For safe and correct use, be sure to read "Safety Information" before using the machine.
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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:

- 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

Manuals for 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® Reader®/Adobe Reader must be installed in order to view the manuals as PDF files.

Safety Information

Provides information about safe usage of the projector.
To avoid injury and prevent damage to the projector, be sure to read Safety Information.

Setup Guide

Provides basic information about how to install the projector. Since the contents of this manual are a summary of Operating Instructions, see Operating Instructions for detailed information.

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 following software products are referred to using general names:

<table>
<thead>
<tr>
<th>Product name</th>
<th>General name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RICOH PJ Network Utility Type A</td>
<td>Network Utility</td>
</tr>
<tr>
<td>RICOH JPEG Conversion Tool Type A</td>
<td>JPEG Conversion Tool</td>
</tr>
</tbody>
</table>

Manuals List

<table>
<thead>
<tr>
<th>Manual Name</th>
<th>Printed Manuals Provided</th>
<th>PDF Manuals Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Information</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Setup Guide</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Manual Name</td>
<td>Printed Manuals Provided</td>
<td>PDF Manuals Provided</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Operating Instructions</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Viewing the PDF Manual on the CD-ROM

This section describes how to view the PDF manual on the supplied manual CD-ROM.

**File path**

The manual is included in the following folder on the CD-ROM:

```
Manual\(language)
```

1. Insert the CD-ROM in the CD-ROM drive of your computer.
2. Specify a language.
   
The launcher screen appears.
3. Click [Read PDF manuals].
   
The PDF manual is displayed on the screen.

**Note**

- To view the PDF manuals, you need to have Adobe Acrobat Reader/Adobe Reader installed on your computer.
How to Read This Manual

Symbols

This manual uses the following symbols:

⭐ Important
Indicates points to pay attention to when using the projector.

👉 Note
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.

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.
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.

Main Functions

The projector features the following functions that you can use.

**Auto set function**

The projector detects the signal and adjusts for flickering and the position of the projected image if you press the [Auto set] button when the projector is connected to a computer.

**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 pauses the image temporarily.

**Magnify/Zoom**

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

**Wall color correction**

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.

**Administrator authentication**

Enable administrator authentication so that only the administrator can change the security settings. This improves the security of the projector because general users cannot change the settings.

**User logo function**

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

**Presentations without a computer**

The projector can project JPEG or MPEG files from a USB memory device that is connected to it. JPEG files stored on a digital camera can also be projected.
It is possible to convert PowerPoint materials to JPEG format using JPEG Conversion Tool and then project them using the projector.

**Mouse remote control**
You can operate the mouse pointer on a computer by using the remote control provided with the projector.

**Network Utility**
Network Utility is an application that is provided with the projector and is used for connecting the projector and a computer to project images. You can also easily specify wireless LAN settings using this application.
Checking the Accessories

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.

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote control</td>
<td>![Remote control]</td>
</tr>
<tr>
<td>AAA battery LR03 (2 ea)</td>
<td>![AAA battery LR03]</td>
</tr>
<tr>
<td>RGB cable (3 m)</td>
<td>![RGB cable]</td>
</tr>
<tr>
<td>Power cord</td>
<td>![Power cord]</td>
</tr>
<tr>
<td>Mouse remote control receiver</td>
<td>![Mouse remote control receiver]</td>
</tr>
<tr>
<td>Carrying bag</td>
<td>![Carrying bag]</td>
</tr>
<tr>
<td>Safety Information</td>
<td>![Safety Information]</td>
</tr>
<tr>
<td>Setup Guide</td>
<td>![Setup Guide]</td>
</tr>
<tr>
<td>CD-ROM</td>
<td>![CD-ROM]</td>
</tr>
<tr>
<td>Warranty card</td>
<td>![Warranty card]</td>
</tr>
</tbody>
</table>
• The bundled accessories may vary depending on the location that this product was purchased.
• Use only the RGB cable provided with the projector.
• Use only the power cord set provided with the projector.
• The Operating Instructions and various applications are on the provided CD-ROM. For procedures about how to read Operating Instructions, see p.9 "Viewing the PDF Manual on the CD-ROM". For instructions about using the applications, see p.51 "How to use JPEG Conversion Tool", p.62 "How to use Network Utility", and p.120 "Managing the Projector Using Projector Management Utility".
Projector Parts and Their Functions

Control Panel (Top View)

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 1 or 3 second intervals: Standby.
     - Flashing at short intervals: Starting up or cooling.

2. [Input] button
   - Switches the signal input. The input signal changes each time the button is pressed.

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 mode.
6. **Arrow buttons**

   Used to operate the menu screen. The [↑] and [↓] buttons are used to adjust the size of the projected image. The [►] and [◄] buttons are used to adjust the volume.

7. **Projection window**

   Enlarges and projects the image (light).

   **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

1. **Remote control receiver, LED indicators**

   Receives the signal from the remote control. You can confirm the status of the projector by referring to the LED indicators. The left LED shows the status of the lamp, and the right LED shows the temperature inside the projector. For details, see p.107 "Indicator Display List".

2. **Speaker**

   Outputs the audio input from an external device.

3. **Focus lever**

   Adjusts the focus of the image.

4. **Adjustable feet**

   Adjusts the angle of the projection.

5. **Exhaust vents**

   Releases hot air from inside the projector.
1. **USB port**
   For connecting a USB memory device or USB device cable.

2. **HDMI port**
   For connecting an HDMI (High-Definition Multimedia Interface) cable.

3. **LAN port**
   For connecting an Ethernet cable.

4. **Computer In port (Y/Pb/Pr)**
   For inputting RGB signals from a computer or component image signals (Y/Pb/Pr) from a video player.

5. **Video In port**
   For inputting image signals from a video player.

6. **Audio In port**
   For inputting audio signals from a computer or video player.

7. **Intake vents**
   For circulating air from the outside to cool the projector.

8. **AC In socket**
   For connecting the power cord set provided with the projector.

9. **Security slot**
   For connecting an anti-theft cable.
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. The signal that is input changes each time the button is pressed.

3. [Page] buttons
   Changes slides, such as in a PowerPoint presentation. Press [→] to go to the next page. Press [←] to go to the previous page. These buttons can be used when the mouse remote control receiver is connected to a computer.

4. [Magnify] buttons
   Enlarges the image. Press the [+] button to enlarge the image. Press the [−] button to reduce the image to its original size.

5. [Keystone] buttons
   Adjusts for keystone distortion. Press the [+] button to increase the correction value. Press the [−] button to decrease the correction value.

6. [Power] button
   Turns the projector on and off.

7. [Freeze] button
   Temporarily pauses the image.

8. [AV Mute] button
   Temporarily blanks the screen and mutes the audio.
9. [Enter] button
   Enters the selected item or mode.

10. [Volume] buttons
    Adjusts the volume of the speaker. Press the [+ button to increase the volume. Press the [-] button to decrease the volume.

11. [Zoom] buttons
    Reduces the image. Press the [-] button to reduce the image. Press the [+ button to enlarge the image to its original size.

12. [HDMI] button
    Switches to HDMI input mode.

13. [Computer] button
    Switches to computer input mode. If only the Y/Pb/Pr signal is input, the Y/Pb/Pr screen appears when you press this button.

14. Number buttons
    Used to enter numbers.

15. [Auto set] button
    Automatically adjusts the image to match the signal input from a computer.

16. [Picture] button
    Switches the screen mode.

17. [Clear] button
    Deletes entered characters.

18. [Network] button
    Switches to network input mode.

19. [USB] button
    Switches to USB input mode.

20. Arrow buttons
    Used to operate the menu screen.

21. [R-Click] button
    Used to operate the computer with the remote control. It is the same as the right-click button on a mouse.

22. [Guide] button
    Displays the operation guide for slideshows.

23. [Aspect] button
    Switches the size of the projected image.

24. [Eco] button
    Switches the lamp power level.

25. [ID] button
    Registers the remote control ID.
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.

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.
• Do not dismantle the remote control.

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.

1. Distance: up to 4.5 meters (14.7 feet)
2. Angle: within 15 degrees

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 used in the remote control. 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 from the remote control 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.

1. Remove the battery cover from the remote control.
2. Insert the batteries.

![Remote Control](CLB016)

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

3. Close the battery cover.

![Battery Cover](CLB017)

**Note**

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

**Inputting Text**

Use the keyboard that is displayed on screen to input text on the setting screen.

1. Use the [▲], [▼], [◄], and [►] buttons on the remote control to select a character on the screen.

   The selected character is highlighted in orange.
2. Press the [Enter] button.
   The selected character appears in the text area.

3. After inputting all the characters, select [OK].

4. Press the [Enter] button.
   The text is input.

   **Note**
   - You can also use the number buttons on the remote control to input numbers.

---

**Operating a Computer with the Remote Control**

You can operate a computer using the projector’s remote control. This function can be used when the mouse remote control receiver is connected to a computer.

A computer with a USB port that supports USB 2.0 can be used. Supported operating systems are Windows XP, Vista, and 7.

   **Important**
   - Connect the mouse remote control receiver to a computer only when operating the computer with the remote control. When operating the projector with the remote control while the mouse remote control receiver is connected to the computer, the pointer on the computer screen also moves according to the key operations of the remote control.

---

1. **Arrow buttons**
   Moves the mouse pointer. Press the button that corresponds to the direction you want to move the pointer.
2. **[Enter] button**
   Left clicks.

3. **[R-Click] button**
   Right clicks.

4. **[Page] button**
   The [+] and [−] buttons change the pages in a PowerPoint presentation.

1. **Connect the mouse remote control receiver to the computer.**

2. **Point the remote control at the mouse remote control receiver and press the buttons.**

   **Note**
   - Some computers cannot be operated using the projector’s remote control.
   - The remote control may not work if the mouse remote control receiver is exposed to sunlight, fluorescent light, or strong light. If this happens, change the position or orientation of the mouse remote control receiver.
   - To drag-and-drop, hold down the [Enter] button while moving the pointer with the arrow buttons, and then release the button at the targeted location.

---

**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.

You need to specify an ID number to assign to each projector in [Remote Control ID] under [Default Settings] in advance.

1. **While pressing the [ID] button, press the number button that corresponds to the ID number of the projector to be operated for three seconds or more.**

   ![Remote Control](image)

   The ID number assigned to the remote control is changed.

2. **Operate the projector.**
The remote control cannot operate a projector unless the ID on the remote control is the same as the controller ID specified in the projector’s Default Settings menu.

- The ID number specified in the remote control is effective until a different ID number is specified.
- The ID number in the remote control must be specified again if the batteries are changed.

**Note**
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 p.26 "Relationship Between the Projection Distance and the Screen Size".

Projection Mode

You can position the projector in one of two ways.

Select the setting according to the position of the projector in [Projection Mode] under [Default Settings]. For details, see p.90 "Default Settings Menu".

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

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

Relationship Between the Projection Distance and the Screen Size

The size of the projected image varies according to the distance from the projector to the screen. Refer to the following table to position the projector in a suitable position.
Positioning the Projector

<table>
<thead>
<tr>
<th>Projection size*1</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>48 inches</td>
<td>12 cm (4.6 inches)</td>
<td>9 cm (3.7 inches)</td>
</tr>
<tr>
<td>60 inches</td>
<td>17 cm (6.5 inches)</td>
<td>12 cm (4.7 inches)</td>
</tr>
<tr>
<td>80 inches</td>
<td>25 cm (9.8 inches)</td>
<td>16 cm (6.2 inches)</td>
</tr>
</tbody>
</table>

*1 The sizes of the projected images are for a full size image without keystone adjustment.
Connecting Equipment to the Projector

**CAUTION**

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

Various equipments can be connected to the projector.

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

**Connecting a Computer**

Connect an RGB cable to the Computer In port of the projector and to the RGB output of a computer. To input audio signals, connect an audio cable to the Audio In port of the projector and to the audio output of a computer.

If an HDMI interface is available on a computer you want to use, connect an HDMI cable to the HDMI ports of the projector and the computer.

1. To the audio output
2. To the HDMI port
3. To the RGB output

**Note**

- Some computers cannot be connected to the projector. Before connecting a computer to the projector, check the output terminals and signal compatibility.
- To input a DVI signal to the projector, connect a conversion adapter or cable to the Computer In port or the HDMI port of the projector.
- The Audio In port is used for equipment that connects to the Computer In port or Video In port.
Connecting AV Equipment

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

To connect a DVD recorder, connect a conversion adapter BNC-pin to the Computer In port of the projector and to the Y/Pb/Pr output of the recorder.

To connect a video recorder or a DVD player, connect a video cable to the Video In port of the projector and to the video output of the recorder or the player.

To input audio signals, connect an audio cable to the Audio In port of the projector and to the audio output of the recorder or the player.

If an HDMI interface is available on a device you want to use, connect an HDMI cable to the HDMI ports of the projector and the device.

1. Video player, DVD player
2. DVD recorder
3. To the audio output
4. To the video output
5. To the HDMI port
6. To the Y/Pb/Pr output
7. To the audio output

**Note**

- The Audio In port is used for equipment that connects to the Computer In port or Video In port.
- 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 the Power Cord

⚠️ WARNING
- Do not use any power sources other than those that match the specifications shown. Doing so could result in fire or electric shock.

⚠️ WARNING
- Do not use any frequencies other than those that match the specifications shown. Doing so could result in fire or electric shock.

