



Operating Instructions

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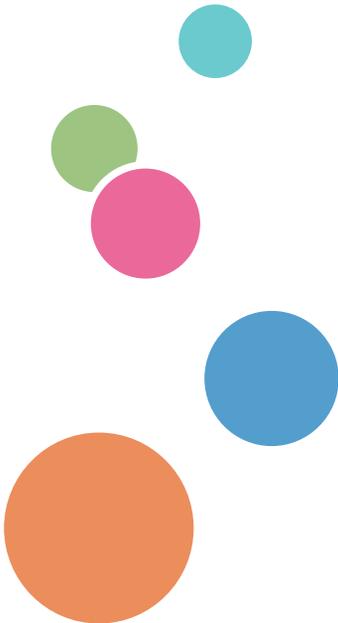


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Introduction

Copyrights to Images

When projecting images using the projector, be careful not to infringe the copyright of protected materials.

The following are examples that may infringe the copyright of protected materials.

- Broadcasting images or movies for commercial purposes
- Modifying images or movies using functions such as freeze, magnify, or zoom to broadcast images for commercial purposes or public viewing
- Varying the aspect ratio of images or movies using a function that changes the screen size to broadcast images for commercial purposes or public viewing

Important

In no event will the company be liable for direct, indirect, special, incidental, or consequential damages as a result of handling or operating the machine.

The manufacturer shall not be responsible for any damage or expense that might result from the use of parts other than genuine parts from the manufacturer with your office products.

Notes to Users Viewing 3D Images

Pay attention to the following points when viewing images using 3D glasses with the projector:

- You need 3D glasses to view 3D images. The projector uses DLP Link technology to synchronize with 3D glasses. You need to use the 3D glasses that support DLP Link.
- How 3D images are viewed may vary according to the individual.
- Do not use 3D glasses for viewing any material other than 3D images.
- Before viewing 3D images, make sure to read the manuals provided with your 3D glasses and 3D compatible content.
- Avoid viewing 3D images for a long period of time. Take a break of 15 minutes or longer after every hour of viewing.
- If you feel sick while viewing 3D images, stop viewing them. If you continue to feel sick, consult a doctor.
- When viewing 3D images in a room where an LED lighting system or fluorescent lights are used, you may feel that the light in the room flickers. If this is the case, dim the lights until you do not notice any flickers, or turn off the lights.

-
- If you or any member of your family has a history of light-sensitive seizures, consult a doctor before viewing 3D images.
 - To view 3D images, sit in front of the screen so that your eyes are parallel and level with the screen.
 - Viewing 3D images from a place that is too close to the screen may result in eye strain. The distance between the screen and you should be at least three times the height of the screen.
 - Adult supervision is required for children using 3D glasses.
 - Viewing 3D images is not recommended for children under 6 years old. It may negatively affect development of their vision. Consult a doctor before using 3D glasses.

Manuals Provided with the Projector

Read this manual carefully before you use the projector.

Refer to the manuals that are relevant to what you want to do with the projector.

Important

- The manuals are provided in various formats.
- Adobe® Acrobat® must be installed in order to view the manuals as PDF files.

Read This First

Provides information about safe usage of the projector.

To avoid injury and prevent damage to the projector, be sure to read the section of this manual entitled Safety Information.

Ultra Short Throw Projector Setting Guide

Provides basic information about how to install the projector.

Start Guide

Provides basic information about how to install the projector and how to project images. The contents of this manual are a summary of Operating Instructions.

Operating Instructions

Provides information about how to install the projector, how to project images using the projector, and how to configure the projector. It also provides information about troubleshooting and maintenance.

Note

- The CD-ROM includes only the English manual. For other languages, download the latest version from the website.

How to Read This Manual

Symbols

This manual uses the following symbols:



Indicates points to pay attention to when using the projector.



Indicates supplementary explanations of the projector's functions, and instructions on resolving user errors.



Indicates the names of buttons on the control panel and remote control. It also indicates items displayed on the menu screens.



Differences in the functions of Region A and Region B models are indicated by two symbols. Read the information indicated by the symbol that corresponds to the region of the model you are using. For details about which symbol corresponds to the model you are using, see page 8 "Model-Specific Information".

Notes

Contents of this manual are subject to change without prior notice.

Two kinds of size notation are employed in this manual.

Some illustrations in this manual might be slightly different from the machine.

Certain options might not be available in some countries. For details, please contact your local dealer.

Depending on which country you are in, certain units may be optional. For details, please contact your local dealer.

Model-Specific Information

This section explains how you can identify the region your projector belongs to.

There is a label on the rear of the projector, located in the position shown below. The label contains details that identify the region your projector belongs to. Read the label.



CZE142

The following information is region-specific. Read the information under the symbol that corresponds to the region of your projector.

 **Region A** (mainly Europe and Asia)

If the label contains the following, your projector is a region A model:

- CODE XXXX -27

 **Region B** (mainly North America)

If the label contains the following, your projector is a region B model:

- CODE XXXX -17

Note

- Dimensions in this manual are given in two units of measure: metric and inch. If your projector is a Region A model, refer to the metric units. If your projector is a Region B model, refer to the inch units.

1. Preparations for Using the Projector

This chapter explains the names and functions of the different parts of the projector and remote control, and how to use them. It also explains how to position the projector and how to connect it to other equipment.

Precautions for Using the Projector

WARNING

- If metal objects, or water or other fluids fall inside this machine, you must turn off its power immediately. After turning off the power, be sure to disconnect the power cord plug from the wall outlet. Then contact your service representative and report the problem. Do not use the machine. Doing so could result in fire or electric shock.
- Do not use any power sources other than those that match the specifications shown in this manual. Doing so could result in fire or electric shock.
- The supplied power cord is for use with this machine only. Do not use it with other appliances. Doing so could result in fire or electric shock.
- It is dangerous to handle the power cord plug with wet hands. Doing so could result in electric shock.
- Do not place the power cord and connection cable in front of the lens or exhaust vents when the product is turned on. Doing so may result in fire.
- Be sure to locate the machine as close as possible to a wall outlet. This will allow easy disconnection of the power cord in the event of an emergency.
- Do not look into the projection window or vent when the machine is on. The bright light may damage your eyes. Be especially careful in an environment with children.
- Do not use flammable sprays or solvents in the vicinity of this machine. Also, avoid placing these items in the vicinity of this machine. Doing so could result in fire or electric shock.

CAUTION

- Do not place low heat resistant material near the exhaust vents. Hot air may come from the exhaust vents, resulting in damage to the machine or an accident.
- Do not place the power cord and connection cable in a way that might cause someone to trip and fall. The machine might fall over and cause an injury.

CAUTION

- 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.

- When disconnecting the power cord from the wall outlet, always pull the plug, not the cord. Pulling the cord can damage the power cord. Use of damaged power cords could result in fire or electric shock.

- Do not block the projection light when it is on. If you do so, the part that is blocking the projection light may get quite hot and deform, deteriorate or cause a burn or fire. The reflected light may make the projection window hot and cause a machine failure. To temporarily suspend projection, select the AV mute function. To suspend longer, turn off the machine.

- Do not increase the volume unless you are listening while increasing the volume. Also, lower the volume before turning off the power, because a loud sound may be emitted when the power is turned on and cause hearing damage.

- Do not tilt the machine horizontally more than ± 20 degrees. Doing so may cause the entrance of foreign objects in the housing of the machine which could result in fire or electric shock.

- Power Source

-  **Region A** (mainly Europe and Asia)
220–240 V, 1.7 A or more, 50/60Hz
-  **Region B** (mainly North America)
120 V, 3.7 A or more, 60Hz

Please be sure to connect the power cord to a power source as above.

Main Functions

The projector features the following functions that you can use.

Tabletop projection

This projector can project images on a tabletop.

Image eco function

The projector switches the lamp power automatically by detecting the brightness of the image signals. This function is useful for energy saving.

Start on input detection

The projector starts projection automatically if the image signals are input even while in standby.

Auto keystone function

The projector automatically adjusts the shape of the projected image according to the angle at which the projector is positioned.

AV Mute/Freeze

Pressing the [AV Mute] button mutes the sound and blanks the screen. Pressing the [Freeze] button freezes the image temporarily.

Magnify/Zoom

Pressing the [Magnify] button enlarges the projected image. Pressing the [Zoom] button reduces the projected image.

Presentation timer function

Pressing the [Timer] button displays the countdown timer on the projection screen. You can check the elapsed time on the projection screen.

Wall color mode

You can adjust the hue of the image in accordance with the color of the wall on which it is projected.

Password setting/Key lock

You can specify a password for the projector to limit the people that can use it. The buttons on the control panel can be disabled with the key lock setting to prevent misoperation.

User logo function

The projector can project a registered logo or image when there is no signal or when it is starting up.

Checking the Accessories

1

The projector is provided with the following accessories. Make sure that everything is included in the package.

If anything is missing or damaged, contact your sales representative or service representative.

- Read This First
- Ultra Short Throw Projector Setting Guide
- Start Guide
- Remote control
- AAA battery LR03 × 2
- CD-ROM
- RGB cable
- Power cord
- Warranty card
- Carrying bag

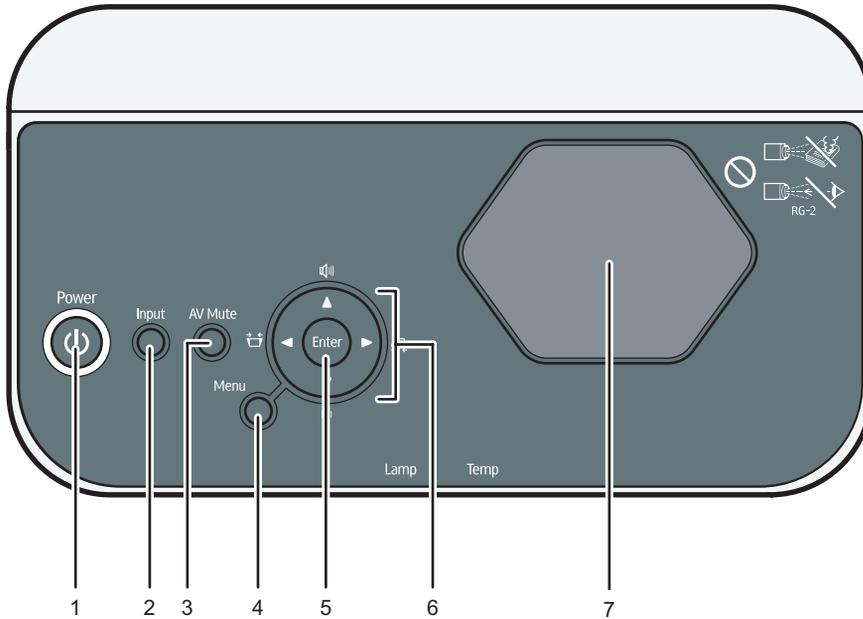
Note

- The bundled accessories may vary depending on the location that this projector was purchased.
- Use only the RGB cable and power cord provided with the projector.

Projector Parts and Their Functions

Control Panel (Top View)

1



DPE139

1. [Power] button

Turns the projector on and off. You can confirm the status of the projector with the indicator.

- On: Power is on.
- Off: Power is off.
- Flashing at long intervals: Standby.
- Flashing at short intervals: Starting up or cooling.

2. [Input] button

Switches the signal input. For details about how to switch the input signal, see page 30 "Projecting an Image".

3. [AV Mute] button

Temporarily blanks the screen and mutes the audio

4. [Menu] button

Displays the menu screen. Press it again to close the menu screen.

5. [Enter] button

Enters the selected item or mode.

6. Arrow buttons

The [◀] and [▶] buttons are used to adjust the keystone distortion. The [▲] and [▼] buttons are used to adjust the volume. These buttons are also used to operate the menu screen and the value bar.

7. Projection window

Enlarges and projects the image.

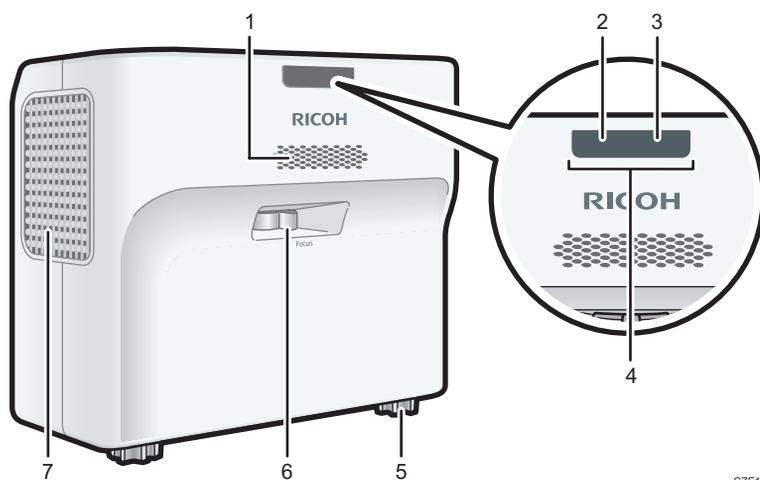
↓ Note

- The top of the projector is covered with a protective film when it is shipped. Remove the film before using the projector.

Front and Left-Side View

⚠ CAUTION

- Do not obstruct the machine's vents. Doing so risks fire caused by overheated internal components.



CZE102

1. Speaker

Outputs the audio input from an external device.

2. Lamp indicator

Shows the status of the lamp. For details, see page 65 "Indicator Display List".

3. Temp indicator

Shows the status of the temperature inside the projector. For details, see page 65 "Indicator Display List".

4. Remote control receiver

Receives the signal from the remote control.

5. Adjustable feet

Adjusts the angle of the projection.

6. Focus lever

Adjusts the focus of the image.

