

Model Altair-PJ1
Machine Codes:
Y024/Y025/Y026/Y027/Y028/Y029
Field Service Manual

17 Dec, 2012

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

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.

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 and Trademarks

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

	See or Refer to
	Screw
	Connector

Trademarks

Microsoft[®], Windows[®], and Excel are registered trademarks of Microsoft Corporation in the United States and /or other countries.

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

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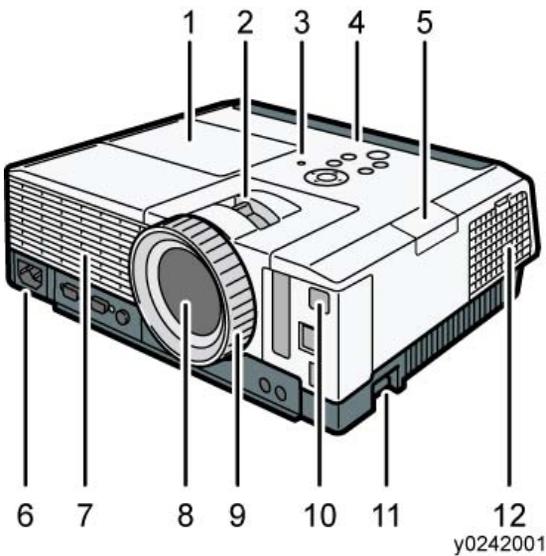
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1. Product Information

Overview

Front and Top View

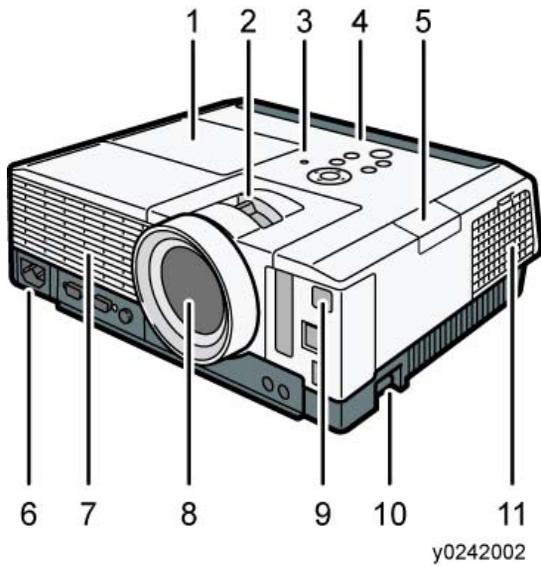
Y024/Y026



No.	Name
1	Lamp cover
2	Zoom lever
3	Illuminance sensor
4	Control panel
5	Interactive kit adapter slot cover
6	AC In socket
7	Exhaust vents
8	Lens

No.	Name
9	Focus ring
10	Remote control receiver
11	Adjustable feet
12	Intake vents

Y025/Y027

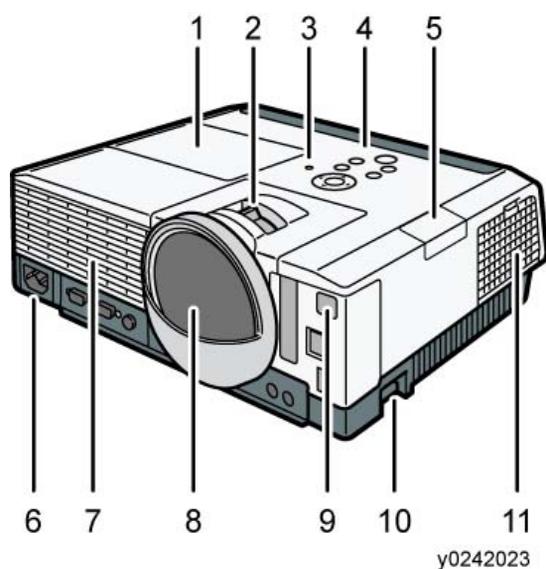


y0242002

No.	Name
1	Lamp cover
2	Zoom lever
3	Illuminance sensor
4	Control panel
5	Interactive kit adapter slot cover
6	AC In socket
7	Exhaust vents
8	Lens

No.	Name
9	Remote control receiver
10	Adjustable feet
11	Intake vents

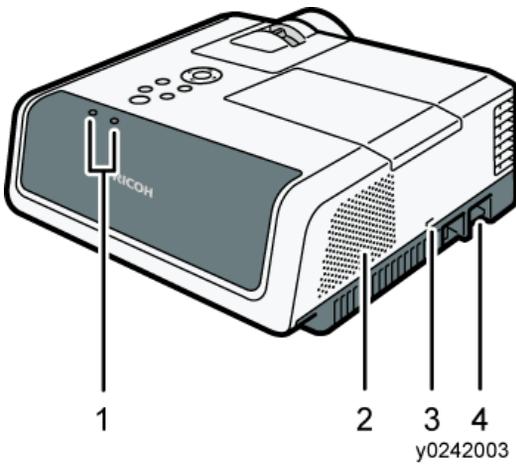
Y28/Y029



No.	Name
1	Lamp cover
2	Focus lever
3	Illuminance sensor
4	Control panel
5	Interactive kit adapter slot cover
6	AC In socket
7	Exhaust vents
8	Lens
9	Remote control receiver

No.	Name
10	Adjustable feet
11	Intake vents

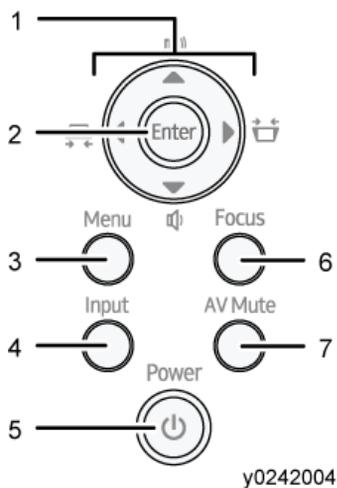
Rear View



No.	Name
1	LED indicators
2	Speaker
3	Security slot
4	Adjustable feet

Control Panel

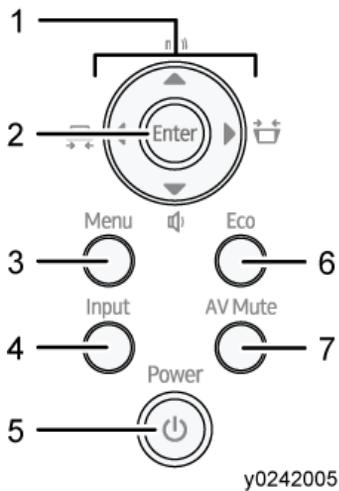
Y024/Y025/Y026/Y027



No.	Name	Function
1	Arrow buttons	Used to operate the menu screen. 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 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.
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.

No.	Name	Function
6	[Focus] button/[Eco] button	<ul style="list-style-type: none"> [Focus] button (Y025/Y027) Displays the manual focus bar. Press it, and then adjust the focus using the [◀] and [▶] buttons. [Eco] button (Y024/Y026/Y028/Y029) 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.

Y028/Y029

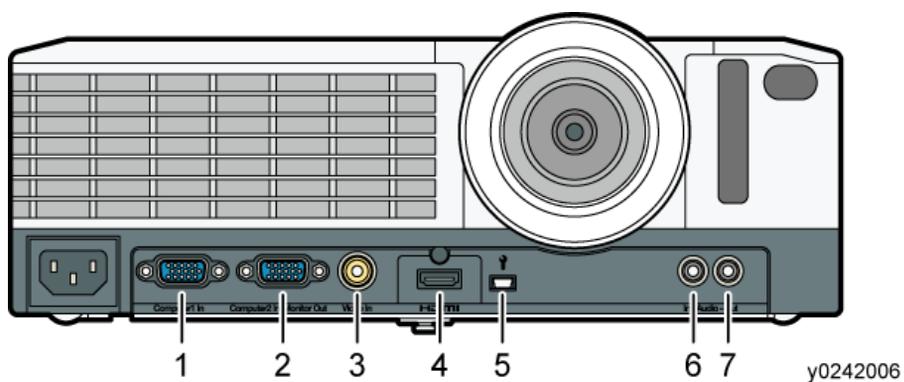


No.	Name
1	Arrow buttons
2	[Enter] button
3	[Menu] button
4	[Input] button
5	[Power] button
6	[Eco] button
7	Remote control receiver

No.	Name
8	[AV Mute] button

Ports on the Projector

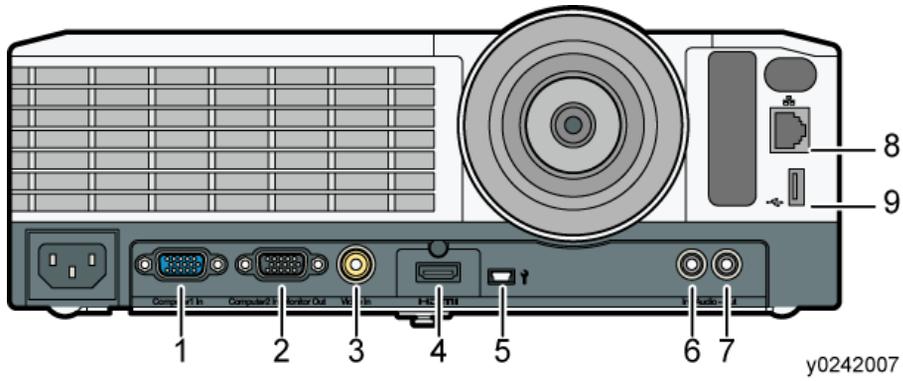
Y024/Y026



y0242006

No.	Name
1	Computer1 In port (Y/Pb/Pr)
2	Computer2 In/Monitor Out port
3	Video In port
4	HDMI port
5	Control port (USB mini-B)
6	Audio In port
7	Audio Out port

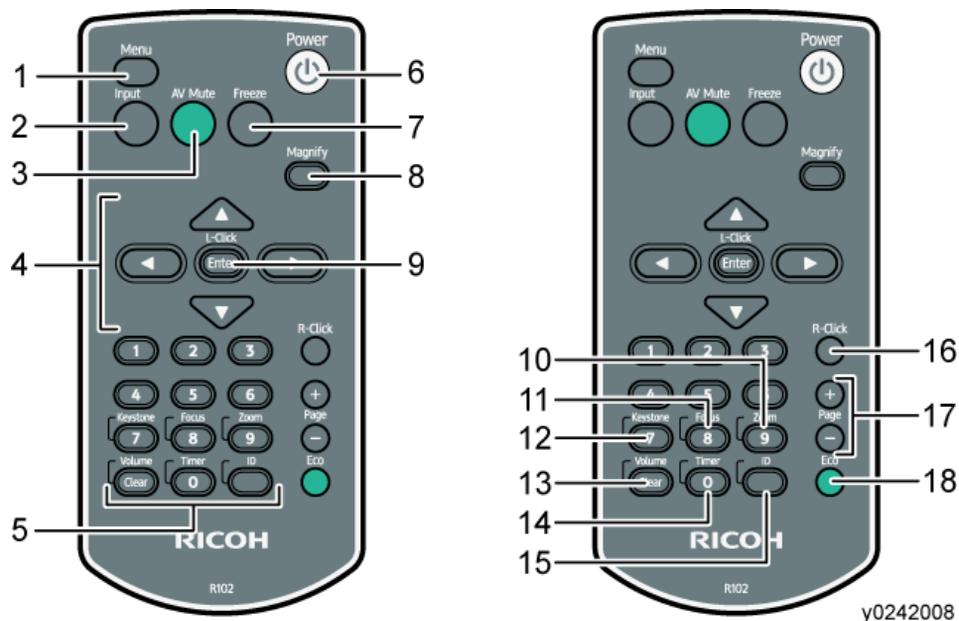
Y025/Y027/Y028/Y029



y0242007

No.	Name
1	Computer1 In port (Y/Pb/Pr)
2	Computer2 In/Monitor Out port
3	Video In port
4	HDMI port
5	Control port (USB mini-B)
6	Audio In port
7	Audio Out port
8	LAN port
9	USB port

Remote Control

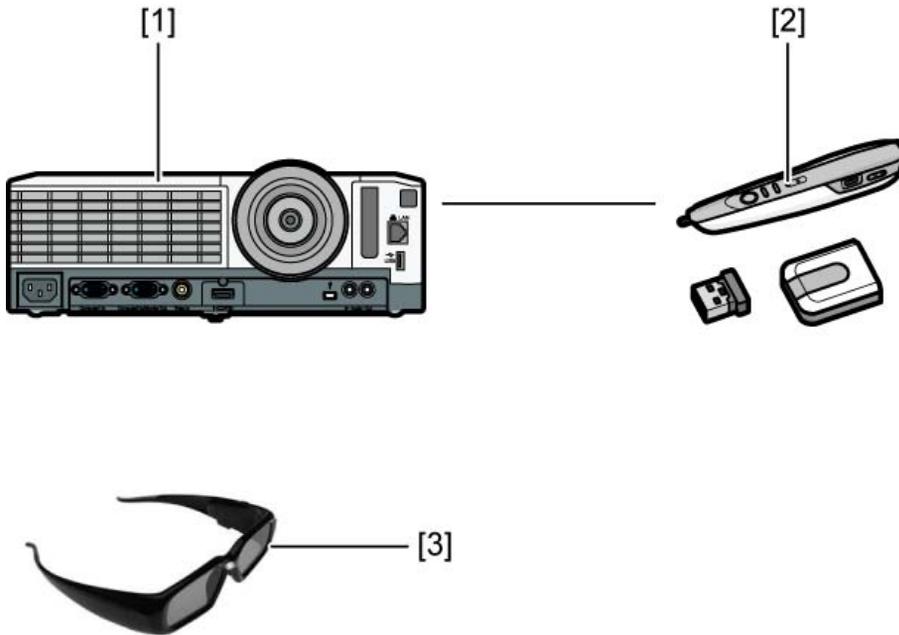


y0242008

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	<ul style="list-style-type: none"> • Y024/Y026/Y028/Y029 <p>This button is not used.</p> <ul style="list-style-type: none"> • Y025/Y027 <p>Displays the manual focus bar. Press it, and then adjust the focus using the [◀] and [▶] buttons.</p>
12	[Keystone] button	Displays the keystone adjustment bar. Press it, 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	<ul style="list-style-type: none"> • Y024/Y026 <p>This button is not used.</p> <ul style="list-style-type: none"> • Y025/Y027/Y028/Y029 <p>Used to operate the computer with the remote control. It is the same as the right-click button on a mouse.</p>
17	[Page] buttons	<ul style="list-style-type: none"> • Y024/Y026 <p>This button is not used.</p> <ul style="list-style-type: none"> • Y025/Y027/Y028/Y029 <p>Changes slides, such as in a PowerPoint presentation. Press [-] to go to the next page. Press [+] to go to the previous page. These buttons can be used when the mouse remote control receiver is connected to a computer.</p>
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



y0242026

Item	Callout	Machine Code
Y024/Y025/Y026/Y027/Y028/Y029	[1]	Y024/Y025/Y026/Y027/Y028/Y029
Interactive Kit	[2]	Y117
3D Glasses	[3]	Y107

General Specifications

1

List of General Specifications

Component	Specifications
Power consumption	Y024/Y025/Y026/Y027: 290 W or less Y028/Y029: 320 W or less
Weight	Y024/Y026: Less than 3.0 kg (6.6 lb.) Y025/Y027: Less than 3.1 kg (6.8 lb.) Y028/Y029: Less than 3.2 kg (7.0 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(R) • Panel size Y024/Y025/Y028: 0.55 inches Y026/Y027/Y029: 0.65 inches • Pixels Y024/Y025/Y028: 786,432 (1024Hx768V) Y026/Y027/Y029: 1,024,000 pixels (1280 H x 800 V)
Projection method	Y024/Y025/Y026/Y027: Zoom lens (X1.5) Y028/Y029: Short focus lens
Lamp	<ul style="list-style-type: none"> • High-pressure mercury lamp Y024/Y025/Y026/027: (Max: 230W, High: 214W, Mid: 175W, Low: 124W) Y028/Y029: (Max: 250W, High: 232W, Mid: 190W, Low: 135W)