⚠️ WARNING
- 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.

⚠️ WARNING
- It is dangerous to handle the power cord plug with wet hands. Doing so could result in electric shock.

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

⚠️ 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.

⚠️ CAUTION
- 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.
1. Insert the connector of the power cord set into the AC In socket on the right side of the projector.

![Connector Insertion](CLB028.jpg)

2. Insert the power plug into a power outlet.

**Note**

- Do not place anything near the power outlet.
- When [Power On Method] in [Default Settings] is specified as [Auto.], the projector turns on as soon as the power plug is inserted in a power outlet (direct power on).
1. Preparations for Using the Projector
2. Projecting an Image

This chapter explains the procedure for projecting an image.

Basic Operations

⚠️ WARNING

• Do not look into the projection window or vent when the product is on. The bright light may damage your eyes. Be especially careful in an environment with children.

⚠️ 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 product or an accident.

⚠️ CAUTION

• 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 product failure. To temporarily suspend projection, select the mute function. To suspend longer, turn off the product.

🌟 Important

• Unplug the power cord if the projector will not be used for an extended period of time.
• If the lamp is used for an extended period of time, it may not light up or the image may become dark. If this happens, replace the lamp. In some rare cases, the lamp's brightness may vary slightly due to the characteristics of a lamp.

👨‍🏫 Note

• The projector supports various RGB signals, but signals that are not WXGA signals are expanded or compressed when displayed and the image quality is slightly decreased. We recommend setting the computer’s output to WXGA to get better image quality.
• The motion of images in videos projected using the DVD software on a computer may seem unnatural.
• Connect the projector and equipment before using the projector. For details, see p.28 "Connecting Equipment to the Projector".
• If [Key Lock] in [Default Settings] 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 an error icon appears on the screen.
• If [Beep] in [Default Settings] is specified as [Off], the projector does not beep.
Turning On the Projector

Make sure that the power plug is inserted into a power outlet. For details, see p.30 "Connecting the Power Cord".

1. Press the [Power] button.

   ![Power Button](CLB030)

   The projector beeps and the indicator flashes blue.
   The start-up screen is displayed.

   **Note**

   - Make sure the projector is positioned squarely in front of the screen. For details, see p.26 "Positioning the Projector".
   - 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 p.34 "When the start menu is displayed".
   - The password input screen is displayed if a password for the projector is specified in [Password] under [Default Settings]. Enter a password.
   - When [Power On Method] in [Default Settings] is specified as [Auto.], the projector turns on as soon as the power plug is inserted in a power outlet (direct power on).
   - The start-up screen closes shortly after appearing. You can specify that the start-up screen not appear in [Start-up Screen] under [Display Settings].

When the start menu is displayed

When the projector is turned on for the first time after it is purchased, specify 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.
Selecting an Input Signal

Select a signal that is compatible with the equipment that is connected to the projector.

1. Turn on the equipment that is connected to the projector.
   To project the image of a video player, press the play button on the video player.

2. Press the [Input] button.

The input signal is detected automatically and the image is projected. The input signal changes each time the [Input] button is pressed.

Note

- In step 2, the input signal selection screen appears if [Off] is specified for [Auto Input Search] in [Default Settings]. Select a signal that is compatible with the equipment that is connected.
- Switch the computer’s image output when projecting a notebook computer’s screen. For details, see p.36 “When projecting the screen of a notebook computer”.
- You can also select the input signal directly with the [Computer], [HDMI], [Network], or [USB] button on the remote control.
- The standby screen for the network input 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 project does not support the input signal, a "Unsupported signal" message is displayed.
When projecting the screen of a notebook computer

When connecting a notebook 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

<table>
<thead>
<tr>
<th>Computer brand</th>
<th>Key combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSI</td>
<td>[Fn] + [F2]</td>
</tr>
<tr>
<td>Everex, Mitsubishi, NEC, Panasonic, Sotec</td>
<td>[Fn] + [F3]</td>
</tr>
<tr>
<td>Gateway, HP</td>
<td>[Fn] + [F4]</td>
</tr>
<tr>
<td>acer, Sharp, Sotec, Toshiba</td>
<td>[Fn] + [F5]</td>
</tr>
<tr>
<td>Hitachi, IBM, lenovo, Sony</td>
<td>[Fn] + [F7]</td>
</tr>
<tr>
<td>Asus, Dell, Epson, Hitachi</td>
<td>[Fn] + [F8]</td>
</tr>
<tr>
<td>Fujitsu</td>
<td>[Fn] + [F10]</td>
</tr>
</tbody>
</table>

**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.
- For details about operating the computer, see the manual provided with the computer.

Adjusting the Angle of the Projection

You can adjust the height of the projected image by using the adjustable feet to change the angle of the projector.
1. Lift the front of the projector and adjust the length of the adjustable feet.

![Adjustable Feet](image)

Turn the adjustable feet to the left to make it longer. Turn the adjustable feet to the right to make it shorter.

**Note**

- 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.

- The projector automatically adjusts the projected image for keystone distortion according to the projection angle. If [Auto Keystone] in [Default Settings] is specified as [Off], manually adjust for keystone distortion. For details, see p.39 "Adjusting for keystone distortion".

### Adjusting the Image

Adjust the focus of the projected image with the focus lever. If there is any keystone distortion, adjust it with the [Keystone] buttons on the remote control.

If the projected image is larger than the screen, adjust the size of the image using the [Zoom] buttons.

### Changing the size of the projected image

Reduces and displays the image. The image can be reduced in a range of 80 to 100%.

If the projected image is larger than the screen, reduce the size of the image using the [Zoom] buttons.
2. Projecting an Image

1. Press the [Zoom−] button to reduce the image.

![Remote control with Zoom− button highlighted](image1)

The ratio decreases each time the [−] button is pressed. You can confirm the current ratio on the value bar at the bottom of the screen.

2. Press the [Zoom+] button to enlarge the image.

   ![Remote control with Zoom+ button highlighted](image2)

   The ratio increases each time the [+] button is pressed. The image is enlarged until it reaches the original size.

   **Note**

   - You can also adjust the size of the projected image from the control panel on the projector.
   - The image may sometimes be disrupted while it is reduced.

### Adjusting the focus

Adjust the focus of the projected image.

1. Move the focus lever on the front of the projector to the left or right.

   ![Projector with focus lever highlighted](image3)

   The shape of the projected image changes slightly when the focus lever is moved.
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 [Default Settings] is specified as [Off], manually adjust for keystone distortion.

1. Press the [Keystone+] and [Keystone−] buttons to adjust the keystone distortion.

   The value bar appears at the bottom of the screen. Press the [+] button to increase the correction value. Press the [−] button to decrease the correction value.

   **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.

Automatically adjusting the image

The image quality and position are automatically adjusted according to the input signal. This function is available when you select [Computer] as an input signal.
1. Press the [Auto set] button.

![Remote Control](image)

**Note**
- Depending on the type of input signal, some images may not be displayed or correctly adjusted. If this happens, adjust the image with [Position] in [Image Adjustment]. For details about the types of signals that can be input to the projector, see p.127 "List of Compatible Signals".

### Adjusting the Volume of the Speaker

1. Press the [Volume+] and [Volume−] buttons to adjust the volume.

![Remote Control](image)

The value bar appears at the bottom of the screen. Press the [+] button to increase the volume. Press the [−] button to decrease the volume.

**Note**
- You can also adjust the volume of the speaker from the control panel on the projector.

### Manipulating Images with the Remote Control

Use the remote control to manipulate projected images.
**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 to enlarge the image.

The ratio increases each time the [+ ] button is pressed. Pressing the [▲], [▼], [◄], and [►] buttons moves the display position of the enlarged image.

2. Press the [Magnify−] button to reduce the image.

The ratio decreases each time the [−] button is pressed. The image is reduced until it reaches the original size.

**Note**

- An icon appears on the screen when the image is enlarged.
- The Magnify function is canceled automatically if any operation is performed.
- The image may sometimes be disrupted while it is enlarged or while moving the enlarged portion.

**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.

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 mute is used.
- The 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.

**Pausing the image**

Pauses the video or moving image that is being projected.

1. Press the [Freeze] button.

The image is paused.

2. To cancel this function, 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.
• When the [Freeze] button is pressed, the image that is being projected at that time is stored in memory, and that image is projected. Because of this, even though the projector has paused the image, the equipment continues to play the video.

Changing the image quality

1. Press the [Picture] button.

2. Select a setting from the list using the [▲] and [▼] buttons, and then press the [Enter] button.

   Note
   • You can also change the screen mode with [Image Adjustment]. For items that can be specified, see p. 83 "Image Adjustment Menu".

Changing the aspect ratio of the projected image

1. Press the [Aspect] button.

2. Select a setting from the list using the [▲] and [▼] buttons, and then press the [Enter] button.
Switching the lamp mode

Select eco mode if the image is too bright or when projecting images in a dark room.

1. Press the [Eco] button.

The mode changes each time the button is pressed.

Turning Off the Projector

1. Press the [Power] button.

The confirm screen appears.
2. Press the [Power] button.

The projector beeps and the projector turns off.

**Note**

- After turning the projector off, wait about five minutes for the lamp to cool before turning the projector on again. The lamp may not light if it is very hot.
- The projector turns off as soon as the power plug is removed from the power outlet (direct power off).
Projecting Images from a USB Memory Device or Digital Camera

The projector can project JPEG and MPEG files stored on a USB memory device that is connected to the projector. JPEG files stored in digital cameras can also be projected. Images can be displayed easily even if a computer is not connected.

The USB devices must support USB 2.0.

**Important**

- It is recommended to back up the data saved to a USB device before using it. The manufacturer is not responsible for any damage due to the loss of data.
- Do not disconnect the power plug while the USB device is being accessed. Doing so may cause malfunction or data loss.

The following file extensions are compatible with the projector.

- Files stored on a USB memory device
  - jpg, jpeg, JPG, JPEG, mpg, mpeg, MPG, MPEG, m2ts, m2t, M2TS, M2T
- Files stored on a digital camera
  - jpg, jpeg, JPG, JPEG

The supported video file formats are MPEG-2 Video Compression and MPEG Audio Compression Layer-3.

**Note**

- The maximum number of files that can be displayed in the list is 512 per folder.
- Characters that can be used for file names and folder names are single-byte letters and numbers and characters used in the language specified in [Language] under [Default Settings]. If characters for languages other than the language specified are used, the file name or folder name will not be displayed properly.
- The folder name or file name can be 255 characters max.
- Data in a folder that is stored six levels or more into a hierarchy cannot be accessed.
- Depending on the file type, the projector may not be able to project the image.
- Depending on the type of USB memory device, it may not be usable with the projector. USB memory devices with passwords cannot be used.
- For information about which digital cameras can be used with the projector, contact your sales representative or service representative.
Connecting the USB Device

Connect the USB memory device or digital camera to the projector.
The USB device can be connected even if the projector is already on.

1. Connect the USB device to the USB port on the projector.
   Check the port orientation before connecting.

   ![USB port orientation](attachment:USB_port_orientation.png)

   **Note**

   - If the projector does not recognize the USB device when it is connected, disconnect and reconnect the USB device.
   - The provided mouse remote control receiver, and commercially available mouse controllers and USB hubs cannot be connected.

Projecting Still Images

Connect the USB memory device or digital camera to the projector. For details, see p.47 "Connecting the USB Device".

A projected image can be controlled using the remote control.

- Right arrow button (►): Displays the next image.
- Left arrow button (◄): Displays the previous image.
- Up arrow button (▲): Rotates the image 90° to the right.
- Down arrow button (▼): Rotates the image 90° to the left.
- [Enter] button: Starts an automatic slide show. Pressing the [Enter] button again stops the slide show. You can switch the images manually.
- [Menu] button: Displays the file list while an image is being projected.
1. Press the [USB] button.

![Remote Control](CLB044)

The input signal switches to the USB, and the files within the root directory are displayed.

2. Use the [▲] and [▼] buttons to select the JPEG file or folder.

3. Press the [Enter] button.

If you select a JPEG file, its image is projected. If you select a folder, the file list within the folder is displayed. Repeat steps 2 and 3 until you can display the file you want to project.

**Note**

- You can also control the projected images using the control panel on the projector.
- Images are displayed in the numerical and alphabetical order of their file name headers.
- If [Auto Demo] in [USB Settings] is specified as [On], the images in the root directory are played automatically.
- Depending on the JPEG file, the projector may not be able to display it. If the file cannot be displayed, converting the file with JPEG Conversion Tool may enable the projector to display it. For details about JPEG Conversion Tool, see p.49 "Converting Presentation Files to JPEG Files".

### Projecting Videos

Connect the USB memory device to the projector. For details, see p.47 "Connecting the USB Device".

A projected video can be controlled using the remote control.

- Right arrow button (►): Displays the next video. If a video is being projected, this button fast forwards the video.
- Left arrow button (◄): Displays the previous video. If a video is being projected, this button rewinds the video.
- [Enter] button: Pause. Press the [Enter] button again to restart the playback. If a video is paused, pressing the left or right arrow buttons switches the video.
- [Menu] button: Displays the file list while a video is being projected.
1. Press the [USB] button.

The input signal switches to the USB, and the files within the root directory are displayed.

