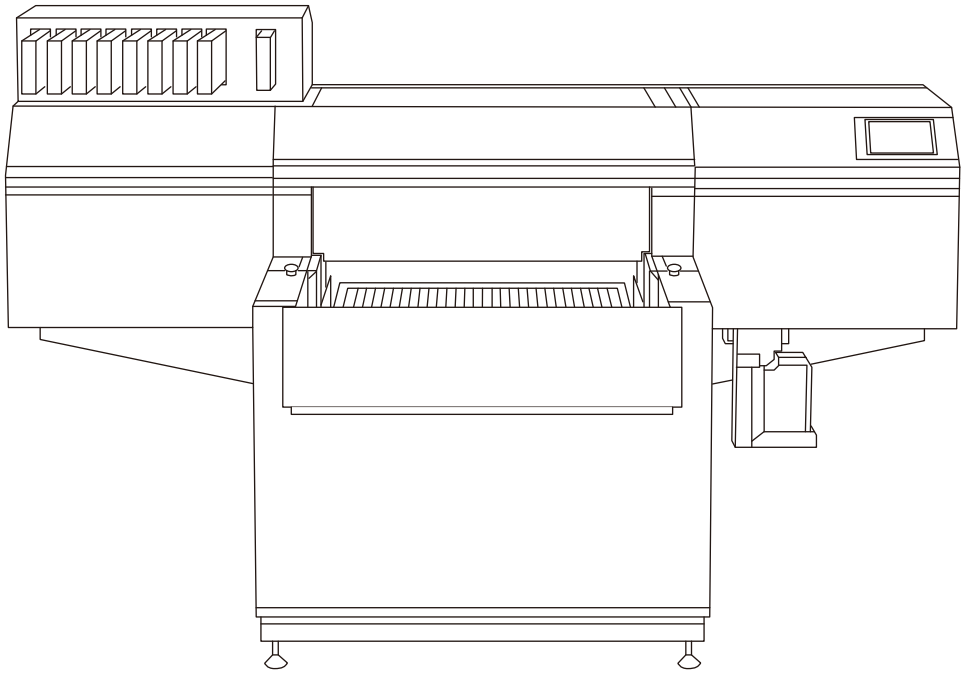
VersaOBJECT IO-300

User's Manual



Thank you very much for purchasing this product.

- To ensure correct and safe usage with a full understanding of this product's performance, please be sure to read through this guide completely.
- Unauthorized copying or transferal, in whole or in part, of this guide is prohibited.
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Basic Handling Methods

Introduction

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About the Documentation for This Machine

The following instruction manuals are included to ensure proper use of the machine.

- **Safety Precautions**

  This manual contains important precautions for using the machine.
- **Regular Maintenance Guidelines**

  These guidelines include links to maintenance items listed in the manual. Scan the QR code to open the maintenance instructions directly.
- **User's Manual**

  This manual contains details such as how to use and maintain the machine as well as an FAQ (a set of frequently asked questions).

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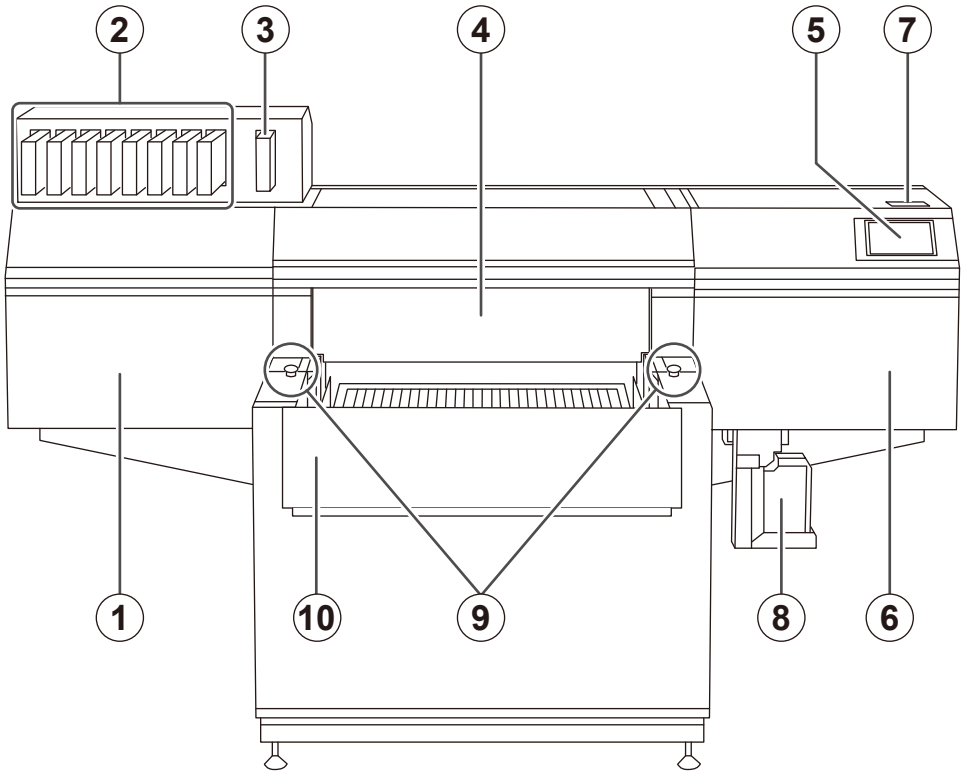
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Part Names and Functions

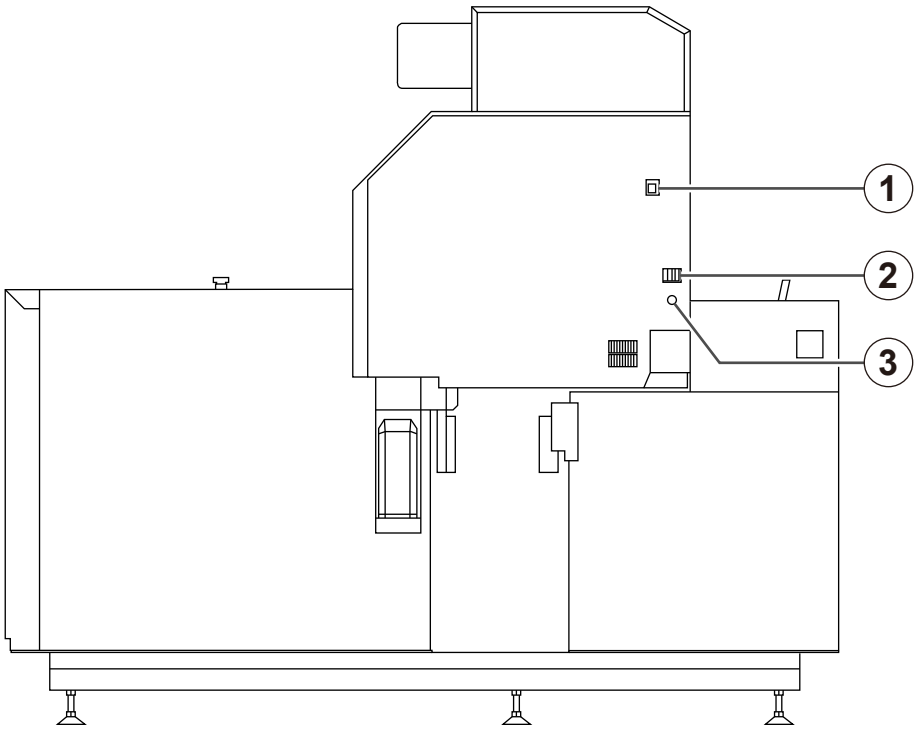
Front



No.	Name	Function overview
①	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.
②	Ink slots	Insert ink cartridges in which ink pouches have been loaded.
③	Cleaning liquid slot	A cleaning cartridge containing a cleaning liquid pouch is inserted here.
④	Front cover	Prevents contact with the print-head carriage and other such fast-moving parts when the machine is operating and reduces ultraviolet light from the UV-LED device. To prevent excessive dust from entering inside the printer, keep the front cover closed except when loading objects to be printed or when performing maintenance.
⑤	Operation panel	Used to perform all machine operations including printing, setup, and maintenance. Operation Panel(P. 36)
⑥	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.
⑦	Status light	Uses colors to indicate the status of the machine. Statuses Indicated by Status Light Color(P. 17)
⑧	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.
⑨	Emergency stop buttons	These buttons are used to immediately stop the machine's operation in the event of an unintended movement of the machine due to an incorrect operation, etc. P. 18 Safety Devices

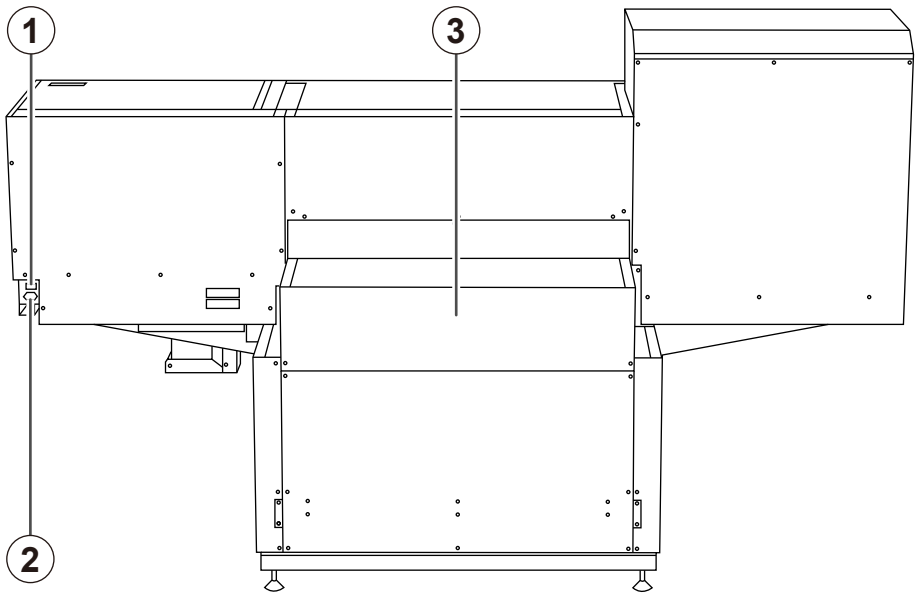
No.	Name	Function overview
⑩	Front UV Shield	You can remove the front UV shield to make it easier to load on the flat table the object to be printed on. Only open the front UV shield when necessary, such as when loading the object to be printed on. In all other situations, close the front UV shield.

Side



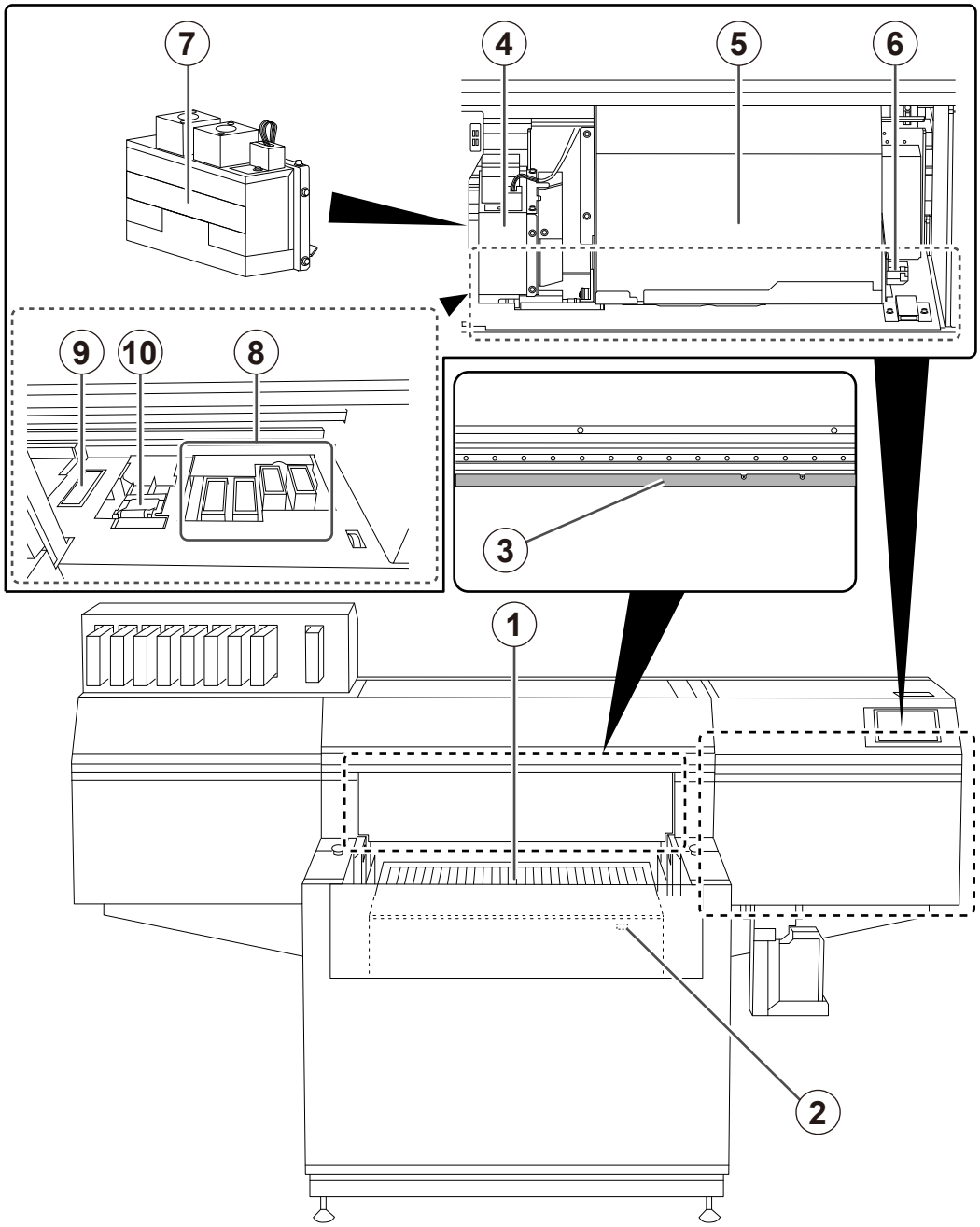
No.	Name	Function overview
①	Ethernet connector	Connects an Ethernet cable.
②	Alarm Lamp Connector	This terminal is used to connect a commercially available alarm lamp.
③	Deodorizer fan switching control connector	You can switch the deodorizer fan on and off in tandem with the unit by connecting it to a deodorizer (sold separately).

Rear



No.	Name	Function overview
①	Main power switch	Switches the main power of the machine on/off.
②	Power-cord connector	Connects the included power cable.
③	Rear UV shield	Remove and attach this cover during maintenance on the ionizer (an optional part). Keep the rear UV shield closed when not performing maintenance on the ionizer.

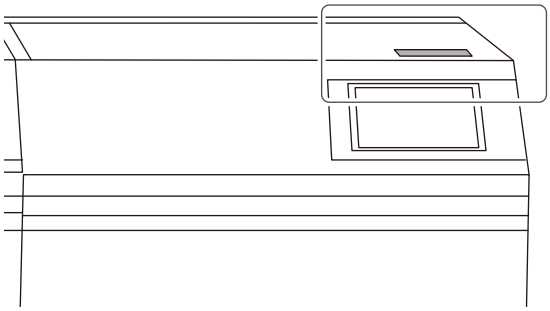
Inside the Printer/Print Head Area



No.	Name	Function overview
①	Flat table	Table on which the object is placed. When the vacuum is on, the object to be printed on is suctioned to prevent warping or lifting up of the object.
②	Rotary axis unit connector	Connector to be used to connect the optional rotary axis unit.
③	Head gap sensor	Comes into contact with the object and sets its height. P. 79 Determining the Print Surface Height and Printing Position
④	UV-LED device	Irradiates the ultraviolet light. Irradiates the ultraviolet light on the print surface to cure the ink.
⑤	Print-head carriage	Transports the built-in print heads and UV-LED device.

No.	Name	Function overview
⑥	Pointer	Shines the light when determining the printing area. Set the points of the light that is shined to the lower right and upper left of the printing area, respectively.
⑦	UV mist filters	Absorb the ink mist generated during printing to reduce the amount of ink mist that adheres to the UV-LED device.
⑧	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.
⑨	Flushing sponge	Absorbs the ink discharged from the print heads to prevent clogging.
⑩	Wiper	Cleans the print heads during wiper automatic cleaning and in similar situations.

Statuses Indicated by Status Light Color



The status light colors indicate the following statuses.

Status Light Color	Status
Off	When the sub power is off and no periodic maintenance or other operations are being performed.
Blue	• During initialization after turning on the sub power. • When setup of the object has not completed. • During maintenance operations. When flashing, the machine is in sleep mode.
Green	When printing.
Yellow	Setup is complete and printing can start. When flashing, printing has been paused.
Red	When an error that can be recovered from or an error that makes it impossible to continue operation has occurred. The error details are shown on the operation panel.

RELATED LINKS

- P. 253 Messages on the Operation Panel

Safety Devices

UV-LED devices are very dangerous because the ultraviolet radiation emitted from UV-LED devices can cause eye damage and skin diseases when directly irradiated on the human body. The machine is fitted with a cover to keep external leakage of ultraviolet radiation at low levels.

Therefore, if the front cover, left cover, right cover, front UV shield, or rear UV shield (hereinafter collectively referred to as the "covers") is opened during printing, lamp irradiation will immediately cease and operation will stop. At this time, a message is displayed on the operation panel prompting the user to close the cover. Close the cover as directed in the instructions shown on the operation panel. Also, if print data is received while the cover is open, printing will not begin.

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.

Front cover

This cover absorbs ultraviolet radiation from the UV-LED device and reduces it to a non-harmful level.

If the front cover is damaged or cracked, stop using the printer immediately and contact your dealer or service center.

Left cover / Right cover

Open these covers when performing work such as maintenance of the print heads and surrounding parts. If opened while printing is in progress, the UV-LED device will immediately stop irradiating, triggering an emergency stop.

If the left cover and right cover are damaged or deformed, stop using the printer immediately and contact your dealer or service center.

Front UV shield

Remove and attach this cover when necessary, such as when loading the object to be printed on. If opened while printing is in progress, the UV-LED device will immediately stop irradiating, triggering an emergency stop.

If the front UV shield is damaged or deformed, stop using the printer immediately and contact your dealer or service center.

Rear UV shield

Remove and attach this cover during maintenance on the ionizer (an optional part). If opened while printing is in progress, the UV-LED device will immediately stop irradiating, triggering an emergency stop.

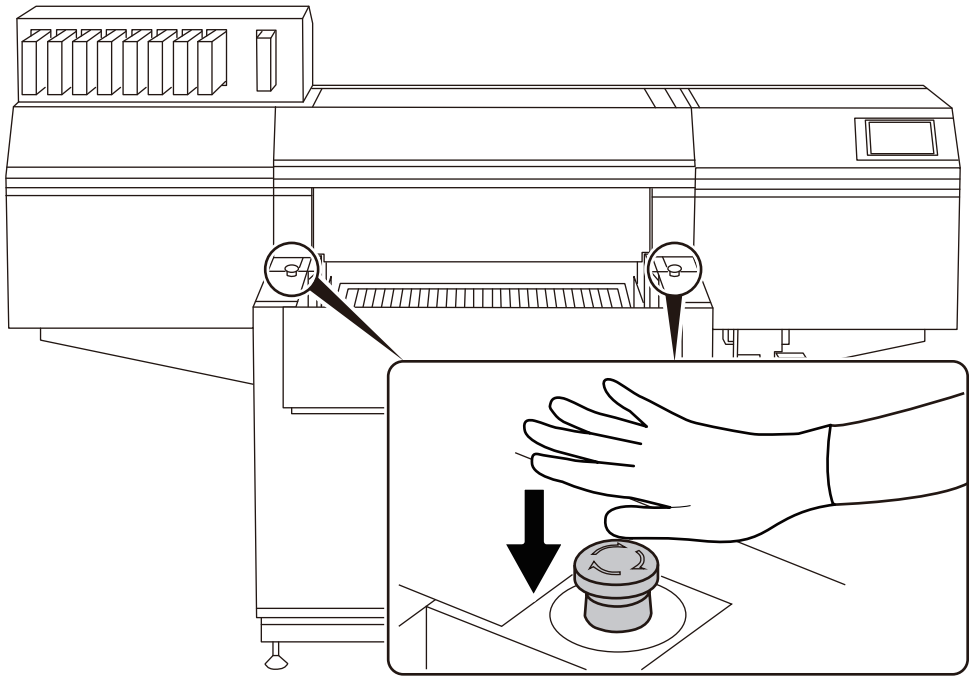
If the rear UV shield is damaged or deformed, stop using the printer immediately and contact your dealer or service center.

Emergency stop buttons

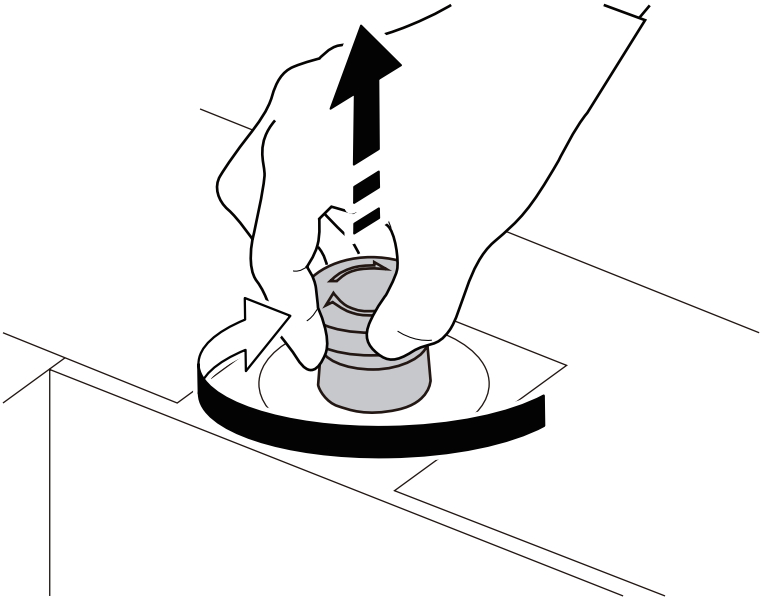
These buttons are used to immediately stop the machine's operation in the event of an unintended movement of the machine due to an incorrect operation, etc. As an example, assume that the covers are open so a worker can perform operations on the machine. Pressing one of these buttons in the event of unexpected machine operation eliminates the hazards presented by such a situation.

