RICOH

RICOH Portable Monitor 150/150BW

Operating Instructions

For safe and correct use, be sure to read the Safety Information in Read This First before using the machine.

TABLE OF CONTENTS

4. Connecting the Device via Wired Connection

5. Connecting the Device via Wireless Connection (150BW models only)

6. Charging

7. Changing Settings

8. Troubleshooting

9. Appendix

Introduction

This manual contains detailed instructions and notes on the operation and use of this machine. For your safety and benefit, read this manual carefully before using the machine. Keep this manual in a handy place for quick reference.

For safe and correct use, be sure to read the Safety Information in "Read This First" before using the machine.

How to Read This Manual

Symbols

This manual uses the following symbols:

⭐ **Important**

Indicates points to pay attention to when using the software. Be sure to read these explanations.

🔽 **Note**

Indicates supplementary information that you may find helpful, but not essential to completing a task.

[ ]

Indicates the names of screens, menus, settings, and buttons.

Disclaimer

To the maximum extent permitted by applicable laws, in no event will the manufacturer be liable for any damages whatsoever arising out of failures of this machine, losses of the registered data, or the use or non-use of this product and operation manuals provided with it.

Make sure that you always copy or have backups of the data registered in this machine. Documents or data might be erased due to your operational errors or malfunctions of the machine.

In no event will the manufacturer be responsible for any documents created by you using this machine or any results from the data executed by you.

Notes

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

Some illustrations or explanations in this guide may differ from your product due to improvement or change in the product.

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.

Two kinds of size notation are employed in this manual.

The following OS version screens are used as examples in this manual:

- Windows 11
- macOS 12

- iOS 15
- Android 12

About the Model Names of this Machine

There are two models of this product, and some functions, operating procedures, and specifications differ depending on the model.

In this manual, descriptions that differ depending on the model are provided with the following names for the model in question:

Model names	Name in this document
RICOH Portable Monitor 150	150 model
RICOH Portable Monitor 150BW	150BW model

How to check the model name

Check the model name at the top of the label attached to the back of the machine.

Terminology

This section explains the terms used in this manual.

RICOH Monitor

This is the abbreviated name for this product.

In this document, the term "this machine" is mainly used, while "RICOH Monitor" is used to refer to the 150 models or 150BW models other than this machine.

Device

In this manual, the term "device" is used exclusively for personal computers, smartphones, and other devices that are connected to this machine via a wired or wireless connection.

USB PD

This is an abbreviation for "USB Power Delivery", which is an extended USB standard that enables USB Type-C to receive and deliver power. This product uses a computer, smartphone, or charger that supports the USB PD standard.

USB PD Charger

This charger supports the USB PD (USB Power Delivery) standard.

1. Overview

This section provides an overview of the product and the names and functions of the various parts.

Things You Can Do with the Machine

Things That You Can Do with All Models

Connecting to a computer or another device to display the screen

Connect this machine to a computer, smartphone, or another device with a USB Type-C cable to display the device's screen.

⇒page 35 "Connecting the Device via Wired Connection"
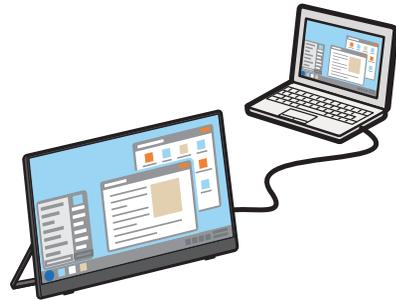
Y317IX0032

Operating the screen of a connected device

When connected to a device that supports touch operation, you can use your finger or stylus pen (optional) to operate the screen from this machine.

⇒page 35 "Connecting the Device via Wired Connection"

⇒page 159 "Using a Stylus Pen"

Y317IX0033

Charging connected devices (pass-through charging)

A commercially available USB PD charger can be used to charge devices connected to this machine with a USB Type-C cable.

⇒page 91 "Charging a Device Connected to This Machine (Pass-through Charging)"

Y317IX0039

1
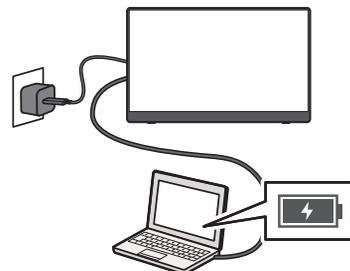
Things That You Can Do with the 150BW Model

Connecting to a computer or another device to display the screen

This machine can be used to connect to a computer, smartphone, or another device by wireless connection to display the screen of the device.

Depending on the operating system of the connected device, wireless connection is available by using an application.

⇒page 43 "Connecting the Device via Wireless Connection (150BW models only)"

Y317IX0035

Operating the screen of a connected device

When connected to a device with an OS that supports touch operation via wireless connection, the device can be operated with a finger or stylus pen (optional) from this machine.

⇒page 43 "Connecting the Device via Wireless Connection (150BW models only)"

Y317IX0034

Broadcasting the screen of connected devices (Windows only)

An application can be used to broadcast the Windows screen to multiple RICOH Monitors connected via the wireless connection.

⇒page 67 "Using the Application to Connect to Multiple RICOH Monitors at the Same Time (Windows)"
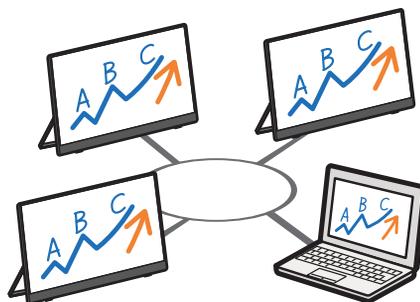
Y317IX0036

Connecting to two devices and displaying their screens

This machine can be connected to two devices by wireless connection to display the screens of both devices at the same time.

⇒page 73 "Things You Can Do on the Connecting Screen"

Y317IX0037

Charging this machine

You can charge the machine by connecting it to a device that supports the USB PD standard or to a commercially available USB PD charger.

⇒page 93 "Charging This Machine (150BW Model Only)"
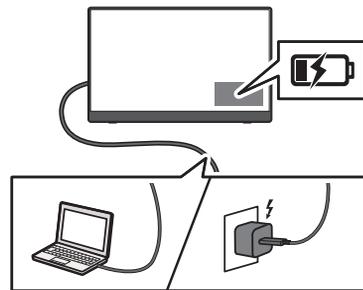
Y317IX0038

Component Names and Functions

Right Side
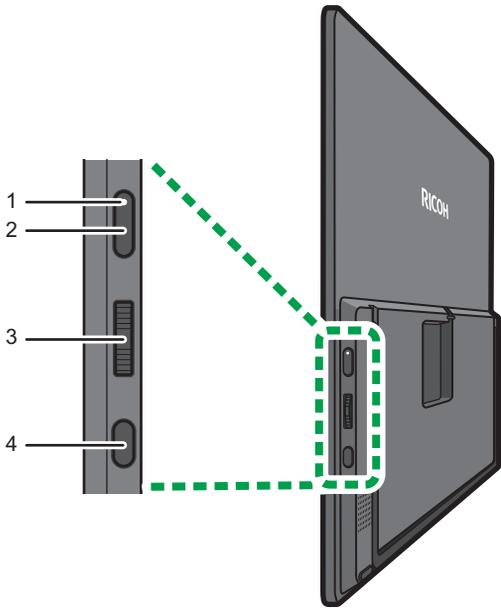
Y317IX0040

1. Power LED

This indicates the status of this machine.

150 model

LED	Color	Status
Off	-	Power off
Lit	White	Power on

150BW model

LED	Color	Status
Off	-	Power off • When the light turns OFF during battery charging Charging complete
Lit	White	Power on

LED	Color	Status
Lit	Orange	Battery charging

2. **Power button**

This turns ON or OFF the power of this machine.

For details, see page 29 "Turning On and Off the Power".

3. **Menu/Select/Enter button**

The Menu/Select/Enter button has the following controls:

- Pressing the center of the button
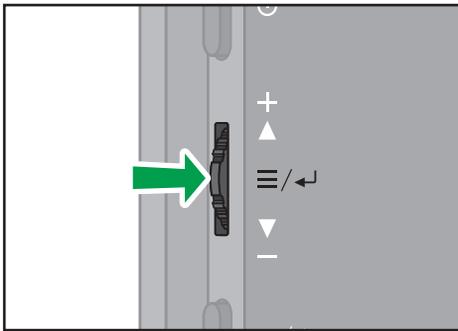
Y317IX0043

- Sliding the button up or down
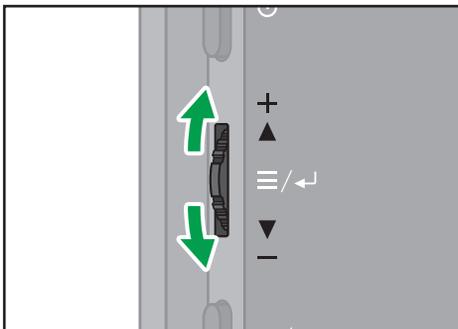
Y317IX0042

The differences in the condition of this machine and the operation of its buttons are as follows:

- When the On-screen Display menu and Switching Input screen are not displayed

Button operation	Machine operation
Pressing the center of the button	Displays the On-screen Display menu
Sliding the button up or down	Adjusts the volume

- When the On-screen Display menu or Switching Input screen is displayed

Button operation	Machine operation
Pressing the center of the button	Confirms the selected item
Sliding the button up or down	Moves the selection position or changes the setting value

4. Switching Input/Back button

This displays the Switching Input screen. Press again to close the Switching Input screen.

When the On-screen Display menu is displayed, it returns to the previous screen.

For details about the On-screen Display menu, see page 97 "Operating the On-screen Display Menu".

Back Side
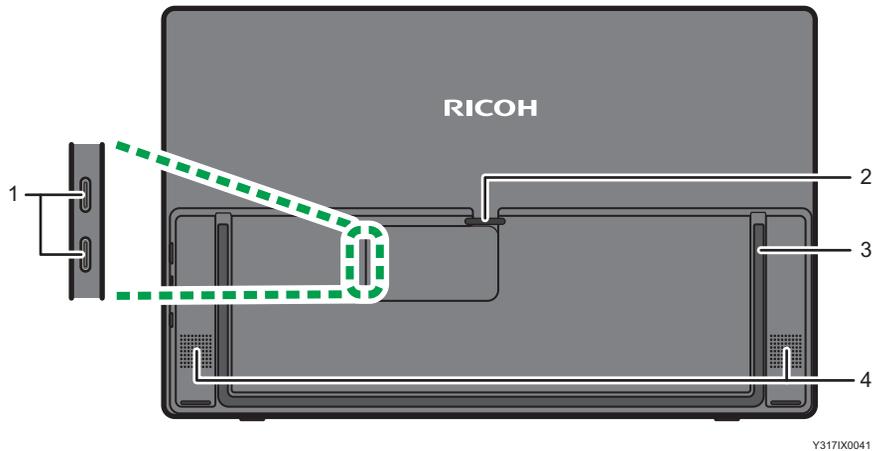
Y317IX0041

1. Top: USB port 1 (Type-C)/Bottom: USB port 2 (Type-C)

Connect this machine to a computer, smartphone, or another device for video and audio input.

It can also be connected to a commercially available USB PD charger so as to charge this machine (150BW model only).

The input assignment for USB ports 1 and 2 can be changed on the Switching Input screen. For details, see page 31 "Switching Inputs".

2. Cable holder

For details about how to use the cable holder, see page 19 "Connecting Cable".

3. Stand

For details about how to use the stand, see page 27 "Using the Stand".

4. Speaker

This outputs audio input from devices connected to this machine.

Regarding Commercially Available Products

This section describes the commercially available products that can be used with this machine.

⭐**Important**

- **Do not use adapters/chargers or conversion connectors for USB standards other than Type-C. The use of commercially available products not included in the description could cause this machine to malfunction.**

Use according to the environment in which this machine is used and the intended application.

- USB PD charger

  A USB Type-C charger that supports the USB PD (USB Power Delivery) standard can be used to supply power to this machine.

  The required USB PD charger specifications vary depending on the intended use.

Objective	Recommended specifications
Connecting to the device with a wired connection	Output 7.5 W or more Output of 15 W or more recommended
Connecting to devices with iOS	Output of 15 W or more
Charging devices connected to this machine (pass-through charging)	Maximum output 45 W
Charging this machine (150BW only)	Output of 20 W or more

- USB Type-C cable

  You can use a USB Type-C cable with both terminals being USB Type-C only.

  Use when connecting this machine to a USB PD charger or when connecting to two devices with a wired connection.

- Apple conversion adapter "Lightning Digital AV Adapter"

  Use when connecting this machine to devices with iOS.

- HDMI to USB Type-C conversion cable

  Use the conversion cable to connect from the HDMI port to the USB Type-C port.

  Use when connecting this machine to devices with iOS.

2. Preparations for Using the Machine

Checking the Accessories

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

- USB Type-C cable
- Cable clamps ✕ 4
- Sleeve case
- Read This First
- Quick Guide
- License Code for "RICOH Monitor Multicast for Windows" (150BW Model Only)
- Warranty card

🔽 Note

- Before discarding the package, check that you haven't left any accessories inside the box.
- Dispose of packaging materials wisely. You can recycle the cardboard carton. Consider storing the package for future transport of the machine if possible.
- Do not leave plastic bags within reach of young children or infants.

When Using this Machine for the First Time

When using this machine for the first time, perform the following operations:

Attaching Cable Clamps

1. **Remove the stickers from the supplied cable clamps (×4).**

Y317IX0044

2. **Attach the cable clamps to the desired position on the back of this machine.**

   • Example of cable clamps installation
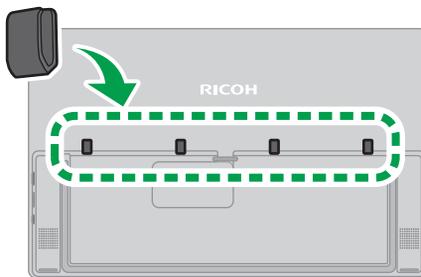
Y317IX0045

Proceed to page 19 "Connecting Cable".

↓Note

• It is recommended that the cable clamps be installed evenly on both sides of the back of this machine in order to keep the cables in the following condition when this machine is stored in the sleeve case:
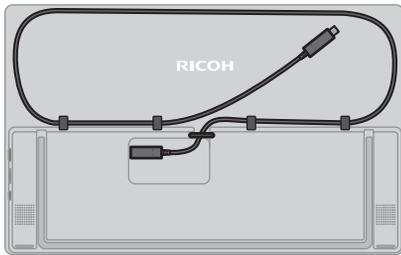
Y317IX0049

Connecting Cable

1. **Connect the supplied USB Type-C cable to the USB port of this machine.**
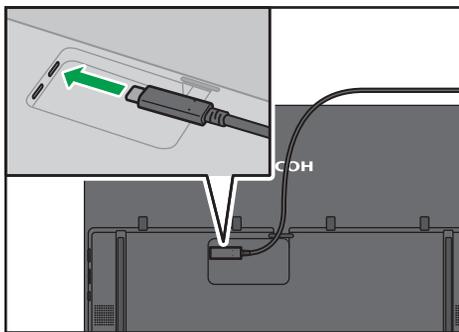
Y317IX0046

2. **Lift up the left end of the cable holder, pass the cable through, and then return the cable holder to its original position.**
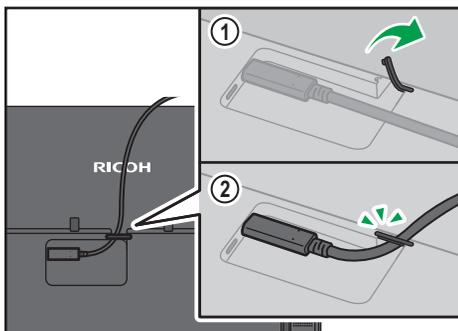
Y317IX0047

3. **Pass the cable through the cable clamps depending on the environment in which this machine will be used.**

    • Example of cable and cable clamps usage
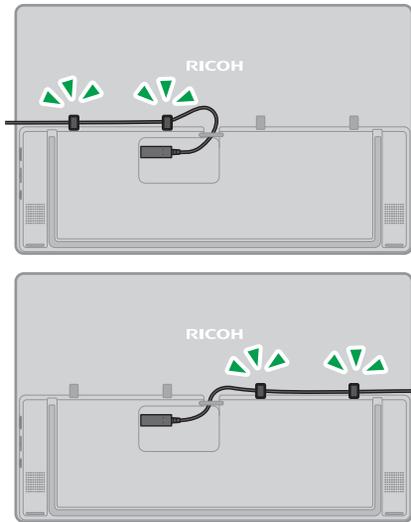
Y317IX0048

When using the 150BW model, proceed to page 20 "Charging This Machine (150BW Model Only)".

Charging This Machine (150BW Model Only)

⭐Important

- When using a commercially available USB PD charger, be sure to use one specifically for USB Type-C. The use of adapters/chargers or conversion connectors for other USB standards could result in a malfunction of this machine.

- Be sure to use a commercially available USB PD charger with an output of 20 W or more.

1. **Connect the USB Type-C cable connected to USB port 1 of this machine to a device that supports the USB PD standard or to a commercially available USB PD charger.**

Y317IX0050

2
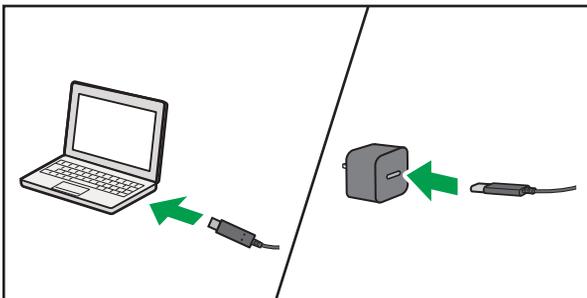
2. **Check that the device is ready to supply power when connected to a device that supports the USB PD standard. Plug the USB PD charger into a power outlet when connected to a USB PD charger.**

This machine starts charging, and the power LED is lit orange.
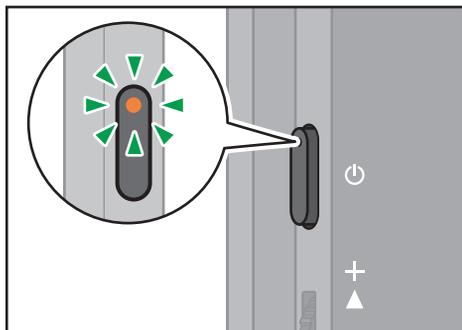
Y317IX0051

3. **Remove the USB Type-C cable from the device or USB PD charger when the power LED turns OFF and charging is complete.**
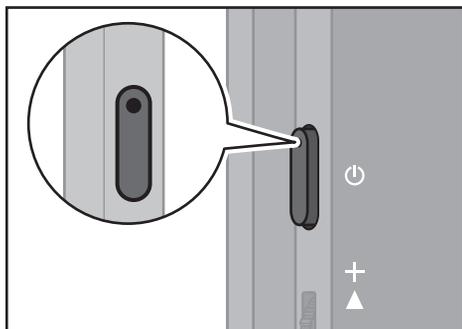
Y317IX0052

To continue with the initial settings for wireless connection, proceed to page 22 "When Using the Wireless Connection for the First Time (150BW models only)".

When Using the Wireless Connection for the First Time (150BW models only)

Changing the Initial Settings

When using the wireless connection for the first time, a screen for the initial settings of the device is displayed.

↓Note

- To continue from the procedure described in the Quick Guide, proceed from step 4.

1. **Press the Power button.**
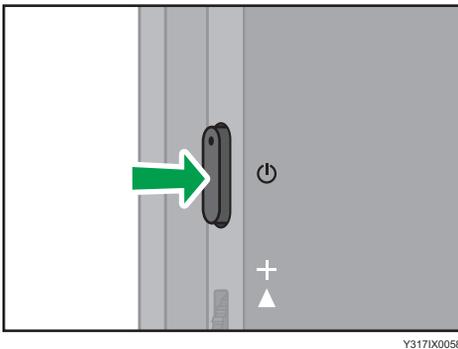
Y317IX0058

The power LED turns ON white, and the machine starts up.

If the power does not turn ON, charge this machine. For details, see page 20 "Charging This Machine (150BW Model Only)".

2. **Switching Input/Back button**
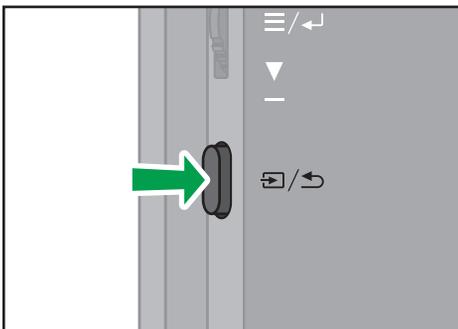
Y317IX0067

The Switching Input screen appears.

Y317OX0024
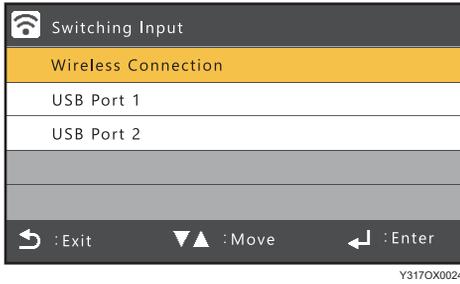
3. **Slide the Menu/Select/Enter button up or down to select [Wireless Connection].**

Y317IX0042
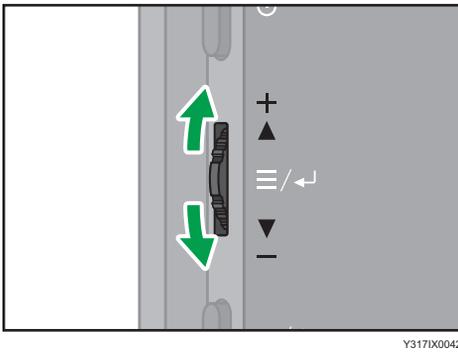
4. **Press the center of the Menu/Select/Enter button.**

Y317IX0043
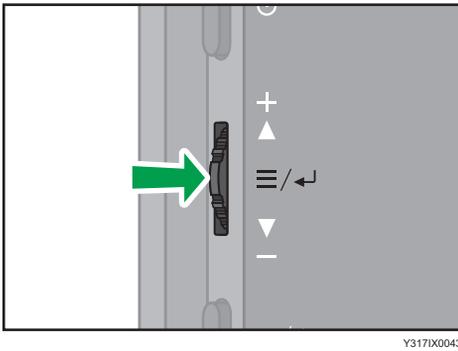
The initial settings screen for the wireless connection appears.

In the initial settings screen, touch the screen to operate.

5. **Select the language if necessary, and then touch [OK].**
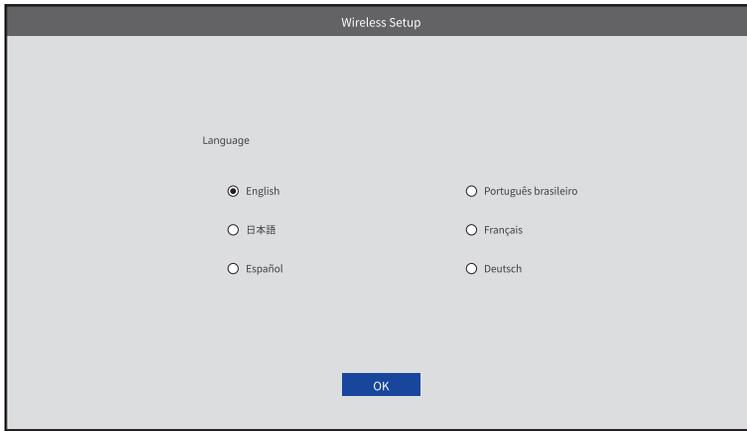
Y317OX0036

6. **Change the device name if necessary, and then touch [OK].**

   Enter the device name using four to 30 single-byte alphanumeric characters.
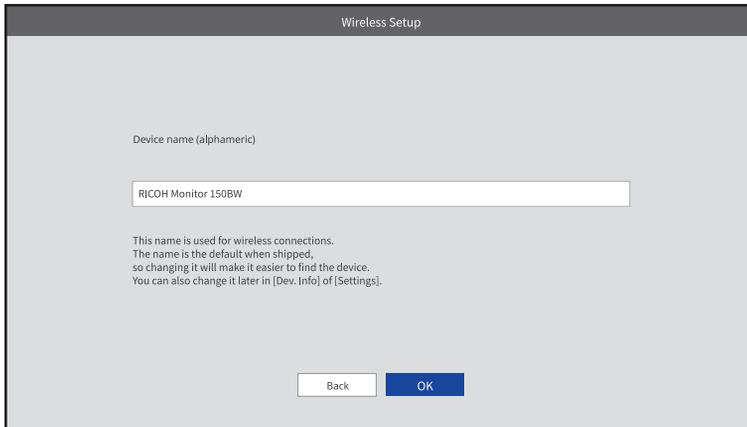
Y317OX0037

The initial settings are completed, and the Waiting to Connect screen appears.