2. Use the [▲] and [▼] buttons to select the MPEG file or folder.

3. Press the [Enter] button.

If you select an MPEG file, the video plays. If you select a folder, the file list within the folder is displayed. Repeat steps 2 and 3 until you can display the file you want to project.

**Note**

- You can also control the projected videos from the control panel on the projector.
- The rewind and fast forward speed increases three levels each time the button is pressed. To reduce the speed to its original, pause the video by pressing the [Enter] button, and then press it again to restart the video.

### Disconnecting the USB Device

1. Press the [Menu] button while the video is being projected.


   The confirmation screen is displayed.

3. Select [OK].

4. Disconnect the USB device.

**Note**

- A USB device can be disconnected by selecting [Remove Device] in [USB Settings].

### Converting Presentation Files to JPEG Files

Microsoft PowerPoint presentation files can be converted to JPEG files, which are compatible with the projector.
You can do presentations without a computer if you save converted JPEG files to a USB memory device and then display the slides using the projector.

The converted files can also be transferred to a server.

**Operating Environment**

- **Supported operating system**
  - Windows XP (32-bit version) Professional Edition and Home Edition, SP3 or later
  - Windows XP (64-bit version) Professional Edition SP2 or later
  - Windows Vista (32-bit and 64-bit versions) Ultimate, Business, Home Premium, and Home Basic, SP2 or later
  - Windows 7 (32-bit and 64-bit versions) Home Premium, Professional, Ultimate, Enterprise

- **Memory size**
  - Recommended memory size for the operating system of the computer you are using

1. **Double-click the "JPEG Conversion Tool" icon.**
   - JPEG Conversion Tool starts.

2. **Drag and drop the PowerPoint file to be converted into the "JPEG Conversion Tool" dialog box.**
   - To manually specify the file, enter the file name in [File Location:].

3. **Specify the destination to which you want to save the converted file.**
   - To save to a computer, select [Local PC].
   - To save to a server, select [Server], and then select the server to which you want to save the file.

4. **Click [Convert&Save].**

5. **Click [OK].**

**Note**

- To convert PowerPoint files, Microsoft PowerPoint 2003, 2007, or 2010 must be installed on the computer to you are using.
- JPEG Conversion Tool is compatible with still images that have a ".ppt" or ".pptx" extension. Animations and audio are not compatible.
- To convert PowerPoint files with the ".pptx" extension, Microsoft PowerPoint 2007 or later must be installed on the computer you are using.
- The number of JPEG files created is equivalent to the number of slides. The file name after conversion is "slide + File Number + .jpg".
- For the settings method when saving converted files to the server, refer to the JPEG Conversion Tool Help.
How to use JPEG Conversion Tool

JPEG Conversion Tool is included on the supplied CD-ROM.

1. Insert the CD-ROM in the CD-ROM drive of your computer.
2. Specify a language.
   The launcher screen appears.
3. Click [JPEG Conversion Tool Type A].
4. Specify a destination to save the application.
   The "RICOH JPEG Conversion Tool Type A" folder is copied to the computer.
5. To create a shortcut icon on the desktop, click [OK].
6. Close the screen.

To start JPEG Conversion Tool, double-click the shortcut icon on the desktop or "RICOH JPEG Conversion Tool TypeA.exe" in the folder.

**Note**

- You can also use JPEG Conversion Tool by dragging and dropping the "RICOH JPEG Conversion Tool Type A" folder that is on the provided CD-ROM to the computer. JPEG Conversion Tool is copied to the computer.
- To delete JPEG Conversion Tool, delete the JPEG Conversion Tool folder that was copied to the computer.
2. Projecting an Image
3. Using the Projector via a Network

This chapter explains the settings for using the projector via a network. This chapter also explains the operations that use Network Utility.

Connecting the Projector to a Network

The projector can be connected to a network using a wireless LAN or an Ethernet cable. For details, see p.55 "Connecting Using an Ethernet Cable", or p.57 "Connecting Using a Wireless LAN".

To use the projector via a network, you must specify settings such as the IP address in [Network Settings]. The required settings are described below:

**Wired LAN**

<table>
<thead>
<tr>
<th>Item</th>
<th>Wired LAN</th>
<th>Wireless LAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wired LAN Settings</td>
<td>As necessary</td>
<td>-</td>
</tr>
<tr>
<td>TCP/IP Settings</td>
<td>Required</td>
<td>-</td>
</tr>
</tbody>
</table>

**Wireless LAN**

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<tr>
<th>Item</th>
<th>Wired LAN</th>
<th>Wireless LAN</th>
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</thead>
<tbody>
<tr>
<td>Simple Settings</td>
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<td>As necessary</td>
</tr>
<tr>
<td>Wireless LAN Settings</td>
<td>-</td>
<td>As necessary</td>
</tr>
<tr>
<td>Security</td>
<td>-</td>
<td>As necessary</td>
</tr>
<tr>
<td>TCP/IP Settings</td>
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<td>Required</td>
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</table>

**LAN Common**

<table>
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<th>Item</th>
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<th>Wireless LAN</th>
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<tbody>
<tr>
<td>Network Interface</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>DNS Settings</td>
<td>As necessary</td>
<td>As necessary</td>
</tr>
<tr>
<td>Projector Search Settings</td>
<td>As necessary</td>
<td>As necessary</td>
</tr>
<tr>
<td>HTTP Client Settings</td>
<td>As necessary</td>
<td>As necessary</td>
</tr>
<tr>
<td>HTTP Server Settings</td>
<td>As necessary</td>
<td>As necessary</td>
</tr>
</tbody>
</table>
For details, see p.96 "Network Settings".

**Note**

- When operating the projector from a computer via a network, use Network Utility which is provided with the projector. For details, see p.61 "Projecting Images Using Network Utility".
Connecting Using an Ethernet Cable

**CAUTION**

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

The projector is compatible with 10BASE-T, 100BASE-TX, and 1000BASE-T Ethernet interfaces.

**Important**

- If the projector is turned on, turn it off before connecting the Ethernet cable.

**Status of the network connection**

You can confirm the status of the network connection by the patterns in which the LEDs on the Ethernet interface light up. If the projector is not connected to a network, no LEDs light up.

1. Insert the Ethernet cable into the Ethernet interface.
2. Connect the other end of the Ethernet cable to a network device such as a hub.
3. Turn the projector on.
3. Using the Projector via a Network

**Note**

- Use an Ethernet cable that is shielded.
- To use the projector via a network, you must specify settings such as the IP address in the Network Settings menu. For items that must be specified, see p.53 "Connecting the Projector to a Network".
Connecting Using a Wireless LAN

⚠️ WARNING

- Do not use a wireless LAN if there is electromagnetic interference from other equipment. Doing so may cause an accident due to the other equipment malfunctioning from the electromagnetic interference.

The projector has a built-in wireless LAN board.

Wireless uses radio waves to exchange information instead of an Ethernet cable. The wireless LAN radio waves pass through barriers such as walls within a fixed area, so the following problems may occur:

**Leak of Personal Information**

- Information such as IDs, passwords, credit card numbers, and the contents of e-mails, etc., may be stolen by a third party.

**Illegal Access to the Network**

- Data and systems may be corrupted or manipulated by a virus.
- An imposter may access information illegally.
- Confidential information may be accessed illegally.

To minimize the possibility of these problems occurring, it is recommended to check the functions built into the wireless LAN devices, such as the projector and wireless LAN access points, and to specify security settings.

---

**Note**

- If the wireless network reception is poor, the connection may be interrupted or disabled. If the wireless reception of the projector and access points is poor, try the following:
  - Move the projector and access points closer to each other.
  - Make sure there is a clear line of sight between the access point and the projector.
  - Make sure the access point and projector are close to each other, and move devices that emit radio signals such as microwave ovens further away.

---

**Wireless LAN Connection Workflow**

The projector is compatible with ad hoc mode and infrastructure mode. Select the communications mode according to the network environment of the site to be used.
Ad Hoc mode

This mode communicates with the computer directly, and not via an access point. No other equipment is required, so this mode is suited for locations that have no network environment.

If you use ad hoc mode, make the following settings:

Settings Using Simple 1:1 Connection

<table>
<thead>
<tr>
<th>Action</th>
<th>Method</th>
<th>Refer to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless LAN settings</td>
<td>Simple 1:1 Connection (Network Utility)</td>
<td>p.62 &quot;Simple 1:1 Connection&quot;</td>
</tr>
<tr>
<td>Image projection</td>
<td>Simple 1:1 Connection (Network Utility)</td>
<td>p.62 &quot;Simple 1:1 Connection&quot;</td>
</tr>
</tbody>
</table>

Settings Using a USB Memory Device

If the computer's wireless LAN settings have already been configured, use the following method:

<table>
<thead>
<tr>
<th>Action</th>
<th>Method</th>
<th>Refer to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless LAN settings</td>
<td>Write Settings to USB Memory (Network Utility)</td>
<td>p.65 &quot;Copying computer settings to the projector&quot;</td>
</tr>
<tr>
<td>Image projection</td>
<td>Network Connection (Network Utility)</td>
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<td>Write Settings to USB Memory (Network Utility)</td>
<td>p.66 &quot;Copying projector settings to the computer&quot;</td>
</tr>
<tr>
<td>Image projection</td>
<td>Network Connection (Network Utility)</td>
<td>p.64 &quot;Network Connection&quot;</td>
</tr>
</tbody>
</table>

Note

- As the radio wave range is limited, use an office or conference room with a good line of sight.
Infrastructure mode

This mode can communicate with networks in which both wireless and wired LAN devices are connected via a wireless LAN access terminal. It is necessary to use greater security since all communication is via a network. Use infrastructure mode in environments in which a wireless LAN has already been configured.

If you use infrastructure mode, make the following settings:

Settings Using Simple Wireless LAN Setup

<table>
<thead>
<tr>
<th>Action</th>
<th>Method</th>
<th>Refer to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless LAN settings</td>
<td>Simple Wireless LAN Setup</td>
<td>p.59 &quot;Simple Wireless LAN Setup&quot;</td>
</tr>
<tr>
<td>Image projection</td>
<td>Network Connection (Network Utility)</td>
<td>p.64 &quot;Network Connection&quot;</td>
</tr>
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Settings Using a USB Memory Device

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<tr>
<td>Image projection</td>
<td>Network Connection (Network Utility)</td>
<td>p.64 &quot;Network Connection&quot;</td>
</tr>
</tbody>
</table>

Simple Wireless LAN Setup

To use the projector via a wireless LAN, the network settings must be configured. If you use the wireless LAN simple setup function, the infrastructure settings can be easily configured.

The simple wireless LAN setup function acquires the wireless LAN settings registered in the access point, and configures those settings for the projector automatically. The access point must also be compliant with the simple wireless LAN setup function.


Setup Method

- Using push buttons
Press the projector and access point keys or buttons to get them to connect to each other and register the settings.

- Enter the access point's PIN code in the projector

Enter the PIN code that was generated by the access point in the projector to get them to connect to each other and register the settings. The access point's PIN code must be registered in the PIN code field of the projector.

1. Press the [Menu] button.

2. Select the [Network/USB Settings] menu.

3. Select [Network Settings].

4. Select [Wireless LAN].

5. Select either [Connect by PIN] or [Connect by Push] in [Simple Wireless LAN Setup].

6. If [Connect by PIN] is selected, enter the PIN code generated by the access point in the projector, and then proceed to step 7.

   You must preconfigure the access point's simple wireless LAN setup function.

7. If [Connect by Push] is selected, press the access point push button.

8. Select [OK] on the confirmation screen.

   The wireless LAN setup is complete.
Projecting Images Using Network Utility

What Is Network Utility?

Network Utility is a software application that connects the projector and a computer to project images. Images that can be projected are computer screens and still images.

The main Network Utility functions are described below:

**Simple 1:1 Connection**

Connects the projector to a computer to project images using a wireless LAN in ad hoc mode. You do not need to specify the wireless LAN settings, such as the SSID or the IP address.

**Network Connection**

Connects the projector to a computer to project images via a network by using a wired or wireless LAN. You need to specify the network settings before you use this function.

**Settings Using a USB Memory Device**

Specifies the wireless LAN settings using a USB memory device. There are two methods to do this: one method is to copy the computer settings to the projector, and the other method is to copy the projector settings to the computer.

Network Utility operating environment is described below.

- **Supported operating system**
  - Windows Vista (32-bit and 64-bit versions) Ultimate, Business, Home Premium, Home Basic, SP2 or later
  - Windows 7 (32-bit and 64-bit versions) Home Premium, Professional, Ultimate, and Enterprise

- **Memory size**
  
  Recommended memory size for the operating system of the computer you are using

**Note**

- To configure the wireless LAN settings using the following methods, log in to the computer with administrator privileges:
  - Simple 1:1 Connection
  - Settings using a USB memory device
- For detailed Network Utility operating methods, refer to the Network Utility Help.
How to use Network Utility

Network Utility is included on the supplied CD-ROM.

1. Insert the CD-ROM in the CD-ROM drive of your computer.
2. Specify a language.
   The launcher screen appears.
3. Click [PJ Network Utility Type A].
4. Specify a destination to save the application.
   The "RICOH PJ NetworkUtility Type A" folder is copied to the computer.
5. To create a shortcut icon on the desktop, click [OK].
6. Close the screen.

To start Network Utility, double-click the shortcut icon on the desktop or "RICOH PJ NetworkUtility TypeA.exe" in the folder.

