

Model Altair-PJ2
Machine Codes:
Y051 / Y053 / Y054 / Y056
Field Service Manual

30 Jan, 2015

Important Safety Notices

Lead-Free Solder

This product is manufactured using lead-free solder as a part of a movement within the consumer products industry at large to be environmentally responsible. Lead-free solder must be used in the servicing and repair of this product.

WARNING

- This product is manufactured using lead free solder. DO NOT USE LEAD BASED SOLDER TO REPAIR THIS PRODUCT! The melting temperature of lead-free solder is higher than that of leaded solder by 86 °F to 104 °F (30 °C to 40 °C). Use of a soldering iron designed for lead-based solders to repair product made with lead-free solder may result in damage to the component and or PCB being soldered. Great care should be made to ensure high-quality soldering when servicing this product - especially when soldering large components, through-hole pins, and on PCBs - as the level of heat required to melt lead-free solder is high.

Prevention of Physical Injury

1. Before disassembling or assembling parts of the machine and peripherals, make sure that the machine power cord is unplugged.
2. The wall outlet should be near the machine and easily accessible.
3. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrified or mechanically driven components.
4. The machine drives some of its components when it completes the warm-up period. Be careful to keep hands away from the mechanical and electrical components as the machine starts operation.
5. Use brackets that are strong enough to support the projector. The projector weighs about 3.1 kg (6.9 lb.).
6. The projector must be installed in a location that is sturdy enough to support the full weight of the projector and brackets.

Observance of Electrical Safety Standards

The machine and its peripherals must be serviced by a customer service representative who has completed the training course on those models.

Safety and Ecological Notes for Disposal

1. Dispose of replaced parts in accordance with local regulations.

WARNING

- To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols. A fire or an explosion might occur.

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 in this product contains mercury. Please dispose according to Local, State or Federal laws.

The following information is only for EU-member states:

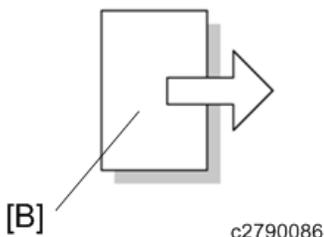
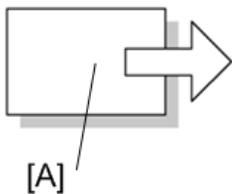


The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office or your household waste disposal service.

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]

Trademarks

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The proper names of the Windows operating systems are as follows:

The product names of Windows XP are as follows:

Microsoft® Windows® XP Professional

- Microsoft® Windows® XP Home Edition
- Microsoft® Windows® XP Professional x64 Edition

The product names of Windows 7 are as follows:

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

The product names of Windows 8 are as follows:

- Microsoft® Windows® 8
- Microsoft® Windows® 8 Pro
- Microsoft® Windows® 8 Enterprise

The product names of Windows 8.1 are as follows:

- Microsoft® Windows® 8.1

-
- Microsoft® Windows® 8.1 Pro
 - Microsoft® Windows® 8.1 Enterprise

The product names of Windows Server 2003 R2 are as follows:

- Microsoft® Windows Server® 2003 R2 Standard Edition
- Microsoft® Windows Server® 2003 R2 Enterprise Edition

The product names of Windows Server 2008 are as follows:

- Microsoft® Windows Server® 2008 Standard
- Microsoft® Windows Server® 2008 Enterprise

The product names of Windows Server 2008 R2 are as follows:

- Microsoft® Windows Server® 2008 R2 Standard
- Microsoft® Windows Server® 2008 R2 Enterprise

The product names of Windows Server 2012 are as follows:

- Microsoft® Windows Server® 2012 Standard

The product names of Windows Server 2012 R2 are as follows:

- Microsoft® Windows Server® 2012 R2 Standard

Other product names used herein are for identification purposes only and might be trademarks of their respective companies. We disclaim any and all rights to those marks.

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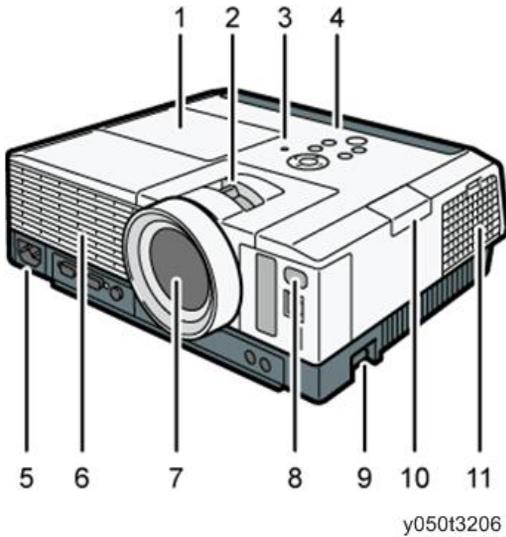
1. Product Information

Overview

Front and Top View

Y051 / Y053 / Y054 / Y056

The illustrations below depict the Y51 / Y053.



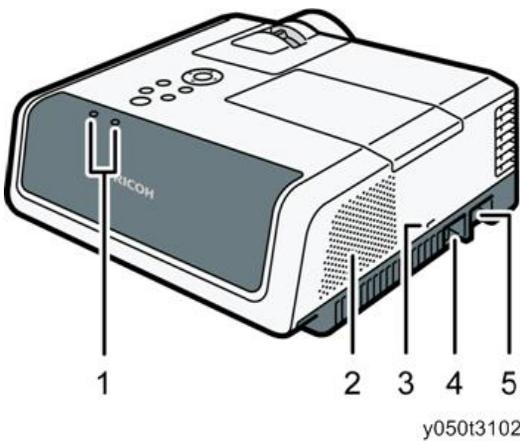
No.	Name	Function
1	Lamp cover	Remove to replace the lamp.
2	Zoom lever	Adjusts the size of the projected image.
3	Illuminance sensor	Measures the brightness of the projecting location.
4	Control panel	-
5	AC In socket	For connecting the power cord set provided with the projector.
6	Exhaust vents	Releases hot air from inside the projector.
7	Lens	Enlarges and projects the image (light).

No.	Name	Function
8	Remote control receiver	Receives the signal from the remote control.
9	Adjustable feet	Adjusts the angle of the projection. Adjustable feet are located on the left and right sides on the projector.
10	Interactive kit attachment cover	Remove to install the adapter for the interactive kit (option)
11	Intake vents	For circulating air from the outside to cool the projector.

Rear View

Y051 / Y053 / Y054 / Y056

The illustrations below depict the Y51 / Y053.

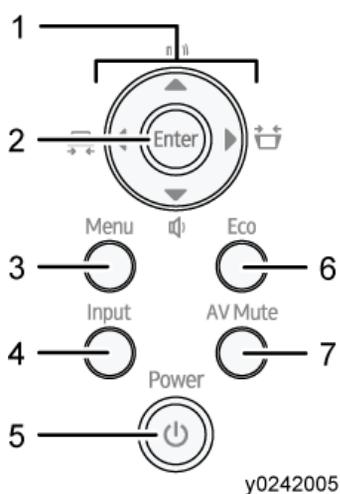


1	LED indicators	You can confirm the status of the projector by referring to the LED indicators. The left LED shows the status of the lamp, and the right LED shows the temperature inside the projector.
2	Speaker	Outputs the audio input from an external device.

3	Security slot	For connecting an anti-theft cable.
4	Security bar	For connecting an anti-theft cable or chain.
5	Adjustable feet	Adjusts the angle of the projection. Adjustable feet are located on the left and right sides on the projector.

Control Panel

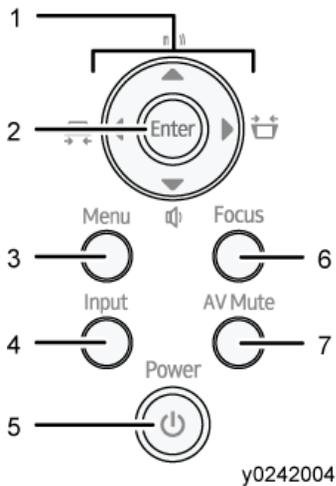
Y054 / Y056



No.	Name	Function
1	Arrow buttons	Used to operate the menu screen and the value bar. The [◀] and [▶] buttons are used to adjust the keystone distortion. The [▲] and [▼] buttons are used to adjust the volume.
2	[Enter] button	Enters the selected item or mode.
3	[Menu] button	Displays the menu screen. Press it again to close the menu screen.
4	[Input] button	Switches the signal input. The input signal changes each time the button is pressed.

No.	Name	Function
5	[Power] button	Turns the projector on and off. You can check the status of the projector with the indicator. <ul style="list-style-type: none"> • On: Power is on. • Off: Power is off. • Flashing at 1 or 3 second intervals: Standby. • Flashing at short intervals: Starting up or cooling.
6	[Eco] button	Displays the [Eco Mode] screen. On the [Eco Mode] screen, you can specify the energy saving settings for the lamp.
7	[AV Mute] button	Temporarily blanks the screen and mutes the audio. The button lights up blue when the projector is muted.

Y051 /Y053



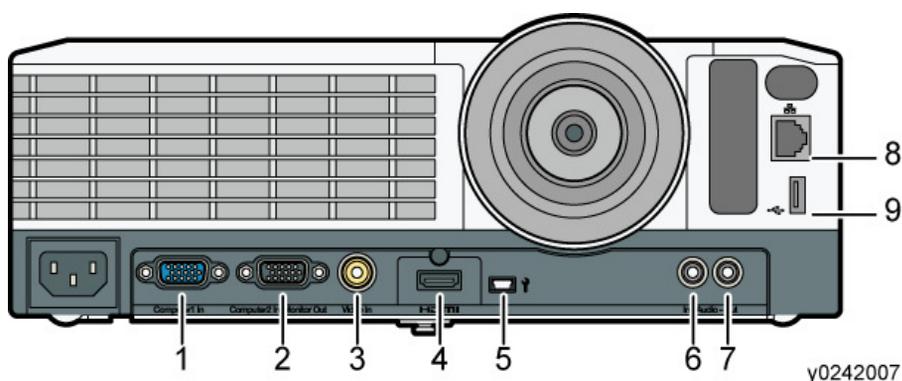
No.	Name	Function
1	Arrow buttons	Used to operate the menu screen and the value bar. The [◀] and [▶] buttons are used to adjust the keystone distortion. The [▲] and [▼] buttons are used to adjust the volume.
2	[Enter] button	Enters the selected item or mode.

No.	Name	Function
3	[Menu] button	Displays the menu screen. Press it again to close the menu screen.
4	[Input] button	Switches the signal input. The input signal changes each time the button is pressed.
5	[Power] button	Turns the projector on and off. You can check the status of the projector with the indicator. <ul style="list-style-type: none"> • On: Power is on. • Off: Power is off. • Flashing at 1 or 3 second intervals: Standby. • Flashing at short intervals: Starting up or cooling.
6	[Focus] button	Displays the manual focus bar. Press it, and then adjust the focus using the [◀] and [▶] buttons.
7	[AV Mute] button	Temporarily blanks the screen and mutes the audio. The button lights up blue when the projector is muted.

Ports on the Projector

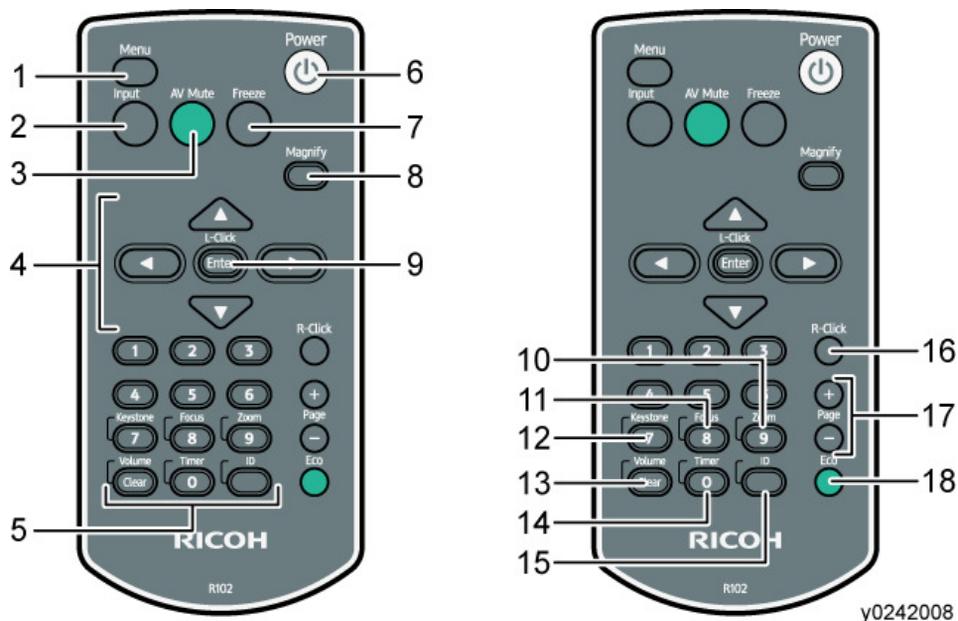
Y051 / Y053 / Y054 / Y056

The illustrations below depict the Y051 / Y053.



No.	Name	Function
1	Computer1 In port (Y/Pb/Pr)	For inputting RGB signals from a computer or component image signals (Y/Pb/Pr) from a video player.
2	Computer2 In/Monitor Out port	For inputting RGB signals, or outputting the image signals input into the "Computer1 In port" to an external display device. You can switch the purpose of this port in [Computer 2 Terminal] under [Default Settings 1].
3	Video In port	For inputting image signals from a video player.
4	HDMI port	For inputting HDMI signals from a computer or video player.
5	Control port (USB mini-B)	For maintenance and service.
6	Audio In port	For inputting audio signals from a computer or video player.
7	Audio Out port	For outputting audio signals to an external speaker.
8	LAN port	For connecting an Ethernet cable.
9	USB port	For connecting a USB memory device or USB device cable.

Remote Control

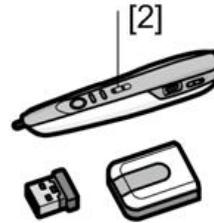
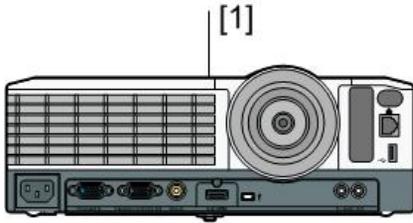


y0242008

No.	Name	Function
1	[Menu] button	Displays the menu screen. Press it again to close the menu screen.
2	[Input] button	Switches the signal input. The signal that is input changes each time the button is pressed.
3	[AV Mute] button	Temporarily blanks the screen and mutes the audio.
4	Arrow buttons	Used to operate the menu screen and the value bar.
5	Number buttons	Used to enter numbers.
6	[Power] button	Turns the projector on and off.
7	[Freeze] button	Temporarily freezes the image.
8	[Magnify] button	Displays the magnification ratio bar. Press it, and then specify the magnification ratio using the [◀] and [▶] buttons.
9	[Enter] button	Enters the selected item or mode.
10	[Zoom] button	Displays the digital zoom bar. Press it, and then adjust the size of the projected image using the [◀] and [▶] buttons.

No.	Name	Function
11	[Focus] button	Y051 / Y053 Displays the manual focus bar. Press it, and then adjust the focus using the [◀] and [▶] buttons. Y054 / Y056 This button is not used.
12	[Keystone] button	Displays the keystone adjustment bars. Press this, select [Keystone (Vertical)] or [Keystone (Horizontal)] using the [▲] and [▼] buttons, and then adjust the keystone distortion using the [◀] and [▶] buttons.
13	[Volume] button	Displays the volume control bar. Press it, and then adjust the volume of the speaker using the [◀] and [▶] buttons.
14	[Timer] button	Displays the presentation timer.
15	[ID] button	Registers the remote control ID.
16	[R-Click] button	This button is not used.
17	[Page] buttons	Changes the image while projecting images from a USB device. Press [+] to go to the next page. Press [-] to go to the previous page.
18	[Eco] button	Displays the [Eco Mode] screen. On the [Eco Mode] screen, you can specify the energy saving settings for the lamp.

Machine Codes and Peripherals Configuration



y050t3209

Item	Callout	Machine Code
Wall-hanging Fittings	[1]	Y051 / Y053 / Y054 / Y056
PJ Interactive Kit Type2	[2]	Y120
PJ 3D Glasses Type2	[3]	Y107

General Specifications

1

List of General Specifications

Component	Specifications
Power consumption	Maximum: 334 W Standard mode: 316 W Eco mode: 209 W
Power consumption (Standby mode)	Regular standby mode: 0.3 W Network standby mode (Wired LAN): 1.4 W Network standby mode (Wired/Wireless LAN): 1.8 W
Weight	Approx. 3.1 kg (6.9 lb.)
External dimensions (not including protruding parts)	297 x 235 x 100 mm (11.7 x 9.3 x 3.9 inches)
Operating environment	Temperature: 5 to 35°C (73 to 95°F), Humidity: 30 to 70%
Display element	<ul style="list-style-type: none"> • Display method Single-chip DLP® • Panel size Y053 / Y056: 0.65 inches Y051 / Y054: 0.55 inches • Pixels Y053 / Y056: 1,024,000 pixels (1280 H x 800 V) Y051 / Y054: 786,432 (1024 H x 768 V)
Projection method	Y051 / Y053: 1.5 x zoom lens Y054 / Y056: Short-focus lens
Lamp	250 W high-pressure mercury lamp
Projection screen size	Y051: 30 to 200 inches Y053: 40 to 240 inches Y054: 50 to 120 inches Y056: 60 to 140 inches

Component	Specifications
Projection distance	Y051: 0.68 to 7.20 m (2.22 to 23.61 feet) Y053: 0.77 to 7.33 m (2.53 to 24.06 feet) Y054: 0.59 to 1.49 m (1.49 to 4.88 feet) Y056: 0.61 to 1.48 m (2.00 to 4.85 feet)
Speaker	10 W (Mono)
Connection ports	<ul style="list-style-type: none"> • Computer1 In port Mini D-SUB15 pin x 1 • Computer2 In/Monitor Out port Mini D-SUB15 pin x 1 • HDMI port (HDCP compliant)* HDMI x 1 • Video In port RCA_1 pin x 1 • Audio In port Mini Jack x 1 • Audio Out port Mini Jack x 1 • Control port USB TYPE-mini-B x 1 • USB port TYPE-A x 1 USB 2.0 High-speed Output voltage: DC 5 V Supply current: 500 mA • LAN port RJ-45 10BASE-T/100BASE-TX/1000BASE-T
Wireless LAN	Compatible with IEEE 802.11a/b/g/n (Y051 / Y053 / Y056 only)

* HDCP (High-bandwidth Digital Content Protection) is a copyright protection method to encrypt digital signals across the DVI/HDMI interface and prevent unauthorized copying. The HDCP specification was developed

and is licensed by Digital Content Protection, LLC. The HDMI port on this projector is HDCP compliant and can project digital video content protected by HDCP. Updates to the HDCP specification may void this compliance and prevent access to protected data. If this occurs, it is not caused by the projector.

Separately sold product

Ricoh Replacement Lamp Type 17

List of Supported Signals

List of supported signals (Computer input)

This projector supports the following RGB signals. Note, however, that depending on the computer model, the screen may show flicker or streaking. Please adjust the projector if this happens.

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
640 × 350	640	350	85.08	37.86	31.50
640 × 400	640	400	85.08	37.86	31.50
640 × 480	640	480	59.93	31.46	25.17
			72.81	37.86	31.50
			75.00	37.50	31.50
			85.01	43.27	36.00
			66.67	35.00	30.24
720 × 400	720	400	70.08	31.47	28.32
			85.04	37.93	35.50

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
800 × 600	800	600	56.25	35.16	36.00
			60.32	37.88	40.00
			72.19	48.08	50.00
			75.00	46.88	49.50
			85.06	53.67	56.25
832 × 624	832	624	74.55	49.72	57.28
848 × 480	848	480	60.00	31.02	33.75
1024 × 768	1024	768	60.00	48.36	65.00
			70.07	56.48	75.00
			75.03	60.02	78.75
			85.00	68.68	94.50
1152 × 864	1152	864	75.00	67.50	108.00
1152 × 870	1152	870	75.06	68.68	100.00
1280 × 720	1280	720	60.00	45.00	74.25
1280 × 768	1280	768	59.99	47.40	68.25
			59.87	47.78	79.50
			74.89	60.29	102.25
			84.84	68.63	117.50
1280 × 800	1280	800	59.91	49.31	71.00
			59.81	49.70	83.50
			74.93	62.79	106.50
			84.88	71.55	122.50

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
1280 × 960	1280	960	60.00	60.00	108.00
			75.02	75.02	126.03
			85.00	85.94	148.50
1280 × 1024	1280	1024	60.02	63.98	108.00
			75.02	79.98	135.00
			85.02	91.15	157.50
1360 × 768	1360	768	60.02	47.71	85.50
1366 × 768	1366	768	60.00	48.00	72.00
			59.79	47.71	85.50
1400 × 1050	1400	1050	59.95	64.74	101.00
			59.98	65.32	121.75
			74.87	82.28	156.00
1440 × 900	1440	900	59.90	55.47	88.75
			59.89	55.93	106.50
			74.98	70.64	136.75
			84.84	80.43	157.00
1600 × 900	1600	900	60.00	60.00	108.00
1600 × 1200	1600	1200	60.00	75.00	162.00
1680 × 1050	1680	1050	59.88	64.67	119.00
			59.95	65.29	146.25

Note

- Signals whose resolution exceeds the native resolution mentioned below will be compressed. For this reason, some information may be lost and/or image quality may be affected.
Y051 / Y054: 1024 x 768 dots

Y053 / Y056: 1280 x 800 dots

List of supported signals (Y/P_b/P_r computer input)

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
480i (525i)	720	242.5	59.940	15.734	13.500
480p (525p)	720	483	59.940	31.469	27.000
576i (625i)	720	288	50.000	15.625	13.500
576p (625p)	720	576	50.000	31.250	27.000
720 / 50p	1280	720	50.000	37.500	74.250
720 / 60p	1280	720	60.000	45.000	74.250
1080 / 50i	1920	540	50.000	28.125	74.250
1080 / 60i	1920	540	60.000	33.750	74.250
1080 / 50p	1920	1080	50.000	56.250	148.500
1080 / 60p	1920	1080	60.000	67.500	148.500

List of supported signals (Video input)

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
NTSC	720	240	59.940	15.734	13.500
PAL	720	288	50.000	15.625	13.500
SECAM	720	288	50.000	15.625	13.500
PAL-M	720	240	59.940	15.734	13.500
PAL-N	720	288	50.000	15.625	13.500

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
PAL60	720	240	59.940	15.734	13.500
NTSC4.43	720	240	59.940	15.734	13.500
60 Hz (mono)	720	240	59.940	15.734	13.500
50 Hz (mono)	720	288	50.000	15.625	13.500

List of supported signals (HDMI input)

Since the resolutions or frequencies input from a computer or picture device vary and may be different from the signals listed below, the images may not appear correctly or some signal formats may not be detected properly and even it may fail to display the images. If that happens, set your computer or the device so that an input signal listed below can be received.

