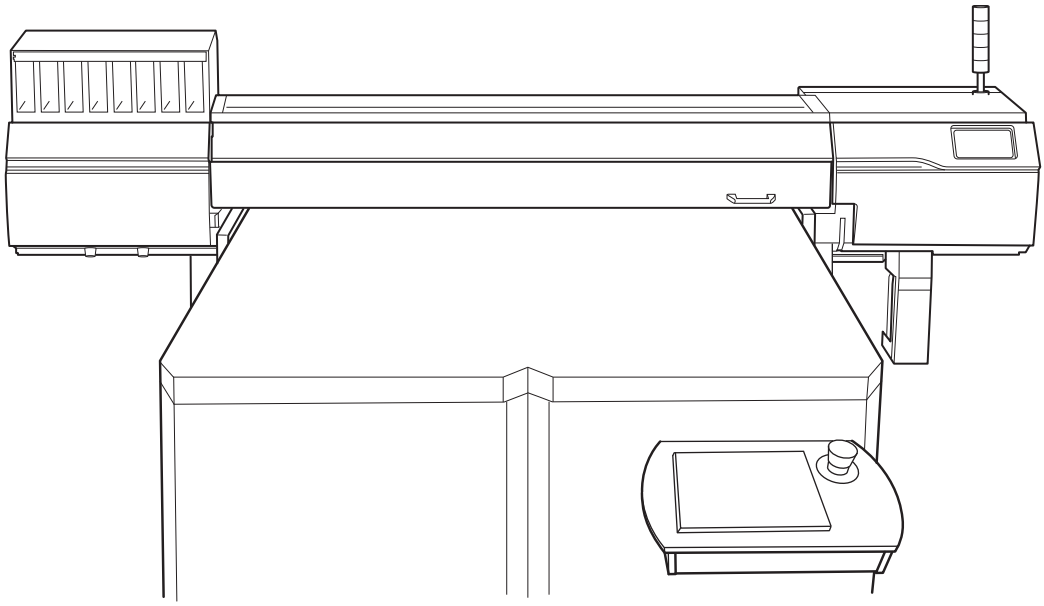
VersaOBJECT

LO-640-F3
LO-300-F2

User's Manual



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FA04275
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Contents

Basic Handling Methods

Introduction

About this Manual

This document is the user's manual for the LO-640-F3/LO-300-F2. This document uses the following notations to distinguish between the models where necessary.

- LO-640-F3 or 64-inch model
- LO-300-F2 or 30-inch model

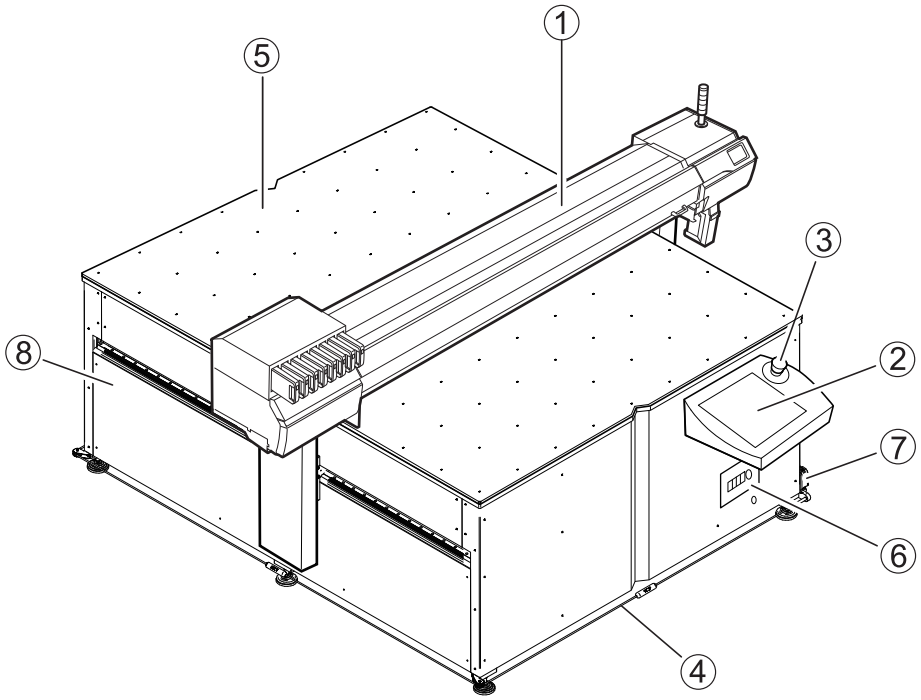
Most of the figures in this document depict the LO-640-F3.

Basic Information

Part Names and Functions

Entire Machine

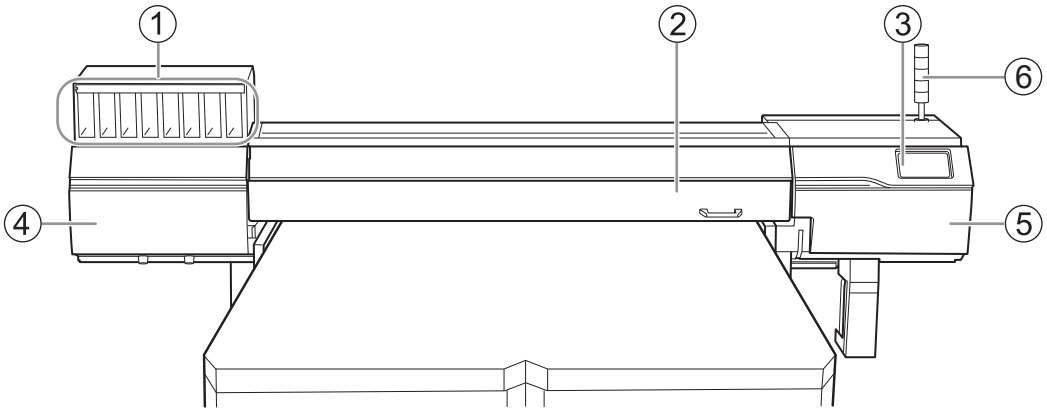
The following is an overhead view of the entire machine, including the printer unit and the transporter.



No.	Name	Function overview
①	Printer unit	Performs printing by discharging ink.
②	Touch panel	Moves the printer unit and switches the vacuum on or off.
③	Emergency stop device/recovery device (button)	Forcibly interrupts the power supply to stop all operations of the machine immediately or recovers from an emergency stop.
④	Emergency stop device (wire)	Forcibly interrupts the power supply to stop all operations of the machine immediately.
⑤	Table	Load the object to be printed on.
⑥	Power Distribution Board	Turns the power for the printer unit, vacuum, transporter, and other components on or off.
⑦	Recovery device	Recovers from an emergency stop caused by the emergency stop device (wire).
⑧	Transporter	Transports the printer unit to the front or back of the table.

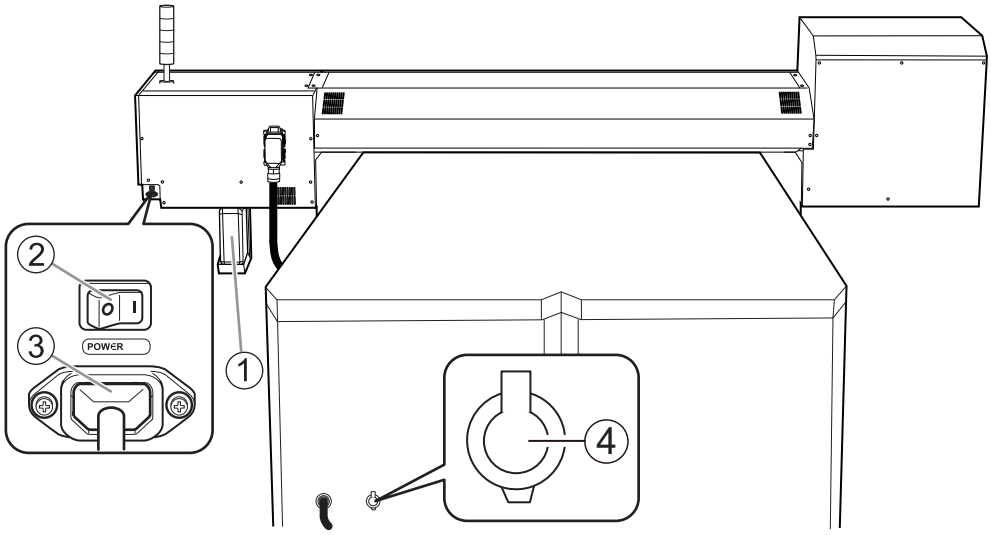
Printer Unit

Front



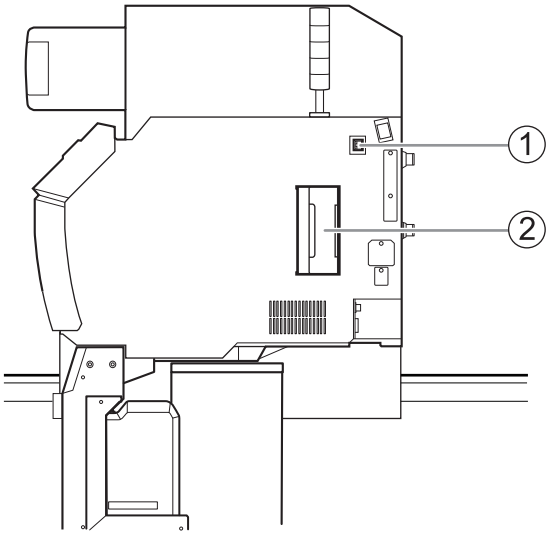
No.	Name	Function overview
①	Ink slots	Insert ink cartridges in which ink pouches have been loaded.
②	Front cover	Prevents contact with the print-head carriage and other such fast-moving parts when the machine is operating. This cover also blocks ultraviolet light and prevents dust from entering the machine. Keep it closed except when loading objects or when performing maintenance.
③	Operation Panel	Operates the printer unit. P. 17 Operation Panel
④	Left cover	Provides access to the interior of the left side of the machine. Open this cover when performing maintenance such as cleaning around the print heads.
⑤	Right cover	Provides access to the interior of the right side of the machine. Open this cover when performing maintenance such as cleaning and part replacement.
⑥	Indicator light	Uses colors to indicate the transporter status. Red: Error Orange: Not used Yellow: Not used Green: Normal

Rear



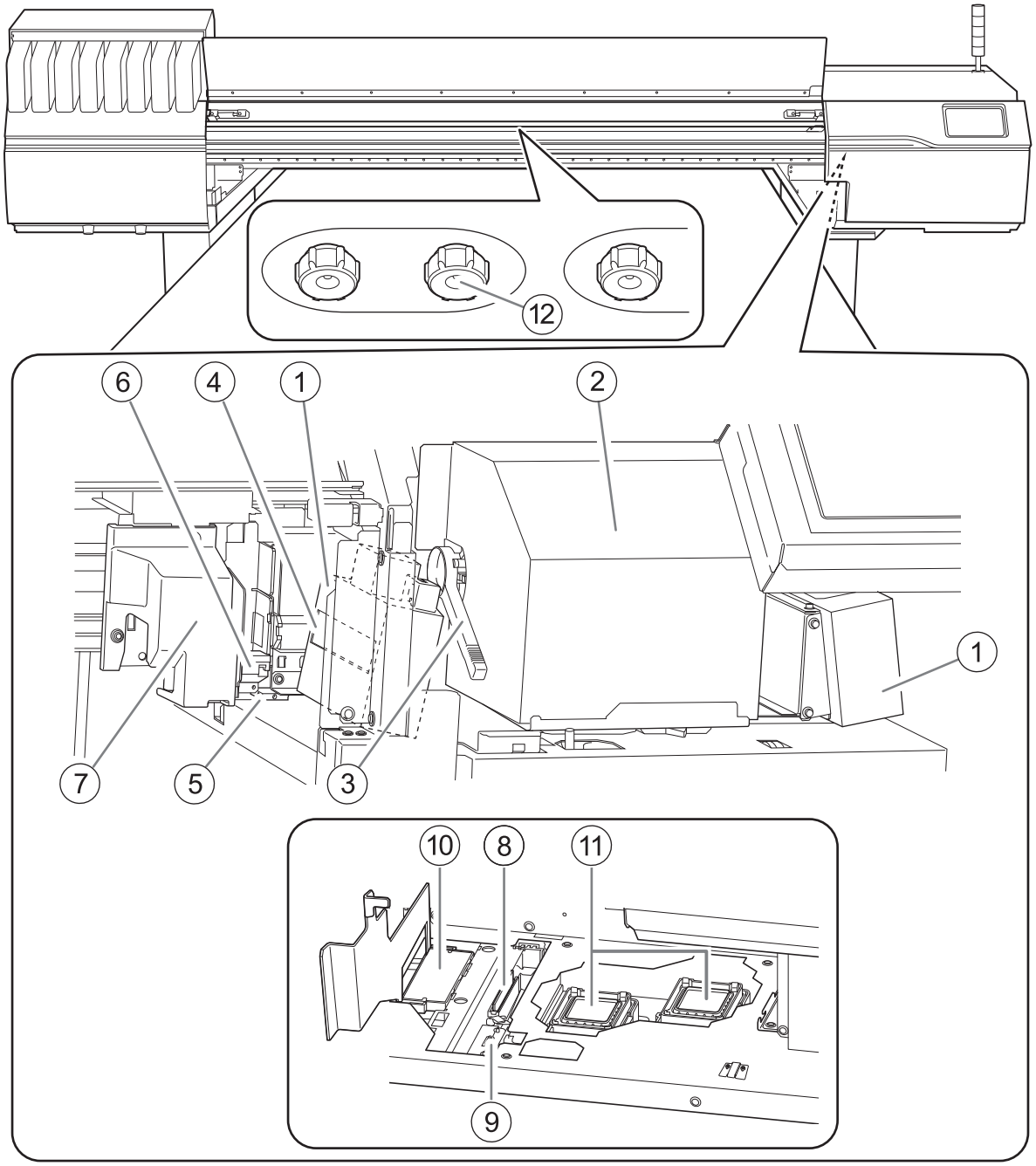
No.	Name	Function overview
①	Drain bottle	Stores cleaning liquid and discharged ink. When discharged fluid is nearly overflowing from the bottle, an error is displayed and printing is not possible.
②	Main power switch	Switch the main power of the printer unit on/off. Normally, do not turn the power off.
③	Power-cord connector	Use this to connect the power cable from the transporter.
④	Ethernet connector	This connector allows you to connect the machine to a network with an Ethernet cable.

Side



No.	Name	Function overview
①	Ethernet connector	Use this to connect the Ethernet cable from the transporter.
②	Cleaning liquid slot	A cleaning cartridge containing a cleaning liquid pouch is inserted here.

Front Cover Interior/Print Head Area



No.	Name	Function overview
①	UV-LED device	Shines the ultraviolet light. Shines the ultraviolet light on the print surface to cure the ink.
②	Print-head carriage	Transports the built-in print heads and UV-LED device.
③	Height-adjustment lever	Changes the print head height.
④	UV mist filters	Absorb the ink mist generated during printing to reduce the amount of ink mist that adheres to the UV-LED device.
⑤	Height sensor	Detects the height of the object to be printed on.
⑥	Pointer	Shines when determining the print origin (print start location). The print origin is set to the position of this point of light.
⑦	Sub carriage	Transports the pointer.

No.	Name	Function overview
⑧	Wiper	Cleans the print heads. Removes dirt and excess ink that have adhered to these heads.
⑨	Wiper cleaner	Removes ink and dirt that have adhered to the wiper.
⑩	Flushing sponge	Absorbs the ink discharged from the print heads to prevent clogging.
⑪	Print head caps	Prevent the print heads from drying out. Seals to the print heads to protect the ink emission surface when the print heads are at the right side of the machine, such as when waiting for printing.
⑫	Ionizer	The ionizer neutralizes the static electricity within the machine and the object.

If a Cover Opens during Operation

If the front cover, left cover, or right cover (hereinafter these items are all referred to as the "cover") opens during an output operation, the machine makes an emergency stop. When an emergency stop occurs, a message prompting you to close the cover appears on the screen. Close the covers as directed in the instructions shown on the screen.

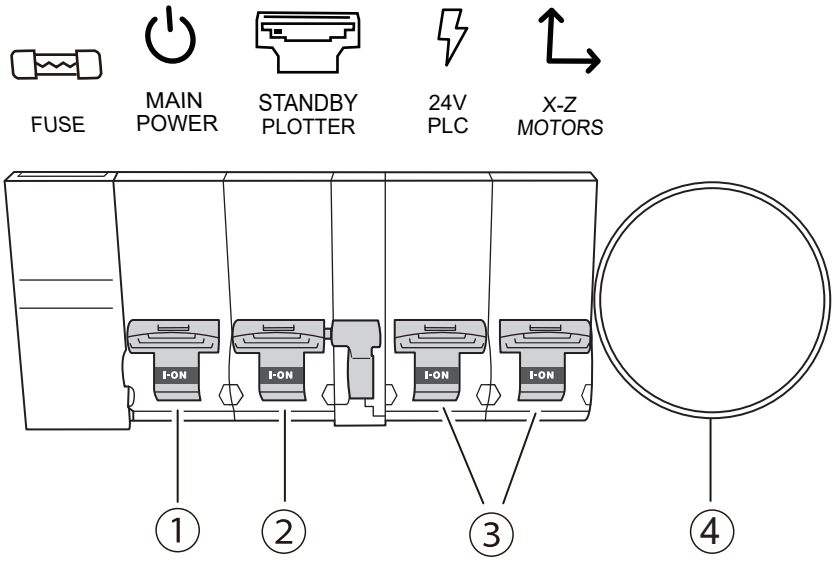
When the cover is closed, you will be able to continue the operation.

If you cannot continue the operation even after you close the cover, a nonrecoverable error may have occurred.

RELATED LINKS

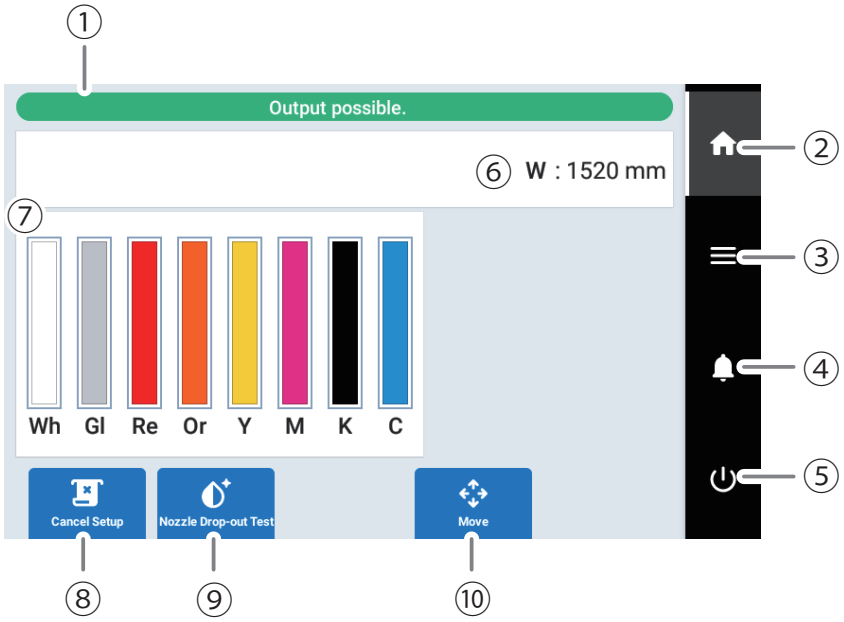
- P. 191 Error Messages

Power Distribution Board



No.	Function overview
①	Turns the power for the entire system (such as the printer unit, the vacuum, and the transporter) on or off. Normally, do not turn the power off. To maintain a state in which printing is possible (such as by preventing ink clogging), do not set this switch to the off position even when the machine is not operating.
②	Turns the power for the printer on or off. Normally, do not turn the power off. To maintain a state in which printing is possible (such as by preventing ink clogging), do not set this switch to the off position even when the machine is not operating.
③	Turns the power for devices other than the printer unit (such as the printer unit's up/down and forward/backward movement devices) on or off. These devices do not perform work that maintains the operating state, so it is not necessary to keep their power turned on. Turn off the power after the day's work is finished.
④	This is the power supply connector. Do not use this connector. It is mainly used by service technicians.

Operation Panel



No.	Name	Details
①	Status bar	Displays the printer status and indicates the next operation.
②	Home	Displays the home screen.
③	Menu	Displays various setting menus.
④	Notifications	Displays important information. When there are notifications, their number is displayed next to the icon.
⑤	Sub power	Switches the printer unit's sub power off.
⑥	Media information	Displays the width (W) of the printing area.
⑦	Amount of ink remaining	Displays the amount of ink remaining in each cartridge. If it is time to replace a color, is displayed next to the corresponding ink cartridge. Tap this icon to display the detailed information for the ink.
⑧	**[Setup]**/**[Cancel Setup]**	Starts/cancels setting up the object to be printed on.
⑨	**[Cleaning]**/**[Nozzle Drop-out Test]**	Displays the menu related to cleaning and to the printing test (nozzle drop-out test) for checking for dot drop-out and dot displacement.
⑩	**[Move]**	Moves the printer unit and sub carriage. You can also set the position moved to as the right edge of the printing area (the base point). P. 88 Adjusting the Output-start Location

Menu List

Tap  to display the list of operations.

MEMO

[**Media Settings**] is displayed only when the object to be printed on has been set up.

Level 1	Level 2	Level 3	Level 4	Details
[**Media Settings**]*1	[**Printing Settings**]	[**Print Head Height**]		Checks and changes the print head height.
		[**Feed Correction**]		Corrects the feed amount during printing. A test pattern is printed, and the correction value is entered manually after the printed correction value is checked visually.
		[**Media Gap Adjustment**]		Corrects the ink landing position. A test pattern is printed, and the correction value is entered manually after the printed correction value is checked visually.
	[**Other Media Settings**]	[**Printing Movement Range**]		During printing, select the movement range of the printhead carriage from [**Output Data Width**], , or [**Full Width**].
[**Cleaning**]	[**Printing Test**]			Before printing, use [**Nozzle Drop-out Test**] to check whether ink is discharged from the print heads correctly. If dot drop-out and dot displacement are present, perform cleaning appropriate for the severity of the problem. If faulty ink discharge cannot be improved, the problematic nozzle can be identified with [**Nozzle Mask Test**], making it possible to stop using this nozzle.
	[**Normal Cleaning**]			If dot drop-out or dot displacement occurs, select the nozzle from [**Group A**], [**Group B**], and [**Both**], and then perform cleaning of the print heads. If the problem cannot be fixed, perform more powerful cleaning. [**Powerful Cleaning**] also has the effect of improving uneven colors with white ink. If the object has already been set up, the [**After cleaning, perform a printing test.**] menu appears. When this is turned on, a printing test is performed after cleaning.
	[**Medium Cleaning**]			
	[**Powerful Cleaning**]			
	[**Manual Cleaning**]			Use cleaning liquid and a cleaning stick to clean the area around the print heads.

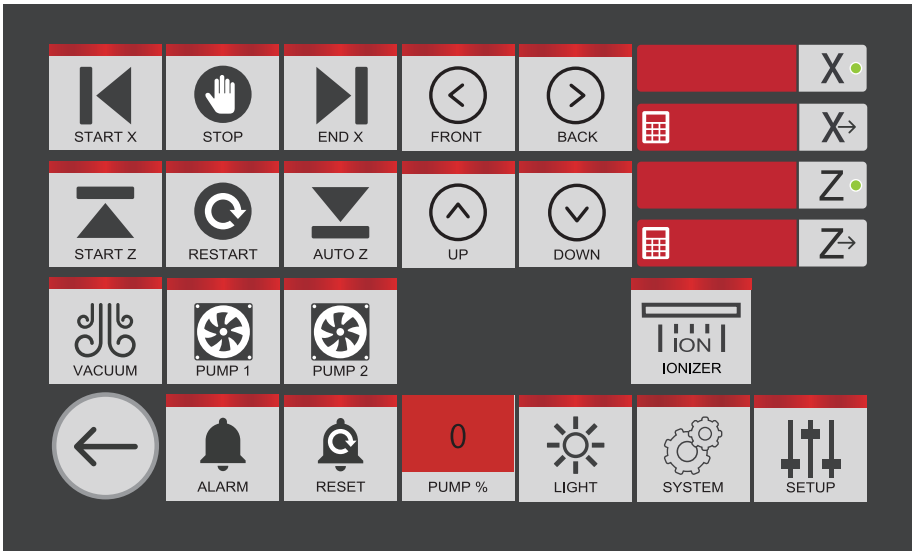
Level 1	Level 2	Level 3	Level 4	Details
[Maintenance]	[Wiper Replacement]			Replaces the wiper used in cleaning the print heads.
	[Cap Replacement]			Replaces the print head caps, which are used to protect the print heads from drying out and from dust.
	[Wiper Cleaner Replacement]			Replaces the wiper cleaner used to wipe away dirt from the wiper.
	[UV Mist Filter Replacement]			Replaces the UV mist filters used to absorb ink mist.
	[Flushing Sponge Replacement]			Replaces the flushing sponge that absorbs the ink discharge to prevent clogging of the print heads.
	[Ink Renewal]			Perform this operation when ink circulation and other cleaning methods (normal, medium, powerful, manual, and ink renewal in the damper) do not correct poor discharge or uneven colors. However, this operation consumes a large amount of ink and may damage the print heads, so do not perform it more than necessary.
	[Ink Renewal Inside Damper]*2			Use this operation to stabilize output when uneven color issues with white ink are not resolved even after shaking the ink cartridge to mix the ink or performing ink circulation or powerful cleaning. However, this operation consumes a large amount of ink and may damage the print heads, so do not perform it more than necessary.
	[Ink Circulation]*2			Circulates ink to prevent uneven color issues with white ink. If the object has already been set up, the [**After ink circulation, perform a printing test.**] menu appears. When this is turned on, a printing test is performed after [**Ink Circulation**].
	[Drain Bottle]			Use this menu to discard discharged fluid at any desired time, regardless of any notifications or errors.
[Preferences]	[Printing Test Position]			Sets the direction for test pattern printing: [**Feed**] or [**Scan**].
	[Ink Circulation Interval]*2			Sets the frequency of white ink circulation.
	[Notifications On/Off]			When this is set to on, notifications are displayed at the appropriate times. • [**Ink Mixing Notification**]*2 • [**Ink Expiration Date Notification**]
	[Time Remaining before Cleaning during Printing]			Sets whether to display the remaining time until cleaning is performed automatically. When this is turned on, the Cleaning and Count Clear menu will be displayed on the setting screen and the remaining time until cleaning is performed will be displayed on the home screen.
	[Sleep Time]			Sets the time until sleep mode (the state in which the power-saving features operate) activates.
	[Post-Scan Length]			Sets the time for which to shine ultraviolet light during printing.
	[Periodic Maintenance Frequency]			Set the frequency for performing automatic cleaning.
	[Reset to Factory Defaults]			Returns all settings other than [**Language**] and [**Units**] to their factory default values.

Level 1	Level 2	Level 3	Level 4	Details
[System Information]	[Machine Information]			Displays the [Model], [Serial Number], [Ink Type], [Firmware Version], and [MAC Address].
	[Network]			Sets the [Obtain IP Address Automatically], [IP Address], [Subnet Mask], and [Default Gateway] to connect the machine to a computer.
	[Units]			Sets the [Length] and [Temperature].
	[Language]			Sets the language. The language can be set to Japanese, English, French, Italian, German, Spanish (Europe), Spanish (South America), or Portuguese (South America).
	[Date/Time]			Sets the current year, month, day, hour, minute, and second.
	[Screen Brightness]			Sets the brightness of the operation panel's screen.
	[Screen Operation Sound]			Turns the operation sound of the operation panel on/off.
	[License]			Displays the license information of the operation panel.

*1 This setting is displayed only when the object to be printed on has been set up.

*2 This menu item is only displayed on machines when the ink type includes white ink.

Touch Panel



Part	Name	Details	Notation in this manual
START X	START X key	Returns the printer unit to the front of the table. Press and hold until the printer begins moving.	[TS : START X]
STOP	STOP key	Stops the printer unit when moving to a specified location.	[TS : STOP]
END X	END X key	Moves the printer unit to the back of the table. Press and hold until the printer begins moving.	[TS : END X]
FRONT	FRONT key	Moves the printer unit to the front. The printer moves while the key is pressed and stops moving when the key is released.	[TS : FRONT]
BACK	BACK key	Moves the printer unit to the back. The printer moves while the key is pressed and stops moving when the key is released.	[TS : BACK]
X	X coordinates	Displays the current position in the feed direction (toward the front and back of the table) using the front of the table as the origin (zero). The lamp lights in green during normal operation and in red when an error occurs.	[TS : X]
X→	Move to X coordinates	Press , and then enter the distance to move from the front position. Press and hold X→ to move the printer unit the set value in the feed direction.	[TS : X - ▶]
Z	Z coordinates	Displays the current position in the vertical direction using the lowest point of the printer unit as the origin (zero). The lamp lights in green during normal operation and in red when an error occurs.	[TS : Z]
Z→	Move to Z coordinates	Press , and then enter the distance to move from the lowest point. Press and hold Z→ to move the printer unit the set value up.	[TS : Z - ▶]
START Z	START Z key	Moves the printer unit to the highest point. Press and hold until the printer begins moving.	[TS : START Z]
RESTART	RESTART key	Restarts the transporter and sets the machine origin again.	[TS : RESTART]

Part	Name	Details	Notation in this manual
	AUTO Z key	Detects the print surface height of the object to be printed on. The printer will descend while the key is pressed and automatically stop when the height is detected. If the key is released before the height is detected, the printing height will be set to that height.	[TS : AUTO Z]
	UP key	Lifts the printer unit up. The printer moves while the key is pressed and stops moving when the key is released.	[TS : UP]
	DOWN key	Lowers the printer unit. The printer moves while the key is pressed and stops moving when the key is released.	[TS : DOWN]
	VACUUM/BLOW key	Suctions the object to be printed on against the table when set to VACUUM. Applies air against the object to be printed on when set to BLOW. Normally set to VACUUM. Set to BLOW if the object to be printed on is heavy and not easily moved.	[TS : VACUUM/BLOW]
	PUMP1 key	Switches the vacuum or blower pump on or off. Pump 1 controls the vacuum or blower from the center to the front of the table.	[TS : PUMP1]
	PUMP 2 key	Switches the vacuum or blower pump on or off. Pump 2 controls the vacuum or blower from the center to the back of the table.	[TS : PUMP2]
	IONIZER key	Switches the ionizer on or off. The ionizer neutralizes the static electricity within the machine and the object. This can reduce issues caused by static electricity such as ink landing position misalignment and adhesion of dust on the object.	[TS : IONIZER]
	ALARM key	Displays warning and error information.	[TS : ALARM]
	RESET key	Press and hold this key to cancel the warning beep and clear the error.	[TS : RESET]
	PUMP % key	Adjusts the vacuum or blower pump strength.	[TS : PUMP %]
	LIGHT key	Switches the internal lighting on or off.	[TS : LIGHT]
	SYSTEM key	Used by service technicians. Do not use this key.	[TS : SYSTEM]
	SETUP key	Used by service technicians. Do not use this key.	[TS : SETUP]
	ARROW key	Displays the language selection menu. Also, when an error occurs, you can press the ALARM key followed by this key to return to the original screen.	[TS : ARROW]

Object to Be Printed On

Conditions for Settable Objects and Maximum Printable Area

MEMO

In this manual, the objects to be printed are called the "object" or "media."

This printer cannot print on all objects. When selecting an object to be printed on, be sure to carry out testing in advance to make sure that satisfactory printing results are obtained.

The conditions for objects that can be set in the machine and the maximum printable area are shown below.

MEMO

The maximum printable areas are not the same as the maximum sizes of objects that can be loaded on the table.

Model	Object size	Maximum printable area	Weight
LO-640-F3	Width: Max. 1,625 mm (63.97 in.), Thickness: Max. 242 mm (9.52 in.)	Width: 1,520 mm (59.84 in.), Length: 2,450 mm (96.46 in.)	Max. 100 kg/m² (0.14 lb./in.²)
LO-300-F2	Width: Max. 762 mm (30 in.), Thickness: Max. 242 mm (9.52 in.)	Width: 656 mm (25.83 in.), Length: 1,450 mm (57.1 in.)	

IMPORTANT

- Objects that easily reflect light cannot be used as objects to be printed on.

  Materials that are likely to reflect the UV light, such as mirrors and stainless steel, accelerate the curing of the surface of the print heads and therefore cannot be used as the object to be printed on.
- Using an object charged with static electricity will result in an unstable ink landing position, which can negatively affect print quality and the print heads.

  Switch on the ionizer to neutralize the static electricity within the object.

  P. 21 Touch Panel
- Be sure to confirm whether an object can be used as an object to be printed on before use. Perform a test print to see if the object meets the quality requirements.

  Check to see if the ink adhesion is sufficient, if the printing comes off when rubbed, if the colors fade after extended exposure to sunlight, etc.
- Objects with excessive unevenness cannot be used for printing.

  P. 81 Notes When the Print Surface Is Uneven
- If the object still comes loose even when it is suctioned, use commercially available tape or some other means to hold the object in place.

  If the object to be printed on comes loose during printing, the object may contact and damage the ink emission surface of the print heads.
- Detecting the print surface height may not be possible with transparent printing objects.

  If the object is transparent, the light from the height sensor may pass through the object, making height detection impossible.

  Use colored tape on the sides of the object to be printed on to prevent the light from passing through.

Features of Inks

Primer Ink

The primer is a colorless and transparent coating agent used as an ink base. By using primer as a base, you can print on glass or other materials on which UV ink cannot be applied.

However, the primer may not be fully efficient on some materials. Be sure to perform test printing to check the effect.

Drain Bottle

Removing the Drain Bottle

Do not remove the drain bottle during maintenance operations and output.

Doing so may lead to unstable machine operation or dripping discharged fluid.

Only remove the drain bottle from the machine when:

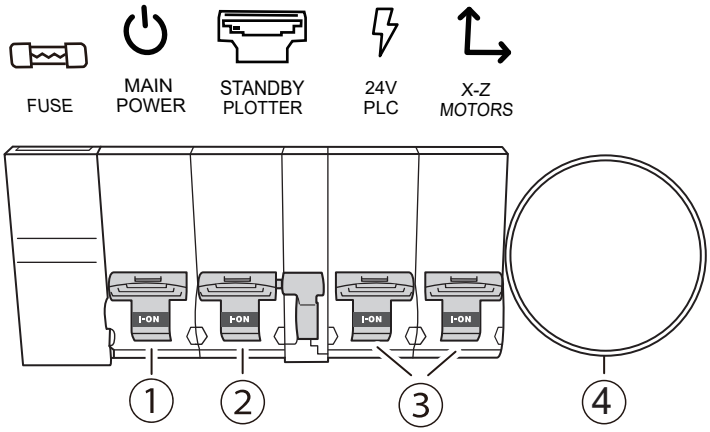
- The message [**Discard the discharged fluid.**] appears and you are disposing of discharged fluid.
- You are disposing of discharged fluid by tapping [**Maintenance**]>[**Drain Bottle**] accessed with  .

Basic Operations

Power Supply Operations

Precautions When Operating the Power Supply

Power Distribution Board



①	Turns the power for the entire system (such as the printer unit, the vacuum, and the transporter) on or off. Normally, do not turn the power off. To maintain a state in which printing is possible (such as by preventing ink clogging), do not set this switch to the off position even when the machine is not operating.
②	Turns the power for the printer on or off. Normally, do not turn the power off. To maintain a state in which printing is possible (such as by preventing ink clogging), do not set this switch to the off position even when the machine is not operating.
③	Turns the power for devices other than the printer unit (such as the printer unit's up/down and forward/backward movement devices) on or off. Unlike the printer unit, these devices do not perform work that maintains the operating state, so it is not necessary to keep their power turned on. Turn off the power after the day's work is finished.
④	This is the power supply connector. Do not use this connector. It is mainly used by service technicians.

Printer Unit

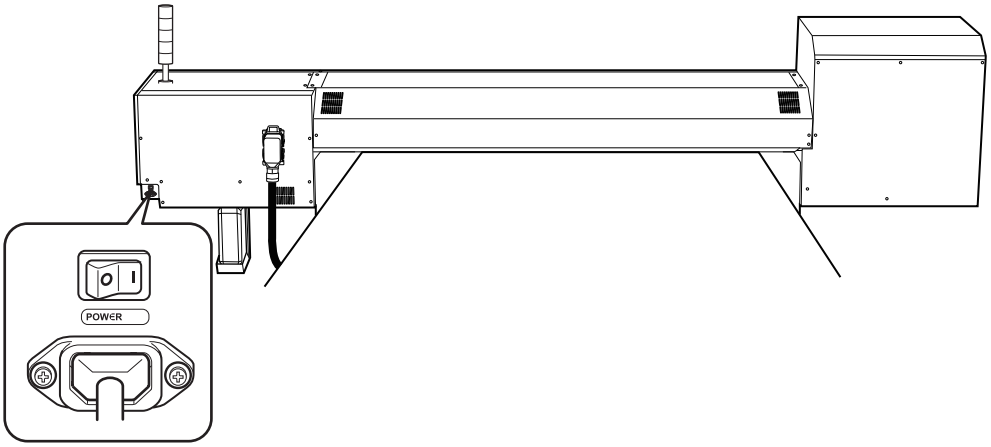
IMPORTANT

Always keep the printer unit's main power switched on.

Never switch off the printer unit's main power. Leaving the main power enables automatic maintenance to be carried out periodically. If the automatic maintenance is not carried out, it may result in the breakdown of this machine, such as the breakdown of the print heads.

Never switch off the printer unit's main power or unplug the power cord suddenly while operation is in progress.

Switching off the printer unit's main power or unplugging the power cord suddenly while operation is in progress may damage the print heads. Be sure to first switch off the printer unit's sub power. If the printer unit's main power is accidentally switched off, immediately turn the main power and sub power back on.



To turn off the printer unit's main power, use the [MAIN POWER] or [STANDBY PLOTTER] switch on the power distribution board.

Turning the Power On

Procedure

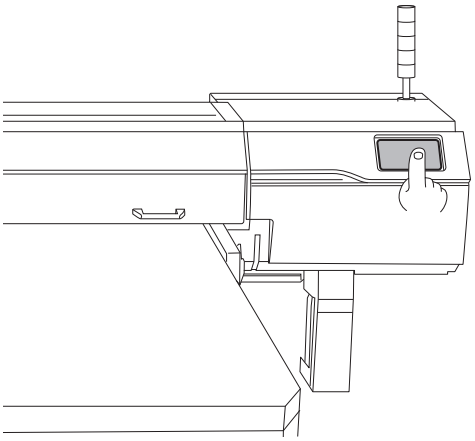
1. **Check that the area around the machine is free of people and obstacles.**
   Be sure to keep everyone away from the area around the machine and to remove any obstacles.