Component	Specifications
Projection screen size	Y024/Y025: 30 to 200 inches Y026/Y027: 40 to 240 inches Y028: 50 to 120 inches Y029: 60 to 140 inches
Projection distance	Y024: 0.68-7.20m Y025: 0.68-7.20m Y026: 0.77-7.33m Y027: 0.77-7.33m Y028: 0.59-1.49m Y029: 0.61-1.48m
Speaker	10 W (Mono)

Component	Specifications
Connection ports	<ul style="list-style-type: none"> <li data-bbox="591 309 824 339">• COMPUTER In port <li data-bbox="618 354 810 384">Mini D-SUB15 x 2 <li data-bbox="618 399 1053 478">* The 2nd port is an In/Out common port. (Selects In/Out by "Setting") <li data-bbox="591 493 930 523">• HDMI port (HDCP compliant)* <li data-bbox="618 539 718 568">HDMI x 1 <li data-bbox="591 584 755 613">• Video In port <li data-bbox="618 629 762 658">RCA_1 pin x 1 <li data-bbox="591 674 755 703">• Audio In port <li data-bbox="618 719 751 748">Mini Jack x 1 <li data-bbox="591 764 776 793">• Audio Out port <li data-bbox="618 809 751 838">Mini Jack x 1 <li data-bbox="591 854 742 883">• Control port <li data-bbox="618 899 828 929">USB TYPE-mini-B x 1 <li data-bbox="591 944 1016 974">• USB port (Y025/Y027/Y028/Y029) <li data-bbox="618 989 728 1019">TYPE-A x 1 <li data-bbox="618 1034 834 1064">USB 2.0 High-speed <li data-bbox="618 1079 861 1109">Output voltage: DC 5 V <li data-bbox="618 1125 865 1154">Supply current: 500 mA <li data-bbox="591 1170 1016 1199">• LAN port (Y025/Y027/Y028/Y029) <li data-bbox="618 1215 677 1244">RJ-45 <li data-bbox="618 1260 1030 1289">10BASE-T/100BASE-TX/1000BASE-T <li data-bbox="591 1305 989 1334">• Wireless LAN (Y025/Y027/Y029) <li data-bbox="618 1350 1026 1379">Compatible with IEEE 802.11 a/b/g/n

* 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 3

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 x 350	640	350	70.090	31.470	25.176
			85.080	37.861	31.500
640 x 400	640	400	59.940	31.469	25.175
			70.090	31.470	25.176
			85.080	37.861	31.500
640 x 480	640	480	59.940	31.469	25.175
			72.809	37.861	31.500
			75.000	37.500	31.500
			85.008	43.269	36.000
			69.444	34.722	28.229
			90.038	45.829	38.130
			89.898	47.916	39.866
			99.989	52.994	44.939
			120.254	63.735	55.067
		66.667	35.000	30.240	
720 x 350	720	350	70.090	31.470	28.323

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
720 x 400	720	400	59.941	31.469	28.322
			70.090	31.470	28.323
			85.039	37.927	35.500
720 x 480	720	480	59.941	31.469	28.322
800 x 600	800	600	56.250	35.156	36.000
			60.317	37.879	40.000
			72.188	48.077	50.000
			75.000	46.875	49.500
			85.061	53.673	56.250
			94.890	59.970	62.369
			80.011	50.327	53.145
			90.045	56.818	59.546
			100.021	63.613	68.194
			110.035	70.422	75.493
800 x 600	800	600	120.372	77.399	84.210
			70.099	44.583	44.940
			100.189	64.021	67.606
			120.031	76.220	81.098
832 x 624	832	624	74.550	49.725	57.283
848 x 480	848	480	60.000	31.020	33.750
960 x 720	960	720	60.004	44.763	55.864

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
1024 x 768	1024	768	60.004	48.363	65.000
			70.069	56.476	75.000
			75.029	60.023	78.750
			84.997	68.678	94.500
			74.700	60.134	79.857
			90.029	72.833	100.219
			109.901	90.009	125.292
			112.294	91.407	127.239
			99.771	80.515	110.145
			119.841	96.712	129.981
1024 x 800	1024	800	84.011	70.821	97.450
1152 x 864	1152	864	43.600	45.998	66.513
			60.039	53.753	79.528
			70.019	63.857	94.509
			75.000	67.500	108.000
			79.523	72.048	112.395
			85.007	77.101	121.512
			100.688	91.324	143.927
1152 x 870	1152	870	75.062	68.682	100.001
1152 x 900	1152	900	76.637	71.809	108.001

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
1280 x 720	1280	720	60.000	45.000	74.250
			69.472	52.521	88.970
			71.577	54.112	91.666
			74.605	56.401	95.544
			85.064	64.308	109.967
			100.047	76.336	131.908
1280 x 768	1280	768	59.995	47.396	68.250
			59.870	47.776	79.500
			74.893	60.289	102.250
			84.837	68.633	117.500
1280 x 800	1280	800	60.020	63.980	108.000
			60.040	49.730	83.300
			59.890	65.100	122.380
			59.910	49.306	71.000
			59.810	49.702	83.500
			74.934	62.795	106.500
			84.880	71.554	122.500
1280 x 960	1280	960	60.000	60.000	108.000
			71.939	72.083	122.253
			75.019	75.019	126.032
			85.002	85.937	148.500

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
1280 x 1024	1280	1024	60.020	63.981	108.000
			60.130	65.360	122.880
			72.037	76.863	132.820
			75.025	79.976	135.000
			80.003	85.763	149.571
			85.024	91.146	157.500
1360 x 768	1360	768	60.015	47.712	85.500
1366 x 768	1366	768	59.960	55.870	106.380
			59.870	65.020	122.240
			60.000	48.000	72.000
			59.790	47.712	85.500
1400 x 1050	1400	1050	59.948	64.744	101.000
			59.978	65.317	121.750
			74.867	82.278	156.000
1440 x 900	1440	900	59.901	55.469	88.750
			59.887	55.935	106.500
			74.984	70.635	136.750
			84.842	80.430	157.000
			59.880	66.930	129.570

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
1600 x 900	1600	900	60.000	60.000	108.000
			60.043	55.960	119.978
			69.980	65.501	140.435
			71.990	67.527	144.777
			75.230	70.716	151.616
1600 x 1024	1600	1024	60.012	63.613	136.386
			70.350	74.571	159.880
			72.513	76.864	164.796
1600 x 1200	1600	1200	51.868	74.794	161.554
			60.000	75.000	162.000
1680 x 1050	1680	1050	59.883	64.674	119.000
			59.954	65.290	146.250

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.
- Y024/Y025/Y028: 1024 x 768 dots , Y026/Y027/Y029: 1280 x 800 dots

List of supported signals (Y/P_B/P_R 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

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
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
PAL60	720	240	59.940	15.734	13.500
NTSC4.43	720	240	59.940	15.734	13.500
60Hz (mono)	720	240	59.940	15.734	13.500
50Hz (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)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
480i (525i)	720	242.5	59.940	15.734	13.500
576i (625i)	720	288	50.000	15.625	13.500
480p (525p)	720	483	59.940	31.469	27.000
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 / 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
1080 / 50p	1920	1080	50.000	56.250	148.500
1080 / 60p	1920	1080	60.000	67.500	148.500
640 x 350	640	350	70.090	31.470	25.176
			85.080	37.861	31.500
640 x 400	640	400	59.940	31.469	25.175
			70.090	31.470	25.176
			85.080	37.861	31.500

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
640 x 480	640	480	59.940	31.469	25.175
			72.809	37.861	31.500
			75.000	37.500	31.500
			85.008	43.269	36.000
			69.444	34.722	28.299
			90.038	45.829	38.130
			66.667	35.000	30.240
720 x 480	720	480	59.941	31.469	28.322
800 x 600	800	600	56.250	35.156	36.000
			60.317	37.879	40.000
			72.188	48.077	50.000
			75.000	46.875	49.500
			85.061	53.673	56.250
			94.890	59.970	62.369
			80.011	50.327	53.145
			90.045	56.818	59.546
			100.021	63.613	68.194
			110.035	70.422	75.493
			120.372	77.399	84.210
832 x 624	832	624	74.550	49.725	57.283
848 x 480	848	480	60.000	31.020	33.750
960 x 720	960	720	60.004	44.763	55.864
			75.013	55.960	69.838

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
1024 x 768	1024	768	60.004	48.363	65.000
			70.069	56.476	75.000
			75.029	60.023	78.750
			84.997	68.678	94.500
			74.700	60.134	79.857
			90.029	72.833	100.219
			109.901	90.009	125.292
			112.294	91.407	127.239
1024 x 800	1024	800	84.011	70.821	97.450
1152 x 864	1152	864	43.600	45.998	66.513
			60.039	53.735	79.528
			70.019	63.857	94.509
			75.000	67.500	108.000
			79.523	72.048	112.395
			85.007	77.101	121.512
			100.688	91.324	143.927
1152 x 870	1152	870	75.062	68.682	100.001
1280 x 720	1280	720	60.000	45.000	74.250
			69.472	52.521	88.970
			71.577	54.112	91.666
			74.605	56.401	95.544
			85.064	64.308	109.967
			100.047	76.336	131.908

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
1280 x 768	1280	768	59.995	47.396	68.250
			59.870	47.776	79.500
			74.893	60.289	102.250
			84.837	68.633	117.500
1280 x 800	1280	800	60.020	63.980	108.000
			60.040	49.730	83.300
			59.890	65.100	122.380
			59.910	49.306	71.000
			59.810	49.702	83.500
			74.934	62.795	106.500
1280 x 960	1280	960	60.000	60.000	108.000
			71.939	72.083	122.253
			75.019	75.019	126.032
			85.002	85.937	148.500
1280 x 1024	1280	1024	60.020	63.981	108.000
			72.037	76.863	132.820
			75.025	79.976	135.000
			80.003	85.763	149.571
			85.024	91.146	157.500
1360 x 768	1360	768	60.015	47.712	85.500

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
1366 x 768	1366	768	59.960	55.870	106.380
			59.870	65.020	122.240
			60.000	48.000	72.000
			59.790	47.712	85.500
1400 x 1050	1400	1050	59.948	64.744	101.000
			59.978	65.317	121.750
			74.867	82.278	156.000
1440 x 900	1440	900	59.901	55.469	88.750
			59.887	55.935	106.500
			74.984	70.635	136.750
			84.842	80.430	157.000
			59.880	66.930	129.570
1600 x 900	1600	900	60.000	60.000	108.000
			60.043	55.960	119.978
			69.980	65.501	140.435
			71.990	67.527	144.777
			75.230	70.716	151.616
1600 x 1024	1600	1024	60.012	63.613	136.386
			70.350	74.751	159.880
			72.513	76.864	164.796
1600 x 1200	1600	1200	51.868	74.794	161.554
			60.000	75.000	162.000

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
1680 x 1050	1680	1050	59.883	64.674	119.000
			59.954	65.290	146.250

List of supported 3D Formats

Computer Input

Mode	Frequency		3D Transmission method		
	Vertical (Hz)	Clock (MHz)	Frame Sequential	Side-by-Side	Top and Bottom
640 x 480	59.94	25.175	Yes	Yes	Yes
800 x 600	60.317	40	Yes	Yes	Yes
1024 x 768	60.004	65	Yes	Yes	Yes
1280 x 960	60	108	Yes	Yes	Yes
1280 x 1024	60.02	108	Yes	Yes	Yes
1360 x 768	60.015	85.5	Yes	Yes	Yes
1366 x 768	60	72	Yes	Yes	Yes
1366 x 768	59.79	85.5	Yes	Yes	Yes
1440 x 900	59.901	88.75	Yes	Yes	Yes
1440 x 900	59.887	106.5	Yes	Yes	Yes
1600 x 900	60	108	Yes	Yes	Yes
1600 x 1200	60	162	Yes	Yes	Yes
1680 x 1050	59.883	119	Yes	Yes	Yes
1680 x 1050	59.954	146.25	Yes	Yes	Yes

Y/Pb/Pr Input

Mode	3D Format		
	Frame Sequential	Side-by-Side	Top and Bottom
480i (525i)	Yes	Yes	Yes
576i (625i)	Yes	Yes	Yes
480p (525p)	No	Yes	Yes
576p (625p)	No	Yes	Yes
720 / 60p	No	Yes	Yes
1080 / 60i	No	Yes	Yes
1080 / 60p	No	Yes	Yes

Video Input

Mode	3D Format		
	Frame Sequential	Side-by-Side	Top and Bottom
NTSC	Yes	No	No
PAL	Yes	No	No

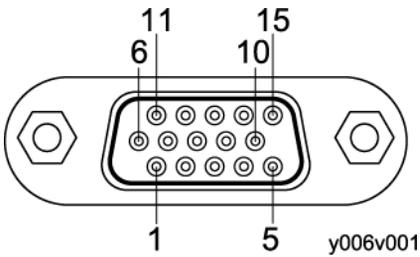
HDMI Input

Mode	Frequency		3D Transmission method			
	Vertical (Hz)	Clock (MHz)	Frame Sequential	Side-by-Side	Top and Bottom	Frame Packing
640 x 480	59.94	25.175	Yes	Yes	Yes	No
800 x 600	60.317	40	Yes	Yes	Yes	No
1024 x 768	60.004	65	Yes	Yes	Yes	No
1280 x 960	60	108	Yes	Yes	Yes	No
1280 x 1024	60.02	108	Yes	Yes	Yes	No
1360 x 768	60.015	85.5	Yes	Yes	Yes	No
1366 x 768	60	72	Yes	Yes	Yes	No

Mode	Frequency		3D Transmission method			
	Vertical (Hz)	Clock (MHz)	Frame Sequential	Side-by-Side	Top and Bottom	Frame Packing
1366 x 768	59.79	85.5	Yes	Yes	Yes	No
1440 x 900	59.901	88.75	Yes	Yes	Yes	No
1440 x 900	59.887	106.5	Yes	Yes	Yes	No
1600 x 900	60	108	Yes	Yes	Yes	No
1600 x 1200	60	162	Yes	Yes	Yes	No
1680 x 1050	59.883	119	Yes	Yes	Yes	No
1680 x 1050	59.954	146.25	Yes	Yes	Yes	No
480i (525i)	59.94	13.5	Yes	Yes	Yes	No
576i (625i)	50	13.5	Yes	Yes	Yes	No
480p (525p)	59.94	27	x	Yes	Yes	No
576p (625p)	50	27	x	Yes	Yes	No
720 / 60p	60	74.25	x	Yes	Yes	No
1080 / 60i	60	74.25	x	Yes	Yes	No
1080 / 60p	60	148.5	x	Yes	Yes	No
720 / 50p <FramePacking>	50	148.5	No	No	No	Yes
720 / 60p <FramePacking>	59.940 / 60.000	148.35 / 148.50	No	No	No	Yes
1080 / 24p <FramePacking>	23.976 / 24.000	148.35 / 148.50	No	No	No	Yes
1080 / 50i <Side-by-Side>	50	74.25	No	Yes	No	No
1080 / 60i <Side-by-Side>	59.940 / 60.000	74.176 / 74.25	No	Yes	No	No

Mode	Frequency		3D Transmission method			
	Vertical (Hz)	Clock (MHz)	Frame Sequential	Side-by-Side	Top and Bottom	Frame Packing
720 / 50p <Top-and-Bottom>	50	74.25	No	No	Yes	No
720 / 60p <Top-and-Bottom>	59.940 / 60.000	74.176 / 74.25	No	No	Yes	No
1080 / 24p <Top-and-Bottom>	23.976 / 24.000	74.176 / 74.25	No	No	Yes	No

Pin assignment of Computer In terminal



Mini D sub 15 Pin connector

Pin No.	Pin description: During RGB input	Pin description: During Y/P _B /P _R input
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	GND	-
5	GND	-
6	GND(R)	GND(P _R)
7	GND(G)	GND(Y)
8	GND(B)	GND(P _B)
9	N.C	-

Pin No.	Pin description: During RGB input	Pin description: During Y/P _B /P _R input
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>
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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 (Y012 only)	INP:12	=INP:12
USB input (Y012 only)	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

- 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.
- 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 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 use the product on soft material such as paper or cloth that might get sucked into the intake vents. Doing so may cause heat buildup inside the product, resulting in malfunction, burns, or fire.
- 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 in a location where air flow is poor. Doing so may cause fire due to internal components becoming overheated.
- Do not place or store the product in a location where direct sunlight or heat generation might occur. The heat may deform or wear out the exterior parts or negatively affect internal parts. Doing so could result in fire.
- Do not place low heat resistant material near the exhaust vents. Hot air may come from the exhaust vents, resulting in damage to the product or an accident.
- Do not expose the product to salt air or corrosive gas. Also, do not place the product in a laboratory or other location where a chemical reaction might occur. Doing so may cause the product to malfunction.
- Do not obstruct the machine's vents. Doing so risks fire caused by overheated internal components.
- Do not use any power sources other than those that match the specifications shown. Doing so could result in fire or electric shock.
- Do not use any frequencies other than those that match the specifications shown. Doing so could result in fire or electric shock.
- Do not damage, break, or modify the power cord. Also, do not place heavy objects on the power cord, or pull the cord or bend it severely. Doing so could result in fire or electric shock.
- 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.