For emergency stop, push in the button shown in the figure. "Fatal Error" is displayed on the operation panel, and all operations of the machine are immediately stopped.

If the print heads are stopped in a position where they are disengaged from the print head caps, turn the sub power back on within 10 minutes to prevent them from drying out.



To cancel the emergency stop, turn the button clockwise until it stops turning, and then release the button. If the button is pulled up, it is released. Then, switch the sub power off and then on again.



RELATED LINKS

- P. 32 Turning the Power On

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.
- **Open and close the front cover gently.**
  - If you do not open and close the front cover gently, it may break or you may be injured.
- **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

- **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 cartridges or shake them 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 ink pouches 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 40°C (104°F) or lower and a relative humidity of 20%RH to 80%RH.

Printable Materials and Shapes

MEMO

In this manual, the printed matter is called "object to be printed on," "object," or "media."

The UV ink used in this machine is an ink that instantly adheres to the object to be printed on by irradiating it with ultraviolet light. This makes it possible to perform printing on objects that are difficult to print on using conventional inks. Primer allows printing on a wider range of materials than printing with UV inks alone.

This section explains the materials and forms of objects to be printed on using the machine.

Even materials with the same name have many variations with different properties depending on slight differences in ingredients, and even if the ingredients are the same, printing may or may not be possible depending on differences in surface treatment such as plating or coating.

Even if a material is listed as a printable material, always be sure to perform a test print to confirm that satisfactory print quality can be achieved.

Objects that cannot be printed on or have print quality issues

- In the case of objects that easily reflect light, the reflection of UV light may accelerate the curing of the UV ink on the surface of the print heads, resulting in ink discharge failure.
- Objects to be printed on that are electrostatically charged should be discharged before use.

  If the ink is electrostatically charged, the position of the ink landing will not be stable, and printing quality will be adversely affected.
- Objects with excessive unevenness cannot be used for printing.
- If the object to be printed on still comes loose even with the vacuum turned on, use commercially available tape or some other means to hold the object in place.

  If the object to be printed on comes loose, the ink emission surface of the print heads and the print surface can rub together, resulting in malfunction.

Material

Even materials with the same name can have many variations with their own distinct properties due to slight differences in composition, and even if the composition is the same, it may or may not be possible for you to print on them due to differences in plating, coating, or other such surface treatments.

Even if a material is listed as a printable material, be sure to print a trial print to confirm that you can achieve satisfactory print quality.

Primer Not Used:

- ABS
- PET (polyethylene terephthalate)
- PC (polycarbonate)
- TPU (thermoplastic polyurethane)
- Leather
- Wood

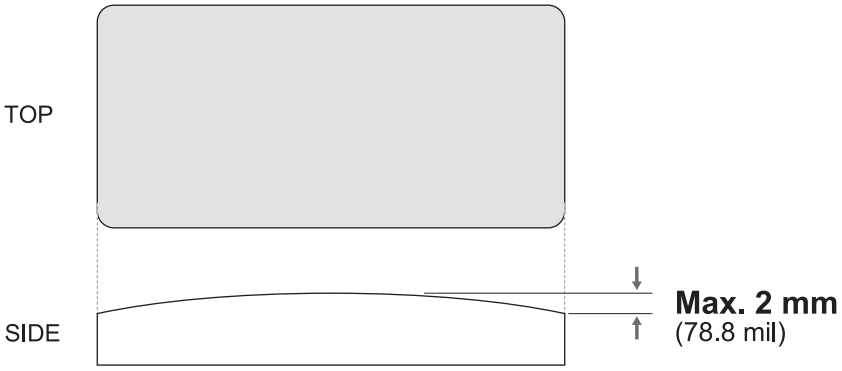
When Using Primer:

- Acrylic
- Glass
- Aluminum
- Iron

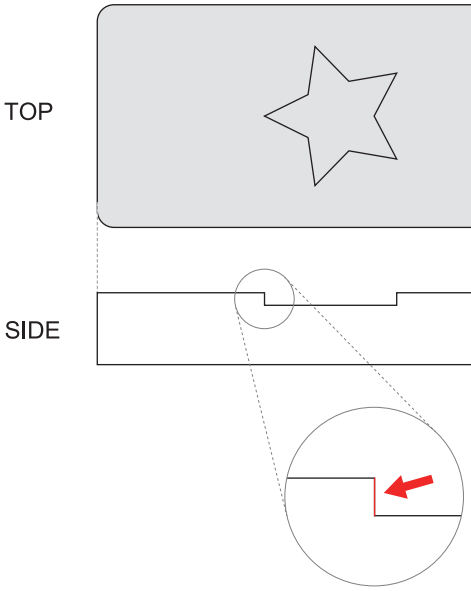
Shape

This section describes the shape of objects to be printed on when printing on a flat table. See "Printing on Cylinders" for information on printing with the rotary axis unit.

Unevenness (variation in height) of the print surface is within 2 mm (78.7 mil)

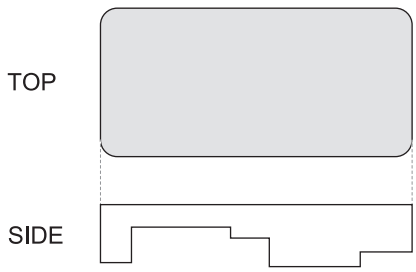


You cannot print on surfaces that are perpendicular to the print heads or that have an overhang at the top that hides hiding the surface beneath the overhang.

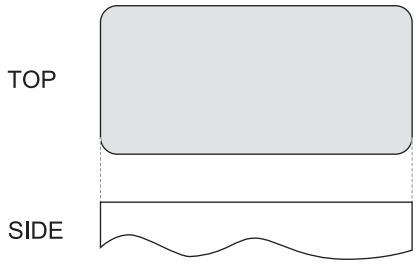


Print Surface Cannot Be Leveled

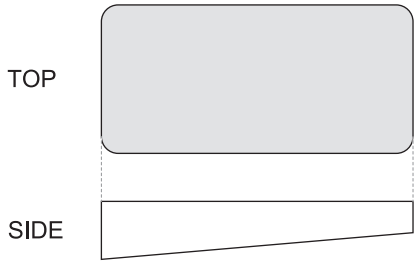
- The surface on which the object is secured is not level.



- The surface on which the object is secured has significant unevenness.



- The surface on which the object is secured is inclined.



If the print surface cannot be kept level due to the reasons mentioned above, measures must be taken to secure the object.

If you cannot keep the print surface level, you cannot print on it.

The Object Lifts Up during Printing

- The surface on which the object is secured is small.
- The surface on which the object is secured has cavities.
- The surface on which the object is secured has holes in it.

In the above cases, vacuum suction may not be effective and the object may be lifted up.

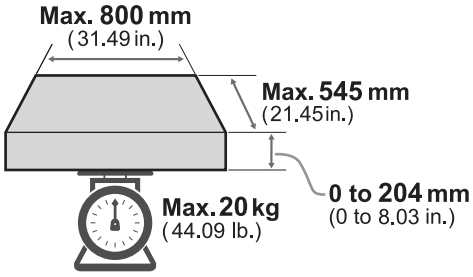
In such cases, it is necessary to secure the object by a method other than suction.

RELATED LINKS

- P. 87 Printing on Cylinders

Size and Weight

The size and weight of the object to be printed on are as follows. For details, refer to Specifications(P. 277).



First Object to be Printed on

If the object to be printed on has never been printed on using this machine before, be sure to perform a test print.

If you have an object to be printed on that is not a product, such as a sample or trial product, you can try printing on that.

In the test print, check the following.

- Does the ink adhere to the object to be printed on?
- Does it peel off when rubbed?
- Can you achieve satisfactory print quality?

In addition to the items listed above, the items to be checked will vary depending on the conditions required for the product. Exercise caution.

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

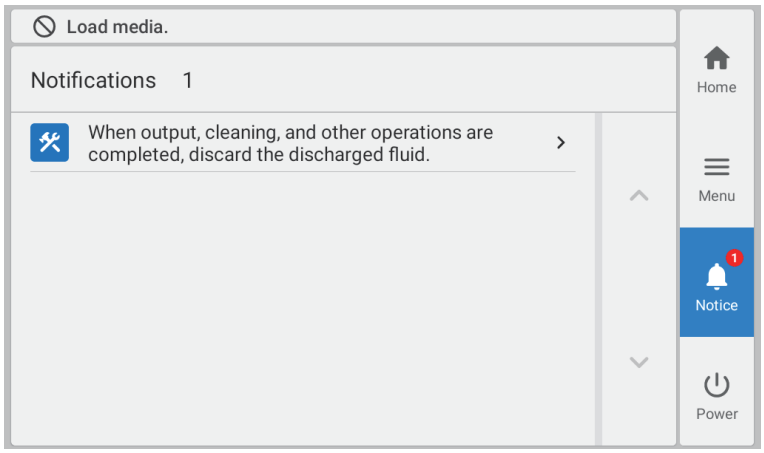
When the accumulated discharged fluid needs to be disposed of, one of the following messages will appear on the operation panel.

- Notifications: When output, cleaning, and other operations are completed, discard the discharged fluid.
- ERROR: Drain bottle error. Discard the discharged fluid in the drain bottle.

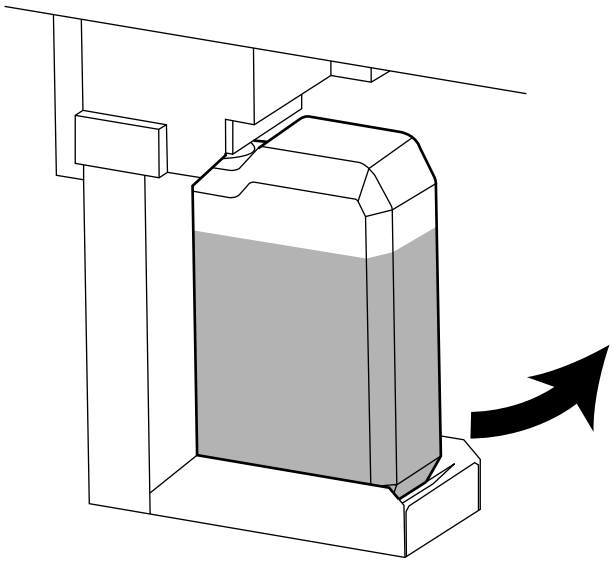
When "When output, cleaning, and other operations are completed, discard the discharged fluid." Is Displayed

Procedure

1. **Tap [OK].**
2. **Tap .**
3. **Tap [When output, cleaning, and other operations are completed, discard the discharged fluid.].**



4. **Tap [Execute].**
   Tap [**Execute**] to display a message reminding the user to wear protective gear.
5. **Tap [OK].**
6. **Remove the drain bottle and discard the discharged fluid.**



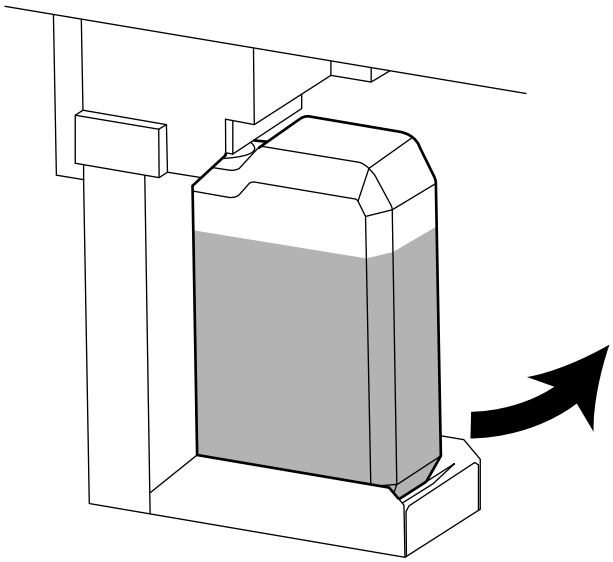
7. Quickly attach the emptied bottle to the machine once more.
8. Tap [Finish].
9. Tap to return to the home screen.

When "Drain Bottle Error: Discard the discharged fluid in the drain bottle." Is Displayed

The drain bottle is already full of discharged fluid.
When this error occurs, a buzzer sounds at regular intervals.
Immediately dispose of the discharged fluid, and then clear the error.

Procedure

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



2. Quickly attach the emptied bottle to the machine once more.
   Weigh the amount of discharged fluid. If the drain bottle is no longer full, the error is cleared.

If the drain bottle is not installed correctly, the error will not be cleared. If the error is not cleared after discarding the discharged fluid, try reinstalling the drain bottle.

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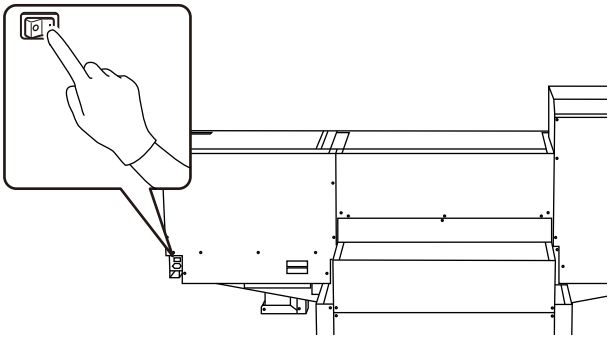
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Power Supply Operations

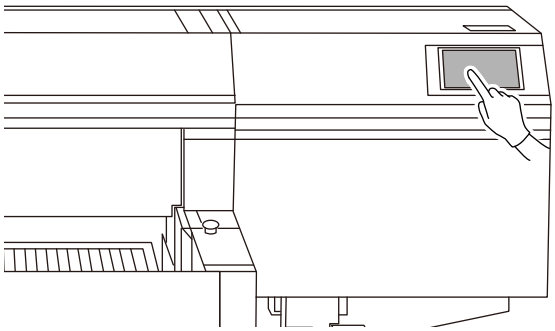
Turning the Power On

Procedure

1. Close the covers.
2. If the main power supply is off, turn it on.



3. Tap the operation panel.



4. When instructions are displayed on the operation panel, tap .

   The sub power is switched on.

Turning the Power Off

Never switch off the power during printing before it finishes. If printing is in progress, wait for printing to finish before switching off the power.

Procedure

1. Tap .

   The confirmation screen appears.

2. Tap [Yes].

   The sub power switches off automatically.

Precautions When Operating the Power Supply

Always keep the main power switched on.

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

Switching off the 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 sub power. If the main power is accidentally switched off, immediately turn the main power and sub power back on.

Sleep Mode (Power-saving Feature)

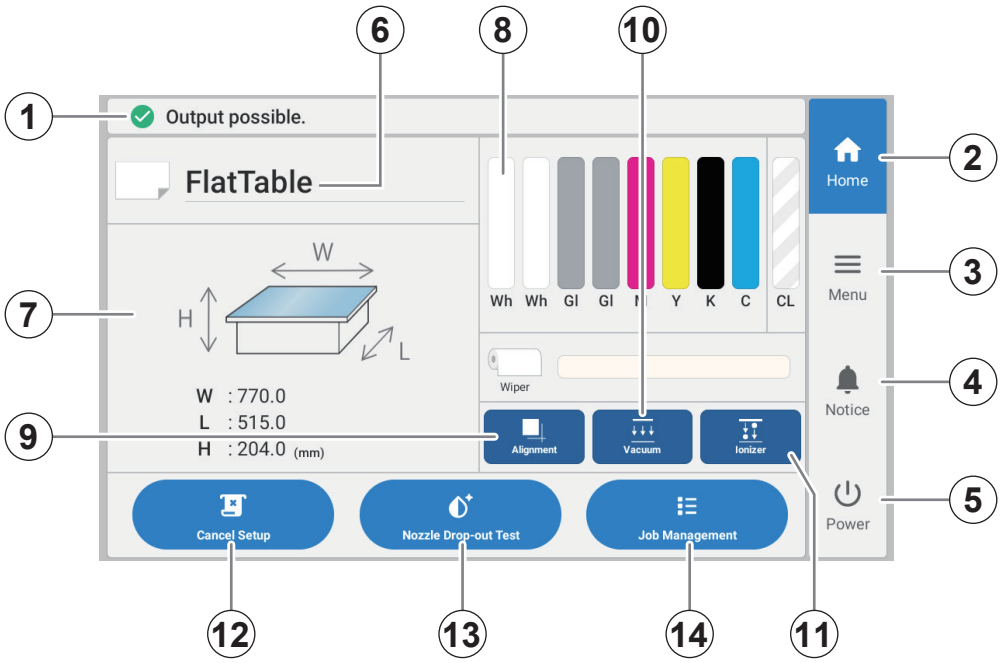
This machine is provided with a power-saving feature that switches to a low-power "sleep mode" when a fixed interval passes with no operation. The factory default for the time after which the machine switches to sleep mode is 30 minutes. The operation panel turns off when the machine enters sleep mode. 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 and prevent problems such as overheating.

RELATED LINKS

- P. 156 Setting the Activation Interval for Sleep Mode (Power-saving Feature)

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	Turn off the sub power. Tap the operation panel to turn the sub power back on.
⑥	Media name	Displays the selected media name. The media name is only displayed when the object is set up, and this is blank when the object has not been set up.
⑦	Printing area	Displays the set printing area size and the height of the print surface. This is displayed only when the object is set up. You can tap it to re-set the printing area. Determining the Print Surface Height and Printing Position(P. 79)
⑧	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.
⑨	**[Alignment]**	When selected, the pins for positioning the object to be printed on emerge from the flat table. P. 44 Alignment of Object to Be Printed On
⑩	**[Vacuum]**	Switches the suction on or off.
⑪	**[Ionizer]**[*1]	Switches the ionizer on or off.
⑫	**[Setup]/[Cancel Setup]**	Starts/cancels setting up the object to be printed on. Determining the Print Surface Height and Printing Position(P. 79)
⑬	**[Cleaning]/[Nozzle Drop-out Test]**	Displays the menu related to the printing test and cleaning for the nozzle drop-out check.

No.	Name	Details
⑭	[**Job Management**]	From the operation panel, perform [**VersaWorks**] and [**Queue Folder**] via Roland DG Connect Hub, and then print the job.

*1 The ionizer is an optional part. This button is displayed when the ionizer is installed.

MEMO

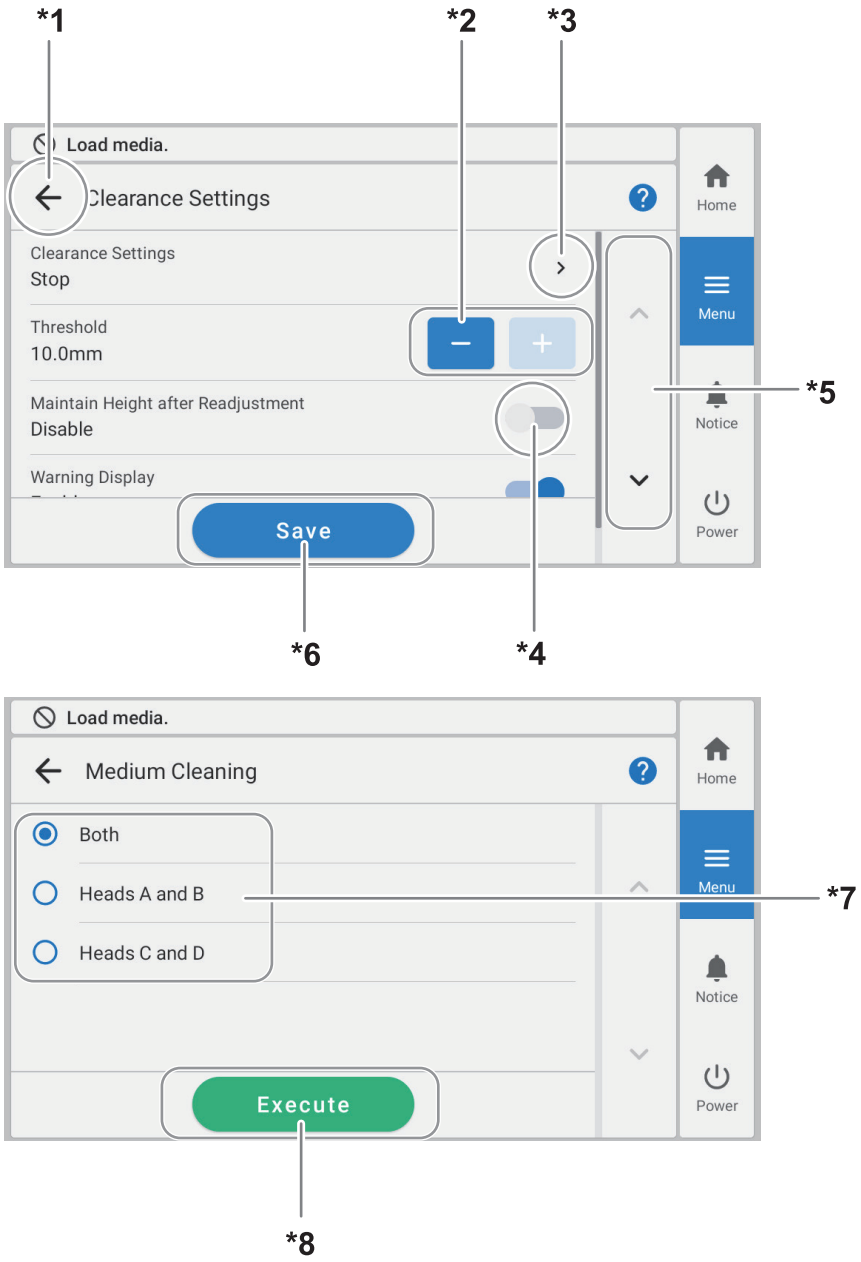
The following are displayed during printing.