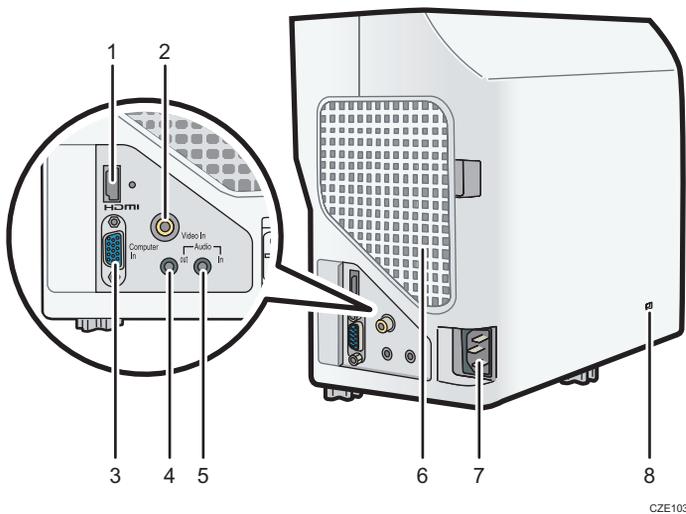
7. Exhaust vents

Releases hot air from inside the projector.

Rear and Right-Side View

⚠ CAUTION

- Do not obstruct the machine's vents. Doing so risks fire caused by overheated internal components.



CZE103

1. HDMI port

For inputting HDMI signals from a computer or video player.

2. Video In port

For inputting image signals from a video player.

3. Computer In port (Y/Pb/Pr)

For inputting RGB signals from a computer or component image signals (Y/Pb/Pr) from a video player.

4. Audio Out port

For outputting audio signals to an external speaker.

5. Audio In port

For inputting audio signals from a computer or video player.

6. Intake vents

For circulating air from the outside to cool the projector.

7. AC In socket

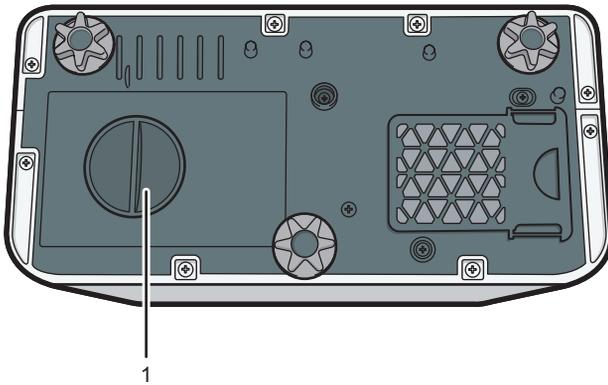
For connecting the power cord set provided with the projector.

8. Security slot (Kensington slot)

For connecting an anti-theft cable.

1

Bottom View

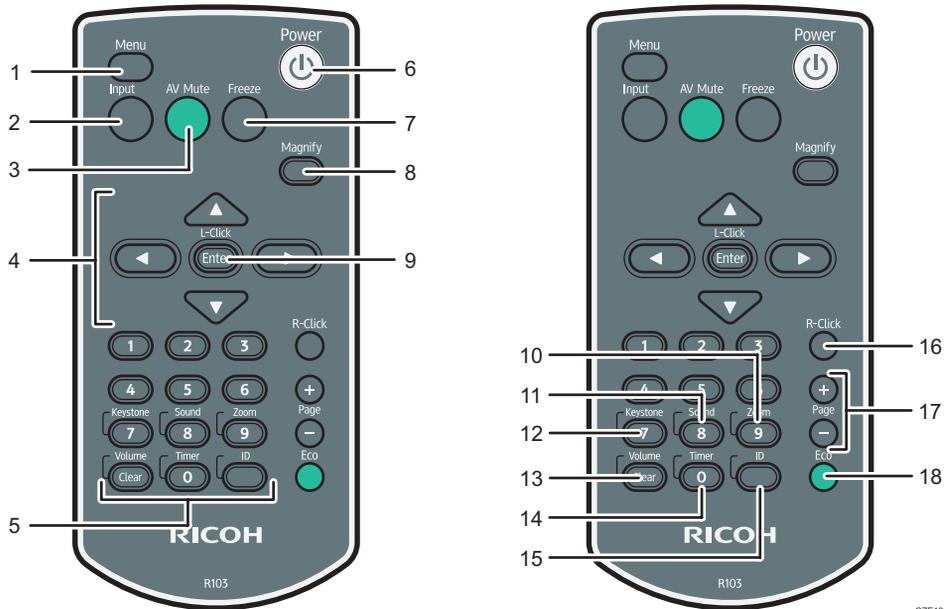


CZE105

1. Lamp cover

Remove to replace the lamp.

Remote Control Parts and Their Functions



1. [Menu] button

Displays the menu screen. Press it again to close the menu screen.

2. [Input] button

Switches the signal input. For details about how to switch the input signal, see page 30 "Projecting an Image".

3. [AV Mute] button

Temporarily blanks the screen and mutes the audio. For details, see page 39 "Temporarily Blanking the Image and Muting 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. For details, see page 39 "Freezing the Image".

8. [Magnify] button

Displays the magnification ratio bar. Press it, and then specify the magnification ratio using the [◀] and [▶] buttons. For details, page 38 "Enlarging the Image".

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. For details, see page 35 "Reducing the Size of the Projected Image".

11. [Sound] button

Displays the sound quality selection screen. Press it, and then select the sound quality using the [◀] and [▶] buttons. For details, see page 37 "Switching the Sound Quality".

12. [Keystone] button

Displays the keystone adjustment bar. Press it, and then adjust the keystone distortion using the [◀] and [▶] buttons. For details, see page 34 "Adjusting for Keystone Distortion".

13. [Volume] button

Displays the volume control bar. Press it, and then adjust the volume of the speaker using the [▲] and [▼] buttons. For details, see page 37 "Adjusting the Volume of the Speaker".

14. [Timer] button

Displays the presentation timer. For details, see page 40 "Using the Presentation Timer".

15. [ID] button

Registers the remote control ID. For details, see page 21 "Operating Multiple Projectors with the Remote Control".

16. [R-Click] button

This button is not used.

17. [Page] buttons

This button is not used.

18. [Eco] button

Switches the lamp power level. For details, see page 39 "Switching the Lamp Mode".

How to Use the Remote Control

You can use the remote control to turn the projector on and off, and to change the signal of the image being input and projected. You can also enlarge or reduce the image and mute the audio.

★ Important

- **Note the following precautions when using the remote control:**
 - Do not drop or hit the remote control.
 - Do not place the remote control in a place that is very hot or very humid.
 - Do not get the remote control wet. Also, do not place it on anything that is wet.

Effective Range of the Remote Control

Point the remote control at the remote control receiver on the projector to use it.

The effective range of the remote control is about 4.5 meters (14.7 feet) from the receiver and at an angle of about 15 degrees to the remote control receiver on the projector.

↓ Note

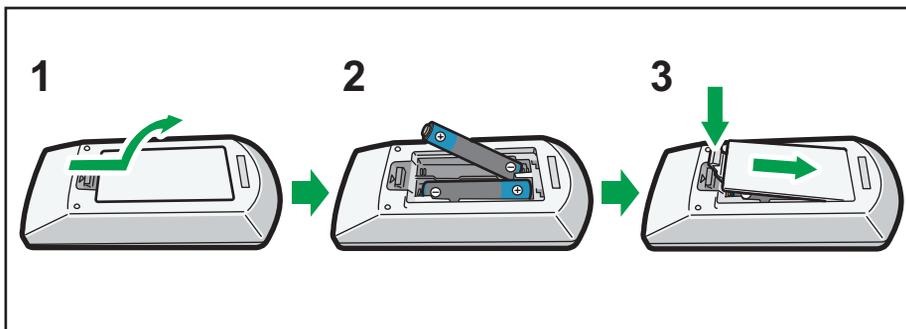
- The remote control may not be effective in some areas and in some conditions. If this happens, point the remote control at the projector and try it again.
- The remote control may not work if the remote control receiver on the projector is exposed to sunlight, fluorescent light, or strong light.

Loading Batteries into the Remote Control

⚠ WARNING

- For safe operation, follow the warnings below regarding the batteries. If you use the batteries incorrectly, it may result in fire or injury due to batteries leaking or exploding.
 - Do not use batteries other than the ones specified.
 - Do not mix and use batteries that are different types or that are new and old.
 - Correctly insert batteries according to the polarity (+/-).
 - Do not charge non-rechargeable batteries.
 - Do not heat or throw the batteries into fire or water.
 - Do not connect the positive and negative terminals on a battery with a wire.
 - Remove the batteries that are past their suggested use period or that are depleted.
 - Remove the batteries when they will not be used for extended periods.
 - Keep the batteries out of the reach of children. Children may swallow or choke on the batteries. If this happens, contact a doctor immediately.

Loading batteries



CUD092

1. Remove the battery cover from the remote control.

2. Insert the batteries.

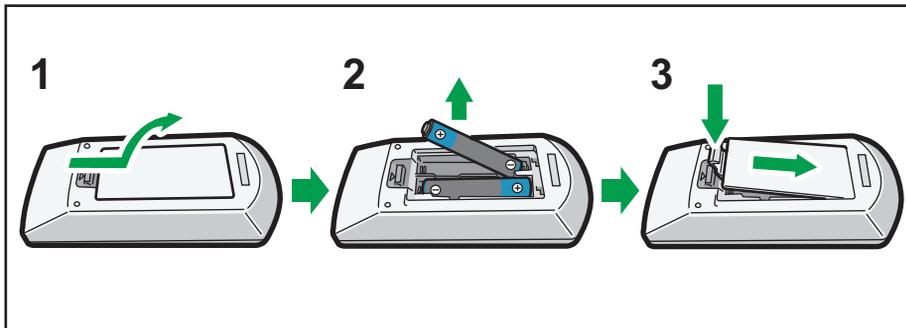
Note the direction of the positive and negative terminals when inserting the batteries.

3. Close the battery cover.

↓ Note

- Replace the batteries if the remote control does not work or if the effective distance becomes too narrow.

Removing batteries



DHY115

1. Remove the battery cover from the remote control.
2. Remove the batteries.
3. Close the battery cover.

Operating Multiple Projectors with the Remote Control

You can operate multiple projectors with a single remote control. It is possible to operate a maximum of four projectors. To operate the projector with the remote control, you must assign the same ID number to the projector and remote control. Projectors that can be operated by the remote control supplied with this projector are RICOH PJ WX4152/WX4152N/WX4152NI.

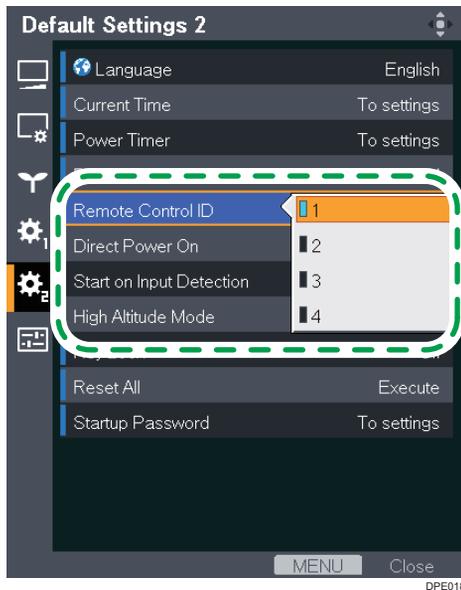
Use the following procedure to assign the same ID number to the projector and the remote control.

Assigning an ID number to the projector

To operate multiple projectors with a single remote control, assign a different ID number to each projector. Use the buttons on the control panel to perform the following procedure.

1. Press the [Menu] button.
2. Select [Default Settings 2], and then press the [▶] button.
3. Select [Remote Control ID], and then press the [Enter] button.

4. Select the ID number to assign to the projector, and then press the [Enter] button.

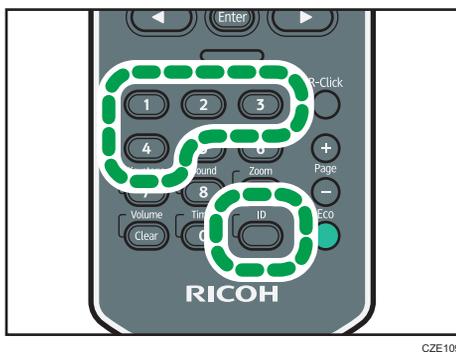


5. Select [OK] on the confirmation screen, and then press the [Enter] button.
6. Press the [Menu] button to close the menu screen.

Changing the remote control's ID number

You can switch the ID number of the remote control to match the ID number of a projector. You can check the ID numbers of projectors in [Remote Control ID] in [Default Settings 2].

1. Press and hold the [ID] button, and then press the number button that is the ID number of the projector you want to operate for at least three seconds.



After the ID number of the remote control is switched, you can operate the projector with the remote control.

Positioning the Projector

When positioning the projector, place it so that the projector's rear side faces the screen. Make sure the projector and the screen are parallel to each other.

Adjust the distance between the projector and the screen according to the size of the projected image. For details, see page 25 "Relationship Between the Projection Distance and the Screen Size".