2. **Turn on all the switches on the power distribution board.**
   The red alarm lamp lights, and a warning beep sounds.

3. **On the touch panel, press the language to use.**
   After selecting the language, press [TS : RESET] to stop the warning beep.

4. **Close the printer unit's front cover when it is open.**

5. **Tap the operation panel.**
   The power to the operation panel is switched on.



6. **When instructions appear on the screen, tap the operation panel again.**
   The printer unit turns on.

Turning the Power Off

Procedure

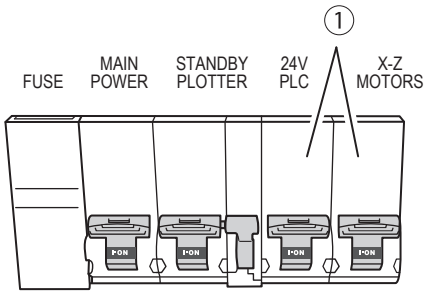
1. **Tap  on the operation panel.**

   The confirmation window appears.

2. **Tap [Yes].**

   The sub power switches off automatically.

3. **Switch off [24V PLC] and [X-Z MOTORS] (①) on the power distribution board.**



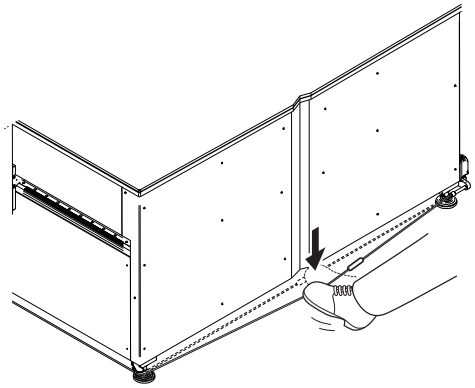
Emergency Stop Devices

Stopping with the Wire

If you detect a hazard during work close to this machine, step on the wire to stop the operation of the printer unit.

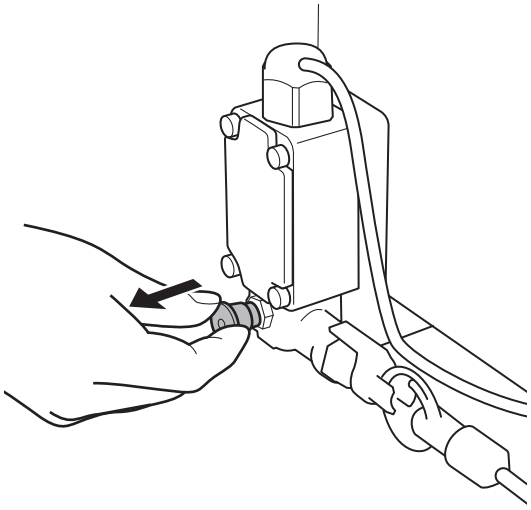
Procedure

1. **Strongly step on the wire strung across the bottom of the main unit.**
   Printer unit operation will immediately stop.



2. **After confirming that the situation is safe even if this machine starts operating again, operate the recovery device at the bottom of the transporter as shown in the figure to recover the operation of the printer unit.**

> **IMPORTANT**
> Operation resumes immediately after it is recovered. Check the surrounding area and make sure it is safe before recovering operation.



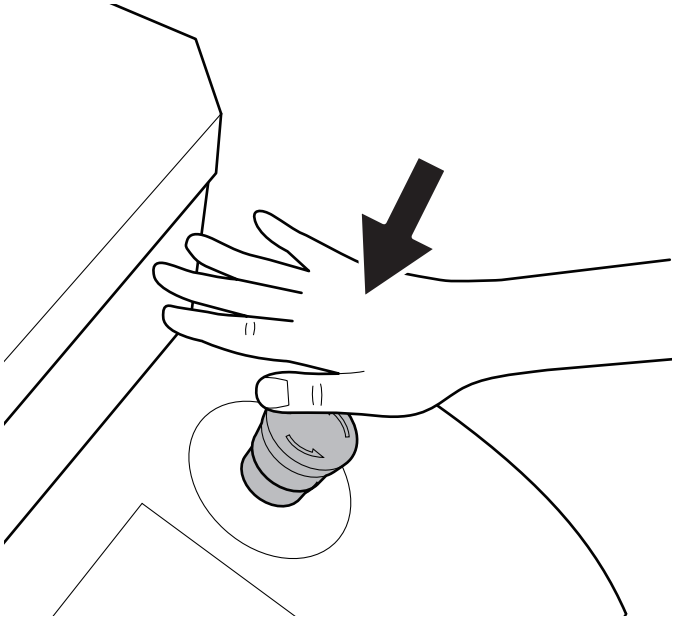
3. **Press [TS : RESET] to stop the warning beep.**

Stopping with the Button

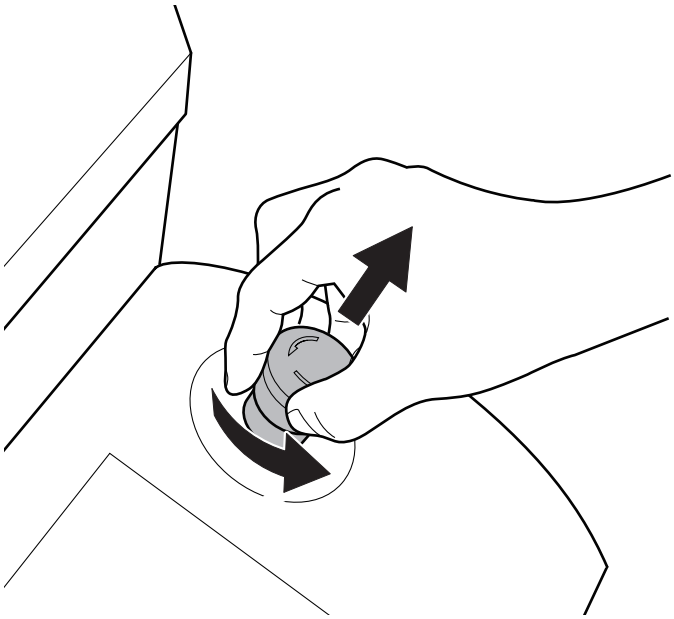
If you detect a hazard during work close to the touch panel, press the button to stop the operation of the machine.

Procedure

1. **Press the button to the right of the touch panel.**
   Machine operation will immediately stop.



2. **After confirming that the situation is safe even if this machine starts operating again, turn the part shown in the figure counterclockwise.**
   The button pops out.



3. **Press [TS : RESET] to stop the warning beep.**

MEMO

When you use the button to perform an emergency stop, the sub power of the printer unit turns off, and transporter operation also stops.

Sleep Mode (Power-saving Feature)

Printer unit

The printer unit switches to a low-power "sleep mode" when a fixed interval passes with no operation. The factory default for the time after which the machine switches to sleep mode is 30 minutes. The operation panel turns off when the machine enters sleep mode. Using the operation panel or performing operations such as sending print data from the computer restores the machine to its normal mode.

This sleep mode setting can be changed. However, we recommend setting the activation time for sleep mode to 30 minutes or less to reduce power consumption.

P. 100 Setting the Activation Interval for Sleep Mode (Power-saving Feature)

Transporter

If 30 minutes pass without any printing after the vacuum pump is activated, the vacuum pump is stopped to reduce power consumption. To activate the vacuum pump again, carry out the same vacuum operations as when setting up the object.

Setting Up the Object to Be Printed On

Loading the Object, and Setting the Print Surface Height and Print Start Point

This section explains how to place the object in the bottom right of the printing area and to set up this object.

MEMO

You can decrease the number of cleaning operations, reducing ink consumption, by setting [**Periodic Maintenance Frequency**] to [**Low**].
However, the risk of dot drop-out and dot displacement will be higher than when [**Normal**] is selected. Change this setting as needed only when setting up a print object with a thickness of less than 2 mm (0.07 in.).

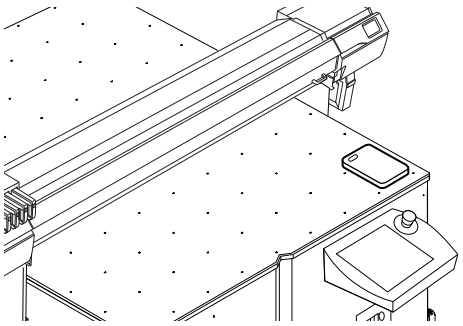
Setting the Periodic Maintenance Frequency(P. 101)

Procedure

1. **Press and hold [TS : START Z] on the touch panel.**
   The printer unit will rise to its highest point.

2. **Press [TS : BACK] on the touch panel.**
   The printer unit will move to the back of the table while [TS : BACK] is pressed.
   Move the printer to a location it will not interfere with the loading of the object to be printed on.
   Movement will stop when the button is released.

3. **Place the object in the printable area.**

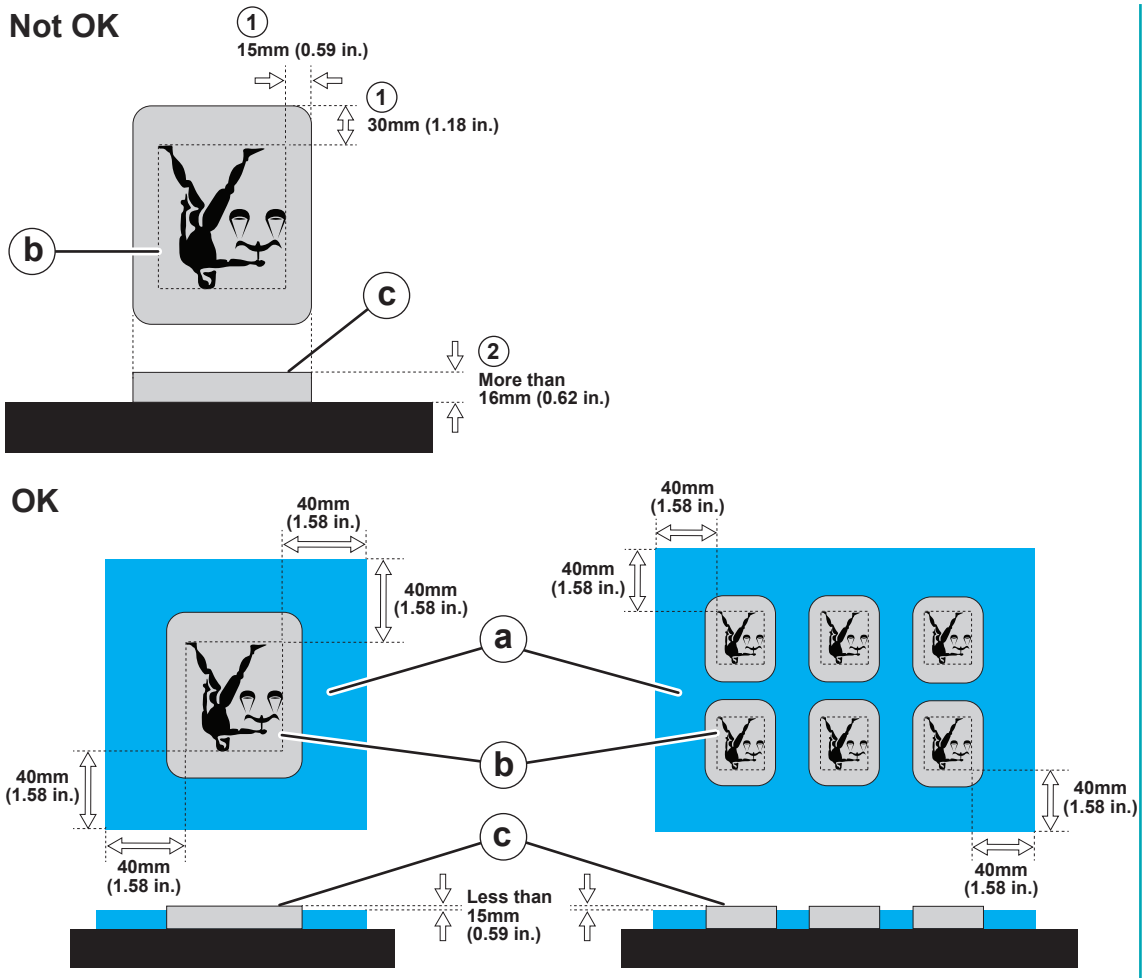


IMPORTANT

When printing, make sure that there is no unnecessary space under the bottom of the print-head carriage (ink ejection surface of the print heads). If too much space is left open, ink mist can more easily form. Therefore, a jig to fill the space around the object to be printed on might be required depending on the size and shape of the object to be printed on.

Prepare a jig (a) if both of the following conditions are met.

1. An area around the print data size (b) plus a margin of 40 mm (1.57 in.) extends beyond the object to be printed on.
2. The height of the print surface (c) is 16 mm (0.63 in.) or more.



MEMO

Use the blower if the object to be printed on is heavy or difficult to place.

P. 87 Loading Heavy and Difficult-to-Move Objects to Be Printed On

4. **Suction the object to secure it in place.**

If the object is not secured in place, uneven colors may occur.

(1) **Check that [TS : VACUUM] is shown for the button on the touch panel.**

If the button is displaying [TS : BLOW], tap the button to switch to [TS : VACUUM].

If [TS : VACUUM] is already displayed, there is no need to switch the setting.

(2) **Tap [TS : PUMP1].**

Suction the object against the table.

If the suction is weak and the object comes loose, tap [TS : PUMP %] on the touch panel and increase the suction power.

MEMO

When the trailing edge of the object is positioned behind the center of the table, also tap [TS : PUMP2] on the touch panel to suction the object.

IMPORTANT

Do not print on the object if it comes loose.
Doing so will not only result in poor print quality but the object to be printed on may also contact and damage the print heads.

5. **Press and hold [TS : START X] on the touch panel.**

The printer unit will move to the front edge of the table.

6. **Press [TS : BACK] on the touch panel to move the printer unit to the highest position for the object.**

Align the printer unit's height sensor with the position of the object. Tap [TS : FRONT] or [TS : BACK] to fine-tune the position of the height sensor.

For information on the height sensor's position, refer to Front Cover Interior/Print Head Area(P. 14).

MEMO

When you perform the following operations, a warning beep may sound, and an error may be detected.

- Tapping [TS : FRONT] on the touch panel or pressing  on the operation panel to move the printer unit forward when it is already positioned at the front edge of the table
- Tapping [TS : BACK] on the touch panel or pressing  on the operation panel to move the printer unit backward when it is already positioned at the back edge of the table

For actions to take when an error is detected, refer to Is [Warning Overtravel X] displayed for [TS:ALARM]?(P. 185).

MEMO

7. **Press [TS : AUTO Z] on the touch panel.**

The printer unit will descend while [TS : AUTO Z] is pressed.

A sensor is used to detect the height and stop the descent. When the printer is stopped, the height will be set as the print surface height.

Notes When the Print Surface Is Uneven(P. 81)

Keep pressing [TS : AUTO Z] until the printer stops descending.

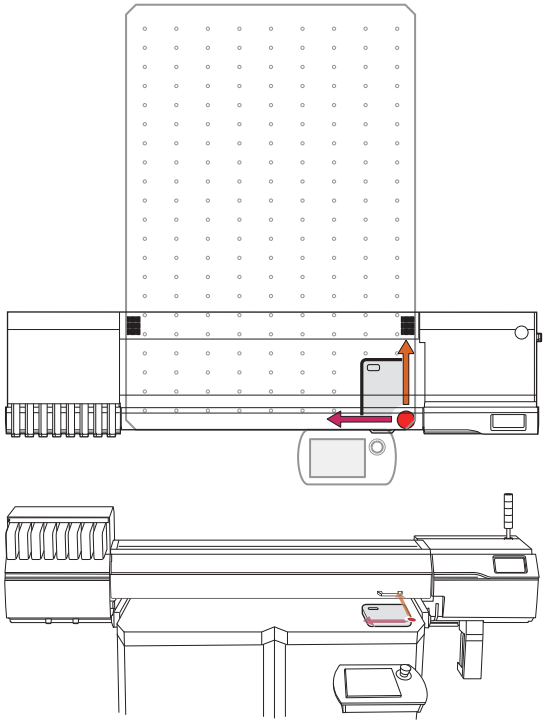
8. **Press and hold [TS : START X] on the touch panel again.**

The printer unit will move to the front edge of the table.

The destination becomes the print start point.

MEMO

The print start point toward the front or back of the table (feed direction) will always be the current position of the printer unit.
Even if the printer unit is moved using the touch panel, or if it is in the stop position after printing has been completed, the current position will always be the print start point.



9. Press  **[Setup] on the operation panel of the printer unit.**

This completes the setup of the object.

Creating Print Data and Determining the Printing Position

Creating Print Data

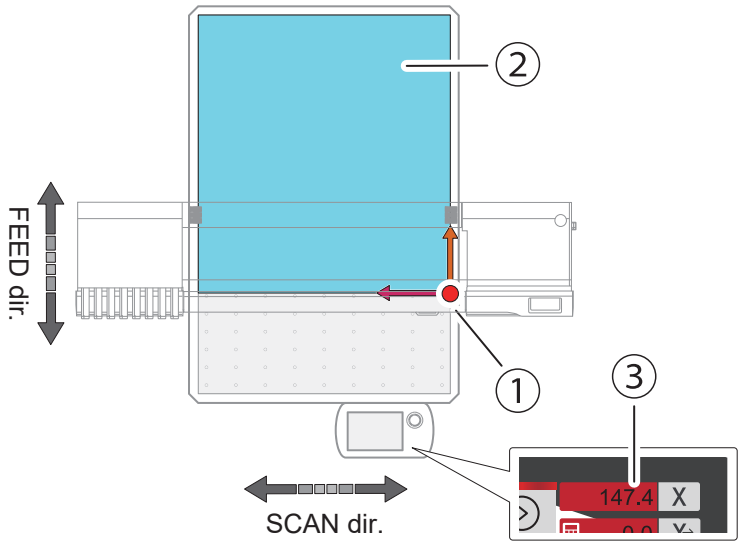
The methods for creating print data differ depending on the color layering and whether a primer has been applied.

Refer to the instructions linked below for information on how to create typical print data.

https://downloadcenter.rolanddg.com/contents/manuals/UV-Guide_USE_JP/

Printing-start Location on the Machine and in VersaWorks

The print origin is the lower right point of the printing area configured during setup. The print origin of this machine and the print origin of VersaWorks (when using [Origin View]) are as shown in the figure below.



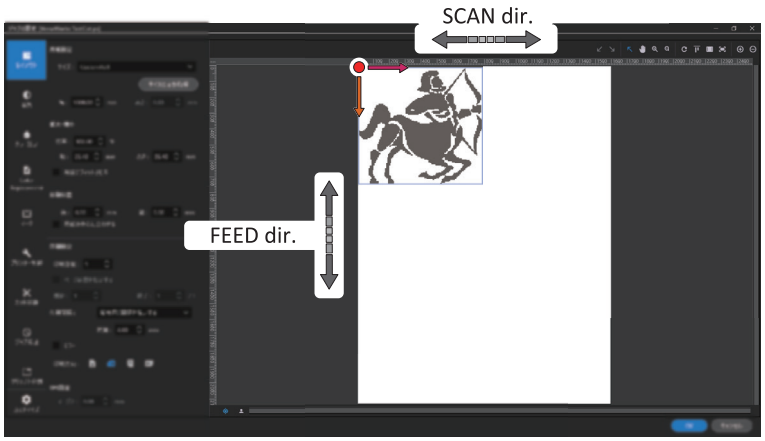
①	Printing-start location
②	Printing area
③	Current position in feed direction

The current position is always the printing-start location in the feed direction (forward/backward).

The right edge of the printing area is the printing-start location in the scan direction (left/right).

To set a specific position as the printing-start location, configure the base point settings for the printer unit.

Setting the Base Point(P. 89)



Perform Printing

Procedure

1. **Create the print data using Adobe Illustrator, CorelDRAW, or some other software.**
   Save the file as a PDF, EPS, JPEG, TIFF, or PostScript (PS) file.

   MEMO

   When saving as a PDF file, do not include margins other than images and figures.
   For Adobe Illustrator, configure the settings as follows.
   - Align the artboard with the entire object.
   - Set all "Bleed" values in the document settings to "0."

2. **Start VersaWorks and input the print data.**
   Drag the file to the job list.

3. **Double-click the job registered in step 2, and open the job settings window.**
   Use this window to enter the printing position and configure print quality settings.
   When finished configuring the settings, click [OK] to close the window.

4. **Click  to print.**

RELATED LINKS

- https://downloadcenter.rolanddg.com/VersaWorks7

Checking before Output

Preventing Sedimentation in Inks

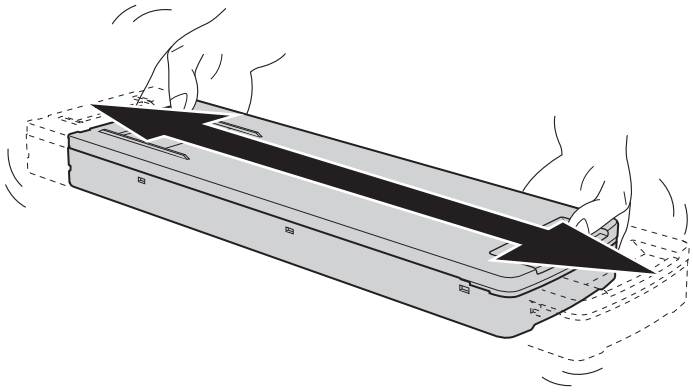
The precipitation of the ingredients in the ink disables printing in normal color. So that the ink mixes well, shake the ink cartridge horizontally with a stroke length of around 5 cm (1.97 in.) from each end of the ink cartridge.

Shake the ink cartridges:

- All inks: When replaced with a new product.
- White ink: Each day (before starting the day's operations).

  Remove the white ink cartridge, shake it 50 times (about 20 seconds), and then reinsert this cartridge.

  The ingredients in white ink tend to settle. Each day, before starting work for that day, be sure to shake the ink cartridge. Allowing the ink to stand can cause the settled material to harden, resulting in malfunctions or other problems.



IMPORTANT

- Before shaking the ink cartridge, wipe off any ink from around its mouth. If you do not wipe off the ink, it may splatter when you shake the ink cartridge.
- When shaking the ink cartridge, firmly hold it with both hands to prevent the ink cartridge cover from coming loose. The cover or ink pouch coming loose and falling may cause damage or printer malfunctions.
- When you have finished mixing the ink, reattach the ink cartridge immediately. Taking time to reattach the ink cartridge will adversely affect the ink path.
- Even if you are not using the printer, shake the white ink cartridge 50 times (about 20 seconds) once a week.

Pausing and Canceling Output

You can pause and cancel output before it finishes.

Pausing, Resuming, and Canceling Output

IMPORTANT

We do not recommend resuming printing because horizontal bands are produced at the place where printing was paused.

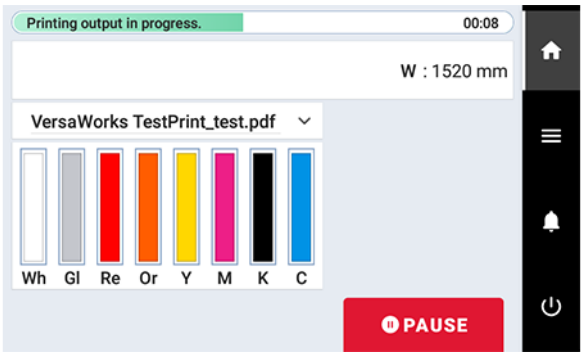
MEMO

Some menu items can be operated during output, but return to the home screen before pausing output.

Procedure

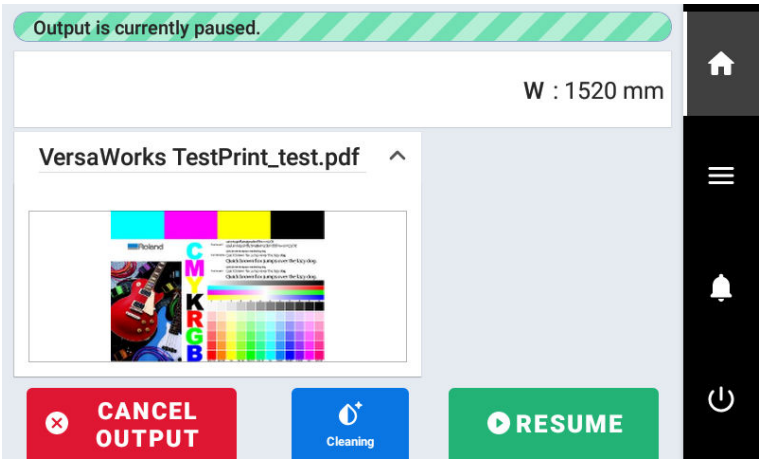
1. **During output, tap [Pause].**

   This pauses the printing operation.



2. **Tap [Resume] or [Cancel Output].**

   - Tap [**Resume**] while printing is paused to resume printing.
   - Tap [**Cancel Output**] while printing is paused to cancel printing. If you have canceled printing, stop sending print data from your computer.



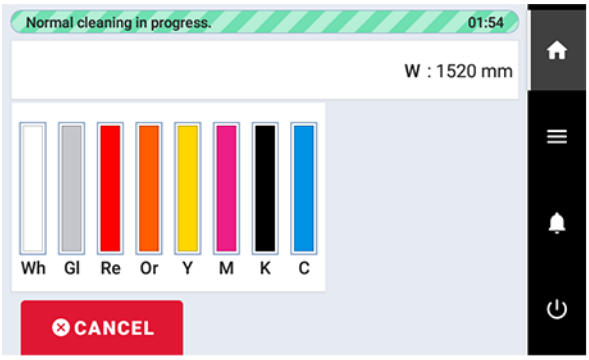
MEMO

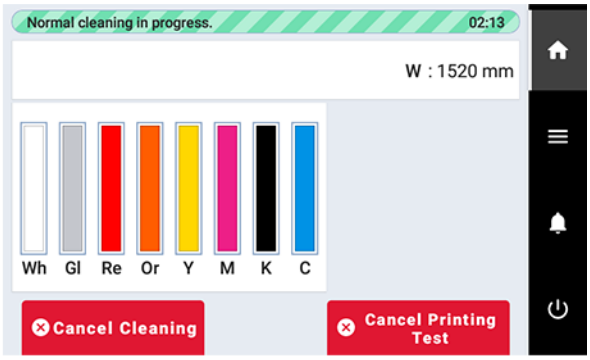
[**Normal Cleaning**], [**Medium Cleaning**], and [**Powerful Cleaning**] can be canceled if necessary.

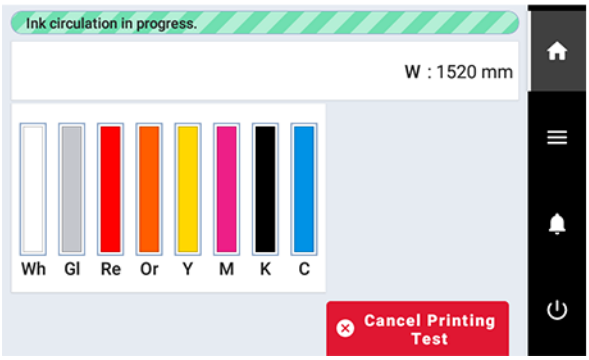
To cancel cleaning, tap  to return to the home screen, and then tap [**Cancel**].

If [**After cleaning, perform a printing test.**] or [**After ink circulation, perform a printing test.**] is turned on, cleaning and printing tests can be canceled. To cancel cleaning, tap  to return to the home screen, and then tap [**Cancel Cleaning**]. To cancel a printing test, tap  to return to the home screen, and then tap [**Cancel Printing Test**]. Note, however, that [**Ink Circulation**] cannot be canceled.

[**Normal Cleaning**] performed by tapping [**Manual Cleaning**] in the [**Finish All**] screen can also be canceled by tapping  to return to the home screen and then tapping [**Cancel**].







Replacing Ink

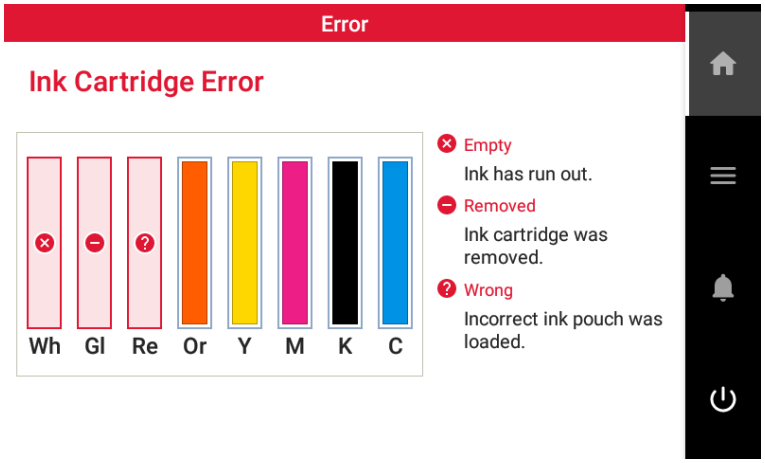
Out-of-ink Warnings

When an ink cartridge runs out of ink, an [Ink Cartridge Error] appears.

[**Empty**] is displayed for ink that has run out. Check the display screen, and then replace the empty ink.

IMPORTANT

- If ink runs out during printing, printing is paused.
- If ink runs out during cleaning, cleaning is canceled.



IMPORTANT

Never reuse an ink pouch within an ink cartridge for which the machine shows a sign indicating no ink.
Occasionally the machine will show a sign indicating no ink even if there is a small amount of ink remaining in the pouch, but nevertheless do not use it. Such an ink pouch is in a state where drawing ink from it is impossible. Using it in such a state may force air into the ink path and cause printer malfunctions.

RELATED LINKS

- P. 45 Ink Replacement Method

Ink Replacement Method

⚠ WARNING

Never store ink, cleaning liquid, or discharged fluid in any of the following locations.

- **Any location exposed to open flame**
- **Any location where high temperature may occur**
- **Near bleach or any other such oxidizing agent or explosive material**
- **Any location within the reach of children**

Fire may be a danger. Accidental ingestion by children may pose a health hazard.

IMPORTANT

Precautions regarding ink pouch replacement

- Be sure to replace each pouch with an item of identical type and color.
- Never use an ink pouch that has already been used in another machine even if it is an identical type.
- Never mix different types of items.
- Never leave the machine with an ink cartridge removed. The print heads may become clogged.
- Do not remove or insert ink cartridges during printing, cleaning, or ink circulation. Ink may leak.
- If the cover of an ink cartridge does not lock securely, this cartridge needs to be replaced.

  For information about purchasing ink cartridges, contact your authorized dealer or visit our website (https://www.rolanddg.co.jp/).

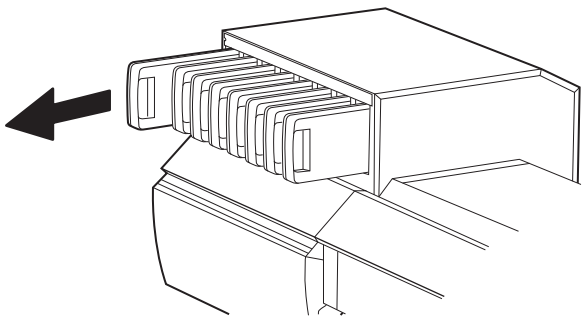
IMPORTANT

Never reuse an ink pouch within an ink cartridge for which the machine shows a sign indicating no ink.

Occasionally the machine will show a sign indicating no ink even if there is a small amount of ink remaining in the pouch, but nevertheless do not use it. Such an ink pouch is in a state where drawing ink from it is impossible. Using it in such a state may force air into the ink path and cause printer malfunctions.

Procedure

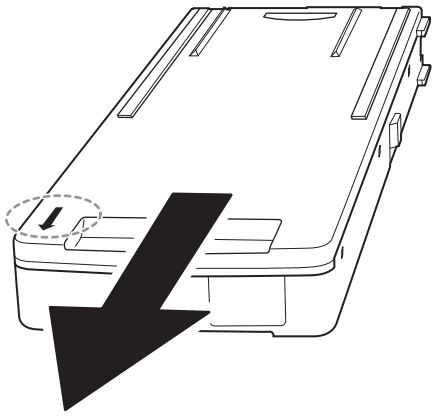
1. Pull out from the machine the ink cartridge of the color to replace.



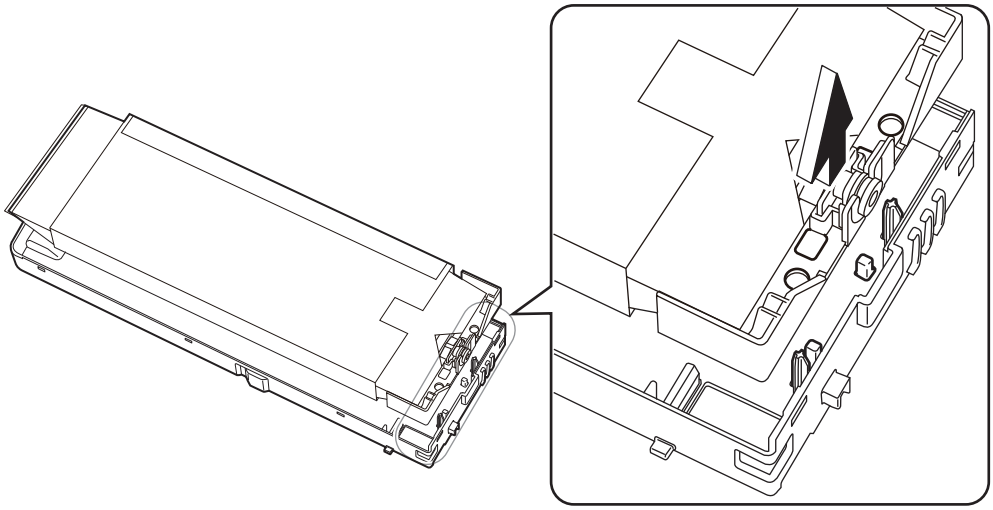
2. Remove the ink cartridge cover.

a. Keep the side with the arrow face up.

b. Remove the cover by sliding it in the direction indicated by the arrow.



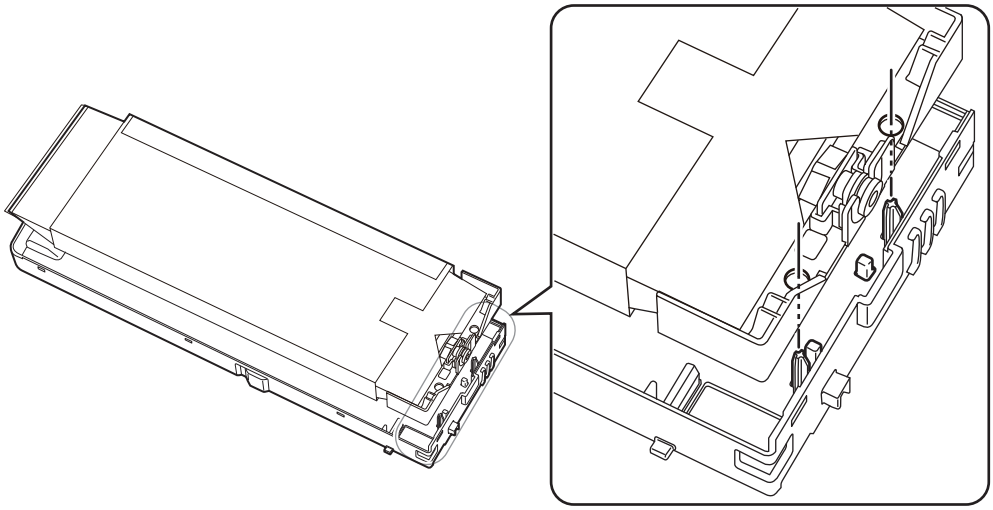
3. **Remove the used ink pouch from the cartridge case.**



4. **Load a new ink pouch in the cartridge case.**

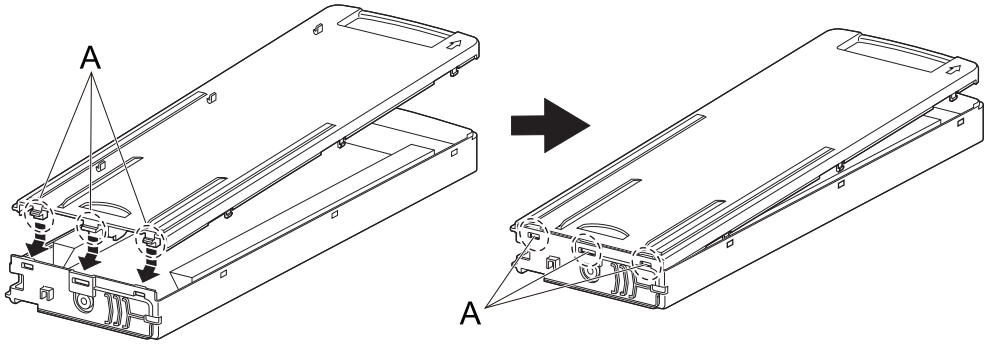
MEMO

Pass the protrusions on the cartridge case through the holes on the ink pouch to load it in the correct position.



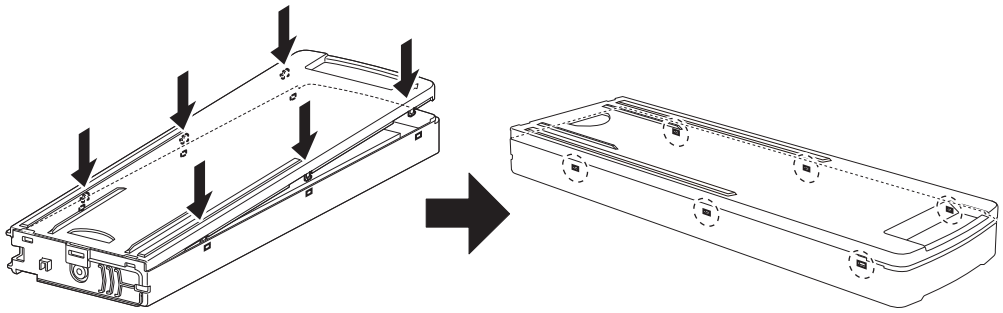
5. **Attach the cover to the cartridge case.**

a. Insert the protrusions (A) at the back of the cover into the holes in the cartridge case.



b. Push the cover to fit its hooks into the holes in the cartridge case.

There are hooks in six locations. Check that all the hooks are seated in the holes and that the cover does not come loose from the cartridge case.