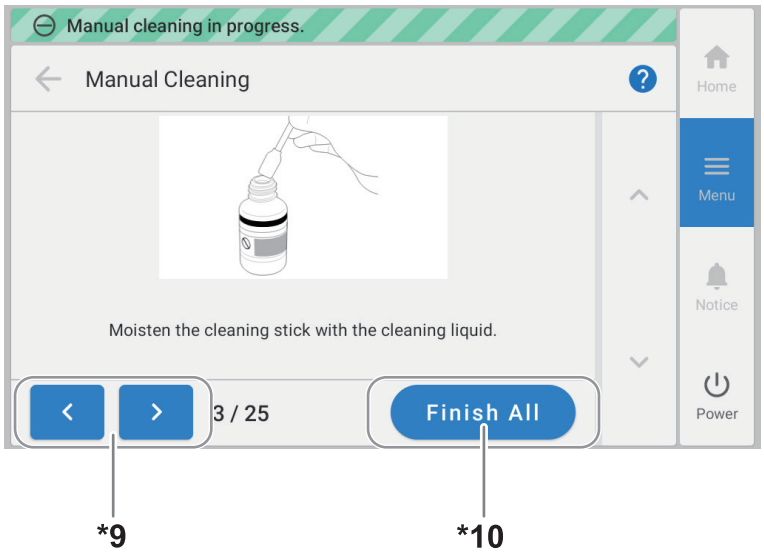


No.	Name	Details
①	Copies to Print	*/* is displayed. The left side indicates the number of the copy currently being printed. The right side indicates the total number of copies.
②	Number of Layers	*/* is displayed. The left side indicates which number layer is currently being printed. The right side indicates the total number of layers.
③	Print Time	Displays the remaining print time (approximate).

Menu

Menu Operation Legend





*1: Tap ← to return to the previous screen.

*2: Tap + or − to change the setting (value).

*3: Tap items marked with › to switch to the settings screen for that item.

*4: Switches settings on or off.

*5: Tap ^ or v to scroll the screen up or down.

*6: Tap [**Save**] to confirm changed details.

*7: Switches the selection.

*8: Tap [**Execute**] to start the work.

*9: When performing a series of work, tap › to display the next step. Tap ‹ to return to the previous step.

*10: Finish configuring settings at this stage and skip all subsequent steps. If all operations have been completed, the work is finished.

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
[**Job Management**]	[**Direct Printing**]			Perform [**VersaWorks**] and [**Queue Folder**] via Roland DG Connect Hub, and then output the job.
	[**Printing Log**]			Displays the printing log of the job. The [**Job Properties**] for each job, and the [**Total Time**] and [**Total Area**] for all jobs, can be checked.

Level 1	Level 2	Level 3	Level 4	Details
[**Media Settings**][*1]	[**List of Media Settings**]			Lists the settings of the object to be printed on that has been set up. Tap a setting to move to a screen for changing this setting.
	[**Printing Zone**]			Changes the print origin and printing area.
	[**Media Suction Force**]			Adjusts the suction force applied to the object on the flat table.
	[**Printing Movement Range**]			During printing, select the movement range of the print-head carriage from [**Output Data Width**], [**Media Width**], or [**Full Width**].
	[**Wait Time Per Scan**]			Set this item when the image quality is rough due to recoil caused by the movement of the print-head carriage during printing.
	[**Batch Media Settings**]			The minimum settings required for object setup can be configured by following the on-screen instructions on the operation panel.
[**Media Management**]				Displays a list of registered media. Up to 50 media names can be saved, and the following operations on media settings are possible. • Checking setting details in a list • Changing media names • Copying media settings • Deleting media settings
[**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 is present, perform cleaning appropriate for the severity of the drop-out. 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**][*2]			If dot drop-out or dot displacement occurs, select the target print head, and then clean it. 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 media 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**][*2]			
	[**Powerful Cleaning**][*2]			
	[**Manual Cleaning**][*2]			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]	[UV Lamp Manual Cleaning]			Cleans dirt from the glass surface of the UV-LED device.
	[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.
	[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.
	[Cleaning of Non-Contact Sensor]*4			Moves the flat table to a position where it is easier to clean the non-contact sensor.
	[Ink Renewal]*2			Perform [**Ink Renewal**] when ink discharge issues or uneven colors are not resolved. 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			Perform this operation to stabilize output when uneven color issues with the ink are not resolved. 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*3			Circulates ink to prevent uneven color issues with white ink. If the media 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.
	[Automatic Maintenance]			Set the maintenance items that are performed automatically and the [**Type**] and [**Frequency**] according to the printer service environment, types of products that are frequently output, and other factors. A maximum of five settings for automatic maintenance can be saved.
	[Automatic Sub Power On Settings]			You can configure the settings so that the printer's sub power switches on automatically on the specified days of the week. The time when the sub power is turned on and the cleaning execution setting can also be configured. You can also specify days when the sub power will not automatically be turned on.
[Preferences]	[Printing Zone Preview]			This is displayed when the object to be printed on is set up. Tap Execute to use the pointer to indicate the printing area that has been set.
	[Continuous Printing Settings]			Select whether to pause for each print data when multiple print data are sent. For example, if you want to replace the object to be printed on during positioning each time printing is finished, disable continuous printing.
	[Sound at End of Printing]			Select whether to play a sound at the end of printing.
	[Base Printing Position]			Select the origin position of the printing area.
	[Crop Mark Detection Sensitivity]			Set the sensitivity for reading of the crop marks.
	[Status Light]			Set whether the status light is turned on or off.
	[Printing Test Position]			Sets the direction for test pattern printing: [**Feed**] or [**Scan**]. If you set it to [**None**], the test pattern will print in the same position.

Level 1	Level 2	Level 3	Level 4	Details
[Preferences]	[Clearance Settings]	[Clearance Settings]		Set whether the height is re-set or not when the object to be printed on touches the head gap sensor during printing.
		[Threshold]		Set the maximum value for when the height is re-set during printing.
		[Maintain Height after Readjustment]		Set whether to overwrite the registered media settings with the flat table height to which the table was readjusted during printing. This setting is only enabled when [**Readjust**] is selected in [**Clearance Settings**].
		[Warning Display]		If this setting is enabled, a message is displayed when the height is readjusted.
	[Z-axis Origin]			You can select whether to set the origin of the Z axis (which indicates the distance in the height direction) to the lowest or highest position on the Z axis.
	[Rotary Axis Unit Attachment/Removal]			Moves the flat table to a position where the rotary axis unit can be inserted/removed.
	[Vacuum]			Set whether the start and end of suction is to be switched automatically or manually in conjunction with printing.
	[Operation before Printing]			When On is selected, the flat table moves slowly from the back to the printing-start location, the height of the object to be printed on is checked, and similar operations are performed.
	[Table High-Speed Operation]			When this function is enabled, the flat table moves forward/backward at a faster speed for operations other than printing.
	[Table Position After Setup Completion]			Specifies the table position after the object to be printed on is set up.
	[Register Standard Waveform of Height Sensor]*4			When the non-contact height sensor cannot correctly measure the height of the object to be printed on, execute this function.
	[Use a Non-contact Sensor During Automatic Height Detection]*4			You can select the way to detect the height of the object to be printed on.
	[Notifications On/Off]			When this is set to on, notifications are displayed at the appropriate times. • [**Ink Mixing Notification**]*3 • [**Ink Expiration Date Notification**]
	[Sleep Time]			Sets the time until sleep mode (the state in which the power-saving features operate) activates.
	[Stopping the Warning Beep]			Sets the duration of the warning beep that sounds when, for example, an error occurs.
	[Post-Scan Length]			Sets the time for which to shine ultraviolet light during printing.
	[Thumbnail Settings]			You can change the orientation of the image (thumbnail) that is being output and is displayed on the operation panel.
	[Time before Automatically Returning to Home Screen]			When [**Menu operation in progress: Press [Home] to enable output.**] is displayed in the status bar and this set time elapses while the menu is displayed, the display will automatically switch to the home screen.
	[Operator Mode]			To prevent operators from performing inadvertent panel operations, you can enable [**Operator Mode**] to limit some panel operations.
	[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.
	[Appearance]			Sets the operation panel to [**Light**] or [**Dark**].
	[Screen Brightness]			Sets the brightness of the operation panel's screen.
	[Screen Operation Sound]			Turns the operation sound of the operation panel on/off.
	[2D Codes]	[User's Manual]		Displays the 2D code for viewing the manual using a smartphone or other mobile terminal.
		[Roland DG Connect]		Displays the 2D code for accessing Roland DG Connect using a smartphone or other mobile terminal.
	[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 For the timing at which to perform each type of cleaning, see Types and Timing of Maintenance(P. 175).

*3 This menu item is only displayed when the machine ink type includes white ink.

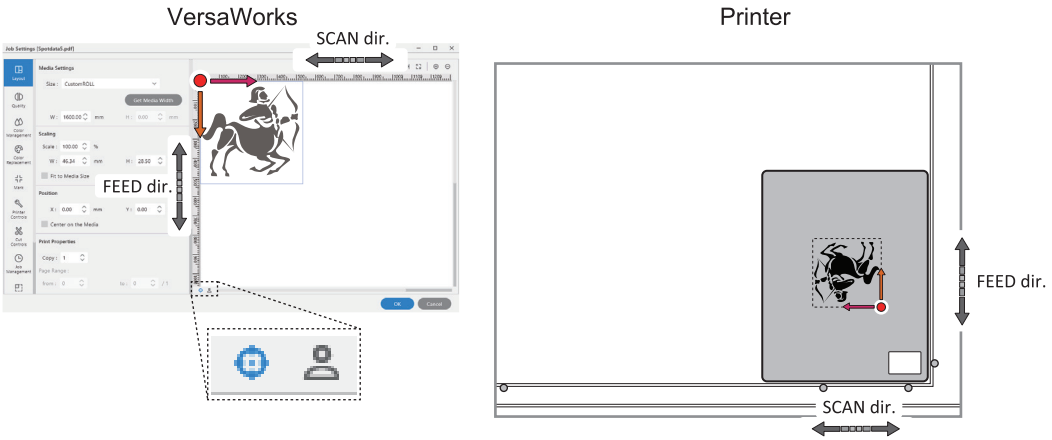
*4 This menu item is displayed when a non-contact height sensor (an optional part) is installed.

Alignment of Object to Be Printed On

About This Machine and the VersaWorks Print Origin

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.



When setup is cancelled, the print origin and printing area are cleared.

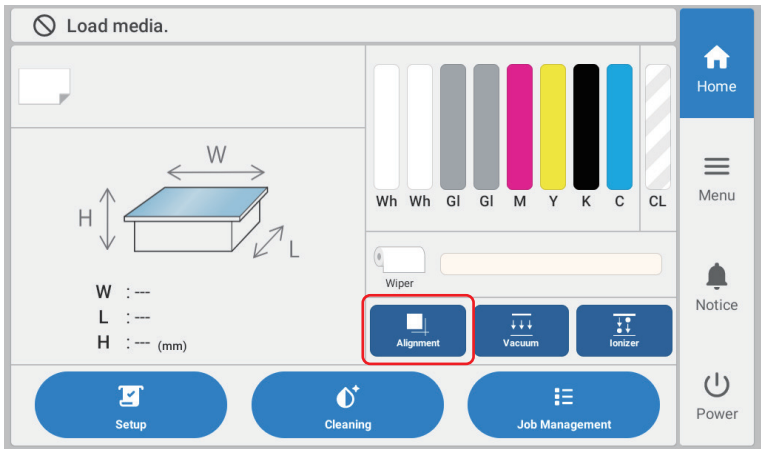
When the power is turned off, setup is canceled, so the print origin and printing area will also be cleared when the power is turned off.

The printing area is saved to the selected media when its settings are configured, so if you want to print with the same printing area, select the same media again.

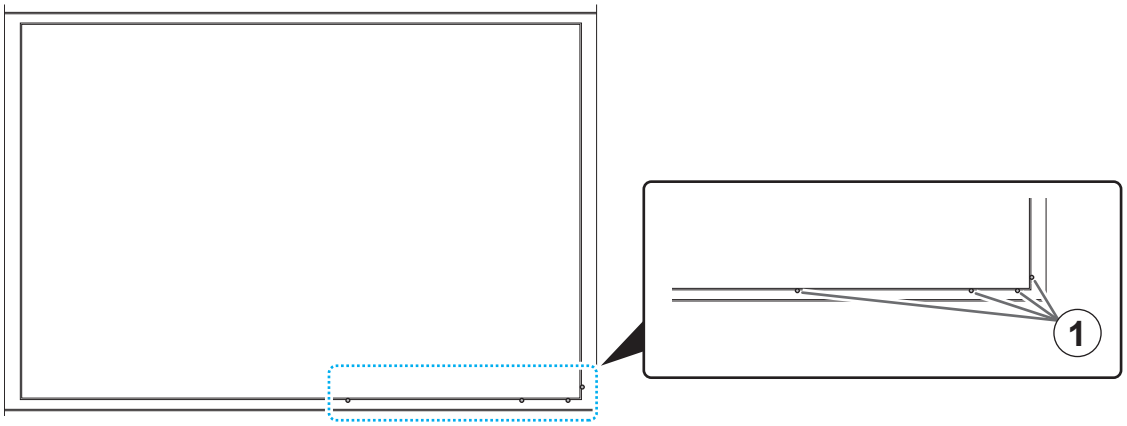
Loading the Object to Be Printed on by Pressing It Against the Positioning Pins

1. Tap  on the home screen.

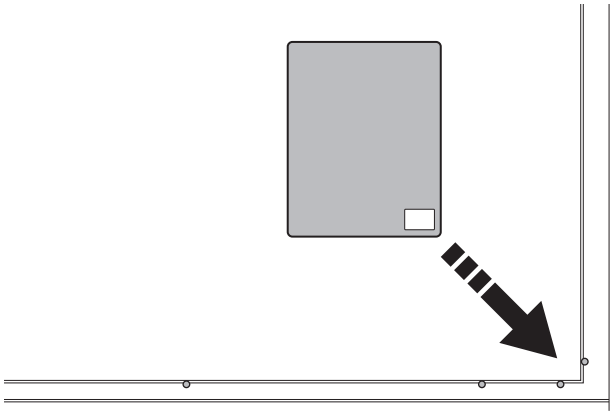
   When this is selected, the button is displayed as enabled, as shown in the figure below.



   The positioning pins ① emerge from the flat table.

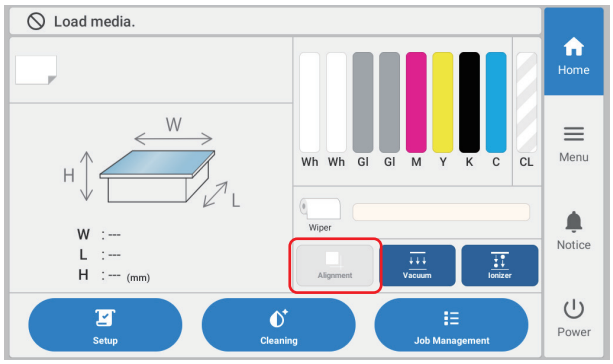


2. Load the object to be printed on by pressing it against the positioning pins.



IMPORTANT

If the height of the object to be printed on is 4.0 mm (0.15 in.) or less, be sure to switch off [**Alignment**] and lower the positioning pins before performing the following work. If the object to be printed on presses firmly against the positioning pins, they may not lower even if [**Alignment**] is switched off. In this case, lower the positioning pins by pressing them with your fingers.



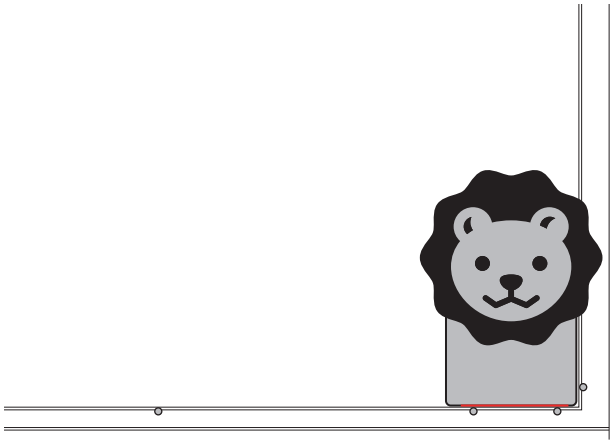
- **When setting the height of the object to be printed on**
  If the positioning pins are higher than the object to be printed on, the height is set with the positioning pins, not the object to be printed on, used as the reference.
- **Before printing**
  The print heads may come into contact with the positioning pins and be damaged.

Characteristics of This Loading Method

- This method is used when any one of the sides of the object is a straight line.

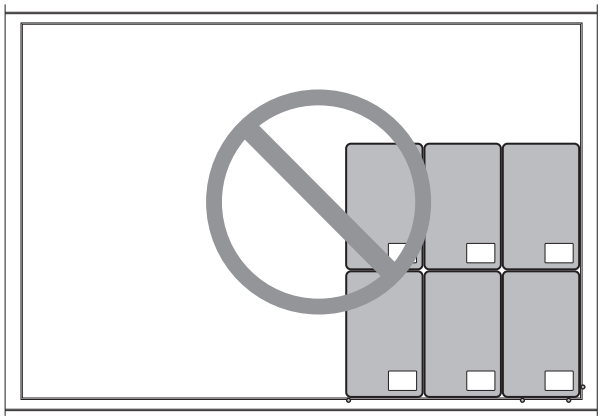
  If any one of the sides is straight, you can load the object by pressing that side against the positioning pins.

  This method is not suitable for objects with exclusively circular, elliptical, or curvilinear outlines.



- This method is used when printing objects one by one.

  This method is not suitable for printing multiple objects side by side at once.

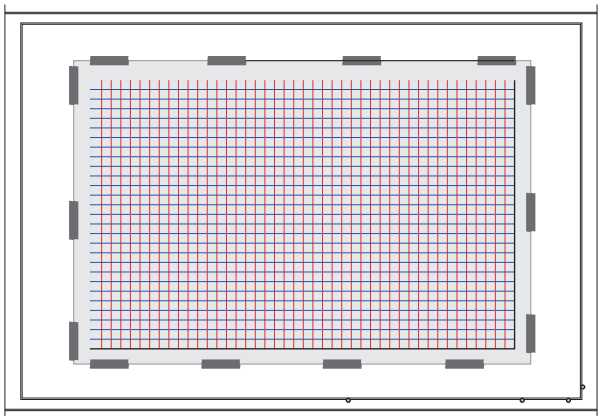


If the objects to be printed on are square or rectangular of the same size, it looks possible to print several of them by placing them with no gaps.

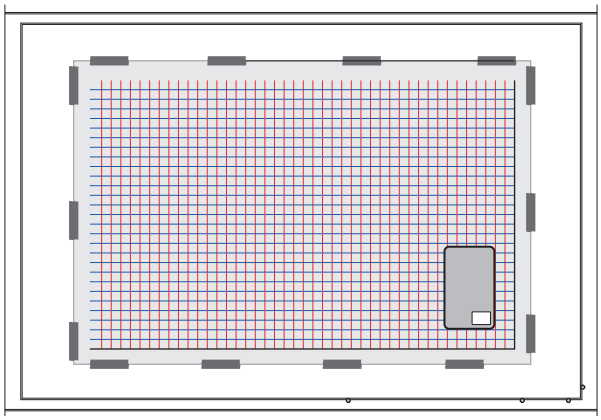
However, when placing multiple objects to be printed on, it becomes difficult to place the sides in correct contact with the positioning pins. Because this may cause deviation in the printing position or angle, doing so is not recommended.

Aligning the Object to Be Printed on to the Grid

This section explains how to lay the printable media on the flat table and print grid lines on it. (In the following figure, the media is secured with tape affixed around the perimeter of the media. Use tape or other means to secure the media so that it will not change position even if the power is turned off and suction is lost.)



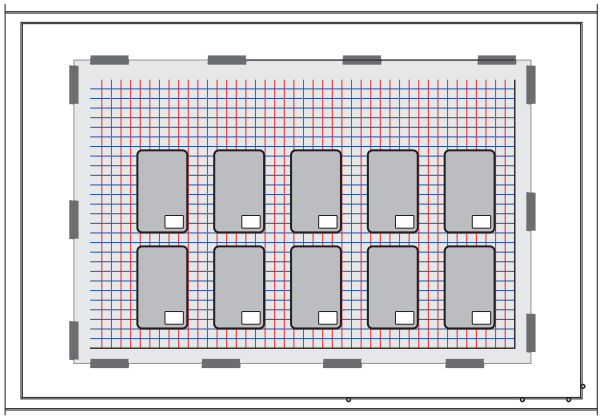
Use these grid lines to place the object at the position specified in the print data.