3. Basic Usage

Operation Flow

The basic operation flow of this machine is as follows:

1. **Remove this machine from its sleeve case.**

2. **Open the stand and adjust the angle.**

   ⇒page 27 "Using the Stand"

3. **Connect it to a computer, smartphone, or another device.**

   • When connecting via a wired connection to a device
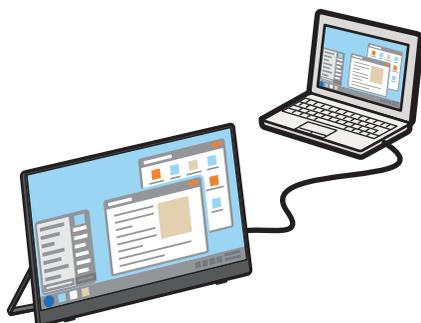
Y317IX0032

   ⇒page 29 "Turning On and Off the Power"

   ⇒page 31 "Switching Inputs"

   ⇒page 35 "Connecting the Device via Wired Connection"

   • When connecting via a wireless connection to a device (150BW models only)

   When using the wireless connection for the first time, it is necessary to change to [Wireless Connection] on the Switching Input screen.

Y317IX0035

   ⇒page 29 "Turning On and Off the Power"

   ⇒page 31 "Switching Inputs"

⇒page 43 "Connecting the Device via Wireless Connection (150BW models only)"

4. **Operate this machine.**

   The things that you can do vary depending on the OS of the connected device.

   ⇒page 35 "Overview of Wired Connection"

   ⇒page 43 "Overview of Wireless Connection "

   The things that you can do with this machine when connected to a device are as follows:

   • Video display/audio playback

     Display and playback the screen and audio of the connected device on this machine.

   • Screen sharing

     Using a free application, the Windows screen can be broadcasted to multiple RICOH Monitors connected via a wireless connection.

   • Touch operation

     Operate connected devices by touching the screen of this machine with your finger.

   • Stylus pen operation (optional)

     Operate connected devices by touching the optional stylus pen to the screen of this machine.

5. **Disconnect from the device.**

6. **Return the stand to the storage position.**

   ⇒page 27 "Using the Stand"

7. **Store this machine in the sleeve case.**

   ⇒page 34 "Storing this Machine"

◆Note

• Stylus pen operation requires an optional stylus pen.

• Stylus pen operation with a wireless connection can only be performed by touch with the stylus pen. If you want to use the stylus pen's function buttons, connect it with a wired connection.

Using the Stand

⚠**CAUTION**

🚫 • Do not apply strong force or impact from the screen side of this machine while the stand is open. Doing so could cause damage to the stand.

• Do not attempt to open the stand to an angle greater than the maximum angle (148°) or to apply strong force in the direction of further opening when the stand is opened to the maximum angle. Doing so could damage the stand.

About the range of stand movement

The stand moves within the following range:
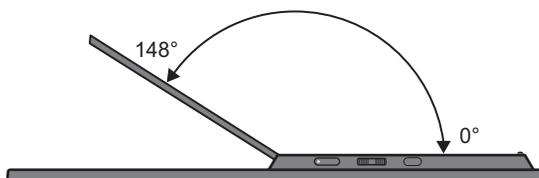
Y317IX0053

1. **Open the stand.**
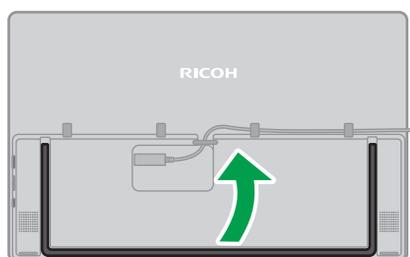
Y317IX0054

2. **Adjust the angle of the stand.**

   • Stepless adjustment

   Use at any angle according to usage.

Y317IX0055
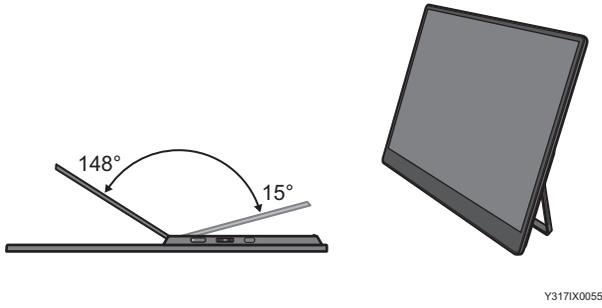
- Portrait placement

  Turn the stand 90° to use this machine in portrait orientation.

Y317IX0056
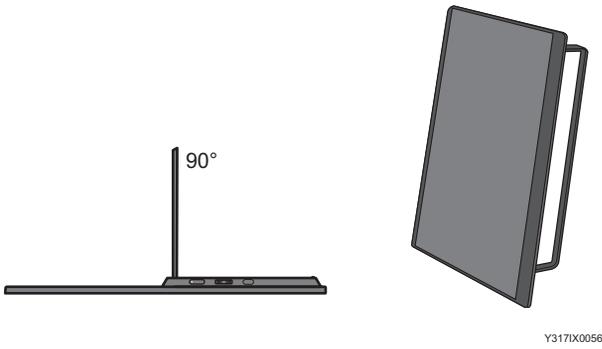
- Handwriting

  Set the stand at 148° for easy writing with a finger or stylus pen (optional).

Y317IX0057
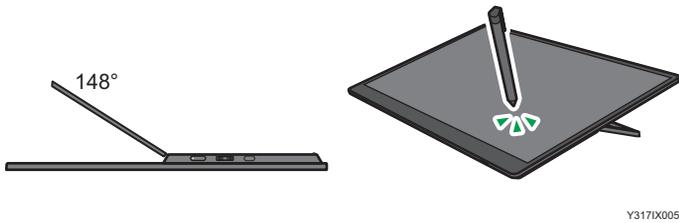
3. **Return the stand to the storage position when finished using it.**

Y317IX0062
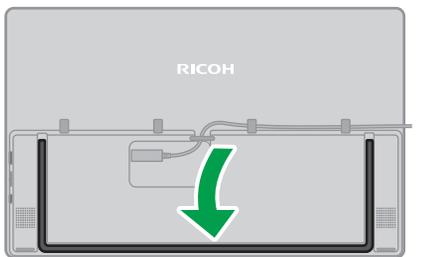
Turning On and Off the Power

Turning On the Power

1. **Press the Power button.**

Y317IX0058

The power LED turns ON white, and the machine starts up.

Y317IX0059
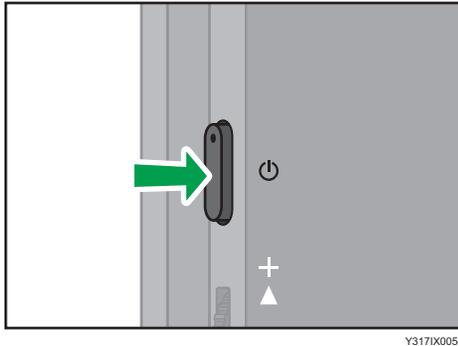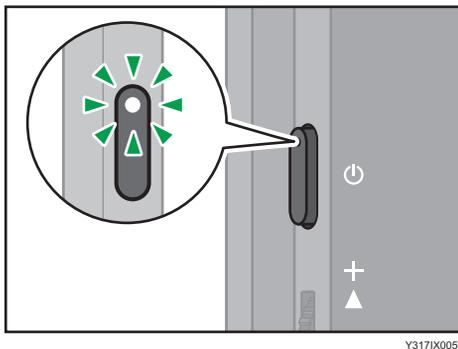
When using the 150 model

When a device that supports the USB PD standard or a USB PD charger is connected to this machine, the power of this machine automatically turns ON. However, the behavior and operation will vary depending on the connected device and the condition of this machine.

- When the connected device is turned ON

  This machine automatically turns ON.

- When the connected device is turned OFF

  When the device is turned ON, this machine automatically turns ON.

- When this machine is connected to a device that supports the USB PD standard or to a USB PD charger, and when the power of this machine is turned OFF

  This machine does not turn ON automatically regardless of the power status of the connected device. Press the power button on this machine.

Turning Off the Power

When there is no video/audio input from the connected device and no operation for a certain period of time, this machine automatically turns OFF.

To turn OFF the power manually, perform the following operation:

1. **Press the Power button.**

Y317IX0058
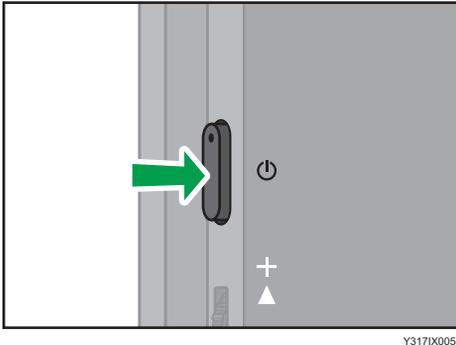
This machine shuts down, and the power LED turns OFF.

Y317IX0052
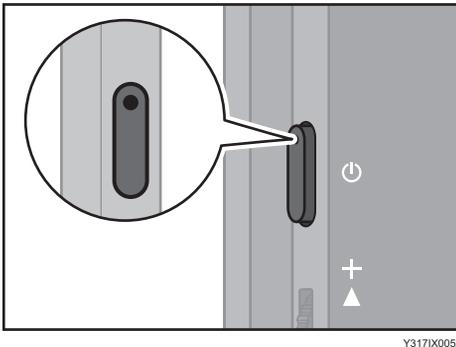
When the Connected Device Enters Power-saving Mode

When the connected device enters a power-saving mode such as sleep mode and then exits the power-saving mode, the power of this machine does not turn ON automatically. Press the power button on this machine.

Switching Inputs

You can use the following input methods to connect this machine to a computer, smartphone, or another device:

- USB Port 1

- USB Port 2

- Wireless Connection (150BW model only)

When only one device is connected to this machine, the connection is detected, and the input method is automatically switched.

When using the wireless connection for the first time (150BW model only) or when multiple devices are connected to the machine, the input method must be switched manually.

1. **Press the Switching Input/Back button.**

   - 150 model
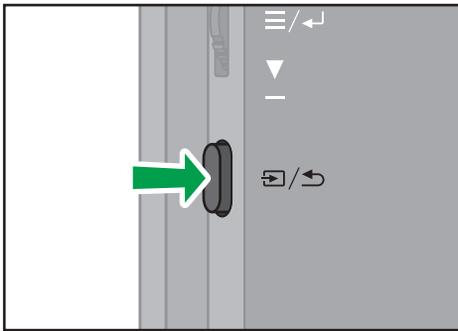
   Y317IX0067
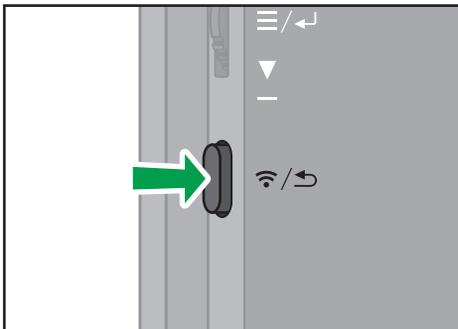
   - 150BW model

   Y317IX0071

   The Switching Input screen appears.

   - 150 model

Y317OX0025

• 150BW model

Y317OX0024
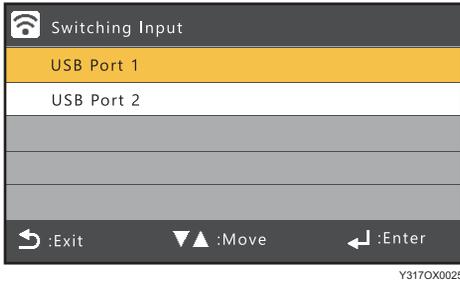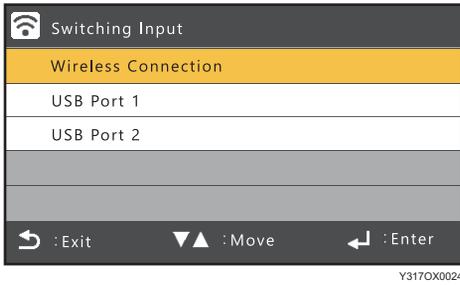
2. **Slide the Menu/Select/Enter button up or down to select the input method.**

Y317IX0042

3. **Press the center of the Menu/Select/Enter button.**

Y317IX0043
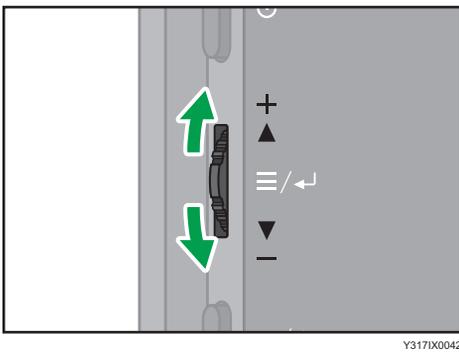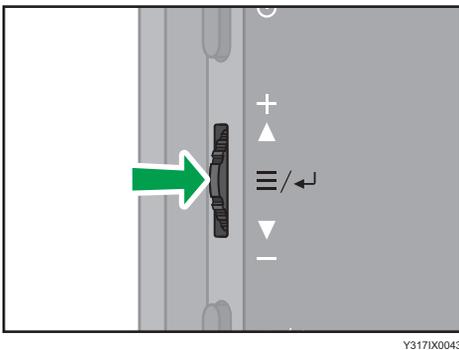
The display switches to the screen of the selected input method.

Changing the Volume

1. **Slide the Menu/Select/Enter button up or down when the On-screen Display menu or Switching Input screen is not displayed.**

Y317IX0042
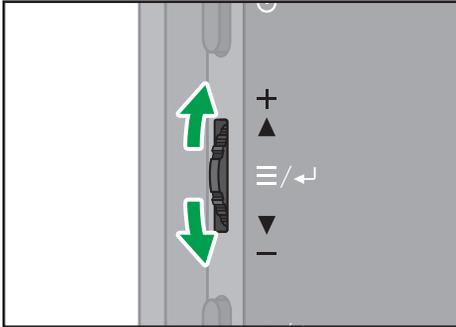
- Increase the volume

   Slide the Menu/Select/Enter button up.

- Decrease the volume

   Slide the Menu/Select/Enter button down.

↓Note

- Changing the volume of the machine from the factory default settings can increase the power consumption of the machine. When the relevant setting is displayed for the first time, a message appears. If you agree with the message after confirming its content, press the center of the Menu/Select/Enter button. If the message has already been displayed when using Brightness, Contrast, or Color Temp. on the On-screen Display menu, the message is not displayed when changing the volume.

- When the message "Low power mode" appears, this machine is connected to a power source with an output of less than 15 W, which limits the setting values of the setting items. To change the setting values, connect this machine to a device that supports the USB PD standard with an output of 15 W or more or to a USB PD charger. For details about the contents of the message, see page 103 "If a Message is Displayed during Operation".

Storing this Machine

When you are finished using this machine, store it in the sleeve case with the USB Type-C cable connected.

1. **Pass the USB Type-C cable through the cable clamps.**

   • Example of cable and cable clamps usage
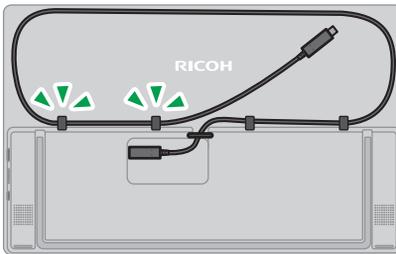
Y317IX0061

2. **Store this machine in the sleeve case.**
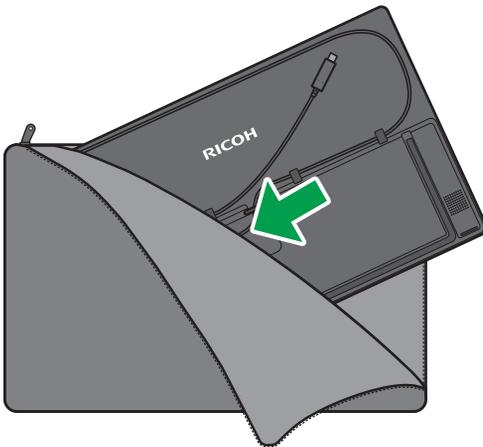
Y317IX0063

4. Connecting the Device via Wired Connection

This section explains how to connect this machine to a device such as a computer or smartphone with a USB Type-C cable to display and playback video and audio from the device on this machine.

Overview of Wired Connection

Supported OS for Wired Connection

The following shows the operating systems and operations of devices that support wired connection:

Supported OS		Video display/ audio playback	Touch operation	Stylus pen operation (optional)
Windows 10	Home Pro Enterprise Education	○*1	○*2	○*2*4
Windows 11	Home Education Pro Pro Education Pro for Workstations	○*1	○*2	○*2*4
macOS 12/13		○*1	×	×
iOS 15/16		○*1	×	×
Android 9/10/11/12		○*1	○*2*3	×

*1 The connected device must support DisplayPort Alternate Mode (DP Alt Mode).

*2 The connected device must support touch operation.

*3 Some devices might not operate properly.

*4 Depending on the device used, the stylus pen might not detect the touched position correctly.

⬇Note

- Be sure to use the included USB Type-C cable to connect the device. The use of other cables or conversion connectors might result in the malfunction of this machine.

- The machine is not compatible with devices that do not have a USB Type-C port. (Except for connection to devices equipped with iOS)

- In order to connect to devices with iOS, the following devices are required for the 150/150BW model in common:

  - Apple conversion adapter "Lightning Digital AV Adapter"

  - HDMI to USB Type-C conversion cable

  - USB PD charger with an output of 15 W or more

Connecting to a Device

Windows/macOS

1. **Connect the USB Type-C cable to the device.**

Y317IX0064

When using the 150 model

- When the connected device is turned ON

  This machine automatically turns ON.

- When the connected device is turned OFF

  When the device is turned ON, this machine automatically turns ON.

- When this machine is connected to a device that supports the USB PD standard or to a USB PD charger, and when the power of this machine is turned OFF

  This machine does not turn ON automatically regardless of the power status of the connected device. Press the power button on this machine.
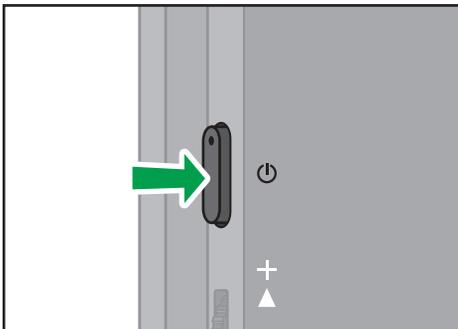
Y317IX0058

When using the 150BW model

Press the power button on this machine after connecting to the device.

Y317IX0058

2. **Operate this machine according to the purpose.**

The following functions are available depending on the OS of the connected device:

Windows

- Video display/audio playback

- Touch operation

- Stylus pen operation (optional)

macOS

- Video display/audio playback

❖Note

- Two devices can be connected to this machine simultaneously using USB port 1 and USB port 2, but only one of the devices can be selected as the input method and displayed on this machine. If you manually switch the input method, you can switch to the screen of the other device. For details, see page 31 "Switching Inputs".

iOS

In order to connect to devices with iOS, the following devices are required for the 150/150BW model in common:
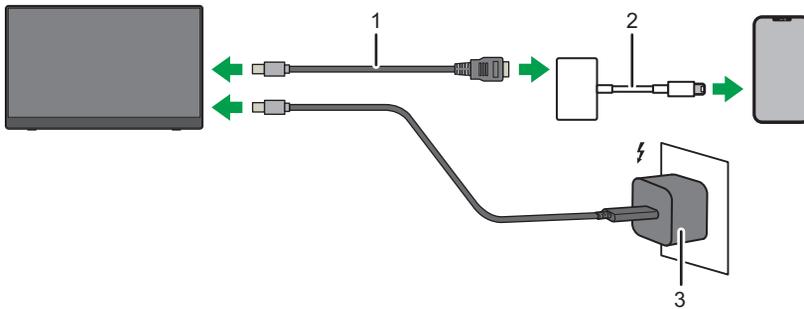
Y317IX0065

1. **HDMI to USB Type-C conversion cable**

2. **Apple conversion adapter "Lightning Digital AV Adapter" (conversion adapter)**

3. **USB PD charger with an output of 15 W or more**

Follow the steps below to connect this machine to a device.

1. **Connect the conversion adapter to the device.**

2. **Connect the supplied USB Type-C cable to a USB PD charger with an output of 15 W or higher.**

3. **Connect the USB Type-C cable to this machine.**

4. **Plug the USB PD charger into an electrical outlet.**

5. **Connect the HDMI to USB Type-C conversion cable to the HDMI port on the conversion adapter.**

6. **Connect the HDMI to USB Type-C conversion cable to this machine.**

7. **Press the Power button.**

Y317IX0058
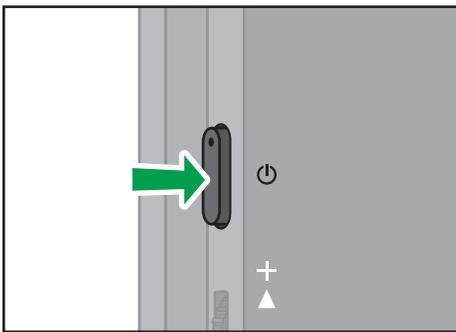
This machine turns ON, and the screen of the connected device appears on the screen.

8. **Operate this machine according to the purpose.**

   Video display/audio playback is available on iOS.

Note

- A USB PD charger with an output of 15 W or more is required to use the conversion adapter and conversion cable; be sure to connect the USB PD charger to this machine, even if you are using the 150BW model.

Android

1. **Connect the USB Type-C cable to the device.**
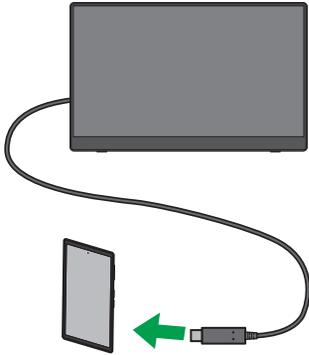
Y317IX0066

When using the 150 model

- When the connected device is turned ON

  This machine automatically turns ON.

- When the connected device is turned OFF

  When the device is turned ON, this machine automatically turns ON.

- When this machine is connected to a device that supports the USB PD standard or to a USB PD charger, and when the power of this machine is turned OFF

  This machine does not turn ON automatically regardless of the power status of the connected device. Press the power button on this machine.
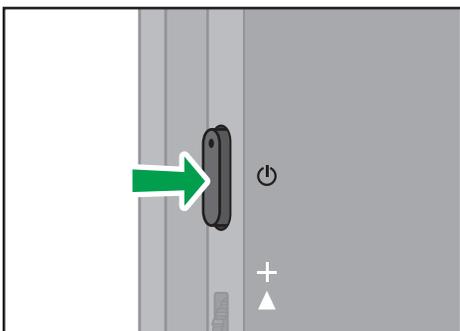
Y317IX0058

- If the machine does not turn on automatically when the device connected

  Enough power not supplied from the device to the machine; connect the machine to the USB PD charger.

When using the 150BW model

Press the power button on this machine after connecting to the device.