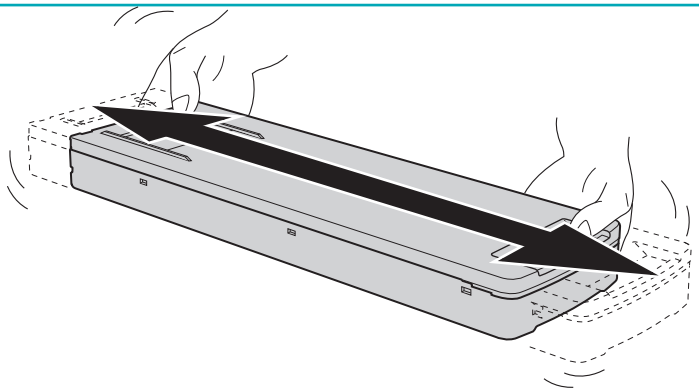


6. Gently shake the ink cartridge.

Shake the ink cartridge 50 times (for approximately 20 seconds) horizontally with a stroke length of 5 cm (1.97 in.) from each end of the cartridge.

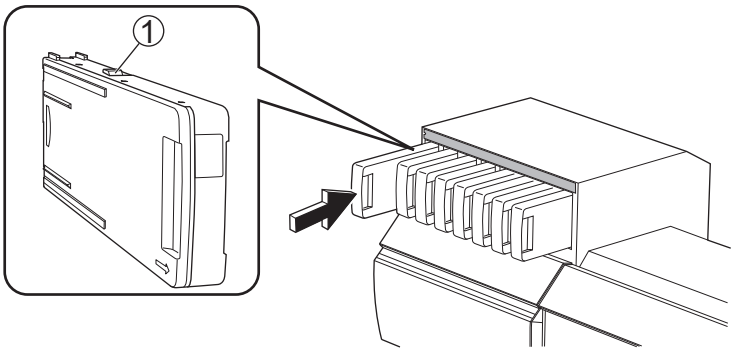
IMPORTANT

When you shake the ink cartridge, firmly hold it with both hands to prevent the cover from coming loose. The cover or ink pouch coming loose and falling may cause damage or printer malfunctions.



7. Load the ink cartridge in its ink slot.

Orient the ink cartridge so its protrusion (①) is face up, and then, while keeping the cartridge level, insert the cartridge as far as it will go.



IMPORTANT

- If an ink cartridge contains an empty ink pouch, do not insert this cartridge into its ink slot. Doing so may force air into the ink path and cause printer malfunctions.
- Check the color names indicated on the ink slots and the ink cartridges to load these cartridges in their correct positions.

Preventing Sedimentation in Inks

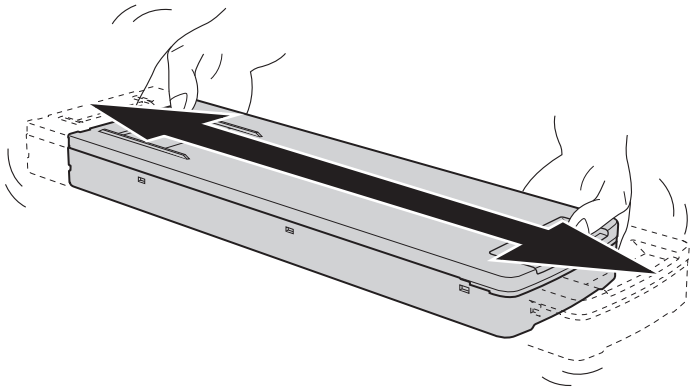
The precipitation of the ingredients in the ink disables printing in normal color. So that the ink mixes well, shake the ink cartridge horizontally with a stroke length of around 5 cm (1.97 in.) from each end of the ink cartridge.

Shake the ink cartridges:

- All inks: When replaced with a new product.
- White ink: Each day (before starting the day's operations).

  Remove the white ink cartridge, shake it 50 times (about 20 seconds), and then reinsert this cartridge.

  The ingredients in white ink tend to settle. Each day, before starting work for that day, be sure to shake the ink cartridge. Allowing the ink to stand can cause the settled material to harden, resulting in malfunctions or other problems.



IMPORTANT

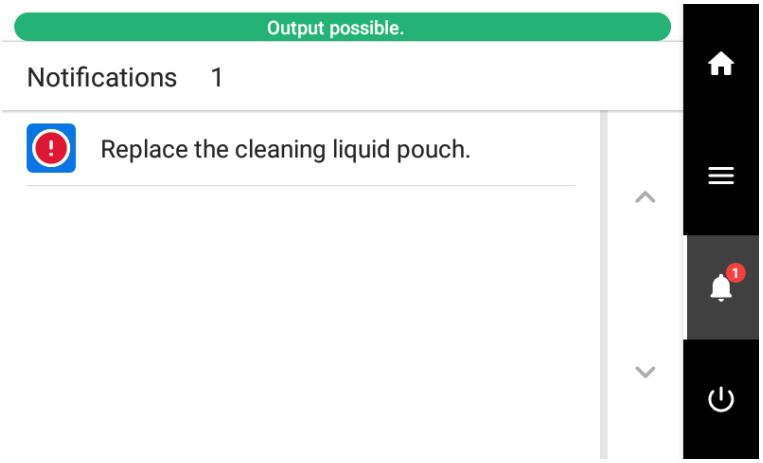
- Before shaking the ink cartridge, wipe off any ink from around its mouth. If you do not wipe off the ink, it may splatter when you shake the ink cartridge.
- When shaking the ink cartridge, firmly hold it with both hands to prevent the ink cartridge cover from coming loose. The cover or ink pouch coming loose and falling may cause damage or printer malfunctions.
- When you have finished mixing the ink, reattach the ink cartridge immediately. Taking time to reattach the ink cartridge will adversely affect the ink path.
- Even if you are not using the printer, shake the white ink cartridge 50 times (about 20 seconds) once a week.

Replacing the Cleaning Liquid

Out-of-cleaning-liquid Warnings

If the cleaning liquid runs out, [**Replace the cleaning liquid pouch.**] appears on the screen. Tap [**OK**] to close this message.

You can also check the message by tapping  .



RELATED LINKS

- P. 51 Cleaning Liquid Replacement Method

Cleaning Liquid Replacement Method

⚠ WARNING

Never store ink, cleaning liquid, or discharged fluid in any of the following locations.

- **Any location exposed to open flame**
- **Any location where high temperature may occur**
- **Near bleach or any other such oxidizing agent or explosive material**
- **Any location within the reach of children**

Fire may be a danger. Accidental ingestion by children may pose a health hazard.

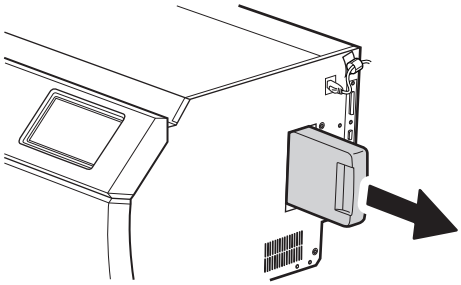
IMPORTANT

Precautions regarding cleaning liquid pouch replacement

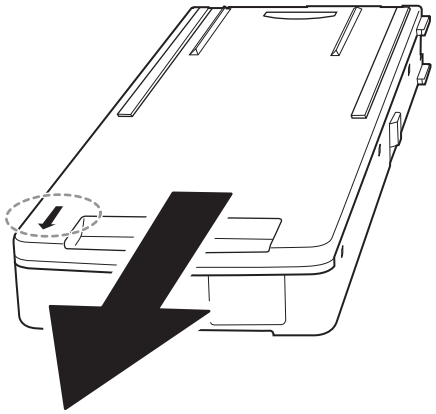
- Never insert or remove the cleaning cartridge with undue force. Cleaning liquid may leak.
- If the cover of the cleaning cartridge does not lock securely, this cartridge needs to be replaced.
  For information about purchasing cleaning cartridges, contact your authorized dealer or visit our website (https://www.rolanddg.co.jp/).

Procedure

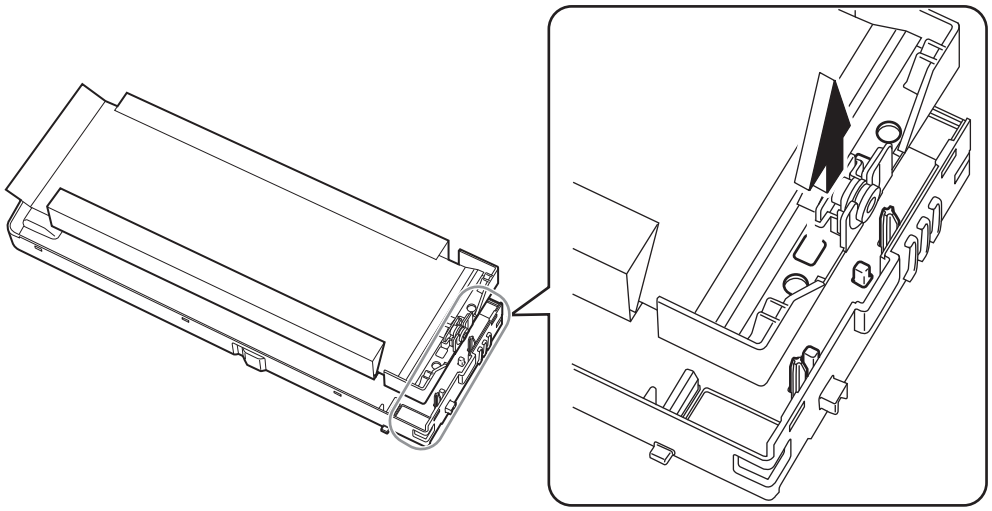
1. **Pull out the cleaning cartridge from the machine.**



2. **Remove the cover of the cleaning cartridge.**
   a. Keep the side with the arrow face up.
   b. Remove the cover by sliding it in the direction indicated by the arrow.



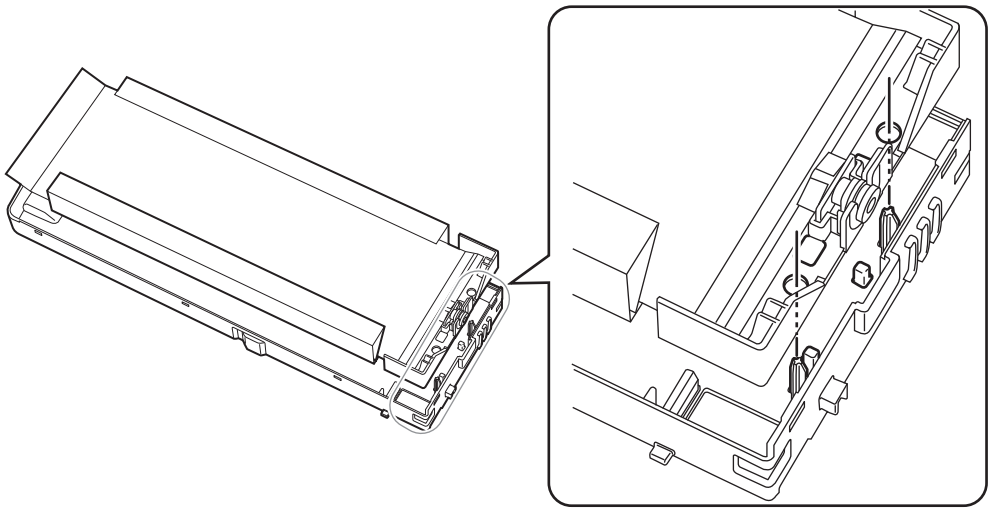
3. **Remove the used cleaning liquid pouch from the cartridge case.**



4. **Load a new cleaning liquid pouch in the cartridge case.**

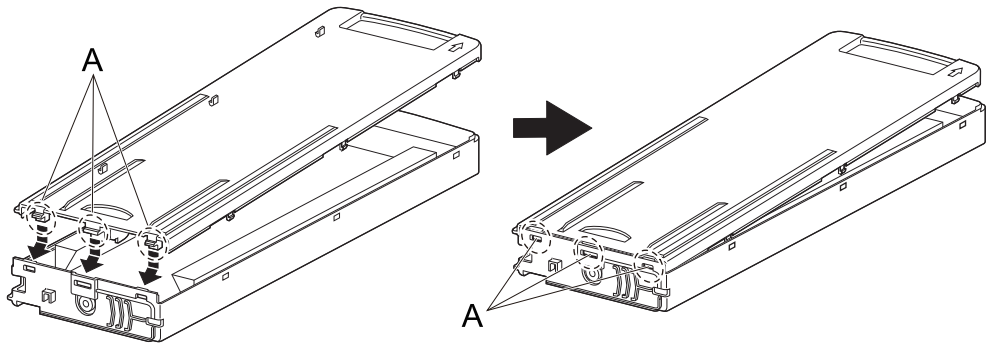
MEMO

Pass the protrusions on the cartridge case through the holes on the cleaning liquid pouch to load it in the correct position.



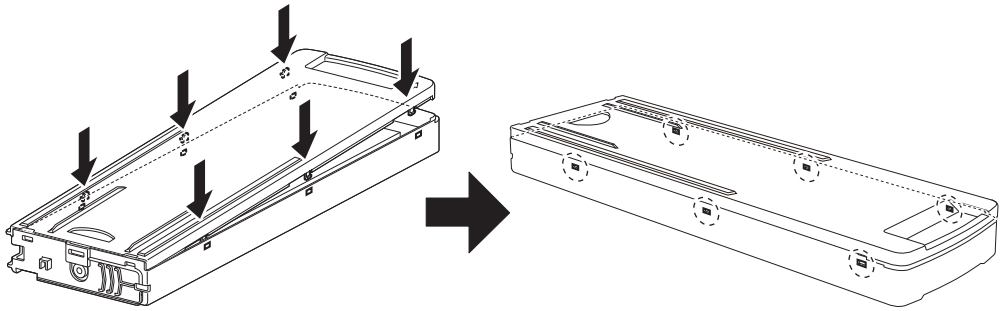
5. **Attach the cover to the cartridge case.**

a. Insert the protrusions (A) at the back of the cover into the holes in the cartridge case.



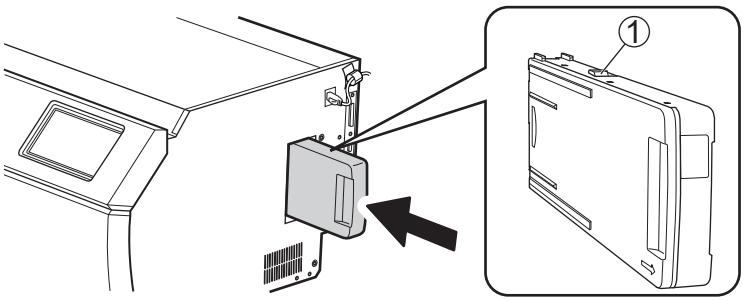
b. Push the cover to fit its hooks into the holes in the cartridge case.

There are hooks in six locations. Check that all the hooks are seated in the holes and that the cover does not come loose from the cartridge case.



6. **Set the cleaning cartridge in the cleaning liquid slot.**

Orient the cleaning cartridge so its protrusion (①) is face up, and then, while keeping the cartridge level, insert the cartridge as far as it will go.



7. **Tap [Yes] when the cleaning liquid pouch replacement confirmation screen appears.**

If you tap [**Yes**] to reset the amount of cleaning liquid remaining, the cleaning liquid pouch will be identified as a new product.

MEMO

If you tap [**Yes**] on the cleaning liquid pouch replacement confirmation screen even though you have not replaced the cleaning liquid pouch, the amount of cleaning liquid remaining is reset. In this situation, no notification will appear even if the amount of cleaning liquid remaining is very small, and the message [**Replace the cleaning liquid pouch.**] will appear when the cleaning liquid runs out. To ensure you have enough time to prepare the replacement cleaning liquid, tap [**No**] if you have not replaced the cleaning liquid.

Output Method

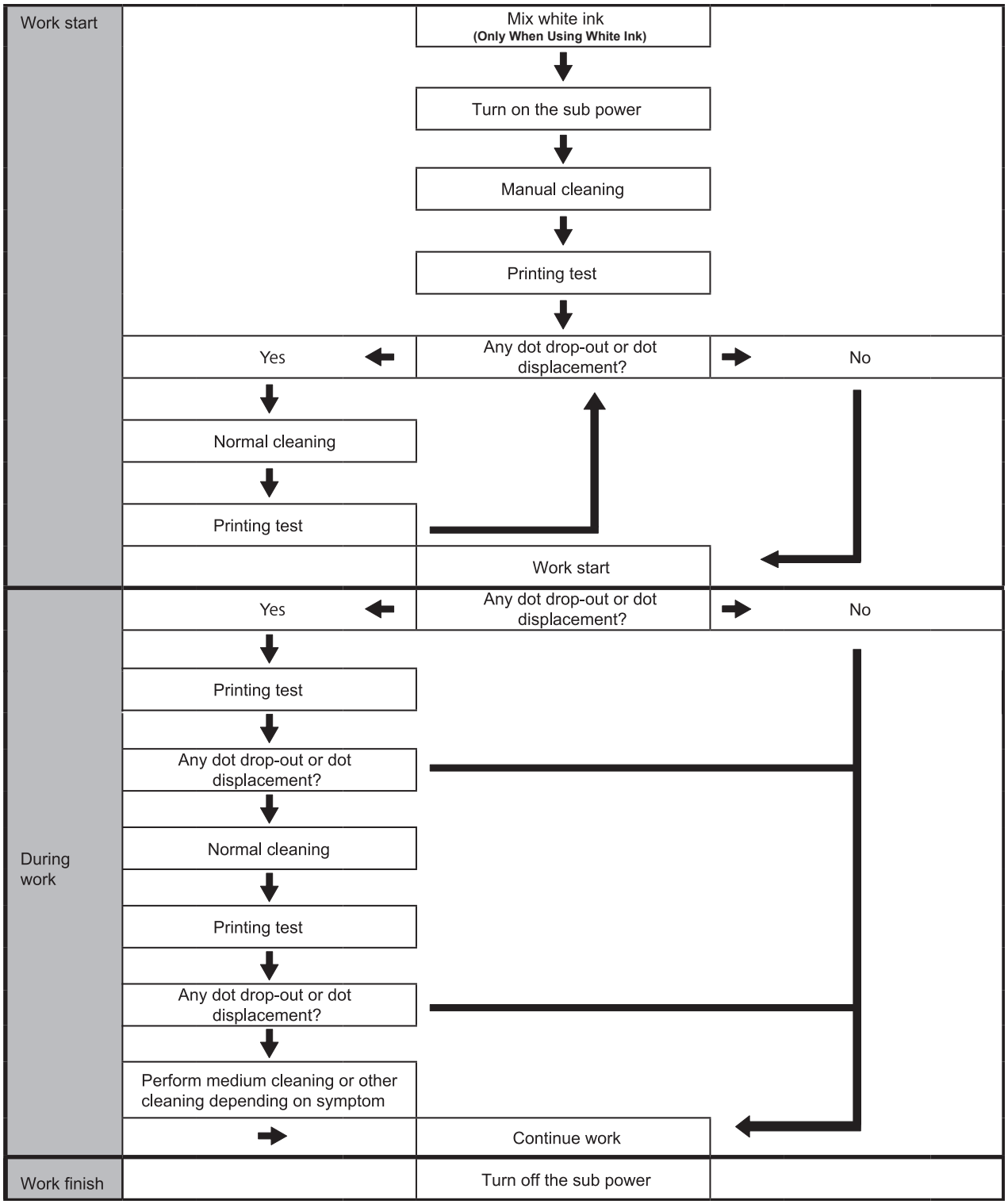
Preparations for Output and Output Methods

Preparations before Daily Operations

Checking the Daily Workflow

This section explains the basic workflow of daily operations.

Performing appropriate maintenance at the correct times can help prevent malfunction as well as bring out the full potential of this machine.



Manual Cleaning Method

Perform manual cleaning:

- Before starting operation for the day
- When the notification [**The time for manual cleaning has arrived.**] appears.
- Before sending the print data if you want to perform unmanned printing at night.
- When dot drop-out or ink drip issues that cannot be improved with powerful cleaning occur.

⚠ CAUTION

Do not perform cleaning immediately after printing has finished. (Wait approximately 15 minutes after printing finishes.)

The area around the UV-LED device is hot and may cause burns.

⚠ WARNING

Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.

Sudden movement of the machine may cause injury.

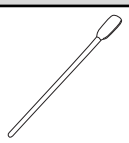
IMPORTANT

Important notes on this procedure

- Before performing this operation, remove any objects to be printed on.
- To prevent the print heads from drying out, finish this procedure in 10 minutes or less. A warning beep sounds after 10 minutes.
- Never use any implements other than the included cleaning sticks. Cotton swabs or other lint-producing items may damage the print heads.
- Do not use cleaning liquid other than the included cleaning liquid.
- Be sure to use new cleaning sticks. Reusing cleaning sticks will adversely affect the printing results.
- Do not put a cleaning stick that has been used for cleaning into the cleaning liquid. Doing so will deteriorate the cleaning liquid.
- Never rub the print head surface (nozzle surface).
- If you use up the cleaning sticks or cleaning liquid, contact your authorized dealer or visit our website (https://www.rolanddg.co.jp/).

When an alarm sounds during cleaning

- A warning beep sounds 10 minutes after operation starts. Stop work, close all the covers, and then tap [**Finish All**] to end the manual cleaning mode. After that, restart the procedure from the beginning.

Required items	
	
Cleaning stick	Cleaning liquid

1. Clean the print head caps.

Procedure

1. **Remove the object to be printed on.**

2. **Tap**  **[Cleaning].**

3. **Tap [Manual Cleaning].**

4. **Tap [Execute].**

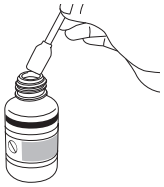
   When the confirmation screen appears, respond to the on-screen instructions, and then tap [**OK**].
   The print head carriage moves to the left end of the machine.

5. **Follow the instructions on the operation panel to perform [Manual Cleaning].**

   - Tap  or  to check the procedure.
   - If you complete the work without viewing the instructions, tap [**Finish All**].

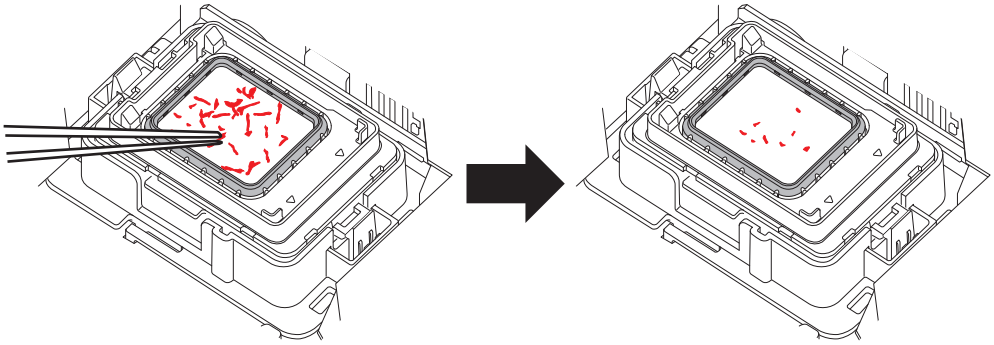
   IMPORTANT

   - Be sure to use one of the included cleaning sticks.
   - Do not use a previously used cleaning stick.
   - Do not put a previously used cleaning stick into the cleaning liquid.

   IMPORTANT

   Use a pair of tweezers to remove the pieces of hardened ink that are 3 mm (0.12 in.) or more in length.
   Do not use excessive force when pulling on pieces of hardened ink that are difficult to remove. Doing so may damage the print head caps.

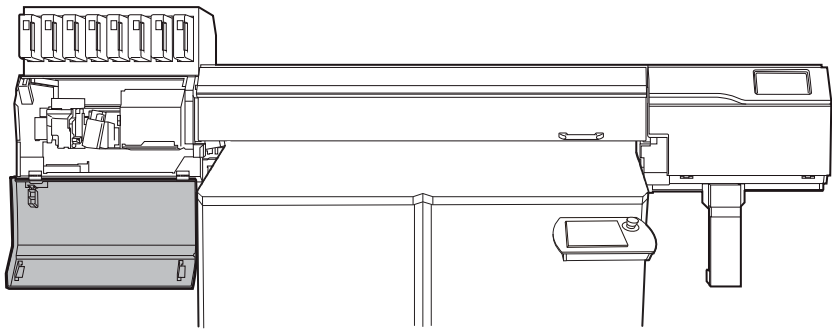
   

   When you have finished cleaning, close the right cover.

2. Clean the print heads.

Procedure

1. **Open the left cover.**



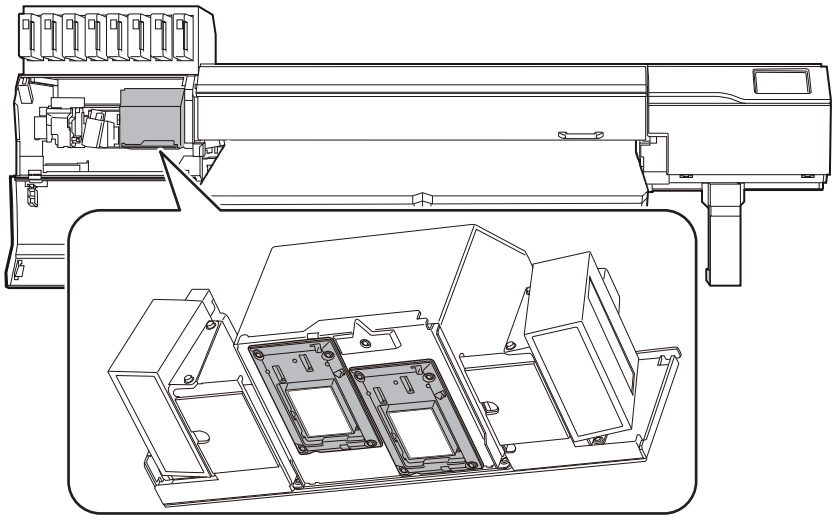
2. **Moisten a new cleaning stick with the cleaning liquid.**

IMPORTANT

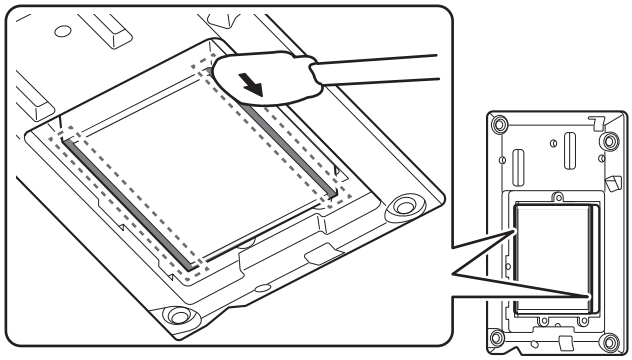
- Be sure to use one of the included cleaning sticks.
- Do not use a previously used cleaning stick.
- Do not put a previously used cleaning stick into the cleaning liquid.

3. **Clean the locations shown in the following figure.**

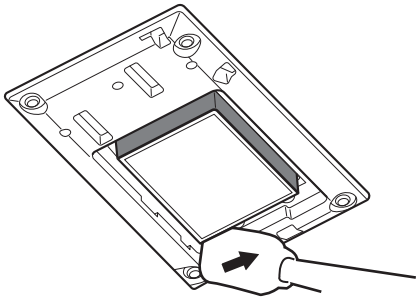
Be especially careful to clean away any fibrous dust (lint).



(1) **Press the wide surface of the cleaning stick against the left side and wipe it off. Then, press the opposite surface (which is clean) against the right side and wipe it off.**

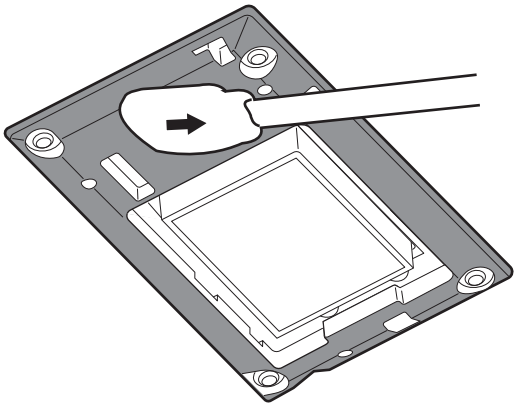


(2) **Stand the cleaning stick upright and wipe off all sides.**



(3) **Use the wide surface of the cleaning stick to wipe away any dirt from the area shown in the figure.**

If this area has any ink or cleaning liquid that appears likely to drip, use a dry cloth that is not fluffy to gently wipe away the ink or cleaning liquid.



4. **Close the left cover.**

5. **Tap [Finish All].**

Cleaning will start. The details of the operation in progress and the (approximate) remaining time of that work are displayed in the status bar at the top of the screen. When the work is finished, the status bar returns to its original display.

6. **Tap  to return to the home screen**

3. Perform a printing test to check the results.

Procedure

1. **Set up the object to be printed on.**

   MEMO

   The printing test requires an object with a W (width) of 170 mm (6.7 in.) or more and an L (length) of 90 mm (3.55 in.) or more. Set the bottom right of the object to the base point, and then carry out a printing test.

   Loading the Object, and Setting the Print Surface Height and Print Start Point(P. 35)

2. **Tap  [Nozzle Drop-out Test] on the home screen.**

3. **Tap [Execute] next to [Printing Test].**

   Printing of the test pattern starts.

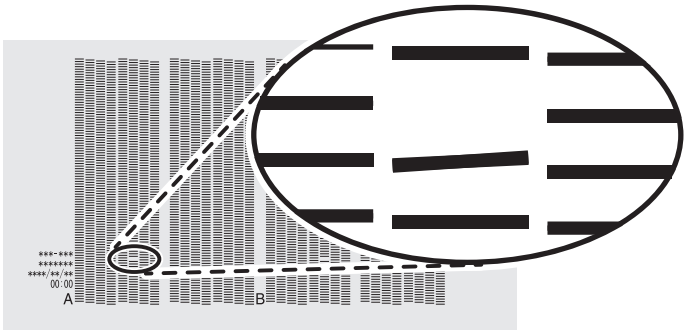
   MEMO

   Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern.

   Tap  **[Nozzle Drop-out Test]** on the home screen, and then select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** to make the base of the white ink black, making it easier to check the white ink. **[Nozzle Drop-out Test (Base: Black)]** is not displayed if the machine is not equipped with white ink.

4. **Check whether there is dot drop-out or dot displacement in the test pattern.**

   Missing blocks indicate dot drop-out. Collapsed or inclined blocks indicate dot displacement.

5. **If you have opened the front cover, close it.**

   If no dot drop-out or dot displacement occurs, this operation is finished. Tap  to return to the home screen.

If dot drop-out or dot displacement is present, perform cleaning such as normal cleaning.

RELATED LINKS

- P. 136 When Dot Drop-out or Dot Displacement Occurs

Printing Method

Preparations for Printing Output

Step 1: Performing a Nozzle Drop-out Test

Before you carry out actual printing, perform a printing test to ensure no dot drop-out or dot displacement occurs. If dot drop-out or dot displacement occurs, perform cleaning of the print heads (normal cleaning).

MEMO

When performing printing tests successively, you can select [**Feed**] (vertical printing) or [**Scan**] (horizontal printing) as the printing position for the second and later tests in comparison to the first test.

P. 94 Performing Printing Tests Arranged Horizontally

Procedure

1. **Set up the object to be printed on.**

   MEMO

   The printing test requires an object with a W (width) of 170 mm (6.7 in.) or more and an L (length) of 90 mm (3.55 in.) or more. Set the bottom right of the object to the base point, and then carry out a printing test.

   Loading the Object, and Setting the Print Surface Height and Print Start Point(P. 35)

2. **Tap  [Nozzle Drop-out Test] on the home screen.**

3. **Tap [Execute] next to [Printing Test].**

   Printing of the test pattern starts.

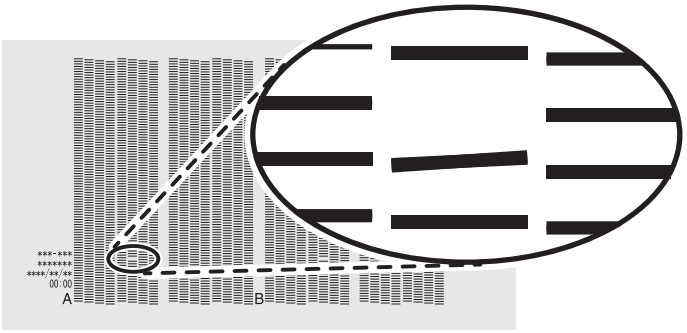
   MEMO

   Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern.

   Tap  [**Nozzle Drop-out Test**] on the home screen, and then select [**Cleaning**]>[**Printing Test**]>[**Nozzle Drop-out Test (Base: Black)**] to make the base of the white ink black, making it easier to check the white ink. [**Nozzle Drop-out Test (Base: Black)**] is not displayed if the machine is not equipped with white ink.

4. **Check whether there is dot drop-out or dot displacement in the test pattern.**

   Missing blocks indicate dot drop-out. Collapsed or inclined blocks indicate dot displacement.



5. **If you have opened the front cover, close it.**

If no dot drop-out or dot displacement occurs, preparations for output are finished.

RELATED LINKS

- P. 136 When Dot Drop-out or Dot Displacement Occurs

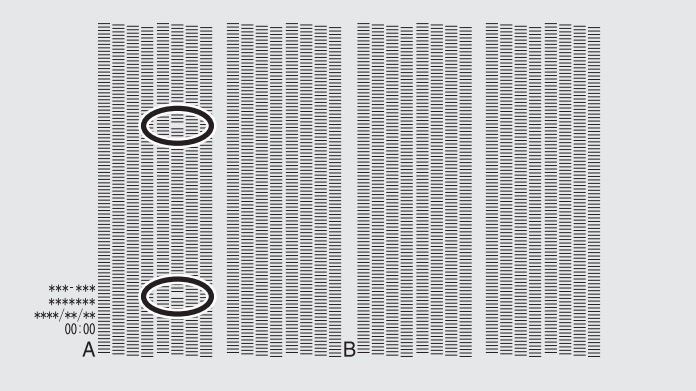
Step 2: Normal Cleaning Method

MEMO

If the object to be printed on is set up before [**Normal Cleaning**] is performed, [**After cleaning, perform a printing test.**] will be displayed on the [**Normal Cleaning**] menu screen. When this setting is turned on, [**Printing Test**] will be performed after [**Normal Cleaning**] even if [**Nozzle Drop-out Test**] is not performed.

Procedure

1. **Check for the group with dot drop-out or dot displacement by viewing the results of the printing test.**
   The space from "A" to "B" is group A. The space from "B" to the right side is group B.

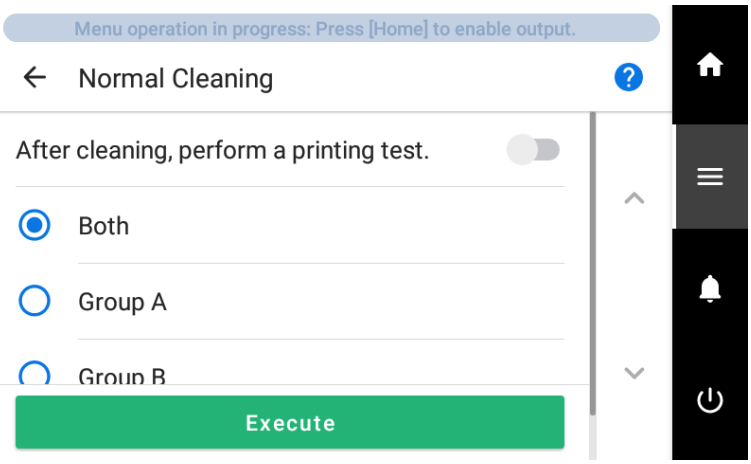


MEMO

If the printing-test results are difficult to interpret
Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

2. **Tap [Cleaning].**

3. **Tap [Normal Cleaning].**
   The screen shown below appears.



4. **Select the group of print heads to clean.**

5. **Tap [Execute].**

   Cleaning will start. The details of the operation in progress and the (approximate) remaining time of that work are displayed in the status bar at the top of the screen.

   When the work is finished, the status bar returns to its original display.

6. **Tap** ← **.**

7. **Perform a printing test again.**

8. **Check to make sure the dot drop-out or dot displacement has been corrected.**

   If the problem persists, try performing normal cleaning again. If the printer has been used for a long period, dot drop-outs may not be fixed even after performing normal cleaning two or three times. If this is the case, clean using a different method.

RELATED LINKS

- P. 62 Performing a Nozzle Drop-out Test
- P. 138 When Normal Cleaning Is Not Effective

Printing Output

Adjusting the Print Head Height

When printing on objects that easily come loose due to poor suction, or if the print surface is slightly uneven, resulting in a height difference between the detected and actual print surface height, adjust the height of the print heads so that they do not come into contact with the object to be printed on. Normally move the height-adjustment lever to [**Low**].

You can select the print head height from [**Low**], [**Medium**], and [**High**]. Printing quality when the print head height is set to [**Medium**] or [**High**] may be coarser or otherwise lower than when set to [**Low**].

Procedure

1. **Set up the object to be printed on.**

   P. 35 Loading the Object, and Setting the Print Surface Height and Print Start Point

2. **Tap**  .

3. **Tap [Media Settings]>[Printing Settings]>[Print Head Height].**

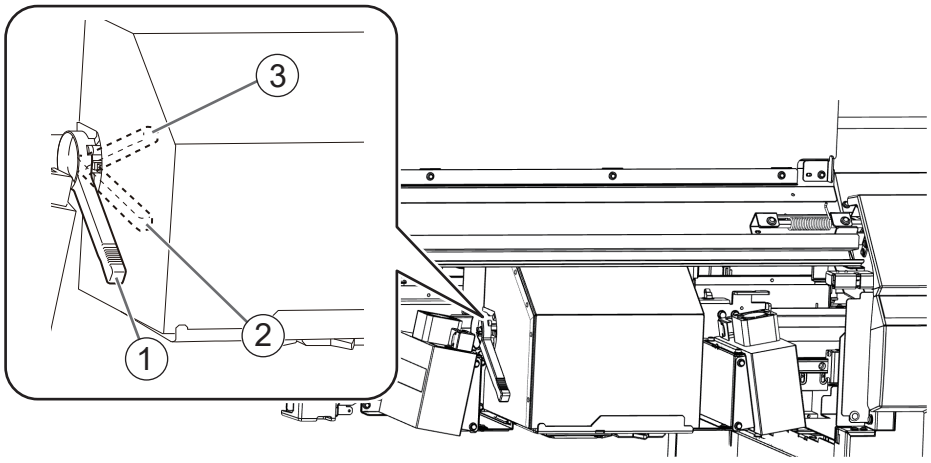
4. **Tap [Change].**

   The print head carriage moves to a position where the height-adjustment lever can be operated.

5. **Open the front cover.**

6. **Move the height-adjustment lever to adjust the print head height.**

   When you change the position of the height-adjustment lever, the display screen will change.



Position	Operation panel display	Description
①	[Low]	Normally set the height-adjustment lever to [**Low**].
②	[Medium]	If the object comes loose from the table during printing, set the height to [**Medium**].
③	[High]	If the object comes loose from the table during printing even though the height is set to [**Medium**], set the height to [**High**].

