal.

1. **Remove the PCB Main Ass'y (page 41).**
2. **Remove the PCB Network [A] (×5, ×1).**



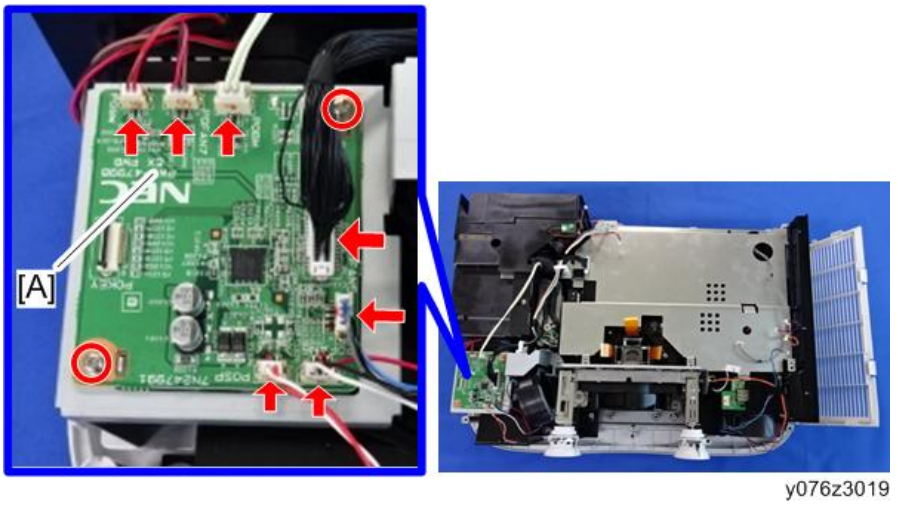
Note

- A small ground plate assembly is fixed together with the PCB Network. Be very careful not to lose this assembly when removing the PCB Network, because the assembly is to be used again when replacing a new PCB Network.

PCB EX

1. **Top cover (page 33).**
2. **Remove the bracket.**

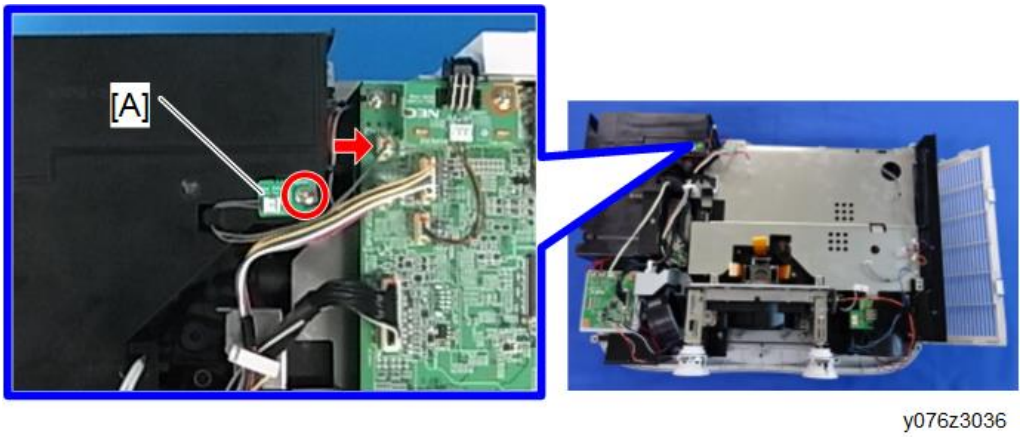
3. Remove the PCB EX (×2, ×7).



y076z3019

Lamp Temp Sensor

1. Top cover (page 33).
2. Remove the Lamp Temp Sensor [A] (×1, ×1).

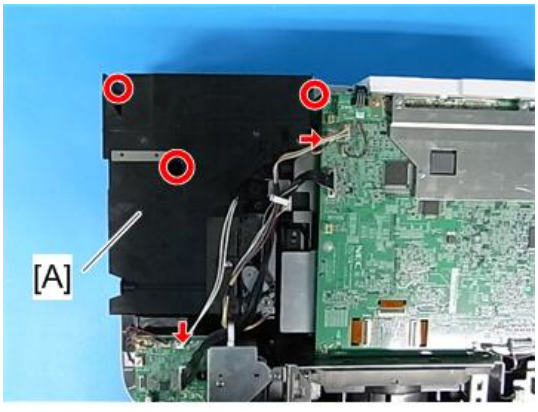


y076z3036

Exhaust Fan

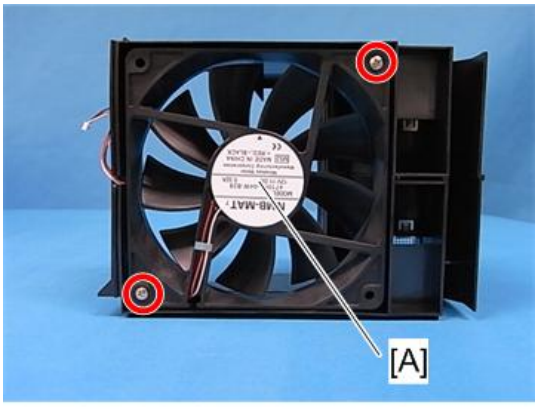
1. Top cover (page 33).
2. Remove the Lamp Temp Sensor (page 44).

3. **Remove the Fan Unit (×3, ×2).**



y0131109

4. **Remove the Exhaust fan (×2).**



y0131110

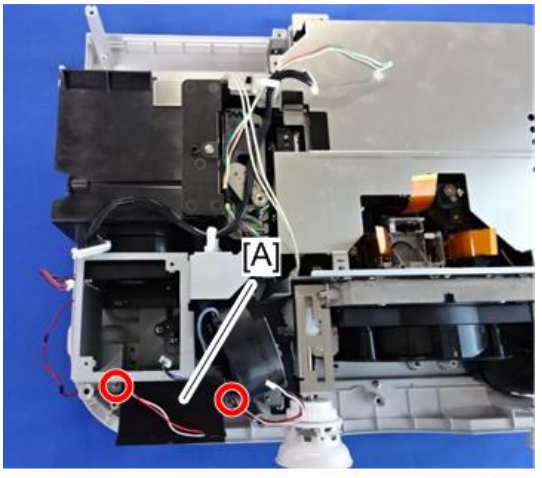
Note

- When installing the fan on the holder, make sure to install it in the correct orientation.

Speaker

1. **Front Cover (page 35).**
2. **Remove the PCB EX (page 43).**

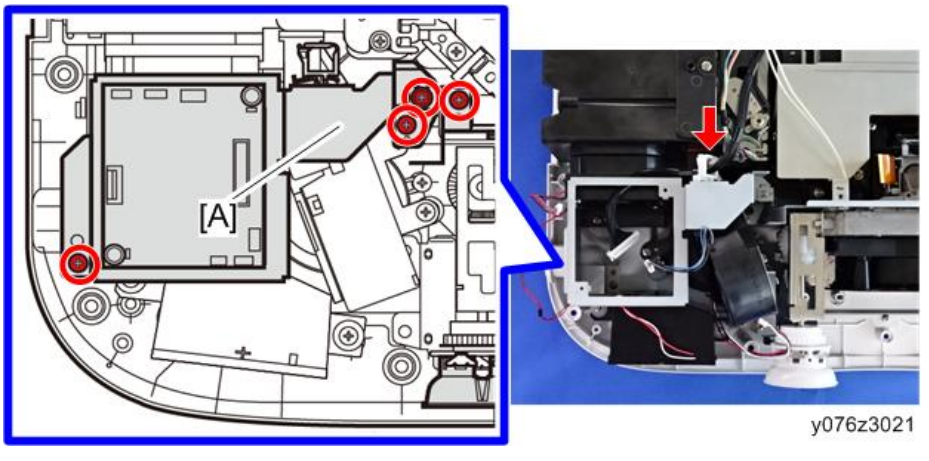
3. **Remove the Speaker [A] (×2).**



y076z3020

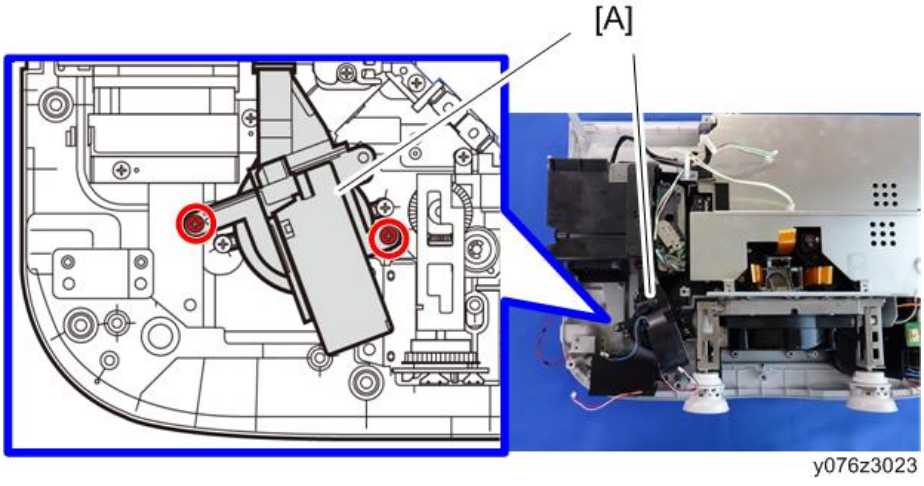
Lamp Fan (Upper)

1. **Remove the PCB EX (page 43).**
2. **Remove the bracket [A] (×4, ×1).**

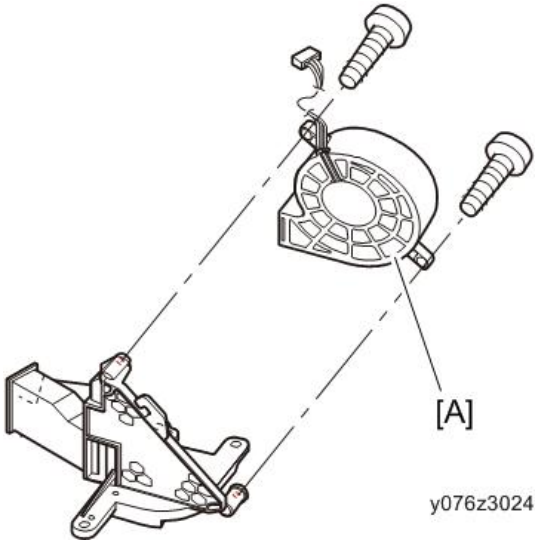


y076z3021

3. **Remove the Lamp Fan (upper) with holder [A] (×2).**



4. **Remove the holder of the Lamp Fan (upper) (×2).**



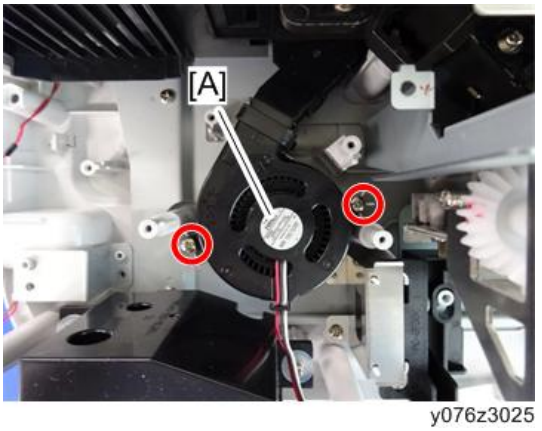
Note

- When installing the fan on the holder, make sure to install it in the correct orientation.

Lamp Fan (Lower)

1. **Remove the Lamp Fan (Upper) (page 46)**

2. **Remove the Lamp Fan (Lower) [A] (×2).**



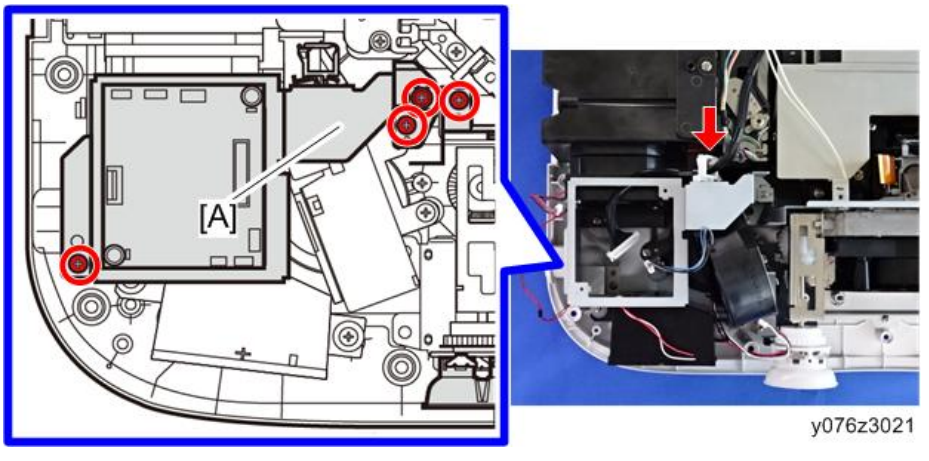
y076z3025

Note

- When installing the fan on the holder, make sure to install it in the correct orientation.

Reflector Fan

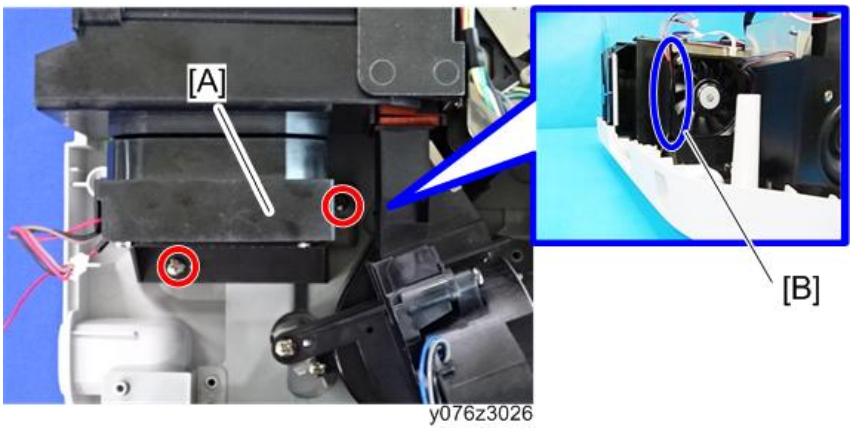
1. **Remove the PCB EX (page 43).**
2. **Remove the bracket [A] (×4, ×1).**



y076z3021

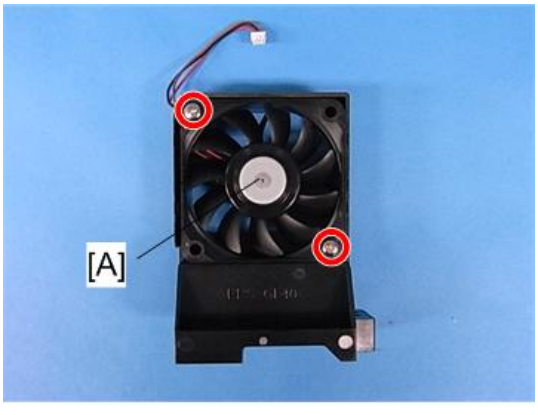
3. **Remove the Fan Unit [A] (×2).**

[B]: When assembling the projector, route the PCB Lamp Interlock cable along the space beside the Lamp Fan Unit.



y076z3026

4. **Remove the Reflector Fan [A] (×2).**



y0131118

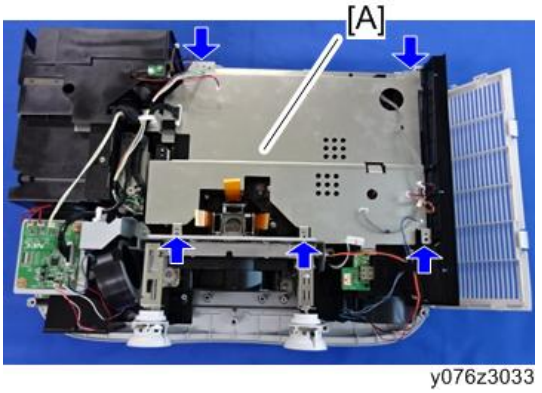
Note

- When installing the fan on the holder, make sure to install it in the correct orientation.

G-LCD Fan

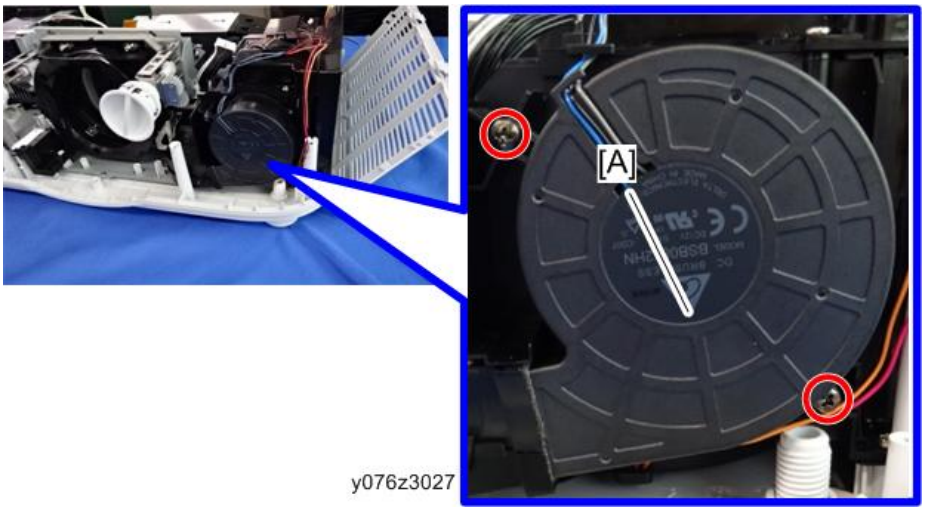
1. **Front Cover (page 35).**
2. **Remove the USB Network Board (page 40).**
3. **Remove the PCB Main Ass'y (page 41).**

4. **Remove the bracket [A].**



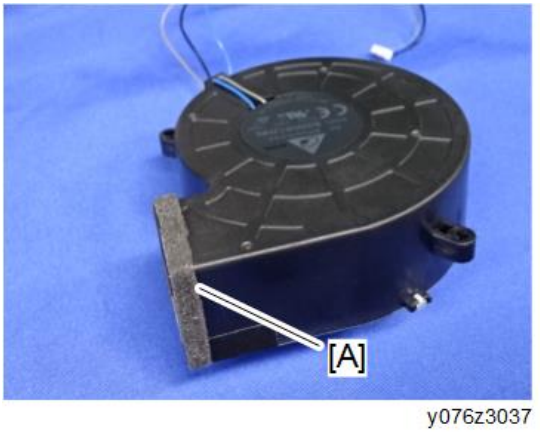
y076z3033

5. **Remove the G-LCD Fan [A] (×2).**



y076z3027

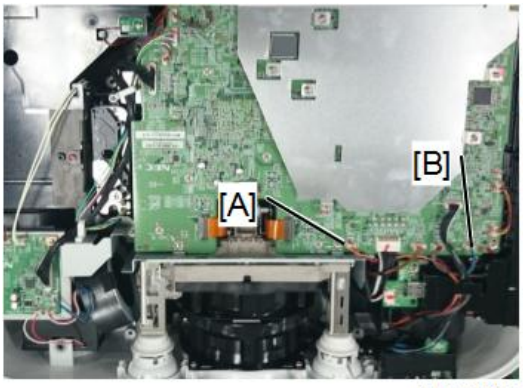
6. **Remove the cushion [A].**



y076z3037

Note

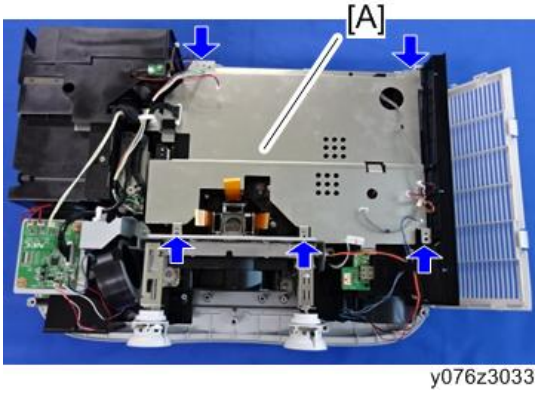
- Both the connector [A] for G-LCD Fan and the connector [B] for R-LCD Fan have the same number of pins. Make sure that you connect appropriate connector when installing them.



y076z3047

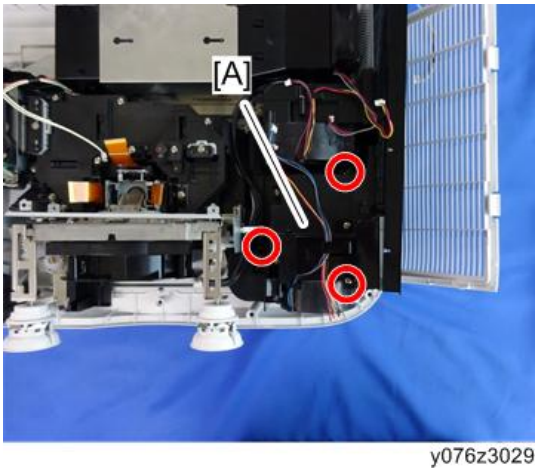
R-LCD Fan

1. Front Cover (page 35).
2. Remove the USB Network Board (page 40).
3. Remove the PCB Main Ass'y (page 41).
4. Remove the bracket [A].



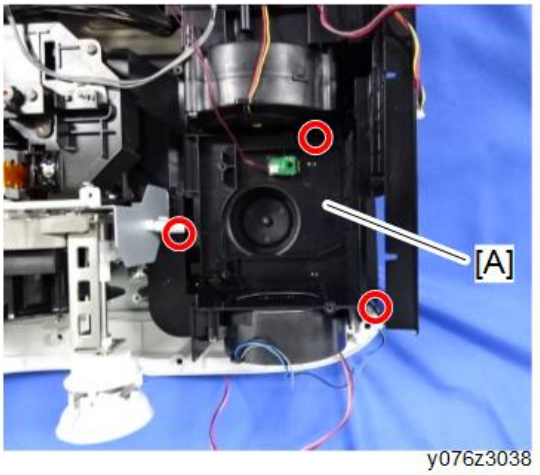
y076z3033

5. **Remove the Duct Cover [A] (×3).**



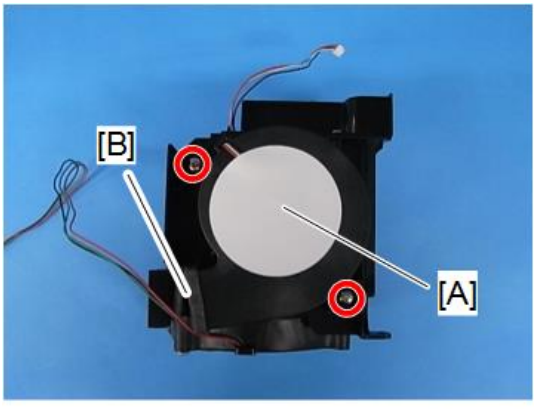
y076z3029

6. **Remove the Duct Base [A] (×3).**



y076z3038

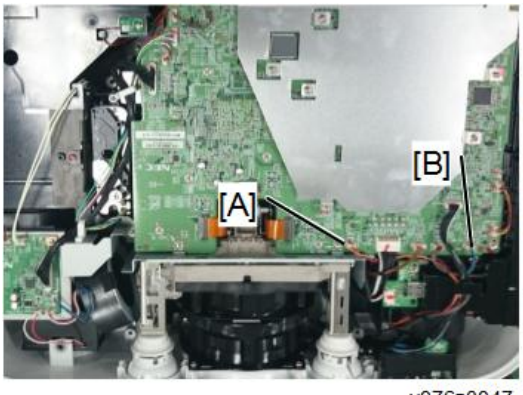
7. **Remove the R-LCD Fan [A] and the Cushion [B] (×2).**



y076z3039

Note

- When installing the fan on the holder, make sure to install it in the correct orientation. Both the connector [A] for G-LCD Fan and the connector [B] for R-LCD Fan have the same number of pins. Make sure that you connect appropriate connector when installing them.

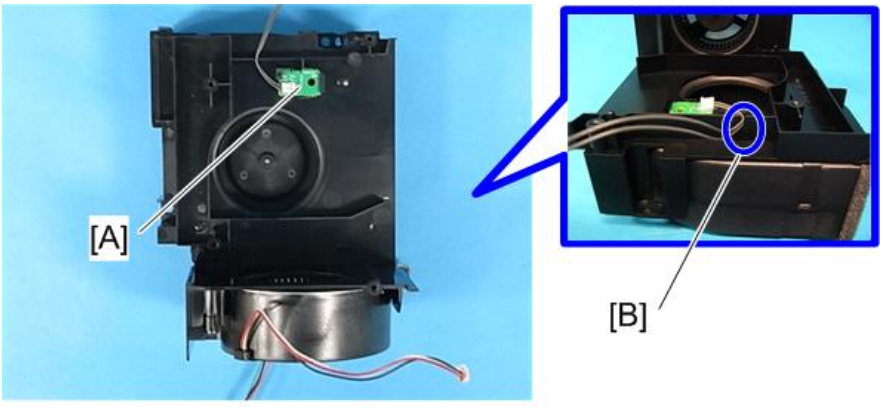


y076z3047

Internal Temp Sensor

1. **R-LCD Fan (page 51).**
2. **Remove the Internal Temp Sensor [A].**

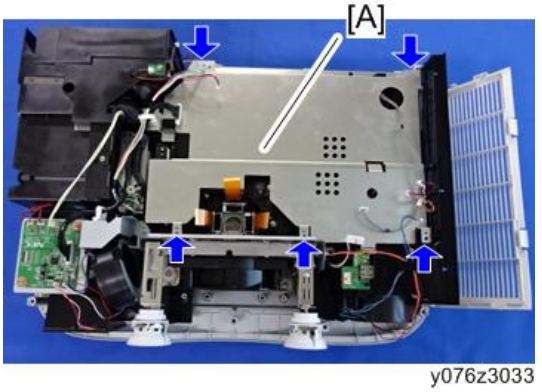
   [B]: When assembling the projector, route the cable through the notch.



y0131125

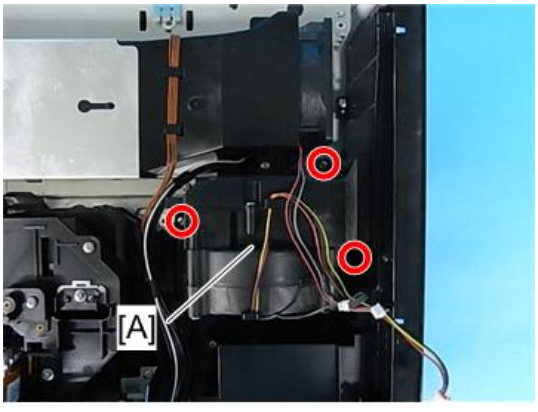
B-LCD Fan

1. Remove the USB Network Board (page 40).
2. Remove the PCB Main Ass'y (page 41).
3. Remove the bracket [A].



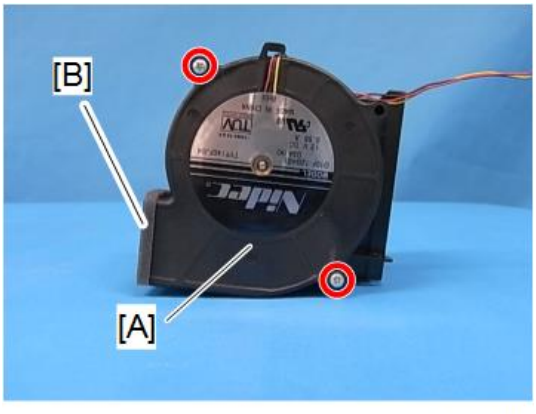
y076z3033

4. **Remove the Fan Unit [A] (×3).**



y0131126

5. **Remove the DC Fan [A] and the Cushion [B] (×2).**



y076z3040

Note

- When installing the fan on the holder, make sure to install it in the correct orientation.