Y317IX0058
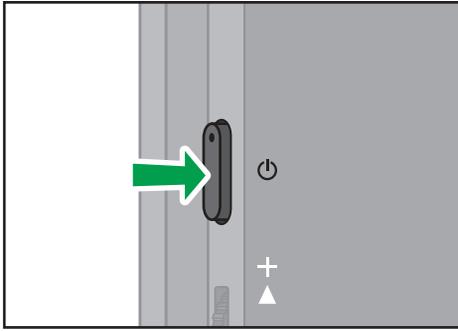
2. **Operate this machine according to the purpose.**

The following features are available on Android:

- Video display/audio playback

- Touch operation

Note

- Two devices can be connected to this machine simultaneously using USB port 1 and USB port 2, but only one of the devices can be selected as the input method and displayed on this machine. If you manually switch the input method, you can switch to the screen of the other device. For details, see page 31 "Switching Inputs".

- Some devices might not operate properly.

4

5. Connecting the Device via Wireless Connection (150BW models only)

This section explains how to connect this machine to a device such as a computer or smartphone via a wireless connection to display and playback video and audio from the device on this machine.

Overview of Wireless Connection

⭐ **Important**

- Be careful where the equipment is installed, so as to prevent unauthorized tampering by any malicious third party.

To connect the device via a wireless connection, you can use the following methods:

The connection method can be selected according to the OS of the device to be connected and the purpose thereof.

Using OS Functions to Connect Directly to Devices

You can connect the machine directly to a device using Wi-Fi Direct without going through an access point.

⭐ **Important**

- The device to be connected must support Miracast.

It is not necessary to set up Wi-Fi on this machine.

Y317IX0035

OS of the device supporting the connection

OS	Reference
Windows 10/11	page 55 "Connecting with Windows"
Android 9/10/11/12	page 58 "Connecting with Android"

Available functions vary depending on the OS. For details, see page 47 "Supported OS for Wireless Connection".

Settings of this machine required for connection

Settings	Reference
Dev. Info[*1]	page 85 "Dev. Info"

*1   When the initial settings have already been made, there is no need to change the settings anew.

The machine can connect to a maximum of two devices wirelessly and can display screens from them at a time. You can use a combination of the following methods to do this:

- Using the relevant OS function
- Using RICOH Monitor Mirroring for macOS/iOS
- Using RICOH Monitor Mirroring for Windows

↓Note

- Wi-Fi setup is required when used in combination with an application to connect to devices in the same network.

Using the Application to Connect to Devices in the Same Network

Use RICOH Monitor Mirroring for macOS or RICOH Monitor Mirroring for iOS to connect to devices in the same network as this machine via an access point.

★Important

- **This machine and the device must be connected to the same network (same subnet).**

Y317IX0073

OS and application of the device supporting the connection

OS	Application	Reference
macOS 12/13	RICOH Monitor Mirroring for macOS[*1]	page 62 "Connecting with RICOH Monitor Mirroring for macOS"
iOS 15/16	RICOH Monitor Mirroring for iOS[*2]	page 64 "Connecting with RICOH Monitor Mirroring for iOS"

* 1 Available as a free download from the Mac App Store

* 2 Available as a free download from the App Store

Available functions vary depending on the OS and application. For details, see page 47 "Supported OS for Wireless Connection".

Settings of this machine required for connection

Settings	Reference
Dev. Info[*1]	page 85 "Dev. Info"
Wi-Fi	page 22 "When Using the Wireless Connection for the First Time (150BW models only)" page 85 "Wi-Fi"

* 1 When the initial settings have already been made, there is no need to change the settings anew.

The machine can connect to a maximum of two devices wirelessly and can display screens from them at a time. You can use a combination of the following methods to do this:

- Using the relevant OS function
- Using RICOH Monitor Mirroring for macOS/iOS
- Using RICOH Monitor Mirroring for Windows

⤓Note

- The IP address of this machine is automatically assigned by DHCP.

Using the Application to Connect to Multiple RICOH Monitors at the Same Time

Use RICOH Monitor Multicast for Windows to connect multiple RICOH Monitors and devices in the same network.

⭐**Important**

- All connected RICOH Monitors and devices must be connected to the same network (same subnet).

Up to five RICOH Monitors can be connected simultaneously, enabling Windows screen sharing and touch operation from a specific connected RICOH Monitor.

Y317IX0036
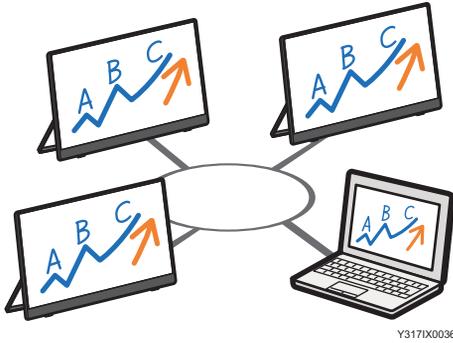
OS and application of the device supporting the connection

OS	Application	Reference
Windows 10/11	RICOH Monitor Multicast for Windows[*1]	page 67 "Using the Application to Connect to Multiple RICOH Monitors at the Same Time (Windows)"

*1 Available for download from the RICOH website

For details about available functions, see page 47 "Supported OS for Wireless Connection".

Settings of this machine required for connection

Settings	Reference
Dev. Info[*1]	page 85 "Dev. Info"
Wi-Fi	page 22 "When Using the Wireless Connection for the First Time (150BW models only)" page 85 "Wi-Fi"

*1 When the initial settings have already been made, there is no need to change the settings anew.

The machine can connect to a maximum of two devices wirelessly and can display screens from them at a time. You can use a combination of the following methods to do this:

- Using the relevant OS function
- Using RICOH Monitor Mirroring for macOS/iOS
- Using RICOH Monitor Mirroring for Windows

↓Note

- The IP address of this machine is automatically assigned by DHCP.

- Other connection methods cannot be used at the same time when connected using RICOH Monitor Multicast for Windows.

Network Environment

For wireless connection via an application, your network must meet the following requirements:

Item	Network Environment
Standard	IEEE802.11 b/g/n (2.4GHz) IEEE802.11 a/n/ac (5GHz)
Encryption method	WPA2-PSK[*1]

*1 The communication encryption method follows Miracast and supports WPA2-PSK.

Supported OS for Wireless Connection

This section describes the operating systems and operations of devices that support wireless connections.

Using OS Functions to Connect Directly to Device

Supported OS		Video display	Audio playback	Touch operation
Windows 10	Home Pro Enterprise Education	O	O	O[*1]
Windows 11	Home Education Pro Pro Education	O	O	O[*1]
Android 9/10/11/12		O[*1]	O[*1]	O[*1][*2]

*1 The connected device must support touch operation.

*2   Some devices might not operate properly.

⬇Note

- When connected via a wireless connection, stylus pen operation can only be performed by touch with the stylus pen. If you want to use the function buttons or the pressure-sensitive function of the stylus pen, please use a wired connection.

- Depending on the device used, there could be misalignment with the screen when touching.

Using the Application to Connect to Devices in the Same Network

Supported OS	Video display	Audio playback	Touch operation
macOS 12/13	O*1	×	×
iOS 15/16	O*1	O*1	×

*1   RICOH Monitor Mirroring for macOS or RICOH Monitor Mirroring for iOS must be installed on the device to be connected.

Using the Application to Connect to Multiple RICOH Monitors at the Same Time

Supported OS		Video display	Audio playback	Touch operation
Windows 10	Home Pro Enterprise Education	O*1	×	O*1*2
Windows 11	Home Education Pro Pro Education	O*1	×	O*1*2

*1   Ricoh Monitor Multicast for Windows must be installed on the device to be connected.

*2   The connected device must support touch operation.

⬇Note

- When connected via a wireless connection, stylus pen operation can only be performed by touch with the stylus pen. If you want to use the function buttons or the pressure-sensitive function of the stylus pen, please use a wired connection.

About the Wireless Connection Screen

This section describes the screens related to wireless connection.

Waiting to Connect Screen

This screen is first displayed when this machine is started up while [Wireless Connection] is selected in the Switching Input screen.

In the Waiting to Connect screen, various settings for the wireless connection can be made.

Y317OX0041
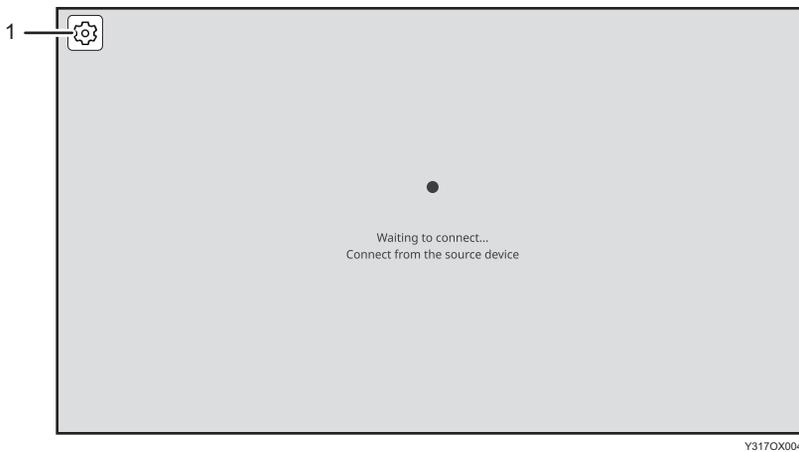
1. **Settings**

   This displays the Settings screen.

   For details, see page 84 "Changing Wireless Connection Settings".

Connecting Screen

This screen is displayed when a connection is successfully established from the device side.

The connecting screen displays a menu of display and audio functions.

Y317OX0021
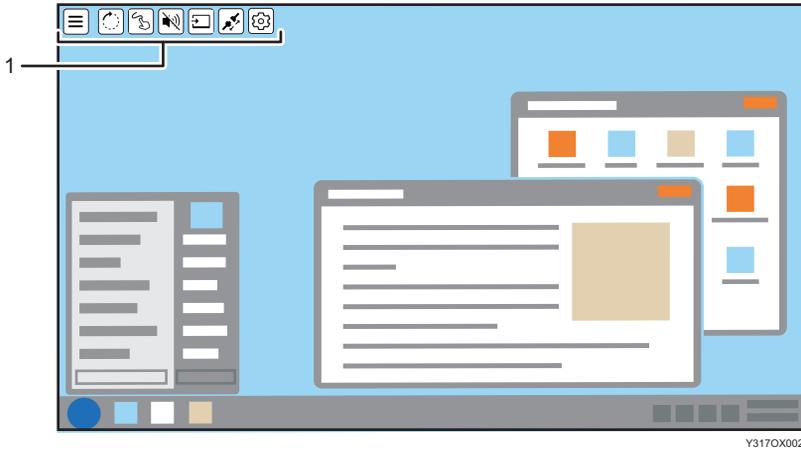
1. **Menu**

    You can use functions related to display, audio, etc.

    For details, see page 51 "Icons of the menu displayed on the Connecting screen".

When connected to two devices

When a second device is connected, the display switches to the two-screen display.

When two screens are displayed in split-screen mode, touch the screen that you want to operate, and then screen that you touch becomes the active screen to be operated, and a yellow frame is displayed.

When two devices are connected, functions related to the display of two screens are added to the menu.

Y317OX0007
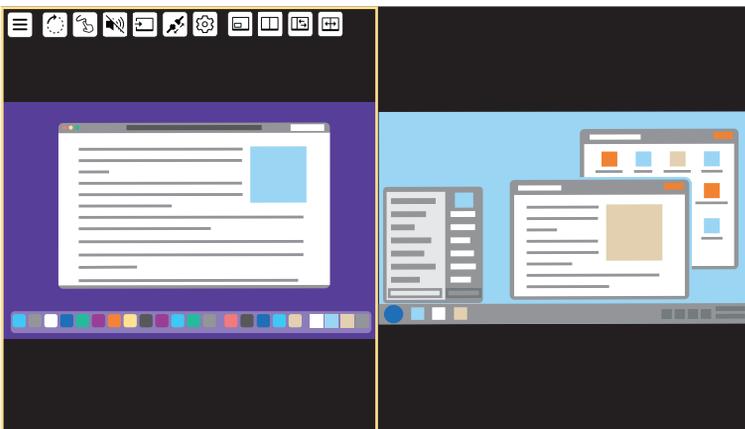
Icons of the menu displayed on the Connecting screen

Icons that are always displayed

Icon	Description
☰ Change Icon Display	Toggles between showing and hiding the icons displayed in the menu You can also change the display position of the menu by touching and moving the icon. The display position is fixed to the four corners of the screen. The display position of the sub-screen changes to the corner of the screen closest to the position where the icon was moved.
↻ Screen Rotation	Rotates the displayed screen 90° clockwise 🔖 Reference • page 73 "Rotating the Screen"
👆 Touch Trace	Turns the Touch Traces ON/OFF When turned ON, the icon will display the following: 👆 🔖 Reference • page 74 "Displaying the Touched Traces"
🔊 Sound	Toggles the sound mute on/off When the sound mute is turned on, the icon changes to: 🔇 🔖 Reference • page 74 "Muting Sound"
⊡ Mute AV	Toggles the screen display, sound, and touch operation on/off with a single operation When the AV mute is turned on, the icon changes to: ⊠ 🔖 Reference • page 75 "Disabling Screen Display/Sound/Touch Operation Temporarily"

5

Icon	Description
Disconnect	Disconnects the wireless connection When two screens are displayed, the connection to the device on the screen selected for operation is disconnected. **Reference** • page 79 "Ending a Connection"
Settings	Displays the Settings screen **Reference** • page 84 "Changing Wireless Connection Settings"

Icons displayed only when connected to two devices

Icon	Description
Sub-screen	Turns the sub-screen display ON/OFF When turned ON, the icon will display the following: **Reference** • page 76 "Displaying the Sub-screen"
Split Screen	Toggles the split screen ON/OFF When turned ON, the icon will display the following: **Reference** • page 77 "Splitting the Screen"
Change Split-Position	Switches the split screen position in three levels This icon appears only when the split screen is turned ON. **Reference** • page 78 "Switching the split position"

Icon	Description
⊞ Swap Screens	Swaps the screen positions This icon appears only when the split screen is turned ON. 📄 **Reference** • page 78 "Switching the screen placement"

Settings Screen

This screen is displayed by touching [Settings] (⚙) on the Waiting to Connect screen or on the Connecting screen.

In the Settings screen, you can change or confirm the wireless connection settings.

When the Settings screen is displayed from the Connecting screen, only the settings can be confirmed.

5

Y317OX0042
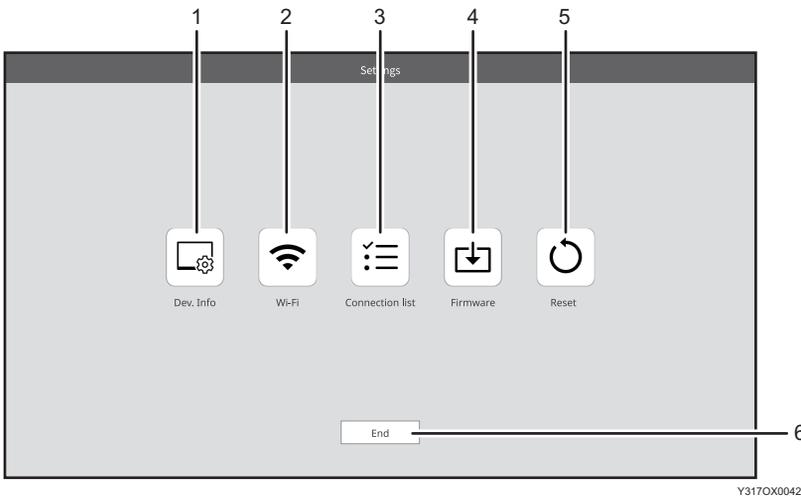
1. **Dev. Info**

   You can change the device name and display language of this machine.

   For details, see page 85 "Dev. Info".

2. **Wi-Fi**

   You can change network settings.

   For details, see page 85 "Wi-Fi".

3. **Connection list**

   You can manage the connected devices.

   For details, see page 86 "Connection List".

4. **Firmware**

   You can check and update the firmware version related to the wireless connection.

For details, see page 87 "Firmware".

5. **Reset**

   You can initialize the settings of this machine.

   For details, see page 88 "Reset".

6. **End**

   Exit the settings and return to the previous screen.

Using OS Functions to Connect Directly to a Device (Windows/Android)

You can connect directly to a device using Wi-Fi Direct without going through an access point.

⭐**Important**

- **The device to be connected must support Miracast.**

⬇**Note**

- If the Dev. Info of this machine has not been configured, configure it before starting the connection. For details, see page 85 "Dev. Info".

Connecting with Windows

When this machine is turned ON, it enters the standby state for connection, and the connecting operation is performed from the device side. Once the connection is accepted by this machine, a wireless connection will be established. Even if Switching Input is set to USB ports, wireless connection can be established when the connecting operation is performed from the device side.

1. **Turn ON this machine and confirm that the Waiting to Connect screen is displayed.**

   For details about how to turn ON the machine, see page 29 "Turning On and Off the Power".

   If the Waiting to Connect screen does not appear after turning ON the machine, set the Switching Input to [Wireless Connection]. For details, see page 31 "Switching Inputs".

   Waiting to connect...
   Connect from the source device

   Y317OX0038

2. **Display the Connect/Cast screen in Windows.**

   - When using Windows 10

     1. Click the Action Center icon on the right end of the taskbar.

        The Action Center appears.

2. Click [Connect].

When using the shortcut keys, press the "Windows logo key" (Start key) and the "K" key on the keyboard at the same time.

- When using Windows 11

    1. Click the Network, Volume, or Battery icon on the taskbar.

       Quick Settings appears.

    2. Click [Cast].

       If [Cast] does not appear, click the Edit Quick Settings icon (pen icon) in Quick Settings, and then click [Add] and select [Cast].

When using the shortcut keys, press the "Windows logo key" (Start key) and the "K" key on the keyboard at the same time.

3. Click the device name of the machine that you want to connect.
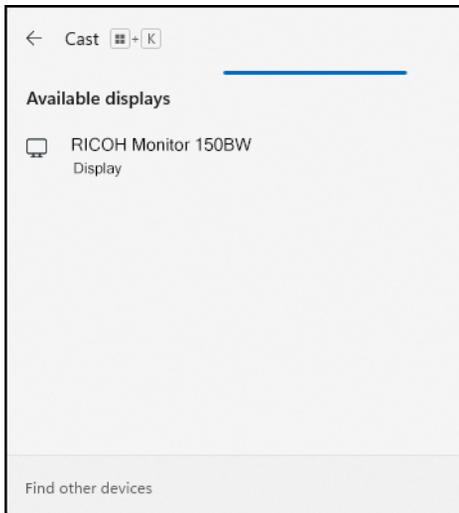
If Windows successfully communicates with this machine, a message appears on the machine to confirm whether the connection is allowed or not.

If the device to be connected is already registered in the Connection list of this machine, the message does not appear. Proceed to step 5.

4. **Confirm the name of the Windows device to be connected with the message displayed on this machine, and then touch [OK].**

Connect to ■■■■■■?

Cancel   OK
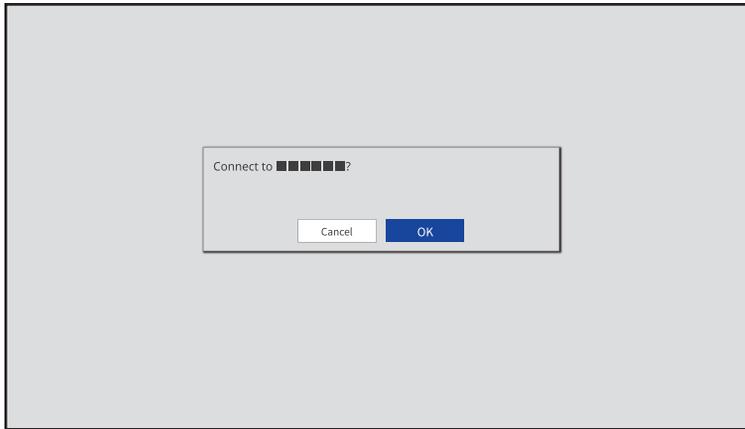
Y317OX0040

The connection is started.

5. **When using touch operation or stylus pen operation with this machine, check the "Allow mouse, keyboard, touch, and pen input from this device" checkbox in Windows of the device.**

← Cast [⊞]+[K]

🖥 RICOH Monitor 150BW
Connected - Duplicate

Change projection mode

☐ Allow mouse, keyboard, touch, and pen input from this device

Disconnect

Find other devices

⬇ **Note**

- By registering the information of a device in the Connection list, it can be connected to this machine without having to allow the connection on the device. For details, see page 86 "Connection List".

Connecting with Android

When this machine is turned ON, it enters the standby state for connection, and the connecting operation is performed from the device side. Once the connection is accepted by this machine, a wireless connection will be established. Even if Switching Input is set to USB ports, wireless connection can be established when the connecting operation is performed from the device side.

This section uses Android 12 as an example of the procedure.

1. **Turn ON this machine and confirm that the Waiting to Connect screen is displayed.**

   For details about how to turn ON the machine, see page 29 "Turning On and Off the Power".

   If the Waiting to Connect screen does not appear after turning ON the machine, set the Switching Input to [Wireless Connection]. For details, see page 31 "Switching Inputs".
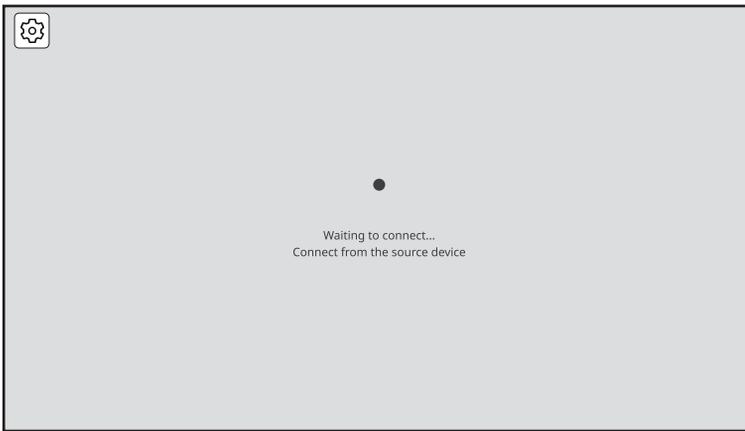
   Y317OX0038

2. **Swipe down from the top of the Android screen (1), and then swipe down the notification area (2) to open the Quick Settings panel.**
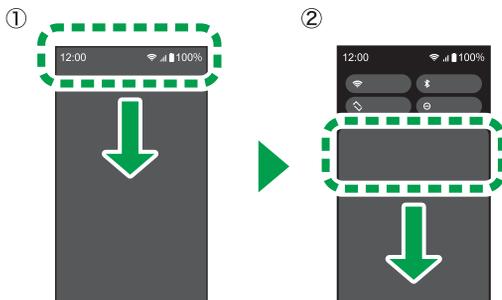
   Y317IX0072

   Depending on the version of Android, the Quick Settings panel can be displayed by swiping down from the top of the screen.

3. **Tap [Cast] or [Cast Screen].**

   Button names could differ depending on the version and model of Android used.

4. **Tap the device name of the machine that you want to connect.**

   If Android successfully communicates with this machine, a message appears on the machine to confirm whether the connection is allowed or not.

   If the device to be connected is already registered in the Connection list of this machine, the message does not appear.

5. **Confirm the name of the Android device to be connected with the message displayed on this machine, and then touch [OK].**
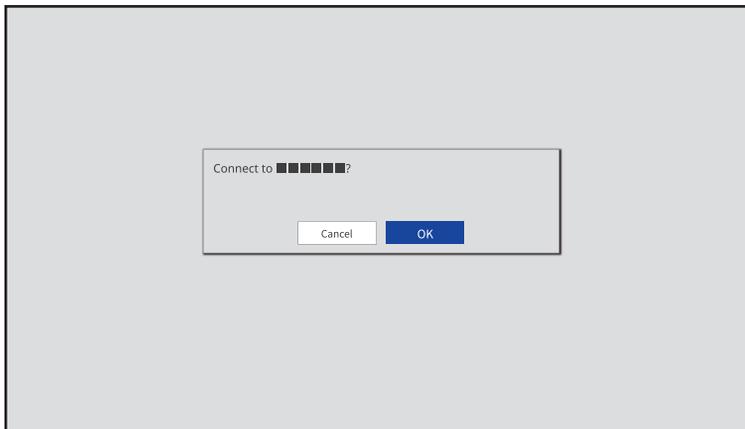
   Connect to ■■■■■■?