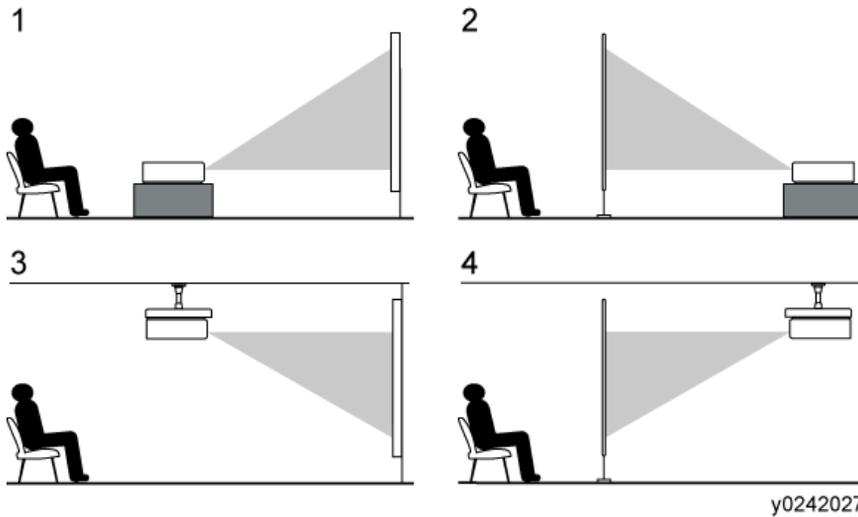
- Push the power plug all the way into the power outlet. Do not use a power outlet with a loose connection. Doing so may result in heat buildup. Plug the power cord in the correct direction into the base. If they are not plugged in correctly, it could result in smoke, fire, or electric shock.
- Do not 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.

Pattern of Installation

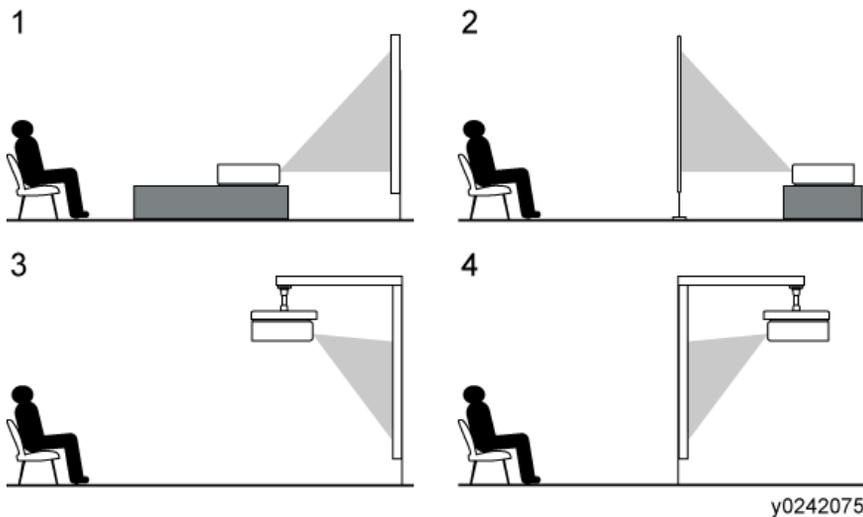
You can position the projector in one of four ways.

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

Y024/Y025/Y026/Y027



Y028/Y029



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.

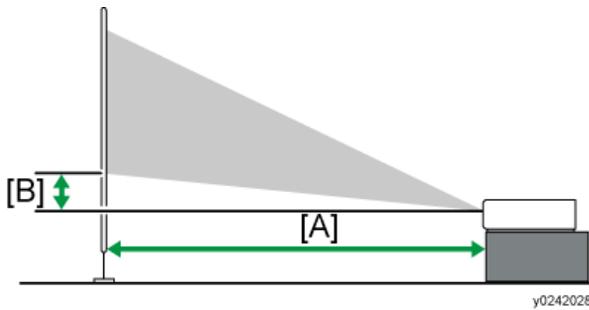
4. Rear Ceiling

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.



Y024/Y025

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)

Y026/Y027

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 (9.94 feet)	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)

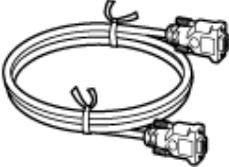
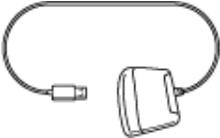
Y028

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)

Y029

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	
CD-ROM	
RGB cable	
Power cord	
Warranty card	
Mouse remote control receiver (Y025, Y027, and Y029 only)	
Carrying bag (Y024, Y025, Y026, and Y027 only)	

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.

2

Connecting a Computer

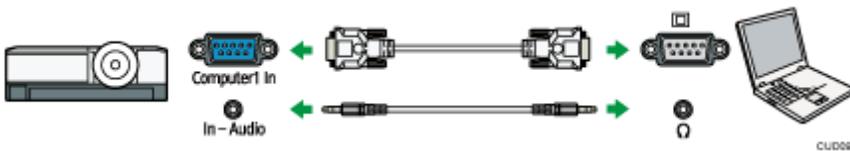
↓ Note

- 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.

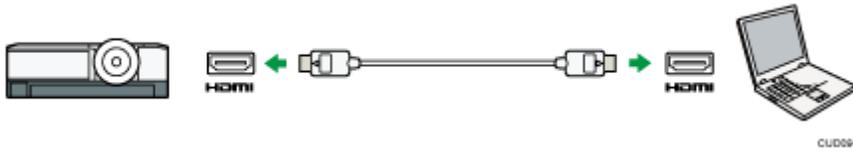


↓ Note

- 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 2] is specified as [Input].

Using an HDMI cable

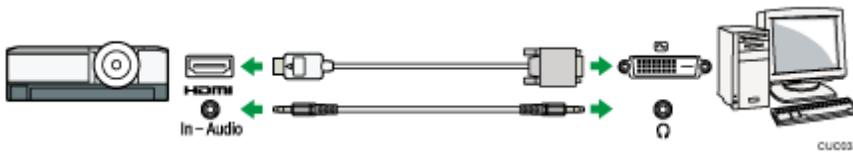
Connect an HDMI cable to the HDMI ports of the projector and the computer.



2

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 (Y025/Y027/Y028/Y029 only)

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 (Y025/Y027/Y029 only)

Y025/Y027/Y029 are equipped with a wireless connectivity function. For details, see Operating Instructions.



CUJ007

Connecting AV Equipment

2

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.

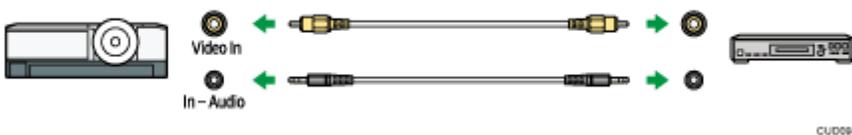


Note

- 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.

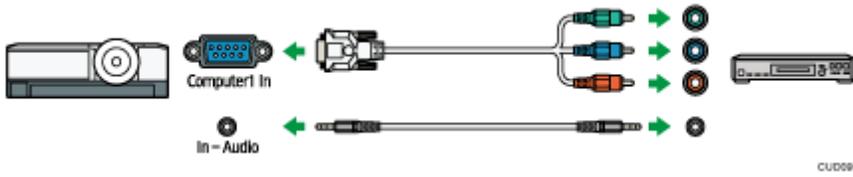
Using a video cable

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

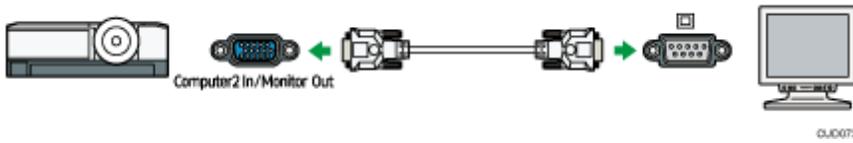
Connect a D-sub to component video cable to the Computer 1 In port of the projector and to the Y/Pb/Pr output of the AV equipment. To output audio from the speaker on the projector, connect an audio cable to the Audio In Port of the projector and to the audio output of AV equipment.



Connecting an External Display Device

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 [Computer 2 Terminal] 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.

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.



y0242075

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.

The method for changing the settings depends on the item.

- Adjusting values using the values bar

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



y0242076

- Selecting the value from a list

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



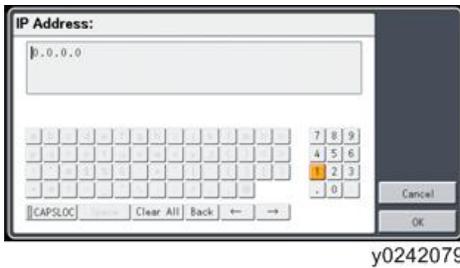
- Inputting numbers

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



- Inputting text (Y025/Y027/Y028/Y029 only)

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.



Note

- The control panel on the projector can be used for operations, but numbers for settings cannot be inputted.
- A confirmation screen appears before some functions are executed or some settings are changed.
- The Network/USB Settings menu has three menu screens, "USB Settings", "Network Settings", and "Network Application Settings". Open the menu according to the settings you want to change, and then go to step 2 to change the settings.
- 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.

Options Installation

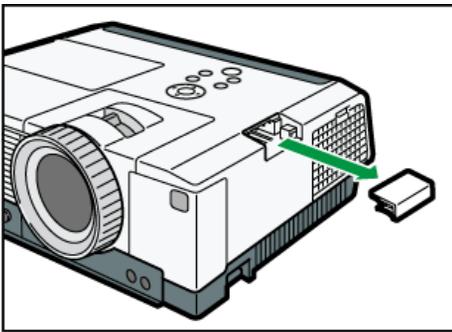
Ricoh PJ Interactive kit Type1

2

Setting Up the Projector

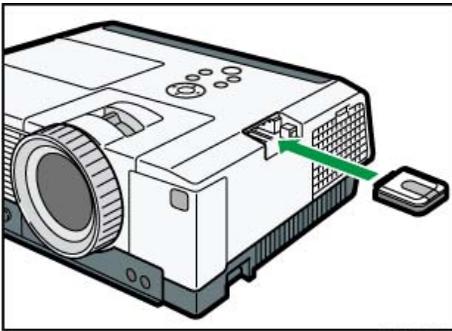
1. Check the projector to make sure that the power supply is OFF.

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.



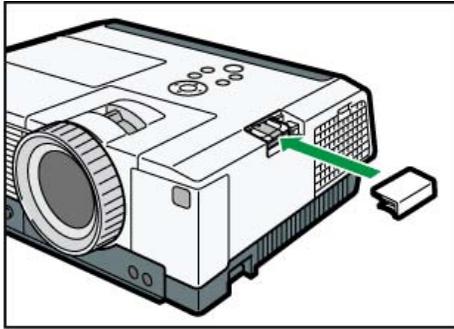
y0242029

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



y0242030

3. Attach the projector adapter to the projector.



y0242031

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

Setting Up Your Computer

1. Insert the product CD-ROM into the computer.
If the auto-play screen appears, install or run the Software.
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 software options you want to install.
3. Specify the language you want to use during the installation process, and then click [OK].
4. Click [Next].
5. Select "I accept the terms of the Software License Agreement.", and then click [Next].
If you do not agree, you will be unable to continue the installation process.
6. Specify the installation folder, and then click [Next].
7. Click [Install].
8. 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.

- To operate the projector screen, use the projector operation panel or the remote control that is included with the projector.

1. Turn on the projector to project the screen.

To turn on the projector or project the screen, see the operating instructions provided with the projector.

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. For the connection procedure, see the operating instructions provided with the projector.

3. Project the computer screen on the projector screen.

For the projecting procedure, see the operating instructions provided with the projector.

4. Press the Menu button.

5. Select [interactive] under [Default Settings 1].

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

7. Have a computer USB adapter at hand.

8. Select [Execute] under [PC Adapter Registration].

9. Press the Enter button.

10. Select [OK] in the message that appears.

11. Press the Enter button.

12. Within 15 seconds of pressing the [Enter] button, attach the computer USB adapter to the computer whose screen is projected by the projector.

Upon being installed, the computer USB adapter flickers 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 11.

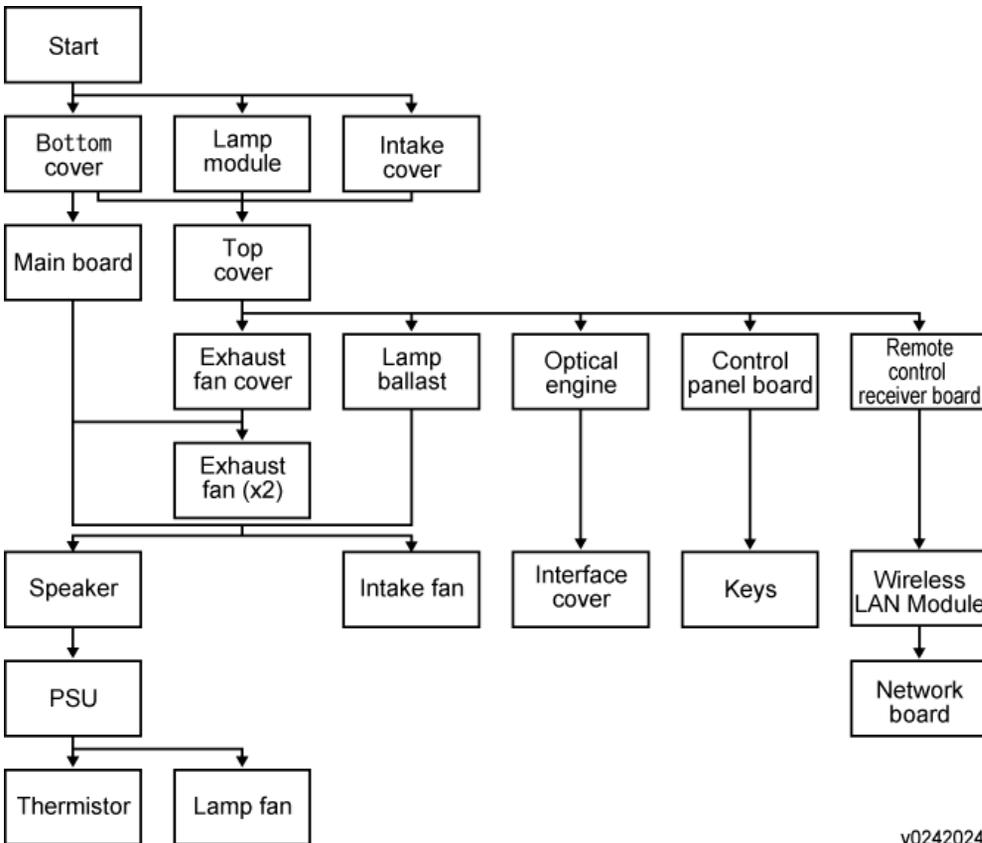
3. Replacement and Adjustment

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

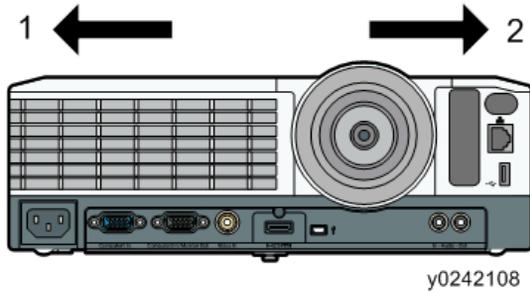
Special Tools

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

Parts Replacement

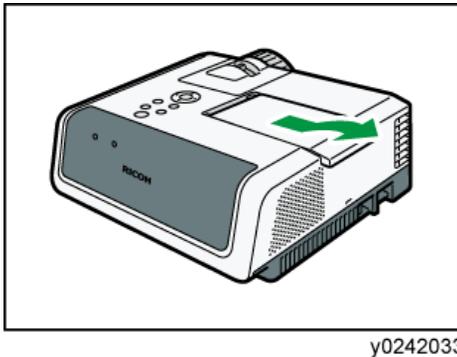
"Left" and "right" indicate the directions as seen from the projected screen.