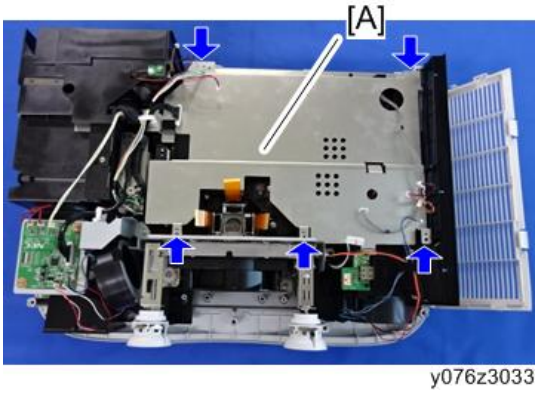
PS-Converter

⚠CAUTION

- When removing or installing the IRIS Unit, be careful not to damage the Integrator.

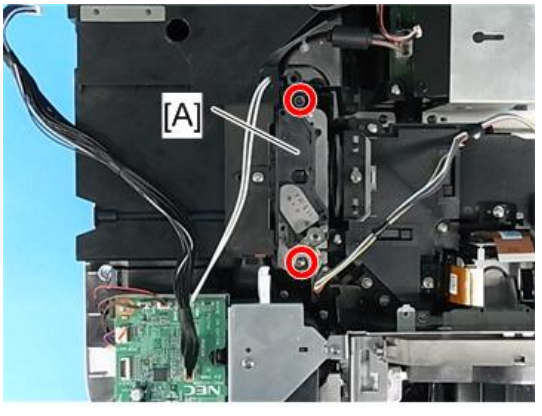
1. **Remove the USB Network Board (page 40).**
2. **Remove the PCB Main Ass'y (page 41).**

3. Remove the bracket [A].



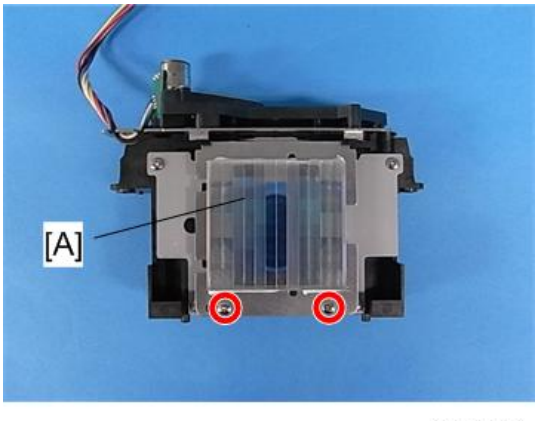
y076z3033

4. Remove the Integrator unit [A] (×2).



y0131128

5. Remove the PS-Converter [A] (×2).



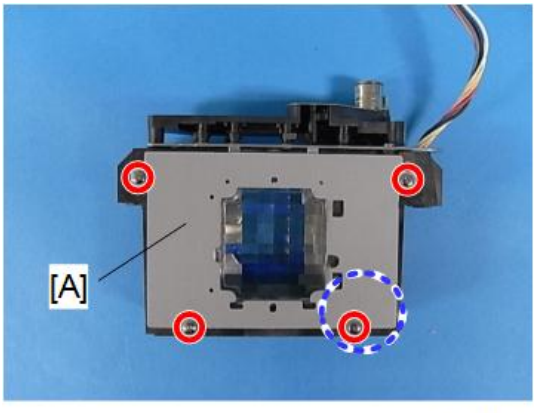
y0131129

Integrator 1

⚠CAUTION

- Carefully handle the removed Integrator to avoid damaging it.

1. **Remove the PS-Converter (page 55).**
2. **Remove the Integrator 1 [A] (×4).**



y0131130

Important

- When mounting Integrator 1, press it up against the area shown in the lower right of the figure, then screw it into place.

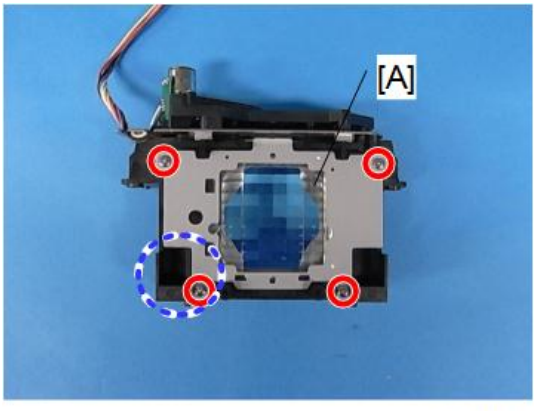
Integrator 2

⚠CAUTION

- Carefully handle the removed Integrator to avoid damaging it.

1. **Remove the PS Converter (page 55).**

2. Remove the Integrator 2 [A] (×4)



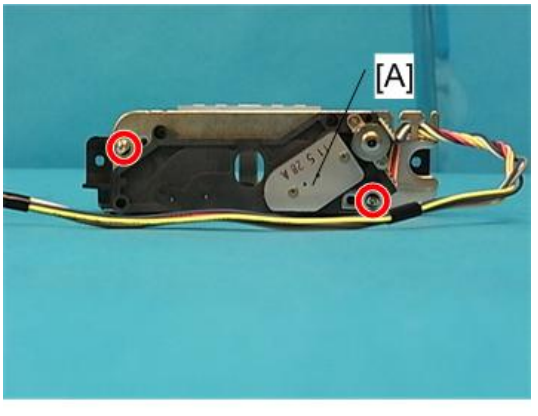
y0131131

Important

- When mounting Integrator 1, press it up against the area shown in the lower left of the figure, then screw it into place.

IRIS Unit

1. Remove the Integrator unit (page 55).
2. Remove the IRIS unit [A] (×2).



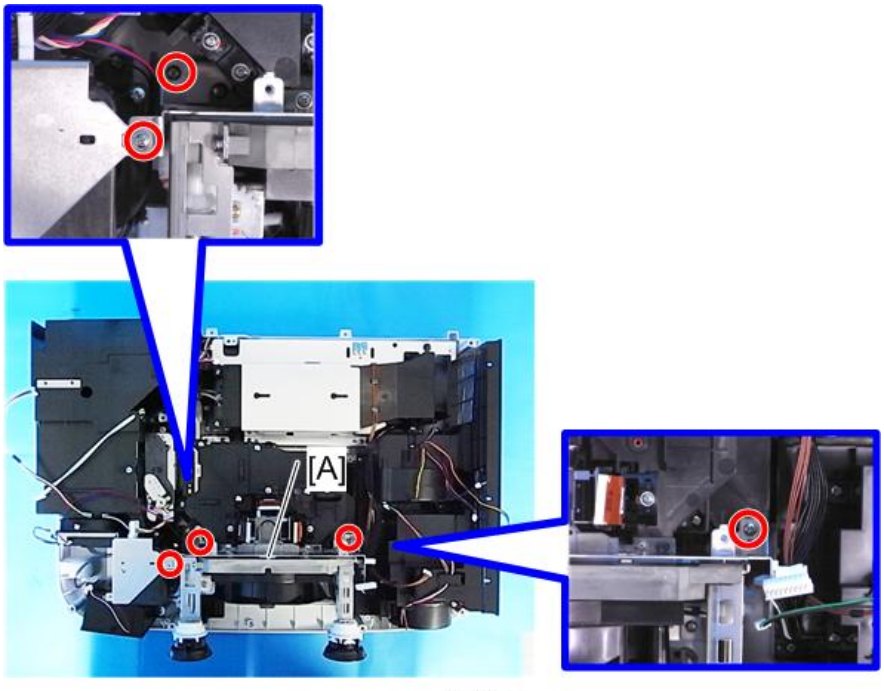
y0131132

OPT Base

Note

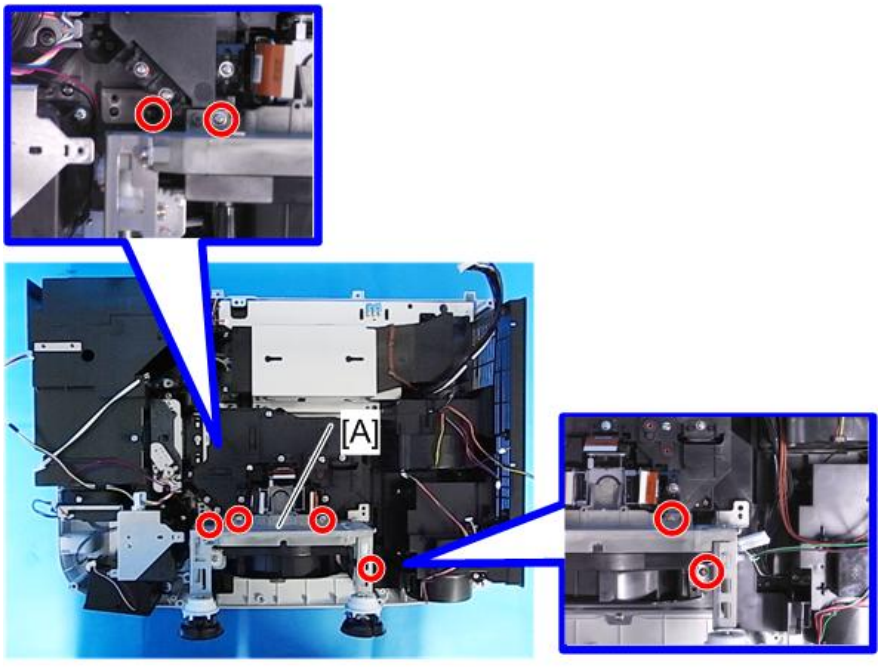
- After replacing the OPT base, make adjustments to the software (refer to Electrical Adjustment) and the optical axis (refer to Optical Parts Adjustment).

1. **Front Cover (page 35).**
2. **Remove the USB Network Board (page 40).**
3. **Remove the PCB Main Ass'y (page 41).**
4. **Remove the PCB EX (page 43).**
5. **Remove the bracket [A] (×3).**



y0131133

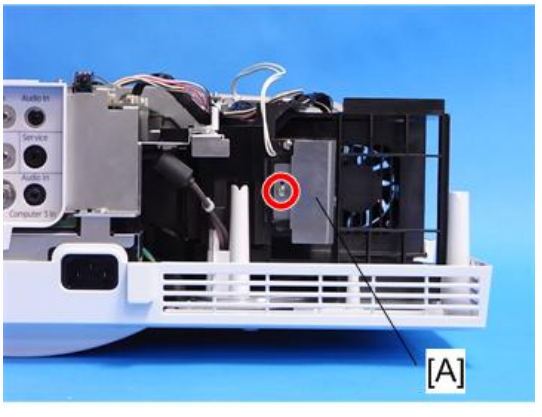
6. Remove the OPT Base [A] (×4).



y0131134

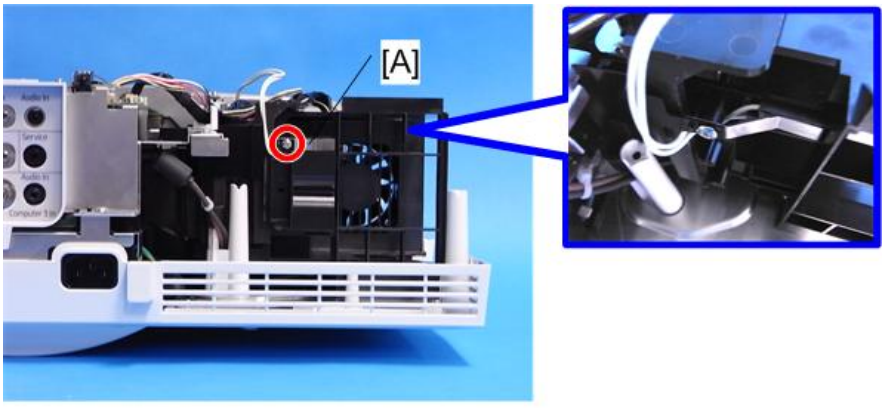
Thermostat

1. Remove the Exhaust Fan unit (page 44).
2. Remove the barrier and guard [A] (×1).



y0131136

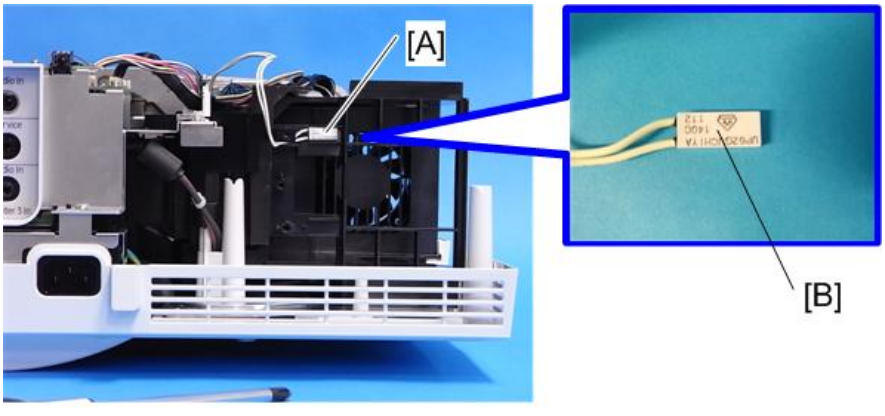
3. **Remove the barrier and spring [A] (×1).**



y0131137

4. **Remove the Thermostat [A].**

   [B]: When assembling the projector, position the print side of the thermostat face up.



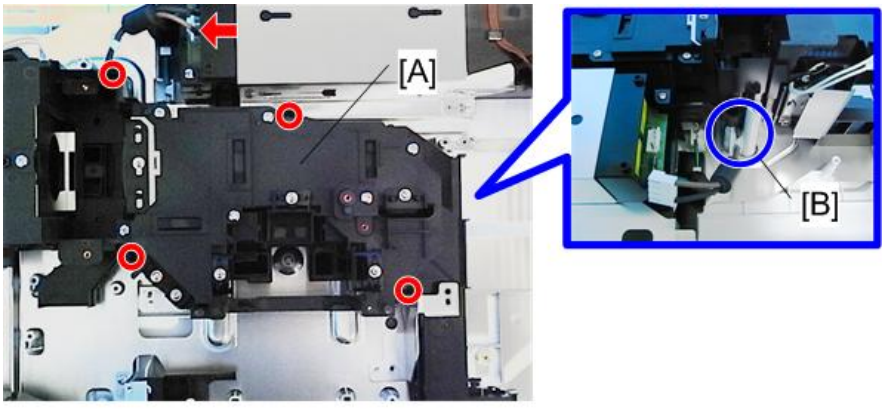
y0131138

PCB Lamp Interlock

1. **Front Cover (page 35).**
2. **Remove the Exhaust Fan (page 44).**
3. **Remove the Lamp Fan unit (page 46).**
4. **Remove the Reflector Fan (page 48).**
5. **Remove the G and R-LCD Fan unit (page 49).**
6. **Remove the B-LCD Fan (page 54).**
7. **Remove the Integrator unit (page 55).**

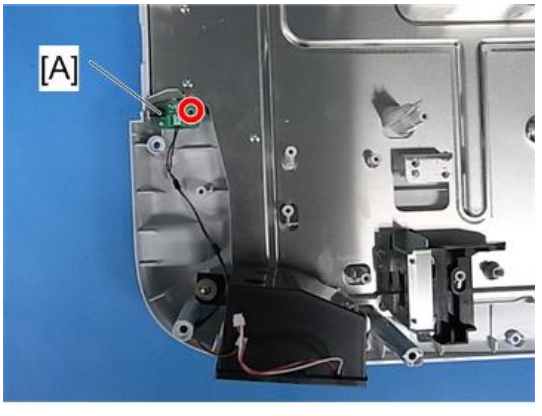
8. **Remove the Engine unit [A] (×4, ×1).**

   [B]: When assembling the projector, route the cable as shown in the figure.



y0131135

9. **Remove the PCB Lamp Interlock [A] (×1).**

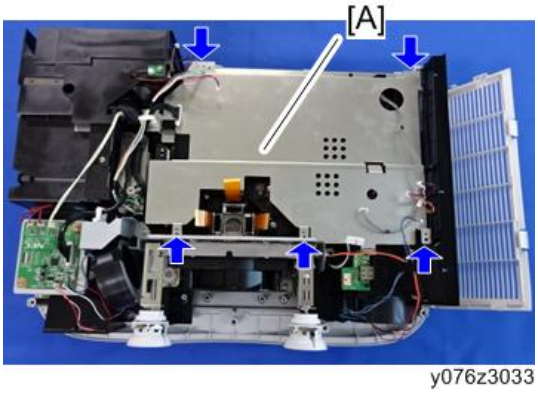


y0131139

PSU Fan

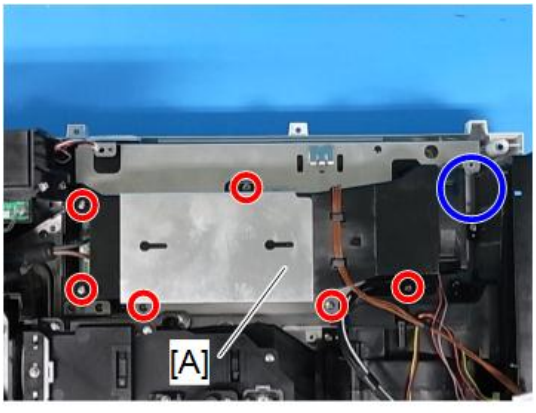
1. **Remove the USB Network Board (page 40)**
2. **Remove the PCB Main Ass'y (page 41).**

3. **Remove the bracket [A].**



y076z3033

4. **Remove the bracket [A] (×6).**

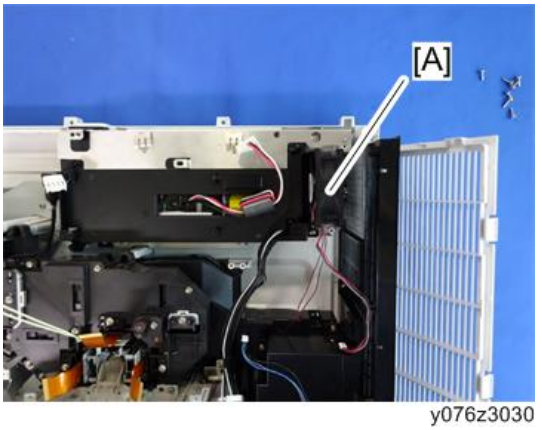


y076z3046

Note

- When installing the bracket during reassembling, to firmly secure the PSU fan, fit the bracket tightly into the PSU fans.

1. **Remove the PSU Fan [A].**



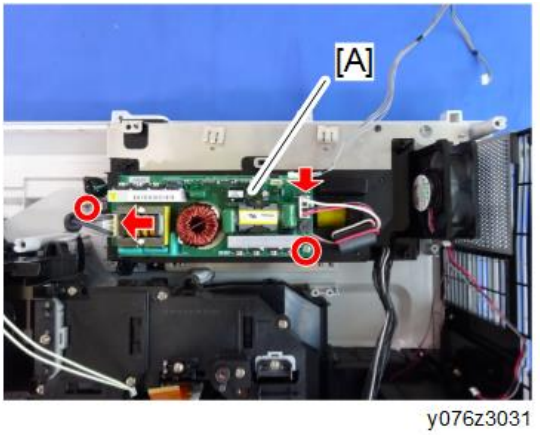
y076z3030

Note

- When installing the fan on the holder, make sure to install it in the correct orientation.

Power Supply-Ballast

1. **Remove the PSU Fan (page 62).**
2. **Remove the Power supply-ballast [A] (×2, ×2).**

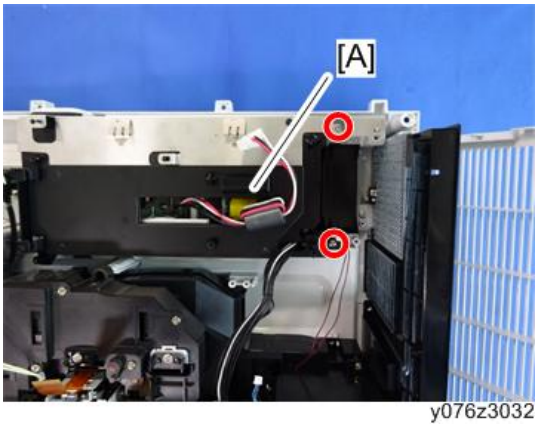


y076z3031

Power Supply-DC

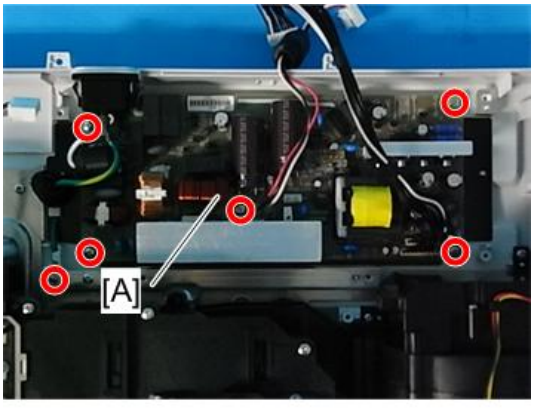
1. **Remove the PSU Fan (page 62).**
2. **Remove the Power supply-ballast (page 64).**

3. **Remove the bracket [A] (×2).**



y076z3032

4. **Remove the Power supply-DC (×6).**



y0131145

Replacement of Optical Parts

Adjustments needed after the replacement of parts are as specified in the table below.

●: Adjustment needed

○: Need checking

Adjustment parts	Disassembly/replacement of parts			
	Polarizing parts			OPT BASE
	R	G	B	
FL1 adjustments				○
RL2 adjustments				○
M1 adjustments				○
POLARIZER R SASSY	●			●
POLARIZER G SASSY		●		●
POLARIZER B SASSY			●	●

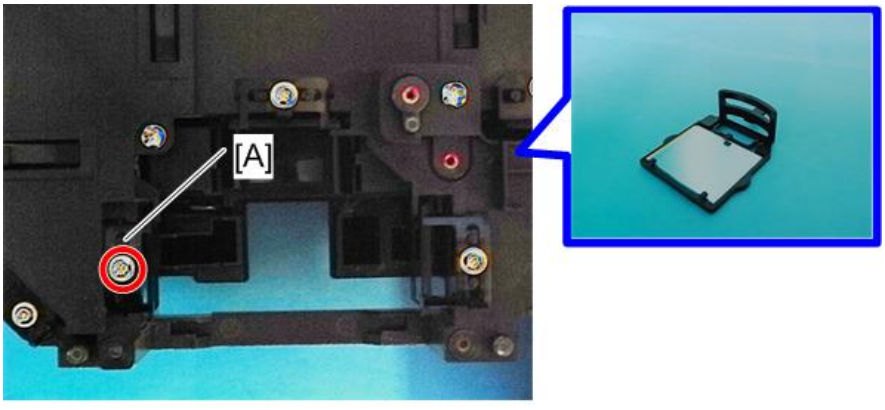
Polarizer-B

⚠CAUTION

- Polarizer B cannot be removed from the holder. Do not touch the polarizer.

1. **Remove the OPT Base (page 59).**

2. **Remove the Polarizer-B [A] (×1).**

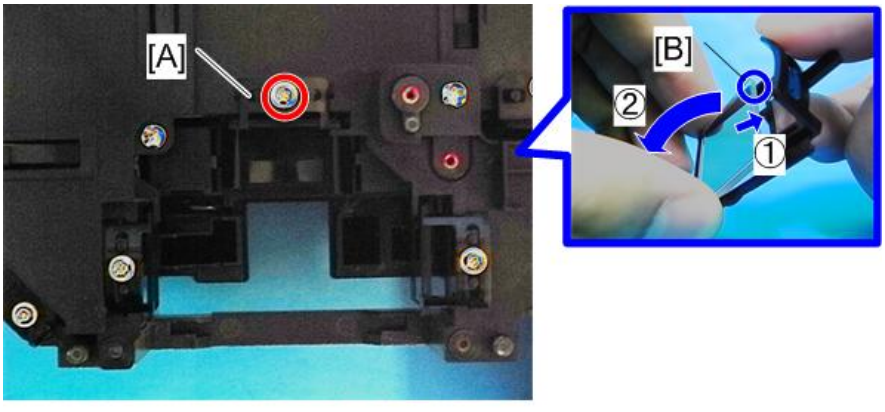


y0131146

Polarizer-G

1. **Remove the OPT Base (page 59).**
2. **Remove the Polarizer-G [A] (×1).**

   [B]: Make sure to note the direction in which the Polarizer-G is set in the holder. There is a mark in the area enclosed by the blue circle in the figure.



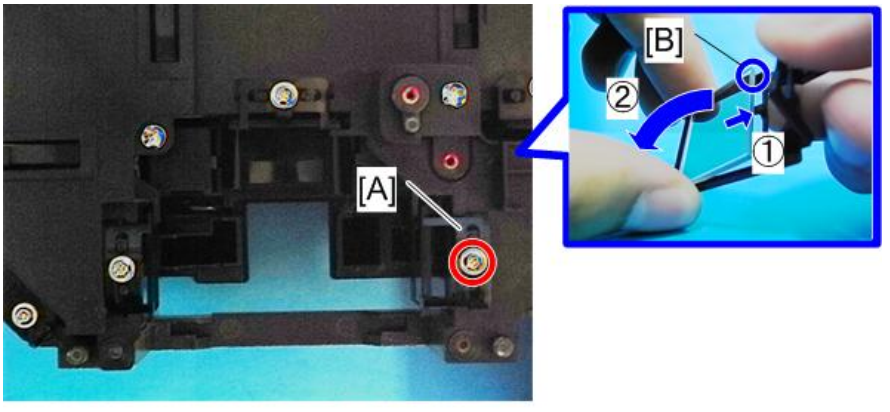
y0131147

Polarizer-R

1. **Remove the OPT Base (page 59).**

2. **Remove the Polarizer-R [A] (×1).**

   [B]: Make sure to note the direction in which the Polarizer-R is set in the holder. There is a mark in the area enclosed by the blue circle in the figure.

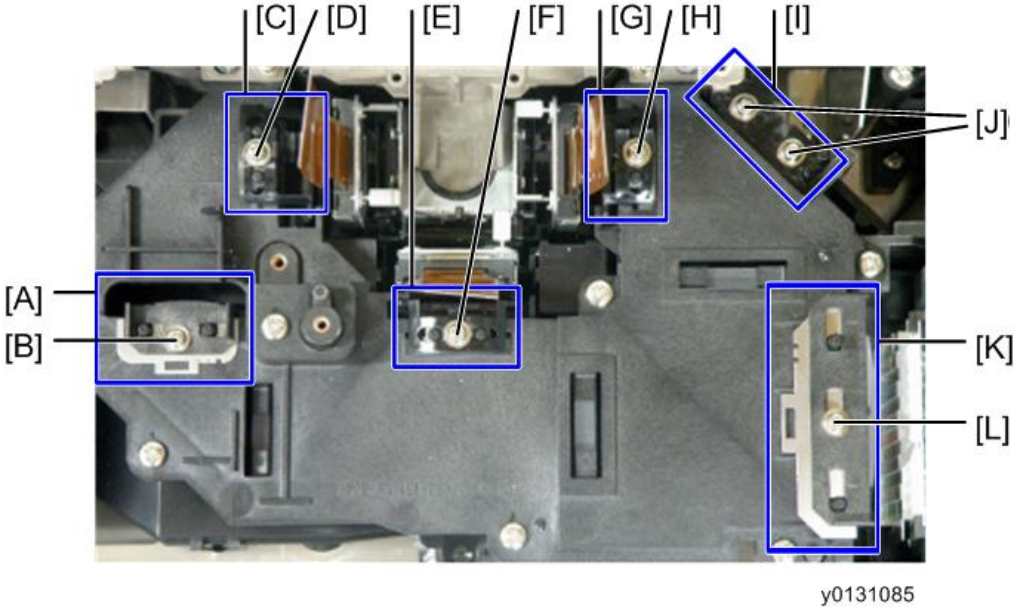


y0131148

Optical Parts Adjustment

Adjustments needed after the replacement of polarization plates.