   Cancel   OK

   Y317OX0040

   The connection is started.

Note

- By registering the information of a device in the Connection list, it can be connected to this machine without having to allow the connection on the device. For details, see page 86 "Connection List".

Using the Application to Connect to Devices in the Same Network (macOS/iOS)

Use RICOH Monitor Mirroring for macOS or RICOH Monitor Mirroring for iOS to connect to devices in the same network as this machine via an access point.

⭐ **Important**

- This machine and the device must be connected to the same network (same subnet).

When Connecting for the First Time

The Wi-Fi settings on this machine must be configured in order to connect. If you have not set up Wi-Fi on this machine, perform the following operations first:

⭐ **Important**

- Settings cannot be changed when this machine is connected to a device via a wireless connection. Be sure to change the settings when the device is not connected via wireless connection.

1. **Turn ON this machine and confirm that the Waiting to Connect screen is displayed.**

   For details about how to turn ON the machine, see page 29 "Turning On and Off the Power".

   If the Waiting to Connect screen does not appear after turning ON the machine, set the Switching Input to [Wireless Connection]. For details, see page 31 "Switching Inputs".

2. **Touch [Settings] (⚙).**

Waiting to connect...
Connect from the source device

Y317OX5010

3. **Touch [Wi-Fi] ( ).**

Y317OX5011

The Wi-Fi screen appears.

4. **Select the network that you want to connect to from the list displayed in "Select network".**

Y317OX0035

To specify the SSID directly, touch the entry field of "Network", and then enter the SSID using the soft keyboard.

5. **Touch the entry field of "Password", and then enter the password using the soft keyboard.**

6. **Touch [OK].**

7. **If the connection is successful, touch [Back].**

To continue to start the connection, proceed to page 62 "Connecting with RICOH Monitor Mirroring for macOS" or page 64 "Connecting with RICOH Monitor Mirroring for iOS".

⬇Note

- Once the connection is successfully established, the network settings are saved in this machine. If you do not want to save the settings, delete the settings from the [List of Saved Networks]. For details, see page 84 "Changing Wireless Connection Settings".

- Up to eight network settings can be saved. If eight network settings have already been saved and a new network is to be saved, the oldest network setting will be deleted.

Connecting with RICOH Monitor Mirroring for macOS

Download RICOH Monitor Mirroring for macOS

⭐Important

- Applying the latest security patches to the OS of the device can reduce security risks. Make sure that the OS of the device on which the application is to be installed has the latest security patches and update them, as necessary.

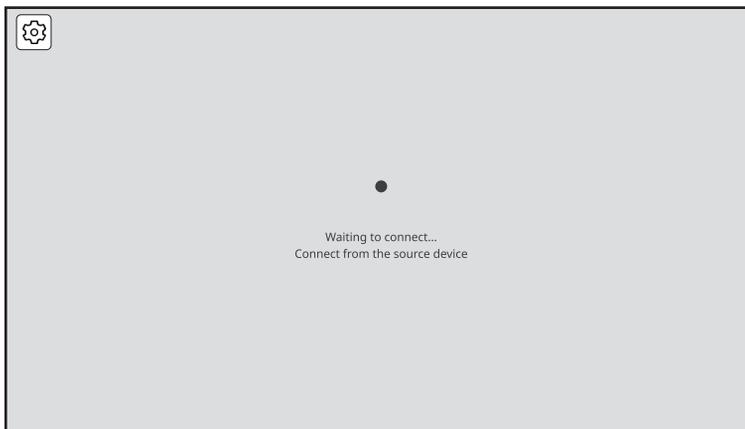Search for "RICOH Monitor Mirroring" in the Mac App Store, and then download the application.

Connecting

When this machine is turned ON, it enters the standby state for connection, and the connecting operation is performed from the device side. Once the connection is accepted by this machine, a wireless connection will be established. Even if Switching Input is set to USB ports, wireless connection can be established when the connecting operation is performed from the device side.

1. **Turn ON this machine and confirm that the Waiting to Connect screen is displayed.**

   For details about how to turn ON the machine, see page 29 "Turning On and Off the Power".

   If the Waiting to Connect screen does not appear after turning ON the machine, set the Switching Input to [Wireless Connection]. For details, see page 31 "Switching Inputs".

Y317OX0038

2. **Start RICOH Monitor Mirroring for macOS.**

   When RICOH Monitor Mirroring for macOS starts, the search for RICOH Monitors in the same network starts, and a list of such is displayed.

   When using RICOH Monitor Mirroring for macOS for the first time, a message will appear asking if you want to allow screen recording. After confirming the displayed message and performing the operation to allow it, close RICOH Monitor Mirroring for macOS and start it again.

3. **Click the device name of the machine that you want to connect.**
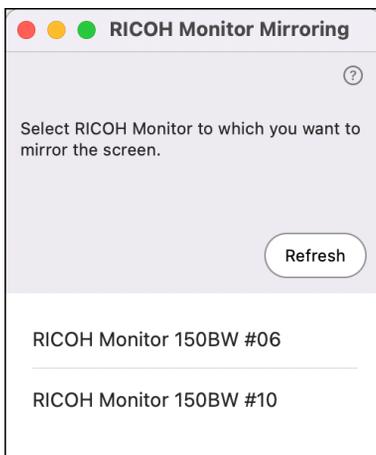
   If RICOH Monitor Mirroring for macOS successfully communicates with this machine, a message appears on the machine to confirm whether the connection is allowed or not.

   If the device to be connected is already registered in the Connection list of this machine, the message does not appear.

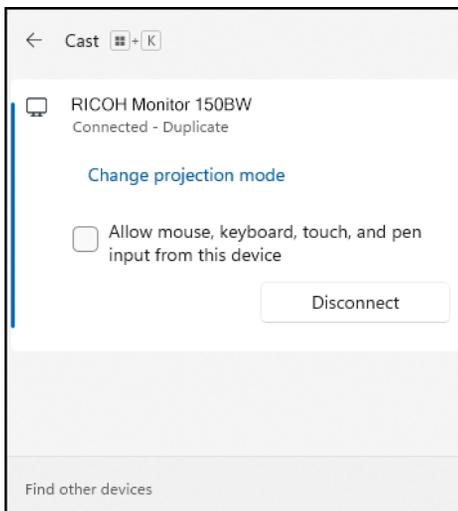4. **Confirm the name of the macOS device to be connected with the message displayed on this machine, and then touch [OK].**
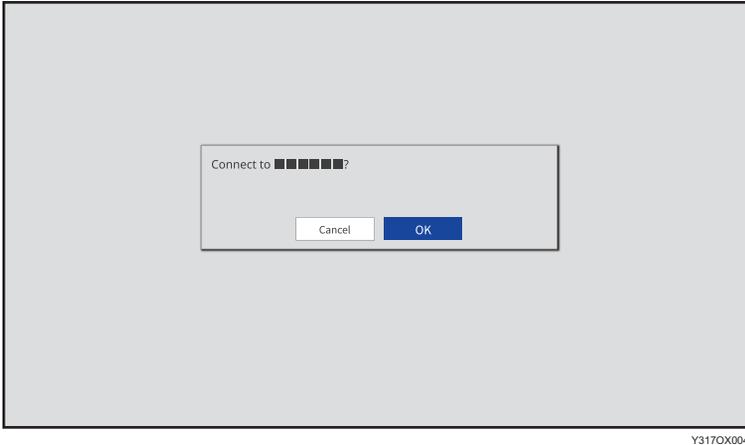
Connect to ■■■■■■■?

Cancel   OK

Y317OX0040

The connection is started.

↓Note

- By registering the information of a device in the Connection list, it can be connected to this machine without having to allow the connection on the device. For details, see page 86 "Connection List".

Connecting with RICOH Monitor Mirroring for iOS

Download RICOH Monitor Mirroring for iOS

★Important

- Applying the latest security patches to the OS of the device can reduce security risks. Make sure that the OS of the device on which the application is to be installed has the latest security patches and update them, as necessary.

Search for "RICOH Monitor Mirroring" in the App Store, and then download the application.

Connecting

When this machine is turned ON, it enters the standby state for connection, and the connecting operation is performed from the device side. Once the connection is accepted by this machine, a wireless connection will be established. Even if Switching Input is set to USB ports, wireless connection can be established when the connecting operation is performed from the device side.

1. **Turn ON this machine and confirm that the Waiting to Connect screen is displayed.**

   For details about how to turn ON the machine, see page 29 "Turning On and Off the Power".

If the Waiting to Connect screen does not appear after turning ON the machine, set the Switching Input to [Wireless Connection]. For details, see page 31 "Switching Inputs".

Y317OX0038

2. **Start RICOH Monitor Mirroring for iOS.**

   When RICOH Monitor Mirroring for iOS starts, the search for RICOH Monitors in the same network starts, and a list of such is displayed.

   When using RICOH Monitor Mirroring for iOS for the first time, the following message appears:

   • Whether or not to allow device search on the local network

   Confirm the displayed message, and then tap [OK].

   • Whether or not to allow the use of wireless data

   Confirm the displayed message, and then tap [WLAN only].

3. **Tap the device name of the machine that you want to connect.**

4. Tap [Start Broadcast].

Everything on your screen, including notifications, will be recorded. Enable Do Not Disturb to prevent unexpected notifications.

Screen Broadcast
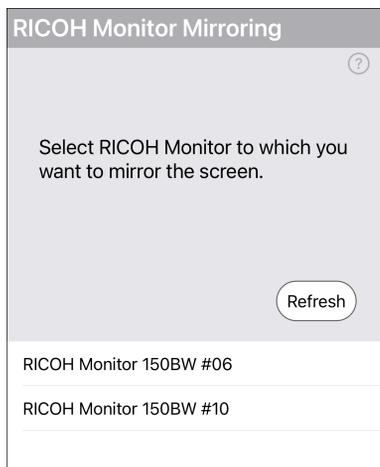
RICOH Monitor Mirroring ✓

Start Broadcast
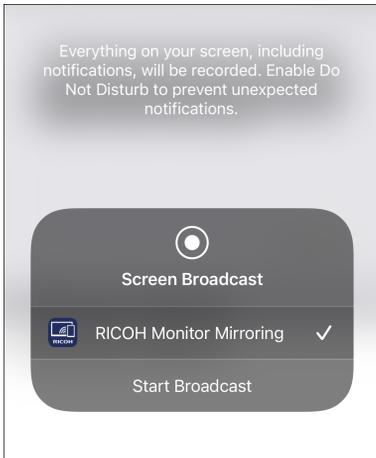
If RICOH Monitor Mirroring for iOS successfully communicates with this machine, a message appears on the machine to confirm whether the connection is allowed or not.

If the device to be connected is already registered in the Connection list of this machine, the message does not appear.

5. Confirm the name of the iOS device to be connected with the message displayed on this machine, and then touch [OK].

Connect to ■■■■■■■?

Cancel   OK

Y317OX0040
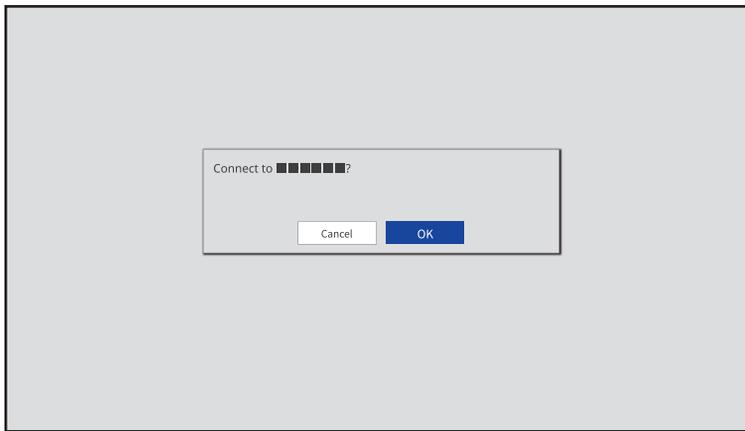
The connection is started.

When displaying other screens on iOS, display the Home screen before performing any operation.

Note

- By registering the information of a device in the Connection list, it can be connected to this machine without having to allow the connection on the device. For details, see page 86 "Connection List".

Using the Application to Connect to Multiple RICOH Monitors at the Same Time (Windows)

Use RICOH Monitor Multicast for Windows to connect multiple RICOH Monitors and devices in the same network.

⭐ Important

- All RICOH Monitors and devices used must be connected to the same network (same subnet).

When Connecting for the First Time

The Wi-Fi settings on this machine must be configured in order to connect. If you have not set up Wi-Fi on this machine, perform the following operations first:
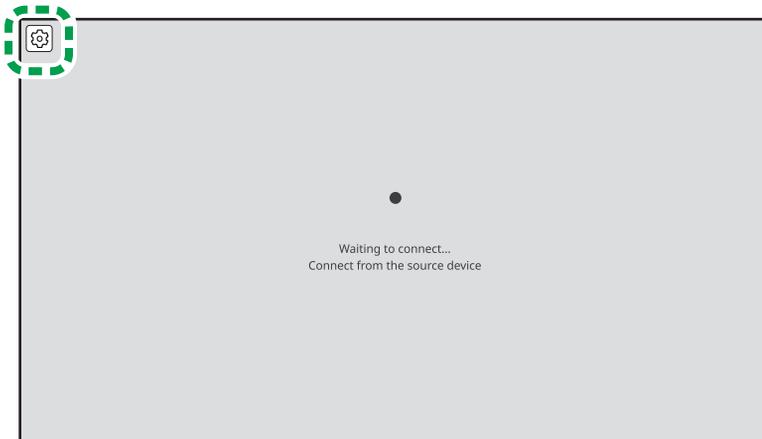
⭐ Important

- Settings cannot be changed when this machine is connected to a device via a wireless connection. Be sure to change the settings when the device is not connected via wireless connection.

1. **Turn ON this machine and confirm that the Waiting to Connect screen is displayed.**

   For details about how to turn ON the machine, see page 29 "Turning On and Off the Power".
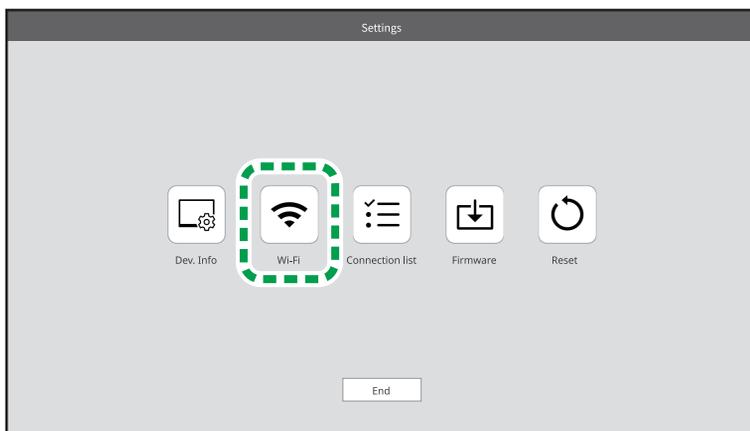
   If the Waiting to Connect screen does not appear after turning ON the machine, set the Switching Input to [Wireless Connection]. For details, see page 31 "Switching Inputs".

2. **Touch [Settings] (⚙).**

Waiting to connect...
Connect from the source device

Y317OX5010
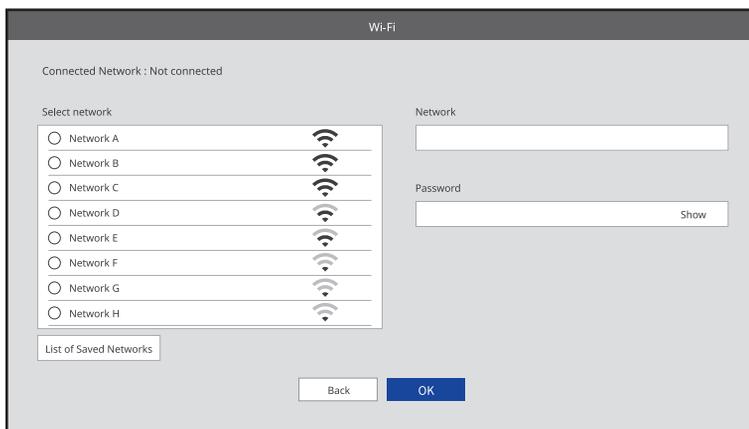
3. **Touch [Wi-Fi] ( ).**

Y317OX5011

The Wi-Fi screen appears.

4. **Select the network that you want to connect to from the list displayed in "Select network".**

Y317OX0035

To specify the SSID directly, touch the entry field of "Network", and then enter the SSID using the soft keyboard.

5. **Touch the entry field of "Password", and then enter the password using the soft keyboard.**

6. **Touch [OK].**

7. **If the connection is successful, touch [Back].**

Note

- Once the connection is successfully established, the network settings are saved in this machine. If you do not want to save the settings, delete the settings from the [List of Saved Networks]. For details, see page 84 "Changing Wireless Connection Settings".

- Up to eight network settings can be saved. If eight network settings have already been saved and a new network is to be saved, the oldest network setting will be deleted.

Connecting with RICOH Monitor Multicast for Windows

Installing RICOH Monitor Multicast for Windows

Important

- Applying the latest security patches to the OS of the device can reduce security risks. Make sure that the OS of the device on which the application is to be installed has the latest security patches and update them, as necessary.

Download RICOH Monitor Multicast for Windows from the RICOH website and install it on Windows to be used.

The license code shown in the supplied "RICOH Monitor Multicast for Windows" license code must be entered to install the application.
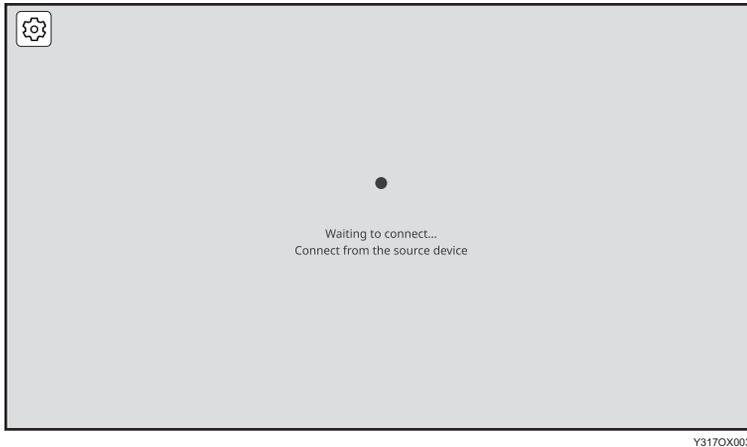
Connecting

When this machine is turned ON, it enters the standby state for connection, and the connecting operation is performed from the device side. Once the connection is accepted by this machine, a wireless connection will be established. Even if Switching Input is set to USB ports, wireless connection can be established when the connecting operation is performed from the device side.

1. **Turn ON all RICOH Monitors to be used and confirm that the Waiting to Connect screen is displayed.**

   For details about how to turn ON the machine, see page 29 "Turning On and Off the Power".

   If the Waiting to Connect screen does not appear after turning ON RICOH Monitor, set the Switching Input to [Wireless Connection]. For details, see page 31 "Switching Inputs".
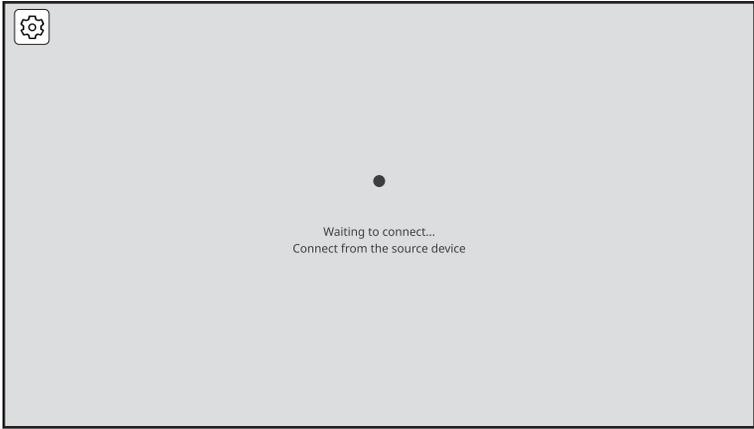
Y317OX0038

2. **Start RICOH Monitor Multicast for Windows.**

   When RICOH Monitor Multicast for Windows starts, the search for RICOH Monitors in the same network starts and the list of such is displayed.

3. **Click [Connect] of the RICOH Monitor that you want to connect.**
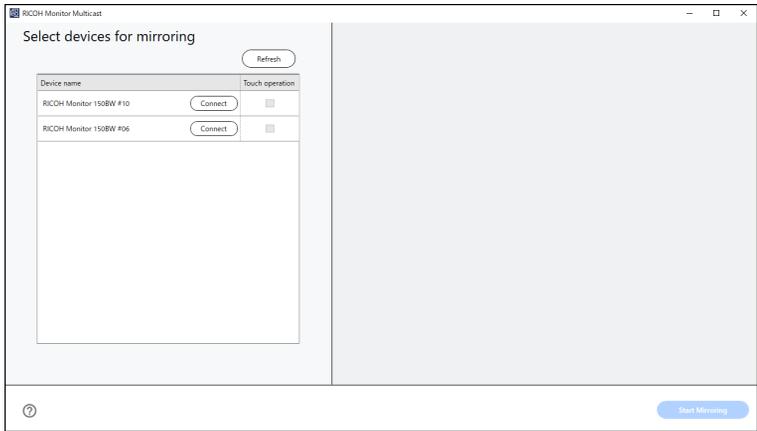
   A maximum of five RICOH Monitors can be selected.

4. **To allow touch operation or stylus pen operation, check the "Touch operation" checkbox of the allowed RICOH Monitor.**

   Only one RICOH Monitor can be allowed for touch operation.

   The allowed RICOH Monitor can be changed at any time.

5. **Click the Windows screen to be shared from "Select a screen to share".**

   The screen to be shared can be selected from the Windows desktop or a window (e.g. application) to be used.

   The screen to be shared can be changed at any time.
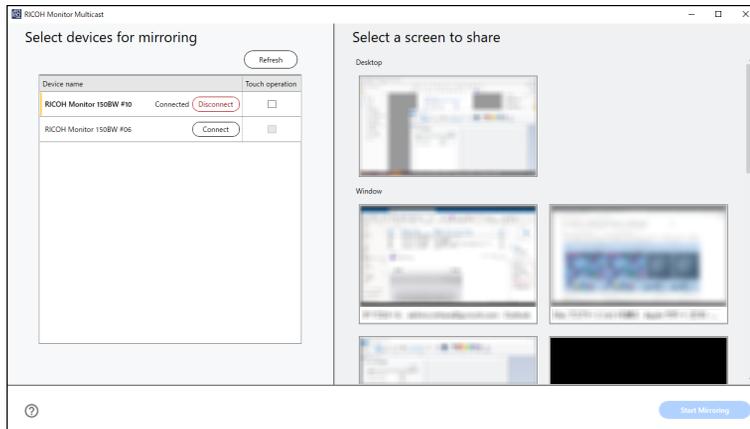
An orange frame appears on the selected screen.
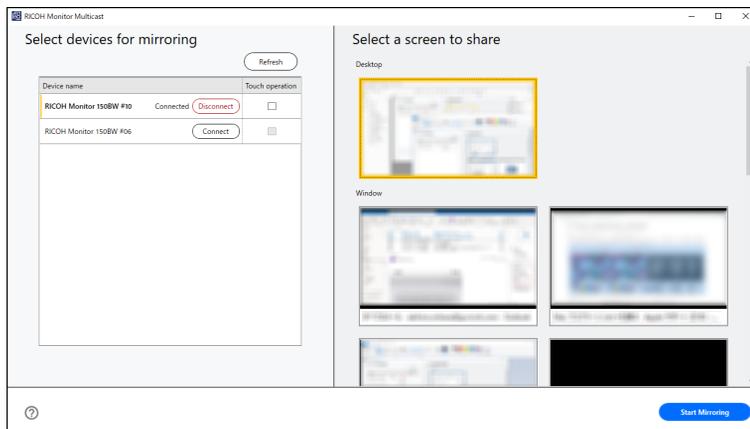
6. **Click [Start Mirroring].**

   When the communication from RICOH Monitor Multicast for Windows to each RICOH Monitor is successful, a message appears on each RICOH Monitor to confirm whether the connection is allowed or not.