IMPORTANT

The printing quality degrades as the distance between the object to be printed on and the print heads increases. Do not move the height-adjustment lever to [**Medium**] or [**High**] needlessly.

7. **Close the front cover.**

8. **Tap [OK].**

The print head carriage moves to their original position.

9. **Tap  to return to the home screen.**

MEMO

- Default setting: [**Low**]
- If degradation of printing quality occurs after raising the print head height, refer to Adjusting the Misalignment of the Ink Landing Position (Media Gap Adjustment)(P. 72) and try optimizing the quality.

Starting Output

⚠ WARNING

Never touch the print-head carriage while output is in progress.

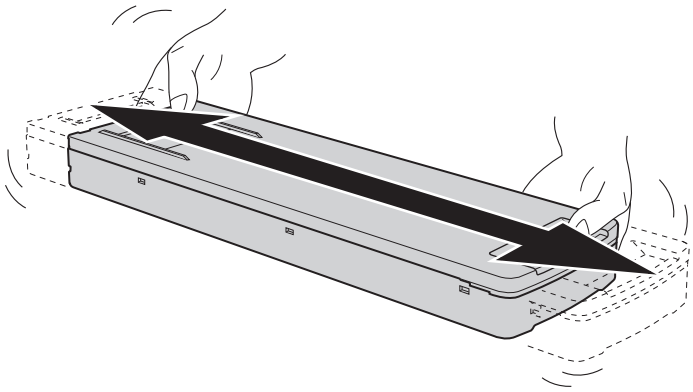
The print-head carriage moves at high speed. Coming into contact with the moving carriage may cause injury.

IMPORTANT

If you are using white ink

Before the start of daily operations, remove just the white ink cartridge, shake it 50 times (about 20 seconds), and then reinsert it.

The ingredients in white ink tend to settle. Each day, before starting work for that day, be sure to shake the ink cartridge. Allowing the ink to stand can cause the settled material to harden, resulting in malfunctions or other problems.



- Before shaking the ink cartridge, wipe off any ink from around its mouth. If you do not wipe off the ink, it may splatter when you shake the ink cartridge.
- When shaking the ink cartridge, firmly hold it with both hands to prevent the ink cartridge cover from coming loose. The cover or ink pouch coming loose and falling may cause damage or printer malfunctions.
- When you have finished mixing the ink, reattach the ink cartridge immediately. Taking time to reattach the ink cartridge will adversely affect the ink path.
- Even if you are not using the printer, shake the white ink cartridge 50 times (about 20 seconds) once a week.

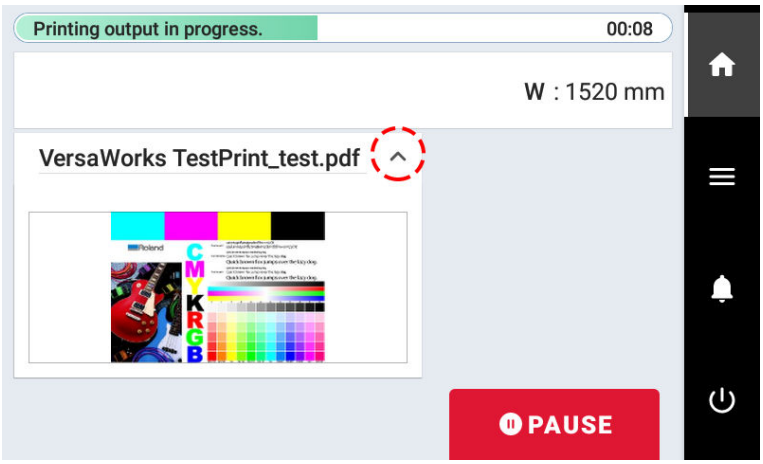
Procedure

1. **Close the front cover.**
2. **Make sure that [Output possible.] is displayed in the status bar at the top of the screen.**
3. **Send the output data from the computer.**

   For information on how to create the output data, refer to the documentation for the software RIP.

   MEMO

   - When you send the output data, **[Ink circulation in progress.]** or **[Normal cleaning in progress.]** may be displayed on the screen. These indicate the preparation operations performed before output. Output will begin after the time displayed on the screen elapses.
   - The data being output can be viewed as an image. Tap ^ shown in the following figure to switch to the remaining ink screen. Tap this icon again to return to the screen for checking the data being output. However, this functionality is limited to software RIPs that support the display of the output data image (thumbnail).



IMPORTANT

Output is not possible in these situations

- The machine does not run when a cover (front, left, or right) is open.
- Data from the computer is not accepted when **[Load media.]** is displayed.
- On menu screens where **[Menu operation in progress: Press [Home] to enable output.]** is displayed, output doesn't start even when data is sent from the computer. When you return to a menu item where output is possible or tap  to return to the home screen, output starts.

Points that must be observed

- Never open a cover (front, left, or right) while output is in progress. Doing so interrupts printing.
- Do not touch the object while output is in progress. Doing so may cause the object to rub against the print heads, resulting in damage to the heads.

When not using the machine, remove the object and store it in a suitable environment.

- Do not leave the object loaded on the machine. When not using the machine, remove the object and store it in a suitable environment.

Optimizing Quality and Efficiency

Optimizing the Output Quality

Using the Correction Functions

To optimize the output quality, it is effective to use some correction functions.

Adjusting the Misalignment of the Ink Landing Position (Media Gap Adjustment)

This adjusts the landing position of the ink discharged from the print heads. The landing position varies according to the print head height, so we recommend that you make corrections to match the object to be printed on you are using.

First, print a test pattern, and then determine and enter the correction value. After entering the correction value, print a test pattern again and check the correction results.

This adjustment must be performed in the following cases.

- When using this machine for the first time
- When the print head height was changed

Procedure

1. **Set up the object to be printed on.**

   MEMO

   The printing test requires an object with a W (width) of 270 mm (10.63 in.) or more and an L (length) of 120 mm (4.73 in.) or more. Set the bottom right of the object to the base point, and then carry out a printing test.

   Loading the Object, and Setting the Print Surface Height and Print Start Point(P. 35)

2. **Close the front cover.**

3. **Tap**  .

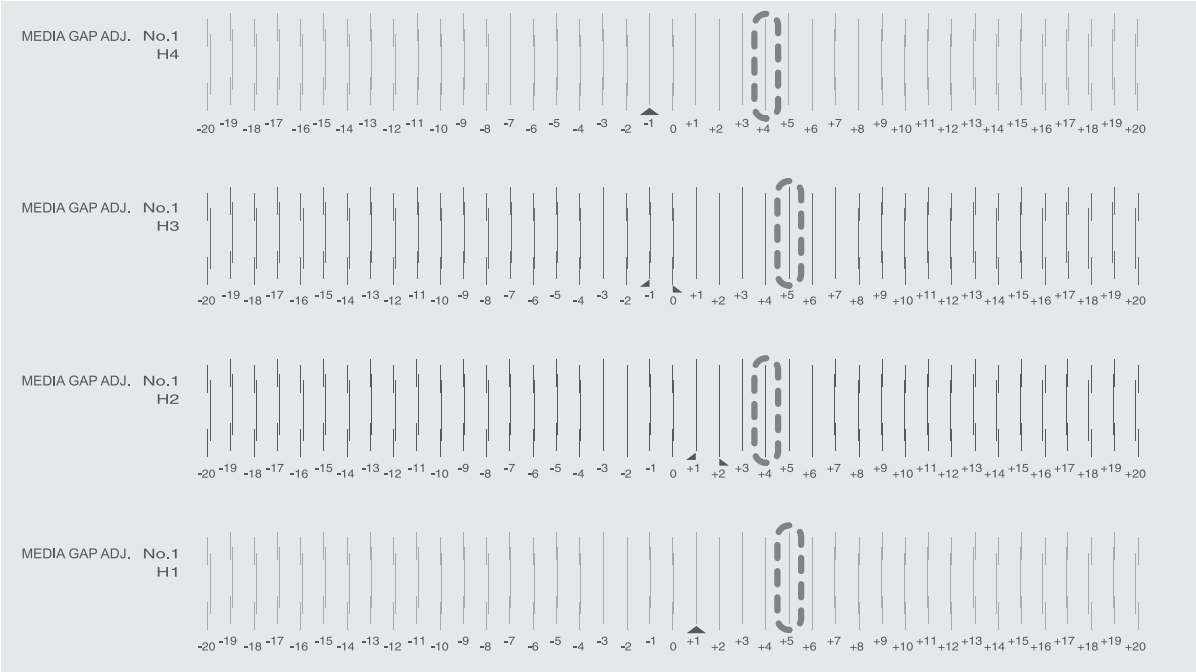
4. **Tap [Media Settings]>[Printing Settings]>[Media Gap Adjustment].**

5. **Tap [Execute] next to [Printing Test].**

   Printing of the test pattern starts.

6. **Check the printed test pattern, and then tap**  **or**  **to enter the H1 and H2 correction values for No. 1 and the H1 and H2 correction values for No. 2.**

   Select the value that gives the least misalignment between the two lines. In the case of the following figure, select "+5" for H1 for No. 1 and No. 2 and "+4" for H2 for No. 1 and No. 2. When you cannot choose between two sequential numbers, select a value that is between them (you can set correction values in units of "0.5").



MEMO

If the test pattern is difficult to see, tap [**TS : FRONT**] or [**TS : BACK**] on the touch panel to move the printer unit to a position where the test pattern is easier to see.

7. **Tap [Save].**

The entered correction value is saved.

8. **Prepare the printing test.**

The printing test starts at the location of the printer unit.

When there is just enough of a printable area on the object, move the printer unit to the location where the previous printing test finished. If the printer unit was not moved when the printing test results were checked, there is no need to move the printer unit.

When there is not enough of a printable area on the object, remove the object and set up a new one.

9. **Tap [Execute] next to [Printing Test].**

Printing of the test pattern starts.

10. **Check the test pattern to see whether the correction was successful.**

For all the correction values, check that the misalignment is minimized for the two vertical lines indicated by "▲" (that is, the current correction value). If the misalignment is smaller for another set of vertical lines, set the correction value again.

11. **When you have successfully performed the correction, tap  to go back to the home screen.**

MEMO

Default setting: 0.0 dots

Reducing Horizontal Bands (Feed Correction)

Perform corrections to make the band-shaped "stripes" on the printed surface less noticeable.

The band-shaped "stripes" are called "horizontal bands" or "banding."

First, print a test pattern, and then determine and enter the correction value. After entering the correction value, print a test pattern again and check the correction results. Repeat the process of printing a test pattern and entering a correction value several times to find the optimal correction value.

Procedure

1. **Set up the object to be printed on.**

   MEMO

   The printing test requires an object with a W (width) of 330 mm (13 in.) or more and an L (length) of 70 mm (2.76 in.) or more. Set the bottom right of the object to the base point, and then carry out a printing test.

   Loading the Object, and Setting the Print Surface Height and Print Start Point(P. 35)

2. **Close the front cover.**

3. **Tap**  .

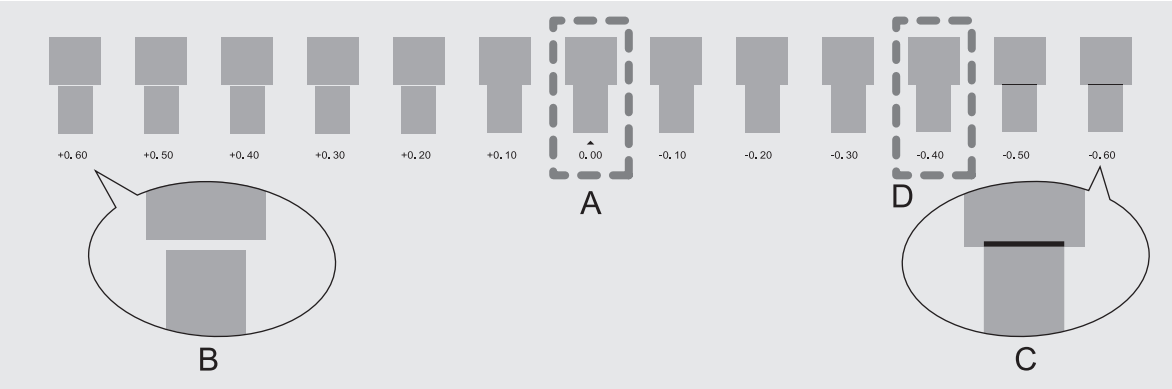
4. **Tap [Media Settings]>[Printing Settings]>[Feed Correction].**

5. **Tap [Execute] next to [Printing Test].**

   Printing of the test pattern starts.

6. **Check the printed test pattern, and then tap**  **or**  **to enter the correction value.**

   The current correction value (A) is that of the figure indicated by "▲." Select the value to make the gap (B) and overlap (C) between the upper/lower squares smallest. In the case of the following figure, select "−0.40" (D). When you cannot choose between two sequential numbers, specify a value that is between them.

   MEMO

   If the test pattern is difficult to see, tap **[TS : FRONT]** or **[TS : BACK]** on the touch panel to move the printer unit to a position where the test pattern is easier to see.

7. **Tap [Save].**

The entered correction value is saved.

8. **Prepare the printing test.**

The printing test starts at the location of the printer unit.

When there is just enough of a printable area on the object, move the printer unit to the location where the previous printing test finished. If the printer unit was not moved when the printing test results were checked, there is no need to move the printer unit.

When there is not enough of a printable area on the object, remove the object and set up a new one.

9. **Tap [Execute] next to [Printing Test].**

Printing of the test pattern starts.

10. **Check the test pattern to see whether the correction was successful.**

Check that the gap and overlap are the smallest for the figure indicated by "▲" (that is, the current correction value). If the gap and overlap are smaller for another figure, set the correction value again.

11. **When you have successfully performed the correction, tap  to go back to the home screen.**

MEMO

- Default setting: 0.00%
- Depending on the software RIP you are using, you can also configure this setting in the software RIP (by, for example, choosing the media type). When you have made the setting in the software RIP, the software RIP's setting is used and the printer unit's setting is ignored.

Configuring Settings to Match the Properties of the Object to Be Printed On

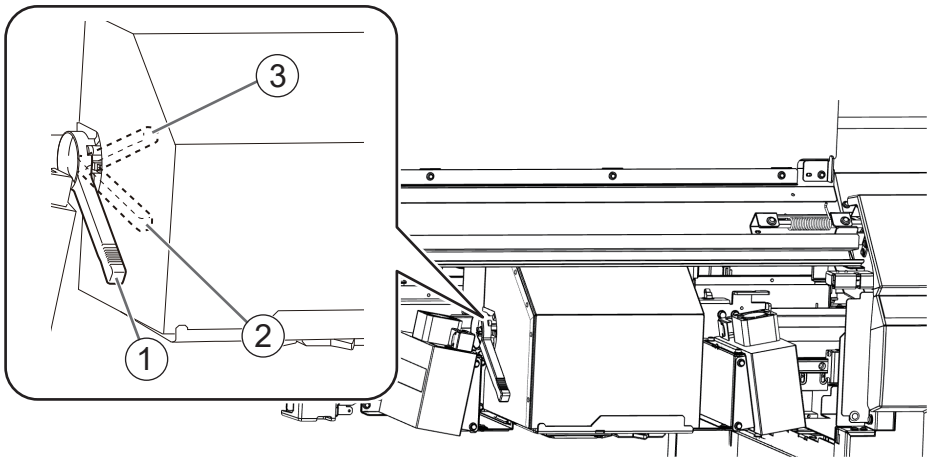
Changing the Print Head Height

When printing on objects that easily come loose due to poor suction, or if the print surface is slightly uneven, resulting in a height difference between the detected and actual print surface height, adjust the height of the print heads so that they do not come into contact with the object to be printed on. Normally move the height-adjustment lever to [**Low**].

You can select the print head height from [**Low**], [**Medium**], and [**High**]. Printing quality when the print head height is set to [**Medium**] or [**High**] may be coarser or otherwise lower than when set to [**Low**].

Procedure

1. **Set up the object to be printed on.**
   Loading the Object, and Setting the Print Surface Height and Print Start Point(P. 35)
2. **Tap**  .
3. **Tap [Media Settings]>[Printing Settings]>[Print Head Height].**
4. **Tap [Change].**
   The print head carriage moves to a position where the height-adjustment lever can be operated.
5. **Open the front cover.**
6. **Move the height-adjustment lever to adjust the print head height.**
   When you change the position of the height-adjustment lever, the display screen will change.



Position	Operation panel display	Description
①	[**Low**]	Normally set the height-adjustment lever to [**Low**].
②	[**Medium**]	If the object comes loose from the table during printing, set the height to [**Medium**].
③	[**High**]	If the object comes loose from the table during printing even though the height is set to [**Medium**], set the height to [**High**].

IMPORTANT

The printing quality degrades as the distance between the object to be printed on and the print heads increases. Do not move the height-adjustment lever to [**Medium**] or [**High**] needlessly.

7. **Close the front cover.**

8. **Tap [OK].**

The print head carriage moves to their original position.

9. **Tap  to return to the home screen.**

MEMO

- Default setting: [**Low**]
- If degradation of printing quality occurs after raising the print head height, refer to Adjusting the Misalignment of the Ink Landing Position (Media Gap Adjustment)(P. 72) and try optimizing the quality.

Avoiding Printing Cancellation Due to Cleaning

Cleaning during Printing

This machine counts the hours of printing, and when the accumulated printing hours reach a specified time, automatic cleaning is performed. When cleaning finishes, the accumulated printing time is reset. This cleaning can also be performed during printing, so print quality may be affected.

To avoid cleaning during printing, first obtain the time until cleaning is performed. Next, use the software RIP to confirm the required time for printing. If the required time for printing is greater than the time until cleaning, perform Cleaning and Count Clear prior to printing. This will cause the accumulated printing time to be reset. Alternatively, change the print quality to reduce the time required for printing. Either of these methods can be used to prevent cleaning from being performed while printing is in progress.

1. Confirm the accumulated printing time.

If the remaining time until cleaning is performed is not displayed on the home screen, change the settings from the menu to display this time.

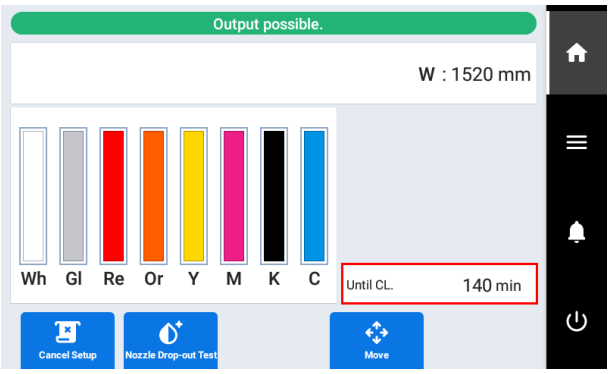
P. 98 Displaying the Remaining Time until Cleaning Is Performed

Procedure

1. **If the home screen is not displayed, tap**  .

2. **Check the display of [Until CL.].**

   The remaining time until automatic cleaning is displayed.



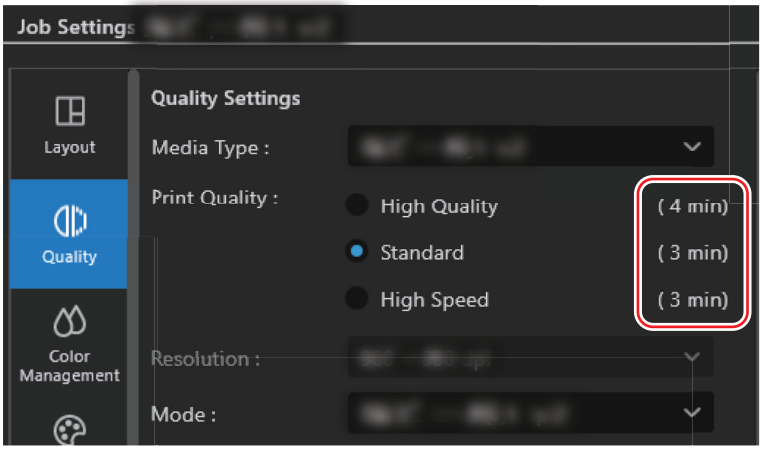
2. Confirm the required time for printing.

Use the software RIP to confirm the required time for printing. The following is the method for confirming when using VersaWorks.

Procedure

1. **Display the [Job Settings] window.**

2. **Confirm the required time for printing.**



RELATED LINKS

- VersaWorks manual (https://downloadcenter.rolanddg.com/VersaWorks7)

3. Reset the time until automatic cleaning.

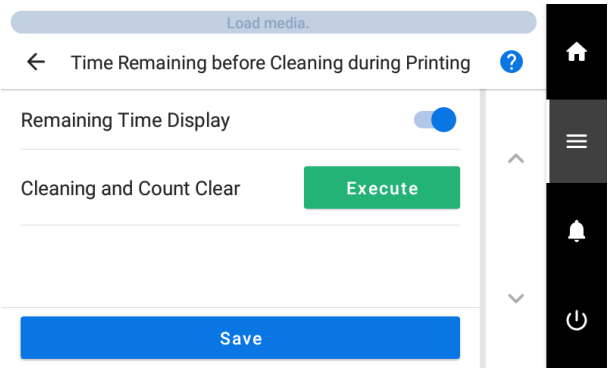
Check the time until automatic cleaning and the required time for printing and perform Cleaning and Count Clear to reset the accumulated time if necessary.

Procedure

1. **Tap**  .

2. **Tap [Preferences]>[Time Remaining before Cleaning during Printing].**

   The screen shown below appears.



3. **Tap [Execute] next to [Cleaning and Count Clear].**

   Cleaning will start. The details of the operation in progress and the (approximate) remaining time of that work are displayed in the status bar at the top of the screen. When the work is finished, the status bar returns to its original display.

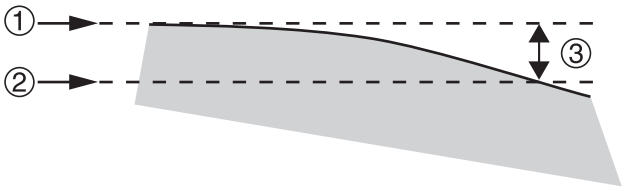
4. **Tap**  **to return to the home screen.**

Notes When the Print Surface Is Uneven

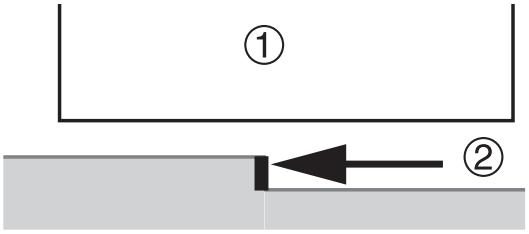
This machine can also print on uneven surfaces. However, remember the following points for the height setting.

- The gap between the "highest position of the object to be printed on" (①) and the "lowest position of the print surface" (②) should be 2 mm (78.7 mil) or less (③; as a general guide).

Print quality at the lower position degrades as the height gap widens.



- Printing on a surface (②) that is perpendicular to the print heads (①) is not possible.



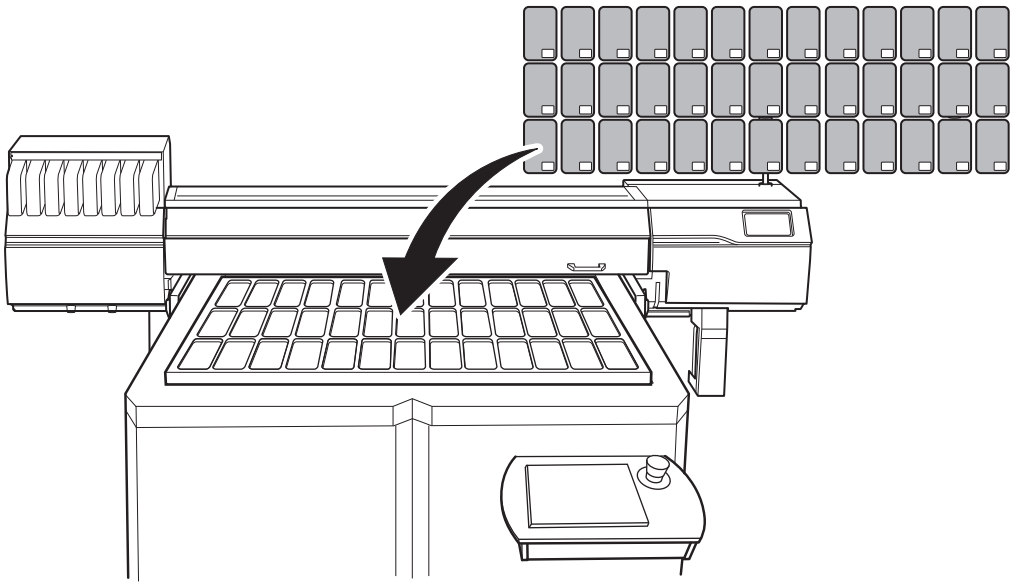
Optimizing Work Efficiency

Considering How to Align the Objects

Considering Dedicated Jigs

When printing on the same object in large quantities, it is common to use a dedicated fixing jig.

Using jigs can be beneficial if the labor and costs that can be cut using a jig exceed the labor and costs of making the jig.



The following is an overview of printing using jigs.

- Temporarily fix the dedicated jig to the table. Because the position and angle will be adjusted during actual printing, temporary installation is acceptable.
- Attach the object to be printed on to the temporarily fixed jig, and set the height of the print surface.
- Once the jig position has been set, you can determine exactly where the object to be printed on will be placed.
- Create print data that takes into account the installation location of the object to be printed on in the dedicated jig.
- Use VersaWorks to set the printing position of the data.

  https://downloadcenter.rolanddg.com/VersaWorks7
- Perform several test prints to adjust the printing position and height.

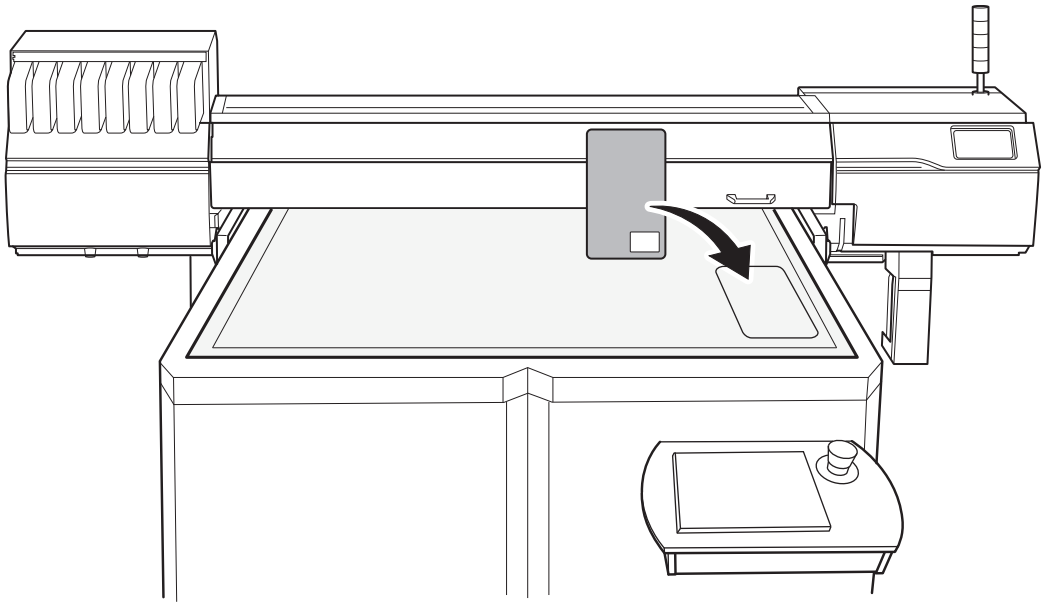
The dimensions, mounting position, and mounting angle of the jig may not be as expected.

Moreover, some jig materials may expand or contract according to the temperature and humidity.

For these reasons, checking and adjusting the printing position using an actual object is recommended.

Loading the Object in the Printing Position

This section explains how to lay the printable media on the table, and then print the outline of the object. Place the object on top of the printed outline so that the printed outline is hidden. This method is suitable if you are not making enough objects to require the need for making jigs.



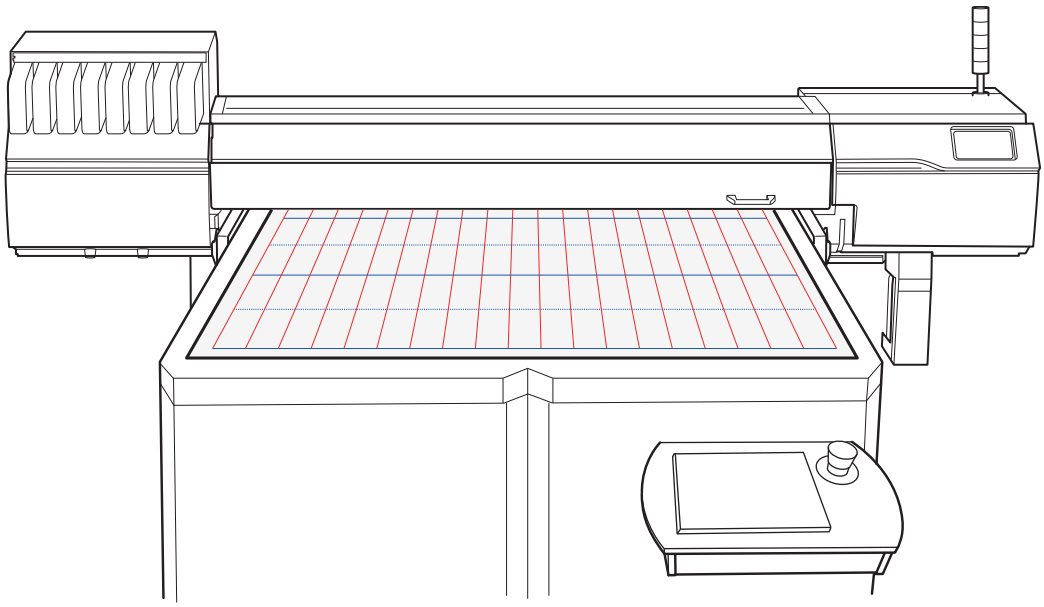
However, note that positioning accuracy will be limited to visual inspection levels.

- Set the media surface height as the print surface height.
- Print the print data—including the external shape of the object to be printed on—onto the media.
- Place the object directly on top of the media on which this external shape was printed.
  Secure the object in place using a substance such as commercially available adhesive tape.
- Set the height of the object to be printed on as the print surface height.
- Print the print data—excluding the external shape of the object to be printed on—onto the object.
- Attach paper or some other wide, flat, printable media to the table.
  Turn on [TS : VACUUM] to ensure the media does not come loose when doing the work.

MEMO

Media refers to the thin sheet used to make it easier to position the object.

Aligning the Object to the Grid



This section explains how to affix and suction printable media to the table and how to print grid lines onto the media.

These printed grid lines can be used to align the object to be printed on, making it easier to set the printing position.

If the media becomes dirty or unusable, replace it.

<Items required>

- Printable media that meets the following requirements:

  Highly breathable

  Uniform thickness

  Minimal expansion/contraction due to temperature or humidity
- Tape for securing media
- Squeegee
- Print data for grid lines

  Click here for printing data with 10 mm (0.39 in.) spacing: (, Adobe Illustrator EPS file)

  * The data has a size of 1,520 mm × 2,450 mm (59.84 in. × 96.46 in.). Remove any unnecessary lines so that the grid does not extend beyond the media on the table.

MEMO

Media refers to the thin sheet used to make it easier to position the object.

Procedure

1. **Use the touch panel to move the printer unit to a location where it will not interfere with the work.**

   Press and hold [TS : START Z]. The printer unit will rise to the highest point.

   Then, press and hold [TS : END X]. The printer unit will move to the back of the table.

2. **Place the media on the table.**

   Place the media in the front-right corner of the maximum printing area.

3. **Check that [TS : VACUUM] is shown for the button on the touch panel, and then press [TS : PUMP1].**

   While the media is being suctioned against the table, remove any wrinkles from the media with a squeegee.

   Place the object to be printed on atop the media as a test, and confirm that the object to be printed on can still be suctioned through the media.

   If the object to be printed on cannot be suctioned, the media is not suitable for use on the table. In such cases, try different media.

   MEMO

   If the button is displaying [TS : BLOW], press [TS : BLOW] to switch to [TS : VACUUM].

   MEMO

   When the trailing edge of the object is positioned behind the center of the table, also tap [TS : PUMP2] on the touch panel to suction the object.

4. **After removing all of the wrinkles, secure the media with tape.**

5. **Press and hold [TS : START X] on the touch panel.**

   Move the printer unit to the front edge of the table.

6. **Press [TS : AUTO Z] on the touch panel.**

   The printer unit will descend while [TS : AUTO Z] is pressed.

   A sensor is used to detect the height and stop the descent. When the printer is stopped, the height will be set as the print surface height.

   Keep pressing [TS : AUTO Z] until the printer stops descending.

7. **Edit the print data so that it does not extend beyond the size of the media on the table.**

   Save the file in EPS format.

8. **Start VersaWorks and input the print data.**

   Drag the file to the job list.

9. **Double-click the job registered in step 8, and open the job settings window.**

   Set the print quality and other settings as necessary. Do not change the printing position from the default setting (0,0).

   When finished configuring the settings, click [**OK**] to close the window.

10. **Click  to print.**

Loading Heavy and Difficult-to-Move Objects to Be Printed On

Use the blower if the object to be printed on is heavy or difficult to place.

Air will be blown from holes in the surface of the table, making it easier to move the object to be printed on when placed on the table.

Procedure

1. **Tap [TS : VACUUM] on the touch panel.**

   The button display will switch to [TS : BLOW].

   If [TS : BLOW] is already displayed, there is no need to switch the setting.

2. **Tap [TS : PUMP1].**

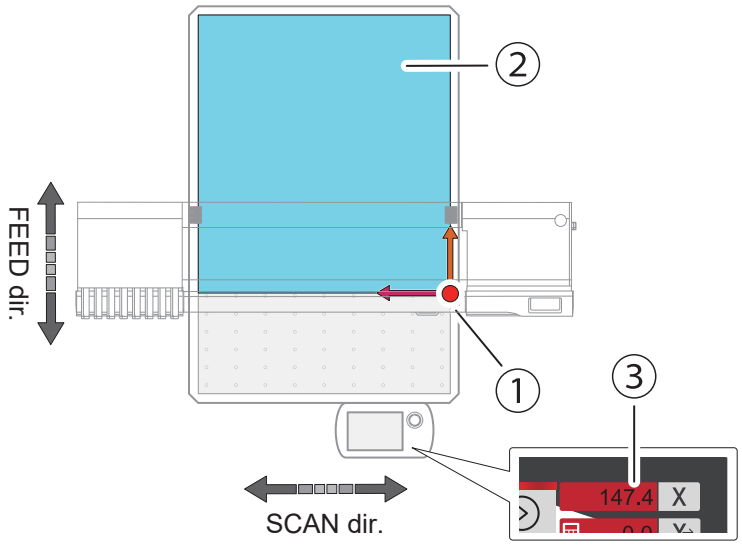
   Air will begin blowing.

   MEMO

   When the trailing edge of the object is positioned behind the center of the table, also tap [TS : PUMP2] on the touch panel.

Adjusting the Output-start Location

Printing-start Location



The current position (③) is always the printing-start location (①) in the feed direction (forward/backward).

The right edge of the printing area (②) is the printing-start location in the scan direction (left/right).

To set a specific position as the printing-start location, set the base point.

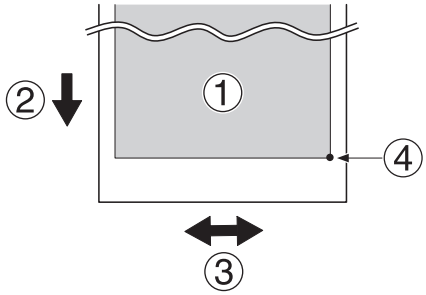
RELATED LINKS

- P. 89 Setting the Base Point

Setting the Base Point

Set the base point to determine the printing area on the set up object.

The base point (④) indicates the bottom-right corner of the printing area (①) (②: feed (forward-back) direction, ③: scan (left-right) direction). The base point will be cleared after printing.



MEMO

Note that the left and right positions are not restored to their defaults for test patterns.

MEMO

The print start point toward the front or back of the table (feed direction) will always be the current position of the printer unit.
Even if the printer unit is moved using the touch panel, or if it is in the stop position after printing has been completed, the current position will always be the print start point.

Procedure

1. **Set up the object to be printed on.**
   Loading the Object, and Setting the Print Surface Height and Print Start Point(P. 35)

2. **Tap  [Move].**
   The movement screen appears.

3. **Select  ,  ,  , or  .**
   The sub carriage will move onto the table, and the pointer will point to the previously set print origin.

   MEMO

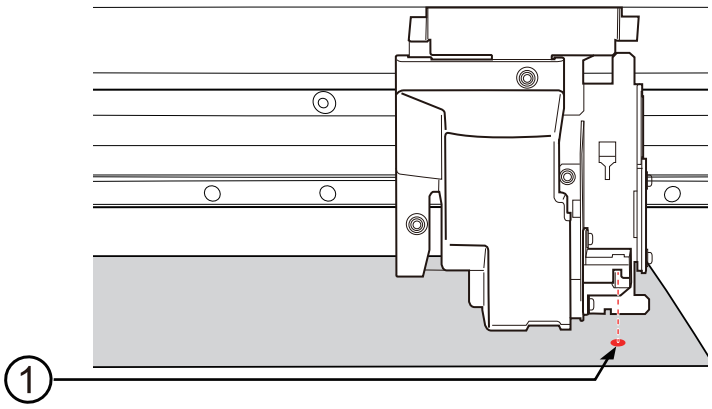
    cannot be tapped when the print origin is set to the right edge of the printing area.

4. **Tap  ,  ,  , or  to move the pointer to the position (origin) so that it points to the right front of the printing area.**

MEMO

When the pointer is difficult to see

Depending on the material of the object to be printed on, such as transparent media or high-gloss media with dark colors used on the print surface, the pointer may be difficult to see. In such cases, the pointer may become more visible by placing masking tape on the print surface or on the back.



①: Base point (right edge of the printing area)

5. **Once the position has been decided, tap [Set Base Point Here] to confirm it.**

The base point position is updated, and you are returned to the home screen.

MEMO

An icon is displayed on the home screen to indicate that the base point position has been updated.

Reducing Output Time

Speeding Up Output for Narrow Print Objects

This shortens output time by reducing the width of print-head carriage movement to the minimum necessary. This feature is effective when the output data has a small width.

Procedure

1. **Set up the object to be printed on.**
   Loading the Object, and Setting the Print Surface Height and Print Start Point(P. 35)
2. **Tap**  .
3. **Tap [Media Settings]>[Other Media Settings]>[Printing Movement Range].**
4. **Specify the range of print-head carriage movement during printing.**

[Output Data Width]	Matches the range of print-head carriage movement to the output data. Movement is limited to the minimum amount necessary, and this can be expected to yield the fastest output. Note, however, that because the movement speed of the object is no longer constant, colors may be uneven.
[Full Width]	The print-head carriage moves from one end of the machine to the other. "FULL" makes the speed of the movement of the object to be printed on constant at all times and produces the most stable printing results.