Adjusting and fixing parts



y0131085

[A]: RL2

[B]: RL2 Fixing screw

[C]: Polarization plate (R)

[D]: Polarization plate fixing screw (R)

[E]: Polarization plate (G)

[F]: Polarization plate fixing screw (G)

[G]: Polarization plate (B)

[H]: Polarization plate fixing screw (B)

[I]: M1

[J]: M1 Fixing screw

[K]: FL1

[L]: FL1 Fixing screw

Adjustment of the optical axis (Shadow adjustment)

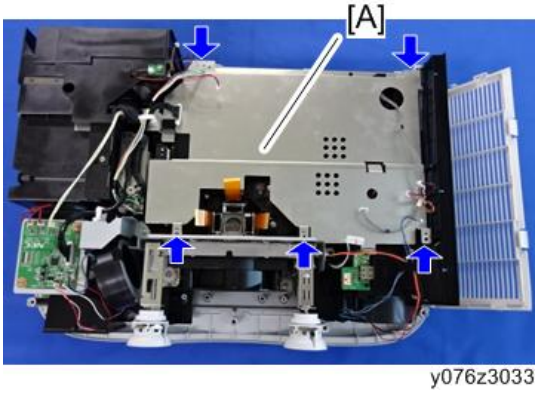
If the projection test succeeds after the Polarization plates are replaced, there is no need to perform Shadow Adjustment.

1. **Top cover (page 33).**

   ⚠CAUTION

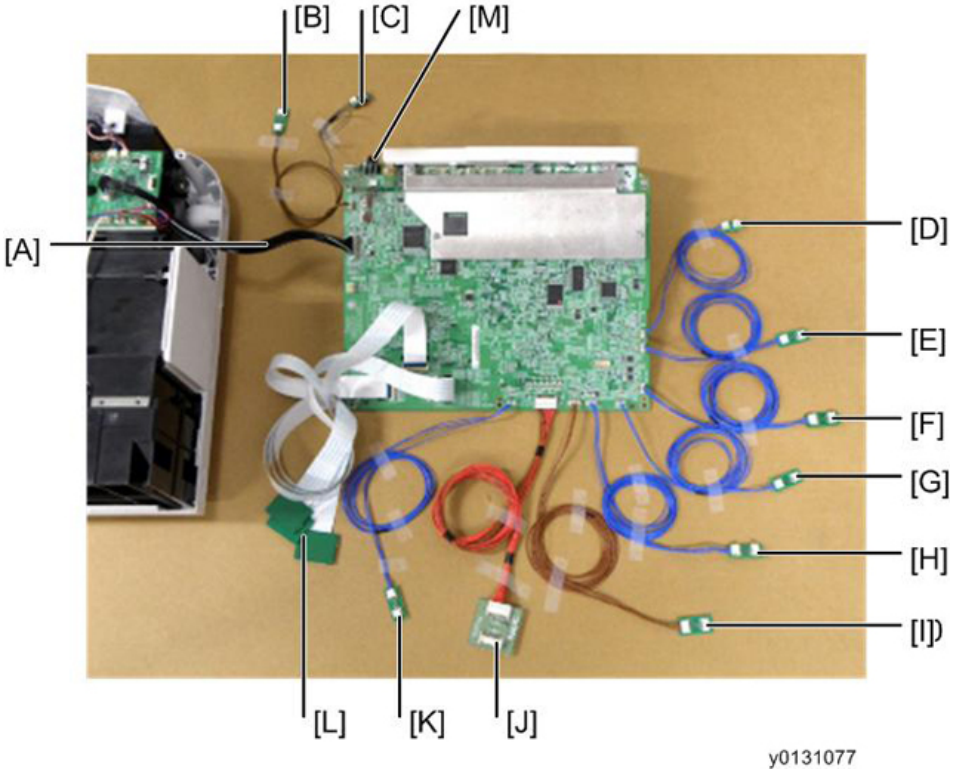
   - The PCB Main Ass'y and the PCB Key-Pad (TOP COVER) are connected through a 10P connector.

2. **Remove the PCB Main Ass'y (page 41).**
3. **Remove the bracket [A].**



y076z3033

4. Connect the extension connectors to the PCB Main Ass'y that has been removed.



[A]: To EX PWB POEX (40P) (The cable connected to the projector is used as it is.)

[B]: To FAN POFAN8 (3P)

[C]: To TH3 PWB POTH3 (2P)

[D]: To TH1 PWB POTH1 (2P)

[E]: To FAN POFAN1 (3P)

[F]: To FAN POFAN2 (4P)

[G]: To FAN POFAN4 (3P)

[H]: To LCAP PWB POLCAP (4P)

[I]: To BS UNIT POLM (5P)

[J]: To PS UNIT POPS (18P)

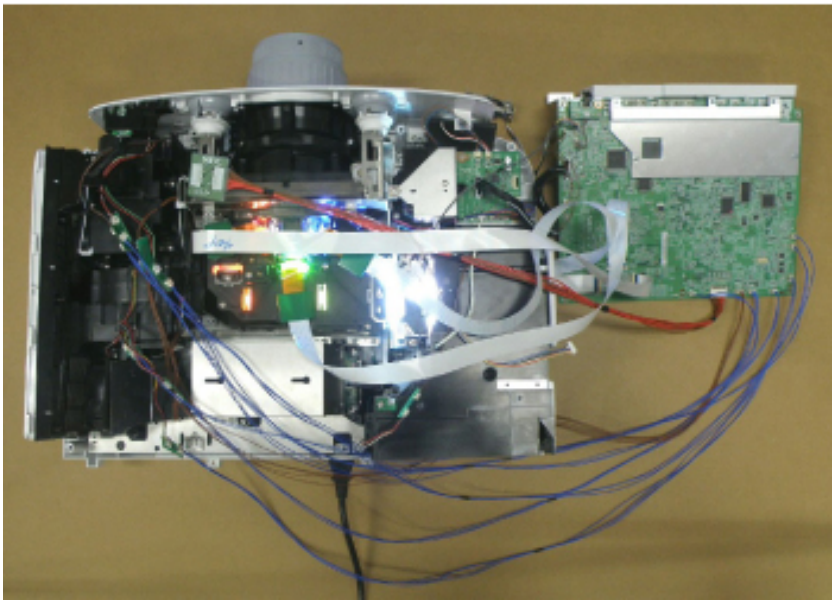
[K]: To FAN POFAN3 (3P)

[L] : To R/G/B LCD (PJ WU6181N(92P), PJ WX6181N / X6181N (57P))

[M]: To IRIS Unit

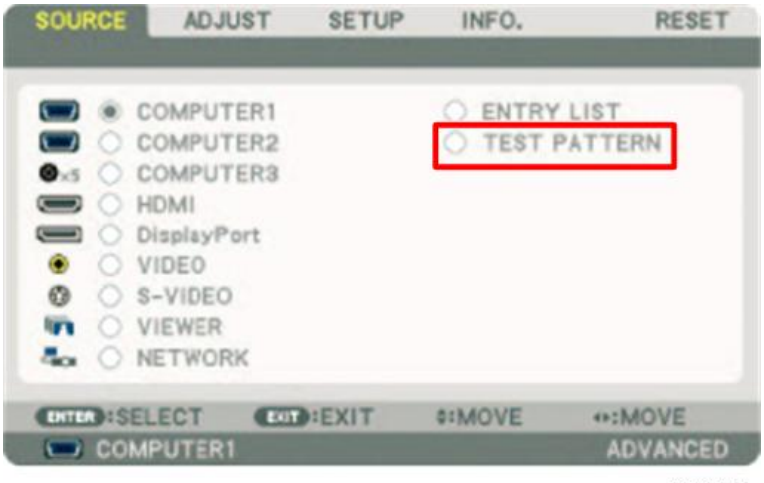
* Refer to "Special Tools".

5. **Connect the respective connectors of the projector with the extension connector PWB (☞ ×13).**



6. **Start the projector. Display an internal pattern (all-white signal).**

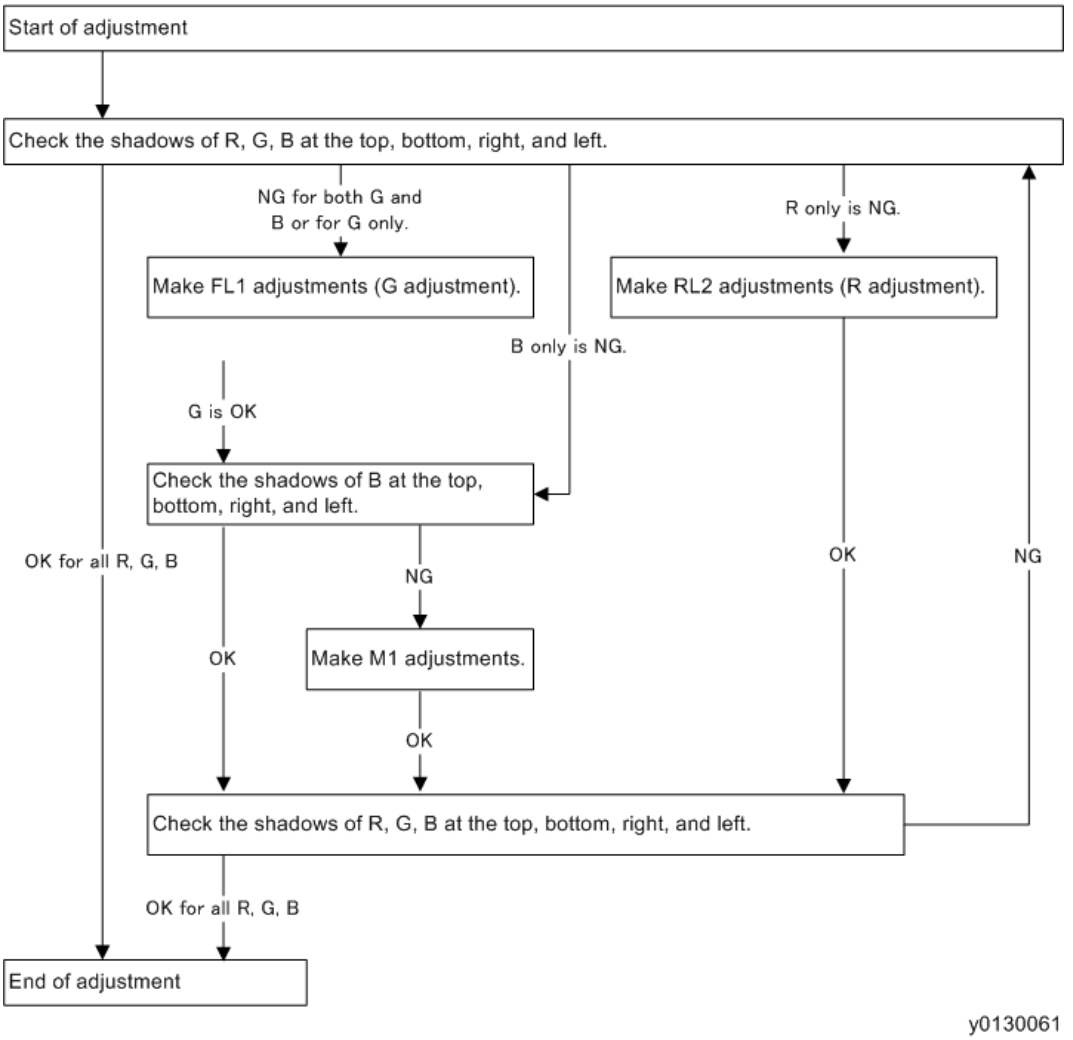
   (Select the test pattern in the Source screen.)



y0131079

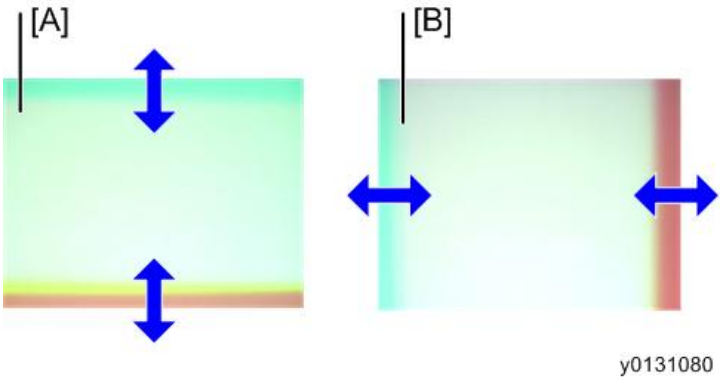
7. **Make shadow adjustments.**
8. **After the completion of adjustments, recover the original status.**

Shadow adjustment flow



Handling of margin in shadow adjustment

During shadow adjustment, adjust the margin so that it is balanced vertically and horizontally. If adjustments are carried out from the LCD panel, this margin cannot be seen directly. Therefore, try to move the shadow until its top, bottom, right, or left part appears. By doing so, examine how much shadow is existing vertically and horizontally. Stop moving the shadow where its margin seems to be well balanced.



[A]: Shadow in vertical direction

[B]: Shadow in vertical direction

Neutral setup position for each adjuster block

- FL1

  Vertical: The state when the holder (FL) maintains the height of one (FL) T1.0 spacer and one T0.5 spacer.

  Horizontal: Bosses of OPT COVER are located in the right and left holder (FL) holes, each in the center position.

- RL2

  Vertical: The state when the holder (RL2) maintains the height of one (RL2) T1.0 spacer and one T0.5 spacer.

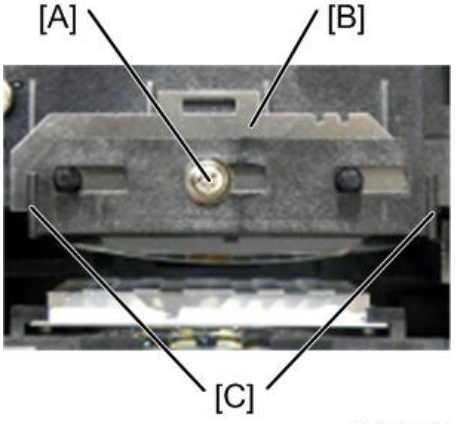
  Horizontal: Bosses of OPT COVER are located in the right and left holder (RL2) holes, each in the center position.

- M1

  The outer edge plane of the separator base is joined with the edge plane of the holder (M1).

Operation of each adjusting part (see "Adjusting and fixing parts")

FL adjustment



y0131081

[A]: Fixing screw

[B]: Spacer (FL)

[C]: Handle part of the holder (FL1)

Vertical direction:

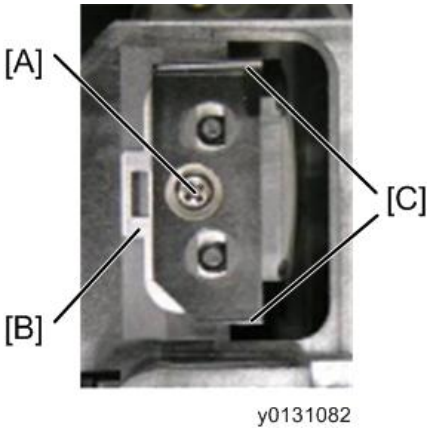
1. Loosen the FL1 fixing screw (in 1 position).
2. Change the spacer (FL) thickness and adjust the shadow margin so that it is vertically equalized. Arrange the spacers so that the total quantity of spacers is as small as possible.
   * The upper limit of the amount of spacers (thickness) in total is 5 mm.

Horizontal direction:

1. Hold the handle part of the holder (FL1) by hand, and move the holder to the right and left in order to adjust the shadow margin so that it is horizontally equalized.
2. After adjustments, fix the FL1 fixing screw (1 position).

   The tightening torque shall be 0.35 ± 0.05N • m.

RL2 adjustment



y0131082

[A]: Fixing screw

[B]: Spacer (RL2)

[C]: Handle part of the holder (RL2)

Vertical direction:

1. Loosen the RL2 fixing screw (1 position).
2. Change the spacer (RL2) thickness and adjust the shadow margin until it is vertically equalized.

   Arrange the spacers so that the total number of spacers is as small as possible.

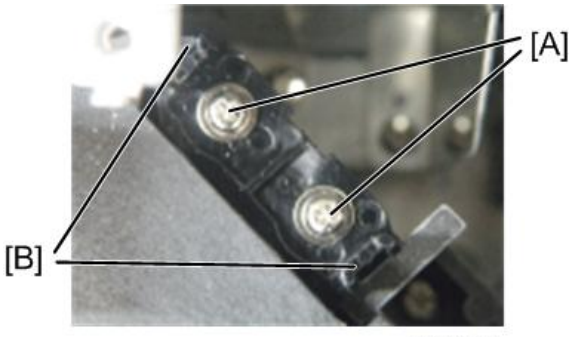
   * The upper limit of the amount of spacers (thickness) in total is 2mm.

Horizontal direction:

1. Hold the handle part of the holder (RL2) by hand, and move the holder to the right and left in order to adjust the shadow margin so that it is horizontally equalized.
2. After adjustments, fix the RL2 fixing screw (1 position).

   The tightening torque shall be 0.35 ± 0.05N • m.

M1 adjustment



y0131083

[A]: Fixing screw

[B]: Handle part of the holder (M1)

1. Loosen the M1 fixing screws (2 positions).
2. Grip the handle part of the holder (M1) by hand, and move the holder to the right and left in order to adjust the shadow position both vertically and horizontally so that it is equally positioned. Make adjustments, paying attention to the directions that M1 rotates and drops down.
3. After adjustments, fix the M1 fixing screws (2 positions).

   The tightening torque shall be 0.35 ± 0.05N • m.

Shadow adjustment for each color

- Vertical shadow adjustment for G and B

  Move the holder (FL1) vertically and eliminate the vertical shadow. (Equally balanced in vertical directions)

(Make adjustments until the portions in magenta or reddish color are eliminated vertically and uniformly in the projector screen.)

- Horizontal shadow adjustment for G and B

  Move the holder (FL1) horizontally and eliminate the horizontal shadow. (Equally balanced in horizontal directions)

  (Make adjustments until the portions in magenta or reddish color are eliminated horizontally and uniformly in the projector screen.)

- Shadow adjustment for B only

  It is possible to adjust the fall. Move the holder (M1) and eliminate the shadows in all directions. (Equalize the shadows both vertically and horizontally.)

  (Make adjustments until the portions in amber or yellowish color are eliminated vertically, horizontally, and uniformly in the projector screen.)

- Horizontal shadow adjustment for R

  Move the holder (RL2) horizontally and eliminate the horizontal shadow. (Equally balanced in horizontal directions)

  (Make adjustments until the portions in cyan are eliminated horizontally and uniformly in the projector screen.)

- Vertical shadow adjustment for R

  Move the holder (RL2) vertically and eliminate the vertical shadow. (Equally balanced in vertical directions)

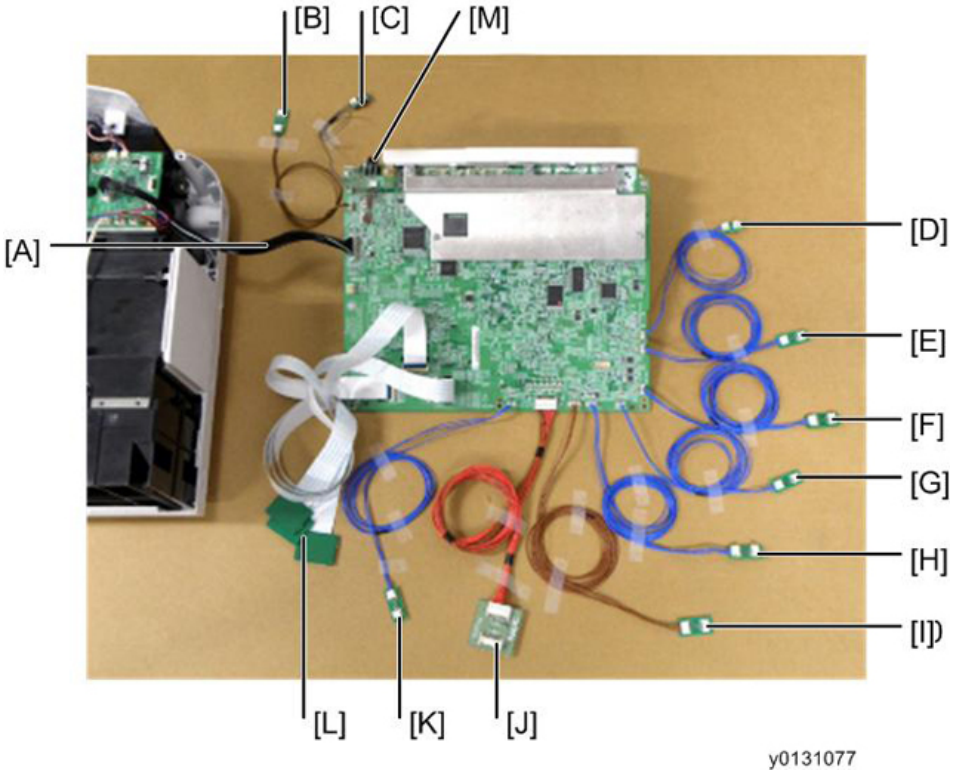
  (Make adjustments until the portions in cyan color are eliminated vertically and uniformly in the projector screen.)

- Cleaning after shadow adjustments

  When the lamp is turned off after the adjustment of the polarizing plate, about 30 seconds of cooling shall be carried out. Then the power supply is turned off.

Adjustment of the polarization plate (Contrast adjustment)

Outlined description of adjusting work



[A]: To EX PWB POEX (40P) (The cable connected to the projector is used as it is.)

[B]: To FAN POFAN8 (3P)

[C]: To TH3 PWB POTH3 (2P)

[D]: To TH1 PWB POTH1 (2P)

[E]: To FAN POFAN1 (3P)

[F]: To FAN POFAN2 (4P)

[G]: To FAN POFAN4 (3P)

[H]: To LCAP PWB POLCAP (4P)

[I]: To BS UNIT POLM (5P)

[J]: To PS UNIT POPS (18P)

[K]: To FAN POFAN3 (3P)

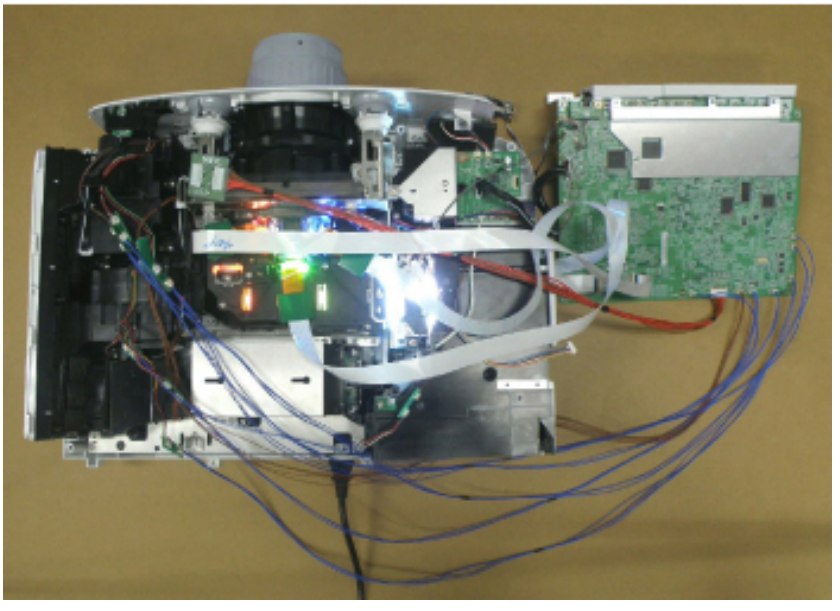
[L]: To R/G/B LCD (40P)

[M]: To IRIS Unit

* Refer to “Special Tools”.

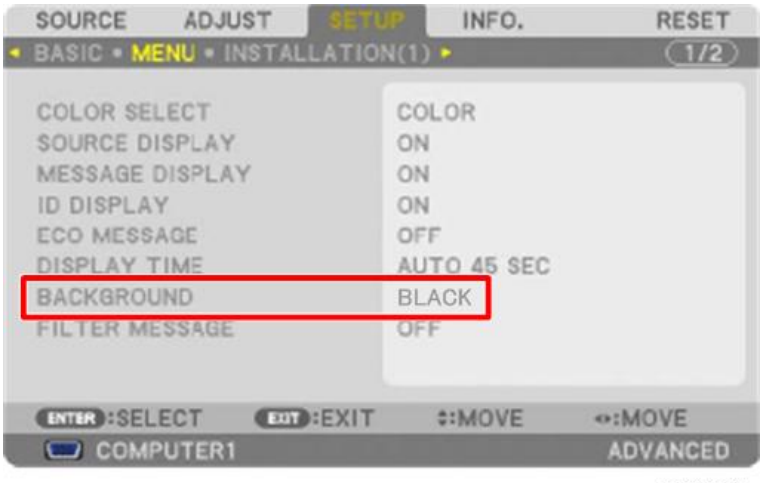
1. **Connect the extension connectors to the PCB Main Ass’y that has been removed.**

2. **Connect the respective connectors of the projector with the extension connector PWB (☞ ×13).**



3. **Start the projector. Display an internal pattern (all-black signal).**

   (Select Install and Setup on the menu screen and set the background at Black Background.)



y0131084

4. **Adjust the polarization plate.**
5. **After the completion of adjustments, return the projector to its original state.**

Method of adjustment (see "Adjusting and fixing parts")

1. Loosen the polarizing plate set screw (in one position) with a Phillips screwdriver.
2. Turn to move the polarizer (folder with a boss). (Manual)

Display an all-black screen, stop it where the screen becomes darkest, and fix the polarizer set screw (one position).

The tightening torque shall be 0.35 ± 0.05N • m.

Follow the steps of (1) and (2) above in the order of the Green, Red, and Blue Channels.

Cooling after the adjustment of the polarizing plate

When the lamp is turned off after the adjustment of the polarizing plate, about 30 seconds of cooling shall be carried out. Then the power supply is turned off.

Electrical Adjustment

Adjustments needed after the replacement of Main PWB is as specified in the table below.

● : Adjustments needed

○ : Data Read/Write

Data writing		
	Data for each model	●
	EDID data	●
	Serial number and Model number	●
Data Read/Write		
	Flicker Data	○
	VT Data	○
	Uniformity Data	○
	Color Correction Data	○
	Multi Data	○
	Usage Time Data	○
Flicker adjustment		
	Floor	●
Usage Time setup		●

Important

- Procedures for the replacement of the PCB Main Ass'y
- When all data can be copied
  - Before the replacement of PCB Main Ass'y

    Copying of all data
  - After the replacement of PCB Main Ass'y
    1. Data writing for each model is carried out
    2. PCB Main Ass'y adjustments (writing of copied All Data)
    3. EDID data writing is carried out

4. Data writing for Serial number and Model number

- When all data cannot be copied
  - After the replacement of PCB Main Ass'y
    1. Data writing for each model is carried out
    2. PCB Main Ass'y adjustments (Flicker adjustments, Usage Time setup)
    3. EDID data writing is carried out
    4. Data writing for Serial number and Model number

Model-Specific Data Writing Procedure (When replacing of the PCB Main Ass'y on PJ WX6181N)

Model-specific data writing procedure

When replacing of the PCB Main Ass'y on PJ X6181N or PJ WU6181N, it is not necessary to perform model-specific data writing.

Note

- Writing procedures shall be performed from step 1 to step 2.

1. **Writing the model-specific VerUpField data**

   Writing software : PJUpgrader2vupf.exe

   File name to be written : VUPF_X6181NtoWX6181N.bin

2. **Writing the model-specific product data**

   Writing software : PJUpgrader2.exe

   File name to be written : WX6181N_CB3_V****.bin and WX6181N_Data_V******.bin

3. **Initial setting of writing software**

   [COM port]: Set the COM port of the used PC (this is explained in the following procedure).

   [Baud rate]: Match the setting of the projector

Operation Procedure

Prior to operation, install the writing software (PJUpgrader2vupf.exe and PJUpgrader2.exe) and copy the files for the model (VUPF_X6181NtoWX6181N.bin, WX6181N_CB3_V****.bin and WX6181N_Data_V******.bin).