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Horizontal (Hz)	Vertical (kHz)	Clock (MHz)
480i	720	242.5	59.940	15.734	13.500
576i	720	288	50.000	15.625	13.500
480p	720	483	59.940	31.469	27.000
576p	720	576	50.000	31.250	27.000
720 / 50p	1280	720	50.000	37.500	74.250
720 / 60p	1280	720	60.000	45.000	74.250
1080 / 50i	1920	540	50.000	28.125	74.250
1080 / 60i	1920	540	60.000	33.750	74.250
1080 / 24p	1920	1080	24.000	27.000	74.250
1080 / 25p	1920	1080	25.000	28.125	74.250
1080 / 30p	1920	1080	30.000	33.750	74.250

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Horizontal (Hz)	Vertical (kHz)	Clock (MHz)
1080 / 50p	1920	1080	50.000	56.250	148.500
1080 / 60p	1920	1080	60.000	67.500	148.500
640 × 350	640	350	85.08	37.86	31.50
640 × 400	640	400	85.08	37.86	31.50
640 × 480	640	480	59.93	31.46	25.17
			72.81	37.86	31.50
			75.00	37.50	31.50
			85.01	43.27	36.00
			66.67	35.00	30.24
720 × 400	720	400	70.08	31.47	28.32
			85.04	37.93	35.50
800 × 600	800	600	56.25	35.16	36.00
			60.32	37.88	40.00
			72.19	48.08	50.00
			75.00	46.88	49.50
			85.06	53.67	56.25
832 × 624	832	624	74.55	49.72	57.28
848 × 480	848	480	60.00	31.02	33.75
1024 × 768	1024	768	60.00	48.36	65.00
			70.07	56.48	75.00
			75.03	60.02	78.75
			85.00	68.68	94.50
1152 × 864	1152	864	75.00	67.50	108.00

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Horizontal (Hz)	Vertical (kHz)	Clock (MHz)
1152 × 870	1152	870	75.06	68.68	100.00
1280 × 720	1280	720	60.00	45.00	74.25
1280 × 768	1280	768	59.99	47.40	68.25
			59.87	47.78	79.50
			74.89	60.29	102.25
			84.84	68.63	117.50
1280 × 800	1280	800	59.91	49.31	71.00
			59.81	49.70	83.50
			74.93	62.79	106.50
			84.88	71.55	122.50
1280 × 960	1280	960	60.00	60.00	108.00
			75.02	75.02	126.03
			85.00	85.94	148.50
1280 × 1024	1280	1024	60.02	63.98	108.00
			75.02	79.98	135.00
			85.02	91.15	157.50
1360 × 768	1360	768	60.02	47.71	85.50
1366 × 768	1366	768	60.00	48.00	72.00
			59.79	47.71	85.50
1400 × 1050	1400	1050	59.95	64.74	101.00
			59.98	65.32	121.75
			74.87	82.28	156.00

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Horizontal (Hz)	Vertical (kHz)	Clock (MHz)
1440 × 900	1440	900	59.90	55.47	88.75
			59.89	55.93	106.50
			74.98	70.64	136.75
			84.84	80.43	157.00
1600 × 900	1600	900	60.00	60.00	108.00
1600 × 1200	1600	1200	60.00	75.00	162.00
1680 × 1050	1680	1050	59.88	64.67	119.00
			59.95	65.29	146.25

3D Format

Computer input

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock
640 × 480	640	480	59.93	31.46	25.17
800 × 600	800	600	60.32	37.88	40.00
848 × 480	848	480	60.00	31.02	33.75
1024 × 768	1024	768	60.00	48.36	65.00
1280 × 720	1280	720	60.00	45.00	74.25
1280 × 768	1280	768	59.99	47.40	68.25
			59.87	47.78	79.50
1280 × 800	1280	800	59.91	49.31	71.00
			59.81	49.70	83.50

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock
1280 × 960	1280	960	60.00	60.00	108.00
1280 × 1024	1280	1024	60.02	63.98	108.00
1360 × 768	1360	768	60.02	47.71	85.50
1366 × 768	1366	768	60.00	48.00	72.00
			59.79	47.71	85.50
1400 × 1050	1400	1050	59.95	64.74	101.00
			59.98	65.32	121.75
1440 × 900	1440	900	59.90	55.47	88.75
			59.89	55.93	106.50
1600 × 900	1600	900	60.00	60.00	108.00
1600 × 1200	1600	1200	60.00	75.00	162.00
1680 × 1050	1680	1050	59.88	64.67	119.00
			59.95	65.29	146.25

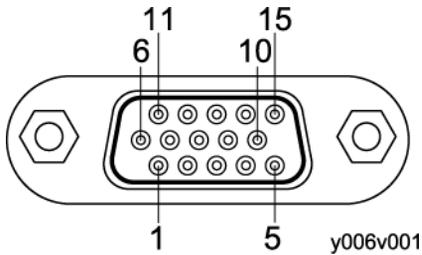
HDMI - 3D Format

Mode	Frequency		3D Transmission method		
	Vertical (Hz)	Clock (MHz)	Frame Packing	Side-by-Side	Top and Bottom
720 / 50p	50	148.5	Yes	No	No
		74.25	No	No	Yes
720 / 60p	59.940 / 60.000	148.35 / 148.50	Yes	No	No
		74.176 / 74.25	No	No	Yes

Mode	Frequency		3D Transmission method		
	Vertical (Hz)	Clock (MHz)	Frame Packing	Side-by-Side	Top and Bottom
1080 / 24p	23.976 / 24.000	148.35 / 148.50	Yes	No	No
		74.176 / 74.25	No	No	Yes
1080 / 50i	50	74.25	No	Yes	No
1080 / 60i	59.940 / 60.000	74.176 / 74.25	No	Yes	No

Pin assignment of Computer In terminal

Pin assignment of Computer1 In terminal and Computer2 / Monitor Out terminal



Mini D sub 15 Pin connector

Pin No.	Pin description	
	During RGB input	During Y/P _b /P _r input (Computer1 In port only)
1	Video signal (R)	Color difference signal (P _r)
2	Video signal (G)	Luminance signal (Y)
3	Video signal (B)	Color difference signal (P _b)
4	N.C.	-
5	GND	-
6	GND(R)	GND(P _r)

Pin No.	Pin description	
	During RGB input	During Y/P _b /P _r input (Computer1 In port only)
7	GND(G)	GND(Y)
8	GND(B)	GND(P _b)
9	N.C	-
10	GND	-
11	N.C	-
12	I ² C Data	-
13	Horizontal sync signal	-
14	Vertical sync signal	-
15	I ² C CLOCK	-

Input Signal

- RGB input
RGB signals: 0.7 V (p-p) 75 ohm
Horizontal sync signal: TTL level (Pos/neg polarity)
Vertical sync signal: TTL level (Pos/neg polarity)
- Y / P_b / P_r input
Y signal: 1.0 V (p-p) 75 ohm
P_b/P_r signals: 0.7 V (p-p) 75 ohm

CONTROL terminal

Interface format

Communication method	RS-232C, 115,200bps, No Parity, Data Length: 8 bits; Stop Bit Length: 1 bit
Communication format	#(23h)' + Command + CR (0Dh) Only 1 command valid per communication. For the available commands, see "Main commands".

Data format	For input commands, only ASCII-compliant all-uppercase alphanumeric characters supported.
Replies	<ul style="list-style-type: none"> Acknowledge (Aborted) '=(3Dh)' + Command(3byte) + ':(3Ah)' + 'E(45h)' + 'R(52h)' + 'O(30h)' + CR(0Dh) No acknowledge '=(3Dh)' + 'E(45h)' + 'R(52h)' + 'O(30h)' + CR(0Dh) <p>For details of Acknowledge (Normally ended), see "Main commands".</p>

Main commands

Item	Command	Acknowledge (Normally ended) *
Power on	PON	=PON:SC0
Power off	POF	=POF:SC0
Icon display on	ICN:1	=ICN:1
Icon display off	ICN:0	=ICN:0
Auto setting (RGB input)	PAT	=PAT:SC0
Status display on	DON	=DON:SC0
Status display off	DOF	=DOF:SC0
RGB input	INP:1	=INP:1
Y/Pb/Pr input	INP:2	=INP:2
HDMI input	INP:5	=INP:5
Video input	INP:9	=INP:9
Network input	INP:12	=INP:12
USB input	INP:13	=INP:13

* CR is added to the end of "Acknowledge (Normally ended)".

Note

- A USB driver must be installed to control the projector using the control port.

2. Installation

Installation Requirements

WARNING

- Do not place vases, plant pots, cups, toiletries, medicines, small metal objects, or containers holding water or any other liquids, on or close to this machine. Fire or electric shock could result from spillage or if such objects or substances fall inside this machine.
- Keep the product and attachments out of the reach of children. If the product is near children, it might fall over and cause an injury.
- When using an extension cord or power strip, only connect equipment whose total power consumption is within the power rating for the extension cord or power strip. If the power rating is exceeded, it may cause heat buildup and result in fire.
- Push the power plug all the way into the power outlet. Do not use a power outlet with a loose connection. Doing so may result in heat buildup. Plug the power cord in the correct direction into the base. If they are not plugged in correctly, it could result in smoke, fire, or electric shock.

CAUTION

- Keep the machine away from humidity and dust. Otherwise a fire or an electric shock might occur.
- Do not place the machine on an unstable or tilted surface. If it topples over, an injury might occur.
- Do not place the power cord and connection cable in a way that might cause someone to trip and fall. The product might fall over and cause an injury.
- Do not place the product or use it in an environment where it might get wet such as from snow, rain, or being near water. Doing so could result in fire or electric shock.
- Do not place the product on other equipment or vice versa. Doing so may cause heat buildup inside the product or cause the other equipment to malfunction.
- Do not use the product in an upright position. Doing so may cause injury if it falls over.
- Do not install the projector tilted horizontally (side-to-side) ± 20 degrees or more. If a foreign material enters inside the machine, it may cause a fire or an electric shock.

Important

- The projector can be installed at any vertical angle, 360 degrees. However, it cannot be installed tilted horizontally.
- When installing the projector lens-up, be sure to secure the projector to the wall or ceiling using brackets.

Methods of Installation

You can position the projector in one of four ways.

Select the setting according to the position of the projector in Projection Mode under Default Settings 2.

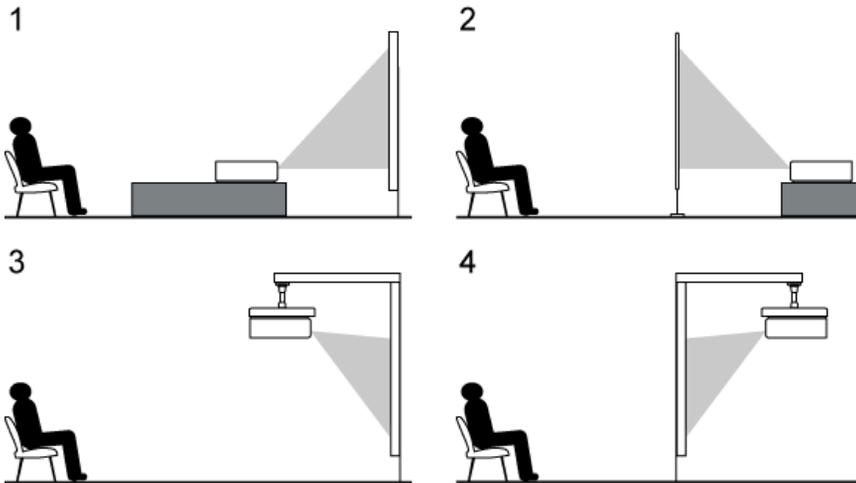
⚠ CAUTION

- Do not install the projector tilted horizontally (side-to-side) ± 20 degrees or more. If a foreign material enters inside the machine, it may cause a fire or an electric shock.

★ Important

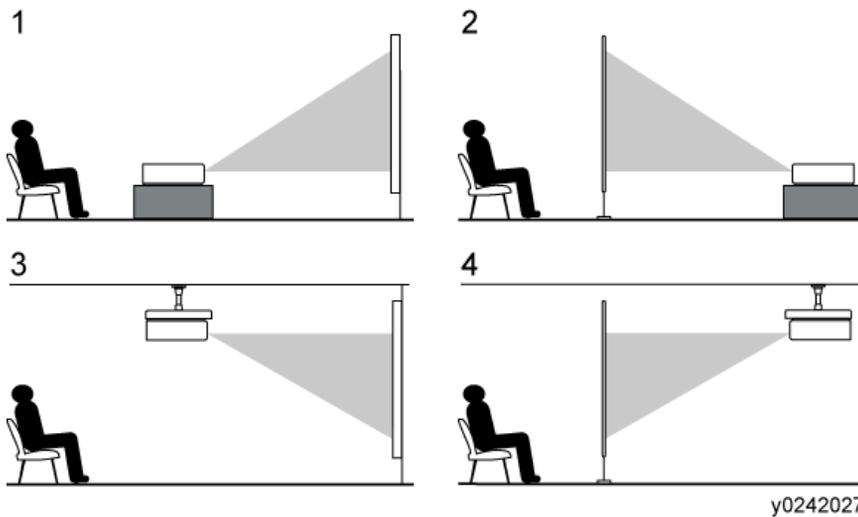
- The projector can be installed at any vertical angle, 360 degrees. However, it cannot be installed tilted horizontally.
- When installing the projector lens-up, be sure to secure the projector to the wall or ceiling using brackets.

Y054 /Y056



y0242075

Y051 / Y053



1. Standard

The projector is placed in front of a screen onto which the images are projected.

2. Rear

The projector is placed behind a screen onto which the images are projected.

3. Ceiling/Wall

The projector is mounted on the ceiling/wall in front of a screen onto which the images are projected.

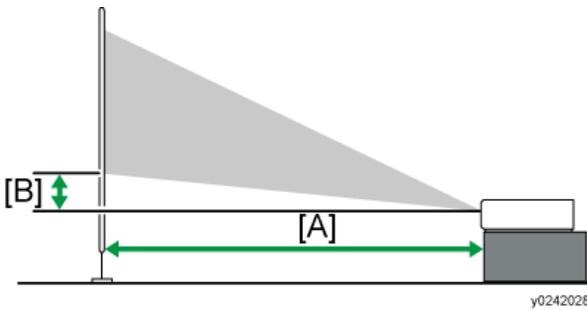
4. Rear Ceiling

The projector is mounted on the ceiling behind a screen onto which the images are projected.

Relationship Between the Projection Distance and the Screen Size

The size of the projected image varies according to the distance from the projector to the screen.

Refer to the following tables to position the projector in a suitable position. The projection sizes presented in tables are for a full size image without keystone adjustment. The projection distance becomes shortest when the zoom lever is at the end of the wide side, and longest when the zoom lever is at the end of the tele side.



Y051

Projection size	[A] Projection distance		[B] Projection height
	Wide	Tele	
30 inches	0.68 m (2.22 feet)	1.05 m (3.45 feet)	4 cm (1 inch)
40 inches	0.92 m (3.02 feet)	1.41 m (4.64 feet)	5 cm (2 inches)
60 inches	1.40 m (4.58 feet)	2.13 m (6.99 feet)	7 cm (3 inches)
80 inches	1.87 m (6.12 feet)	2.86 m (9.38 feet)	10 cm (4 inches)
100 inches	2.34 m (7.68 feet)	3.58 m (11.75 feet)	12 cm (5 inches)
120 inches	2.82 m (9.24 feet)	4.31 m (14.12 feet)	14 cm (6 inches)
150 inches	3.54 m (11.60 feet)	5.39 m (17.67 feet)	18 cm (7 inches)
200 inches	4.73 m (15.50 feet)	7.20 m (23.61 feet)	24 cm (9 inches)

Y053

Projection size	[A] Projection distance		[B] Projection height
	Wide	Tele	
40 inches	0.77 m (2.53 feet)	1.20 m (3.94 feet)	3 cm (1 inch)
60 inches	1.18 m (3.87 feet)	1.80 m (5.91 feet)	5 cm (2 inches)
80 inches	1.58 m (5.18 feet)	2.42 m (7.92 feet)	6 cm (2 inches)
100 inches	1.98 m (6.50 feet)	3.03 m (9.94feet)	8 cm (3 inches)
120 inches	2.39 m (7.84 feet)	3.65 m (11.97 feet)	9 cm (4 inches)
150 inches	2.99 m (9.81 feet)	4.57 m (14.98 feet)	11 cm (4 inches)
200 inches	4.00 m (13.12 feet)	6.10 m (20.01 feet)	15 cm (6 inches)
240 inches	4.81 m (15.79 feet)	7.33 m (24.06 feet)	18 cm (7 inches)

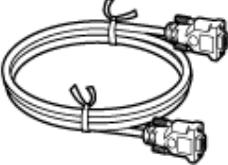
Y054

Projection size	[A] Projection distance	[B] Projection height
	50 inches	0.59 m (1.94 feet)
60 inches	0.72 m (2.36 feet)	7 cm (3 inches)
70 inches	0.85 m (2.78 feet)	8 cm (3 inches)
80 inches	0.97 m (3.20 feet)	10 cm (4 inches)
90 inches	1.10 m (3.62 feet)	11 cm (4 inches)
100 inches	1.23 m (4.04 feet)	12 cm (5 inches)
110 inches	1.36 m (4.46 feet)	13 cm (5 inches)
120 inches	1.49 m (4.88 feet)	14 cm (6 inches)

Y056

Projection size	[A] Projection distance	[B] Projection height
60 inches	0.61 m (2.00 feet)	5 cm (2 inches)
70 inches	0.72 m (2.35 feet)	5 cm (2 inches)
80 inches	0.83 m (2.71 feet)	6 cm (2 inches)
90 inches	0.94 m (3.07 feet)	7 cm (3 inches)
100 inches	1.04 m (3.43 feet)	8 cm (3 inches)
110 inches	1.15 m (3.78 feet)	8 cm (3 inches)
120 inches	1.26 m (4.14 feet)	9 cm (4 inches)
140 inches	1.48 m (4.85 feet)	11 cm (4 inches)

Checking the Accessories

Read This First Start Guide	
Remote control AAA battery LR03 (x 2)	
CD-ROM	
RGB cable	
Power cord	
Warranty card	
Carrying bag	

Connecting Equipment to the Projector

⚠ CAUTION

- Do not place the power cord and connection cable in a way that might cause someone to trip and fall. The product might fall over and cause an injury.

Various equipments can be connected to the projector.

Turn off the power to any equipment before connecting it to the projector. Be sure to read the manual for the applicable equipment before connecting it to the projector.

Connecting a Computer

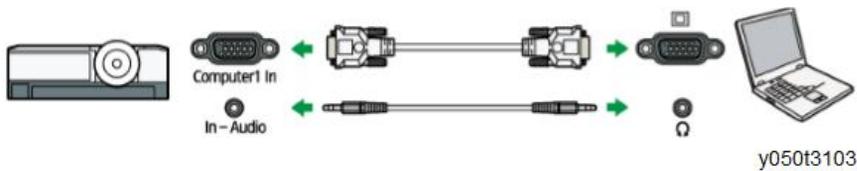
↓ Note

- Some computers cannot be connected to the projector. Before connecting a computer to the projector, check the output terminals and signal compatibility.

Using an RGB cable

Connect an RGB cable to the Computer1 In port of the projector and to the RGB output of a computer.

To output audio from the speaker on the projector, connect an audio cable to the Audio In port of the projector and to the audio output of a computer.

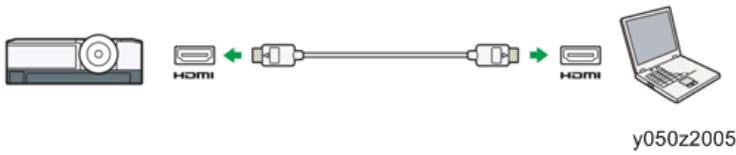


↓ Note

- Use the RGB cable provided with the projector.
- You can also use the Computer2 In/Monitor Out port to input RGB signals if [Computer 2 Terminal] in [Default Settings 1] is specified as [Input].

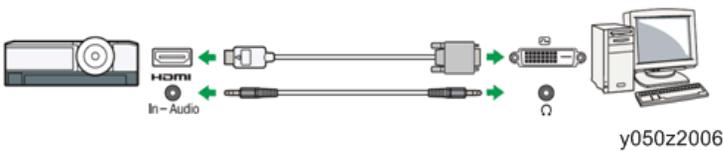
Using an HDMI cable

Connect an HDMI cable to the HDMI ports of the projector and the computer.



Using a DVI-to-HDMI cable

To input a DVI signal to the projector, connect a DVI-to-HDMI cable to the HDMI port of the projector and to the DVI output of a computer. To output audio from the speaker on the projector, connect an audio cable to the Audio In port of the projector and to the audio output of a computer.



↓ Note

- You can use a DVI-to-HDMI conversion adapter instead of a DVI-to-HDMI cable.

Using an Ethernet cable

Connect an Ethernet cable to the Ethernet interface of the projector and to a network device such as a hub. To use the projector via a network, you must specify settings such as the IP address. For details, see Operating Instructions.



↓ Note

- Use an Ethernet cable that is shielded.

Using a wireless LAN (Y051 / Y053 / Y056 only)

Y051 / Y053 / Y056 are equipped with a wireless connectivity function. For details, see Operating Instructions.



Supported wireless specification

IEEE 802.11b/g /n (mainly Europe and Asia)

IEEE 802.11a/b/g/n (mainly North America)

Connecting AV Equipment

Use a cable that supports the signal being input when connecting AV equipment.

Using an HDMI cable

Connect an HDMI cable to the HDMI ports of the projector and the AV equipment.



Note

- Some devices may not operate properly when connected using HDMI.
- Use only an HDMI cable that has the HDMI logo. To input 1080p image signals, use a high-speed HDMI cable. A conventional HDMI cable may not work properly.

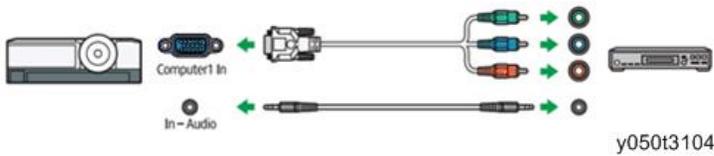
Using a video cable

Connect a video cable to the Video In port of the projector and to the video output of AV equipment. To output audio from the speaker on the projector, connect an audio cable to the Audio In Port of the projector and to the audio output of AV equipment.



Using a D-sub to component video cable

Connect a D-sub to component video cable to the Computer1 In port of the projector and to the Y / Pb / Pr output of the AV equipment. To output audio from the speaker on the projector, connect an audio cable to the Audio In Port of the projector and to the audio output of AV equipment.

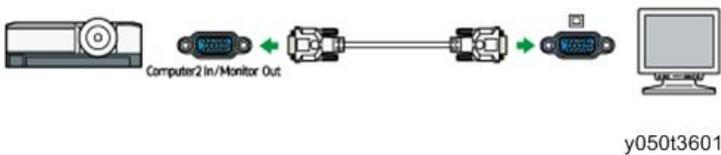


Connecting an External Display Device

2

You can display the projected image on another display simultaneously by connecting the projector and the external display device. The image signals input into the Computer1 In port can be displayed on an external display device.

To connect an external display, specify [Computer2 Terminal] in [Default Settings 1] to [Output]. Then connect an RGB cable to the Computer2 In/Monitor Out port of the projector and the RGB input of an external display device.



↓ Note

- Only the image input from a computer or AV equipment is displayed on the external display device.
- Images generated by the projector, such as menu screens, are not displayed on the external display device. Use the external display device's settings to adjust its display.

Connecting an External Speaker

You can output the audio signals to the external speaker. To connect an external speaker, connect an audio cable to the Audio Out port of the projector and the audio output of an external speaker.



↓ Note

- There is no sound output from the projector's speaker when an external speaker is connected.
- You can adjust the sound output from the external speaker by using the [Volume] button.

Connecting a Smartphone/Tablet (Y051 / Y053 / Y056 only)



2

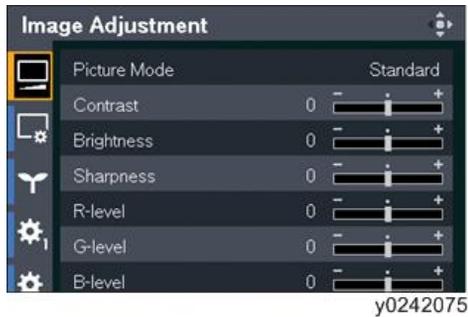
↓ Note

- Y051 / Y053 / Y056 are Miracast compatible. You can display the screen of the mobile terminal such as a smart phone or a tablet on the projector screen with Miracast.
- Also, you can display the video or audio sent from the mobile terminal on the projector screen when you connect the projector to a DLNA compatible device.
- For details, see Operating Instructions.

Using the Menus

This section explains the methods for changing the menu screen using the remote control.

1. Press the [Menu] button.
2. Select the menu tab using the [▲] and [▼] buttons.



If you select the Display Status tab, you can confirm the information in this step.

3. Press the [▶] button.
4. Select the item to be changed using the [▲] and [▼] buttons.
5. Press the [Enter] button.

If "To settings" is displayed on the right, the item has a submenu. Press the Enter button to display the submenu screen.

If "Execute" is displayed to the right of the item you select, the function is executed in this step.

6. Change the settings.

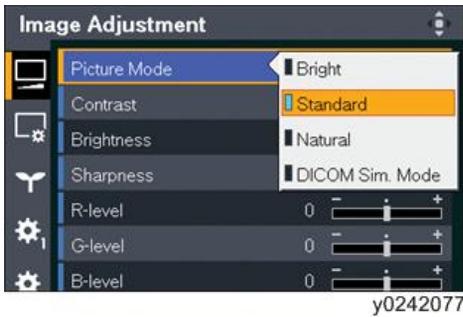
- Adjusting values using the values bar

Change the value using the [◀] and [▶] buttons, and then press the [Enter] button.



- Selecting the value from a list

Change the value using the [▲], [▼], [◀] and [▶] buttons, and then press the [Enter] button.



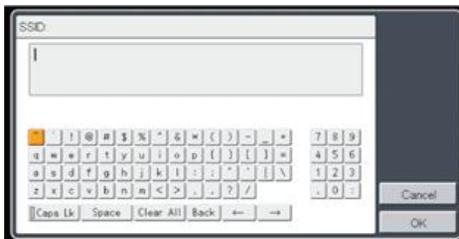
- Inputting numbers

Use the number buttons on the remote control to input numbers.



- Inputting text

Use the keyboard that is displayed on screen to input text. You can also use the number buttons on the remote control to input numbers.



7. If a confirmation screen appears, select [OK], and then press the [Enter] button.
8. Press the [Menu] button.
9. If a confirmation screen appears, select [Reflect], and then press the [Enter] button.

↓ Note

- The control panel on the projector can be used for operations, but numbers for settings cannot be inputted.
- The Network/USB Settings menu tab includes the USB Settings menu, Network Settings menu, and Network Application Settings menu. Open the menu according to the settings you want to change, and then go to Step 2 to change the settings.

The menu screen closes automatically 30 seconds after the last operation. Changes to the settings are automatically applied when you close the menu screen. You do not need to press the [Enter] button. Settings in the Network/USB Settings menu are not applied until you select [Reflect] on the confirmation screen.

To access the menu screen while projecting images from a USB memory device or server, press the [Menu] button to stop projecting images, and then press the [Menu] button again.

