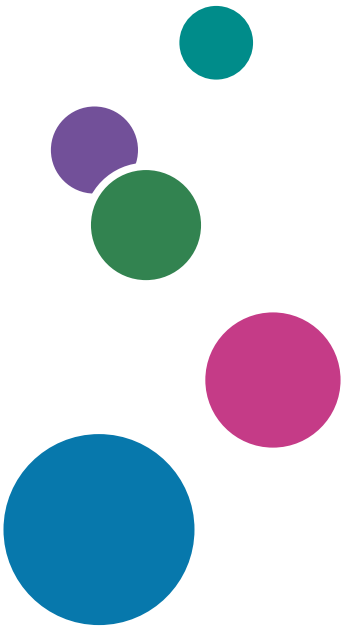
Roland

IU-1000F

Operating Instructions

Original Instructions

For information not in this manual, refer to the PDF files on the supplied CD.



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

TABLE OF CONTENTS

1. Getting Started

This chapter describes how to read the manuals supplied with the printer, names and functions of components, and supported ink and media, etc.

Before You Start

How to Read the Manuals

Symbols used in the manuals

This manual uses the following symbols:

Important

Indicates points to pay attention to when using the machine, and explanations of likely causes of damage to media or loss of data. Be sure to read these explanations.

Note

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

[ ]

Indicates the names of keys and buttons.

Region A (mainly Europe and Asia), (mainly Europe), or (mainly Asia)

Region B (mainly North America)

Differences in the functions of Region A and Region B models are indicated by the two symbols. Read the information indicated by the symbol that corresponds to the region of the model you are using.

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 in this manual might be slightly different from the machine.

For good output quality, the manufacturer recommends that you use genuine ink from the manufacturer.

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 products.

The screen shots used in this manual are displayed in English.

About Operating Environments

Conditions for Installation Locations

This printer is designed for industrial use.

⚠WARNING

- Make sure that the room where you are using the machine is well ventilated. Otherwise a fire or an electric shock might occur. Be sure to install a ventilator when installing the machine in a sealed room or a room with poor ventilation.

⚠CAUTION

- Do not place the machine in a humid or dusty environment. Doing so can result in fire or electric shock.

- Do not obstruct the machine's vents. Doing so can result in fire as the internal components are overheated.

The following is the recommended range for the operating environment:

- Temperature: 15–30°C (59–86°F)
- Humidity: 40–80%RH
- Altitude: 2,000 m (approx. 6,561.7 ft.) or less

Place the machine on a level surface. The machine must be level within 5 mm (approx. 0.2 inches): both front to rear and left to right.

Place the machine in a stable place where the floor is strong enough to withstand a load of 1,800 N/m^2 or more.

Avoid the following environments when locating the machine. If the machine is placed somewhere where the conditions are different from those recommended, a failure may occur.

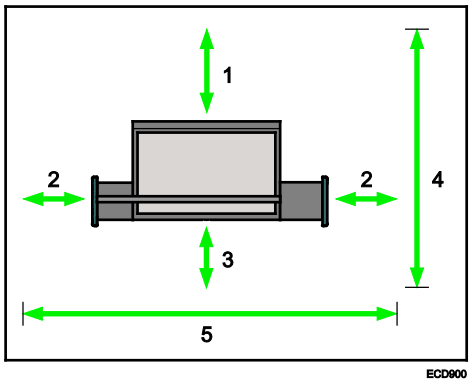
- Low temperature and humidity or high temperature and humidity
- Places exposed to direct sunlight
- Places close to heaters, air conditioners, or humidifiers
- Places subject to frequent strong vibration
- Places with poor ventilation
- Dusty areas
- Places close to an oil heater or machine generating ammonia, such as a diazo copy machine

Precautions for users of ultrasonic-type humidifiers

Do not use an ultrasonic-type humidifier near this product. Chlorine or mineral components atomized by an ultrasonic-type humidifier may adhere to the electronic components inside the product, causing it to malfunction.

Space Required for Installation

Ensure enough space around the machine for installation. The space shown is necessary for operating the machine and for work done by a service engineer.



1. **Rear: 155 cm (61.0 inches) or more**
2. **Right and left: 100 cm (39.4 inches) or more**
3. **Front: 105 cm (41.3 inches) or more**
4. **Depth: 467 cm (183.9 inches) or more**
5. **Width: 681 cm (268.1 inches) or more**

About Moving the Machine

Relocation of the machine should be performed by your service representative. Contact your authorized Roland DG Corporation representative if you need to relocate the machine.

How to secure the machine

The legs of the machine are equipped with leveling feet for securing the machine.

Be sure to confirm that the machine is secured by the leveling feet before turning on the power of the machine.

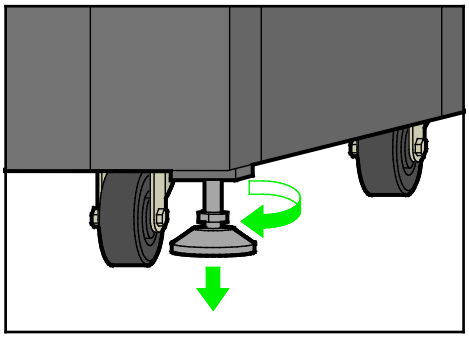
If you print when the machine is not secured by the leveling feet, the machine may move accidentally.

⚠CAUTION

- Be sure to adjust the level foot to keep the machine flat. Using the machine on an unstable surface might cause an injury or unexpected accident.

How to use the leveling feet

Rotate each adjuster clockwise to lower the leveling feet.



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Confirming Accessories

The main accessories included with the machine are shown below.
Contact your authorized Roland DG Corporation representative if any accessories are missing or damaged.

List of Included Items

- Waste cloth (paper towel)
- Non-woven fabric
- Polyethylene gloves
- Nitrile gloves
- UV protective glasses
- Cleaning stick
- Carriage filter
- Flushing pad
- Air bubble ejection tool
- USB interface cable*1
- CD "Operating Instructions"
- CD "Configuration data"
- CD-ROM "Print Control"
- A set of instruction manuals

  「Safety Information, Requests for Daily Care and Maintenance, Operating Instructions, Note of Confirmation, Risk Estimation, Risk Assessment, and Risk Reduction」

*1 The interface of the machine supports USB 3.0.

Manuals for This Machine

The operating instructions included with the machine are provided in both paper and PDF format (users can view the contents on a display). Operating instructions that can be viewed on a display are included on the supplied CD. The following is a list of instruction manuals provided with the machine:

Safety Information

Describes the "Safety Information". Be sure to read it before using the machine. It describes regulations and environmental measures.

Operating Instructions

Describes detailed information about how to use the machine. The contents are shown below:

- Getting Started
- Using Print Control
- Basic Operations
- Convenient Usage
- Troubleshooting
- Maintenance and Specifications

Requests for Daily Care and Maintenance

Describes periodical maintenance procedures for the machine.

Note

- In order to view the operating instructions in PDF format, install Adobe Acrobat Reader / Adobe Reader.

List of software

The following software is included on the CD:

Product name	Abbreviation
Roland IU-1000F UV Print Control Center	Print Control

Note

- Print Control is a software necessary to read RIP files created by an application and to print its content from the machine. For details about how to install Print Control, see page 29 "Installing Print Control".

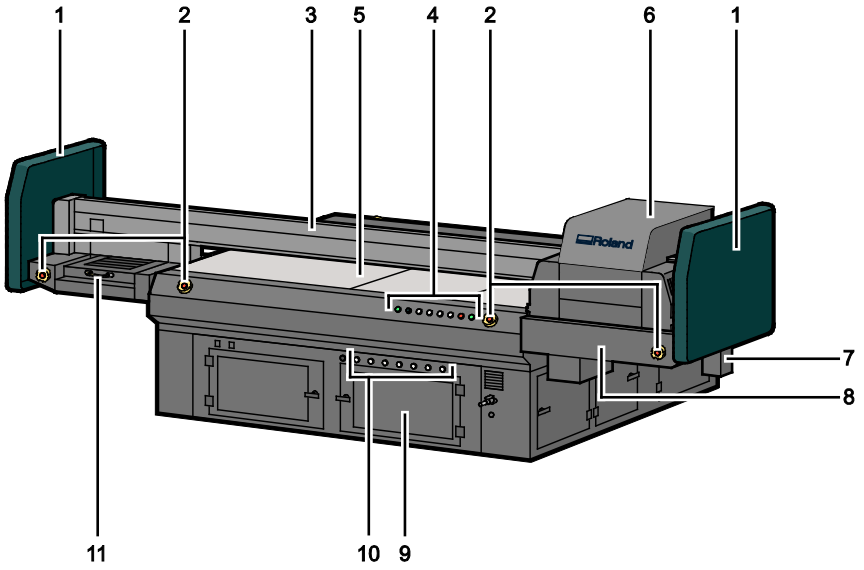
Guide to Names and Functions of Components

This section describes the names and functions of the machine's components.

⚠CAUTION

- Do not obstruct the machine's vents. Doing so can result in fire as the internal components are overheated.

Front View



1. Proximity sensor

Automatically detects if a person approaches the carriage and stops the carriage immediately. See page 19 "Proximity Sensor".

2. Emergency buttons

Press any of these buttons when you need to stop the machine urgently during printing. See page 17 "Emergency Buttons".

3. Gantry

Moves the carriage to the left or right, and moves forward and backward on the table.

4. Front control section

See page 13 "Front view/control section".

5. **Media table**

   Set the printing media on the table. See page 53 "Setting Media".

6. **Carriage**

   Discharges ink onto media. See page 15 "Carriage".

7. **Waste ink tank**

   Accumulates discharged waste ink from head cleaning, etc. To dispose of waste ink, see page 124 "Disposing of Waste Ink".

8. **Maintenance station**

   Caps or cleans the print heads while the machine is in the print standby state. See page 16 "Maintenance Station".

9. **Front cover**

   Open this cover when replenishing ink for each color. See page 121 "Replenishing Ink".

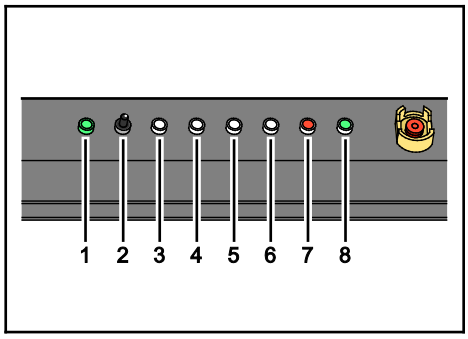
10. **Ink lamps**

    Lights up when the remaining amount of ink is low. To replenish ink, see page 121 "Replenishing Ink".

11. **Left-side ink receiver**

    Used to clean around the carriage or for maintenance. If you select the maintenance mode, the carriage moves to the left-side ink receiver.

Front view/control section



1. **Power indicator**

   Lights up when the power of the machine is on.

2. **Vacuum pressure control**

   Adjusts the pressure used to vacuum the media on the table. Adjust the vacuum pressure to strengthen the vacuuming of the media if the media becomes out of position or when using warped media. This is effective when the vacuum switch is ON.

3. Vacuum switch

Turns on and off media suction. If switched on, suction is applied to the media through the holes in the table. When applying suction, specify the suction area using the vacuum valves. For details, see page 53 "Setting Media on a Table".

4. UV lamp switch 1

Turns on the UV lamp on the left side of the carriage.

5. UV lamp switch 2

Turns on the UV lamp on the right side of the carriage.

6. Positioning pin switch

Sets the positioning pins built into the table. An air compressor is required to use the positioning pins. For details, contact your authorized Roland DG Corporation representative.

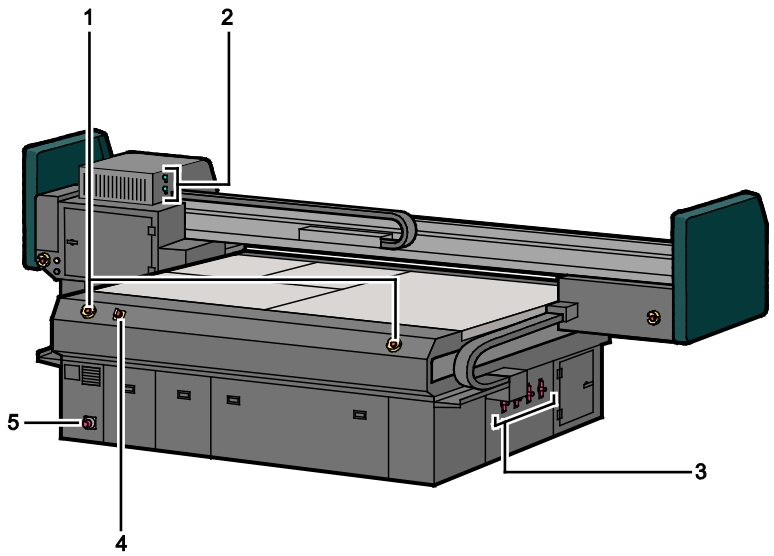
7. Power off button

Turns off the machine. See page 45 "Turning Off the Power".

8. Power on button

Turns on the machine. See page 44 "Turning On the Power".

Rear/Side View



1. Emergency buttons

Press these buttons when you need to stop the machine urgently during printing. See page 17 "Emergency Buttons".

2. Negative pressure valves

If power outage is scheduled, close the negative pressure valves. For details, see page 131 "Closing the Negative Pressure Valves".

3. Vacuum valves

Open the valves according to the size of the media used when applying media suction. There are four valves each with a fixed suction area. For details, see page 56 "Adjusting vacuuming areas".

4. Main power switch

If do not have a power outage scheduled, do not turn the machine off with the main power switch.

Turning the machine off with the main power switch stops the application of pressure to the print head, resulting in ink leakage. In the case of a scheduled power outage, see page 127 "If the Machine Is to be Left Unused for a Long Time or If a Power Outage Is Scheduled".

5. Power socket

Connect the included power cord to the power socket.

Carriage

The carriage basically consists of the print head units and UV lamp. It is also equipped with an ionizer for removing static electricity.

⚠DANGER

- Do not place paper or cloth on the UV lamp or bring flammable objects close to the UV lamp. Doing so might cause fire or smoke.

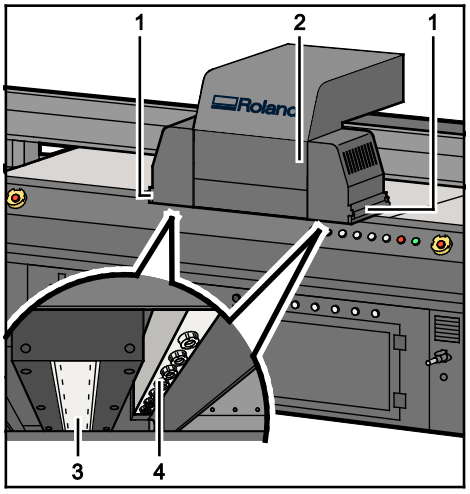
⚠WARNING

- Do not touch the UV lamp. As it becomes very hot, touching the UV lamp might cause injury or burns.

- Only perform maintenance after the LED UV lamp has completely cooled down and the cooling fan has stopped. Touching the LED UV lamp while it is hot might cause burns.

Important

- **Do not touch the print head nozzle faces, UV lamp irradiation surface and ionizer electrode section on the bottom of the carriage except for cleaning and maintenance. Doing so may cause malfunctions.**



1. **Jam-detecting feeler**

   Detects an error if the carriage interferes with media and stops the carriage immediately.

2. **Print heads**

   Discharges ink from the print head nozzles.

3. **UV lamp**

   Irradiates the UV-LED lamps during printing to cure ink.

4. **Ionizer**

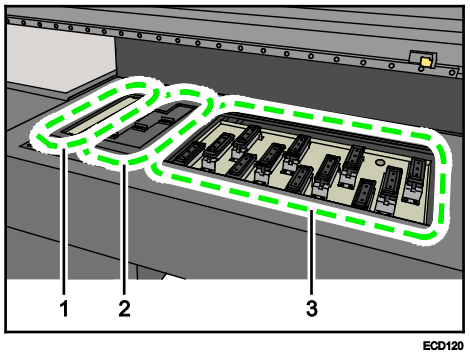
   Removes static electricity from media.

Note

- For details about how to clean the carriage, see page 51 "Cleaning Print Head Nozzles".

Maintenance Station

The maintenance station basically consists of the capping station for maintaining the nozzles faces of the print heads and the head wipers.



1. Flush receiver

Accumulates unnecessary ink discharged by head cleaning. For details about replacing the flushing pad in the flush receiver, see page 123 "Replacing the Flushing Pad".

2. Head wipers

Used in head cleaning. For details about how to clean the wipers, see "Cleaning Wipers", Requests for Daily Care and Maintenance.

3. Capping station

Prevents nozzles from drying by capping the print heads. For details about how to clean the caps, see "Cleaning the Capping Station", Requests for Daily Care and Maintenance.

Note

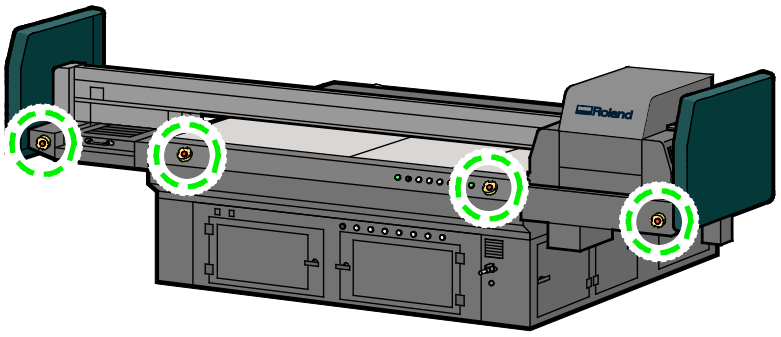
- For details about how to clean the areas around the maintenance station, see "Cleaning the Area around the Maintenance Station", Requests for Daily Care and Maintenance.

Emergency Buttons

Press them when stopping the machine urgently for safety reasons.

The emergency buttons are located in 4 positions: 2 buttons on the front of the machine, 2 buttons on the rear of the machine, 2 buttons on the front side of the gantry, and 2 buttons on the rear of the gantry. After performing an emergency stop, confirm that everything is safe before canceling the emergency stop.

Front View



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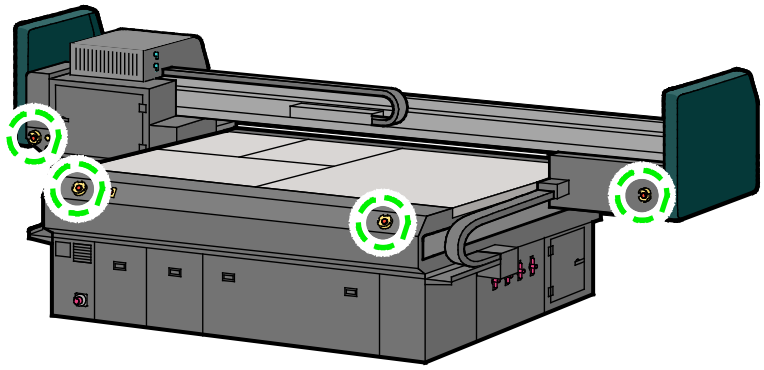
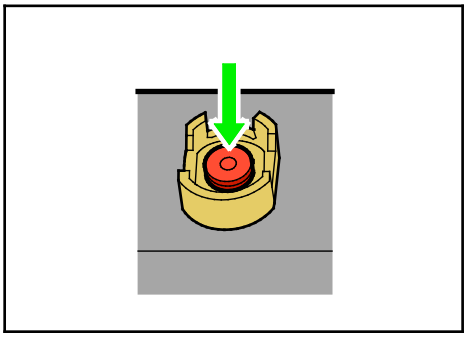
Rear View



To stop the machine in case of emergency

Press the emergency button.

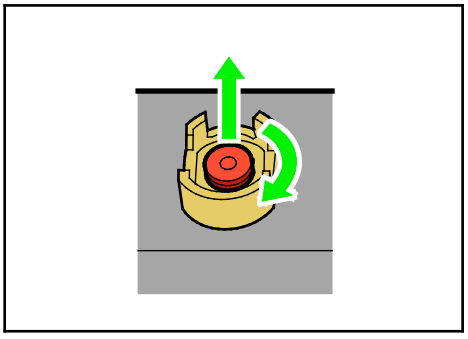


DVB123

To release an emergency stop

Turn the base of the emergency button in the direction of the arrow.

The emergency button moves back to its original position.

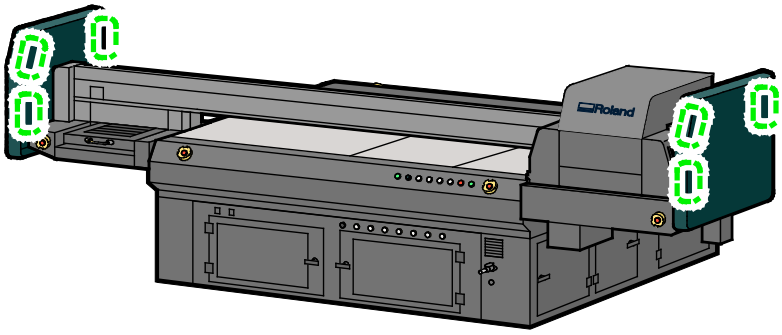


DVB124

If pressing any of the emergency buttons, the machine turns off the power automatically. After releasing the emergency button, be sure to turn the power switch on the control section on the front part of the machine off and then back on.

Proximity Sensor

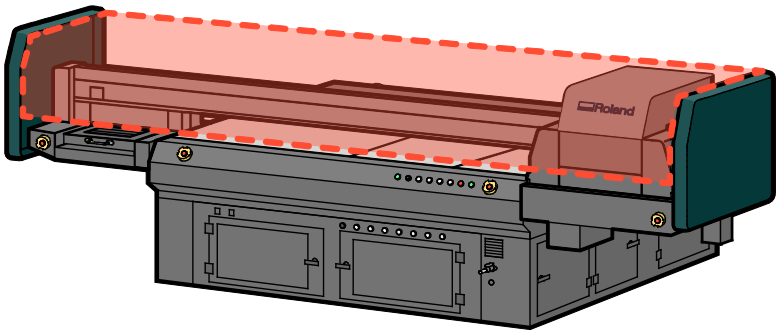
The sensor stops the machine if it senses someone approaching the carriage's movable range.
There are 3 proximity sensors on each side of the machine.



ECD251

The sensors cover the following areas.

As seen from the front of the machine



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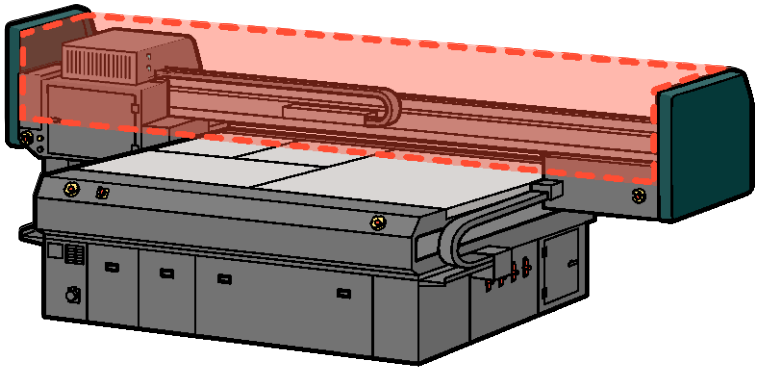
As seen from the back of the machine



Connecting the Power Cord

This section explains how to connect the power cord.

⚠DANGER

- Only qualified electricians are allowed to handle electrical work. This machine contains parts that generate high voltages. Failure to observe this caution might result in an electric shock.

- If you find the following, turn off its power immediately and disconnect the power cord plug, and then report the problem to your authorized Roland DG Corporation representative. If you keep using the machine, fire or electric shock may result:
  - Generating abnormal noises
  - Generating abnormal odors
  - Emitting smoke
  - Metal objects, water, or other fluids have fallen inside the machine
  - The power cord or power plug is damaged.

⚠WARNING

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

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

- Avoid applying the following actions to power cords because doing so can result in fire or electric shock:
  - Damaging them
  - Bundling them
  - Modifying them
  - Putting heavy objects on them
  - Pulling them forcibly
  - Bending them forcibly

- Do not let the prongs of the power cord plug touch anything metallic. Doing so could result in fire or electric shock.

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

⚠WARNING

- Be sure to disconnect the plug at least once a year and check for the following:
  - There are burn marks on the plug.
  - The plug is deformed.
- If any of the conditions above exist, do not use the plug and consult your authorized Roland DG Corporation representative. Use of the plug could result in fire or electric shock.

- Be sure to disconnect the power cord 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 conditions above exist, do not use the power cord and consult your authorized Roland DG Corporation representative. Use of the power cord could result in fire or electric shock.

- Do not pull the power cord. Pulling the cord can damage the power cord. Use of damaged power cords could result in fire or electric shock.

⚠CAUTION

- Do not disconnect the power cord plug. If the machine is not going to be used for several days or longer, contact your authorized Roland DG Corporation representative.