5. **Tap [Save] to confirm your entry.**
6. **Tap**  **to return to the home screen.**

MEMO

- Default setting: **[Output Data Width]**

Speeding Up Output for Deep Objects

You can reduce the output time by shortening the illumination distance of the ultraviolet light after printing.

IMPORTANT

If this distance is too short, the ultraviolet light's illumination time will also be too short, possibly preventing the ink from being cured. Be sure to try printing and check that the ink is cured.

MEMO

- This setting is effective for objects that have high ink adhesion. Check the material of the object before printing.
- Using primer and degreasing the object with anhydrous ethanol or isopropyl alcohol are also effective methods for increasing the adhesion of the ink.

Procedure

1. **Tap**  .
2. **Tap [Preferences]>[Post-cure Length].**
3. **Tap**  **or**  **to set the illumination distance of the ultraviolet light.**

   The smaller the number, the shorter the illumination distance of the ultraviolet light after printing.

   IMPORTANT

   You can change the illumination distance of the ultraviolet light in increments of 5%.
4. **Tap [Save] to confirm your entry.**
5. **Tap**  **to return to the home screen.**

   MEMO

   - Default setting: **[100 %]**

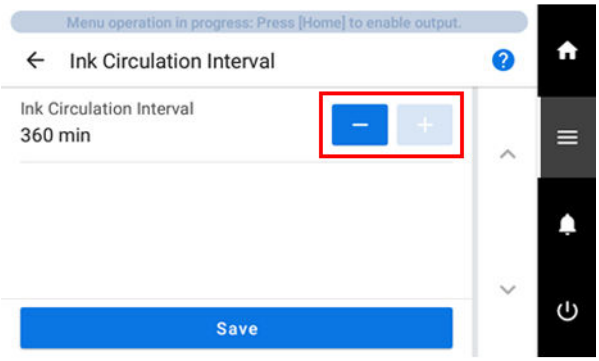
Other Useful Functions

Setting the Ink Circulation Interval

This section explains how to set the circulation of white ink at set intervals of time.

Procedure

1. Tap  .
2. Tap [Preferences]>[Ink Circulation Interval].
3. Select [Ink Circulation Interval] from the following.



[Ink Circulation Interval]	Description
30 to 360 min*1	Sets the circulation of white ink at set intervals of time.

*1 Increase or decrease in 30 minute increments.

4. Tap [Save] to confirm your entry.
5. Tap  to return to the home screen.

MEMO

- Default setting: 360 min.

Performing Printing Tests Arranged Horizontally

When performing printing tests successively, you can select [**Feed**] (vertical printing) or [**Scan**] (horizontal printing) as the print position for the second and later tests in comparison to the first test.

Procedure

1. Tap  .
2. Tap [Preferences]>[Printing Test Position].
3. Select [Scan].
4. Tap [Save] to confirm your entry.
5. Tap  to return to the home screen.

MEMO

Default setting: [**Feed**]

Optimizing Operation Management

Managing the Operations Appropriately and Efficiently

Setting the Current Date/Time and Using It for Maintenance

Use the following procedure to set the current date and time. By setting this, when you perform a printing test the printing test date and time will be printed alongside the printed test pattern.

Procedure

1. Tap  .
2. Tap [System Information]>[Date/Time].
3. Tap  or  to set the date and time.
4. Tap [Save] to confirm your entry.
5. Tap  to return to the home screen.

Showing/Hiding Notifications

Use the following procedure to show/hide the following notifications, which prompt operators to perform proper operations.

Procedure

1. Tap  .
2. Tap [Preferences]>[Notifications On/Off].
3. Tap  to show/hide the notifications.

	Displayed notification	Description
[Ink Mixing Notification]	[The time for ink mixing has arrived.]	Prompts you to mix the ink cartridge to prevent ink precipitation. When this is on, a message recommending mixing the ink is displayed once a day.
[Ink Expiration Date Notification]	[There is ink that has expired.]	Ink has expired. Replace the ink pouch immediately. P. 45 Ink Replacement Method

4. Tap [Save] to confirm your entry.
5. Tap  to return to the home screen.

MEMO

Default setting:

- [Ink Mixing Notification]: Selected
- [Ink Expiration Date Notification]: Selected

Displaying the Remaining Time until Cleaning Is Performed

You can display the remaining time until cleaning is performed automatically.

If you turn on the remaining time display, the Cleaning and Clear Count menu will be displayed and the remaining time until cleaning is performed will be displayed on the home screen.

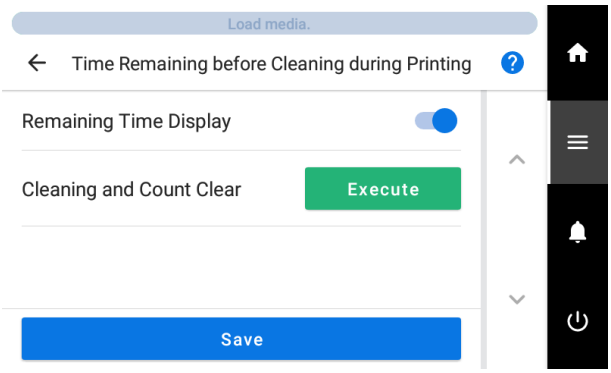
MEMO

Changing the print head height will change the remaining time until cleaning is performed.

As the distance between the object and the print heads increases, the likelihood of ink mist increases, so the remaining time until cleaning is performed shortens.

Procedure

1. **Tap**  .
2. **Tap [Preferences]>[Time Remaining before Cleaning during Printing].**
3. **Tap**  **to turn [Remaining Time Display] on (**  **).**

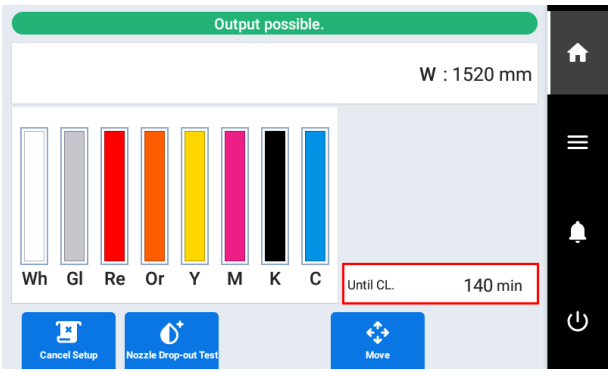


4. **Tap [Save] to confirm your entry.**
5. **Tap**  **to return to the home screen.**

   The remaining [**Until CL.**] time is displayed on the home screen.

   MEMO

   Tap the remaining [**Until CL.**] time to open the settings screen.



MEMO

- Default setting: Off

Setting the Activation Interval for Sleep Mode (Power-saving Feature)

This setting is used to set how long it should take until the machine goes into sleep mode (the state in which the power-saving feature is working) when no output data is received and no operations are performed for a continued length of time.

Procedure

1. Tap  .
2. Tap [Preferences]>[Sleep Time].
3. Tap  or  to set the time.
4. Tap [Save] to confirm your entry.
5. Tap  to return to the home screen.

MEMO

- Default setting: [30 min.]

Setting the Periodic Maintenance Frequency

Set the frequency for performing automatic cleaning.

IMPORTANT

You can decrease the number of cleaning operations, reducing ink consumption, by setting [**Periodic Maintenance Frequency**] to [**Low**].
However, the risk of dot drop-out and dot displacement will be higher than when [**Normal**] is selected. Change this setting as needed only when setting up a print object with a thickness of less than 2 mm (0.07 in.).

Procedure

1. Tap  .
2. Tap [Preferences]>[Periodic Maintenance Frequency].
3. Select the periodic maintenance frequency.

[**Normal**]	Cleaning is performed with the optimal frequency to maintain printing quality.
[**Low**]	Select this option as needed only when printing on an object with a thickness of 2 mm (0.07 in.) or less and that scatters a relatively low amount of ink mist.

4. Tap [Save] to confirm your entry.
5. Tap  to return to the home screen.

MEMO

Default setting: [**Normal**]

Managing the Basic Settings of the Printer

Changing the Display Language

This feature sets the language displayed on the display screen of the operation panel.

Procedure

1. Tap  .
2. Tap [System Information]>[Language].
3. Tap [Language].
4. Select the display language.
5. Tap [OK].
6. Tap [Save] to confirm your entry.
   The display language is changed, and you are returned to the home screen.

MEMO

Default settings

- [Language]: ENGLISH

Changing the Units of Measurement

Use the following procedure to set the units of measurement displayed on the display screen of the operation panel.

Procedure

1. Tap  .
2. Tap [System Information]>[Units].
3. Tap [Length].
4. Select the unit.
5. Tap [Save] to confirm your entry.
6. Tap [Temperature].
7. Select the unit.
8. Tap [Save] to confirm your entry.
9. Tap  to return to the home screen.

MEMO

- Default settings
  - [**Length**]: mm
  - [**Temperature**]: ˚C

Viewing Printer Information

This is a method for viewing information of this machine, such as serial number and ink type.

Procedure

1. Tap  .

2. **Tap [System Information]>[Machine Information].**
   You can check the following information:
   - [**Model**]: Model name
   - [**Serial Number**]: Serial number
   - [**Ink Type**]: Ink type
   - [**Firmware Version**]
   - [**MAC Address**]

3. **Tap  to return to the home screen.**

Viewing Network Information

Use the following procedure to view network information such as the IP address and default gateway.

Procedure

1. Tap  .
2. **Tap [System Information]>[Network].**
   You can check the following information:
   - **[Obtain IP Address Automatically]**: Enables/disables the automatic obtaining of IP addresses via DHCP. When this is disabled, tap  to change the following settings.
   - **[IP Address]**
   - **[Subnet Mask]**
   - **[Default Gateway]**
3. **Tap  to return to the home screen.**

RELATED LINKS

- P. 197 Reconfiguring the Network Settings

Adjusting the Brightness of the Operation Panel

Procedure

1. Tap  .
2. Tap [System Information]>[Screen Brightness].
3. Tap  or  to adjust the brightness.

   The larger the value, the brighter the screen.
4. Tap [Save] to confirm your entry.
5. Tap  to return to the home screen.

MEMO

- Default setting: [50%RH]

Turning Off Operation Panel Sounds

Use the following procedure to turn off the sound when you tap the operation panel.

Procedure

1. Tap  .
2. **Tap [System Information]>[Screen Operation Sound].**
3. **Tap [Off].**
   The operation sound turns off.
4. **Tap [Save] to confirm your entry.**
5. **Tap  to return to the home screen.**

MEMO

- Default setting: **[On]**

Returning All Settings to Factory Defaults

This menu returns all settings to the same as their factory defaults.
The settings for [**Language**] and [**Units**] are not returned to their factory default values.

Procedure

1. Tap  .
2. Tap [Preferences]>[Reset to Factory Defaults].
3. Tap [Reset].
4. Tap [Yes] on the confirmation screen.
5. Tap  to return to the home screen.

Maintenance

Introduction

Important Notes on Handling and Use

Printer

- **This machine is a precision device.**
  - Never subject the machine to impacts or excessive force.
  - Never needlessly put your hand or fingers inside the cover, the ink-cartridge ports, or other internal areas of the machine.
- **Install in a suitable location.**
  - Install the machine in a location having the specified temperature and relative humidity.
  - Install the machine in a quiet, stable location offering good operating conditions.
- **The print heads and the UV-LED device are delicate devices.**
  - Avoid needlessly touching them, allowing them to scrape against the object, or similar. Failure to handle with care may cause damage.
  - The print heads may be damaged if allowed to dry out. The machine prevents desiccation automatically, but improper operation may render this feature inoperative. Operate properly, as specified in this manual.
  - Never leave the machine with an ink cartridge removed. Remaining ink in the printer may harden and clog the print heads.
  - Daily maintenance as well as various types of maintenance depending on the status must be performed. Read this manual thoroughly and perform the appropriate maintenance at the appropriate times.
  - The print heads are components that wear out. Periodic replacement is required, with the frequency of replacement depending on use.
- **Keep the operation panel clean.**
  - If dirt or ink adheres to the operation panel, immediately wipe it clean with dry, soft fabric.

Ink Cartridges

⚠ WARNING

Never store ink, cleaning liquid, or discharged fluid in any of the following locations.

- **Any location exposed to open flame**
- **Any location where high temperature may occur**
- **Near bleach or any other such oxidizing agent or explosive material**
- **Any location within the reach of children**

Fire may be a danger. Accidental ingestion by children may pose a health hazard.

- **The ink pouches inside ink cartridges come in various types.**
  - Use a type that is compatible with the printer. Also, be sure to use only genuine items from Roland DG Corporation.
- **Never subject ink cartridges and ink pouches to impacts and never attempt to disassemble ink pouches.**
  - Never drop the ink bottle or shake it forcefully. The impact may rupture the internal pouches and cause the ink to leak.
  - Never attempt to disassemble ink pouches.
  - Never attempt to refill the ink in ink pouches.

- If ink gets on your hands or clothing, wash it off as soon as possible. Removal may become difficult if you leave such adhered ink untreated.

- **Storage**
  - Use up the ink before the expiration date printed on the ink pouch.
  - Store the ink bottle in a location that is not subject to direct sunlight or strong illumination.
  - Store the ink cartridges unopened in a well-ventilated location at a temperature of 5°C (41°F) or higher and less than 30°C (86°F) and a relative humidity of 20%RH to 80%RH.

Basic Maintenance Knowledge

Types and Timing of Maintenance

To use this machine under its optimal conditions, it is important to perform the appropriate maintenance at the appropriate times.

Regular Maintenance

These are the maintenance items that are required on a daily basis.

Timing	Item	Reference
Before daily operations	Preparations before Daily Operations • Manual Cleaning • Print head check	P. 56 Preparations before Daily Operations
	Ink mixing (white ink)	P. 41 Preventing Sedimentation in Inks
After daily operations	Cleaning the Machine	P. 119 Cleaning the Machine
If a message appears	Cleaning around the print heads	P. 120 Cleaning around the Print Heads
If the Discharged Fluid Disposal Message Appears	Disposing of Discharged Fluid	P. 133 If the Discharged Fluid Disposal Message Appears
Once a month	Cleaning the UV-LED devices	P. 127 Cleaning That Must Be Performed Once a Month or More

Advanced Maintenance

Maintenance that is performed in an emergency. Some of this maintenance consumes a large amount of ink, so thoroughly read the explanation, and then perform the operation at the appropriate point in time.

Timing	Item	Reference
When dot drop-out or dot displacement occurs	Checking and cleaning the print heads	P. 62 Performing a Nozzle Drop-out Test
		P. 64 Normal Cleaning Method
		P. 138 Medium Cleaning Method
		P. 140 Powerful Cleaning Method
		P. 57 Manual Cleaning Method
When uneven colors with white ink are not resolved	Circulating the ink and replacing the ink in the ink path*1	P. 142 Ink Circulating Method
		P. 143 Method for Eliminating Uneven Color Issues with Powerful Cleaning
		P. 144 Method for Ink Renewal Inside Damper
When uneven color, dot drop-out, and dot displacement issues are not resolved even by performing the above operations	Replacing the ink in all ink paths*1	P. 147 Ink Renewal Method
When the Operation Panel Is Dirty	Cleaning the operation panel	P. 157 Operation Panel Cleaning Method

*1 Ink Renewal Inside Damper is cleaning that consumes a large amount of ink.

Replacing Consumable Parts

These items are for replacement of consumable parts. Thoroughly read the explanation, and then perform the operation at the appropriate point in time.

Timing	Item	Reference
When a Message Appears	Replacing consumable parts • Wiper • Wiper cleaner • UV mist filters • Flushing sponge • Print head caps	P. 159 Replacing the Wiper
		P. 166 Replacing the UV Mist Filters
		P. 168 Replacing the Flushing Sponge
		P. 162 Replacing the Print Head Caps

Automatic Maintenance Feature and Notes

This machine has a feature that automatically performs maintenance periodically.

This function performs operations for preventing the print heads from drying out, so:

- Always keep the printer unit's main power switched on.
- Always leave [**MAIN POWER**] and [**STANDBY PLOTTER**] on the power distribution board switched on.
- Do not leave the front, left, and right covers open for a long period of time.
- Tap  to return to the home screen after specifying settings in the menus.

Measures When the Printer Is Not in Use for a Prolonged Period

Be sure to follow the instructions shown below when the printer is not in use for a prolonged period.

- Empty the drain bottle.

  If you know that you will not use the machine for a prolonged period, empty the drain bottle. When the main power is on, the machine periodically performs automatic maintenance in which fluid is discharged.

  The drain bottle is filled when the following periods elapse, so periodically discard the discharged fluid.

  - Approximately 1 week after the message [**When output, cleaning, and other operations are completed, discard the discharged fluid.**] is displayed or approximately 120 days after the drain bottle is emptied

    P. 133 If the Discharged Fluid Disposal Message Appears

- Do not allow the machine to run out of ink or cleaning liquid.

  The machine discharges ink and cleaning liquid during the automatic maintenance that is performed periodically. Set in the machine ink and cleaning liquid pouches having sufficient remaining ink and cleaning liquid. The machine cannot perform automatic maintenance if it has run out of ink or cleaning liquid.

- Switch on the sub power once a month.

  Switch on the sub power once a month. When you turn on the power, the machine automatically performs operations such as those to keep the print heads from drying out. Leaving the machine unused for a prolonged period may damage the print heads, so be sure to switch on the power to perform these automatic operations.

- Keep the machine at a constant temperature and relative humidity.

  Even when the machine is not in use, keep it at a temperature of 5 to 40°C (41 to 104°F) and a relative humidity of 20 to 80% (with no condensation). Temperatures that are too high may degrade the ink and cause malfunctions. Temperatures that are too low may cause the ink to freeze and damage the print heads.

RELATED LINKS

- P. 45 Ink Replacement Method
- P. 51 Cleaning Liquid Replacement Method

Regular Maintenance

Print Head Check before Printing

Performing a Nozzle Drop-out Test

Before you carry out actual printing, perform a printing test to ensure no dot drop-out or dot displacement occurs. If dot drop-out or dot displacement occurs, perform cleaning of the print heads (normal cleaning).

MEMO

When performing printing tests successively, you can select [**Feed**] (vertical printing) or [**Scan**] (horizontal printing) as the printing position for the second and later tests in comparison to the first test.

P. 94 Performing Printing Tests Arranged Horizontally

Procedure

1. **Set up the object to be printed on.**

   MEMO

   The printing test requires an object with a W (width) of 170 mm (6.7 in.) or more and an L (length) of 90 mm (3.55 in.) or more. Set the bottom right of the object to the base point, and then carry out a printing test.

   Loading the Object, and Setting the Print Surface Height and Print Start Point(P. 35)

2. **Tap  [Nozzle Drop-out Test] on the home screen.**

3. **Tap [Execute] next to [Printing Test].**

   Printing of the test pattern starts.

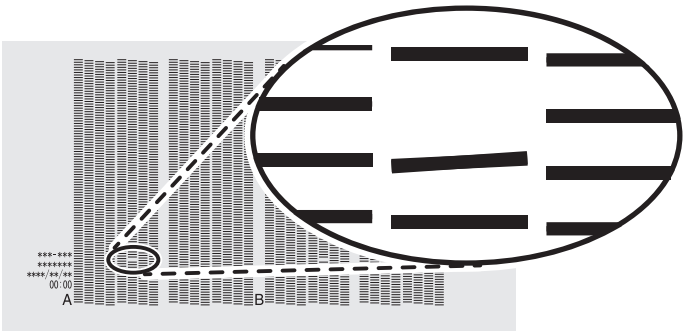
   MEMO

   Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern.

   Tap  [**Nozzle Drop-out Test**] on the home screen, and then select [**Cleaning**]>[**Printing Test**]>[**Nozzle Drop-out Test (Base: Black)**] to make the base of the white ink black, making it easier to check the white ink. [**Nozzle Drop-out Test (Base: Black)**] is not displayed if the machine is not equipped with white ink.

4. **Check whether there is dot drop-out or dot displacement in the test pattern.**

   Missing blocks indicate dot drop-out. Collapsed or inclined blocks indicate dot displacement.

5. **If you have opened the front cover, close it.**

If no dot drop-out or dot displacement occurs, preparations for output are finished.

RELATED LINKS

- P. 136 When Dot Drop-out or Dot Displacement Occurs

Cleaning the Machine

Cleaning the Table

Wipe away any ink or other substances on the table.
Ink stains left on the table may stain the attached object to be printed on.
Clean by wiping with a cloth moistened with neutral detergent diluted with water then wrung dry.

⚠ WARNING

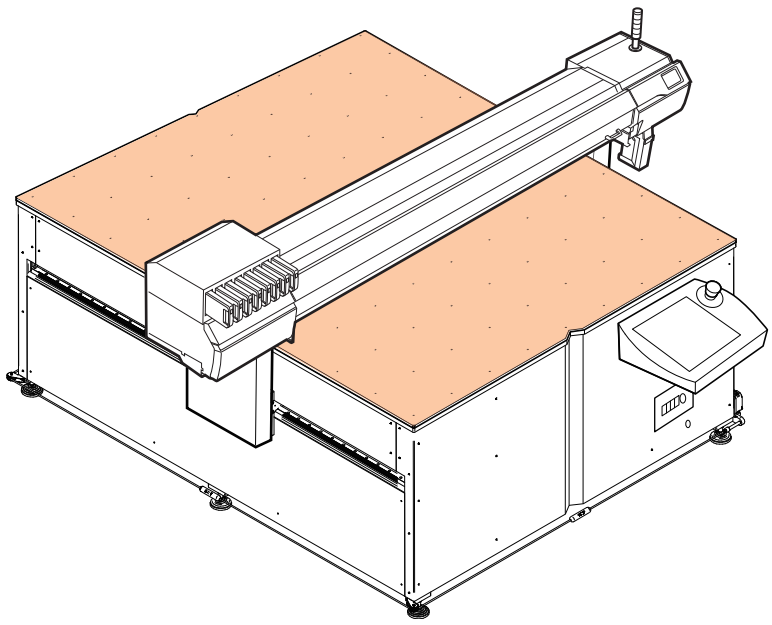
Never use a solvent such as gasoline, alcohol, or thinner to perform cleaning.
Doing so may cause a fire.

⚠ CAUTION

Before attempting cleaning, switch off the sub power and wait until the UV-LED device cools (approximately 15 minutes).
Sudden movement of the machine may cause injury, or hot components may cause burns.

IMPORTANT

- This machine is a precision device and is sensitive to dust and dirt. Perform cleaning on a daily basis.
- Never attempt to oil or lubricate the machine.

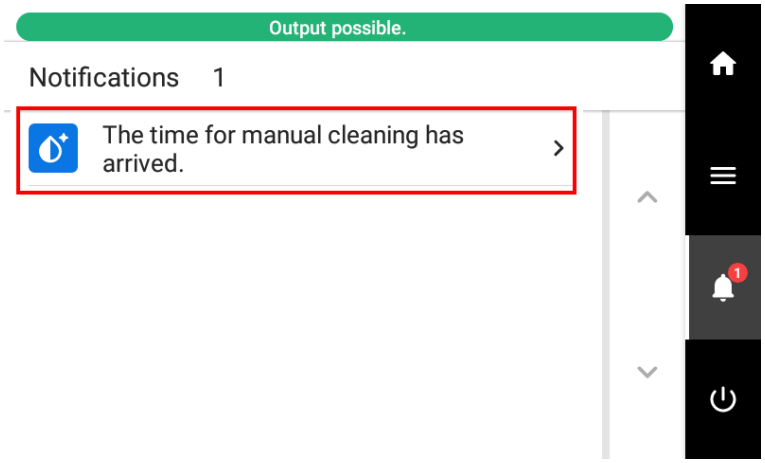


Cleaning around the Print Heads

The print heads are important components that discharge ink. They require periodic and appropriate maintenance. Cleaning around the print heads is known as "manual cleaning." Be sure to perform manual cleaning in the following situations.

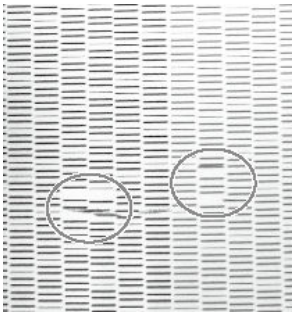
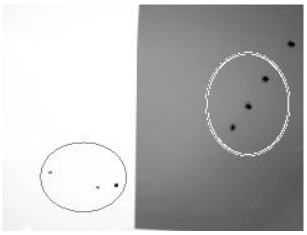
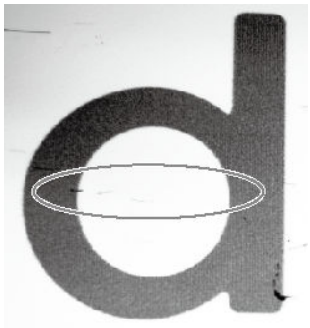
When a Message Appears

When a message appears, you can tap  on the home screen to check the notification details. Tap the notification to display the manual cleaning menu screen.



When Symptoms That Cannot Be Improved with Powerful Cleaning Occur

When any of the symptoms given below occur and powerful cleaning is not effective, perform manual cleaning.

Dot drop-out/Dot displacement	Ink drips	Dragging dirt
		
Dust or other foreign matter adheres to the print heads and impedes correct ink discharge.	Ink accumulates on dirty areas around the print heads and drips onto the object to be printed on.	Dirt accumulates on the area around the print heads and touches the object to be printed on.

MEMO

Wiper replacement may also be effective in improving these symptoms.

RELATED LINKS

- P. 159 Replacing the Wiper

Manual Cleaning Method

Perform manual cleaning:

- Before starting operation for the day
- When the notification [**The time for manual cleaning has arrived.**] appears.
- Before sending the print data if you want to perform unmanned printing at night.
- When dot drop-out or ink drip issues that cannot be improved with powerful cleaning occur.

⚠ CAUTION

Do not perform cleaning immediately after printing has finished. (Wait approximately 15 minutes after printing finishes.)
The area around the UV-LED device is hot and may cause burns.

⚠ WARNING

Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.
Sudden movement of the machine may cause injury.

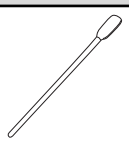
IMPORTANT

Important notes on this procedure

- Before performing this operation, remove any objects to be printed on.
- To prevent the print heads from drying out, finish this procedure in 10 minutes or less. A warning beep sounds after 10 minutes.
- Never use any implements other than the included cleaning sticks. Cotton swabs or other lint-producing items may damage the print heads.
- Do not use cleaning liquid other than the included cleaning liquid.
- Be sure to use new cleaning sticks. Reusing cleaning sticks will adversely affect the printing results.
- Do not put a cleaning stick that has been used for cleaning into the cleaning liquid. Doing so will deteriorate the cleaning liquid.
- Never rub the print head surface (nozzle surface).
- If you use up the cleaning sticks or cleaning liquid, contact your authorized dealer or visit our website (https://www.rolanddg.co.jp/).

When an alarm sounds during cleaning

- A warning beep sounds 10 minutes after operation starts. Stop work, close all the covers, and then tap [**Finish All**] to end the manual cleaning mode. After that, restart the procedure from the beginning.

Required items	
	
Cleaning stick	Cleaning liquid

1. Clean the print head caps.

Procedure

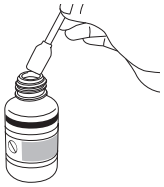
1. **Remove the object to be printed on.**
2. **Tap**  **[Cleaning].**
3. **Tap [Manual Cleaning].**
4. **Tap [Execute].**

   When the confirmation screen appears, respond to the on-screen instructions, and then tap [**OK**]. The print head carriage moves to the left end of the machine.
5. **Follow the instructions on the operation panel to perform [Manual Cleaning].**

   - Tap  or  to check the procedure.
   - If you complete the work without viewing the instructions, tap [**Finish All**].

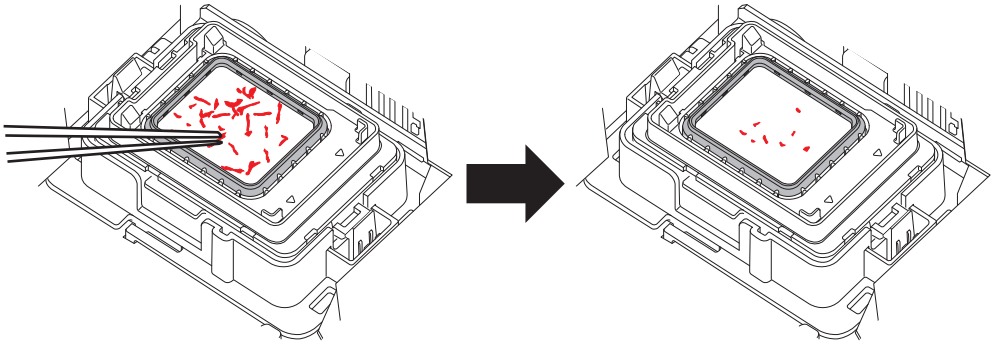
IMPORTANT

- Be sure to use one of the included cleaning sticks.
- Do not use a previously used cleaning stick.
- Do not put a previously used cleaning stick into the cleaning liquid.



IMPORTANT

Use a pair of tweezers to remove the pieces of hardened ink that are 3 mm (0.12 in.) or more in length.
Do not use excessive force when pulling on pieces of hardened ink that are difficult to remove. Doing so may damage the print head caps.

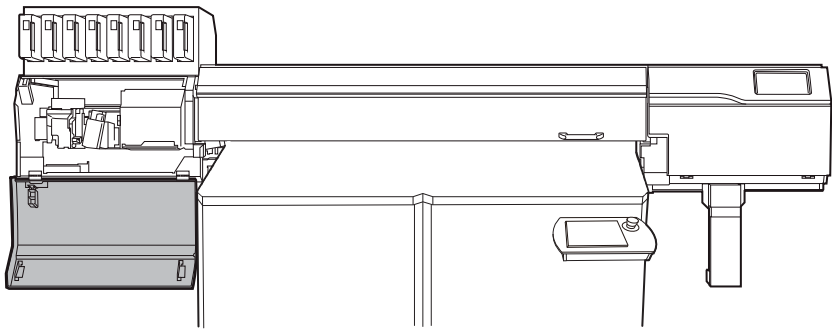


When you have finished cleaning, close the right cover.

2. Clean the print heads.

Procedure

1. **Open the left cover.**



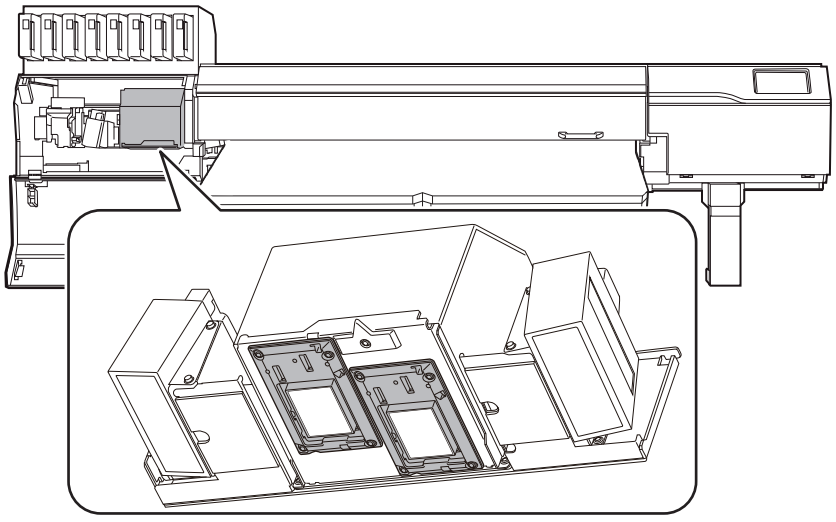
2. **Moisten a new cleaning stick with the cleaning liquid.**

IMPORTANT

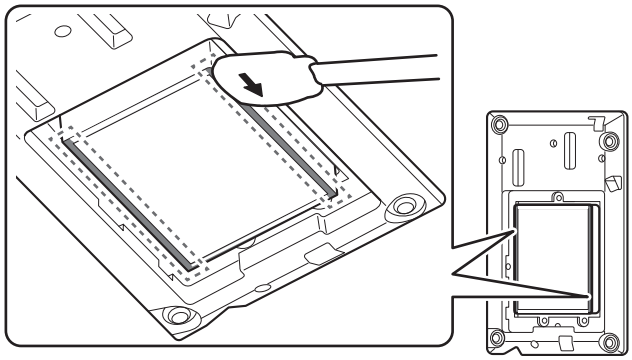
- Be sure to use one of the included cleaning sticks.
- Do not use a previously used cleaning stick.
- Do not put a previously used cleaning stick into the cleaning liquid.

3. **Clean the locations shown in the following figure.**

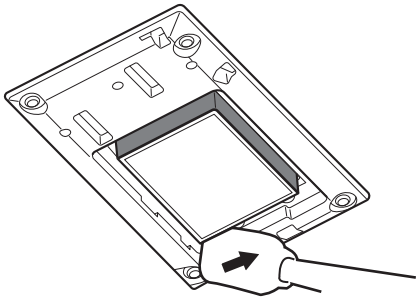
Be especially careful to clean away any fibrous dust (lint).



(1) **Press the wide surface of the cleaning stick against the left side and wipe it off. Then, press the opposite surface (which is clean) against the right side and wipe it off.**

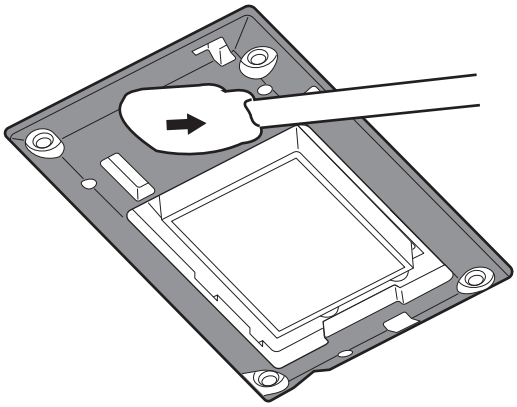


(2) **Stand the cleaning stick upright and wipe off all sides.**



(3) **Use the wide surface of the cleaning stick to wipe away any dirt from the area shown in the figure.**

If this area has any ink or cleaning liquid that appears likely to drip, use a dry cloth that is not fluffy to gently wipe away the ink or cleaning liquid.



4. **Close the left cover.**

5. **Tap [Finish All].**

Cleaning will start. The details of the operation in progress and the (approximate) remaining time of that work are displayed in the status bar at the top of the screen. When the work is finished, the status bar returns to its original display.

6. **Tap  to return to the home screen**

3. Perform a printing test to check the results.

Procedure

1. **Set up the object to be printed on.**

   MEMO

   The printing test requires an object with a W (width) of 170 mm (6.7 in.) or more and an L (length) of 90 mm (3.55 in.) or more. Set the bottom right of the object to the base point, and then carry out a printing test.

   Loading the Object, and Setting the Print Surface Height and Print Start Point(P. 35)

2. **Tap  [Nozzle Drop-out Test] on the home screen.**

3. **Tap [Execute] next to [Printing Test].**

   Printing of the test pattern starts.

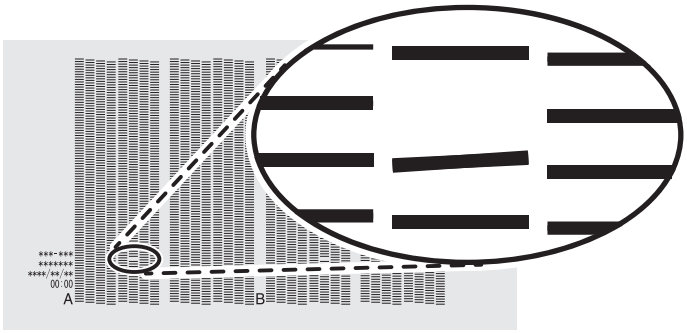
   MEMO

   Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern.

   Tap  **[Nozzle Drop-out Test]** on the home screen, and then select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** to make the base of the white ink black, making it easier to check the white ink. **[Nozzle Drop-out Test (Base: Black)]** is not displayed if the machine is not equipped with white ink.

4. **Check whether there is dot drop-out or dot displacement in the test pattern.**

   Missing blocks indicate dot drop-out. Collapsed or inclined blocks indicate dot displacement.

5. **If you have opened the front cover, close it.**

   If no dot drop-out or dot displacement occurs, this operation is finished. Tap  to return to the home screen.

If dot drop-out or dot displacement is present, perform cleaning such as normal cleaning.

RELATED LINKS

- P. 136 When Dot Drop-out or Dot Displacement Occurs

Consumable Products and Parts Related to Manual Cleaning

The cleaning sticks, cleaning liquid, and print heads are consumable products or consumable parts.

- If you use up the cleaning sticks and cleaning liquid used for manual cleaning, contact your authorized Roland DG Corporation dealer or visit our website (https://www.rolanddg.co.jp/).
- The print heads are components that wear out. Periodic replacement is required, with the frequency of replacement depending on use. Contact your authorized Roland DG Corporation dealer.

Cleaning That Must Be Performed Once a Month or More

When UV-LED Device Cleaning Is Necessary

The UV-LED device is an important component for ink adhesion. They require periodic and appropriate maintenance. It is important to clean the UV-LED device with the appropriate timing.

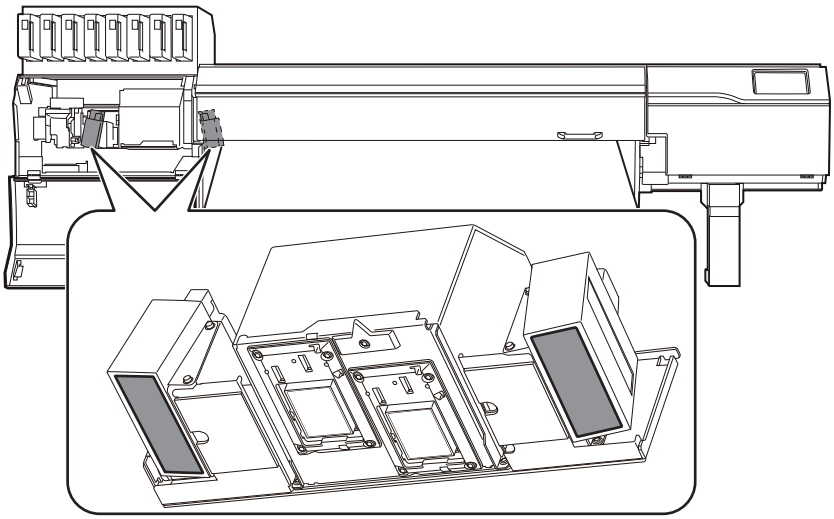
Once a month or more

To keep a stable printing condition at all times, perform cleaning once a month or more.