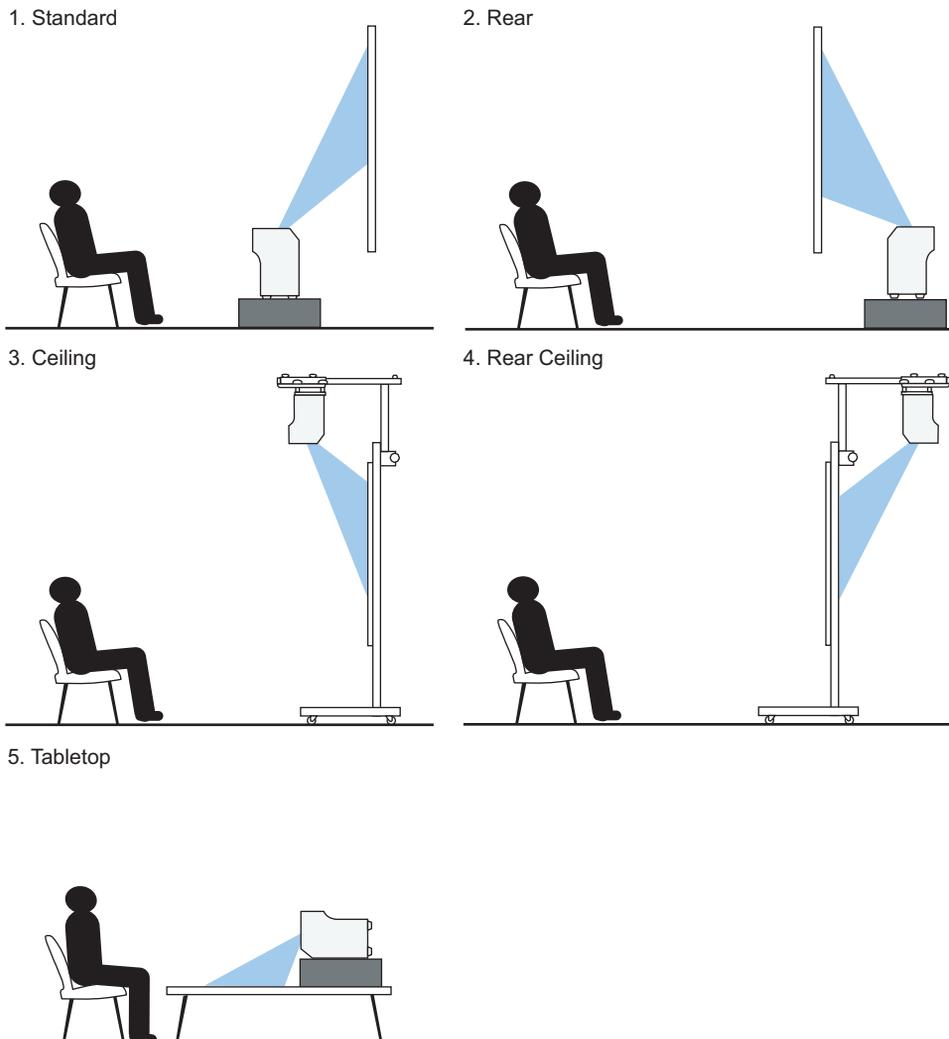
Projection Mode

WARNING

- If a machine is incorrectly installed on a wall or ceiling, it may fall down and cause an injury. Contact your sales or service representative if you want to install a machine on a wall or ceiling.

You can position the projector in one of five ways.

Select the setting according to the position of the projector in [Projection Mode] under [Default Settings 2]. For details, see page 60 "Default Settings 2 Menu".



DPE014

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

The projector is mounted on the ceiling 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.

5. Tabletop

The projector is placed in such a way to use the top surface of a table as the screen, and project the image on the tabletop.

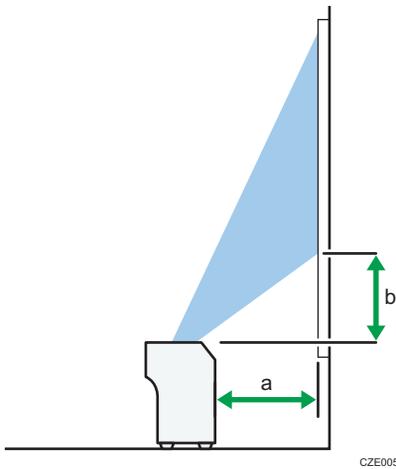
Note

- Projection on the ceiling is not supported.

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 table to position the projector in a suitable position. The projection screen sizes presented in the table are for a full size image without keystone adjustment.



Projection screen size	Projection distance (a)	Projection height (b)
48 inches	12 cm (4.6 inches)	9 cm (3.6 inches)
60 inches	17 cm (6.5 inches)	12 cm (4.5 inches)
80 inches	25 cm (9.8 inches)	16 cm (6.1 inches)

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 machine might fall over and cause an injury.

Various equipments can be connected to the projector.

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

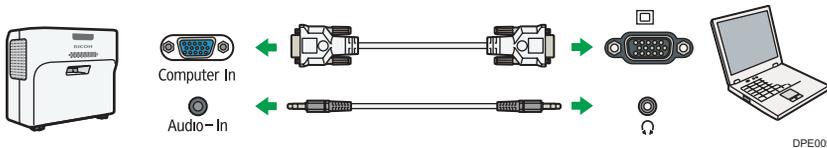
Connecting a Computer

↓ Note

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

Connecting to the RGB out port

Connect an RGB cable to the Computer In port of the projector and to the RGB out port 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 out port of a computer.



↓ Note

- Use the RGB cable provided with the projector.

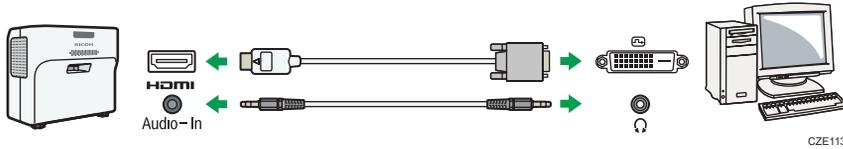
Connecting to the HDMI port

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



Connecting to the DVI out port

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 out port 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 out port of a computer.



Note

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

Connecting AV Equipment

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

Connecting to the HDMI port

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

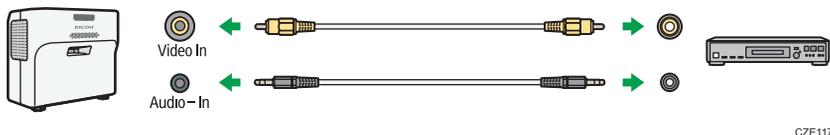


Note

- 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.

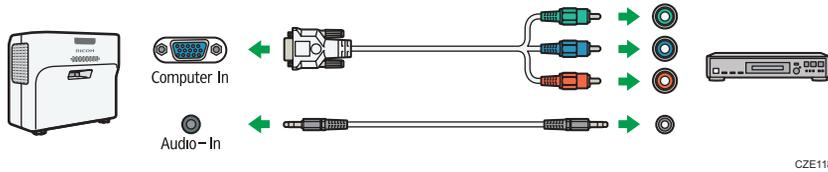
Connecting to the video out port

Connect a video cable to the Video In port of the projector and to the video out port 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 out port of AV equipment.



Connecting to the Y/Pb/Pr out port

Connect a D-sub to component video cable to the Computer In port of the projector and to the Y/Pb/Pr out port 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 out port of AV equipment.



Connecting an External Speaker

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

2. Projecting an Image

This chapter explains the procedure for projecting an image.

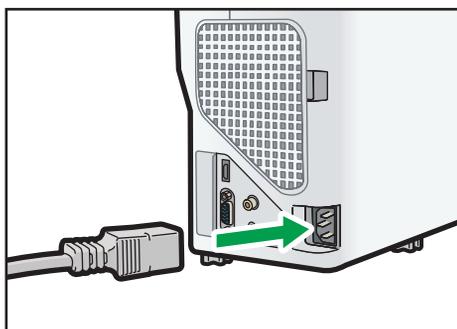
Basic Operations for Using the Projector

↓ Note

- If [Key Lock] in [Default Settings 2] is specified as [On], you cannot operate the projector from its control panel. Use the remote control.
- If you press a button that is disabled, the projector beeps and the "Invalid operation." or "This function cannot be used on this product." message appears on the screen.
- If [Beep] in [Default Settings 1] is specified as [Off], the projector does not beep.

Turning On the Projector

1. Insert the connector of the power cord set into the AC In socket on the projector.



2. Insert the power plug into a power outlet.

When [Direct Power On] in [Default Settings 2] is specified as [On], the projector turns on in this step.

3. Press the [Power] button.

Power



The projector beeps and the indicator flashes blue.

The start-up screen is displayed.

To project an image from the connected equipment, see page 30 "Projecting an Image".

When the projector is turned on for the first time after it is purchased, the start menu appears. Specify the display language and lamp power level. For details, see page 30 "When the start menu is displayed".

Note

- The password input screen is displayed if a password for the projector is specified in [Startup Password] under [Default Settings 2]. Enter a password.
- The start-up screen closes shortly after appearing. You can specify that the start-up screen not appear in [Start-up Screen] under [Default Settings 1].

When the start menu is displayed

When the projector is turned on for the first time after it is purchased, select the display language and lamp power level.

1. Select the display language, and then press the [Enter] button.
2. Select the lamp power level, and then press the [Enter] button.

Note

- The display language can also be changed in the menu screen. For details, see page 60 "Default Settings 2 Menu".
- The lamp power level can also be changed using the remote control. For details, see page 39 "Switching the Lamp Mode".
- The start menu is only displayed the first time the projector is used. However, the start menu is displayed after [Reset All] in [Default Settings 2] is executed.

Projecting an Image

1. Turn on the equipment that is connected to the projector.

To project the image of an AV equipment, press the play button on the AV equipment.

To project a laptop computer's screen, switch the computer's image output. For details, see page 31 "When projecting the screen of a laptop computer".

The input signal is detected automatically and the image is projected.

2. If an image is not projected automatically, press the [Input] button.
3. Select an input signal, and then press the [Enter] button.



↓ Note

- If [Auto Input Search] in [Default Settings 1] is specified as [On], pressing the [Input] button changes the input to one that is different from the image signal being input.
- The image specified in [Background on No Signal] under [Default Settings 1] is displayed if the signal is lost or there is no signal being input from the connected equipment. Check that the equipment is turned on and that it is properly connected to the projector.
- If the projector does not support the input signal, a "Unsupported signal" message is displayed.
- The brightness of the image may vary temporarily because the lamp may automatically adjust to maintain its condition.

When projecting the screen of a laptop computer

When connecting a laptop computer to the projector, switch the computer's image output.

In Windows operating systems, the image output can be switched with a function key. While pressing and holding the [Fn] key, press the  key, the  key, or the LCD/VGA function key.

Examples of various computers

Computer brand	Key combination
MSI	[Fn] + [F2]
Everex, MITSUBISHI, NEC, Panasonic, SOTEC	[Fn] + [F3]
Gateway, HP	[Fn] + [F4]
acer, SHARP, SOTEC, TOSHIBA	[Fn] + [F5]
HITACHI, IBM, lenovo, SONY	[Fn] + [F7]
ASUS, DELL, EPSON, HITACHI	[Fn] + [F8]
FUJITSU	[Fn] + [F10]

↓ Note

- Depending on the computer, the image may not be projected properly if it is displayed on the computer's LCD display while being projected onto the screen by the projector. If this happens, turn off the computer's LCD display. For details about switching the display, see the manual provided with the computer.

Turning Off the Projector

★ Important

- Unplug the power cord if the projector will not be used for an extended period of time.
- After disconnecting the power cord, wait at least 1 second before connecting the power cord again. Not doing so may result in a malfunction.

1. Press the [Power] button.

Power



The confirm screen appears.

2. Press the [Power] button.

The projector beeps and enters the standby mode.

3. Disconnect the power cord.

↓ Note

- After turning the lamp off, wait about five minutes for the lamp to cool before turning the lamp on again. The lamp may not light if it is very hot.
- The projector turns off as soon as the power cord is disconnected (direct power off).
- You can specify the settings for saving energy in standby mode in [Energy Saving Settings]. For details, see page 57 "Energy Saving Settings Menu".

Adjusting the Projected Image

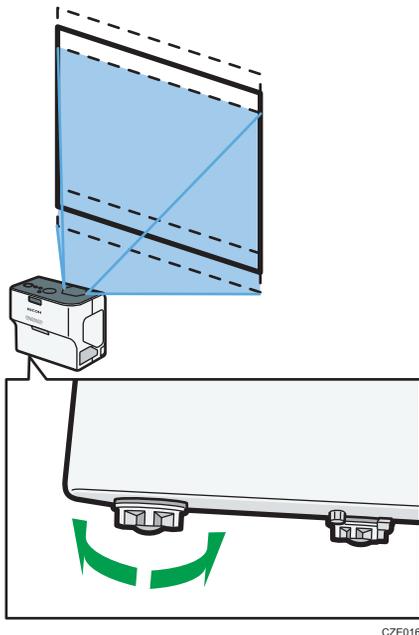
Adjusting the Angle of the Projection

If the height of the projected image does not fit the screen, you can adjust the angle of the projection using the adjustable feet.

2

1. **Lift the projector.**
2. **Adjust the length of the adjustable feet.**

Adjust the height of the right and left adjustable feet so the projector is level. If the projector is inclined too much, an error occurs and operation cannot be performed.



Note

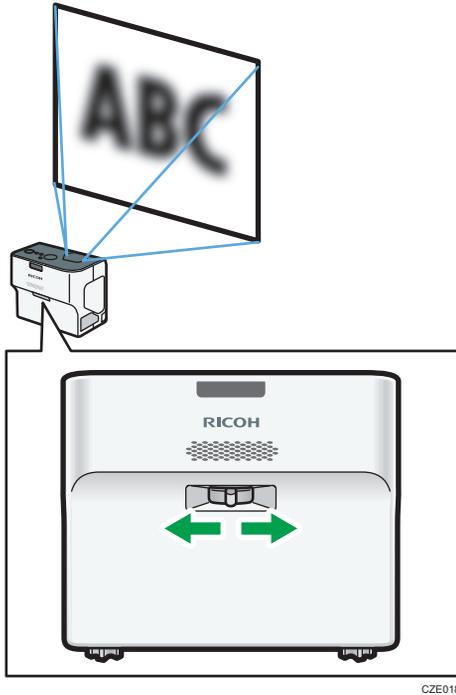
- You do not need to adjust the angle of projection using the adjustable feet if the projector is installed on a wall or ceiling.
- The projector automatically adjusts the projected image for keystone distortion according to the projection angle. If [Auto Keystone] in [Display/Sound Settings] is specified as [Off], manually adjust for keystone distortion. For details, see page 34 "Adjusting for Keystone Distortion".