Options Installation

Ricoh PJ Interactive kit Type 2

2

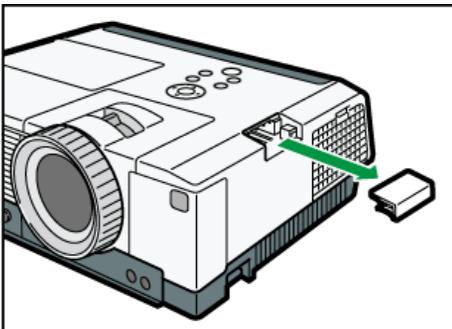
Setting Up the Projector

1. Check the projector to make sure that the power supply is OFF.

Note

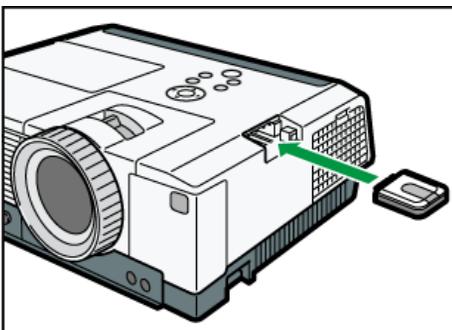
- If you attach the projector adapter while the projector power is on, Interactive Mode may not work correctly. For details about how to turn the projector off, see the manual included with the projector.

2. Slide the interactive kit adapter slot cover to remove it.



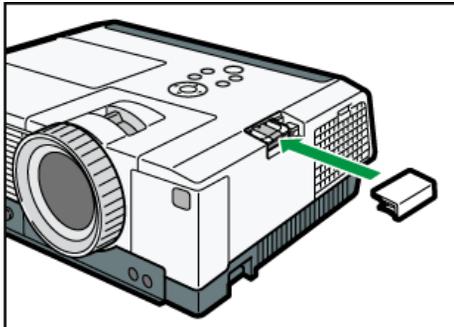
y0242029

3. Attach the projector adapter to the projector.



y0242030

4. Re-attach the interactive kit adapter slot cover.



y0242031

Setting Up RICOH PJ Interactive Software on Your Computer

★ Important

- Log on as the user who have administrator privileges and install the software.

1. Insert the product CD-ROM into the computer.

If the user account control screen appears, perform one of the following steps:

- If you have administrator privileges, permit changes to the computer.
- If you are a standard user, enter the administrator account password and click [Yes].

2. Select the language and click [Select].

3. Click [PJ Interactive Software].

4. Select the software options you want to install.

5. Specify the language you want to use during the installation process, and then click [OK].

6. If Net Framework 4 is not installed on your PC, click [Install].

↓ Note

- If Net Framework 4 is already installed on your PC, the [Install] button will be shown. Go to the next step.

7. Click [Next].

8. Select "I accept the terms of the Software License Agreement.", and then click [Next].

↓ Note

- If you do not agree, you will be unable to continue the installation process.

9. Specify the installation folder, and then click [Next].

10. Click [Install].

11. Click [Close].

Registering the Computer USB Adapter

To use the computer USB adapter in interactive mode, the adapter must be registered to the projector.

Once the computer USB adapter is registered to the projector, there is no need to register it again. You can use the computer USB adapter with any computer that is connected to the projector.

The procedure for registering the computer USB adapter to the projector is described below.

↓ Note

- To register a computer USB adapter, connect the projector to the computer, and then insert the adapter into the computer. Have a computer USB adapter at hand, ready for installation.
- Do not register computer USB adapters for multiple projectors at the same time. The computer USB adapter might not be registered correctly.

1. Turn on the projector to project the screen.

2. Connect the computer to the projector using RGB cables or an HDMI cable.

You cannot use the Interactive function if another type of cable is used for the connection.

3. Project the computer screen on the projector screen.

4. Press the [Menu] button.

The projector menu screen will be displayed on the projector screen.

5. Press the [▲] [▼] buttons to select [Default Settings 1], then press the [▶] button.

6. Press the [▲] [▼] buttons to select [Interactive], then press the [Enter] button.

↓ Note

- If the computer USB adapter for the projector is not connected to the projector, you will not be able to select [Interactive].

7. Check that [Interactive Mode] is set to [On].

↓ Note

- If [Interactive Mode] is set to [ON], the USB adapter for the computer will not be able to be registered.

8. Have a computer USB adapter at hand.

9. Press the [▲] [▼] buttons to select [PC Adapter Registration].

10. Press the [Enter] button.

11. Press the [OK] button of the message screen that is displayed.

12. Press the [Enter] button.

13. Connect the computer USB adapter to the computer.

↓ Note

- If the USB adapter is installed on the computer, the USB adapter will flicker twice every 0.5 seconds.

If registration succeeds

The following message appears.

- "Registration has completed."

On being registered, the computer USB adapter flickers every two seconds.

Press the [Enter] button to close the message.

If registration fails

The following message appears.

- "Failed to register. Do you want to retry?"

Registration fails unless the computer USB adapter is installed into the computer while the projector is searching for the computer USB adapter.

If there are any obstacles between the projector and computer, the attempt to perform registration will fail.

To retry registration, select [OK] and press the [Enter] button. Then, take out the computer USB adapter from the computer and restart the procedure from Step 10.

14. Press the [Menu] button twice

The [Menu] screen will close.

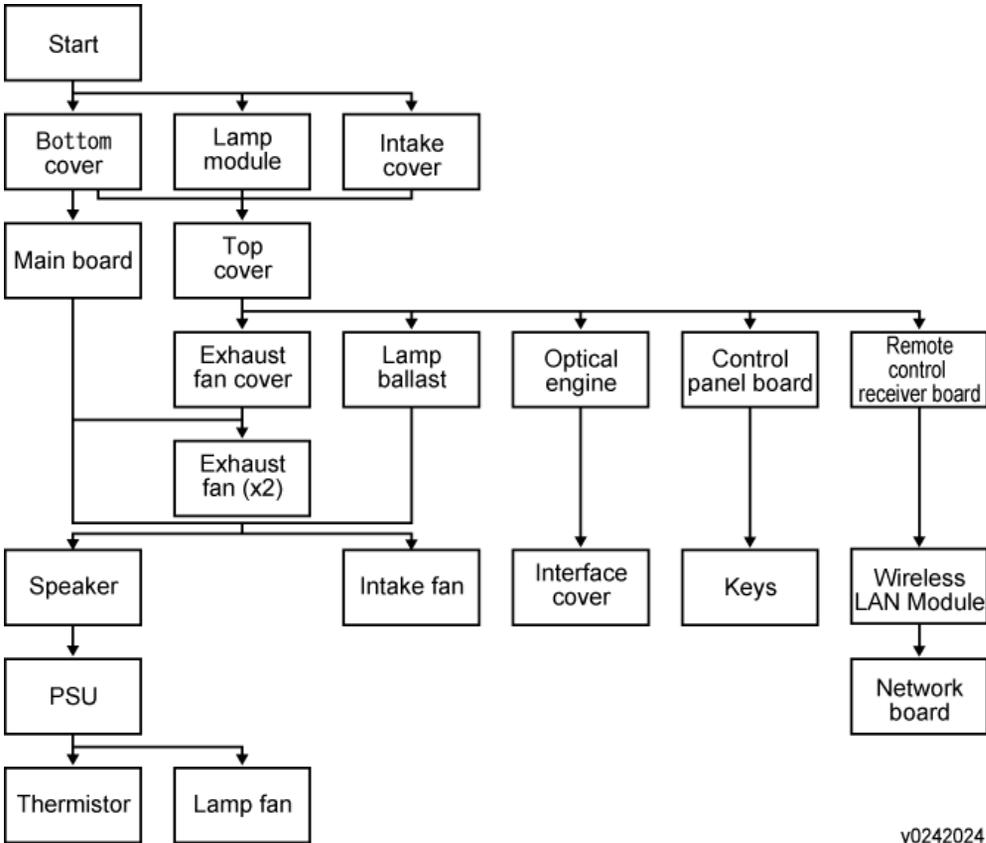
3. Replacement and Adjustment

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 module) are accessible without removing any other parts.

The more levels down that a part is, the more parts you need to remove in order to access it.



y0242024

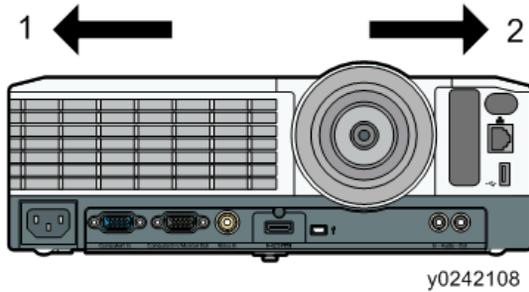
Special Tools

Make sure that technicians are equipped with the following tools, which will be necessary in order to update the main firmware, and to perform adjustments that are necessary after replacing the optical engine or main board.

1. USB cable
2. PC
3. USB storage device (or USB SD card reader plus SD card)

Parts Replacement

"Left" and "right" indicate the directions as seen from the projected screen.



1. Left
2. Right

3

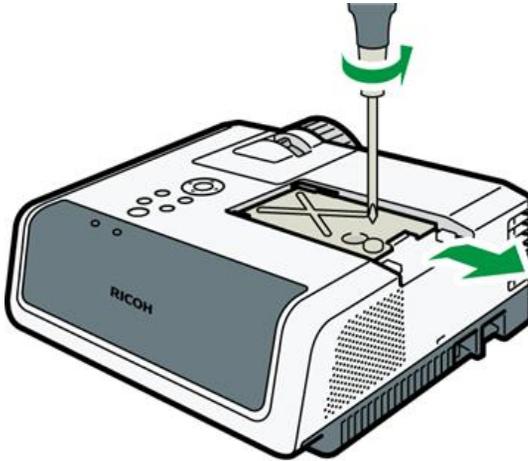
Lamp Module

⚠ WARNING

- The lamp contains mercury.
Please dispose of this product or used lamps in accordance with local regulations.
1. **Turn off the power first and unplug the power cord after the cooling fan stops.**
Since the lamp unit is still heated just after the power is turned off, make sure to replace the lamp unit at least one hour or more after the power cord is unplugged.
 2. **Slide the outer lamp cover to remove it.**

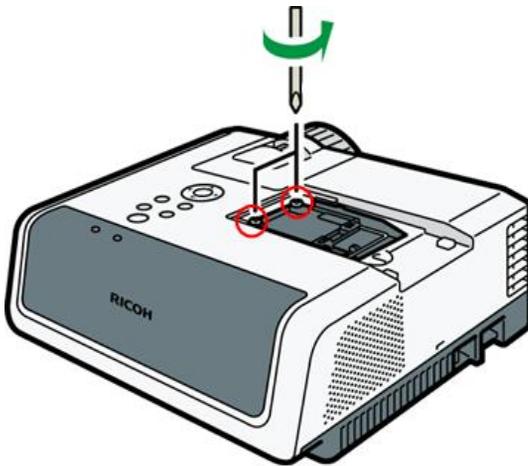


3. Loosen the screw on the side of the inner lamp cover, and then remove the inner lamp cover.



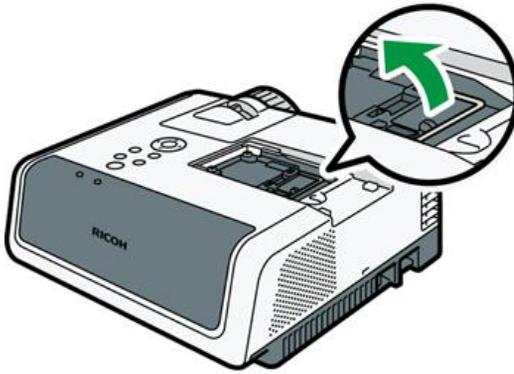
y050t3002

4. Loosen the two screws on the side of the lamp unit.



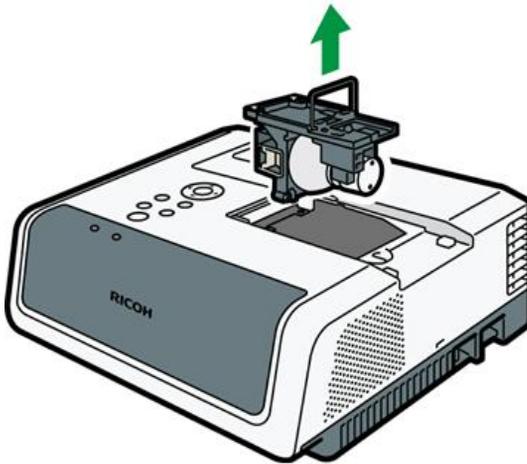
y050t3003

5. Raise the metal handle.



y050t3004

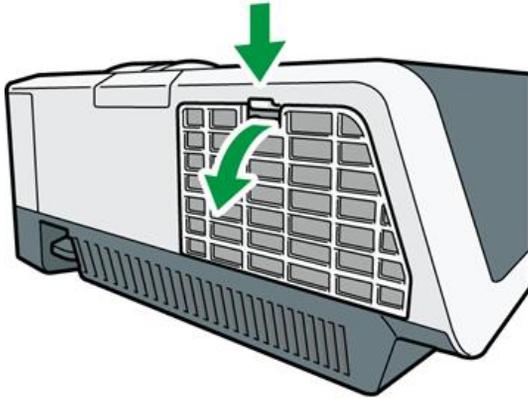
6. Hold the handle, and then pull the lamp unit out of the projector.



y050t3005

Intake Cover

1. While pressing the lever on the top of the air filter, pull the filter open.

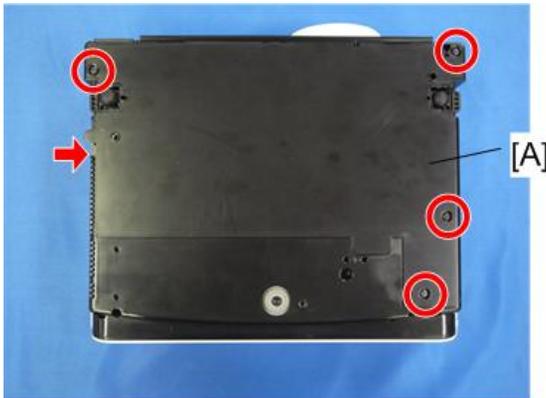


y050t3006

3

Bottom Cover

1. Bottom cover [A] (⌀ x 4, hook x 1)

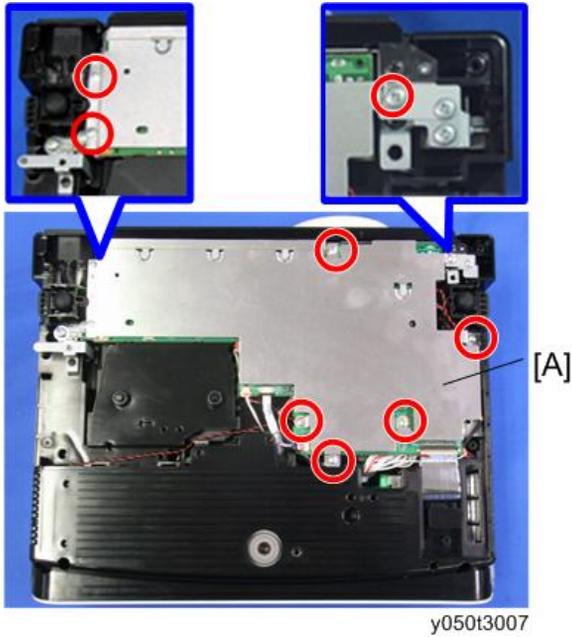


y0242039

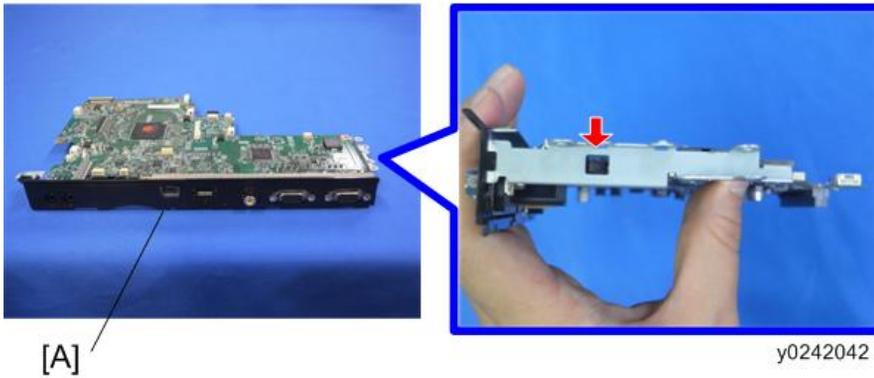
Main Board Assembly

1. Bottom cover (page 60 "Bottom Cover")

2. Bottom plate [A] (8 x 8)



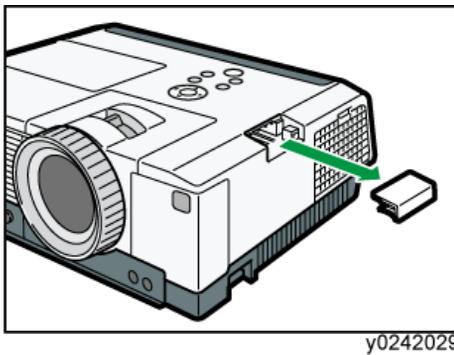
4. Terminal cover [A] (hook x 1)



3

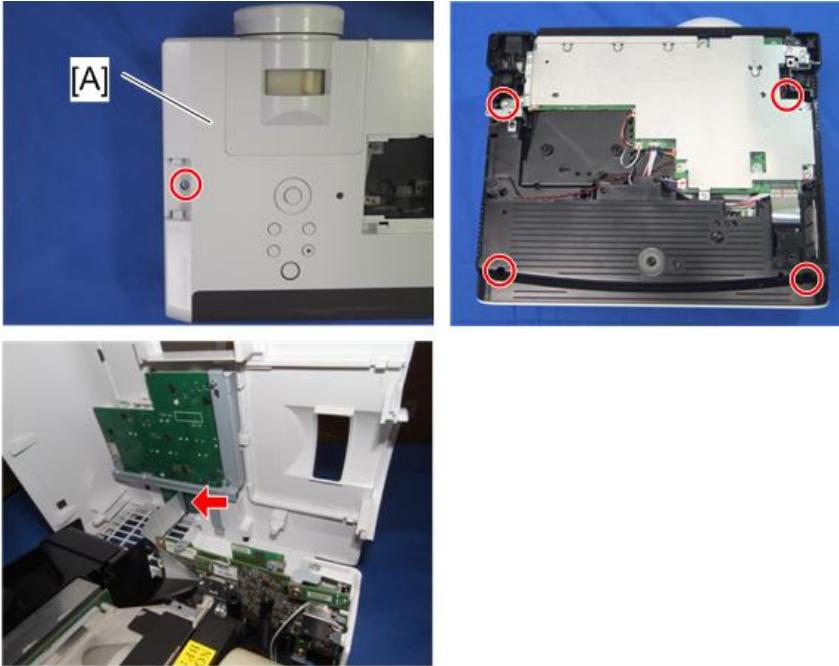
Top Cover

1. Lamp module (page 57 "Lamp Module")
2. Interactive kit adapter slot cover



3. Intake cover (page 60 "Intake Cover")
4. Bottom cover (page 60 "Bottom Cover")
5. Top cover [A] (🔩 x 5, 📦 x 1)

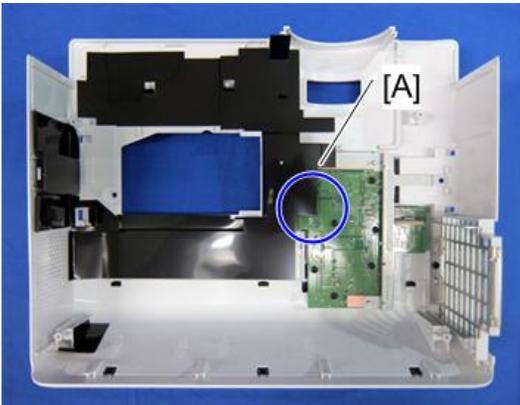
Remove the connector by pushing the hook.



y050t3009

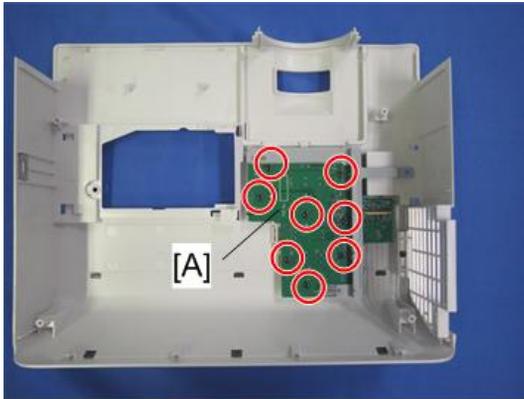
Control Panel Board

1. Top cover (page 63 "Top Cover")
2. Remove the board protection film [A] where the two screws (🔩 x 2) hide.



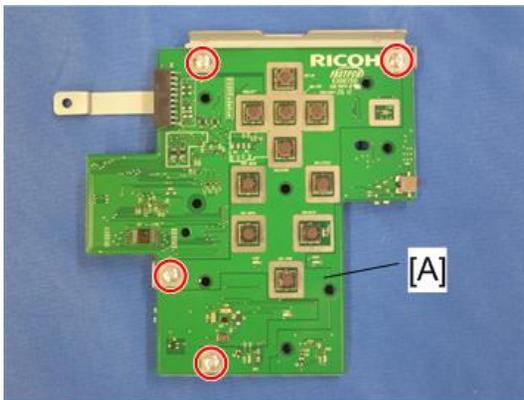
y050t3010

3. Control panel board with bracket [A] (🔩 x 8)



y0242045

4. Remove the bracket from the control panel board [A] (🔩 x 4)

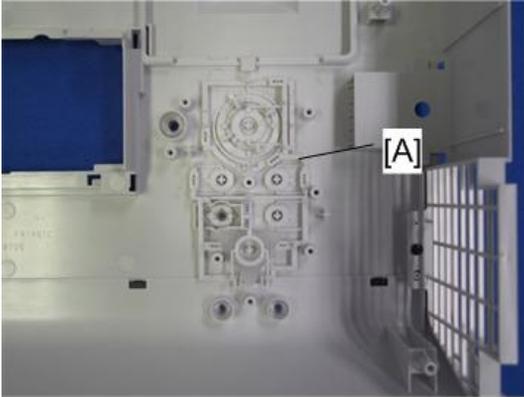


y0242046

Keys

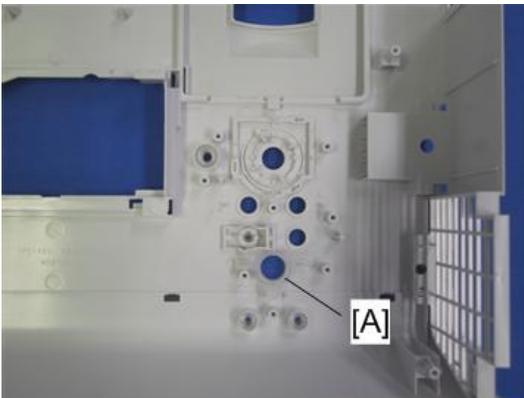
1. Control panel board [A] with bracket (page 64 "Control Panel Board")

2. Keys (L) [A]



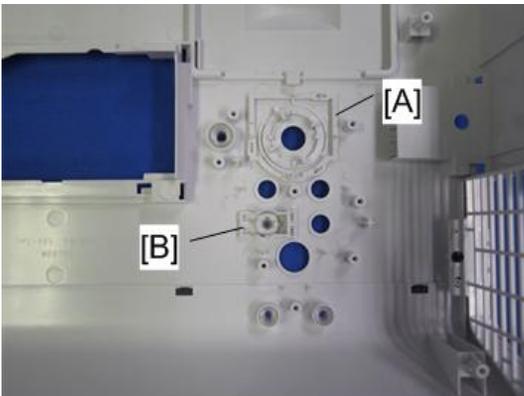
y0242047

3. Power button LED cover [A]



y0242048

4. Keys (M) [A] and Keys (S) [B]



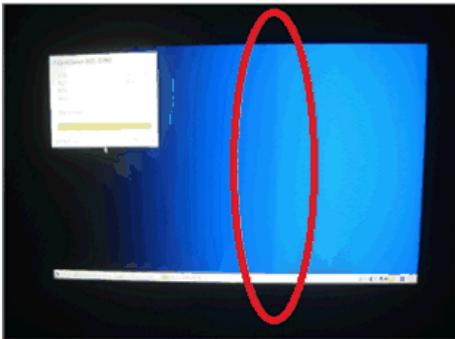
y0242049

Optical Engine

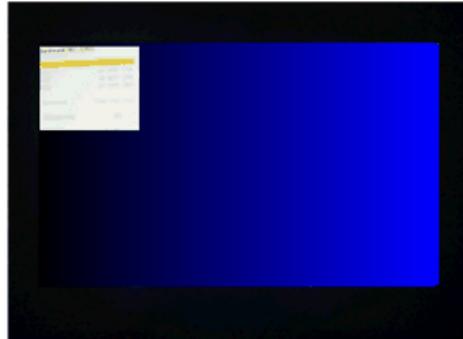
★ Important

- After replacing the optical unit, you must input the value of color wheel index delay that is specific to the new unit and do the keystone adjustment.
- When you input the value of color wheel index delay, you must display the color pattern sample and input the normal value. (Refer to "3. Replacement and Adjustment > Projector Setup > Color wheel index delay")

Incorrect

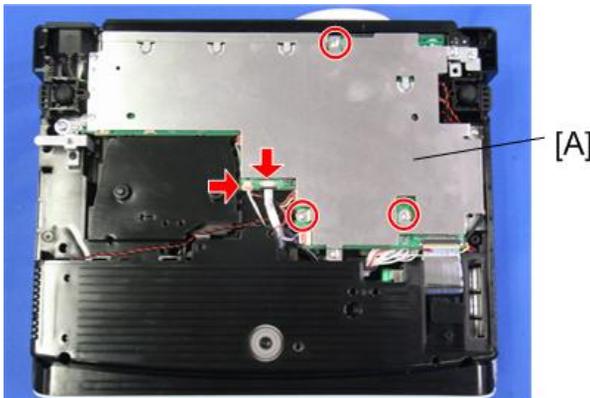


Correct



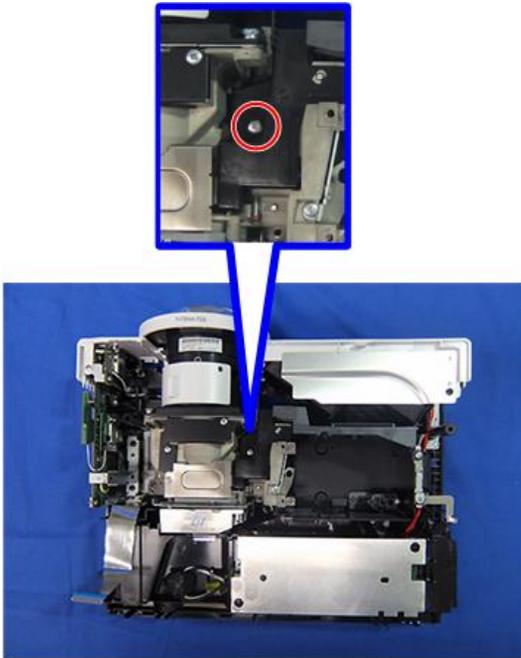
y050z3011

1. Top cover (page 63 "Top Cover")
2. Optical engine (Base fixing section) [A] (⚙️ x 3, 🛠️ x 2)



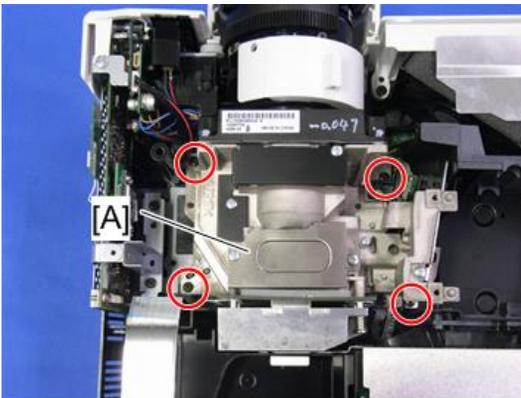
y050t3023

3. Fixing cover (🔩 x 1)



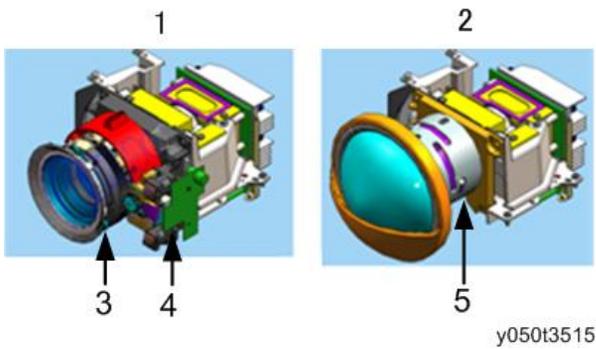
y050t3011

4. Optical engine [A] (🔩 x 4)



y050t3012

How to determine the type of the optical engine



1. Y051 / Y053
2. Y054 / Y056
3. Lens barrel
4. Auto focus unit
5. Lens barrel

How to determine the resolution of the optical engine



y050t3013

Read the second to fifth letters on the label attached to the left side of the optical engine and check them against the following table.