Note

- You can also use Network Utility by dragging and dropping the "RICOH PJ NetworkUtility Type A" folder that is on the provided CD-ROM into the computer or a USB memory device.
- To delete Network Utility, delete the Network Utility folder.

Simple 1:1 Connection

You can connect the computer and projector using a wireless LAN in ad hoc mode.

Make sure the projector's "Connection Method:" is "Simple 1:1 Connection". You can confirm the projector's "Connection Method:" on Network Information displayed on the screen.

To set the projector's "Connection Method:" to "Simple 1:1 Connection", enable the projector's wireless LAN connection in ad hoc mode, and then select [Auto] in [Connection Setting] under [Wireless LAN Settings].

You do not need to specify the wireless LAN settings such as the SSID or the IP address.

1. Turn the projector on.
2. Press the [Network] button.

3. Double-click the “Network Utility” icon on the computer.

Network Utility starts.

4. Click the [Simple 1:1 Connection] tab.

Projector search starts. If projector search does not start automatically, click [Search].

5. If two or more projectors are found, select a projector to connect from [Select Projector to Use (Projection Can Only be Performed by 1 Device)].

6. Select the projection method.

7. If you select [Transmit Still Image File], specify the file to be projected.

8. Click [Start Prjctn].

The computer screen or selected file is projected.

**Note**

- Antivirus programs may prevent client computers from establishing Simple 1:1 Connection with projector. To prevent an antivirus application from blocking the connection, register Network Utility in the antivirus program’s exclusion list. For details about the procedure for excluding a program, see your antivirus application’s Help.

- A client computer which is connected to the network using an Ethernet cable may not be able to establish Simple 1:1 Connection with projector. Disconnect the Ethernet cable from the client computer before configuring Simple 1:1 Connection.

- When Network Utility ends, the computer wireless LAN settings automatically reset to their pre-connection settings.

- To close Network Utility, either select [Exit], or click [X] to close the window.

- If Network Utility or the projector’s firmware version is older than the following, update them to the latest version. You can download the latest Network Utility or projector firmware from our Web site.

  - Network Utility: V1.1
  - Energy Saving IO Firmware Version: V1.1
• You can confirm the version of Network Utility in [Version Information] on the [Help] menu.
• You can confirm the version of the energy saving IO firmware in [Display Status] in [Network Settings].
• To connect a projector whose energy saving IO firmware version is older than V1.1, set Network Utility to "Version 1.0 Compatible Mode". Check the [Enable Version 1.0 Compatible Mode] check box in [Version Information] on the [Help] menu.
• You can start projecting images even while the computer is searching for a projector.

**Network Connection**

You can connect the projector to a computer via a network by using a wired or wireless LAN. A maximum of four projectors can be selected at the same time. If you select multiple projectors, they will all project the same image.

Make sure the projector's "Connection Method:" is "Network Connection". You can confirm the projector's "Connection Method:" on Network Information displayed on the screen.

To set the projector's "Connection Method:" to "Network Connection", do one of the following:

• Enable connection to a wired LAN.
• Use infrastructure mode to connect to a wireless LAN.
• Use ad hoc mode to connect to a wireless LAN, and then select [Manual] in [Connection Setting] under [Wireless LAN Settings].

You must also specify the settings, such as the IP address, in [Network Settings].

1. Turn the projector on.

2. Press the [Network] button.

3. Double-click the "Network Utility" icon on the computer.

   Network Utility starts.

4. Click the [Network Connection] tab.

   Projector search starts. If projector search does not start automatically, click [Update].
Select a projector to connect from [Select Projector(s) to Use (Projection Available on up to 4 Devices):].

If you want to manually enter the projector IP address, select [Connect by Manual Entry], and enter the IP address.

Select the projection method.

If you select [Transmit Still Image File], specify the file to be projected.

Click [Start Prjctn].

The computer screen or selected file is projected.

**Note**

- To close Network Utility, either select [Exit], or click [X] to close the window.

**Settings Using a USB Memory Device**

The wireless LAN settings information can be shared between the computer and projector using a USB memory device. This is useful when you are setting up multiple devices at one time.

The wireless LAN settings information is stored on the USB memory device. There are two methods to do this: one method is to copy the computer settings to the projector, and the other method is to copy the projector settings to the computer.

**Copying computer settings to the projector**

1. Insert the USB memory device into the computer USB port.
2. Double-click the “Network Utility” icon.

   Network Utility starts.
3. Click [Menu].
4. Click [Write Settings to USB Memory].

   If the [Simple 1:1 Connection] tab is selected, click the [Network Connection] tab.
5. Click [Execute] in [Copy Setting Information].

   The computer’s wireless LAN settings are displayed on the screen.
6. If necessary, enter the network key.

   If network authentication is configured for the access point, enter the network key in the [Network Key:] box. Check the network key that is set for the access point. The network key settings for the access point and the projector must be the same.

   If [Network Authentication:] is [None] on the screen displayed in step 5, you do not need to enter the network key.
7. If necessary, specify the projector’s IP address settings.

The IP address settings displayed on the screen in step 5 are the computer’s settings.

If the [Use DHCP] check box is not checked, do either of the following:

• Enter the projector’s IP address in the [IP Address:] box if you want to allocate the projector’s IP address manually.
• Check the [Use DHCP] check box if you want to allocate the projector’s IP address automatically from a DHCP server.

8. Click [OK].

The settings are saved to the USB memory device.

9. Turn the projector on.


11. Insert the USB memory device into the USB port on the projector.

The confirmation screen is displayed.

12. Select [OK].

The wireless LAN settings saved to the USB memory device are reflected in the projector.

13. Select [OK].

**Note**

• If the confirmation screen does not appear when you insert the USB memory device into the projector’s USB port, remove the USB memory device. Press the [Network] button, and then reinsert the device.
• It is also possible to change the wireless LAN settings on the computer using Network Utility, and to save the settings to the USB memory device. For details, see Help.

**Copying projector settings to the computer**

1. Turn the projector on.
2. Insert the USB memory device into the USB port on the projector.
3. Press the [Menu] button.

4. Select the [Network/USB Settings] menu.
5. Select [Network Settings].
6. Select [Wireless LAN]
8. Select [Simple Connection (USB Memory)], and then press the [Enter] button.

   The wireless LAN settings for the projector are saved to the USB memory device.
9. Select [OK].
11. Select [USB Settings].
12. Select [OK] in [Remove Device].
13. Disconnect the USB memory device.
14. Insert the disconnected USB memory device into the USB port on the computer.
15. Double-click the “Network Utility” icon on the computer.

   Network Utility starts.
16. Click [Menu].
17. Click [Read Settings from USB Memory].

   If the [Simple 1:1 Connection] tab is selected, click the [Network Connection] tab.
18. Click [OK].
19. When the USB memory device selection screen is displayed, select the USB memory device from which to read the settings, and click [OK].
20. When the wireless LAN adapter selection screen is displayed, select the wireless LAN adapter that you want to store of, and click [OK].

   The computer settings are complete.
Using the Projection Server Function

The projector accesses the network server to project JPEG files saved on the server.

You do not need to carry a storage device or computer that has the files to be used. Therefore, it is useful to protect information.

Accessing folders on the server can be controlled by registering an access number.

Configuring the Network Server

A network server on which IIS (Internet Information Services) is installed can be used as a projection server.

Projection server operations have been verified for the following operating systems:

- Windows Server 2003 R2 Standard (32-bit version) SP2 and IIS 6
  IIS 6 is not provided with a URL rewrite module. Use a URL rewrite module provided by a third party.
- Windows Server 2008 R2 Standard (64-bit version) SP1 and IIS 7
  Install the URL Rewrite Module that can be downloaded from Microsoft Download Center. If the ASP (Active Server Pages) Execution Environment is not available on the network server, install the ASP module.

The following settings are required on the network server that is used as a projection server:

Creating a virtual directory

Create a directory (virtual directory) that the projector accesses on the network server.

Register the alias name and directory path of the virtual directory by following the wizard instructions. For detailed procedures, see the Microsoft Web site.

- Alias name
  An alias name is required when the projector accesses the virtual directory.
  The settings must be configured in [Projection Server] under [Network Application Settings].
  For details, see p.69 "Configuring the Projector".

- Directory path
  This is a path for the directory in which files projected by the projector are stored.
  To store files converted by JPEG Conversion Tool on the network server, register the directory path. For details, see JPEG Conversion Tool Help.

Storing the folder management file for the projection server

The folder management file for the projection server is stored in the "Projection Server" folder on the supplied CD-ROM. Copy the folder management file to the virtual directory on the network server.
Registering a URL rewrite rule

Using a URL rewrite module, register a rule to rewrite "original characters" to "rewritten characters":

- Original characters: ^alias name of the virtual directory/(.*)
- Rewritten characters: /alias name of the virtual directory/name of the folder management file

If you use IIS 7, and if the alias name is "ABC" and the folder management file name is "xyz.asp", the characters become the following:

- Original characters: ^ABC/(.*)
- Rewritten characters: /ABC/xyz.asp

Configuring the Projector


- Validate Projection by Projection Server
  Specify to [Enable].

- Server URL
  Enter the projection server URL and the alias name of the virtual directory in the following format:
  Projection server URL/alias name/\{n\}
  If the projection server URL is "http://hostname" and the alias name is "document", enter "http://hostname/document".
  An IP address can be used as the projection server URL.
  If you select [Access Number] in [Access Restriction Type], add "/\{n\}" at the end of the Server URL.

Specify other settings in [Projection Server], if necessary.

**Note**

- To use the projection server function, you must specify the network settings in advance. For details, see p.53 "Connecting the Projector to a Network".
- For details about how to change the settings, see p.73 "Using the Menu Screen". For details about the setting items, see p.103 "Network Application Settings".

Projecting Files that Are Stored on the Server

Store files to be projected using the projector in the virtual directory on the network server.

If you select [Access Number] in [Access Restriction Type], create a folder whose name is the number that you specify as Access Number. After this, store the files to be projected in the folder. To project the files stored in the folder, enter the access number when accessing the projection server.
A projected image can be controlled using the remote control.

- Right arrow button (►): Displays the next image.
- Left arrow button (◄): Displays the previous image.
- [Menu] button: Displays the file list while an image is being projected.

1. Turn the projector on.
2. Press the [Network] button.

3. Press the [Enter] button.
   The confirmation screen is displayed.
4. Select [OK].
   The list of files in the root directory is displayed.
5. Select the file to be projected.
   If you select a folder, the file list within the folder is displayed. Repeat these steps until you can display the file you want to project.
6. To quit the projection, press the [Menu] button to display the file list, and the select [Exit].

**Note**

- If [Access Restriction Type] is specified for [Access Number] after step 3, the access number input screen is displayed. Contact your server administrator for your access number.
4. Changing the Projector Settings

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

Viewing the Menu Screen

1. Image Adjustment menu tab
   Enables the image items to be adjusted and configured.
   For the Image Adjustment menu settings, see p.83 "Image Adjustment Menu".

2. Display Settings menu tab
   Enables the screen display items to be configured.
   For the Display Settings menu settings, see p.87 "Display Settings Menu".

3. Default Settings menu tab
   Enables the installation status, etc., to be configured.
   For the Default Settings menu settings, see p.90 "Default Settings Menu".

4. Network/USB Settings menu tab
   Enables the network and USB settings to be configured.
For the Network/USB Settings menu settings, see p.95 "Network/USB Settings Menu".

5. **Display Status tab**

   Enables information such as input signals and lamp usage time, etc., to be displayed.
   For item that can be displayed, see p.106 "Display Status".

6. **Settings**

   The settings and information for each menu can be displayed.
   For the list of possible settings for each menu, see p.79 "List of Menu Items".
Using the Menu Screen

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

1. Press the [Menu] button.

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

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

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

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

5. 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.

The method for changing the settings depends on the item.

- Adjusting values using the values bar
  Change the value using the [▲] and [▼] buttons, and then press the [Enter] button.
• 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.
4. Changing the Projector Settings

- **Inputting text**

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

- **Note**

  - The control panel on the projector can be used for operations, but numbers for settings cannot be inputted.
  - A confirmation screen appears before some functions are executed or some settings are changed.
  - The Network/USB Settings menu has three submenu screens, [USB Settings], [Network Settings], and [Network Application Settings]. Open the submenu according to the settings you want to change, and then go to step 2 to change the settings.
  - Changes to the settings are automatically applied when you close the menu screen. You do not need to press the [Enter] button.
  - Settings in the Network/USB Settings menu are not applied until you select [Reflect] on the confirmation screen.
Restoring Settings to Their Default Settings

This section explains the method for restoring the projector settings to the default values using the remote control.