   If the device to be connected is already registered in the Connection list of RICOH Monitor, the message whether the connection is allowed or not is not displayed.

7. **Confirm the name of the Windows device to be connected with the message displayed on each RICOH Monitor, and then touch [OK].**
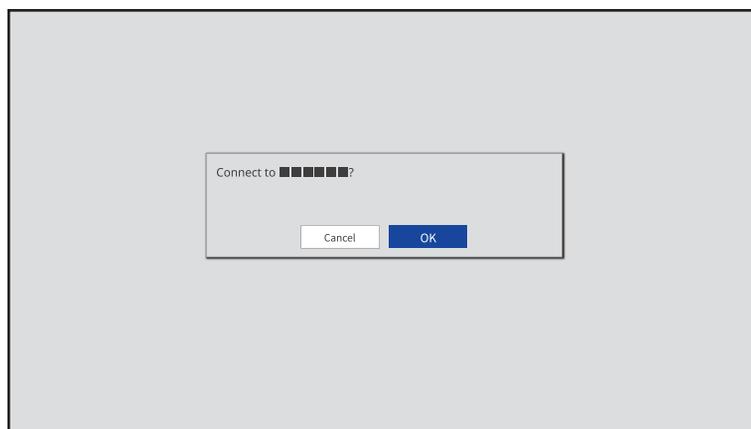
Connect to ■■■■■■?

Cancel   OK

Y317OX0040

The connection is started.

Note

- By registering the information of a device in the Connection list, it can be connected to this machine without having to allow the connection on the device. For details, see page 86 "Connection List".

Things You Can Do on the Connecting Screen

This section describes the functions available on the Connecting screen.
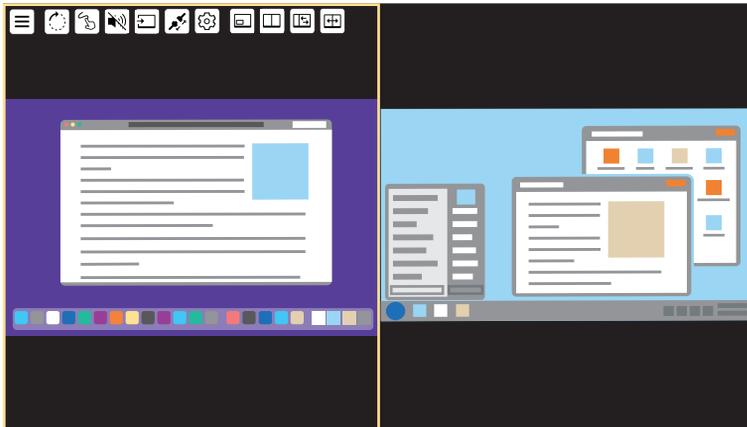
Y317OX0007

Rotating the Screen

You can rotate the screen display of this machine according to the size of the screen of the connected device or the usage purpose of this machine.

1. **Touch [Screen Rotation] ( ).**

   The displayed screen rotates 90° clockwise.
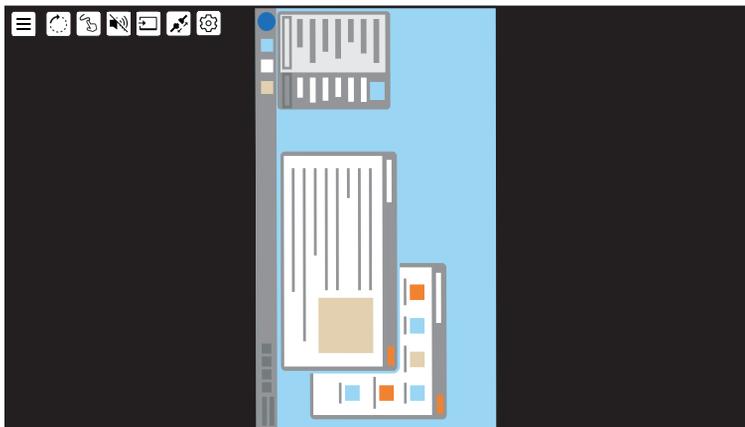
Y317OX0010

Touch [Screen Rotation] ( ) to change the screen orientation as needed.

Touch [Screen Rotation] ( ) four times to return to the original display.

Note

- The menu orientation does not change when the screen is rotated.

Displaying the Touched Traces

You can display the traces of touch operation or stylus pen operation.

1. **Touch [Touch Trace] ( ).**

   The icon display turns to , and the Touch Trace turns ON.

   The touched trace is displayed as a dotted line.

Y317OX0011

   The trace display disappears after two seconds.

2. **To turn OFF the Touch Trace, touch [Touch Trace] ( ) again.**

Muting Sound

You can mute the sound temporarily.

1. **Touch [Sound] ( ).**

   The icon display turns to , and the sound mute is turned ON.

2. **To turn it OFF, touch [Sound] ( ) again.**

When connected to two devices

You can mute the sound on the two displayed screens individually.

1. **Touch the screen that you want to mute the sound for so as to make it the active screen.**

2. **Touch [Sound] (🔊).**

   The sound mute is turned ON for the active screen only, and the sound on the inactive screen is played back.

3. **To turn sound mute ON for both screens, repeat steps 1 and 2.**

4. **To turn it OFF, touch the screen for which sound mute was turned ON so as to make it the active screen, and then touch [Sound] (🔇) again.**

Disabling Screen Display/Sound/Touch Operation Temporarily

You can temporarily disable screen display/sound/touch operation (stylus pen operation).

When Mute AV is turned ON, the following states are set, respectively:

- Screen display: Hidden
- Sound: Mute
- Touch operation (stylus pen operation): Inoperable

1. **Touch [Mute AV] (▭).**

   The icon display turns to ▭, and screen display/sound/touch operation (stylus pen operation) is disabled.

Y317OX0012

2. **To restore the original settings, touch [Mute AV] (▭) again.**

Disconnecting

You can disconnect the wireless connection.

For details, see page 79 "Ending a Connection".

Settings

You can display the Settings screen and check the settings related to the wireless connection.

For details, see page 84 "Changing Wireless Connection Settings".

Displaying the Sub-screen

When connected to two devices, you can display the active screen at the size of a single screen display, with the inactive screen at a smaller sub-screen.

1. **Touch [Sub-screen] (⊡).**

   The icon display turns to ⊡, and the inactive screen is displayed on the sub-screen.

   Y317OX0013
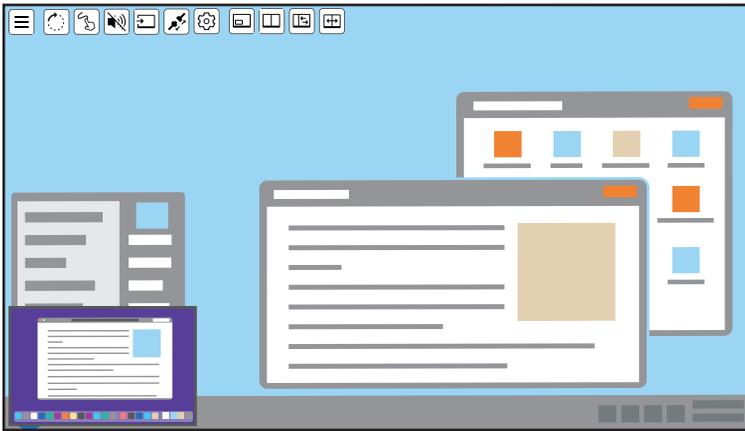
2. **To finish the sub-screen display, touch [Sub-screen] (⊡) again.**

🔸**Note**

* When both the sub-screen and the split screen are turned OFF, only the active screen is displayed.

* If the sub-screen is turned ON while the split screen is ON, the split screen is automatically switched to OFF.

Switching sub-screens

1. **Touch the sub-screen.**

   The screen displayed on the sub-screen becomes the active screen, and the display is switched.

Changing the display size of the sub-screen

1. **Touch the sub-screen with two fingers and spread or pinch them together.**

Y317OX0014

- Enlarging

   Increase the distance between the two fingers.

- Reducing

   Shorten the distance between the two fingers.

Changing the display position of the sub-screen

1. **Touch and hold the sub-screen and move it in the desired direction.**

   The display position of the sub-screen is fixed to the four corners of the screen.

   The display position of the sub-screen is changed to the corner of the screen closest to the position where the sub-screen was moved.

Splitting the Screen

You can split the screen to display two screens when two devices are connected.

1. **Touch [Split Screen] (⊠).**

   The icon display turns to ⊡ and splits the screen.

Y317OX0007
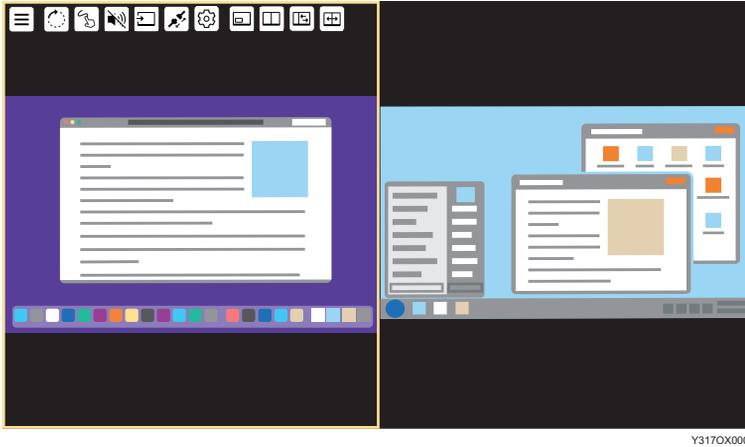
2. **To finish the splitting screen display, touch [Split Screen] (▣) again.**

Note

- When both the sub-screen and the split screen are turned OFF, only the active screen is displayed.

- If the split screen is turned ON while the sub-screen is ON, the sub-screen is automatically switched to OFF.

Switching the split position

You can switch the split position of the screen in three levels when the split screen is turned ON.

1. **Touch [Change Split-Position] (▣).**

   The split position of the screen switches.

   Touch [Change Split-Position] (▣) to change the split position, as necessary.

   Touching [Change Split-Position] (▣) three times returns the screen to the original split position.

Switching the screen placement

You can swap the screens when the split-screen is turned ON.

1. **Touch [Swap Screens] (▣).**

   The placement of the two screens is switched.

Ending a Connection

Disconnecting from This Machine

1. **Touch [Disconnect] ( ) on the Connecting screen.**

Y317OX0008
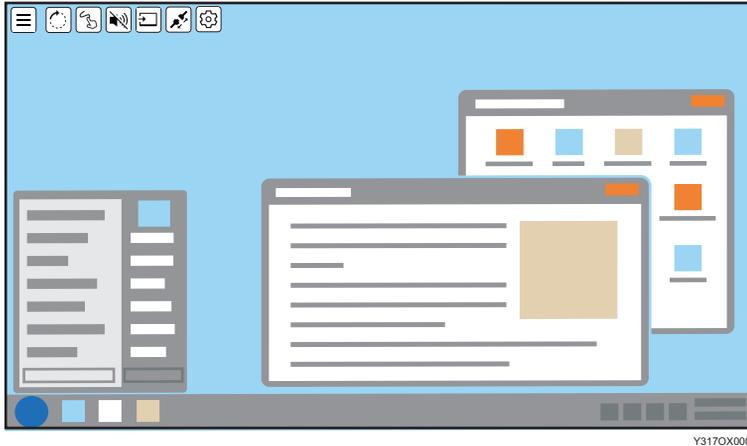
The connection is disconnected.

Depending on the OS or application used, a disconnection message might appear on the device side. Close the message or close the application according to the displayed content.

When using RICOH Monitor Mirroring for iOS, after tapping [OK] in the message, a screen broadcast appears. Tap [Stop Broadcast].

Disconnecting from a Device

Disconnecting from Windows

1. **Display the Connect/Cast screen in Windows.**

   - When using Windows 10

     1. Click the Action Center icon on the right end of the taskbar.

        The Action Center appears.

     2. Click [Connect].

     When using the shortcut keys, press the "Windows logo key" (Start key) and the "K" key on the keyboard at the same time.

   - When using Windows 11

1. Click the Network, Volume, or Battery icon on the taskbar.

   Quick Settings appears.

2. Click [Cast].

   If [Cast] does not appear, click the Edit Quick Settings icon (pen icon) in Quick Settings, and then click [Add] and select [Cast].

When using the shortcut keys, press the "Windows logo key" (Start key) and the "K" key on the keyboard at the same time.

2. Click [Disconnect].
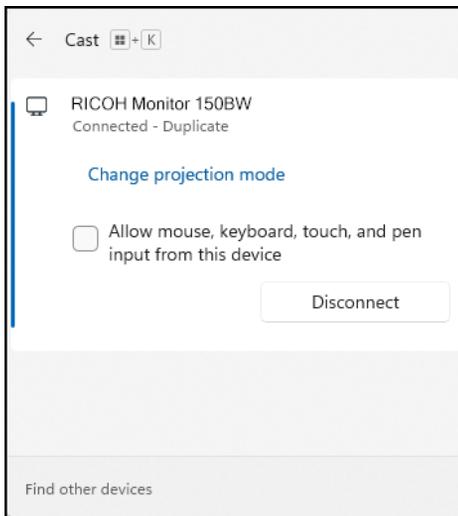
The disconnection message is displayed on the machine and the Waiting to Connect screen appears.

Disconnecting from Android

This section uses Android 12 as an example of the procedure.

1. **Swipe down from the top of the Android screen (1), and then swipe down the notification area (2) to open the Quick Settings panel.**

Y317IX0072
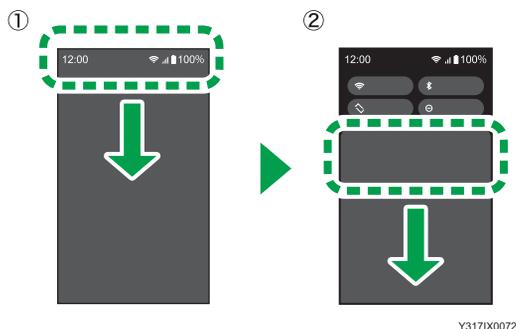
Depending on the version of Android, the Quick Settings panel can be displayed by swiping down from the top of the screen.

2. **Tap [Stop Casting] or [Disconnect].**

Button names could differ depending on the version and model of Android used.

The disconnection message is displayed on the machine and the Waiting to Connect screen appears.

Disconnecting from RICOH Monitor Mirroring for macOS

1. **Click [Stop Mirroring].**
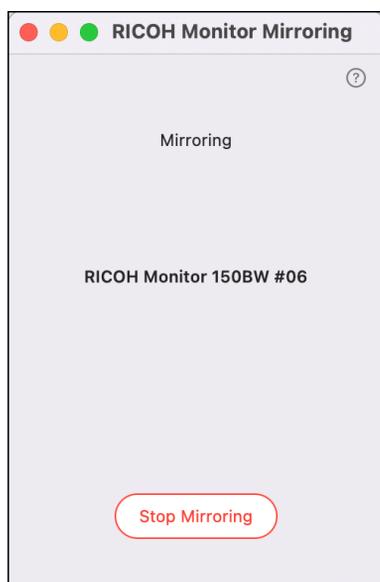
The disconnection message is displayed on the machine and the Waiting to Connect screen appears.

Disconnecting from RICOH Monitor Mirroring for iOS

1. **Tap the red indicator at the top of the iOS screen or display the RICOH Monitor Mirroring for iOS screen and then tap [Stop Mirroring].**
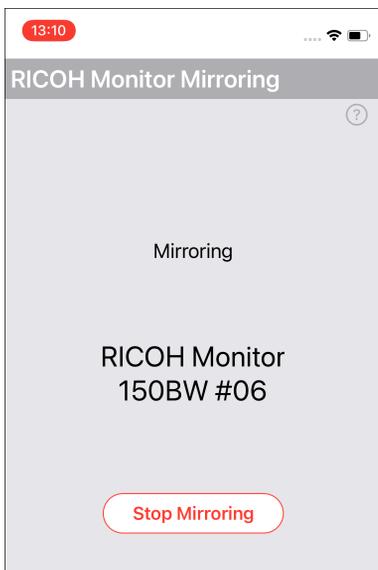
2. **Tap [Stop].**
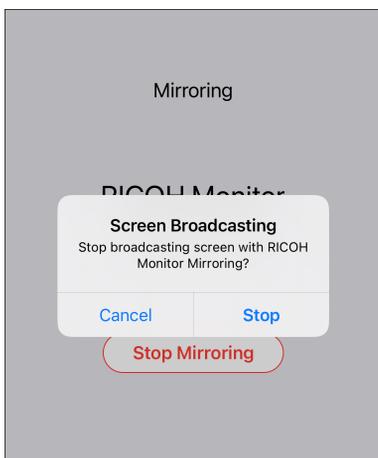
The disconnection message is displayed on the machine and the Waiting to Connect screen appears.

5

Disconnecting from RICOH Monitor Multicast for Windows

1. **Click [Stop Mirroring].**
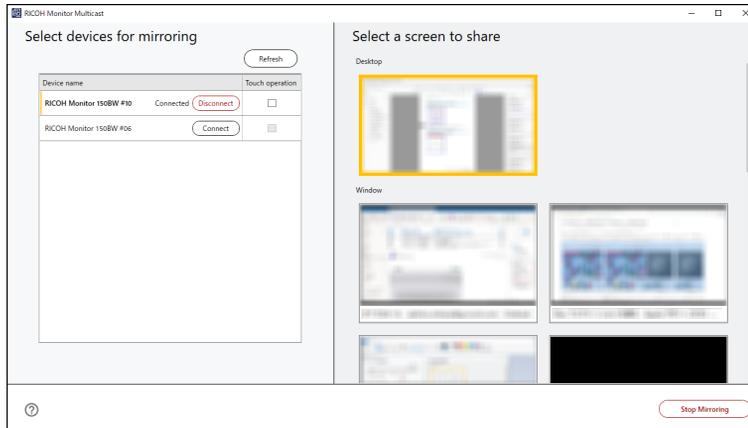
The disconnection message is displayed on each RICOH Monitor, and the Waiting to Connect screen is displayed.

When the connection is disconnected from the RICOH Monitor side and when there is no more connected RICOH Monitor, it switches to stop mirroring automatically.

Changing Wireless Connection Settings

Displaying the Settings Screen

⭐ **Important**

* When the Settings screen is displayed from the Connecting screen, only the [Language] in [Dev. Info] and setting of the Connection list can be changed.

1. **Touch the Settings (⚙) on the Waiting to Connect screen or the Connecting screen.**

Waiting to connect...
Connect from the source device

Y317OX5010

The Settings screen is displayed.

Settings

Dev. Info   Wi-Fi   Connection list   Firmware   Reset

End

Y317OX0039
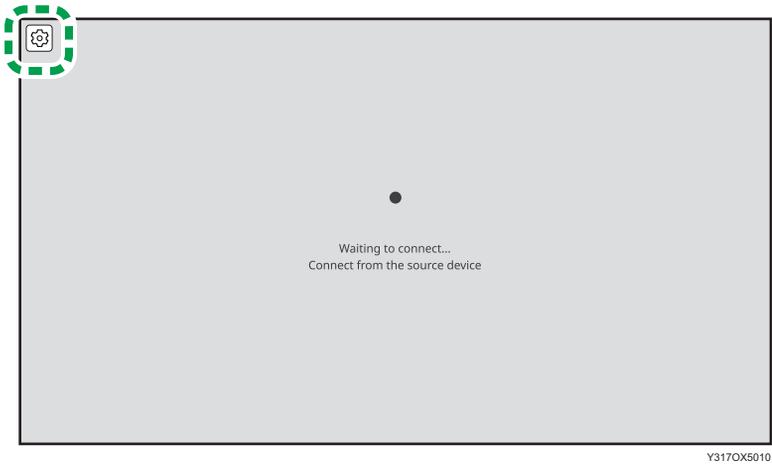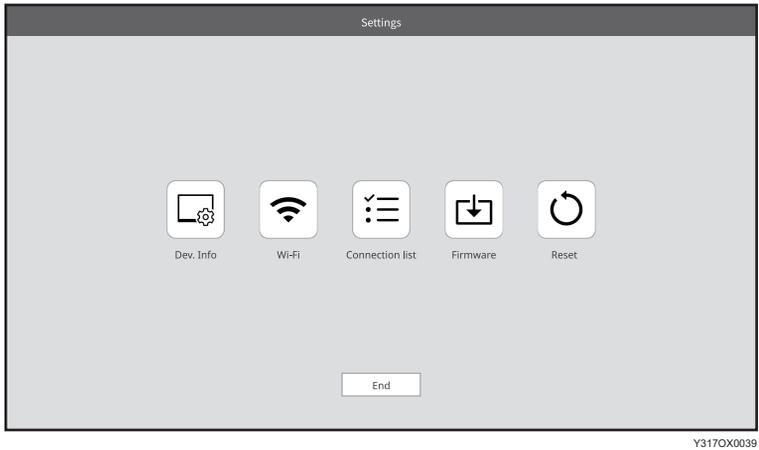
2. **Touch the icon of the item that you want to change, and then change the settings.**

Dev. Info

You can change the device name and display language of this machine.

⭐ **Important**

• **The device name cannot be changed when the Settings screen is displayed from the Connecting screen.**

Item	Descriptions
Device name	Set the name of this machine to be displayed on the device when connecting from the device side. ⬇ **Note** • The device name can be set using four to 30 single-byte alphanumeric characters. • The name cannot be changed when it is displayed from the Connecting screen. • When using this machine for the first time, set this item on the initial setting screen. For details, see page 22 "Changing the Initial Settings".
Language	Select the display language for the wireless connection screen. ⬇ **Note** • When using this machine for the first time, set this item on the initial setting screen. For details, see page 22 "Changing the Initial Settings". • The display language for the On-screen Display menu is set in the On-screen Display menu.

Wi-Fi

You can change the network settings.

⭐ **Important**

• **This setting cannot be changed when displayed from the Connecting screen.**

Item	Descriptions
Connected Network	Displays the networks to which this machine is connected

Item	Descriptions
Select network	Displays a list of available wireless networks You can select the network that you want to connect to from the list.
Network	Displays the network you selected in "Select network" To connect to a network by specifying the SSID directly, enter the SSID in the entry field.
Password	Enter the password for the network selected in "Select network".
Saved Networks	Displays a list of settings for networks that have been connected in the past and stored on this machine To delete a saved network, check the checkbox of the network that you wish to delete and touch [Delete]. 🔽**Note** • A maximum of eight network settings are saved. If eight network settings have already been saved, the oldest network setting will be deleted first.

Connection List

You can manage connected devices.

Item	Descriptions	Default
Register to cxn list	Select whether or not to register the devices connected wirelessly to this machine in the Connection list. • ON Devices connected to this machine via a wireless connection will be registered in the Connection list. Devices registered in the Connection list can connect to this machine without connection confirmation next time. • OFF The device is not registered in the Connection list. The device must confirm the connection with this machine each time it connects.	ON

Item	Descriptions	Default
Connection list	Displays a list of devices that have been connected in the past and stored on this machine To delete a saved device, check the checkbox for the device name that you want to delete and touch [Delete]. 🔽 **Note** • Deleted devices must be confirmed by this machine the next time they are connected. • Up to eight devices can be saved. If eight devices have already been saved, the oldest device will be deleted first.	-

Firmware

You can check and update the firmware version related to the wireless connection.