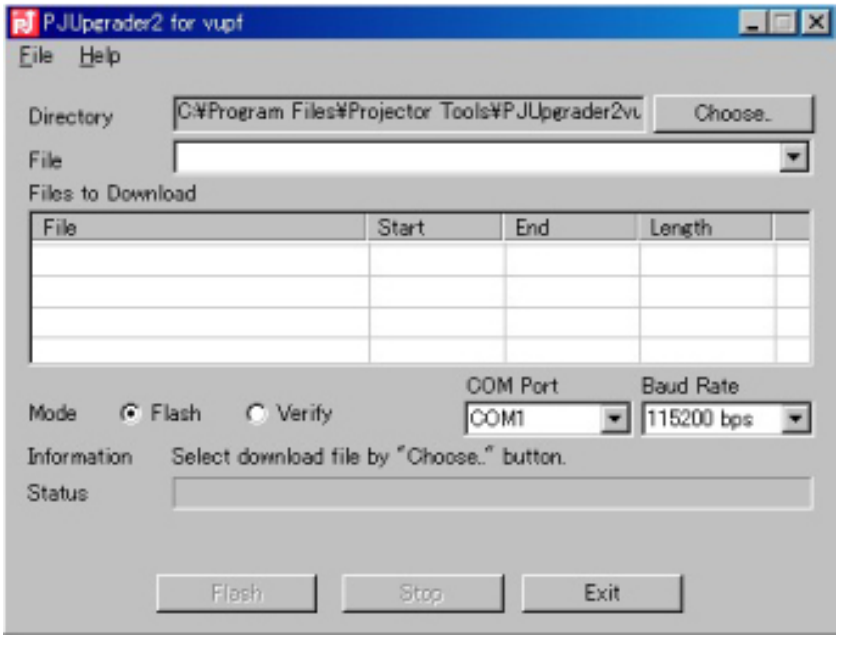
Model-specific VerUpField data

1. **Connect the projector to a PC with an RS232C cable (Cross).**

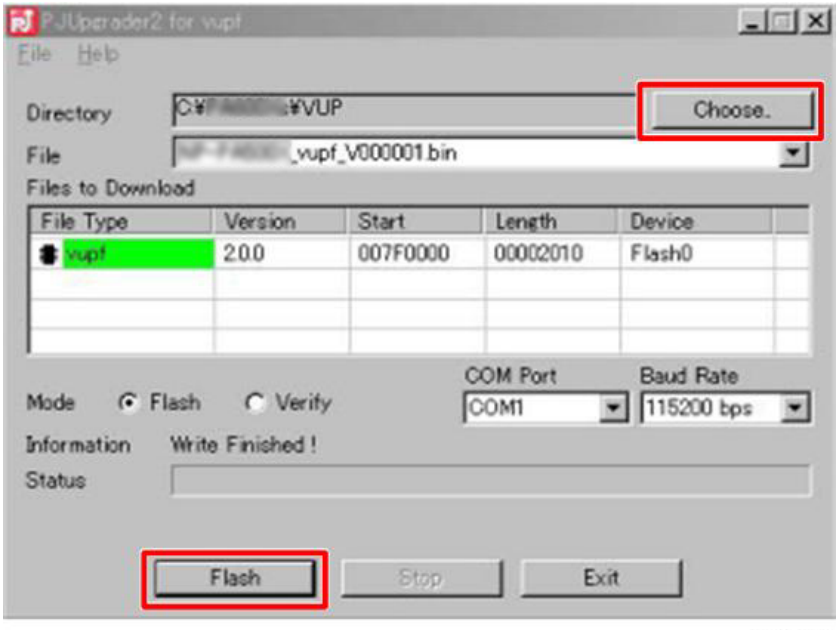
2. **Turn the power ON*, pressing the [ENTER] and [EXIT] keys of the main unit simultaneously.**

   * Connect the plug of the power cord to the power outlet. (AC source turned on)

3. **Release the [ENTER] and [EXIT] keys when the Power LED blinks in green.**



4. **Start up PJUpgrader2vupf.exe previously installed.**



y0131031

5. **Press [choose....] button to select the file (VUPF_X6181NtoWX6181N.bin) to be written.**
6. **Check that the projector and PC are properly connected each other, then press [Flash] button.**

   Message "Do you start flash write?" is displayed.
7. **When [Yes(Y)] button is pressed, writing is started.**

   (Progress bar showing writing situation is displayed.)

8. **Message "Write Finished!" is displayed, when completed. Press [OK] button to finish the operation.**

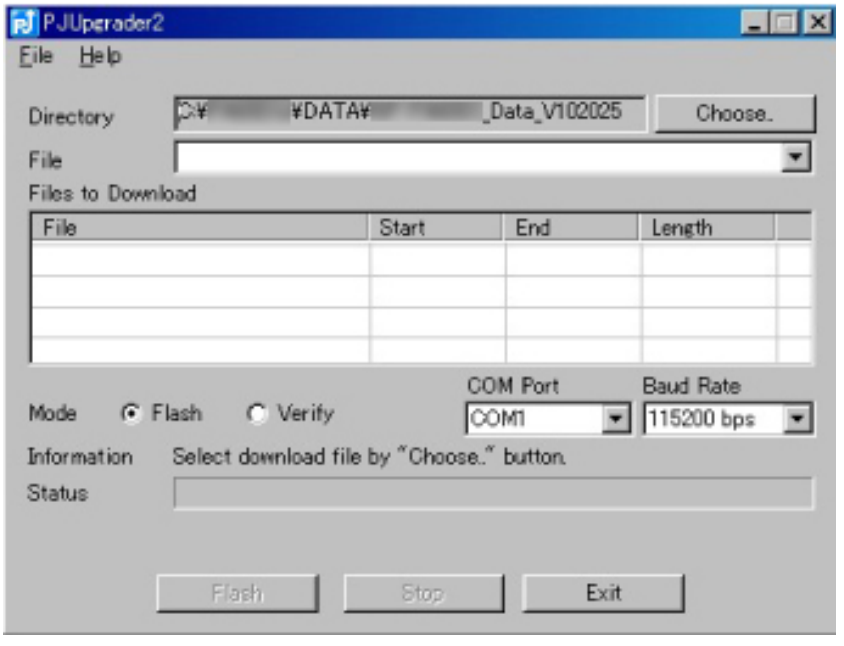
Model-specific production data

1. **Connect projector to PC with an RS232C cable (Cross).**

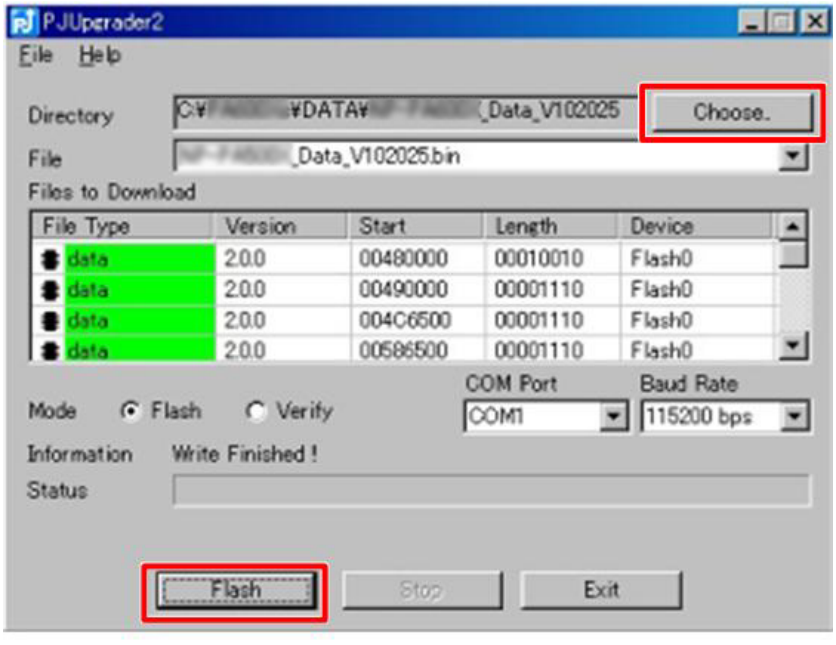
2. **Turn the power ON*, pressing the [EXIT] and [MENU] keys of the main unit simultaneously.**

   * Connect the plug of the power cord to the power outlet. (AC source turned on)

3. **Release the [EXIT] and [MENU] keys when the Power LED blinks in green.**



4. **Start up PJUpgrader2.exe copied previously.**



y0131035

5. **Press [choose....] button to select the file (WX6181N_Data_V******.bin) to be written.**
6. **Check that the projector and PC are properly connected each other, then press [Flash] button.**

   Message "Do you start flash write?" is displayed.
7. **When [Yes(Y)] button is pressed, writing is started.**

   (Progress bar showing writing situation is displayed.)

8. **Message "Write Finished!" is displayed, when completed. Press [OK] button to finish the operation.**
9. **Unplug the power cord from the projector.**

10. **Turn the power ON* again, pressing the [EXIT] and [MENU] keys of the main unit simultaneously.**

    * Connect the plug of the power cord to the power outlet. (AC source turned on)

11. **Release the [EXIT] and [MENU] keys when the Power LED blinks in green.**
12. **Start up PJUpgrader2.exe copied previously.**
13. **Press [choose....] button to select the file (WX6181N_CB3_V****.bin) to be written.**
14. **Check that the projector and PC are properly connected each other, then press [Flash] button.**

    Message "Do you start flash write?" is displayed.

15. **When [Yes(Y)] button is pressed, writing is started.**

    (Progress bar showing writing situation is displayed.)

16. **Message "Write Finished!" is displayed, when completed. Press [OK] button to finish the operation.**

Error Messages

- Header information is illegal. (-308)

  Check the selected file.

  PJUpgrader2 for vupf cannot rewrite the firm data

- Attestation failure. (-1001)

  When rewriting the version up field, it is required to set the projector in writing only mode in advance. (Pressed the wrong buttons when turning on the projector.)

- The model information of the file conflicts with that of the connected projector. (-1002)

  Check the projector connecting to the selected file.

  The projector connected is not that the selected file can write for.

Procedure for rewriting EDID data

Outline software descriptions

This is PC control software to rewrite EDID data of PCB Main Ass'y supporting PJ X6181N/ WX6181N/WU6181N.

Equipment to be used and environment

Equipment to be used

- EDID rewriting software

  EDIDwriter.exe

  PJUpgrader2.exe
- EDID data (HDMI) ("***" in the file name denotes the version.)

  X6181N _EDID_HDMI_V***.bin

  WX6181N _EDID_HDMI_V***.bin

  WU6181N _EDID_HDMI_V***.bin
- EDID data (Analog) ("***" in the file name denotes the version.)

  X6181N _EDID_DSUB_V***.bin

  WX6181N _EDID_DSUB_V***.bin

  WU6181N _EDID_DSUB_V***.bin
- EDID data (Display Port) ("***" in the file name denotes the version.)

  X6181N _EDID_DP_V***.bin

  WX6181N _EDID_DP_V***.bin

  WU6181N _EDID_DP_V***.bin
- PC

  A Windows VISTA/7 operable PC, which enables an RS232C cable (Cross) and RGB (analog) video connection with the projector.
- RS232C cable (Cross)

  D-SUB9pin-D-SUB9pin, Cross (reverse) cable

Software installation procedures

1. **Installing PJUpgrader2**

   Execute "PJUpgrader2_***.exe".

   Proceed installing following the instructions.

   * When the previous version is installed, uninstall it first. And install the new version.
2. **Installing EDIDwriter**

   Copy all files of "EDIDwriter" into any folder.
3. **Installing EDID data**

   Copy each EDID data to any folder, and execute.

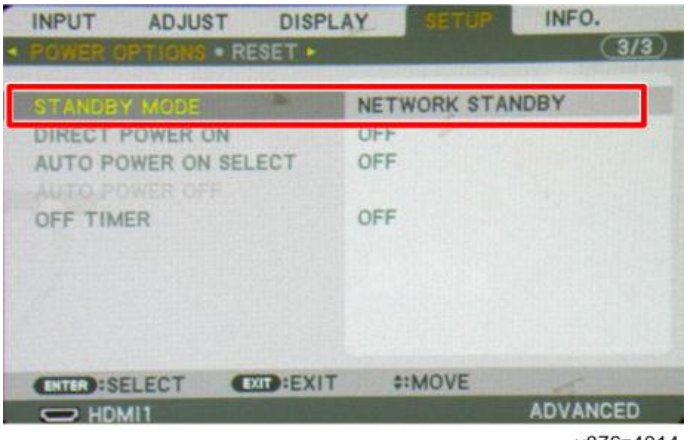
Rewrite procedure

Change the data as specified below.

1. Rewrite HDMI terminal EDID.
2. Rewrite D-SUB terminal EDID.
3. Rewrite DP (Display Port) terminal EDID.

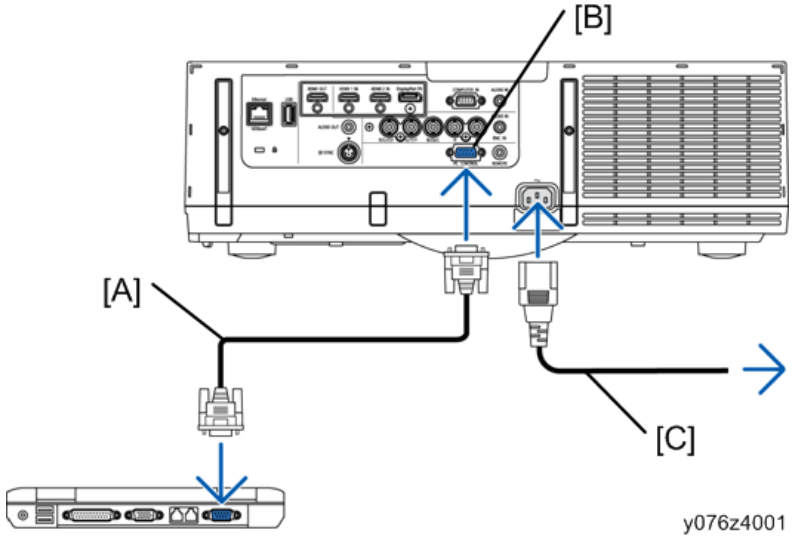
Note

- Before rewriting EDID data, set the on-screen menu's [SETUP] > [POWER OPTIONS] > [STANDBY MODE] to [NETWORK STANDBY].

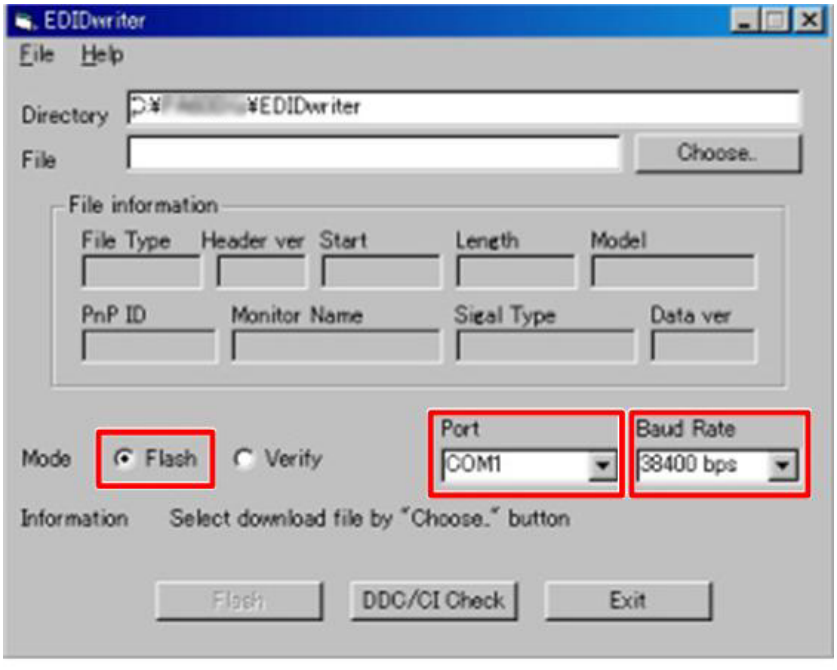


y076z4014

Rewriting HDMI terminal EDID



y076z4001



y0131037

1. **Initial setting**

   Set the power supply of the projector main unit under the STANDBY conditions.

   Connect the projector and the PC with an RS232C cable (Cross), referring to "Equipment to be used and environment". Then activate "EDIDwriter".

   [A] : RS232C cable (Cross)

   [B] : PC CONTROL

   [C] : Power cord (supplied)

   - Mode

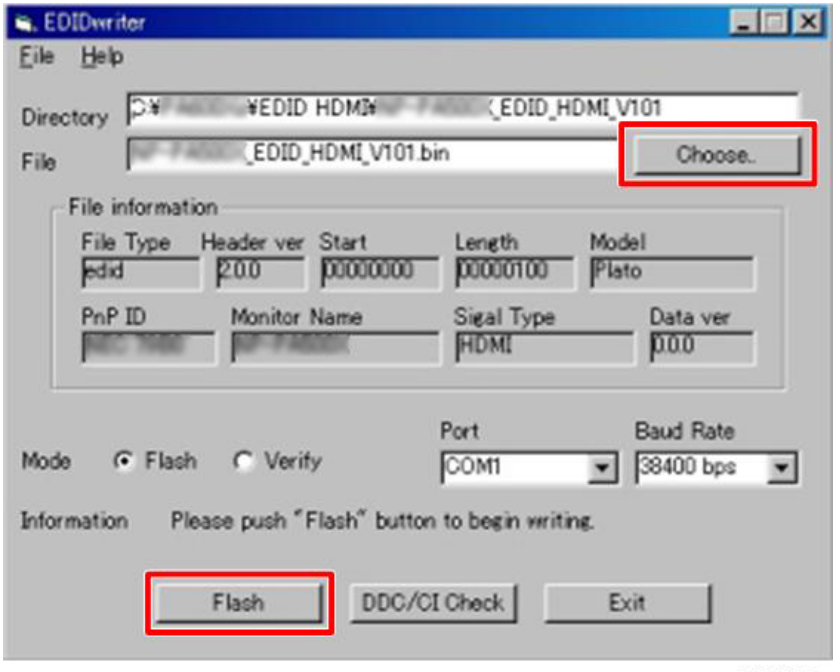
     Select "Flash".

   - Port

     Select the corresponding Com Port for the target PC.

   - Baud Rate

     Select "38400 bps".



y0131038

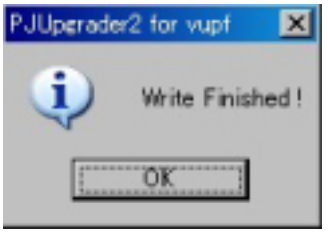
2. Selecting a writing file

Click "Choose.." button to select the file.

* Select HDMI EDID data from File name "xxxxx_EDID_HDMI_V***.bin". (xxxxx: Model, ***: version).

- Comparison Table of Model Names and EDID File Names of HDMI

Model Name	EDID File Name
PJ- X6181N	X6181N_EDID_HDMI_V***.bin
PJ- WX6181N	WX6181N_EDID_HDMI_V***.bin
PJ- WU6181N	WU6181N_EDID_HDMI_V***.bin



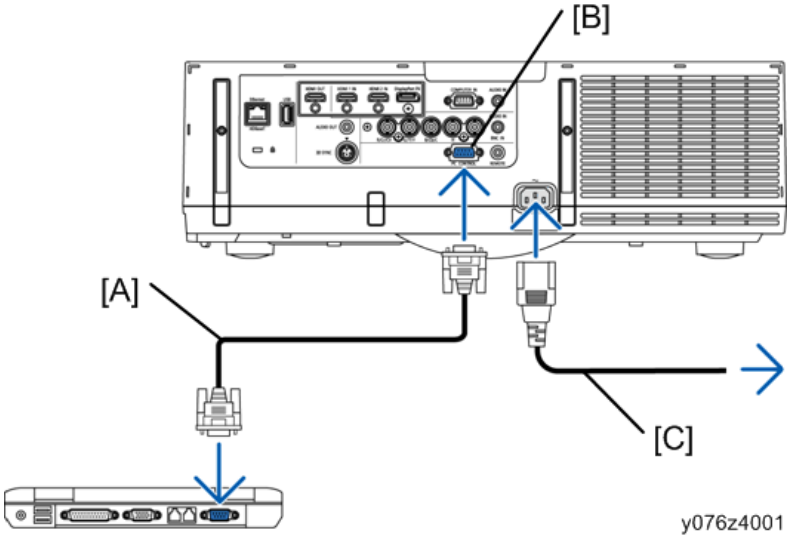
3. **Rewriting data**

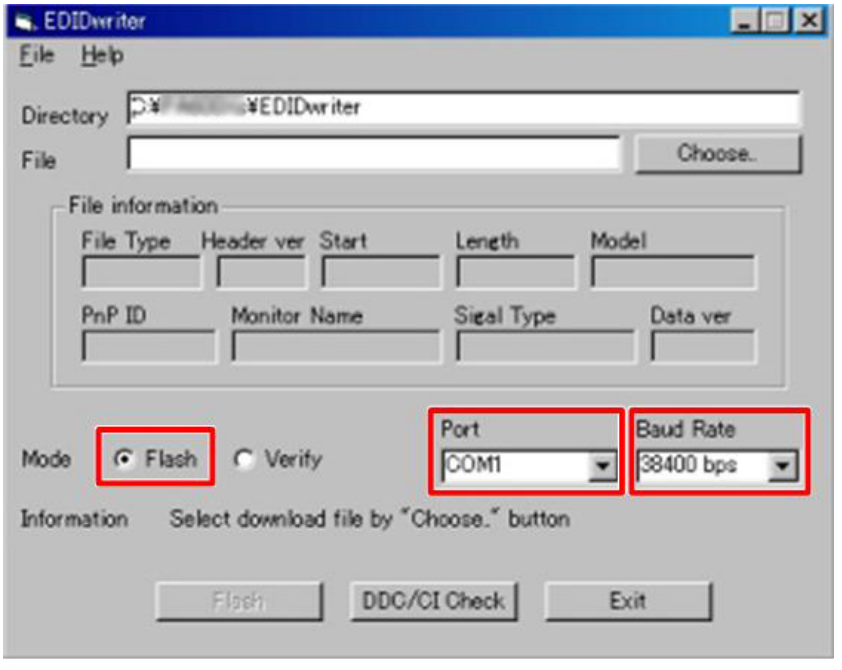
   Make sure that the projector and the PC are properly connected, and then click "Flash" button. Rewriting HDMI terminal EDID is started.

   When writing is completed, the message "Write Finished!" will be displayed.

   Click "OK" button to finish the procedure.

Rewriting D-SUB terminal EDID





y0131040

1. Initial setting

Set the power supply of the projector main unit under the STANDBY conditions.

Connect the projector and the PC with an RS232C cable (Cross), referring to "2Equipment to be used and environment". Then activate "EDIDwriter".

[A] : RS232C cable (Cross)

[B] : PC CONTROL

[C] : Power cord (supplied)

- Mode

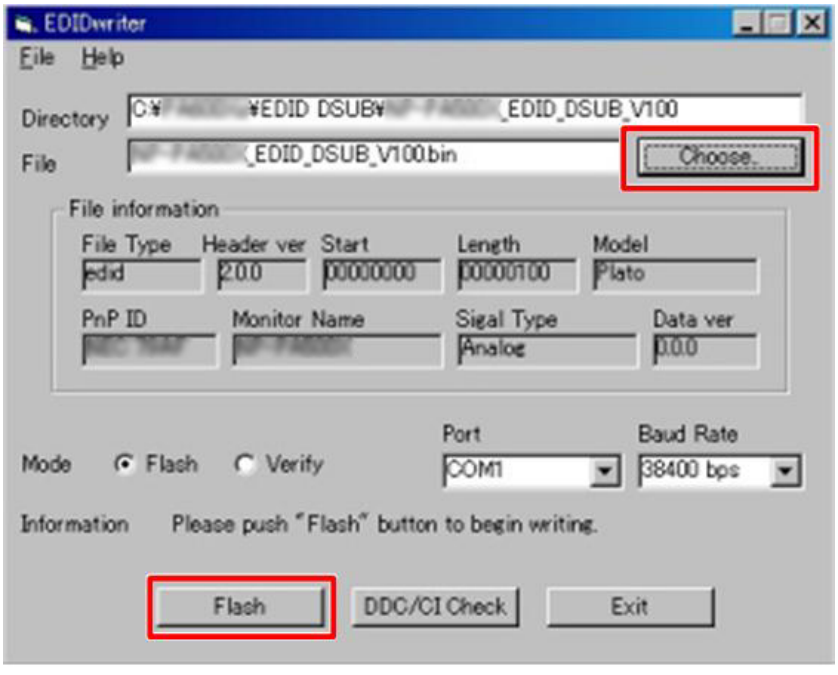
  Select "Flash".

- Port

  Select the corresponding Com Port for the target PC.

- Baud Rate

  Select "38400 bps".



y0131041

2. Selecting a writing file

Click "Choose.." button to select the file.

* Select D-SUB EDID data from File name "xxxxx_EDID_DSUB_V***.bin". (xxxxx: Model series name, ***: version)

- Comparison Table of Model Names and EDID File Names of D-SUB

Model Name	EDID File Name
PJ- X6181N	X6181N_EDID_DSUB_V***.bin
PJ- WX6181N	WX6181N_EDID_DSUB_V***.bin
PJ- WU6181N	WU6181N_EDID_DSUB_V***.bin

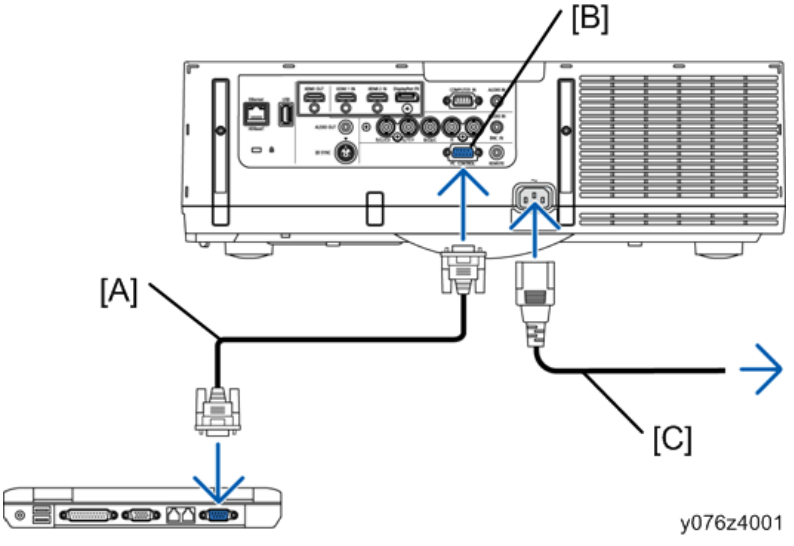
3. **Rewriting data**

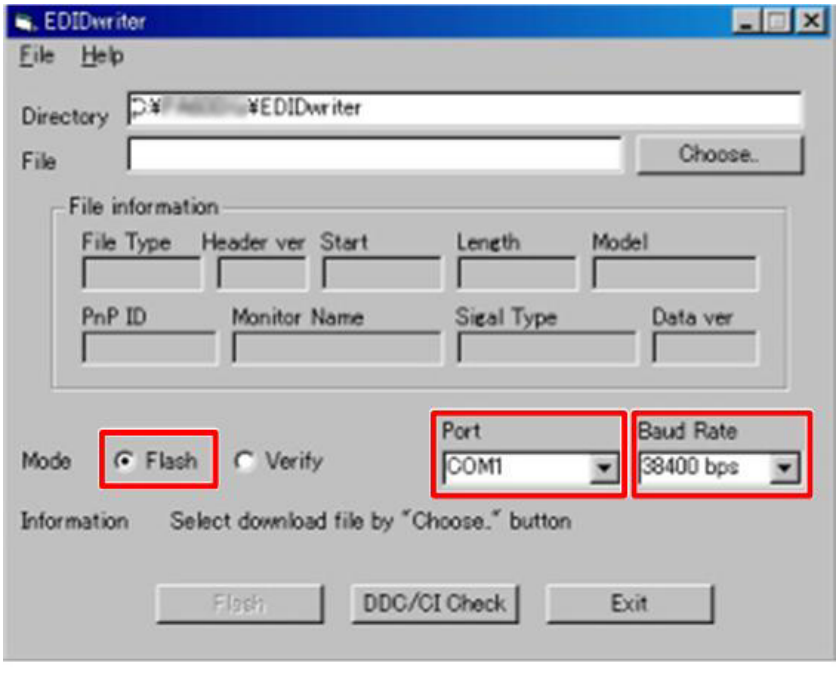
Make sure that the projector and the PC are properly connected, and then click "Flash" button. Rewriting HDMI terminal EDID is started.