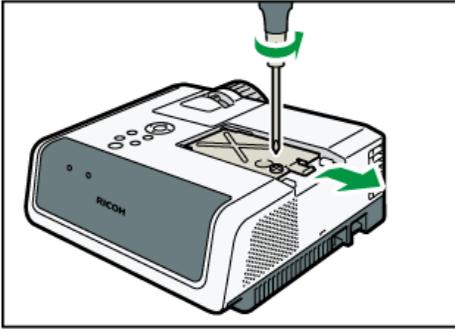
1. Left
2. Right

Lamp Module

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.

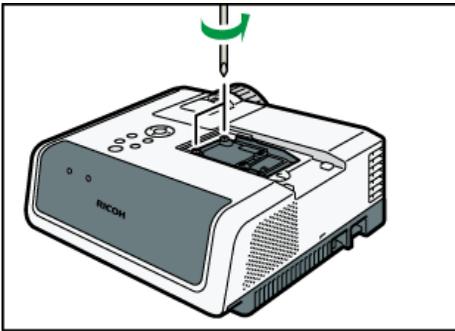


2. Slide the outer lamp cover to remove it.



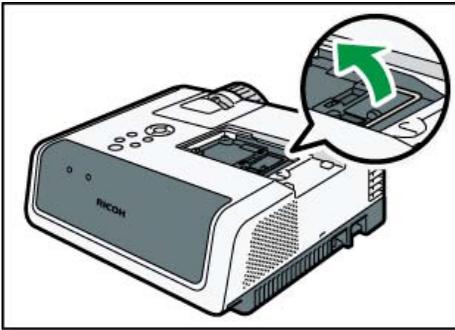
y0242034

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



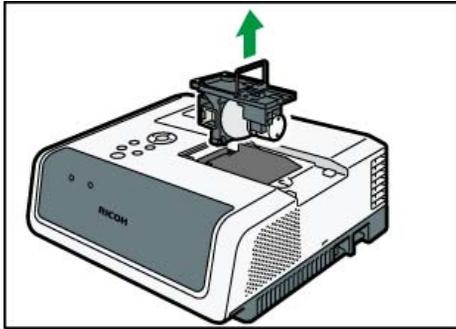
y0242035

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



y0242036

5. Raise the metal handle.

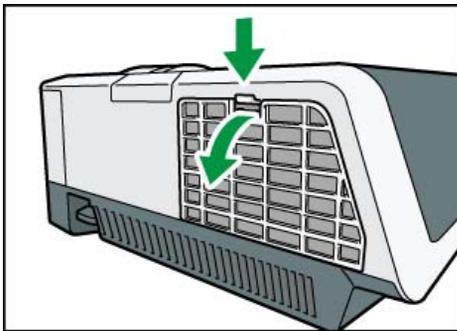


y0242037

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

3

Intake Cover



y0242038

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

Bottom Cover

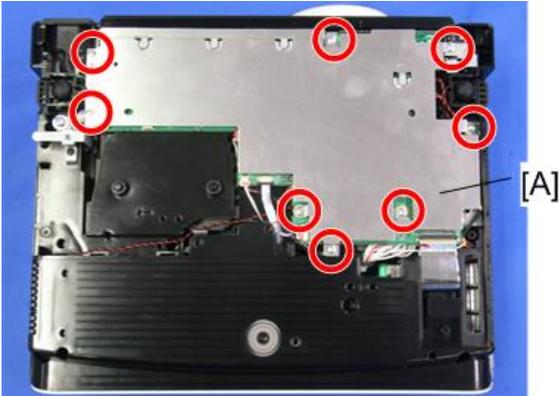


y0242039

1. Bottom cover [A] (🔩 x 4, hook)

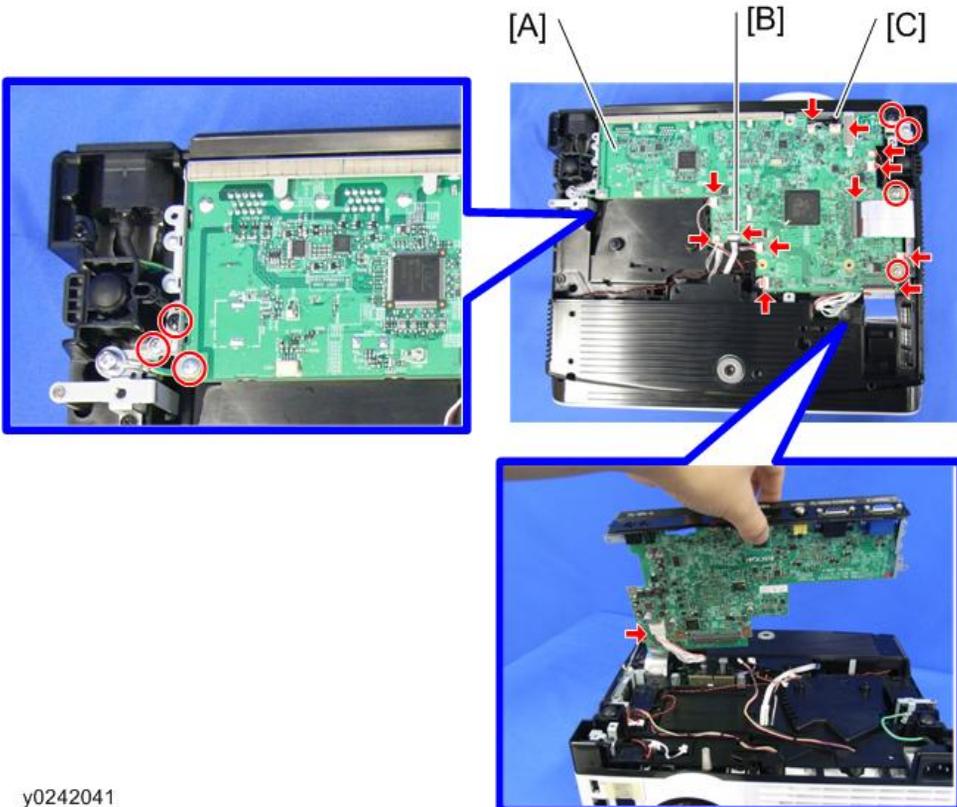
Main Board Assembly

1. Bottom cover (🔩 page 61)



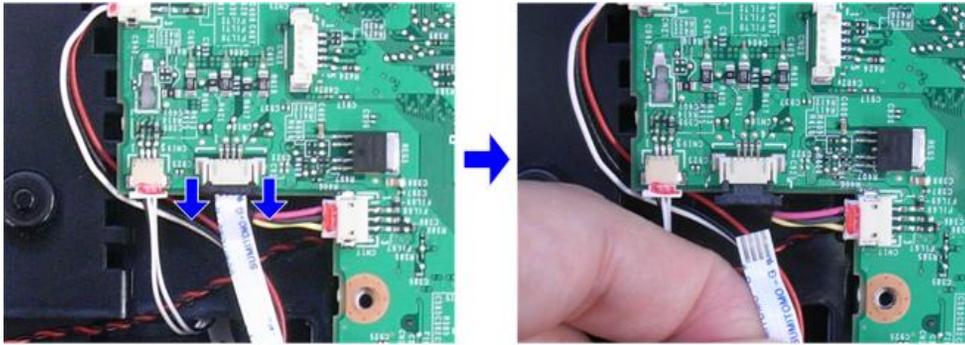
y0242040

2. Bottom plate [A] (🔩 x 8)



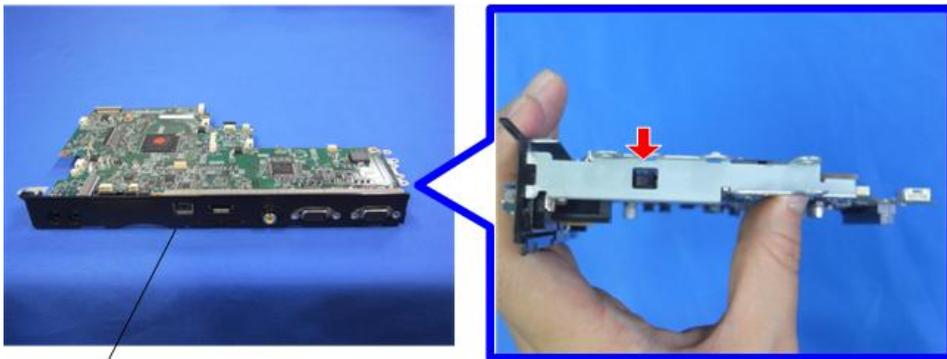
y0242041

When disconnecting [B]:



y0242133

3. Main board assembly [A] (⚙️ x 7, 🖱️ x 13/Connector [C]: Y025/Y027 only.)



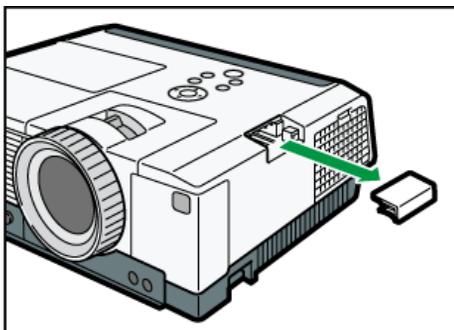
[A]

y0242042

4. Terminal cover [A] (hook)

Top Cover

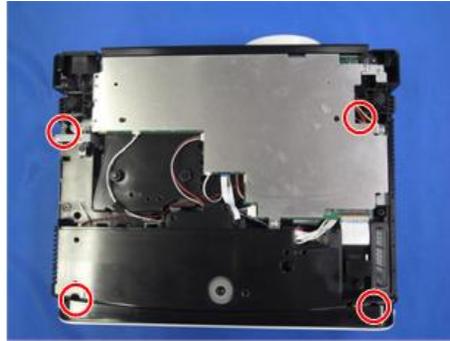
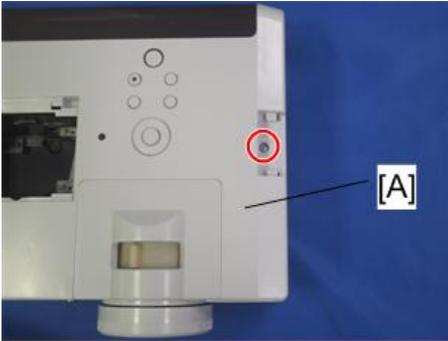
1. Lamp module (🔦 page 59)



y0242029

2. Interactive kit adapter slot cover

- 3. Intake cover (📄 page 61)
- 4. Bottom cover (📄 page 61)

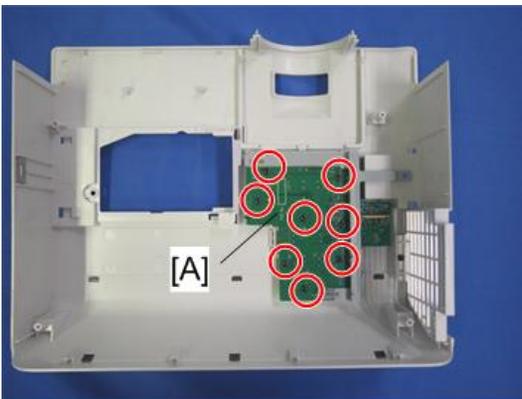


y0242044

- 5. Top cover [A] (🔩 x 5, 📌 x 1)

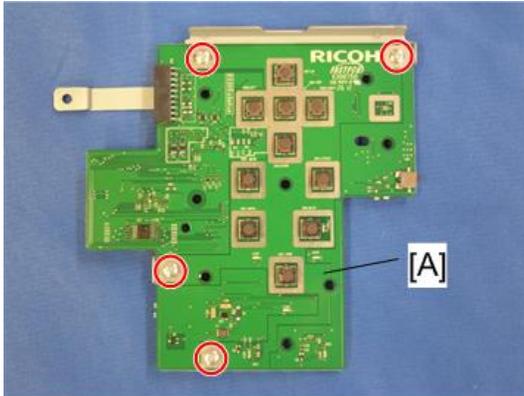
Control Panel Board

- 1. Top cover (📄 page 63)



y0242045

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

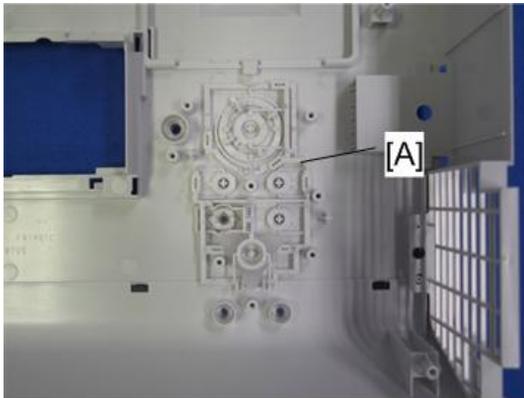


y0242046

3. Control panel board [A] (⚙️ x 4)

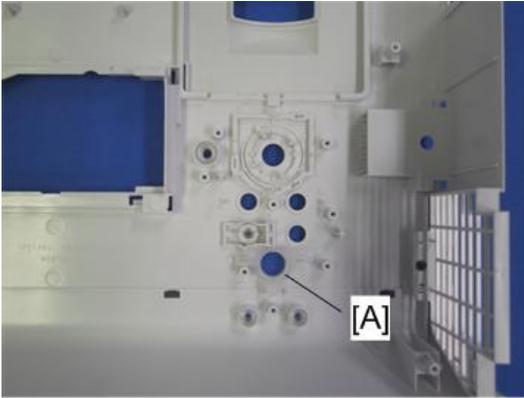
Keys

1. Control panel board with bracket (🔑 page 64 "Control Panel Board")



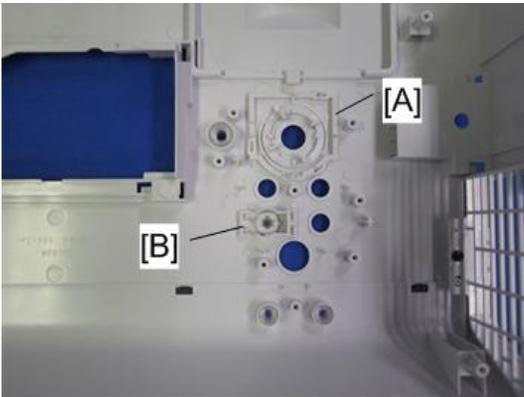
y0242047

2. Keys (L) [A]



y0242048

3. Power button LED cover [A]



y0242049

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

Optical Engine

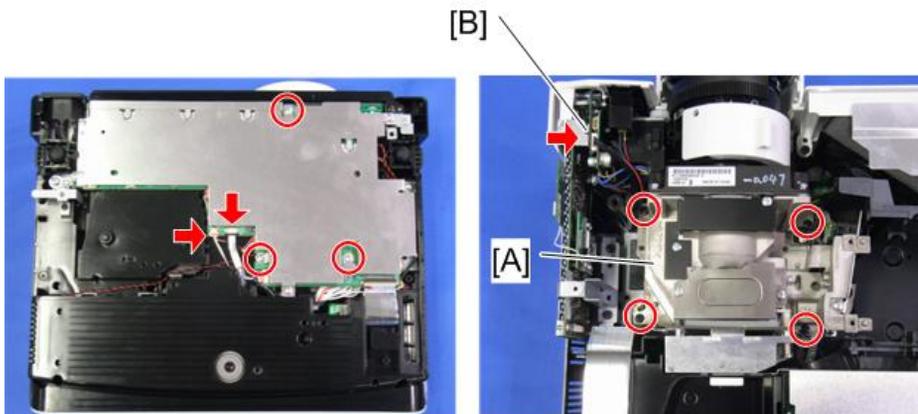
★ Important

- After replacing the optics section, you must the input the value of color wheel index delay that is specific to the new unit. The value is printed on the label attached to the unit. Make a note of the last three digits on the label shown in the figure, and enter it after replacement. (page 80 "Electrical Adjustment")