Adjusting the Focus

Adjust the focus of the projected image.

1. Move the focus lever to adjust the focus.

The shape of the projected image changes slightly when the focus ring is turned.



Adjusting for Keystone Distortion

If the projector is placed at an angle, the projected image will be distorted. This is called keystone distortion.

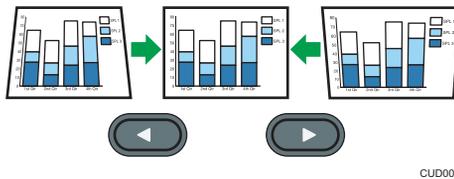
If [Auto Keystone] in [Display/Sound Settings] is specified as [On], the projector automatically adjusts the projected image for keystone distortion according to the projection angle. If this setting is specified as [Off], adjust for keystone distortion using the following procedure.

1. Press the [Keystone] button.



The value bar appears at the bottom of the screen.

2. Adjust the keystone distortion using the [◀] and [▶] buttons.



Press the [◀] button to decrease the width of the bottom of the projected image. Press the [▶] button to decrease the width of the top of the projected image.

↓ Note

- Some data may be lost or the image quality may be degraded depending on the degree of the keystone adjustment and the type of the image.
- You can manually adjust for keystone distortion even if [Auto Keystone] is specified as [On]. However, if you change the angle of the projector, it is automatically adjusted again.
- The keystone adjustment level stays registered even if the projector is turned off. We recommend that you specify [Auto Keystone] to [Off] if the projector and screen are permanently installed.
- You can also adjust the keystone distortion using the [◀] and [▶] buttons on the control panel.

Reducing the Size of the Projected Image

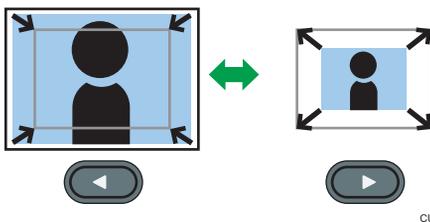
If the projected image is larger than the screen, reduce the size of the image using the [Zoom] button. The image can be reduced by 80 to 100% using the digital zoom function.

1. Press the [Zoom] button.



The value bar appears at the bottom of the screen.

2. Adjust the size of the projected image using the [◀] and [▶] buttons.



Press the [◀] button to reduce the size of the projected image. Press the [▶] button to enlarge the size of the projected image. The image is enlarged until it reaches the original size.

 **Note**

- The image may sometimes be disrupted while it is reduced.

Operations while Projecting Images

Adjusting the Volume of the Speaker

1. Press the [Volume] button.



The value bar appears at the bottom of the screen.

2. Adjust the volume using the [▲] and [▼] buttons.



Press the [▼] button to decrease the volume. Press the [▲] button to increase the volume.

↓ Note

- You can also adjust the volume of the speaker using the [▲] and [▼] buttons on the control panel.

Switching the Sound Quality

You can select the sound quality of the audio that is playing.

1. Press the [Sound] button.



The sound quality selection screen appears at the bottom of the screen.

2. Select the sound quality using the [◀] and [▶] buttons.

- Standard (🔊): Dialog and music are carefully balanced
- Narration (🗣️): This mode is suitable for listening to dialog
- Music (🎵): This mode is suitable for listening to music

↓ Note

- This function applies to the built-in speaker on the projector only. If you use an external speaker, you cannot change the sound quality with this function.
- The sound quality selection screen also appears when you press the [▲] or [▼] buttons on the control panel or [Volume] button on the remote control.

Enlarging the Image

Enlarges and displays a part of the image. The image can be enlarged in a range of 100 to 200%.

The enlarged image becomes grainy due to the digital processing.

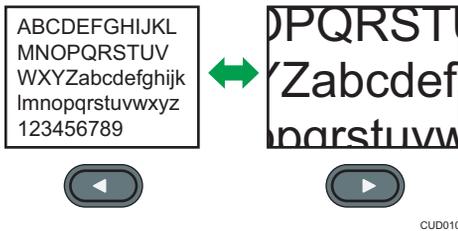
1. Press the [Magnify] button.

Magnify



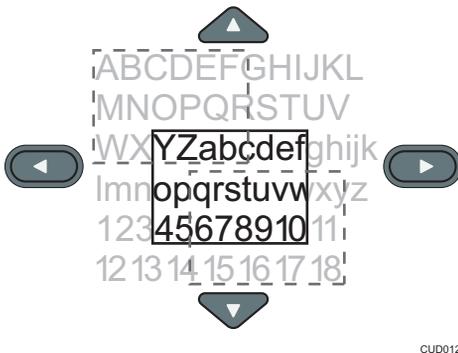
The value bar appears at the bottom of the screen.

2. Adjust the magnification ratio using the [◀] and [▶] buttons.



Press the [◀] button to decrease the magnification ratio. Press the [▶] button to increase the magnification ratio.

3. Press the [Enter] button.
4. Move the display position using the [▲], [▼], [◀], and [▶] buttons.



To change the magnification ratio, press the [Enter] button, and then repeat Step 2.

5. To cancel this function, press the [Magnify] button again.

↓ Note

- The Magnify function is canceled automatically if any operation is performed.

Temporarily Blanking the Image and Muting the Audio

Temporarily blanks the screen and mutes the audio.

This is useful when projecting images from another projector or an OHP.

1. Press the [AV Mute] button.

AV Mute



The image blanks and the audio mutes.

2. To cancel this function, press the [AV Mute] button again.

↓ Note

- An icon () appears on the screen when AV mute is used.
- The AV mute function is canceled automatically if any button on the control panel is pressed.
- You can also use the [AV Mute] button on the projector's control panel.

Freezing the Image

Freezes the video or moving image that is being projected.

1. Press the [Freeze] button.

Freeze



The image freezes.

2. To unfreeze the image, press the [Freeze] button again.

↓ Note

- An icon () appears on the screen when freeze is used.
- The Freeze function is canceled automatically if any operation is performed.
- The Freeze function is for freezing the image projected on the screen. To pause the video of the connected equipment, use the pause function of the connected equipment.

Switching the Lamp Mode

You can switch the lamp mode. To save energy, select the eco mode. To make images brighter, select the standard mode.

1. Press the [Eco] button.



The mode changes each time the button is pressed.

↓ Note

- You can also change the lamp settings with [Energy Saving Settings]. For details, see page 57 "Energy Saving Settings Menu".
- The image may flicker, depending on the characteristics of the lamp, when you select the eco mode. If this happens, select the standard mode.

Using the Presentation Timer

Displays the timer on the projection screen. This function is useful for time management when you are giving a presentation.

1. Press the [Timer] button.



2. Specify the time period from 1 to 99 minutes using the number buttons.

You can also use the [▲] and [▼] buttons to specify the time period.

3. Select [Display Size] using the [◀] and [▶] buttons, and then select [Large] or [Small] using the [▲] and [▼] buttons.

4. Select [Display Position] using the [◀] and [▶] buttons, and then select from the four corners and the center using the [▲] and [▼] buttons.

5. Select [Start] using the [◀] and [▶] buttons, and then press the [Enter] button.

To stop the countdown, press the [Timer] button, and then select [OK] on the confirmation screen.

After the time countdown is finished, a message appears and the projector beeps.

↓ Note

- The projector does not beep if [Beep] in [Default Settings 1] is specified as [Off].

3. Useful Functions

This chapter describes the useful functions of the projector.

Projecting an Image at a Specified Time

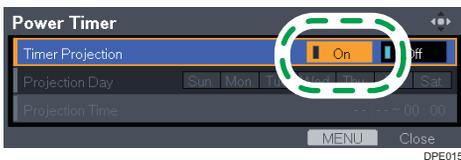
Using the power timer function, you can set the projector to project images at a specified time.

This section explains how to set the projector to project images automatically from 9:00 to 18:00 every Sunday as an example.

1. Press the [Menu] button.
2. Select [Default Settings 2], and then press the [▶] button.

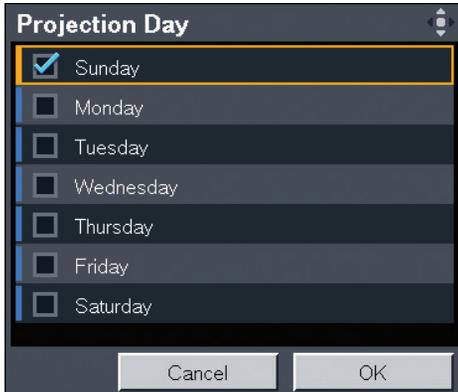


3. Select [Power Timer], and then press the [Enter] button.
4. If [Current Time] is not set, set the current date and time.
5. Select [Power Timer], and then press the [Enter] button.
6. Select [On], and then press the [Enter] button.

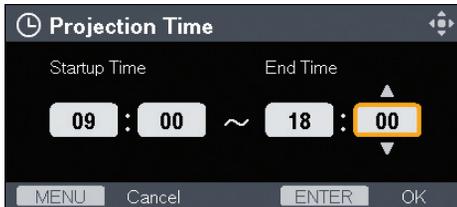


7. Select [Projection Day], and then press the [Enter] button.

8. Select a day to project images (Sunday in this example), and then press the [Enter] button.



9. Select [OK], and then press the [Enter] button.
10. Select [Projection Time], and then press the [Enter] button.
11. Specify the startup time (for example: 9:00) using the number buttons.
You can also use the [▲] and [▼] buttons to specify the startup time.
12. Specify the end time (for example: 18:00) using the number buttons.
You can also use the [▲] and [▼] buttons to specify the end time.



13. Press the [Enter] button.
14. Press the [Menu] button twice to close the menu screen.
15. Press the [Power] button.



The confirm screen appears.

16. Press the [Power] button.
- The projector beeps and enters the standby mode.

↓ Note

- Do not disconnect the power cord when using the power timer function. The projector cannot start if the power cord is disconnected.

Specifying the Sound Quality

You can select a sound quality setting for the built-in speaker that is applicable for the type of audio that you are playing. This makes it easier to hear the audio that is playing.

Setting the Sound Quality for Giving a Presentation

If [Narration] is specified for the sound quality, the projector plays dialog clearly. This mode is useful when you give a presentation using the microphone connected to the projector, for example.

3

1. Press the [Sound] button.



The sound quality selection screen appears at the bottom of the screen.

2. Select [Narration] (🗨️) using the [◀] and [▶] buttons.

Setting the Sound Quality for Playing Music

If [Music] is specified for the sound quality, the projector plays music dynamically. This mode is useful for music videos, for example. This mode is also useful if you want to decorate a shop window with video and music.

1. Press the [Sound] button.



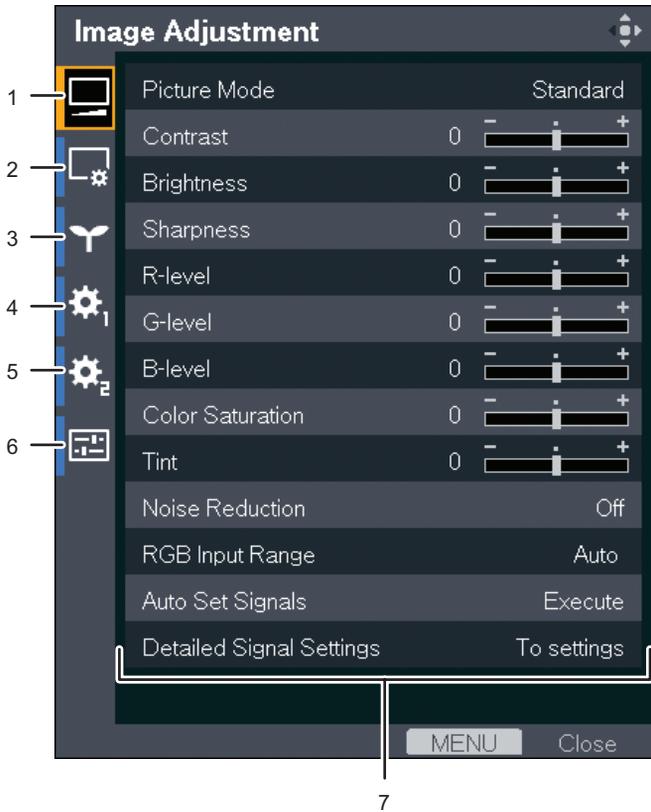
The sound quality selection screen appears at the bottom of the screen.

2. Select [Music] (🎵) using the [◀] and [▶] buttons.

4. Changing the Projector Settings

This chapter explains the settings on the menu screen and how to change the settings.

Viewing the Menu Screen



7

CZE133

1. Image Adjustment menu tab

Adjusts the settings for the projected image, such as contrast and brightness.

For the Image Adjustment menu settings, see page 50 "Image Adjustment Menu".

2. Display/Sound Settings menu tab

Specifies the settings for image display and sound, such as auto keystone correction and sound quality.

For the Display/Sound Settings menu settings, see page 54 "Display/Sound Settings Menu".

3. Energy Saving Settings menu tab

Specifies the settings for energy saving.

For the Energy Saving Settings menu settings, see page 57 "Energy Saving Settings Menu".