When There Is a Lot of Scattered Ink Mist and the Inside of the Machine is Soiled

Perform this cleaning every day when frequently printing with the print heads at a distance from the print surface or when ink is emitted to locations that protrude from the print surface. If the scattered ink mist is allowed to harden, it may cause malfunctions.

When the bases and irradiation windows of the UV-LED device are dirty (see the following figure).



MEMO

- The frequency with which UV-LED device cleaning is required depends on the machine's use. For information about the frequency of cleaning needed for your conditions of use, contact your authorized dealer.
- For hardened ink and other such dirt that cannot be completely cleaned away, contact your authorized dealer.

How to Clean the UV-LED Devices

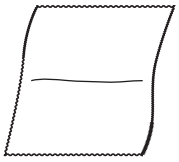
IMPORTANT

Important notes on this procedure

- Before performing this operation, remove any objects to be printed on.
- To prevent the print heads from drying out, finish this procedure in 10 minutes or less. A warning beep sounds after 10 minutes.
- The cloths, alcohol, and similar items used in cleaning are not included with the product.

When a warning beep sounds during cleaning

- A warning beep sounds 10 minutes after operation starts. Stop work, close all the covers, and then press [**Finish All**] to end the manual cleaning mode. After that, restart the procedure from the beginning.

Required items	
	
Anhydrous ethanol or isopropyl alcohol	Cloth (that is not fluffy)

⚠ CAUTION

Do not perform cleaning immediately after printing has finished. (Wait approximately 15 minutes after printing finishes.)

The area around the UV-LED device is hot and may cause burns.

⚠ CAUTION

When using anhydrous ethanol or isopropyl alcohol, be sure to follow the product's usage precautions.

Exercise caution regarding items such as fire, ventilation, and rashes.

⚠ CAUTION

Only use anhydrous ethanol or isopropyl alcohol.

Using chemicals (or similar substances) other than anhydrous ethanol or isopropyl alcohol may lead to UV-LED device damage.

⚠ CAUTION

Use cloth that is not fluffy to wipe off the parts. Do not use a hard material such as metal.

Using cloth that is fluffy or a hard material such as metal may lead to UV-LED device damage.

Procedure

1. Remove the object to be printed on.

2. Tap  [Cleaning].

3. Tap [Manual Cleaning].

4. Tap [Execute].
   When the confirmation screen appears, respond to the on-screen instructions, and then tap [OK].
   The print head carriage moves to the left end of the machine.

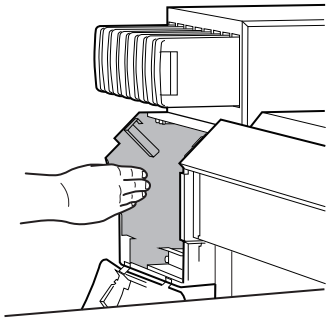
   MEMO

   The UV-LED device cleaning uses the manual cleaning menu and moves the print-head carriage to the left side of the machine. Therefore, the manual cleaning procedure appears on the operation panel.

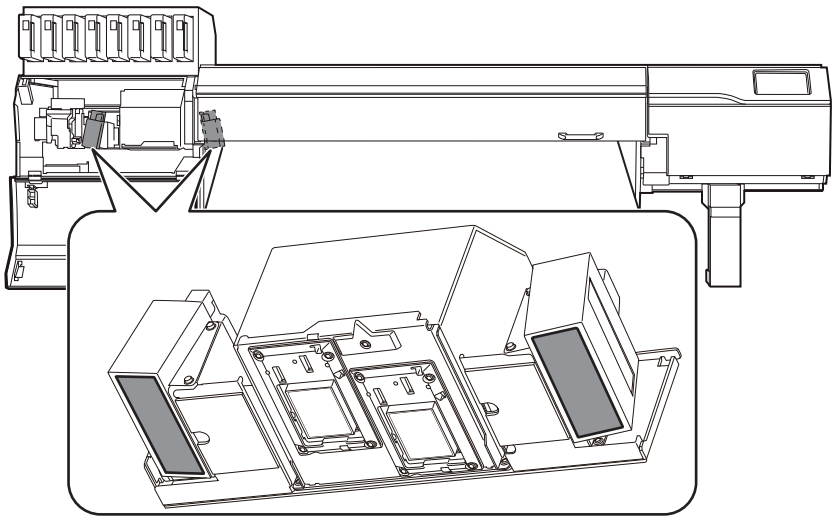
5. Press and hold [TS : START Z] on the touch panel.
   Raise the printer unit to the highest point to secure the space required for cleaning.

6. Open the left cover.

7. Touch the location shown in the figure to discharge any static electricity.



8. Wet a cloth with anhydrous ethanol or isopropyl alcohol, and then wipe off the base and irradiation unit of each UV-LED device with this cloth.
   Wipe the cloth across each lamp for approximately 10 round trips until all the dirt is cleared away.



9. Close the left cover.

10. **Tap [Finish All].**

Cleaning will start. The details of the operation in progress and the (approximate) remaining time of that work are displayed in the status bar at the top of the screen.

When the work is finished, the status bar returns to its original display.

11. **Tap  to return to the home screen.**

12. **Press and hold [TS : AUTO Z] on the touch panel to lower the printer unit.**

RELATED LINKS

- P. 127 When UV-LED Device Cleaning Is Necessary

Disposing of Discharged Fluid

Precautions for Disposing of Discharged Fluid

⚠ WARNING

Never place discharged fluid or ink near an open flame.

Doing so may cause a fire.

⚠ CAUTION

To store discharged fluid temporarily, place it in the included drain bottle or in a durable sealed container such as a metal can or polyethylene tank, and cap the container tightly.

Any spillage or vapor leakage may cause fire, odor, or physical distress.

IMPORTANT

Do not store discharged fluid in a location where it is exposed to direct sunlight.

When temporarily storing discharged fluid in the included drain bottle, do not store it in a location that is exposed to direct sunlight. The discharged fluid may harden, making the drain bottle unusable. The drain bottle may also deteriorate, leading to discharged fluid leaks.

IMPORTANT

Dispose of discharged fluid properly, in accordance with the laws in effect in your locale.

Discharged fluid is flammable and contains toxic ingredients. Never attempt to incinerate discharged fluid or discard it with ordinary trash. Also, do not dispose of it in sewer systems, rivers, or streams. Doing so may have an adverse impact on the environment.

If the Discharged Fluid Disposal Message Appears

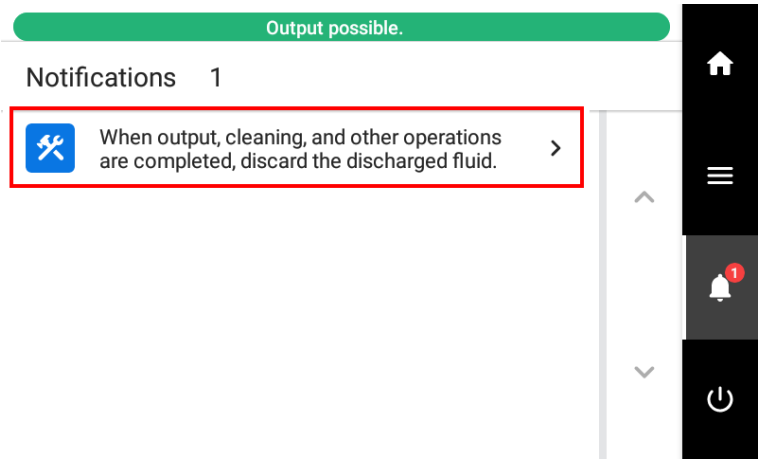
The [**When output, cleaning, and other operations are completed, discard the discharged fluid.**] message appears when a certain amount of discharged fluid has collected in the bottle. If this message appears, dispose of the discharged fluid.

Procedure

1. **When the message [When output, cleaning, and other operations are completed, discard the discharged fluid.] appears, tap [OK].**

2. **Tap**  **to display the notification.**

3. **Tap the following notification.**



The [**Drain Bottle**] screen appears.

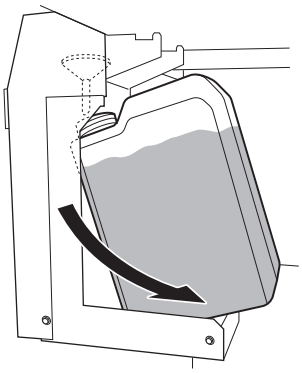
MEMO

You can dispose of discharged fluid even if the above message has not appeared.
Use the following operations to display the drain bottle screen, and then dispose of discharged fluid according to the procedure starting from step 4.

1. Tap  .
2. Tap [**Maintenance**]>[**Drain Bottle**].

4. **Tap [Execute].**

5. **Remove the drain bottle and discard the discharged fluid.**



⚠ CAUTION

Before you detach the drain bottle, be sure to wait for the screen to display [Discard the discharged fluid in the bottle.]. After discarding the discharged fluid, promptly attach the drain bottle to the machine.

Failing to follow this procedure may cause discharged fluid to flow out of the tube and spill, soiling your hands or the floor.

IMPORTANT

When you remove the drain bottle, a few drops of discharged fluid may come out of the machine. Exercise caution to prevent this fluid from soiling your hands or the floor.

6. **Quickly attach the emptied bottle to the machine once more.**

7. **Tap [Finish].**

   The display returns to the original screen.

8. **Tap  to return to the home screen.**

Advanced Maintenance

When Dot Drop-out or Dot Displacement Occurs

If dot drop-out or dot displacement occurs, perform cleaning of the print heads (normal cleaning).

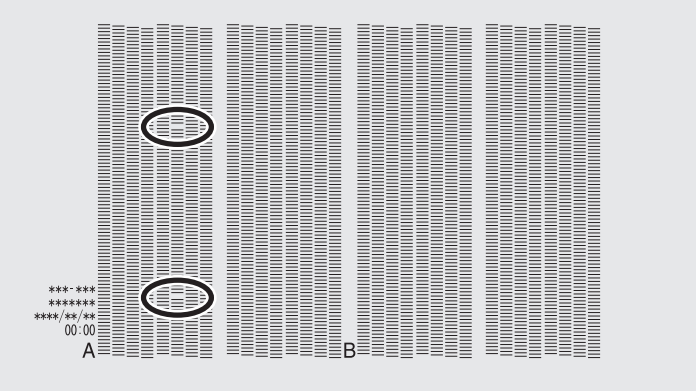
Normal Cleaning Method

IMPORTANT

If the object to be printed on is set up before [**Normal Cleaning**] is performed, [**After cleaning, perform a printing test.**] will be displayed on the [**Normal Cleaning**] menu screen. When this setting is turned on, [**Printing Test**] will be performed after [**Normal Cleaning**] even if [**Nozzle Drop-out Test**] is not performed.

Procedure

1. **Check for the group with dot drop-out or dot displacement by viewing the results of the printing test.**
   The space from "A" to "B" is group A. The space from "B" to the right side is group B.

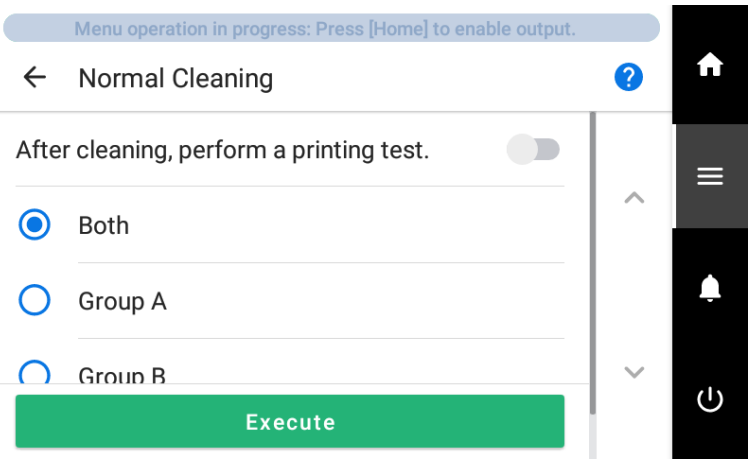


MEMO

If the printing-test results are difficult to interpret
Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

2. **Tap  [Nozzle Drop-out Test].**

3. **Tap [Cleaning]>[Normal Cleaning].**
   The screen shown below appears.



4. **Select the group of print heads to clean.**

5. **Tap [Execute].**

   Cleaning will start. The details of the operation in progress and the (approximate) remaining time of that work are displayed in the status bar at the top of the screen.

   When the work is finished, the status bar returns to its original display.

6. **Tap** ← **.**

7. **Tap [Printing Test].**

8. **Select [Nozzle Drop-out Test] and tap [Execute].**

   Perform a printing test again to check whether the dot drop-out and dot displacement have been corrected.

MEMO

Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern.

Tap  **[Nozzle Drop-out Test]** on the home screen, and then select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** to make the base of the white ink black, making it easier to check the white ink. **[Nozzle Drop-out Test (Base: Black)]** is not displayed if the machine is not equipped with white ink.

MEMO

If the problem persists, try performing **[Normal Cleaning]** again. If the printer has been used for a long period, dot drop-outs may not be fixed even after performing **[Normal Cleaning]** two or three times. If this is the case, clean using a different method.

RELATED LINKS

- P. 62 Performing a Nozzle Drop-out Test
- P. 138 When Normal Cleaning Is Not Effective

When Normal Cleaning Is Not Effective

Medium Cleaning Method

The print heads are important components that discharge ink. They require periodic and appropriate maintenance. When problems such as dot drop-out are not resolved by [**Normal Cleaning**], perform the more forceful [**Medium Cleaning**] to remove clogging from the print heads.

IMPORTANT

[**Medium Cleaning**] is more forceful cleaning that consumes more ink than [**Normal Cleaning**].

MEMO

If the object to be printed on is set up before [**Medium Cleaning**] is performed, [**After cleaning, perform a printing test.**] will be displayed on the [**Medium Cleaning**] menu screen. When this setting is turned on, [**Printing Test**] will be performed after [**Medium Cleaning**] even if [**Nozzle Drop-out Test**] is not performed.

Procedure

1. **Set up the object to be printed on.**

   MEMO

   The printing test requires an object with a W (width) of 170 mm (6.7 in.) or more and an L (length) of 90 mm (3.55 in.) or more. Set the bottom right of the object to the base point, and then carry out a printing test.

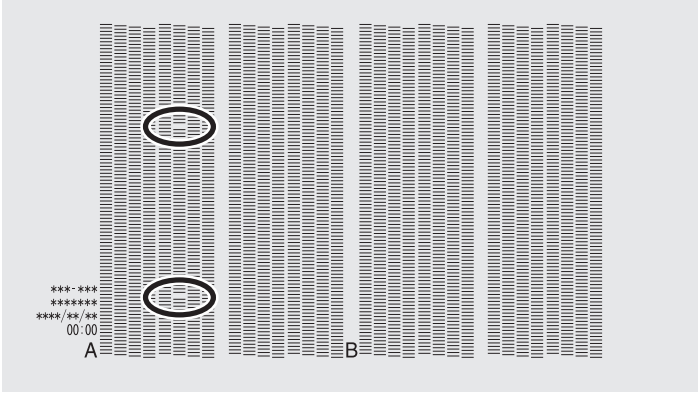
   P. 35 Loading the Object, and Setting the Print Surface Height and Print Start Point

2. **Tap**  **[Nozzle Drop-out Test].**

3. **Tap [Cleaning]>[Medium Cleaning].**

4. **Check for the group with dot drop-out or dot displacement by viewing the results of the printing test.**

   The space from "A" to "B" is group A. The space from "B" to the right side is group B.

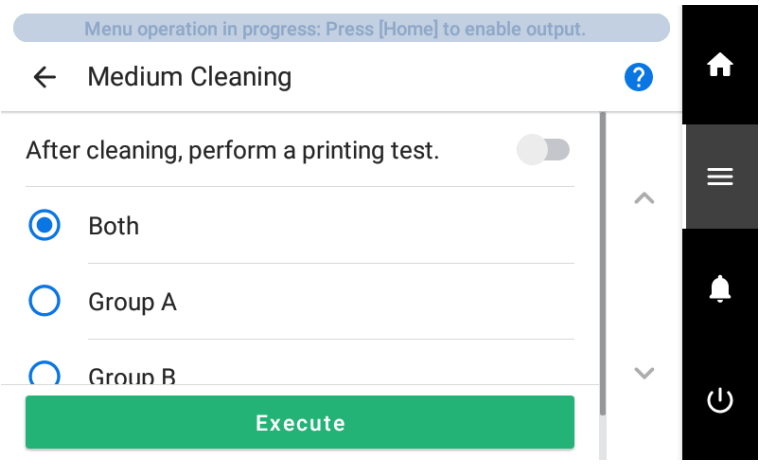


   MEMO

   If the printing-test results are difficult to interpret

Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

5. **Select the group of print heads to clean.**



6. **Tap [Execute].**

Cleaning will start. The details of the operation in progress and the (approximate) remaining time of that work are displayed in the status bar at the top of the screen.

When the work is finished, the status bar returns to its original display.

7. **Tap ←.**

8. **Tap [Printing Test].**

9. **Select [Nozzle Drop-out Test] and tap [Execute].**

Perform a printing test again to check whether the dot drop-out and dot displacement have been corrected.

MEMO

Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern.

Tap  **[Nozzle Drop-out Test]** on the home screen, and then select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** to make the base of the white ink black, making it easier to check the white ink. **[Nozzle Drop-out Test (Base: Black)]** is not displayed if the machine is not equipped with white ink.

MEMO

- If the problem persists, try performing **[Medium Cleaning]** again.
- If problems such as dot drop-out and dot displacement persist even after you have performed **[Medium Cleaning]** several times, perform **[Powerful Cleaning]**.

RELATED LINKS

- P. 140 Powerful Cleaning Method

Powerful Cleaning Method

The print heads are important components that discharge ink. They require periodic and appropriate maintenance. When problems such as dot drop-out are not resolved by [**Medium Cleaning**], perform the more forceful [**Powerful Cleaning**] to remove clogging from the print heads.

IMPORTANT

[**Powerful Cleaning**] is more forceful cleaning that consumes more ink than [**Medium Cleaning**].

MEMO

If the object to be printed on is set up before [**Powerful Cleaning**] is performed, [**After cleaning, perform a printing test.**] will be displayed on the [**Powerful Cleaning**] menu screen. When this setting is turned on, [**Printing Test**] will be performed after [**Powerful Cleaning**] even if [**Nozzle Drop-out Test**] is not performed.

Procedure

1. **Set up the object to be printed on.**

   MEMO

   The printing test requires an object with a W (width) of 170 mm (6.7 in.) or more and an L (length) of 90 mm (3.55 in.) or more. Set the bottom right of the object to the base point, and then carry out a printing test.

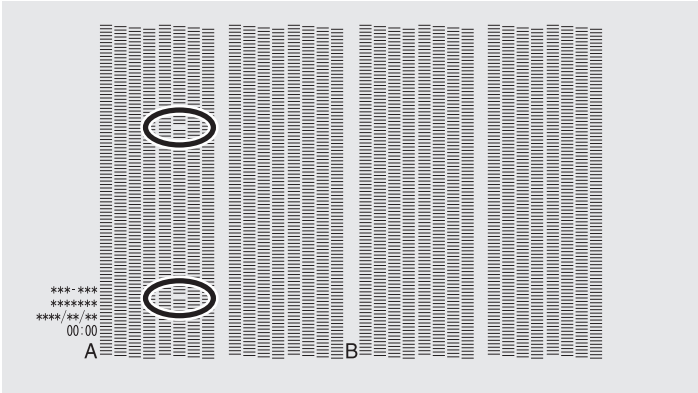
   P. 35 Loading the Object, and Setting the Print Surface Height and Print Start Point

2. **Tap**  **[Nozzle Drop-out Test].**

3. **Tap [Cleaning]>[Powerful Cleaning].**

4. **Check for the group with dot drop-out or dot displacement by viewing the results of the printing test.**

   The space from "A" to "B" is group A. The space from "B" to the right side is group B.

   MEMO

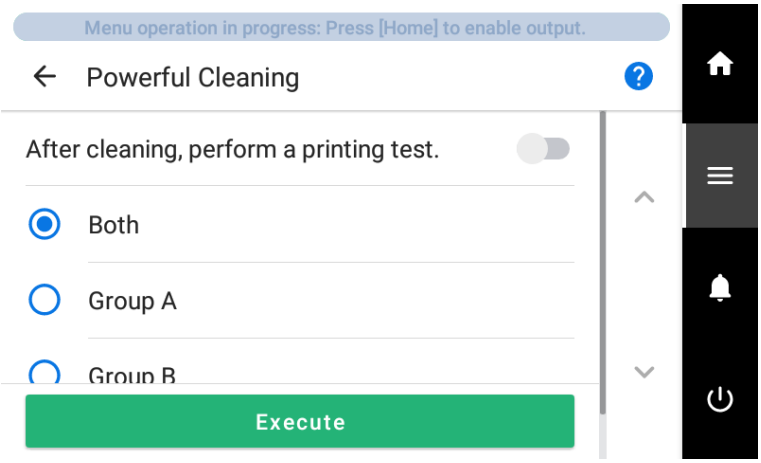
   If the printing-test results are difficult to interpret

   Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

5. **Tap [Execute].**

Cleaning will start. The details of the operation in progress and the (approximate) remaining time of that work are displayed in the status bar at the top of the screen.

When the work is finished, the status bar returns to its original display.



6. **Tap ←.**

7. **Tap [Printing Test].**

8. **Select [Nozzle Drop-out Test] and tap [Execute].**

Perform a printing test again to check whether the dot drop-out and dot displacement have been corrected.

MEMO

Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern.

Tap  **[Nozzle Drop-out Test]** on the home screen, and then select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** to make the base of the white ink black, making it easier to check the white ink. **[Nozzle Drop-out Test (Base: Black)]** is not displayed if the machine is not equipped with white ink.

MEMO

- If the problem persists, try performing **[Powerful Cleaning]** again.
- If problems such as dot drop-out and dot displacement persist even after you have performed **[Powerful Cleaning]** several times, perform **[Manual Cleaning]**.

RELATED LINKS

- P. 57 Manual Cleaning Method

When Uneven Color Issues Occur with White Ink

Ink Circulating Method

If uneven color issues with white ink are not resolved even after shaking the ink cartridges to mix the ink, perform [**Ink Circulation**]. Uneven colors refers to the symptom of printed colors being uneven (such as the color density being inconsistent) even when the same data is printed with the same settings.

IMPORTANT

If the object to be printed on is set up before [**Ink Circulation**] is performed, [**After ink circulation, perform a printing test.**] will be displayed on the [**Ink Circulation**] menu screen. When this setting is turned on, [**[Printing Test]**] will be performed after [**Ink Circulation**] even if [**Nozzle Drop-out Test**] is not performed.

Procedure

1. **Tap**  .
2. **Tap [Maintenance]>[Ink Circulation].**
3. **Tap [Execute].**

   Depending on the timing with which the [**Ink Circulation**] is started, cleaning may start. When cleaning is complete, [**Ink Circulation**] will start.

   If uneven output color issues with white ink are not resolved even after performing [**Ink Circulation**], perform [**Powerful Cleaning**].
4. **Tap**  **to return to the home screen.**

RELATED LINKS

- P. 143 Method for Eliminating Uneven Color Issues with Powerful Cleaning

Method for Eliminating Uneven Color Issues with Powerful Cleaning

When uneven color issues with white ink are not resolved even after performing [**Ink Circulation**], perform the more forceful [**Powerful Cleaning**] to eliminate these issues. Uneven colors refers to the symptom of printed colors being uneven (such as the color density being inconsistent) even when the same data is printed with the same settings.

IMPORTANT

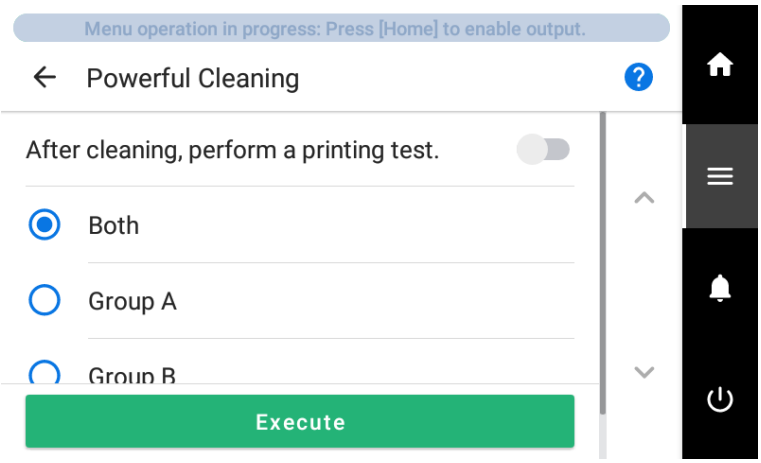
The ink in the print heads is discharged to stabilize the output color, so a certain amount of ink is consumed.

MEMO

If the object to be printed on is set up before [**Powerful Cleaning**] is performed, [**After cleaning, perform a printing test.**] will be displayed on the [**Powerful Cleaning**] menu screen. When this setting is turned on, [**Printing Test**] will be performed after [**Powerful Cleaning**] even if [**Nozzle Drop-out Test**] is not performed.

Procedure

1. Tap  [**Nozzle Drop-out Test**].
2. Tap [**Cleaning**]>[**Powerful Cleaning**].
3. Select [**Both**].



4. Tap [**Execute**].

   Cleaning will start. The details of the operation in progress and the (approximate) remaining time of that work are displayed in the status bar at the top of the screen.

   When the work is finished, the status bar returns to its original display.

   If uneven output color issues with white ink are not resolved even after performing [**Powerful Cleaning**], perform [**Ink Renewal Inside Damper**].

RELATED LINKS

- P. 144 Method for Ink Renewal Inside Damper

Method for Ink Renewal Inside Damper

If uneven color issues with white ink are not resolved even after performing [**Powerful Cleaning**], perform [**Ink Renewal Inside Damper**]. Uneven colors refers to the symptom of printed colors being uneven (such as the color density being inconsistent) even when the same data is printed with the same settings.

[**Ink Renewal Inside Damper**] can be used to stabilize the output colors by replacing the ink.

IMPORTANT

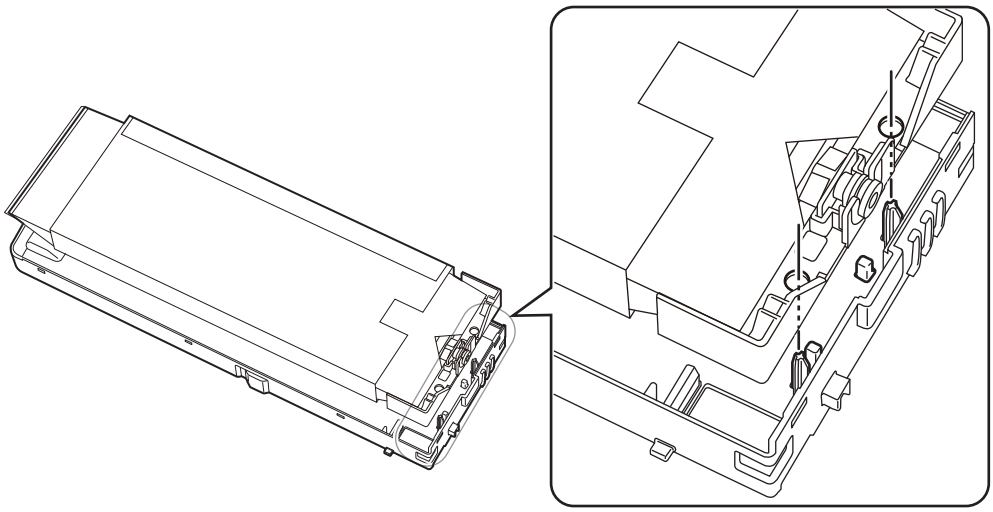
- [**Ink Renewal Inside Damper**] consumes more ink than [**Powerful Cleaning**].
- When you perform [**Ink Renewal Inside Damper**], replace all the ink pouches other than those in the C, M, Y, and K ink cartridges with new ink pouches. If the ink runs out during cleaning, a [**Cleaning Error (Ink Cartridge)**] will occur and cleaning will stop.
  The ink pouches that you have removed can still be used in operations other than ink renewal inside the damper (such as printing).

Procedure

1. Tap  .

2. Tap [Maintenance]>[Ink Renewal Inside Damper].

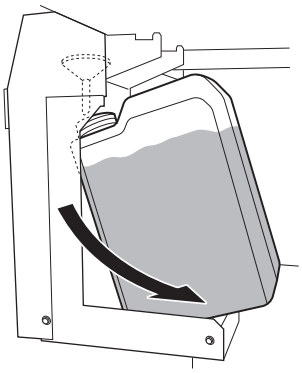
3. Replace all the ink pouches other than those in the C, M, Y, and K ink cartridges with new ink pouches.
   P. 45 Ink Replacement Method



4. Tap [Execute].
   Cleaning will start. On completion, you will return to the original screen.

MEMO

If [Discard the discharged fluid in the bottle.] appears after tapping [Execute]



1. **Remove the drain bottle and discard the discharged fluid.**

IMPORTANT

When you remove the drain bottle, a few drops of discharged fluid may come out of the machine. Exercise caution to prevent this fluid from soiling your hands or the floor.

2. **Quickly attach the emptied drain bottle to the machine once more.**
3. **Tap [Finish].**

⚠ CAUTION

Before you detach the drain bottle, be sure to wait for the screen to display [Discard the discharged fluid in the bottle.]. After discarding the discharged fluid, promptly attach the drain bottle to the machine.

Failing to follow this procedure may cause discharged fluid to flow out of the tube and spill, soiling your hands or the floor.

⚠ WARNING

Never place discharged fluid or ink near an open flame.

Doing so may cause a fire.

⚠ CAUTION

To store discharged fluid temporarily, place it in the included drain bottle or in a durable sealed container such as a metal can or polyethylene tank, and cap the container tightly.

Any spillage or vapor leakage may cause fire, odor, or physical distress.

IMPORTANT

Do not store discharged fluid in a location where it is exposed to direct sunlight.

When temporarily storing discharged fluid in the included drain bottle, do not store it in a location that is exposed to direct sunlight. The discharged fluid may harden, making the drain bottle unusable. The drain bottle may also deteriorate, leading to discharged fluid leaks.

IMPORTANT

Dispose of discharged fluid properly, in accordance with the laws in effect in your locale.

Discharged fluid is flammable and contains toxic ingredients. Never attempt to incinerate discharged fluid or discard it with ordinary trash. Also, do not dispose of it in sewer systems, rivers, or streams. Doing so may have an adverse impact on the environment.

5. If uneven output color issues with white ink are not resolved even after performing [Ink Renewal Inside Damper], perform [Ink Renewal].

6. Tap  to return to the home screen.

RELATED LINKS

- P. 147 Ink Renewal Method
- P. 194 [Cleaning Error (Ink Cartridge)]

Handling Severe Dot Drop-out, Dot Displacement, and Uneven Colors

Ink Renewal Method

Perform [**Ink Renewal**] in the following situations.

- When ink discharge issues such as dot drop-out are not corrected after performing cleaning using the cleaning function (normal, medium, powerful) and [**Manual Cleaning**]
- When white is uneven even after performing [**Ink Renewal Inside Damper**]
- When a color other than white is uneven even after shaking the ink cartridges to mix the ink

IMPORTANT

A large amount of ink will be discharged during [**Ink Renewal**]. Perform this operation only when ink discharge issues such as dot drop-out, dot displacement, and uneven colors cannot be corrected even after performing cleaning using the other cleaning functions (normal, medium, powerful, manual, ink circulation, and ink renewal inside damper).

RELATED LINKS

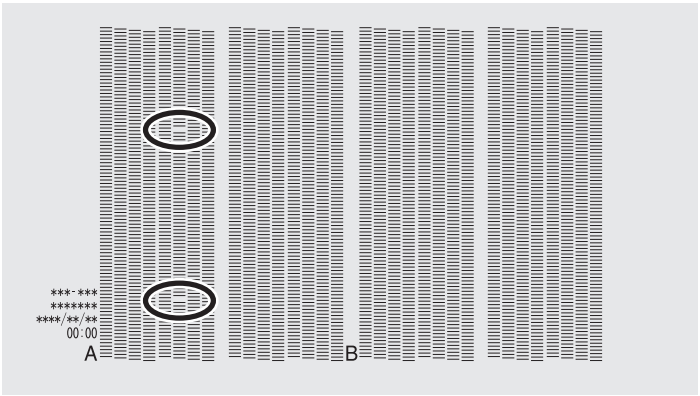
- P. 136 When Dot Drop-out or Dot Displacement Occurs
- P. 138 Medium Cleaning Method
- P. 140 Powerful Cleaning Method
- P. 57 Manual Cleaning Method
- P. 142 Ink Circulating Method
- P. 143 Method for Eliminating Uneven Color Issues with Powerful Cleaning
- P. 144 Method for Ink Renewal Inside Damper

1. Start the [Ink Renewal] menu.

Procedure

1. Tap  .
2. Tap [Maintenance]>[Ink Renewal].
3. **Check for the group with dot drop-out, dot displacement, or uneven colors by viewing the results of the printing test.**

   The space from "A" to "B" is group A. The space from "B" to the right side is group B.

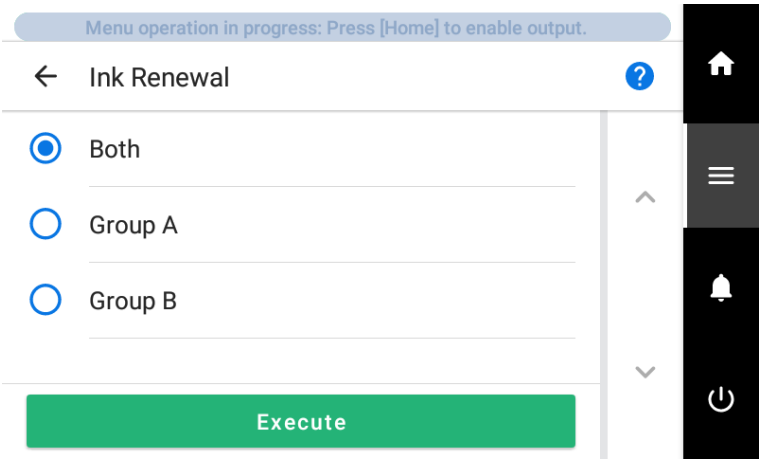


MEMO

If the printing-test results are difficult to interpret

Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

4. **Select the group of print heads to renew the ink of.**



5. **Tap [Execute].**

The [**Discard the discharged fluid in the bottle.**] screen appears.

6. **Remove the drain bottle and discard the discharged fluid.**

IMPORTANT

When you remove the drain bottle, a few drops of discharged fluid may come out of the machine. Exercise caution to prevent this fluid from soiling your hands or the floor.

⚠ CAUTION

Before you detach the drain bottle, be sure to wait for the screen to display [Discard the discharged fluid in the bottle.]. After discarding the discharged fluid, promptly attach the drain bottle to the machine.

Failing to follow this procedure may cause discharged fluid to flow out of the tube and spill, soiling your hands or the floor.

⚠ WARNING

Never place discharged fluid or ink near an open flame.

Doing so may cause a fire.

⚠ CAUTION

To store discharged fluid temporarily, place it in the included drain bottle or in a durable sealed container such as a metal can or polyethylene tank, and cap the container tightly.

Any spillage or vapor leakage may cause fire, odor, or physical distress.

IMPORTANT

Do not store discharged fluid in a location where it is exposed to direct sunlight.

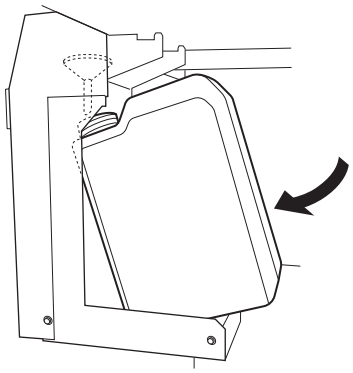
When temporarily storing discharged fluid in the included drain bottle, do not store it in a location that is exposed to direct sunlight. The discharged fluid may harden, making the drain bottle unusable. The drain bottle may also deteriorate, leading to discharged fluid leaks.

IMPORTANT

Dispose of discharged fluid properly, in accordance with the laws in effect in your locale.

Discharged fluid is flammable and contains toxic ingredients. Never attempt to incinerate discharged fluid or discard it with ordinary trash. Also, do not dispose of it in sewer systems, rivers, or streams. Doing so may have an adverse impact on the environment.

7. **Quickly attach the emptied drain bottle to the machine once more.**



8. **Tap [Finish].**

Ink renewal starts. On completion, you will return to the original screen.

9. **Tap  to return to the home screen.**

2. Perform a printing test to check the results.

Procedure

1. **Set up the object to be printed on.**

   MEMO

   The printing test requires an object with a W (width) of 170 mm (6.7 in.) or more and an L (length) of 90 mm (3.55 in.) or more. Set the bottom right of the object to the base point, and then carry out a printing test.

   Loading the Object, and Setting the Print Surface Height and Print Start Point(P. 35)

2. **Tap  [Nozzle Drop-out Test] on the home screen.**

3. **Tap [Execute] next to [Printing Test].**

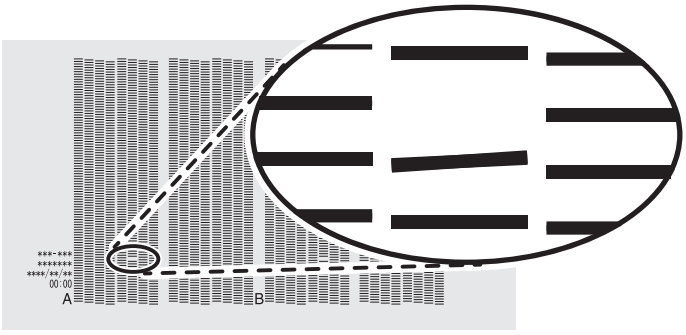
   Printing of the test pattern starts.

   MEMO

   Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern.

   Tap  **[Nozzle Drop-out Test]** on the home screen, and then select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** to make the base of the white ink black, making it easier to check the white ink. **[Nozzle Drop-out Test (Base: Black)]** is not displayed if the machine is not equipped with white ink.

4. **Check whether there is dot drop-out or dot displacement in the test pattern and whether its uneven colors have been eliminated.**

5. **If you have opened the front cover, close it.**

   If no dot drop-out or dot displacement occurs and if there are no uneven colors, this operation is finished. Tap  to return to the home screen.

If the dot drop-out or dot displacement location is different, perform medium cleaning another two or three times.

If this problem is not fixed, contact your authorized dealer.

Partially Restricting the Print Heads Used for Printing

When dot drop-out or dot displacement is not improved even after renewing the ink, partially restrict the print heads to use for printing. This operation is called the "nozzle mask," and while it slows down printing speed, it also allows you to decrease the impact of dot drop-out or dot displacement.