y0242109

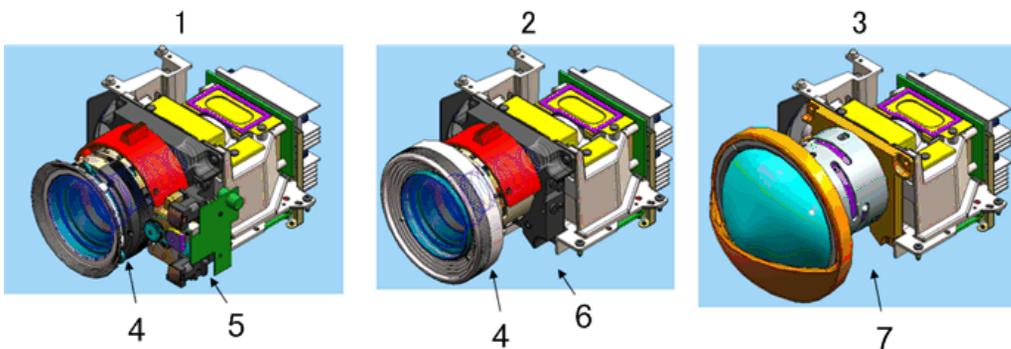
1. Top cover (☞ page 63)



y0242050

2. Optical engine [A] (⚙️ x 7, 📡 x 3/Connector [B]: Y025/Y027 only)

How to determine the type of the optical engine



y0242020

1. Y025/Y027

2. Y024/Y026
3. Y028/Y029
4. Lens barrel of the Y024/Y025/Y026/Y027 model
5. Auto focus unit
6. No auto focus unit
7. Lens barrel of the Y028/Y029 model

3

How to determine the resolution of the optical engine



y0242134

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.

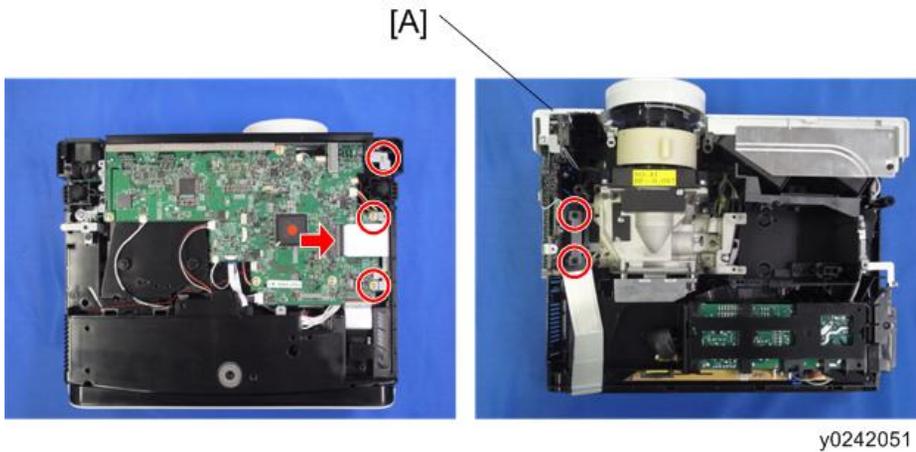
Code	Resolution
Y024	XGA
Y025	
Y028	
Y026	WXGA
Y027	
Y029	

Remote Control Receiver Board

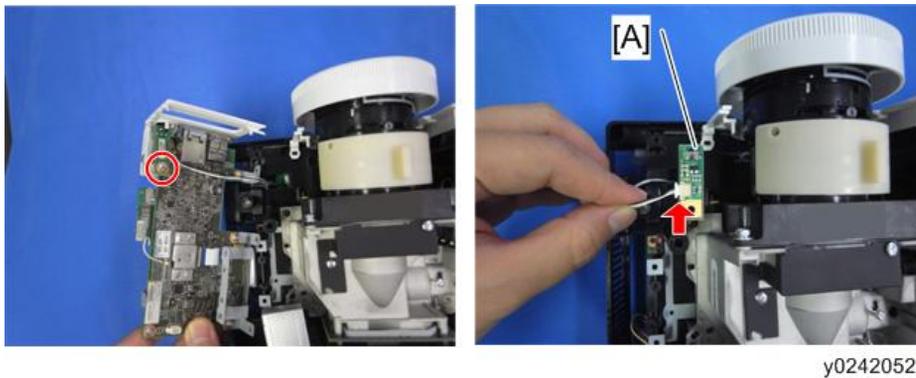
★ Important

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

1. Top cover (page 63)



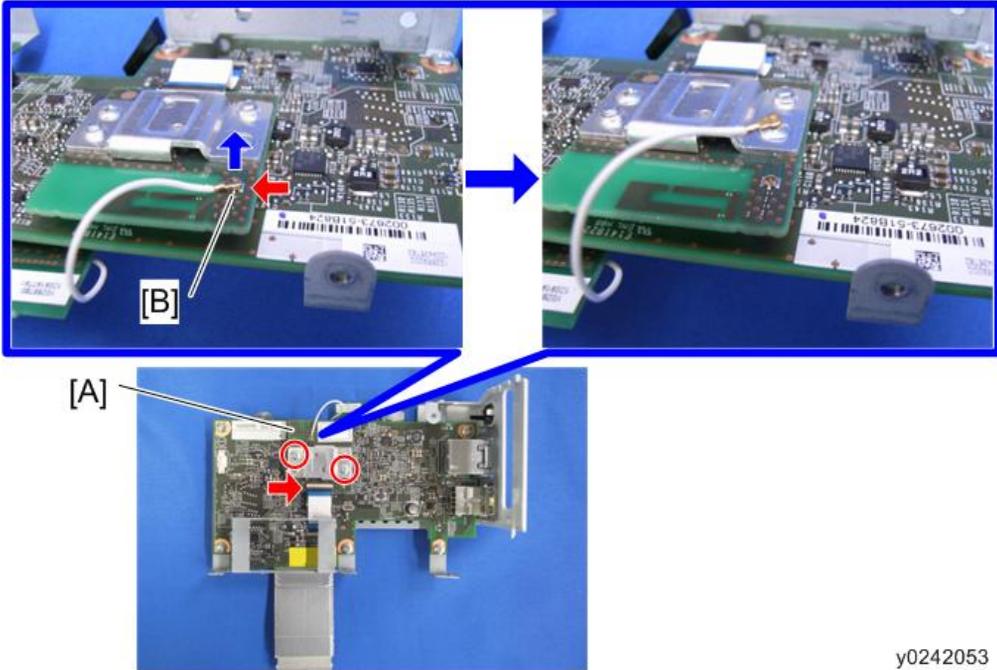
2. Front right cover with bracket [A] (🔩 x 5, 📏 x 1 (Y025/Y027/Y028/Y029 only))



3. Remote control receiver board [A] (🔩 x 1, 📏 x 1)

Wireless LAN Module (Y025/Y027/Y029 only)

1. Remote control receiver board (📏 page 68)



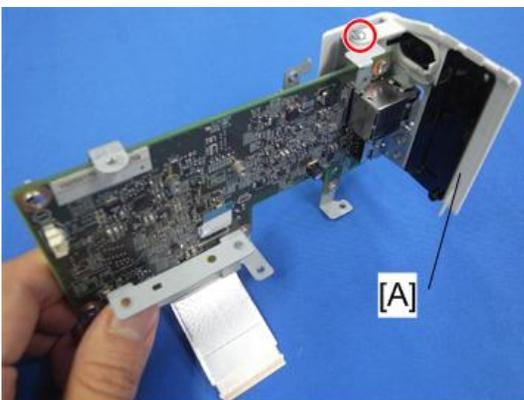
y0242053

- 2. Wireless LAN Module [A] (🔩 x 2, 📏 x 2)

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

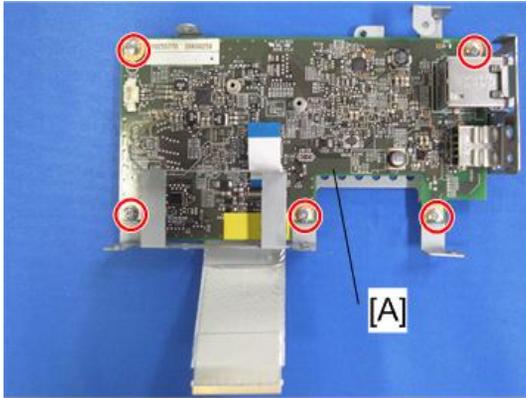
Network Board (Y025/Y027/Y028/Y029 only)

- 1. Wireless LAN module (📏 page 69)



y0242054

- 2. Front right cover [A] (🔩 x 1)

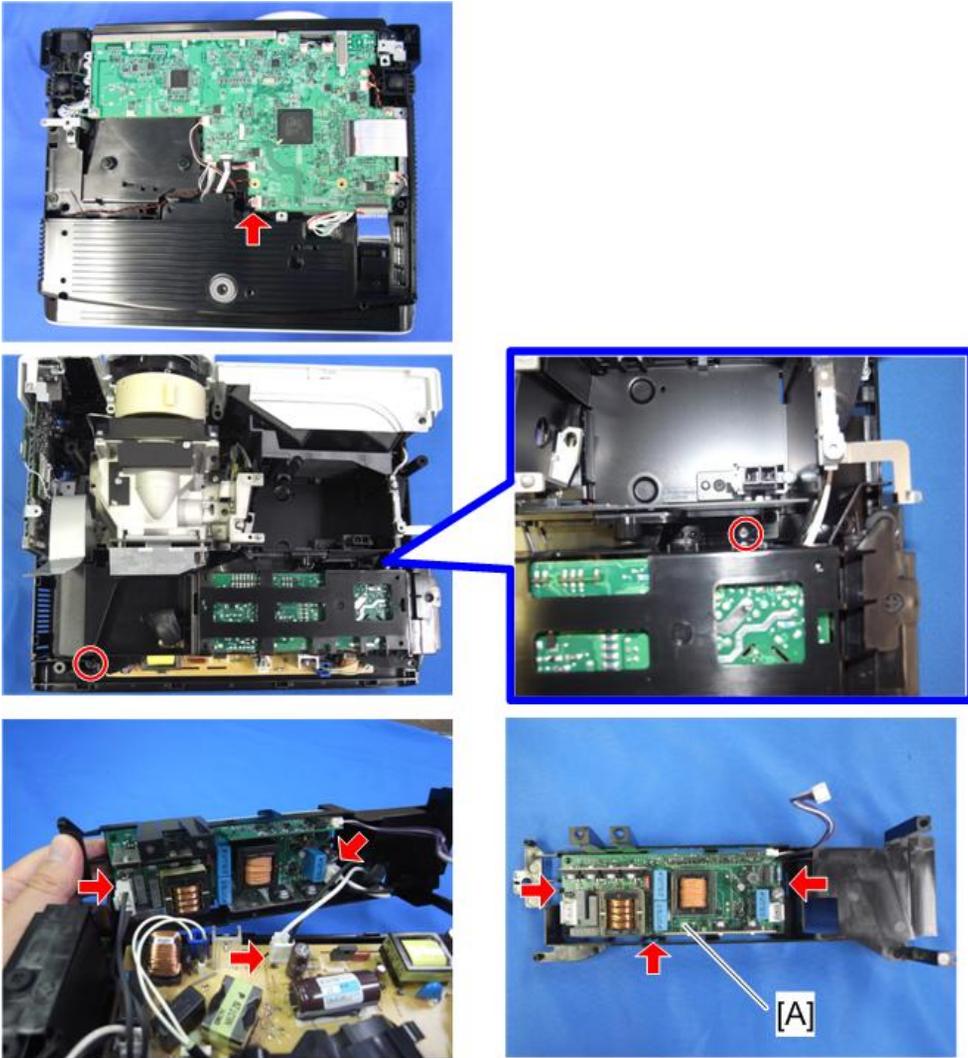


y0242055

3. Network board [A] (🔩 x 5)

Lamp Ballast

1. Top cover (🔩 page 63)

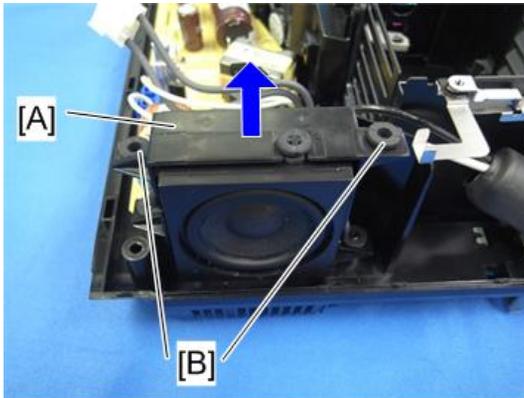


y0242056

2. Lamp ballast (🔌 x 2, 📏 x 4, hooks x 3)

Speaker

1. Main board assembly (🔌 page 62)
2. Lamp Ballast (🔌 page 71)



y0242057

3. Lift the speaker bracket [A]. Take care not to lose the rubber grommets [B].



y0242058

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

When attaching the speaker

Arrange the cables as shown in the picture below.