1. Press the [Menu] button.

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

![Default Settings]

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

![Confirm]

Note

- The following settings cannot be reset with this function:
  - [User Logo] in [Display Settings]
    To reset the registered user logo, select [Reset Logo] in [Display Settings].
  - [Password] in [Default Settings]
  - [Administrator Password] in [Network/USB Settings]
    To reset the registered passwords, contact your service representative.
## List of Menu Items

### Image Adjustment menu

<table>
<thead>
<tr>
<th>Item</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture Mode</td>
<td>Select the picture mode.</td>
</tr>
<tr>
<td>Contrast</td>
<td>Adjust the image contrast.</td>
</tr>
<tr>
<td>Brightness</td>
<td>Adjust the image brightness.</td>
</tr>
<tr>
<td>Color Saturation</td>
<td>Adjust the color saturation of the image.</td>
</tr>
<tr>
<td>Tint</td>
<td>Adjust the tint of the image.</td>
</tr>
<tr>
<td>Sharpness</td>
<td>Adjust the sharpness of the image.</td>
</tr>
<tr>
<td>Noise Reduction</td>
<td>Select whether or not to use the function to reduce the Y/Pb/Pr (480i/576i) or video signal noise.</td>
</tr>
<tr>
<td>R-level</td>
<td>Adjust the level of red in the image.</td>
</tr>
<tr>
<td>G-level</td>
<td>Adjust the level of green in the image.</td>
</tr>
<tr>
<td>B-level</td>
<td>Adjust the level of blue in the image.</td>
</tr>
<tr>
<td>RGB Input Range</td>
<td>Select the RGB input range.</td>
</tr>
<tr>
<td>Auto Set</td>
<td>Automatically adjust the items set for the image according to the type of input signal.</td>
</tr>
<tr>
<td>Equalizer</td>
<td>Select the strength of the functions that reduce the HDMI signal noise.</td>
</tr>
<tr>
<td>Position</td>
<td>Adjust the values for the image position.</td>
</tr>
</tbody>
</table>

### Display Settings menu

<table>
<thead>
<tr>
<th>Item</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keystone</td>
<td>Adjust for image keystone distortion.</td>
</tr>
<tr>
<td>Aspect</td>
<td>Select the screen size of the image.</td>
</tr>
<tr>
<td>Display Position</td>
<td>Move the image if the projected image is smaller or larger than the screen size.</td>
</tr>
</tbody>
</table>
### Default Settings menu

<table>
<thead>
<tr>
<th>Item</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Input Search</td>
<td>Select whether or not to only select inputs with signals when switching input signals.</td>
</tr>
<tr>
<td>Auto Keystone</td>
<td>Select whether or not to implement keystone correction automatically depending on the angle of the projector's position.</td>
</tr>
<tr>
<td>Projection Mode</td>
<td>Select the projection method according to how the projector is positioned.</td>
</tr>
<tr>
<td>Closed Caption</td>
<td>Select the closed caption display method.</td>
</tr>
<tr>
<td>3D Projection</td>
<td>Specify 3D projection.</td>
</tr>
<tr>
<td>Language</td>
<td>Select the language in which to display menus, etc.</td>
</tr>
<tr>
<td>Beep</td>
<td>Select whether or not to beep during use.</td>
</tr>
<tr>
<td>Remote Control ID</td>
<td>Select the projector remote control ID.</td>
</tr>
<tr>
<td>Power Off on No Signal</td>
<td>Select the time from the final operation to automatic power shutdown when there are no input signals.</td>
</tr>
<tr>
<td>Item</td>
<td>Summary</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>Power On Method</td>
<td>Select whether or not to use the auto power on function.</td>
</tr>
<tr>
<td>Standby Energy Saving</td>
<td>Select the level of energy saving while on standby.</td>
</tr>
<tr>
<td>Lamp Power</td>
<td>Select the lamp power level.</td>
</tr>
<tr>
<td>High Altitude Mode</td>
<td>Select whether or not to increase the speed of the fan.</td>
</tr>
<tr>
<td>Key Lock</td>
<td>Select whether or not to lock the buttons on the control panel.</td>
</tr>
<tr>
<td>Reset All</td>
<td>Reset all menus to their defaults.</td>
</tr>
<tr>
<td>Password</td>
<td>Register a password for the projector.</td>
</tr>
</tbody>
</table>

**Network/USB Settings menu**

- **USB Settings**

<table>
<thead>
<tr>
<th>Item</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settings</td>
<td>Specify the file projection method using a USB device.</td>
</tr>
<tr>
<td>Display Status</td>
<td>Confirm the status of the USB device.</td>
</tr>
</tbody>
</table>

- **Network Settings**

<table>
<thead>
<tr>
<th>Item</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wired LAN</td>
<td>Specify the wired LAN settings.</td>
</tr>
<tr>
<td>Wireless LAN</td>
<td>Specify the wireless LAN settings.</td>
</tr>
<tr>
<td>LAN Common</td>
<td>Specify the common wired LAN and wireless LAN settings.</td>
</tr>
<tr>
<td>Projector ID</td>
<td>Enter an ID to identify the projector on the network.</td>
</tr>
<tr>
<td>Display Status</td>
<td>Confirm the status of network settings.</td>
</tr>
</tbody>
</table>

- **Network Application Settings**
4. Changing the Projector Settings

<table>
<thead>
<tr>
<th>Item</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>PJLink</td>
<td>Specify the PJLink settings.</td>
</tr>
<tr>
<td>Security</td>
<td>Specify the security settings.</td>
</tr>
<tr>
<td>Projection Server</td>
<td>Specify the projection server settings.</td>
</tr>
<tr>
<td>Display Status</td>
<td>Confirm the status of the network application settings.</td>
</tr>
</tbody>
</table>

### Display Status

<table>
<thead>
<tr>
<th>Item</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Displays the selected input signals.</td>
</tr>
<tr>
<td>Resolution</td>
<td>Displays the resolution.</td>
</tr>
<tr>
<td>Frequency</td>
<td>Displays the synchronous frequency.</td>
</tr>
<tr>
<td>Sync</td>
<td>Displays the synchronous signal polarity.</td>
</tr>
<tr>
<td>Signal Format</td>
<td>Displays the Y/Pb/Pr signal format.</td>
</tr>
<tr>
<td>Video Mode</td>
<td>Displays the video signal color format.</td>
</tr>
<tr>
<td>Lamp Time</td>
<td>Displays the lamp usage time.</td>
</tr>
<tr>
<td>Lamp Reset Count</td>
<td>Displays the number of lamp replacements.</td>
</tr>
<tr>
<td>Total Time</td>
<td>Displays the projector usage time.</td>
</tr>
<tr>
<td>Total CO2 Reduction</td>
<td>Displays the total CO2 amount that can be reduced by setting the lamp mode to eco mode.</td>
</tr>
<tr>
<td>Eco Time Ratio</td>
<td>Displays the ratio of the time eco mode was used to the total use time.</td>
</tr>
<tr>
<td>Main FW Version</td>
<td>Displays the version of the firmware on the main board.</td>
</tr>
</tbody>
</table>
Image Adjustment Menu

**Picture Mode**
Select the picture mode.
This function is not available when you select [On] in [3D Projection] under [Default Settings].
Default: [Standard]
- Bright
  This image mode makes it easier to see the projection in bright locations.
- Standard
  This is the standard image mode.
- Natural
  Photos appear more natural in this mode.

**Contrast**
Adjust the image contrast.
The greater the value, the stronger the image contrast.
Default: 0
- -16 to +16

**Brightness**
Adjust the image brightness.
The greater the value, the brighter the image.
Default: 0
- -16 to +16

**Color Saturation**
Adjust the color saturation of the image.
The greater the value, the richer the image.
This function is available when you select [Y/Pb/Pr] or [Video] as an input signal.
Default: 0
- -16 to +16

**Tint**
Adjust the tint of the image.
This function is available when you select [Y/Pb/Pr], [HDMI] (Y/Pb/Pr signals), or [Video] as an input signal.
Default: 0
• -16 to +16

**Sharpness**
Adjust the sharpness of the image.
The greater the value, the sharper the image.
Default: 0
• -8 to +8

**Noise Reduction**
Select whether or not to use the function to reduce the Y/Pb/Pr (480i/576i) or video signal noise.
This function is available when you select [Y/Pb/Pr] (480i/576i) or [Video] as an input signal.
Default: [Off]
  • On
  • Off

**R-level**
Adjust the level of red in the image.
The greater the value, the stronger the color red is in the image.
Default: 0
• -16 to +16

**G-level**
Adjust the level of green in the image.
The greater the value, the stronger the color green is in the image.
Default: 0
• -16 to +16

**B-level**
Adjust the level of blue in the image.
The greater the value, the stronger the color blue is in the image.
Default: 0
• -16 to +16

**RGB Input Range**
Select the RGB input range.
When connecting an AV equipment which outputs a full-range RGB signal by HDMI cable, the image becomes clearer by selecting [Full].
This function is available when you select [HDMI] (RGB signals) as an input signal.
Default: [Full]
• Stnd.
• Full

Auto Set
Automatically adjust the items set for the image according to the type of input signal.
This function is available when you select [Computer] as an input signal.

Equalizer
Select the strength of the functions that reduce the HDMI signal noise.
This function is available when you select [HDMI] as an input signal.
Default: [Low]
• Low
• High

Position
Adjust the values for the image position.
This function is available when you select [Computer] as an input signal.
• Phase
  Adjust to eliminate image flicker.
  Default: +16
  • 0 to +31
• Frequency
  Adjust to eliminate moiré patterns and flicker when you project images with thin vertical-stripes.
  Default: 0
  • -64 to +64
• H-position
  Adjust the horizontal position of the image.
  Default: 0
  • -64 to +64
• V-position
  Adjust the vertical position of the image.
  Default: 0
  • -32 to +32
• Clamp Pulse 1
  Adjust the clamp pulse position.
4. Changing the Projector Settings

- 0 to +255
- Clamp Pulse 2
  Adjust the clamp pulse width.
  - 0 to +255
Display Settings Menu

Keystone

Adjust for image keystone distortion.
This setting changes automatically depending on the angle of the projector position if you select [On] in [Auto Keystone] under [Default Settings].

Default: 0
• -32 to +32

Aspect

Select the screen size of the image.
This function is not available when you select [USB Memory] as an input signal.

Default: [Normal]
• 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.
• Zoom
  Display the image width as the projection screen width while maintaining the input signal aspect ratio.

Display Position

Move the image if the projected image is smaller or larger than the screen size.

You can move the image using the [▲], [▼], [◄], and [►] buttons.
This function is not available when you select [Network] or [USB Memory] as an input signal.

Wall Color Correction

Select the image hue according to the projection surface when the image is being projected on something other than a screen.

Default: [Off]
• Off
• Whiteboard
• Beige
• Gray
• Blackboard (Green)

**Background on NoSignal**
Select the image display when there is no input signal.
Default: [Logo]
• Logo
• Blue
• None

**Display Help**
Select whether or not to display Help when there is no input signal.
Default: [On]
• On
• Off

**Display Icon**
Select whether or not to display icons when switching the input signals and settings.
Default: [On]
• On
• Off

**Start-up Screen**
Select whether or not to display the start-up screen when the projector is turned on.
Default: [On]
• On
• Off

**User Logo**
Register and confirm user logos.
User logos can be displayed in the start-up screen or as the background when there are no input signals.
• Register Logo
  Register a user logo. You can register an image with a resolution of up to 1280 × 800 pixels. Project the image to be registered as a user logo, and then execute this function.
  This function is available when you select [Computer], [HDMI] (RGB signals), or [Network] as an input signal.
• Confirm Logo
  Display the registered user logo.
• Reset Logo
  Delete the registered user logo.
Default Settings Menu

Auto Input Search
Select whether or not to only select inputs with signals when switching input signals.

Default: [On]
- On
- Off

Auto Keystone
Select whether or not to implement keystone correction automatically depending on the angle of the projector’s position.

Default: [On]
- On
- Off

Projection Mode
Select the projection method according to how the projector is positioned.

Default: [Stnd.]
- Stnd.
  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.

Closed Caption
Select the closed caption display method.

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).

Select [CC-1] to [CC-4] to display the dialogue and narration of TV programs and videos that are closed captioned.

This function is available when you select [Video] as an input signal.

Default: [Off]
- Off
- CC-1
- CC-2
- CC-3
- CC-4
3D Projection

Specify 3D projection.

3D projection is compatible with the field sequential signal and the frame sequential signal.

- 3D Projection
  Select whether or not to use 3D projection.
  The image will be slightly darker if this is set to [On].
  Default: [Off]
  • On
  • Off

- DLP Link
  Select whether or not to synchronize 3D images and DLP images.
  Default: [On]
  • On
  • Off

- L/R Reverse
  Select whether or not to reverse left and right in a 3D image.
  Default: [Normal]
  • Normal
  • Reverse

Language

Select the language in which to display menus, etc.

Default: [English]

Beep

Select whether or not to beep during use.

Default: [On]
  • On
  • Off

Remote Control ID

Select the projector remote control ID.

Specify the ID for each projector when operating multiple projectors using one remote control.

Default: [1]
  • 1
  • 2
Power Off on No Signal

Select the time from the final operation to automatic power shutdown when there are no input signals.

Default: [Off]
- Off
- 5 min.
- 10 min.
- 20 min.
- 30 min.

Power On Method

Select whether or not to use the auto power on function.

Default: [Manual]
- Manual
  Turn the projector on when the [Power] button is pressed.
- Auto.
  Automatically turn on the projector when the power cord is connected.

Standby Energy Saving

Select the level of energy saving while on standby.

You can save power by using this function. The energy saving level is highest when you select [High] and lowest when you select [None]. However, this function affects network functions and start-up time. Select a mode according to how you use the projector.