4. Default Settings 1 menu tab

Specifies the settings for the beep sound, user logo, etc.

For the Default Settings 1 menu settings, see page 59 "Default Settings 1 Menu".

5. Default Settings 2 menu tab

Specifies the settings for the display language, startup password, etc.

For the Default Settings 2 menu settings, see page 60 "Default Settings 2 Menu".

6. Display Status tab

Enables information such as input signals and lamp usage time, etc., to be displayed.

For item that can be displayed, see page 63 "Display Status".

7. Settings

The settings and information for each menu can be displayed.

Changing the Settings

1. Press the [Menu] button.



2. Select the menu tab using the [▲] and [▼] buttons.



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

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

If [To settings] is displayed on the right, the item has a submenu. Select an item on the submenu, and then press the [Enter] button.

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

6. Change the settings.

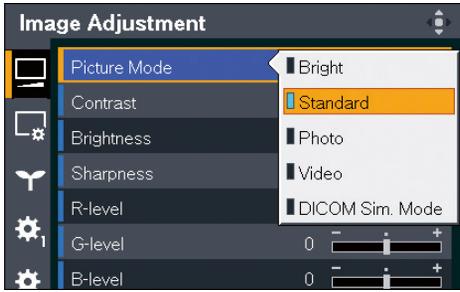
- Adjusting values using the values bar

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



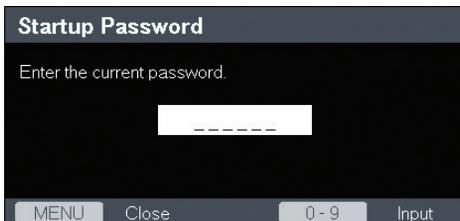
- Selecting the value from a list

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



- Inputting numbers

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



7. If a confirmation screen appears, select [OK], and then press the [Enter] button.

8. Press the [Menu] button.

Note

- The menu screen closes automatically thirty seconds after the last operation. Changes to the settings are automatically applied when you close the menu screen. You do not need to press the [Enter] button.

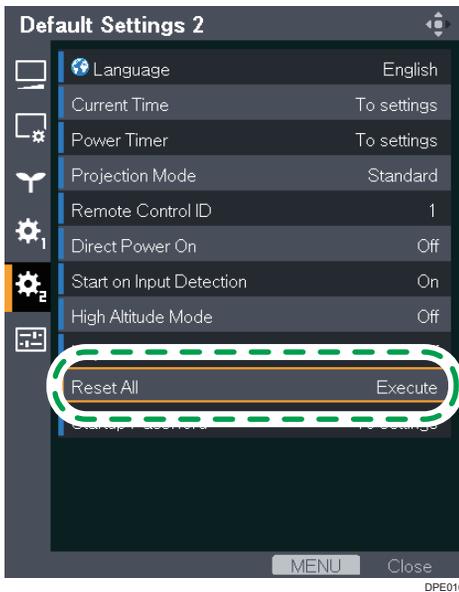
Restoring All the Settings to Their Defaults

1. Press the [Menu] button.

Menu



2. Select [Default Settings 2], and then press the [▶] button.
3. Select [Reset All], and then press the [Enter] button.



4. Select [OK] in the confirm screen, and then press the [Enter] button.

↓ Note

- The start menu is displayed after [Reset All] is executed. For details about the start menu, see page 30 "When the start menu is displayed".
- The following settings cannot be reset with this function:
 - [User Logo] in [Default Settings 1]
To reset the registered user logo, select [Reset Logo] in [Default Settings 1].
 - [Current Time] and [Startup Password] in [Default Settings 2]
To reset the registered passwords, contact your service representative.

Image Adjustment Menu

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

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

Item	Default
<p>RGB Input Range</p> <p>Select the RGB input range.</p> <p>This function is available when you select [HDMI] (RGB signals) as an input signal.</p> <ul style="list-style-type: none"> • Auto The projector switches RGB input range according to the settings of the connected equipment. • Standard Select this mode when the color black in the image is light. • Full Select this mode when dark parts in the image are too dark. 	<p>Auto</p>
<p>Auto Set Signals</p> <p>Automatically adjust the items in [Detailed Signal Settings].</p> <p>This function is available when you select [Computer] as an input signal.</p>	<p>-</p>
<p>Detailed Signal Settings > Phase</p> <p>Adjust to eliminate image flicker.</p> <p>This function is available when you select [Computer] as an input signal.</p>	<p>0 to 31^{*1}</p>
<p>Detailed Signal Settings > Frequency</p> <p>Adjust to eliminate moiré patterns and flicker when you project images with thin vertical-stripes.</p> <p>This function is available when you select [Computer] as an input signal.</p>	<p>0</p>
<p>Detailed Signal Settings > H-position</p> <p>Adjust the horizontal position of the image.</p> <p>This function is available when you select [Computer] as an input signal.</p>	<p>0</p>
<p>Detailed Signal Settings > V-position</p> <p>Adjust the vertical position of the image.</p> <p>This function is available when you select [Computer] as an input signal.</p>	<p>0</p>
<p>Detailed Signal Settings > Clamp Pulse 1</p> <p>Adjust the clamp pulse position.</p> <p>This function is available when you select [Computer] as an input signal.</p>	<p>0 to 255^{*1}</p>

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

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

Display/Sound Settings Menu

Item	Default
<p>Auto Keystone</p> <p>Specify whether or not to implement keystone correction automatically depending on the angle of the projector's position.</p>	On
<p>Keystone</p> <p>Adjust for keystone distortion.</p> <p>To decrease the width of the bottom of the projected image, decrease the value. To decrease the width of the top of the projected image, increase the value.</p>	0
<p>Zoom</p> <p>Reduce the size of the image if the projected image is larger than the screen. The image can be reduced in a range of 80 to 100% using the digital zoom function.</p>	100%
<p>Aspect</p> <p>Select the aspect ratio of the image.</p> <ul style="list-style-type: none"> • Normal Display in full screen without changing the input signal aspect ratio. • 16:9 Display using 16:9 aspect ratio (1280 × 720 resolution). • Full Display using 1280 × 800 resolution. • Native Display the image without changing the resolution of the input signal. This setting is available when you select [Computer] or [HDMI] (RGB signals) as an input signal. • Zoom Display the image width as the projection screen width while maintaining the input signal aspect ratio. 	Normal

Item	Default
<p>Display Position</p> <p>Move the image if the projected image is smaller or larger than the projection screen size. You can move the image using the [▲], [▼], [◀], and [▶] buttons.</p>	-
<p>Wall Color Mode</p> <p>Select the image hue according to the projection surface when the image is being projected on something other than a screen.</p> <ul style="list-style-type: none"> • Off • Whiteboard • Beige • Gray • Blackboard (Green) 	Off
<p>3D Projection > 3D Projection</p> <p>Specify whether or not to use 3D projection.</p> <p>The image will be slightly darker if this is set to [On].</p>	Off
<p>3D Projection > L/R Reverse</p> <p>Specify whether or not to reverse left and right in a 3D image.</p> <ul style="list-style-type: none"> • Normal • Reverse 	Normal
<p>3D Projection > 3D Format</p> <p>Select a 3D format.</p> <p>Select [Auto] when the 3D signals are input through HDMI. If the image does not project in 3D even if [Auto] is selected, change the setting to match the 3D format of the signal being input.</p> <ul style="list-style-type: none"> • Auto • Frame Sequential • Side by Side • Top and Bottom • Frame Packing 	Auto

Item	Default
<p>Closed Caption</p> <p>The projector supports closed captioning, which allows subtitles to be displayed at the bottom of the picture. This is pursuant to the regulations set forth by the US Federal Communications Commission (FCC).</p> <p>Select [CC-1] to [CC-4] to display the dialogue and narration of TV programs and videos that are closed captioned.</p> <p>This function is available when you select [Video] as an input signal.</p> <ul style="list-style-type: none"> • Off • CC-1 • CC-2 • CC-3 • CC-4 	<p>Off</p>
<p>Sound Quality</p> <p>Select the sound quality of the audio that is playing. This function applies to the built-in speaker on the projector only. If you use an external speaker, you cannot change the sound quality with this function.</p> <ul style="list-style-type: none"> • Standard Dialog and music are carefully balanced. • Narration This mode is suitable for listening to dialog. • Music This mode is suitable for listening to music. 	<p>Standard</p>

Energy Saving Settings Menu

Item	Default
<p>Lamp Power</p> <p>Select the lamp power level.</p> <p>To save energy, select the eco mode. To make images brighter, select the standard mode.</p> <p>The lamp power is switched to the standard mode regardless of this setting when [DICOM Sim. Mode] or [3D Projection] is enabled.</p> <ul style="list-style-type: none"> • Eco • Std. 	<p>Std.</p>
<p>Lamp Pwr on No Signal</p> <p>Specify whether or not to lower the lamp power when there is no input signal. If you select [Eco], the projector lowers the lamp power thirty seconds after the input signal disappears.</p> <ul style="list-style-type: none"> • Eco • Std. 	<p>Eco</p>
<p>Image Eco</p> <p>Specify whether or not to switch the lamp power automatically depending on the brightness of the image.</p> <p>This function does not work when [DICOM Sim. Mode] or [3D Projection] is enabled.</p>	<p>On</p>
<p>Power Off on No Signal</p> <p>Select the amount of time from the last input signal or operation until the projector enters standby mode.</p> <ul style="list-style-type: none"> • Off • 5 min. • 10 min. • 20 min. • 30 min. 	<p>20 min.</p>

Item	Default
<p>Power on Standby</p> <p>Specify whether or not to save energy while in standby.</p> <ul style="list-style-type: none">• Eco You can save energy while in standby, but start-up time is slower.• Q'ck On You can turn on the projector quickly, but the standby energy level is higher.	Eco

4

Note

- The image may flicker, depending on the characteristics of the lamp, when the lamp power is cut by the lamp settings. If this happens, specify the lamp settings as follows:
 - Lamp Power: Stnd.
 - Lamp Pwr on No Signal: Stnd.
 - Image Eco: Off

Default Settings 1 Menu

Item	Default
<p>Auto Input Search</p> <p>Specify whether or not to switch to another input signal that the projector detects when you press the [Input] button.</p>	On
<p>Beep</p> <p>Specify whether or not to beep during use.</p>	On
<p>Background on No Signal</p> <p>Select the image display when there is no input signal.</p> <ul style="list-style-type: none"> • Logo • Blue • None 	Logo
<p>Display Guidance</p> <p>Specify whether or not to display the guidance for operating the projector.</p>	On
<p>Start-up Screen</p> <p>Specify whether or not to display the start-up screen when the projector is turned on.</p>	On
<p>User Logo > Register Logo</p> <p>Register a user logo. Project the image to be registered as a user logo, and then execute this function. User logos can be displayed in the start-up screen or as the background when there are no input signals.</p> <p>You can register an image with a resolution of up to 1280 × 800 pixels.</p> <p>This function is available when you select [Computer] or [HDMI] (RGB signals) as an input signal.</p>	-
<p>User Logo > Confirm Logo</p> <p>Display the registered user logo.</p>	-
<p>User Logo > Reset Logo</p> <p>Delete the registered user logo.</p>	-

Default Settings 2 Menu

Item	Default
<p>Language</p> <p>Select the display language.</p> <p>Available languages are as follows:</p> <p>English, Japanese, Spanish, Russian, French, Portuguese, German, Italian, Dutch, Polish, Swedish, Norwegian, Danish, Romanian, Turkish, Arabic, Thai, Indonesian, Traditional Chinese.</p>	<p>English</p>
<p>Current Time > Date/Time</p> <p>Specify the current date and time.</p>	<p>(Not programmed)</p>
<p>Power Timer > Timer Projection</p> <p>Specify whether or not to enable the power timer function.</p> <p>When you enable this function, the projector automatically starts projection and turns off at the specified time. If you select [On], specify [Projection Day] and [Projection Time] to enable this function.</p>	<p>Off</p>
<p>Power Timer > Projection Day</p> <p>Select a day of the week to start projecting using the power time function.</p>	<p>(Not programmed)</p>
<p>Power Timer > Projection Time</p> <p>Specify the time to start and end projecting using the power timer function. An interval of at least ten minutes is required between the startup time and the end time.</p>	<p>(Not programmed)</p>

Item	Default
<p>Projection Mode</p> <p>Select the projection method according to how the projector is positioned.</p> <ul style="list-style-type: none"> • Standard Select this mode when the projector is placed in front of a screen. • Rear Select this mode when the projector is placed behind a screen. • Ceiling Select this mode when the projector is mounted on the ceiling in front of a screen. • Rear Ceiling Select this mode when the projector is mounted on the ceiling behind a screen. 	Standard
<p>Remote Control ID</p> <p>Select the projector remote control ID. Specify the ID for each projector when operating multiple projectors using one remote control.</p> <ul style="list-style-type: none"> • 1 • 2 • 3 • 4 	1
<p>Direct Power On</p> <p>Select the power on method of the projector.</p> <ul style="list-style-type: none"> • Off Turn the projector on when the [Power] button is pressed. • On Automatically turn on the projector when the power cord is connected. 	Off
<p>Start on Input Detection</p> <p>Specify whether or not to start projecting automatically if the signals are input while in standby.</p>	On