Code	Resolution
Y051	XGA
Y054	

Code	Resolution
Y053	WXGA
Y056	

Remote Control Receiver Board

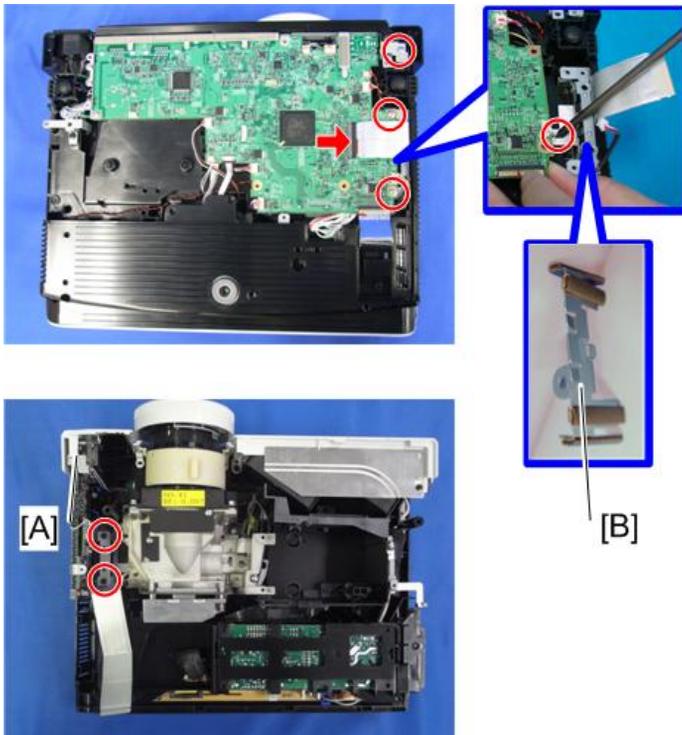
★ Important

- Put the projector on a flat surface to prevent the main board from being damaged by protrusions.

1. Top cover (page 63 "Top Cover")

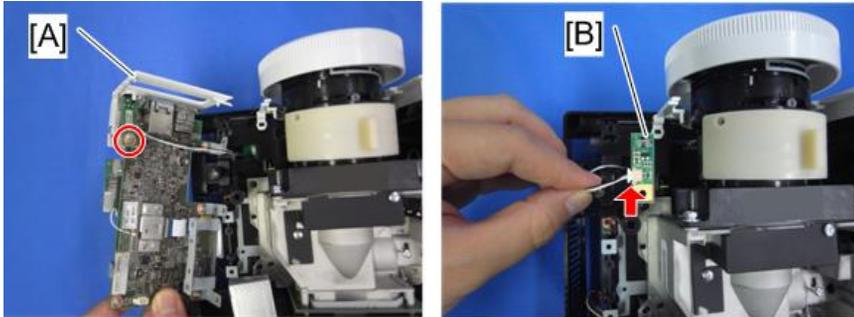
2. Front right cover [A] with Network Board (🔩 x 6, 🛠 x 1 (Y051 / Y053 / Y056 only))

To remove the part, pull it up by holding the gray cushion [B] at the same time.



y050t3204

3. Topple the front right cover [A] and remove the remote control receiver board [B] (🔩 x 1, 📦 x 1)



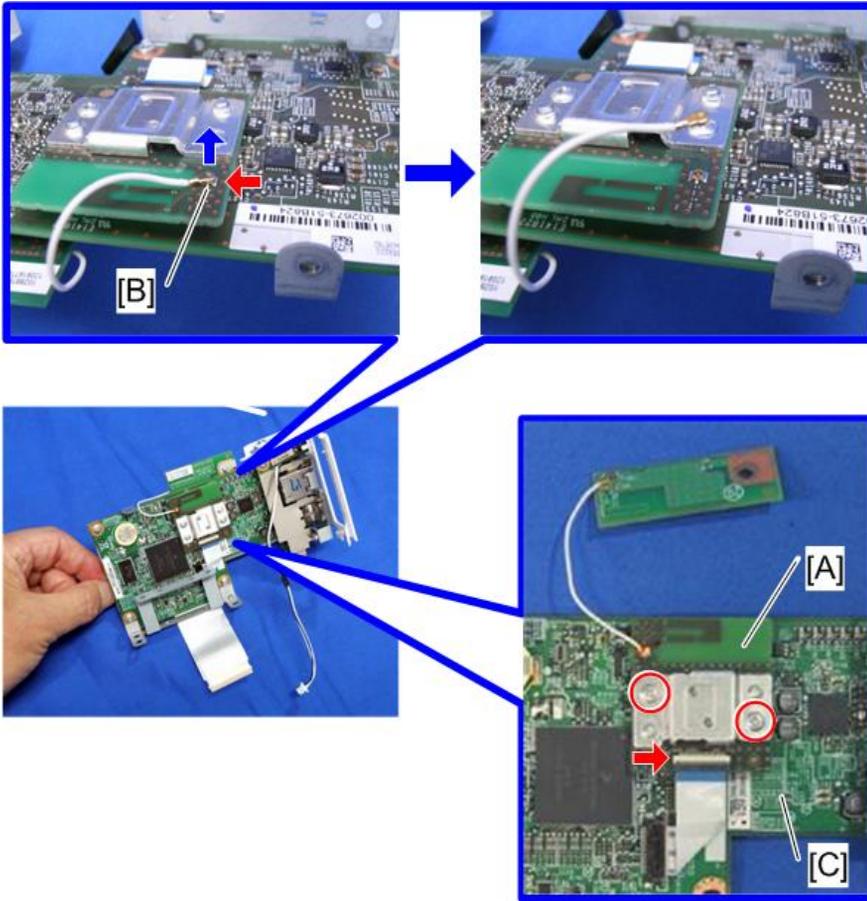
y050t3510

3

Wireless LAN Module (Y051 / Y053 / Y056 only)

1. Remote control receiver board (page 70 "Remote Control Receiver Board")
2. Remove the wireless LAN module [A] from the network board [C] (🔩 x 2, 📦 x 2)

Pull the connector [B] in a vertical direction from the board to disconnect it.

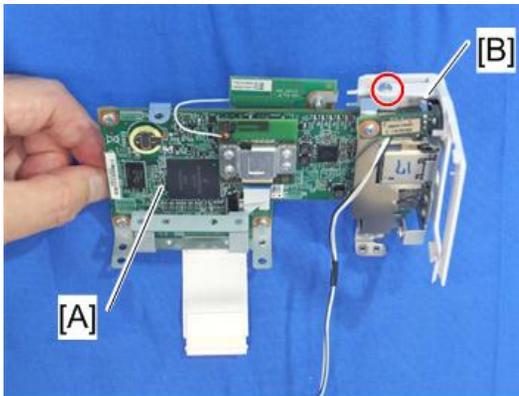


y050t3015

Network Board

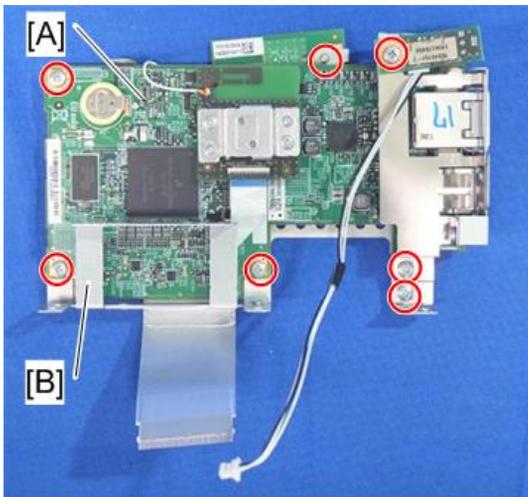
1. Wireless LAN module (page 71 "Wireless LAN Module (Y051 / Y053 / Y056 only)")

2. Remove the front right cover [B] from the network board [A]



y050t3017

3. Remove the bracket from the network board [A] (🔩 x 7)



y050t3016

⬇️ Note

- The sheet metal has a three-layer structure with the sensor located at the top. Be careful when assembling.



y050t3024

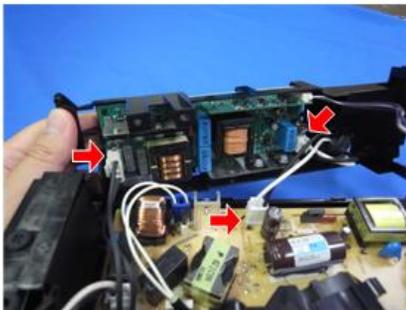
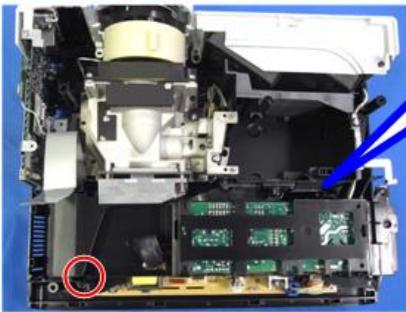
★ Important

- After the network board is replaced, perform the following steps so that the board will recognize the screen resolution (XGA/WXGA) of the model.
- 1. Turn on the power after replacing the network board.
- 2. Turn off the power.
- 3. Disconnect the power cord.
- 4. Connect the power cord.
- 5. Turn on the power.

Lamp Ballast

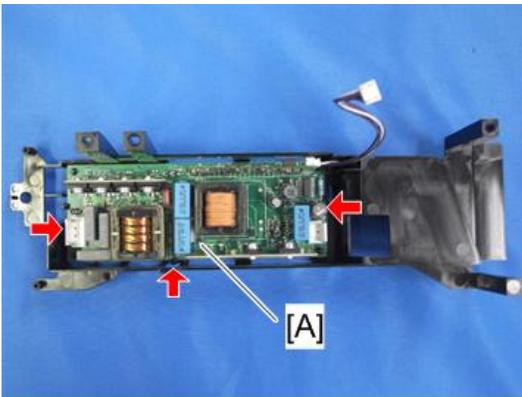
1. Top cover (page 63 "Top Cover")

2. Remove the Lamp ballast from the bracket (🔩 x 2, 🛠️ x 4,)



y050t3504

3. Remove the ballast [A] from the bracket (hooks x 3)

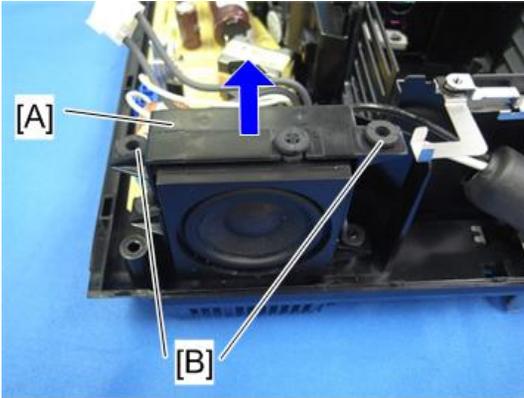


y050t3505

Speaker

1. Main board assembly (page 60 "Main Board Assembly")
2. Lamp Ballast (page 74 "Lamp Ballast")
3. Lift the speaker bracket [A].

Take care not to lose the rubber grommets [B].



y0242057

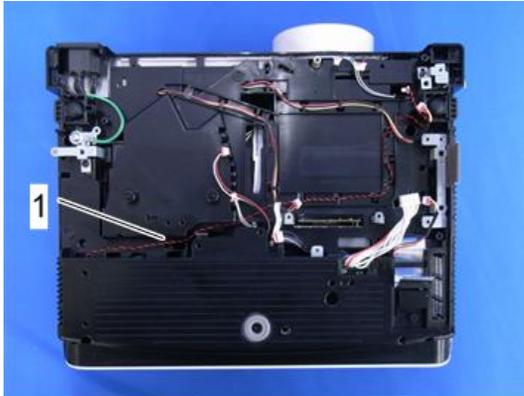
4. Pull out the cables [A] to remove the speaker [B].



y0242058

When attaching the speaker

Arrange the cables as shown in the picture below.



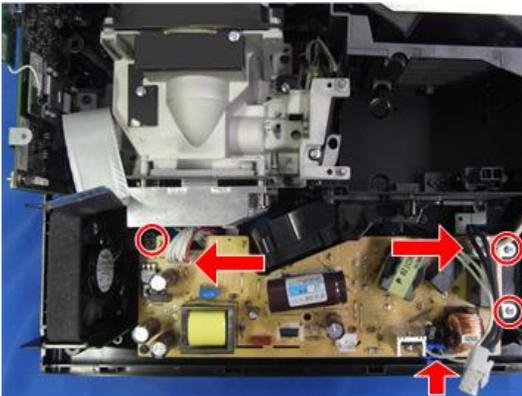
y0242135

1. Speaker cables

3

PSU

1. Speaker (page 76 "Speaker")
2. PSU (🔩 x 3, 📦 x 3, hook x 1)

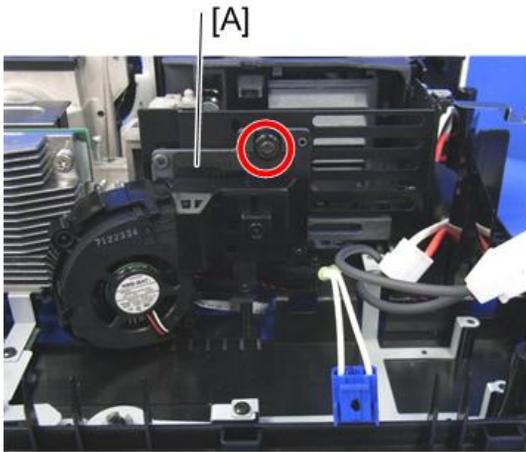


y050t3025

Thermistor

1. PSU (page 77 "PSU")

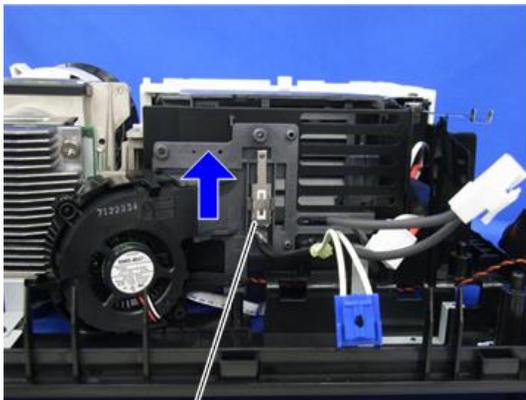
2. Thermistor cover [A] (⌀ x 1)



y0242060

3. Thermistor cover [A]

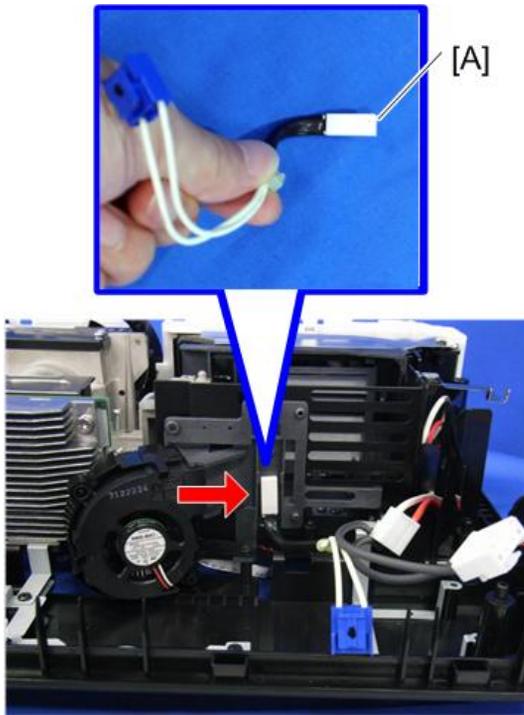
Raise the metal holder together with the cable.



[A]

y050t3020

4. Thermistor [A] (📦 x 1)

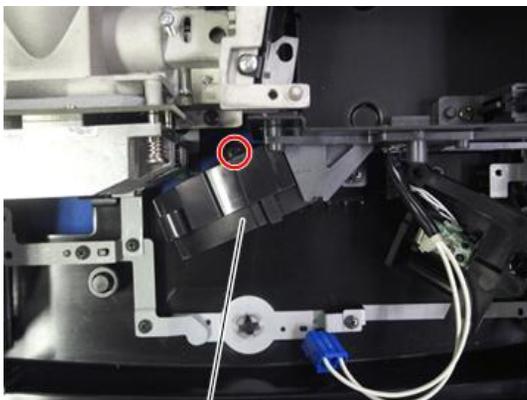


y050t3019

3

Lamp Fan

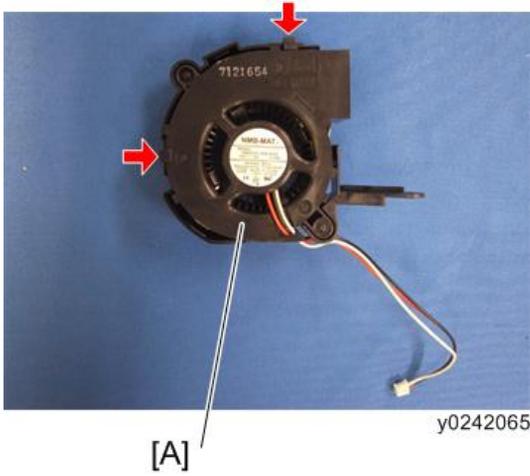
1. Thermistor cover (page 77 "Thermistor")
2. Lamp fan bracket [A] (📦 x 2)



y0242064

[A]

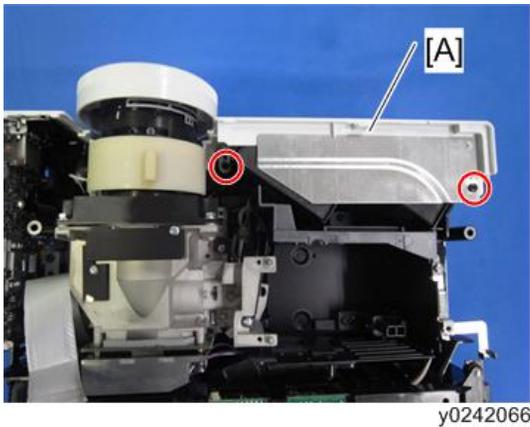
3. Remove the lamp fan [A] from bracket (hooks x 2)



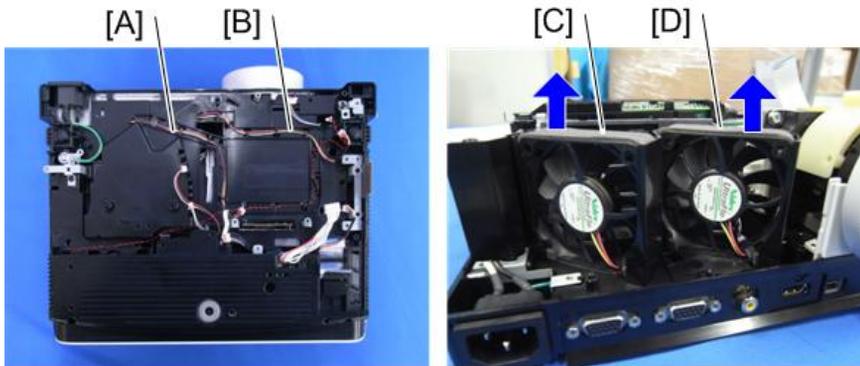
3

Exhaust Fan

1. Main board assembly (page 60 "Main Board Assembly")
2. Top cover (page 63 "Top Cover")
3. Front left cover [A] (🔧 x 2)



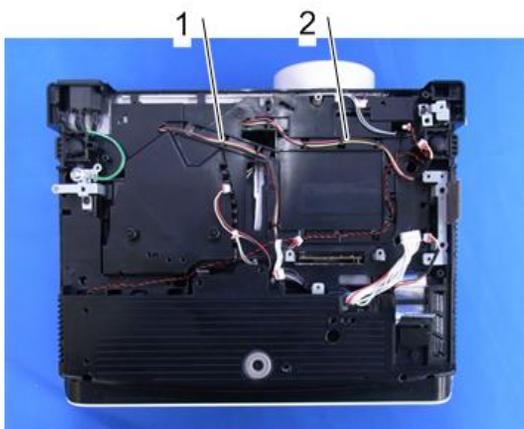
4. Pull out the cables [B] to remove the exhaust fan 1 [D]. Pull out the cables [A] to remove the exhaust fan 2 [C].



y050t3022

When attaching the exhaust fans

Arrange the cables as shown in the picture below.



y0242137

1. Cables for exhaust fan 2

2. Cables for exhaust fan 1

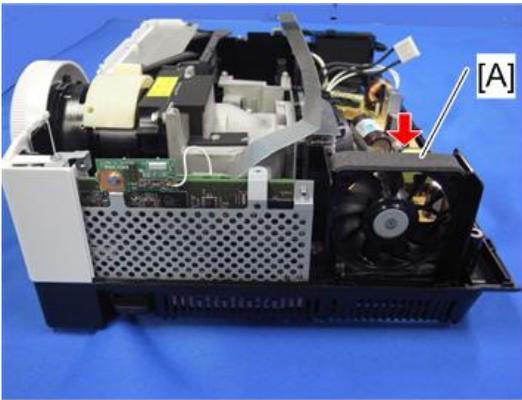
Note

- When installing the exhaust fans, make sure that the fans are installed with their decals (product label) facing the outside of the projector.

Intake Fan

3

1. Main board assembly (page 60 "Main Board Assembly")
2. Lamp ballast (page 74 "Lamp Ballast")
3. Intake Fan [A] (📦 x 1)



y050t3511



y0242068

Note

- When installing the exhaust fans, make sure that the fans are installed with their decals (product label) facing the outside of the projector.

Electrical Adjustment

Adjustment Points vs Part Replaced

The table below shows you the items to be adjusted according to the type of part you replaced.

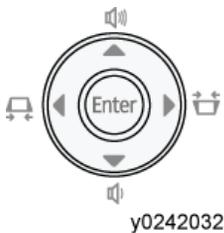
	Keystone	Sub Contrast	Color wheel index delay
Main board	Yes	No	Yes
Control panel board	No	No	No
Optics section	Yes	No	Yes

For this model, Sub Contrast is adjusted at the factory and no further adjustment is required.

