

Read This First

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For information not in the printed manual, refer to the HTML/PDF files on the website.





Read this manual carefully before you use this machine and keep it handy for future reference. For safe and correct use, be sure to read the Safety Information in this manual before using the machine.

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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 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.

About Operating Instructions

Operating Instructions explains how to operate and troubleshoot the machine after it is set up. It also lists the detailed specifications of the machine. You can download Operating Instructions from the RICOH home page.

http://www.ricoh.com/

1. Safety Information

This chapter describes the safety precautions.

Safety Symbols for This Machine

The meanings of the safety symbols for this machine are as follows:



Safety During Operation

In this manual, the following important symbols are used:



⚠ WARNING

Indicates a potentially hazardous situation which, if instructions are not followed, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation which, if instructions are not followed, may result in minor or moderate injury or damage to property.

Safety Precautions to Be Followed

This section explains safety precautions that should always be followed when using this machine.



⚠ WARNING

- The mains plug of the power supply cord shall remain readily operable. The AC receptacle (mains socket outlet) shall be installed near the equipment and shall be easily accessible. To completely disconnect this equipment from the AC mains, disconnect the power cord plug from the AC receptacle.
- Do not place vases, plant pots, cups, toiletries, medicines, small metal objects, or containers holding water or any other liquids, on or close to this machine. Since there are openings on the top and side surfaces of this machine, fire or electric shock could result if liquids or foreign substances get into the machine.
- The supplied power cord is for use with this machine only. Do not use it with other appliances. Doing so could result in fire or electric shock.
- Do not place the machine near water, like a spa or pool, or in a position which will allow the splashing or spraying of water onto the display, like in front of an open window where rain water may enter. Fire or electric shock could result from spillage or if such objects or substances fall inside this machine.
- Use only genuine accessories or accessories recommended by the manufacturer to mount the main unit. Using wrong or unsuitable accessories may cause the main unit to fall and result in serious personal injuries. Make sure that the surface and fixing points are strong enough to sustain the weight of the main unit.
- To reduce the risk of electric shock, do not remove covers. No user serviceable parts inside. Refer all servicing to qualified service personnel.
- The following explains the warning messages on the plastic bag used in this product's packaging.
 - Keep the polythene materials (bags, etc.) supplied with this machine away from babies and small children at all times. Suffocation can result if polythene materials are brought into contact with the mouth or nose.

WARNING

- It is dangerous to handle the power cord plug with wet hands. Doing so could result in electric shock.
- Be sure to disconnect the plug from the wall outlet at least once a year and check for the following:
 - There are burn marks on the plug.
 - The prongs on the plug are deformed.
- If any of the above conditions exist, do not use the plug and consult your dealer or service representative. Use of the plug could result in fire or electric shock.
- Be sure to disconnect the power cord from the wall outlet at least once a year and check for the following:
 - The power cord's inner wires are exposed, broken, etc.
 - The power cord's coating has a crack or dent.
 - When bending the power cord, the power turns off and on.
 - Part of the power cord becomes hot.
 - The power cord is damaged.
- If any of the above conditions exist, do not use the power cord and consult your dealer or service representative. Use of the power cord could result in fire or electric shock.

CAUTION

- Do not place the machine on an uneven, sloping or unstable surface (such as a trolley) where it may fall and cause damage to itself or others.
- When assembling the stand, mounting the main unit on a wall, or installing the main unit, make sure to contact your local dealer. Do not attempt to perform the installation by yourself.
- Do not install the machine in a confined space without proper ventilation and air circulation, such as in a closed cabinet. Allow proper space around the machine for dissipating heat inside. Do not block any openings and vents on the machine.
 Overheating may result in hazards and electric shock.
- To prevent personal injuries, mounting the main unit or installing the stand is required before use.
- Avoid placing the display in direct sun or where direct sun or spot lighting will shine onto
 the LCD panel, as the heat may damage the panel and the external casing of the
 display, and the bright light will make viewing the display more difficult than necessary.
- Do not obstruct the machine's air inlet or outlet. Doing so risks fire caused by overheated internal components or resulting in damage to the product.
- Do not allow foreign objects to enter the machine from the air inlet or outlet.