Item	Default
<p>High Altitude Mode</p> <p>The number of fan rotations is high when set to [On]. The air is thin at high elevations, so the cooling efficiency of the projector is reduced. Select [On] when using the projector at an altitude of more than 1,500 meters (4,921 feet). Do not select [On] when the altitude is less than 1,500 meters (4,921 feet).</p>	Off
<p>Key Lock</p> <p>Specify whether or not to lock the buttons on the control panel. You can change this setting to [Off] by pressing the [AV Mute] button on the projector's control panel for 10 seconds.</p>	Off
<p>Reset All</p> <p>Reset all menus to their defaults.</p> <p>This function cannot restore the default settings of [User Logo] in [Default Settings 1], [Current Time] and [Startup Password] in [Default Settings 2].</p>	-
<p>Startup Password > Register Password</p> <p>Enter a 6-digit password. The current password is required to change the password.</p>	000000
<p>Startup Password > Password Protect</p> <p>Specify whether or not to enter a password when the projector is turned on. If this is selected, a password must be entered when the projector is turned on after the power cord has been unplugged. However, a password is not required when turning the projector on from the standby mode.</p> <p>A password is required to change this setting.</p>	Off

Display Status

Item
<p>Input</p> <p>Displays the selected input signals.</p>
<p>Resolution</p> <p>Displays the resolution.</p> <p>This item appears when you select [Computer] or [HDMI] (RGB signals) as the input signal.</p>
<p>Frequency</p> <p>Displays the synchronous frequency.</p> <p>This item appears when you select [Computer] or [HDMI] (RGB signals) as the input signal.</p>
<p>Sync</p> <p>Displays the synchronous signal polarity.</p> <p>This item appears when you select [Computer] as the input signal.</p>
<p>Signal Format</p> <p>Displays the Y/Pb/Pr signal format.</p> <p>This item appears when you select [Y/Pb/Pr] or [HDMI] (Y/Pb/Pr signals) as the input signal.</p>
<p>Video Mode</p> <p>Displays the video signal color format.</p> <p>This item appears when you select [Video] as the input signal.</p>
<p>Lamp Time</p> <p>Displays the lamp usage time.</p>
<p>Lamp Reset Count</p> <p>Displays the number of lamp replacements.</p>
<p>Total Time</p> <p>Displays the projector usage time.</p>
<p>Total CO2 Reduction</p> <p>Displays the total reduction in CO₂ caused by setting the lamp to the eco mode.</p>
<p>Eco Time Ratio</p> <p>Displays the ratio of the time eco mode was used to the total use time.</p>

Item
Current Time Displays the current time specified in [Current Time] in [Default Settings 2].
Main FW Version Displays the version of the firmware on the main board.

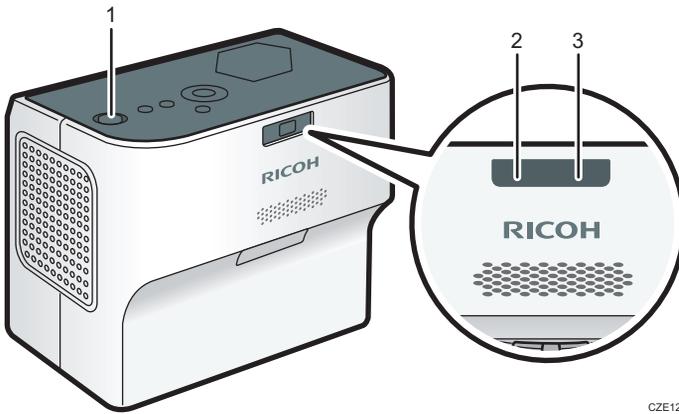
5. Troubleshooting

This chapter explains the basic problems and troubleshooting methods when an indicator light is lit.

Indicator Display List

The projector uses the [Power] button, indicators, and beeps to notify you if a malfunction occurs. Check the indicator's status, and implement the following measures. "⚡" in the table means the indicator is flashing.

Indicator location



CZE123

1. [Power] button
2. Lamp indicator
3. Temp indicator

Status	Causes	Solutions
<p>The projector does not turn on.</p> <p>Lamp Temp</p> 	<p>The projector has malfunctioned.</p>	<p>Disconnect the power cord, and contact your service representative.</p>

Status	Causes	Solutions
<p>"Hardware Error" was displayed, and the projector turned off during operation.</p>  <p>Flashing interval : 0.2 seconds</p>	<p>The projector has malfunctioned.</p>	<p>Disconnect the power cord, wait a while, and then turn on the projector again.</p> <p>You can also press and hold the [Power] button on the remote control or the control panel for two seconds.</p> <p>If the problem cannot be resolved, contact your service representative.</p>
<p>The lamp does not turn on.</p> 	<ul style="list-style-type: none"> • The lamp has overheated and cannot turn on. • The lamp's service life has expired. • The projector has malfunctioned. 	<ul style="list-style-type: none"> • Disconnect the power cord, wait a while, and then turn on the projector again. You can also press and hold the [Power] button on the remote control or the control panel for two seconds. • If the lamp burns out, replace it with a new lamp. For details of how to replace the lamp, see page 81 "Replacing the Lamp".
<p>The lamp turned off during operation.</p>  <p>Flashing interval: 1 second</p>	<ul style="list-style-type: none"> • The lamp's service life has expired. • The projector has malfunctioned. 	<ul style="list-style-type: none"> • Disconnect the power cord, wait a while, and then turn on the projector again. You can also press and hold the [Power] button on the remote control or the control panel for two seconds. • If the lamp burns out, replace it with a new lamp. For details of how to replace the lamp, see page 81 "Replacing the Lamp".

Status	Causes	Solutions
<p>The lamp does not turn on, turned off during operation, or it does not turn off.</p> <p> Lamp Temp</p> <p>Flashing interval: 0.2 seconds</p>	<p>The projector has malfunctioned.</p>	<p>Disconnect the power cord, wait a while, and then turn on the projector again.</p> <p>You can also press and hold the [Power] button on the remote control or the control panel for two seconds.</p> <p>If the problem cannot be resolved, contact your service representative.</p>
<p>The lamp turned off during operation, or it does not turn on.</p> <p> Lamp Temp</p> <p>Flashing interval: 1 second</p>	<p>The lamp cover is not installed correctly.</p>	<p>Disconnect the power cord, and reinstall the lamp cover correctly. For details of how to install the lamp cover, see page 81 "Replacing the Lamp".</p>
<p>"Temperature Error" was displayed, and the projector turned off during operation.</p> <p> Lamp Temp</p> <p>Flashing interval: 5 seconds</p>	<ul style="list-style-type: none"> • The interior has overheated. • The projector is being used in a high-temperature environment. 	<p>Place the projector so that the intake and exhaust vents are not blocked.</p> <p>Disconnect the power cord, wait a while, and then turn on the projector again.</p> <p>You can also press and hold the [Power] button on the remote control or the control panel for two seconds.</p>
<p>"Fan Error" was displayed, and the projector turned off during operation.</p> <p> Lamp Temp</p> <p>Flashing interval: 1 to 4 times in 5 seconds</p>	<p>The cooling fan in the projector has malfunctioned.</p>	<p>Disconnect the power cord, and contact your service representative.</p>

Status	Causes	Solutions
<p>The projector turned off during operation, or it does not turn on.</p>  <p>Flashing interval: 0.2 seconds</p>	<p>The projector has malfunctioned.</p>	<p>Disconnect the power cord, wait a while, and then turn on the projector again.</p> <p>You can also press and hold the [Power] button on the remote control or the control panel for two seconds.</p> <p>If the problem cannot be resolved, contact your service representative.</p>
<p>The lamp turned off during operation.</p>  <p>Flashing interval: 1 second</p>	<ul style="list-style-type: none"> • The interior has overheated. • The projector is being used in a high-temperature environment. 	<ul style="list-style-type: none"> • Place the projector so that the intake and exhaust vents are not blocked. • Disconnect the power cord, wait a while, and then turn on the projector again. You can also press and hold the [Power] button on the remote control or the control panel for two seconds. If the problem cannot be resolved, contact your service representative.
<p>The lamp turned off during operation.</p>  <p>Flashing interval: 1 second</p>	<ul style="list-style-type: none"> • The lamp's service life has expired. 	<ul style="list-style-type: none"> • Disconnect the power cord, wait a while, and then turn on the projector again. You can also press and hold the [Power] button on the remote control or the control panel for two seconds. • If the lamp burns out, replace it with a new lamp. For details of how to replace the lamp, see page 127 "Replacing the Lamp".

Status	Causes	Solutions
<p>The lamp does not turn on.</p>  <p>Flashing interval: 1 second</p>	<p>The projector has malfunctioned.</p>	<p>Disconnect the power cord, wait a while, and then turn on the projector again.</p> <p>You can also press and hold the [Power] button on the remote control or the control panel for two seconds.</p> <p>If the problem cannot be resolved, contact your service representative.</p>
<p>The lamp turned off during operation.</p>  <p>Flashing interval: 1 second</p>	<p>The projector has malfunctioned.</p>	<p>Disconnect the power cord, wait a while, and then turn on the projector again.</p> <p>You can also press and hold the [Power] button on the remote control or the control panel for two seconds.</p> <p>If the problem cannot be resolved, contact your service representative.</p>

Common Problems

If you think a malfunction has occurred, check the following before contacting your service representative.

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 page 81 "Replacing the Lamp". • When projecting an image on the tabletop, be sure to press the [Power] button and wait until the projector cooling process completes before disconnecting the power cord. If you disconnect the power cord without pressing the [Power] button or the projector's power is turned off suddenly due to a power outage, you cannot turn the projector back on for up to approximately 25 minutes because it needs to release the internal heat. Wait until the projector cools down.
Power turns off during use.	<ul style="list-style-type: none"> • Make sure the environment in which the projector is being used is within the acceptable temperature range. • Make sure the vents are not blocked.

Problem	Solutions
No image.	<ul style="list-style-type: none"> • Make sure the input signal is switched correctly if [Auto Input Search] in [Default Settings 1] is set to [Off]. For details, see page 59 "Default Settings 1 Menu". • Make sure the AV mute function is not turned on. For details, see page 39 "Temporarily Blanking the Image and Muting the Audio". • Check the settings of [Brightness] in [Image Adjustment]. For details, see page 50 "Image Adjustment Menu". • Make sure the computer or AV equipment is connected to the projector correctly. For details, see page 26 "Connecting Equipment to the Projector". • Make sure the computer's image output is switched correctly. For details, see page 31 "When projecting the screen of a laptop computer". • Make sure the computer or AV equipment is working properly.
No sound.	<ul style="list-style-type: none"> • Make sure the input signal is switched correctly if [Auto Input Search] in [Default Settings 1] is set to [Off]. For details about how to switch the input signal, see page 30 "Projecting an Image". • Make sure the AV mute function is not turned on. For details, see page 39 "Temporarily Blanking the Image and Muting the Audio". • Check the speaker's volume adjustment. For details, see page 37 "Adjusting the Volume of the Speaker". • Make sure the computer or AV equipment is connected to the projector correctly. For details, see page 26 "Connecting Equipment to the Projector". • Make sure the computer or AV equipment is working properly.

Problem	Solutions
Image is not projected normally.	<ul style="list-style-type: none"> • Make sure the input signal is compatible with the projector. For details, see page 89 "List of Compatible Signals". • Check the status of the video tape or other video source. • Execute [Auto Set Signals] in [Image Adjustment]. For details, see page 50 "Image Adjustment Menu". • Check the settings of the computer's graphics driver. For details, see the manual provided with the computer.
Image is blurred. Image is partially out of focus.	<ul style="list-style-type: none"> • Make sure the lens is clean. For details, see page 79 "Cleaning the Projection Window". • Check the focus adjustment. For details, see page 33 "Adjusting the Focus". • Make sure the projection distance is within the projector's range. For details, see page 25 "Relationship Between the Projection Distance and the Screen Size". • Check the installation angles of the projector and screen. For details, see page 33 "Adjusting the Angle of the Projection". • Check the settings of [Sharpness] and [Phase] in [Image Adjustment]. For details, see page 50 "Image Adjustment Menu".
Image is dark.	<ul style="list-style-type: none"> • Check the settings of [Brightness] and [Contrast] in [Image Adjustment]. For details, see page 50 "Image Adjustment Menu". • Make sure the lamp is not near the end of its service life. For details, see page 63 "Display Status". • Check the settings of [RGB Input Range] in [Image Adjustment]. For details, see page 50 "Image Adjustment Menu". • Make sure [3D Projection] in [Display Settings] is set to [Off]. For details, see page 54 "Display/Sound Settings Menu".

Problem	Solutions
<p>Color is faded. Tint is poor.</p>	<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 page 50 "Image Adjustment Menu". • Make sure the screen is clean. • Check the settings of [Wall Color Mode] in [Display Settings]. For details, see page 54 "Display/Sound Settings Menu". • Make sure the lamp is not near the end of its service life. For details, see page 63 "Display Status".
<p>The projector's operation keys do not respond.</p>	<ul style="list-style-type: none"> • Make sure [Key Lock] in [Default Settings 2] is not set to [On]. For details, see page 60 "Default Settings 2 Menu".
<p>The remote control does not respond.</p>	<ul style="list-style-type: none"> • Make sure the ID assigned to the remote control and in the settings of [Remote Control ID] in [Default Settings 2] are the same. For details, see page 60 "Default Settings 2 Menu". • 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 page 20 "Loading Batteries into the Remote Control". • Make sure the remote control is inside its effective range. For details, see page 19 "Effective Range of the Remote Control". • 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.
<p>Display language is unknown.</p>	<ul style="list-style-type: none"> • Press the [Menu] button, and then select the display language in [Language / XXX] (XXX indicates the current display language) on the  tab. For details, see page 60 "Default Settings 2 Menu".

Accessing the Online Knowledge Base

If you have any questions about the projector, refer to the knowledge base. Visit our global website listed below, and then access a knowledge base page in your language.

<http://www.ricoh.com/support/>

You can search the knowledge base by product name or keywo

6. Maintenance

This chapter explains the operating precautions and maintenance for the projector.