Save Data to EEPROM (Common for all adjustments)

After performing adjustments, save the new settings to the EEPROM.

Press the [▲], [▼], [◀], and [▶] buttons of the projector simultaneously.



A beep sounds upon completion of saving data.

Preparation

Test equipment

1. Personal computer
(Windows PC, OS: Windows Vista, 7)
2. Cables
RGB Cable and Control (USB A to mini-B) Cable
3. A protractor for Vertical Auto Keystone Calibration

Projector Setup

Plug in the power cord and press the [Power] button of the projector.

How to enter the Service Mode

1. Press and hold the [Enter] and [Menu] buttons of the projector simultaneously for 2 seconds.

You will hear a short beep.

2. Press the [◀] button on the projector.
3. Press the [▼] button on the projector.
4. Press the [▲] button on the projector.
5. Press and hold the [Enter] button on the projector for longer than 2 seconds.

When the projector enters the Service Mode, the buzzer beeps for 3 seconds.

If it doesn't beep, repeat from the beginning.

The projector remains in this mode until you disconnect the power cord.

How to display the Service status

After the projector has entered the service mode, press the [AV Mute] and [▲] buttons simultaneously. Then, the following display appears.

If it doesn't appear, repeat from the beginning.

This mode remains until you press the [Menu] button.

Service status		[MENU] Quit	
Version (Main-PIC-Network)	1234567890 - 1234 - 123.456	Version (DDP API)	12.34.56
Total time	32767H - 59M - 59S	Model	PJWX4141NI
User lamp time	32767H - 59M - 59S	Serial No.	123456789012
Lamp reset count	255	Engine No.	A123456789
Lamp Power(actual)	Maximum	Region Code	NA
Lamp voltage	255 V	Sub contrast	9999 - 9999 - 9999
Lamp wattage	250 W	CW index delay	719
KC0	99 - 9999 - 2048	Altitude	6
KC1	99 - 9999 - 2048	Temp (intake)	165 deg
KC2	99 - 9999 - 2048	[Lamp Msg] display	Enable
KC3	99 - 9999 - 2048	[Filter Msg] display	Enable
Fan1 (intake)	9999 rpm	[Password] function	Enable
Fan2 (lamp)	9999 rpm	[HDMI overscan] function	Disable
Fan3 (exhaust1)	9999 rpm	Shut down	255
Fan4 (exhaust2)	9999 rpm	Error count (Main)	4080
Error log (PIC)	CD-CD-CD-CD-CD	Error log (Main)	01-02-03-04-05-06-07-08-09-10-11-12-13-14-15-16

y050z3000

The number in the Error log shows the error log (page 159 "Error Log").

Version (Main - PIC - Network): Version of Main - PIC - Network

Version (DDP API): Version of DDP API

Total time: Total time that the projector has been used (Unit: hr/m/s)

*Total time that the lamp has been lighted (not reset by lamp replacement)

User lamp time: Time of the lamp has been used.

Lamp reset count: Reset count for the time that the lamp has been used.

Lamp voltage: Power voltage of the lamp

Lamp wattage: Wattages of the lamp

KCO: Value of keystone adjustment 0

KC1: Value of keystone adjustment 1

KC2: Value of keystone adjustment 2

KC3: Value of keystone adjustment 3

Fan1 (intake): Rotation count of intake fan

Fan2 (lamp): Rotation count of lamp fan

Fan3 (exhaust1): Rotation count of exhaust fan 1

Fan4 (exhaust2): Rotation count of exhaust fan2

Error log (PIC): Display of the error ID log that is recorded by the standby micro computer. (page 159 "Error Log").

Error log (Main): Display of the error ID log that is recorded by the main board software. (page 159 "Error Log").

Model: Model name

Serial No.: Serial number

Engine No.: Serial number of the optical engine

Region Code: Delivered area code

Sub contrast: Adjusted value of sub contrast

C/W index delay: Synchronized adjustment between the color wheel index and the video signals

Altitude: Adjustment of altitude

Temp (intake): Temperature of intake

[Lamp Msg] display: Display of the lamp message

[Filter Msg] display: Display of the filter message

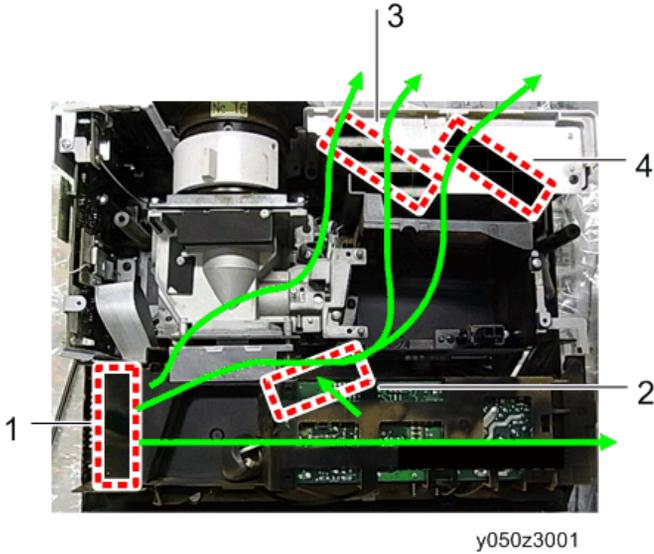
[Password] function: Enable/Disable of the password setting

[HDMI overscan] function: Enable/Disable of the use of HDMI over scan mode

Shut down: Number of the projector shut down

Error count (Main): Number of times errors have occurred (Sum of the counts for each error type)

Fan locations



1. Fan1 (intake fan)
2. Fan2 (lamp fan)
3. Fan3 (exhaust fan 1)
4. Fan4 (exhaust fan 2)

Keystone Calibration

1. Press the [Input] and [▲] buttons simultaneously.

Adjustment (KC, CW)	
KC0 (normal)	0 - 0 - 2048
KC1 (back)	0 - 0 - 2048
KC2 (front)	0 - 0 - 2048
KC3 (30 min.)	0 - 0 - 2048
Sub contrast	512 - 512 - 512
CW index delay	50
[MENU] Quit	[ENTER] Execute

w_y050t3701

2. Set the projector on a level surface.



y0242071

3. Press the [Enter] button of the projector.

When the adjustment is successfully completed, the values changes from the default [0-0-2048].

(Example: See below)

Adjustment (KC, CW)	
KC0 (normal)	25 - 3353 - 2051
KC1 (back)	0 - 0 - 2048
KC2 (front)	0 - 0 - 2048
KC3 (30 min.)	0 - 0 - 2048
Sub contrast	512 - 512 - 512
CW index delay	50
[MENU] Quit	[ENTER] Execute

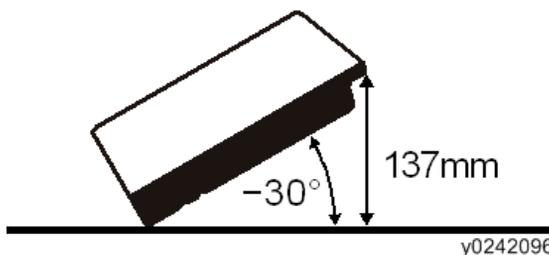
w_y050t3702

If it fails, the values don't change from the default [0-0-2048].

4. Keep the projector at 30 degrees.

Remove the front foot adjuster (stand).

Adjust the distance from the mounting surface to the corner under the rear of the projector to 137 mm.



y0242096

5. Select the KC1 item by pressing the [▼] button.



w_y050t3703

6. Press the [Enter] button of the projector.

When the adjustment is successfully completed, the values changes from the default [0-0-2048].

(Example: See below)



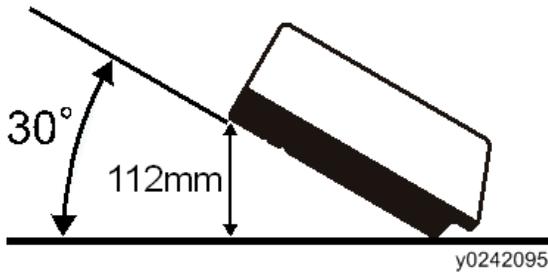
w_y050t3704

If it fails, the values don't change from the default [0-0-2048].

7. Keep the projector at -30 degrees.

Turn the foot adjuster (stand) to the right until the end and set it to the shortest status.

Adjust the distance from the mounting surface to the front of the projector to 112 mm.



8. Select the KC2 item by pressing the [▼] button.

Adjustment (KC, C/W)	
KC0 (normal)	25 - 3353 - 2051
KC1 (back)	25 - 3354 - 1802
KC2 (front)	0 - 0 - 2048
KC3 (30 min.)	0 - 0 - 2048
Sub contrast	512 - 512 - 512
C/W index delay	50
[MENU] Quit	[ENTER] Execute

w_y050t3705

9. Press the [Enter] button of the projector.

When the adjustment is successfully completed, the values changes from the default [0-0-2048].

(Example: See below)

Adjustment (KC, C/W)	
KC0 (normal)	25 - 3353 - 2051
KC1 (back)	25 - 3354 - 1802
KC2 (front)	25 - 3353 - 2299
KC3 (30 min.)	0 - 0 - 2048
Sub contrast	512 - 512 - 512
C/W index delay	50
[MENU] Quit	[ENTER] Execute

w_y050t3706

If it fails, the values don't change from the default [0-0-2048].

- Set the projector on a level surface and turn on the projector to shine the lamp through it for 30 minutes or more.



y0242071

- Select the KC3 item by pressing the [▼] button.

3

Adjustment (KC, C/W)	
KC0 (normal)	25 - 3353 - 2051
KC1 (back)	25 - 3354 - 1802
KC2 (front)	25 - 3353 - 2299
KC3 (30 min.)	0 - 0 - 2048
Sub contrast	512 - 512 - 512
C/W index delay	50
[MENU] Quit	[ENTER] Execute

w_y050t3707

- Press the [Enter] button of the projector.

When the adjustment is successfully completed, the values changes from the default [0-0-2048].

(Example: See below)

Adjustment (KC, C/W)	
KC0 (normal)	25 - 3353 - 2051
KC1 (back)	25 - 3354 - 1802
KC2 (front)	25 - 3353 - 2299
KC3 (30 min.)	24 - 3396 - 2049
Sub contrast	512 - 512 - 512
C/W index delay	50
[MENU] Quit	[ENTER] Execute

w_y050t3708

If it fails, the values don't change from the default [0-0-2048].

↓ Note

- This adjustment can also be done manually using the Backup/Restore Tool. (page 99 "Data Backup/Restore")

Color wheel index delay

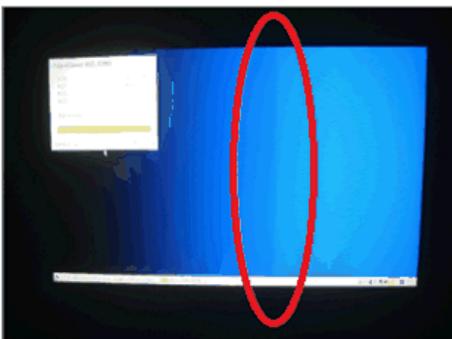
1. Press the [Input] and [▲] buttons simultaneously.
2. Select the C/W index delay item by pressing the [▼] button.



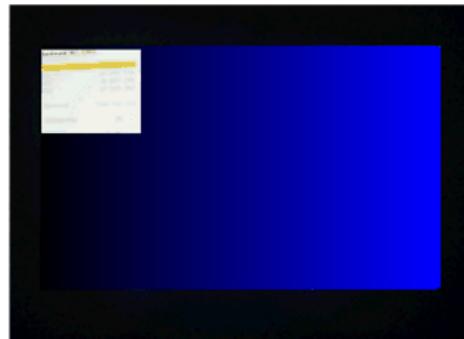
w_y050t3709

3. Connect your PC to the projector and display the samplepattern.png file.
4. Adjust the value of the C/W index delay by pressing the [◀] or [▶] button until the color changes smoothly across the screen as shown below.

Incorrect



Correct



y050z3011

Altitude

You can set this when [High Altitude Mode] in [Default settings 2] is [On].

1. Press the [Input] and [▼] buttons simultaneously.

Adjustment(Altitude,Fan)		
Altitude	4	
Fan control	<input checked="" type="radio"/> Auto	<input type="radio"/> Manual
	Setting	Actual
Fan1 (intake)	205	2891rpm
Fan2 (exhaust1)	194	2792rpm
Fan3 (exhaust2)	179	2960rpm
Fan4 (lamp)	166	3366rpm
		Actual
Temp1 (intake)		26deg
[MENU]Quit	[<]/[>]Adjust	

y0242074

2. Select the correct value by pressing the [◀] or [▶] button.

The number of fan rotations changes by the setting value below.

The value [1] (7.7% up) is for more than 500 m (1,640 ft) and under 1,000 m (3,281 ft).

The value [2] (15.4% up) is for more than 1,000 m (3,281 ft) and under 1,500 m (4,921 ft).

The value [3] (23.1% up) is for more than 1,500 m (4,921 ft) and under 2,000 m (6,562 ft).

The value [4] (30.8% up) is for more than 2,000 m (6,562 ft) and under 2,500 m (8,202 ft).

The value [5] (38.5% up) is for more than 2,500 m (8,202 ft) and under 3,000 m (9,843 ft).

The value [6] (46.2% up) is for more than 3,000 m (9,843 ft).

4. System Maintenance

Firmware Update

Updating the Firmware Using a Computer (Main Board only)

Preparation

Note

- There are two types of firmware according to the screen resolution (XGA/WXGA). Make sure to use the firmware that matches the model.
- You need the following tools when updating the firmware of the customer’s projector.
Ricoh Projector FW Update Tool (Software)
- Driver software
- Firmware to update
- USB cable (USB A / mini-B) to connect the projector and PC.
- Check the firmware release information how to get the most recent firmware.

1. Install the driver on a computer.

Double-click the CP210xVCPInstaller.exe icon and click the [Install] button.



Updating the firmware

1. Make sure that the power cord of the projector is disconnected.

2. Connect a USB cable to the control port and connect the other end of the USB cable to your computer.



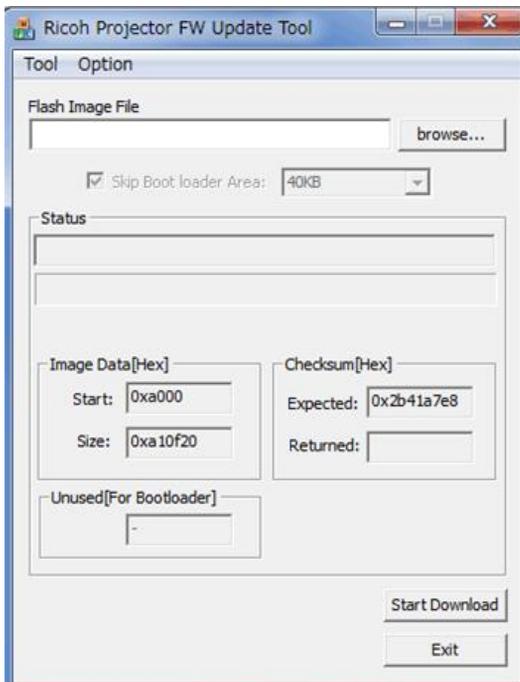
y0242111

3. While holding down the [Input] and [AV mute] buttons, plug in the power cord.

When the projector starts up in firmware update mode, the Power button flashes and the lamp indicator and the Temp indicator light up.



4. Start "Ricoh Projector FW Update Tool" on your computer.
5. Click [browse...] and select the firmware data (*.img file) you want to install.



w_y050t3109

Note

- "Skip Boot loader Area:" is selected by default. Do not change the setting unless otherwise indicated.

6. Click [Start Download].

While the firmware is updating, don't operate the projector. The firmware will not be able to be updated.

While the firmware is being written, the Power button, the Lamp indicator and the Temp indicator flash alternately.



When update is complete, the "Returned:" area under "Checksum [Hex]" on the Ricoh Projector FW Update Tool window displays the same value as the "Expected:" area. The [Power] button, the Lamp indicator and the Temp indicator light up for five seconds



7. Check the firmware version.

How to check the firmware version:

Hold down the [Menu] button once and the [▼] button several times on the default settings window, and select the Display Status tab.

↓ Note

- If a writing error occurs, the [Power] button, the Lamp indicator and the Temp indicator flash simultaneously (page 143 "LED Display / Error ID").



Updating the firmware using a USB memory device

★ Important

- There are two types of firmware according to the screen resolution (XGA/WXGA). Make sure to use the firmware that matches the model.
- Do not touch the projector while updating the firmware.
- Doing so may cause the update to fail.
- Store the latest firmware file (.sfw) in the root directory of a USB memory device.
- Do not store any other firmware files in the root directory.
- Use a USB memory device that supports USB2.0.
- Use a USB memory device formatted with the FAT16 or FAT32 file system.
- USB memory devices where a password is set cannot be used.

1. Copy the downloaded firmware file that has the .sfw extension to the root directory of a USB memory device.
2. Unplug the power cord from the AC In socket of the projector.
3. Insert the USB memory device into the USB port on the projector.
4. Make sure that the power plug is plugged into a power outlet.
5. While pressing the [Power] button and the [Input] button, plug the power cord into the AC In socket of the projector.

The projector starts updating the firmware.

6. Release your fingers from the buttons.

During the firmware update, the [Power] button, lamp indicator, and temp indicator flash. The pattern of flashing changes according to the progress of the firmware update.

When the update completes, the [Power] button, lamp indicator, and temp indicator each light up for a few seconds. Then the projector is in standby mode or power on mode.

After installation is complete, remove the USB memory.

7. Check the firmware version of the projector after the firmware is updated.

 **Note**

- The update time of the firmware is 30 minutes at the longest.
- When the firmware update has failed, the machine automatically restarts.
- The firmware version can be checked on the menu screen of the machine. Check that the same version as the downloaded firmware version is displayed.
- - Main FW version: Status display menu
- - Network/USB function FW version: Network/USB setting menu > Network setting > Status display
- You can use an SD card with a USB card adapter in place of a USB memory device.

Service Status

Even when the lamp does not light due to lamp rupture (projection does not start), the service status information including the lamp time and the total time can be acquired and displayed by using the Service Status Tool without replacing the lamp.

Using the service status tool

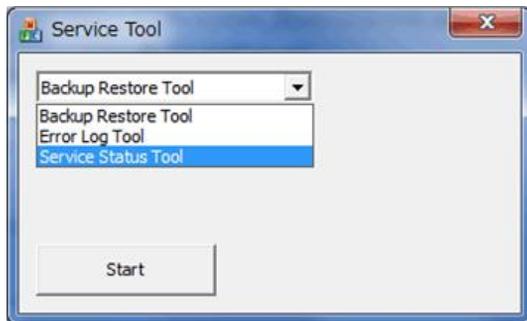
Note

- Before starting this work, download "Backup/Restore Tool", install the USB driver on the computer, and connect the projector to the computer. (page 99 "Data Backup/Restore")

4

Acquiring the service status information

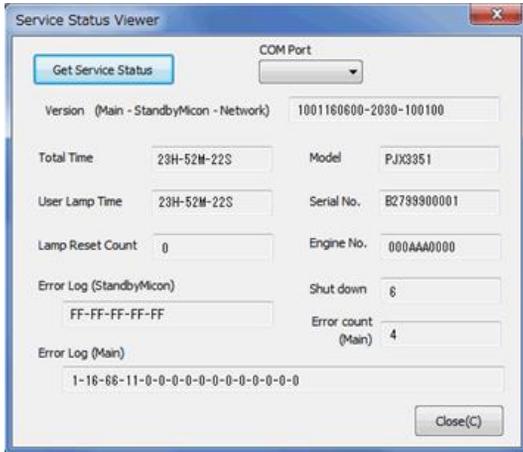
1. Put the projector in the standby state. (The power can stay ON.)
2. Start ServiceTool_DataBackupRestore.EXE (the Service tool).



w_y050t3202

3. Select [Service Status Tool], and click [Start].

[Service Status Viewer] that acquires the service status information appears.



w_y050t3203

4

4. Select the COM port used for connecting the projector and the computer.
5. Click [Get Service Status] to display the following service status information.

Item	Display name
Main version	Version (Main-StandbyMicon-Network)
Standby microcomputer version	Version (Main-StandbyMicon-Network)
NW version	Version (Main-StandbyMicon-Network)
Total time	Total Time
Lamp time	User Lamp Time
Lamp reset count	Lamp Reset Count
Model name	Model
Serial number	Serial No.
Engine number	Engine No.
Abnormal shutdown count	Shut down
Main error count	Error count(Main)
Standby microcomputer error log	Error Log (StandbyMicon)
Main error log	Error Log (Main)

Data Backup/Restore

When replacing the main board or the optical engine, the Service tool can be used for backing up and restoring projector settings.

What to Do When Replacing Parts

When replacing the main board

Before replacement: Perform "Data Backup" and "Keystone Backup".

After replacement: Perform "Data Restore" and "Keystone Restore".

- If Backup/Restore is finished successfully, manual adjustments of the following items are unnecessary.
- If Backup/Restore cannot be executed (for example, when "Data backup" cannot be performed because a board is faulty), adjust the following items manually.

Items to be adjusted when replacing the main board

1. Color wheel index delay
2. Keystone Calibration
3. Serial number Setup

When replacing the optical engine

Before replacement: Perform "Keystone Backup".

After replacement: Perform "Keystone Restore".

- If Backup/Restore is finished successfully, manual keystone calibration is unnecessary.
- If Backup/Restore cannot be executed, perform keystone calibration manually.

In both cases, color wheel index delay must be adjusted manually.

Items to be adjusted when replacing the optical engine

1. Color index delay, which is specific to the new unit
2. Keystone Calibration

How to Use the Backup/Restore Tool

Downloading the tool

1. Download the "Backup Tool" from the Tools/Firmware download page.
2. After extracting the package, Execute "Y*****.exe".

The following files will appear.

- ServiceTool_DataBackupRestore.EXE (the Service tool)
- USB-Serial_Driver_XP-Vista-7.EXE (driver software required when connecting the projector and the computer)

4

Installing the USB Driver

1. Execute "USB-Serial_Driver_XP-Vista-7.EXE" and open the "SiLabs_XP-Vista-7" folder that is created.
2. Open the folders in the following order: "SiLabs" - "MCU" - "CP210x" - "Windows_XP_S2K3_Vista_7".
3. Execute "Windows_XP_S2K3_Vista_7.exe" in the "Windows_XP_S2K3_Vista_7" folder.
4. Click [Install].



w_y033t5645

5. Confirming that [Installation completed successfully] is displayed, and then click [OK].

Connecting the projector to a computer

1. Set the projector in standby status.

Hold down the [Power] button to turn off the lamp.

* Standby status: The [Power] button flashes at one or three second intervals.

2. Connect the projector and the computer with a USB cable (USB Type A/Type mini-B).

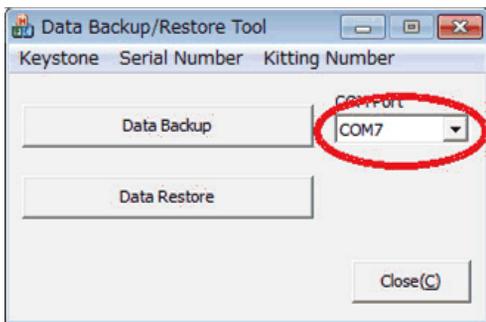


y0242111

Starting the Backup/Restore Tool

1. Execute "ServiceTool_DataBackupRestore.EXE" and open the "ServiceTool_DataBackupRestore" folder.
2. Execute "ServiceTool.exe".
3. Select the COM port that is used for connection between the projector and the computer.

4



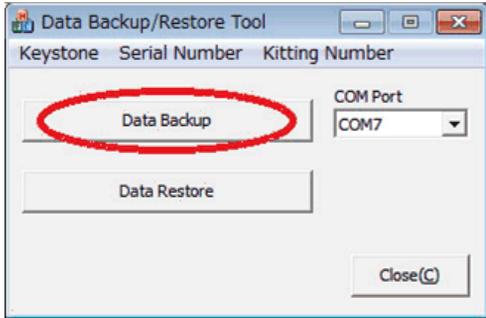
w_y033t5646

How to determine the COM port

Right-click "Computer" and open "Device Manager" in "Properties". Check "Ports (COM & LPT)".

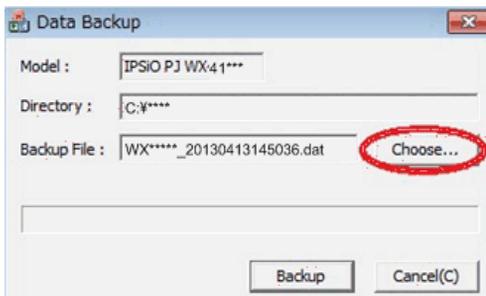
How to Perform Data Backup

1. Click [Data Backup].



w_y033t5647

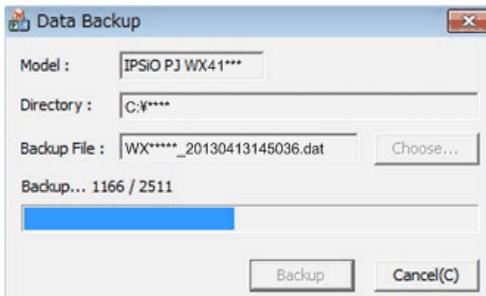
2. Only when changing the destination folder: Click [Choose], and then select where to save the file.



w_y033t5605

3. Click [Backup].

(Backup will take 3 to 4 minutes.)



w_y033t5606

- When "Backup Complete." is displayed, click [OK].