Characteristics of This Loading Method

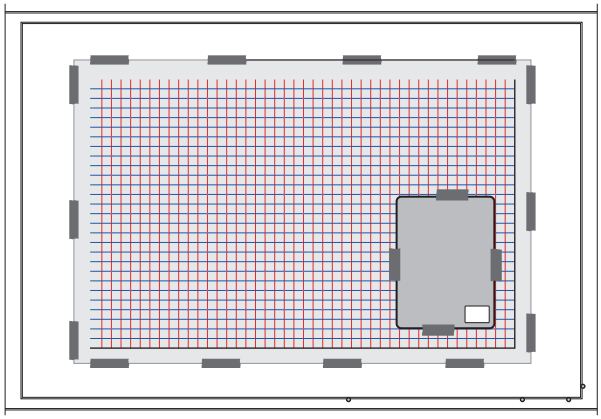
- You can load multiple objects at once.

  You can place objects at regular intervals along the grid lines.



- You cannot suction the object to be printed on to the flat table since the media on which the grid lines are printed will cover the flat table.

  If necessary, you may have to secure the object with a method other than suction, such as tape.



- Positioning accuracy is not high.

  If you are printing on something for which even the slightest misalignment would be noticeable, you may want to use a different method.

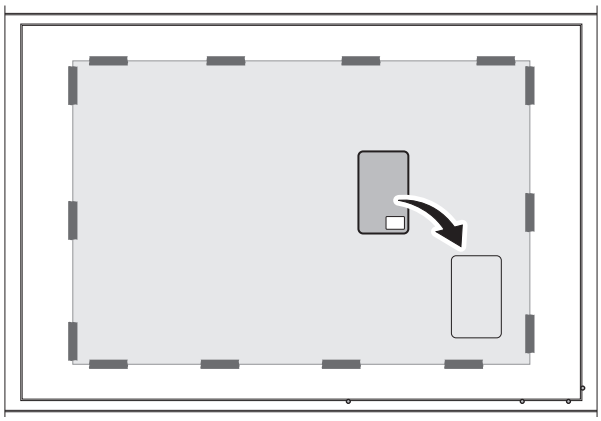
- The grid is a general-purpose grid, so you can continue to use it even if the object changes.

  However, if the grid lines become blurred or the media is torn, replace the media and reprint the grid lines.

Printing Object Outline and Placing the Object over the Outline

This section explains how to lay the printable media on the flat table, and then print the outline of the object to be printed on.

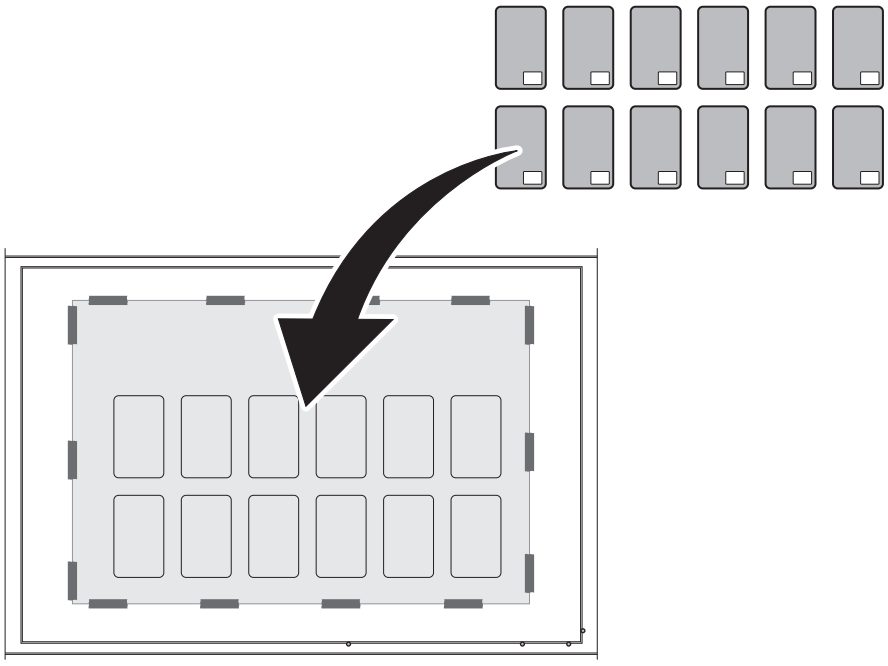
Place the object on top of the printed outline so that the printed outline is hidden.



Characteristics of This Loading Method

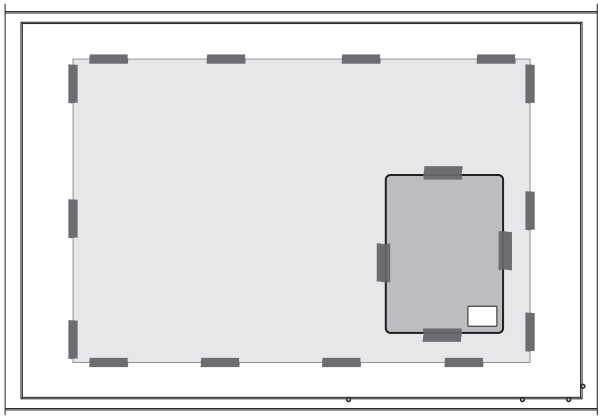
- You can load multiple objects at once.

  Print data is created with regular spacing, and then objects are placed according to their printing position.

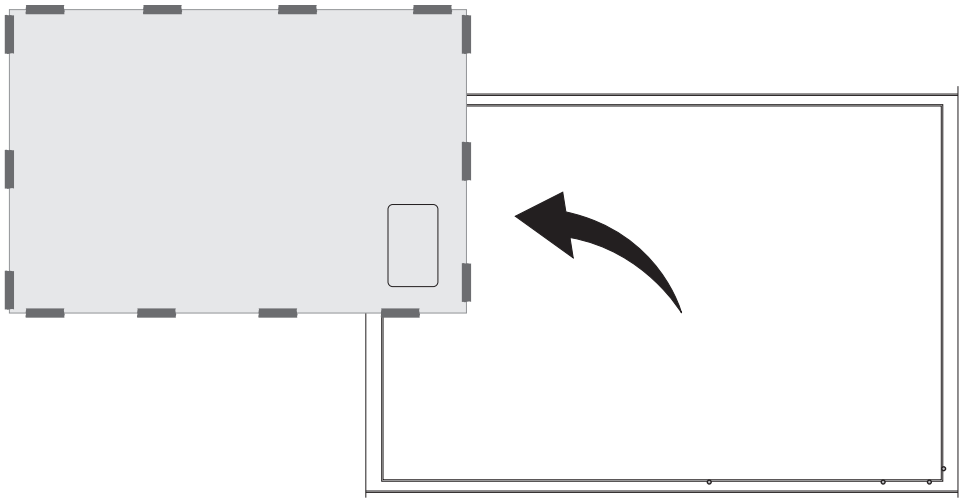


- You cannot suction the object to be printed on to the flat table since the flat table is covered with media.

  If necessary, you may have to secure the object with a method other than suction, such as tape.



- Replace the media when changing the object.
  Since it cannot be used for objects of different shapes and sizes, the printed media must be removed.

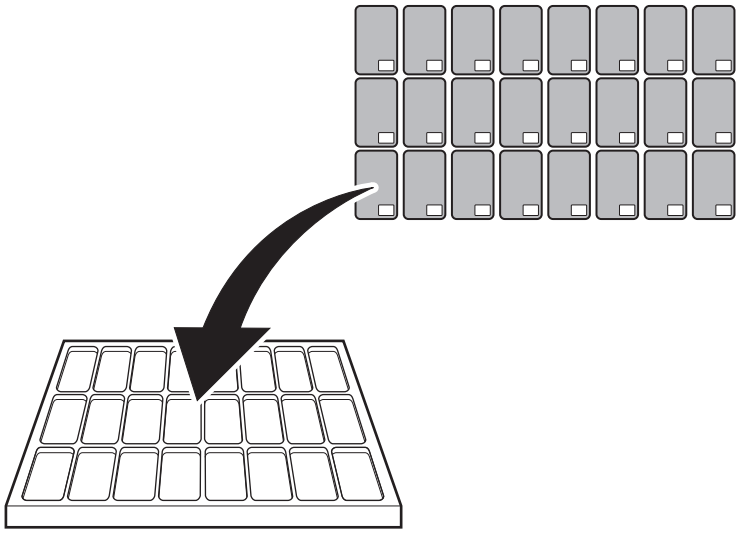


Loading the Object to Be Printed on in the Dedicated Jig

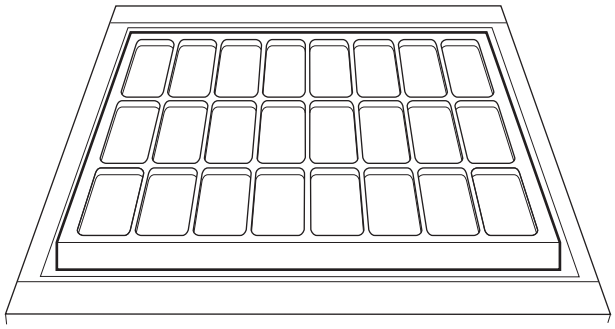
When printing on the same object in large quantities, it is common to use a dedicated fixing jig.

There are advantages to using a fixing jig when the results obtained from its use are worth the labor and cost of making the fixing jig.

Print data must be made to match the printing position of the object to be loaded on the fixing jig.



Jig Securing Method (1): Fixing the Fixing Jig Directly to the Flat Table



- Allows you to easily load objects.

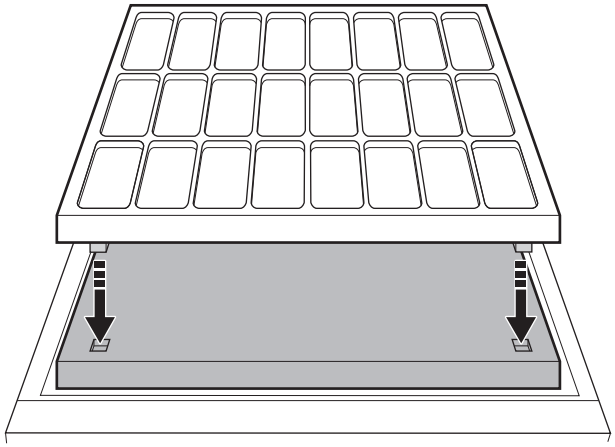
  A jig that allows easy mounting and removal of the object is optimal.

  Make a jig that allows you to do this.
- This method is not suitable for applications where jigs are frequently replaced.

  To position the fixing jig, load the object on the jig, perform a trial print several times, and adjust the position of the fixing jig.

  Therefore, if the jig is frequently put on and taken off, positioning the jig is time-consuming and inefficient.

Jig Securing Method (2): Fixing the Foundation to the Flat Table, and Fixing the Fixing Jig to the Foundation



- Allows you to easily load objects.

  A jig that allows easy mounting and removal of the object is optimal.

  Make a jig that allows you to do this.
- Can also be used for applications where jigs are frequently changed.

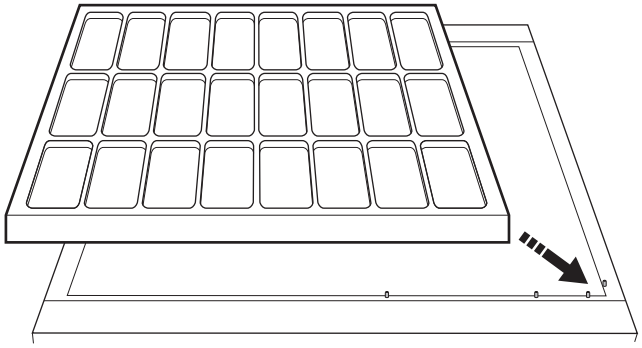
  Shapes that make positioning the jig easier should be prepared for both the foundation and the jig. (E.g., holes in the foundation or protrusions on the bottom of the jig.)

  The fit between the foundation and the jig facilitates positioning of the jig.
- Occasional remaking of foundations and jigs

  If you use protrusions and holes for positioning, you will not be able to position them accurately if there are gaps between them due to wear and tear.

  When this situation occurs, the foundation, the jig, or both need to be remade.

Jig Securing Method (3): Positioning the Fixing Jig by Pressing It against the Positioning Pin



- Allows you to easily load objects.

  A jig that allows easy mounting and removal of the object is optimal.

  Make a jig that allows you to do this.
- Can also be used for applications where jigs are frequently changed.

  You can position the jig relatively easily.

  To achieve accurate positioning of the jig, the corners of the jig to be pressed against must be made to form right angles.

Before, During, and After Printing

⚠ CAUTION

Do not place your hands on or touch the flat table or inside the machine (except for the cartridge slots).

Doing so may cause burns.

⚠ CAUTION

Do not place any objects in front of or behind the flat table.

The flat table moves horizontally and vertically. If there is an object between the flat table and the machine, it can be caught and cause the machine to malfunction.

⚠ CAUTION

If anything drops toward the back of the flat table, turn off all power switches before looking for the dropped object.

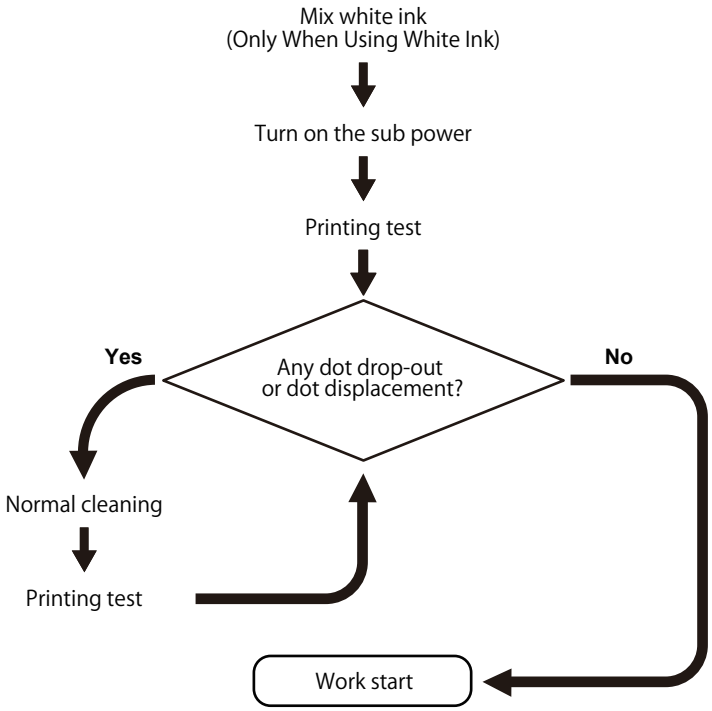
Otherwise sudden movement of the machine may cause injury.

First Thing Every Day

Before starting the day's work, eliminate white ink sedimentation and dot drop-out on the print heads.

We especially recommend test printing if the printer has not been used for a few days.

If there is a problem with discharge, clean the print heads.



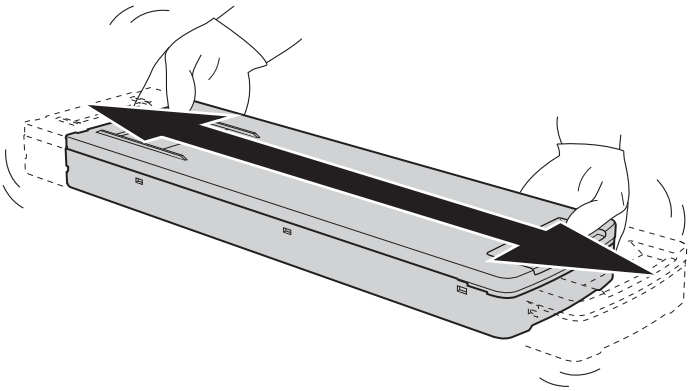
Step 1: Ink mixing

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.
- Ink other than white ink: If colors are uneven
- White ink: Every day (before starting the day's work), pull out the white ink cartridge once, shake it 50 times (for about 20 seconds), and insert it again.

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 and ink pouch coming loose and falling may lead to damage or printer failure.
- 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.

Step 2: 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), [**Scan**] (horizontal printing), or [**None**] (same location printing) as the printing position for the second and later tests in comparison to the first test.

Changing the Printing Test Printing Position(P. 144)

Procedure

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

   Determining the Print Surface Height and Printing Position(P. 79)

For a printing test, set the printing area with W (width) of 110 mm (4.34 in.) or more and L (length) of 110 mm (4.34 in.) or more. An error will occur and printing tests cannot be performed if the area is smaller than this.

2. **Tap on the home screen.**

3. **To change the printing test start position, tap [Change] under [Output Start Location].**

If you have tapped on the [**Printing Test Start Location**] screen and enabled [**Use coordinates to specify the printing area without moving the carriage or table.**], specify the values for [S] and [F].

For more information on settings, refer to Changing the Operation Performed when Setting the Printing Test Start Location(P. 141).

(1) **Tap , , , or once.**

The flat table and print-head carriage will move, and the pointer will point to the previously-set print origin.

Subsequently, when you have finished setting the print start position, the print-head carriage will automatically return to the standby position to protect the print heads from drying out if they have not been moved by the user for approximately three minutes. Perform the procedure again.

MEMO

If [**Use coordinates to specify the printing area without moving the carriage or table.**] is enabled, the print-head carriage will not move, so the print-head drying protection function will not work.

(2) **Set the [Printing Test Start Location].**

Long tap or tap , , , and to set the printing test start position.

MEMO

- If [**Use coordinates to specify the printing area without moving the carriage or table.**] is enabled, specify the values for [S] and [F].
- The printing test start position you have set will remain in effect until you change to a different media.

(3) **Tap [OK].**

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

Printing of the test pattern starts.

MEMO

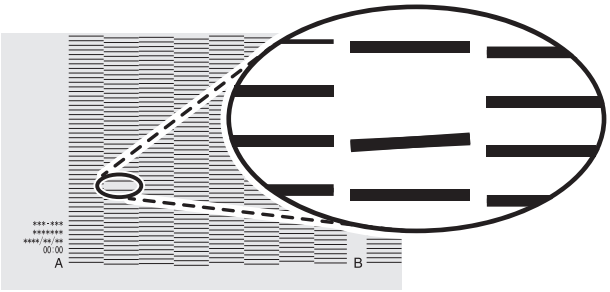
Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern.

Tap on the home screen, select [**Cleaning**]>[**Printing Test**]>[**Nozzle Drop-out Test (Base: Black)**] in that order, and then tap [**Execute**] 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.

5. **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.



6. **If dot drop-out or dot displacement is present, perform normal cleaning.**

   P. 57 Normal Cleaning Method

   If there is no dot drop-out or dot displacement, proceed to the next step.

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

RELATED LINKS

- P. 202 When Dot Drop-out or Dot Displacement Occurs

Step 3: Normal Cleaning Method

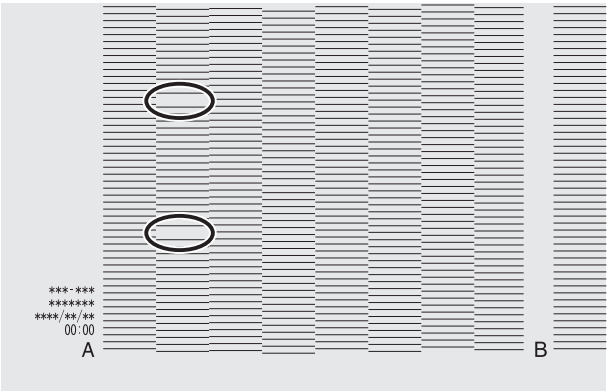
MEMO

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 print head with dot drop-out or dot displacement by viewing the results of the printing test.**

   In the case of the figure below, the space from [A] to [B] is head A.



   MEMO

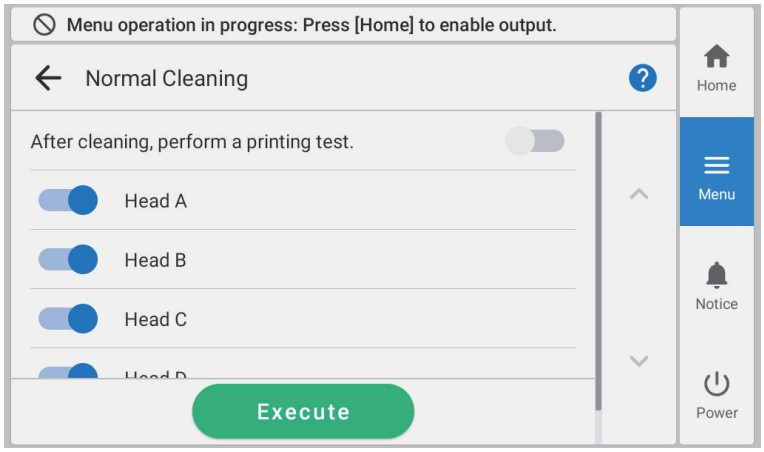
   If the printing-test results are difficult to interpret

   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. **Set the print heads to clean to and the print heads to not clean to .**

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 ←, and then tap it one more time after the screen switches.**

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

Tap **[Execute]** under **[Printing Test]**.

MEMO

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

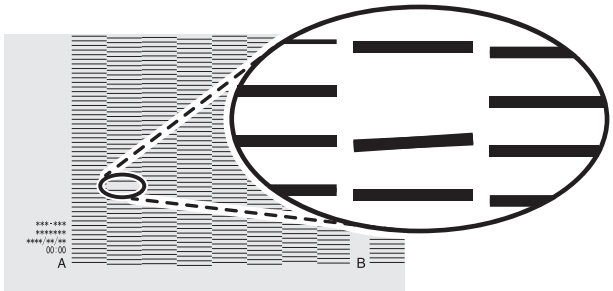
Tap on the home screen, select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** in that order, and then tap **[Execute]** to make the base of the white ink black, making it easier to check the white ink.

[Nozzle Drop-out Test (Base: Black)] is not displayed if the machine is not equipped with white ink.