First print a test pattern, and then select the nozzle group to use by viewing the test results. After that, use VersaWorks to select the nozzle group used for printing.

1. Perform a printing test for the nozzle mask.

Procedure

1. **Set up the object to be printed on.**

   MEMO

   The printing test requires an object with a W (width) of 170 mm (6.7 in.) or more and an L (length) of 90 mm (3.55 in.) or more. Set the bottom right of the object to the base point, and then carry out a printing test.

   Loading the Object, and Setting the Print Surface Height and Print Start Point(P. 35)

2. **Tap**  **.**

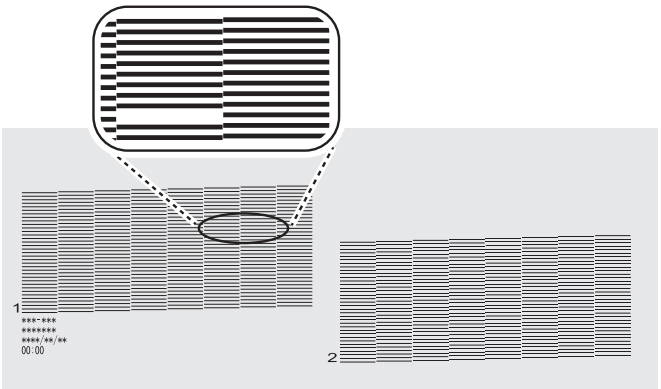
3. **Tap [Cleaning]>[Printing Test].**

4. **Select [Nozzle Mask Test] and tap [Execute].**

   Printing of the test pattern starts.

5. **Check for the nozzle group with dot drop-out or dot displacement by viewing the results of the printing test.**

   The results of the printing test are displayed separately for nozzle groups "1" and "2." The following shows a dot drop-out in nozzle group 1.

   MEMO

   If the printing-test results are difficult to interpret

   Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

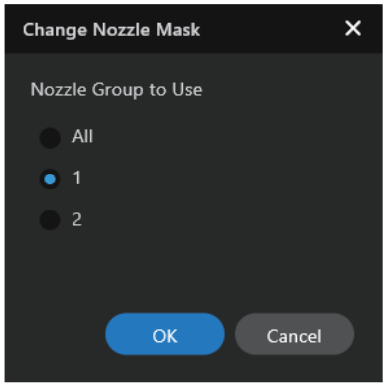
6. **If you have opened the front cover, close it.**

If no dot drop-out or dot displacement occurs, this operation is finished. Tap  to return to the home screen.

2. Limit the print heads used for printing.

Use VersaWorks to select the nozzle group for printing. For detailed procedures, refer to the VersaWorks Master Guide.

https://downloadcenter.rolanddg.com/VersaWorks7



RELATED LINKS

- VersaWorks Master Guide

Emergency Measure) Cleaning the Print Head Surface

When dot drop-out or dot deflection is not improved even if cleaning is performed several times, you can clean the surface of the print heads as an emergency measure. The print head surface (nozzle surface) is a very delicate mechanism, so work must be performed carefully and cautiously.

This operation is an emergency measure. It may damage defect-free parts depending on the symptoms, worsening the symptoms. If you have any questions, contact your authorized dealer.

⚠ CAUTION

Do not perform cleaning immediately after printing has finished. (Wait approximately 15 minutes after printing finishes.)

The area around the UV-LED device is hot and may cause burns.

⚠ WARNING

Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.

Sudden movement of the machine may cause injury.

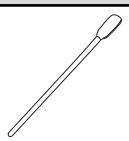
IMPORTANT

Important notes on this procedure

- Before performing this operation, remove any objects to be printed on.
- To prevent the print heads from drying out, finish this procedure in 10 minutes or less. A warning beep sounds after 10 minutes.
- Never use any implements other than the included cleaning sticks. Cotton swabs or other lint-producing items may damage the print heads.
- Do not use cleaning liquid other than the included cleaning liquid.
- Be sure to use new cleaning sticks. Reusing cleaning sticks will adversely affect the printing results.
- Do not put a cleaning stick that has been used for cleaning into the cleaning liquid. Doing so will deteriorate the cleaning liquid.
- Never rub the print head surface (nozzle surface).
- If you use up the cleaning sticks or cleaning liquid, contact your authorized dealer or visit our website (https://www.rolanddg.co.jp/).

When an alarm sounds during cleaning

- A warning beep sounds 10 minutes after operation starts. Stop work, close all the covers, and then tap [**Finish All**] to end the manual cleaning mode. After that, restart the procedure from the beginning.

Required items	
	
Cleaning stick	Cleaning liquid

Procedure

1. Remove the object to be printed on.

2. Tap  **[Cleaning].**

3. **Tap [Manual Cleaning].**

4. **Tap [Execute].**

When the confirmation screen appears, respond to the on-screen instructions, and then tap [**OK**].

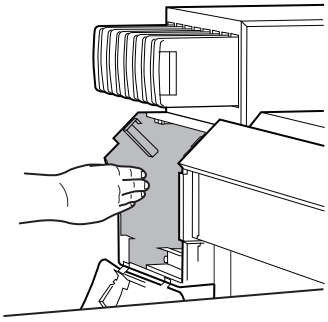
The print head carriage moves to the left end of the machine.

IMPORTANT

The cleaning of the print head surface (as an emergency measure) uses the manual cleaning menu and moves the print-head carriage to the left side of the machine. Therefore, the manual cleaning procedure appears on the operation panel.

5. **Open the left cover.**

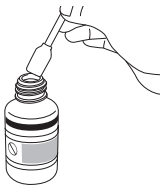
6. **Touch the location shown in the figure to discharge any static electricity.**



7. **Apply a large amount of cleaning liquid to a new cleaning stick.**

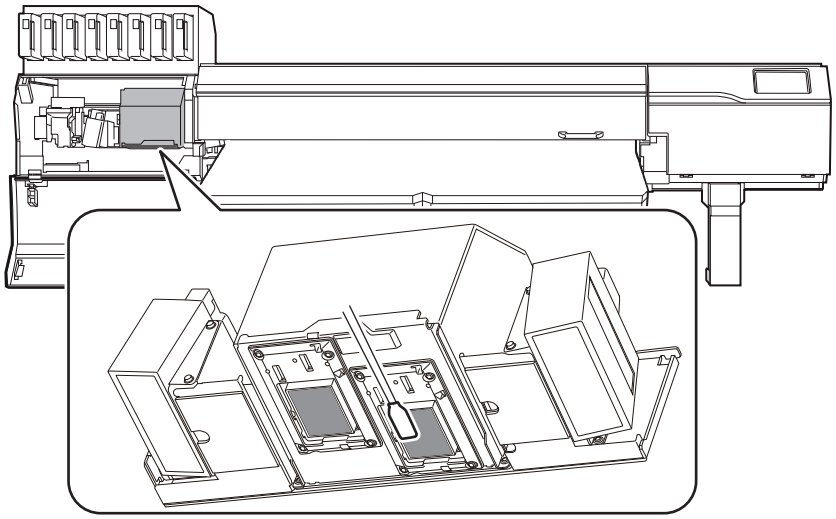
IMPORTANT

- Be sure to use one of the included cleaning sticks.
- Do not use a previously used cleaning stick.
- Do not put a previously used cleaning stick into the cleaning liquid.



8. **Very gently touch the cleaning stick against the print head surface (nozzle surface).**

Very softly press the cleaning stick against the print head so that cleaning liquid soaks into the print head surface (nozzle surface). Never rub the stick on the surface or press it forcibly.



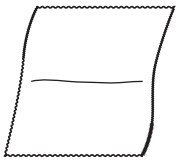
When the Operation Panel Is Dirty

Operation Panel Cleaning Method

IMPORTANT

Important notes on this procedure

- The cloths, alcohol, and similar items used in cleaning are not included with the product.
- Be sure to use a cloth when cleaning the operation panel. Liquid entering into the operation panel through its gaps may cause printer malfunctions.

Required items	
	
Anhydrous ethanol or isopropyl alcohol	Cloth (that is not fluffy)

⚠ CAUTION

When using anhydrous ethanol or isopropyl alcohol, be sure to follow the product's usage precautions.

Exercise caution regarding items such as fire, ventilation, and rashes.

⚠ CAUTION

Only use anhydrous ethanol or isopropyl alcohol.

Using chemicals (or similar substances) other than anhydrous ethanol or isopropyl alcohol may lead to operation panel damage.

Procedure

1. **Switch off the sub power.**
2. **Wipe off the operation panel with a cloth soaked in anhydrous ethanol or isopropyl alcohol.**

   Wipe slowly and gently to remove the grime.

Replacing Consumable Parts

Replacing Parts for Maintenance

Replacing the Wiper

The wiper periodically cleans the surface of the print heads.

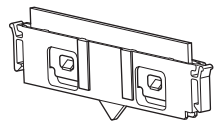
When it is time to replace the wiper, the message [**The time for wiper replacement has arrived.**] appears. In this situation, replace the wiper.

For information about purchasing wipers, contact your authorized dealer or visit our website (https://www.rolanddg.co.jp/).

⚠ WARNING

Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.

Sudden movement of the machine may cause injury.

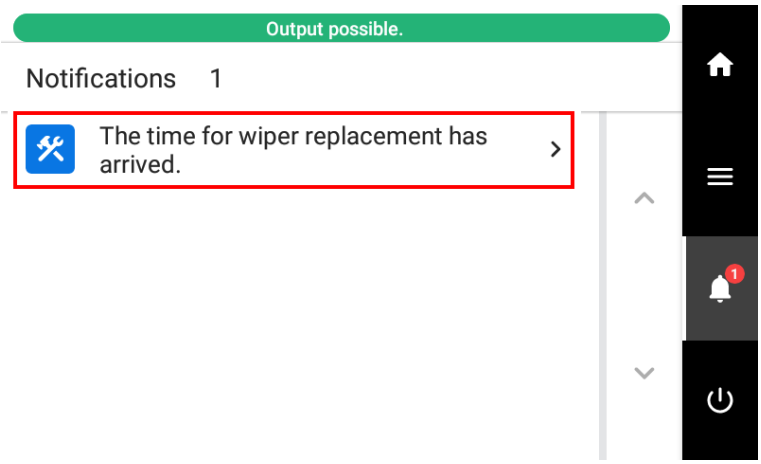
Required item

Wiper

IMPORTANT

Take care to prevent ink from adhering to the operation panel.

Procedure

1. **When the message [The time for wiper replacement has arrived.] appears, tap [OK].**
2. **Remove the object to be printed on.**
3. **Tap**  **to display the messages.**
4. **Tap [The time for wiper replacement has arrived.].**



The [**Wiper Replacement**] screen appears.

5. **Tap [Execute].**

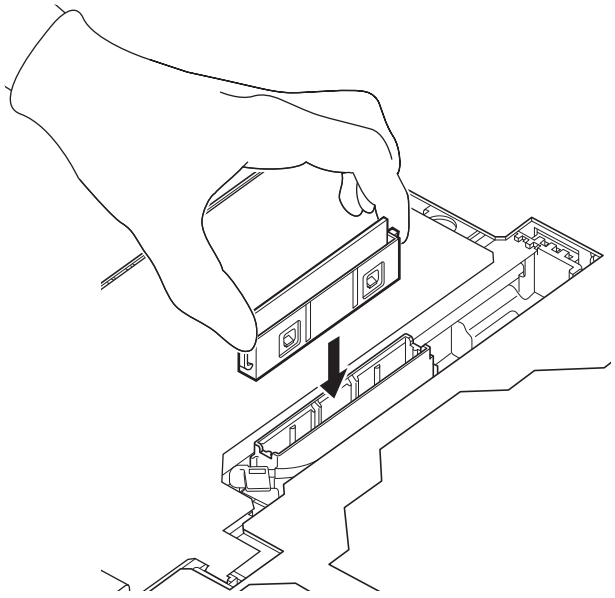
When the confirmation screen appears, respond to the on-screen instructions, and then tap [**OK**]. The print-head carriage moves to a location where wiper replacement is possible.

6. **Follow the instructions on the operation panel to replace the wiper.**

- Tap < or > to check the procedure.
- If you complete the work without viewing the instructions, tap [**Finish All**].

IMPORTANT

After installing the wiper, hold the hooks on the left and right sides, pressing in just enough so that the locks are not released. Then, gently pull the wiper up and check that it is not removed.



7. **When the wiper replacement is finished, tap [Finish All].**

8. **When [Close the cover.] appears, close the right cover.**

When you close the right cover, you are returned to the original screen.

9. Tap  to return to the home screen.

Replacing the Print Head Caps

The print head caps seal the nozzle surfaces of the print heads, preventing these surfaces from drying out and preventing dust from adhering to them.

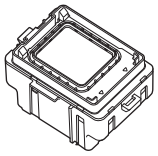
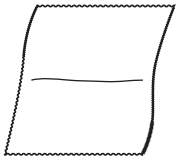
When it is time to replace the print head caps, the message [**The time for cap replacement has arrived.**] appears. In this situation, replace the print head caps.

For information about purchasing print head caps, contact your authorized dealer or visit our website (https://www.rolanddg.co.jp/).

⚠ WARNING

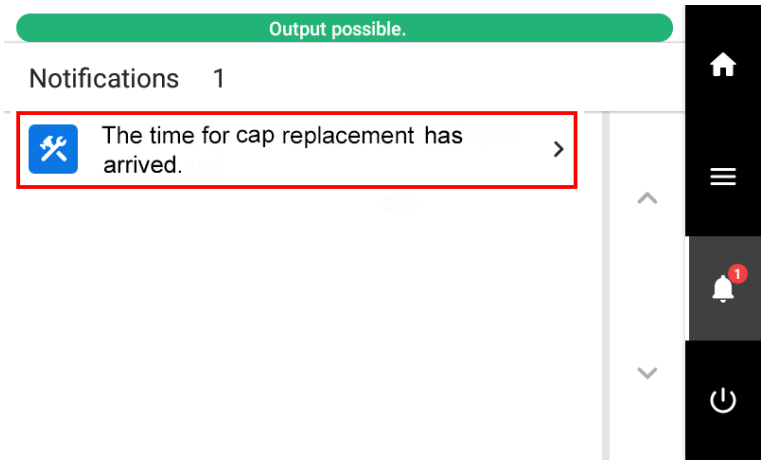
Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.

Sudden movement of the machine may cause injury.

Required items		
		
Print head cap	Cloth (that is not fluffy)	Cleaning stick

Procedure

1. **When the message [The time for cap replacement has arrived.] appears, tap [OK].**
2. **Remove the object to be printed on.**
3. **Tap**  **to display the messages.**
4. **Tap [The time for cap replacement has arrived.].**



The [**Cap Replacement**] screen appears.

5. **Tap [Execute].**

When the confirmation screen appears, respond to the on-screen instructions, and then tap [**OK**].

The print-head carriage moves to a location where print head cap replacement is possible.

6. Follow the instructions on the operation panel to replace the print head caps.

- Tap  or  to check the procedure.
- If you complete the work without viewing the instructions, tap [**Finish All**].

IMPORTANT

Ink may drip from the removed print head cap. Exercise caution to prevent this fluid from soiling your hands or the floor.
To prevent ink from adhering to your hands, the machine, or the floor, cover the bottom surface of the removed print head cap with paper towels or something similar.

7. When the print head cap replacement is finished, tap [Finish All].

8. When [Close the cover.] appears, close the right cover.

When you close the right cover, you are returned to the original screen.

9. Tap  to return to the home screen.

Replacing the wiper cleaner

The wiper cleaner removes ink, dust, and similar substances that have adhered to the wiper during cleaning.

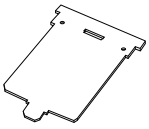
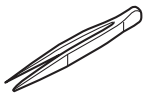
When it is time to replace the wiper cleaner, the message [**The time for wiper cleaner replacement has arrived.**] appears. In this situation, replace the wiper cleaner.

For information about purchasing wiper cleaners, contact your authorized dealer or visit our website (https://www.rolanddg.co.jp/).

⚠ WARNING

Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.

Sudden movement of the machine may cause injury.

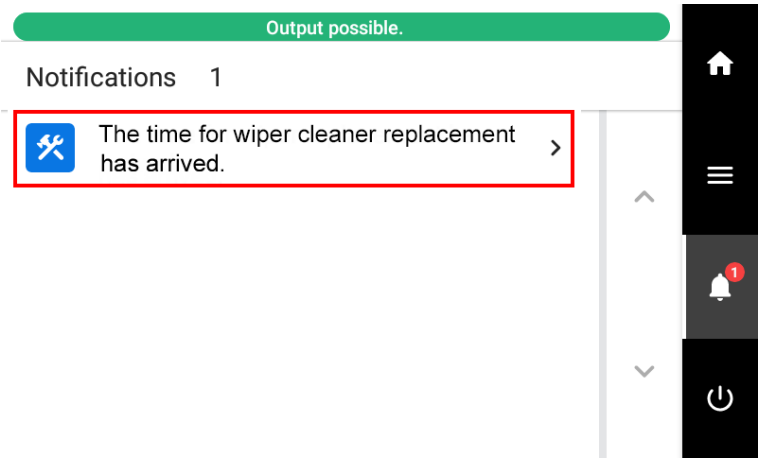
Required items	
	
Wiper cleaner	Tweezers

IMPORTANT

Take care to prevent ink from adhering to the operation panel.

Procedure

1. **When the message [The time for wiper cleaner replacement has arrived.] appears, tap [OK].**
2. **Remove the object to be printed on.**
3. **Tap**  **to display the messages.**
4. **Tap [The time for wiper cleaner replacement has arrived.].**



The [**Wiper Cleaner Replacement**] screen appears.

5. **Tap [Execute].**

When the confirmation screen appears, respond to the on-screen instructions, and then tap [**OK**]. The print-head carriage moves to a location where wiper cleaner replacement is possible.

6. **Follow the instructions on the operation panel to replace the wiper cleaner.**

- When [**Eliminate static electricity.**] appears, touch the indicated location, and then tap [**Finish All**] to display the instructions for wiper cleaner replacement.
- Tap  or  to check the procedure.
- If you complete the work without viewing the instructions, tap [**Finish All**].

7. **When the wiper cleaner replacement is finished, tap [Finish All].**

8. **When [Close the cover.] appears, close the right cover and the flushing cover.**

When you close the right cover and the flushing cover, you are returned to the original screen.

9. **Tap  to return to the home screen.**

Replacing the UV Mist Filters

The UV mist filters absorb the ink mist generated during printing to reduce the amount of ink mist that adheres to the UV-LED device.

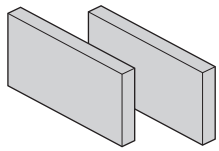
When it is time to replace the UV mist filters, the message [**The time for UV mist filter replacement has arrived.**] appears. If this message appears, replace the UV mist filters.

For information about purchasing UV mist filters, contact your authorized dealer or visit our website (https://www.rolanddg.co.jp/).

⚠ WARNING

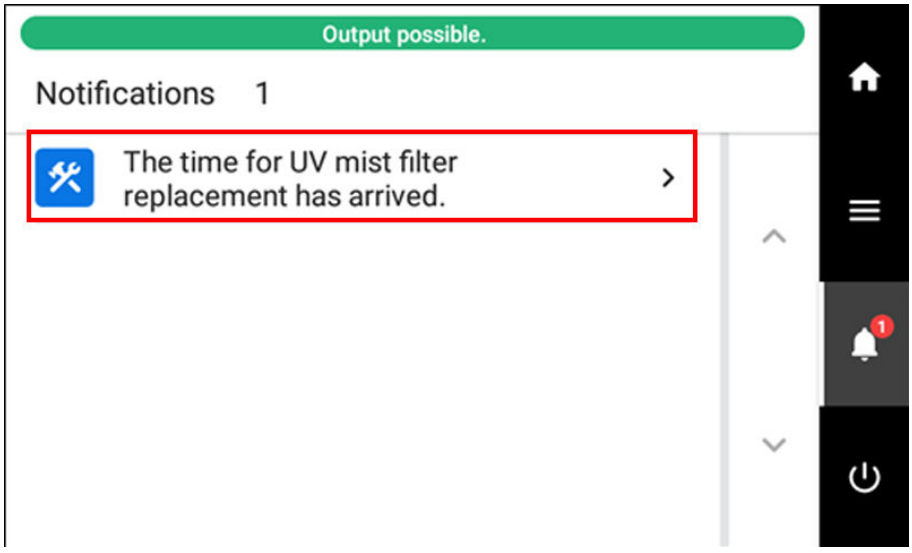
Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.

Sudden movement of the machine may cause injury.

Required item

UV mist filters

Procedure

1. **When the message [The time for UV mist filter replacement has arrived.] appears, tap [OK].**
2. **Remove the object to be printed on.**
3. **Tap**  **to display the messages.**
4. **Tap [The time for UV mist filter replacement has arrived.].**



The [**UV Mist Filter Replacement**] screen appears.

5. **Tap [Execute].**

When the confirmation screen appears, respond to the on-screen instructions, and then tap [**OK**]. The print-head carriage moves to a location where the right UV mist filter can be replaced.

6. **Follow the instructions on the operation panel to replace the UV mist filters.**

- Tap  or  to check the procedure.
- There is one UV-LED device on the left side of the print head carriage and one on the right side. The instructions are displayed for the left and right sides.
- If you complete the work to replace the left UV mist filter without viewing the instructions, tap [**Finish All**]. When you do so, the instructions for the right side appear. If you complete the work to replace the right UV mist filter without viewing the instructions, tap [**Finish All**].

MEMO

UV mist filters do not have a specified front or back. They can be attached with either orientation.

7. **When the UV mist filter replacement is finished, tap [Finish All].**

8. **When [Close the cover.] appears, close the front cover.**

When you close the front cover, you are returned to the original screen.

9. **Tap  to return to the home screen.**

Replacing the Flushing Sponge

The flushing sponge absorbs the discharged ink to prevent clogging of the print heads.

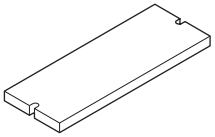
When it is time to replace the flushing sponge, the message [**The time for flushing sponge replacement has arrived.**] appears. In this situation, replace the flushing sponge.

For information about purchasing flushing sponges, contact your authorized dealer or visit our website (https://www.rolanddg.co.jp/).

⚠ WARNING

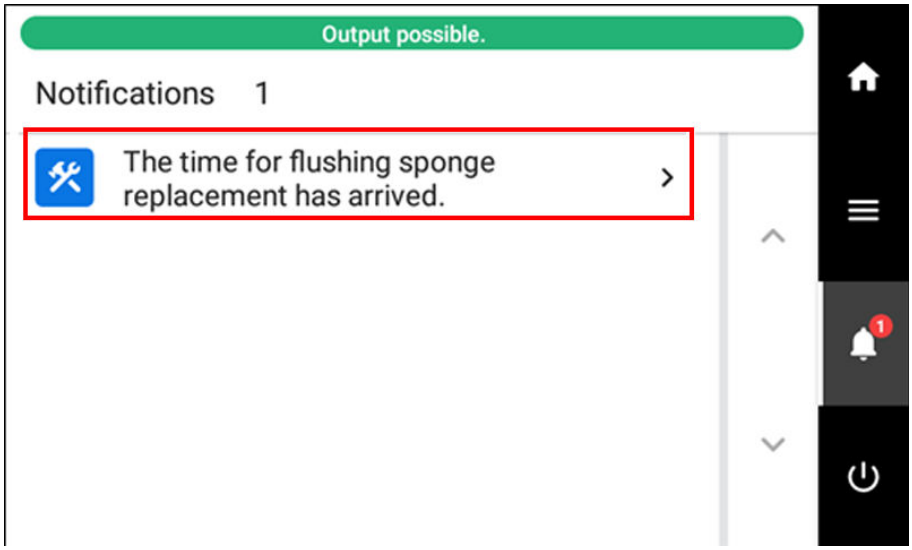
Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.

Sudden movement of the machine may cause injury.

Required items	
	
Flushing sponge	Tweezers

Procedure

1. **When the message [The time for flushing sponge replacement has arrived.] appears, tap [OK].**
2. **Remove the object to be printed on.**
3. **Tap**  **to display the messages.**
4. **Tap [The time for flushing sponge replacement has arrived.].**



The [**Flushing Sponge Replacement**] screen appears.

5. **Tap [Execute].**

When the confirmation screen appears, respond to the on-screen instructions, and then tap [**OK**].
The print-head carriage moves to a location where flushing sponge replacement is possible.

6. Follow the instructions on the operation panel to replace the flushing sponge.

- Tap  or  to check the procedure.
- If you complete the work without viewing the instructions, tap [**Finish All**].

MEMO

Flushing sponges do not have a specified front or back. They can be attached with either orientation.

7. When the flushing sponge replacement is finished, tap [Finish All].

8. When [Close the cover.] appears, close the right cover and the flushing cover.

When you close the right cover and the flushing cover, you are returned to the original screen.

9. Tap  to return to the home screen.

Consumable Parts That Require Inquiries before Replacement

When replacing the following consumable parts, contact your authorized Roland DG Corporation dealer.

Item	Related page
Print heads	P. 120 Cleaning around the Print Heads

Troubleshooting Methods

Output Quality Problems

Printed results are coarse or contain horizontal stripes

Do the print heads cause dot drop-out?

Carry out a printing test and make sure no dot drop-out or dot displacement occurs. If dot drop-out or dot displacement is present, perform cleaning.

RELATED LINKS

- P. 62 Performing a Nozzle Drop-out Test
- P. 64 Normal Cleaning Method
- P. 138 When Normal Cleaning Is Not Effective

Is the print head height appropriate?

Printing when the [**Print Head Height**] menu item is set to [**High**] or to [**Medium**] is coarser than when set to [**Low**]. Set to [**Low**] unless otherwise necessary.

RELATED LINKS

- P. 76 Changing the Print Head Height

Is the printer installed in a level and stable location?

Never install the machine in a location where it is tilted or where it may wobble or experience vibration. Also make sure that the print heads are not exposed to moving air. These factors may lead to dot drop-out or reduced printing quality.

Is the printer installed in a location that is not exposed to direct sunlight?

Never install the machine in a location that is exposed to direct sunlight. Doing so may result in dot drop-out or other problems with reduced printing quality, or may even result in malfunction.

Is the print mode suitable?

If attractive printing is impossible, try using a higher-quality print mode. Depending on the object to be printed on, smudging may occur when using a high-quality print mode, and results may also vary greatly depending on the settings of your software RIP (such as the color-profile selection). Select settings appropriate for the object to be printed on you are using.

Is the object set up correctly?

If the object is not set up correctly, printing may be adversely affected. Make sure the object is set up correctly.

RELATED LINKS

- P. 35 Loading the Object, and Setting the Print Surface Height and Print Start Point

Has [Periodic Maintenance Frequency] been set to [Low]?

If [**Periodic Maintenance Frequency**] has been set to [**Low**], change it to [**Normal**]. Changing this setting to [**Normal**] will increase the number of cleaning operations, preventing dot drop-out and dot displacement.

MEMO

You can decrease the number of cleaning operations, reducing ink consumption, by setting [**Periodic Maintenance Frequency**] to [**Low**].
However, the risk of dot drop-out and dot displacement will be higher than when [**Normal**] is selected. Change this setting as needed only when setting up a print object with a thickness of 2 mm (0.07 in.) or less.
Default setting: [**Normal**]

RELATED LINKS

- P. 101 Setting the Periodic Maintenance Frequency

The Object to be Printed on Becomes Soiled When Printed

Do the print heads come into contact with the object being printed on?

The height of the print heads may be too low. Also, if the object is not loaded and set up correctly, it may wrinkle or come loose and contact the print heads.

RELATED LINKS

- P. 35 Loading the Object, and Setting the Print Surface Height and Print Start Point
- P. 66 Adjusting the Print Head Height

Are the print heads dirty?

The following may cause ink to drip on the object to be printed on during printing.

- Fibrous dust (lint) is built up around the print heads
- Ink transferred to the print heads due to rubbing against the object to be printed on

If this happens, perform manual cleaning. We recommend carrying out periodic cleaning of the print heads.

RELATED LINKS

- P. 120 Cleaning around the Print Heads

Is the humidity of the room too low?

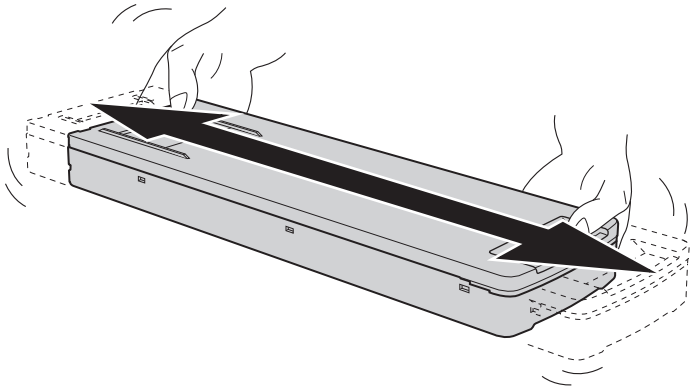
Use the machine in an environment where the humidity is 35 to 80%RH (no condensation).

Colors are unstable or uneven

Did you shake the ink cartridges before installing them?

Shake new ink cartridges 50 times (about 20 seconds) before you install them.

Every day before starting work, remove the white ink cartridge, shake it 50 times (about 20 seconds), and then reinsert it.



Are colors still uneven after mixing the ink by shaking the ink cartridges?

If uneven color issues with white ink still occur even after shaking the ink cartridges to mix the ink, perform [**Ink Circulation**].

If uneven color issues with white ink still occur even after performing [**Ink Circulation**], perform [**Powerful Cleaning**].

If uneven color issues with white ink still occur even after performing [**Powerful Cleaning**], perform [**Ink Renewal Inside Damper**].

If uneven color issues with white ink still occur even after performing [**Ink Renewal Inside Damper**], perform [**Ink Renewal**].

If uneven color issues with ink other than white ink still occur even after shaking the ink cartridges to mix the ink, perform [**Ink Renewal**].

RELATED LINKS

- P. 142 Ink Circulating Method
- P. 143 Method for Eliminating Uneven Color Issues with Powerful Cleaning
- P. 144 Method for Ink Renewal Inside Damper
- P. 147 Ink Renewal Method

Was printing paused partway through?

When printing is paused, the coloring at the seam may be altered when printing resumes. Avoid pausing printing.

Printing pauses when ink runs out during printing. Before you perform printing, check the amount of ink remaining. Printing may also pause when data is not sent from the computer quickly enough. We recommend not performing any other tasks with the computer while printing is in progress.

Was cleaning performed during printing?

Performing cleaning during printing can affect the print quality. Check the time until cleaning and the printing time before printing.

RELATED LINKS

- P. 78 Avoiding Printing Cancellation Due to Cleaning

Is the printer installed in a level and stable location?

Never install the machine in a location where it is tilted or where it may wobble or experience vibration. Also make sure that the print heads are not exposed to moving air. These factors may lead to dot drop-out or reduced printing quality.

Is the object set up correctly?

If the object is not set up correctly, printing may be adversely affected. Make sure the object is set up correctly.

RELATED LINKS

- P. 35 Loading the Object, and Setting the Print Surface Height and Print Start Point

Are the operating parameters set to appropriate values?

Depending on the [**Printing Movement Range**] setting, uneven colors may occur. If you are concerned about uneven colors, try setting [**Printing Movement Range**] to [**Full Width**].

RELATED LINKS

- P. 91 Speeding Up Output for Narrow Print Objects

Is the printer installed in a location that is not exposed to direct sunlight?

Never install the machine in a location that is exposed to direct sunlight. Doing so may result in dot drop-out or other problems with reduced printing quality, or may even result in malfunction.

Are the irradiation windows of the UV-LED devices dirty?

If the irradiation windows are dirty, this can reduce ink adhesion and the quality of the printed materials. Check the level of dirt and clean at the appropriate times.

RELATED LINKS

- P. 127 Cleaning That Must Be Performed Once a Month or More

Is the print mode suitable?

If attractive printing is impossible, try using a higher-quality print mode. Depending on the object to be printed on, smudging may occur when using a high-quality print mode, and results may also vary greatly

depending on the settings of your software RIP (such as the color-profile selection). Select settings appropriate for the object to be printed on you are using.

Is the printer being used in a location subject to severe changes in the operating environment?

Large fluctuations in temperature or humidity while printing is in progress may cause the colors to change partway through the printing. When printing, use the machine in a location where the temperature and humidity are stable.

Machine Problems

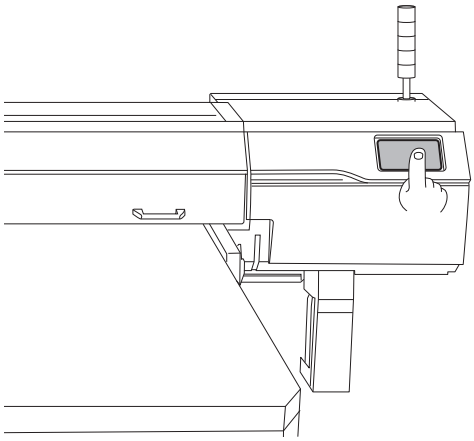
Why Has the Print-Head Carriage Stopped Moving?

If the print-head carriage stops on the table, take immediate action to prevent the print heads from drying out.

What to Do First

Switch the sub power off and then back on again.

If the print-head carriage moves to the home position (inside the right cover), it means the operation has ended successfully.



If the print-head carriage still does not move

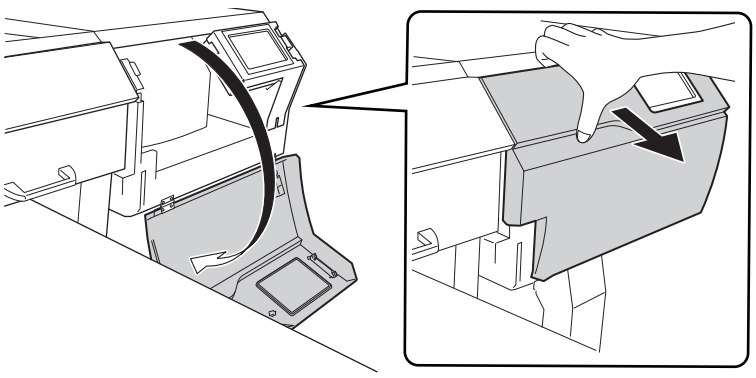
Try switching off the sub power, followed by the main power, then switching on the main power again, followed by the sub power.

If the Print Heads Still Do Not Move

If the heads still do not move, carry out the following emergency response measure, and then contact your authorized dealer.

Procedure

1. **Switch off the sub power.**
2. **Switch off the main power, and then open the front cover.**
3. **Open the right cover.**

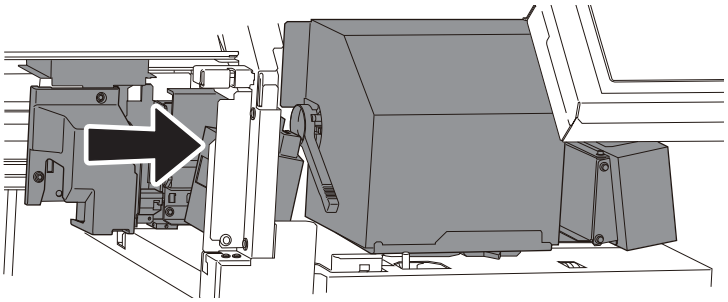


4. **Gently move the print-head carriage to the home position by hand.**

Stopping at the place where the audible click is heard locks the print-head carriage in place.

IMPORTANT

When moving the print-head carriage by hand, check that it does not come in contact with the wiper or the print head cap. If it does come into contact with the wiper or print head cap, the print-head carriage cannot be moved to the standby position and should be left in place.



5. **Gently apply pressure from the right side to make sure the print-head carriage does not move to the left.**

If the print-head carriage moves to the left, move it again slowly by applying pressure from the left side and make sure it locks in place.

6. **Close the front and right covers.**

The printer unit does not run

Is the power switched on?

Check that the power distribution board switches and the printer's main power are on, and then turn on the sub power and make sure the home screen appears.

RELATED LINKS

- P. 12 Rear
- P. 27 Precautions When Operating the Power Supply
- P. 29 Turning the Power On

Is [Output possible.] displayed?

Output is not performed when [**Output possible.**] is not displayed in the status bar at the top of the screen. Load the object, determine the print surface height and the print start point, and then tap  [**Setup**]. Also, when operating the setting menu, output doesn't start when data is sent from the computer with some menu items. When you return to a menu item where output is possible or tap  to return to the home screen, output starts.

RELATED LINKS

- P. 35 Loading the Object, and Setting the Print Surface Height and Print Start Point
- P. 68 Starting Output

Are any covers open?

Close the front, left, and right covers.

Is the message [Output is currently paused.] displayed on the screen?

When [**Output is currently paused.**] is displayed on the screen, operation is paused. To resume, tap [**Resume**].

RELATED LINKS

- P. 42 Pausing and Canceling Output

Is a message displayed on the screen?

RELATED LINKS

- P. 187 Messages
- P. 191 Error Messages

Are the cables connected?

Connect the cables securely.

Is the LAN routing appropriate?

Check whether or not the network routing is appropriate. Try connecting the computer and the machine to the same hub or connecting them directly using a cable. If this makes it possible to perform output, it means the problem may be in the network itself.

Are the LAN settings correct?

If the cable connections are secure and no problem is found in the network itself, make sure that the IP address and other such settings are appropriate. The settings on both the machine and the computer must be appropriate. Redo the settings, checking to ensure that the IP address does not conflict with the IP address for another device on the network, that the port setting for the software RIP specifies the IP address set on the machine, that the settings have no typing errors, and for other such problems.

RELATED LINKS

- P. 104 Viewing Printer Information
- P. 197 Reconfiguring the Network Settings

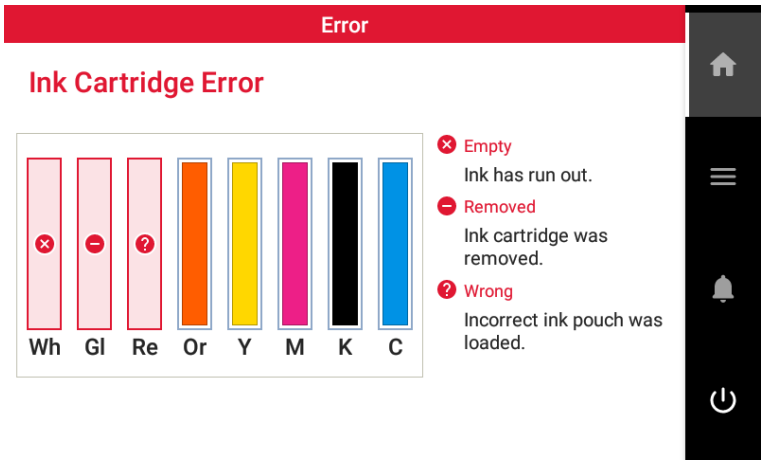
Did the software RIP end abnormally?