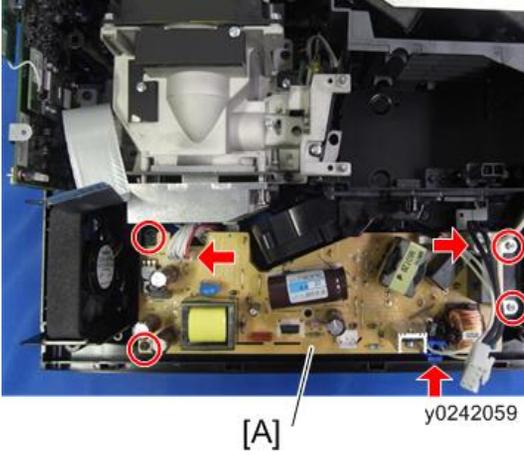


y0242135

1. Speaker cables

PSU

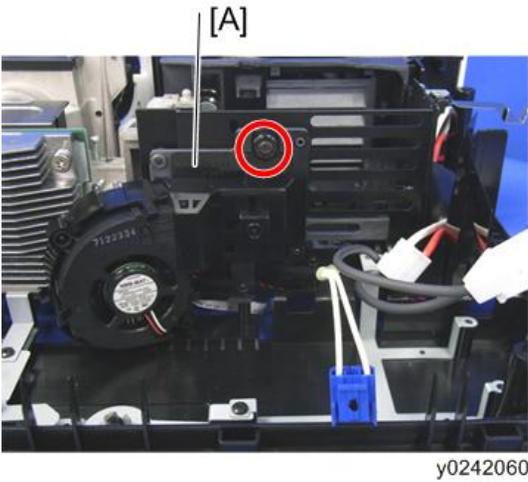
1. Speaker (🔧 page 72)



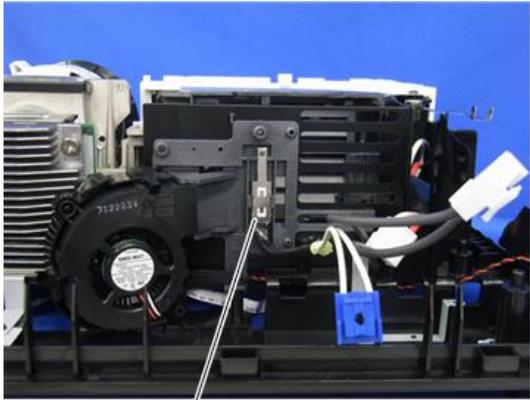
2. PSU (🔧 x 4, 📦 x 3)

Thermistor

1. PSU (🔧 page 74)



2. Thermistor cover [A] (🔧 x 1)



[A]

y0242062

3. Thermistor bracket [A]



[A]

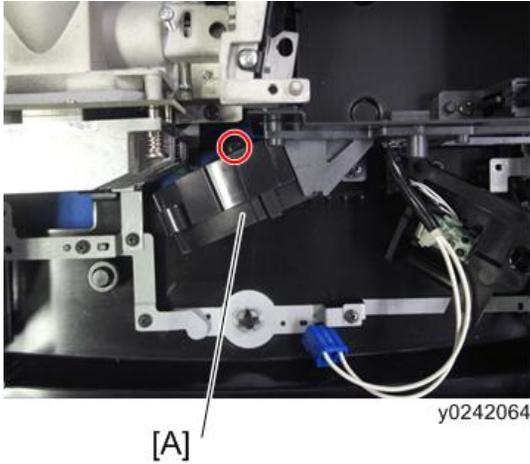
y0242063

4. Thermistor [A]

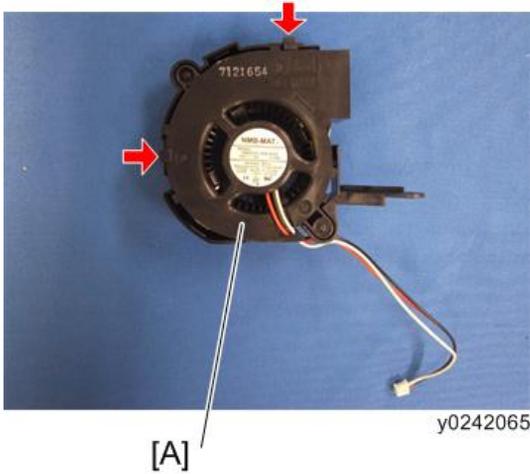
Lamp Fan

1. Thermistor cover (see page 74 "Thermistor")

3



2. Lamp fan bracket [A] (⚙ x 1)

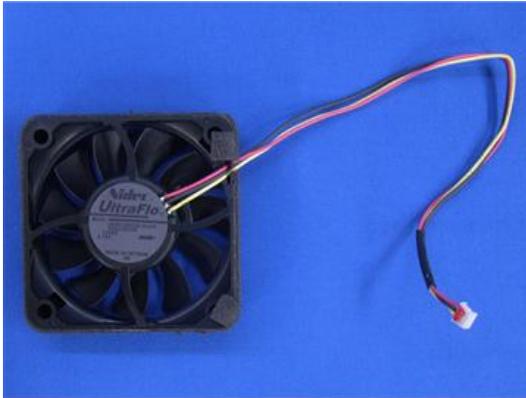


3. Lamp fan [A] (hooks x 2)

Exhaust Fan

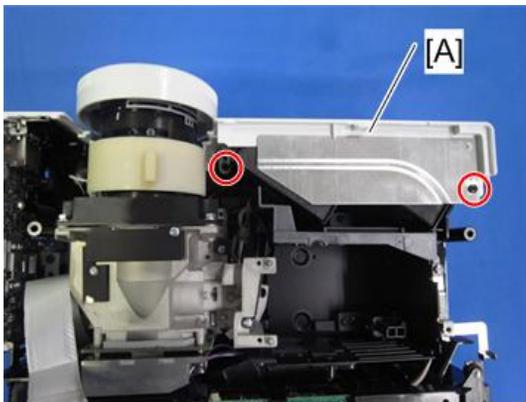
⚠ CAUTION

- When installing the exhaust fans, make sure that the fans are installed with their decals facing the outside of the machine.



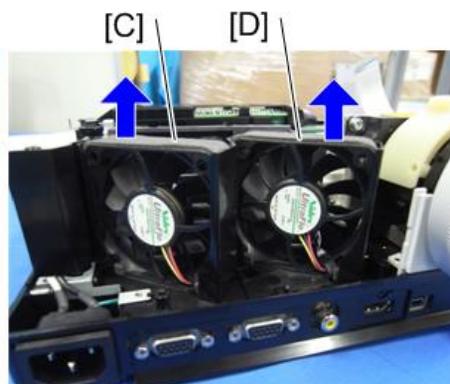
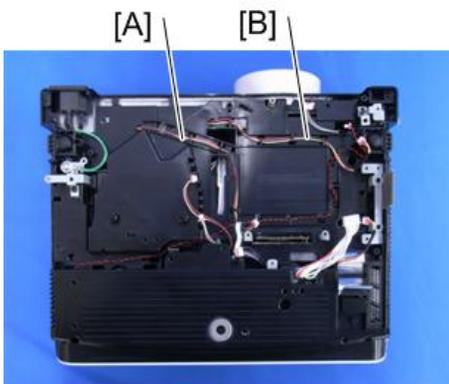
y0242136

1. Main Board Assembly (🔗 page 62)
2. Top cover (🔗 page 63)



y0242066

3. Front left cover [A] (🔗 x 2)

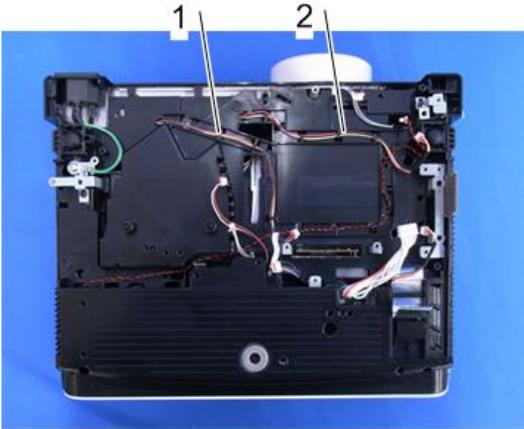


y0242067

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

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

Intake Fan

⚠ CAUTION

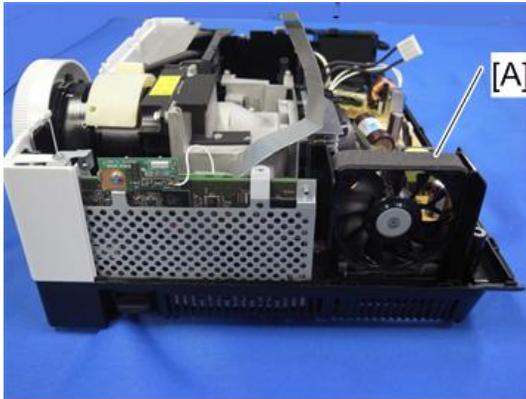
- When installing the intake fan, make sure that the fans are installed with their decals facing the inside of the machine.



y0242068

1. Main board assembly (see page 62)

2. Lamp ballast (see page 71)



y0242069

3. Intake fan [A]

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.

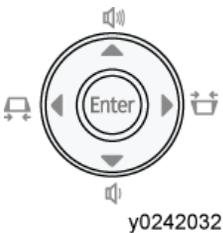
	Keystone	Sub Contrast	Color wheel index delay
Main board	Yes	No	Yes
Control panel board	No	No	No
Optics section	Yes	No	Yes

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.

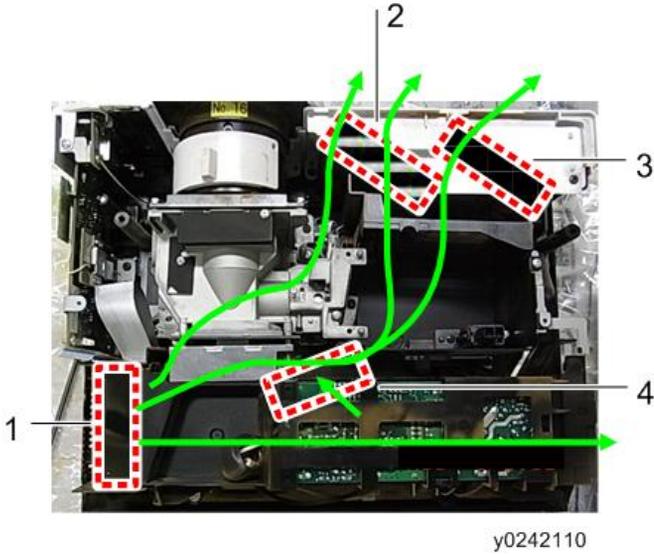
Preparation

Test equipment

1. Personal computer
(Windows PC, OS: Windows 98SE, ME, 2000, XP)
2. Cables
RGB Cable and Control (USB A to mini-B) Cable
3. A protractor for Vertical Auto Keystone Calibration

The number in the Error log shows the error ID (see page 113 "Error ID").

Fan locations



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

Keystone Calibration

- 1. Press the [Enter] and ▲ buttons simultaneously.

Adjustment(KC,C/W)	
KC0	0 - 0 - 2048
KC1	0 - 0 - 2048
KC2	0 - 0 - 2048
KC3	0 - 0 - 2048
Sub contrast	512 - 512 - 512
C/W index delay	50
[MENU]Quit	[ENTER]Execute

y011r010



y0242071

2. Set the projector on a level surface.
3. Press the [Enter] button of the projector.

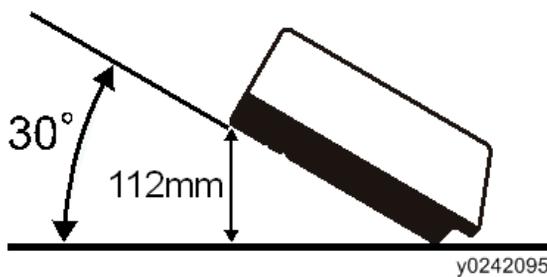
When the adjustment is successfully completed, the values changes from the default [0-0-2048].

(Example: See below)

Adjustment(KC,C/W)	
KC0	25 - 3353 - 2051
KC1	0 - 0 - 2048
KC2	0 - 0 - 2048
KC3	0 - 0 - 2048
Sub contrast	512 - 512 - 512
C/W index delay	50
[MENU]Quit	[ENTER]Execute

y011r011

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



y0242095

4. Keep the projector at 30 degrees.

Adjustment(KC,C/W)	
KC0	25 - 3353 - 2051
KC1	0 - 0 - 2048
KC2	0 - 0 - 2048
KC3	0 - 0 - 2048
Sub contrast	512 - 512 - 512
C/W index delay	50
[MENU]Quit	[ENTER]Execute

y011r012

5. Select the KC1 item by pressing the ▼ button.
6. Press the [Enter] button of the projector.

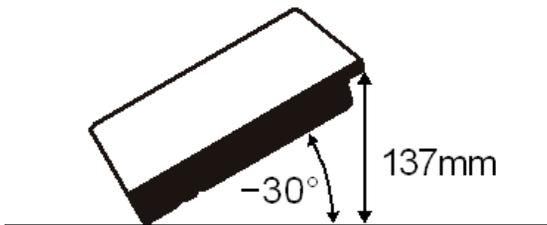
When the adjustment is successfully completed, the values changes from the default [0-0-2048].

(Example: See below)

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

y011r013

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



y0242096

7. Keep the projector at -30 degrees.

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

y011r014

8. Select the KC2 item by pressing the ▼ button.
 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	25 - 3353 - 2051
KC1	25 - 3354 - 1802
KC2	25 - 3353 - 2299
KC3	0 - 0 - 2048
Sub contrast	512 - 512 - 512
C/W index delay	50
[MENU]Quit	[ENTER]Execute

y011r015

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

Note

- When the projector is not tilted accurately +/- 30degrees, the adjustment values ([KC1] and [KC2]) do not change.



y0242071

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

3

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

y011r016

11. Select the KC3 item by pressing the ▼ button.
12. 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	25 - 3353 - 2051
KC1	25 - 3354 - 1802
KC2	25 - 3353 - 2299
KC3	24 - 3396 - 2049
Sub contrast	512 - 512 - 512
C/W index delay	50
[MENU]Quit	[ENTER]Execute

y011r017

↓ Note

- This adjustment can also be done manually using the Backup/Restore Tool. (page 92 "Data Backup/Restore")

Color wheel index delay

1. Select the C/W index delay item by pressing the ▼ button.

Adjustment(KC, C/W)	
KC0	25 - 3353 - 2051
KC1	25 - 3354 - 1802
KC2	25 - 3353 - 2299
KC3	24 - 3396 - 2049
Sub contrast	1162 - 1157 - 1158
C/W index delay	50
[MENU]Quit	[<][>]Adjust

y011r077

2. Adjust the value by pressing the ◀ or ▶ button.

Altitude

1. Press the [Input] and ▼ buttons simultaneously.
2. Select the correct value by pressing the ◀ or ▶ button.

This setting is effective only when [High Altitude Mode] is [On] (over 1,500m (4,921ft)).

The factory setting value is [0] (30.0% up).

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

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

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

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

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

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

For example, in the case of 2,700m altitude, set the value to [5].

Adjustment(Altitude,Fan)

Altitude		4
Fan control	Auto	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

3. Press the MENU button.

4. System Maintenance

Firmware Update

Updating the Firmware Using a Computer (Main Board only)

★ Important

- There are two types of firmware; the Y024/Y025/Y028 firmware and the Y026/Y027/Y029 firmware. Use the firmware that is supported by your projector.

Preparation

Before you begin firmware update, the SiLabs driver software must be installed on your computer.

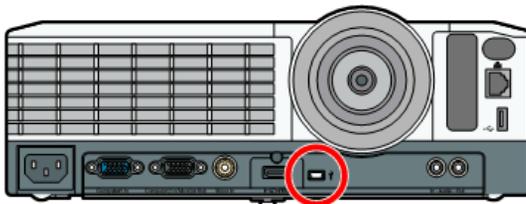
1. Double-click the CP210xVCPInstaller.exe icon.



2. Click [Install].

Updating the firmware

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



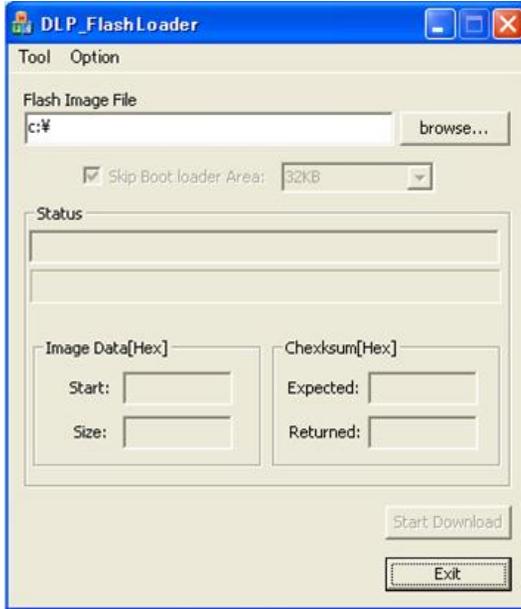
y0242111

2. Connect a USB cable to the control port.
3. Connect the other end of the USB cable to your computer.
4. While holding down the Input and 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.