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

P. 55 Performing a Nozzle Drop-out Test

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



9. **If dot drop-out or dot displacement is present, perform normal cleaning.**

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 you perform normal cleaning two or three times. In that situation, perform [**Medium Cleaning**].

If there is no dot drop-out or dot displacement, proceed to the next step.

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

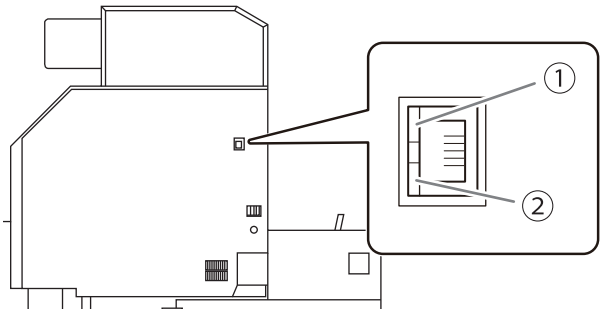
Before Printing

Before you start printing, check or perform the following.

LAN (Local Area Network) Terminal Status

Check that you can perform communication through the LAN terminal.

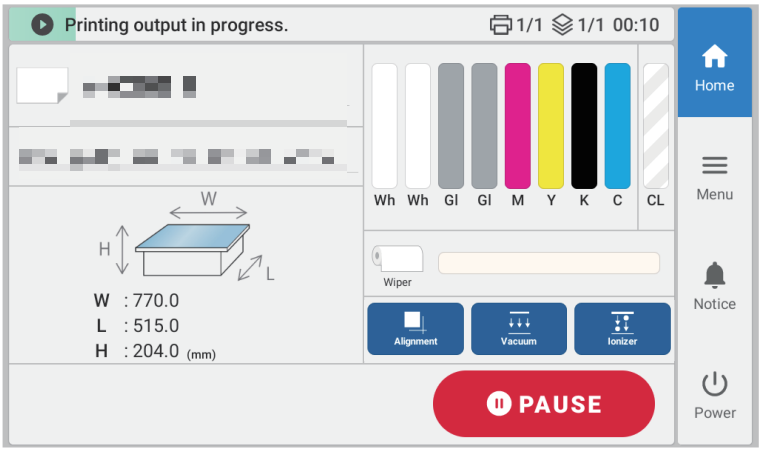
The LAN is enabled if the status LED (②) on the LAN connector located on the side of the printer is lit in green.



①	Activity LED	This flashes orange while data is being received from the network.
②	Status LED	This indicates the status of the communication function. When it lights in green, communication is possible.

Pausing, Resuming, and Canceling Printing

Tap [**Pause**] during printing to pause printing.

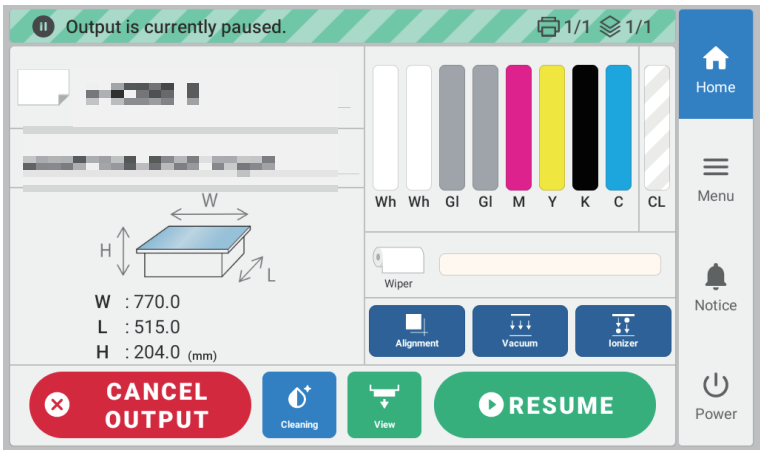


Tap [**Resume**] while printing is paused to resume printing.

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

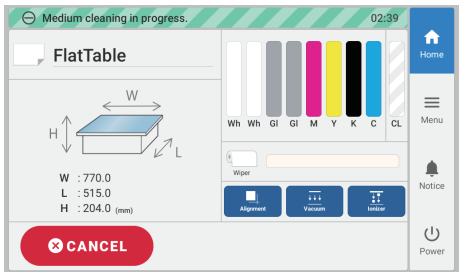
MEMO

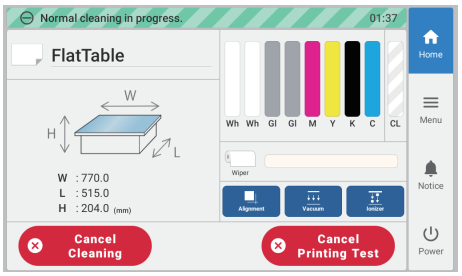
Tap while printing is paused to move the flat table forward.
Tap this button to correct the position of the tape holding the object to be printed on in place or to reapply the tape, such as before printing starts.

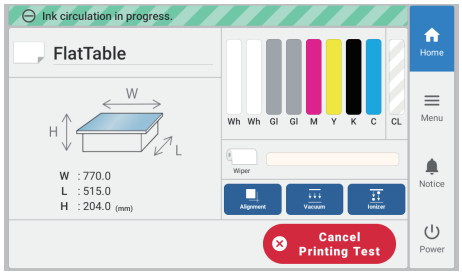


MEMO

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


Medium cleaning in progress.
02:39
FlatTable
W
H
L
W : 770.0
L : 515.0
H : 204.0 (mm)
Wh Wh Gl Gl M Y K C CL
Wiper
Alignment
Vacuum
Ionizer
CANCEL
Home
Menu
Notice
Power


Normal cleaning in progress.
01:37
FlatTable
W
H
L
W : 770.0
L : 515.0
H : 204.0 (mm)
Wh Wh Gl Gl M Y K C CL
Wiper
Alignment
Vacuum
Ionizer
Cancel Cleaning
Cancel Printing Test
Home
Menu
Notice
Power


Ink circulation in progress.
FlatTable
W
H
L
W : 770.0
L : 515.0
H : 204.0 (mm)
Wh Wh Gl Gl M Y K C CL
Wiper
Alignment
Vacuum
Ionizer
Cancel Printing Test
Home
Menu
Notice
Power

Ink Pouch Replacement

Timing of Ink Replacement

When ink is about to run out, replace it before printing.

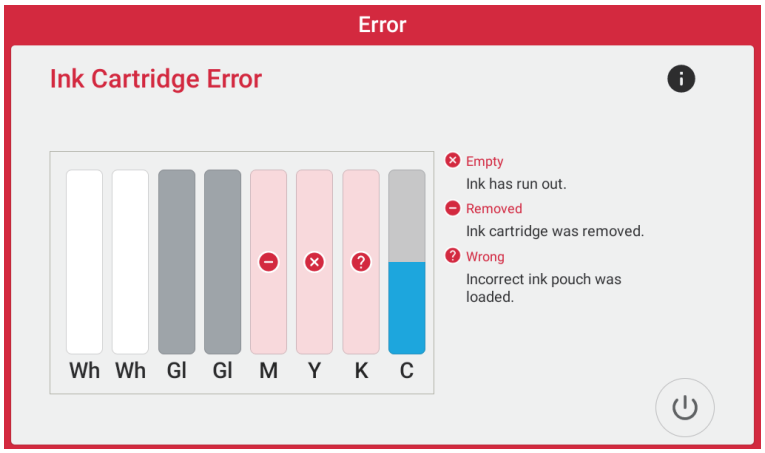
If the remaining ink display on the home screen of the operation panel is marked with , the ink level is low. (It is also displayed if the shelf life is about to expire or has expired.) We recommend replacing ink in advance as needed, using VersaWorks' ink usage amounts as a reference.

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

[Empty] is displayed for ink that has run out. Check the operation panel, and then replace the empty ink.

MEMO

- If ink runs out during printing, printing is paused.
- If ink runs out during cleaning, cleaning is canceled. When you replace the ink pouch, cleaning resumes.



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 cartridge 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.com/).

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.

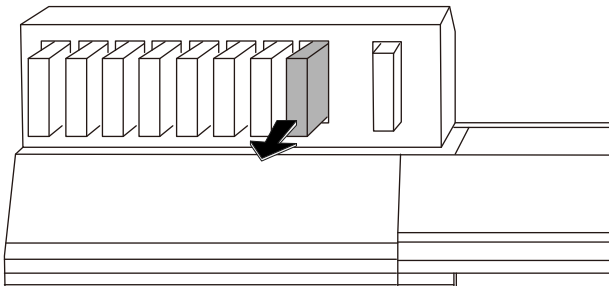
MEMO

The illustrations in the replacement procedure show a cleaning liquid pouch, but the replacement method and the work procedure are the same.

Procedure

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

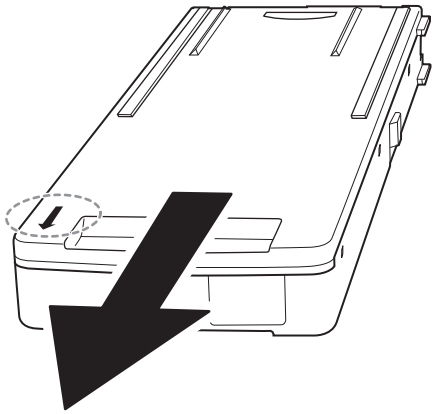
   When removing the ink cartridge, pull it out slowly and carefully, without any force.



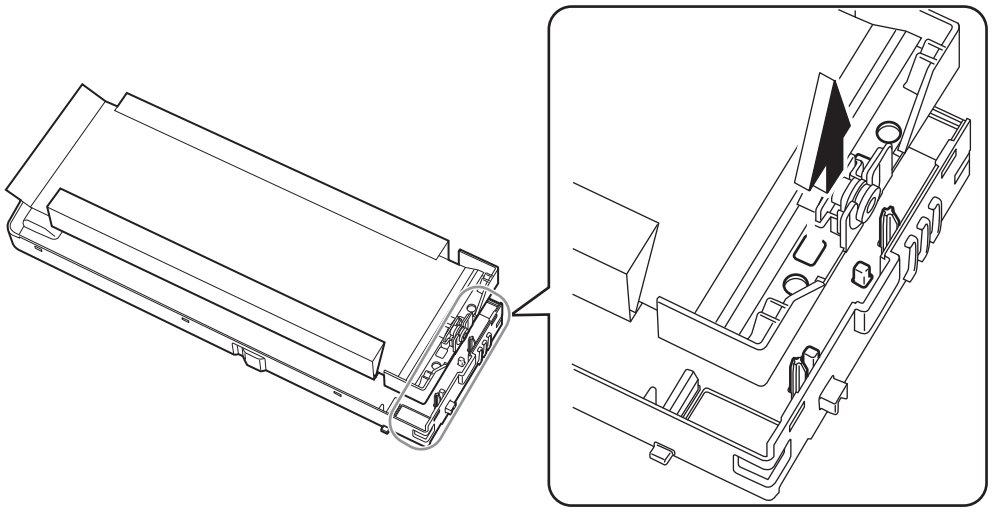
2. **Remove the ink cartridge cover.**

a. Keep the side with the arrow mark face up.

b. Slide the ink cartridge cover in the direction of the arrow to remove it.



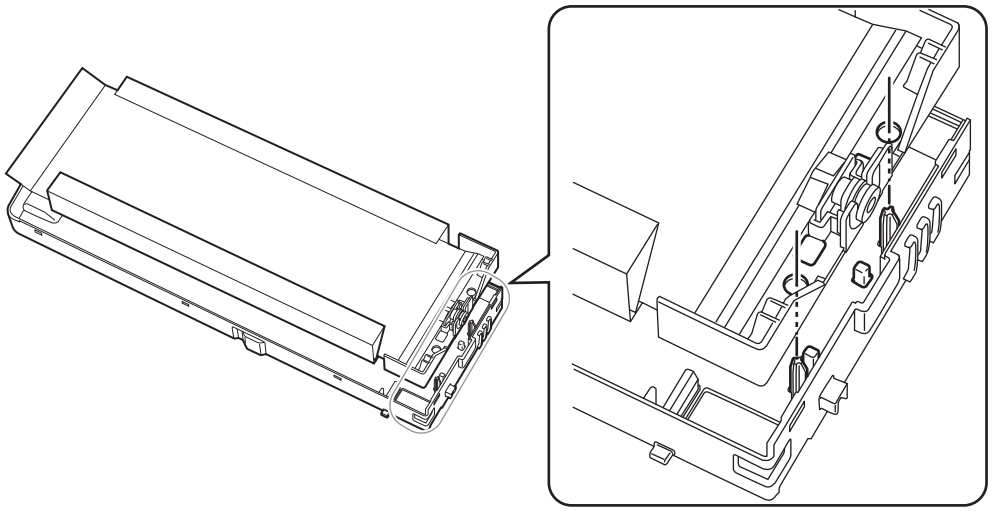
3. **Remove the used ink pouch from the cartridge case.**



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

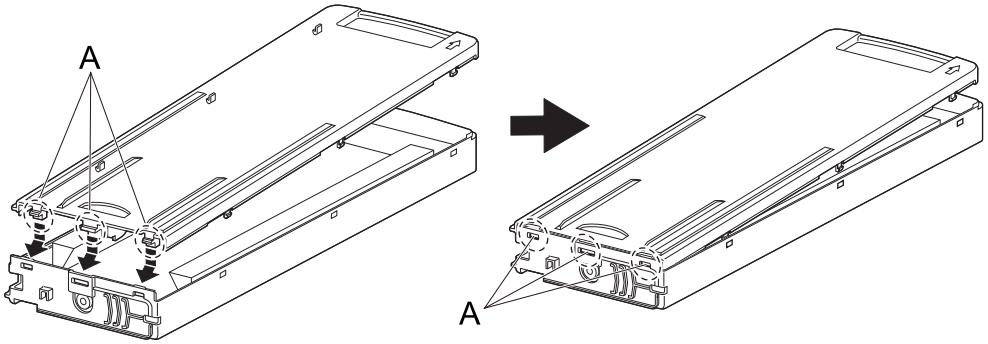
MEMO

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



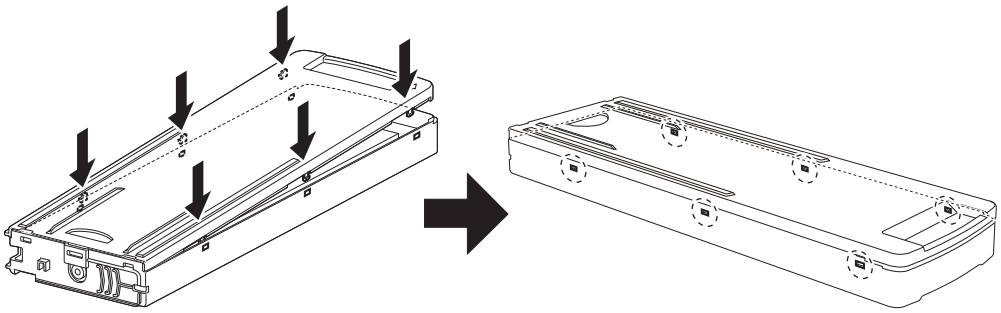
5. **Attach the ink cartridge cover to the cartridge case.**

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



b. Push the ink cartridge 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 ink cartridge cover does not come loose from the cartridge case.

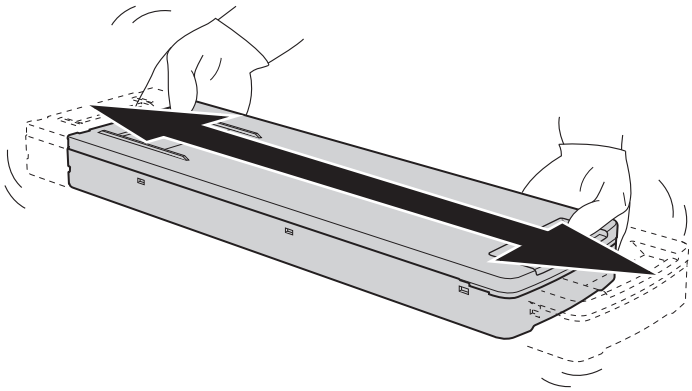


6. **Shake the ink cartridge 50 times (about 20 seconds).**

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.

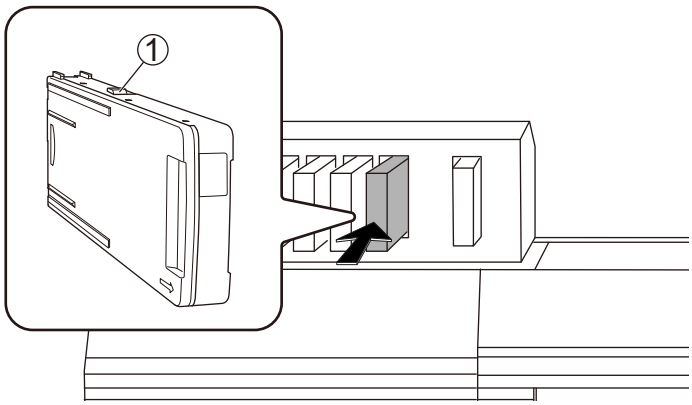
IMPORTANT

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.



7. **Insert the ink cartridge.**

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

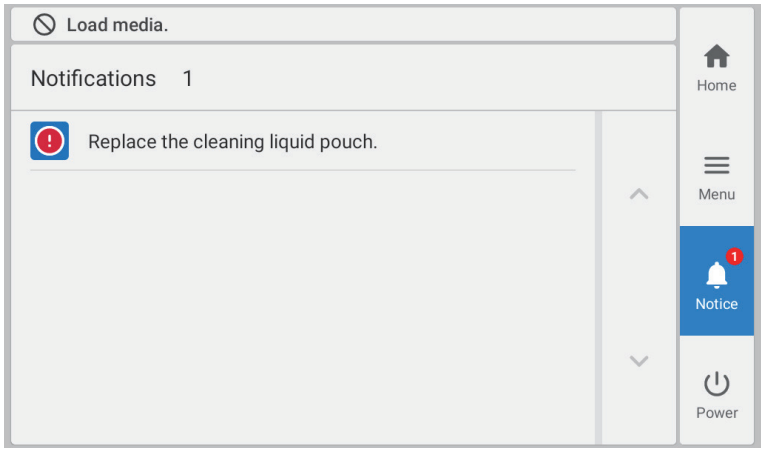


Replacing the Cleaning Liquid

Out-of-cleaning-liquid Warnings

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

You can also check the message by tapping .



RELATED LINKS

- P. 69 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.

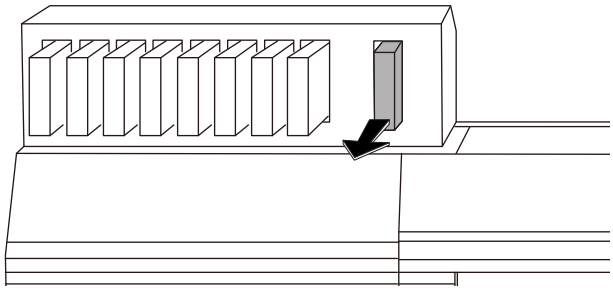
IMPORTANT

Precautions regarding cleaning liquid pouch replacement

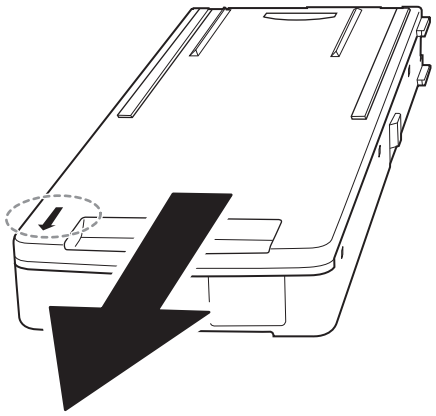
- Never insert or remove the cleaning cartridge with undue force. Cleaning liquid may leak.
- If the cover of the cleaning cartridge does not lock securely, this cartridge needs to be replaced.
  For information about purchasing cleaning cartridges, contact your authorized dealer or visit our website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

Procedure

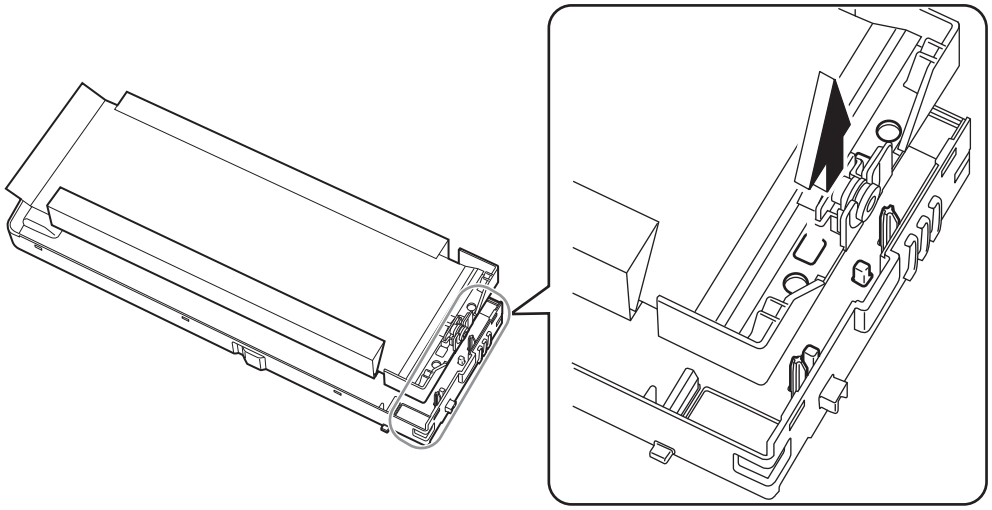
1. **Pull out the cleaning cartridge from the machine.**



2. **Remove the cleaning cartridge cover.**
   a. Keep the side with the arrow mark face up.
   b. Slide the cleaning cartridge cover in the direction of the arrow to remove it.