When writing is completed, the message "Write Finished!" will be displayed.

Click "OK" button to finish the procedure.

Rewriting DP (Display Port) terminal EDID





y0131043

1. **Initial setting**

   Set the power supply of the projector main unit under the STANDBY conditions.

   Connect the projector and the PC with an RS232C cable (Cross), referring to "Equipment to be used and environment". Then activate "EDIDwriter".

   [A] : RS232C cable (Cross)

   [B] : PC CONTROL

   [C] : Power cord (supplied)

   - Mode

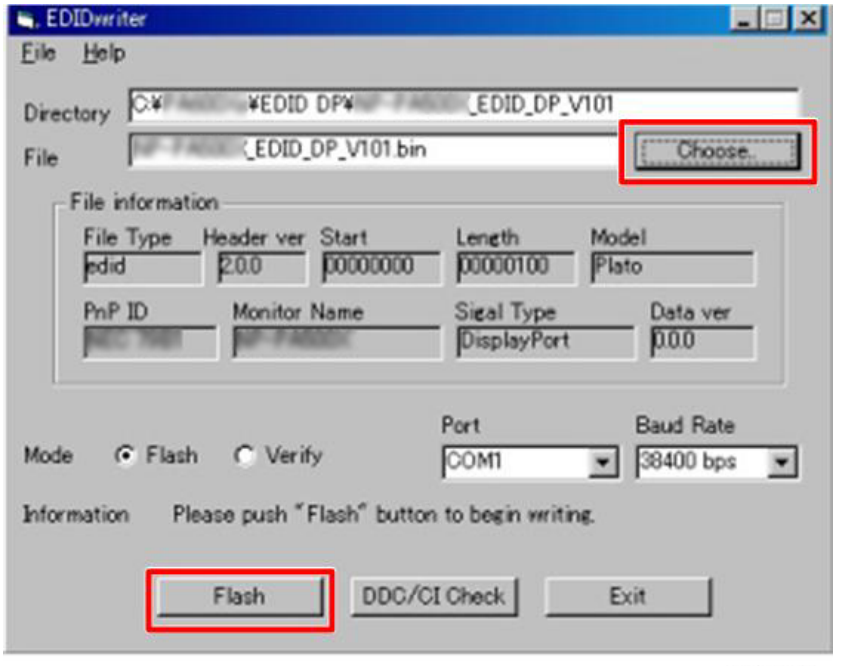
     Select "Flash".

   - Port

     Select the corresponding Com Port for the target PC.

   - Baud Rate

     Select "38400 bps".



y0131044

2. Selecting a writing file

Click "Choose.." button to select the file.

* Select DP EDID data from File name “xxxxx_EDID_DP_V***.bin”. (xxxxx: Model, ***: version).

- Comparison Table of Model Names and EDID File Names of DP

Model Name	EDID File Name
PJ- X6181N	X6181N _EDID_DP_V***.bin
PJ- WX6181N	WX6181N_EDID_DP_V***.bin
PJ- WU6181N	WU6181N_EDID_DP_V***.bin

3. **Rewriting data**

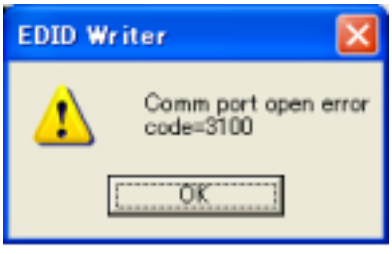
   Make sure that the projector and the PC are properly connected, and then click "Flash" button. Rewriting HDMI terminal EDID is started.

   When writing is completed, the message "Write Finished!" will be displayed.

   Click "OK" button to finish the procedure.

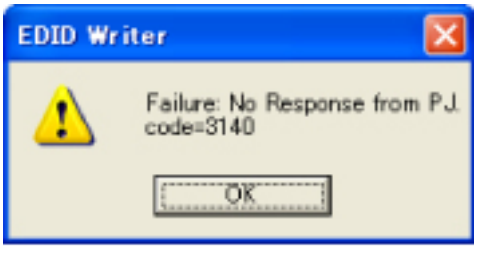
Miscellaneous

Error message



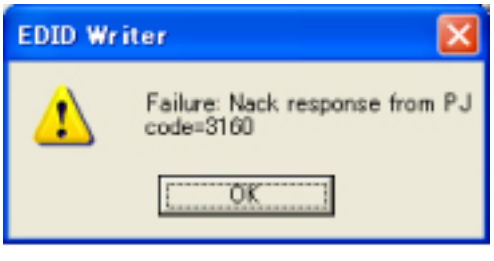
The serial port has failed to open.

Check whether any available serial port has been selected.



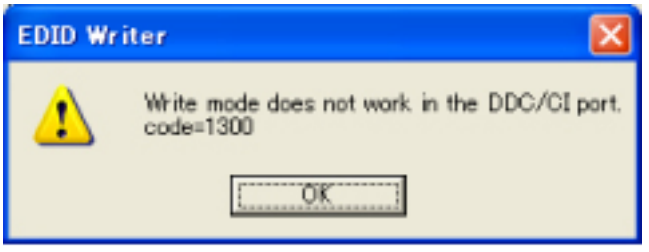
There is no response from the projector.

Check whether the PC and the projector are connected through an RS232C cable (Cross).



There was a Nack response from the projector.

Check the condition of projector power supply and the baud rate.

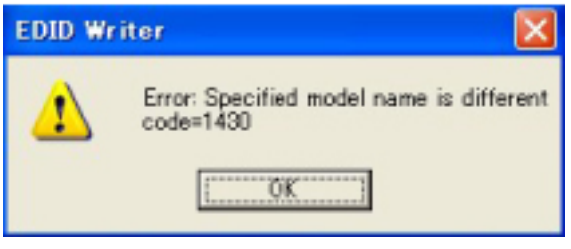


Writing in the EDID of HDMI is impossible from the DDC/CI board.

Select the serial port.

The projector is not found.

Check whether the PC and the projector are connected through an RGB cable.

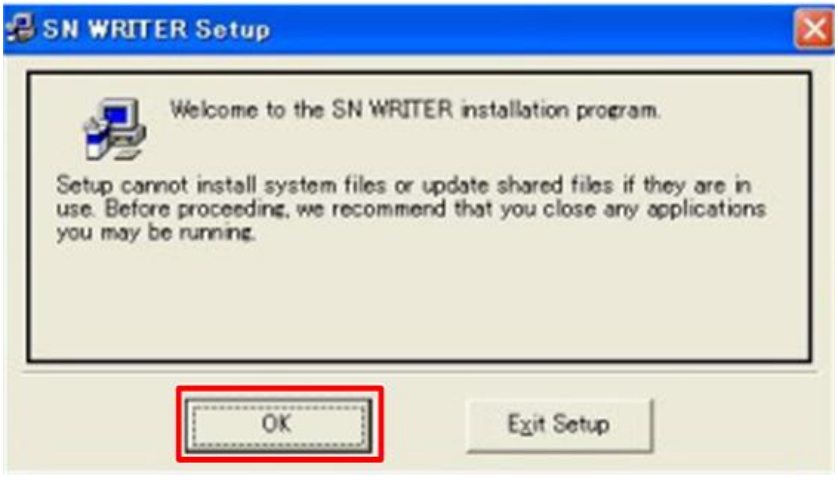


A wrong model is specified.

Check the model.

Procedure for writing of a serial number and a model number

Software installation



y0131052

y0131053

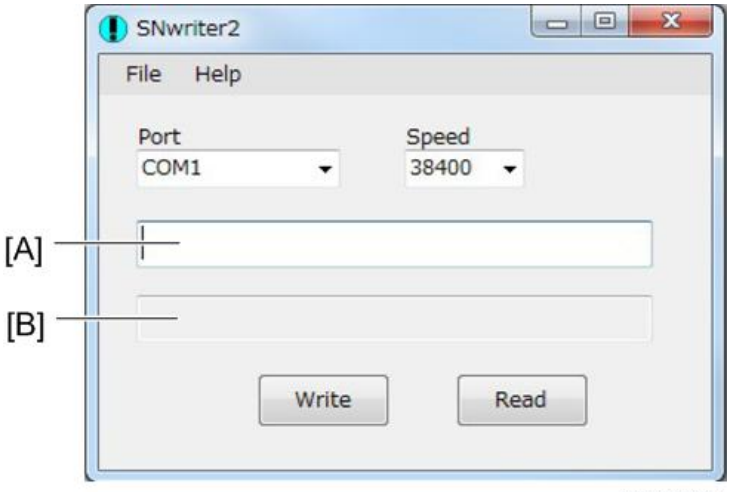
Decompress SNWriter2.zip and execute the established set-up.exe to install it in the PC.

(For the destination folder for installation, either half-size or full-size font characters are acceptable.)

Writing of a serial number and a model number

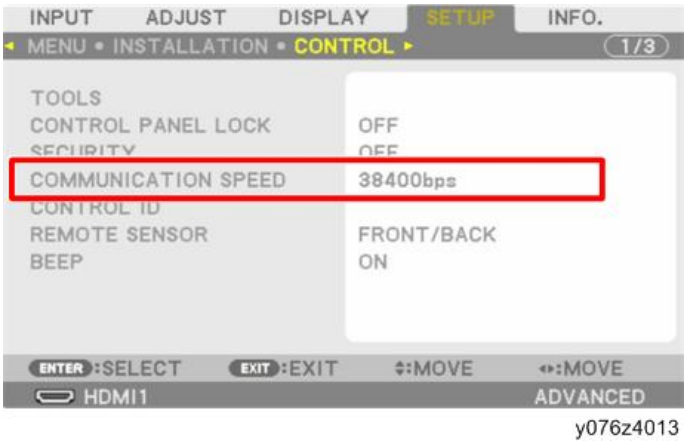
1. **Connect the Projector to computer through an RS232C cable (Cross). Turn on the power supply of the Projector.**

2. Click "SNWriter2.exe" installed previously.



y076z4012

* In regard to "Speed" that is indicated in the above-mentioned screen, make confirmation on the menu screen specified below.



y076z4013

3. In the specified format, the model number and the serial number are entered in the column of [A]. When the "Write" button is pressed, these data are transferred to the projector and serial number writing is completed.

Specified format:

Attach the asterisks ("*") to the head and the tail.

Provide a space between the model number and the serial number.

Examples:

Model number: PJ WU6181N/WX6181N/X6181N

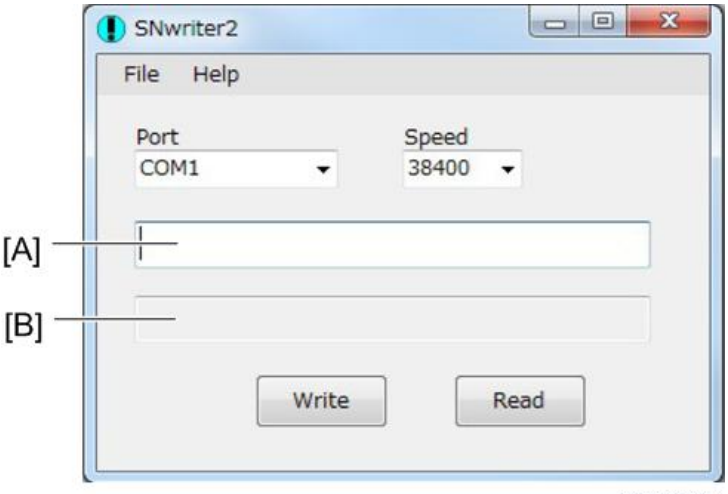
Serial number: B87YAM0000

"*PJ X6180N B87YAM0000*"

⚠CAUTION

- After the completion of writing, no verification is performed. Therefore, press the "Read" button separately to confirm the result of writing.

Data readout



The data (model number and serial number) written in the projector are read out.

When the "Read" button is pressed, the data read out of the projector are displayed in Column [B] in the specified format.

PC control software for service

Outline software descriptions

This is the PC control software for servicing adjustments to be conducted during the replacement of the PCB Main Ass'y, OPT BASE, and the LAMP for the LCD projector.

This software makes it possible to perform the following adjustments:

- Adjustment of Flicker
- Modification of usage time for the Usage Time (Lamp, Filter, Panel, and Projector)
- READ/WRITE of factory ADJ data (Flicker, VT, Uniformity, Color Correction, Multi) and Usage Time data

Equipment to be used and environment

Equipment to be used

- The service adjustment software
- PC (under the conditions that Windows VISTA/7 is working and either of serial ports COM1 - COM9 is D-SUB9-pin)
- RS232C cable (Cross)

Software installation procedures

This software is composed of the following items:

- Service adjusting software (Service Adjust Tool, Ser_WU6181NSeries (1.0.0))

Follow the instructions below to install the files on the PC.

1. **Copy all files into any folder.**

Repair and adjustment procedures

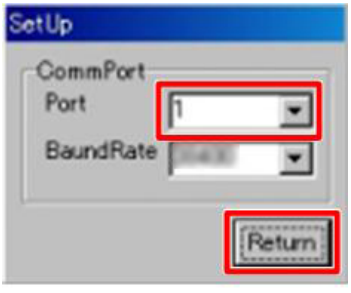
Starting and ending methods for adjustments

Method of adjustment starting

1. **Assume a condition that projector and PC are connected through an RS232C cable (Cross) and start the service adjustment software.**

y0131058

2. **Click [Setup] button to open the Setup window.**



y0131059

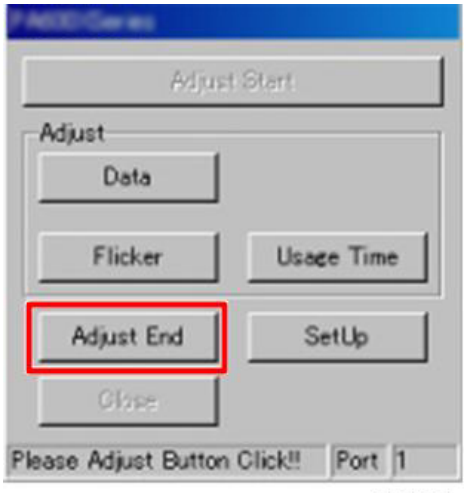
3. **Select the COM port connected to the projector in the [Port] box. The default setting of [Baud Rate] on the projector side is 9600. Press [Return] button when the setting is completed.**

y0131060

4. **Click "Adjust Start" to start initial data reading.**

   * Each adjusting button will be enabled when models are correctly identified.

Method of adjustment ending



y0131061

When the adjustment described below, from the procedure "Replacement of the PCB Main Ass'y", "Replacement of the OPT BASE" and "Miscellaneous" is done, click [Adjust End] button.

* When adjustments of another set are further intended, operation should be started with [Adjust Start].

* If trying to adjust another set without making [Adjust End], there will be an error as a result of model discrimination.

* Click [Close] button to terminate the program.

Replacement of the PCB Main Ass'y

Copy all data when replacing the PCB Main Ass'y.

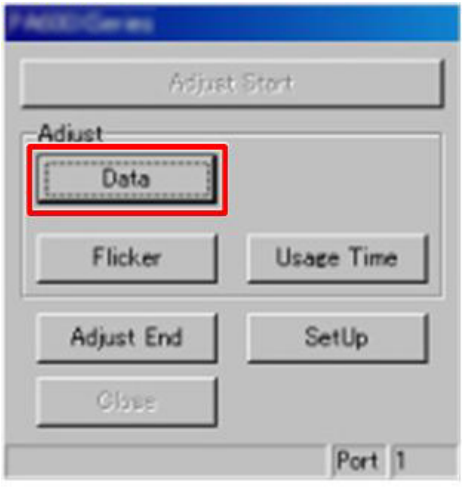
*If All Data Copy is impossible to carry out, refer to "Miscellany (Failure in <All Data Copy> to be performed at the time of PCB Main Ass'y replacement)."

In regard to the replacement of servicing parts for the PCB Main Ass'y, the procedures described below should be followed.

- Before the replacement of PCB Main Ass'y
    1. Copying of all data
- After the replacement of PCB Main Ass'y
    1. Data writing for each model is carried out.
    2. EDID data writing is carried out.
    3. Data writing for Serial number and Model number

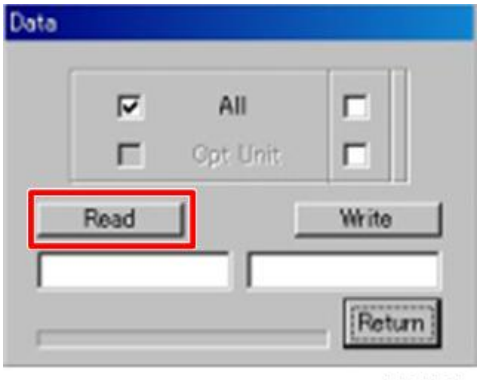
All Data copying

All Data mentioned here denote the respective factory adjusting data (Flicker, VT, Uniformity, Color Correction, Multi), and Usage Time.



y0131062

1. **Click [Data] button of the service software with the projector power in standby to open the Data window.**



y0131063

2. **All Data Read**

   Read the PCB Main Ass'y data currently used before replacement and save them in a file. Check mark the [All data], and click [Read] button. Name the file and save.

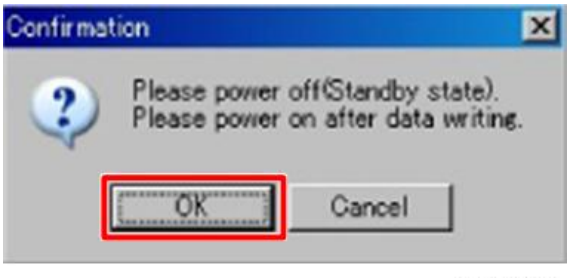
3. **The procedure is done when a message box "It completed. " is displayed.**

   * In a certain faulty state, data cannot be saved. In such a case, follow the steps of [Miscellany].

y0131066

4. **All Data Write**

   After exchanging PCB Main Ass'y, click [Write] button to select the saved file.



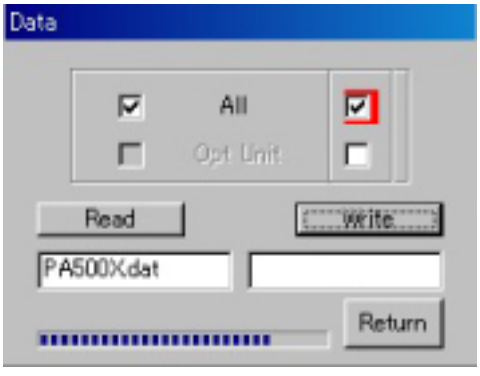
y0131067

5. **When a message "Please Power Off (Standby state)." is displayed, make sure that the projector power is in standby, then click [OK] button.**

   In normal standby mode, the Power indicator is orange and the Status indicator is green.

   In power-saving standby mode, the Power indicator is red and the Status indicator is off.

   If the projector is not in standby mode, press the Power button one time.



6. **The procedure is done when a message box "It completed." is displayed.**

* When Usage Time Data is written, it is necessary to turn the power supply ON (for one minute) after data writing. Turn the projector power supply ON.

* When executing data writing, [Data] indicated in the main window turns to bold text.

Replacement of the OPT BASE

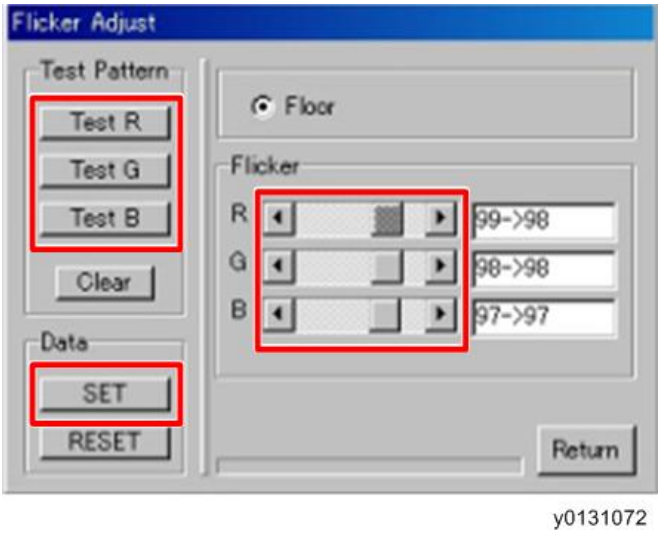
When replacing the OPT BASE.

- Flicker adjustments are carried out.

Adjustment of Flicker

y0131071

1. **Click [Flicker] button of the service software to open the Flicker Adjust window.**
2. **Keeping the projector power supply turned ON, maintain the condition of aging for five minutes.**



y0131072

3. **Check [Floor].**

   Display Red raster signal by clicking [Test R] button in the [Test Pattern] box. Adjust R-scroll bar so that the flicker in the middle of the window becomes smallest.

   Display Green raster signal by clicking [Test G] button in the [Test Pattern] box. Adjust G-scroll bar so that the flicker in the middle of the window becomes smallest.

Display Blue raster signal by clicking [Test B] button in the [Test Pattern] box. Adjust B-scroll bar so that the flicker in the middle of the window becomes smallest.

When flicker adjustment is done, click [SET] button in the [Data] box to write the adjusted value.

* When adjustments have been finished ([SET] is clicked), the Floor characters turn to red.

* To restore the data to the state before the adjustment, click [RESET] button. The data will restore to the initial setting, and the characters return to black.

* The value displayed by the side of the scroll bar indicates the original value in the left side of the arrow, the current value in the right side of the arrow.

* The data adjusted with the scroll bar is temporary data. For the projector to store the data, click [SET] button to write in Flash ROM.

Miscellaneous

If <All Data Copy> cannot be accomplished during the replacement of the PCB Main Ass'y, follow the following steps:

In regard to the replacement of servicing parts for the PCB Main Ass'y, the procedures after the completion of replacement (after mounting the PCB Main Ass'y on the product) are described below.

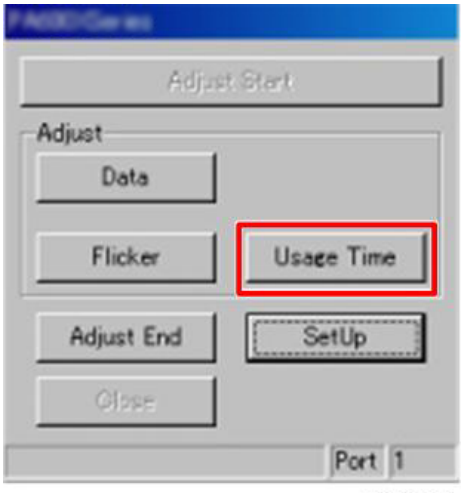
1. Data writing for each model is carried out.
2. PCB Main Ass'y adjustments (Usage Time setup, Flicker adjustments (*1)).

*1 In the case of "Replacement of the OPT BASE", these adjustments are not required.

1. EDID data writing is carried out.
2. Data writing for Serial number and Model number.

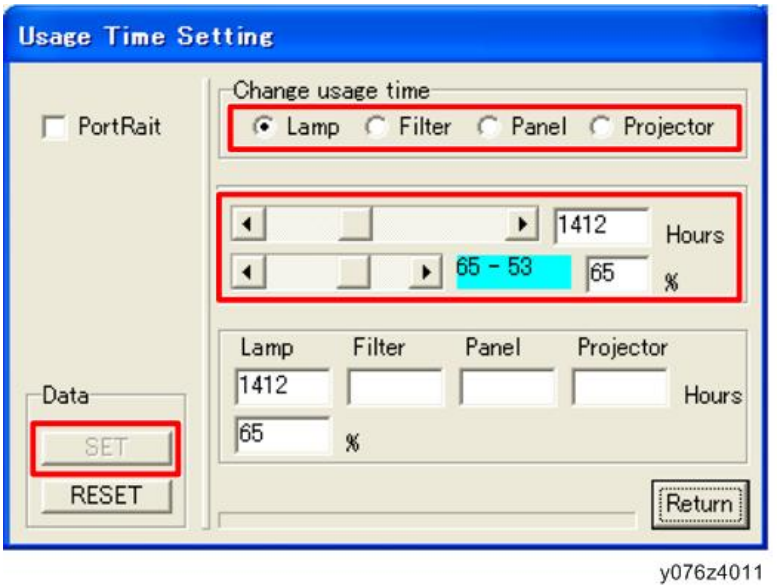
Usage Time Setup

- If the present Usage Time for the Lamp / Projector is different from the actual Usage Time, the following setup is made to recover the correct Usage Time.
- When Usage Time Read / Write is carried out at the time of PCB Main Ass'y replacement, the correct Usage Time is also copied for the Lamp / Projector. Therefore, no more setting is required.
- However, this function should not be used unless the correct Usage Time is known.



y0131073

1. **Click [Usage Time] button of the service software with the projector power in standby to open Usage Time Setting window.**



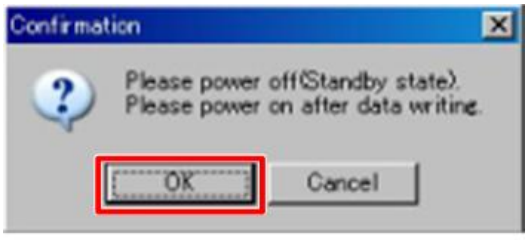
y076z4011

2. **Select a type of Usage Time to be changed in the [Change Usage Time]. Set time using the scroll bar, then click [SET] in the Data Box.**

   Using scroll bars, adjust [Hours] and remaining [%] for Lamp Usage Time, and [Hours] for Usage Time.

   * When Usage Time is changed, the changed time will be displayed in the editor below.

   * To restore the time, click [RESET] button. It restores to the initial data.



y0131075

3. **When a message [Please Power Off (Standby state).] is displayed, make sure that the projector power is in standby, then click [OK] button.**

* When writing the Usage Time Data, it is necessary to turn the power supply ON (for one minute) after data writing. Turn the projector power supply ON.

* When changing Usage Time, [Usage Time] indicated in the main window turns to bold text.

Error messages

"TIME OUT (ACK) I "

This is a communication error in conjunction with the projector.

Check the Serial Port Number, BaundRate, and whether the projector main power is turned ON.

"TIME OUT (Data) I", "RsRead Error, " , "Data Send ErrorII ", "DATA READ ERROR",

"Model check Error (Data Read)II "

This is a communication error in conjunction with the projector.

Check the connection, and error occurrence in the projector, then retry.

In case it occurs 2 or 3 times consecutively, reboot the PC.

"Comm Open Error"

This is a failure in opening the serial port.

Check the Serial Port Number.

Make sure that there is no other application using the same Serial Port.

"TIME OUT (Comm Close Error) ! ", "Comm Close Error"

This is a failure in closing the serial port.

Confirm if there is any application that occupies the serial port.

In case it occurs 2 or 3 times consecutively, reboot the PC.

"File format error", "Address error"

The data format of the file specified when executing data writing from the file is not correct.

Make sure that it is a file read in PJ X6181N/WX6181N/WU6181N.

"ACK Error!! "

Check the status of the projector, and retry.

* For instance, you may have done an operation with Power OFF, which should have been done with Power ON.

In case it occurs 2 or 3 times consecutively, reboot the PC.

If not recovering from this error after operating the above, the projector may be in trouble.

"Model name error!! "

The target projector is not PJ X6181N/WX6181N/WU6181N.

"Model check Error (2)!! "

The current target projector is not the one executed [Adjust Start].

Restart from [Adjust Start], in case adjusting current target projector.

"Comparison error"

The data is not successfully written. Retry writing.

In case it occurs 2 or 3 times consecutively, reboot the PC.

If not recovering from this error after operating the above, the projector may be in trouble.

4. System Maintenance

Firmware Upgrade

A LAN cable is needed to upgrade the firmware.

Before upgrading the firmware, make sure to prepare the following:

- LAN cable
- Notebook PC (on which Internet Explorer 7.0 or later is installed)

Upgrading the firmware

1. **Connect the PC to the projector via a wired or wireless LAN.**

   * Use PING to check whether the PC is successfully connected to the LAN.

2. **Select [MENU], [INFO.], and then [WIRED LAN] or [WIRELESS LAN] to check the IP address.**

3. **Place the projector in standby mode.**

   * On the projector, set [STANDBY MODE] to [NORMAL].