Default: [Medium]
- High
  Wired LAN and Wireless LAN are disabled when the projector is in standby.
- Medium
  Wired LAN is enabled but Wireless LAN is disabled when the projector is in standby.
- Low
  Wired LAN and Wireless LAN are enabled.
- None
  Wired LAN and Wireless LAN are enabled. Start-up time is faster.

Lamp Power

Select the lamp power level.
Select [Eco] if the image is too bright or when projecting images in a dark room.

Default: [Stnd.]

- Eco
- Stnd.

**High Altitude Mode**

Select whether or not to increase the speed of the fan.

The number of fan rotations is high when set to [On]. Select [On] only 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).

Default: [Off]

- On
- Off

**Key Lock**

Select 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.

Default: [Off]

- On
- Off

**Reset All**

Reset all menus to their defaults.

This function cannot restore the default settings of [User Logo] in [Display Settings], [Password] in [Default Settings], and [Administrator Password] in [Network/USB Settings].

**Password**

Register a password for the projector.

- Register Password
  
  Enter a 6-digit password.

  The current password is required to change the password.

  Default: [000000]

- Password Protect

  Select 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.

  A password is required to change this setting.
4. Changing the Projector Settings

Default: [Off]

- On
- Off
Network/USB Settings Menu

USB Settings

You can specify how to project files from a USB device and confirm the status of the USB device.

Settings

- Auto Demo
  Select whether or not to start a slide show automatically when the projector is connected to the USB device.
  Default: [Off]
  • On
  • Off
- Repeat
  Select whether or not to repeat video playback.
  Default: [Off]
  • On
  • Off
- Display Interval (sec.)
  Enter the slide show switching interval from 5 to 999 seconds.
  Default: 5 seconds
- Remove Device
  The USB device can be removed when this command is executed.

Display Status

- USB Memory
  Display the USB device status.
  • USB Memory Free Space (KB)
    Display the space available on the USB device (Displayed in KB).
  • USB Memory Access Status
    Display whether or not the USB device can be accessed.
- Firmware Version
  Display the firmware version.
  • Network/USB Function Firmware Version
    Display the firmware version of the network and USB functions.
• Energy Saving IO Firmware Version
  Display the energy-saving IO firmware version.

**Network Settings**

Enables the wired LAN and wireless LAN settings, projector ID registration, and network status to be verified.

**Wired LAN**

Specify the wired LAN settings.

• Wired LAN Settings
  • Transmission Speed
    Select the wired LAN speed.
    Select a speed that matches your network environment. It is recommended that [Auto-Negotiation] be selected.
    Default: [Auto-Negotiation]
    • Auto-Negotiation
    • 10BASE-T Full Duplex
    • 10BASE-T Half Duplex
    • 100BASE-TX Full Duplex
    • 100BASE-TX Half Duplex
  • MAC Address
    Display the projector’s MAC address.

• TCP/IP Settings
  • DHCP
    Select whether to enable or disable DHCP.
    The IP address is allocated automatically from the DHCP server when [Enable] is selected. When [Disable] is selected, enter the IP address, subnet mask, and default gateway manually.
    Default: [Enable]
    • Enable
    • Disable
  • IP Address
    Enter the projector’s IP address.
    Default: 0.0.0.0
• Subnet Mask
  Enter the subnet mask.
  Default: 0.0.0.0

• Default Gateway
  Enter the default gateway.
  Default: 0.0.0.0

Wireless LAN
Specify the wireless LAN settings.

• Simple Settings
  • Wireless Connection via USB
    Select whether or not to use the wireless LAN settings function using a USB memory device.
    Default: [Enable]
      • Enable
      • Disable
  • Simple Connection (USB Memory)
    Save the wireless LAN settings of the projector to the USB memory device.
    You can copy the wireless LAN settings saved in the USB memory device to a computer.

• Simple Wireless LAN Setup
  Acquire the wireless LAN settings registered in the access point, and specify infrastructure mode wireless LAN settings for the projector automatically.
  This function may not work depending on the access point.

• Wireless LAN Settings
  • Communication Mode
    Select the wireless LAN communication mode.
    Default: [Adhoc]
      • Infrastructure
      • Adhoc
  • Connection Setting
    Select the wireless LAN connection method in ad hoc mode to connect the computer and projector using Network Utility.
    If you select [Auto], connect by the "Simple 1:1 Connection" function. You do not need to specify [SSID], [Security], and [TCP/IP Settings] when connecting by the "Simple 1:1 Connection" function.
If you select [Manual], connect by the "Network Connection" function. You need to specify [SSID], [Security], and [TCP/IP Settings] when connecting by the "Network Connection" function.

This function is available when you select [Adhoc] in [Communication Mode].

Default: [Auto]

- Auto
- Manual

- SSID
Enter the SSID to identify the network to which the projector is connected via wireless LAN. Enter up to 32 characters.

- MAC Address
Display the projector's MAC address.

- Channel
Select the channel to use when [Adhoc] is selected.
Select the channel that matches the type of wireless LAN being used.
The channels available might differ depending on the country.
Default: [11]
For IEEE 802.11 b/g/n (2.4 GHz): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

- Security

  - Authentication Method
Select the wireless LAN authentication method.
Only [Open System] is selectable when you select [Adhoc] in [Communication Mode].
Default: [Open System]

  - Open System
  - WEP Shared Key
  - WPA-PSK
  - WPA2-PSK

  - Encryption Method
Select the wireless LAN encryption method.
If you select [No Encryption], the communication is not encrypted. [No Encryption] is selectable only when you select [Open System] in [Authentication Method].
Select [WEP] when you select [Open System] or [WEP Shared Key] in [Authentication Method].
Default: [No Encryption]
  • No Encryption
  • WEP
  • TKIP
  • CCMP

• Transmission WEP Key Number
  Select the Key number used to authenticate and encrypt transmissions when you select [WEP] in [Encryption Method].
  Default: [1]
    • 1
    • 2
    • 3
    • 4

• Network Key
  Enter the WEP key when you select [WEP Shared Key] or [Open System] in [Authentication Method] and select [WEP] in [Encryption Method].
  When using 64 bit WEP, up to 10 characters can be used for hexadecimal and up to 5 characters for ASCII. When using 128 bit WEP, up to 26 characters can be used for hexadecimal and up to 13 characters for ASCII.
  Enter PSK when [WPA-PSK] or [WPA2-PSK] is selected in [Authentication Method].
  When using a PSK, up to 64 characters can be used for hexadecimal and 8 to 63 characters for ASCII.

• TCP/IP Settings
  • DHCP
    Select whether to enable or disable DHCP.
    The IP address is allocated automatically from the DHCP server when [Enable] is selected. If you select [Disable], manually enter the IP address, subnet mask, and default gateway.
    Default: [Disable]
      • Enable
      • Disable

  • IP Address
    Enter the projector’s IP address.
    Default: 0.0.0.0

  • Subnet Mask
Enter the subnet mask.
Default: 0.0.0.0

- Default Gateway
  Enter the default gateway.
  Default: 0.0.0.0

- Reset Wireless LAN Settings
  - Reset Wireless LAN Settings
    Restore all the wireless LAN settings to their defaults.

LAN Common
Specify the wired LAN and wireless LAN settings.

- Network Interface
  - Network Interface
    Select the network interface to be used.
  Default: [Wired LAN Priority]
    - Wired LAN
    - Wireless LAN
    - Wired LAN Priority
      Give priority to wired LAN if connected to the network via an Ethernet cable.
      Disconnect the Ethernet cable when using a wireless LAN.
    - Disable

- DNS Settings
  - Primary DNS Server Address
    Enter the IP address of the primary DNS server.
    Default: 0.0.0.0
  - Secondary DNS Server Address
    Enter the IP address of the secondary DNS server.
    Default: 0.0.0.0
  - Host Name
    Display the projector’s host name.
    The [Projector Name] in [Projector ID] is used as the projector’s host name.
  - Domain Name
    Enter the projector’s domain name. Enter up to 63 characters.

- Projector Search Settings
• Projector Search
Select whether or not to search for the projector automatically when the projector and the device connected to the projector are on the same network.
Default: [Enable]
  • Enable
  • Disable

• HTTP Client Settings
  • HTTP Proxy Server Port
    Enter an HTTP proxy server port that is between 0 and 65535.
    Default: 80
  • HTTP Proxy Server Name
    Enter an HTTP proxy server name that is up to 128 characters.
  • HTTP Proxy User Name
    Enter an HTTP proxy user name that is up to 31 characters.
  • HTTP Proxy Password
    Enter an HTTP proxy password that is up to 31 characters.

• HTTP Server Settings
  • HTTP Port
    Enter an HTTP port that is between 0 and 65535.
    Default: 80

• Manage Certificate
  • Import Device Certificate
    Import the device certificate saved on the USB memory device to the projector.
    Insert the USB memory device into the USB port on the projector to display the file list.
    Select the device certificate to be imported from the file list.

  • Certificate List
    The list of device certificates is displayed.
    You can confirm details about the device certificate or delete it in this screen.

Projector ID
  • Projector Name
    Enter an ID to identify the projector on the network. Enter up to 16 characters.
    Default: [RPJxxxxxx] (xxxxxx is the last six digits of the wired LAN’s MAC address)

Display Status
  • Wireless LAN
• Connection Status
  Display the wireless LAN connection status.
• MAC Address
  Display the projector’s MAC address.
• Access Point BSSID
  Display the currently connected BSSID.
• Communication Mode
  Display the wireless LAN communication mode.
• Transmission Speed
  Display the wireless LAN transmission speed.
• Channel
  Display the wireless LAN channel.
• SSID
  Display the SSID of the connected wireless LAN network.
• Authentication Method
  Display the wireless LAN authentication method.
• Encryption Method
  Display the wireless LAN encryption method.
• IP Address
  Display the IP address.
• Subnet Mask
  Display the subnet mask.
• Default Gateway
  Display the default gateway.
• Wired LAN
  • Connection Status
    Display the wired LAN connection status.
  • MAC Address
    Display the projector’s MAC address.
  • Transmission Speed
    Display the wired LAN transmission speed.
  • IP Address
    Display the IP address.
Network/USB Settings Menu

- Subnet Mask
  Display the subnet mask.
- Default Gateway
  Display the default gateway.
- Firmware Version
  - Network/USB Function Firmware Version
    Display the firmware version of the network and USB functions.
  - Energy Saving IO Firmware Version
    Display the energy-saving IO firmware version.

Network Application Settings

These settings enable the projection server, PJLink, etc., to be specified, and the network application status to be verified.

PJLink

Specify the authentication and passwords when accessing the projector using application software that is compatible with PJLink.

- PJLink Authentication
  Select whether or not to set PJLink authentication.
  Default: [Off]
  - On
  - Off
- PJLink Password
  Enter a password used when setting the PJLink authentication that is up to 32 characters.

Security

Specify the password to authenticate the administrator.

If administrator authentication is set, a password is required when changing [Transmission WEP key Number], [Network Key], [PJLink Authentication], [PJLink Password], [Administrator Authentication] or [Administrator Password], and importing or deleting device certificates. A password is also required when operating the projector power via a network.

- Administrator Authentication
  Select whether or not to set administrator authentication.
  Default: [Off]
  - On
  - Off
• Administrator Password
  Enter the administrator password using up to 32 characters.

**Projection Server**

Specify the projection server functions.

• Validate Projection by Projection Server
  Select whether or not to enable the projection server functions.
  Default: [Disable]
  • Enable
  • Disable

• Server URL
  Enter the root URL of the server on which the files to be projected using the projection server functions are saved. Enter up to 128 characters.

• Index File
  Enter the name of the index file on the projection server. Enter up to 31 characters.

• HTTP Proxy Server Usage
  Select whether or not to use a proxy server.
  Default: [No]
  • Yes
  • No

• Access Restriction Type
  Select whether or not to display the access number input screen when you access the projection server.
  Select [Access Number] if access to the projection server is restricted by an access number.
  Default: [None]
  • Access Number
  • None

**Display Status**

• PJLink
  • PJLink Class
    Display the PJLink class.

• Firmware Version
  Display the firmware version.
  • Network/USB Function Firmware Version
    Display the firmware version of the network and USB functions.
• **Energy Saving IO Firmware Version**

  Display the energy-saving IO firmware version.
Display Status

Input
Displays the selected input signals.

Resolution
Displays the resolution.
This item appears when you select [Computer] or [HDMI] as an input signal.

Frequency
Displays the synchronous frequency.
This item appears when you select [Computer] or [HDMI] as an input signal.

Sync
Displays the synchronous signal polarity.
This item appears when you select [Computer] as an input signal.

Signal Format
Displays the Y/Pb/Pr signal format.
This item appears when you select [Y/Pb/Pr] as an input signal.

Video Mode
Displays the video signal color format.
This item appears when you select [Video] as an input signal.

Lamp Time
Displays the lamp usage time.

Lamp Reset Count
Displays the number of lamp replacements.

Total Time
Displays the projector usage time.

Total CO2 Reduction
Displays the total CO₂ amount that can be reduced by setting the lamp mode to eco mode.

Eco Time Ratio
Displays the ratio of the time eco mode was used to the total use time.

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.

**Indicator display image**

The [Power] button is located on top of the projector. The indicators are on the front of the projector. For details, see p.15 “Projector Parts and Their Functions”.