Operating Precautions

CAUTION

- The machine's light uses a mercury vapor lamp that becomes high pressure when it is turned on. The lamp has the following characteristics, so be sure to handle it with care after understanding the contents. If the lamp explodes and either you are injured from broken pieces of glass, think you have gotten glass particles or mercury vapour in your eyes, or have inhaled glass particles or mercury vapour, contact a doctor immediately.
 - Deterioration or shock can cause the lamp's life span to end or the lamp to explode. If the lamp explodes, it may make a big noise.
 - The time that it takes for the lamp to reach its life span or explode depends on each individual lamp and its operating conditions. It is possible that it might explode the first time it is used.
 - If you use the lamp past its replacement period, the possibility of explosion increases.
 - If the lamp explodes, broken glass pieces may be scattered around the inside of the machine and ejected from the vent or other opening.
 - If the lamp explodes, a very small amount of mercury vapor in the lamp tube and broken glass pieces may be ejected from the vents or other opening.

Pay attention to the following points when using the projector:

- What to do if a lamp has exploded
 - If the lamp explodes, remove the power cord from the projector, leave the room while making sure it is thoroughly ventilated.
 - If the lamp explodes and you think that you have gotten glass particles or mercury vapor in your eyes or have inhaled either, contact a doctor immediately.
 - Clean up the area around the projector completely while being careful not to get injured from any broken glass pieces.
 - Throw away any food that was near the projector.
 - Ask your service representative to replace the lamp and inspect the projector.
- What to do if a battery has leaked
 - If leakage from a battery adheres to your skin, rinse it with water immediately, and then contact a doctor.
 - Wipe off the leakage with tissue paper while being careful not to touch it.

- Soak the tissue paper that you used in water, and then throw it away as burnable trash.
- When you carry the projector by hand, hold it with both hands and keep it in a horizontal position. If you hold the projector with one hand, its covers may come off or you may drop it.
- If moving the projector under conditions including vibration and shock, use both the packing case and included carrying bag. Transporting the projector using the carrying bag only may damage it due to shock or vibration. Further, transporting the projector in a damaged packing case may damage the projector, so use a packing case that is strong enough to protect the projector from shock or vibration.
- Do not apply volatile substances such as insecticide to the projector. Also, do not bring the projector into long-term contact with rubber or vinyl products. Doing so may cause discoloration or the paint to peel.
- The projector is not intended for long-term continuous operation. Further, do not use the projector before removing it completely from the packing case. If a malfunction occurs when using the projector under these conditions, a fee is charged for repair even if the warranty is still in effect.
- Do not use locations that may be hot, such as near a heater. Doing so may cause the projector to malfunction or reduce the service life.
- Avoid locations that may become smoky. Particulates may adhere to the optical parts, reducing the service life and causing the image to darken.
- Using the projector close to a television or radio may adversely affect the images and sound.
- Do not expose the projector to salt air or corrosive gas. Also, do not place the projector in a laboratory or other location where a chemical reaction might occur. Doing so may cause the projector to malfunction.
- Moving the projector from a low-temperature location to a high-temperature location may cause water droplets to form on the projector lens and parts due to condensation. Continued use under such conditions may cause malfunction, so do not use the projector until the water droplets have evaporated.
- The air is thin at high elevations, so the cooling efficiency of the projector is reduced. Select [On] in [High Altitude Mode] before using.
- Do not use the projector in an extremely inclined position ($\pm 20^\circ$ or greater). Doing so may cause malfunction or reduce the service life.
- Clean the air filter and the bottom air intake at a regular interval. If the filter becomes clogged, it may cause the inside of the projector to overheat and reduce the service life of the optical parts.
- If the air filter is damaged, replace it with a new one. Using a damaged air filter may allow dust or dirt to get inside the projector and cause the projector to stop working or malfunction.

Cleaning the Projector

WARNING

- Do not remove any covers or screws that are not mentioned in this manual. There are high voltage components inside the machine that may cause electric shock. Contact your service representative if any of the machine's internal components require maintenance, adjustment, or repair.
 - Do not disassemble or modify the machine. Doing so may cause injury or malfunction.
- Do not attempt to clean or replace parts for a machine that is installed in a high location on a wall or ceiling. Doing so may cause it to fall down, resulting in an injury.
 - Do not open the lamp cover of a machine that is installed on a wall or ceiling. Doing so may cause the lamp cover to fall down. If the lamp is broken, pieces of glass may fall and cause an injury.
 - Contact your sales or service representative to clean or replace parts for a machine that is installed on a wall or ceiling.

CAUTION

- When performing maintenance on the machine, always disconnect the power cord from the wall outlet.

Cleaning the Air Filter

Important

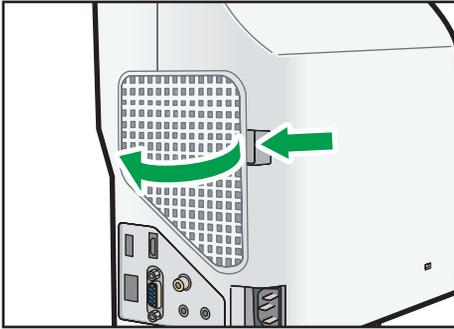
- An error in which the lamp turns off by itself during operation may occur if the air filter and the bottom air intake vent get clogged and the interior of the projector overheats due to inadequate circulation of air. Clean the air filter and the bottom air intake vent also when "Temperature Error" is displayed.
- If an air filter is damaged, replace it with a new one. Using a damaged air filter may cause the projector to stop operating or malfunction. For details, contact your sales representative or service representative.

The air filter prevents dust and dirt from entering the interior of the projector. If you will use the projector, install the air filter.

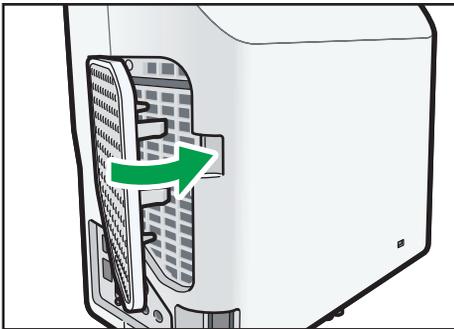
If the message "Check the air filter for dirt." is displayed, check the air filter for dirt or dust, and use the following procedure to clean off any dirt or dust.

1. **Disconnect the power plug.**

2. While pressing the lever on the right side of the air filter, pull the filter open.



3. Remove the air filter.
4. Use a vacuum cleaner to clean any dirt or dust from the filter.
5. Install the air filter in the projector.



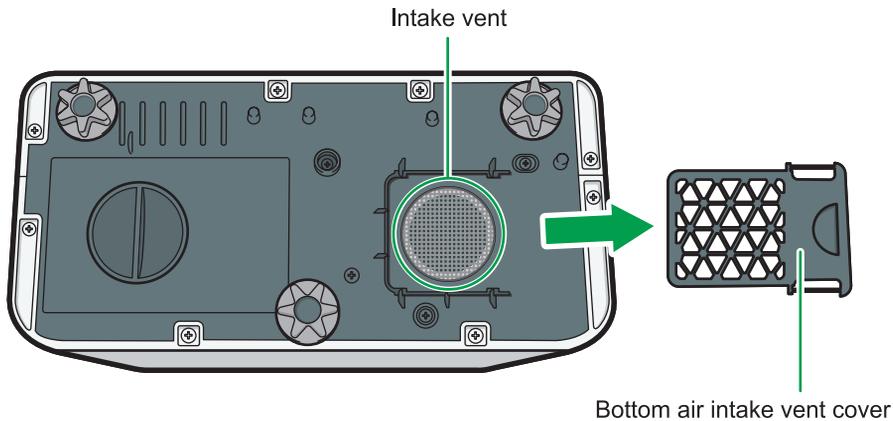
Insert the left side of the air filter in first, and then press the lever while pushing in the right side of the filter.

Make sure that the air filter is installed correctly. Otherwise, dirt and dust may enter the projector through any gaps and cause it to stop or malfunction.

Cleaning the Bottom Air Intake Vent

1. Place the projector on a stable and level surface with the bottom surface clearly visible.

2. Gently slide and pull out the bottom air intake vent cover to remove it, and then use a vacuum cleaner to clean any dirt or dust from the intake vent.



DHY852

3. Install the bottom air intake vent cover by sliding it gently back into place.

Check that the bottom air intake vent cover is correctly installed.

↓ Note

- The message is displayed only once at the following occasions:
 - Every 500 hours
 - After the machine restarts when an error that the lamp turns off by itself during operation has occurred
- The message is displayed for 30 seconds after the machine has been turned on. The message disappears when you perform any operation.
- Depending on the environment in which the projector is located, the filter may get clogged earlier than expected. When any dust or dirt has visibly collected on the air filter, clean it regardless of whether the warning message is displayed or not. A buildup of dust on the air filter may cause poor ventilation, causing the interior of the projector overheat and operations to stop or malfunction.
- If vacuuming the air filter does not remove the dust and dirt, wash it with water. After washing the air filter with water, make sure to dry it completely before reinstalling it back in the projector.

Cleaning the Projection Window

When cleaning the projection window, make sure to do the following:

- Use a commercially available blower or cloth for cleaning glass, cleaning paper, lens cleaner, etc.
- The projection window surface scratches easily, so do not rub or tap it with a hard object.

Cleaning the Projector

When cleaning the projector, make sure to do the following:

- Gently wipe any dirt from the projector using a soft cloth. Using a damp cloth may cause water to seep inside the projector and cause electric shock or malfunction.
- Do not use benzene or paint thinners. Doing so may cause the projector to warp, discolor, or the paint to peel. Further, do not use cleaning cloths that contain chemicals.

Replacing the Lamp

WARNING

- Before replacing the lamp, turn off the power and wait at least one hour to allow the machine to cool completely. If it is not completely cool, you may burn or injure yourself due to the inside of the machine and lamp unit being hot. If you replace the lamp without unplugging the power cord from the power outlet, electric shock or explosion may occur.
- Be careful when handling the used lamp so that it does not break. If it breaks, it may cause injury.

- Do not attempt to clean or replace parts for a machine that is installed in a high location on a wall or ceiling. Doing so may cause it to fall down, resulting in an injury.
- Do not open the lamp cover of a machine that is installed on a wall or ceiling. Doing so may cause the lamp cover to fall down. If the lamp is broken, pieces of glass may fall and cause an injury.
- Contact your sales or service representative to clean or replace parts for a machine that is installed on a wall or ceiling.

CAUTION

- Be sure to always use a dedicated replacement lamp that is new when replacing the lamp. If you use a lamp that is not dedicated, it may result in an explosion and injury.
- The machine's light uses a mercury vapor lamp that becomes high pressure when it is turned on. The lamp has the following characteristics, so be sure to handle it with care after understanding the contents. If the lamp explodes and you are either injured from broken pieces of glass, think you have gotten glass particles or mercury vapour in your eyes, or have inhaled glass particles or mercury vapour, contact a doctor immediately.
 - Deterioration or shock can cause the lamp's life span to end or the lamp to explode. If the lamp explodes, it may make a big noise.
 - The time that it takes for the lamp to reach its life span or explode depends on each individual lamp and its operating conditions. It is possible that it might explode the first time it is used.
 - If you use the lamp past its replacement period, the possibility of explosion increases.
 - If the lamp explodes, broken glass pieces may be scattered around the inside of the machine and ejected from the vent or other opening.
 - If the lamp explodes, a very small amount of mercury vapor in the lamp tube and broken glass pieces may be ejected from the vents or other opening.

★ Important

- The lamp is a glass product. Do not touch the glass surface with bare hands, hit it forcefully, or damage it. For details about what to do if a lamp has exploded, see page 75 "Operating Precautions".
- This projector's lamp contains trace amounts of environmentally harmful inorganic mercury. Be careful not to break used lamps, and dispose of them in accordance with local regulations.

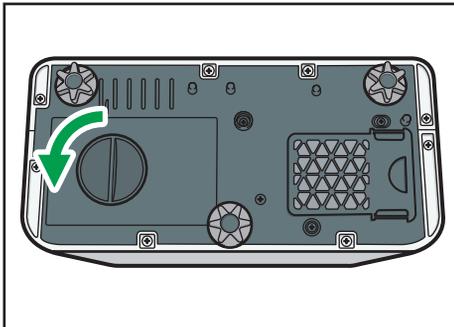
When the lamp is due for replacement, the message "The lamp is reaching the end of its life. Please change it." is displayed. Change the lamp as instructed.

When [Lamp Power] in [Energy Saving Settings] is specified as [Std.], replace the lamp after approximately 3,500 hours. When the setting is [Eco], replace it after approximately 5,000 hours. However, depending on the characteristics of the lamp and how the lamp is used, the image may become dim or the lamp may go out before the message is displayed. We recommend preparing a spare lamp, just in case.

Do not repeatedly turn off the projector immediately after the lamp is lit, or turn on the projector immediately after turning it off. Doing so may damage the lamp or shorten its life.

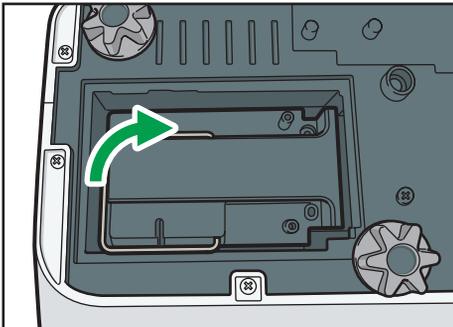
Furthermore, if the lamp is used for an extended period of time, the image may darken or the lamp may burn out. If this happens, replace the lamp with a new one.

1. Turn over the projector and place it on a flat surface so that you can see the bottom of the projector.
2. Turn the knob counterclockwise, and then open the lamp cover.