4. **Start Internet Explorer and open the "http://xxx.xxx.x.xx/upload.html" page.**

   * Replace xxx.xxx.x.xx with the IP address that was confirmed in Step 2.

y0131150

5. **When the "Projector Update" page appears, press the [Browse] button.**

6. Select the file and press the [UPDATE] button.

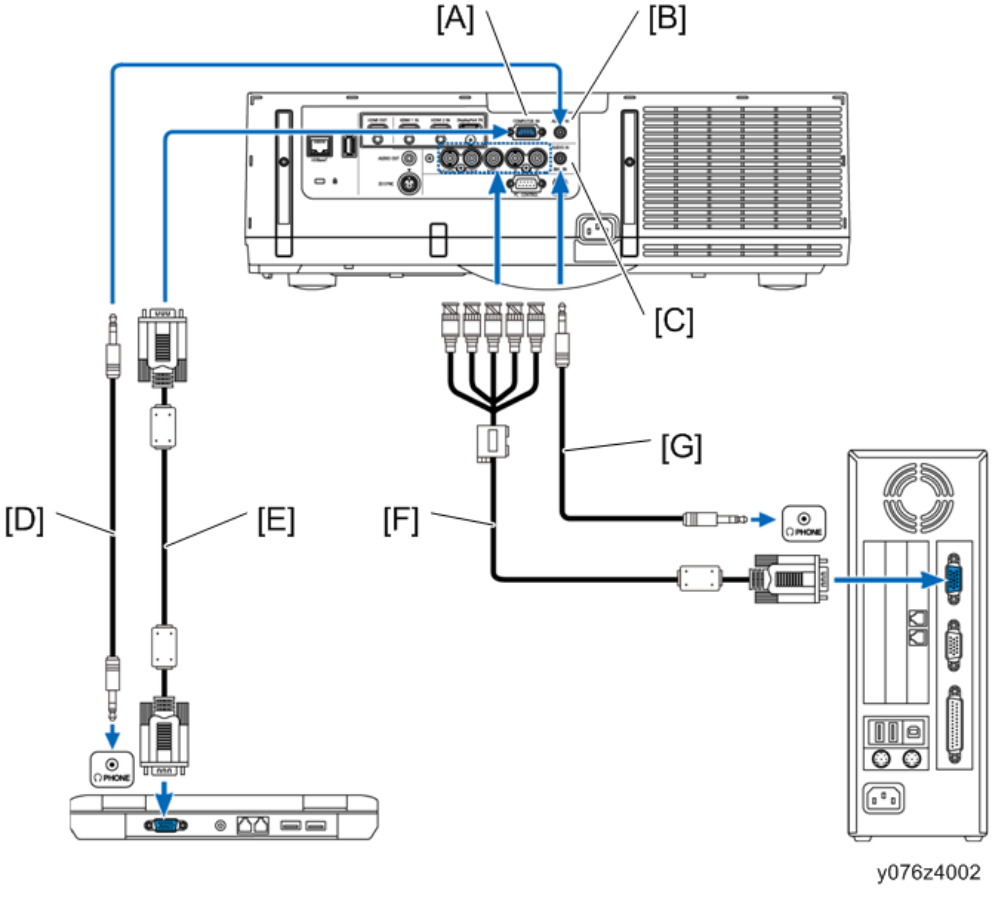
y0131151

7. When the confirmation dialog box appears, press the [OK] button.
8. When the message "File written successfully" appears in the history section, press the [REBOOT] button to restart the projector.
9. To update multiple files, repeat steps 5 to 7 for each file to update.
10. Do not turn off the projector or disconnect the LAN cable before the update is complete. Otherwise, the projector may not restart.

Functional Test

Analog RGB signal connection

- Connect the computer cable to the display output terminal (mini D-sub 15 pin) on the computer and the computer video input terminal on the projector. Use a computer cable attached with a ferrite core.
- When connecting the display output terminal (mini D-sub 15 pin) on the computer to the BNC video input terminal, use a conversion cable to convert the BNC cable (5 core) to a mini D-sub 15 pin cable.



[A]: COMPUTER IN

[B]: AUDIO IN

[C]: BNC AUDIO IN

[D]: Stereo mini-plug audio cable (not supplied)

[E]: RS232C cable (cross) (sold commercially)

[F]: RGB - to - BNC cable (not supplied)

[G]: Stereo mini-plug audio cable (not supplied)

Select the source name for its appropriate input connector after turning on the projector.

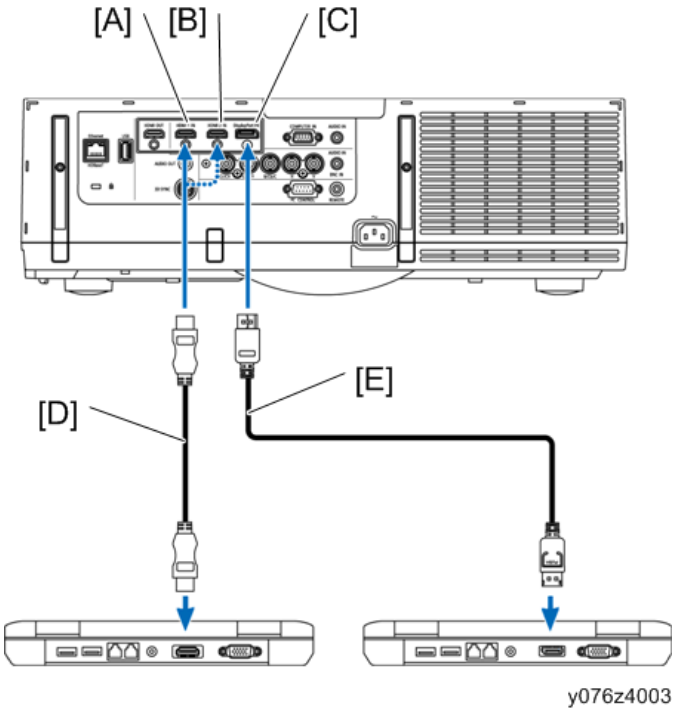
Input connector	Input button on the projector cabinet	Button on the remote control
COMPUTER IN	COMPUTER	Computer
BNC IN	BNC	BNC

Note

- Check the operation manual of the computer because the name, position and direction of the terminal may differ depending on the computer.

Digital RGB signal connection

- Connect a commercially available HDMI cable between the computer's HDMI output connector and the projector's HDMI1 or HDMI2 input connector.
- Connect a commercially available DisplayPort cable between the computer's DisplayPort output connector and the projector's DisplayPort input connector.



[A]: HDMI 1 IN

[B]: HDMI 2 IN

[C]: DisplayPort IN

[D]: HDMI cable (not supplied)

[E]: DisplayPort cable (not supplied)

Select the source name for its appropriate input connector after turning on the projector.

Input connector	Input button on the projector cabinet	Button on the remote control
HDMI 1 IN	HDMI 1	HDMI 1
HDMI 2 IN	HDMI 2	HDMI 2
DisplayPort	DisplayPort	DisplayPort

Cautions when connecting an HDMI cable

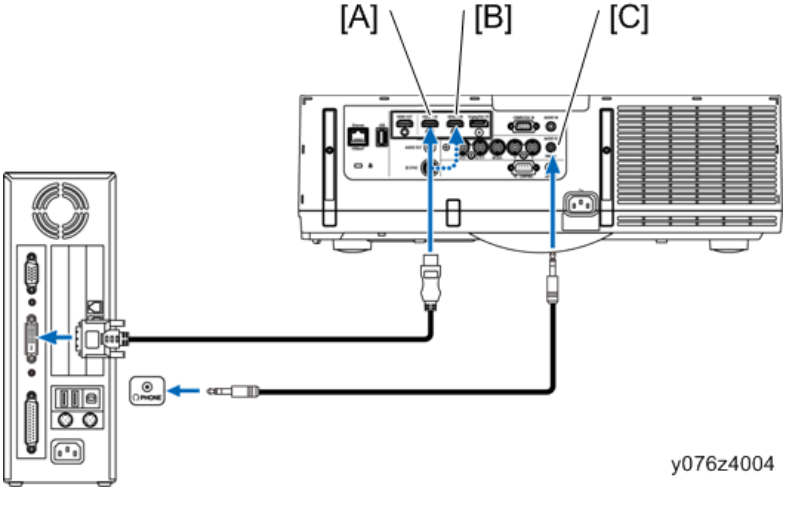
Use a certified High Speed HDMI® Cable or High Speed HDMI® Cable with Ethernet.

Cautions when connecting a DisplayPort cable

- Use a certified DisplayPort cable.
- Depending on the computer, some time may be required until the image is displayed.
- Some DisplayPort cables (commercially available) have locks.
- To disconnect the cable, press the button on the top of the cable's connector, then pull the cable out.
- Power can be supplied to the connecting device from the Display Port input terminal (maximum of 1.65 W); however, power will not be supplied to the computer.
- When signals from a device that uses a signal converter adapter are connected to the DisplayPort input connector, in some cases the image may not be displayed.
- When the HDMI output of a computer is connected to the DisplayPort input connector, use a converter (commercially available).

⚠CAUTION

- When the computer has a DVI output connector, use a commercially available converter cable to connect the computer to the projector's HDMI 1 or HDMI 2 input connector (only digital video signals can be input). Also, connect the computer's audio output to the projector's BNC audio input connector. In this case, switch the HDMI1 or HDMI2 setting in the on-screen menu's audio selection on the projector to [BNC].
- To connect the computer's DVI output connector to the projector's DisplayPort input connector, use a commercially available converter.



[A]: HDMI 1 IN

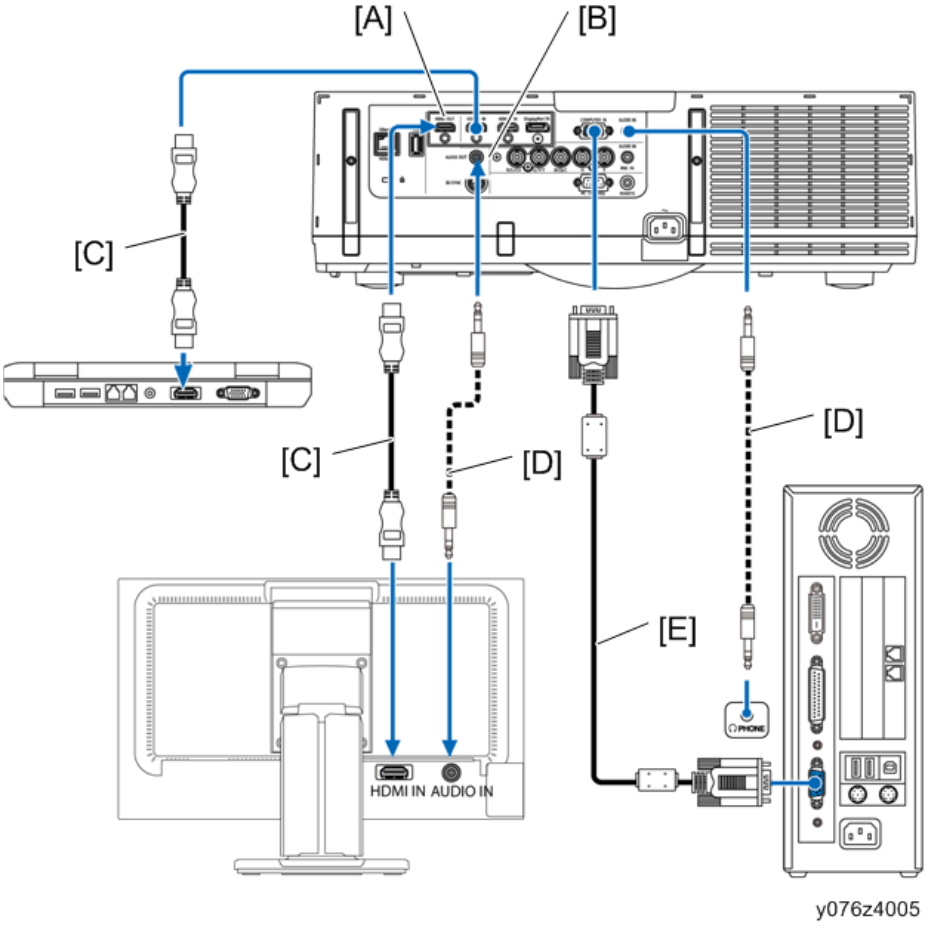
[B]: HDMI 2 IN

[C]: AUDIO IN

Note

- Turn off the power of the computer and projector before connecting.
- Lower the computer's volume setting before connecting an audio cable to the headphones connector. When using with a computer connected to the projector, adjust the volume of both the projector and computer to set the appropriate volume level.
- If the computer has a mini-jack type audio output connector, we recommend connecting the audio cable to that connector.
- When a video deck is connected via a scan converter, etc., the display may not be correct during fast-forwarding and rewinding.
- Use a DVI-to-HDMI cable compliant with DDWG (Digital Display Working Group) DVI (Digital Visual Interface) revision 1.0 standard. The cable should be within 197"/5m long.
- Turn off the projector and the PC before connecting the DVI-to-HDMI cable.
- To project a DVI digital signal: Connect the cables, turn the projector on, then select the HDMI input. Finally, turn on the PC.
- Failure to do so may not activate the digital output of the graphics card, resulting in no picture being displayed. Should this happen, restart PC.
- Some graphics cards have both analog RGB (15-pin D-Sub) and DVI (or DFP) outputs. Use of the 15-pin D-Sub connector may result in no picture being displayed from the digital output of the graphics card.
- Do not disconnect the DVI-to-HDMI cable while the projector is running. If the signal cable has been disconnected and then reconnected, an image may not be correctly displayed. Should this happen, restart PC.
- The COMPUTER video input connectors support Windows Plug and Play. The BNC video input connector does not support Windows Plug and Play.
- A Mac signal adapter (commercially available) may be required to connect a Mac computer.
- To connect a Mac computer equipped with a Mini DisplayPort to the projector, use a commercially available Mini DisplayPort → DisplayPort converter cable.

Connecting an External Monitor



[A]: HDMI OUT

[B]: AUDIO OUT

[C]: HDMI cable (not supplied)

[D]: Stereo mini-plug audio cable (not supplied)

[E]: RS232C cable (cross) (not supplied)

It is possible to connect a separate, external monitor to the projector to simultaneously view the analog projected image from the computer on this monitor.

Note

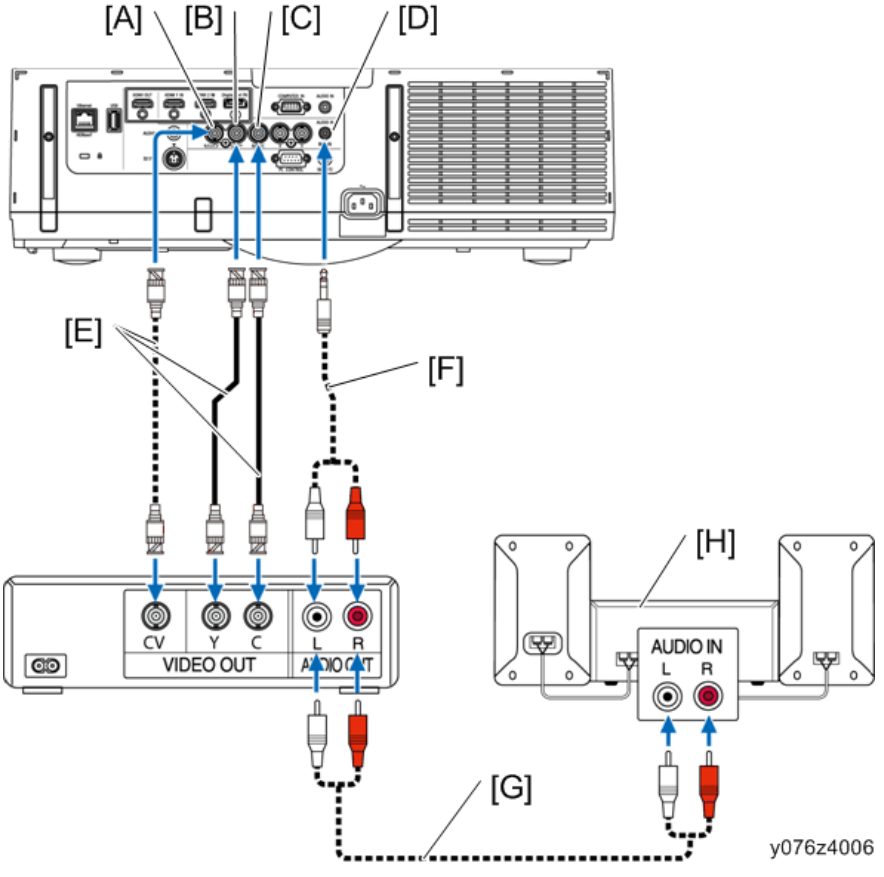
- When outputting HDMI signals, turn on the power of the video device on the output side and keep it connected before inputting video signals into this device. The HDMI output terminals of the projector are equipped with repeater functions. When a device is connected to the HDMI output

terminal, the resolution of the output signal is limited by the resolution supported by the connected device.

- Connecting and disconnecting an HDMI cable or selecting another input source on the second and subsequent projectors will disable the HDMI repeater function.
- For the HDMI output terminal of the projector, the theoretical number of units that can be connected in a series is seven. The maximum number of units that can be connected may be reduced by the external environment and quality of the signal and cable, etc. The number of units that can be connected may differ depending on the HDCP version, restriction on the number of HDCP repeaters in the source device and the quality of the cable. The overall system needs to be checked in advance when building a system.
- When audio equipment is connected, the projector speaker is disabled.
- To output audio from the audio output terminal when the input terminal is neither “COMPUTER IN” nor “BNC IN”, select [BNC] under [AUDIO SELECT] of the on-screen menu.
- When the [STANDBY MODE] is set to [NORMAL], video and audio will not be output when the projector is set to the standby mode. Set the standby mode to [NETWORK STANDBY].
- HDMI output of this projector does not output signals from following inputs.
- -Composite video: Computer, BNC, BNC(CV)
- -BNC(Y/C): S-Video

Connecting the Blu-ray Player or Other AV Equipment

Component video signal/S-video signal connection



[A]: BNC (CV) IN

[B]: BNC (Y) IN

[C]: BNC (C) IN

[D]: AUDIO IN

[E]: BNC cable (not supplied)

[F]: Audio cable (not supplied)

[G]: Audio cable (not supplied)

[H]: Audio equipment

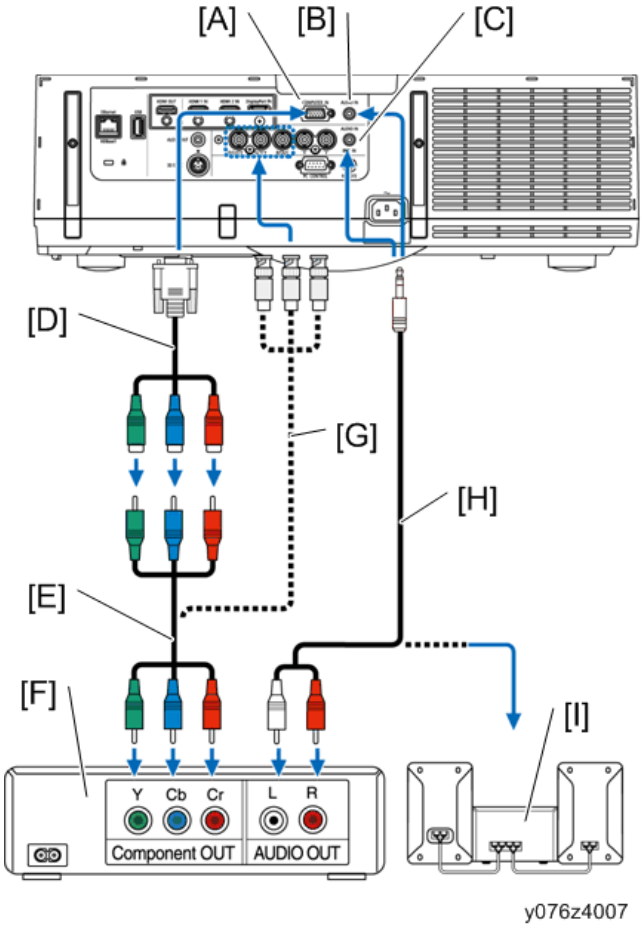
Select the source name for its appropriate input connector after turning on the projector.

Input connector	Input button on the projector cabinet	Button on the remote control
BNC (CV) IN	BNC (CV)	BNC (CV)
BNC (Y/C) IN	BNC (Y/C)	BNC (Y/C)

Note

- The BNC (analog RGB/component), BNC (CV) and BNC (Y/C) audio input terminals are shared.

Connecting Component Input



[A]: COMPUTER IN

[B]: AUDIO IN

[C]: AUDIO IN

[D]: 15-pin - to - RCA (female) × 3 cable adapter (sold commercially)

[E]: Component video RCA × 3 cable (not supplied)

[F]: Blu-ray player

[G]: BNC (male) - to - RCA (male) conversion cable × 3 (sold commercially)

[H]: Stereo mini plug - to - RCA audio cable (not supplied)

[I]: Audio Equipment

Select the source name for its appropriate input connector after turning on the projector.

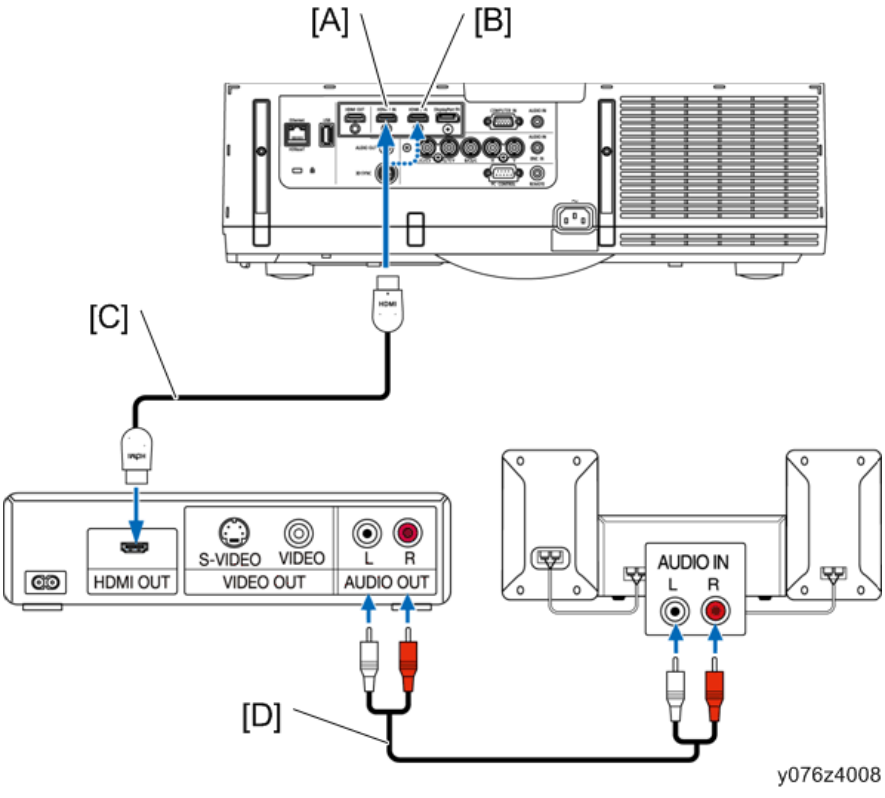
Input connector	Input button on the projector cabinet	Button on the remote control
COMPUTER IN	COMPUTER	COMPUTER
BNC IN	BNC	BNC

Note

- When the signal format is set to [AUTO] (default factory setting when shipped), the computer signal and component signal are automatically distinguished and switched. If the signals cannot be distinguished, select [COMPONENT] under [ADJUST] → [VIDEO] → [SIGNAL TYPE] in the on-screen menu of the projector.
- To connect to a video device with a 15-pin D-sub connector, use a component video to VGA 15-pin D-sub adapter (commercially available).

Connecting HDMI Input

Connect the HDMI output of the Blu-ray player, hard disk player, or notebook type PC to the HDMI 1 IN or HDMI 2 IN connector of the projector.



[A]: HDMI 1 IN

[B]: HDMI 2 IN

[C]: HDMI cable (not supplied) (Use High Speed HDMI® Cable)

[D]: Audio cable (not supplied)

Input connector	Input button on the projector cabinet	Button on the remote control
HDMI 1 IN	HDMI 1	HDMI 1
HDMI 2 IN	HDMI 2	HDMI 2

Note

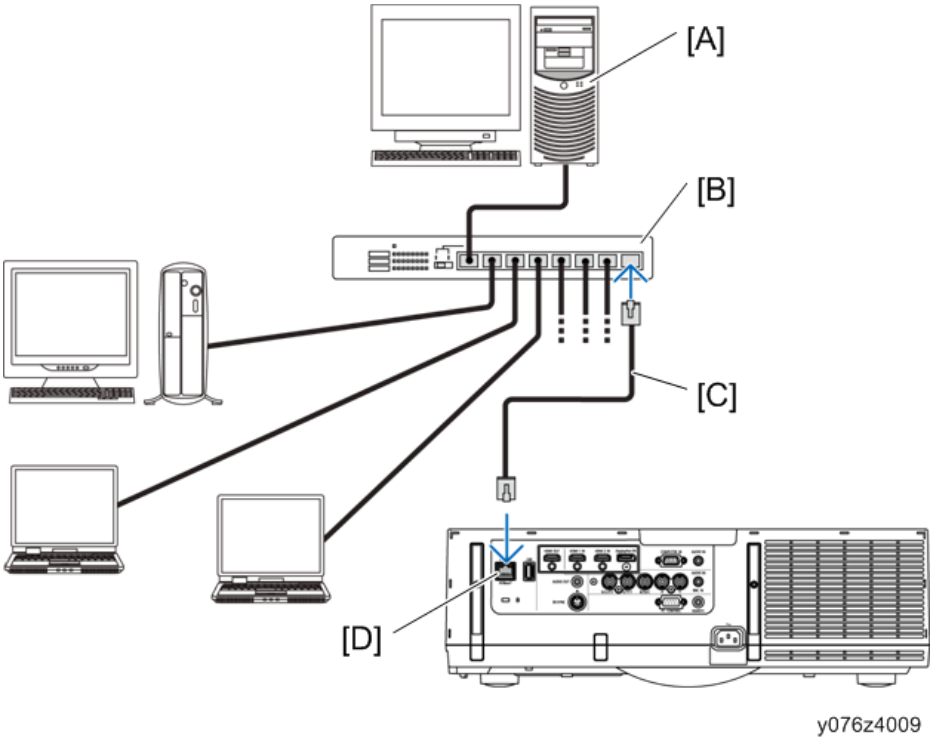
- For users of audio video equipment with an HDMI connector:
- Select “Enhanced” rather than “Normal” if HDMI output is switchable between “Enhanced” and “Normal”.
- This will provide improved image contrast and more detailed dark areas.
- For more information on settings, refer to the instruction manual of the audio video equipment to be connected.

- When connecting the HDMI 1 IN or HDMI 2 IN connector of the projector to the Blu-ray player, the projector's video level settings can be made in accordance with the Blu-ray player's video level. In the menu, select [ADJUST] → [VIDEO] → [VIDEO LEVEL] and make the necessary settings.
- If the HDMI input sound cannot be heard, in the menu select [AUDIO SELECT] → [HDMI1] or [HDMI2].
- If the HDMI input's sound is not output, check that [SOURCE OPTIONS] → [AUDIO SELECT] → [HDMI1] or [HDMI2] on the projector's on-screen menu is set to "HDMI".

Connecting to a Wired LAN

The projector comes standard with an Ethernet port (RJ-45) which provides a LAN connection using a LAN cable. To use a LAN connection, it is required to set up the LAN using the projector menu. Select [SETUP] → [NETWORK SETTINGS] → [WIRED LAN].

Example of LAN connection



[A]: Server

[B]: Hub

[C]: LAN cable (not supplied) (Use a Category 5 or higher LAN cable.)