<table>
<thead>
<tr>
<th>Status</th>
<th>Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The projector does not turn on.</td>
<td>The projector is malfunctioning.</td>
<td>Disconnect the power cord, and contact your service representative.</td>
</tr>
<tr>
<td>&quot;Hardware Error&quot; was displayed, and the projector turned off during operation.</td>
<td>The projector has an internal malfunction.</td>
<td>Disconnect the power cord, wait a while, and then turn on the projector again. If the problem cannot be resolved, contact your service representative.</td>
</tr>
</tbody>
</table>
### 5. Troubleshooting

<table>
<thead>
<tr>
<th>Status</th>
<th>Causes</th>
<th>Solutions</th>
</tr>
</thead>
</table>
| The lamp turned off during operation, or it does not turn on. | • The lamp has overheated and cannot turn on.  
• The lamp's service life has expired.  
• The projector has malfunctioned. | • Disconnect the power cord, wait a while, and then turn on the projector again.  
• If the lamp burns out, replace it with a new lamp. For details of how to replace the lamp, see p.117 "Replacing the Lamp". |
| The lamp does not turn off.  
Flashing interval: 2 seconds | The projector has an internal malfunction. | Disconnect the power cord, wait a while, and then turn on the projector again.  
If the problem cannot be resolved, contact your service representative. |
| The projector turned off during operation, or it does not turn on.  
Flashing interval: 1 second | The lamp cover is not installed correctly. | Disconnect the power cord, and reinstall the lamp cover correctly.  
For details of how to install the lamp cover, see p.117 "Replacing the Lamp". |
| "Temperature Error" was displayed, and the projector turned off during operation. | • The interior has overheated.  
• The projector is being used in a high-temperature environment. | 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. |
| "Fan Error" was displayed, and the projector turned off during operation. | The cooling fan in the projector has malfunctioned. | Disconnect the power cord, and contact your service representative. |
"Installation Error" was displayed, and the projector turned off during operation, or it does not turn on.

<table>
<thead>
<tr>
<th>Status</th>
<th>Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The projector's angle is too great.</td>
<td>Place the projector at a proper angle, and then turn it on again.</td>
<td></td>
</tr>
</tbody>
</table>

**Note**

- " means the indicator is flashing.
## Common Problems

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

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power does not turn on.</td>
<td>• Make sure the power plug or connector is connected correctly.</td>
</tr>
<tr>
<td></td>
<td>• Make sure the lamp cover is mounted correctly.</td>
</tr>
<tr>
<td></td>
<td>For details, see p.117 &quot;Replacing the Lamp&quot;.</td>
</tr>
<tr>
<td>Power turns off during use.</td>
<td>• Make sure the environment in which the projector is being used is within the acceptable temperature range.</td>
</tr>
<tr>
<td></td>
<td>• Make sure the vents are not blocked.</td>
</tr>
<tr>
<td>No image.</td>
<td>• Make sure the input signal is switched correctly if [Auto Input Search] in [Default Settings] is set to [Off].</td>
</tr>
<tr>
<td></td>
<td>For details, see p.90 &quot;Default Settings Menu&quot;.</td>
</tr>
<tr>
<td></td>
<td>• Make sure the mute function is not turned on.</td>
</tr>
<tr>
<td></td>
<td>For details, see p.41 &quot;Temporarily blanking the image and muting the audio&quot;.</td>
</tr>
<tr>
<td></td>
<td>• Check the settings of [Brightness] in [Image Adjustment].</td>
</tr>
<tr>
<td></td>
<td>For details, see p.83 &quot;Image Adjustment Menu&quot;.</td>
</tr>
<tr>
<td></td>
<td>• Make sure the computer or AV equipment is connected to the projector correctly.</td>
</tr>
<tr>
<td></td>
<td>For details, see p.28 &quot;Connecting Equipment to the Projector&quot;.</td>
</tr>
<tr>
<td></td>
<td>• Make sure the computer’s image output is switched correctly.</td>
</tr>
<tr>
<td></td>
<td>For details, see p.36 &quot;When projecting the screen of a notebook computer&quot;.</td>
</tr>
<tr>
<td></td>
<td>• Make sure the computer or AV equipment is working properly.</td>
</tr>
<tr>
<td>Problem</td>
<td>Solutions</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| No sound.                                    | • Press the [Input] button.  
For details, see p.35 "Selecting an Input Signal".  
• Make sure the mute function is not turned on.  
For details, see p.41 "Temporarily blanking the image and muting the audio".  
• Check the speaker's volume adjustment.  
For details, see p.40 "Adjusting the Volume of the Speaker".  
• Make sure the computer or AV equipment is connected to the projector correctly.  
For details, see p.28 "Connecting Equipment to the Projector".  
• Make sure the computer or AV equipment is working properly. |
| Image is not projected normally.             | • Make sure the input signal is compatible with the projector.  
For details, see p.127 "List of Compatible Signals".  
• Check the status of the video tape or other video source. |
| Image is blurred.                            | • Make sure the projection window is clean.  
For details, see p.116 "Cleaning the Projection Window".  
• Check the focus adjustment.  
For details, see p.38 "Adjusting the focus".  
• Make sure the projection distance is within the projector's range.  
For details, see p.26 "Relationship Between the Projection Distance and the Screen Size".  
• Check the installation angles of the projector and screen.  
For details, see p.36 "Adjusting the Angle of the Projection".  
• Check the settings of [Sharpness] and [Phase] in [Image Adjustment].  
For details, see p.83 "Image Adjustment Menu". |
<table>
<thead>
<tr>
<th>Problem</th>
<th>Solutions</th>
</tr>
</thead>
</table>
| Image is dark.              | • Check the settings of [Brightness] and [Contrast] in [Image Adjustment].  
                               For details, see p.83 "Image Adjustment Menu".  
                               • Make sure the lamp is not near the end of its service life.  
                               For details, see p.106 "Display Status".  
                               • Check the settings of [RGB Input Range] in [Image Adjustment].  
                               For details, see p.83 "Image Adjustment Menu".  
                               • Make sure [3D Projection] in [Default Settings] is set to [Off].  
                               For details, see p.90 "Default Settings Menu". |
| Color is faded. Tint is poor.| • Check the settings of [Color Saturation], [R-level], [G-level], and [B-level] in [Image Adjustment].  
                               For details, see p.83 "Image Adjustment Menu".  
                               • Make sure the screen is clean.  
                               • Check the settings of [Wall Color Correction] in [Display Settings].  
                               For details, see p.87 "Display Settings Menu".  
                               • Make sure the lamp is not near the end of its service life.  
                               For details, see p.106 "Display Status" |
| The projector’s operation keys do not respond. | • Make sure [Key Lock] in [Default Settings] is not set to [On].  
                               For details, see p.90 "Default Settings Menu". |
<table>
<thead>
<tr>
<th>Problem</th>
<th>Solutions</th>
</tr>
</thead>
</table>
| The remote control does not respond.         | • Make sure the ID assigned to the remote control and in the settings of [Remote Control ID] in [Default Settings] are the same.  
  For details, see p.90 "Default Settings 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 p.21 "Loading Batteries into the Remote Control".  
• Make sure the remote control is inside its effective range.  
  For details, see p.20 "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. |
| Display language is unknown.                 | • Press the [Menu] button, and then select the display language in [XXX/Language] (XXX differs from the current display language) under [Language] tab.  
  For details, see p.90 "Default Settings Menu". |
| No images from USB devices.                  | • Make sure the USB memory device is connected correctly.  
• Make sure the connected USB memory device is compatible with the projector.  
• Make sure there are JPEG or MPEG files saved on the USB memory device.  
• Make sure the compression format, file size, and other conditions are compatible with the projector.  
  For details, see p.46 "Projecting Images from a USB Memory Device or Digital Camera". |
| Wired LAN is disabled.                       | • Check the settings of [Wired LAN Settings] in [Network Settings] under [Network/USB Settings].  
  For details, see p.96 "Network Settings". |
Wireless LAN is disabled.

- Check the settings of [Wireless LAN Settings] in [Network Settings] under [Network/USB Settings]. For details, see p.96 "Network Settings".
- Make sure there is nothing placed between the computer and the projector.
- Make sure the operating system of the computer is compatible with Network Utility. Log in to the computer using administrator privileges to configure the wireless LAN settings using Simple 1:1 Connection or a USB memory device. For details, see p.61 "What Is Network Utility?".
- Make sure that the projector is not in standby.

Knowledge Base

If you have any questions about the projector, refer to the knowledge base. Visit our global Web site 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 keyword.
6. Maintenance

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

Operating Precautions

Pay attention to the following points when using the projector:

- 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 in good condition.

- 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, remove the projector from the packing case before using. 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. If this happens, move the projector away from the television or radio.

- 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 (±20° or greater). Doing so may cause malfunction or reduce the service life.

- 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.
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 product that may cause electric shock. Contact your service representative if any of the product's internal components require maintenance, adjustment, or repair.
- Do not disassemble or modify the product. Doing so may cause injury or malfunction.

⚠️ CAUTION

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

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:

- Disconnect the power plug before cleaning.
- 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 product to cool completely. If it is not completely cool, you may burn or injure yourself due to the inside of the product 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.

⚠️ 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.

⚠️ Important

- The lamp is a glass product. Do not touch the glass surface with bare hands, hit it forcefully, or damage it.
- 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 or contact your sales representative or service representative.

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.

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.

When [Lamp Power] in [Default Settings] is specified as [Standard], replace the lamp after approximately 3,000 hours. When the setting is [Eco], replace it after approximately 4,000 hours. This may differ, however, depending on how the lamp is used.

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.

3. Raise the metal handle.

4. Hold the handle, and then pull the lamp unit out of the projector.
5. Insert a new lamp unit.

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's service life can be verified using [Lamp Time] in [Display Status].
- The lamp may stop working before it reaches its approximate service life or before the replacement message is displayed.
Managing the Projector Using Projector Management Utility

Projector Management Utility conforms to the PJLink class 1 standards, and is compatible with all class 1 commands.

A maximum of 100 projectors connected to the network can be managed using one computer.

Projector Management Utility operating environment is described below.

- Supported operating system
  - Windows 7 (32-bit version) Home Premium, Professional, Ultimate, Enterprise
- Memory size
  Recommended memory size for the operating system of the computer you are using
- Display resolution
  800 × 600 pixels or more

**Note**

- This software is to control and monitor projectors manufactured by our company. The software may not work properly when used to control other projectors.

Installing Projector Management Utility

Projector Management Utility is included on the supplied CD-ROM.

Log in to the computer with administrator privileges to install or uninstall utilities.

1. Close all applications.
2. Insert the CD-ROM in the CD-ROM drive of your computer.
3. Specify a language.
   The launcher screen appears.
4. Click [Projector Management Utility].
5. Install the application by following the on-screen instruction.
6. When the installation is complete, exit the installer.
   A shortcut icon is created on the desktop.
To uninstall Projector Management Utility, use the program delete function in [Control Panel] to delete "Projector Management Utility".

Settings Required to Use Projector Management Utility

Prepare the network so the projector can be connected. Specify the settings either in [Wireless LAN] or [Wired LAN].

Specify the following settings to control the projector using Projector Management Utility:

- [Projector ID] in [Network Settings]
- [PJLink] items in [Network Application Settings]

For details, see p.95 "Network/USB Settings Menu".

Note

- [PJLink Password] is not specified by factory defaults. It is recommended to register a password as soon as possible. If you forget the password, register a new password. The new password is valid.

Starting Projector Management Utility

Projector Management Utility acquires the projector registration information from the configuration file, when it is launched.

The following information can be obtained:

- Projector status (power on and off, input signal, Av mute on and off, lamp status, error status)
- Projector information (product name, manufacturer, available input ports, other information)

The functions that can be operated from Projector Management Utility are power on and off, input signal switching, and mute. Settings cannot be changed if the function specified by the projector is not compatible.

1. Double-click the "Projector Management Utility" icon on the desktop.

   The information for the projectors detected by the application is displayed.

Note

- If using Projector Management Utility with Windows Vista or Windows 7, log in using administrator privileges.
- The projector must be registered in advance. For details, see the Projector Management Utility Help.
• Depending on the setting in [Standby Energy Saving], the projector does not respond even if the projector is in standby mode. Press the [Power] button, or change the setting in [Standby Energy Saving].

• If a communications error prevents the projector from being detected, "?" is displayed. If the connection failed due to an incorrect password or other reason, "x" is displayed.