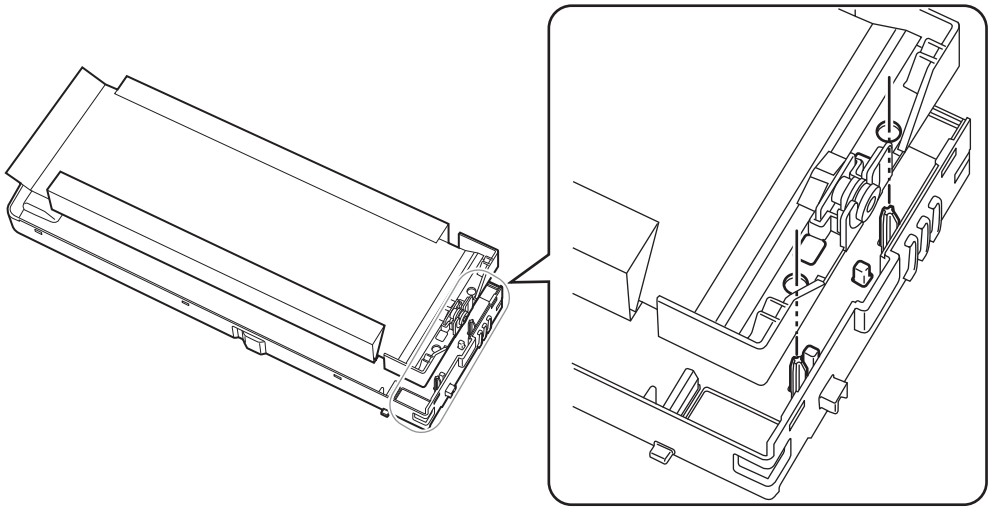
3. **Remove the used cleaning liquid pouch from the cartridge case.**



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

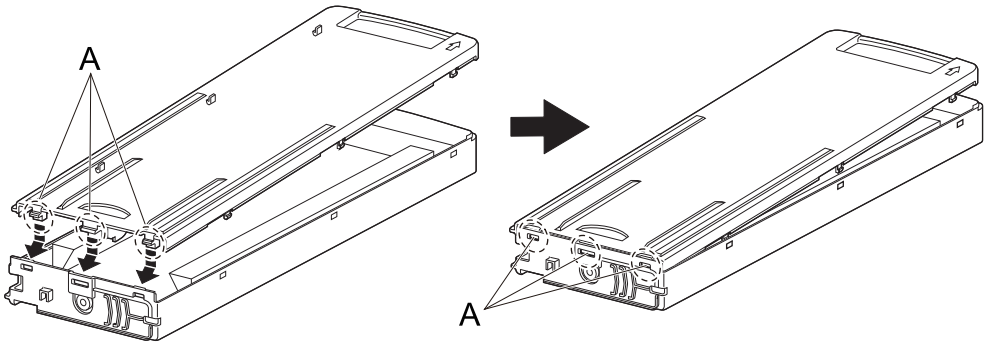
MEMO

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



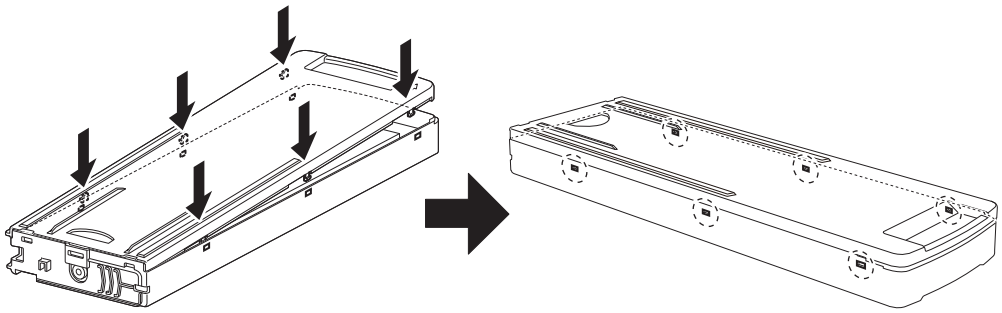
5. **Attach the cleaning cartridge cover to the cartridge case.**

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



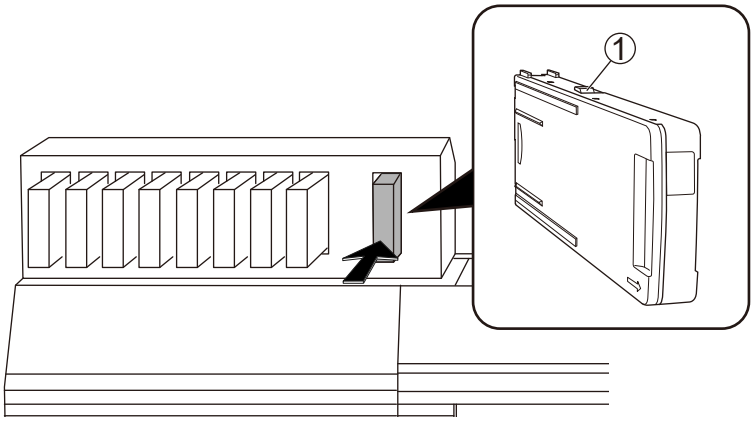
b. Push the cleaning cartridge cover to fit its hooks into the holes in the cartridge case.

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



6. Set the cleaning cartridge in the cleaning liquid 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.



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 immediately.**] 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.

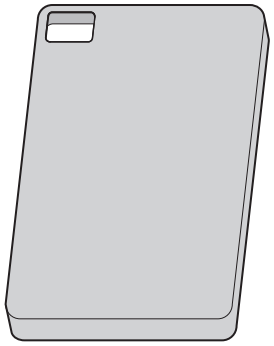
Printing Methods

Printing on a Flat Surface

Overview: Printing on a Flat Surface 75
Loading the Object to Be Printed On 76
Loading the Object to Be Printed on by Pressing It Against the Positioning Pins 76
Eliminating Spaces Around the Object to Be Printed on 78
Determining the Print Surface Height and Printing Position 79
Performing Printing.....84

Overview: Printing on a Flat Surface

This section explains how to print on an object that has a flat print surface.



This section explains the following steps based on the assumption that you are printing on the above tablet cover for the first time.

See "Printable Materials and Shapes" for information on whether you can print on the target object.

Even materials with the same name can have many variations with their own distinct properties due to slight differences in composition, and even if the composition is the same, it may or may not be possible for you to print on them due to differences in plating, coating, or other such surface treatments.

If this is the first time you are printing on a material, or if it is similar to something you have printed on before but you are not sure if it can be printed, please print a trial print to see if it is viable.

Generally speaking, the criteria for determining whether printing is viable are as follows. In addition to the items listed below, the items to be checked will vary depending on the requirements for the printed product. Exercise caution.

- Does the ink adhere to the object?
- Does the printing not come off even if rubbed?
- Can a satisfactory level of print quality be achieved?

RELATED LINKS

- P. 22 Printable Materials and Shapes
- P. 44 Alignment of Object to Be Printed On
- P. 87 Printing on Cylinders

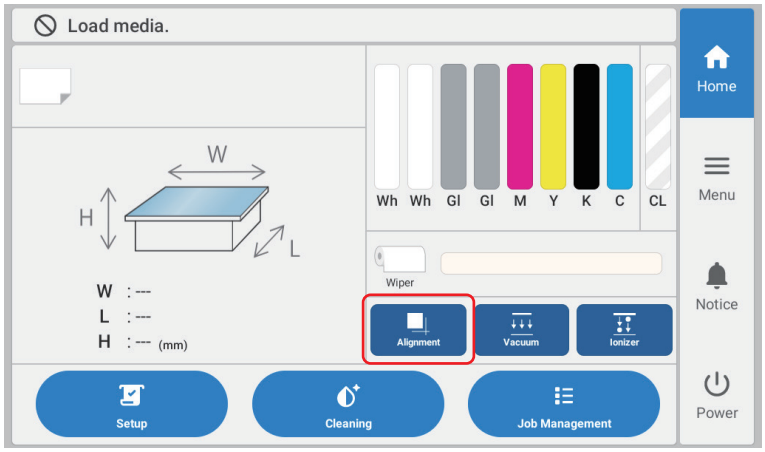
Loading the Object to Be Printed On

Loading the Object to Be Printed on by Pressing It Against the Positioning Pins

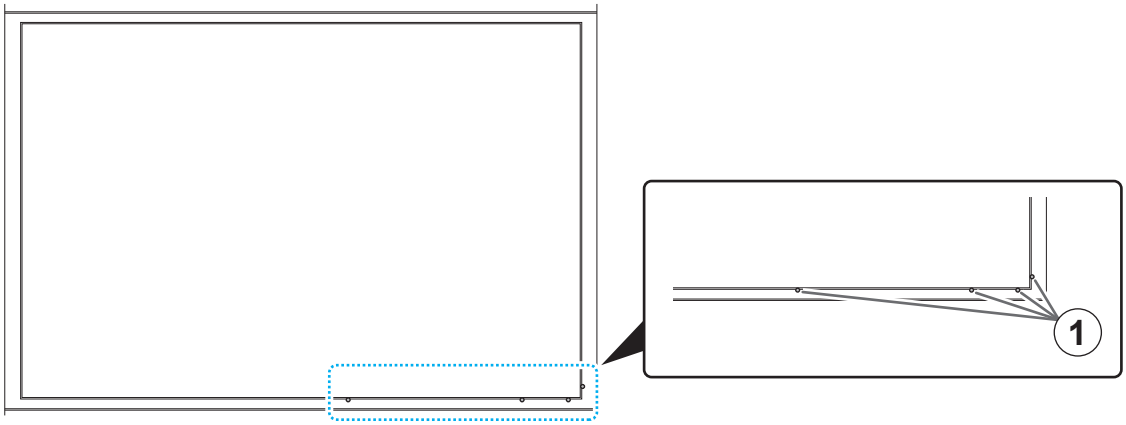
Procedure

1. **Tap  on the home screen.**

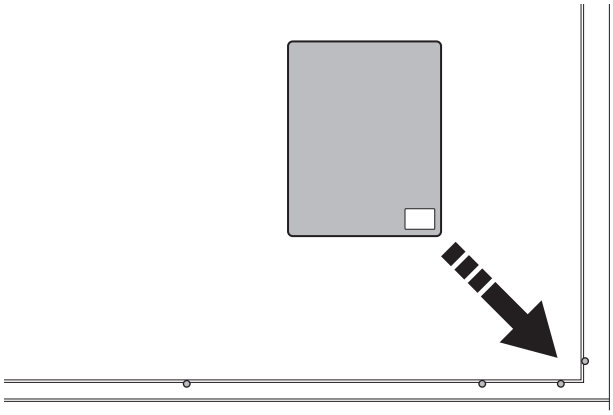
When this is selected, the button is displayed as enabled, as shown in the figure below.



The positioning pins ① emerge from the flat table.

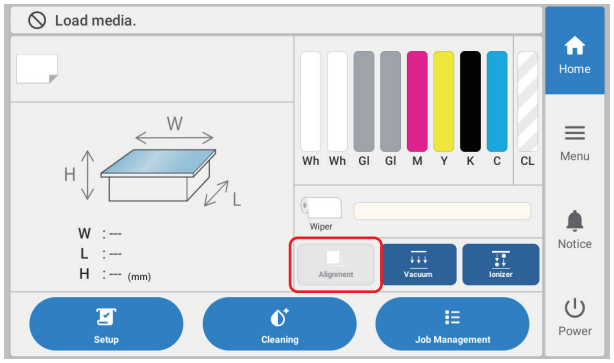


2. **Load the object to be printed on by pressing it against the positioning pins.**



IMPORTANT

If the height of the object to be printed on is 4.0 mm (0.15 in.) or less, be sure to switch off [**Alignment**] and lower the positioning pins before performing the following work. If the object to be printed on presses firmly against the positioning pins, they may not lower even if [**Alignment**] is switched off. In this case, lower the positioning pins by pressing them with your fingers.

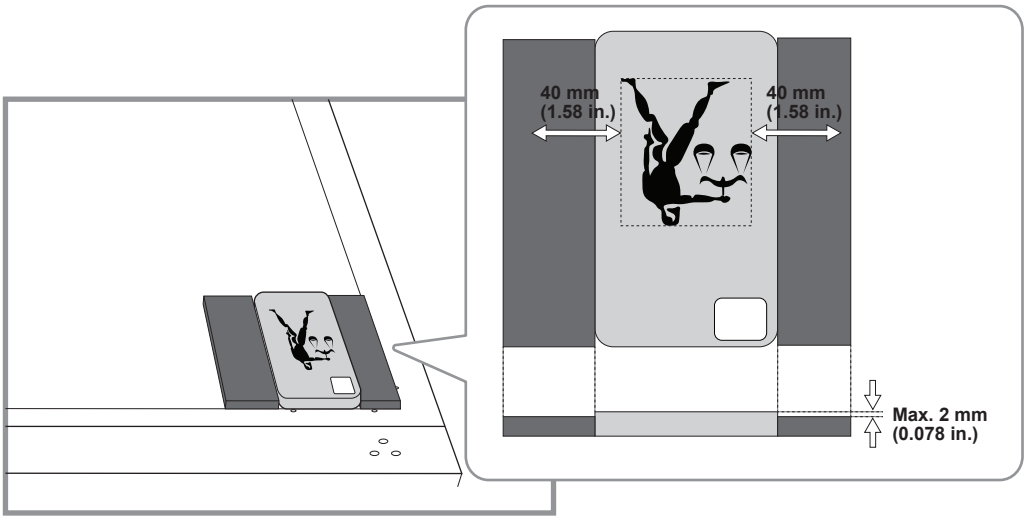


- **When setting the height of the object to be printed on**
  If the positioning pins are higher than the object to be printed on, the height is set with the positioning pins, not the object to be printed on, used as the reference.
- **Before printing**
  The print heads may come into contact with the positioning pins and be damaged.

Eliminating Spaces Around the Object to Be Printed on

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 if one of the following conditions is met.

- An area around the print data size (left and right: direction the print-head carriage moves) plus a margin of 40 mm (1.57 in.) extends beyond the object to be printed on.

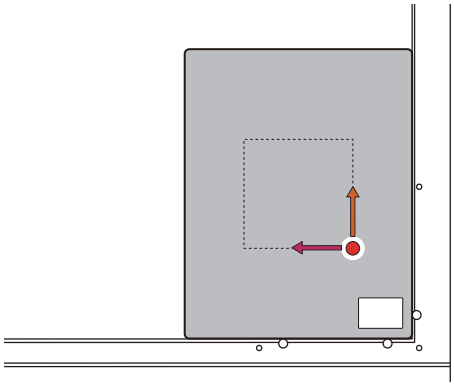


The height difference between the print surface and the jig surface should not exceed 2 mm (0.07 in.).

Determining the Print Surface Height and Printing Position

This section explains how to set the print heads to the appropriate height for printing and specify the location to be printed.

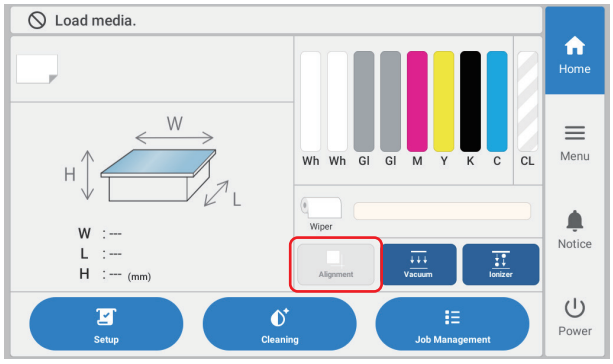
The height and printing position settings can be configured with the front cover open.



IMPORTANT

If the height of the object to be printed on is 4.0 mm (0.15 in.) or less, switch off [**Alignment**] and lower the positioning pins. If the positioning pins are higher than the object to be printed on, the height is set with the positioning pins, not the object to be printed on, used as the reference.

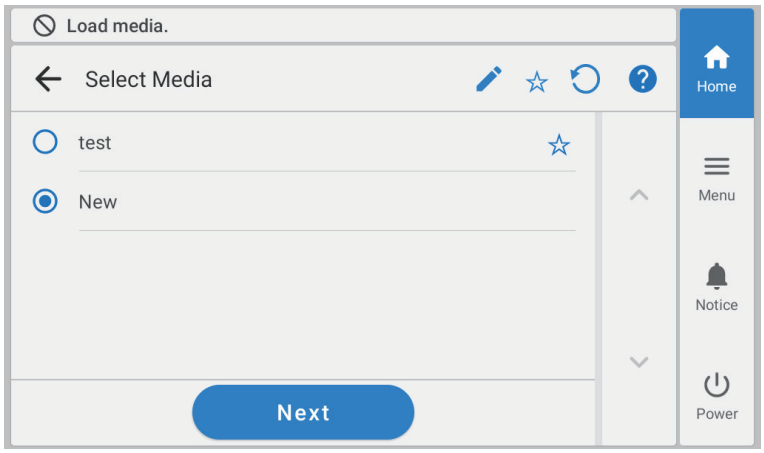
If the object to be printed on presses firmly against the positioning pins, they may not lower even if [**Alignment**] is switched off. In this case, lower the positioning pins by pressing them with your fingers.



Procedure

1. **If the home screen is not displayed, tap .**
2. **Tap on the home screen.**
3. **Tap [Select] next to [Preset].**
4. **Tap [New], and then tap [Next].**

   Assuming this is the first time you are using this type of object to be printed on, select [**New**] here.



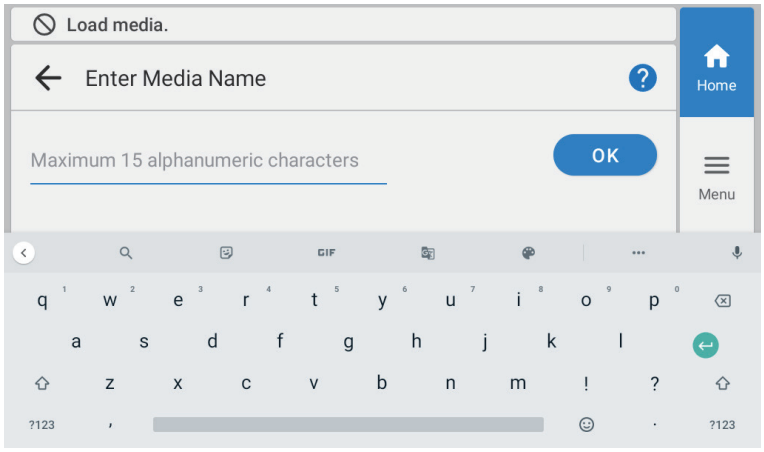
If you have already registered the media, select the media (printing settings) from the list of existing media, tap [**Next**], and then proceed to Step 7.

MEMO

- You cannot select media for the flat table if the media was registered when using the rotary axis unit.
- Tapping makes it possible to search the registered media by keyword.
  To reset the entered keyword, tap .
- Tapping to the right of the media name will change the symbol to , and the media will be registered to Favorites.
  Tap the Favorites filter at the top of the operation panel to turn the filter on and show only favorited media.
  Tap to turn the Favorites filter off.
- Keyword searching and the Favorites filter can be used at the same time.
  Tap to turn the Favorites filter off and reset all keywords.

5. Enter the media name and tap [OK].

Tap the keyboard displayed on the screen to enter the name.



6. Check the name you entered and tap [Next].

To make corrections, tap the name you entered.

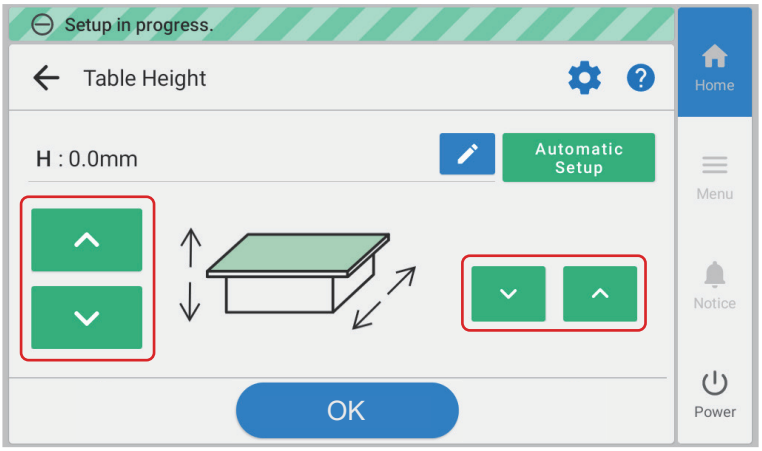
7. Tap [Change] next to [Table Height].

8. **Move the print surface so that it is close to the head gap sensor.**

Move the print surface as close as possible to the head gap sensor beforehand to avoid needlessly increasing the time required for automatic height setting.

Tap or long tap ^ and v for moving up/down or back/forth.