ACAUTION

- If metal objects, or water or other fluids fall inside this machine, you must turn off its
 power immediately. After turning off the power, be sure to disconnect the power cord
 plug from the wall outlet. Then contact your service representative and report the
 problem. Do not use the machine. Doing so could result in fire or electric shock.
- Be sure to disconnect the plug from the wall outlet and clean the prongs and the area around the prongs at least once a year. Allowing dust to build up on the plug constitutes a fire hazard.

Safety notice for remote control

ACAUTION

• Do not expose the remote control to water or moisture. Failure to do so could result in malfunction.

Battery safety notice

WARNING

- Always ensure that the batteries are inserted with the positive and negative terminals in the correct direction as shown in the battery compartment.
- Do not mix old and new batteries. Mixing old and new batteries will shorten battery life or cause chemical leaks from the old batteries.
- Chemicals which leak from batteries may cause skin irritation. If any chemical matter seeps out of the batteries, wipe it up immediately using a dry cloth, and replace the batteries as soon as possible.

ACAUTION

- There is a risk of explosion if a battery is replaced with an incorrect type of battery.
 Dispose of used batteries according to the instructions.
- Different types of batteries have different characteristics. Do not mix different types.

Handling the Machine's Interior

This section explains safety precautions about handling the machine's interior.

WARNING

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

CAUTION

• If the machine's interior is not cleaned regularly, dust will accumulate. Fire and breakdown can result from heavy accumulation of dust inside this machine. Contact your sales or service representative for details about and charges for cleaning the machine's interior.

Safety Labels of This Machine

This section explains the machine's safety information labels.

Positions of WARNING and CAUTION labels

This machine has labels for **AWARNING** and **ACAUTION**. For safety, please follow the instructions and handle the machine as indicated.

Power Switch Symbols

The meanings of the symbols for the switches on this machine are as follows:

- 🖳: Protective earth
- I: MAIN POWER ON
- O: MAIN POWER OFF
- 也: STANDBY

Important safety instructions

- 1. Read this manual carefully.
- 2. Keep this manual handy for future reference.
- 3. Heed all warnings.
- 4. Follow all instructions.
- 5. Do not use this apparatus near water.
- 6. Clean only with dry cloth.
- 7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11. Only use attachments/accessories specified by the manufacturer.
- 12. Use only with the cart, stand, tripod, bracket, or table recommended by the manufacturer or that satisfy the conditions specified by the manufacturer. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 13. Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Notes on the LCD panel of the machine

- The Liquid Crystal Display (LCD) panel of this display has a very thin protective layer of glass which is liable to marking or scratching, and cracking if struck or pressured. The liquid crystal substrate is also liable to damage under excessive force or extreme temperatures. Please handle with care.
- The response time and brightness of the LCD panel may vary with the ambient temperature.
- The LCD panel consists of individual pixels to display images and is manufactured according to the design specifications. While 99.9% of these pixels work normally, 0.01% of the pixels may remain constantly lit (in red, blue or green) or unlit. This is a technical limitation of the LCD technology and is not a defect.
- LCD screens, like plasma (PDP) and conventional CRT (Cathode Ray Tube) screens, are also susceptible to 'screen burn-in' or 'image retention' which can be found on the screen as visible fixed lines and shades. To avoid such damage to the screen, avoid displaying still images (like On-Screen Display menus, TV station logos, fixed/inactive text or icons) for more than two hours. Change the aspect ratio from time to time. Fill the entire screen with the image and eliminate the black bars whenever possible. Avoid displaying images in 4:3 aspect ratio over a long period of time, otherwise there may be visible burn marks on the screen as two vertical lines.

2. Information for This Machine

This chapter describes laws and regulations related to this machine.

Laws and Regulations

Warning on Class A Product

Warning:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

As this machine is not a household appliance, it does not conform to ErP Directive 2009/125/EC which was revised in 2013.

CE Marking Traceability Information (For EU Countries Only) Manufacturer:

Ricoh Co., Ltd.

3-6 Nakamagome 1-chome, Ohta-ku, Tokyo. 143-8555, Japan

Importer:

Ricoh Europe PLC

20 Triton Street, London. NW1 3BF, United Kingdom

Overseas Affiliates and Noise Emission Information

In accordance with TUV "GS Symbol" requirements, details of the EU office or representative company are given below.