How to Check the Data Backup

4

- Open "Data_BackupRestore_*.xls" in the "ServiceTool_DataBackupRestore" folder.
*Macros must be enabled.
- Open the "Backup" worksheet and click [Execute] button on the sheet.

	A	B
	Execute	Clear
1		
2		
3	Version(Main-Standby)	
4	Serial No.	
5	Total time	
6	User lamp time	
7	Lamp reset count	
8		
9		

w_y033t5649

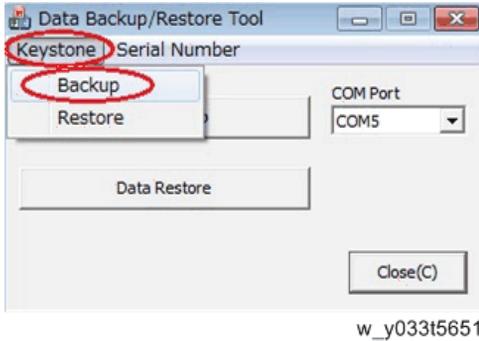
- Select the backup file "X3351N_*****.dat". (** indicate the date and time.)

The file name above is an example. "X3351N " may be either of the following, depending on the projector model.

- WX4241N
- X4241N
- WX3351N
- X3351N

How to Perform Data Restore

1. Click [Data Restore].



2. Click [Choose] and select the backup file "X3351N_*****.dat".

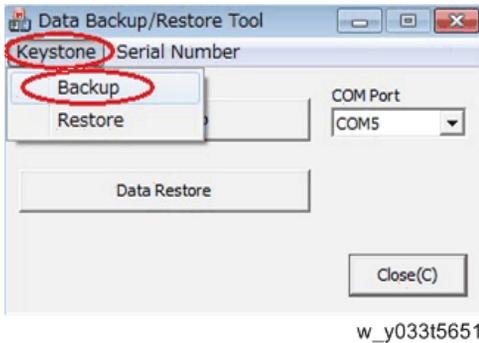
The file name above is an example. "X3351N" may be either of the following, depending on the projector model.

- WX4241N
- X4241N
- WX3351N
- X3351N

3. Click [Restore].
4. When "Restore Complete." is displayed, click [OK].

How to Perform Keystone Backup

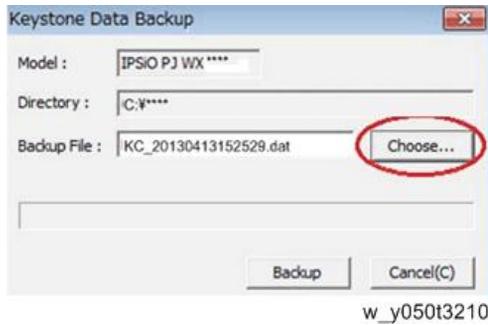
1. Select [Keystone]-[Backup].



2. Only when changing the destination folder: Click [Choose], and then select where to save the file.

3. Click [Backup].

Backup will take 1 to 2 minutes.



4. When "Backup Complete." is displayed, click [OK].



4

How to Check the Keystone Backup

1. Open "Data_BackupRestore_*.xls" in the "ServiceTool_DataBackupRestore" folder.
*Macros must be enabled.
2. Open the "Keystone" worksheet and click the [Execute] button on the sheet.

	A	B
1	Execute	Clear
2		
3	Version(Main-Standby)	
4	Serial No.	
5	Total time	
6	User lamp time	
7	Lamp reset count	
8		
9		

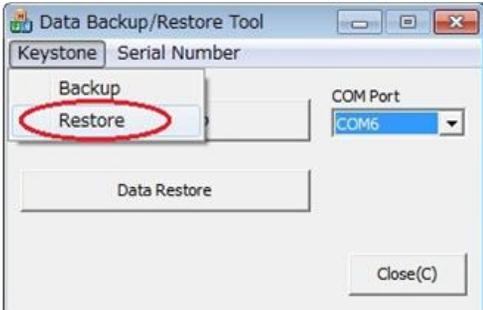
w_y03315649

3. Select the backup file "KC_*****.dat". (** indicate the date and time.)

Acquired data will be displayed on the Excel Window.

How to Perform Keystone Restore

1. Select [Keystone]-[Restore].



w_y050t3212

2. Make sure that [Use Backup Data] is checked and click [Choose]. Then, select the backup file "KC_*****.dat".



w_y050t3211

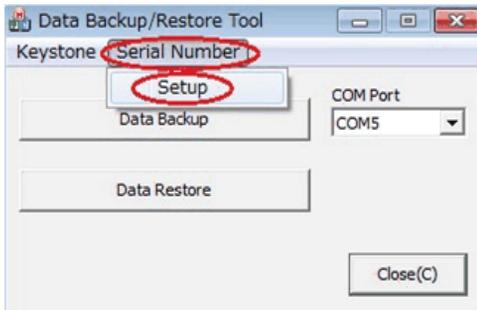
If you cannot back up the settings from the old board, select [Manual] and enter the following values.

- KC0: 25 3375 2048
- KC1: 25 3375 1792
- KC2: 25 3375 2304
- KC3: 25 3375 2048

3. Click [Restore].
4. When "Restore Complete." is displayed, click [OK].

Serial number Setup

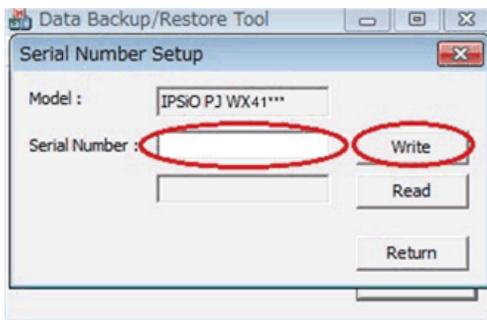
1. Select [Serial Number]-[Setup].



w_y033t5654

2. For "Serial Number", enter the serial number (11 digits including the hyphen). Then, click [Write].

Example: 47XA-111111



w_y033t5609

Network Service Menu

Displaying the Network Service Menu

1. Enter the service mode. (page 84 "Projector Setup")
2. Press the [MENU] button.
3. Press [▼] three times to display the [Network/USB Settings] menu.
4. Press [▶].
5. Press [▼] several times to select the [Network Application Settings] menu, then press the [Enter] button.

4

Menu Items

You can set or refer the following items by the network service menu.

Item	Description
Reset Administrator Password	Reset the administrator password.
Reset PLink Password	Reset the PLink password.

Menu List

Image Adjustment Menu

Item	Default
<p>Picture Mode</p> <p>Select the picture mode.</p> <p>This function is not available when you select [On] in [3D Projection] under [Display/Sound Settings] or [On] in [Interactive Mode] under [Default Settings 1].</p> <ul style="list-style-type: none"> • Bright This image mode makes it easier to see the projection in bright locations. • Standard This is the standard image mode. • Photo Photos appear more natural in this mode. • Video Video is smoother in this mode. • DICOM Sim. Mode In this image mode, the images are adjusted to simulate the DICOM format. DICOM is a global standard for storing and transmitting medical images. DICOM is used for computer tomography (CT), magnetic resonance imaging (MRI), and endoscope images. However, this mode only simulates these formats, so the image may be projected differently from the original DICOM format. Use this mode only for education. It should not be used for actual diagnoses. 	Standard
<p>Contrast</p> <p>Adjust the image contrast. The greater the value, the stronger the image contrast.</p>	0
<p>Brightness</p> <p>Adjust the image brightness. The greater the value, the brighter the image.</p>	0

Item	Default
<p>Sharpness</p> <p>Adjust the sharpness of the image. The greater the value, the sharper the image.</p>	0
<p>R-level</p> <p>Adjust the level of red in the image. The greater the value, the stronger the color red is in the image.</p>	0
<p>G-level</p> <p>Adjust the level of green in the image. The greater the value, the stronger the color green is in the image.</p>	0
<p>B-level</p> <p>Adjust the level of blue in the image. The greater the value, the stronger the color blue is in the image.</p>	0
<p>Color Saturation</p> <p>Adjust the color saturation of the image. The greater the value, the richer the image.</p> <p>This function is available when you select [Y/Pb/Pr] or [Video] as an input signal.</p>	0
<p>Tint</p> <p>Adjust the tint of the image.</p> <p>This function is available when you select [Y/Pb/Pr], [HDMI] (Y/Pb/Pr signals), or [Video] as an input signal.</p>	0
<p>Noise Reduction</p> <p>Specify whether or not to use the function to reduce the Y/Pb/Pr (480i/576i) or video signal noise.</p> <p>This function is available when you select [Y/Pb/Pr] (480i/576i) or [Video] as an input signal.</p>	Off

Item	Default
<p>RGB Input Range</p> <p>Select the RGB input range.</p> <p>This function is available when you select [HDMI] (RGB signals) as an input signal.</p> <ul style="list-style-type: none"> • Auto The projector switches RGB input range according to the settings of the connected equipment. • Standard Select this mode when the color black in the image is light. • Full Select this mode when dark parts in the image are too dark. 	Auto
<p>Auto Set Signals</p> <p>Automatically adjust the items in [Detailed Signal Settings].</p> <p>This function is available when you select [Computer 1] or [Computer 2] as an input signal.</p>	-
<p>Detailed Signal Settings > Phase</p> <p>Adjust to eliminate image flicker.</p> <p>This function is available when you select [Computer 1] or [Computer 2] as an input signal.</p>	0 to 31 ^{*1}
<p>Detailed Signal Settings > Frequency</p> <p>Adjust to eliminate moiré patterns and flicker when you project images with thin vertical-stripes.</p> <p>This function is available when you select [Computer 1] or [Computer 2] as an input signal.</p>	0
<p>Detailed Signal Settings > H-position</p> <p>Adjust the horizontal position of the image.</p> <p>This function is available when you select [Computer 1] or [Computer 2] as an input signal.</p>	0
<p>Detailed Signal Settings > V-position</p> <p>Adjust the vertical position of the image.</p> <p>This function is available when you select [Computer 1] or [Computer 2] as an input signal.</p>	0

Item	Default
<p>Detailed Signal Settings > Clamp Pulse 1</p> <p>Adjust the clamp pulse position.</p> <p>This function is available when you select [Computer 1] or [Computer 2] as an input signal.</p>	0 to 255 *1
<p>Detailed Signal Settings > Clamp Pulse 2</p> <p>Adjust the clamp pulse width.</p> <p>This function is available when you select [Computer 1] or [Computer 2] as an input signal.</p>	0 to 255 *1

* 1 The default of [Phase], [Clamp Pulse 1], and [Clamp Pulse 2] is variable because the projector automatically adjusts these settings according to the input signal.

Display Settings Menu

Item	Default
<p>Auto Keystone (Vertical)</p> <p>Specify whether or not to implement vertical keystone correction automatically depending on the angle of the projector's position.</p> <p>When [Auto Keystone (Vertical)] is enabled, [4-corner Correction] is disabled automatically and reset to its default.</p>	On
<p>Keystone (Vertical)</p> <p>Adjust for vertical keystone distortion manually.</p> <p>To decrease the length of the bottom of the projected image, decrease the value. To decrease the length of the top of the projected image, increase the value.</p> <p>The setting range is between -40 and 40. However, the available range may vary depending on the Keystone (Horizontal) setting.</p> <p>If you change this setting, [4-corner Correction] is disabled and reset to its default.</p>	0

Item	Default
<p>Keystone (Horizontal)</p> <p>Adjust for horizontal keystone distortion manually.</p> <p>To decrease the length of the left side of the projected image, decrease the value. To decrease the length of the right side of the projected image, increase the value.</p> <p>The setting range is between -30 and 30. However, the available range may vary depending on the Keystone (Vertical) setting.</p> <p>If you change this setting, [4-corner Correction] is disabled and reset to its default.</p>	0
<p>4-corner Correction</p> <p>Move the four corners of the projected image, so that it fits into the screen.</p> <p>Select the corner you want to move and increase or decrease the value until it fits into the screen.</p> <p>When [4-corner Correction] is enabled, [Auto Keystone (Vertical)], [Keystone (Vertical)], [Keystone (Horizontal)] are disabled automatically and reset to their defaults.</p> <p>When [4-corner Correction] is enabled, the [Zoom], [Aspect], and [Display Position] settings are not available.</p> <p>If the projector is tilted horizontally and vertically at the same time, the projected image may be distorted.</p> <p>Use [Keystone (Vertical)] and [Keystone (Horizontal)] to adjust for the vertical and horizontal distortions.</p> <p>Unless otherwise required, tilt the projector either vertically or horizontally.</p>	-
<p>Zoom</p> <p>Reduce the size of the image if the projected image is larger than the screen. The image can be reduced in a range of 80 to 100% using the digital zoom function.</p> <p>When [4-corner Correction] is enabled, the setting is [100%] and cannot be changed.</p>	100%

Item	Default
<p>Aspect</p> <p>Select the aspect ratio of the image.</p> <p>This function is not available when you select [USB Memory] or [Server] as an input signal. When you select [Network PC] or [Miracast] as the input signal, this function is available for a computer or smartphone screen you project.</p> <p>When [4-corner Correction] is enabled, the setting is [Normal] and cannot be changed.</p> <ul style="list-style-type: none"> • Normal Display in full screen without changing the input signal aspect ratio. • 16:9 Display using 16:9 aspect ratio. <ul style="list-style-type: none"> • Y051 / Y054: 1024 × 576 resolution • Y053 / Y056: 1280 × 720 resolution • Full Display using full size resolution. <ul style="list-style-type: none"> • Y051 / Y054: 1024 × 768 resolution • Y053 / Y056: 1280 × 800 resolution • Native Display the image without changing the resolution of the input signal. This setting is not available when you select [Y/Pb/Pr], [HDMI] (Y/Pb/Pr signals), [Video], [USB Memory], or [Server]. When you select [Computer 1], [Computer 2], [HDMI] (RGB signals) as the input signal, this setting is not available if the horizontal resolution of the image is 1920. • Zoom (Y053 / Y056 only) Display the image width as the projection screen width while maintaining the input signal aspect ratio. 	<p>Normal</p>

Item	Default
<p>Display Position</p> <p>Move the image if the projected image is smaller or larger than the screen size. You can move the image using the [▲], [▼], [◀], and [▶] buttons.</p> <p>This function is not available when you select [Network PC], [USB Memory], [Server], or [Miracast] as an input signal.</p> <p>When [4-corner Correction] is enabled, the display position is initialized and cannot be changed.</p>	-
<p>Wall Color Mode</p> <p>Select the image hue according to the projection surface when the image is being projected on something other than a screen.</p> <ul style="list-style-type: none"> • Off • Whiteboard • Beige • Gray • Blackboard (Green) 	Off
<p>3D Projection > 3D Projection</p> <p>Specify whether or not to use 3D projection.</p> <p>The image will be slightly darker if this is set to [On].</p> <p>3D projection and interactive mode cannot be enabled simultaneously. If you change this setting to [On], [Interactive Mode] in [Default Settings 1] is switched to [Off], and the projector operates with the lamp power maximum and Image Eco disabled.</p>	Off
<p>3D Projection > L/R Reverse</p> <p>Specify whether or not to reverse left and right in a 3D image.</p> <ul style="list-style-type: none"> • Normal • Reverse 	Normal

Item	Default
<p>3D Projection > 3D Format</p> <p>Select a 3D format.</p> <p>Select [Auto] when the 3D signals are input through HDMI. If the image does not project in 3D even if [Auto] is selected, change the setting to match the 3D format of the signal being input.</p> <ul style="list-style-type: none"> • Auto • Frame Sequential • Side by Side • Top and Bottom • Frame Packing 	Auto
<p>Closed Caption</p> <p>The projector supports closed captioning, which allows subtitles to be displayed at the bottom of the picture. This is pursuant to the regulations set forth by the US Federal Communications Commission (FCC).</p> <p>Select [CC-1] to [CC-4] to display the dialogue and narration of TV programs and videos that are closed captioned.</p> <p>This function is available when you select [Video] as an input signal.</p> <ul style="list-style-type: none"> • Off • CC-1 • CC-2 • CC-3 • CC-4 	Off

Energy Saving Settings Menu

Item	Default
<p>Eco Mode</p> <p>Specify the lamp settings to save energy or to make images brighter.</p> <ul style="list-style-type: none"> • On (Auto) <p>Select this mode to save energy. In this mode, the following settings are automatically specified:</p> <ul style="list-style-type: none"> • Lamp Power: [Auto] • Lamp Pwr on No Signal: [Eco] • Image Eco: [On] • On (Detailed) <p>You can specify [Lamp Power], [Lamp Pwr on No Signal], and [Image Eco] manually.</p> • Off <p>Select this mode to make images brighter. In this mode, the following settings are automatically specified:</p> <ul style="list-style-type: none"> • Lamp Power: [Maximum] • Lamp Pwr on No Signal: [Std.] • Image Eco: [Off] 	On (Auto)

Item	Default
<p>Lamp Power</p> <p>This setting is available when [Eco Mode] is set to [On (Detailed)].</p> <p>Select the lamp power level.</p> <p>[Auto] is selectable when you select [Standard] or [Rear] in [Projection Mode] under [Default Settings 2]. If you select [Auto], the lamp power level switches automatically depending on the brightness of the projecting location. Make sure that the illuminance sensor on the top of the projector is not blocked. This function may not work correctly depending on the positioning of the projector.</p> <p>When you select [Maximum], the image is brightest but the power consumption is highest. When you select [Low], the power consumption is lowest but the image brightness is lowest.</p> <p>The lamp power reaches maximum regardless of this setting when [DICOM Sim. Mode], [3D Projection], or [Interactive Mode] is enabled.</p> <ul style="list-style-type: none"> • Auto • Maximum • High • Medium • Low 	<p>Std.</p>
<p>Lamp Pwr on No Signal</p> <p>This setting is available when [Eco Mode] is set to [On (Detailed)].</p> <p>Specify whether or not to lower the lamp power when there is no input signal. If you select [Eco], the projector lowers the lamp power 30 seconds after the input signal disappears.</p> <ul style="list-style-type: none"> • Eco • Std. 	<p>Eco</p>
<p>Image Eco</p> <p>This setting is available when [Eco Mode] is set to [On (Detailed)].</p> <p>Specify whether or not to switch the lamp power automatically depending on the brightness of the image.</p> <p>This function does not work when [DICOM Sim. Mode], [3D Projection], or [Interactive Mode] is enabled.</p>	<p>On</p>

Item	Default
<p>Power Off on No Signal</p> <p>Select the amount of time from the last input signal or operation until the projector enters standby mode.</p> <ul style="list-style-type: none"> • Off • 5 min. • 10 min. • 20 min. • 30 min. 	20 min.
<p>Power on Standby</p> <p>Specify whether or not to save energy while in standby.</p> <ul style="list-style-type: none"> • Eco You can save energy while in standby, but start-up time is slower. • Q'ck On You can turn on the projector quickly, and the projector starts projection automatically if the image signals are input even while in standby. However, the standby energy level is higher. 	Eco
<p>NW Settings on Standby</p> <p>Select a network function to be enabled while in standby. You can save energy by disabling the network function.</p> <p>This function is available when you select [Eco] in [Power on Standby].</p> <ul style="list-style-type: none"> • Do not Use Disable the wired LAN and the wireless LAN while in standby to save energy. To use the wired LAN or the wireless LAN, press the [Power] button to turn on the projector. • Wired LAN You can turn on the projector from standby mode via a wired LAN. • Wired/Wireless LAN (Y051 / Y053 / Y056 only) You can turn on the projector from standby mode via a wired LAN or wireless LAN. 	Wired LAN

Default Settings 1 Menu

Item	Default
<p>Auto Input Search</p> <p>Specify whether or not to switch to another input signal that the projector detects when you press the [Input] button.</p> <p>Always select the [Server] and [Miracast] input signals manually even if this setting is [On].</p>	On
<p>Computer 2 Terminal</p> <p>Select the purpose of Computer 2 In/Monitor Out port.</p> <ul style="list-style-type: none"> • Input You can use Computer 2 In/Monitor Out port for inputting RGB signals. • Output You can use Computer 2 In/Monitor Out port for outputting RGB signals and Y/Pb/Pr signals. 	On
<p>Beep</p> <p>Specify whether or not to beep during use.</p>	On
<p>Background on No Signal</p> <p>Select the image display when there is no input signal.</p> <ul style="list-style-type: none"> • Logo • Blue • None 	Logo
<p>Display Guidance</p> <p>Specify whether or not to display the guidance for operating the projector.</p>	On
<p>Start-up Screen</p> <p>Specify whether or not to display the start-up screen when the projector is turned on.</p>	On

Item	Default
<p>User Logo > Register Logo</p> <p>Register a user logo. Project the image to be registered as a user logo, and then execute this function. User logos can be displayed in the start-up screen or as the background when there are no input signals.</p> <p>User logos can be registered up to the following resolutions:</p> <ul style="list-style-type: none"> • Y051 / Y054: 1024 × 768 pixels • Y053 / Y056: 1280 × 800 pixels <p>This function is available when you select [Computer 1], [Computer 2], or [HDMI] (RGB signals) as the input signal. When you select [Network PC] or [Miracast] as the input signal, this function is available for the computer or smartphone screen you project.</p>	-
<p>User Logo > Confirm Logo</p> <p>Display the registered user logo.</p>	-
<p>User Logo > Reset Logo</p> <p>Delete the registered user logo.</p>	-
<p>Interactive > Interactive Mode</p> <p>When the interactive kit is connected to the projector, you can specify whether or not to enable the interactive mode. For details about the interactive mode, see the manual provided with the interactive kit. Interactive mode and 3D projection or Image Eco cannot be enabled simultaneously. If you change this setting to [On], [3D Projection] in [Display Settings] is switched to [Off], and the projector operates with the lamp power maximum and Image Eco disabled.</p>	Off
<p>Interactive > PC Adapter Registration</p> <p>Register the computer USB adapter to the projector to use the interactive mode. For details about how to register the computer USB adapter, see the manual provided with the interactive kit.</p> <p>This function is not available when you select [Video] as an input signal.</p>	-
<p>Auto Focus (Y051 / Y053 only)</p> <p>Specify whether or not to enable the automatic focus function.</p>	On

Default Settings 2 Menu

Item	Default
<p>Language</p> <p>Select the display language.</p> <p>Available languages are as follows:</p> <p>English, Japanese, Spanish, Russian, French, Portuguese, German, Italian, Dutch, Polish, Czech, Swedish, Finnish, Hungarian, Norwegian, Danish, Romanian, Greek, Turkish, Arabic, Thai, Indonesian, Traditional Chinese.</p>	English
<p>Projection Mode</p> <p>Select the projection method according to how the projector is positioned.</p> <p>When you select [Ceiling] or [Rear Ceiling], you cannot select [Auto] in [Lamp Power] under [Energy Saving Settings].</p> <p>If you change this setting to [Ceiling] or [Rear Ceiling] when [Lamp Power] is [Auto], [Lamp Power] is switched to [Maximum].</p> <p>If you change this setting to [Standard] or [Rear] when [Lamp Power] is [Maximum], [Lamp Power] is switched to [Auto].</p> <ul style="list-style-type: none"> • Standard Select this mode when the projector is placed in front of a screen. • Rear Select this mode when the projector is placed behind a screen. • Ceiling Select this mode when the projector is mounted on the ceiling in front of a screen. • Rear Ceiling Select this mode when the projector is mounted on the ceiling behind a screen. 	Standard
<p>Remote Control ID</p> <p>Select the projector remote control ID. Specify the ID for each projector when operating multiple projectors using one remote control.</p> <ul style="list-style-type: none"> • 1 • 2 • 3 • 4 	1

Item	Default
<p>Direct Power On</p> <p>Select the power on method of the projector.</p> <ul style="list-style-type: none"> • On Automatically turn on the projector when the power cord is connected. • Off Turn the projector on when the [Power] button is pressed. 	Off
<p>High Altitude Mode</p> <p>The number of fan rotations is high when set to [On]. The air is thin at high elevations, so the cooling efficiency of the projector is reduced. Select [On] when using the projector at an altitude of more than 1,500 meters (4,921 feet). Do not select [On] when the altitude is less than 1,500 meters (4,921 feet).</p>	Off
<p>Key Lock</p> <p>Specify whether or not to lock the buttons on the control panel. You can change this setting to [Off] by pressing the [AV Mute] button on the projector's control panel for 10 seconds.</p>	Off
<p>Current Time > Date/Time</p> <p>Specify the current date and time.</p>	-
<p>Current Time > Time Zone</p> <p>Specify the time zone of the location where the projector is used by selecting the time difference to UTC (Coordinated Universal Time).</p>	+0:00
<p>Power Timer > Timer Projection</p> <p>Specify whether or not to enable the power timer function.</p> <p>When you enable this function, the projector automatically starts projection and turns off at the specified time. If you select [On], specify [Projection Day] and [Projection Time] to enable this function.</p>	Off
<p>Power Timer > Projection Day</p> <p>Select a day of the week to start projecting using the power time function.</p>	(Not programmed)
<p>Power Timer > Projection Time</p> <p>Specify the time to start and end projecting using the power timer function. An interval of at least ten minutes is required between the startup time and the end time.</p>	(Not programmed)

Item	Default
<p>Startup Password > Register Password</p> <p>Enter a 6-digit password. The current password is required to change the password.</p>	00000
<p>Startup Password > Password Protect</p> <p>Specify whether or not to enter a password when the projector is turned on. If this is selected, a password must be entered when the projector is turned on after the power cord has been unplugged. However, a password is not required when turning the projector on from the standby mode.</p> <p>A password is required to change this setting.</p>	Off
<p>Reset All</p> <p>Reset all menus to their defaults.</p> <p>This function cannot restore the default settings of [User Logo] in [Default Settings 1], [Startup Password] in [Default Settings 2], the network security settings that are reset by executing [Reset Security Settings] in [Network Application Settings], and [Administrator Password] in [Network Application Settings].</p>	-

USB Settings Menu

This section explains the items in the USB Settings menu under the Network/USB Settings menu tab. You can also specify and check the items in the USB Settings menu using Web Image Monitor. However, the following items are available only on the menu screen.