[D]: Ethernet

5. Troubleshooting

LED Display

Indicator Messages

Power Indicator

Indicator display		Projector status	Procedure
Off		Power is off.	–
Flashing	Blue (short flashes)	Preparing to turn power on	Wait a while.
	Blue (long flashes)	Off timer (enabled) Program timer (off time enabled)	–
	Orange (short flashes)	Projector cooling	Wait a while.
	Orange (long flashes)	Program timer (on time enabled)	–
Lit	Blue	Power on	–
	Red	Standby mode (NORMAL)	–
	Orange	Standby mode (NETWORK STANDBY)	–

Status Indicator

Indicator display	Projector status	Procedure
Off	No problem, or standby mode	–

Flashing	Red (cycles of 1)	Cover problem	The lamp cover is not properly mounted. Mount it properly.
			The POSW connector is pulled out. Make sure that the PCB EX and PCB Lamp Interlock connectors are connected correctly.
			The POEX connector is pulled out. Make sure that the PCB Main Ass'y and PCB EX connectors are connected correctly.
Flashing	Red (cycles of 4)	Fan problem	The cooling fan has stopped turning. Replace the cooling fan.
			Foreign object stuck in the Fan. Remove the foreign object.
			The POFAN1 connector is pulled out. Make sure that the PCB Main Ass'y and PSU Fan connectors are connected correctly.
			The POFAN2 connector is pulled out. Make sure that the PCB Main Ass'y and B-LCD Fan connectors are connected correctly.
			The POFAN3 connector is pulled out. Make sure that the PCB Main Ass'y and G-LCD Fan connectors are connected correctly.

Flashing	Red (cycles of 4)	Fan problem	The POFAN4 connector is pulled out. Make sure that the PCB Main Ass'y and R-LCD Fan connectors are connected correctly.
			The POFAN5 connector is pulled out. Make sure that the PCB EX and Lamp Fan connectors are connected correctly.
			The POFAN6 connector is pulled out. Make sure that the PCB EX and IRIS Fan connectors are connected correctly.
			The POFAN7 connector is pulled out. Make sure that the PCB EX and Reflector Fan connectors are connected correctly.
			The POFAN8 connector is pulled out. Make sure that the PCB Main Ass'y and Exhaust Fan connectors are connected correctly.
			The POEX connector is pulled out. Make sure that the PCB Main Ass'y and PCB EX connectors are connected correctly.
Flashing	Orange	Network conflict	It is not possible to connect the projector's built-in LAN and wireless LAN simultaneously to the same network. To connect the projector's built-in LAN and wireless LAN simultaneously, connect them to different networks.
Lit	Green	Standby mode in sleep mode*	–
	Orange	Button has been pressed while projector is in key lock mode	The projector's keys are locked. The setting must be canceled to operate the projector.
		Projector's ID number and remote control's ID number do not match	Check the control IDs.

* Sleep mode refers to the state whereby the functional restrictions due to the standby mode setting are removed.

Lamp Indicator

Indicator display		Projector status	Procedure
Off		The lamp is turned off.	–
Flashing	Green	Preparing to relight lamp after lighting has failed	Wait a while.
	Red	Lamp replacement grace period	The lamp has reached the end of its service life and is now in the replacement grace period (100 hours). Replace the lamp as soon as possible.
	Red (cycles of 6)	Lamp does not light	The lamp has not turned on. Wait at least 1 minute, then turn the power back on. If the lamp still does not light, refer to the "Troubleshooting Guide".
			The lamp is damaged. Replace the lamp.
			The POLM connector is pulled out. Make sure that the PCB Main Ass'y and Power supply-ballast connectors are connected correctly.
Lit	Red	Lamp usage time exceeded	The lamp has exceeded its usage time. The projector's power cannot be turned on until the lamp is replaced.
	Green	Lamp lit	–

Temp. Indicator

Indicator display	Projector status	Procedure
Off	No problem	

Flashing	Red (cycles of 2)	Temperature problem	The temperature protector has been activated. If the room temperature is high, move the projector to a cool place. If the problem still persists, refer to the "Troubleshooting Guide".
			The POBM connector is pulled out. Make sure that the Thermostat and PCB EX connectors are connected correctly.
			The POEX connector is pulled out. Make sure that the PCB Main Ass'y and PCB EX connectors are connected correctly.
			The POTH1 connector is pulled out. Make sure that the PCB Main Ass'y and TH1 connectors are connected correctly.
			The POTH3 connector is pulled out. Make sure that the PCB Main Ass'y and TH3 connectors are connected correctly.
Lit	Orange	High surrounding temperature	The surrounding temperature is high. Lower the room temperature.

If the temperature protector is activated

If the projector's internal temperature rises abnormally, the lamp turns off and the temperature indicator flashes (repeatedly in cycles of 2).

It may happen that the projector's temperature protector is simultaneously activated and the projector's power turns off. If this happens, do the following:

- Unplug the power cord from the power outlet.
- If using in a place where the surrounding temperature is high, move the projector to a different, cool place.
- If there is dust in the ventilation holes, clean.
- Wait as such about 1 hour for the projector's internal temperature to lower.

Service Mode

Mode change

How to enter the Expert Mode

When an accessory remote control is used:

- In the state of Power ON, press the keys in the order of [Help] → [▲] → [◀] → [Help].
- Press the [Menu] key to display the menu and confirm that the conditions of [EXPERT] have been obtained.

How to enter the Service Mode

- In the state of Power ON, press the keys of [Help] → [Enter] → [Help] → [Enter] → [Help] → [Enter] → [Menu] for 3 seconds. Then, the [Password] menu is displayed.
- Press the select keys in the order of [▲] → [▶] → [◀] → [▶] → [▶] → [▶] → [▲] → [▲] → [Enter].
- Press the [Menu] key to display the menu and confirm that the conditions of [Service] have been obtained.

Additional functions

Menus and functions to be added by the Expert Mode

Difference in the menu screen and its functions

- [INPUT] – [9:USB-A]
  – Display of [CHECK PATTERN]
- [INPUT] – [8:ETHERNET]
  – [IMAGE EXPRESS UTILTY]
  – Setup of [ADVANCED]
  – [DESKTOP CONTROL UTILTY]
  – Setup of [ADVANCED]
  – [Setup of [PING]
- [INPUT] – [8:ETHERNET] – [NETWORK SETTINGS (MM)] – [WIRELESS LAN] – [ADVANCED]
  – Setup of [MODE(2.4GHz)]
  – Setup of [COMMUNICATION SPEED]
- [INPUT] – [8:ETHERNET] – [NETWORK SETTINGS (MM)]

  – Setup of [FIREWALL]
- [INPUT] – Setup of [TEST PATTERN2]
- [ADJUST] – [3D SETTINGS]
  – Setup of [3D SYNC TIMING]
- [ADJUST] – [EXPERT1]
  – Adjustment of [R/Cr-GAIN]
  – Adjustment of [G/Yr-GAIN]
  – Adjustment of [B/Cb-GAIN]
  – Adjustment of [R/Cr-OFFSET]
  – Adjustment of [G/Yr-OFFSET]
  – Adjustment of [B/Cb-OFFSET]
- [ADJUST] – [EXPERT2]
  – Setup of [SYNC SLICER]
  – Setup of [CLAMP TIMING]
  – Adjustment of [VIDEO FILTER]
- [ADJUST] – [EXPERT3]
  – Adjustment of [Y/C DELAY]
  – Adjustment of [YTR ADJUSTMENT]
  – Adjustment of [CTR ADJUSTMENT]
  – Adjustment of [COLOR MATRIX]
  – Adjustment of [SYNCHRONIZE]
- [SETUP] – [NETWORK SETTINGS] – [NETWORK SERVICE]
  – [HTTP SERVER]
  – Setup of [PORT]
  – Execute of [INITIALIZE]
  – [PJLink]
  – Setup of [PORT]
  – Execute of [INITIALIZE]
  – [CRESTRON]
  – Setup of [PORT]
  – Execute of [INITIALIZE]
  – Setup of [SNMP]
  – Setup of [PC CONTROL]

– Setup of [SEARCH]

- [SETUP] – [NETWORK SETTINGS]
  – Setup of [FIREWALL]
  – Setup of [PING]
- [SETUP] – [POWER OPTIONS]
  – Setup of [STANDBY MODE SETTING]
- [SETUP] – [EXPERT]
  – Setup of [POWER OFF CONFIRMATION]
  – Setup of [SYNC TERMINATOR (BNC)]
  – Setup of [DIGITAL EQULIZER]
  – Setup of [EDGE BLENDING (TOOL)]
- [INFO.] – [USAGE TIME]
  – Display of [PROJECTOR HOURS USED]
- [INFO.] – [VERSION(1)]
  – Display of [BIOS]
  – Display of [FIRMWARE2]
  – Display of [HARDWARE1/2/3]
- [INFO.] – [VERSION(2)]
  – Display of [BIOS(MM)]
  – Display of [BOOTLOADER(MM)]

Factory reset

- When [SETUP] – [RESET] – [ALL DATA (INCLUDING ENTRY LIST)] – [YES] is carried out in Expert Mode, all adjustments and setup values including the contents of registration data in the entry list are restored to the status of factory shipment.
- The data restored to the status of factory shipment as a result of factory reset are all data other than [LANGUAGE], [BACKGROUND], [FILTER MASSAGE], [SCREEN TYPE], [GEOMETRIC CORRECTION], [EDGE BLENDING], [MULTI SCREEN], [ADMINISTRATOR MODE], [DATE AND TIME SETTINGS], [NETWORK SETTING], [CONTROL PANEL LOCK], [SECURITY], [CONTROL ID], [COMMUNICATION SPEED], [STANDBY MODE], [FAN MODE], [LAMP LIFE REMAINING], [LAMP HOURS USED], [FILTER HOURS USED], [TOTAL CARBON SAVINGS] and [PROJECTOR HOURS USED].

Menus and functions to be added by the Service Mode

Difference in the menu screen and its functions

- [INPUT] – [9:USB-A]

– Display of [CHECK PATTERN]

- [INPUT] – [8:ETHERNET]
  – [IMAGE EXPRESS UTILTY]
  – Setup of [ADVANCED]
  – [DESKTOP CONTROL UTILTY]
  – Setup of [ADVANCED]
  – Setup of [PING]
- [INPUT] – [8:ETHERNET] – [NETWORK SETTINGS (MM)] – [WIRELESS LAN] – [ADVANCED]
  – Setup of [MODE(2.4GHz)]
  – Setup of [COMMUNICATION SPEED]
- [INPUT] – [8:ETHERNET] – [NETWORK SETTINGS (MM)]
  – Setup of [FIREWALL]
- [INPUT] – Setup of [TEST PATTERN2]
- [ADJUST] – [3D SETTINGS]
  – Setup of [3D SYNC TIMING]
- [ADJUST] – [EXPERT1]
  – Adjustment of [R/Cr-GAIN]
  – Adjustment of [G/Yr-GAIN]
  – Adjustment of [B/Cb-GAIN]
  – Adjustment of [R/Cr-OFFSET]
  – Adjustment of [G/Yr-OFFSET]
  – Adjustment of [B/Cb-OFFSET]
- [ADJUST] – [EXPERT2]
  – Setup of [SYNC SLICER]
  – Setup of [CLAMP TIMING]
  – Adjustment of [VIDEO FILTER]
- [ADJUST] – [EXPERT3]
  – Adjustment of [Y/C DELAY]
  – Adjustment of [YTR ADJUSTMENT]
  – Adjustment of [CTR ADJUSTMENT]
  – Adjustment of [COLOR MATRIX]
  – Adjustment of [SYNCHRONIZE]
- [SETUP] – [NETWORK SETTINGS] – [NETWORK SERVICE]

  - [HTTP SERVER]
  - Setup of [PORT]
  - Execute of [INITIALIZE]
  - [PJLink]
  - Setup of [PORT]
  - Execute of [INITIALIZE]
  - [CRESTRON]
  - Setup of [PORT]
  - Execute of [INITIALIZE]
  - Setup of [SNMP]
  - Setup of [PC CONTROL]
  - Setup of [SEARCH]
- [SETUP] – [NETWORK SETTING]
  - Setup of [FIREWALL]
  - Setup of [PING]
- [SETUP] – [POWER OPTIONS]
  - Setup of [STANDBY MODE SETTING]
- [SETUP] – [RESET]
  - Execute of [CLEAR PANEL HOURS]
- [SETUP] – [EXPERT]
  - Setup of [POWER OFF CONFIRMATION]
  - Setup of [SYNC TERMINATOR (BNC)]
  - Setup of [DIGITAL EQULIZER]
  - Setup of [EDGE BLENDING (TOOL)]
  - Setup of [COLOR UNIFORMITY]
  - Execute of [G-SENSOR CALIBLATION]
- [INFO.] – [USAGE TIME]
  - Display of [PROJECTOR HOURS USED]
  - Display of [PANEL HOURS USED]
  - Display of [PORTRAIT USED]
- [INFO.] – [VERSION(1)]
  - Display of [BIOS]
  - Display of [FIRMWARE2]

– Display of [HARDWARE1/2/3]

- [INFO.] – [VERSION(2)]

  – Display of [BIOS(MM)]

  – Display of [BOOTLOADER(MM)]

- [INFO.] – [CONDITONS]

  – Display of [FAN CONTROL MODE]

Factory reset

- When [SETUP] – [RESET] – [ALL DATA (INCLUDING ENTRY LIST)] – [YES] is carried out in Service Mode, the language is changed to [ENGLISH] and the language select screen of [LANGUAGE] is displayed.
- This display continues to remain until any required language is selected or each time input signal changeover is carried out.
- The data restored to the status of factory shipment as a result of factory reset are all data other than [SECURITY], [STANDBY MODE], [DATE AND TIME SETTINGS], [LAMP LIFE REMAINING], [LAMP HOURS USED], [FILTER HOURS USED], [PROJECTOR HOURS USED], [PANEL HOURS USED] and [TOTAL CARBON SAVINGS].

How to withdraw from the mode

- The previous status is recovered when the [Exit] key is pressed in the state that no menu is displayed.
- The previous status is also recovered when the [Standby] key is pressed to recover the standby condition and starting is performed subsequently.

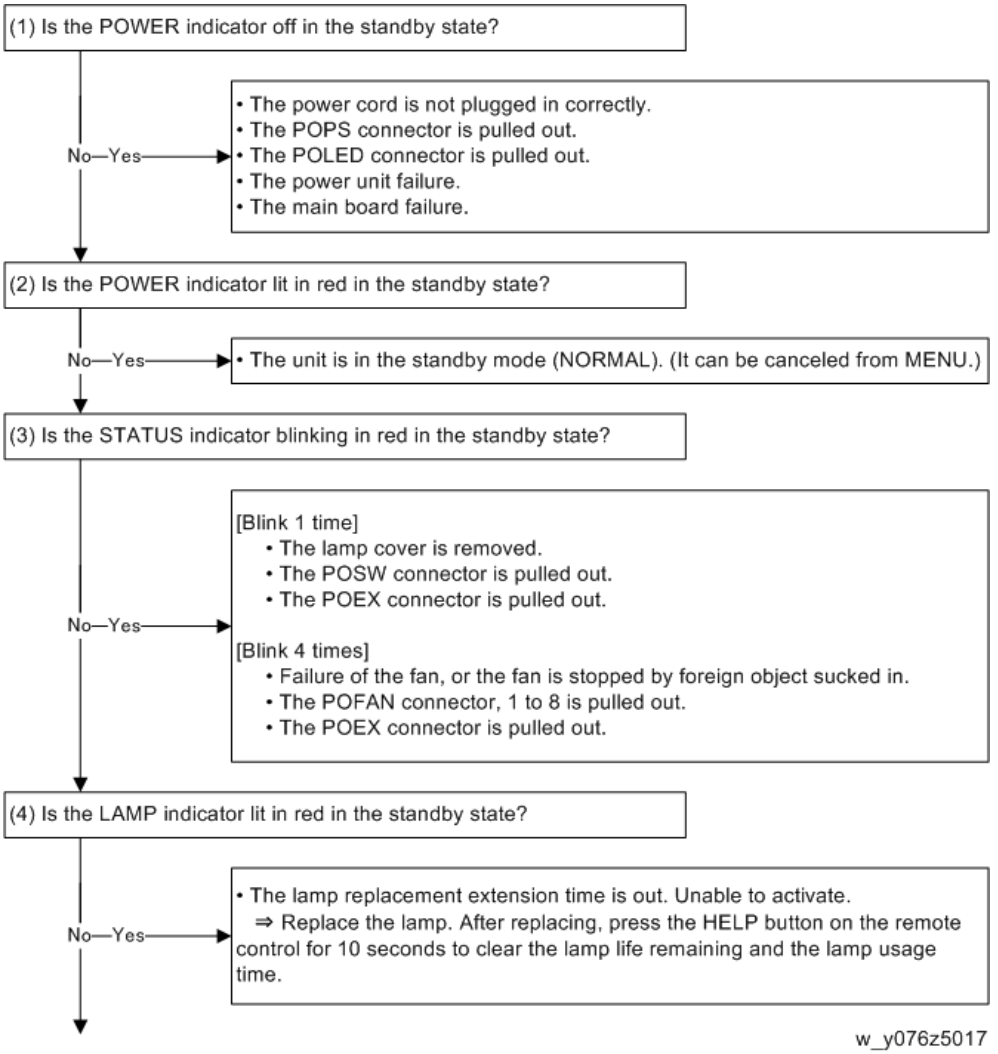
Troubleshooting Guide

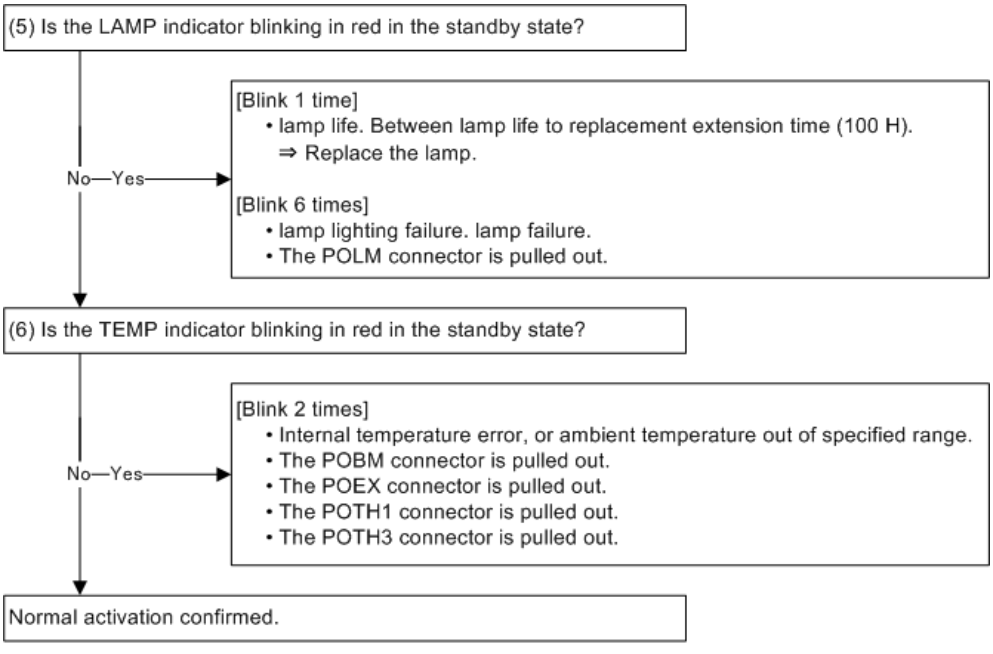
Operation Check for the Main Board

It is possible to conduct a certain level of fault diagnosis in normal state of operation check.

Before removing the top cover, check the indicator.

Do the operation check after pulling out any cables other than the power cord.

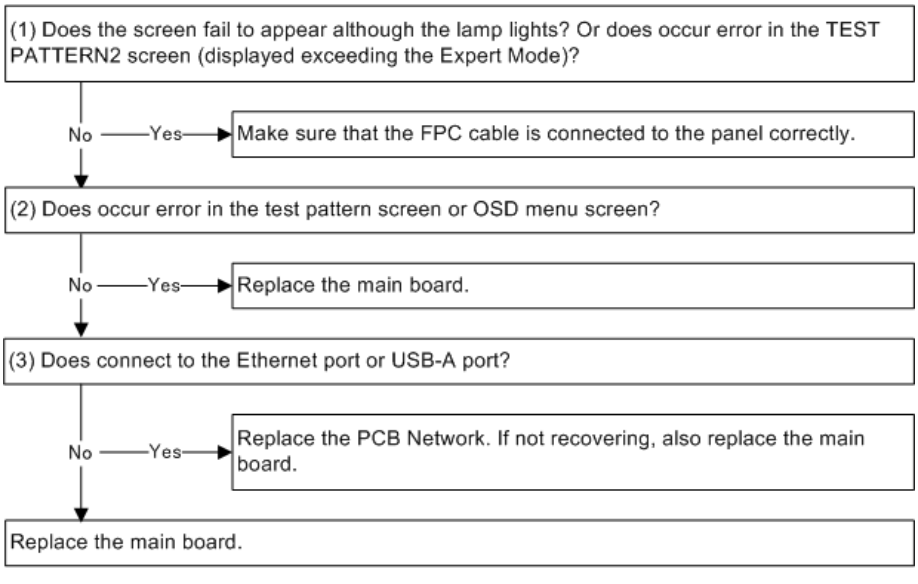




w_y076z5018

For Video

Perform the following check after powering ON the projector.

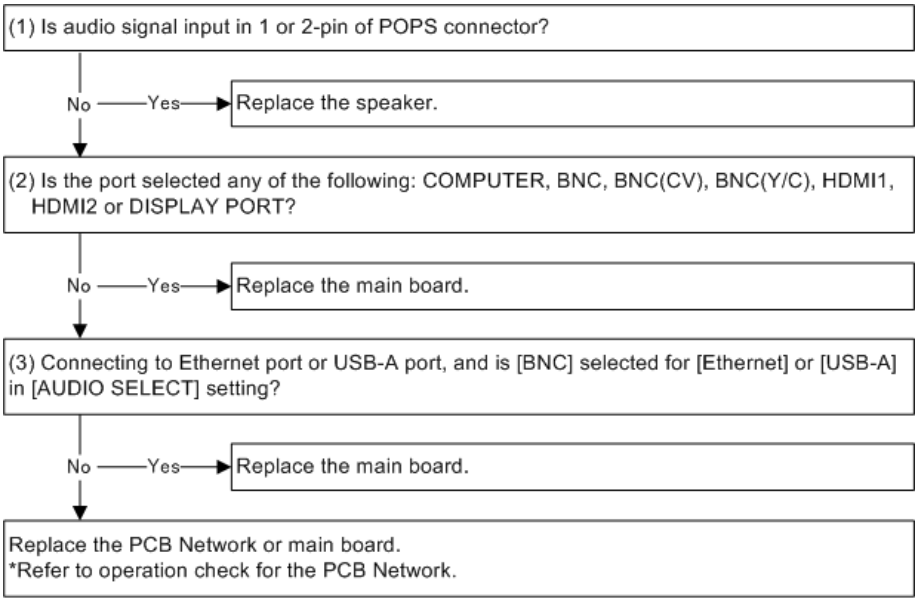


w_y076z5019

For Audio

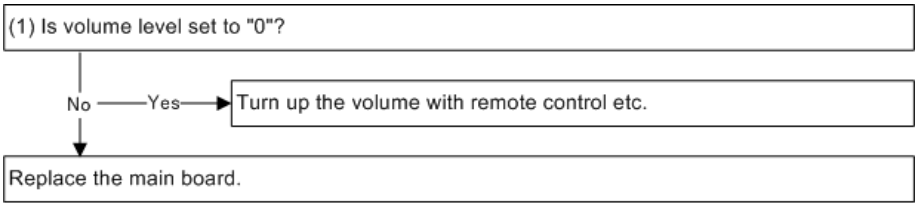
Perform the following check after powering ON the projector.

1. No sound from a speaker



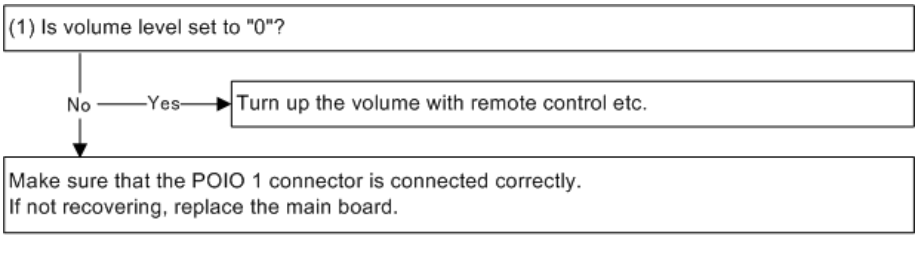
w_y076z5020

2. Failure to output sound to an external device (HDMI OUT)



w_y076z5021

3. Failure to output sound to an external device (AUDIO OUT)



w_y076z5022

For Multi Media

- The wired LAN, wireless LAN or USB function does not work.

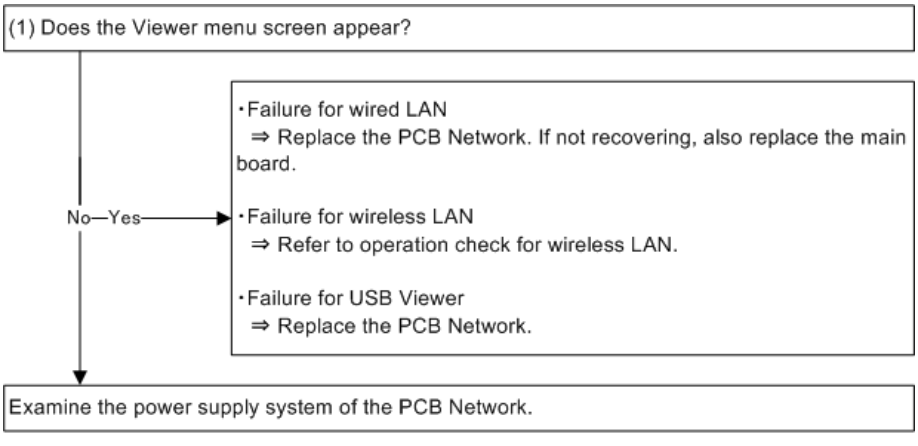
  → Refer to operation check for the PCB Network. (page 141)

- The time settings are not saved.

  → Replace the main board.

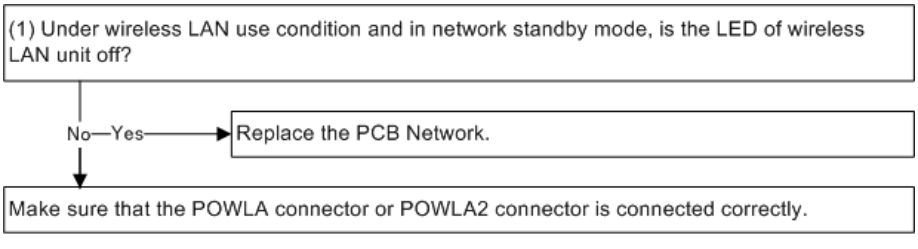
Operation Check for the PCB Network

Perform the following check after powering ON the projector.



w_y076z5023

Check for wireless LAN



w_y076z5024

Error Log

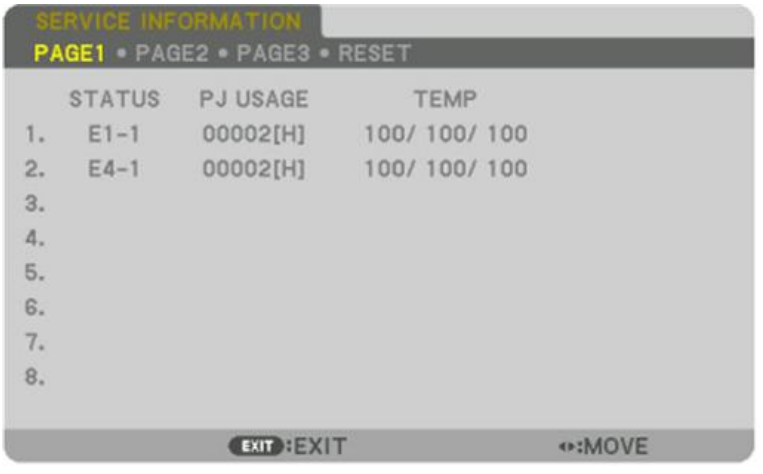
Error Log Screen Image

Displaying the error log screen

To display the error log screen, press and hold the [MENU] button for five seconds or more in user, expert, or service mode.