Firmware updates are performed from the computer side by connecting to the computer with the supplied USB Type-C cable.

⭐ **Important**

• The latest firmware includes security patches. Always update the firmware of this machine to the latest version.

• When displayed from the Connecting screen, you cannot operate the firmware screen.

• Do not turn OFF the power of this machine while updating.

• Do not disconnect the USB Type-C cable connecting this machine to a computer during an update.

• Do not connect a device such as a computer or smartphone to USB port 2.

• Do not operate the Switching Input/Back button on this machine during updating.

1. **Download the RICOH Monitor 150BW Firmware Updater to the computer used for the firmware update.**

2. **Touch [Firmware] ().**

Y317OX0039

3. **Touch [OK].**

   If you only want to check the current firmware version, touch [Back].

4. **Connect the USB Type-C cable connected to the USB port 1 of this machine to the computer.**

5. **Start the RICOH Monitor 150BW Firmware Updater downloaded in step 1.**

6. **Select the language to be displayed, and then click [Next].**

   When the computer and this machine are connected, the current firmware version and the firmware version to be updated are displayed.

7. **Confirm the firmware version, and then click [Next].**

   To cancel the update, click [Cancel].

8. **Click [OK].**

   The firmware update starts.

   Do not turn OFF the power of this machine or remove the USB Type-C cable while the update is in progress.

9. **When the update is complete, click [Close].**

   This machine reboots automatically.

Reset

You can initialize the settings of this machine.

The settings to be initialized are as follows:

- Settings for Dev. Info
- Settings for Wi-Fi

- Settings for Connection list

Important

- **Operation is not possible when displaying from the Connecting screen.**

1. **Touch [Reset] ( ).**

Y317OX0039
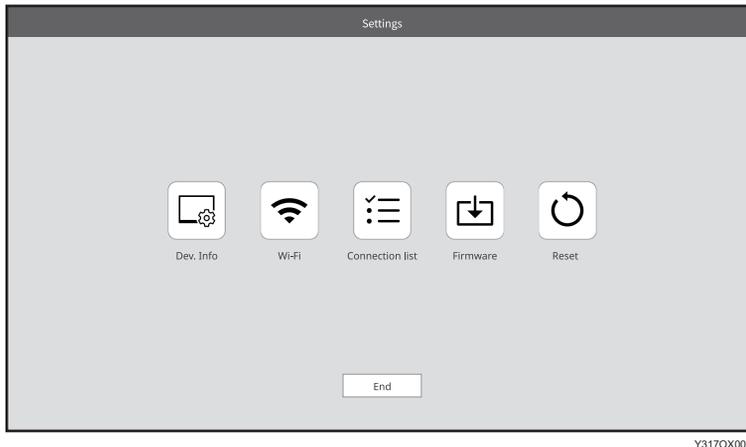
2. **Touch [OK].**

   A confirmation message is displayed.

3. **Touch [OK].**

   When the initialization is complete, this machine reboots automatically.

6. Charging

Charging a Device Connected to This Machine (Pass-through Charging)

You can charge a device such as a computer or smartphone connected to this machine using a commercially available USB PD charger and a commercially available USB Type-C cable (pass-through charging).

⭐ **Important**

- When using a commercially available USB PD charger, be sure to use one specifically for USB Type-C. Use of adapters/chargers or conversion connectors for other USB standards could cause this machine to malfunction.

- It is recommended to use a USB PD charger with a maximum output of 45 W.

1. **Connect the supplied USB Type-C cable connected to the USB port of this machine to the device that you want to charge.**
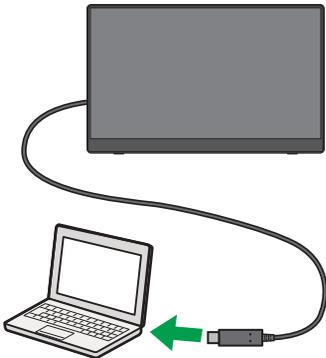
Y317IX0064

2. **Connect a commercially available USB Type-C cable to the USB port of this machine.**
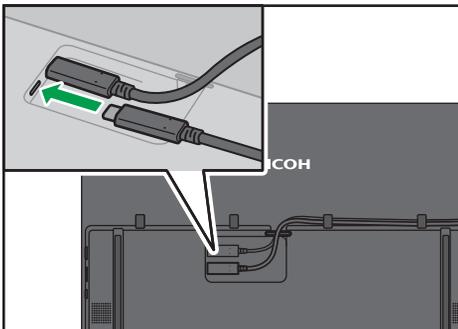
Y317IX0068

3. **Connect the USB Type-C cable to the USB PD charger.**

4. **Plug the USB PD charger into a power outlet.**

   The device starts charging.
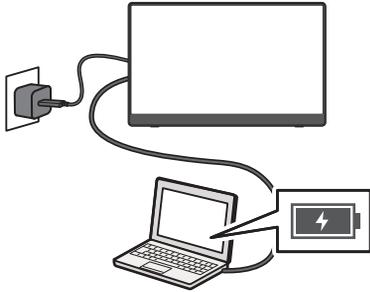
   Y317IX0039

5. **When charging of the device is complete, unplug the USB PD charger from the power outlet and remove the USB Type-C cable connected to this machine.**

Charging This Machine (150BW Model Only)

A low battery limits the functions of this machine that can be used.

Check the remaining battery level periodically and charge this machine, as necessary.

Checking the Remaining Battery Level

The remaining battery level can be checked in the On-screen Display menu.

1. **Press the center of the Menu/Select/Enter button.**

Y317IX0043
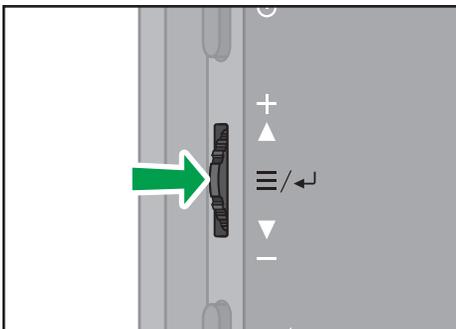
The On-screen Display menu is displayed.

2. **Check the battery level using the battery icon and remaining battery level display.**

Menu		100% 🔋
🔆 Brightness	50%	
◑ Contrast	80%	
🌡 Color Temp.	6500K	
⚙ System	...	
↩ :Exit	▼▲ :Move	↵ :Enter
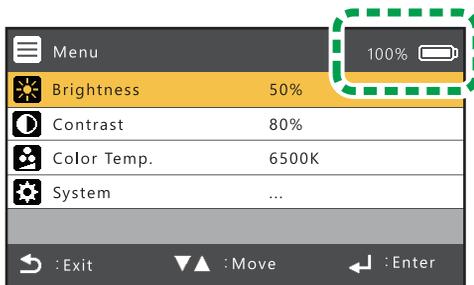
Y317OX5007

Charging

⭐ **Important**

- When using a commercially available USB PD charger, be sure to use one specifically for USB Type-C. Use of adapters/chargers or conversion connectors for other USB standards could cause this machine to malfunction.

- Make sure to use a commercially available USB PD charger with an output of 20 W or more.

1. **Connect the USB Type-C cable connected to the USB port of this machine to a device that supports the USB PD standard or to a commercially available USB PD charger.**
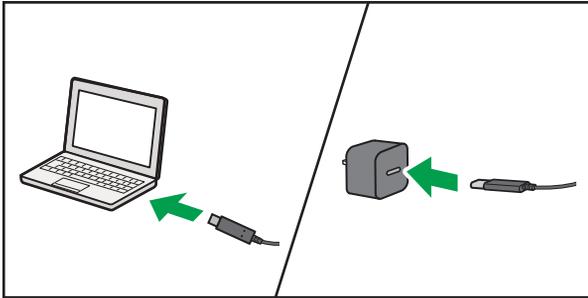
Y317IX0050

2. **When connected to a device that supports the USB PD standard, make sure that the device is ready to supply power. When connected to a USB PD charger, plug the USB PD charger into an outlet.**

   This machine starts charging.

   The charging status can be checked as follows:

   • When this machine is turned OFF

     The power LED is lit orange while charging.
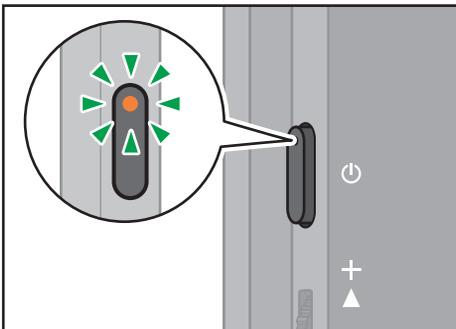
Y317IX0051

   • When this machine is turned ON

     The battery icon in the On-screen Display menu shows the charging status.
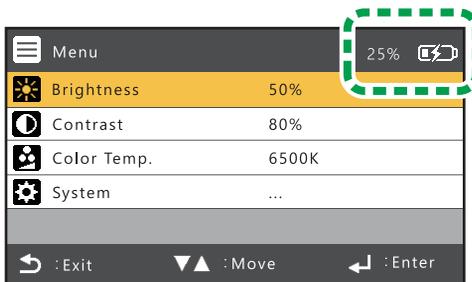
Y317OX5008

3. **When charging is complete, remove the USB Type-C cable from the device. If using a USB PD charger, unplug the USB PD charger from the power outlet.**

To check when charging is complete:

- When this machine is turned OFF

    The power LED turns OFF.

Y317IX0052
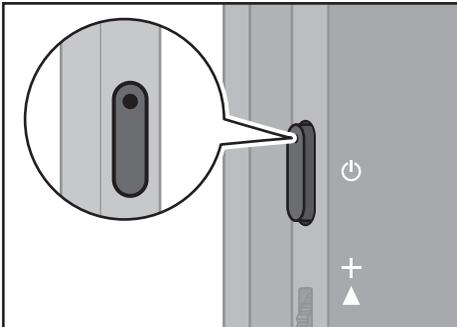
- When this machine is turned ON

    The battery level indicator in the On-screen Display menu shows 100%.

Y317OX5009
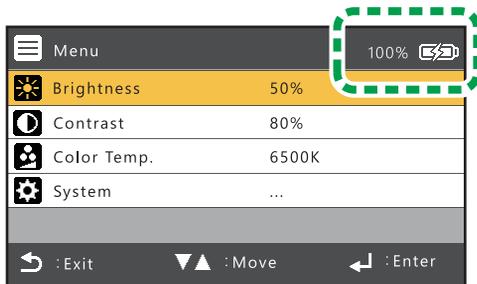
7. Changing Settings

This section describes how to operate the On-screen Display menu and its menu items.

Operating the On-screen Display Menu

You can change the screen brightness, contrast, color temperature, and other settings in the On-screen Display menu.

1. **Press the center of the Menu/Select/Enter button.**
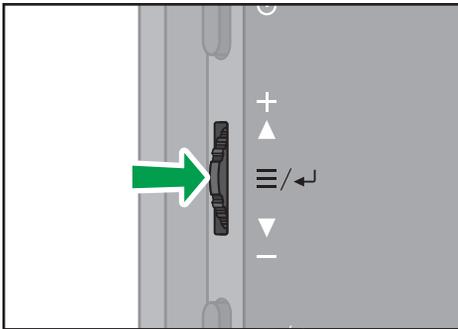
Y317IX0043

The On-screen Display menu is displayed.
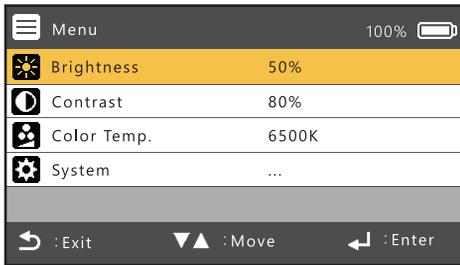
Y317OX0030

2. **Slide the Menu/Select/Enter button up or down to select an item.**
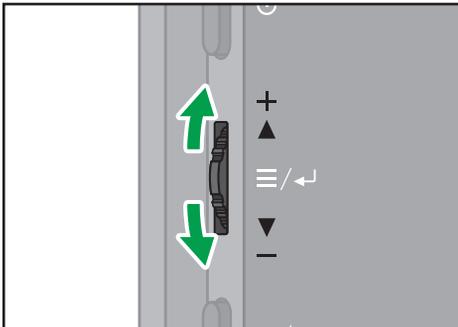
Y317IX0042

3. **Press the center of the Menu/Select/Enter button to confirm the selection.**
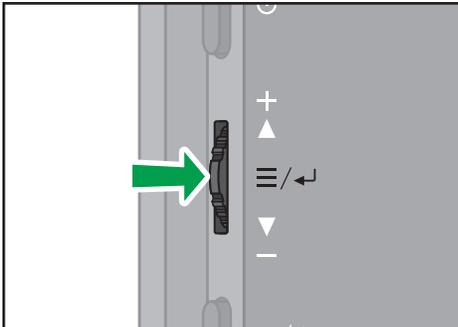
Y317IX0043

Changing "Brightness", "Contrast", or "Color Temp." from the factory default settings can increase the power consumption of this machine. A message appears when the relevant setting is displayed for the first time. If you agree with the contents of the message, press the center of the Menu/Select/Enter button.

4. **Repeat steps 2 and 3 as necessary to display the items that you want to change.**

5. **Slide the Menu/Select/Enter button up or down to select a setting or adjust a setting value.**
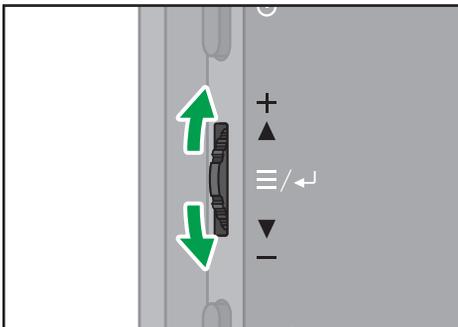
Y317IX0042

6. **Press the center of the Menu/Select/Enter button to confirm the change.**
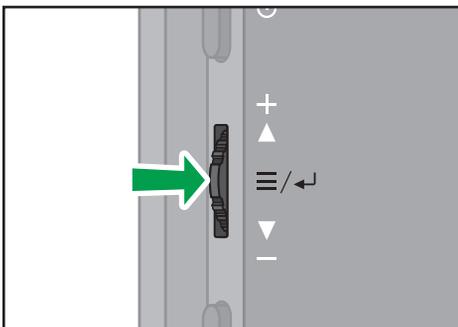
Y317IX0043

7. **Press the Switching Input/Back button to return to the previous display. Press the Switching Input/Back button multiple times to return to the top of the On-screen Display menu, and then press the Switching Input/Back button again to close the On-screen Display menu.**

- 150 model

Y317IX0067

- 150BW model

Y317IX0071

7

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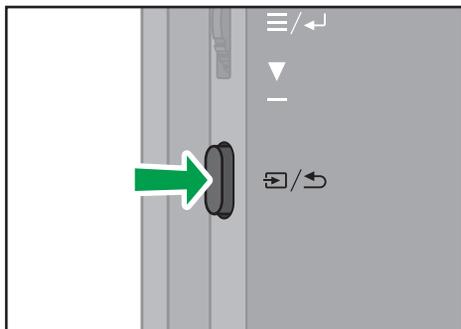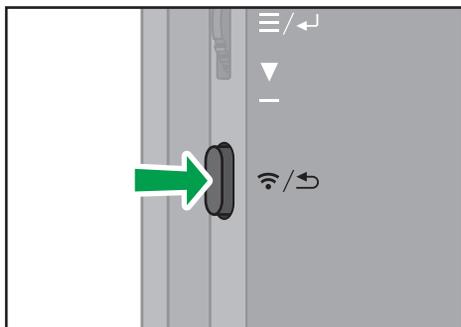
Setting Items in the On-screen Display Menu

Note

- When the message "Low power mode" appears, this machine is connected to a power source with an output of less than 15 W and the setting values of the setting items are restricted. To change the setting values, connect this machine to a device that supports the USB PD standard with an output of 15 W or more or to a USB PD charger. For details about the message, see page 103 "If a Message is Displayed during Operation".

Brightness

Y317OX0031
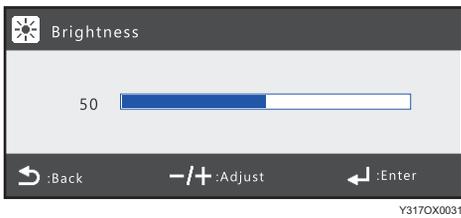
Adjusts the screen brightness

Contrast

Y317OX0032
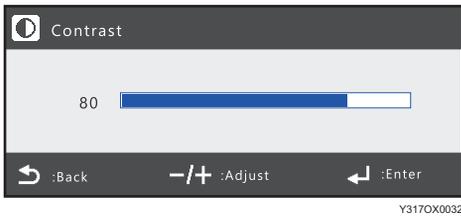
Adjusts the screen contrast

Color Temp.

Y317OX0033
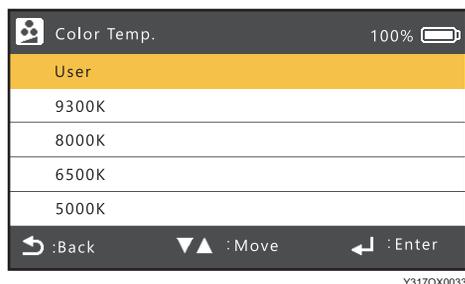
Adjusts the color temperature

- 9300K

  Displays images in a bluish tone

- 8000K

  Displays images in a natural tone

- 6500K

  Displays images in a reddish tone

- 5000K

  Adjusts the tone to reduce the amount of blue light, which is harmful to the eyes

- User

  The RGB values can each be adjusted.

System

Y317OX0034
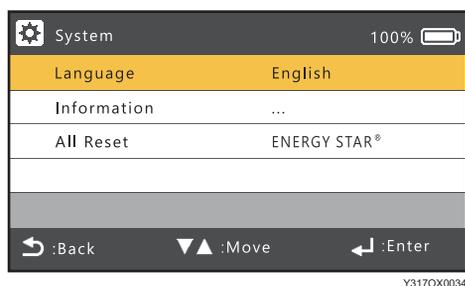
Language

Sets your preferred language for the On-screen Display menu

Information

Displays the software version and operating hours of this machine

All Reset

Initializes all settings in the On-screen Display menu

After initialization, when the "Brightness", "Contrast", "Color Temp.", or "Volume" settings of this machine is/are first displayed, a message regarding the increased power consumption of this machine will be displayed again.

7

8. Troubleshooting

This chapter explains what to do when a message is displayed or when the machine cannot be operated as wanted.

If a Message is Displayed during Operation

The following table lists the main messages and their recommended actions.

📥 **Note**

- Check the model name of this machine to be used and check the description of the corresponding model name. For details about how to check the model name, see page 7 "About the Model Names of this Machine".

Messages Related to Errors

150 model

Message	Causes	Solutions
An internal power error has occurred. Refer to the instruction manual.	An error has occurred in the machine's internal power supply.	Perform the following steps to clear the error. If the error is successfully cleared, the message will no longer appear. If the message reappears, unplug all cables and stop using this machine immediately. 1. Remove all USB Type-C cables connected to this machine. 2. Connect this machine to a device that supports the USB PD standard or to a USB PD charger with a USB Type-C cable. 3. Check if the message is displayed when this machine starts up.

8

150BW model

Message	Causes	Solutions
An internal power error has occurred. Refer to the instruction manual.	An error has occurred in the machine's internal power supply.	Perform the following steps to clear the error. If the error is successfully cleared, the message will no longer appear. If the message reappears, unplug all cables and stop using this machine immediately. 1. Remove all USB Type-C cables connected to this machine. 2. Press and hold the power button for more than 10 seconds. 3. Check that the power LED is lit orange. 4. Press the power button to check that this machine does not start up. 5. Connect this machine to a device that supports the USB PD standard or to a USB PD charger with a USB Type-C cable. 6. Check if the message is displayed when this machine starts up.

8

Messages Related to the Battery

150BW model

Message	Causes	Solutions
Battery power is low. Connect to power.	• The remaining battery charge is 15%. • The remaining battery charge is below 15% when this machine is started up.	Connect this machine to a USB PD charger.
Wireless connection cannot be used due to low battery. Connect to power.	This machine is connected to a power source with an output of less than 20 W and remaining battery power of less than 2%.	Connect this machine to a USB PD charger with an output of 20 W or more.
Shutting down due to low battery. Connect to power.	The battery level is below 2%.	Connect this machine to a USB PD charger.

8

Messages Related to the On-screen Display Menu

150 model

Message	Causes	Solutions
Low power mode [0-25]	This machine is operating in low power mode because it is connected to a power supply with an output of less than 15 W.	Connect this machine to a device that supports the USB PD standard or a USB PD charger with an output of 15 W or more.
	The machine is operating in low-power mode due to insufficient power supply, as the machine is designed to operate like this with pass-through power from a connected device.	This is normal.
Low power mode [mute]	This machine is operating in low power mode because it is connected to a power supply with an output of less than 15 W.	Connect this machine to a device that supports the USB PD standard or a USB PD charger with an output of 15 W or more.
Power consumption may increase when screen settings are changed.	This displays the on-screen device menu that can increase the power consumption of this machine by changing the factory default settings.	If you accept the increased power consumption, press the center of the Menu/Select/Enter button to select [OK]. Display the On-screen Device menu again to change the setting. If the increase in power consumption is not acceptable, press the Switching Input/Back button.

150BW model

Message	Causes	Solutions
Low power mode [0-25]	This machine is operating in low-power mode because it is connected to a power source with an output of less than 15 W and the remaining battery power is less than 2%.	Connect this machine to a device that supports the USB PD standard or a USB PD charger with an output of 15 W or more.
	When pass-through charging is being performed on a device connected to a power source with an output of less than 15 W, this machine is operating in low-power mode to match the power specifications of the device being powered.	• Connect this machine to a device that supports the USB PD standard or a USB PD charger. • This is normal.
Low power mode [mute]	This machine is operating in low-power mode because it is connected to a power source with an output of less than 15 W and the remaining battery power is less than 2%.	Connect this machine to a device that supports the USB PD standard or a USB PD charger with an output of 15 W or more.
Power consumption may increase when screen settings are changed.	This displays the on-screen device menu that can increase the power consumption of this machine by changing the factory default settings.	If you accept the increased power consumption, press the center of the Menu/Select/Enter button to select [OK]. Display the On-screen Device menu again to change the setting. If the increase in power consumption is not acceptable, press the Switching Input/Back button.

8

Messages Related to Screen Display

150/150BW model

Message	Causes	Solutions
No Video Input	No video input from USB ports 1 and 2	Connect the device to this machine with a USB Type-C cable for video input.