- [Remove USB Mem.] in [Settings]
- [USB Memory Free Space (KB)] and [USB Memory Access Status] in [Display Status]

On Web Image Monitor, you can check [Network/USB Func. Firmware Version] on the top page.

Settings

Still Image

Item	Default
<p>Display Effect</p> <p>Select the display effect for switching the image.</p> <ul style="list-style-type: none"> • None • Push The current image is pushed off by the next image. • Wipe The current image is wiped off by the next image. • Fade The current image fades out and the next image fades in. 	None
<p>Display Interval (sec.)</p> <p>Enter the slide show switching interval from 5 to 999 seconds.</p>	5 seconds

Moving Image

Item	Default
<p>Repeat</p> <p>Specify whether or not to repeat video playback.</p>	Off

Common

Item	Default
<p>Auto Start Slideshow</p> <p>Specify whether or not to start a slide show automatically when the projector is connected to the USB device.</p>	Off
<p>Remove USB Mem.</p> <p>The USB device can be removed when this command is executed.</p>	-

Display Status

USB Memory

Item	Default
USB Memory Free Space (KB) Display the space available on the USB device (Displayed in KB).	-
USB Memory Access Status Display whether or not the USB device can be accessed.	-

Firmware Version

Item	Default
Network/USB Func. Firmware Version Display the firmware version of the network and USB functions.	-

Network Settings Menu

This section explains the items in Network Settings menu under the Network/USB Settings menu tab.

You can also specify and check the items in the Network Settings menu using Web Image Monitor.

However, the following items are available only on the menu screen.

- [Simple Wireless LAN Setup], [EAP Type], [Import Client Certificate], [Client Certificate User Name], [Client Certificate List], [Import CA Certificate], [CA Certificate List], [Delete Client/CA Certificate], [MS-CHAP v2 User Name], [MS-CHAP v2 Password], [Windows Domain Name], [Server Certificate Authentication], [Intermediate CA Permission], [WPA/WPA2-EAP Connection Check], and [Reset Wireless LAN Settings] in [Wireless LAN]
- [Network Setting Wizard] in [Setup Wizard]

On Web Image Monitor, you can check [Network/USB Func. Firmware Version] on the top page.

Wired LAN Settings

Item	Default
Wired LAN Specify whether to enable or disable wired LAN.	Enable

Item	Default
<p>Transmission Speed</p> <p>Select a wired LAN speed that matches your network environment. It is recommended that [Auto-Negotiation] be selected.</p> <ul style="list-style-type: none"> • Auto-Negotiation • 10BASE-T Full Duplex • 10BASE-T Half Duplex • 100BASE-TX Full Duplex • 100BASE-TX Half Duplex 	Auto-Negotiation

TCP/IP Settings

Item	Default
<p>DHCP</p> <p>Specify whether to enable or disable DHCP.</p> <p>The IP address is allocated automatically from the DHCP server when [Enable] is selected. When [Disable] is selected, enter the IP address, subnet mask, and default gateway manually.</p>	Enable
<p>IP Address</p> <p>Enter the projector's IP address.</p>	0.0.0.0
<p>Subnet Mask</p> <p>Enter the subnet mask.</p>	0.0.0.0
<p>Default Gateway</p> <p>Enter the default gateway.</p>	0.0.0.0

Wireless LAN

Simple Settings

Item	Default
<p>Simple Wireless LAN Setup</p> <p>Acquire the wireless LAN settings registered in the access point, and specify infrastructure mode wireless LAN settings for the projector automatically.</p> <p>This function may not work depending on the access point.</p>	-

Wireless LAN Settings

Item	Default
<p>Wireless LAN</p> <p>Specify whether to enable or disable wireless LAN.</p>	Enable
<p>Communication Mode</p> <p>Select the wireless LAN communication mode.</p> <ul style="list-style-type: none"> Infrastructure Select this mode when you want to connect the projector to a wireless LAN network. You need to specify [SSID] and items in [Security] and [TCP/IP Settings] in this mode. Adhoc Select this mode when you want to connect the projector and the computer directly. The projector specifies [SSID] and items in [Security] and [TCP/IP Settings] automatically in this mode. 	Adhoc
<p>SSID</p> <p>Enter the SSID to connect to a wireless LAN network when [Infrastructure] is selected. Enter up to 32 characters.</p>	(blank)
<p>Channel</p> <p>Select the channel to use when [Adhoc] is selected.</p> <p>Select the channel that matches the type of wireless LAN being used.</p> <p>The channels available might differ depending on the country.</p> <ul style="list-style-type: none"> 2.4 GHz: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 	11

TCP/IP Settings

Item	Default
<p>DHCP</p> <p>Specify whether to enable or disable DHCP.</p> <p>The IP address is allocated automatically from the DHCP server when [Enable] is selected. If you select [Disable], manually enter the IP address, subnet mask, and default gateway.</p>	Enable
<p>IP Address</p> <p>Enter the projector's IP address.</p>	0.0.0.0

Item	Default
Subnet Mask Enter the subnet mask.	0.0.0.0
Default Gateway Enter the default gateway.	0.0.0.0

Security

Item	Default
Authentication Method Select the wireless LAN authentication method. <ul style="list-style-type: none"> • Open System • WEP Shared Key • WPA/WPA2-PSK • WPA2-PSK • WPA/WPA2-EAP • WPA2-EAP 	Open System
Encryption Method Select the wireless LAN encryption method. <ul style="list-style-type: none"> • No Encryption Communication is not encrypted. You can select [No Encryption] if you select [Open System] in [Authentication Method]. • WEP You can select [WEP] if you select [Open System] in [Authentication Method]. [WEP] is selected automatically when you select [WEP Shared Key] in [Authentication Method]. • TKIP/CCMP [TKIP/CCMP] is selected automatically when you select [WPA/WPA2-PSK] or [WPA/WPA2-EAP] in [Authentication Method]. • CCMP [CCMP] is selected automatically when you select [WPA2-PSK] or [WPA2-EAP] in [Authentication Method]. 	No Encryption

Item	Default
<p>Transmission WEP Key Number</p> <p>Select the key number used to authenticate and encrypt transmissions when you select [WEP] in [Encryption Method].</p> <ul style="list-style-type: none"> • 1 • 2 • 3 • 4 	<p>1</p>
<p>Network Key</p> <p>Enter the WEP key when you select [WEP Shared Key] or [Open System] in [Authentication Method] and select [WEP] in [Encryption Method].</p> <p>When using 64 bit WEP, up to 10 characters can be used for hexadecimal and up to 5 characters for ASCII. When using 128 bit WEP, up to 26 characters can be used for hexadecimal and up to 13 characters for ASCII.</p> <p>Enter PSK when [WPA/WPA-PSK] or [WPA2-PSK] is selected in [Authentication Method].</p> <p>When using a PSK, up to 64 characters can be used for hexadecimal and 8 to 63 characters for ASCII.</p>	<p>(blank)</p>
<p>EAP Type</p> <p>Specify the WPA/WPA2-EAP type when [WPA/WPA2-EAP] or [WPA2-EAP] is selected in [Authentication Method]. You can select EAP-TLS or EAP-PEAP.</p> <ul style="list-style-type: none"> • EAP-TLS A client certificate and a CA certificate must be imported to the projector. • EAP-PEAP A CA certificate must be imported to the projector. 	<p>EAP-TLS</p>
<p>Import Client Certificate</p> <p>Imports the client certificate used for WPA/WPA2-EAP or WPA2-EAP when [EAP-TLS] is selected in [EAP Type].</p>	<p>-</p>
<p>Client Certificate User Name</p> <p>Enter the client certificate user name used for WPA/WPA2-EAP or WPA2-EAP when [EAP-TLS] is selected in [EAP Type].</p>	<p>(blank)</p>

Item	Default
<p>Client Certificate List</p> <p>Displays a list of imported client certificates.</p>	-
<p>Import CA Certificate</p> <p>Import a CA certificate when [WPA/WPA2-EAP] or [WPA2-EAP] is selected in [Authentication Method].</p>	-
<p>CA Certificate List</p> <p>Display a list of imported CA certificates.</p>	-
<p>Delete Client/CA Certificate</p> <p>Delete all the imported client of CA certificates.</p>	-
<p>MS-CHAP v2 User Name</p> <p>Enter the MS-CHAP v2 user name when [EAP-PEAP] is selected in [EAP Type]. You can enter up to 31 characters including spaces.</p>	(blank)
<p>MS-CHAP v2 Password</p> <p>Enter the MS-CHAP v2 password when [EAP-PEAP] is selected in [EAP Type]. You can enter up to 128 characters including spaces.</p>	(blank)
<p>Windows Domain Name</p> <p>Enter the Windows domain name when [EAP-PEAP] is selected in [EAP Type]. You can enter up to 64 characters including spaces. "@" and backslashes cannot be used.</p>	(blank)
<p>Server Certificate Authentication</p> <p>Specify whether to enable or disable server certificate authentication.</p>	Enable
<p>Intermediate CA Permission</p> <p>Specify whether to enable or disable intermediate CA permission.</p>	Enable
<p>WPA/WPA2-EAP Connection Check</p> <p>Check the WPA/WPA2-EAP connection.</p>	-

Reset Wireless LAN Settings

Item	Default
<p>Reset Wireless LAN Settings</p> <p>The following wireless LAN settings are reset to their defaults: Communication Mode, SSID, Channel, Authentication Method, Encryption Method, Transmission WEP Key Number, Network Key, DHCP, IP Address, Subnet Mask, Default Gateway.</p>	-

LAN Common

Specify the wired LAN and wireless LAN settings.

Preferred Default Gateway (Y051 / Y053 / Y056 only)

Item	Default
<p>Preferred Default Gateway</p> <p>Select the network interface to be used when the projector is connected to both wired and wireless LAN.</p> <ul style="list-style-type: none"> • Wired LAN • Wireless LAN 	Wired LAN

DNS Settings

Item	Default
<p>Host Name</p> <p>Display the projector's host name.</p> <p>The [Projector Name] in [Projector ID] is used as the projector's host name.</p>	-
<p>Domain Name</p> <p>Enter the projector's domain name. Enter up to 63 characters.</p>	(blank)

Projector Search Settings

Item	Default
<p>Projector Search</p> <p>Specify whether or not to search for the projector automatically when the projector and the device connected to the projector are on the same network.</p>	Enable

HTTP Server Settings

Item	Default
HTTP Port Enter an HTTP port that is between 1 and 65535.	80

Projector ID

Item	Default
Projector Name Enter an ID to identify the projector on the network. Enter up to 16 characters. You can use alphanumeric characters, hyphens, and periods for projector names. Only a letter can be used for the first character of the projector's name. Hyphens and periods cannot be entered consecutively and cannot be used for the last character of the projector's name.	RPJxxxxxx *1
Identification Code Enter the 4-digit identification code for connecting the projector and the computer using QuickProjection.	0000 to 9999 *2

*1 xxxxxx is the last six digits of the wired LAN's MAC address.

*2 Each projector has a unique identification code as the default setting.

Setup Wizard

Item	Default
Network Setting Wizard Open Network Setting Wizard. For details about Network Setting Wizard.	-

Display Status

Wired LAN

Item	Default
Current wired LAN settings are displayed. You can confirm the following items: Connection Status, MAC Address, Transmission Speed, IP Address, Subnet Mask, Default Gateway	-

Wireless LAN (Y051 / Y053 / Y056 only)

Item	Default
Current wireless LAN settings are displayed. You can confirm the following items: Connection Status, Radio Field Intensity, MAC Address, Access Point BSSID, Communication Mode, Transmission Speed, Channel, SSID, Authentication Method, Encryption Method, IP Address, Subnet Mask, Default Gateway	-

Firmware Version

Item	Default
Network/USB Func. Firmware Version Display the firmware version of the network and USB functions.	-

4

Network Application Settings Menu

This section explains the items in the Network Application Settings menu under the Network/USB Settings menu tab.

You can also specify and check the items in the Network Application Settings menu using Web Image Monitor. However, the following items are available only on the menu screen.

- [Crestron WebUI User Auth.], [Crestron WebUI User Password], [Crestron WebUI Admin. Auth.], [Crestron WebUI Admin. Password], [Control System IP Address], [Control System IP ID], and [Control System Port] in [Administration Tools]
- [DLNA Certification Mode] in [Server]
On Web Image Monitor, you can check [Network/USB Func. Firmware Version] on the top page.

Administration Tools

Web Image Monitor

Item	Default
Web Image Monitor Specify whether or not to allow the projector settings to be changed and checked using a web browser. To enable this setting, you must restart Web Image Monitor after making the change.	Enable

AMX Device Discovery

Item	Default
<p>AMX Device Discovery</p> <p>Specify whether or not to allow the projector to be controlled and monitored by AMX Device Discovery. To use this function, an AMX controller is required in your network environment. For details about AMX Device Discovery, see the AMX LLC website.</p>	Disable

Crestron RoomView

Item	Default
<p>Crestron RoomView</p> <p>Specify whether or not to allow the projector to be controlled and monitored by Crestron RoomView.</p>	Disable
<p>Crestron WebUI User Auth.</p> <p>Specify whether or not to restrict access to Crestron WebUI with a password.</p>	Off
<p>Crestron WebUI User Password</p> <p>Enter the password for Crestron WebUI user authentication up to 26 characters.</p>	(blank)
<p>Crestron WebUI Admin. Auth.</p> <p>Specify whether or not to restrict access to the tools screen on Crestron WebUI with a password.</p>	Off
<p>Crestron WebUI Admin. Password</p> <p>Enter the password for Crestron WebUI administrator authentication up to 26 characters.</p>	(blank)
<p>Control System IP Address</p> <p>Enter the IP address of Crestron Control System.</p>	0.0.0.0
<p>Control System IP ID</p> <p>Enter the IP ID to connect to Crestron Control System.</p>	3
<p>Control System Port</p> <p>Enter the port number for communicating to Crestron Control System.</p>	41794

PJLink

Item	Default
PJLink Authentication Specify whether or not to set PJLink authentication.	Off
PJLink Password Enter a password used when setting the PJLink authentication. Up to 32 alphanumeric characters can be used.	(blank)

Security

Item	Default
<p>Administrator Authentication</p> <p>Specify whether or not to set administrator authentication. A administrator password is required to change this setting.</p> <p>If administrator authentication is set, a password is required for the following operations:</p> <p>Y051 / Y053 / Y056</p> <ul style="list-style-type: none"> • Changing [Transmission WEP Key Number], [Network Key], [EAP Type], [Client Certificate User Name], [MS-CHAP v2 User Name], [MS-CHAP v2 Password], [Windows Domain Name], [Server Certificate Authentication], [Intermediate CA Permission], [Crestron WebUI User Auth.], [Crestron WebUI User Password], [Crestron WebUI Admin. Auth.], [Crestron WebUI Admin. Password], [PJLink Authentication], and [PJLink Password] • Using the simple wireless LAN setup function and Network • Importing, deleting, or displaying client or CA certificates • Turning the projector on or off via a network • Changing the settings using Web Image Monitor • Executing [Reset Security Settings] <p>Y054</p> <ul style="list-style-type: none"> • Changing [Crestron WebUI User Auth.], [Crestron WebUI User Password], [Crestron WebUI Admin. Auth.], [Crestron WebUI Admin. Password], [PJLink Authentication], and [PJLink Password] • Using Network Setting Wizard • Turning the projector on or off via a network • Changing the settings using Web Image Monitor • Executing [Reset Security Settings] 	Off
<p>Administrator Password</p> <p>Enter the administrator password. Up to 32 alphanumeric characters can be used. The current password is required to change the administrator password.</p>	(blank)
<p>Application Authentication</p> <p>Specify whether to enable or disable Application Authentication.</p>	Off

Item	Default
<p>Application Password</p> <p>Enter the password to be used for Application Authentication.</p> <p>Up to 32 alphanumeric characters can be used.</p>	Off
<p>Reset Security Settings</p> <p>Reset the values of the following settings protected by Administrator</p> <p>Authentication:</p> <p>Y051 / Y053 / Y056</p> <p>[Transmission WEP Key Number], [Network Key], [EAP Type], [Client Certificate User Name], [MS-CHAP v2 User Name], [MSCHAPv2 Password], [Windows Domain Name], [Server Certificate Authentication], [Intermediate CA Permission], [Crestron WebUI User Auth.], [Crestron WebUI User Password], [Crestron WebUI Admin. Auth.], [Crestron WebUI Admin. Password], [PJLink Authentication], and [PJLink Password].</p> <p>Y054</p> <p>[Crestron WebUI User Auth.], [Crestron WebUI User Password], [Crestron WebUI Admin. Auth.], [Crestron WebUI Admin. Password], [PJLink Authentication], and [PJLink Password].</p>	-

Server

Remote Projection Control

Item	Default
<p>Remote Projection Control</p> <p>Specify whether or not to enable the Remote Projection Control function. The Remote Projection Control function allows you to project images from a tablet computer or a smartphone via a network.</p> <p>For details about how to project images using this function, see the Operating Instructions.</p>	Enable

Still Image

Item	Default
<p>Display Effect</p> <p>Select the display effect for switching the image.</p> <ul style="list-style-type: none"> • None • Push The current image is pushed off by the next image. • Wipe The current image is wiped off by the next image. • Fade The current image fades out and the next image fades in. 	None
<p>Display Interval (sec.)</p> <p>Enter the slide show switching interval from 5 to 999 seconds.</p>	5 seconds

Moving Image

Item	Default
<p>Repeat</p> <p>Specify whether or not to repeat video playback.</p>	Off
<p>DLNA Certification Mode</p> <p>Specify whether the projector works as a DLNA-certified device.</p> <p>The projector is certified to DLNA 1.5 guidelines for still images.</p> <p>For details about the supported file types, see the Operating Instructions.</p> <ul style="list-style-type: none"> • Enable The projector works as a DLNA-certified device. Of the video files sent from the DLNA server, those files that are not DLNA compatible are shown on the file list of the Server Projection screen. • Disable The projector works according to its own specifications. It does not work as a DLNA-certified device. All the video files delivered from the DLNA server appear in the file list of the Server Projection screen. 	Disable

Display Status

PJLink

Item	Default
PJLink Class Display the PJLink class.	-

Firmware Version

Item	Default
Network/USB Func. Firmware Version Display the firmware version of the network and USB functions.	-

Administrator Authentication

Item	Default
Reset Administrator Password Reset the administrator password.	-
Reset PJLink Password Reset the PJLink password.	-

Display Status

Item
Input Displays the selected input signals.
Resolution Displays the resolution. This item appears when you select [Computer 1], [Computer 2], or [HDMI] (RGB signals) as an input signal.
Frequency Displays the synchronous frequency. This item appears when you select [Computer 1], [Computer 2], or [HDMI] (RGB signals) as an input signal.

Item
<p>Sync</p> <p>Displays the synchronous signal polarity.</p> <p>This item appears when you select [Computer 1] or [Computer 2] as an input signal.</p>
<p>Signal Format</p> <p>Displays the Y/Pb/Pr signal format.</p> <p>This item appears when you select [Y/Pb/Pr] or [HDMI] (Y/Pb/Pr signals) as the input signal.</p>
<p>Video Mode</p> <p>Displays the video signal color format.</p> <p>This item appears when you select [Video] as the input signal.</p>
<p>Lamp Time</p> <p>Displays the lamp usage time.</p>
<p>Lamp Reset Count</p> <p>Displays the number of lamp replacements.</p>
<p>Total Time</p> <p>Displays the projector usage time.</p>
<p>Total CO₂ Reduction</p> <p>Displays the total reduction in CO₂ caused by setting the lamp to the eco mode.</p>
<p>Eco Time Ratio</p> <p>Displays the ratio of the time eco mode was used to the total use time.</p>
<p>Current Time</p> <p>Displays the current time specified in [Current Time] in [Default Settings 2].</p>
<p>Main FW Version</p> <p>Displays the version of the firmware on the main board.</p>
<p>Interactive Version</p> <p>When the interactive kit is connected to the projector, the version of the interactive function is displayed.</p>

5. Troubleshooting

LED Display / Error ID

If a problem occurred on the projector, the content of the error can be checked by the following three types of notification.

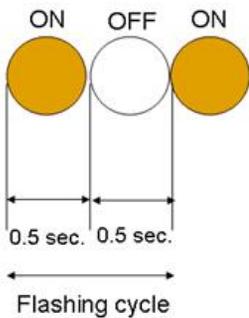
No.	Notification	How to confirm the error status
1	Light on the [Power] button and the LED indicator, and a beep sound	Check the status of indicator. Refer to the following "Error list" table.
2	Error ID displayed on the error log screen	Check the error ID in the following types. (Error log) <ul style="list-style-type: none"> • Output the error log. • Display the main error log screen. • Display the PIC error log screen.
3	Error ID displayed on the service status screen.	Display the service status and check the error ID. (Refer to "Chapter 3. Replacement and Adjustment" > "Electrical Adjustment" .> "How to display the Service status")

Error list

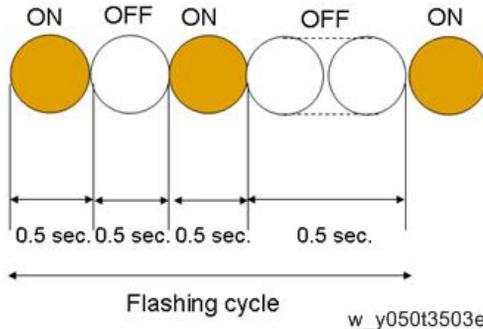
Descriptions used in the following table.

-  means flashing.
- The interval of flash indicates the period of time since the LED lights until it lights again.

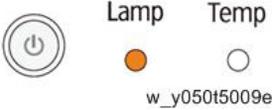
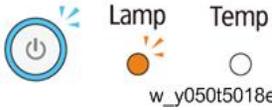
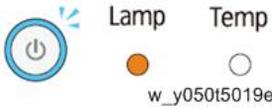
Ex.1) 1 flash at 1 sec. interval

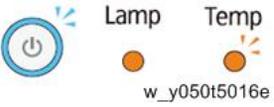


Ex. 2) 2 flashes at 5 sec. interval

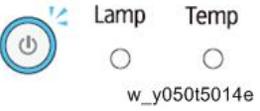


w_y050t3503e

Error ID	Status / LED display	Cause	Solution
1	<p>[Status] The lamp does not turn on correctly.</p> <p>[LED display]</p> 	The lamp temperature is high.	Wait for the projector to be cooled down.
		Mercury bridge* 1 has occurred.	Apply vibration to the lamp unit by shaking it 5 times side to side about 30 cm across. (page 57 "Lamp Module")
		Lamp defect / failure / life expired	Replace the lamp. (page 57 "Lamp Module")
		Ballast defect / failure	Replace the ballast. (page 74 "Lamp Ballast")
		Main board defect	Replace the main board. (page 60 "Main Board Assembly")
		PSU defect / failure	Replace the PSU. (page 77 "PSU")
36	<p>[Status] The lamp does not turn on correctly.</p> <p>[LED display]</p>  <p>Flashing interval: 1 second</p>	Mercury bridge* 1 has occurred.	<ul style="list-style-type: none"> Apply vibration to the lamp unit by shaking it 5 times side to side about 30 cm across. Replace the lamp. (page 57 "Lamp Module")
26	<p>[Status] The lamp turned off during use.</p> <p>[LED display]</p>  <p>Flashing interval: 1 second</p>	Lamp defect / failure / life expired	Replace the lamp. (page 57 "Lamp Module")
		Ballast defect / failure	Replace the ballast. (page 74 "Lamp Ballast")
		PSU defect / failure	Replace the PSU. (page 77 "PSU")

Error ID	Status / LED display	Cause	Solution
61	<p>[Status] The lamp turned off during use.</p> <p>[LED display]</p>  <p>Flashing interval: 1 second</p>	The lamp is degraded.	Replace the lamp. (page 57 "Lamp Module")
63	<p>[Status] The lamp turned off during use.</p> <p>[LED display]</p>  <p>Flashing interval: 1 second</p>	The ballast temperature is high.	<ul style="list-style-type: none"> • Wait for the projector to be cooled down. • Replace the ballast. (page 74 "Lamp Ballast")
65	<p>[Status] The lamp turned off during use.</p> <p>[LED display]</p>  <p>Flashing interval: 1 second</p>	Lamp defect / failure	Replace the lamp. (page 57 "Lamp Module")

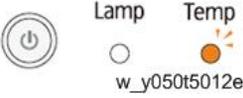
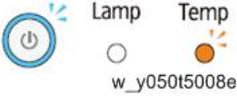
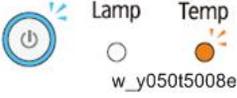
Error ID	Status / LED display	Cause	Solution
2	<p>[Status]</p> <p>The lamp turned off during use, or does not turn on.</p> <p>[LED display]</p>  <p>Flashing interval: 1 second</p>	<p>The lamp cover is not properly attached.</p>	<ul style="list-style-type: none"> • Attach the lamp cover properly. • Replace the lamp cover. (Lamp Module)
62	<p>[Status]</p> <p>The lamp turned off during use, or does not turn on.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	<p>PSU defect / failure</p>	<p>Replace the PSU. (page 77 "PSU")</p>
64	<p>[Status]</p> <p>The lamp turned off during use, or does not turn on.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	<p>Ballast defect</p>	<p>Replace the ballast. (page 74 "Lamp Ballast")</p>

Error ID	Status / LED display	Cause	Solution
66	<p>[Status] The lamp turned off during use, or does not turn on.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	PSU defect / failure	Replace the PSU. (page 77 "PSU")
68	<p>[Status] The lamp turned off during use, or does not turn on.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	Ballast defect	Replace the ballast. (Lamp Ballast)
-	<p>[Status] The lamp turned off during use, or does not turn on.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	<p>Hardware error</p> <p>The PSU temperature is abnormal.</p>	<p>Replace the main board. (page 60 "Main Board Assembly")</p> <ul style="list-style-type: none"> • Clean the intake / exhaust section and wait for the projector to be cooled down. • Reconsider the installation location. (Avoid installing the projector inside a small, closed box, or at a place where the projector intakes the exhaust air from another projector, etc.)