Overseas Affiliates

Ricoh Europe PLC

20 Triton Street, London. NW1 3BF, United Kingdom

Noise Emission

Maschinenlärminformations-Verordnung 3. GPSGV:

Der höchste Schalldruckpegel beträgt 70 dB(A) oder weniger gemäss EN ISO 7779

User Information on Electrical & Electronic Equipment

Users in the countries where this symbol shown in this section has been specified in national law on collection and treatment of E-waste

Our Products contain high quality components and are designed to facilitate recycling. Our products or product packaging are marked with the symbol below.



The symbol indicates that the product must not be treated as municipal waste. It must be disposed of separately via the appropriate return and collection systems available. By following these instructions you ensure that this product is treated correctly and help to reduce potential impacts on the environment and human health, which could otherwise result from inappropriate handling. Recycling of products helps to conserve natural resources and protect the environment.

For more detailed information on collection and recycling systems for this product, please contact the shop where you purchased it, your local dealer or sales/service representatives.

All Other Users

If you wish to discard this product, please contact your local authorities, the shop where you bought this product, your local dealer or sales/service representatives.

For Users in India

This product complies with the "India E-waste Rule 2011" and prohibits use of lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers in concentrations exceeding 0.1 weight % and 0.01 weight % for cadmium, except for the exemptions set in Schedule 2 of the Rule.

For Turkey only

Üretici:

Ricoh Company, Ltd.

3-6, Nakamagome 1-chome, Ohta-ku, Tokyo 143-8555 Japan

+81-3-3777-8111 (English only/Sadece İngilizce)

AEEE Yönetmeliğine Uygundur.

Bu sistem sarf malzemeleri ve yedek parçaları da dahil olmak üzere AEEE Yönetmeliğine Uygundur.

Note for the Battery and/or Accumulator Symbol (For EU countries only)



In accordance with the Battery Directive 2006/66/EC Article 20 Information for end-users Annex II, the above symbol is printed on batteries and accumulators.

This symbol means that in the European Union, used batteries and accumulators should be disposed of separately from your household waste.

In the EU, there are separate collection systems for not only used electrical and electronic products but also batteries and accumulators.

Please dispose of them correctly at your local community waste collection/recycling centre.

Notes to USA Users of FCC Requirements Note:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Caution:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Using the shield cable

Properly shielded and grounded cables and connectors must be used for connections to a host computer (and/or peripheral) in order to meet FCC emission limits.

Installing the ferrite core

Ferrite core must be used for RF interference suppression.

Notes to Users in the State of California (Notes to Users in USA)

Perchlorate Material - special handling may apply. See: www.dtsc.ca.gov/hazardouswaste/perchlorate

Notes for Contractors (in Norway)

D8400 is also designed for an IT power system with phase-to-phase voltage 230V.

3. Installing the Machine (Installed by a Contractor)

WARNING

• When mounting the main unit on a wall, or installing the main unit, make sure to contact your local dealer. Do not attempt to perform the installation by yourself.

The main unit can be mounted on a stand or mounted on a wall.

When using a stand, be sure it has a load capacity of 110 kg (242.5 lb.) or more and allows displays sized 84-inch or more to be mounted.

For details about how to mount the main unit on the wall, see the instructions included with the wall-mounting bracket.

Installation Precautions

⚠ WARNING

- Do not use flammable sprays or solvents in the vicinity of this machine. Also, avoid
 placing these items in the vicinity of this machine. Doing so could result in fire or electric
 shock.
- Do not place vases, plant pots, cups, toiletries, medicines, small metal objects, or containers holding water or any other liquids, on or close to this machine. Since there are openings on the top and side surfaces of this machine, fire or electric shock could result if liquids or foreign substances get into the machine.
- Install the machine so that the power cord and cables do not get tangled or caught. If the cables get caught, they may become damaged, resulting in fire or electric shock.
- The following explains the warning messages on the plastic bag used in this product's packaging.
 - Keep the polythene materials (bags, etc.) supplied with this machine away from babies and small children at all times. Suffocation can result if polythene materials are brought into contact with the mouth or nose.

CAUTION

- Keep the machine away from humidity and dust. Otherwise a fire or an electric shock might occur.
- Do not place any objects on the machine. Doing so may cause the machine to topple over, possibly resulting in injury.
- Do not place the machine on an unstable or tilted surface. If it topples over, an injury might occur.
- Keep the machine away from salt-bearing air and corrosive gases. Also, do not install
 the machine in places where chemical reactions are likely (laboratories, etc.), as doing
 so will cause the machine to malfunction.