- Power Source

  Region A (mainly Europe and Asia)

  AC400 V 3P/N/PE, 25 A, 50/60 Hz

  Region B (mainly North America)

  AC220 V 3P/N/PE, 30 A, 60 Hz

Be sure to connect the power cord to a power source as above.

Region A (mainly Europe)

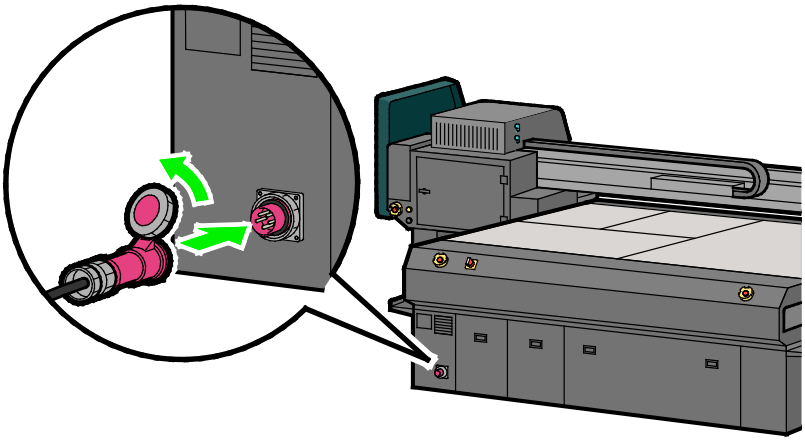
For users in Norway, this product is also designed for an IT power distribution system with phase-to-phase voltage of 230 V.

Important

- **The power switch must only be turned on by personnel with sufficient knowledge about how to use this machine.**

1. **Confirm that the power of the machine is off.**

2. Lift the cap of the power cord connector and insert it into the power socket of the machine.



3. Connect the power cord plug to the power source.

Note

- For details about how to turn on/off the power properly, see page 44 "Turning On/Off the Power".

About Ink

This section describes supported ink and precautions for handling ink bottles.

Unless handled appropriately, UV ink might cause harmful effects. Before disposing of UV ink or using the machine, be sure to read the Safety Data Sheet (SDS) and follow the descriptions.

Supported Ink

Important

- **When replacing the ink with a different type, contact your authorized Roland DG Corporation representative. This cannot be done by the customer, because it requires an operation such as cleaning the ink path.**

On this machine, you can use any of the following 3 types of UV ink:

Ink type	Characteristics	Color
US-BK, CY, MG, YE, WH	Wide color gamut	Black, Cyan, Magenta, Yellow, White
UE-BK, CY, MG, YE, WH	High adhesion and wide color gamut	Black, Cyan, Magenta, Yellow, White
US-PR, US-GL	Can be used in common with the above ink	Primer, Gloss

If the remaining amount of ink in the ink tank is low, the machine will make a beeping sound. Do not print while the buzzer is sounding. If the buzzer sounds during printing, stop using the printer as soon as printing is complete and add ink. We recommend contacting your authorized Roland DG Corporation representative and purchase a new ink bottle. For details about how to replenish ink, see page 121 "Replenishing Ink".

When using white or magenta ink, it is recommended to perform head cleaning every day.

If the white, gloss, or primer ink is installed but it is not used, perform head cleaning once a day. For details, see page 51 "Cleaning Print Head Nozzles".

Storage Conditions for Ink Bottles

Take the following precautions when storing ink bottles:

⚠WARNING

- Make sure to store ink bottles in a cool and dry place.

- Make sure to store ink in a cool, dark place. Also store the ink in a place that can be locked so that the ink is out of the reach of children.

Store ink bottles at the following temperatures:

Ink type	Storage temperature
US-PR	5–35°C (41–95°F)
US-BK, CY, MG, YE, WH	4–23°C (39.2–73.4°F)*1
UE-BK, CY, MG, YE, WH, US-GL	5–35°C (41–95°F)

*1 Can be stored at a maximum temperature of 28°C (82.4°F) for 3 weeks continuously out of a year.

Important

- **Make sure to store ink bottles in a place that is not exposed to direct sunlight and is free from high humidity.**
- **Make sure to store ink bottles in a place lower than 1 m (approx. 3.3 ft.). If ink bottles are stored in a place higher than 1 m (approx. 3.3 ft.), the cap may come off when an ink bottle falls, and ink inside the bottle will splash.**
- **Ink may freeze if stored in a cold place for a long period of time. If ink freezes, it may become unusable as it may deteriorate. Make sure to store ink in an environment where ink will not freeze.**

Expiration Dates of Ink Bottles

The expiration dates of ink bottles when stored unopened under the specified storage conditions are as follows:

For details about storage conditions for ink bottles, see page 24 "Storage Conditions for Ink Bottles".

Ink type	Color	Expiration date
US-PR	Primer	12 months after production
US-BK, CY, MG, YE, WH	Black/Cyan/Magenta/Yellow/White	18 months after production
UE-BK, CY, MG, YE, US-GL	Black/Cyan/Magenta/Yellow/Gloss	24 months after production*1
UE-WH	White	12 months after production

*1 This is the expiration date when stored at a temperature of 25°C (77°F). If stored at a temperature of 25.1 to 35°C (77.2 to 95°F), the expiration date is 18 months.

Important

- **Use the ink bottles within 3 months after unsealing it. In addition, do not use an ink bottle if its shelf life has expired.**

Precautions for Handling Ink Bottles

Take the following precautions when handling ink bottles:

⚠WARNING

- Be careful not to spill ink. Avoid ink flowing into the natural water system or household wastewater. Ink causes irritation and is toxic.

- Avoid mixing ink with incompatible materials.

- While handling ink bottles, be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

⚠CAUTION

- Do not give a shock to the ink bottles. Doing so might cause the ink to leak.

Important

- **Shake well before use.**
- **Do not disassemble ink bottles, refill or add ink to the ink bottles.**
- **Do not hit or swing around the ink bottles. Doing so might cause the ink to leak.**

About Media

This section describes the size and weight specifications of media that can be used with this machine, and how to store and handle media.

Size and Weight Specifications of Supported Media

Supported media size and weight are shown below:

Media size:

600 × 450 – 2,510 × 1310 mm (approx. 23.6 × 17.7 – 98.8 × 51.6 inches)

Printable size:

600 × 450 – 2,500 × 1,300 mm (approx. 23.6 × 17.7 – 98.4 × 51.2 inches)

Media thickness:

110 mm (approx. 4.3 inches) or less

Media weight:

45 kg/m^2 or less

How to Store Media

Take the following precautions when storing media:

Important

- **Make sure to store media in a place that is not exposed to direct sunlight and is free from humidity and dust.**
- **For media that warps easily, store the media, for example, by placing it on a smaller table, so that the media warps down. Warped up media may be impossible to vacuum on the table.**
- **When storing the media printed in [Draft] mode, do not pile them on top of each other. Doing so may cause the media to stick to each other.**

Precautions for Handling Media

Take the following precautions when handling media:

⚠CAUTION

- Make sure to wear protectors such as safety shoes and gloves when using heavy media. Using heavy media without wearing protections might cause an injury.

Important

- **While handling media, be sure to wear gloves during the work. If handling media with bare hands, the media may become dirty from fingerprints or grease on your hands.**
- **Make sure to use the media recommended to maintain consistent print quality.**
- **Do not use media immediately after unpacking. Media may expand or contract by the temperature or humidity in a room. Leave the media for at least 30 minutes near the machine, and then set the media.**
- **Do not use warped media. Otherwise, the carriage and the media may interfere or print quality can be affected. Remove any warps, and then set the media.**
- **Do not use media that cannot be vacuumed due to warps or shifts while the carriage moves. Secure the media with a tape, etc.**
- **If using mirrors, glass, or glossy metal, increase the number of times maintenance is performed. If UV light is reflected, it will cure ink in the print heads, which will be the cause of malfunction.**
- **The printed media may contain an unreacted ink component. As an unreacted ink component may be harmful to the human body, do not use the printed media for the following purposes:**
  - **Food wrapping**
  - **Items that children may put into their mouth by mistake (such as toys).**
  - **Cloth or leather that may come into direct contact with the human body (such as clothing and accessories).**
  - **Medical devices, etc. that may come into direct contact with the human body or may be inserted into the human body.**
  - **If ink is peeled off, degrease the media with alcohol before printing.**

2. Using Print Control

This chapter explains how to install Print Control, connecting the machine to a computer, and use the Print Control screen.

About Print Control

You can use Print Control to check the status of the machine and change the machine's settings.
You can perform the following operations using Print Control:

- Displaying the machine status or settings
- Managing tasks or checking the printing status
- Printing a RIP file or displaying previews
- Interrupting or stopping currently printing jobs
- Configuring settings related to print contents
- Configuring machine settings
- Backing up or restoring the settings

Operating environment

- Operating system
  Windows 7/10 (64 bit)
- CPU
  Intel® Core™ i5 2 GHz or more
- Memory
  16 GB or more
- Display resolution
  1152 × 854 or more and 16-bit color or higher

Note

- For details about the Print Control screen, see page 31 "How to Use the Print Control Screen".

Installing Print Control

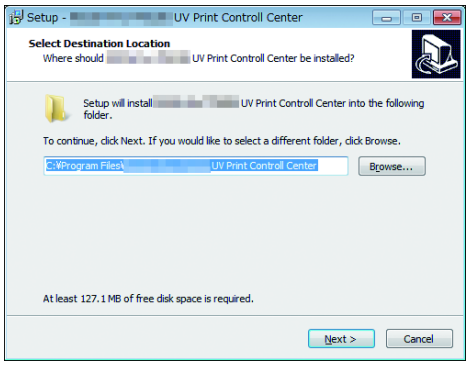
The procedure to install Print Control by using the software on the supplied CD is explained below.

Important

- **Do not connect the machine to the computer before installing Print Control.**

1. **Start up "Setup.exe" for Print Control.**
2. **Select the language to be used on the display, and then click [OK].**

3. Proceed with the installation according to the instructions displayed on the screen.



- Change the settings if necessary.

4. In the component settings, select the print-head configuration and type of ink used with this machine.

- Ink Config

  Select the machine's ink configuration.

  - Standard Ink Config: Standard ink configuration
  - Double White Ink Config: Higher throughput with white ink
- Ink Type

  Select the type of ink used with the machine.

  - US Ink: US-BK, CY, MG, YE, WH, PR, GL
  - UE Ink: UE-BK, CY, MG, YE, WH

5. Click [Install].

6. Connect the machine and computer via a USB cable, and then click [OK].

7. Click [Finish].

A shortcut is created on the desktop.

Note

- If Print Control is reinstalled, any contents that have been adjusted or set will be restored to their initial state. Be sure to back up parameter data beforehand. For details, see page 80 "Backing Up/Restoring the Settings".
- After changing the main unit's print-head configuration or ink, it is necessary to change the component setting.
  - The display language in Print Control is set automatically according to the language setting of the PC that starts up Print Control. Change the display language to display a different language other than the one set with the PC language setting. For details, see page 78 "Changing the Display Language".

How to Use the Print Control Screen

This section describes each function of the Print Control screen. You cannot change the settings for some functions as they have already been set to their optimum values.

Important

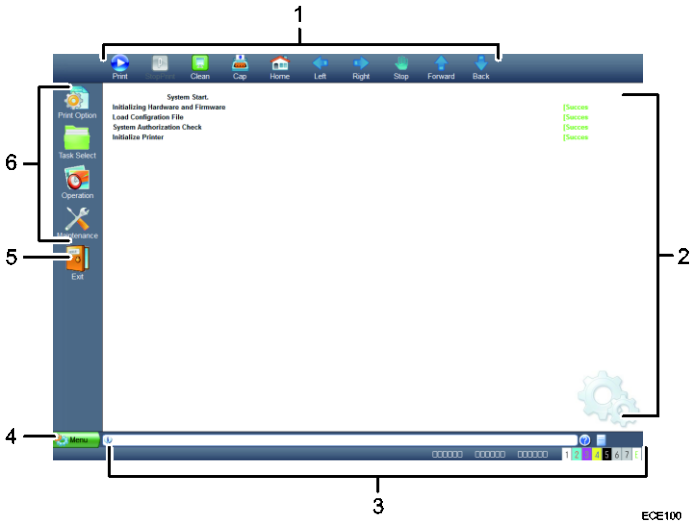
- **When you launch Print Control, the message "Do you want to reset carriage height?" appears. Be sure to reset the carriage height.**

Note

- Double-clicking the shortcut icon on the desktop will start Print Control.

Startup Screen

An icon is assigned to each function, and these icons are displayed on the Startup screen. The toolbar and other functions are described below:



1. **Toolbar**

   Used to perform basic operations in printing preparation or in printing. See page 32 "Toolbar".

2. **Work area**

   Used to configure settings and perform printing.

3. **Status indicator area**

   Displays messages and residual ink quantity, etc. See page 33 "Status indicator area".

4. [Menu]

Used for users to perform backing up or restoring of the settings or changing the indication unit. See page 33 "Menu".

5. [Exit]

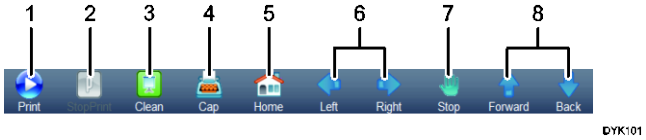
Terminates the application.

6. Function tab

Click the icon to switch to the selected screen.

Toolbar

Functions of each button on the toolbar are described below:



1. [Print]/[Pause]/[Continue]

Click to start, pause or continue printing.

2. [StopPrint]

Click to cancel printing.

3. [Clean]

Click to perform head cleaning. See page 51 "Cleaning Print Head Nozzles".

4. [Cap]

Attach the cap to the nozzle face of the print head or detach the cap as required. See page 68 "Capping" or page 68 "Detaching caps".

5. [Home]

Click to move the carriage to the home position (the right edge of the gantry).

6. [Left]/[Right]

Click to move the carriage to the left or right.

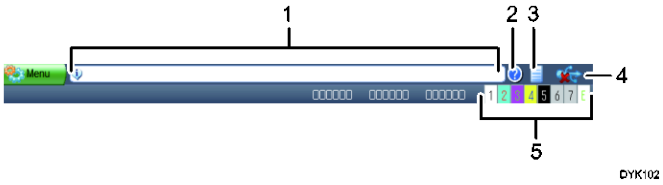
7. [Stop]

Click to stop the carriage.

8. [Forward]/[Back]

Click to move the carriage forward (the rear side of the machine) or backward (the front of the machine).

Status indicator area



1. System messages

Displays messages from the machine system.

2. ? icon

Click the icon to display the details of the messages.

3. Log icon

Click the icon to display a list of error logs or printing logs.

4. USB connection indicator

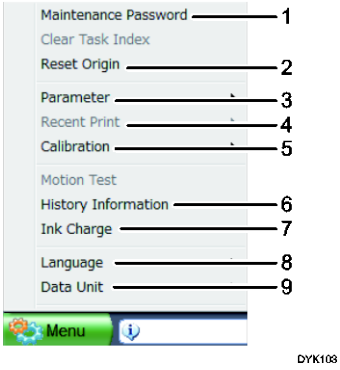
Displays the connection status between the machine and the computer. If they are not correctly connected, the USB icon ( ) will appear.

5. Remaining ink indicator

Displays the amount of ink remaining in the sub tank. The icon will flash while ink is supplied.

Menu

Click [Menu] on the lower left of the screen to display the menu items.



1. Maintenance Password

Log in to the maintenance mode as an administrator. Usually you do not need to use the setting items that can be configured in the maintenance mode as they have already been set to their optimum values.

2. Reset Origin

Resets the carriage original position while moving the carriage to the X or Y directions.

3. Parameter

Loads the setting values from a computer or saves the values to a computer. For details, see page 80 "Backing Up/Restoring the Settings".

4. Recent Print

Displays recent print jobs.

5. Calibration

Calibrates the status of the nozzle for printing.

6. History Information

Checks the print and error histories.

7. Ink Charge

Perform ink or air discharge. For details about ink discharge, see page 127 "Discharging Ink". For details about air discharge, see page 88 "If Ink Mixes or Missing Nozzles Occur Due to Aeration".

8. Language

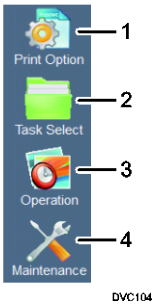
Selects the language to be displayed on the screen.

9. Data Unit

Used to select the unit displayed on the screen from Metric (mm), inch, and mil.

Function tab

Switch the screen displayed in the work area by clicking each function tab.



1. [Print Option] tab

Click to display the [Print Option] screen. See page 35 "[Print Option] Screen".

2. [Task Select] tab

Click to display the [Task Select] screen. See page 35 "[Task Select] Screen".

3. [Operation] tab

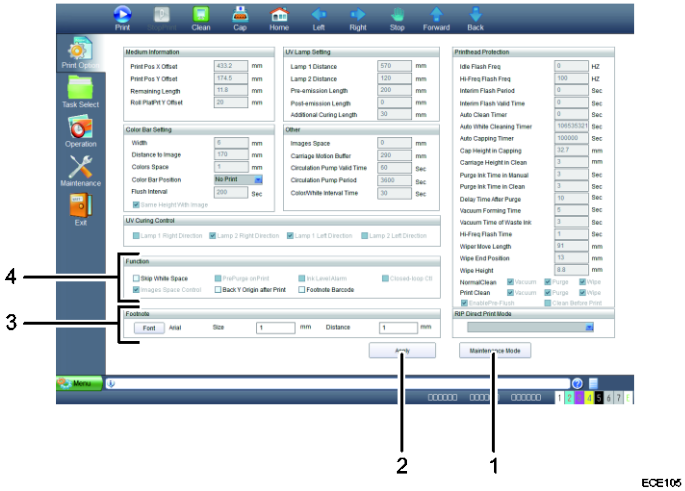
Click to display the [Operation] screen. See page 36 "[Operation] Screen".

4. [Maintenance] tab

Click to display the [Maintenance] screen. See page 39 "[Maintenance] Screen".

[Print Option] Screen

You can configure settings for the footnote and the UV lamp, etc. on this screen.



1. **[Maintenance Mode]**

   A carriage moves to the left-side ink receiver position. You cannot adjust the height of the carriage in Maintenance mode. If it is necessary to adjust the height of the carriage, adjust it in advance by following the procedure on page 41 "Carriage Lifter".

2. **[Apply]**

   Click to apply the settings.

3. **Footnote**

   Specify the font and size of a footnote. For details about how to print a footnote, see page 76 "Printing a Footnote".

4. **Function**

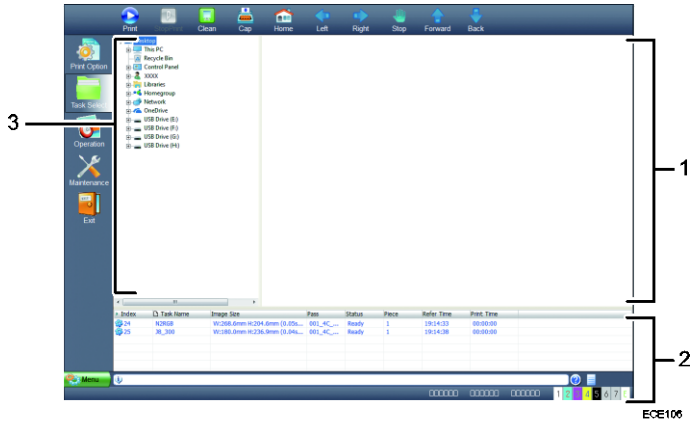
   Configure settings for skipping white spaces and printing barcodes in a footnote, etc.

Note

- For details about the functions and setting items, see page 81 "List of Setting Items on the [Print Option] Screen".
- When you move to another screen without clicking [Apply], the setting values will not be reflected in operations. Make sure to click [Apply] after changing the setting values.

[Task Select] Screen

You can select a RIP file and send it to the task list using a computer. You can check a RIP file in the preview area.



1. Preview area

Displays a thumbnail of the files selected in the folder selection area.

2. Task list

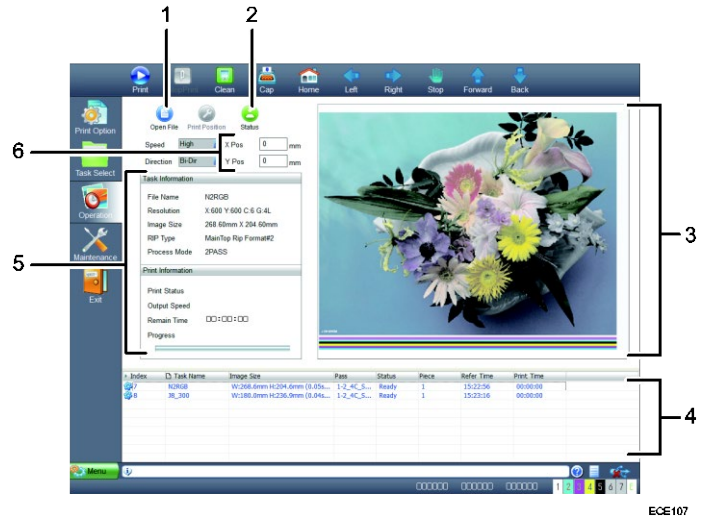
Displays a list of registered tasks. You can change the printing order or delete tasks from the right-click menu. Tasks will be deleted when an application is closed.

3. Folder selection area

Displays a list of folders from the connected computer.

[Operation] Screen

You can print while checking the task information and printing status.



1. [Open File]

Click to display the file selection screen.

2. [Status]

Click to display the [Medium Thickness] screen and print a nozzle check pattern. See page 46 "Test Printing".

3. Preview area

Displays a preview of the task selected in the task list.

4. Task list

Displays a list of registered tasks. You can change the printing order or delete tasks from the right-click menu. Tasks will be deleted when an application is closed.

5. Task Information/Print Information

Displays task information and printing status.

6. Print-start position

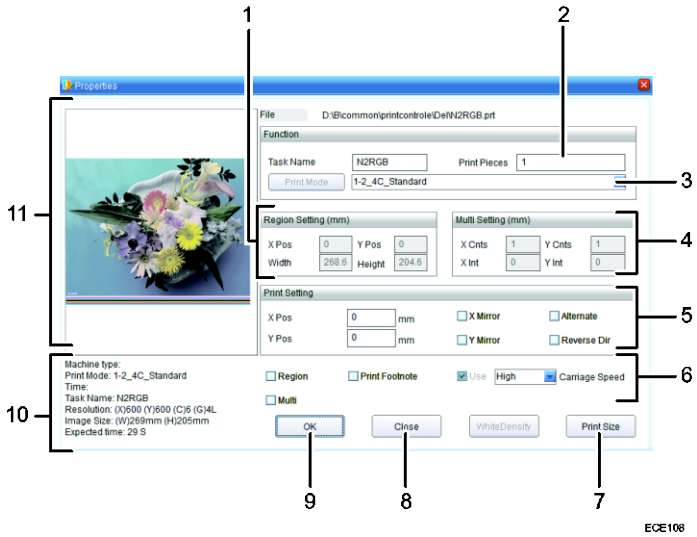
You can change print-start position. The contents of the settings will not be reflected in the registered tasks. Configure settings on the [Properties] screen to change the registered tasks.

[Properties] screen

Double-click a task in the task list to display the [Properties] screen. You can configure settings for partial printing, multi-copy printing, and multicoat printing, etc. on the [Properties] screen.

You can also display the [Properties] screen by:

- Right-clicking the task in the task list and selecting [Properties].
- Adding the selected file to the task list on the [Task Select] screen.



1. Region Setting

Specify a printing range to perform partial printing. See page 69 "Partial Printing".

2. Print Pieces

Sets the re-coating frequency with color ink.

3. Print Mode

From the pull-down menu, select the print mode.

Select the print mode according to the color combination in use and required image quality.

The following are the 5 types of image quality:

- [Draft]: Used to check the layout. You can select this only if the color set is 4C.
- [Production]: Prints at high speed but the quality is lowered.
- [Standard]: Prints at standard quality and speed.
- [Quality]: Prints at high quality but the printing speed is slower.
- [High Quality]: Prints at the highest image quality at a lower speed than "Quality".

For information about the types of ink, see page 132 "List of Consumables".

For details about the selectable print modes, see page 137 "List of Print Modes".

If the color combination includes W, Gl, or Pr, it is necessary to specify the spot color setting.

4. Multi Setting

Configure settings for multi-copy printing. See page 71 "Multicopy Printing".

5. Print Setting

Configure settings for the print-start position and multicoating of color ink, etc. For details about multicoating, see page 74 "Multicoat Printing".

- X Pos/Y Pos: Sets the print-start position.
- Alternate: Performs reciprocating printing in multicoating. When [Reverse Dir] is selected, this function cannot be used.
- X Mirror/Y Mirror: Reverses the image towards the X or Y direction.
- Reverse Dir: Moves the carriage from the opposite direction to print. When [Alternate] is selected, this function cannot be used.

6. Print options

Enables the settings for a printing range or multiple printing, etc.