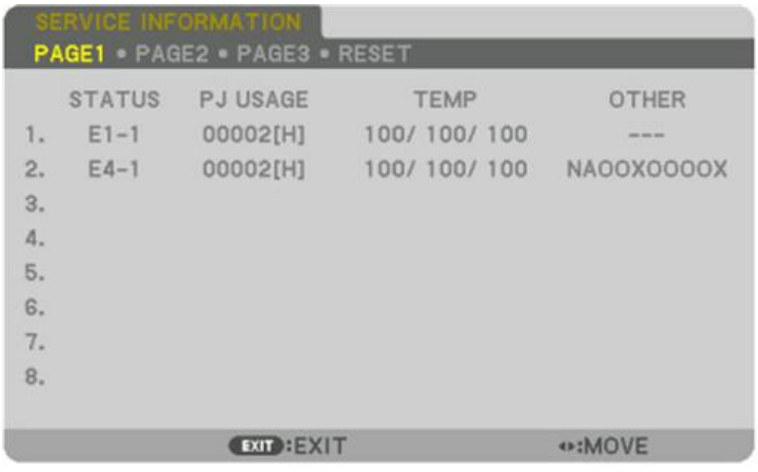
Service Information: Page-1

User mode / Expert mode



y076z5001

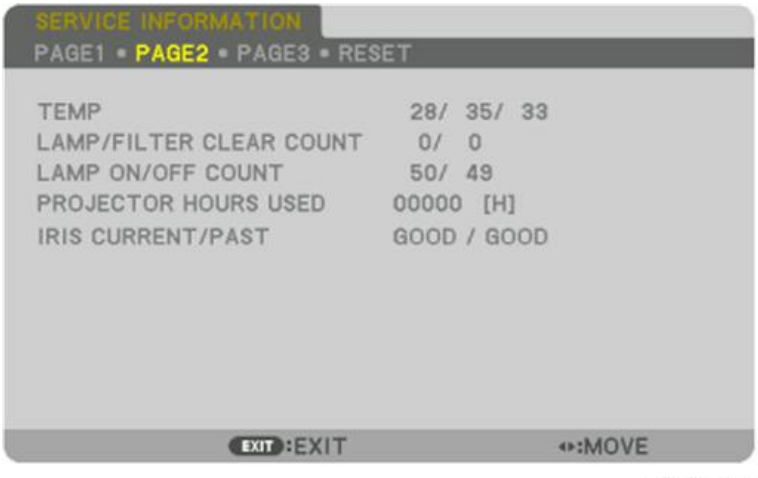
Service mode: Display of other areas added



y076z5002

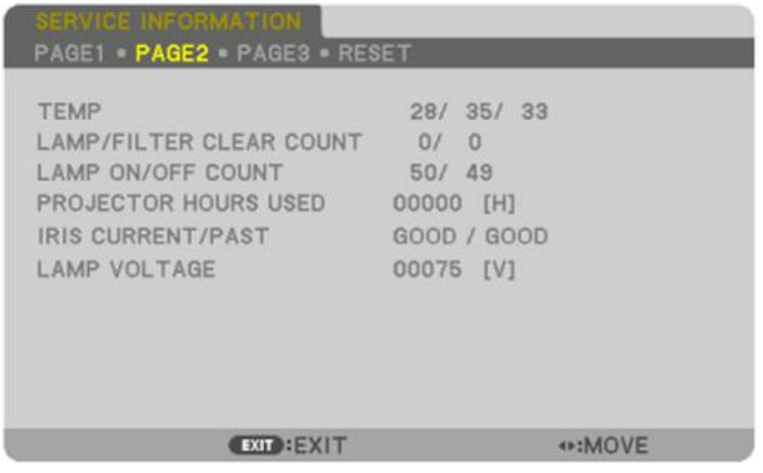
Service Information: Page-2

User mode / Expert mode



y076z5003

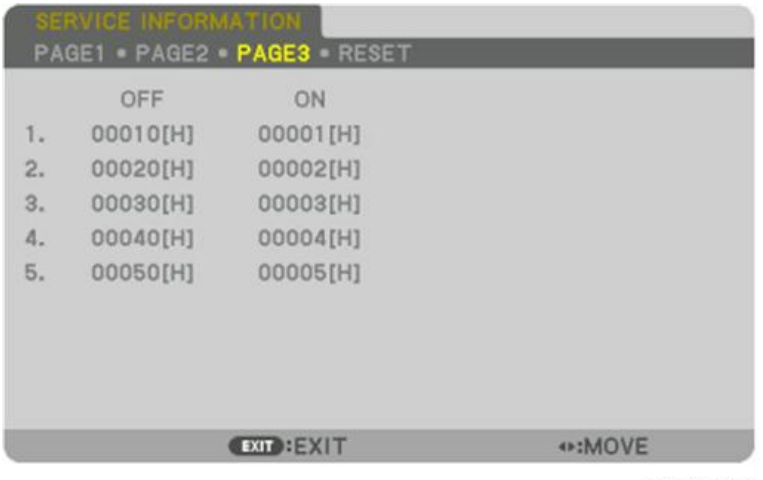
Service mode: Display of lamp voltage added



y076z5004

Service Information: Page-3

Not related to the menu mode



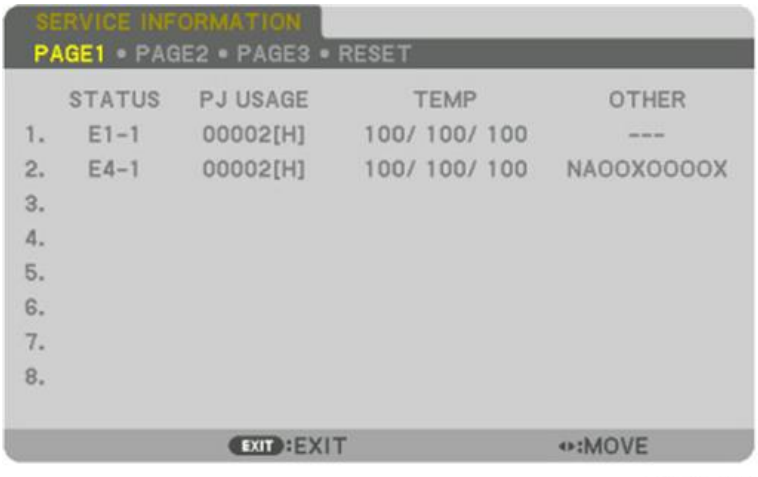
y076z5005

Service Information: Reset

Not related to the menu mode

y076z5006

Contents of Error Log (Page1) Display



y076z5002

* Cleared with All Data Reset from the service menu.

Status Columns

List of Phenomena caused by Power OFF due to Errors

Display symbol	Meaning	Details	Possible cause
E1-1	Status LED blinking once	Cover malfunction	Lamp cover

Display symbol	Meaning	Details	Possible cause
E1-2	Status LED blinking once	Mirror (M4) cover malfunction	Mirror cover
E2-1	Status LED blinking twice	Temperature error	Bimetal error
E2-2	Status LED blinking twice	Temperature error	Thermal error
E2-3	Status LED blinking twice	Temperature error	Optical path temperature error
E3-1	Status LED blinking 3 times	Power source error	Nil
E4-1	Status LED blinking 4 times	Fan stop	Nil
E4-2	Status LED blinking 4 times	Super-capacitor error	Nil
E6-1	Status LED blinking 6 times	Lamp failure in lighting (except communication error)	Lamp
E6-2	Status LED blinking 6 times	DMD error	DMD, C/W
E6-3	Status LED blinking 6 times	Lamp failure in lighting (communication error)	Ballast / connector
E8-1	Status LED blinking 8 times	Pump error	Nil
E9-1	Status LED blinking 9 times	Iris error (calibration)	Iris

PJ Usage Columns

Display of projector usage time (Projector Hours Used) when an error emerges

TEMP Columns

Display of temperature information when an error emerges

In the order of [Suction Air], [Exhaust Air 1] and [Exhaust Air 2] from left to right.

Other Columns

* Display of Service Menu only

Display can differ according to the error phenomenon arising.

- For Fan error

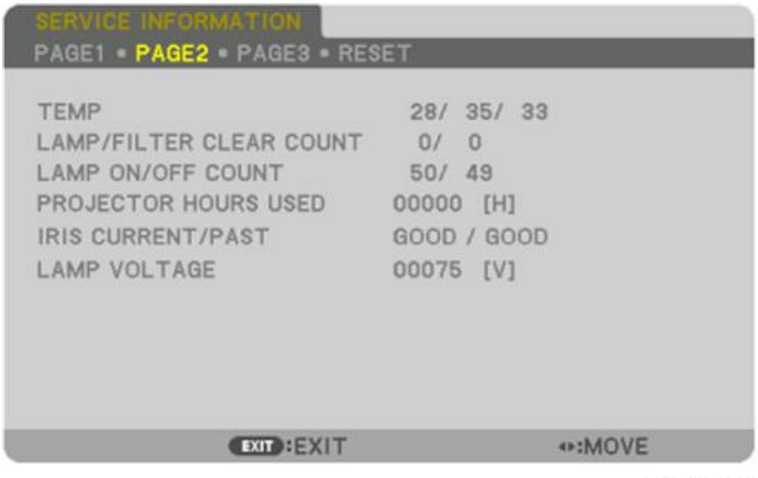
Symbol consisting of 2 alphanumerical characters plus the number of fans (8 for Plato)

Eco mode (1 character)	Normal	“N”
	Eco	“E”
Fan mode (1 character)	Auto	“A”
	High	“H”
	Altitude	“T”
Error Fan (8 characters)	Normal	“O”
	Error	“X”

- For other errors

  No particular indications

Contents of Error Log (Page2) Display



y076z5004

TEMP Columns

Present temperature information is displayed.

In the order of [Suction Air], [Exhaust Air 1] and [Exhaust Air 2] from left to right.

Lamp/Filter Clear Count

The number of reset actions is displayed in regard to Lamp Usage / Filter Usage.

Displayed in the order of [No. of reset actions for Lamp Usage] and [No. of reset actions for Filter Usage].

Cleared with All Data Reset from the Service menu.

Lamp ON/OFF Count

The number of user's lamp ON/OFF actions is displayed.

Initialized with Reset – Clear Lamp Hours.

Projector Hours Used

Present Projector Hours Used is displayed.

The same as Projector Hours Used displayed in the Expert menu.

Iris Current/Past

Displays whether an iris calibration error occurred.

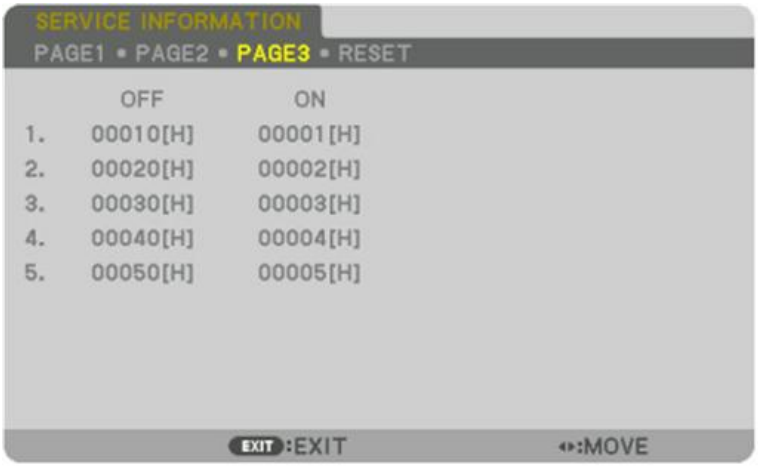
Displayed in the order of [Whether error occurred in this time] and [Whether error occurred in the past].

[GOOD] means no error, [FAIL] means an error occurred.

Lamp Voltage: Indicated exceeding the Service Power

The present status of lamp ballast voltage is displayed.

Contents of Error Log (Page3) Display

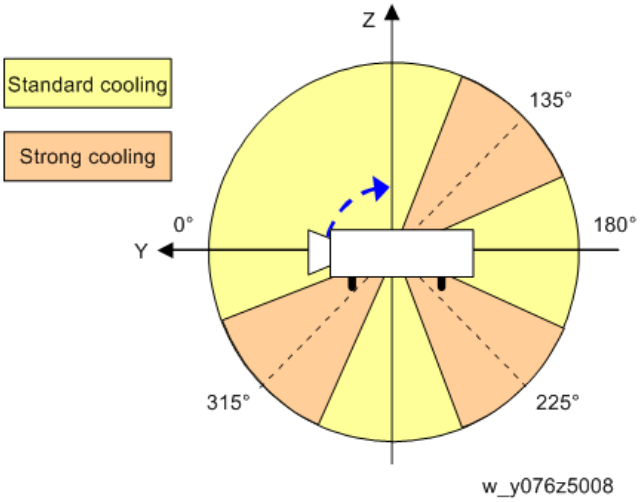


y076z5005

Display of projector usage time by tilt angle.

OFF/ON means setting of Eco mode.

1. Tilt angle for standard cooling: increases when installing at other than a tilt angle of [2.] or [4.].
2. Tilt angle for strong cooling: increases when installing the projector at 135 degrees, 225 degrees or 315 degrees.
3. Tilt angle for weak cooling: no increase
4. Portrait: increases when installing in vertical orientation.
5. No definition: no increase



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Contents of Error Log (Reset) Display

y076z5006

ALL DATA

All Data Reset is executed according to the User Menu mode.

MEMO

MEMO

Model Sirius-PJ2

Machine Codes:
Y076/Y077/Y078

Appendices

June, 2015

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1. Appendix: Specifications

General Specifications

List of General Specifications

Item		Specification
Model name		PJ WU6181N/WX6181N/X6181N
Method		Three primary color liquid crystal shutter projection method
Specifications of main parts		
Liquid crystal panel	Size	X6181N: 0.79" (with MLA) × 3 (aspect ratio: 4:3) WX6181N: 0.76" (with MLA) × 3 (aspect ratio: 16:10) WU6181N: 0.76" (with MLA) × 3 (aspect ratio: 16:10)
	Pixels (*1)	X6181N: 786,432 (1024 dots × 768 lines) WX6181N: 1,024,000 (1280 dots × 800 lines) WU6181N: 2,304,000 (1920 dots × 1200 lines)
Projection lenses	Zoom	Manual (zoom range depends on lens)
	Focus	Manual
	Lens shifting	Manual
Light source		350 W AC lamp (264 W when Eco mode is on)
Optical device		Optical isolation by dichroic mirror, combining by dichroic prism
Light output (*2) (*3)		ECO OFF: X6181N : 7200 lm, WX6181N: 6700 lm, WU6181N: 6200 lm
Contrast ratio (*2) (all white/all black)		6000:1
Screen size (throw distance)		30" to 500" (throw distance depends on lens)
Color reproducibility		10-bit color processing (approx. 1.07 billion colors) (*4)
Audio output		Built-in 10W monaural speaker

Item		Specification
Scanning frequency	Horizontal	Analog: 15 kHz, 24 to 100 kHz (24 kHz or greater for RGB inputs), conforming to VESA standards Digital: 15 kHz, 24 to 153 kHz, conforming to VESA standards
	Vertical	Analog: 48 Hz, 50 to 85 Hz, 100, 120 Hz conforming to VESA standards Digital: 24, 25, 30, 48 Hz, 50 to 85 Hz, 100, 120 Hz conforming to VESA standards
Main adjustment functions		Manual zoom, manual focus, manual lens shift, input signal switching (HDMI1/HDMI2/Display- Port/BNC/BNC(CV)/BNC(Y/C)/COMPUTER/ETHERNET), auto image adjustment, picture enlarging, picture position adjustment, muting (both video and audio), power on/standby, on-screen display/selection, etc.
Max. display resolution (horizontal × vertical)		Analog: 1920 × 1200 (handled with Advanced AccuBlend) Digital: 4096 × 2160 (handled with Advanced AccuBlend)

Item		Specification
Input signals	R,G,B,H,V	RGB: 0.7Vp-p/75Ω
		Y: 1.0Vp-p/75Ω (with Negative Polarity Sync)
		Cb, Cr (Pb, Pr): 0.7Vp-p/75Ω
		H/V Sync: 4.0Vp-p/TTL
		Composite Sync: 4.0Vp-p/TTL
		Sync on G: 1.0Vp-p/75Ω (with Sync)
	Composite video	1.0Vp-p/75Ω
	S-Video	Y: 1.0Vp-p/75Ω
		C: 0.286Vp-p/75Ω
	Component	Y: 1.0Vp-p/75Ω (with Sync)
		Cb, Cr (Pb, Pr): 0.7Vp-p/75Ω
		DTV: 480i, 480p, 720p, 1080i, 1080p (60Hz) 576i, 576p, 720p, 1080i (50Hz)
		DVD: Progressive signal (50/60Hz)
Audio		0.5Vrms/22kΩ or greater

Item		Specification
Input/output connectors		
Computer/ Component	Video input	Mini D-Sub 15-pin × 1, BNC connector × 5
	Audio input	Stereo mini jack × 2
	Audio output	Stereo mini jack × 1 (common for all signals)

Item		Specification
HDMI	Video input	HDMI® Connector type A × 2 Deep Color (color depth): 8-/10-/12-bit compatible Colorimetry: RGB, YcbCr444 and YcbCr422 compatible LipSync compatible, HDCP compatible (*5), Supports 4K and 3D
	Video output	Repeater
	Audio input	HDMI: Sampling frequency - 32/44.1/48 kHz, Sampling bits - 16/20/24 bits
DisplayPort	Video input	DisplayPort × 1 Data rate: 2.7Gbps/1.62Gbps No. lanes: 1 lane/2 lanes/4 lanes Color depth: 6-bit, 8-bit, 10-bit Colorimetry: RGB, YcbCr444 and YcbCr422 compatible HDCP compatible (*5)
	Audio input	DisplayPort: Sampling frequency - 32/44.1/48 kHz, Sampling bits - 16/20/24 bits
BNC (CV)	Video input	BNC × 1
	Audio input	(shared with the BNC, BNC (CV), BNC (Y/C) audio input terminals)
BNC (Y/C)	Video input	BNC × 2
	Audio input	(shared with the BNC, BNC (CV), BNC (Y/C) audio input terminals)
PC control connector		D-Sub 9-pin × 1
USB port		USB type A × 1
USB port for wireless LAN		USB type A × 1
Ethernet port		RJ-45 × 1, 10/100 BASE
Remote connector		Stereo mini jack × 1
3D SYNC output terminal		5 V / 10 mA, synchronized signal output for 3D use

Item		Specification
Usage environment		Operating temperature: 41 to 104°F (5 to 40°C) (*6) Operating humidity: 20 to 80% (with no condensation)
		Storage temperature: 14 to 122°F (-10 to 50°C) Storage humidity: 20 to 80% (with no condensation)
		Operating altitude: 0 to 3650 m/12000 feet (1700 to 3650 m/5500 to 12000 feet: Set [FAN MODE] to [HIGH ALUTITUDE])
Power supply		100-240 V AC, 50/60Hz
Power consumption	Eco mode off	483 W (100-130 V)/460W (200-240 V)
	Eco mode on	377 W (100-130 V)/362 W (200-240 V)
	Standby	Normal : 0.11 W (100-130 V)/0.16 W (200-240 V) Network standby: 7.4 W (100-130 V)/4.9 W (200-240 V)
Rated input current		5.5A - 2.2A
External dimensions		19.7" (width) × 5.68" (height) × 14.1" (depth)/499 (width) × 142 (height) × 359 (depth) mm (not including protruding parts) 19.7" (width) × 6.38" (height) × 14.5" (depth)/499 (width) × 162 (height) × 368 (depth) mm (including protruding parts)
Weight		18.5 lbs/8.4 kg (not including lens)

*1 Effective pixels are more than 99.99%.

*2 This is the light output value (lumens) when the [PRESET] mode is set to [HIGH-BRIGHT]. The light output values will drop to 80% when [ON] is selected for [ECO MODE]. If any other mode is selected as the [PRESET] mode, the light output value may drop slightly.

*3 Compliance with ISO21118-2005

*4 Full color (approx. 16.77 million colors or greater) when the Ethernet input connector is selected.

*5 HDMI® (Deep Color, Lip Sync) with HDCP

What is HDCP/HDCP technology?

HDCP is an acronym for High-bandwidth Digital Content Protection. High bandwidth Digital Content Protection (HDCP) is a system for preventing illegal copying of video data sent over a High-Definition Multimedia Interface (HDMI).

If it is unable to view material via the HDMI input, this does not necessarily mean the projector is not functioning properly. With the implementation of HDCP, there may be cases in which certain content is protected with HDCP and might not be displayed due to the decision/intention of the HDCP community (Digital Content Protection, LLC).

Video: Deep Color; 8/10/12-bit, LipSync

Audio: LPCM; up to 2 ch, sample rate 32/44.1/48 KHz, sample bit; 16/20/24-bit

*6 95 to 104°F (35 to 40°C) – "Forced eco mode" (PJ WU6181N will shift to the eco-mode in stages starting from 33 °C.)

Note

- These specifications and the product's design are subject to change without notice.

List of Supported Signals

Analog Computer Signal

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
VGA	640 × 480	4 : 3	60/72/75/85/iMac
SVGA	800 × 600	4 : 3	56/60/72/75/85/ iMac
XGA	1024 × 768 *1	4 : 3	60/70/75/85/iMac
XGA+	1152 × 864	4 : 3	60/70/75/85
WXGA	1280 × 768 *2	15 : 9	60
	1280 × 800 *2	16 : 10	60
	1360 × 768 *5	16 : 9 *4	60
	1366 × 768 *5	16 : 9 *4	60
Quad-VGA	1280 × 960	4 : 3	60/75/85
SXGA	1280 × 1024	5 : 4	60/75/85
SXGA+	1400 × 1050	4 : 3	60/75
WXGA+	1440 × 900	16 : 10	60

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
WXGA++	1600 × 900	16 : 9	60
UXGA	1600 × 1200 *3	4 : 3	60/65/70/75
WSXGA+	1680 × 1050	16 : 10	60
WUXGA	1920 × 1200 *3	16 : 10	60 (Reduced Blanking)
2K	2048 × 1080	17 : 9	60
Full HD	1920 × 1080	16 : 9	60
MAC 13"	640 × 480	4 : 3	67
MAC 16"	832 × 624	4 : 3	75
MAC 19"	1024 × 768	4 : 3	75
MAC 21"	1152 × 870 *6	4 : 3 *4	75
MAC 23"	1280 × 1024	5 : 4	65

Component

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
HDTV (1080p)	1920 × 1080	16 : 9	50/60
HDTV (1080i)	1920 × 1080	16 : 9	48/50/60
HDTV (720p)	1280 × 720	16 : 9	50/60
SDTV (480p)	720 × 480	4:3 / 16:9	60
SDTV (576p)	720 × 576	4:3 / 16:9	50
SDTV (480i)	720 × 480	4:3 / 16:9	60
SDTV (576i)	720 × 576	4:3 / 16:9	50

Composite Video/S-Video

Signal	Aspect Ratio	Refresh Rate (Hz)
NTSC	4 : 3	60
PAL	4 : 3	50

Signal	Aspect Ratio	Refresh Rate (Hz)
PAL60	4 : 3	60
SECAM	4 : 3	50

HDMI

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
VGA	640 × 480	4 : 3	60
SVGA	800 × 600	4 : 3	60
XGA	1024 × 768 *1	4 : 3	60
HD	1280 × 720 *2	16 : 9	60
WXGA	1280 × 768 *2	15 : 9	60
	1280 × 800 *2	16 : 10	60
	1366 × 768 *3	16 : 9*4	60
Quad-VGA	1280 × 960	4 : 3	60
SXGA	1280 × 1024	5 : 4	60
SXGA+	1400 × 1050	4 : 3	60
WXGA+	1440 × 900	16 : 10	60
WXGA++	1600 × 900	16 : 9	60
WSXGA+	1680 × 1050	16 : 10	60
UXGA	1600 × 1200*3	4 : 3	60
Full HD	1920 × 1080*3	16 : 9	60
WUXGA	1920 × 1200*3	16 : 10	60
2K	2048 × 1080	17 : 9	60
WQHD iMac 27″	2560 × 1440	16 : 9	60
WQXGA	2560 × 1600	16 : 10	60 (Reduced Blanking)

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
4K	3840 × 2160	16 : 9	23.98/24/25/29.97/30
	4096 × 2160	17 : 9	24
HDTV(1080p)	1920 × 1080	16 : 9	24/25/30/50/60
HDTV(1080i)	1920 × 1080	16 : 9	48/50/60
HDTV(720p)	1280 × 720	16 : 9	50/60
SDTV(480i/p)	720/1440 × 480	4:3 / 16:9	60
SDTV(576i/p)	720/1440 × 576	4:3 / 16:9	50

HDMI 3D

Signal Resolution (dots)	Refresh Rate (Hz)	Aspect Ratio	3D Format
1920 × 1080p	23.98/24	16 : 9	Frame Packing
			Side By Side
			Top and Bottom
	25		Side By Side
			Top and Bottom
	50		Side By Side
			Top and Bottom
	59.94/60		Side By Side
			Top and Bottom
1920 × 1080i	50		Top and Bottom
			Side By Side
	59.94/60		Top and Bottom
			Side By Side
1280 × 720p	50		Frame Packing
			Side By Side
			Top and Bottom
	59.94/60		Frame Packing
			Side By Side
			Top and Bottom

DisplayPort

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
VGA	640 × 480	4 : 3	60
SVGA	800 × 600	4 : 3	60
XGA	1024 × 768 *1	4 : 3	60

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
HD	1280 × 720 *2	16 : 9	60
WXGA	1280 × 768 *2	15 : 9	60
	1280 × 800 *2	16 : 10	60
	1366 × 768 *5	16 : 9 *4	60
Quad-VGA	1280 × 960	4 : 3	60
SXGA	1280 × 1024	5 : 4	60
SXGA+	1400 × 1050	4 : 3	60
WXGA+	1440 × 900	16 : 10	60
WXGA++	1600 × 900	16 : 9	60
WSXGA+	1680 × 1050	16 : 10	60
UXGA	1600 × 1200 *3	4 : 3	60
Full HD	1920 × 1080 *3	16 : 9	60
WUXGA	1920 × 1200 *3	16 : 10	60 (Reduced Blanking)
2K	2048 × 1080	17 : 9	60
WQHD iMac 27″	2560 × 1440	16 : 9	60
WQXGA	2560 × 1600	16 : 10	60 (Reduced Blanking)
4K	3840 × 2160	16 : 9	23.98/24/25/29.97/30
	4096 × 2160	17 : 9	24
HDTV(1080p)	1920 × 1080	16 : 9	24/25/30/50/60
HDTV(720p)	1280 × 720	16 : 9	50/60
SDTV(480i/p)	720/1440 × 480	4:3 / 16:9	60
SDTV(576i/p)	720/1440 × 576	4:3 / 16:9	50

Display Port 3D

Signal Resolution (dots)	Refresh Rate (Hz)	Aspect Ratio	3D Format
1920 × 1080p	23.98/24	16 : 9	Frame Packing
			Side By Side
			Top and Bottom
	25		Side By Side
			Top and Bottom
	50		Side By Side
			Top and Bottom
	59.94/60		Side By Side
			Top and Bottom
1920 × 1080i	50		Top and Bottom
			Side By Side
	59.94/60		Top and Bottom
			Side By Side
1280 × 720p	50		Frame Packing
			Side By Side
			Top and Bottom
	59.94/60		Frame Packing
			Side By Side
			Top and Bottom

*1 Native resolution on XGA Type

*2 Native resolution on WXGA Type

*3 Native resolution on WUXGA Type

*4 Approximate Value

*5 The projector may fail to display these signals correctly when [AUTO] is selected for [ASPECT RATIO] in the on-screen menu.

The factory default is [AUTO] for [ASPECT RATIO]. To display these signals, select [16:9] for [ASPECT RATIO].

*6 The projector may fail to display these signals correctly when [AUTO] is selected for [ASPECT RATIO] in the on-screen menu.

The factory default is [AUTO] for [ASPECT RATIO]. To display these signals, select [4:3] for [ASPECT RATIO].

Note

- Signals exceeding the projector's resolution are handled with Advanced AccuBlend.
- With Advanced AccuBlend, the size of characters and ruled lines may be uneven and colors may be blurred.
- Upon shipment, the projector is set for signals with standard display resolutions and frequencies, but adjustments may be required depending on the type of computer.

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