Wall mounting precautions

A VESA-compliant bracket is required to mount the main unit on a wall.

Important

- At least six people are required to install, remove, or move the main unit.
- When mounting a VESA-compliant bracket, use the bracket that corresponds to 600 × 400 mm (23.6 × 15.7 inches).
- Use a bracket that creates 2 cm (0.78 inches) or more of clearance when the main unit is mounted on a wall or the ceiling.
- The weight of the main unit is about 110 kg (242.5 lb.). Use a mounting bracket that is sufficiently strong enough to support the weight of the main unit.
- When mounting the main unit on a wall or the ceiling, select a location that can withstand four times the combined weight of the main unit and mounting bracket, such as a concrete wall or pillar.
- When mounting a bracket, use M8 screws and the VESA screw holes on the back
 of the main unit. Be sure that all mounting screw holes are filled with screws.

Note

Contact your local dealer for details about the recommended wall-mounting bracket for the main unit.

Environmental Specifications

The following table lists the environmental specifications for the machine:

Environment	Specifications
Temperature	0 – 32°C (32 – 89.6°F)
Humidity	10 – 80% (without condensation)
Maximum altitude	2,500 m (8,202 feet)
Power	AC 100 – 240 V, 50/60 Hz

- The machine is designed for indoor use.
- The machine is equipped with an infrared touch panel. Do not use the machine in a location
 exposed to strong light, such as direct sunlight. If you use the machine in a location exposed
 to strong light, the machine may not operate properly.
- We recommend that you take the necessary measures to prevent the machine from falling over after it is installed.

Note

If you install the machine in a location exposed to high temperatures, we recommend that you specify a low humidity (60% or lower) when operating the machine.

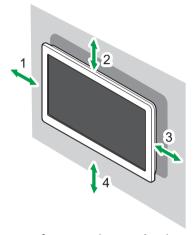
Installation Space Requirements

Secure a sufficient amount of clearance around the machine to allow for cable routing and better airflow.

Important

When using multiple machines in close proximity, the touch pens may not operate correctly. In such cases, either place some distance between the machines or arrange them so they are parallel to each other.

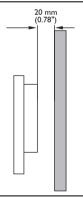
When installing the machine on a wall



- 1. Left: 10 cm (3.9 inches) or more
- 2. Top: 20 cm (7.9 inches) or more
- 3. Right: 15 cm (5.9 inches) or more
- 4. Under: 20 cm (7.9 inches) or more

Note

- To maintain proper ventilation, keep at least 20 mm of clear space from the back cover of the display to the wall.
- Please consult a professional technician for wall mount installations. The manufacturer accepts no liability for installations not performed by a professional technician.



Mounting the pen tray

Important

When mounting the pen tray, make sure to contact your local dealer. Do not attempt to perform the mounting by yourself.

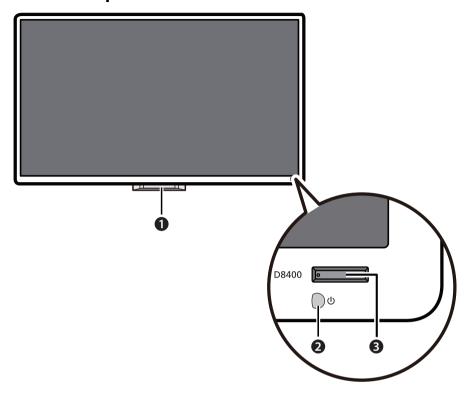
After mounting the main unit, mount the pen tray on the main unit. The pen tray should be positioned on the center of the lower part of the main unit.

Note

- A Phillips screwdriver is required to mount the pen tray. Select the proper tool according to location in which the main unit is installed.
- When removing the main unit from the stand or wall, make sure to remove the pen tray first.