Messages Related to Wireless Connection

150BW model

Message	Causes	Solutions
Failed to connect. Try again.	Wireless connection to the device failed.	• Check that there are no devices in the surroundings that generate radio waves that could interrupt wireless communication, and then try the wireless connection again. • Reboot this machine and the device, and then retry the wireless connection.
**** (source device name) was disconnected.	The connection to the device has been disconnected.	• Check that there are no devices in the surroundings that generate radio waves that could interrupt wireless communication, and then try the wireless connection again. • Check whether the device is executing a high-load process.
Cannot rename device while connecting. Disconnect and set up again.	During the wireless connection, you touched the "Device name" entry field on the Dev. Info screen.	Change the device name of this machine after disconnecting the wireless connection with the device. ⇒page 85 "Dev. Info"

8

Message	Causes	Solutions
Enter a device name using 4 to 30 characters.	A 0–3 character device name was attempted to be set when changing the device name of this machine.	The device name for this machine must be at least four characters long. ⇒page 85 "Dev. Info"
Cannot change network while connecting. Disconnect and set up again.	Wi-Fi screen was displayed during wireless connection.	Disconnect the wireless connection to the device before connecting to the network or changing networks. ⇒page 85 "Wi-Fi"
Failed to connect. Please connect again.	Network connection failed.	Check that there are no devices in the surroundings that generate radio waves that could interrupt wireless communication, and then try the wireless connection again.
Password does not match. Enter the password again.	The password entered does not match the password registered at the access point.	Enter the correct password, and then try to reconnect to the network. ⇒page 85 "Wi-Fi"
Enter a password using 8 to 63 characters.	A password was entered using 0–7 characters.	Enter the correct password and then try to reconnect to the network. ⇒page 85 "Wi-Fi"
Connecting... Cannot update firmware. Try again after canceling the connection.	A firmware update screen was displayed during wireless connection.	Disconnect the wireless connection to the device before performing the firmware update. ⇒page 87 "Firmware"
Connecting... Disconnect to reset.	A reset screen was displayed during wireless connection.	Disconnect the wireless connection to the device before resetting the settings of this machine. ⇒page 88 "Reset"

8

Messages Related to RICOH Monitor Mirroring for macOS/RICOH Monitor Mirroring for iOS

150BW model

Message	Causes	Solutions
Not connected to the network.	The device you are using is not connected to the network.	Connect the device to the network.
RICOH Monitor was not found. Check that RICOH Monitor and PC are connected to the same network, and try connecting again.	• This machine is not connected to the network. • This machine and the device are not connected to the same network.	• Connect this machine to the network. • Connect this machine and the device to the same network (same subnet).
Failed to connect the device. Check the status of the device, and try connecting again.	• The network signal condition is poor. • The network is busy.	Check the network status and reconnect.
Please allow screen recording and try again.	• Screen recording is not allowed for the application. (macOS only)	Perform the following steps to allow screen recording for the application: 1. Click [Privacy & Security]. 2. Check the application in [Screen Recording].
The connection with ∗ ∗ ∗ ∗ (name of this machine) has been lost.	• This machine has been turned OFF. • This machine or device has been disconnected from the network.	• Turn ON the power to this machine. • Connect this machine and the device to the same network (same subnet).

Messages Related to RICOH Monitor Multicast for Windows

150BW model

Message	Causes	Solutions
This OS is not supported. Refer to the manual for supported OSs.	You are trying to install RICOH Monitor Multicast for Windows on an unsupported OS.	Install on a compatible OS. ⇒page 47 "Supported OS for Wireless Connection"
There is not enough free space to install the app. Installation requires at least ** MB of free space.	Insufficient computer capacity	Increase the free space by deleting unnecessary files, etc., and then reinstall the software.
The license key is incorrect. Enter the correct license key.	Wrong license code entered	Enter the correct license code.
An unknown error has occurred. Restart the app. If restarting does not resolve the error, reinstall the app.	• The application file is corrupt. • An error has occurred in Windows.	• Reinstall RICOH Monitor Multicast for Windows. • Restart your computer.
Failed to get the desktop image.	An error has occurred in RICOH Monitor Multicast for Windows.	Restart RICOH Monitor Multicast for Windows.
Failed to get the window image.	An error has occurred in RICOH Monitor Multicast for Windows.	Restart RICOH Monitor Multicast for Windows.
Not connected to the network.	The device is not connected to the network.	Connect the device to the network.
RICOH Monitor was not found. Check that RICOH Monitor and PC are connected to the same network, and try connecting again.	• The device is not connected to the network. • This machine and the device are not connected to the same network.	• Connect the device to the network. • Connect this machine and the device to the same network (same subnet).

8

Message	Causes	Solutions
Failed to connect the device. Check the status of the device, and try connecting again.	• The network signal condition is poor. • The network is busy.	Check the network status and reconnect.
The connection with ＊＊＊＊ (name of RICOH Monitor) has been lost.	• This machine has been turned OFF. • This machine or device has been disconnected from the network.	• Turn ON the power to this machine. • Connect this machine and the device to the same network (same subnet).
Up to 5 devices can be connected at the same time.	The sixth RICOH Monitor was attempted to be connected.	Disconnect the connected RIOCH Monitor, and then reconnect it. The maximum number of RICOH Monitors that can be connected at one time is five.

8

When You Cannot Use the Machine As You Want

This section explains what to do when the machine cannot be operated as you want.

 Note

- Check the model name of this machine to be used and check the description of the corresponding model name. For details about how to check the model name, see page 7 "About the Model Names of this Machine".

- The machine might not operate normally, depending on the connected computer, smartphone, USB PD charger, or cable. For information about the models tested and verified for normal operation, visit our website.

8

Problems Related to Power Supply

150 model

Problem	Possible cause	Solutions
Power is not turned ON.	-	If this machine is connected to a device that supports the USB PD standard or to a USB PD charger and this machine is turned OFF, this machine does not turn ON automatically even if a new device is connected to it. Press the power button.
	The USB PD charger is malfunctioning.	Replace the USB PD charger.
	Insufficient power is being supplied to this machine from the USB PD charger being used.	Replace with a USB PD charger with an output of 7.5 W or higher.
	There is no function to supply power from the connected device to this machine.	Connect this machine to a USB PD charger.
	The USB Type-C cable is not properly connected.	Reconnect the USB Type-C cable.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	USB Type-A to USB Type-C conversion cable is being used.	This machine cannot be used with a Type-C conversion cable from a USB Type-A port. Use a cable with only USB Type-C cable terminals.

8

Problem	Possible cause	Solutions
Power is not turned ON.	The screen is switching.	Due to the properties of the OLED panel, the screen displays completely dark at the timing when the black screen is displayed. Check the power status of this machine with the power LED. ⇒page 12 "Component Names and Functions"
Does not start when the power button is pressed	The USB PD charger is malfunctioning.	Replace the USB PD charger.
	Insufficient power is being supplied to this machine from the USB PD charger being used.	Replace with a USB PD charger with an output of 7.5 W or higher.
	There is no function to supply power from the connected device to this machine.	Connect this machine to a USB PD charger.
	The USB Type-C cable is not properly connected.	Reconnect the USB Type-C cable.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	USB Type-A to USB Type-C conversion cable is being used.	This machine cannot be used with a Type-C conversion cable from a USB Type-A port. Use a cable with only USB Type-C cable terminals.
	The screen is switching.	Due to the properties of the OLED panel, the screen displays completely dark at the timing when the black screen is displayed. Check the power status of this machine with the power LED. ⇒page 12 "Component Names and Functions"

8

Problem	Possible cause	Solutions
Turns OFF unintentionally	A sudden load fluctuation has occurred in this machine.	Use lower brightness and volume. ⇒page 33 "Changing the Volume" ⇒page 100 "Setting Items in the On-screen Display Menu"
Power repeatedly turning ON and OFF	There is a problem with the combination of this machine and the USB PD charger used.	Replace the USB PD charger, and then reboot this machine.

8

150BW model

Problem	Possible cause	Solutions
Power is not turned ON.	-	This machine does not turn ON automatically when a device is connected. Press the power button.
	There is no battery power remaining.	Connect this machine to a device that supports the USB PD standard or to a USB PD charger to charge the battery.
	The USB PD charger is malfunctioning.	Replace the USB PD charger.
	Insufficient power is being supplied to this machine from the USB PD charger being used.	Replace with a USB PD charger with an output of 7.5 W or higher.
	There is no function to supply power from the connected device to this machine.	Connect this machine to a USB PD charger.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	The screen is switching.	Due to the properties of the OLED panel, the screen displays completely dark at the timing when the black screen is displayed. Check the power status of this machine with the power LED. ⇒page 12 "Component Names and Functions"

8

Problem	Possible cause	Solutions
Does not start when the power button is pressed	There is no battery power remaining.	Connect this machine to a device that supports the USB PD standard or to a USB PD charger to charge the battery.
	The USB PD charger is malfunctioning.	Replace the USB PD charger.
	Insufficient power is being supplied to this machine from the USB PD charger being used.	Replace with a USB PD charger with an output of 7.5 W or higher.
	There is no function to supply power from the connected device to this machine.	Connect this machine to a USB PD charger.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	The screen is switching.	Due to the properties of the OLED panel, the screen displays completely dark at the timing when the black screen is displayed. Check the power status of this machine with the power LED. ⇒page 12 "Component Names and Functions"

8

Problems Related to the Battery

150BW model

Problem	Possible cause	Solutions
Unable to charge	The USB PD charger is malfunctioning.	Replace the USB PD charger.
	Insufficient power is being supplied to this machine from the USB PD charger being used.	Replace with a USB PD charger with an output of 7.5 W or higher.
	The USB Type-C cable is not properly connected.	Reconnect the USB Type-C cable.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	• The battery has malfunctioned. • The battery has reached the end of its useful life.	If the battery cannot be recharged, stop using this machine. Using the battery as-is can cause leakage or fire. Battery life varies depending on conditions and other factors.
	The battery has more than 96% remaining.	Charge the battery when the remaining battery charge is less than 95%.
	USB Type-A to USB Type-C conversion cable is being used.	This machine cannot be used with a Type-C conversion cable from a USB Type-A port. Use a cable with only USB Type-C cable terminals.

8

Problems Related to Pass-through Charging

150/150BW model

Problem	Possible cause	Solutions
Device connected to this machine not working with pass-through charging	The power consumption of the connected device is too high.	Pass-through charging is not possible from this machine. Pass-through charging is available only for devices that can be used with a maximum output of 25 W.
	USB PD charger output is insufficient.	Replace with a USB PD charger with an output of at least 20 W and 9 V, 15 V, or 20 V.
	The USB Type-C cable is not properly connected.	Reconnect the USB Type-C cable.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.

Problems Related to Touch/Stylus Pen Operation

150 model

Problem	Possible cause	Solutions
The machine does not respond when the screen is touched.	The OS or device does not support touch operation.	Check whether the OS or the device supports touch operation. ⇒page 35 "Overview of Wired Connection"
	There is a problem with the OS driver.	Update the driver for the device.
	There is a problem with the application that you are using.	If the touch operation does not respond only with a specific application, check the application specifications.

Problem	Possible cause	Solutions
Touching with stylus pen is not responsive.	The OS or device does not support stylus pen operation.	Check whether the OS or the device supports touch operation. ⇒page 35 "Overview of Wired Connection"
	There is a problem with the OS driver.	Update the driver for the device.
	• The battery in the stylus pen is running out of power. • No battery is set in the stylus pen. • The battery in the stylus pen is not set correctly. • The cap of the stylus pen is not closed properly.	• Check that the battery is properly set. • Replace the batteries. ⇒"Read This First", which comes with the stylus pen.
	There is a problem with the application that you are using.	If the touch operation does not respond only with a specific application, check the application specifications.
	The stylus pen is in sleep mode.	If the stylus pen is not used for a certain period of time, it automatically switches to sleep mode. Touch the stylus pen to the screen of this machine to cancel sleep mode. Touch the screen again, and the stylus pen will respond.
The function button on the stylus pen is not responding.	The OS or device does not support touch operation.	Check whether the OS or the device supports touch operation. ⇒page 35 "Overview of Wired Connection"
	There is a problem with the application that you are using.	If the touch operation does not respond only with a specific application, check the application specifications.

8

Problem	Possible cause	Solutions
While using the stylus pen, the device reacts when part of the hand touches the screen.	The connected device does not support palm rejection (a feature that recognizes only the stylus pen touch without reacting when part of the hand touches the screen when using the stylus pen).	Use devices that support palm rejection.
The position of the touch and the position of the response are misaligned.	The OS or device does not support touch operation.	Check whether the OS or the device supports touch operation. ⇒page 35 "Overview of Wired Connection"
	There is a problem with the OS driver.	Update the driver for the device.
	There is a problem with the application that you are using.	If the touch operation does not respond only with a specific application, check the application specifications.
Lines are not smooth.	Depending on the application used, drawing in fine lines might not result in smooth lines.	-
Slow to respond	A high-load process is running on the device.	Reboot the device.
	There is a problem with the OS driver.	Update the driver for the device.
Reacts when not touched	Dust or water droplets are adhering to the screen of this machine.	Check the screen surface for dust or water droplets.

8

150BW model

Problem	Possible cause	Solutions
The machine does not respond when the screen is touched. (when wired connection is used).	The OS or device does not support touch operation.	Check whether the OS or the device supports touch operation. ⇒page 35 "Overview of Wired Connection"
	There is a problem with the OS driver.	Update the driver for the device.
	There is a problem with the application that you are using.	If the touch operation does not respond only with a specific application, check the application specifications.

8

Problem	Possible cause	Solutions
The machine does not respond when the screen is touched. (when wireless connection is used).	Windows is not set to allow touch operation when connected.	Perform the following steps to verify that the settings are set to allow touch operation: 1. Press the "Windows logo key" and the "K" key on the keyboard simultaneously to display the Connect/Cast screen. 2. Check if the "Allow mouse, keyboard, touch, and pen input from this device" checkbox in the device name of the connected machine is checked. If it is not checked, check the box. ⇒page 55 "Connecting with Windows"
	The OS or device does not support touch operation.	Check whether the OS or the device supports touch operation. ⇒page 47 "Supported OS for Wireless Connection"
	There is a problem with the OS driver.	Update the driver for the device.
	There is a problem with the application that you are using.	If the touch operation does not respond only with a specific application, check the application specifications.
Long presses (long taps) sometimes do not respond.	Due to Windows specifications, when connected wirelessly, if the user does not move from the touched position, the touch output stops and is not detected, and a long press might not result in a response.	-

Problem	Possible cause	Solutions
Touching with stylus pen is not responsive.	Windows is not set to allow touch operation when connected.	Perform the following steps to verify that the settings are set to allow touch operation: 1. Press the "Windows logo key" and the "K" key on the keyboard simultaneously to display the Connect/Cast screen. 2. Check if the "Allow mouse, keyboard, touch, and pen input from this device" checkbox in the device name of the connected machine is checked. If it is not checked, check the box. ⇒page 55 "Connecting with Windows"
	The OS or device does not support touch operation.	Check whether the OS or the device supports touch operation. ⇒page 47 "Supported OS for Wireless Connection"
	There is a problem with the OS driver.	Update the driver for the device.
	• The battery in the stylus pen is running out of power. • No battery is set in the stylus pen. • The battery in the stylus pen is not set correctly. • The cap of the stylus pen is not closed properly.	• Check that the battery is properly set. • Replace the batteries. ⇒"Read This First", which comes with the stylus pen.
	There is a problem with the application that you are using.	If the touch operation does not respond only with a specific application, check the application specifications.

8

Problem	Possible cause	Solutions
Touching with stylus pen is not responsive.	The stylus pen is in sleep mode.	Touch the stylus pen to the screen of this machine to cancel sleep mode. Touch the screen again, and the stylus pen will respond.
The function button on the stylus pen is not responding (when wired connection is used).	The OS or device does not support touch operation.	Check whether the OS or the device supports touch operation. ⇒page 47 "Supported OS for Wireless Connection"
	There is a problem with the application that you are using.	If the touch operation does not respond only with a specific application, check the application specifications.
The function button on the stylus pen is not responding (when wireless connection is used).	The function buttons on the stylus pen cannot be used when using a wireless connection.	-
While using the stylus pen, the device reacts when part of the hand touches the screen.	The connected device does not support palm rejection (a feature that recognizes only the stylus pen touch without reacting when part of the hand touches the screen when using the stylus pen).	Use devices that support palm rejection.
	This is due to the specifications of this machine and is not a defect or malfunction.	If using a stylus pen and do not want the machine to respond to touch other than that of the stylus pen, use a wired connection.

Problem	Possible cause	Solutions
The position of the touch and the position of the response are misaligned.	The OS or device does not support touch operation.	Check whether the OS or the device supports touch operation. ⇒page 47 "Supported OS for Wireless Connection"
	There is a problem with the OS driver.	Update the driver for the device.
	There is a problem with the application that you are using.	If the touch operation does not respond only with a specific application, check the application specifications.
Lines are not smooth.	Depending on the application used, drawing in fine lines might not result in smooth lines.	-
Slow to respond (when wired connection is used)	A high-load process is running on the device.	Reboot the device.
	There is a problem with the OS driver.	Update the driver for the device.
Slow to respond (when wireless connection is used)	A high-load process is running on the device.	Reboot the device.
	There is a problem with the OS driver.	Update the driver for the device.
	The network signal condition is poor.	Check the network status and reconnect.
	This machine is generating heat due to charging of the battery.	Stop charging this machine or use it after charging is complete.
Reacts when not touched (when wired connection is used)	Dust or water droplets are adhering to the screen of this machine.	Check the screen surface for dust or water droplets.

8

Problem	Possible cause	Solutions
Reacts when not touched (when wireless connection is used)	Dust or water droplets are adhering to the screen of this machine.	Check the screen surface for dust or water droplets.
	The network signal condition is poor.	Check the network status and reconnect.

8

Problems Related to Images

150 model

Problem	Possible cause	Solutions
No image is displayed.	This machine is turned OFF.	Turn ON the power of this machine. ⇒page 29 "Turning On and Off the Power"
	The USB Type-C cable is not properly connected.	Reconnect the USB Type-C cable.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	Insufficient power is being supplied to this machine from the connected device.	Check the specifications of the device and confirm that the output power is 7.5 W or higher. If the output is less than 7.5 W, connect a USB PD charger to this machine.
	The connected device does not support DisplayPort Alternate Mode (DP Alt mode).	Use a device that supports DisplayPort Alternate Mode.
	A different input method has been selected.	Select the input method that you want to display in the "Switching Input". ⇒page 31 "Switching Inputs"
	A resolution not supported by this machine has been input.	Check whether the output resolution of the device is supported by this machine. ⇒page 161 "Specifications"

8

Problem	Possible cause	Solutions
An image has noise.	The USB Type-C cable is not properly connected.	Reconnect the USB Type-C cable.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	The connected device is outputting abnormal data.	Connect other devices and check if the same problem occurs.
	A resolution not supported by this machine has been input.	Check whether the output resolution of the device is supported by this machine. ⇒page 161 "Specifications"
	There is a device generating noise in the surroundings.	Change the location of use and check if the problem improves.
The image is delayed.	A high-load process is running on the device.	Reboot the device.
The screen switches unintentionally.	If there is no video input signal and nothing is displayed on the screen, the input method is automatically switched when a video input is connected to another port.	-
	There is a problem with the connected device.	Change the device.
	USB Type-C cable is damaged.	Replace the USB Type-C cable.

8

Problem	Possible cause	Solutions
Screen does not switch automatically	The condition that the input method switches automatically is not met.	For details about the conditions under which the input method switches automatically, see page 31 "Switching Inputs".
	There is a problem with the connected device.	Change the device.
	USB Type-C cable is damaged.	Replace the USB Type-C cable.
	• A charger that is not supported by this machine is used. • There is a problem with the USB PD charger.	Replace the USB PD charger.
The screen is dark.	The brightness of this machine is set low.	Change the brightness setting in the On-screen Display menu. ⇒page 100 "Setting Items in the On-screen Display Menu"
	Insufficient power is being supplied to this machine from the connected device.	Connect this machine to a USB PD charger.
	The original image is darkened.	Check the video brightness on the device side.
	USB Type-A to USB Type-C conversion cable is being used.	This machine cannot be used with a Type-C conversion cable from a USB Type-A port. Use a cable with only USB Type-C cable terminals.
	Insufficient power is being supplied to this machine from the USB PD charger being used.	Brightness could be limited depending on the combination of the connected device and USB PD charger. Replace with a USB PD charger with an output of 45 W or higher.

8

Problem	Possible cause	Solutions
The color is wrong.	The color temperature of this machine is set to "User".	Selecting "User" for color temperature in the On-screen Display menu and adjusting the setting value can cause color imbalance depending on the setting. Change the color temperature setting to other than "User". ⇒page 100 "Setting Items in the On-screen Display Menu"
	The contrast of this machine is set high.	If the contrast setting in the On-screen Display menu is set higher than the default value of "80", some colors could appear whitish. Change the contrast setting to "80". ⇒page 100 "Setting Items in the On-screen Display Menu"
	There is a problem with the input video.	Check the color of the image on the device side.
	USB Type-C cable is damaged.	Replace the USB Type-C cable.
Copyrighted content is not displayed.	The connected device does not support HDCP.	Use a device that is HDCP-compliant.
	A peripheral device that does not support HDCP is connected between this machine and the device.	If a cable or USB hub that does not support HDCP is connected between this machine and a device, copyrighted content might not be displayed. Connect the device directly to this machine with a USB Type-C cable.
Image burned in	A still image is displayed continuously for a long time.	Continuously displaying a still image for a long period of time could cause the image to burn into the screen. Avoid using still images for long periods of time.

Problem	Possible cause	Solutions
The screen flickers.	This is due to the specifications of this machine and is not a defect or malfunction.	The screen could appear to flicker depending on the operating environment and user. Changing the brightness setting in the On-screen Display menu could improve the flickering. ⇒page 100 "Setting Items in the On-screen Display Menu"
Screen glows momentarily when brightness is changed	This is due to the specifications of this machine and is not a defect or malfunction.	-
Part of the screen remains unlit.	OLED panels form an image via a collection of pixels and are manufactured to design specifications. While most of the screen operates normally, there are some dots in red, blue, or green that remain unlit, pixel by pixel. This is a limitation of OLED technology and is not a defect or failure.	-

8

150BW model

Problem	Possible cause	Solutions
No image is displayed (when wired connection is used).	This machine is turned OFF.	Turn ON the power of this machine. ⇒page 29 "Turning On and Off the Power"
	The USB Type-C cable is not properly connected.	Reconnect the USB Type-C cable.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	Insufficient power is being supplied to this machine from the connected device.	Check the specifications of the device and confirm that the output power is 7.5 W or higher. If the output is less than 7.5 W, connect a USB PD charger to this machine.
	The connected device does not support DisplayPort Alternate Mode (DP Alt mode).	Use a device that supports DisplayPort Alternate Mode.
	A different input method has been selected.	Select the input method that you want to display in the "Switching Input". ⇒page 31 "Switching Inputs"
	A resolution not supported by this machine has been input.	Check whether the output resolution of the device is supported by this machine. ⇒page 161 "Specifications"
	There is no battery power remaining.	Connect this machine to a device that supports the USB PD standard or to a USB PD charger to charge the battery.

Problem	Possible cause	Solutions
No image is displayed (when wireless connection is used).	This machine is turned OFF.	Turn ON the power of this machine. ⇒page 29 "Turning On and Off the Power"
	There is no battery power remaining.	Connect this machine to a device that supports the USB PD standard or to a USB PD charger to charge the battery.
	A different input method has been selected.	Select the input method that you want to display in the "Switching Input". ⇒page 31 "Switching Inputs"
	The screen is switching.	Due to the properties of the OLED panel, the screen displays completely dark at the timing when the black screen is displayed. Check the power status of this machine with the power LED. ⇒page 12 "Component Names and Functions"
An image has noise (when wired connection is used).	The USB Type-C cable is not properly connected.	Reconnect the USB Type-C cable.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	The connected device is outputting abnormal data.	Connect other devices and check if the same problem occurs.
	A resolution not supported by this machine has been input.	Check whether the output resolution of the device is supported by this machine. ⇒page 161 "Specifications"
	There is a device generating noise in the surroundings.	Change the location of use and check if the problem improves.

8

Problem	Possible cause	Solutions
An image has noise (when wireless connection is used).	The connected device is outputting abnormal data.	Connect other devices and check if the same problem occurs.
	A resolution not supported by this machine has been input.	Check whether the output resolution of the device is supported by this machine. ⇒page 161 "Specifications"
	There is a device generating noise in the surroundings.	Change the location of use and check if the problem improves.
	The network signal condition is poor.	Check the network status and reconnect.
	This machine is generating heat due to charging of the battery.	Stop charging this machine or use it after charging is complete.
	Due to the specifications of wireless video transmission, noise can occur when displaying video with a lot of movement.	-
The image is delayed (when wired connection is used).	A high-load process is running on the device.	Reboot the device.