- Region: Enables the settings for "Region Setting".
- Multi: Enables the settings for "Multi Setting".
- Print Footnote: Enables footnote printing. For details about footnote settings, see page 76 "Printing a Footnote".
- Use/Carriage Speed: Sets the moving speed of the carriage.

7. [Print Size]

Click to configure the print size settings.

8. [Close]

Click to cancel the settings.

9. [OK]

Click to apply the settings.

10. Print Information

You can check information such as the RIP file information. You can also print this information on the footnote. For information on printing the information on the footnote, see page 76 "Printing a Footnote".

11. Preview screen

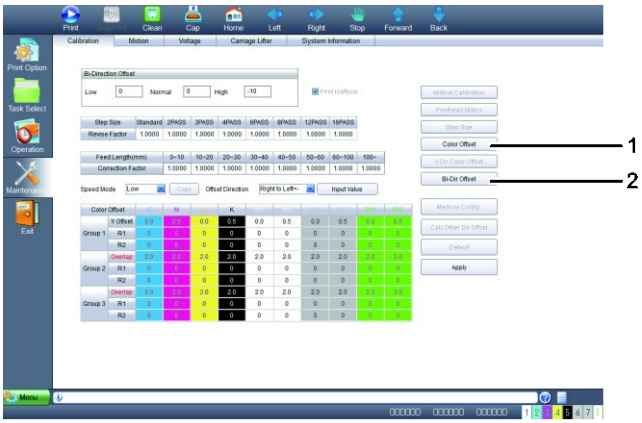
You can preview an image of a RIP file.

[Maintenance] Screen

You can configure the carriage motion settings, change the carriage position, and check the system information of the machine.

Calibration

Calibrates the status of the nozzle for printing.



ECE050

1. [Color Offset]

Adjusts the ink drop position which is misaligned among the color nozzles in the Y direction. For details, see page 92 "Color Offset Adjustment".

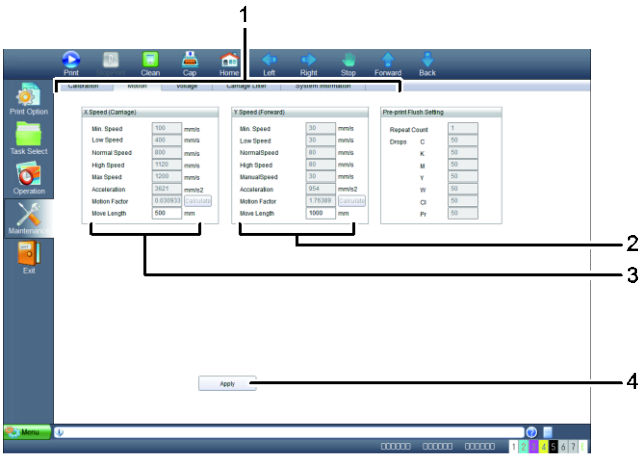
2. [Bi-Dir Offset]

This machine can print in bidirectional mode, and the print heads perform printing for the outbound pass and return pass. For details, see page 99 "Adjustment for Misalignment in Bidirectional Printing".

Do not configure other settings because they have already been set to their optimum values.

Motion

You can set the moving distance of the carriage in the X and Y directions.



ECE110

1. **Screen-switching tabs**

   Switches between screens for maintenance.

2. **Move Length of Y Speed (Forward)**

   Specify the moving distance of the carriage in the Y direction at every click of [Forward] or [Back] on the toolbar.

3. **Move Length of X Speed (Carriage)**

   Specify the moving distance of the carriage in the X direction at every click of [Left] or [Right] on the toolbar.

4. **[Apply]**

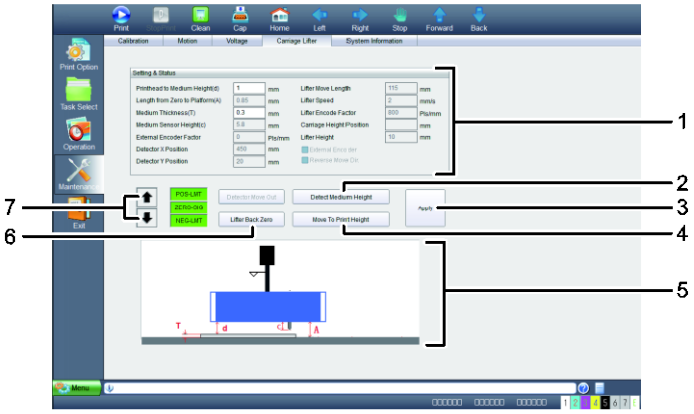
   Click to apply the settings.

Voltage

Do not configure the settings as they have already been set to their optimum values.

Carriage Lifter

You can measure the thickness of the media and move the carriage to the height set in the setting items.



ECE112

1. Setting & Status

Specify the media thickness and the distance between the media and print heads.

2. [Detect Medium Height]

Detects the thickness of the media automatically and moves the carriage to a height added the value specified in Printhead to Medium Height(d).

3. [Apply]

Click to apply the settings.

4. [Move To Print Height]

Raises the carriage to a height added the values specified in Medium Thickness(T) and Printhead to Medium Height(d).

5. Carriage position screen

Indicates the locations of the carriage, table, and media.

6. [Lifter Back Zero]

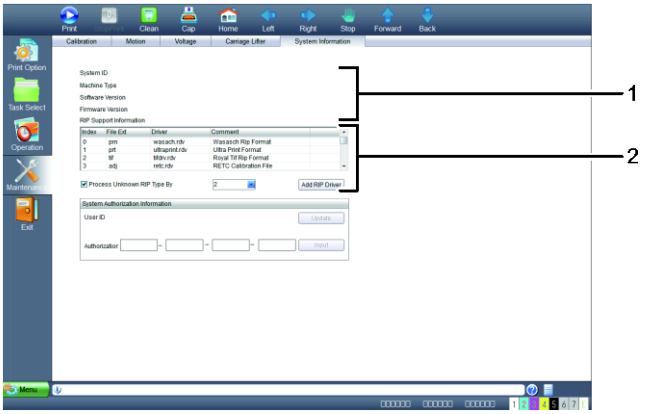
Reset the height of the carriage to return the carriage to zero.

7. Up arrow button/Down arrow button

Move the carriage to the upper or lower position. The down arrow button can be used when the media thickness sensor comes out.

System Information

You can check the system information of the machine and support information for RIP files.



ECE113

1. System information

You can check the name of the machine and firmware version, etc.

2. RIP Support Information

You can check support information for RIP files.

3. Basic Operations

This chapter explains the procedures for preparing printing media, head cleaning, printing data and how to configure these settings.

Procedure to Print

Use the following procedure to print on media:

1. **Turn on the power.**

   See page 44 "Turning On/Off the Power".

2. **Perform test printing.**

   See page 46 "Test Printing".

3. **Clean the print heads.**

   See page 51 "Cleaning Print Head Nozzles".

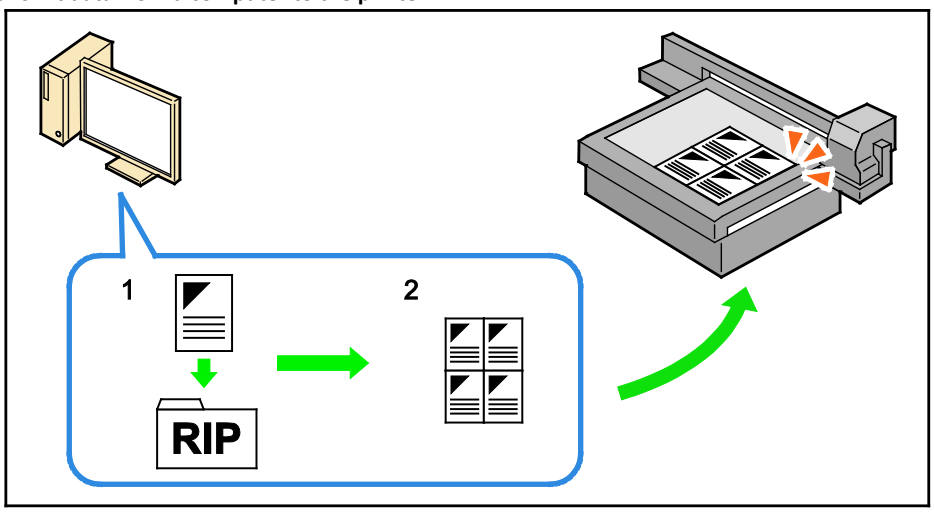
4. **Set the media.**

   See page 53 "Setting Media".

5. **Print data.**

   See page 60 "Printing Data".

To transmit data from a computer to the printer:



1. **Create a RIP file using RIP.**
2. **Print the RIP file using Print Control.**

   You can manage RIP files and configure settings for printing using Print Control.

Turning On/Off the Power

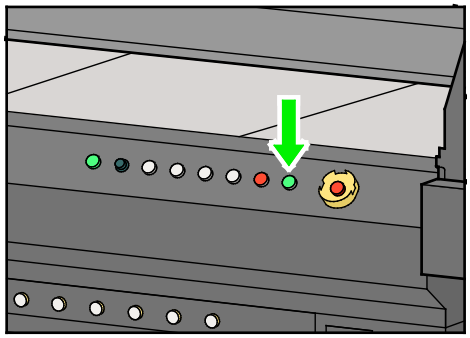
⚠CAUTION

- Do not disconnect the power cord plug. If the machine is not going to be used for several days or longer, contact your authorized Roland DG Corporation representative.

Turning On the Power

1. Press the power-on button on the front of the machine.

The power lamp will light up.



2. Start Print Control.

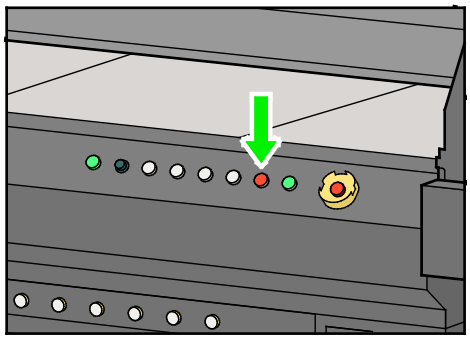
Turning Off the Power

Before you turn off the power, confirm:

- Data is not being received from a computer.
- There is no data that has not been output yet.
- The carriage is placed in the maintenance station.
- There is no error message displayed.

1. **Exit Print Control.**
2. **Confirm that the cooling fan for the UV lamp has stopped, and then press the power-off button on the front of the machine.**

   The power lamp will turn off.



Note

- If you find an error while turning off the power, resolve the error. For details, see page 103 "If a Message Appears".
- Do not unplug the power cord plug. If the power cord plug is unplugged, the negative pressure adjustment function does not work, which may cause ink to leak from the nozzles.
- Confirm that the carriage is returned to the maintenance station position before turning off the power. If you turn off the power before the carriage returns to the maintenance station position, the print heads will get dry, which may cause nozzle clogging.
- Do not turn off the power during printing. Otherwise, the carriage may not return to the maintenance station.
- You cannot turn off the power by pressing the emergency button.

Test Printing

Print a test pattern and check whether or not there are discharge defects such as nozzle clogging (blurring or drop-out of printing).

Performing Test Printing

1. **Set the media for test printing on the original position (0,0) of the table.**

   For details about how to set media, see page 53 "Setting Media on a Table".

2. **Click the [Operation] tab.**

3. **Specify the print-start position of the X-coordinate.**

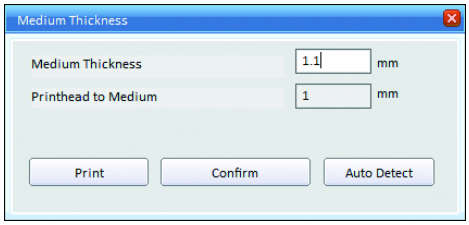
   For details about how to set the print-start position, see page 59 "Changing Print-start Position".

4. **Click [Back] on the tool bar to make the carriage move to the original position.**

5. **Click [Status].**

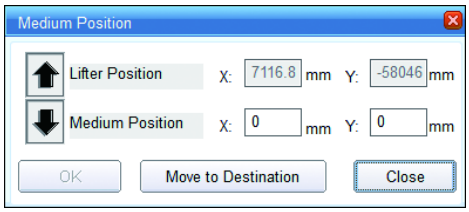
The [Medium Thickness] screen is displayed.

6. **Click [Auto Detect] on the [Medium Thickness] screen.**



The message screen is displayed.

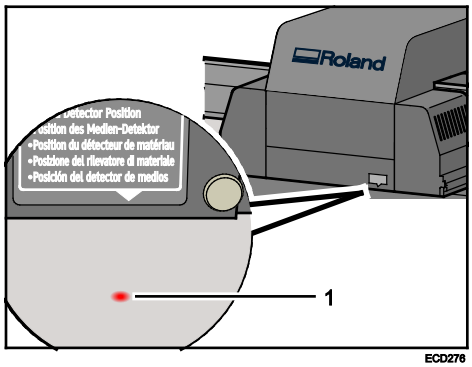
7. **Click [↑] to raise the carriage to a height where the print heads do not interfere with the media.**



8. **Enter numerical values in [X:] and [Y:] for "Medium Position" in accordance with the position to measure media thickness.**

   When printing on uneven media, measure its thickest part.

   Align the LED marker light with the part to be measured.



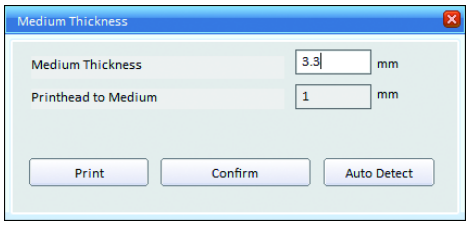
   1. **LED marker light**

9. **Click [Move to Destination].**

10. **Click [OK].**

    The machine measures the media thickness and the carriage moves to the set height.

11. **Confirm the setting contents and click [Confirm].**



12. **Click [Print].**

    After the carriage has moved toward the recess by approximately 160 mm, the test pattern is printed.

13. **Check the printed result.**

- For details about the printing result, see page 48 "How to Read the Printing Result".
- If there are abnormalities, perform head cleaning. For details about head cleaning, see page 51 "Cleaning Print Head Nozzles".

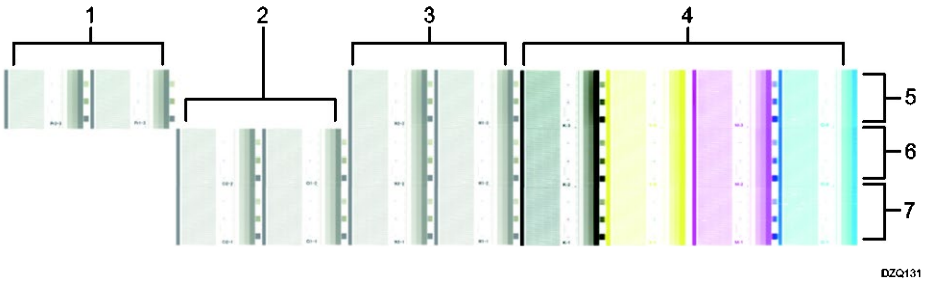
How to Read the Printing Result

How to read the test printing result is explained below.

Pr, Gl, and W are easier to see if printed on transparent media.

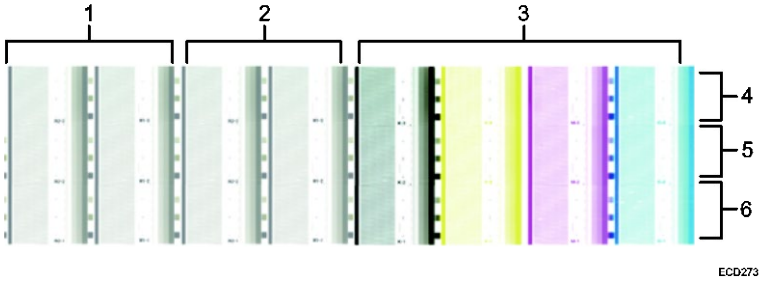
The areas where Pr, Gl, and W are printed depend on the ink configuration. For details about changing the ink configuration, contact your authorized Roland DG Corporation representative.

If the ink configuration is set to "Standard Ink Config"



1. **Pr (Primer)**
2. **Gl (Gloss)**
3. **W (White)**
4. **CMYK (Color)**
5. **Print head 3**
6. **Print head 2**
7. **Print head 1**

If the ink configuration is set to "Double White Ink Config"

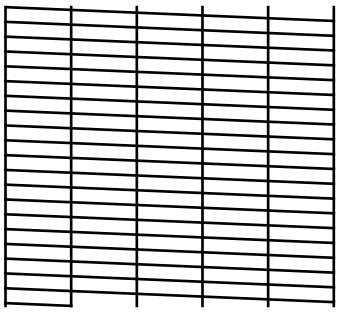


ECD273

1. **White2**
2. **White1**
3. **CMYK (Color)**
4. **Print head 3**
5. **Print head 2**
6. **Print head 1**

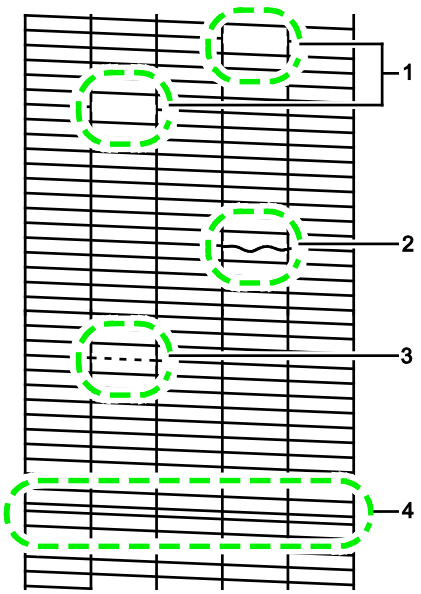
Check the color and position of the print heads with discharge defects such as missing nozzles in the printing result. Check the print heads with discharge defects by referring to the following illustration.

Normal printing result



CFT168

When there are discharge defects in the heads



DVB195

1. **Missing nozzles have occurred.**
2. **The test pattern is wave-like.**
3. **The test pattern is intermittent.**
4. **The intervals in the test pattern are not equal. (Bending lines have occurred.)**

Cleaning Print Head Nozzles

This section explains how to handle print heads. For details about how to maintain the machine periodically, see Requests for Daily Care and Maintenance.

About Head Cleaning

If a printing problem is not resolved even when you have performed cleaning, perform cleaning again. If the printing problem is still not resolved even after performing cleaning three times, see page 87 "When nozzle clogging does not clear".

If the white, gloss, or primer ink is installed but it is not used, perform head cleaning once a day.

Performing Head Cleaning According to the Test Printing Result

Head cleaning means discharging a small amount of ink from the print heads and wiping off unnecessary ink with a wiper. You can remove unnecessary ink and clear ink clogging by cleaning the print heads. Perform cleaning repeatedly until the printing result becomes normal.

1. **Confirm that the carriage is located in the home position.**

   If not, click [Home] on the toolbar.

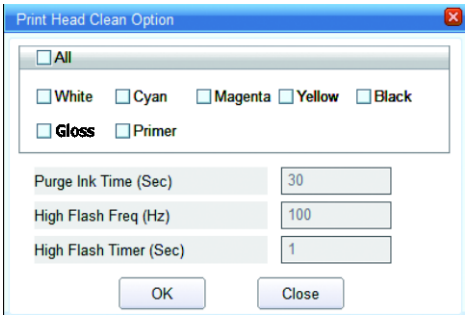
2. **Click [Clean] on the toolbar.**

   The selection window for ink to be cleaned is displayed.

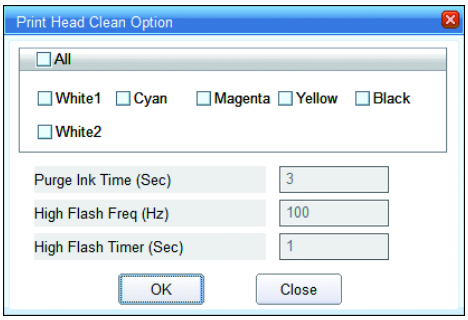
3. **Select the types of ink subject to cleaning and click [OK].**

   When several types of ink are selected, cleaning is applied to the selected colors in turn.

   - If the ink configuration is set to "Standard Ink Config"



- If the ink configuration is set to "Double White Ink Config"



Setting Media

This section explains how to set the media.

For details about supported media or precautions for handling media, see page 27 "About Media".

Precautions for Setting Media

Make sure to understand the following precautions before setting media:

⚠WARNING

- Do not mount the table. Mounting it could result in injury or lowered accuracy of the board face.

⚠CAUTION

- Make sure to wear protectors such as safety shoes and gloves when using heavy media. Otherwise, it might cause an injury.

Important

- **If there are vacuuming holes that are not closed with the media in the vacuuming area, lay a sheet-like material such as paper, film, or tape to close the holes.**
- **When placing thin media, reduce the adsorption pressure. If adsorption is too strong, marks from the adsorption holes may remain. For details about adjusting the adsorption pressure, see page 53 "Setting Media on a Table".**
- **The outer periphery of the media may warp due to heat. There is a risk of media breakage or head failure due to contact with the head during printing. Use an adhesive tape or other means to fix it.**
- **Take the following precautions when setting the media. Otherwise, a table may be deformed.**
  - **Do not drop heavy media onto a table.**
  - **Do not apply load to a specific part of the media (up to 45 kg/m^2).**
- **Allow more than 10 seconds between pressing the vacuum switch multiple times. If the vacuum fan does not operate even when the vacuum switch is pressed, turn off the vacuum switch, wait at least 10 seconds, and then press the vacuum switch again.**
- **Use the keyboard to enter the result of measurement using a micrometer, etc., instead of automatically detecting the substrate thickness setting.**

Setting Media on a Table

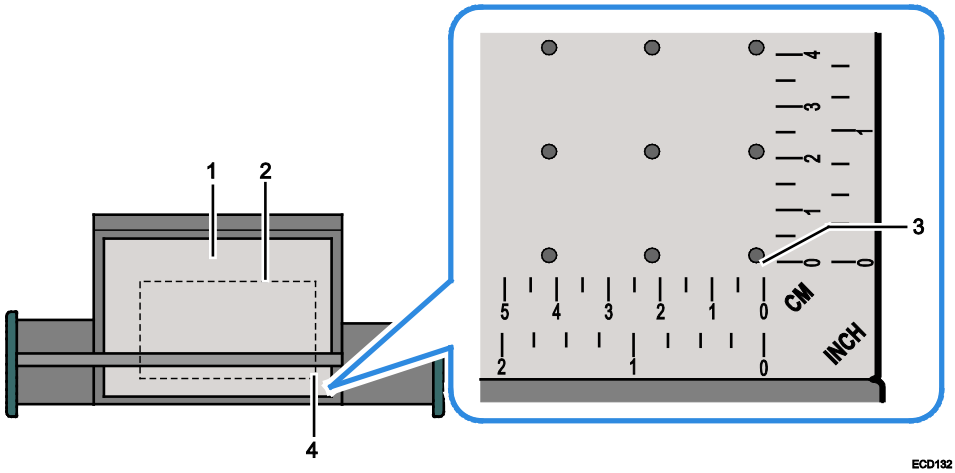
1. **Set the media on a table.**

Align the right edge of the media with the print-start position.

For details about using the positioning pins, see page 56 "Setting positioning pins".

The relationship between the origin and the print-start position is as follows.

When the print-start position is set to (100, 100).

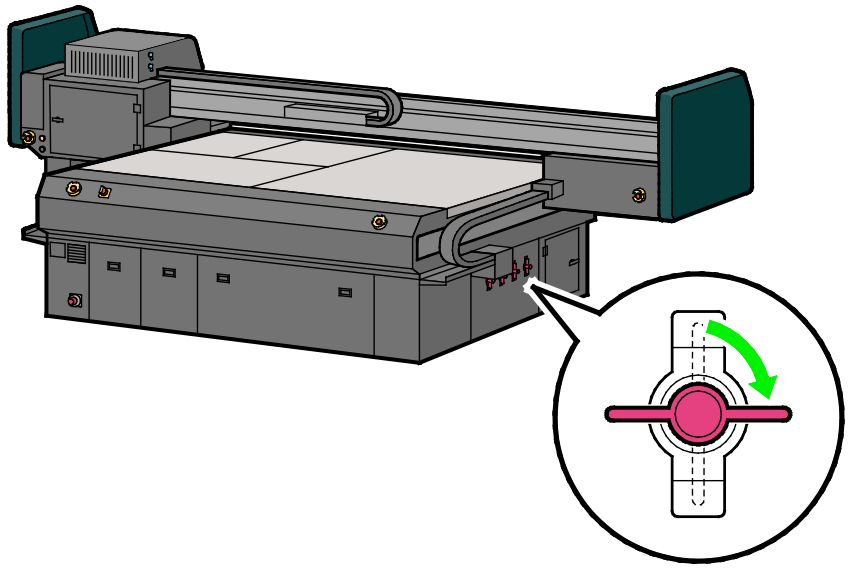


1. **Table**
2. **Media**
3. **Origin (0, 0)**
4. **Print-start position (100, 100)**

2. Switch the vacuum valves to align it with the size of the media to be used.

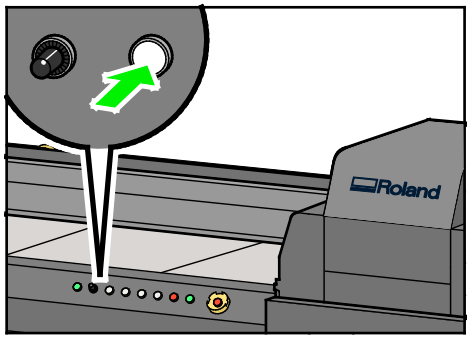
The valve will be opened when the handle is tilted in the longitudinal direction. It will be closed when the handle is tilted in the lateral direction.