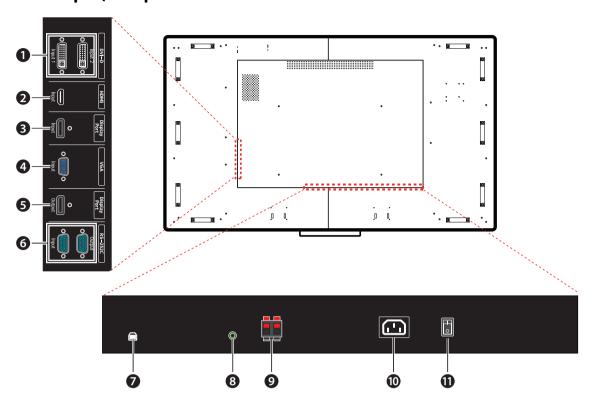
4. Component Names and Functions

Front panel



No.	Name	Description
0	Touch pen tray	For placing the touch pens when they are not in use.
2	Power button	Turns the machine on or off.
3	Remote control sensor / Power indicator	 Receives command signals from the remote control. Indicates the operating status of the machine: Lights up green when the power is turned on. Lights up red when the machine is turned off. Flashes red when the machine is in Power Save > On mode. Off when the main power is turned off.

Input/output terminals



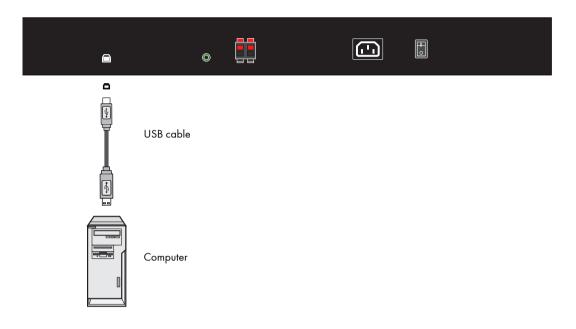
No.	Name	Description
0	DVI-D Input 1/ DVI-D Input 2	Receives digital RGB signals from an external device (such as a computer).
2	HDMI Input	Receives HDMI signals from an external device (such as a Blu-ray disc player).
3	DisplayPort Input	Connects to a DisplayPort compatible device.
4	VGA Input	Receives analog RGB signals from an external device (such as a computer).
		Outputs digital RGB signals from the DisplayPort Input to another display.
5	DisplayPort Output	Note When using the DisplayPort Output jack, connect the input image to the DisplayPort Input jack.
		For external control and multi-display operation.
6	RS-232C Input/ RS-232C Output	 RS-232C Input: receives control signals from a computer or another display.
		 RS-232C Output: outputs control signals from the RS-232C Input to another display.
0	USB Type-B For Touch	Connects the USB cable from the display to a computer to use the touch module.

No.	Name	Description
8	Audio Input (VGA/DVI)	Receives audio signals from an external device (such as a computer).
9	Speaker R(8Ω)12W/ Speaker L(8Ω)12W	Outputs audio signals to external speakers.
10	AC In	Connects to a power outlet via the supplied power cord.
	AC Switch On/Off	Turns on or off the main power.
•		The meanings of the symbols for the main power switch on this machine are as follows:
		• I : MAIN POWER ON
		O: MAIN POWER OFF

5. Connection

Connecting the touch module

Connect the **USB Type-B For Touch** jack on the machine to the USB port of a computer using the supplied USB cable. The touch module of the machine supports easy Plug-and-Play operation. There is no need to install additional drivers on the computer.



Note

• Avoid blocking the touch screen frame (where sensors are located) when initiating the touch module.

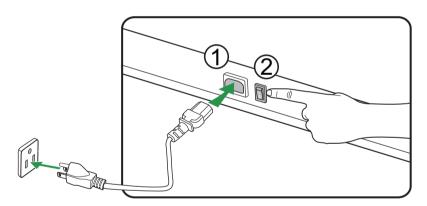
Connecting power

MARNING

- The supplied power cord is for use with this machine only. Do not use it with other appliances. Doing so could result in fire or electric shock.
- Do not remove any covers or screws. Contact your service representative if any of the product's internal components require maintenance, adjustment, or repair.
- Do not disassemble or modify the product. Doing so may cause injury or malfunction.
- Unplug the power cord from the wall outlet before you move the machine. While
 moving the machine, take care that the power cord is not damaged under the machine.
 Failing to take these precautions could result in fire or electric shock.

Important

- Never use a power cord which appears damaged or frayed, or change the plug type on the power cord.
- Be aware of the power loading when you use extension cords or multiple outlet power boards.
- 1. Plug one end of the power cord into the **AC In** jack on the machine and the other end into an appropriate power outlet (if the outlet is switched, turn on the switch).
- 2. Flip the power switch to the ON position to turn on the main power.



Note

The power cord and outlet illustrated may differ from the ones used in your region.