5. Start DLP_FlashLoader on your computer.



4

6. Click [browse...] and select the firmware data (*.img file) you want to install.

Note

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

7. Click [Start Download].

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 DLP_FlashLoader window displays the same value as the "Expected:" area. The Power button, the Lamp indicator and the Temp indicator light up for five seconds



Note

- If a writing error occurs, the Power button, the Lamp indicator and the Temp indicator flash simultaneously (see page 109 "LED Display").



Updating the firmware using a USB memory device (Y025/Y027/Y028/Y029 only)

★ Important

- There are two types of firmware; the Y025/Y028 firmware and the Y027/Y029 firmware. Use the firmware that is supported by your projector.
 - 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.
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.

7. Confirm the firmware version of the projector.

↓ Note

- You can use an SD card with a USB card adapter in place of a USB memory device.

Data Backup/Restore

When replacing the main board or the optical engine, the backup/restore 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

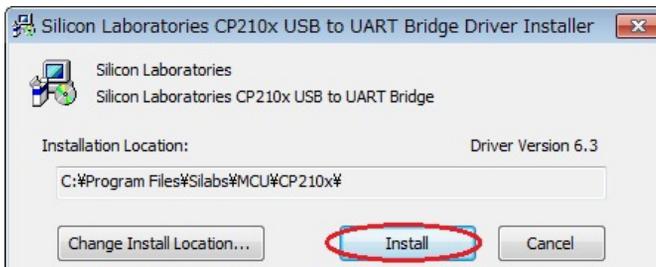
How to Use the Backup/Restore Tool

Downloading the tool

1. Download the "Backup Tool".
2. After extracting the package, Execute "Y0119100B.exe". The following files will appear.
 - Data_BackupRestore.EXE (the backup/restore tool)
 - USB-Serial_Driver_XP-Vista-7.EXE (driver software required when connecting the projector and the computer)

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].



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

Connecting the projector to a computer

1. Turn on the projector and set "Power on Standby" in the "Energy Savins Settings Menu" to "Q'ck On".
If it was set to "Eco", change it back to "Eco" after your work is done.
2. Press the [Power] button of the projector to set the projector in standby status.
Standby status: The [Power] button flashes at 1 or 3 second intervals.
3. Connect the projector and the computer with a USB cable (USB Type A/Type mini-B).

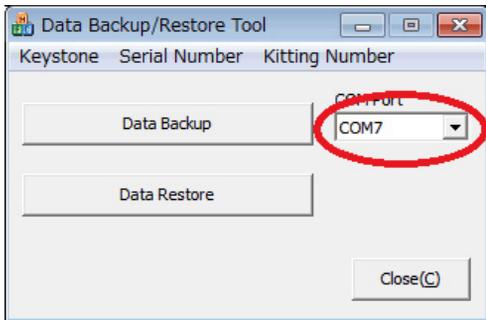


y0242111

Starting the Backup/Restore Tool

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

4

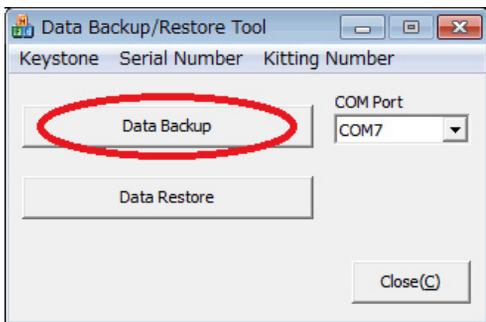


How to determine the COM port

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

How to Perform Data Backup

1. Click [Data Backup].

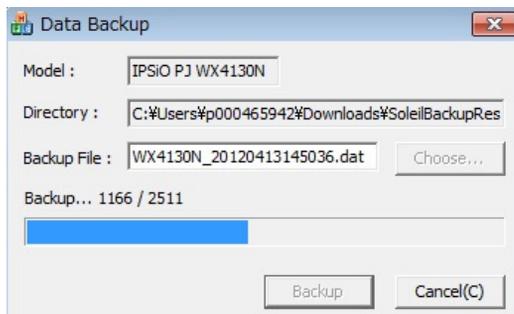


2. Only when changing the destination folder: Click [Choose], and then select where to save the file.

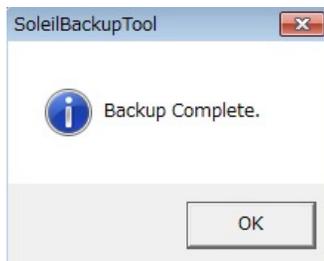


3. Click [Backup].

Backup will take 3 to 4 minutes.



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



How to Check the Data Backup

1. Open "Data_BackupRestore_*.xls" in the "Data_BackupRestore" folder.
Macros must be enabled.
2. Open the "Backup" worksheet and click [Execute] 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		

3. Select the backup file "X3340_*****.dat". (** indicate the date and time.)

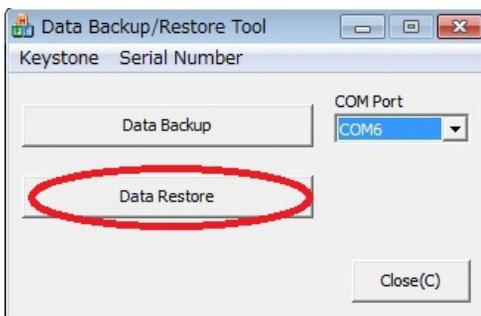
The file name above is an example. "X3340" may be either of the following, depending on the projector model.

- X3340
- WX3340
- X3340N
- WX3340N
- X4240N
- WX4240N

4. Acquired data will be displayed on the Excel Window.

How to Perform Data Restore

1. Click [Data Restore].



2. Click [Choose] and select the backup file "X3340_*****.dat".

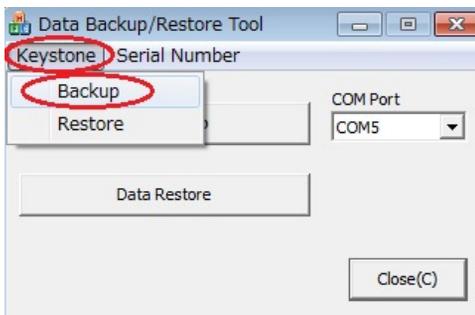
The file name above is an example. "X3340" may be either of the following, depending on the projector model.

- X3340
- WX3340
- X3340N

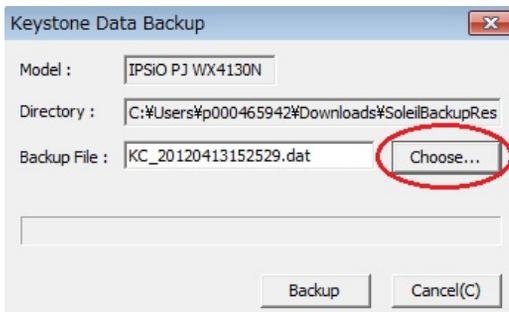
- WX3340N
 - X4240N
 - WX4240N
3. Click [Restore].
 4. When "Restore Complete." is displayed, click [OK].

How to Perform Keystone Backup

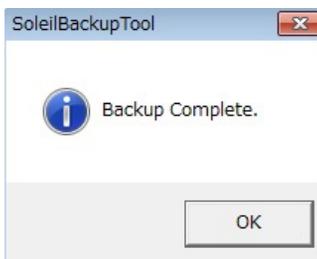
1. Select [Keystone]-[Backup].



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].



How to Check the Keystone Backup

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

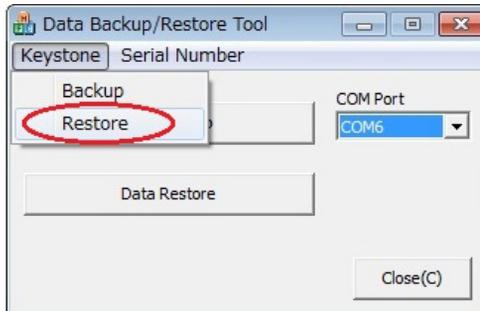
	A	B
1	Execute	Clear
2		
3	KC0	
4	KC1	
5	KC2	
6	KC3	

3. Select the backup file "KC_*****.dat". (** indicate the date and time.)
4. Acquired data will be displayed on the Excel Window.

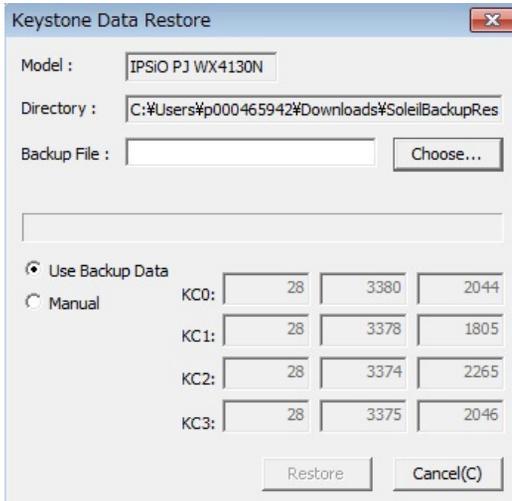
4

How to Perform Keystone Restore

1. Select [Keystone]-[Restore].



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



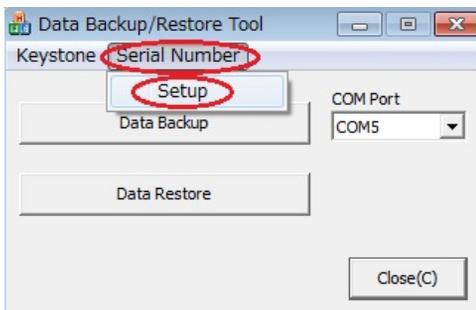
If you cannot back up the settings from the old board, select [Manual] and enter the following values.

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

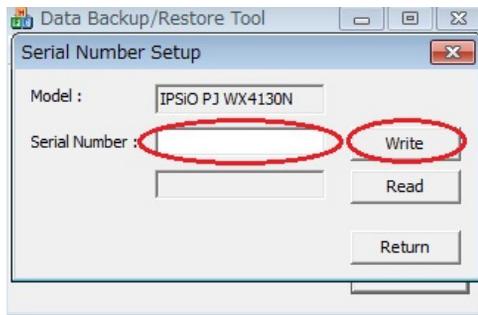
3. Click [Restore].
4. When "Restore Complete." is displayed, click [OK].

Serial number Setup

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



2. For "Serial Number", enter the serial number (11 digits including the hyphen). Then, click [Write].
Example: 47XA-111111



Network Service Menu

Displaying the Network Service Menu

1. Enter the service mode. (See page 81 "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 display the "Network Application Settings" menu.

Menu Items

The following items can be set or displayed in the network service menu.

Item	Description
@Remote: Setup Status	Displays the setup status of @Remote function.
@Remote: Request No.	Input the request No. required for @Remote function setup.
@Remote: Service Test Call	Perform a test to check whether communication with the NRS (New Remote Service) gateway is possible.
@Remote: Perform Polling Manually	Perform communication server polling function manually.
@Remote: Perform Confirmation	Perform request No. confirmation to NRS (New Remote Service) gateway.

Item	Description
@Remote: Confirmation Response Result	Displays the result of request number confirmation. 0: Confirmation was successful. 1: Request number error. Check the entered request number. If the entered number is correct, the installation information may not have been registered in the NRS (New Remote Service) gateway. 3: Communication Error (proxy enabled). 4: Communication Error (proxy disabled). 5: Proxy error (authentication failure). 6: Communication Error. 8: Other errors. For details, see ""@Remote: Display Error Code"". 9: Confirmation in progress. The request number is being confirmed between the gateway and the machine. 10: Confirmation has not been done yet.
@Remote: Confirm Results Location	Displays the location notified from the NRS (New Remote Service) as response to request No. confirmation on @Remote function.
@Remote: Perform Registration	Perform @Remote registration.
@Remote: Registration Response Result	Displays the result of registration. 0: Registration completed. 1: Request number error. The information registered in the NRS (New Remote Service) gateway may be wrong. 2: Registration has already been completed. 3: Communication Error (proxy enabled). 4: Communication Error (proxy disabled). 5: Proxy error (authentication failure). 8: Other errors. For details, see ""@Remote: Display Error Code"". 9: Registration in progress. Registration is being done between the gateway and the machine. 10: Registration has not been done yet.
@Remote: Clear @Remote Setup	Return the @Remote set device to the unset condition.
@Remote: CE Call	Performs the CE Call at the start or end of the service.

Item	Description
@Remote: Display Error Code	Displays the error code, which shows the details of the error when the result of "@Remote: Confirmation Response Result", "@Remote: Registration Response Result", "@Remote: Scheduled Notify Result", or "@Remote: Error Notification Result" is "Other errors". Also, displays error codes for errors encountered when updating the certificate.
@Remote: Communication Permit	Select whether to allow @Remote communication or not.
@Remote: HTTP Proxy Usage	Set whether to use proxy on communication with NRS (New Remote Service) or not. HTTP=Hypertext Transfer Protocol
@Remote: Device ID2 Code	Displays device ID2 code.
@Remote: Common Certificate Write Operation	Performs the write operation of the common certificate for the @Remote function.
@Remote: Certificate Macro Version	Displays the macro version of the NRS (New Remote Service) certificate used on @Remote function.
@Remote: Certificate PAC Version	Displays the PAC version of the NRS (New Remote Service) certificate used on @Remote function.
@Remote: Certificate Subject	Displays the certificate subject of the NRS (New Remote Service) certificate used on @Remote function.
@Remote: Certificate Serial Number	Displays the certificate serial number of the NRS (New Remote Service) certificate used on @Remote function.
@Remote: Certificate Issuer	Displays the CommonName of NRS (New Remote Service) certificate Issuer used on @Remote function.
@Remote: Cert. Validity Not Before	Displays the validated date of the NRS (New Remote Service) certificate used on @Remote function. (The start date)
@Remote: Cert. Validity Not After	Displays the validated date of the NRS (New Remote Service) certificate used on @Remote function. (The end date)
@Remote: Certificate Update Request ID	Displays the request ID for certificate update.