For details about how to adjust the vacuuming areas, see page 56 "Adjusting vacuuming areas".



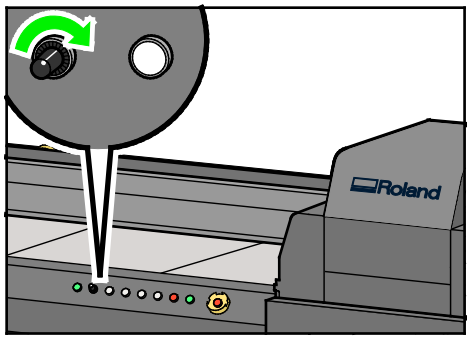
3. Press the vacuum switch to vacuum the media.

The vacuum fan will operate.



ECD143

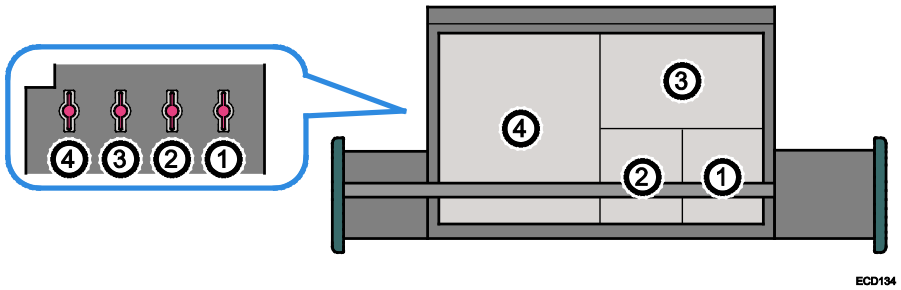
4. Turn the vacuum pressure control to adjust the vacuum pressure.



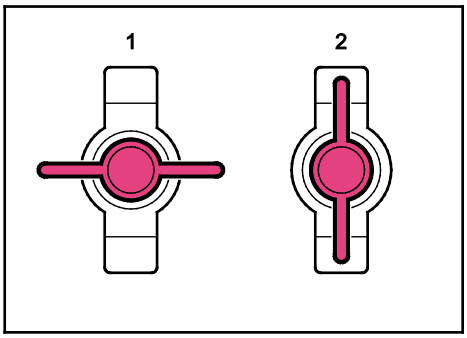
ECD145

Adjusting vacuuming areas

The relation between the vacuum valves and vacuuming areas is shown below. Switch the vacuum valves to adjust the vacuuming areas to match the size of the media to be used.



ECD134



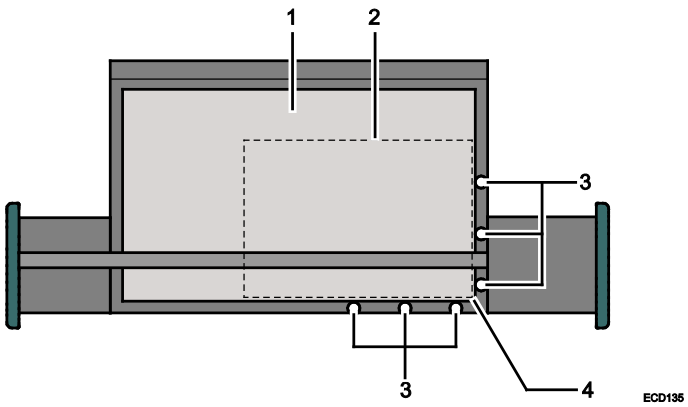
ECD121

1. **Valve is closed. (Vacuuming of the selected area is disabled.)**
2. **Valve is open.**

Setting positioning pins

The positioning pins for aligning the media straight are built into the table. The positioning pins are set when the positioning pin switch on the front of the machine is turned on. You can use them as a guide. An air compressor is required to use the positioning pins. For details, contact your authorized Roland DG Corporation representative.

The locations of the positioning pins are shown below. Positioning pins are built into the table with three in the X direction and Y direction respectively.



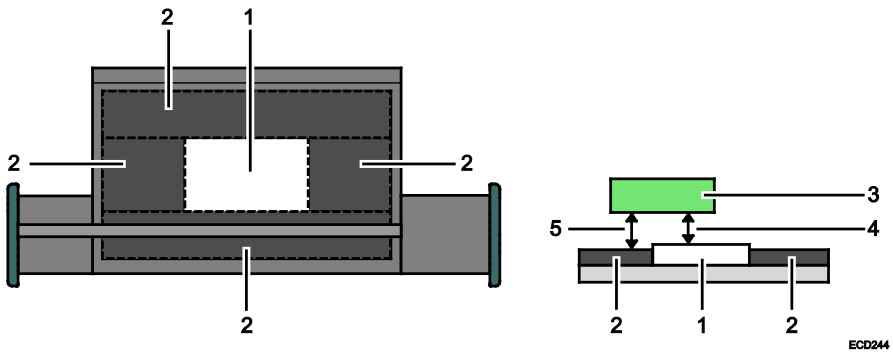
1. **Table**
2. **Media**
3. **Positioning pins**
4. **Origin (0, 0)**

Notes on Loading Thick Media

When loading thick media, cover the space around the media with a dummy of similar thickness. This prevents the head gap (distance to the print head) from becoming too great in areas without the media. Keep the head gap to 2 mm or less for both the media and dummy.

Note

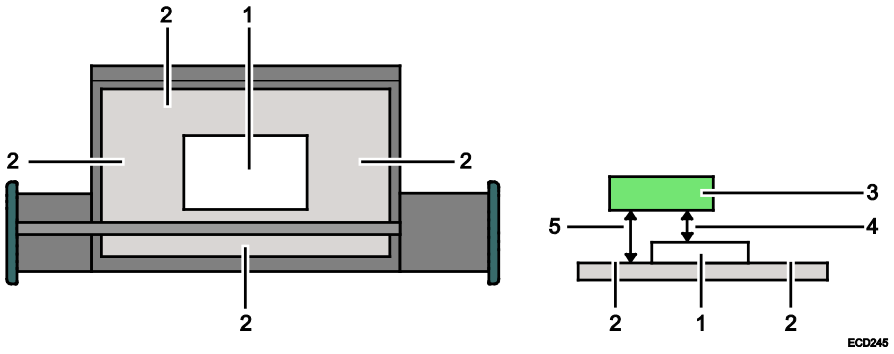
- The default setting for the head gap is 1 mm. A head gap up to 2 mm is allowable, but the image quality may become lower than that with the default setting.



1. **Media**
2. **Dummy of similar thickness to the media**
3. **Print head**
4. **Head gap from media: Keep to 2 mm or less**
5. **Head gap from dummy: Keep to 2 mm or less**

If not covered by the dummy

The head gap is set according to the media thickness, so the head gap becomes too great in areas not covered by the dummy. This may cause the UV light to reflect off the print head, causing the ink on the head to cure and can lead to failure. If the gap is wide, the airflow may be disturbed, resulting in poor printing.



1. **Media**
2. **Areas not covered by the dummy**
3. **Print head**
4. **Adequate head gap (2 mm or less)**
5. **The head gap is too wide.**

Changing Print-start Position

You can change the print-start position in the X and Y directions on the [Operation] screen.

1. **Click the [Operation] tab.**
2. **Enter numerical values in [X Pos].**

   The print-start position of the X-coordinate is set.

3. **Enter numerical values in [Y Pos].**

   The print-start position of the Y-coordinate is set.

Note

- The settings for [X Pos] and [Y Pos] can be configured on both the [Operation] screen and [Properties] screen. When configuring the settings on both screens, the values set on the [Properties] screen immediately before printing will take priority over the values on the [Operation] screen.

Printing Data

Before Print Start

Check the conditions of the ink tank and waste ink tank before starting printing.

If the amount of ink in the ink tank is low or the waste ink tank is full, the machine will make a beeping sound.

For details about how to replenish ink, see page 121 "Replenishing Ink".

For details about how to dispose of waste ink, see page 124 "Disposing of Waste Ink".

Note

- If the ink tank becomes empty during printing or the waste ink tank is full, printing will be interrupted and the carriage will return to the home position.

Start Printing

Before you start printing, print a test pattern and check for ink ejection defects such as nozzle clogging (blurring or drop-out of printing). For details, see page 46 "Test Printing".

Set the printing media in advance. For details, see page 53 "Setting Media".

Important

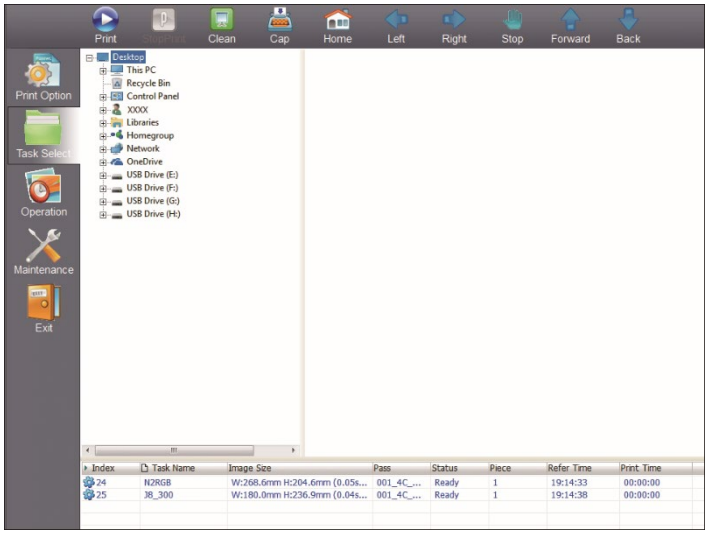
- **If the carriage is not returned to the home position, click [Home] on the toolbar to return the carriage to the home position.**
- **As you may not obtain the printing result you want for some printing data or media types, we recommend performing test printing beforehand.**
- **Media may be heated by the UV lamp and raised, causing printing to be interrupted. In such cases, set the new media and perform printing again.**
- **Be sure to prevent ink from adhering to the table by setting sufficient margins or pasting a masking tape to the outer part of the media, etc.**
- **If the printing contents are accidentally printed on the table, stop printing immediately and wipe off the adhering ink with a dry cloth. For details about how to remove ink adhering to the table, see "Removing Ink Adhering to the Table", Requests for Daily Care and Maintenance.**
- **Wipe off the media surface before printing to improve ink adhesion.**

Register the file to be printed to the tasks

1. **Click the [Print Option] tab to confirm the setting contents.**

   For details about the [Print Option] screen, see page 35 "[Print Option] Screen".

2. **Click the [Task Select] tab and select the folder to be used in the folder selection area.**



   Thumbnails of RIP files are displayed in the preview area.

3. **Select a file you want to print in the preview area and drag it to the task list area.**

   The [Properties] screen is displayed.

4. **Change the settings on the [Properties] screen as required.**

   For details about how to change the settings, see page 37 "[Properties] screen" or page 69 "Various Print Functions".

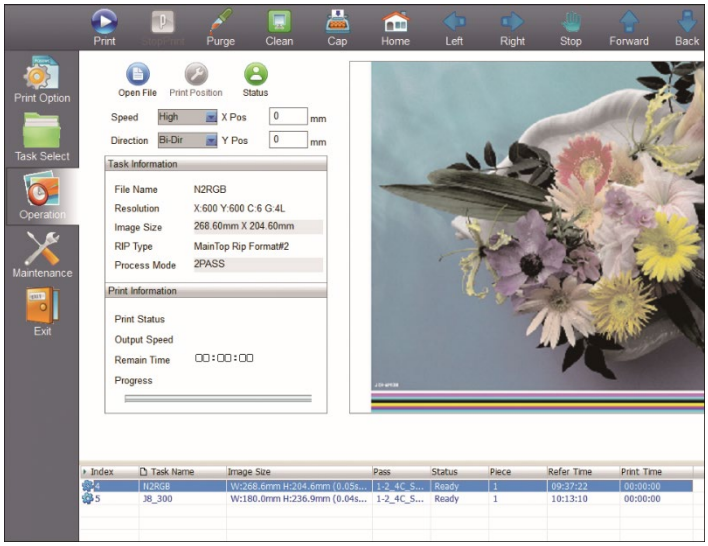
5. **Click [OK].**

   The dragged file is added to the task list.

Perform printing

1. Click the [Operation] tab and select the task to be printed.

You can confirm information about tasks and files that are printed from the preview area.



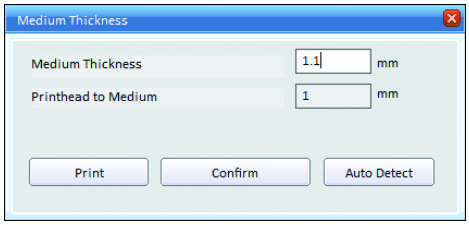
2. Perform the following settings as required:

- X Pos: Specify the print-start position in the X direction.
- Y Pos: Specify the print-start position in the Y direction.

3. Click [Print] on the toolbar.

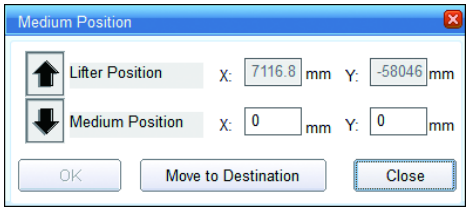
The [Medium Thickness] screen is displayed.

4. Click [Auto Detect] on the [Medium Thickness] screen.



The message screen is displayed.

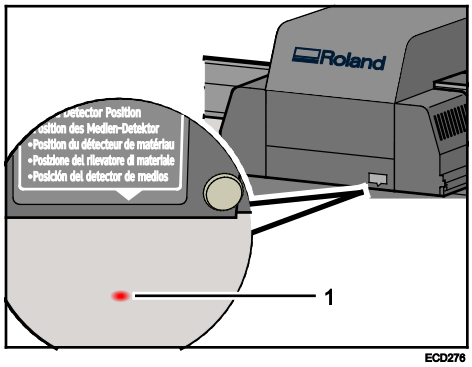
5. Click [↑] to raise the carriage to a height where the print heads do not interfere with the media.



6. **Enter numerical values in [X:] and [Y:] for "Medium Position" in accordance with the position to measure the media thickness.**

   When printing on uneven media, measure its thickest part.

   Align the LED marker light with the part to be measured.



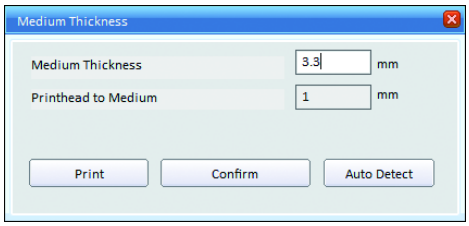
   1. **LED marker light**

7. **Click [Move to Destination].**

8. **Click [OK].**

   The machine measures the media thickness and the carriage moves to the set height.

9. **Confirm the setting contents and click [Confirm].**



10. **Click [Print].**

    The machine will start printing.

Note

- After printing finishes, confirm that the carriage returns to the home position, and then remove the media.
- When storing the media printed in [Draft] mode, do not pile them on top of each other. Doing so may cause the media to stick to each other.

Interrupt Printing

When you interrupt ongoing printing jobs, perform the following operations using Print Control.

1. **Click Pause on the toolbar during printing.**

   Printing is interrupted.

2. **Click [Continue] to resume printing from the interrupted position.**

Stop Printing (Data Clear)

When you stop ongoing printing jobs, perform the following operations using Print Control.

1. **Click [StopPrint] on the toolbar during printing.**

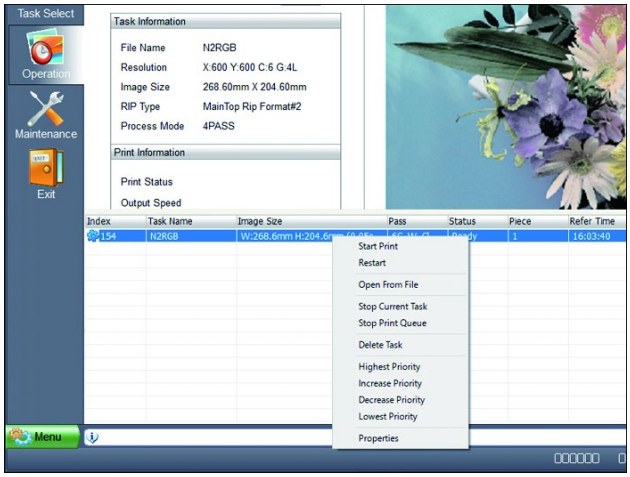
   Printing stops. Proceed to Step 2 to delete the stopped task completely.

2. **Select the task you want to delete in the task list from the [Operation] tab, and right-click it.**

   You can select multiple tasks simultaneously.

3. **Click [Delete Task].**

   The selected task is deleted.



Note

- When printing is completed, the task in the task list will be automatically deleted.

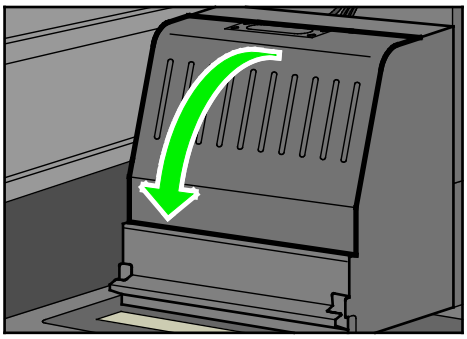
Adjusting the UV Lamp Position

When printing with a gloss finish using gloss ink, use the following procedure to adjust the position of the UV lamp.

Important

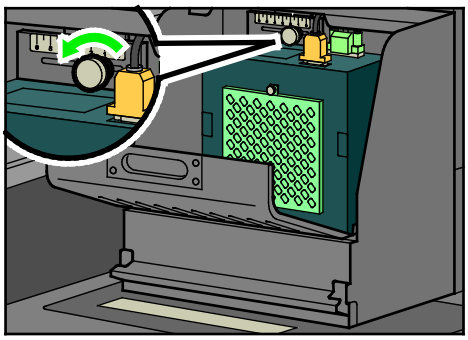
- **When not using a gloss finish with gloss ink (such as when using CMYK or white ink or when printing with a matte finish using gloss ink), be sure to set the horizontal UV lamp position to 0 mm (scale mark 0).**

1. **Open left UV lamp cover.**



ECD223

2. **Turn the UV lamp securing screw counterclockwise to loosen it.**

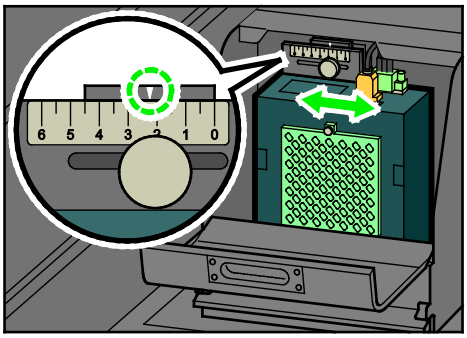


ECD240

3

3. **Slide the UV lamp to align the arrow with 20 mm (graduation "2").**

   Set this to 0 mm (scale mark 0) when not using a gloss finish with gloss ink.



4. **Tighten the UV lamp retaining screw.**
5. **Close left UV lamp cover.**
6. **Adjust the right UV lamp position in the same way.**

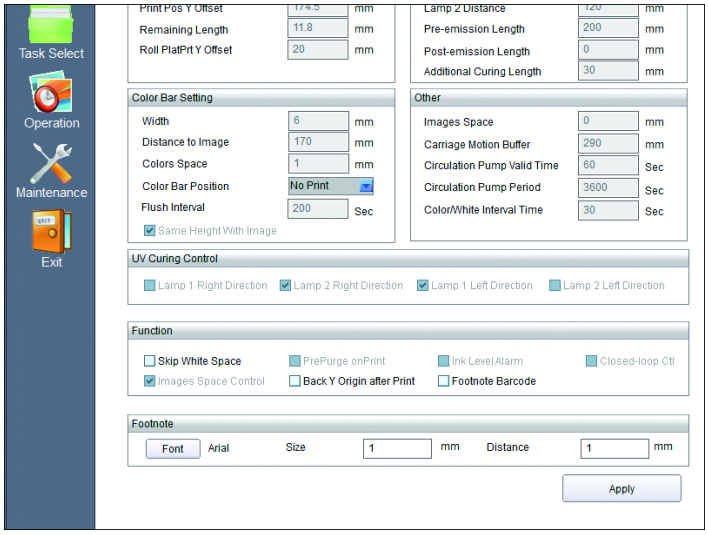
Moving Gantry

You can move the gantry to check the printing result or remove the media.
This section explains the functions to move the gantry automatically or manually after printing.

Moving the gantry automatically

This section explains the settings to move the gantry to the home position automatically after printing.

1. **Click the [Print Option] tab.**
2. **Select the [Back Y Origin after Print] check box in the "Function" area.**



3. **Click [Apply].**

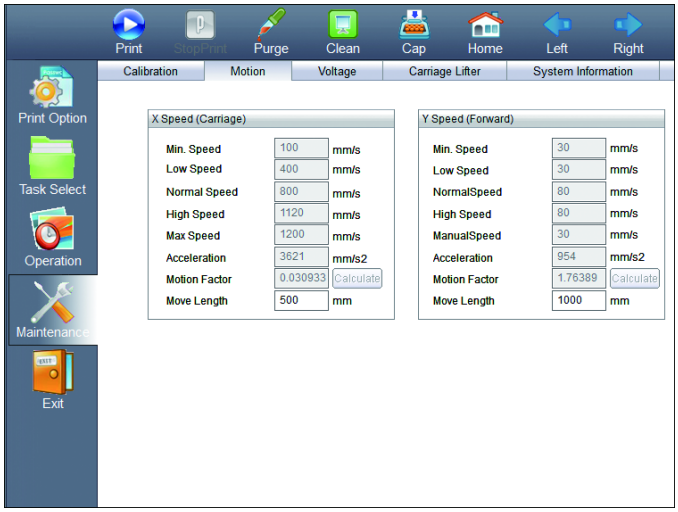
   After printing, the gantry moves to its starting (frontmost) position.
   After printing, stay clear of the gantry.

Moving the gantry manually

Click the moving buttons on the toolbar to move the carriage or gantry manually.

This section uses the Y-direction as an example to explain the setting procedure for the moving distance each time you click a moving button.

1. **Click the [Maintenance] tab.**
2. **Enter the moving distance in the Y direction in [Move Length] from the [Motion] tab.**



3. **Click [Apply].**

   Each time you click [Forward] and [Back] on the toolbar, the gantry will move the distance of the set value.

Capping

You can prevent nozzle clogging due to drying by capping the print heads.

1. **Click [Cap] on the toolbar.**

   The carriage moves to the maintenance station and caps are attached to the print heads.

Detaching caps

When moving the carriage from the maintenance station for measuring the thickness of media, etc., detach the caps beforehand.

1. **Click [Cap] on the toolbar.**

   Caps are detached from the print heads.

4. Convenient Usage

This chapter explains operating procedures for using this machine more usefully and procedures for each setting.

Various Print Functions

This section describes various printing functions that can be set on the [Properties] screen by double clicking the printing task. For details about the [Properties] screen, see page 37 "[Properties] screen".

You can use the following print functions:

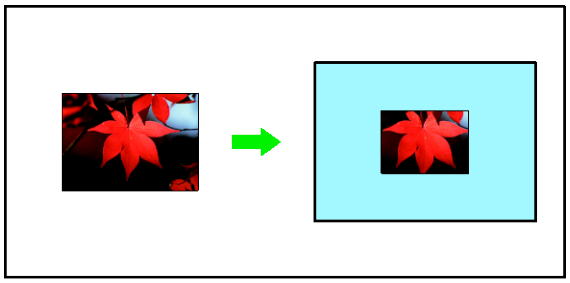
- Partial printing function
- Multicopy printing function
- Multicoat printing function
- Mirror printing function

Note

- To perform printing, see page 60 "Printing Data".

Partial Printing

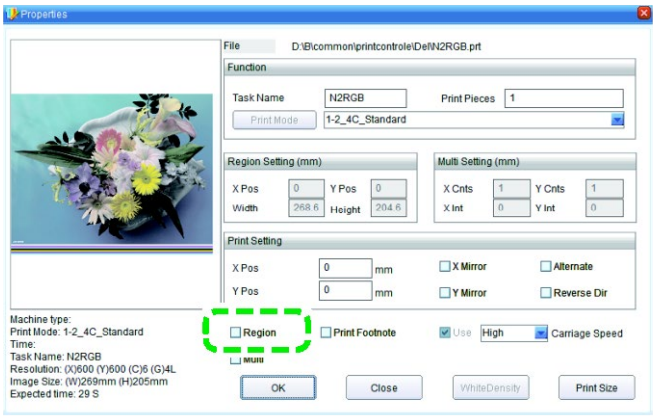
Specify the printing range to perform printing.