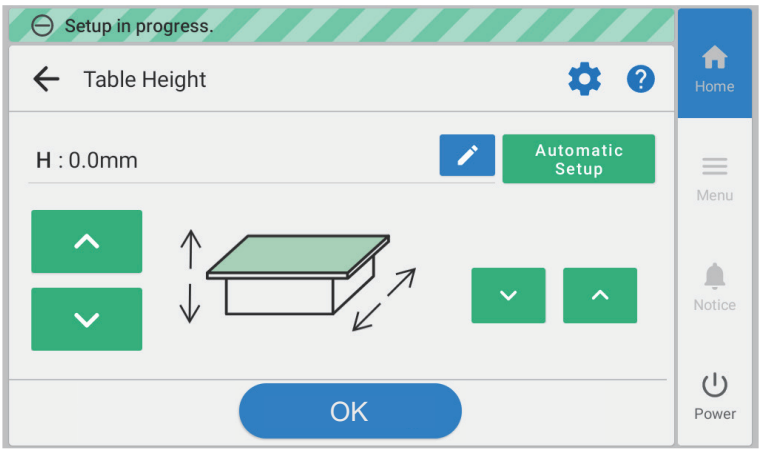
A long tap will speed up the movement after 2 seconds, so take care to avoid going too far.



9. **Tap [Automatic Setup].**

The height of the object to be printed on will be set automatically to a position about 1 mm (39.4 mil) away from the print head's ink emission surface.

10. **Tap [OK].**



11. **Tap [Change] next to [Printing Area].**

You can tap ⚙ to change the operation performed by the machine when configuring settings. For more information on settings, refer to Changing the Operation Performed When Setting Up the Printing Area(P. 116).

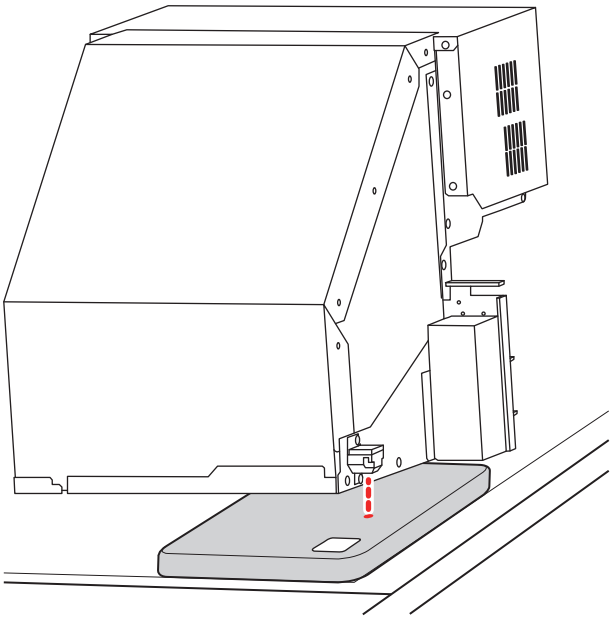
12. **Tap [Print Origin], and then tap ^, v, <, or > once.**

The print-head carriage moves to the bottom right point of the currently set printing area, and the pointer is irradiated.

Subsequently, when you have finished setting the printing area, the print-head carriage will automatically return to the standby position to protect the print heads from drying out if they have not been moved by the user for approximately three minutes. Perform the procedure again.

MEMO

[**Use coordinates to specify the printing area without moving the carriage or table.**] If is enabled, the print-head carriage will not move, so the print-head drying protection function will not work.



13. **Tap or long tap , , , or .**

Align the pointer with the lower right point of the printing area of the loaded object to be printed on.

MEMO

[**Use coordinates to specify the printing area without moving the carriage or table.**] If is enabled, specify the values for [**S**] and [**F**].

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.
- By opening the front cover, this work can be performed while viewing up close. However, because the print-head carriage or flat table may start moving, be careful not to touch any moving parts.

14. **Tap [Printing Area].**

The print-head carriage moves to the top left point of the currently set printing area, and the pointer is irradiated.

MEMO

If [**Use coordinates to specify the printing area without moving the carriage or table.**] is turned on, the print-head carriage will not move.

15. **Tap or long tap , , , or .**

Align the pointer with the upper left point of the printing area of the loaded object to be printed on.

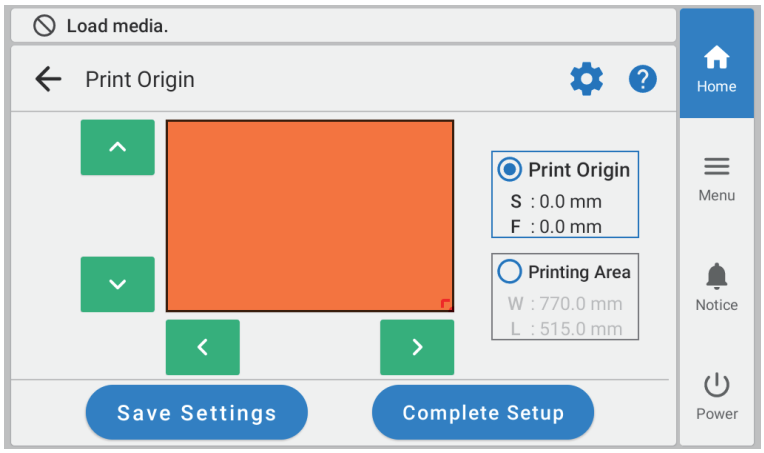
MEMO

If [**Use coordinates to specify the printing area without moving the carriage or table.**] is turned on, specify the [**W**] and [**L**] values.

16. **Tap [Complete Setup].**

MEMO

Tap [**Save Settings**] to return to the setup item selection screen to change the settings as necessary.



17. **Close the front cover if it is open.**

RELATED LINKS

- P. 94 Adjusting the Height
- P. 106 Printing Area Settings

Performing Printing

Print data is created and then output to the machine using VersaWorks.

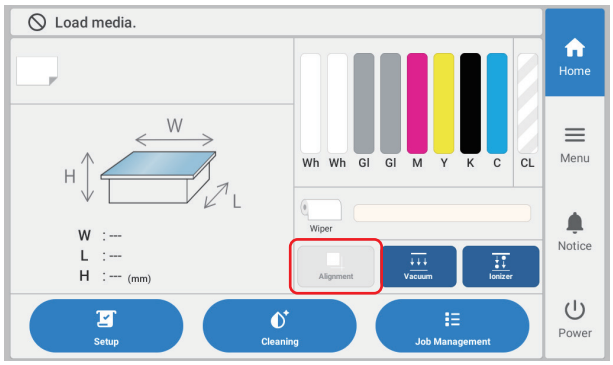
Print data is created in an application such as Adobe Illustrator and then saved in a file format (e.g., PDF or EPS) that can be read by VersaWorks.

The methods for creating print data differ depending on the color layering and whether a primer has been applied. See the "VersaUV Usage Guide" for a description of how to create typical print data.

IMPORTANT

If the height of the object to be printed on is 4.0 mm (0.15 in.) or less, switch off [**Alignment**] and lower the positioning pins. The print heads may come into contact with the positioning pins and be damaged.

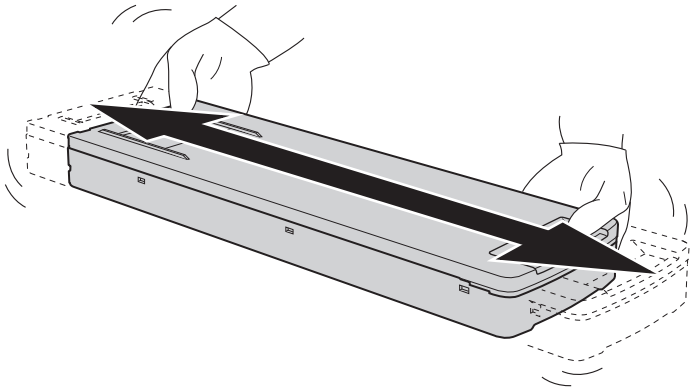
If the object to be printed on presses firmly against the positioning pins, they may not lower even if [**Alignment**] is switched off. In this case, lower the positioning pins by pressing them with your fingers.



If you are using white ink

When printing for the first time for the day, remove just the white ink cartridge, shake it 50 times (about 20 seconds), and then reinsert the cartridge. 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.

The ingredients in white ink tend to settle. Each day, before starting the day's operations, be sure to shake this 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 and ink pouch coming loose and falling may lead to damage or printer failure.
- 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 if it is open.**

2. **Start VersaWorks.**

3. **Click the printer to use.**

   Check that:

   - VersaWorks Dual connects to the machine.
   - The machines status is [**Ready to Print**].

4. **Click the [Gear Icon] of the folder where you want to enter the print data.**

   The [**Queue Properties**] screen appears.

5. **Click [Get Media Width].**

   Obtain and then set the printing area set in "Determining the Print Surface Height and Printing Position" from the printer.

   For other VersaWorks settings, see the VersaWorks manual.

6. **Click [OK].**

7. **When the confirmation window for the setting changes appears, click [OK].**

8. **Enter the print data in the queue folder for which the size was obtained in step 5.**

   Drag the print data to the job list in the target queue folder.

9. **Double-click the entered print data.**

   The job settings window is displayed.

   Use this window to fit the print data in the printing area and adjust its position.

   The white part in the layout area is the loaded printing area. Note that print data that does not fit within the printing area will be automatically split and then printed as separate pages.

   MEMO

   To set [**Base Printing Position**] to [**Center**], select the [**Center on the Media**] under [**Position**] in VersaWorks.

10. **When the size and position are adjusted, click[OK].**

11. **Click the [Printing Icon].**

    The [**Advanced Print Settings**] window appears.

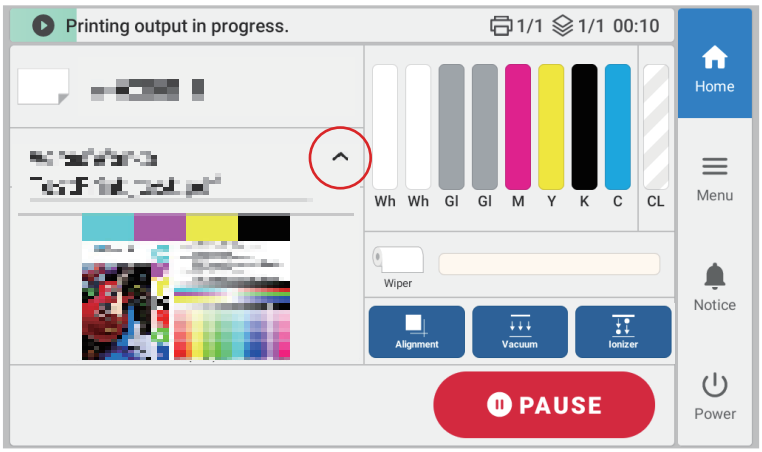
    Set the [**Print Count**], and then click [**Print**].

    Printing starts.

    The operation panel will change to the display indicating that printing is in progress.

    MEMO

    - When you send the output data, [**Ink circulation in progress.**] or [**Normal cleaning in progress.**] may be displayed on the operation panel. 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 [**Printing Area**] 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).



RELATED LINKS

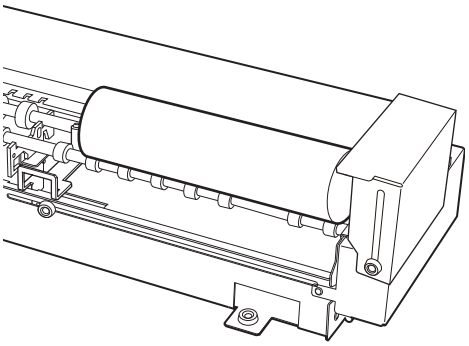
- https://downloadcenter.rolanddg.com/VersaWorks7
- https://downloadcenter.rolanddg.com/contents/manuals/UV-Guide_USE_EN

Printing on Cylinders

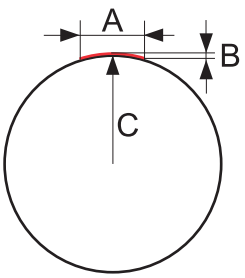
Overview: Printing on Cylinders.....88

Overview: Printing on Cylinders

You can print on cylindrical surfaces even without using the rotary axis unit as long as the variation in height of the printed surface is no more than 2 mm (78.7 mil). If the variation in height of the print surface exceeds 2 mm (78.7 mil), use the rotary axis unit (sold separately).



The table below shows the maximum width you can print without using the rotary axis unit for a given cylinder size (radius). If the printing width is narrower than the printing width in the table below, you can print without using the rotary axis unit since the variation in height of the print surface is within 2 mm (78.7 mil). If the printing width is wider than the one shown in the table below, use the rotary axis unit.



A: Maximum Printable Width	B: Variation in height (2 mm [0.08 in.])	C: Cylinder Size (Radius)

Cylinder Size (Radius)	Maximum Printable Width
5 mm (0.2 in.)	8 mm (0.31 in.)
10 mm (0.39 in.)	12 mm (0.47 in.)
15 mm (0.59 in.)	14.96 mm (0.58 in.)
20 mm (0.79 in.)	17.43 mm (0.68 in.)
30 mm (1.18 in.)	21.54 mm (0.84 in.)
50 mm (1.97 in.)	28 mm (1.1 in.)
80 mm (3.15 in.)	35.55 mm (1.39 in.)
100 mm (3.94 in.)	39.79 mm (1.56 in.)

For information on how to install and print with the rotary axis unit, see the manual for the rotary axis unit.

RELATED LINKS

- OA-RA-240 User's Manual

Optimizing Quality and Efficiency

Optimizing the Setup Method

Suction Function Setting 91
- Setting the Suction Function 91
- Turning the Suction Function On or Off 92
- Adjusting the Suction Force 93

Adjusting the Height 94
- Setting the Height of the Object to Be Printed On Manually 94
- Adjusting the Distance between the Object to Be Printed on and the Print Heads 96
- Enabling Automatic Height Adjustment during Printing 99
- Determining the Maximum Value (Threshold) for Automatic Height Adjustment 101
- Applying Readjusted Flat Table Heights to Registered Media Settings 103
- Notes When the Print Surface Is Uneven 104
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Printing Area Settings 106
- Fixing the Base Position of the Printing Area 106
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- Changing Just the Printing Position Reference Setting (Origin) 113
- Changing the Operation Performed When Setting Up the Printing Area 116

Stabilizing Image Quality 119
- Set the [**Wait Time Per Scan**]. 119

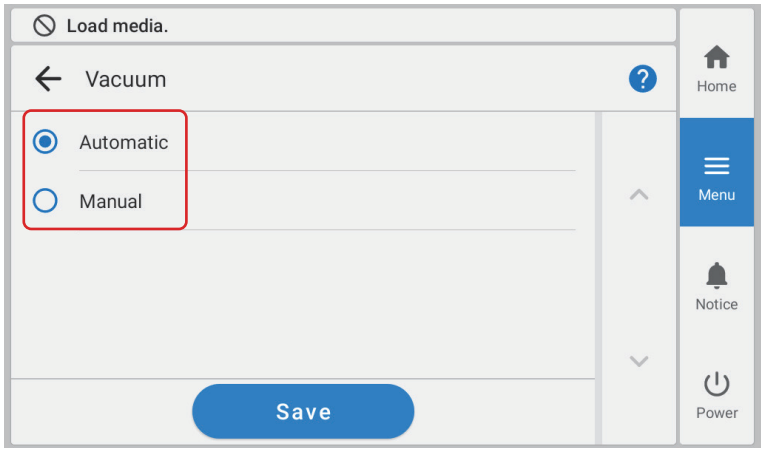
Suction Function Setting

Setting the Suction Function

The flat table suctions the object to be printed on to make it hard to move and easy to load. This function is especially effective when the object to be printed on is thin and light.

Procedure

1. Tap .
2. Tap [Preferences]>[Vacuum].
3. Select [Vacuum] from the following.



[Vacuum]	Description
[Automatic]	Turns the suction function on or off automatically, e.g., when printing.
[Manual]	Turns the suction function on or off on the home screen.

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

MEMO

Default setting: [Automatic]

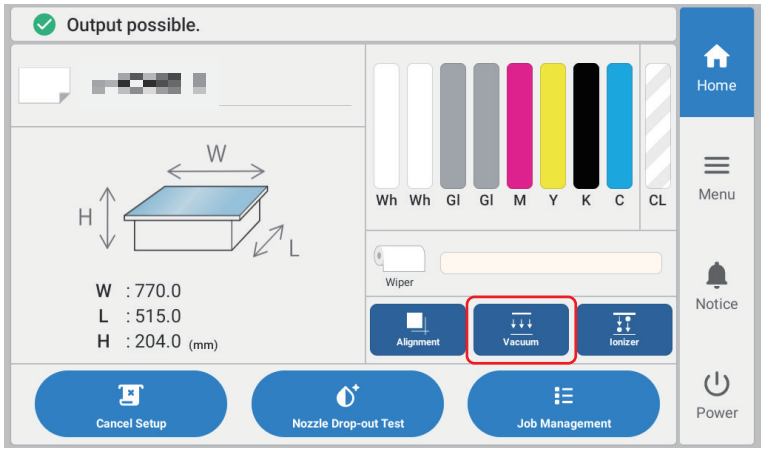
Turning the Suction Function On or Off

This operation turns the suction function on or off when [**Manual**] under [**Vacuum**] is selected.

Procedure

1. **Tap  on the home screen.**

   The suction function turns on (or off). When this is selected, the button is displayed as enabled, as shown in the figure below.



IMPORTANT

The suction function cannot be used to hold in place warped or thick objects. Secure the media in place using a substance such as commercially available adhesive tape affixed directly to the flat table.

MEMO

- You can adjust the suction force in [**Media Suction Force**].
  P. 93 Adjusting the Suction Force
- If the object to be printed on is small, you can further increase the suction force by covering the suction holes with paper or other material in areas without the object to be printed on.

MEMO

The suction function cannot be changed in the following situations.

- During setup
- When a menu is displayed
- When an error is displayed

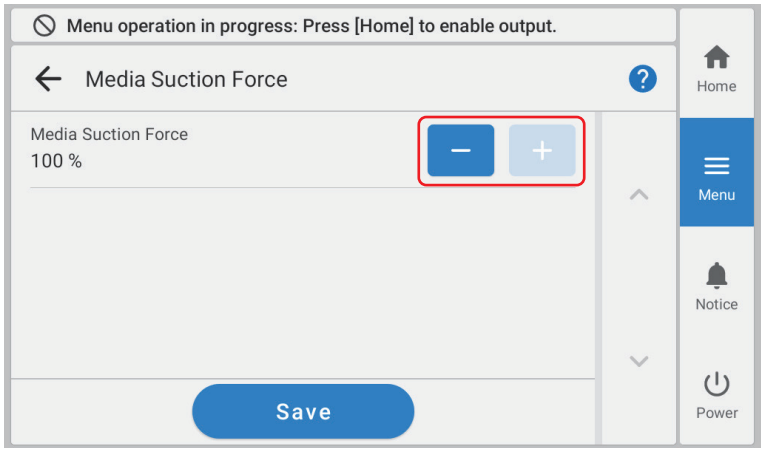
RELATED LINKS

- P. 93 Adjusting the Suction Force

Adjusting the Suction Force

Procedure

1. Set up the object to be printed on.
   Determining the Print Surface Height and Printing Position(P. 79)
2. Make sure that [Vacuum] is turned [On] on the home screen of the operation panel.
3. Tap ☰.
4. Tap [Media Settings]>[Media Suction Force].
5. Tap − and + to set the media suction force.
   Each tap increases or decreases the suction force by 10%.



6. Tap [Save] to confirm your entry.
7. Tap ⌂ to return to the home screen.

MEMO

- Default setting: 100%

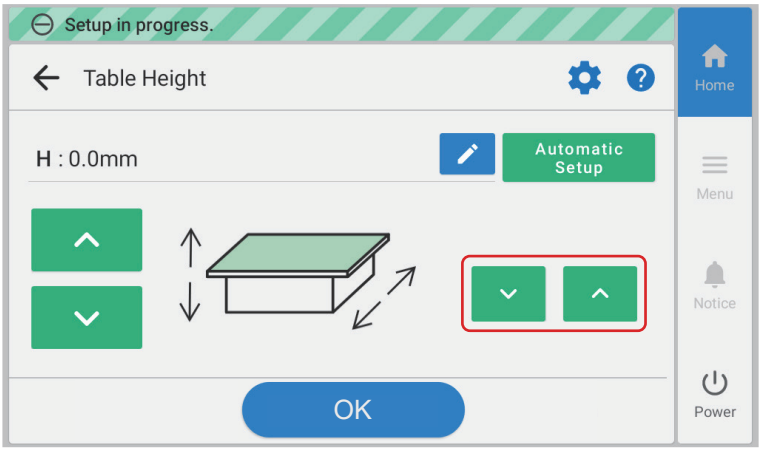
Adjusting the Height

Setting the Height of the Object to Be Printed On Manually

This section explains how to manually set the height of the object to be printed on. This is suited to the case when you do not want the head gap sensor to come in contact with the object to be printed on and the case when you want to set the distance between the print heads and the object to be printed on. The manual setting takes a little longer than the automatic setting because you need to visually set the height. If the print surface is uneven, there is a limit to the area of unevenness.

Procedure

1. **Load the object to be printed on.**
   P. 76 Loading the Object to Be Printed On
2. **Tap .**
3. **Tap [Select] under [Preset], and then select the preset for which you would like to change the settings.**
4. **Tap [Next].**
5. **Tap [Change] next to [Table Height].**
6. **Move the object to be printed on so that it is under the head gap sensor.**
   Long tap or tap lined up on the right side of the screen to move the flat table forward or backward.