8

Problem	Possible cause	Solutions
The image is delayed (when wireless connection is used).	The network signal condition is poor.	Check the network status and reconnect.
	A high-load process is running on the device.	Reboot the device.
	This machine is generating heat due to charging of the battery.	Stop charging this machine or use it after charging is complete.
	Wireless connection to the device and to the access point is used at the same time.	Disconnect from the access point before connecting to the device via wireless connection. To disconnect from the access point, move to a location where the access point is out of range or select and delete the network you want to disconnect from the "List of Saved Networks" on the Wi-Fi screen.
The screen switches unintentionally.	If there is no video input signal and nothing is displayed on the screen, the input method is automatically switched when a video input is connected to another port.	-
	There is a problem with the connected device.	Change the device.
	USB Type-C cable is damaged.	Replace the USB Type-C cable.
	There is no battery power remaining.	Connect this machine to a device that supports the USB PD standard or to a USB PD charger to charge the battery.

8

Problem	Possible cause	Solutions
Screen does not switch automatically	The condition that the input method switches automatically is not met.	For details about the conditions under which the input method switches automatically, see page 31 "Switching Inputs".
	There is a problem with the connected device.	Change the device.
	USB Type-C cable is damaged.	Replace the USB Type-C cable.
	There is no battery power remaining.	Connect this machine to a device that supports the USB PD standard or to a USB PD charger to charge the battery.
	• A charger that is not supported by this machine is used. • There is a problem with the USB PD charger.	Replace the USB PD charger.
The screen is dark (when wired connection is used).	The brightness of this machine is set low.	Change the brightness setting in the On-screen Display menu. ⇒page 100 "Setting Items in the On-screen Display Menu"
	Insufficient power is being supplied to this machine from the connected device.	Connect this machine to a USB PD charger.
	The original image is darkened.	Check the video brightness on the device side.
	The power supply is less than 15 W output, and the remaining battery power is less than 2%.	Connect this machine to a USB PD charger to charge the battery.
	Insufficient power is being supplied to this machine from the USB PD charger being used.	Brightness could be limited depending on the combination of the connected device and USB PD charger. Replace with a USB PD charger with an output of 45 W or higher.

Problem	Possible cause	Solutions
The screen is dark (when wireless connection is used).	The brightness of this machine is set low.	Change the brightness setting in the On-screen Display menu. ⇒page 100 "Setting Items in the On-screen Display Menu"
	The original image is darkened.	Check the video brightness on the device side.
	The power supply is less than 15 W output, and the remaining battery power is less than 2%.	Connect this machine to a USB PD charger to charge the battery.
The color is wrong (when wired connection is used).	The color temperature of this machine is set to "User".	Selecting "User" for color temperature in the On-screen Display menu and adjusting the setting value can cause color imbalance depending on the setting. Change the color temperature setting to other than "User". ⇒page 100 "Setting Items in the On-screen Display Menu"
	The contrast of this machine is set high.	If the contrast setting in the On-screen Display menu is set higher than the default value of "80", some colors could appear whitish. Change the contrast setting to "80". ⇒page 100 "Setting Items in the On-screen Display Menu"
	There is a problem with the input video.	Check the color of the image on the device side.
	USB Type-C cable is damaged.	Replace the USB Type-C cable.

8

Problem	Possible cause	Solutions
The color is wrong (when wireless connection is used).	The color temperature of this machine is set to "User".	Selecting "User" for color temperature in the On-screen Display menu and adjusting the setting value can cause color imbalance depending on the setting. Change the color temperature setting to other than "User". ⇒page 100 "Setting Items in the On-screen Display Menu"
	The contrast of this machine is set high.	If the contrast setting in the On-screen Display menu is set higher than the default value of "80", some colors could appear whitish. Change the contrast setting to "80". ⇒page 100 "Setting Items in the On-screen Display Menu"
	There is a problem with the input video.	Check the color of the image on the device side.
	The network signal condition is poor.	Check the network status and reconnect.
Copyrighted content is not displayed (when wired connection is used).	The connected device does not support HDCP.	Use a device that is HDCP-compliant.
	A peripheral device that does not support HDCP is connected between this machine and the device.	If a cable or USB hub that does not support HDCP is connected between this machine and a device, copyrighted content might not be displayed. Connect the device directly to this machine with a USB Type-C cable.
Copyrighted content is not displayed (when wireless connection is used).	This is due to the specifications of this machine and is not a defect or malfunction.	Copyrighted content should be displayed via a wired connection.

Problem	Possible cause	Solutions
Image burned in	A still image is displayed continuously for a long time.	Continuously displaying a still image for a long period of time could cause the image to burn into the screen. Avoid using still images for long periods of time.
The screen flickers.	This is due to the specifications of this machine and is not a defect or malfunction.	The screen could appear to flicker depending on the operating environment and user. Changing the brightness setting in the On-screen Display menu could improve the flickering. ⇒page 100 "Setting Items in the On-screen Display Menu"
Screen glows momentarily when brightness is changed	This is due to the specifications of this machine and is not a defect or malfunction.	-
Part of the screen remains unlit.	OLED panels form an image via a collection of pixels and are manufactured to design specifications. While most of the screen operates normally, there are some dots in red, blue, or green that remain unlit, pixel by pixel. This is a limitation of OLED technology and is not a defect or failure.	-

8

Problems Related to Sound

150 model

Problem	Possible cause	Solutions
No sound	No audio is being input from the connected device.	• Check if the audio output destination of the device is set to this machine (RICOH Monitor). • Check the volume setting of the device or the volume setting of the application being used.
	The volume of this machine is set to "0".	Adjust the volume. ⇒page 33 "Changing the Volume"
	Insufficient power is being supplied to this machine from the connected device or USB PD charger.	When the On-screen Display menu and Switching Input screen are not displayed, slide the Menu/Select/Enter button up or down to display the volume screen and check whether "Low power mode [mute]" is displayed. If it is displayed, connect this machine to a USB PD charger with an output of 15 W or more.
Low volume	The volume setting of the connected device is low.	Adjust the volume setting of the device or the volume setting of the application being used.
	The volume of this machine is set low.	Adjust the volume. ⇒page 33 "Changing the Volume"

8

Problem	Possible cause	Solutions
Noise in the audio	The original audio contains noise.	Check the audio on the device side.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	The volume is too loud.	Turn the volume down and check if the problem improves. ⇒page 33 "Changing the Volume"
Video and audio are out of sync.	The video and audio are out of sync from the original.	Check whether there is any discrepancy between video and audio on the device side.

150BW model

Problem	Possible cause	Solutions
No sound (when wired connection is used)	No audio is being input from the connected device.	• Check if the audio output destination of the device is set to this machine (RICOH Monitor). • Check the volume setting of the device or the volume setting of the application being used.
	The volume of this machine is set to "0".	Adjust the volume. ⇒page 33 "Changing the Volume"
	Insufficient power is being supplied to this machine from the connected device or USB PD charger.	When the On-screen Display menu and Switching Input screen are not displayed, slide the Menu/Select/Enter button up or down to display the volume screen and check whether "Low power mode [mute]" is displayed. If it is displayed, connect this machine to a USB PD charger with an output of 15 W or more. ⇒page 33 "Changing the Volume"

8

Problem	Possible cause	Solutions
No sound (when wireless connection is used)	No audio is being input from the connected device.	• Check if the audio output destination of the device is set to this machine (RICOH Monitor). • Check the volume setting of the device or the volume setting of the application being used.
	The volume of this machine is set to "0".	Adjust the volume. ⇒page 33 "Changing the Volume"
	The power supply is less than 15 W output, and the remaining battery power is less than 2%.	When the On-screen Display menu and Switching Input screen are not displayed, slide the Menu/Select/Enter button up or down to display the volume screen and check whether "Low power mode [mute]" is displayed. If it is displayed, connect this machine to a USB PD charger with an output of 15 W or more. ⇒page 33 "Changing the Volume"
	Sound mute is turned ON.	Check whether the Sound or Mute AV is turned ON in the menu icon that appears on the screen during the connection. If it is ON, touch the icon to turn it OFF. ⇒page 74 "Muting Sound" ⇒page 75 "Disabling Screen Display/Sound/Touch Operation Temporarily"

8

Problem	Possible cause	Solutions
No sound (when wireless connection is used)	The network signal condition is poor.	Check the network status and reconnect.
	Audio cannot be played when using RICOH Monitor Mirroring for macOS or RICOH Monitor Multicast for Windows.	-
Low volume	The volume setting of the connected device is low.	Adjust the volume setting of the device or the volume setting of the application being used.
	The volume of this machine is set low.	Adjust the volume. ⇒page 33 "Changing the Volume"
Noise in the audio (when wired connection is used)	The original audio contains noise.	Check the audio on the device side.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	The volume is too loud.	Turn the volume down and check if the problem improves. ⇒page 33 "Changing the Volume"
Noise in the audio (when wireless connection is used)	The original audio contains noise.	Check the audio on the device side.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	The volume is too loud.	Turn the volume down and check if the problem improves. ⇒page 33 "Changing the Volume"
	There is a device generating noise in the surroundings.	Change the location of use and check if the problem improves.
	The network signal condition is poor.	Check the network status and reconnect.
	The connected device is outputting abnormal data.	Connect other devices and check if the same problem occurs.

8

Problem	Possible cause	Solutions
Video and audio are out of sync (when wired connection is used).	The video and audio are out of sync from the original.	Check whether there is any discrepancy between video and audio on the device side.
Video and audio are out of sync (when wireless connection is used).	The video and audio are out of sync from the original.	Check whether there is any discrepancy between video and audio on the device side.
	The network signal condition is poor.	Check the network status and reconnect.
	External speakers are used.	Connecting an external speaker to the device without using the speaker of this machine could cause the audio to shift.

Problems Related to Wireless Connection

150 model

Problem	Possible cause	Solutions
Unable to change to wireless connection via Switching Input	This model does not support wireless connection.	Check the model name of this machine. The model that supports wireless connection is "150BW". ⇒page 7 "About the Model Names of this Machine"

150 BW model

Problem	Possible cause	Solutions
Unable to change to wireless connection via Switching Input	It is connected to a power source with an output of less than 20 W, and the remaining battery power is less than 2%.	Connect this machine to a USB PD charger with an output of 20 W or more.

8

Problem	Possible cause	Solutions
• Cannot connect wirelessly to a device • Cannot connect wirelessly to a second device	This machine is turned OFF.	Turn this machine ON and wait for the Waiting to Connect screen to display before making a connection. ⇒page 29 "Turning On and Off the Power"
	When connecting from a device, the device name of this machine is not selected.	Check if the device name of this machine, which is displayed in "Dev. Info" on the Settings screen or in the upper right corner of the Waiting to Connect screen, is displayed in the Connection list on the device side, and then select it. ⇒page 85 "Dev. Info"
	This model does not support wireless connection.	Check the model name of this machine. The model that supports wireless connection is "150BW". ⇒page 7 "About the Model Names of this Machine"
	The network signal condition is poor.	• Check the network status and reconnect. • Check that there are no devices in the surroundings that generate radio waves that could interrupt wireless communication, and then try the wireless connection again.
	The device you are trying to connect does not support Miracast.	Use a device that supports Miracast. ⇒page 47 "Supported OS for Wireless Connection"
	A high-load process is running on the device.	Finish the process on the device side, and then reconnect it.
	There is a problem with the device that you are trying to connect.	Reboot the device and reconnect it.

8

Problem	Possible cause	Solutions
• Cannot connect wirelessly to a device • Cannot connect wirelessly to a second device	Blocked by Windows firewall	• When using Windows 10 Go to "Windows Settings", then "Update and Security", then "Windows Security", then "Firewall and Network Protection", then "Public Networks", and uncheck "Block all incoming connections, including apps in the list of allowed apps". • When using Windows 11 Go to "Windows Settings", "Privacy and Security", "Windows Security", "Firewall and Network Protection", "Public Networks", and then "Block all incoming connections, including apps in the list of allowed apps". Uncheck the "Block all incoming connections, including apps in the list of allowed apps".
Lost wireless connection	A high-load process is running on the device.	Finish the process on the device side, and then reconnect it.
	The network signal condition is poor.	• Check the network status and reconnect. • Check that there are no devices in the surroundings that generate radio waves that could interrupt wireless communication, and then try the wireless connection again.

Problem	Possible cause	Solutions
The desired network does not appear in the list under "Select network".	The network is configured with stealth features.	After confirming the SSID, touch the "Network" entry field on the Wi-Fi screen and enter the SSID directly. ⇒page 85 "Wi-Fi"
	The access point is turned OFF.	Turn ON the access point.
	The signal from the access point does not reach this machine.	Move to a location where the access point's signal can be received.
	The network signal condition is poor.	• Check the network status and reconnect. • Check that there are no devices in the surroundings that generate radio waves that could interrupt wireless communication, and then try the wireless connection again.

8

Problem	Possible cause	Solutions
Unable to connect to network	An incorrect SSID has been entered.	Enter the correct SSID, and then reconnect to the network. ⇒page 85 "Wi-Fi"
	An incorrect password has been entered.	Enter the correct password, and then reconnect to the network. ⇒page 85 "Wi-Fi"
	The signal from the access point does not reach this machine.	Move to a location where the access point's signal can be received.
	The network signal condition is poor.	• Check the network status and reconnect. • Check that there are no devices in the surroundings that generate radio waves that could interrupt wireless communication, and then try the wireless connection again.
	Environment-dependent characters are used in the network SSID.	Change the SSID to one that does not contain environment-dependent characters.

8

Problem	Possible cause	Solutions
Does not automatically connect to networks saved in the "List of Saved Networks"	The signal from the access point does not reach this machine.	Move to a location where the access point's signal can be received.
	The network signal condition is poor.	• Check the network status and reconnect. • Check that there are no devices in the surroundings that generate radio waves that could interrupt wireless communication, and then try the wireless connection again.
	Already connected to the device	The network cannot automatically connect to a device while it is connected to the network. When the connection to the device is disconnected, it can automatically connect to the network.
Want to erase the entered network password	-	Select the network that you want to delete from the "List of Saved Networks" on the Wi-Fi screen and delete it. ⇒page 85 "Wi-Fi"
The device cannot be registered in the "Connection list".	Registration to the Connection list is disabled.	Turn ON "Register to cxn list" on the Connection list screen. ⇒page 86 "Connection List"
Device disappeared from the "Connection list"	A new device is registered with eight devices already registered.	• Connect to the device again and register the device as the first device in the Connection list. • Delete unnecessary devices from the Connection list to reduce the number of devices registered to less than eight. ⇒page 86 "Connection List"

8

Problem	Possible cause	Solutions
Accidentally deleted a device from the Connection list	-	Reconnect to the device with the "Register to cxn list" turned ON. ⇒page 86 "Connection List"

Problems Related to RICOH Monitor Mirroring for macOS/RICOH Monitor Mirroring for iOS

150 BW model

Problem	Possible cause	Solutions
Cannot install application	There is an attempt to install the application on an unsupported OS.	Install on a compatible OS. For details, see page 47 "Supported OS for Wireless Connection".
	There is insufficient capacity in the device.	Increase the free space by deleting unnecessary files, etc., and then reinstall the application.
The application does not start.	The application file is corrupt.	Reinstall the application.
	An unexpected error has occurred in the OS.	Reboot the device.

Problems Related to RICOH Monitor Multicast for Windows

150 BW model

Problem	Possible cause	Solutions
Video image not shared	An error has occurred in the application.	Restart the application and reconnect.
Touch operation is not reflected from the RICOH Monitor that allowed touch operation.	An error has occurred in the application.	Restart the application and reconnect.

8

Problems Related to Firmware Updates

150BW model

Problem	Possible cause	Solutions
Unable to connect this machine to a computer	The USB Type-C cable is not properly connected.	Reconnect the USB Type-C cable.
	A problem with USB Type-C cable.	Replace the USB Type-C cable.
	The connected device does not support DisplayPort Alternate Mode (DP Alt mode).	Use a device that supports DisplayPort Alternate Mode.
	USB Type-A to USB Type-C conversion cable is being used.	This machine cannot be used with a Type-C conversion cable from a USB Type-A port. Use a cable with only USB Type-C cable terminals.

8

Problem	Possible cause	Solutions
Unable to connect this machine to a computer	Blocked by Windows firewall	• When using Windows 10 Go to "Windows Settings", then "Update and Security", then "Windows Security", then "Firewall and Network Protection", then "Public Networks", and uncheck "Block all incoming connections, including apps in the list of allowed apps". • When using Windows 11 Go to "Windows Settings", "Privacy and Security", "Windows Security", "Firewall and Network Protection", "Public Networks", and then "Block all incoming connections, including apps in the list of allowed apps". Uncheck the "Block all incoming connections, including apps in the list of allowed apps".

8

| Problem	Possible cause	Solutions
Unable to connect this machine to a computer	RICOH Monitor 150BW Firmware Updater is not allowed to communicate through the firewall.	• When using Windows 10 Go to "Windows Settings", "Update and Security", "Windows Security", "Firewall and Network Protection", and "Allow Applications through the Firewall" to allow Monitor Update TCP 51000 and Monitor Update UDP 51000 to communicate through the firewall. • When using Windows 11 Go to "Windows Settings", "Privacy and Security", "Windows Security", "Firewall and Network Protection", and "Allow applications through the firewall" to allow Monitor Update TCP 51000 and Monitor Update UDP 51000 to communicate through the firewall.
Failure to send update file	The USB Type-C cable is not properly connected.	Reconnect the USB Type-C cable, and then retry the firmware update.
	A problem with USB Type-C cable.	Replace the USB Type-C cable, and retry the firmware update.
• Turned OFF the power during the update • The battery ran out of power during the update • The USB Type-C cable is removed during the update.	-	Perform the firmware update again. ⇒page 87 "Firmware"

8

Problem	Possible cause	Solutions
Update fails	The USB Type-C cable is not properly connected.	Reconnect the USB Type-C cable, and then retry the firmware update.
	A problem with USB Type-C cable.	Replace the USB Type-C cable, and retry the firmware update.
	The downloaded update file is corrupt.	Download the RICOH Monitor 150BW Firmware Updater again and retry the firmware update. ⇒page 87 "Firmware"
The update does not end with the update in progress.	There is a problem with this machine.	Reboot this machine and retry the firmware update.

Troubles Related to This Machine

150/150BW model

This machine gets hot.

The area within the dotted line in the following figure might feel hot, but this is due to the specifications of this machine and is not a defect:
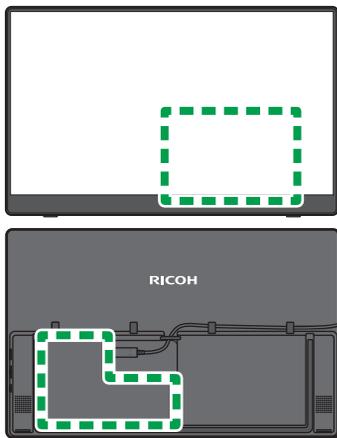
Y317IX0070

⭐ **Important**

- During use, do not keep touching the portion indicated within the dotted lines. Doing so will cause low-temperature burn.

- If you are directly holding the machine during use, be careful not to touch the portion indicated within the dotted lines.

8

9. Appendix

This section describes how to operate the stylus pen (optional), how to care for this machine, contact information, trademarks, etc.

Using a Stylus Pen

The optional RICOH Monitor Stylus Pen Type 1 (stylus pen) can be used to perform stylus pen operations on this machine.

Method of use

Once a battery is set in the stylus pen, it can be used immediately with this machine.

There is no need to turn ON the stylus pen or to connect it to this machine.

Function buttons

The stylus pen has two function buttons.
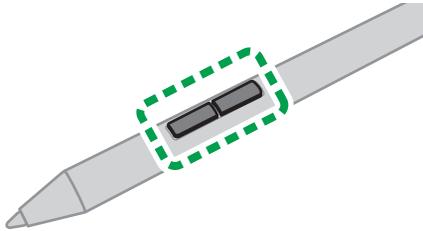
Y317IX0069

The action when the function button is pressed depends on the application used.

✎Note

- Before using the stylus pen, be sure to read the "Safety Information" in the "Read This First", which comes with the stylus pen.

- Only touch operation with the stylus pen is available when connected via a wireless connection. If you want to use the function buttons of the stylus pen, connect it with a wired connection.

- For details about how to set the battery, see "Inserting/Removing the Battery into/from the Stylus Pen" in the "Read This First", which comes with the stylus pen.

9

Maintenance

Cleaning the Display

- When the surface of the display on this machine becomes soiled, wipe it clean with a soft, dry cloth. If the display is used while soiled, the position touched on the display might not be recognized correctly.

- If the touch operation shows signs of incorrect operation, clean the screen.

    - Before cleaning the screen, turn OFF the machine and unplug all cables.

    - Remove dust and dirt from the screen periodically. Use a clean, soft cloth for cleaning.

    - Do not wipe the screen with an abrasive cloth, as this can damage the screen.

    - Do not spray neutral detergent directly onto the screen or main frame.

9

Specifications

Machine Specifications

Item		Specifications
Display panel	Display method	OLED (Organic Light Emitting Diode)
	Panel size	15.6 inches
	Maximum resolution	1920 × 1080
	Brightness (max)	300 nit (=cd/m^2)
	Contrast	1:100,000
	Display colors	8bit+2bit FRC
	Maximum number of colors	Approx. 1.07 billion colors
	Refresh rate	60 Hz
	Color gamut	DCI P3 100%
	Viewing angle	85° or higher
	Response time	1 ms
	Blue light cut	Eye Care Display certified
Touch panel	Protective glass	Toughened glass, AF (anti-fingerprint) coating
	Detection method	Active electrostatic coupling method (AES2.0)
	10-point multi-touch	Supported (depends on OS support)

9

Item		Specifications
Interfaces	Back side	USB Type-C × 2 (External power supply/DisplayPort signal input function supported)
	Screen wireless communication method	Miracast
	Encryption	WPA2-PSK
	Supported wireless LAN standard	IEEE802.11 b/g/n (2.4 GHz) IEEE802.11 a/n/ac (5 GHz)
Audio	Built-in speaker	1.5 W × 2
Power supply (external)	Input method	USB Power Delivery (USB Type-C powered)
	Input	Max. 45 W (5 V/3 A, 9 V/3 A, 15 V/3 A, 20 V/2.25 A)
	Output	Max. 25 W (5 V/0.9 A, 9 V/0.77 A, 15 V/1.66 A, 20 V/1.25 A)

	ON mode power consumption	**150 model**
		   13 W or less
		150BW model
		   15.5 W or less

	Standby mode power consumption	0.2 W or less

9

Item		Specifications
Internal battery (150BW only)	Type	lithium-ion battery
	Capacity	3740 mAh
	Operating time (when fully charged)	Continuous operating time: 3 hours **⬇Note** • The operating time is a rough estimate of the shipping state based on our measurement method and can vary depending on the usage conditions.
	Charging time	Approx. 2.5 hours (when charged at 16–35°C environment)
Environment	Operating temperature	0～35°C **⬇Note** • The temperature range varies according to the conditions of the installation location.
	Operating humidity	10–80% (without condensation) **⬇Note** • The humidity range varies according to the conditions of the installation location.
Weight (main unit only)		**150 model** Approx. 560 g **150BW model** Approx. 715 g
Dimensions (main unit only) W × D × H		356.0 × 10.8 × 221.7 mm (Thinnest part: 4.8 mm)
Screen installation angle	Landscape orientation	Free stop (approx. 75–16°) **⬇Note** • Recommended angle for writing: approx. 16°
	Portrait orientation	Approx. 70°
Certification	Supported Certifications	Energy Star, Act on Promoting Green Purchasing

9

Item	Specifications
Accessories	• USB Type-C cable • Cable clamps × 4 • Sleeve case • Warranty card • Read This First • Quick Guide • License Code for "RICOH Monitor Multicast for Windows" (150BW Model Only)

Note

• The source code for some of the firmware installed in the machine is available to the public. To obtain the source code, please contact our contact person.

Optional Specifications

RICOH Monitor Stylus Pen Type1

Item	Specifications
Detection method	AES2.0
Other specifications	• AAAA dry cell battery × 1 • Up to 4,096 levels of pressure detection • Function button × 2 (For wired connection, depends on OS/ application support)

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9

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