DVB136

1. Double click the task you want to specify and open the [Properties] screen.

2. Select the [Region] check box.

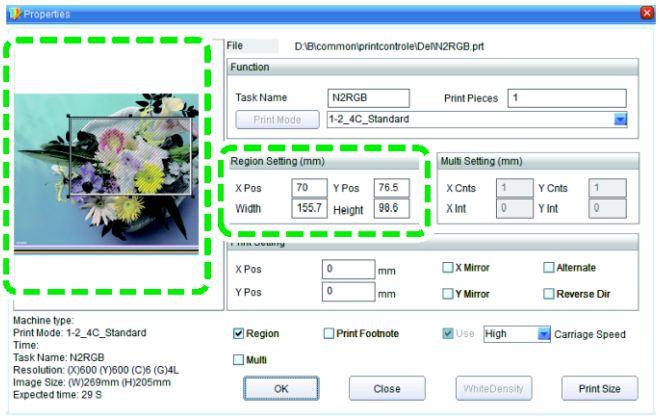


ECE175

The "Region Setting" area is enabled.

3. To specify the region setting, drag the mouse pointer on the thumbnail on the upper left of the dialog box.

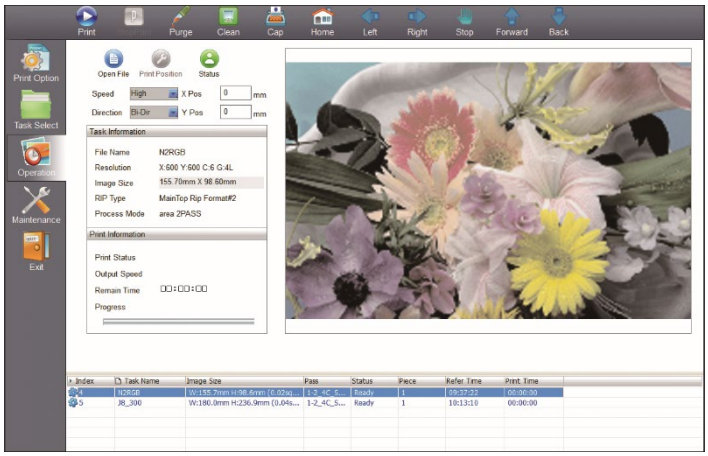
- The setting value will be reflected in each item in the "Region Setting" area.
- You can also adjust the selected range by entering a setting value for each item directly.



ECE176

4. **Click [OK].**

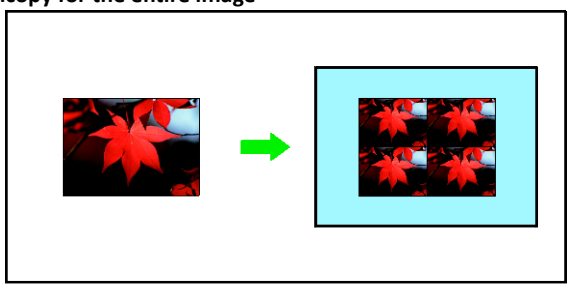
The image to which the area setting is applied is displayed in the preview area on the upper right of the [Operation] screen.



Multicopy Printing

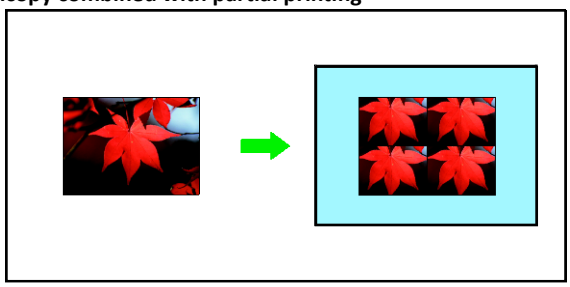
Allocate images repeatedly copied to one media. When combined with the partial printing function, it will print by repeatedly copying the image that has been specified.

Multicopy for the entire image



DVB137

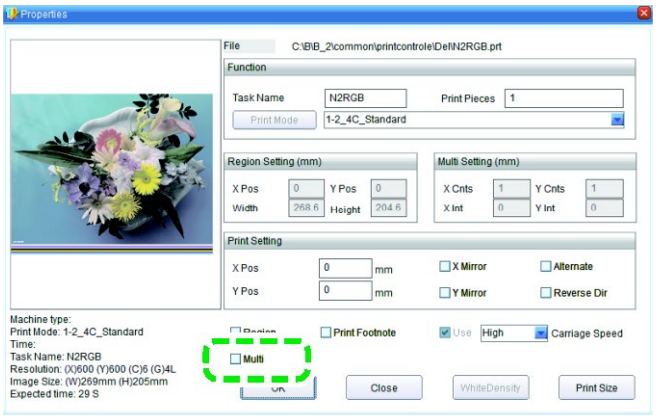
Multicopy combined with partial printing



DVB138

This section describes how to copy the entire image repeatedly.

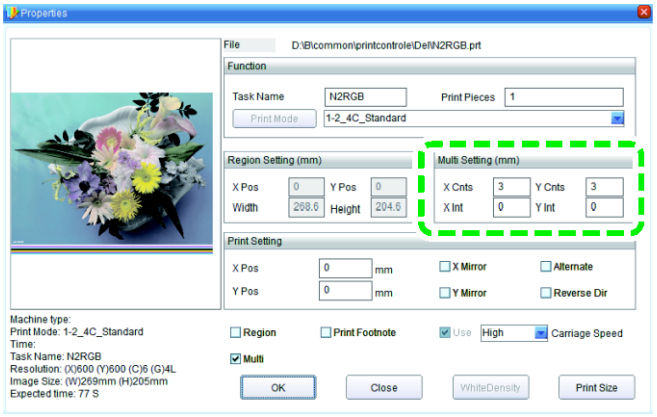
1. **Double click the task you want to specify and open the [Properties] screen.**
2. **Select the [Multi] check box.**



ECE177

The "Multi Setting" area is enabled.

3. **Specify the number of images you want to allocate to X or Y in "X Cnts" or "Y Cnts" in the "Multi Setting" area.**

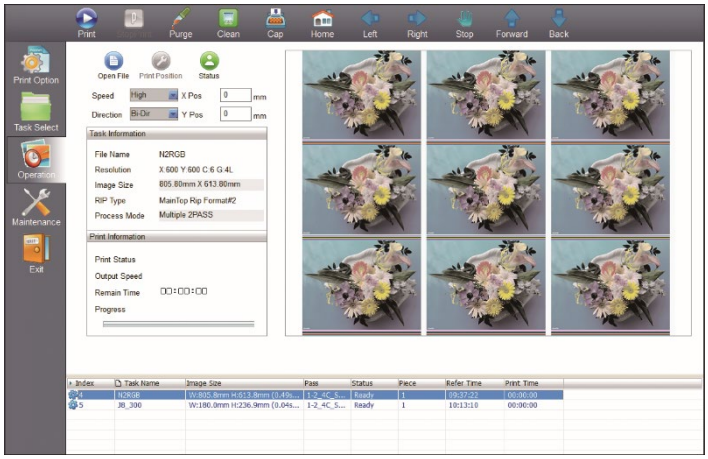


ECE178

4. **Specify the distance between images in "X Int" or "Y Int" in the "Multi Setting" area.**

5. **Click [OK].**

The allocated images are displayed in the preview area on the upper right of the [Operation] screen.



Note

- When printing with gloss ink, the print quality may be affected depending on the distance in the x-direction. Print quality is higher if printed with the distance in the x-direction set shorter.

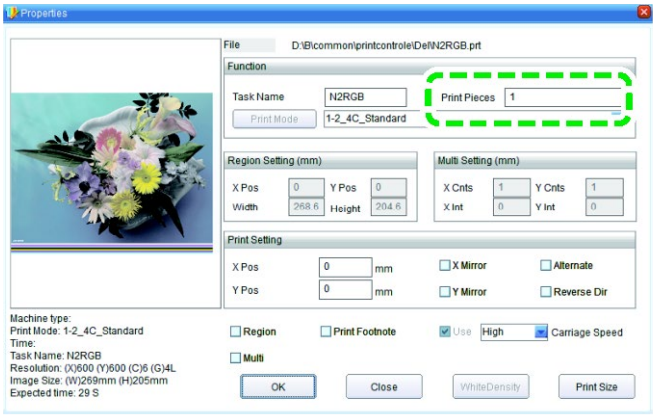
Multicoat Printing

You can create a more even finish to the media by repeating coating. Configure the settings for the re-coating frequency with color ink and reciprocating printing.

When multicoat printing is combined with reciprocating printing, the printing time can be reduced, however, the print quality may be lowered.

1. **Double click the task you want to open the [Properties] screen.**
2. **Enter the re-coating frequency in "Print Pieces" in the "Function" area.**

   For example, if you enter "3", the same area will be coated three times. Once the media is re-coated from the front of the machine to the back of the machine, the gantry will return to the front automatically. The machine repeats re-coating for the specified number of times.



ECE180

3. **To perform reciprocating printing, select the [Alternate] check box.**

   The media will be printed while reciprocating from the front side to the back side for the first time, and from the back side to the font side for the second time.

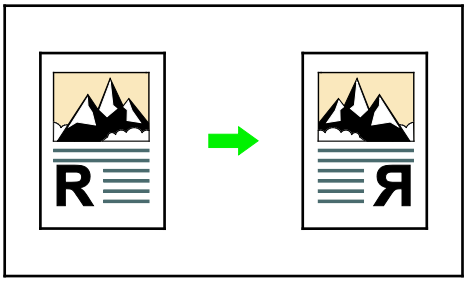
4. **Click [OK].**

Note

- When [Reverse Dir] is selected, [Alternate] cannot be used.

Mirror Printing

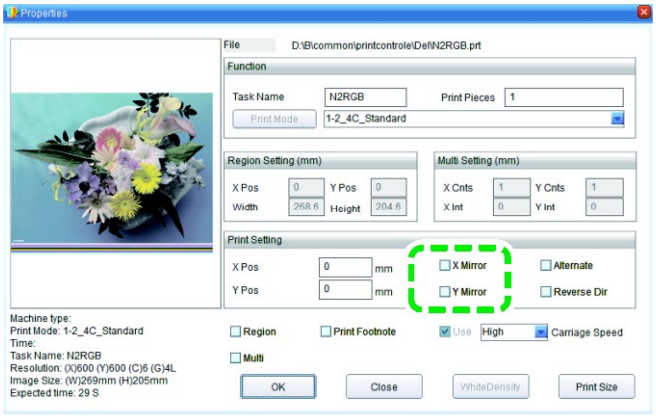
The images are reversed towards the X direction or Y direction.



CKN047

1. **Double click the task you want to open the [Properties] screen.**
2. **Select the [X Mirror] or [Y Mirror] check box in the "Print Setting" area.**

   The images are reversed towards the X or Y direction.



ECE181

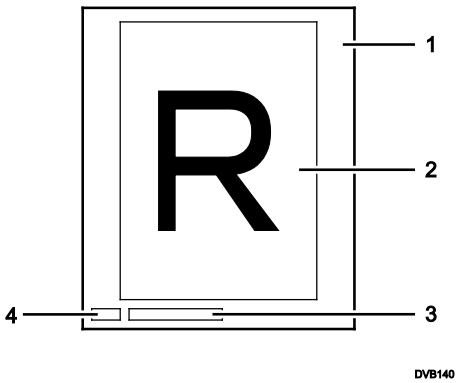
3. **Click [OK].**

Printing a Footnote

This section explains the settings for printing a footnote on media. The following items are printed in the footnote.

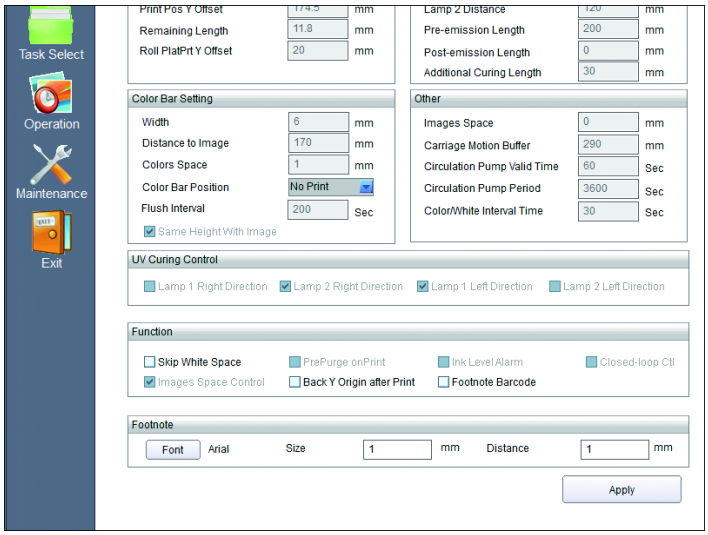
- Machine Type
- Print Mode
- Time
- Task Name
- Resolution
- Image Size

A barcode can be added as required.



1. **Media**
2. **Image**
3. **Footnote**
4. **Barcode**

1. **Click the [Print Option] tab.**
2. **Configure the necessary settings in the "Footnote" area.**
   - [Font]: Specify the font of the text to be printed in the footnote.
   - "Size": Specify the height of the footnote to be printed.
   - "Distance": Specify the distance between the footnote and the image.



3. **To print a barcode in the footnote, select the [Footnote Barcode] check box in the "Function" area.**
4. **Click [Apply].**
5. **Open the [Properties] screen of the task that adds a footnote, select the [Print Footnote] check box, and then print.**

   For details, see page 37 "[Properties] screen".

Note

- Footnotes are printed outside of image data. Be sure to use media that is larger than the image data when printing a footnote.
- The barcode to be printed includes the file name.

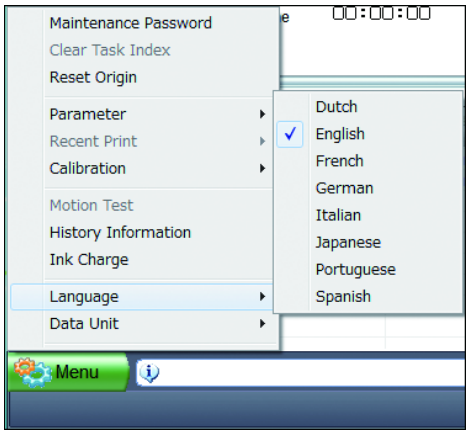
Changing the Display Language

If you are accessing Print Control for the first time, the language set on the PC being used is displayed in Print Control. Perform the following procedure to change the language displayed in Print Control.

The following languages can be displayed: Japanese, English, French, German, Italian, Spanish, Portuguese, and Dutch.

1. **Click [Menu] on the lower left of the screen.**
2. **Select the language to be displayed from [Language].**

   The message screen will be displayed.



3. **Confirm the message and click [Yes].**
4. **Click [Exit].**
5. **Restart Print Control.**

   The display will be switched to the selected language.

Note

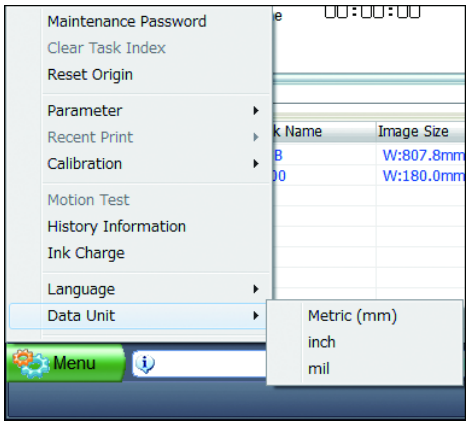
- The display language in Print Control is set automatically according to the language setting of the PC to be used. Once you change the language, the automatic setting function will be disabled.

Switching the Indication Unit

You can switch the indication unit displayed on Print Control. Metric (mm), inch, and mil can be displayed.

1. **Click [Menu] on the lower left of the screen.**
2. **Select the unit to be displayed from [Data Unit].**

   The display will be switched to the selected unit.



Note

- If you change the data unit, the setting values are converted automatically according to the selected unit and displayed.

Backing Up/Restoring the Settings

You can save the values set in Print Control to the computer or restore the set values from the computer.

Note

- Values set in Print Control are saved even when Print Control is closed, however, we recommend that values set just once should be saved to a computer. You can then restore these settings as necessary.
- You cannot back up the log, language, and indication unit.

Backing Up the Setting Files

1. Click [Menu] on the lower left of the screen.
2. Select [Backup To Disk] in [Parameter].
3. Select the file to be saved to the computer, and then click [Save].

Restoring the Setting Files

1. Click [Menu] on the lower left of the screen.
2. Select [Load From Disk] in [Parameter].
3. Select the file to be loaded, and then click [Open].
4. Click [OK].

Initializing the Setting Values

You can return the set values to the factory-set values by loading the parameter files included on the CD supplied with the machine. For details about how to load the parameter files, see page 80 "Restoring the Setting Files".

List of Setting Items on the [Print Option] Screen

This section describes an overview of each setting function and setting values.

[Print Option] Screen

This section describes each setting function and the default values on the [Print Option] screen.

After changing the settings, click [Apply]. The changed contents will not be reflected unless you click [Apply].

Note

- For details about how to access to the [Print Option] screen, see page 31 "How to Use the Print Control Screen".

Function

Configure the settings for each function. Users cannot change the settings except the following items as they have already been set to their optimum values.

Skip White Space

If there is no image data, blank spaces will not be printed.

Default: **[**Disabled**]**

Back Y Origin after Print

The gantry will return to the origin after printing.

Default: **[**Disabled**]**

Footnote Barcode

Barcodes will be printed in the footnote (the front side of the machine) of the printed materials.

Default: **[**Disabled**]**

Footnote

Specify the font and size of a footnote.

Font

Specify the font of the text to be printed in the footnote.

Default: [Arial]

Size

Specify the height of the footnote to be printed.

Default: **[**0 mm**]**

Distance

Specify the distance between the footnote and the image.

Default: **[**0 mm**]**

5. Troubleshooting

This chapter provides solutions to common problems and it also explains how to correct unwanted print results.

If You Cannot Turn On the Power

If you cannot turn on the power of the machine, check the power supply. Main causes and solutions are shown below.

Cause	Solution
The power cord is not connected to the machine and the power source.	Make sure to connect the power cord firmly to the machine and the power source.
The power indicator is off.	Turn on the power. For details about how to turn on the power, see page 44 "Turning On/Off the Power".
The power indicator is off even after the power switch is pressed.	Check if the power cord plug is firmly connected to the power source. If the power indicator is still off, disconnect the power cord, and then contact your authorized Roland DG Corporation representative.
An emergency button remains pressed.	Release the emergency button, and then turn on the power again. For details about how to release the emergency button, see page 17 "Emergency Buttons".
The front cover or other covers of the machine are open.	Close the cover before turning on the machine.

When You Have Problems Operating the Machine

Problem	Cause	Solution
The machine does not start.	If the machine is not properly connected to a computer, the machine will not initialize and start even if Print Control is launched.	Perform either of the following: • If you are not using a dedicated USB cable, use the included USB cable. • If the USB cable is damaged, contact your authorized Roland DG Corporation representative for a replacement. • Check if the machine is firmly connected to the computer by the included USB cable. • Check if Print Control has been installed to the computer. For details about how to install Print Control, see page 29 "Installing Print Control".
The machine does not start.	The interlock is enabled for one of the following reasons, causing the machine to stop. • The machine's front cover or another cover is open. • The carriage is positioned too far to the left or right end.	• Close the cover properly, and then reboot Print Control. • Move the carriage by hand approximately 10 cm toward the center, and then reboot Print Control.
Printing does not start even if print jobs start using Print Control.	An error message is displayed.	Check the displayed error message and take the appropriate action. For details about how to handle errors, see page 102 "When You Check Messages".
	An emergency button remains pressed.	Release the emergency button. For details, see page 17 "Emergency Buttons".

Problem	Cause	Solution
The machine's beep alerts do not stop.	The waste ink tank is full.	If the waste ink tank is full, the machine makes a beeping sound. Dispose of the waste ink. For details, see page 124 "Disposing of Waste Ink".
	The amount of remaining ink in the ink tank is low.	If the amount of remaining ink in the ink tank is low, the machine makes a beeping sound. Check which ink tanks are low on ink, and then replenish them with ink. For details, see page 121 "Replenishing Ink".

If You Cannot Print as Expected

When You Cannot Print Properly

If there are any problems with the print quality, check the following table. If you still cannot print as expected, contact your authorized Roland DG Corporation representative.

Problem	Cause	Solution
The images printed soon after printing starts are blurred or misaligned.	Because of the time spent in standby mode, the ink inside the print head has become viscous.	Before you start printing, print a test pattern and check for ink ejection defects such as nozzle clogging (blurring or drop-out of printing). For details, see page 46 "Test Printing".
Fading or streaks appear on the printed image, or the colors mix during printing.	• Ink is clogged in the print head nozzles. • The print head nozzle faces are dirty. • The entire bottom plate and left and right sides of the carriage are dirty.	• Perform head cleaning. For details, see page 51 "Cleaning Print Head Nozzles". • Clean the maintenance station. See "Cleaning the Area around the Maintenance Station", Requests for Daily Care and Maintenance. • Clean around the print heads. See "Cleaning Around the Print Heads", Requests for Daily Care and Maintenance.
The printed image is blurred, or double lines appear on the image.	The ink drop position is misaligned between color nozzles.	Perform [Color Offset]. See page 92 "Color Offset Adjustment".
When performing bidirectional printing, the printed image is blurred, or double lines appear on the image.	The forward and backward printing positions are misaligned.	• If you increase the print head gap value, use unidirectional printing. • Perform [Bi-Dir Offset]. See page 99 "Adjustment for Misalignment in Bidirectional Printing".

Problem	Cause	Solution
The image is smudged during printing.	The print head nozzle faces, wipers, or cap unit is dirty.	Perform the following: 1. Clean the wipers. See "Cleaning Wipers", Requests for Daily Care and Maintenance. 2. Clean the capping station. See "Cleaning the Capping Station", Requests for Daily Care and Maintenance. 3. Clean the areas around the print heads. See "Cleaning Around the Print Heads", Requests for Daily Care and Maintenance. 4. Perform head cleaning. For details, see page 51 "Cleaning Print Head Nozzles".
There are blisters on the media surface.	The media surface is dusty.	Make the work environment less dusty.

Note

- Depending on the type or conditions of the media to be used, you may not obtain the print result you expect. Make sure to use appropriate media. For details, see page 27 "About Media".

When nozzle clogging does not clear

This section explains how to recover the machine when nozzle defects are not resolved after cleaning is performed.

1. **Perform daily maintenance of the machine.**
   - Clean around the print heads, capping station, wipers, and maintenance station.
     See the following sections in Requests for Daily Care and Maintenance:
     - "Cleaning Around the Print Heads"
     - "Cleaning the Capping Station"
     - "Cleaning Wipers"
     - "Cleaning the Area around the Maintenance Station"
   - After cleaning, print nozzle check pattern.
     For details, see page 46 "Test Printing".

   If there is any problem with the printing result, proceed to the following procedure:

2. Clean the nozzle faces.

- If the machine is not used for 1 week or more or the nozzle faces are dirty, clean the nozzle faces.

  See "Cleaning the Nozzle Faces of the Print Heads", Requests for Daily Care and Maintenance.
- After cleaning, print nozzle check pattern.

  For details, see page 46 "Test Printing".

If there is any problem with the printing result, proceed to the following procedure:

3. Perform head cleaning.

- Perform head cleaning using Print Control.

  For details, see page 51 "Cleaning Print Head Nozzles".
- After cleaning, print nozzle check pattern.

  For details, see page 46 "Test Printing".

If there is any problem with the printing result, proceed to the following procedure:

4. Remove air bubbles.

- Unnecessary ink and air mixed inside the print heads are discharged.

  For details, see page 88 "If Ink Mixes or Missing Nozzles Occur Due to Aeration".
- After removing air bubbles, print nozzle check pattern.

  For details, see page 46 "Test Printing".

If you cannot resolve the nozzle defects after performing the procedures 1 to 4 above, print nozzle check pattern after 8 hours or more have elapsed. If you still cannot resolve the defect, you need to replace the print heads. Contact your authorized Roland DG Corporation representative.

If Ink Mixes or Missing Nozzles Occur Due to Aeration

If the problem corresponds to either of the following, remove air bubbles by using Print Control. By removing air bubbles, unnecessary ink and air mixed inside the print heads are discharged from the port for discharging air bubbles located in the carriage.

- If nozzle clogging is not resolved after cleaning the machine and the print heads.
- If ink colors mix inside the print heads or missing nozzles occur due to aeration.
- If nozzle clogging is not resolved after turning on and cleaning the machine that has not been used for a long period of time.

The included dedicated tool is required to remove air bubbles.