Make sure the software RIP is running correctly, then switch the sub power switch off and back on.

RELATED LINKS

- https://downloadcenter.rolanddg.com/VersaWorks7

Is an [Ink Cartridge Error] displayed?



When an [**Ink Cartridge Error**] appears on the display screen, output data cannot be accepted. If there is data that has not yet been output remaining in the machine, output resumes when the error is cleared. If there is unsent data in the computer, output resumes when the data is resent.

When ink runs out

Replace the ink pouch in the ink cartridge with a new ink pouch.

When an ink pouch with the incorrect color is loaded

Remove the ink pouch that was loaded incorrectly and load the appropriate ink pouch.

When an ink cartridge is removed or has not been securely loaded

Securely load the ink cartridge by pushing it all the way to the back.

RELATED LINKS

- P. 45 Ink Replacement Method
- P. 191 [**Ink Cartridge Error**]

A Warning Beep Sounded during Printer Unit Movement

Is an object still on the table?

When the printer unit is moved by touch panel operations, if the height sensor detects an object or something similar, a warning beep will sound, and the operation of the printer unit will stop. Check the transporter table and remove any objects or similar items that are there. Alternatively, raise the printer unit to a point where the height sensor does not detect these items.

MEMO

Press [TS : RESET] on the touch panel to stop the warning beep.

RELATED LINKS

- P. 21 Touch Panel
- P. 14 Front Cover Interior/Print Head Area

Is [Warning Overtravel X] displayed for [TS:ALARM]?

When the printer unit exceeds the control area of the transporter, the machine displays the [**Warning Overtravel X**] error on the touch panel and stops operation.

MEMO

This error appears due to operations of the touch panel and operation panel but also appears when the maximum printing area is reached during the output of the sent print data.
Use the following procedure to clear the error, correct the print data so it fits within the printing area, and then send this data again.

If [**Warning Overtravel X**] appears when you tap 

, perform the following operations to clear this error.

When a negative value is displayed for 

[TS : X] on the touch panel:

Tap [TS : BACK] to move the printer unit to the back, and then tap 

[TS : RESET].

When a non-negative value is displayed for 

[TS : X] on the touch panel:

Tap [TS : FRONT] to move the printer unit to the front, and then tap 

[TS : RESET].

MEMO

Press [TS : RESET] on the touch panel to stop the warning beep.

Messages on the Operation Panel

Messages

These are the main messages that appear on the printer unit's operation panel to prompt correct operation. These messages are not errors, so you can close them and perform other work. To check messages again or to carry out their corresponding actions, tap  to display the list of messages. Tap a message to display the menus and procedure required for the action. Perform operations according to the on-screen instructions.

[When output, cleaning, and other operations are completed, discard the discharged fluid.]

This message appears when a certain amount of discharged fluid collects in the drain bottle.

Tap [**When output, cleaning, and other operations are completed, discard the discharged fluid.**]>[**Execute**] to discard this fluid.

RELATED LINKS

- P. 133 If the Discharged Fluid Disposal Message Appears

[The time for manual cleaning has arrived.]

This message appears when it is time to perform manual cleaning.

Tap [**The time for manual cleaning has arrived.**]>[**Execute**] to perform manual cleaning.

RELATED LINKS

- P. 57 Manual Cleaning Method

[The time for wiper replacement has arrived.]

This message appears when it is time to replace the wiper.

Tap [**The time for wiper replacement has arrived.**]>[**Execute**] to replace the wiper.

RELATED LINKS

- P. 159 Replacing the Wiper

[The time for cap replacement has arrived.]

This message appears when it is time to replace the print head caps.

Tap [**The time for cap replacement has arrived.**]>[**Execute**] to replace the print head caps.

RELATED LINKS

- P. 162 Replacing the Print Head Caps

[The time for wiper cleaner replacement has arrived.]

This message appears when it is time to replace the wiper cleaner.

Tap [**The time for wiper cleaner replacement has arrived.**]>[**Execute**] to replace the wiper cleaner.

RELATED LINKS

- P. 164 Replacing the wiper cleaner

[The time for UV mist filter replacement has arrived.]

This message appears when it is time to replace the UV mist filters.

Tap [**The time for UV mist filter replacement has arrived.**]>[**Execute**] to replace the UV mist filters.

RELATED LINKS

- P. 166 Replacing the UV Mist Filters

[The time for flushing sponge replacement has arrived.]

This message appears when it is time to replace the flushing sponge.

Tap [**The time for flushing sponge replacement has arrived.**]>[**Execute**] to replace the flushing sponge.

RELATED LINKS

- P. 168 Replacing the Flushing Sponge

[Print head protection mode has activated.]

This message appears when the ink in use may not be a product specified by Roland DG Corporation.

If the ink is not a product specified by Roland DG Corporation, a larger amount of ink will be consumed, and cleaning will be performed frequently. To obtain optimal performance, we recommend that you use ink specified by Roland DG Corporation. To purchase ink, contact your authorized dealer.

[Replace the cleaning liquid pouch.]

This message appears when the cleaning liquid runs out.

Replace the empty cleaning liquid pouch.

When you replace the cleaning liquid pouch, the message [**Has the cleaning liquid pouch been replaced? Tap "Yes" to reset the amount of remaining cleaning liquid.**] appears.

Tap [**Yes**] to reset the amount of cleaning liquid remaining and identify the cleaning liquid pouch as a new product.

MEMO

If you tap [**Yes**] on the cleaning liquid pouch replacement confirmation screen even though you have not replaced the cleaning liquid pouch, the amount of cleaning liquid remaining is reset. In this situation, no notification will appear even if the amount of cleaning liquid remaining is very small, and the message [**Replace the cleaning liquid pouch.**] will appear when the cleaning liquid runs out. To ensure you have enough time to prepare the replacement cleaning liquid, tap [**No**] if you have not replaced the cleaning liquid.

RELATED LINKS

- P. 51 Cleaning Liquid Replacement Method

[Install the cleaning liquid pouch.]

This message appears when a cleaning cartridge that does not contain a cleaning liquid pouch is loaded or when the cleaning cartridge is removed from the machine.

Correctly load a new cleaning liquid pouch into the cleaning cartridge and insert this cartridge into the machine. If the cleaning cartridge was removed from the machine, quickly insert it.

When you insert the cleaning cartridge, the cleaning liquid pouch replacement confirmation screen appears.

- If you have replaced the cleaning liquid pouch, tap [**Yes**]. The amount of cleaning liquid remaining is reset.
- If you have not replaced the cleaning liquid pouch, tap [**No**]. The amount of cleaning liquid remaining is not changed.

MEMO

If you tap [**Yes**] on the cleaning liquid pouch replacement confirmation screen even though you have not replaced the cleaning liquid pouch, the amount of cleaning liquid remaining is reset. In this situation, no notification will appear even if the amount of cleaning liquid remaining is very small, and the message [**Replace the cleaning liquid pouch.**] will appear when the cleaning liquid runs out. To ensure you have enough time to prepare the replacement cleaning liquid, tap [**No**] if you have not replaced the cleaning liquid.

RELATED LINKS

- P. 51 Cleaning Liquid Replacement Method

[Remaining cleaning liquid level low.]

This message appears when the remaining cleaning liquid level is low.

The cleaning liquid can be used until it runs out, so it does not need to be replaced immediately. However, printing is not possible if there is no cleaning liquid. If this message appears, prepare a replacement cleaning liquid pouch.

[The time for ink mixing has arrived.]

This message appears when it is time to mix the ink.

When [**Ink Mixing Notification**] accessed with [**Preferences**]>[**Notifications On/Off**] is on, this message appears when 1 day elapses from the last time the ink was mixed.

When the message [**The time for ink mixing has arrived.**] appears, tap [**OK**] to clear the message.

Tap  then [**The time for ink mixing has arrived.**] to display a confirmation screen.

Remove the white ink cartridge, shake it 50 times (about 20 seconds), and then reinsert this cartridge. On completion, tap [**Yes**].

[The LAN cable is not connected.]

This message appears when the machine and a computer are not connected with a LAN cable.

Properly connect the LAN cable.

[Connection is requiring too much time. Manually setting the IP address will improve the connection speed.]

This message appears when automatic IP address acquisition is enabled and the machine connects to a network on which no DHCP server exists while this automatic acquisition is in progress.

Connect to a network on which a DHCP server exists or disable automatic IP address acquisition and set a fixed IP address.

[There is ink that has expired.]

Ink has expired.

Replace with an ink pouch that is within its expiration date.

RELATED LINKS

- P. 45 Ink Replacement Method

Error Messages

This section describes the error messages that appear on the printer unit's operation panel and how to take action to remedy the problem.

Follow the instructions on the screen to clear the error or switch the power off before starting to operate the machine again.

If the action displayed on the screen does not correct the problem or if an error message not described here appears, contact your authorized dealer.

[Ink Cartridge Error]

This message appears when one of the following ink cartridge errors is detected.

MEMO

When an error occurs, the ⊗, ⊖, or ? icon is displayed next to the corresponding ink cartridge on the screen.

Implement appropriate countermeasures according to the error.

- **When ink runs out**

  ⊗[Empty][Ink has run out.]

  Replace the ink pouch with a new one, and then load the ink cartridge.

- **When an ink cartridge is removed**

  ⊖[Removed][Ink cartridge was removed.]

  Load the removed ink cartridge.

- **When an ink pouch with the incorrect color is loaded**

  ?[Wrong][Incorrect ink pouch tray was loaded.]

  Remove the ink pouch that was loaded incorrectly and load the correct ink pouch.

  When an ink cartridge is removed, ⊖ [Removed][Ink cartridge was removed.] is displayed.

[Emergency Stop Executed]

The front, right, or left cover is open.

For safety, the machine stops if a cover is opened during operation.

Close the open cover.

When the emergency stop button is pressed

Pressing the emergency stop button or activating the emergency stop device (wire) causes an emergency stop on the machine.

Operation cannot be continued. Perform the following operations.

1. Check the safety of the surrounding area.
2. Release the emergency stop button.
3. Press [TS : RESET] to stop the warning beep.
4. Press the sub power button again.

When the emergency stop device (wire) is activated

After confirming that the situation is safe even if this machine starts operating again, operate the recovery device at the bottom of the transporter to recover the operation of the printer unit.

The flushing cover inside the right cover is open.

If the machine is operated with the flushing cover open, the machine will stop to prevent collisions.

Close the flushing cover.

RELATED LINKS

- P. 31 Emergency Stop Devices

[Drain Bottle Error]

This message appears when the drain bottle has reached its limit for discharged fluid.

Discard the discharged fluid in the drain bottle, and then attach this bottle again.

MEMO

When the drain bottle is detached, the error message changes to [**Install the drain bottle.**].

This message appears when the drain bottle is misaligned or removed.

Install the drain bottle again.

[Unable to Fill Wiper Cleaning Liquid]

The cleaning liquid pouch in the cleaning cartridge is empty.

Quickly replace this cleaning liquid pouch with a new one.

[Print Head Height Mismatch]

[Print Head Height] and the actual print head height are different.

Follow the instructions on the screen to change the print head height. When you change this height, [**OK**] is displayed on the screen. Tap [**OK**] to resume printing.

If 10 minutes elapse after the print-head carriage moves, the print heads are capped and the data is canceled to prevent the heads from drying out.

RELATED LINKS

- P. 76 Changing the Print Head Height

[Insufficient Media Width]

[The print data is larger than the media width. Continue output?]

This message appears when the size of the printing data is larger than the printing area of the loaded object.

To continue performing output without making corrections, tap [**Continue Output**]. At this time, the portion extending beyond the printing area is not output.

To cancel output, tap [**Cancel**]. Check the data output settings, and then send the data again.

[Crop marks cannot be added because the print data is larger than the media width. Continue output?]

This message appears when one of the following situations is detected.

- The size of the data with crop marks is larger than the printing area of the loaded object.
- The width of the printing data is 60 mm (2.36 in.) or less.

To continue performing output without making corrections, tap [**Continue Output**]. The data is output without printing the crop marks.

To cancel output, tap [**Cancel**]. Check the data output settings, and then send the data again.

The size of the data being output is too small.

The horizontal-direction (scan-direction) size of the data should be at least 61 mm (2.41 in.). To continue performing output without making corrections, tap [**Continue Output**]. At this time, the data is output without printing the crop marks.

To cancel output, tap [**Cancel**]. Increase the size of the data, and then send the data again.

[Motor Error]

A motor error occurred.

Operation cannot be continued. Turn off the sub power. Next, eliminate the cause of the error, then immediately switch on the sub power.

If the machine is allowed to stand with the error uncorrected, the print heads may dry out and become damaged. This error may be caused by the object to be printed on being set incorrectly, etc.

[Print Head Dry-out Error]

This message appears when the print heads are forced to the home position to prevent them from drying out.

Operation cannot be continued. Switch the sub power off, and then back on.

[Low Temperature Error]

The internal temperature of the machine has fallen below that at which it can operate.

This message appears when the temperature falls to 16°C (60.8°F) or lower during startup or to 14°C (57.2°F) or lower during operation.

Operation cannot be continued. Turn off the sub power.

Bring the installed location to a temperature at which operation is possible (20°C to 32°C [68°F to 89.6°F]), allow the machine to come to room temperature, and then turn on the power.

RELATED LINKS

- P. 27 Power Supply Operations

[High Temperature Error]

The internal temperature of the machine has risen above that at which it can operate.

This message appears when the temperature rises to 45°C (113°F) or higher during startup or to 50°C (122°F) or higher during operation (when recovering from sleep mode).

Operation cannot be continued. Turn off the sub power.

Bring the installed location to a temperature at which operation is possible (20°C to 32°C [68°F to 89.6°F]), allow the machine to come to room temperature, and then turn on the power.

RELATED LINKS

- P. 27 Power Supply Operations

[Pump Stop Error]

This message appears when an ink cartridge is pulled out during pump operation, such as during cleaning, or when the machine has no ink for 10 minutes or more.

Operation cannot be continued. Switch the sub power off, and then back on.

[Cleaning Error (Ink Cartridge)]

The printer made an emergency stop for one of the following reasons.

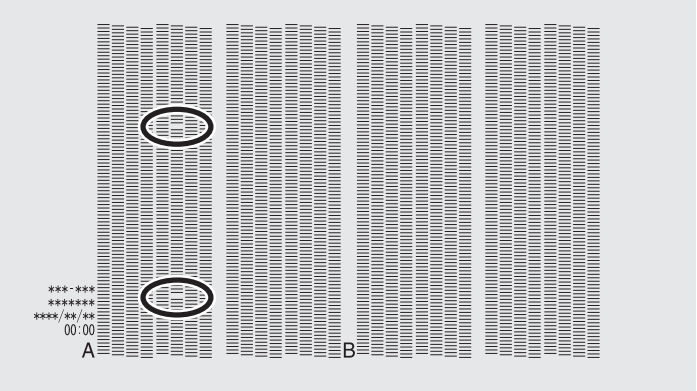
- Ink ran out during "Ink Renewal Inside Damper."
- The ink ran out during the first ink fill.
- An ink cartridge was pulled out during "Ink Renewal Inside Damper."
- An ink cartridge was pulled out during the initial ink filling.

Operation cannot be continued. Perform the following operations.

1. Check that the ink cartridges are inserted and that there is sufficient ink.
2. Switch the sub power off and back on.
3. Perform [**Ink Renewal Inside Damper**] or fill the machine with ink.

MEMO

If the printer stopped partway through [**Ink Renewal Inside Damper**], perform [**Ink Renewal**] for the group ("A" or "B") with the white ink, and then perform [**Ink Renewal Inside Damper**] again.
The space from "A" to "B" is [**Group A**]. The space from "B" to the right side is [**Group B**].



If the printing-test results are difficult to interpret

Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

If an Ink Cartridge Error appears during work, remove and reinsert the corresponding ink cartridge.

RELATED LINKS

- P. 144 Method for Ink Renewal Inside Damper

[Cleaning Error (Drain Bottle)]

This message appears when one of the following situations is detected.

- The drain bottle is removed during execution of "Ink Renewal Inside Damper."
- The drain bottle is removed during initial ink filling.
- The limit for discharged fluid was reached during execution of "Ink Renewal Inside Damper."

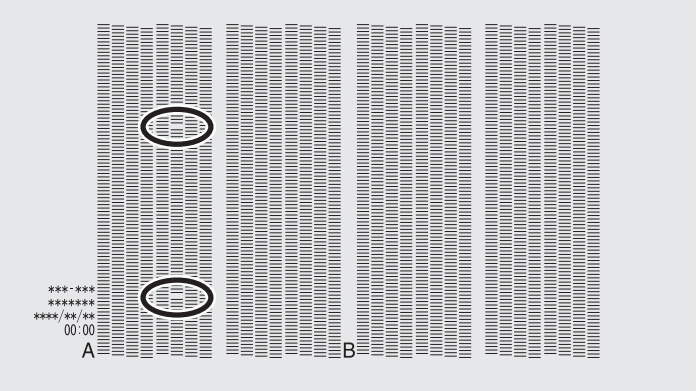
- The limit for discharged fluid was reached during initial ink filling.

Operation cannot be continued. Perform the following operations.

1. Discard the discharged fluid and correctly attach the drain bottle.
2. Check that the ink cartridges are inserted and that there is sufficient ink.
3. Switch the sub power off and back on.
4. Perform [**Ink Renewal Inside Damper**] or fill the machine with ink.

MEMO

If the printer stopped partway through [**Ink Renewal Inside Damper**], perform [**Ink Renewal**] for the group ("A" or "B") with the white ink, and then perform [**Ink Renewal Inside Damper**] again.
The space from "A" to "B" is [**Group A**]. The space from "B" to the right side is [**Group B**].



If the printing-test results are difficult to interpret

Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

If an Ink Cartridge Error appears during work, remove and reinsert the corresponding ink cartridge.

[Service Call]

An unrecoverable error occurred or part replacement that must be performed by a service technician is required.

Note the number displayed on the operation panel, and then switch off the sub power. After turning the power off, contact your authorized Roland DG Corporation dealer.

[Software error]

An error occurred in the internal communication or applications of the machine or part replacement that must be performed by a service technician is required.

Switch off the main power. Then, switch on the main power again, followed by the sub power. If the error still occurs, contact your authorized Roland DG Corporation dealer.

Appendix

Reconfiguring the Network Settings

Network

The IP address of this machine can be assigned automatically from a DHCP server. If there is a DHCP server on your local network, no network settings are required. After connecting a LAN cable, carry out Setting the Software RIP(P. 205) on the computer you are using.

However, it takes time to assign the IP address if there is no DHCP server. If the message [**Connection is requiring too much time. Manually setting the IP address will improve the connection speed.**] appears when you tap  , carry out Setting a Fixed IP Address(P. 198).

When connecting the computer and the machine directly, carry out Directly Connecting to the Computer(P. 200).

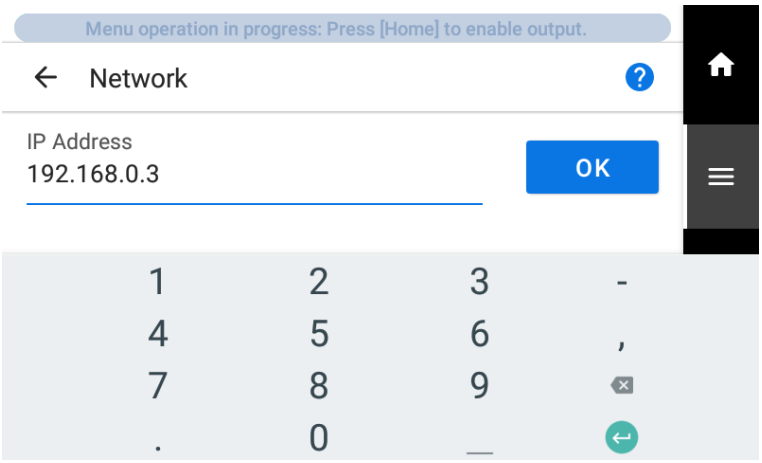
In an environment where the computer being used is connected to multiple network devices and the Internet, inappropriate settings will have a large effect on the entire network. For detailed information about the settings, consult your network administrator.

Setting a Fixed IP Address

Procedure

1. **Tap**  .
2. **Tap [System Information]>[Network].**
3. **Tap [Obtain IP Address Automatically] to set it to [Disable].**
4. **Tap**  **to the right of [IP Address].**

   The numeric value input screen appears.

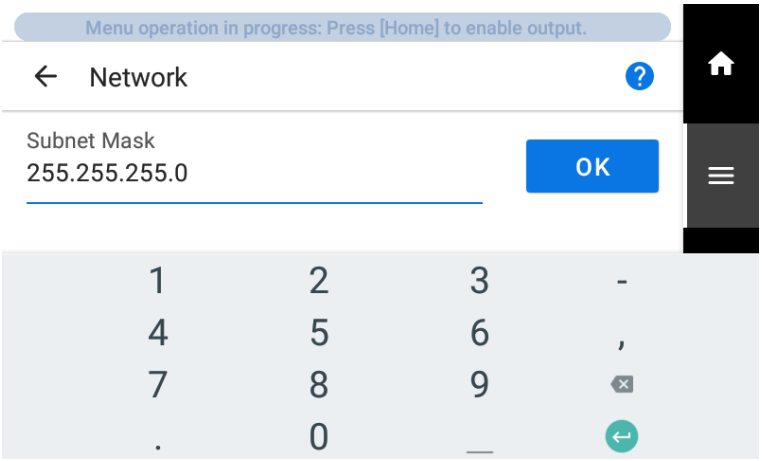


5. **Enter the IP address.**

   For the IP address, contact your network administrator.
6. **Tap [OK].**

7. Tap  to the right of [Subnet Mask].

The numeric value input screen appears.

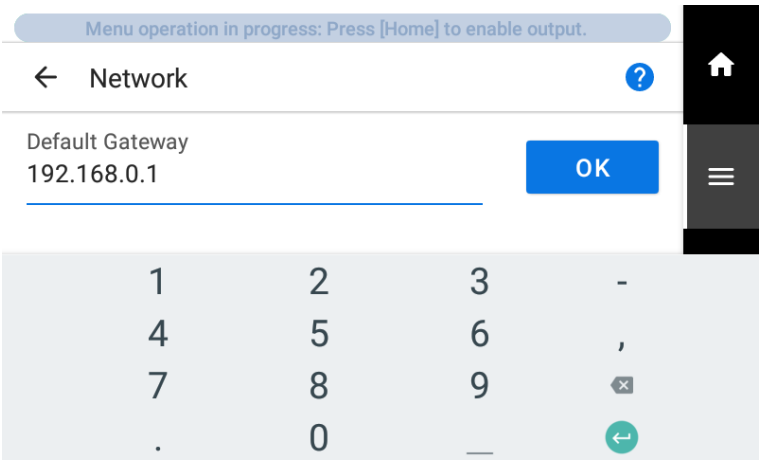


8. Enter the subnet mask.

9. Tap [OK].

10. Tap  to the right of [Default Gateway].

The numeric value input screen appears.



11. Enter the default gateway.

12. Tap [OK].

13. Tap [Save].

14. Tap  to return to the home screen.

This completes the setting of a fixed IP address. Go back to the home screen. Then, proceed to Setting the Software RIP(P. 205).

Directly Connecting to the Computer

This section explains the setting procedure for connecting one computer and one machine.

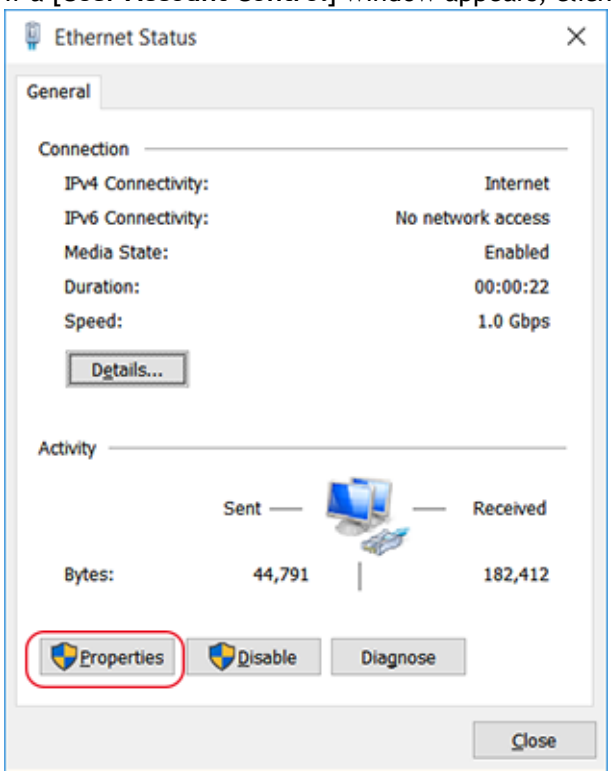
Step 1: Setting the Computer's Network

Procedure

1. **Log on to Windows as the [Administrator] or a member of the [Administrators] group.**

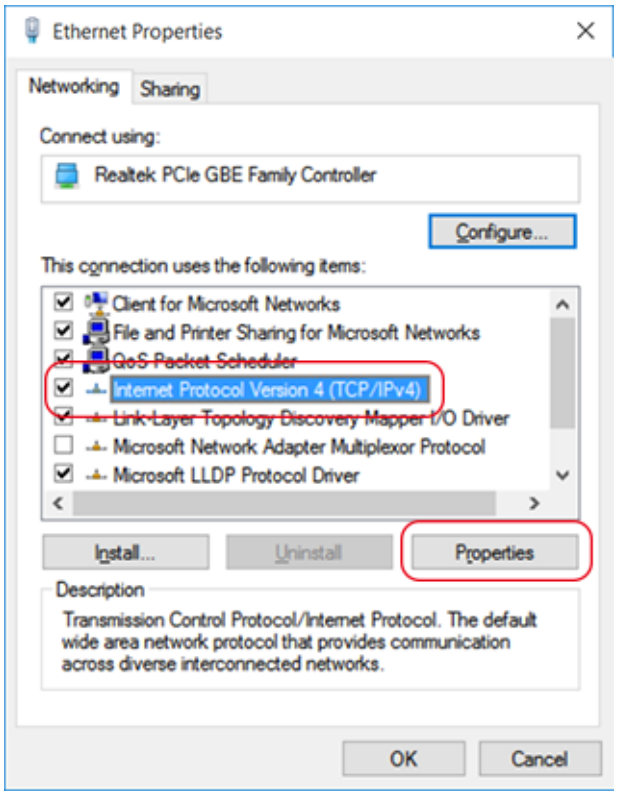
2. **Display the network connections screen.**
   - Windows 11
     a. Click **[Start]**>**[Settings]**.
     b. Click **[Network & Internet]**>**[Dial-up]**.
     c. Click **[Network and Sharing Center]**.
     d. Click **[Ethernet]**.
   - Windows 10
     a. Click **[Start]**>**[Settings]**>**[Network & Internet]**.
     b. Click **[Network and Sharing Center]**.
     c. Click **[Ethernet]**.

3. **Click [Properties].**
   If a **[User Account Control]** window appears, click **[Continue]**.



   The **[Ethernet Properties]** screen appears.

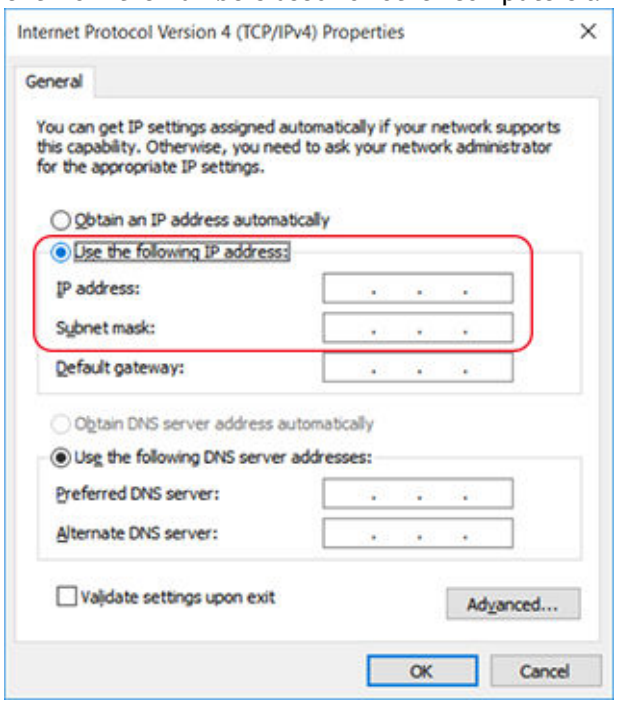
4. **Select [Internet Protocol Version 4 (TCP/IPv4)], and then click [Properties].**
   If the **[Internet Protocol]** check box is clear, select it.



5. **Select [Use the following IP address]. Enter the information as shown below, and then click [OK].**

Item	Address to enter
IP address	192.168.0.XXX
Subnet mask	255.255.255.0

Here, "XXX" can be any number from 1 to 254. However, be sure to specify a number that is different from the numbers used for other computers and devices.



6. **Click the following buttons to return to the original state.**

a. [**Close**] in the [**Ethernet Properties**] window
b. [**Close**] in the [**Ethernet Status**] window

Step 2: Make the Network Settings on the Printer

Procedure

1. Set the IP address.

(1) Tap  .

(2) **Tap [System Information]>[Network].**

(3) **Tap [Obtain IP Address Automatically] to disable it.**

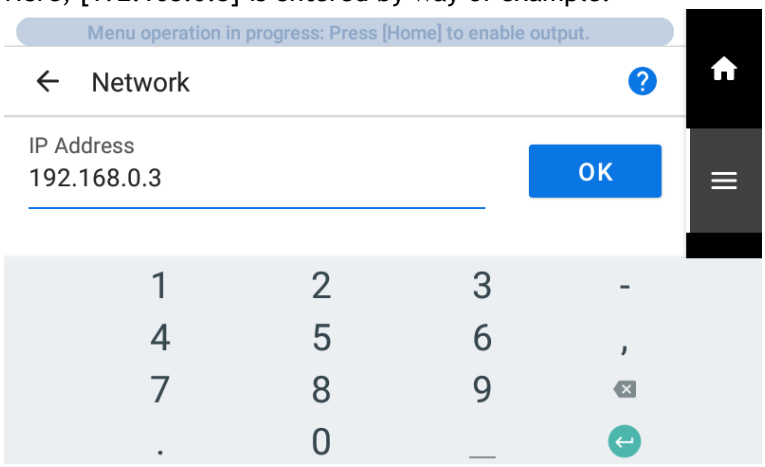
(4) Tap  **next to [IP Address].**

(5) **Set the IP address (192.168.0.XXX).**

"XXX" represents a number from 1 to 254. However, be sure to specify a number that is different from the setting you made in Step 1 and from the numbers used for other computers and devices.

For the part corresponding to [192.168.0], apply the same value as the setting of your computer.

Here, [192.168.0.3] is entered by way of example.



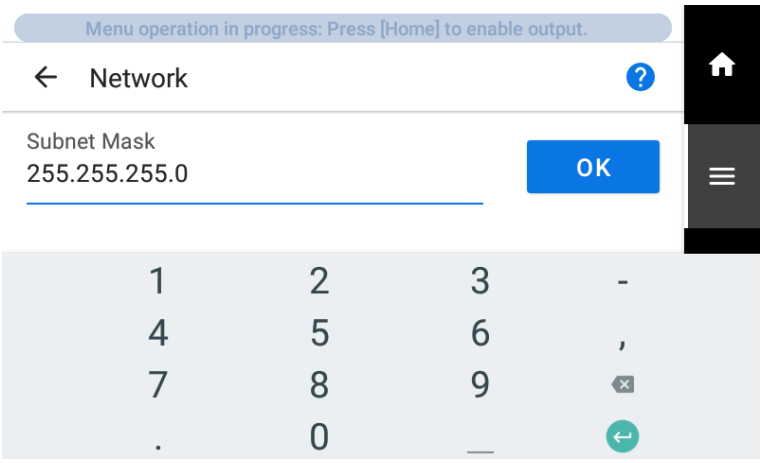
(6) **Tap [OK].**

2. Set the subnet mask.

(1) Tap  **next to [Subnet Mask].**

(2) **Set the subnet mask (255.255.255.0).**

Note: For the subnet mask, make the setting the same value as the one used by the computer.



(3) **Tap [OK].**

(4) **Tap [Save].**

If you are using the computer and the machine on a one-to-one basis, this completes the settings to make on the printer.

Go back to the original screen. Then, proceed to Setting the Software RIP(P. 205).

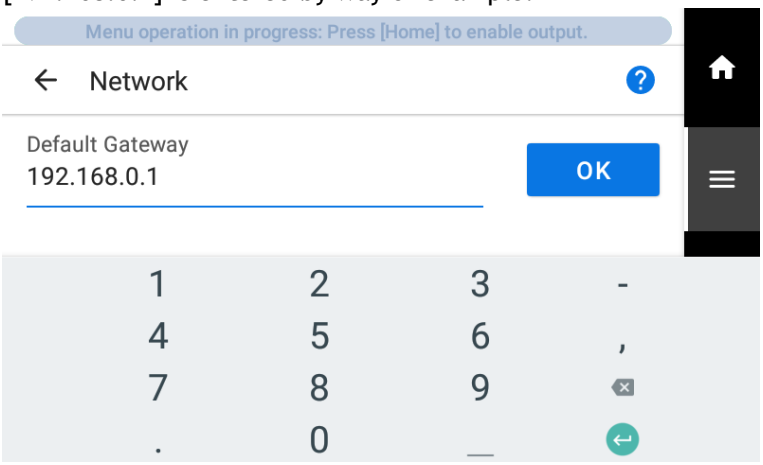
If you need to set the gateway address, proceed to the following procedure.

3. Set the gateway address.

(1) **Tap**  **next to [Default Gateway].**

(2) **Set the default gateway (192.168.0.XXX).**

For the value to enter for your default gateway, contact your network administrator. Here, [192.168.0.1] is entered by way of example.



(3) **Tap [OK].**

(4) **Tap [Save].**

4. Tap  **to return to the home screen.**

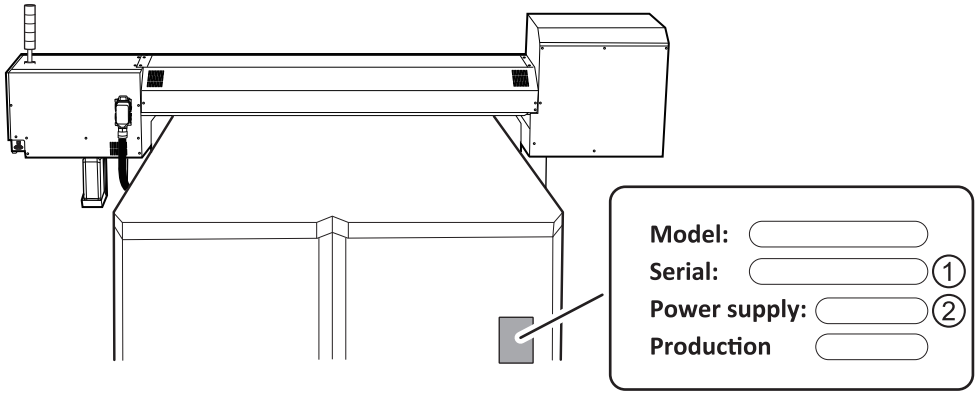
Setting the Software RIP

For information on how to connect the printer unit after installing VersaWorks, see the VersaWorks Installation Guide.

Specifications

Location of the Power Rating and Serial Number Label

Rear

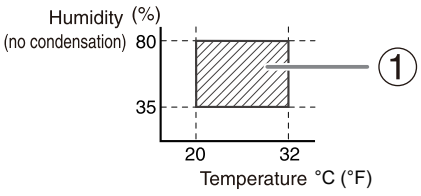


①	Serial number This number is required when you seek maintenance, servicing, or support. Never peel off the label.
②	Power Rating Use an electrical outlet that meets the requirements for voltage, frequency, and amperage given here.

Specifications

		LO-300-F2	LO-640-F3
Printing method		Piezo ink-jet method	
Attachable objects to be printed on	Width	Max. 762 mm (30 in.)	Max. 1,625 mm (64 in.)
	Thickness	Max. 242 mm (9.5 in.)	
	Weight	Max. 100 kg/m^2 (0.142 lb./$in.^2$)	
Printing width		Max. 656 mm (25.8 in.)	Max. 1,520 mm (59.8 in.)
Printing length		Max. 1,450 mm (57 in.)	Max. 2,450 mm (96.4 in.)
Ink	Type	ECO - UV (EUV5P) 750 ml pouch	
	Color	Eight colors (Cyan, Magenta, Yellow, Black, Gloss, White, Orange, and Red) Seven colors (Cyan, Magenta, Yellow, Black, Gloss, White, and Red)and Primer Seven colors (Cyan, Magenta, Yellow, Black, White, Orange, and Red)and Primer Seven colors (Cyan, Magenta, Yellow, Black, White (×2), Orange, and Red) Six colors (Cyan, Magenta, Yellow, Black, Gloss, and White (×2))and Primer Six colors (Cyan, Magenta, Yellow, Black, Gloss (×2), and White (×2)) Four colors (Cyan, Magenta, Yellow, and Black)	
Ink-curing unit		Built-in UV-LED lamp	
Printing resolution (dots per inch)		Max. 1,200 dpi	
Connectivity		Ethernet (100BASE-TX/1000BASE-T, automatic switching)	
Power-saving function		Automatic sleep feature	
Power requirements		230V 16A 2P+E	
Power consumption	During operation (100% vacuum)	Approx. 1.80 kW	Approx. 2.90 kW
	Sleep mode	Approx. 0.08 kW	Approx. 0.08 kW
Acoustic noise level	During operation	80 dB (A) or less	90 dB (A) or less
	During standby	70 dB (A) or less	80 dB (A) or less
Dimensions (width × depth × height)		2,037 mm × 2,430 mm × 1,560 mm (80.2 in. × 95.7 in. × 61.5 in.)	2,901 mm × 3,457 mm × 1,560 mm (114.3 in. × 136.2 in. × 61.5 in.)
Weight		526 kg (1,160 lb.)	920 kg (2,029 lb.)
Environment	During operation*1	Temperature: 20 to 32 °C (68 to 89.6 °F), Humidity: 35 to 80 %RH (no condensation)	
	Not operating	Temperature: 5 to 40 °C (41 to 104 °F), Humidity: 20 to 80 %RH (no condensation)	
Included items		Power cord, cleaning liquid, drain bottle, User's Manual, software (VersaWorks, Roland DG Connect), etc.	

*1 Operating environment
(①: Use the machine in an operating environment within these ranges.)



Memo

Software

This product is equipped with an "eT-Kernel Multi-Core Edition" eT-Kernel and a "PrCONNECT(R)/Pro" TCP/IP protocol stack, both made by eSOL Co., Ltd. eT-kernel and PrCONNECT are registered trademarks of eSOL Co., Ltd.

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Roland