Item	Description
<p>@Remote: Certificate Update Status</p>	<p>Certificate status for @Remote function.</p> <p>0: Normal state. No cause for update detected.</p> <p>1: Certificate update requested. notifyAuthKenChangeVer13 is sent to the regular gateway or rescue gateway, depending on the cause for update.</p> <p>2: Waiting for certificate reception. Waiting for reception of setAuthKey from the gateway by polling.</p> <p>3: Writing certificate. Saving the received certificate.</p> <p>4: Writing of the certificate completed. notifyAuthKeyChangeResult is sent to the regular gateway.</p> <p>5: Writing of the certificate failed. notifyAuthKeyChangeResult is sent to the regular or rescue gateway.</p> <p>6: Result notification failed. When SSL negotiation fails in the notification process in state 4, notifyAuthKeyChangeResult is sent to the rescue gateway.</p>
<p>@Remote: Certificate Abnormal Problem</p>	<p>Displays the cause for certificate update request notification for @Remote function.</p> <p>0: Normal state. Certificate update request not done.</p> <p>1: The date of expiry is drawing near.</p> <p>2: SSL error. An SSL error occurs when the certificate has expired.</p> <p>3: The common certificate must be replaced with an individual certificate.</p>

Item	Description
@Remote: Certificate Check Result	<p>Displays the result of certificate check upon installation and startup.</p> <p>(ten's digit)</p> <p>0: Normal</p> <p>1: Serial number abnormality</p> <p>2: ID2/serial number inconsistency</p> <p>3: Individual certificate abnormality</p> <p>4: Common certificate abnormality</p> <p>5: Rescue certificate abnormality</p> <p>(one's digit)</p> <p>0: The period between the current time and expiration time is longer than the configured margin.</p> <p>1: The period between the current time and expiration time is shorter than the configured margin.</p> <p>2: The period between the current time and expiration time is shorter than 3/4 of the configured margin.</p> <p>3: The period between the current time and expiration time is shorter than 1/2 of the configured margin.</p> <p>4: Certificate expired.</p> <p>5: The current date is before the start of validity. (This does not happen usually.)</p>
@Remote: Server Auth. CN Check	<p>Not used.</p>
@Remote: Notification Timing Type	<p>Displays the notification timing specified from the NRS (New Remote Service) gateway on @Remote function.</p>
@Remote: Scheduled Notify Result	<p>Displays the result of scheduled notification.</p> <p>0: Success (The date and time is displayed in "@Remote: Last Scheduled Notify Date".)</p> <p>3: Communication Error (proxy enabled).</p> <p>4: Communication Error (proxy disabled).</p> <p>5: Proxy error (authentication failure).</p> <p>8: Other errors. For details, see "@Remote: Display Error Code".</p>

Item	Description
@Remote: Error Notification Result	Displays the result of error auto notification. 0: Success 3: Communication Error (proxy enabled). 4: Communication Error (proxy disabled). 5: Proxy error (authentication failure). 8: Other errors. For details, see "@Remote: Display Error Code".
@Remote: Next Scheduled Notify Date	Displays the next scheduled notification date set from the NRS (New Remote Service) gateway.
@Remote: Advance Notice of Expiry	Displays the criterial value (seconds) to judge the term of validity for certificate.
@Remote: Near Expiry Notify Date	Displays the date to notify near expiry of certificate.
@Remote: Last Scheduled Notify Date	Displays the previous scheduled notification date.
@Remote: Rescue Gateway URL Path	Displays the rescue gateway URL path used on @Remote function.
@Remote: Gateway URL Path	The gateway URL for design debug, evaluation used on @Remote function.
@Remote: Rescue Gateway SSL Usage	Not used
@Remote: Rescue Gateway Host	Displays the URL (IP address) of the rescue gateway.
@Remote: Rescue Gateway Port	Not used
@Remote: Communication Server Polling Interval	Set the polling interval to NRS (New Remote Service) gateway.
@Remote: HTTP Connection Timeout	Connection timeout to NRS (New Remote Service) gateway.

Item	Description
@Remote: HTTP Transmission Timeout	Transmission timeout to NRS (New Remote Service) gateway.
@Remote: HTTP Reception Timeout	Reception timeout from NRS (New Remote Service) gateway.
@Remote: Retry Interval on HTTP Connection	Connection retry interval when unable to connect to NRS (New Remote Service) gateway.
@Remote: Number of Retries on HTTP Connection	Number of connection retries when unable to connect to NRS (New Remote Service) gateway.
@Remote: HTTP Connection Req. Transmission Delay	The wait time for notification after sending notification request to the communication module. Req.=request
@Remote: Maximum Number of Multipart	The maximum number of multipart messages sent and received with the NRS (New Remote Service) gateway.
@Remote: SSL Usage	Not used
@Remote: Gateway Port	Not used
@Remote: Gateway Host	To in-place the gateway host within the security device for design debug/evaluation.
Reset Administrator Password	Resets the administrator password.
Reset PLink Password	Resets the PLink password.

↓ Note

- Error codes displayed in “@Remote: Display Error Code” indicate the following:
 - -12003 Registration has been attempted without confirmation.
 - -12004 Installation attempted without certificate or machine serial number
 - -12005 Confirmation or registration attempted but @remote communication is disabled or Cumin is malfunctioning.
 - -12006 Performed confirmation even though the Box is already installed.

- -12007 The request No. used for registration does not match the last confirmed No.
- 1 NRS Center is outside office hours.
- -2385 The international dialing prefix included in prefixboxTelNo is inappropriate.
- -2387 Unsupported by the center.
- -2389 DB failure.
- -2390 Program error
- -2391 One machine registered twice.
- -2392 Parameter error.
- -2393 An RC Gate not controlled.
- -2394 A device not controlled.
- -2395 RC Gate BoxID is incorrect.
- -2396 RC Gate DeviceID is incorrect.
- -2397 ID2 is incorrect.
- -2398 Request No. format is incorrect.
- -2399 Timeout between center and gateway (Certificate update result notification)
- 3: Communication Error (proxy enabled).
- 4: Communication Error (proxy disabled).
- 5: Proxy error (authentication failure).
- 8: Other errors.

5. Troubleshooting

LED Display

Internal problems are shown by a combination of LED Indicators accompanied by beep sounds.

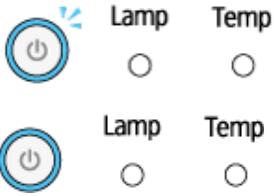
"" means they are flashing.

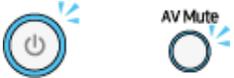
★ Important

- If the problem occurred during firmware update, there will be no beep sound.

Status of Indicator Lights	Trouble	Cause	Solution
 Lamp Temp  	Standby power is not on.	There is a problem with the power supply or the main board.	Check the power supply. Check the connector. Check the main board.
 Lamp Temp  	Lamp error Lamp went out during use, or won't come on.	<ul style="list-style-type: none"> • Lifetime of the lamp has ended. • The rotation of the color wheel is not detected. • The lamp ballast is defective. • The temperature around the lamp ballast is high. 	<ul style="list-style-type: none"> • Replace the lamp. • Clean the inside of the projector. • Replace the optics section. • Replace the lamp ballast.
 Lamp Temp   (Flashes at 2-second intervals)	Lamp off error The projector failed to switch off the lamp.	<ul style="list-style-type: none"> • The processor in the lamp ballast is malfunctioning. • The main processor is malfunctioning. 	Disconnect the power cord, and then connect it again.
 Lamp Temp   (Flashes at 1-second intervals)	Lamp cover error Power went out during use, or power won't come on.	<ul style="list-style-type: none"> • The lamp cover is not properly attached. 	<ul style="list-style-type: none"> • Check if the lamp cover is properly attached.

Status of Indicator Lights	Trouble	Cause	Solution
  	<p>Fan error</p> <p>Power went out during use.</p>	<p>Fan rotation speed is too low.</p> <p>DAC error of the fan IC.</p> <p>The number of flashes indicates the Fan No.</p> <p>Single flash repeated: FAN1 (intake fan)</p> <p>2 flashes repeated: FAN2 (exhaust fan 1)</p> <p>3 flashes repeated: FAN3 (exhaust fan 2)</p> <p>4 flashes repeated: FAN4 (lamp fan)</p>	<ul style="list-style-type: none"> • Check if the fan connector is properly connected. • Replace the fan. • Replace the main board.
  	<p>Temperature error</p> <p>Power went out during use.</p>	<ul style="list-style-type: none"> • Internal overheating. The temperature around the intake fan is 42 degrees C or higher. • Temperature sensor is defective. 	<ul style="list-style-type: none"> • Check the environment, e.g. whether there is any heat source near the projector. • Check if the temperature sensor connector is properly connected. • Replace the temperature sensor board. • Replace the main board.
  	<p>Hardware error</p> <p>Power went out during use.</p>	<p>There are problems with the main board.</p>	<p>Check the main board and the cable connections.</p>

Status of Indicator Lights	Trouble	Cause	Solution
<p>After the [Power] button and the [AV Mute] button flash for about 5 seconds, the projector is in either standby mode or power on mode.</p> 	Firmware download error	The projector cannot find the firmware (.sfw) file for the update.	<ul style="list-style-type: none"> • Make sure that the firmware file is stored in the root directory of the USB memory device. • A firmware file which is not supported by the projector is stored in the root directory of the USB memory device. Download the firmware that is supported by your projector. • The USB memory device was removed while the data was being read. Do not remove the USB memory device during the update. • If any other firmware files are stored in the root directory of the USB memory device, delete the unnecessary files. • The downloaded firmware file may be corrupted. Download the firmware file again.

Status of Indicator Lights	Trouble	Cause	Solution
<p>The [Power] button and the [AV Mute] button flash for more than 25 minutes.</p> 	<p>Firmware download error</p>	<p>The projector cannot detect the USB memory device.</p>	<ul style="list-style-type: none"> • Make sure the USB memory device is connected correctly. Turn the projector off, and then remove the USB memory device. Repeat the updating procedure from step 2. • Use a USB memory device supported by the projector. Turn the projector off, and then remove the USB memory device. Repeat the updating procedure from step 2.
	<p>Firmware update error</p>	<p>The firmware has not been properly written.</p>	<p>Perform the firmware update procedure again. If the problem persists, replace the network board and the main board.</p>

Error ID

The error ID shown on the Service status display indicates the cause of the error.

Error ID	Meaning	Cause	Solution
1	Lamp turn on error	<ul style="list-style-type: none"> • Lifetime of the lamp has ended. • The rotation of the color wheel is not detected. • The lamp ballast is defective. • The temperature around the lamp ballast is high. 	<ul style="list-style-type: none"> • Replace the lamp. • Clean the inside of the projector. • Replace the optics section. • Replace the lamp ballast.
2	Lamp cover error	<ul style="list-style-type: none"> • The lamp cover is not properly attached. • The lamp cover open sensor is defective. 	<ul style="list-style-type: none"> • Check if the lamp cover is properly attached. • Check the lamp cover open sensor.
3	Lamp off error	<ul style="list-style-type: none"> • The processor in the lamp ballast is malfunctioning. • The main processor is malfunctioning. 	Disconnect the power cord, and then connect it again.
4	Fan 1 error	<ul style="list-style-type: none"> • Fan rotation speed is too low. • DAC error of the fan IC. 	<ul style="list-style-type: none"> • Check if the fan connector (CN10) is properly connected. • Replace the intake fan. • Replace the main board.
5	Fan 2 error	<ul style="list-style-type: none"> • Fan rotation speed is too low. • DAC error of the fan IC. 	<ul style="list-style-type: none"> • Check if the fan connector (CN12) is properly connected. • Replace the exhaust fan. • Replace the main board.
6	Fan 3 error	<ul style="list-style-type: none"> • Fan rotation speed is too low. • DAC error of the fan IC. 	<ul style="list-style-type: none"> • Check if the fan connector (CN17) is properly connected. • Replace the lamp fan. • Replace the main board.

Error ID	Meaning	Cause	Solution
7	Temp error	<ul style="list-style-type: none"> The temperature around the intake fan is 42 degrees C or higher. Temperature sensor is defective. 	<ul style="list-style-type: none"> Check the environment, e.g. whether there is any heat source near the projector. Check if the temperature sensor connector is properly connected. Replace the temperature sensor board. Replace the main board.
9	Memory read error	A data access error occurred while accessing the EEPROM on the main board.	Replace the main board.
10	Audio processor error	A data access error occurred while accessing the audio device.	Replace the main board.
11	Video processor error	A data access error occurred while accessing the video decoder.	Replace the main board.
12	A/D converter error	A data access error occurred while accessing the A/D converter.	Replace the main board.
13	HDMI receiver error	A data access error occurred while accessing the HDMI receiver.	Replace the main board.
14	Tilt sensor error	A data access error occurred while accessing the tilt sensor.	<ul style="list-style-type: none"> Check if the connector between the control panel board and the main board (CN9) is properly connected. Replace the control panel board.

Error ID	Meaning	Cause	Solution
15	Color wheel error	<ul style="list-style-type: none"> The color wheel stopped after the lamp turned on. Color wheel rotation speed is too low after the lamp turned on. 	<ul style="list-style-type: none"> Check if the color wheel sensor connector (CN19) is properly connected. Check if the color wheel motor connector (CN18) is properly connected. Clean the inside of the projector. Replace the main board. Replace the optics section.
16	DMD error	<ul style="list-style-type: none"> DMD temperature is abnormal. DMD drive voltage is too low. 	Replace the optics section.
17	DDP error	The main processor is malfunctioning.	<ul style="list-style-type: none"> Disconnect the power cord, and then connect it again. Replace the main board.
18	Network communication error (Y025/Y027/Y028/Y029 only)	Main board/network board communication error.	<ul style="list-style-type: none"> Check the connection with the network board. Replace the network board.
19	Network device error (Y025/Y027/Y028/Y029 only)	Network board device error	Replace the network board.
20	Network I/O device error (Y025/Y027/Y028/Y029 only)	DM3725-Shockley communication error.	Replace the network board.

Error ID	Meaning	Cause	Solution
26	Lamp go out error	<ul style="list-style-type: none"> • Lifetime of the lamp has ended. • The lamp is defective. • The PSU is defective. • The lamp ballast is defective. 	<ul style="list-style-type: none"> • Disconnect the power cord, wait for the lamp to cool down, and then connect it again. • Replace the lamp.
27	Lamp voltage error	Lamp deterioration.	Replace the lamp.
28	Ballast temp error	High temperature detected around the lamp ballast.	<ul style="list-style-type: none"> • Disconnect the power cord, wait for the lamp ballast to cool down, and then connect it again. • Replace the lamp ballast.
29	Fan 4 speed error	<ul style="list-style-type: none"> • Fan rotation speed is too low. • DAC error of the fan IC. 	<ul style="list-style-type: none"> • Check if the fan connector (CN21) is properly connected. • Replace the lamp fan. • Replace the main board.
31	Auto focus error	Distance measurement could not be completed.	<ul style="list-style-type: none"> • Turn off the projector and turn it back on again. • Replace the optical engine.
32	Interactive kit error	The interactive kit adapter (projector adapter) is malfunctioning.	<ul style="list-style-type: none"> • Turn off the projector and turn it back on again. • Remove the adapter and attach it again.
33	Illuminance sensor error	The illuminance sensor is malfunctioning.	<ul style="list-style-type: none"> • Turn off the projector and turn it back on again.

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.
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 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
No sound.	<ul style="list-style-type: none"> • Press the Input button. For details, see the Operating Instructions. • Make sure the 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.
Image is not projected normally.	<ul style="list-style-type: none"> • Make sure the input signal is compatible with the projector. (See page 18 "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.)
Image is blurred. 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. (See page 43 "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 “Default 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 Correction” 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.

Problem	Solutions
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" 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.
No images from USB devices. (Y025/Y027/Y028/Y029 only)	<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. (Y025/Y027/Y028/Y029 only)	<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.

Problem	Solutions
Wireless LAN is disabled. (Y025/Y027/Y029 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. • Make sure the operating system of the computer is compatible with Network Utility. Log on to the computer using administrator privileges to configure the wireless LAN settings using “Simple 1:1 Connection” or a USB memory device. For details, see the Operating Instructions. • Make sure that the projector is not in standby.

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

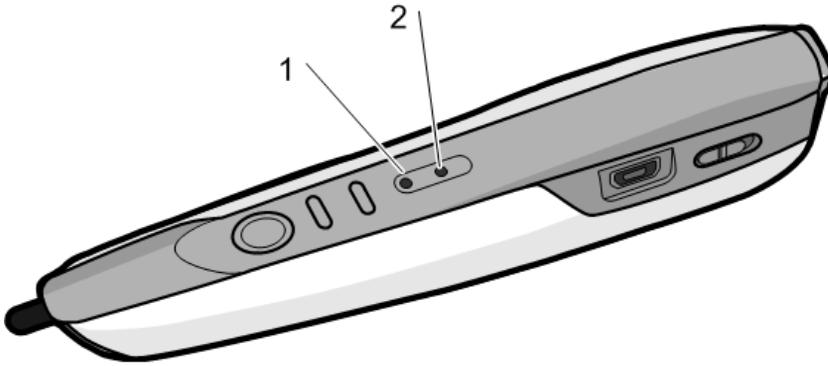
Message	Cause	Solution
The PC USB adapter for the interactive kit may not be connected yet.	The electronic pen has been registered to the projector before the computer USB adapter is registered to the projector.	Turn off the electronic pen, register the computer USB adapter to the projector, and then register the electronic pen again.

Message	Cause	Solution
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

5

	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