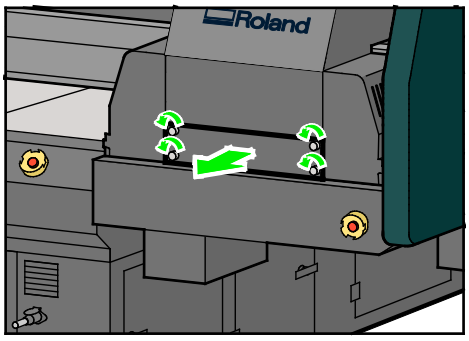
⚠WARNING

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

Important

- **If ink or dust adheres to an area surrounding the print heads, clean the area as required to prevent the printed materials from becoming dirty.**
- **Do not place any object on the table as the carriage moves there.**
- **Be careful so that the air bubble ejection tool will not be removed from the port.**
- **If you discharged unnecessary ink, contact a company that handles industrial waste.**

1. Loosen the 4 screws, and then remove the carriage's front cover.



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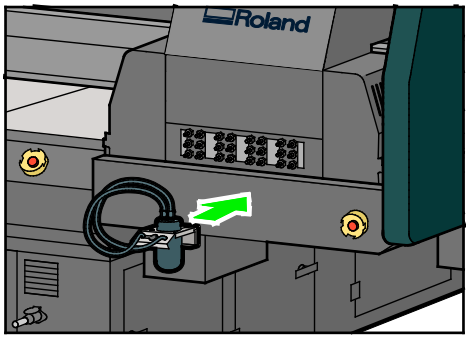
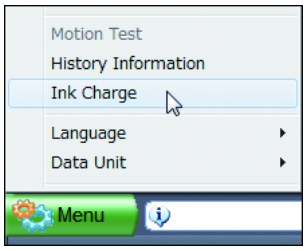
2. Attach the air bubble ejection tool at the maintenance station position.

Make sure that the tank of the air-bubble ejection tool does not contain any ink. If the tool ejects air bubbles while there is ink in the tank, the tank may become full, resulting in ink overflow.



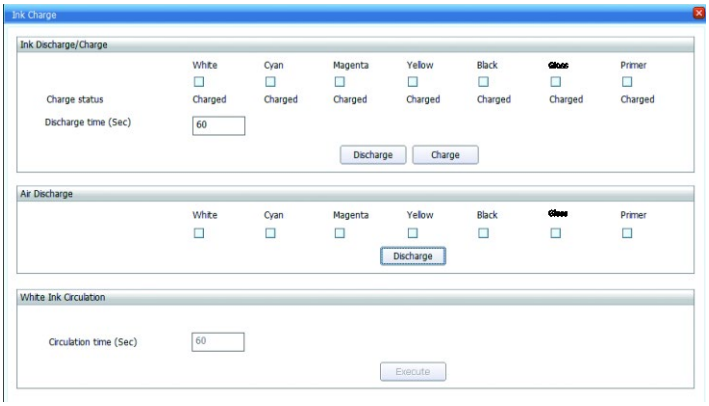
ECD148

3. From [Menu] in Print Control, select [Ink Charge].

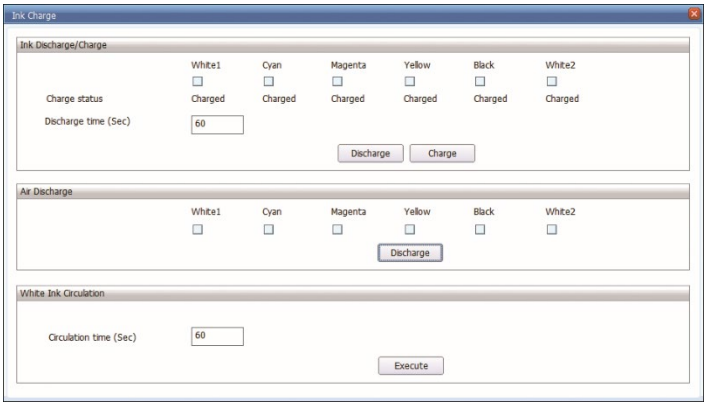


4. Select the check boxes in [Air Discharge] to discharge air bubbles for each color.

- If the print-head configuration is set to "Common head"



- If the print-head configuration is set to "Double White"

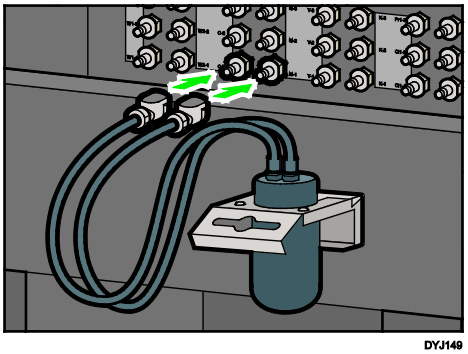


5. Click [Discharge] in the "Air Discharge" area.

Wait until "Connect the tubes of the air bubble ejection tool to the port, and click OK button." is displayed.

6. Connect the tubes of the air-bubble ejection tool to the air-bubble discharge port.

Push the tube connector straight into the port until you hear a click.



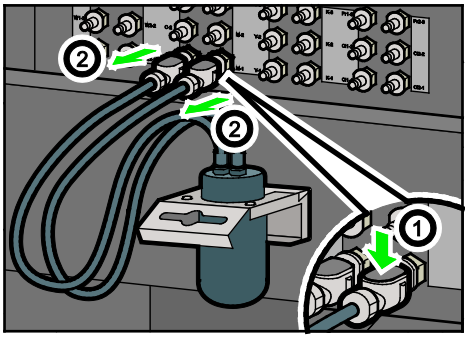
7. **Click [OK].**

   Ink is discharged to the air bubble ejection tool. Wait until "Remove the tubes of the air bubble ejection tool from the port, and click OK button." is displayed.

8. **Remove the tubes of the air bubble ejection tool from the ports.**

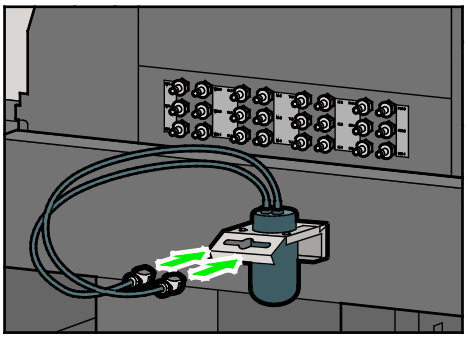
   As you remove the tubes, the ink may leak. Place an item such as a paper towel around the port.

   Pull out the tubes straight while pressing the button on the top of the port.



DYJ150

   Pass the tubes through the holes of the air bubble ejection tool to avoid splashing the ink from the removed tubes.



ECD151

9. **Click [OK].**

   The message "Be careful as the carriage moves." is displayed.

10. **Move to a place to avoid contact with the carriage, and then click [OK].**

11. **Repeat Steps 6 to 10 until air bubbles for all the colors selected in Step 4 have been discharged.**

12. **Click [Exit].**

13. **Wipe out the ink from the port and install the cover on the front of the carriage.**

14. **Store the bubble ejection tool in a dust-free place.**

*Wipe off the ink in the bubble ejection tool, discard the ink in the container, and store it in a place where it will not be exposed to dust.

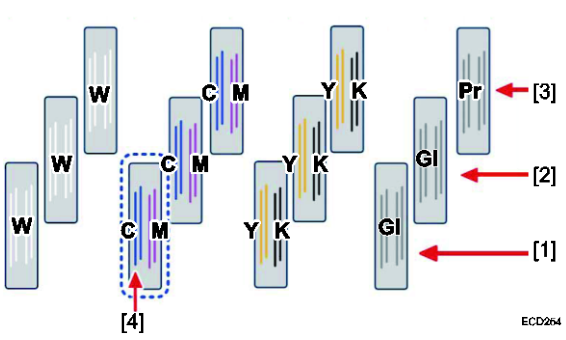
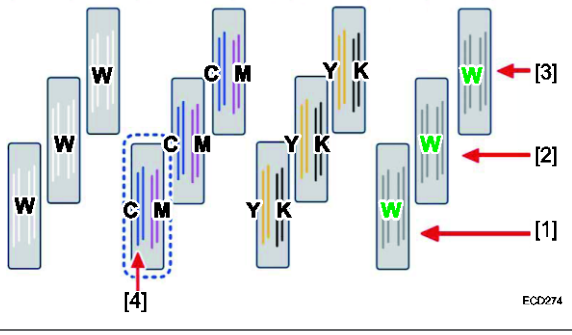
Color Offset Adjustment

The following procedure allows you to adjust the ink drop position which is misaligned for the color nozzles in the Y direction with respect to the reference nozzle (Cyan (Nozzle 1 of Head 1)).

Ink Configuration

There are two types of ink configurations. By default, it is set to "Standard Ink Config".

For details about changing the ink configuration, contact your authorized Roland DG Corporation representative.

Ink configuration	Color layout
Standard Ink Config	
Double White Ink Config	

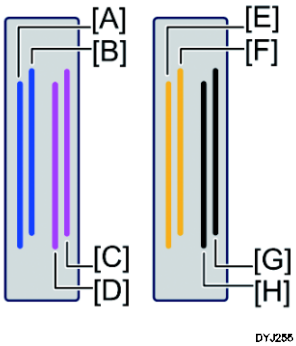
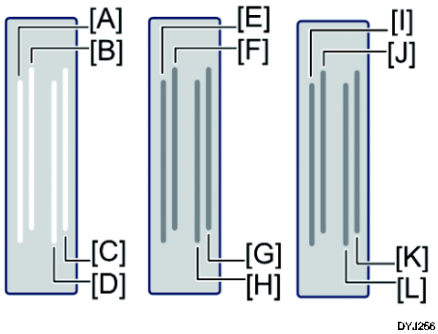
[1]: Print heads for the first row (Head 1)

[2]: Print heads for the second row (Head 2)

[3]: Print heads for the third row (Head 3)

[4]: Reference nozzle (Cyan (Nozzle 1 of Head 1))

Nozzle Configuration

Print head for C/M/Y/K nozzles	Print head for W/Gl/Pr nozzles
 • [A]: Cyan (Nozzle 1) • [B]: Cyan (Nozzle 2) • [C]: Magenta (Nozzle 2) • [D]: Magenta (Nozzle 1) • [E]: Yellow (Nozzle 1) • [F]: Yellow (Nozzle 2) • [G]: Black (Nozzle 2) • [H]: Black (Nozzle 1)	 • [A]: White 1 (Nozzle 1) • [B]: White 1 (Nozzle 2) • [C]: White 2 (Nozzle 2) • [D]: White 2 (Nozzle 1) • [E]: Gloss 1/White 3 (Nozzle 1) • [F]: Gloss 1/White 3 (Nozzle 2) • [G]: Gloss 2/White 4 (Nozzle 2) • [H]: Gloss 2/White 4 (Nozzle 1) • [I]: Primer 1/White 3 (Nozzle 1) • [J]: Primer 1/White 3 (Nozzle 2) • [K]: Primer 2/White 4 (Nozzle 2) • [L]: Primer 2/White 4 (Nozzle 1)

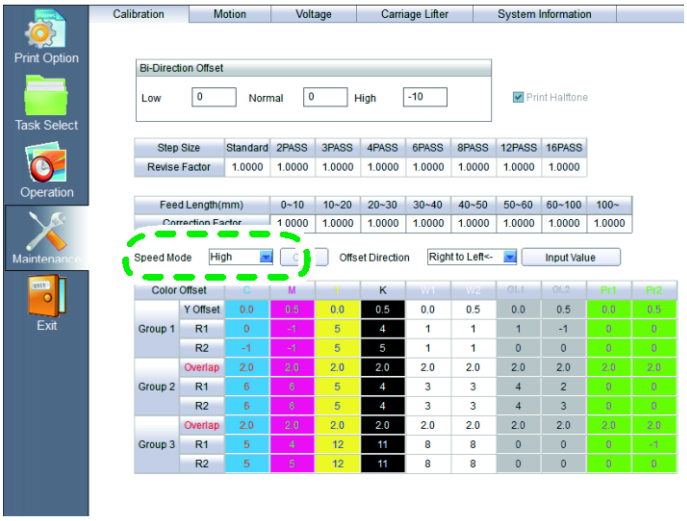
[M] to [T] vary in color depending on the ink configuration. For "Standard Ink Config", Cl and Pr. W for "Double White Ink Config".

Note

- This machine can print in bidirectional mode, and the print heads perform printing for the outbound pass and return pass when the mode is enabled. Therefore, color offset adjustment needs to be performed for both outbound pass printing and return pass printing.

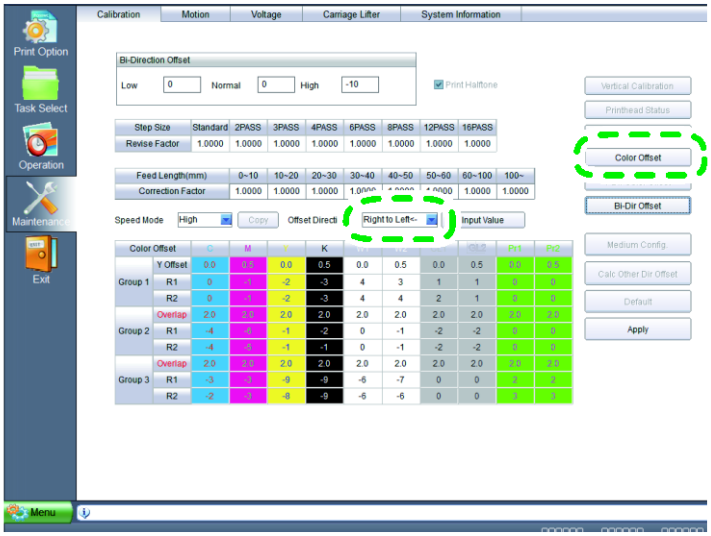
1. **Set the print media on the table.**
2. **Click the [Maintenance] tab in the Print Control window.**

3. **Select [High] in [Speed Mode] under the [Calibration] tab.**



ECE257

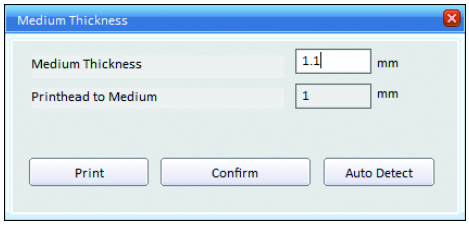
4. **Select [Right to Left<-] in [Offset Direction], and then click [Color Offset].**



ECE264

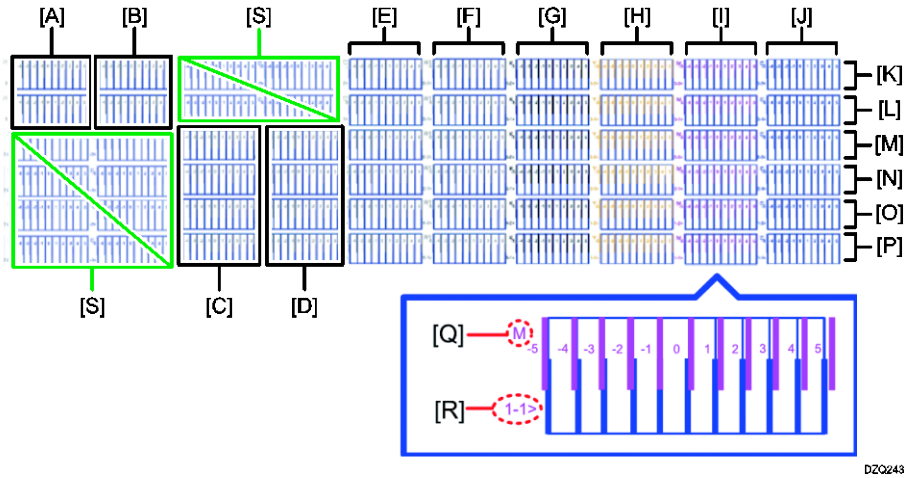
5. Enter the media thickness in [Medium Thickness], and then click [Print].

The test pattern for the outbound pass is printed.



6. Look at the test pattern for the outbound pass and specify the optimum adjustment value for each nozzle.

- The adjustment patterns for each nozzle (cyan, magenta, yellow, black, white, gloss, primer) are printed.

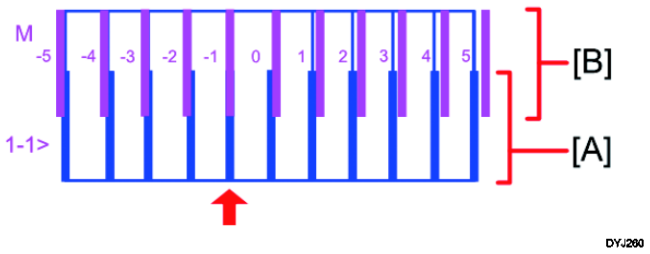


If the ink configuration is set to "Standard Ink Config", [A] and [B] are printed using primer ink; [C] and [D], using gloss ink; and [E] and [F], using white ink.

If the ink configuration is set to "Double White Ink Config", [A], [B] [C], [D], [E], and [F] are all printed using white ink.

Pr, Gl, and W are easier to see if printed on transparent media.

Symbol	Description	Symbol	Description
[A]	If set to "Standard Ink Config": Pr2 If set to "Double White Ink Config": W4	[K]	Nozzle 2 of Head 3 (3-2)
[B]	If set to "Standard Ink Config": Pr1 If set to "Double White Ink Config": W3	[L]	Nozzle 1 of Head 3 (3-1)
[C]	If set to "Standard Ink Config": Gl2 If set to "Double White Ink Config": W4	[M]	Nozzle 2 of Head 2 (2-2)
[D]	If set to "Standard Ink Config": Gl1 If set to "Double White Ink Config": W3	[N]	Nozzle 1 of Head 2 (2-1)
[E]	W2	[O]	Nozzle 2 of Head 1 (1-2)
[F]	W1	[P]	Nozzle 1 of Head 1 (1-1)
[G]	K	[Q]	Indicates the nozzle color of the adjustment pattern
[H]	Y	[R]	Indicates the nozzle of the adjustment pattern
[I]	M	[S]	Not to be used.
[J]	C		



- Look at the adjustment pattern for each nozzle. The lower line [A] indicates the reference nozzle and the upper line [B] indicates the adjustment pattern for each nozzle.
- Find the pattern where the two lines (upper line and lower line) are overlapped and aligned to form one straight line. The value at the left side of those lines is the optimum adjustment value. For the illustration above, "-1" is the optimum adjustment value for the Magenta (Nozzle 1 of Head 1) adjustment pattern.
- Check the adjustment pattern for all nozzles, and take a note of the optimum adjustment value for all nozzles.
- The lowest adjustment pattern on the right is the pattern for the reference nozzle (Cyan (Nozzle 1 of Head 1)). Therefore, you don't need to check this pattern.

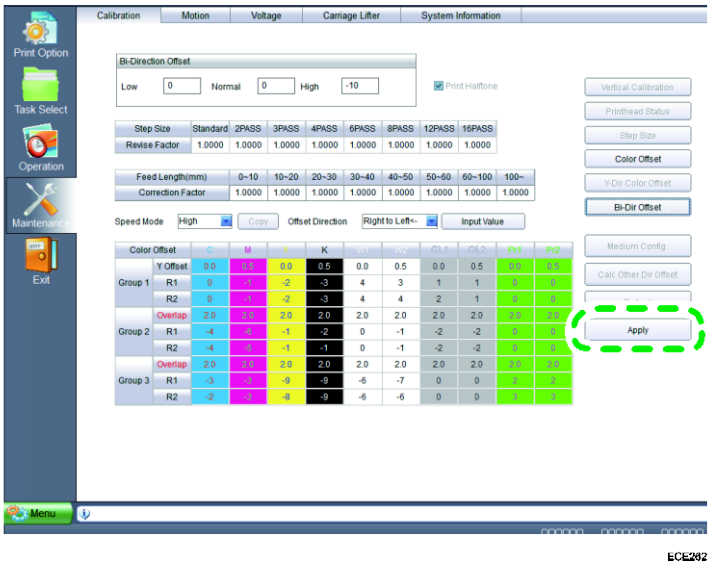
7. **Click [Input Value].**

8. Enter all the optimum adjustment values into the corresponding colors/nozzles.

If "-1" is the optimum adjustment value for Magenta (Nozzle 1 of Head 1), enter "-1" into the "1-1" column of the "M".

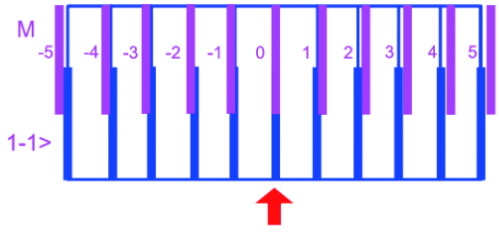
9. Click [OK].

10. Click [Apply].



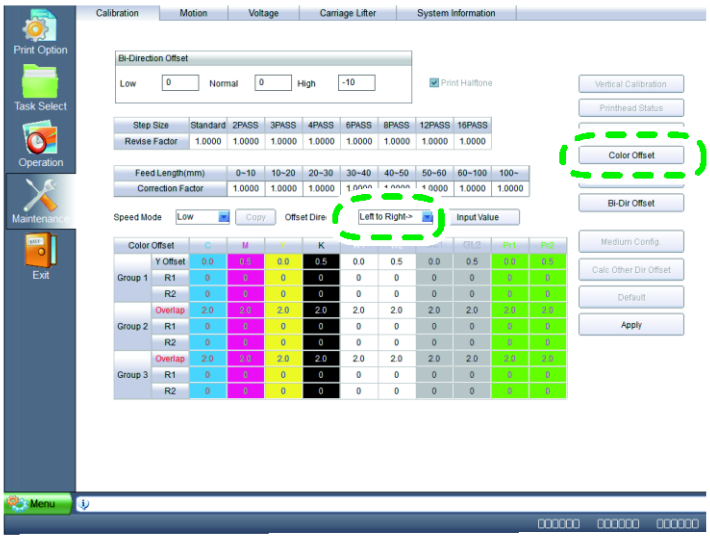
11. Print the test pattern again and check the adjustment pattern for all nozzles except for the reference nozzle.

Look at the lines with "0" next to them. Check whether or not the two lines (upper line and lower line) are overlapped and aligned to form one straight line. If a straight line is not formed, perform adjustments until the two lines become overlapped and aligned to form one straight line.



DYJ263

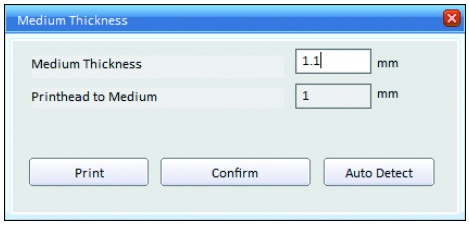
12. **Select [Left to Right->] in [Offset Direction], and then click [Color Offset].**



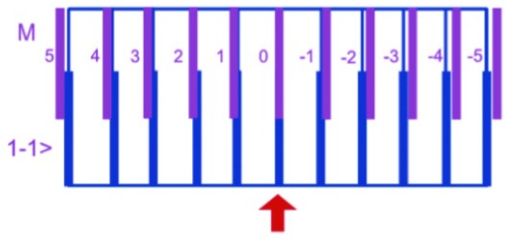
EQE234

13. **Enter the media thickness in [Medium Thickness], and then click [Print].**

The test pattern for the return pass is printed.



14. **Check the test pattern for the return pass and perform the color offset adjustment in the same way as the outbound pass. (Refer to Steps 7 to 11)**



DYJ264

Note

The test patterns "+" and "-" are displayed in the opposite direction from the outbound path display.

Adjustment for Misalignment in Bidirectional Printing

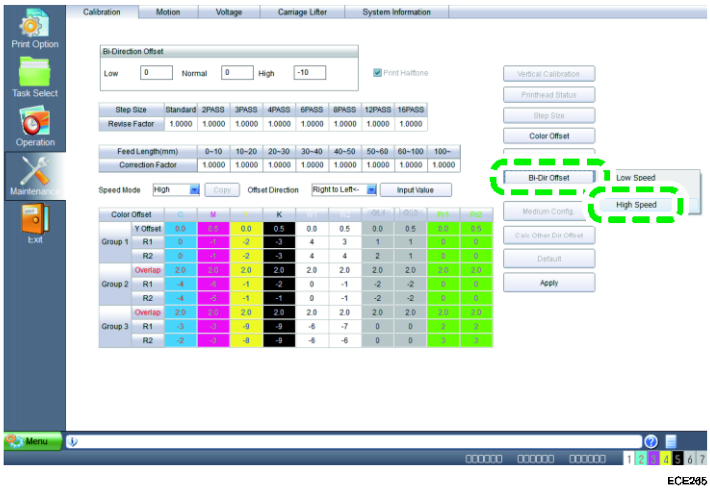
This machine can print in bidirectional mode, and the print heads perform printing for the outbound pass and return pass.

The following procedure allows you to adjust subtle misalignments that occur for the outbound and return passes.