• The details displayed in the Projector Management Utility "Input" and the corresponding projector input signals are described below:

<table>
<thead>
<tr>
<th>Projector input signal</th>
<th>PJLink input name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer</td>
<td>RGB1</td>
</tr>
<tr>
<td>Y/Pb/Pr</td>
<td>RGB2</td>
</tr>
<tr>
<td>HDMI</td>
<td>DIGITAL1</td>
</tr>
<tr>
<td>Video</td>
<td>VIDEO1</td>
</tr>
<tr>
<td>Network</td>
<td>NETWORK1</td>
</tr>
<tr>
<td>USB Memory</td>
<td>STORAGE1</td>
</tr>
</tbody>
</table>

• See the Projector Management Utility Help for how to use Projector Management Utility.
Consumables

- Lamp unit
  Replacement Lamp Type 3

**Note**

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

### Specifications for the Projector

<table>
<thead>
<tr>
<th>Component</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption</td>
<td>300 W or less</td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 3.0 kg (6.7 lb.)</td>
</tr>
<tr>
<td>External dimensions (not including protruding parts)</td>
<td>257 × 144 × 221 mm (10.1 × 5.7 × 8.7 inches)</td>
</tr>
<tr>
<td>Operating environment</td>
<td>Temperature: 5 to 35°C (73 to 95°F), Humidity: 30 to 70%</td>
</tr>
<tr>
<td>Display element</td>
<td>• Display method</td>
</tr>
<tr>
<td></td>
<td>Single-chip DLP®</td>
</tr>
<tr>
<td></td>
<td>• Panel size</td>
</tr>
<tr>
<td></td>
<td>0.65 inches</td>
</tr>
<tr>
<td></td>
<td>• Pixels</td>
</tr>
<tr>
<td></td>
<td>1,024,000 pixels (1280 H × 800 V)</td>
</tr>
<tr>
<td>Projection method</td>
<td>Ultra short-focus lens/mirror projection method</td>
</tr>
<tr>
<td>Lamp</td>
<td>High-pressure mercury lamp (Standard mode: 225 W, Eco mode: 170 W)</td>
</tr>
<tr>
<td>Projection screen size</td>
<td>48 to 80 inches</td>
</tr>
<tr>
<td>Projection distance</td>
<td>12 to 25 cm (4.6 to 9.8 inches)</td>
</tr>
<tr>
<td>Speaker</td>
<td>2 W (Mono)</td>
</tr>
</tbody>
</table>
### Component Specifications

<table>
<thead>
<tr>
<th>Component</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection ports</td>
<td>• COMPUTER In port</td>
</tr>
<tr>
<td></td>
<td>Mini D-SUB 15 × 1</td>
</tr>
<tr>
<td></td>
<td>• HDMI port (HDCP compliant)*</td>
</tr>
<tr>
<td></td>
<td>HDMI × 1</td>
</tr>
<tr>
<td></td>
<td>• Video In port</td>
</tr>
<tr>
<td></td>
<td>RCA_1pin × 1</td>
</tr>
<tr>
<td></td>
<td>• Audio In port</td>
</tr>
<tr>
<td></td>
<td>Mini Jack × 1</td>
</tr>
<tr>
<td></td>
<td>• Control port</td>
</tr>
<tr>
<td></td>
<td>USB-TYPE-minB × 1</td>
</tr>
<tr>
<td></td>
<td>• USB port</td>
</tr>
<tr>
<td></td>
<td>TYPE-A × 1</td>
</tr>
<tr>
<td></td>
<td>USB 2.0 High-speed</td>
</tr>
<tr>
<td></td>
<td>Output voltage: DC 5 V</td>
</tr>
<tr>
<td></td>
<td>Supply current: 500 mA</td>
</tr>
<tr>
<td></td>
<td>• LAN port</td>
</tr>
<tr>
<td></td>
<td>RJ-45</td>
</tr>
<tr>
<td></td>
<td>10BASE-T/100BASE-TX/1000BASE-T</td>
</tr>
</tbody>
</table>

* HDCP (High-bandwidth Digital Content Protection) is a copyright protection method to encrypt digital signals across the DVI/HDMI interface and prevent unauthorized copying. The HDCP specification was developed and is licensed by Digital Content Protection, LLC. The HDMI port on this projector is HDCP compliant and can project digital video content protected by HDCP. Updates to the HDCP specification may void this compliance and prevent access to protected data. If this occurs, it is not caused by the projector.
List of Compatible Signals

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

If resolutions or signal frequencies that are not compatible with the projector are input, the image may flicker or become blurred. Further, the image may not be displayed.

**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.

### Computer Input

<table>
<thead>
<tr>
<th>Mode</th>
<th>Resolution (pixel)</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Horizontal</td>
<td>Vertical</td>
</tr>
<tr>
<td></td>
<td>(pixel)</td>
<td>(Hz)</td>
</tr>
<tr>
<td>640 × 480</td>
<td>640</td>
<td>480</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>720 × 400</td>
<td>720</td>
<td>400</td>
</tr>
<tr>
<td>800 × 600</td>
<td>800</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>832 × 624</td>
<td>832</td>
<td>624</td>
</tr>
<tr>
<td>848 × 480</td>
<td>848</td>
<td>480</td>
</tr>
<tr>
<td>Mode</td>
<td>Resolution</td>
<td>Frequency</td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td>Horizontal (pixel)</td>
<td>Vertical (pixel)</td>
</tr>
<tr>
<td>1024 × 768</td>
<td>1024</td>
<td>768</td>
</tr>
<tr>
<td>1152 × 864</td>
<td>1152</td>
<td>864</td>
</tr>
<tr>
<td>1152 × 870</td>
<td>1152</td>
<td>870</td>
</tr>
<tr>
<td>1280 × 720</td>
<td>1280</td>
<td>720</td>
</tr>
<tr>
<td>1280 × 768</td>
<td>1280</td>
<td>768</td>
</tr>
<tr>
<td>1280 × 800</td>
<td>1280</td>
<td>800</td>
</tr>
<tr>
<td>1280 × 960</td>
<td>1280</td>
<td>960</td>
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<tr>
<td>1280 × 1024</td>
<td>1280</td>
<td>1024</td>
</tr>
<tr>
<td>1360 × 768</td>
<td>1360</td>
<td>768</td>
</tr>
</tbody>
</table>
## List of Compatible Signals

<table>
<thead>
<tr>
<th>Mode</th>
<th>Resolution</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Horizontal (pixel)</td>
<td>Vertical (pixel)</td>
</tr>
<tr>
<td>1366 × 768</td>
<td>1366</td>
<td>768</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1400 × 1050</td>
<td>1400</td>
<td>1050</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1440 × 900</td>
<td>1440</td>
<td>900</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1600 × 900</td>
<td>1600</td>
<td>900</td>
</tr>
<tr>
<td>1600 × 1200</td>
<td>1600</td>
<td>1200</td>
</tr>
<tr>
<td>1680 × 1050</td>
<td>1680</td>
<td>1050</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Y/Pb/Pr Input

<table>
<thead>
<tr>
<th>Mode</th>
<th>Resolution</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Horizontal (pixel)</td>
<td>Vertical (pixel)</td>
</tr>
<tr>
<td>480i (525i)</td>
<td>720</td>
<td>242.5</td>
</tr>
<tr>
<td>480p (525p)</td>
<td>720</td>
<td>483</td>
</tr>
<tr>
<td>576i (625i)</td>
<td>720</td>
<td>288</td>
</tr>
<tr>
<td>576p (625p)</td>
<td>720</td>
<td>576</td>
</tr>
<tr>
<td>720 / 50p</td>
<td>1280</td>
<td>720</td>
</tr>
<tr>
<td>Mode</td>
<td>Resolution</td>
<td>Frequency</td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td>Horizontal (pixel)</td>
<td>Vertical (Pixel)</td>
</tr>
<tr>
<td>720 / 60p</td>
<td>1280</td>
<td>720</td>
</tr>
<tr>
<td>1080 / 50i</td>
<td>1920</td>
<td>540</td>
</tr>
<tr>
<td>1080 / 60i</td>
<td>1920</td>
<td>540</td>
</tr>
<tr>
<td>1080 / 50p</td>
<td>1920</td>
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</tr>
<tr>
<td>1080 / 60p</td>
<td>1920</td>
<td>1080</td>
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**Video Input**

<table>
<thead>
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<th>Mode</th>
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<tbody>
<tr>
<td></td>
<td>Vertical (Hz)</td>
</tr>
<tr>
<td>NTSC</td>
<td>59.940</td>
</tr>
<tr>
<td>PAL</td>
<td>50.000</td>
</tr>
<tr>
<td>SECAM</td>
<td>50.000</td>
</tr>
<tr>
<td>PAL-M</td>
<td>59.940</td>
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<tr>
<td>PAL-N</td>
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<td>PAL60</td>
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<td>NTSC4.43</td>
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**HDMI Input**

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<th>Mode</th>
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<td>Horizontal (pixel)</td>
<td>Vertical (Pixel)</td>
</tr>
<tr>
<td>480i (525i)</td>
<td>720</td>
<td>242.5</td>
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<tr>
<td>576i (625i)</td>
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<td>Mode</td>
<td>Resolution</td>
<td>Frequency</td>
</tr>
<tr>
<td>-------------</td>
<td>------------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td>Horizontal (pixel)</td>
<td>Vertical (pixel)</td>
</tr>
<tr>
<td>480p (525p)</td>
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<td>576p (625p)</td>
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<td>576</td>
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<td>720 / 50p</td>
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<tr>
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<td>-----------</td>
</tr>
<tr>
<td></td>
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<td>1680 × 1050</td>
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<td>1050</td>
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Specifications for Ports

Computer In Port

Pin assignment

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<thead>
<tr>
<th>Pin No.</th>
<th>Pin description</th>
<th>During RGB input</th>
<th>During Y/Pb/Pr input</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Video signal (R)</td>
<td></td>
<td>Color difference signal (Pr)</td>
</tr>
<tr>
<td>2</td>
<td>Video signal (G)</td>
<td></td>
<td>Luminance signal (Y)</td>
</tr>
<tr>
<td>3</td>
<td>Video signal (B)</td>
<td></td>
<td>Color difference signal (Pb)</td>
</tr>
<tr>
<td>4</td>
<td>N.C</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>GND (R)</td>
<td></td>
<td>GND (Pr)</td>
</tr>
<tr>
<td>7</td>
<td>GND (G)</td>
<td></td>
<td>GND (Y)</td>
</tr>
<tr>
<td>8</td>
<td>GND (B)</td>
<td></td>
<td>GND (Pb)</td>
</tr>
<tr>
<td>9</td>
<td>N.C</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>GND</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>N.C</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td>I²C Data</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>13</td>
<td>Horizontal sync signal</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>14</td>
<td>Vertical sync signal</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>15</td>
<td>I²C CLOCK</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Communication method</th>
<th>RS-232C, 115,200bps, No Parity, Data Length: 8 bits; Stop Bit Length: 1bit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication format</td>
<td>#{23h}' + Command + CR (0Dh)</td>
</tr>
<tr>
<td></td>
<td>Only 1 command valid per communication.</td>
</tr>
<tr>
<td></td>
<td>For the available commands, see &quot;Main commands&quot;.</td>
</tr>
<tr>
<td>Data format</td>
<td>For input commands, only ASCII-compliant all-uppercase alphanumeric characters supported.</td>
</tr>
<tr>
<td>Replies</td>
<td>• Acknowledge (Aborted)</td>
</tr>
<tr>
<td></td>
<td>'={3Dh}’ + Command{3byte} + '{3Ah}’ + 'E{45h}’ + 'R{52h}’ + '0{30h}’ + CR(0Dh)</td>
</tr>
<tr>
<td></td>
<td>• No acknowledge</td>
</tr>
<tr>
<td></td>
<td>'{3Dh}’ + 'E{45h}’ + 'R{52h}’ + '0{30h}’ + CR(0Dh)</td>
</tr>
<tr>
<td></td>
<td>For details of Acknowledge (Normally ended), see &quot;Main commands&quot;.</td>
</tr>
</tbody>
</table>

Main commands

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

* 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.
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This product uses open source and/or third party software. To check the information about software copyrights, see the documents in the "Copyrights" folder on the supplied CD-ROM.
Updating the Firmware

To update the projector firmware, download the latest firmware from the Web site and installing it. You can check the current firmware version on the menu screens of the projector.

- Main FW Version: Display Status menu

Note

- For details about how to use the menu screen, see p.73 "Using the Menu Screen".
Where to Inquire

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- The product names of Windows XP are as follows:
  - Microsoft® Windows® XP Professional Edition
  - Microsoft® Windows® XP Home Edition
  - Microsoft® Windows® XP Media Center Edition
  - Microsoft® Windows® XP Tablet PC Edition
  - Microsoft® Windows® XP Professional x64 Edition

- The product names of Windows Vista are as follows:
  - Microsoft® Windows Vista® Ultimate
  - Microsoft® Windows Vista® Business
  - Microsoft® Windows Vista® Home Premium
  - Microsoft® Windows Vista® Home Basic
  - Microsoft® Windows Vista® Enterprise

- The product names of Windows 7 are as follows:
  - Microsoft® Windows® 7 Home Premium
  - Microsoft® Windows® 7 Professional
  - Microsoft® Windows® 7 Ultimate
  - Microsoft® Windows® 7 Enterprise

- The product names of Windows Server 2003 R2 are as follows:
  - Microsoft® Windows Server® 2003 R2 Standard Edition
Microsoft® Windows Server® 2003 R2 Enterprise Edition
Microsoft® Windows Server® 2003 R2 Datacenter Edition

- The product names of Windows Server 2008 R2 are as follows:
  Microsoft® Windows Server® 2008 R2 Foundation
  Microsoft® Windows Server® 2008 R2 Standard
  Microsoft® Windows Server® 2008 R2 Enterprise
  Microsoft® Windows Server® 2008 R2 Datacenter
  Microsoft® Windows Server® 2008 R2 for Itanium-based Systems
  Microsoft® Windows® Web Server 2008 R2
  Microsoft® Windows® HPC Server 2008 R2
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<td>68</td>
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<td>Volume button</td>
<td>18, 40</td>
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<td>W</td>
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<td>87</td>
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<td>139</td>
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<td>Z</td>
<td>Zoom button</td>
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