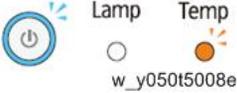
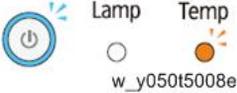
Error ID	Status / LED display	Cause	Solution
71-77	<p>[Status] The lamp turned off during use, or does not turn on.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	Ballast defect	Replace the ballast. (page 74 "Lamp Ballast")
-	<p>[Status] The lamp turned off during use, or does not turn on.</p> <p>[LED display] None</p>	The PSU temperature is abnormal.	<ul style="list-style-type: none"> • Clean the intake / exhaust section and wait for the projector to be cooled down. • Reconsider the installation location. (Avoid installing the projector inside a small, closed box, or at a place where the projector intakes the exhaust air from another projector, etc.) • Replace the PSU. (page 77 "PSU")
-	<p>[Status] The lamp turned off during use, or does not turn on.</p> <p>[LED display] None</p>	The temperature is abnormal.	<ul style="list-style-type: none"> • Clean the intake / exhaust section and wait for the projector to be cooled down. • Reconsider the installation location. (Avoid installing the projector inside a small, closed box, or at a place where the projector intakes the exhaust air from another projector, etc.) (page 82 "Intake Fan")

Error ID	Status / LED display	Cause	Solution
3	<p>[Status]</p> <p>The lamp does not turn off or the screen is blacked out.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	Ballast defect	Replace the ballast. (page 74 "Lamp Ballast")
4	<p>[Status]</p> <p>"Fan Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 1 time in 5 seconds</p>	Fan defect	Replace the intake fan. (page 82 "Intake Fan")
5	<p>[Status]</p> <p>"Fan Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 2 times in 5 seconds</p>	Fan defect	Replace the lamp fan. (page 57 "Lamp Module")

Error ID	Status / LED display	Cause	Solution
6	<p>[Status] "Fan Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 3 times in 5 seconds</p>	Fan defect	Replace the exhaust fan. (page 80 "Exhaust Fan")
29	<p>[Status] "Fan Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 4 times in 5 seconds</p>	Fan defect	Replace the exhaust fan. (page 80 "Exhaust Fan")
7	<p>[Status] "Temperature Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 1 time in 5 seconds</p>	Dust is clogging the intake / exhaust section.	Clean the intake / exhaust section and wait for the projector to be cooled down.
		It cannot be cooled by the intake air because the ambient temperature is high or exhaust is not possible.	Reconsider the installation location. (Avoid installing the projector inside a small, closed box, or at a place where the projector intakes the exhaust air from another projector, etc.)

Error ID	Status / LED display	Cause	Solution
9	<p>[Status]</p> <p>"Temperature Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 1 time in 5 seconds</p>	Hardware defect / failure	Replace the main board. (page 60 "Main Board Assembly")
10	<p>[Status]</p> <p>"Hardware Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	Hardware defect / failure	Replace the main board. (page 60 "Main Board Assembly")
11	<p>[Status]</p> <p>"Hardware Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	Hardware defect / failure	Replace the main board. (page 60 "Main Board Assembly")

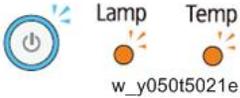
Error ID	Status / LED display	Cause	Solution
12	<p>[Status] "Hardware Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	Hardware defect / failure	Replace the main board. (page 60 "Main Board Assembly")
13	<p>[Status] "Hardware Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	Hardware defect / failure	Replace the main board. (page 60 "Main Board Assembly")
15	<p>[Status] "Hardware Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	Color wheel sensor defect / failure	Replace the optical engine. (page 67 "Optical Engine")

Error ID	Status / LED display	Cause	Solution
16	<p>[Status]</p> <p>"Hardware Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	DMD defect / failure	Replace the main board. (page 60 "Main Board Assembly")
17	<p>[Status]</p> <p>"Hardware Error" was displayed and the lamp turned off.</p> <p>[LED display]</p>  <p>Flashing interval: 0.2 seconds</p>	Hardware defect / failure	Replace the main board. (page 60 "Main Board Assembly")
14	<p>[Status]</p> <p>"The hardware error has occurred. The keystone adjustment is not available." was displayed and the keystone adjustment does not work.</p> <p>Projection is possible after the message is closed.</p>	Hardware defect / failure	Replace the main board. (page 60 "Main Board Assembly")

Error ID	Status / LED display	Cause	Solution
31	[Status] "The hardware error has occurred. The autofocus function is not available." was displayed and the autofocus function does not work. Projection is possible after the message is closed. [LED display] None	Connection error of the auto focus unit	Replace the entire optical engine including the auto focus unit. (page 67 "Optical Engine")
		Auto focus unit defect / failure	Replace the entire optical engine including the auto focus unit. (page 67 "Optical Engine")
32	[Status] "The hardware error has occurred. The interactive function is not available." was displayed and the interactive function does not work. Projection is possible after the message is closed. [LED display] None	Connection error of the projector adapter	Check the connection of the projector adapter.
		Projector adapter defect / failure	Replace the projector adapter.

Error ID	Status / LED display	Cause	Solution
33	<p>[Status]</p> <p>"The hardware error has occurred. The auto-eco function is not available." was displayed and the auto-eco function (automatic brightness adjustment for the lamp by the illuminance sensor) does not work.</p> <p>Projection is possible after the message is closed.</p> <p>[LED display]</p> <p>None</p>	Hardware defect / failure	Replace the control board. (page 64 "Control Panel Board")
34	<p>[Status]</p> <p>"The hardware error has occurred. The power timer function is not available." was displayed and the power timer function does not work.</p> <p>Projection is possible after the message is closed.</p> <p>[LED display]</p> <p>None</p>	Hardware defect / failure	Replace the network board. (page 72 "Network Board")

Error ID	Status / LED display	Cause	Solution
35	<p>[Status]</p> <p>“The hardware error has occurred. The power timer function is not available.” was displayed and the power timer function does not work.</p> <p>Projection is possible after the message is closed.</p> <p>[LED display]</p> <p>None</p>	Battery shortage of the network board	Replace the network board. (page 72 "Network Board")
18	<p>[Status]</p> <p>“The network error has occurred. The network and USB memory functions are not available.” was displayed and the network or USB memory function does not work.</p> <p>Projection is possible after the message is closed except for the network or USB memory.</p> <p>[LED display]</p> <p>None</p>	Software error	<ul style="list-style-type: none"> • Turn off the power and turn it back on. • Turn off the power and update the firmware. (page 72 "Network Board")
	Hardware error	Replace the network board. (page 72 "Network Board")	

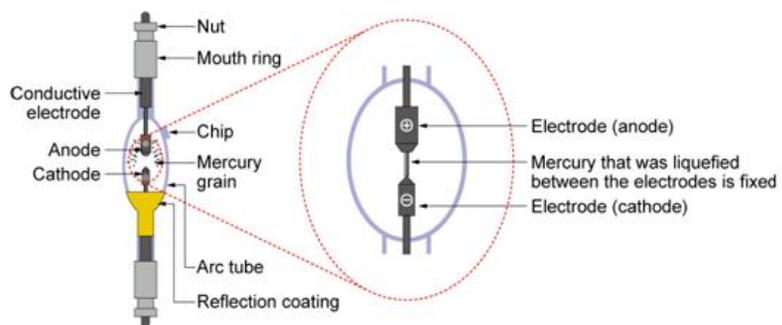
Error ID	Status / LED display	Cause	Solution
19	[Status] "The network error has occurred. Turn off the power and turn on. When the same error occurs again, please contact the service center." was displayed and the network or USB memory function does not work. Projection is possible after the message is closed except for the network or USB memory. [LED display] None	Software error	<ul style="list-style-type: none"> Turn off the power and turn it back on. Turn off the power and update the firmware. (page 93 "Firmware Update")
		Hardware error	Replace the network board. (page 72 "Network Board")
-	[Status] Firmware update via USB memory does not end normally. [LED display]  Flashing interval: 0.9 seconds	Updated with the firmware of another model	<ul style="list-style-type: none"> Replace the main board. (Main Board) Replace the network board. (page 72 "Network Board")
		Hardware error	<ul style="list-style-type: none"> Replace the main board. (Main Board) Replace the network board. (page 72 "Network Board")

* 1 : 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 short-circuit between the electrodes. This phenomenon is called "mercury bridge". (See figure 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).



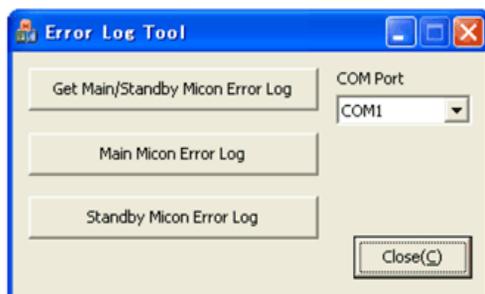
w_y050t3111e

Error Log

Output Error Log

1. Select [Error Log Tool].

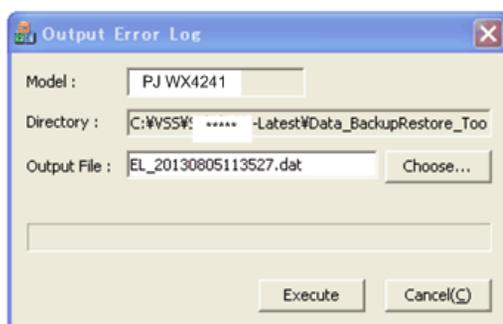
The [Error Log Tool] main screen is displayed.



y050z5000

2. Select the [COM port] connecting the projector in the [COM Port] list box.
3. Click the [Get Main/Standby Micon Error Log] button.

The [Output Error Log] screen is displayed.



y050z5001

Model: Model name of the connected projector.

4. Click the [Choose...] button.

The screen to choose the directory to save the output log file is displayed.

Directory: Path for saving the log file

Output file: File name to save

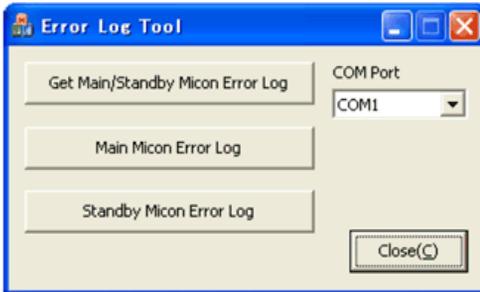
5. Click the [Execute] button.

The output error log is saved.

Display the Main Micon Error Log Viewer

1. Select [Error Log Tool].

The [Error Log Tool] main screen is displayed.



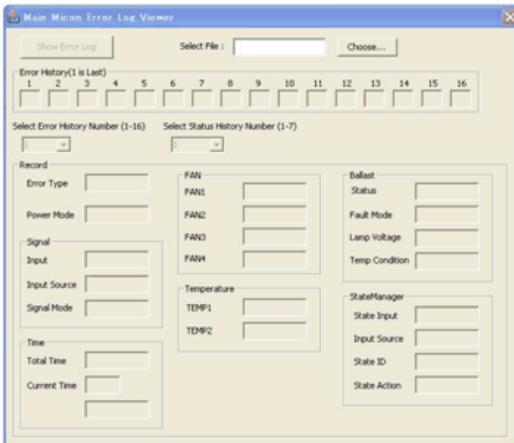
y050z5000

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2. Select the [COM port] connecting the projector in the [COM Port] list box.

3. Click the [Main Micon Error Log] button.

The [Main Micon Error Log Viewer] screen is displayed.



y050z5002

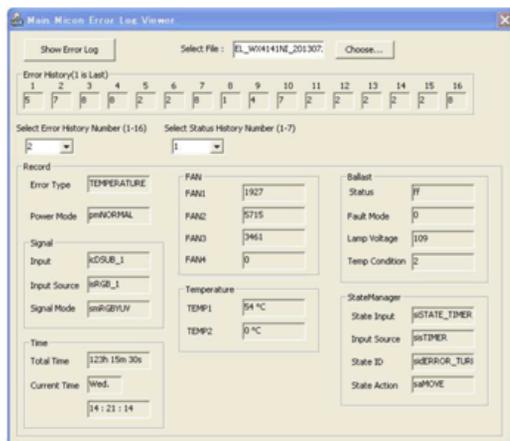
4. Click the [Choose...] button.

The screen to choose the log file is displayed.

Select File: Error log file name.

5. Click the [Show Error Log] button.

The output error log is displayed.



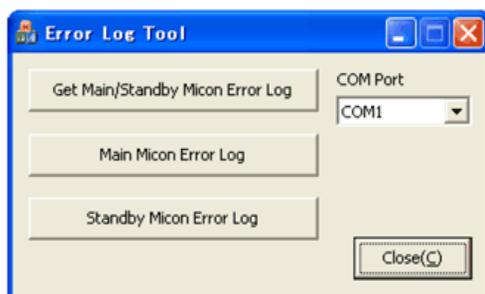
y050z5003

Display the [Standby Micon Error Log Viewer]

5

1. Select [Error log Tool]

The [Error Log Tool] main screen is displayed.

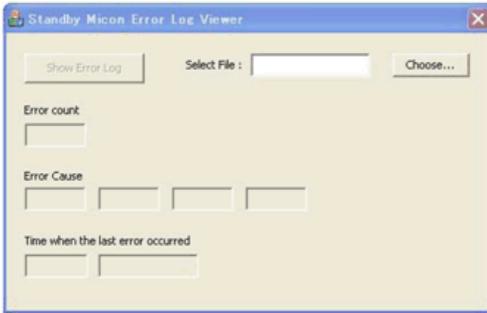


y050z5000

2. Select the [COM port] connecting the projector in the [COM Port] list box.

3. Click the [Standby Micon Error Log] button.

The [Standby Micon Error Log Viewer] (PIC error log screen) is displayed.



y050z5004

4. Click the [Choose...] button.

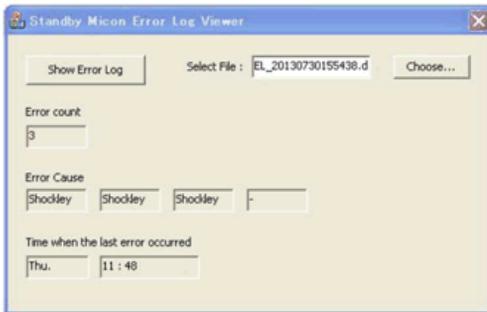
The screen to choose the log file is displayed.

Select File: Error log file name.

5. Click the [Show Error Log] button.

The output error log is displayed.

5



y050z5005

How to see the “Error log (PIC)”

Displayed on the [Service status] window. AA-BB-CC-DD-EE

AA: Total number (hexadecimal) of Errors This is increased by one for each error

BB: Error meaning*

CC: Not used

DD: Not used

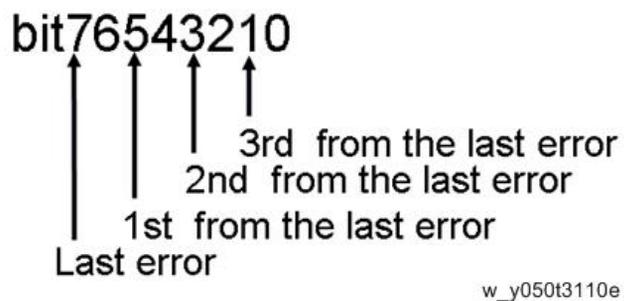
EE: Not used

*Error meaning

It shows the cause of the error as a two-bit number

01: Network

10: Main



Since the service status screen is displayed in hexadecimal, convert from the above displayed binary number.

If you use the Error log Tool, you do not need to convert.

Troubleshooting

Use this section to diagnose problems with the projector.

Problem	Solutions
Power does not turn on.	<ul style="list-style-type: none"> • Make sure the power plug or connector is connected correctly. • Make sure the lamp cover is mounted correctly. For details, see the Operating Instructions. • When the projector is installed on a ceiling and lens-down, be sure to press the [Power] button and wait until the projector cooling process completes before disconnecting the power cord. If the projector's power is turned off by disconnecting the power cord and without pressing the [Power] button, by an unexpected power interruption, you cannot turn the projector back on for up to approximately 25 minutes because it needs to radiate heat. Wait for a while until the projector is cooled down.
Power turns off during use.	<ul style="list-style-type: none"> • Make sure the environment in which the projector is being used is within the acceptable temperature range. • Make sure the vents are not blocked.
No image.	<ul style="list-style-type: none"> • Make sure the input signal is switched correctly if "Auto Input Search" in "Default Settings" is set to "Off". For details, see the Operating Instructions. • Make sure the AV mute function is not turned on. For details, see the Operating Instructions. • Check the settings of "Brightness" in "Image Adjustment". For details, see the Operating Instructions. • Make sure the computer or AV equipment is connected to the projector correctly. For details, see the Operating Instructions. • Make sure the computer's image output is switched correctly. For details, see the Operating Instructions. • Make sure the computer or AV equipment is working properly.

Problem	Solutions
<p>No sound.</p>	<ul style="list-style-type: none"> • Make sure the input signal is switched correctly if [Auto Input Search] in [Default Settings 1] is set to [Off]. For details, see the Operating Instructions. • Make sure the AV mute function is not turned on. For details, see the Operating Instructions. • Check the speaker's volume adjustment. For details, see the Operating Instructions. • Make sure the computer or AV equipment is connected to the projector correctly. For details, see the Operating Instructions. • Make sure the computer or AV equipment is working properly.
<p>Image is not projected normally.</p>	<ul style="list-style-type: none"> • Make sure the input signal is compatible with the projector. (page 20 "General Specifications") • Check the status of the video tape or other video source. • See if it is improved by executing [Auto Set Signals] in the Image Adjustment menu. • Check if the Scaling setting of the computer is appropriate. (See Note.)
<p>Image is blurred.</p> <ul style="list-style-type: none"> • Image is partially out of focus. 	<ul style="list-style-type: none"> • Make sure the projection window is clean. For details, see the Operating Instructions. • Check the focus adjustment. For details, see the Operating Instructions. • Make sure the projection distance is within the projector's range. (page 38 "Relationship Between the Projection Distance and the Screen Size") • Check the installation angles of the projector and screen. For details, see the Operating Instructions. • Check the settings of "Sharpness" and "Phase" in "Image Adjustment". For details, see the Operating Instructions.

Problem	Solutions
Image is dark.	<ul style="list-style-type: none"> • Check the settings of "Brightness" and "Contrast" in "Image Adjustment". For details, see the Operating Instructions. • Make sure the lamp is not near the end of its service life. For details, see the Operating Instructions. • Check the settings of "RGB Input Range" in "Image Adjustment". For details, see the Operating Instructions. • Make sure "3D Projection" in "Display Settings" is set to "Off". For details, see the Operating Instructions.
Color is faded. Tint is poor.	<ul style="list-style-type: none"> • Check the settings of "Color Saturation", "R-level", "G-level", and "B-level" in "Image Adjustment". For details, see the Operating Instructions. • Make sure the screen is clean. • Check the settings of "Wall Color Mode" in "Display Settings". For details, see the Operating Instructions. • Make sure the lamp is not near the end of its service life. For details, see the Operating Instructions.
The projector's operation keys do not respond.	<ul style="list-style-type: none"> • Make sure "Key Lock" in "Default Settings 2" is not set to "On". For details, see the Operating Instructions.
The remote control does not respond.	<ul style="list-style-type: none"> • Make sure the ID assigned to the remote control and in the settings of "Remote Control ID" in "Default Settings 2" are the same. For details, see the Operating Instructions. • Make sure the batteries in the remote control are not dead. • Make sure the batteries are correctly loaded into the remote control. For details, see the Operating Instructions. • Make sure the remote control is inside its effective range. • Make sure there is nothing placed between the remote control and the projector. • Make sure the remote control receiver is not exposed to strong light.

Problem	Solutions
Display language is unknown.	<ul style="list-style-type: none"> • Press the [Menu] button, and then select the display language in [Language / XXX] (XXX indicates the current display language) on the [⚙️] tab. For details, see the Operating Instructions.
No images from USB devices.	<ul style="list-style-type: none"> • Make sure the USB memory device is connected correctly. • Make sure the connected USB memory device is compatible with the projector. • Make sure there are JPEG or MPEG files saved on the USB memory device. • Make sure the compression format, file size, and other conditions are compatible with the projector. For details, see the Operating Instructions.
Wired LAN is disabled.	<ul style="list-style-type: none"> • Check the settings of “Wired LAN Settings” in “Network Settings” under “Network/USB Settings”. For details, see the Operating Instructions.
Wireless LAN is disabled. (Y051/Y053/Y056 only)	<ul style="list-style-type: none"> • Check the settings of “Wireless LAN Settings” in “Network Settings” under “Network/USB Settings”. For details, see the Operating Instructions. • Make sure there is nothing placed between the computer and the projector. <ul style="list-style-type: none"> • Make sure the operating system of the computer is compatible with QuickProjection. For details, see the Operating Instructions. • Make sure that the projector is not in standby. • Move the projector and access points closer to each other. • Make sure the access point and projector are close o each other, and move devices that emit radio signals such as microwave ovens further away.
The screen flickers.	<p>When the lamp power is lowered in the “Eco mode” setting, the screen may flicker in rare cases. In such a case, set “Eco mode” to “Off”.</p>
The lamp does not turn on.	<p>Check the status of “User lamp time” and “Total time” (Service Status)</p>

 **Note**

- If image input from a computer is not projected normally, it may be solved by changing the Scaling setting of the computer.
- 1. Connect the computer and the projector.
2. Right-click on the desktop and select [Graphics Properties].
3. For "Display" select [Monitor].
4. For "Scaling" select "Maintain Display Scaling".

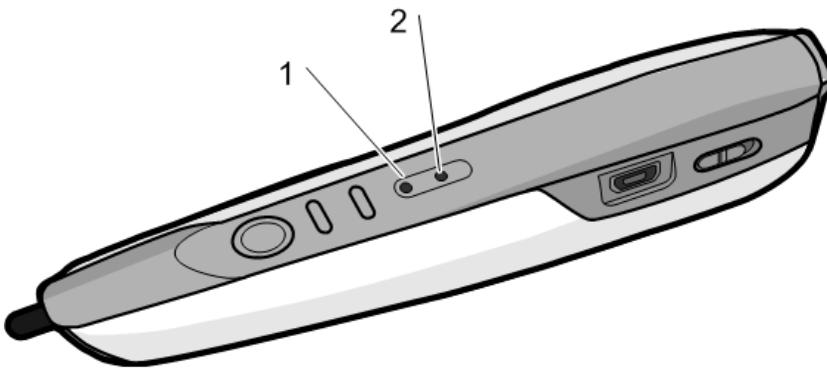
Interactive Kit Error Messages

Message	Cause	Solution
The PC USB adapter for the interactive kit may not be connected yet.	The electronic pen has been registered to the projector before the computer USB adapter is registered to the projector.	Turn off the electronic pen, register the computer USB adapter to the projector, and then register the electronic pen again.
Failed to register. Do you want to retry?	The projector failed to register the computer USB adapter.	To try the registration process again, remove the computer USB adapter, and then click [OK]. <ul style="list-style-type: none"> • Make sure that the computer USB adapter is set correctly. • Make sure that there are no obstacles between the projector and the computer. • Be sure to attach the computer USB adapter within five seconds of pressing the [Enter] button.
Please wait.	The channel for wireless connection is being switched automatically. The message disappears when the wireless LAN connection channel is fixed.	Wait until the message disappears.

Interactive Kit Troubleshooting

Problem	Solutions
The electronic pen is not working correctly.	The electronic pen may not work correctly if it is pointed at a shadowed area on the screen. Try to keep the screen from being shadowed and point it at an unshadowed area.
The electronic pen is not working correctly.	The electronic pen may not work correctly if the surrounding area is too bright. Dim the surrounding lights.
The electronic pen is not working correctly.	The Interactive Tool Kit may not work correctly if other Bluetooth/wireless LAN devices are used nearby. Try not to use the kit in the vicinity of such devices.

Electronic pen LED Display



y00242025

- 1. LED1
- 2. LED2

	LED1	LED2
Not registered by projector/ Currently being registered by projector	-	Flashes red.
Registration completed	-	Lights up in green or rapidly flashes.
Charging	Lights up in green.	-

MEMO

MEMO

MEMO