Important

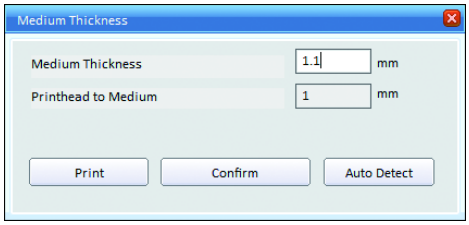
- **If also adjusting [Color Offset], do so first.**

1. **Set the print media on the table.**
2. **Click the [Maintenance] tab in the Print Control window.**
3. **Click [Bi-Dir Offset], and then click [High Speed].**



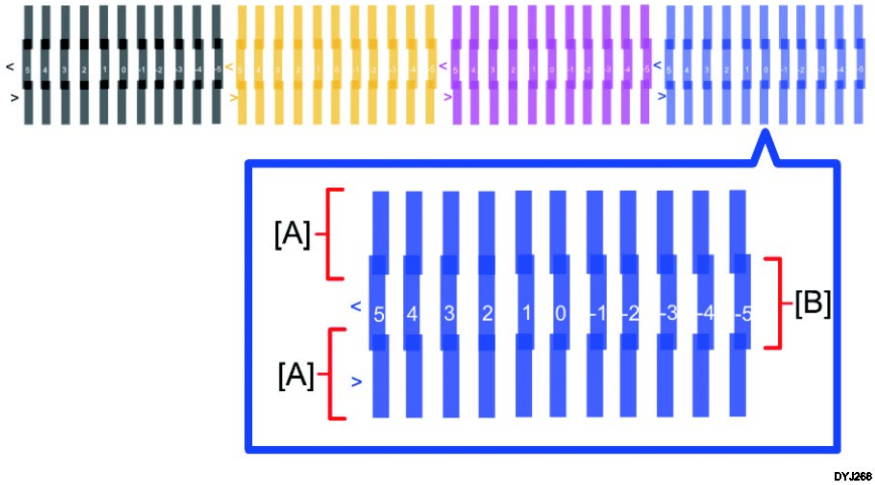
4. **Enter the media thickness in [Medium Thickness], and then click [Print].**

   The test pattern is printed.

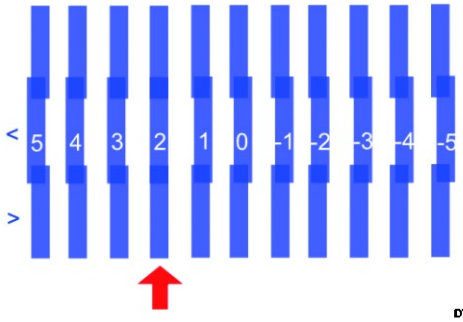


5. Check the test pattern and find the optimum adjustment value.

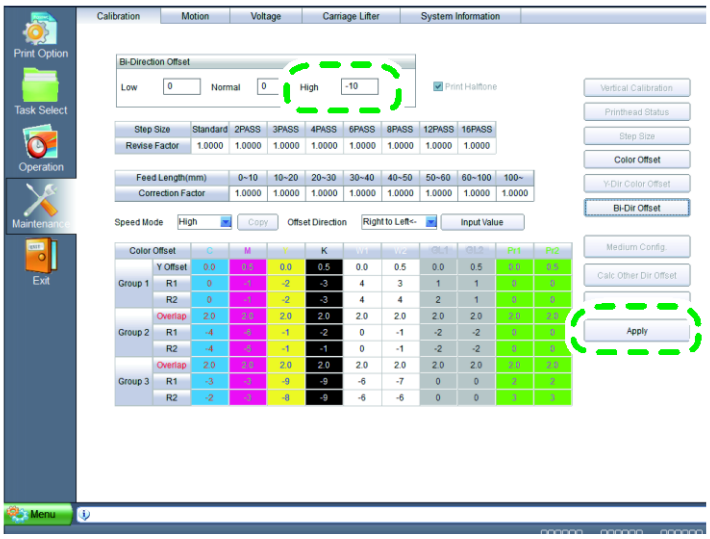
- The adjustment patterns consist of outbound pass lines and return pass lines for each color. [A] consists of lines for the outbound pass, and [B] consists of lines for the return pass. Adjustment values (-5 to 5) are printed on return pass lines.
- This test pattern is printed using only the print heads for the first row. The pattern is identical for the adjustment patterns for Cyan, Magenta, Yellow, and Black. Therefore, only check the adjustment pattern for Cyan.



- Find the pattern where outbound pass lines and return pass line are overlapped and aligned to form one straight line, and then check its adjustment value. In the following case shown below, "2" is the optimum adjustment value.



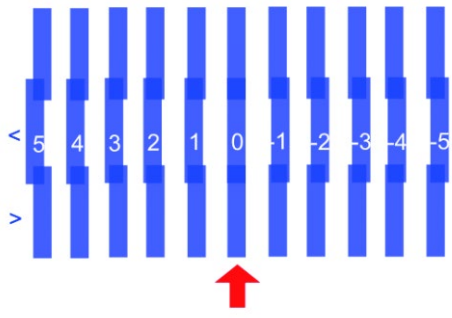
6. Enter the optimum adjustment value in [High] for [Bi-Direction Offset], and then click [Apply].



ECE268

7. Print the test pattern and check the adjustment pattern for Cyan.

Look at the return pass line with "0" on it. Check whether or not the outbound pass lines and the return pass lines are overlapped and aligned to form one straight line. If a straight line is not formed, perform adjustments until they become overlapped and aligned to form one straight line.

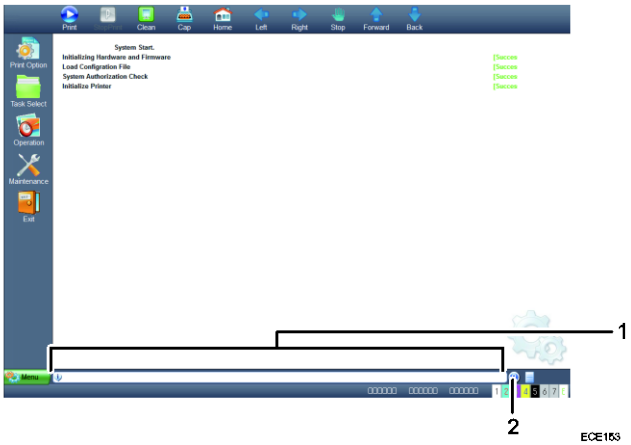


8. Check the adjustment patterns for Magenta, Yellow, and Black.

- Look at the return pass line with "0" on it. Check whether or not the outbound pass lines and the return pass lines are overlapped and aligned to form a straight line.
- If a straight line is not formed, perform "Color Offset Adjustment" again because the ink drop position is misaligned for the color nozzles. After this, perform page 99 "Adjustment for Misalignment in Bidirectional Printing" again.

When You Check Messages

The status of the machine is indicated by messages that appear in Print Control. This section describes where the messages appear on the Print Control screen.

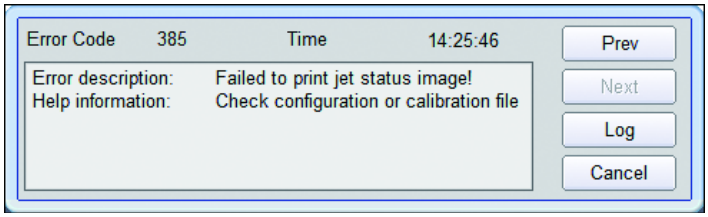


1. System messages

Displays messages from the machine system.

2. ? icon

Click the icon to display the error code and the details of the messages.



If a Message Appears

Important

- **An error code will be displayed together in the service call message. Make sure to write down the error code and contact your authorized Roland DG Corporation representative.**
- **Before turning off the power, see page 44 "Turning On/Off the Power".**

Message	Cause	Solution
1: "It is now printing." "Try again Later. Or abort software process and restart program."	The machine is printing.	Perform again after printing is complete. If the same message still appears, restart Print Control.
4: "Hardware configuration is incorrect, machine cannot print." "Contact your equipment provider, please!"	The operating system does not support Print Control.	Check the version of Print Control and the operating system being used, and contact your authorized Roland DG Corporation representative.
5: "Illegal print head voltage found!" "Contact your equipment provider, please!"	An error has occurred in the carriage or the print heads.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
6: "Carriage height is too low."	• The height of the carriage is too low. • There is an error with the height of the carriage. • The caps is not detached.	• Adjust the height of the carriage by using the [Carriage Lifter] tab on the Print Control [Maintenance] screen. If the carriage position error is too large, click [Lifter Back Zero], and reset the height of the carriage. • Detaching caps
8: "System is busy."	The computer being used has insufficient memory.	Close any unnecessary applications that are open, and then restart Print Control.

Message	Cause	Solution
9: "Insufficient ink or unmeasurable level" "Failed to read ink level."	There is insufficient ink remaining, or the remaining ink detection sensor has malfunctioned.	Replenish ink. If the same message still appears, contact your authorized Roland DG Corporation representative. For details about how to replenish ink, see page 121 "Replenishing Ink".
10: "Insufficient ink"	There is insufficient ink remaining, or the remaining ink detection sensor has malfunctioned.	Replenish ink. If the same message still appears, contact your authorized Roland DG Corporation representative. For details about how to replenish ink, see page 121 "Replenishing Ink".
11: "Designated RIP data does not exist." "1.Special rip file can't be read. 2.The net rip data stream is interrupted."	• The specified RIP file does not exist, or there is a problem with the hard disk of the computer. • There is a problem in the connection between the machine and the computer.	• Reselect a RIP file to print. • Check that the machine is securely connected with the included USB cable.
14: "The DPI does not support the RIP document." "The XDPI of rip source over system capacity."	The resolution of the X direction in the specified RIP file exceeds the limit.	Reset the RIP file to a lower resolution.
15: "Incorrect Print Head Channel Parameter." "Restore parameter files or re-install software."	There is a problem with the setting parameter of the print heads or the setting file is corrupted.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".

Message	Cause	Solution
16: "Incorrect Amount of Channel Parameter." "Restore parameter files or re-install software."	There is a problem with the setting parameter of the print heads or the setting file is corrupted.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
17: "Channel parameter is incorrect." "Restore parameter files or re-install software."	There is a problem with the setting parameter of the print heads or the setting file is corrupted.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
18: "Channel parameter is incorrect." "Restore parameter files or re-install software."	There is a problem with the setting parameter of the print heads or the setting file is corrupted.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
19: "Memory is insufficient." "Close some application which is used much memory."	• The computer being used has insufficient memory. • The size of the specified RIP file is too large.	• Close any unnecessary applications that are open, and then restart Print Control. • Reset the RIP file to a lower resolution or increase the memory capacity of the computer.

Message	Cause	Solution
21: "System doesn't support the designated printing PASS amount." "Attempt to change print mode, restart print."	Specifies the number of paths not supported by the machine.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
22: "Printing image width of current task is more than the available width." "1.Confirm the validity of medium width. 2.Change to more broad medium. 3.Limit printing region."	The width of the specified RIP file exceeds the set media size.	• Check that the width of the set media is correct. • Change the media to be used. • Use the partial printing function to print. For details, see page 69 "Partial Printing".
23: "The printing image width exceeds the width of the machine platform." "Restore parameter files or re-install software."	• The value of the print start position in the X direction is too large. • There is a problem with the settings file. • The carriage motion buffer is too large.	• Reset the print start position for the X direction. • Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings". • If the same message still appears, you must change the carriage motion buffer. Contact your authorized Roland DG Corporation representative.

Message	Cause	Solution
24: "The print position is too close to the zero position." "Set the print position to a little further from the origin."	• There is a problem with the print start position. • The carriage motion buffer is too large.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
25: "Print size exceeds range of Y axis motion."	• The Y direction print size is too large. • The Y direction print start position is too large.	• Make the printing size of the Y direction smaller. • Reset the print start position for the Y direction.
26: "Printing speed is too fast." "Turn down the speed of printing."	The print speed set in Print Control is too fast.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
30: "Failed to load error information." "Restore parameter files or re-install software."	There is a problem with the version information of Print Control.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
31: "Failed to load parameter." "Restore parameter files or re-install software."	There is a problem with the parameter or the setting file is corrupt.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".

Message	Cause	Solution
32: "Failed to load machine configuration." "Restore parameter files or re-install software."	There is a problem with the parameter or the setting file is corrupt.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
33: "Failed to react to RIP database." "Restore parameter files or re-install software."	There is a problem with the parameter or the setting file is corrupt.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
34: "Failed to load temperature-voltage curve." "Restore parameter files or re-install software."	There is an error in the voltage value of the print heads.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
35: "Failed to load color curve." "Restore parameter files or re-install software."	There is a problem with the parameter or the setting file is corrupt.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
50: "Carriage cannot go to original position." "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.

Message	Cause	Solution
61: "Carriage cannot go to original position." "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
79: "Failed to add printing task." "1.File is using by other process. 2.File format is incorrect."	• The specified RIP file is in use. • The specified RIP file uses a format that is not supported by the machine.	• Wait a while before attempting printing again. • Convert the file to the correct format.
80: "Designated RIP driver solution has failed."	You are specifying a RIP driver that is not supported by the machine.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
88: "USB cable is not connected."	There is a problem with the USB connection between the machine and the computer.	Check that the machine is securely connected with the included USB cable. If the USB cable is damaged or there is a problem with the USB connection of the machine, contact your authorized Roland DG Corporation representative.
99: "USB cable is not connected."	There is a problem with the USB connection between the machine and the computer.	Check that the machine is securely connected with the included USB cable. If the USB cable is damaged or there is a problem with the USB connection of the machine, contact your authorized Roland DG Corporation representative.

Message	Cause	Solution
100: "Failed to update printing speed." "Specified resolution is not supported."	You are specifying a resolution not supported by the machine.	Open the property screen of the printing task in Print Control, and then select the appropriate print mode from [Draft], [Production], [Standard], or [High Quality].
111: "System control card has not been driven." "Contact your equipment provider, please!"	• The machine is not turned on. • There is a problem with the USB cable connection. • There is a problem with the control card.	Check the connection of the USB cable, and then turn on the power to the machine. If the same message still appears, contact your authorized Roland DG Corporation representative.
112: "Main board's firmware is not active." "Contact your equipment provider, please!"	An error has occurred in the control card of the machine.	Restart Print Control. If the same message still appears, contact your authorized Roland DG Corporation representative.
113: "Main board's firmware is not active." "Contact your equipment provider, please!"	An error has occurred in the control card of the machine.	Restart Print Control. If the same message still appears, contact your authorized Roland DG Corporation representative.
116: "Carriage card found error." "Contact your equipment provider, please!"	An error has occurred in the carriage card of the machine.	Restart Print Control. If the same message still appears, contact your authorized Roland DG Corporation representative.
117: "Carriage card exist voltage error!" "Contact your equipment provider, please!"	An error has occurred in the carriage card of the machine.	Restart Print Control. If the same message still appears, contact your authorized Roland DG Corporation representative.
118: "Setting up optical fiber cable communication has failed." "Check carriage card is work normally."	An error has occurred in the carriage card or optical fiber cable of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.

Message	Cause	Solution
119: "Setting up channel mapping has failed." "Contact your equipment provider, please!"	An error has occurred in the carriage card of the controller software of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
120: "Restart has been cancelled by user, position system does not work correctly, please do not execute the carriage motion."	As the reset operation on the machine was canceled, initialization of the carriage position failed.	Restart Print Control. Do not perform any other operations while Print Control is restarting.
121: "Limit position signal cannot be detected after machinery reset. Reset has failed. Position system is not working correctly." "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
122: "When doing reset, there is no carriage encoder signal, and can't execute reset function." "Please confirm interlock switch and restart software. If the device do not recover, please contact your equipment provider."	• The machine's front cover or another cover is open. • The carriage is positioned too far to the left or right end.	• Close the cover properly, and then reboot Print Control. • Move the carriage by hand approximately 10 cm toward the center, and then reboot Print Control. If the same message appears even after this is performed, turn the machine off and on. If the same message still appears, contact your authorized Roland DG Corporation representative.

Message	Cause	Solution
123: "When doing reset, carriage encoder signal is reversed." "Please confirm interlock switch and restart software. If the device do not recover, please contact your equipment provider."	• The machine's front cover or another cover is open. • The carriage is positioned too far to the left or right end.	• Close the cover properly, and then reboot Print Control. • Move the carriage by hand approximately 10 cm toward the center, and then reboot Print Control. If the same message appears even after this is performed, turn the machine off and on. If the same message still appears, contact your authorized Roland DG Corporation representative.
124: "Both of left and right limit switches are in effective condition." "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
125: "The emergency stop has been pressed." "Twist emergency switch, then restart software."	The emergency stop button on the machine was pressed.	Close Print Control, and then release the emergency stop button. Turn the power to the machine off and then on again, and then restart Print Control. For details about how to release the emergency stop button, see page 17 "Emergency Buttons".
126: "Both Y limit switch signals are valid." "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
127: "Y position encoder no signal" "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.

Message	Cause	Solution
128: "The signal phase of Y position encoder is inverse." "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
129: "Resetting position is timed out."	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
130: "Can't detect zero signal after all motion instruction finish." "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
131: "Medium sensor signal has not been detected." "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
132: "Synchronization error found while resetting Y axis." "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
133: "Y1-Y2 gap over the correctable range" "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
134: "Counting error is too large while initializing Y1-Y2 encoder." "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.

Message	Cause	Solution
135: "Y1-Y2 gap is too large." "Please confirm interlock switch and restart software. If the device do not recover, please contact your equipment provider."	• The machine's front cover or another cover is open. • The carriage is positioned too far to the left or right end.	• Close the cover properly, and then reboot Print Control. • Move the carriage by hand approximately 10 cm toward the center, and then reboot Print Control. If the same message appears even after this is performed, turn the machine off and on. If the same message still appears, contact your authorized Roland DG Corporation representative.
136: "Y2 position encoder no signal." "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
137: "The signal phase of Y2 position encoder is inverse." "Please confirm interlock switch and restart software. If the device do not recover, please contact your equipment provider."	• The machine's front cover or another cover is open. • The carriage is positioned too far to the left or right end.	• Close the cover properly, and then reboot Print Control. • Move the carriage by hand approximately 10 cm toward the center, and then reboot Print Control. If the same message appears even after this is performed, turn the machine off and on. If the same message still appears, contact your authorized Roland DG Corporation representative.
138: "X Axis Reset Fault" "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.

Message	Cause	Solution
139: "Y Axis Reset Fault" "Contact your equipment provider, please!"	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
140: "Software version does not match the board." "Restore parameter files or re-install software."	There is a problem with the software version or the controller board.	Restart Print Control. If the same message still appears, contact your authorized Roland DG Corporation representative.
143: "Main board does not match with carriage card." "Contact your equipment provider, please!"	There is a problem with the main card of the machine or the carriage card.	Restart Print Control. If the same message still appears, contact your authorized Roland DG Corporation representative.
144: "Failed to get carriage card information, the system cannot work as normal." "Contact your equipment provider, please!"	There is a problem with the carriage card of the machine.	Restart Print Control. If the same message still appears, contact your authorized Roland DG Corporation representative.
171: "Found ink level card Error!" "Re-connect or properly install the card."	There is a problem with the remaining ink detection sensor of the machine.	Restart Print Control. If the same message still appears, contact your authorized Roland DG Corporation representative.
260: "Carriage motion system has failed to correct automatically." "1.Verify the carriage work is normally.2.Verify the carriage encoder work is normally."	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.
301: "Printing data is broken." "Verify RIP data source."	There is a problem with the RIP file.	Check that the RIP file is OK. After resolving any problems, click the [Continue] button and resume printing.

Message	Cause	Solution
302: "The printing task data source is disconnected." "Verify RIP data source."	There is a problem with the RIP file.	Check that the RIP file is OK. After resolving any problems, click the [Continue] button and resume printing.
303: "The printing task data source is disconnected." "Verify RIP data source."	There is a problem with the RIP file.	Check that the RIP file is OK. After resolving any problems, click the [Continue] button and resume printing.
304: "The printing task data source is disconnected." "Verify RIP data source."	There is a problem with the RIP file.	Check that the RIP file is OK. After resolving any problems, click the [Continue] button and resume printing.
305: "The printing task data source is disconnected." "Verify RIP data source."	There is a problem with the RIP file.	Check that the RIP file is OK. After resolving any problems, click the [Continue] button and resume printing.
309: "In the printing process, found USB disconnect."	• The USB cable is not connected. • The USB connector is loose. • The computer is infected with a virus.	• Insert the USB cable, and then try printing again. • Check the connection part of the USB cable. If there is a problem with the connector, contact your authorized Roland DG Corporation representative. • Use anti-virus software to check for viruses on the computer or replace the computer being used.
310: "When printing, if the motion designated exceeds maximum length or carriage cannot move to designated position, printing will be cancelled."	There is a problem with the carriage system of the machine.	Turn the power to the machine off and then on again. If the same message still appears, contact your authorized Roland DG Corporation representative.

Message	Cause	Solution
311: "In the printing process, found position error. Check motion or encoder."	The proximity sensor stopped the machine.	Delete the remaining print jobs, and then reboot Print Control. If the same message appears even after this is performed, turn the machine off and on. If the same message still appears, contact your authorized Roland DG Corporation representative.
312: "Error in printing process control." "Please confirm interlock switch and restart software. If the device do not recover, please contact your equipment provider."	• The USB cable is not connected. • The USB connector is loose. • The computer is infected with a virus.	• Insert the USB cable, and then try printing again. • Check the connection part of the USB cable. If there is a problem with the connector, contact your authorized Roland DG Corporation representative. • Use anti-virus software to check for viruses on the computer or replace the computer being used.
	• The machine's front cover or another cover is open. • The carriage is positioned too far to the left or right end.	• Close the cover properly, and then reboot Print Control. • Move the carriage by hand approximately 10 cm toward the center, and then reboot Print Control. If the same message appears even after this is performed, turn the machine off and on. If the same message still appears, contact your authorized Roland DG Corporation representative.
318: "Failed to cleaning in printing!"	There is a problem with the maintenance station.	Clean the maintenance station. For details about how to clean the maintenance station, see "Requests for Daily Care and Maintenance".

Message	Cause	Solution
385: "Failed to print jet status image!" "Check configuration or calibration file."	There is a problem with the settings file for calibration.	Restore the settings file. If the same message still appears, reinstall Print Control, and then restore the settings file. For details about how to restore the settings file, see page 80 "Backing Up/Restoring the Settings".
401: "Parameter backup has failed."	You do not have the permission to write into the specified directory or the parameter file.	Remove the access restrictions for files or folders, or check with your system administrator.
402: "Failed to backup printing parameter." "The destination file can't be write."	You do not have the permission to write into the specified directory or the parameter file.	Remove the access restrictions for files or folders, or check with your system administrator.
403: "The parameter inputted is invalid, the operation will be cancelled." "The file format is incorrect."	There is a problem with the backup file.	Check the file import destination, and then import the settings file again. For details about how to import the settings file, see page 80 "Backing Up/Restoring the Settings".
410: "Software version does not match the setting files." "Restore parameter files or re-install software."	There is a problem with the Print Control setting values.	Restart Print Control, and then import the settings file again. If the same message still appears, reinstall Print Control. For details about how to import the settings file, see page 80 "Backing Up/Restoring the Settings".
1190: "Failed to load waveform file." "Restore parameter files or re-install software."	You do not have permission to access the settings file.	Launch Print Control as the system administrator, and then import the settings file again. If the same message still appears, reinstall Print Control. For details about how to import the settings file, see page 80 "Backing Up/Restoring the Settings".

Message	Cause	Solution
1191: "The waveform format is incorrect." "Restore parameter files or re-install software."	• You do not have permission to access the settings file. • There is a problem with the format of the specified file or the directory.	Launch Print Control as the system administrator, and then import the settings file again. If the same message still appears, reinstall Print Control. For details about how to import the settings file, see page 80 "Backing Up/Restoring the Settings".

If the problem cannot be resolved, contact your authorized Roland DG Corporation representative.

6. Maintenance and Specifications

This chapter explains precautions for replacing ink, how to clean the machine, and specifications of the machine.

Replenishing and Replacing Consumables

This section describes how to replenish the ink tank, replace the flushing pad, and dispose of used ink.

Replenishing Ink

If the remaining amount of ink in the ink tank is low, the machine will make a beeping sound. Prepare an ink bottle to replenish the ink.

⚠WARNING

- Avoid mixing ink with incompatible materials.

- Be careful not to spill ink. Avoid ink flowing into the natural water system or household wastewater. Ink causes irritation and is toxic.