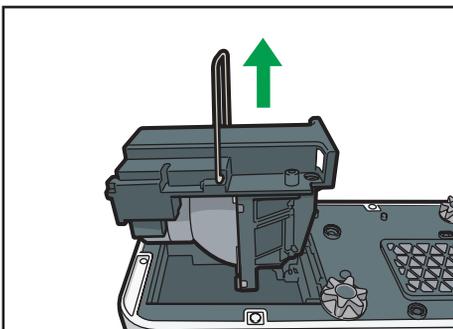
CZE150

3. Raise the metal handle.



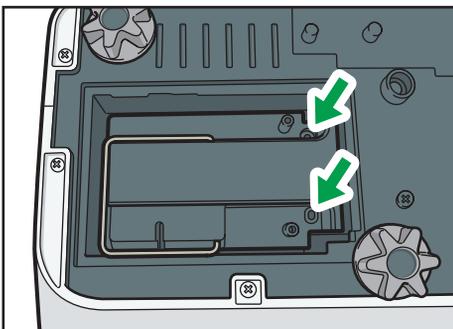
CZE151

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



CZE152

5. Insert a new lamp unit.



CZE153

Make sure that the small projections inside the projector are inserted into the holes of the lamp unit properly.

6. Close the lamp cover.

Correctly install the outer lamp cover. Incorrect installation may prevent the lamp or projector from turning on.

7. Reset the lamp time.

For the reset method, see the manual provided with the lamp.

 **Note**

- The lamp usage time can be verified using [Lamp Time] in [Display Status].

Consumables

- Lamp unit
RICOH PJ Replacement Lamp Type1 1
- Air filter
RICOH PJ Replacement Air Filter Type4

↓ Note

- Contact your sales or service representative for information about consumables.

7. Appendix

This chapter explains the projector's specifications and compatible signals. This chapter also explains where to inquire about the projector and related services.

Specifications for the Projector

Component	Specifications
Power consumption	Standard mode: 313 W Eco mode: 208 W
Power consumption (Standby mode)	0.22 W
Weight	Approx. 3.0 kg (6.7 lb.)
External dimensions (not including protruding parts)	257 × 144 × 221 mm (10.1 × 5.7 × 8.7 inches)
Operating environment	Temperature: 5 to 35°C (73 to 95°F), Humidity: 30 to 70%
Power requirements	<ul style="list-style-type: none">•  Region A (mainly Europe and Asia) 220–240 V, 1.7 A, 50/60Hz•  Region B (mainly North America) 120 V, 3.7 A, 60Hz
Display element	<ul style="list-style-type: none">• Display method Single-chip DLP®• Panel size 0.65 inches• Pixels 1,024,000 pixels (1,280 H × 800 V)
Projection method	Ultra short-focus lens/mirror projection method
Lamp	High-pressure mercury lamp (Standard mode: 250 W, Eco mode: 150 W)
Projection screen size	48 to 80 inches
Projection distance	12 to 25 cm (4.6 to 9.8 inches)
Speaker	2 W (Mono)

Component	Specifications
Connection ports	<ul style="list-style-type: none"> • Computer In port Mini D-SUB15 × 1 • HDMI port (HDCP compliant)* HDMI × 1 • Video In port RCA_1 pin × 1 • Audio In port Mini Jack × 1 • Audio Out port Mini Jack × 1 • Control port USB-TYPE-minB × 1

* 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.

List of Compatible Signals

Set the computer and AV equipment output signals so that they match the input signals compatible with the projector.

If the image flickers, blurs, or is not displayed, check that the resolution and frequency of the input signals is supported by the projector.

↓ Note

- Images with a resolution greater than 1280 × 800 are compressed when displayed, so some of the information may be lost or the image may deteriorate.

Video Input

Compatible mode

NTSC, PAL, SECAM, PAL-M, PAL-N, PAL60, NTSC4.43

Y/Pb/Pr Input

Compatible mode

480i, 480p, 576i, 576p, 720/50p, 720/60p, 1080/50i, 1080/60i, 1080/50p, 1080/60p

Computer Input

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
640 × 480	640	480	59.93	31.46	25.17
			72.81	37.86	31.50
			75.00	37.50	31.50
			85.01	43.27	36.00
720 × 400	720	400	85.04	37.93	35.50
800 × 600	800	600	56.25	35.16	36.00
			60.32	37.88	40.00
			72.19	48.08	50.00
			75.00	46.88	49.50
848 × 480	848	480	85.06	53.67	56.25
			60.00	31.02	33.75
1024 × 768	1024	768	60.00	48.36	65.00
			70.07	56.48	75.00
			75.03	60.02	78.75
			85.00	68.68	94.50
1152 × 864	1152	864	75.00	67.50	108.00
1280 × 720	1280	720	60.00	45.00	74.25
1280 × 768	1280	768	59.99	47.40	68.25
			59.87	47.78	79.50
			74.89	60.29	102.25
			84.84	68.63	117.50
1280 × 800	1280	800	59.91	49.31	71.00
			59.81	49.70	83.50
			74.93	62.79	106.50
			84.88	71.55	122.50
1280 × 960	1280	960	60.00	60.00	108.00
			85.00	85.94	148.50
1280 × 1024	1280	1024	60.02	63.98	108.00
			75.02	79.98	135.00
			85.02	91.15	157.50
1360 × 768	1360	768	60.02	47.71	85.50
1366 × 768	1366	768	60.00	48.00	72.00
			59.79	47.71	85.50
1400 × 1050	1400	1050	59.95	64.74	101.00
			59.98	65.32	121.75
			74.87	82.28	156.00
1440 × 900	1440	900	59.90	55.47	88.75
			59.89	55.93	106.50
			74.98	70.64	136.75
			84.84	80.43	157.00
1600 × 900	1600	900	60.00	60.00	108.00
1600 × 1200	1600	1200	60.00	75.00	162.00
1680 × 1050	1680	1050	59.88	64.67	119.00
			59.95	65.29	146.25

HDMI Input

Mode	Resolution		Frequency		
	Horizontal (pixel)	Vertical (pixel)	Vertical (Hz)	Horizontal (kHz)	Clock (MHz)
480i	720	242.5	59.940	15.734	13.500
576i	720	288	50.000	15.625	13.500
480p	720	483	59.940	31.469	27.000
576p	720	576	50.000	31.250	27.000
720 / 50p	1280	720	50.000	37.500	74.250
720 / 60p	1280	720	60.000	45.000	74.250
1080 / 50i	1920	540	50.000	28.125	74.250
1080 / 60i	1920	540	60.000	33.750	74.250
1080 / 24p	1920	1080	24.000	27.000	74.250
1080 / 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 × 480	640	480	59.93	31.46	25.17
			72.81	37.86	31.50
			75.00	37.50	31.50
			85.01	43.27	36.00
800 × 600	800	600	56.25	35.16	36.00
			60.32	37.88	40.00
			72.19	48.08	50.00
			75.00	46.88	49.50
848 × 480	848	480	85.06	53.67	56.25
			60.00	31.02	33.75
			60.00	48.36	65.00
1024 × 768	1024	768	70.07	56.48	75.00
			75.03	60.02	78.75
			85.00	68.68	94.50
1152 × 864	1152	864	75.00	67.50	108.00
1280 × 720	1280	720	60.00	45.00	74.25
1280 × 768	1280	768	59.99	47.40	68.25
			59.87	47.78	79.50
			74.89	60.29	102.25
			84.84	68.63	117.50
1280 × 800	1280	800	59.91	49.31	71.00
			59.81	49.70	83.50
			74.93	62.79	106.50
			84.88	71.55	122.50
1280 × 960	1280	960	60.00	60.00	108.00
			85.00	85.94	148.50
			60.02	63.98	108.00
1280 × 1024	1280	1024	75.02	79.98	135.00
			85.02	91.15	157.50
			60.02	47.71	85.50
1360 × 768	1360	768	60.00	48.00	72.00
1366 × 768	1366	768	59.79	47.71	85.50
			59.95	64.74	101.00
1400 × 1050	1400	1050	59.98	65.32	121.75
			74.87	82.28	156.00
			59.90	55.47	88.75
1440 × 900	1440	900	59.89	55.93	106.50
			74.98	70.64	136.75
			84.84	80.43	157.00
			60.00	60.00	108.00
1600 × 900	1600	900	60.00	60.00	108.00
1680 × 1050	1680	1050	59.88	64.67	119.00
			59.95	65.29	146.25

3D Format

○: Supported

✕: Not Supported

Computer input

Mode	Frequency		3D format		
	Vertical (Hz)	Clock (MHz)	Frame Sequential	Side by Side	Top and Bottom
640 × 480	59.93	25.17	○	○	○
800 × 600	60.32	40.00	○	○	○
1024 × 768	60.00	65.00	○	○	○
1280 × 960	60.00	108.00	○	○	○
1280 × 1024	60.02	108.00	○	○	○
1360 × 768	60.02	85.50	○	○	○
1366 × 768	60.00	72.00	○	○	○
	59.79	85.50	○	○	○
1440 × 900	59.90	88.75	○	○	○
	59.89	106.50	○	○	○
1600 × 900	60.00	108.00	○	○	○
1600 × 1200	60.00	162.00	○	○	○
1680 × 1050	59.88	119.00	○	○	○
	59.95	146.25	○	○	○

Y/Pb/Pr input

Mode	3D format		
	Frame Sequential	Side by Side	Top and Bottom
480i	○	○	○
576i	○	○	○
480p	✕	○	○
576p	✕	○	○
720 / 60p	✕	○	○
1080 / 60i	✕	○	○
1080 / 60p	✕	○	○

Video input

Mode	3D format		
	Frame Sequential	Side by Side	Top and Bottom
NTSC	○	✕	✕
PAL	○	✕	✕

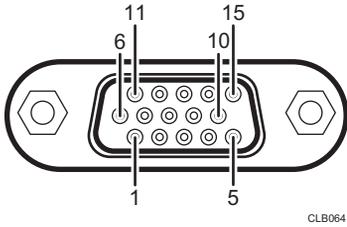
HDMI input

Mode	Frequency		3D format			
	Vertical (Hz)	Clock (MHz)	Frame Sequential	Side by Side	Top and Bottom	Frame Packing
640 × 480	59.93	25.17	○	○	○	✕
800 × 600	60.32	40.00	○	○	○	✕
1024 × 768	60.00	65.00	○	○	○	✕
1280 × 960	60.00	108.00	○	○	○	✕
1280 × 1024	60.02	108.00	○	○	○	✕
1360 × 768	60.02	85.50	○	○	○	✕
1366 × 768	60.00	72.00	○	○	○	✕
	59.79	85.50	○	○	○	✕
1440 × 900	59.90	88.75	○	○	○	✕
	59.89	106.50	○	○	○	✕
1600 × 900	60.00	108.00	○	○	○	✕
1600 × 1200	60.00	162.00	○	○	○	✕
1680 × 1050	59.88	119.00	○	○	○	✕
	59.95	146.25	○	○	○	✕
480i	59.940	13.500	○	○	○	✕
576i	50.000	13.500	○	○	○	✕
480p	59.940	27.000	✕	○	○	✕
576p	50.000	27.000	✕	○	○	✕
720 / 60p	60.000	74.250	✕	○	○	✕
1080 / 60i	60.000	74.250	✕	○	○	✕
1080 / 60p	60.000	148.500	✕	○	○	✕
720 / 50p (Frame Packing)	50.000	148.500	✕	✕	✕	○
720 / 60p (Frame Packing)	59.940/60.000	148.350/148.500	✕	✕	✕	○
1080 / 24p (Frame Packing)	23.976/24.000	148.350/148.500	✕	✕	✕	○
1080 / 50i (Side by Side)	50.000	74.250	✕	○	✕	✕
1080 / 60i (Side by Side)	59.940/60.000	74.176/74.250	✕	○	✕	✕
720 / 50p (Top and Bottom)	50.000	74.250	✕	✕	○	✕
720 / 60p (Top and Bottom)	59.940/60.000	74.176/74.250	✕	✕	○	✕
1080 / 24p (Top and Bottom)	23.976/24.000	74.176/74.250	✕	✕	○	✕

Specifications for Ports

Computer In Port

Pin assignment



Pin No.	Pin description	
	During RGB input	During Y/Pb/Pr input
1	Video signal (R)	Color difference signal (Pr)
2	Video signal (G)	Luminance signal (Y)
3	Video signal (B)	Color difference signal (Pb)
4	N.C	-
5	GND	-
6	GND (R)	GND (Pr)
7	GND (G)	GND (Y)
8	GND (B)	GND (Pb)
9	N.C	-
10	GND	-
11	N.C	-
12	I ² C Data	-
13	Horizontal sync signal	-
14	Vertical sync signal	-
15	I ² C CLOCK	-

Input Signal

- RGB input
RGB signals: 0.7V (p-p), 75 Ω
Horizontal sync signal: TTL level (Pos/neg polarity)
Vertical sync signal: TTL level (Pos/neg polarity)
- Y/Pb/Pr input
Y signal: 1.0V (p-p), 75 Ω
Pb/Pr signals: 0.7V (p-p), 75 Ω

Control Port

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) For details of Acknowledge (Normally ended), see "Main commands".

Main commands

Item	Command	Acknowledge (Normally ended) *
Power on	PON	=PON:SC0
Power off	POF	=POF:SC0

Item	Command	Acknowledge (Normally ended) *
Guidance display on	ICN:1	=ICN:1
Guidance 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
Computer input	INP:1	=INP:1
HDMI input	INP:5	=INP:5

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

Note

- The control port is for service representatives or administrators of the projector.
- A USB driver must be installed to control the projector using the control port. For details, contact your service representative.

Information

Where to Inquire

Contact your sales or service representative for further information about topics covered in this manual or to inquire about topics not covered in this manual.

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