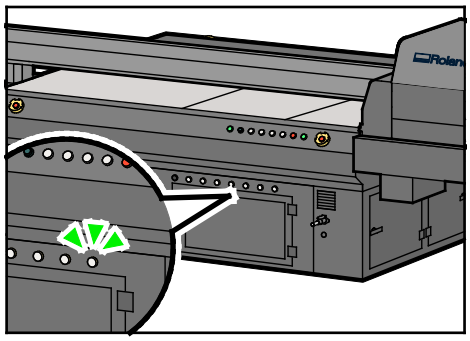
- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

Important

- **Do not place caps or other items on the table as the carriage may move when replenishing ink during printing.**
- **If you want to dispose of used ink, contact a company that handles industrial waste.**
- **Be careful not to allow dust or foreign matter to enter the ink tank. Wipe off any dirt or foreign matter on the spout or cap of the ink tank.**

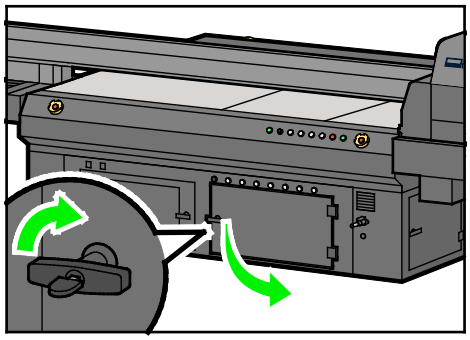
1. **Check which lamp is lit from the ink lamps located on the front side of the machine.**

   The lamp for which a beeping sound is made is lit.



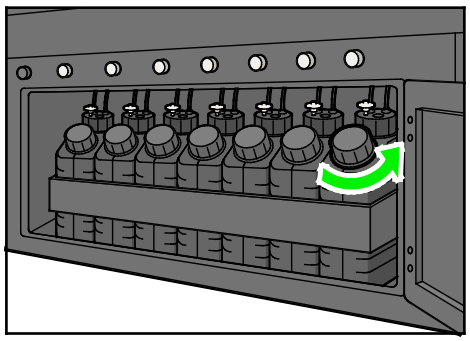
2. Turn the knob clockwise and open the front cover.

If the front cover is locked, use the included key.



ECD155

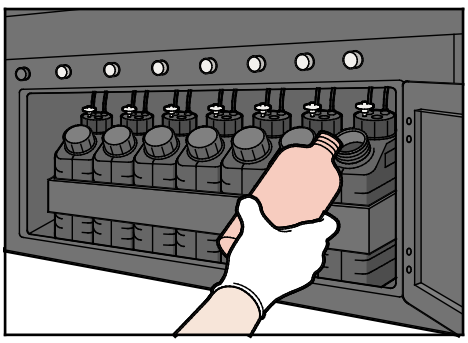
3. Open the cap of the ink tanks to be replenished with ink.



DVB157

4. Open the cap of an ink bottle for replenishing, and then replenish ink into the ink tank.

- The buzzer will stop when you finish replenishing ink. Be sure to empty all the ink from the ink bottle.
- When replenishing white ink, confirm the cap of the ink bottle is closed and shake the bottle well before replenishing.



DVB158

5. Close the cap of the ink tank.

6. **Close the front cover and lock the cover.**

   Be sure to store the key in a safe place.

Replacing the Flushing Pad

Check the amount of ink accumulated on the surface of the pad at least once a week. If 3 mm (approx. 0.1 inches) of ink or more accumulates above the upper surface of the pad, replace the flushing pad.

⚠WARNING

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

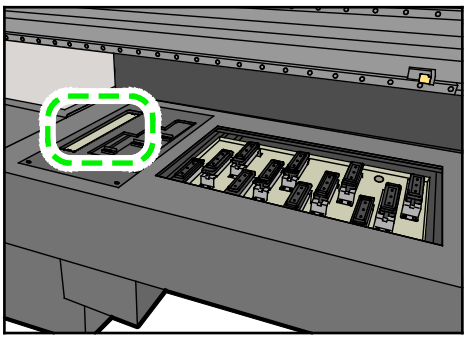
Important

- **Only use a genuine replacement pad. Otherwise, malfunction or damage may result.**
- **Do not place any object on the table as the carriage moves there during replacement.**

1. **Click [Maintenance Mode] on the [Print Option] tab in Print Control.**
2. **Click [Start].**

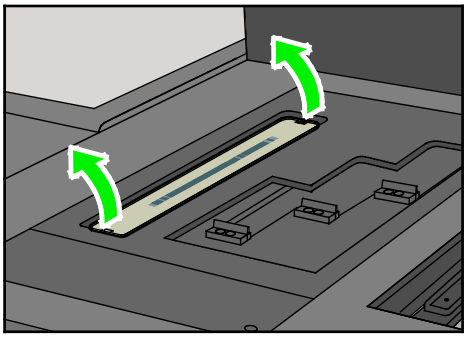
   Move away from the gantry as the carriage moves to the left-side ink receiver position.

3. **Remove the used flushing pad located on the left side of the maintenance station.**



ECD165

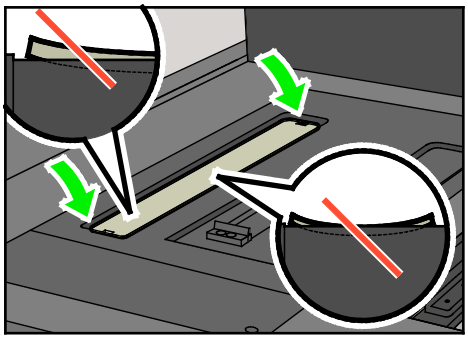
Remove the pad from the grooves located at both ends.



ECD166

4. **Attach a new flushing pad.**

- Do not press the pad too strongly. Otherwise the pad might crush, causing defects in cleaning.
- Attach the pad firmly. When printing is performed with the upper surface of the pad rising above the flush receiving section, it interferes with the print heads. This may cause an ink discharge defect.



5. **Click [Exit] to exit the maintenance mode.**

Move away from the gantry as the carriage moves to the maintenance station position.

Disposing of Waste Ink

The waste ink tank accumulates unnecessary ink discharged by head cleaning, etc.

If the waste ink tank is full, the machine will make a beeping sound. Dispose of the waste ink in the waste ink tank.

⚠WARNING

- Avoid mixing ink with incompatible materials.

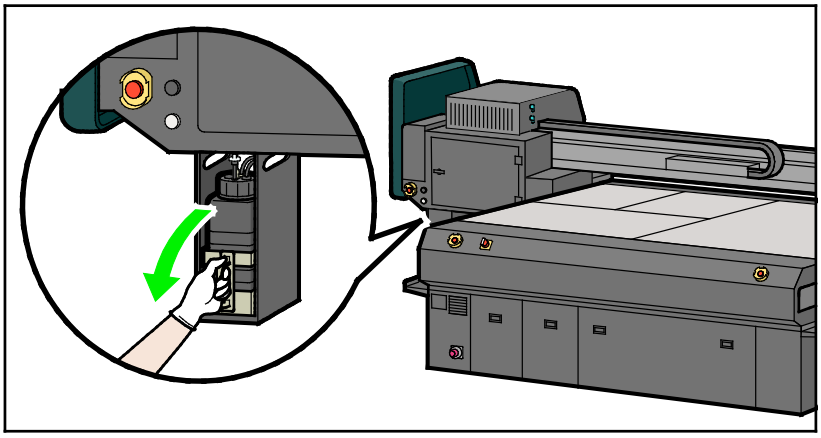
- Be careful not to spill ink. Avoid ink flowing into the natural water system or household wastewater. Ink causes irritation and is toxic.

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

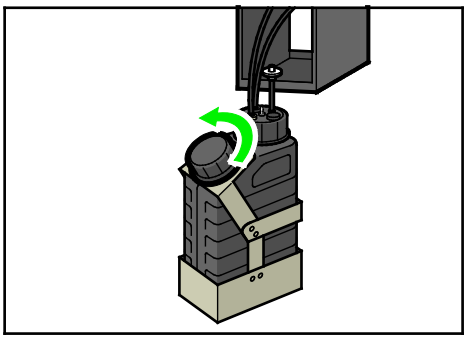
Important

- **Do not replace the waste ink tank while the machine is printing or being cleaned.**
- **If you moved the waste ink to a polyethylene tank, contact a company that handles industrial waste.**
- **Some components such as photopolymerization initiators are toxic to aquatic animals. Do not flow these components in natural water such as rivers or domestic wastewater such as that from bathrooms or roads.**
- **Before disposing of the waste ink from the machine, spread paper or some other material around the area to keep ink from dirtying your workspace.**

1. **Holding the grip on the waste ink tank at the front right of the machine, pull the tank from the back.**

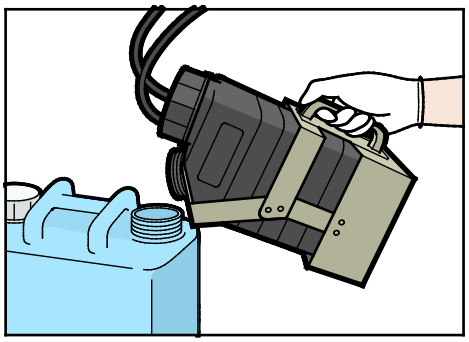


2. **Place the waste ink tank on the floor, and then remove the cap that does not have tubes attached.**



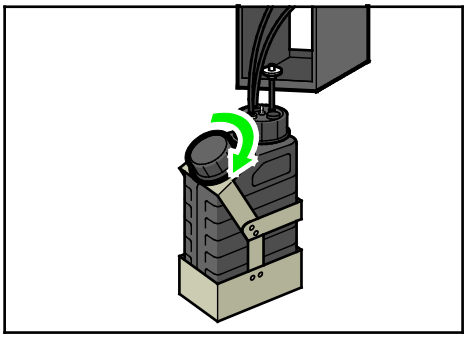
ECD161

3. **Pour the waste ink into a dedicated container such as a polyethylene tank.**



ECD162

4. **Wipe off any ink on the waste ink tank, and then close the cap.**



5. **Return the waste ink tank to its original position.**

Confirm that the tubes coming out of the waste ink tank are not bent or crushed.

If the Machine Is to be Left Unused for a Long Time or If a Power Outage Is Scheduled

The solution depends on how long the machine is to be left unused or the duration of the scheduled power outage.

- If the machine is to be left unused for 10 days or longer

  Discharge the ink regardless of the duration of the power outage. For details, see page 127 "Discharging Ink".

Discharging Ink

If leaving the machine idle for a long period (10 days or more), discharge the ink before stopping the machine.

Before using the machine after discharging the ink, it is necessary to fill the tanks with ink. Contact your authorized Roland DG Corporation representative to fill the tanks with ink.

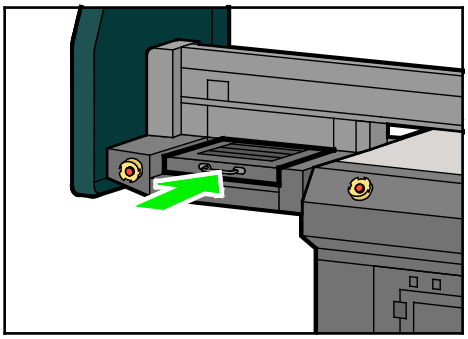
⚠WARNING

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

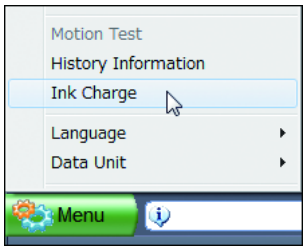
Important

- **Do not place any object on the table as the carriage moves there.**

1. **Slide the cover of the left-side ink receiver section carefully into the printer until it stops.**

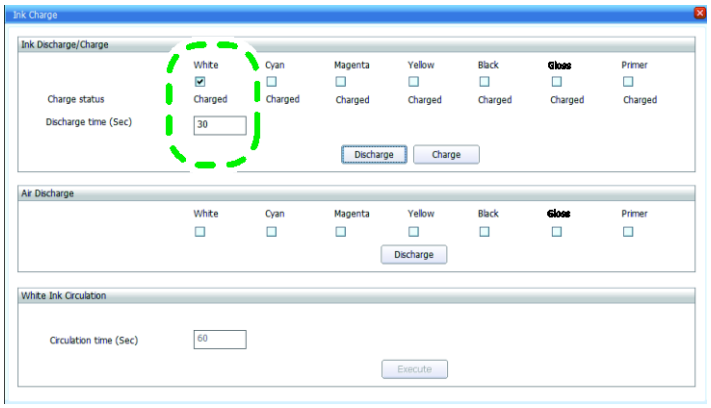


2. From [Menu] in Print Control, select [Ink Charge].



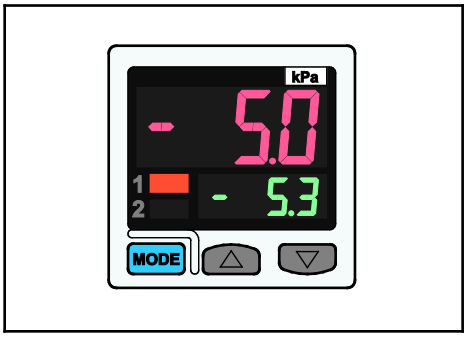
3. Check [White] in "Ink Discharge/Charge" area, and then set "Discharge time (Sec)" to 30 seconds.

If the ink configuration is set to "Double White Ink Config", check [White1] in "Ink Discharge/Charge" area, and then set "Discharge time (Sec)" to 30 seconds.



ECE237

4. Check the pressure gauges at the bottom of the front part of the machine and make a note of the indicated pressures.



DZQ242

- There are two gauges. Make a note of the Lo-1, Hi-1, and P2 pressures indicated by each gauge.
- To switch between the Lo-1, Hi-1, and P2 indications on a gauge, press the [MODE] button.
- If the transparent protective cover is on the gauge, remove it to access the buttons.
- The pressures you have made a note of are required in order to stop ink discharge.

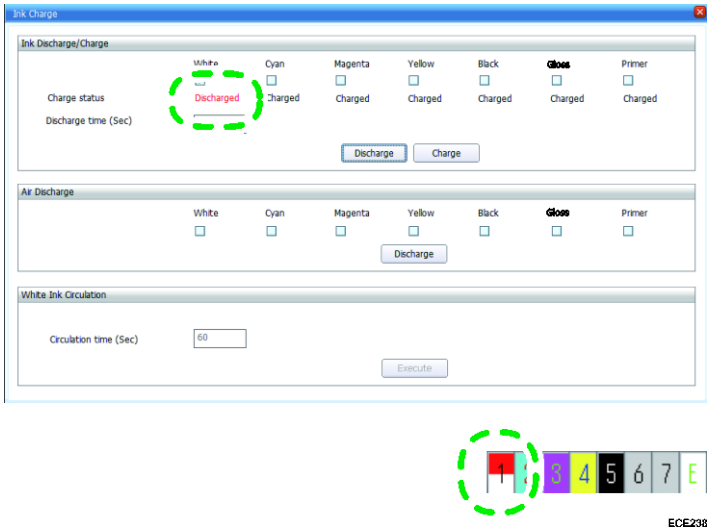
5. Change the pressures indicated by the pressure gauges as follows.

- Lo-1 = 0.1kPa, Hi-1 = 0.5kPa, P2 = 0.0kPa
- You can switch between the Lo-1, Hi-1, and P2 indications on a gauge by pressing the [MODE] button. To change the indicated pressure, press the [△] and [▽] buttons.
- Set the Lo-1 and Hi-1 pressures indicated by both gauges to the same value. Do likewise for the P2 pressures.

6. Click [Discharge] in the "Ink Discharge/Charge" area.

The carriage moves to the left-side ink receiver, and then ink discharge starts.

Once discharge ends, the message "Discharged" appears. Of the sub tank ink levels indicated at the lower right of the screen, the sub tank of the discharged ink flashes in red.



ECE238

7. Next, discharge the ink in the following order. Check 2 colors at a time, specify "Discharge time (Sec)", and then execute [Discharge].

If the ink configuration is set to "Standard Ink Config"

Cyan and Magenta (Discharge time: 60 sec) → Yellow and Black (Discharge time: 60 sec) → Gloss and Primer (Discharge time: 60 sec)

If the ink configuration is set to "Double White Ink Config"

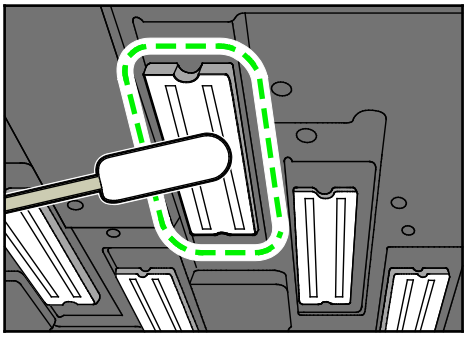
Cyan and Magenta (Discharge time: 60 sec) → Yellow and Black (Discharge time: 60 sec) → White2 (Discharge time: 30 sec)

After the ink for all colors becomes "Discharged", go to the next step.

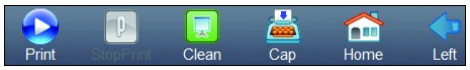
8. **Apply cleaning liquid to the cleaning stick, and then use the cleaning stick to apply cleaning liquid to the nozzle faces of the print heads.**

   This prevents the ink from clogging on the nozzle surface while the machine is left unused.

   You only need to apply cleaning liquid to the nozzle faces. Be careful not to rub the nozzle faces with excessive force.



9. **Click [Cap] to cap the print head.**



10. **To stop the ink discharge, return the indicated pressures to those you made a note of in Step 4, check the necessary color, and click [Charge].**

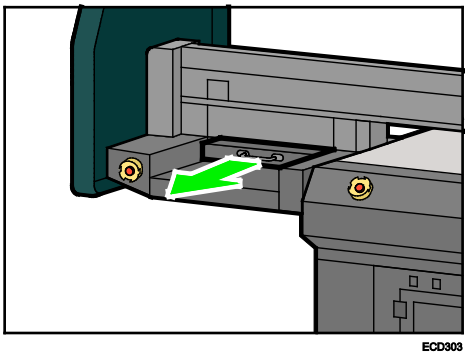
    Ink is refilled. After the tanks have been refilled, the sub tank ink level indicated at the lower right of the screen stops flashing and returns to its normal state.

    If not stopping the ink discharge, go to the next step.

11. **Turn off the power on the operation panel at the front of the machine.**

12. **Turn off the computer.**

13. **Pull the cover of the left-side ink receiver section to return it to its original position.**



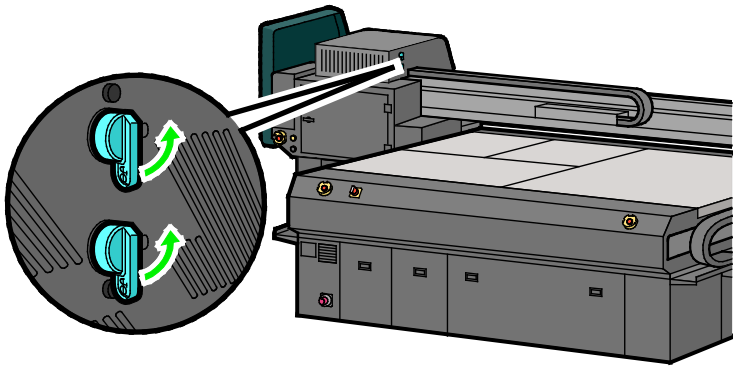
If you need to turn the machine off with the main power switch for a scheduled power outage, contact your authorized Roland DG Corporation representative.

Closing the Negative Pressure Valves

If the machine is to be left unused for less than 10 days and a power outage is scheduled, close the negative pressure valves.

1. **Move the carriage to the left ink tray at the left end.**
2. **Turn the machine's power off.**

   For details about how to turn the power off, see page 45 "Turning Off the Power".
3. **Turn the main power switch off.**
4. **Turn the two negative pressure valves on the side of the carriage counterclockwise to close them.**



To use the machine, open the two negative pressure valves.

List of Consumables

Ink Bottles

These ink bottles are used to replenish ink in the main tank of this machine.

Standard ink

Name	Sales unit
UV Ink Bottle Black US-BK	1
UV Ink Bottle Magenta US-MG	1
UV Ink Bottle Yellow US-YE	1
UV Ink Bottle White US-WH	1
UV Ink Bottle Primer US-PR	1

High adhesion and wide color gamut ink

Name	Sales unit
UV Ink Bottle Black UE-BK	1
UV Ink Bottle Cyan UE-CY	1
UV Ink Bottle Magenta UE-MG	1
UV Ink Bottle Yellow UE-YE	1
UV Ink Bottle White UE-WH	1

Common ink

Name	Sales unit
UV Ink Bottle Primer US-PR	1
UV Ink Bottle Gloss US-GL	1

Note

- Before there is no remaining ink in the ink tank, we recommend purchasing it soon.
- If there is a problem with ink at the time of purchase, please contact the authorized Roland DG Corporation representative.
- For details about storage conditions for the ink bottles, see page 24 "Storage Conditions for Ink Bottles".

Other Consumables

These consumables are used for periodic maintenance and cleaning of this machine.

Maintenance Kit

Name	Quantity
Carriage filter	4 pieces
Flushing pad	3 pieces

Cleaning Kit

Name	Quantity
Waste cloth (paper towel)	1 box (50 sheets)
Non-woven fabric	1 box (100 sheets)
Polyethylene gloves	7 pairs
Nitrile gloves	14 pairs
Cleaning stick	12 sticks

Cleaning Liquid

Name	Sales unit
Cleaning liquid (US-CL)	1 bottle

Specifications

Machine Specifications

Configuration:

Console type ink jet printer

Ink to be used:

UV curing ink (C, M, Y, K, W, Gl, Pr)

UV curing equipment:

LED lamp (supported wavelength: 395 nm)

Power is supplied from the machine.

Print head height adjustment:

Automatic adjustment

Print mode:

5 modes: [Draft]/[Production]/[Standard]/[Quality]/[High Quality]

Maximum resolution:

635 × 1,800 dpi

Maximum print size:

2,500 × 1,300 mm (approx. 98.4 × 51.2 inches)

Supported media:

For details, see page 27 "Size and Weight Specifications of Supported Media".

Media vacuuming:

Vacuuming is performed by a vacuum (Divided into 4 parts.)

Waste ink tank:

Bottle system (2.5 L)

Operating environment:

- Temperature: 15–30°C (59–86°F)
- Humidity: 40–80%

Power supply used:

- Region A (mainly Europe and Asia)

  AC400 V 3P/N/PE, 25 A, 50/60 Hz
- Region B (mainly North America)

  AC220 V 3P/N/PE, 30 A, 60 Hz

Dimensions (W × D × H):

4,812 × 2,200 × 1,580 mm (approx. 189.4 × 86.6 × 62.2 inches)

Machine occupation dimensions (W × D):

6,810 × 4,670 mm (approx. 268.1 × 183.9 inches) or more

Weight:

1,436 kg (3,166 lb.)

Supported USB interface:

USB 3.0

Supported operating system:

Windows 7 (64 bit version), Windows 10 (64 bit version)

Ink Specifications

Important

- **Only use genuine ink.**
- **Do not disassemble the ink bottle, refill or add ink to the ink bottles.**
- **Ink may freeze if stored in a cold place for a long period of time. If ink freezes, it may become unusable as it may deteriorate. Make sure to store ink in an environment where ink will not freeze.**

Supported ink colors:

Black, cyan, magenta, yellow, white, gloss, and primer ink

Ink tank capacity:

2.5 L

Ink supply method:

Ink bottle (1.0 L)

Note

- For details about storage conditions for the ink bottles, see page 24 "Storage Conditions for Ink Bottles".
- For information about the expiration dates of ink bottles, see page 25 "Expiration Dates of Ink Bottles".

7. Appendix

List of Print Modes

Specify the resolution of the created RIP file according to the print mode.

Print mode	X: Resolution	Y: Resolution
1-0_4C_Draft	635 dpi	300 dpi
1-1_4C_Production	635 dpi	300 dpi
1-2_4C_Standard	635 dpi	600 dpi
1-3_4C_Quality	635 dpi	900 dpi
1-4_4C_High Quality	635 dpi	1,800 dpi
2-1_W-4C_Production	635 dpi	300 dpi
2-2_W-4C_Standard	635 dpi	600 dpi
2-3_W-4C_Quality	635 dpi	900 dpi
2-4_W-4C_High Quality	635 dpi	1,800 dpi
3-1_Pr-4C_Production	635 dpi	300 dpi
3-2_Pr-4C_Standard	635 dpi	600 dpi
3-3_Pr-4C_Quality	635 dpi	900 dpi
3-4_Pr-4C_High Quality	635 dpi	1,800 dpi
4-1_Pr-W-4C_Production	635 dpi	300 dpi
4-2_Pr-W-4C_Standard	635 dpi	600 dpi
4-3_Pr-W-4C_Quality	635 dpi	900 dpi
4-4_Pr-W-4C_High Quality	635 dpi	1,800 dpi
5-1_4C-W_Production	635 dpi	300 dpi
5-2_4C-W_Standard	635 dpi	600 dpi
5-3_4C-W_Quality	635 dpi	900 dpi

Print mode	X: Resolution	Y: Resolution
5-4_4C-W_High Quality	635 dpi	1,800 dpi
6-1_Pr-4C-W_Production	635 dpi	300 dpi
6-2_Pr-4C-W_Standard	635 dpi	600 dpi
6-3_Pr-4C-W_Quality	635 dpi	900 dpi
6-4_Pr-4C-W_High Quality	635 dpi	1,800 dpi
7_4C-Gl_Standard	635 dpi	600 dpi
8_Gl	635 dpi	600 dpi

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