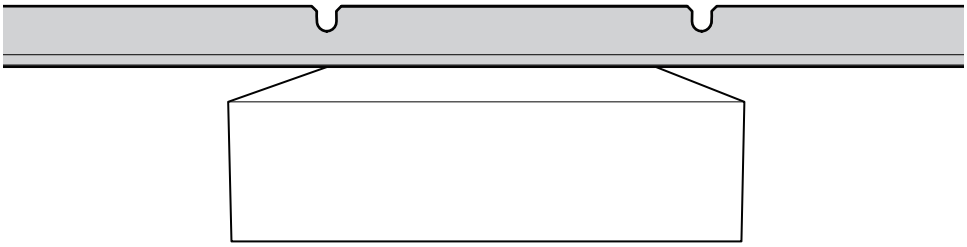
MEMO

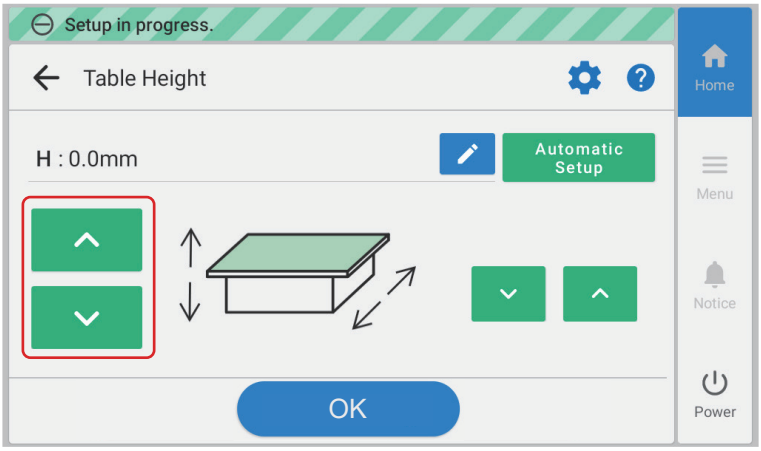
You can also tap and then enter a value to set the height.

7. **Adjust the height of the object to be printed on.**
   Long tap or tap lined up vertically on the left side of the screen to adjust the height of the object to be printed on. Move the head gap sensor as close as possible to the print surface.

IMPORTANT

Set the height of the flat table in a way that the highest position of the print surface will not come into contact with the head gap sensor. Note that print quality will deteriorate as the distance between the head gap sensor and print surface widens.





8. **Once the position has been decided, tap [OK].**

9. **Tap [Complete Setup].**

RELATED LINKS

- P. 22 Printable Materials and Shapes
- P. 104 Notes When the Print Surface Is Uneven

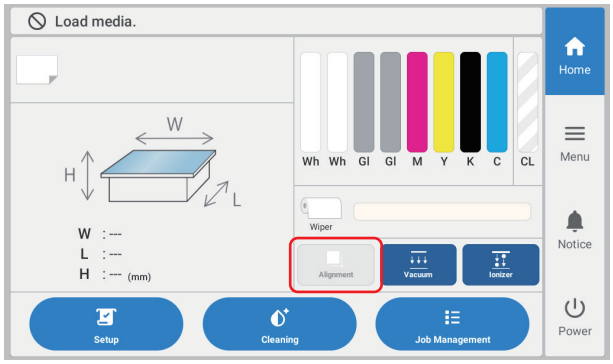
Adjusting the Distance between the Object to Be Printed on and the Print Heads

If the height (thickness) of the object to be printed on varies or if the object to be printed on is lifted or warped during printing, the object to be printed on might come into contact with the print heads. You can expand the distance between the object to be printed on and the print heads in the [**Table Lowering Amount**] setting to prevent issues like this from happening.

IMPORTANT

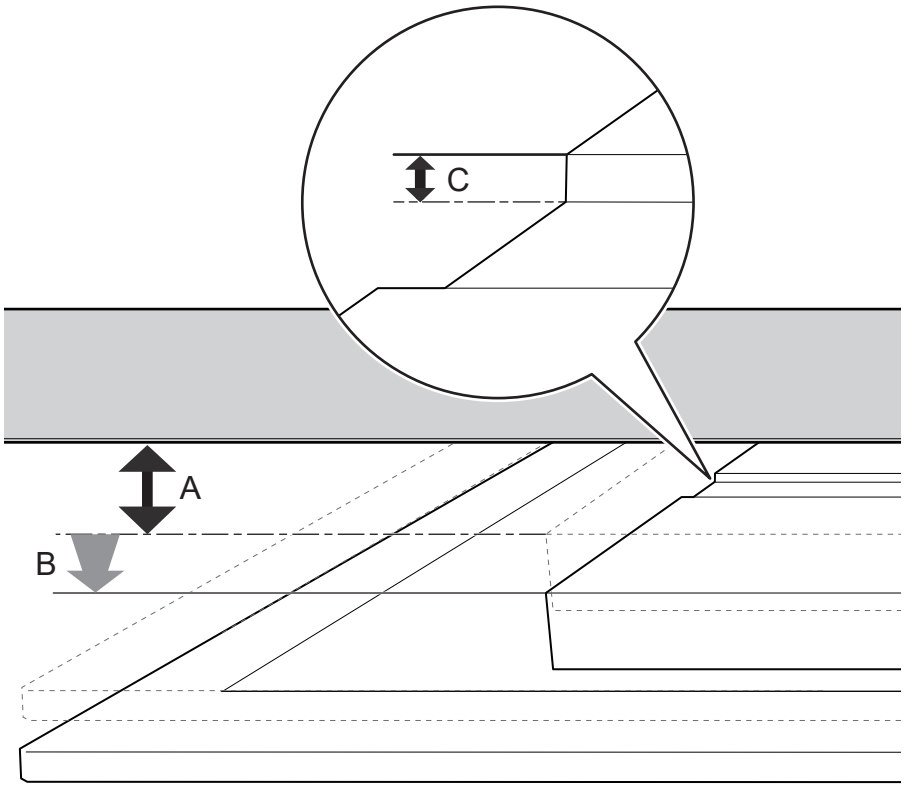
If the height of the object to be printed on is 4.0 mm (0.15 in.) or less, switch off [**Alignment**] and lower the positioning pins. If the positioning pins are higher than the object to be printed on, the height is set with the positioning pins, not the object to be printed on, used as the reference.

If the object to be printed on presses firmly against the positioning pins, they may not lower even if [**Alignment**] is switched off. In this case, lower the positioning pins by pressing them with your fingers.



- If the distance is expanded too much, the print quality may be deteriorated and the nozzles of the print heads may be clogged. Configure the settings so that the distance between the highest position of the object to be printed on and the lowest position of the print surface is 2 mm (78.7 mil) or less.

  Notes When the Print Surface Is Uneven(P. 104)
- This setting is enabled when the height of the object to be printed on is set automatically.



A	Height from print heads to highest position on the object to be printed on when [**Table Lowering Amount**] is not set
B	[**Table Lowering Amount**]
C	2 mm (78.7 mil) or less

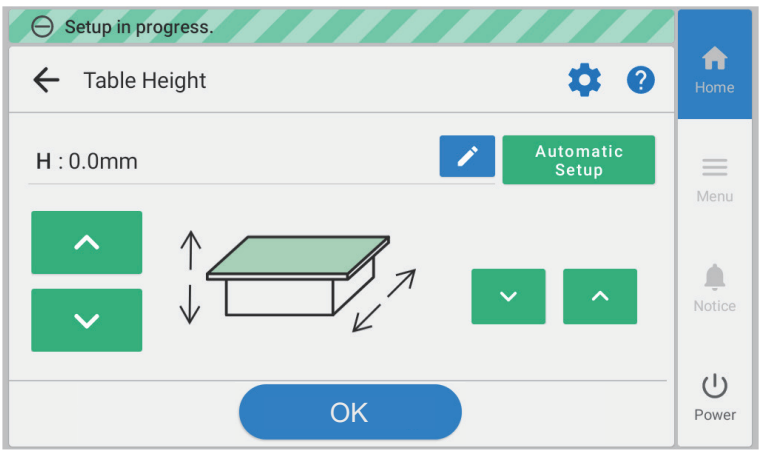
Procedure

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

   Refer to Steps 1 through 6 of Determining the Print Surface Height and Printing Position(P. 79) to perform [**Select**] of [**Preset**].

2. **Tap [Change] next to [Table Height].**

   The [**Table Height**] screen appears.



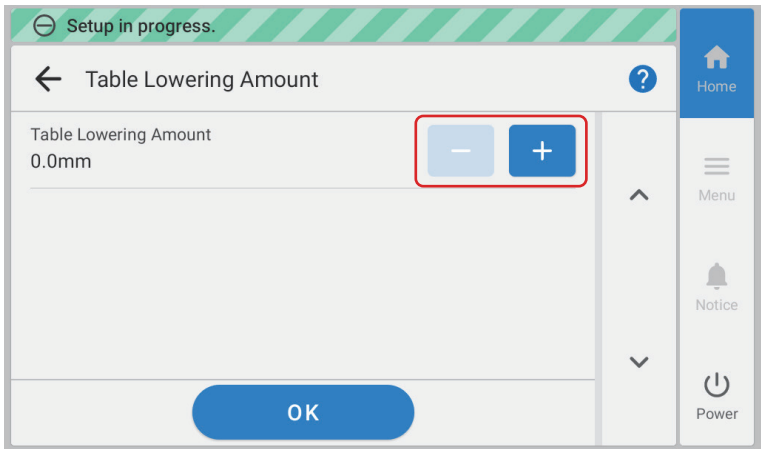
3. Tap .

The [**Table Lowering Amount**] screen appears.

4. **Set the distance between the object to be printed on and the print heads.**

Tap − and + to adjust the distance.

You can adjust the distance in increments of 0.1 mm (3.9 mil).



[Table Lowering Amount]	Distance between the object to be printed on and the print heads
[0.0 mm]	1.0 mm (39.37 mil)
:	:
[2.0 mm (0.08 in.)]	3.0 mm (0.12 in.)

5. **Tap [OK].**

6. **Configure the [Table Height] and the [Print Origin] and [Printing Area] settings.**

Refer to steps 8 through 15 of Determining the Print Surface Height and Printing Position(P. 79) to configure the settings.

7. **Close the front cover if it is open.**

8. **Tap [Complete Setup].**

MEMO

Tap [**Save Settings**] to return to the setup item selection screen to change the settings as necessary.

MEMO

- Default setting: 0.0 mm

RELATED LINKS

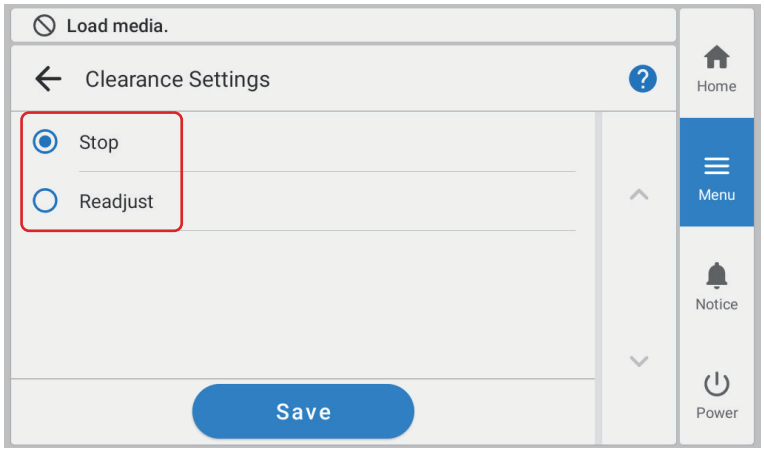
- P. 108 Detecting the Height of the Object to Be Printed on Automatically

Enabling Automatic Height Adjustment during Printing

These settings allow the flat table height to be automatically readjusted and printing to continue when shifting or lifting up of the object to be printed on during printing is detected and there is a possibility of the print heads coming into contact with the object. This function is effective when using objects to be printed on that cannot be reprinted on.

Procedure

1. Tap .
2. Tap [Preferences]>[Clearance Settings].
3. Tap [Clearance Settings] to select [Readjust].



[Clearance Settings]	Description
[Stop]	Cancels printing when the possibility of the print heads coming into contact with the object is detected during printing.
[Readjust]	Readjusts the flat table height and continues printing when the possibility of the print heads coming into contact with the object to be printed on is detected during printing.

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

MEMO

Default setting: [Stop]

MEMO

- After printing, [**The table height was readjusted. Press [OK].**] is displayed if the flat table height was automatically adjusted.
  To prevent [**The table height was readjusted. Press [OK].**] from being displayed, set [**Warning Display**] to (off).
- When the flat table height is readjusted automatically and printing continues, the height setting is changed. Therefore, the print quality may change. Hence, proper printing requires that the object to be printed on be secured properly before printing to keep it from moving out of position or lifting up.
- The flat table height is automatically readjusted when the object to be printed on comes into contact with the head gap sensor.

- Printing will be canceled in the following cases, even if [**Readjust**] is selected.
  If printing is canceled, [**Table Height Error**] is displayed.
  - When the object to be printed on coming into contact with the head gap sensor is detected even though the flat table has moved to the bottom
  - When the height reaches the maximum value (threshold) of automatic adjustment
    The maximum value (threshold) for readjustment can be set.

RELATED LINKS

- P. 44 Alignment of Object to Be Printed On
- P. 92 Turning the Suction Function On or Off
- P. 101 Determining the Maximum Value (Threshold) for Automatic Height Adjustment

Determining the Maximum Value (Threshold) for Automatic Height Adjustment

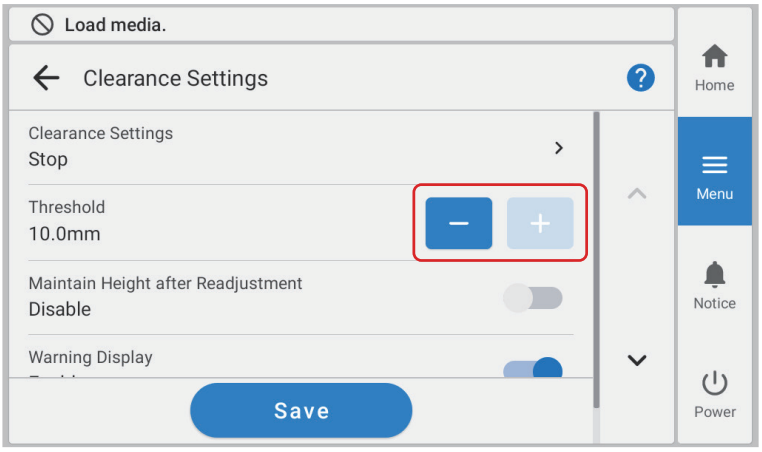
This section explains how to set the maximum value (the threshold) to use when automatically adjusting the height of the flat table during printing.

If an abnormal media height is detected during printing, the flat table is automatically lowered to avoid a collision between the print heads and the object to be printed on, and then the media height is detected again. This operation is automatically repeated until no abnormal media height is detected, and printing continues when the media height is determined to be normal.
When the flat table lowering amount exceeds the maximum value (threshold) for automatic height adjustment, printing is canceled.

This setting is only enabled when [**Readjust**] is selected in [**Clearance Settings**].

Procedure

1. Tap ☰.
2. Tap [Preferences]>[Clearance Settings].
3. Tap − and + to set the [Threshold].



[Threshold]	Description
0.1 mm (0.01 in.) to 10.0 mm (0.39 in.)	Maximum value (the threshold) to use when automatically adjusting the height of the flat table during printing

4. Tap [Save].
5. Tap ⌂ to return to the home screen.

MEMO

Default setting: 10.0 mm

IMPORTANT

The greater the distance between the print surface and the print head, the greater the trend for the printing image quality to drop. Therefore, it is beneficial to minimize the adjustment width. Keep the following points in mind when determining the setting value.

- Consider the effect on the printing image quality in order to obtain satisfactory image quality.

- The variation in height across the entire print surface (not the print target area but including parts that will not be printed)

RELATED LINKS

- P. 99 Enabling Automatic Height Adjustment during Printing

Applying Readjusted Flat Table Heights to Registered Media Settings

Use the setting described here to overwrite the registered media settings with the flat table height to which the flat table was readjusted during printing.

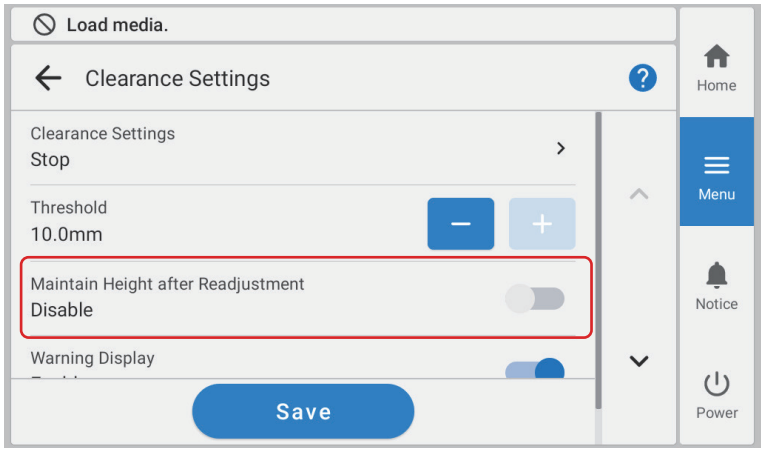
This setting is only enabled when [**Readjust**] is selected in [**Clearance Settings**].

MEMO

When this setting is set to [**Enable**], you can reduce the time it takes for [Readjust] when printing on the same object without changing the media settings. Print time is reduced, but print quality tends to be lower because the distance between the print heads and the object is lengthened. If print quality is important to you regardless of whether it takes more time to print, disable this setting.

Procedure

1. **Tap ☰.**
2. **Tap [Preferences]>[Clearance Settings].**
3. **Tap next to [Maintain Height after Readjustment] to change the setting.**



[Maintain Height after Readjustment]	Description
	[**Disable**]: Leaves the registered media settings unchanged.
	[**Enable**]: Use the setting described here to overwrite the registered media settings with the flat table height to which the flat table was readjusted during printing.

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

MEMO

Default setting: [**Disable**]

RELATED LINKS

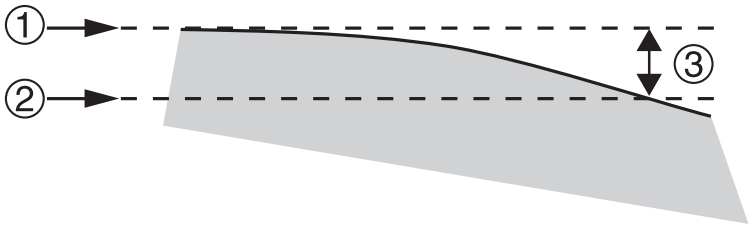
- P. 99 Enabling Automatic Height Adjustment during Printing

Notes When the Print Surface Is Uneven

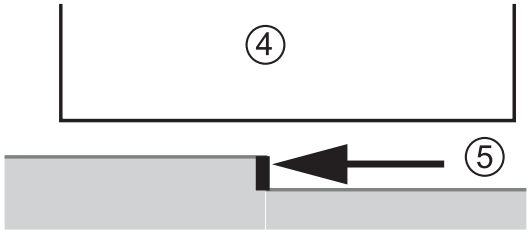
This machine can also print on uneven surfaces. However, remember the following points for the height setting.

- 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 (⑤) that is perpendicular to the print head (④) is not possible.

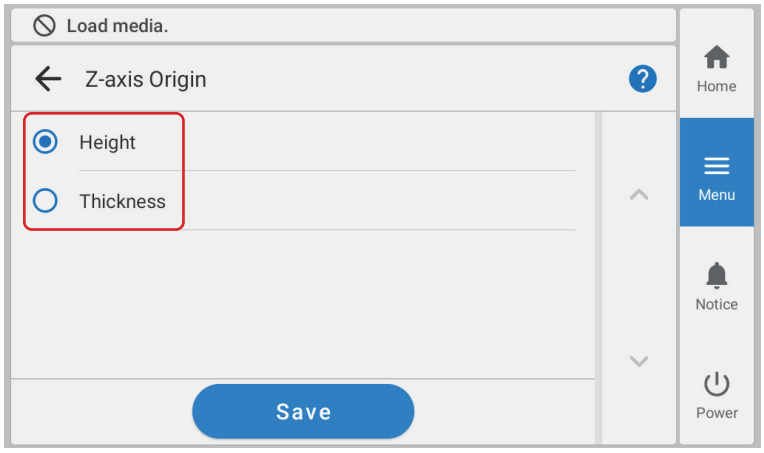


Changing [Z-axis Origin]

You can select whether to set the origin of the Z axis (which indicates the distance in the height direction) to the lowest or highest position on the Z axis.

Procedure

1. Tap .
2. Tap [Preferences]>[Z-axis Origin].
3. Select [Z-axis Origin] from the following.



[Z-axis Origin]	Description
[Height]	The lowest state of the flat table is used as the origin (0 mm) of the Z-axis, and the distance up along the axis from the origin is displayed as [**Height**].
[Thickness]	The highest state of the flat table is used as the origin (0 mm) of the Z-axis, and the distance down along the axis from the origin is displayed as [**Thickness**]. The value displayed as [**Thickness**] takes into account items such as the height of the flat table. Therefore, the displayed value may differ from the actual thickness of the object to be printed on.

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

MEMO

Default setting: [**Height**]

Printing Area Settings

Fixing the Base Position of the Printing Area

You can use the positioning pins to fix the lower right corner of the flat table as the base position (home position) of the printing area.

Load the object to be printed on by pressing it against the positioning pins. For details of the procedure, refer to Loading the Object to Be Printed on by Pressing It Against the Positioning Pins(P. 45).

Setting the Printing Area Using the Center of the Printing Area as the Base Position

1. Setting the Base Printing Position Setting in the Center

This section explains how to set the print origin to the center of the printing area with the base printing position setting. This setting method is appropriate when clear specification of the printing area is difficult or when the print site is curved or uneven.

Printing area setup can be performed with the front cover open.

Procedure

1. **Tap ☰.**
2. **Tap [Preferences]>[Base Printing Position].**
3. **Select [Center].**



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

MEMO

- Default setting: **[Bottom Right]**

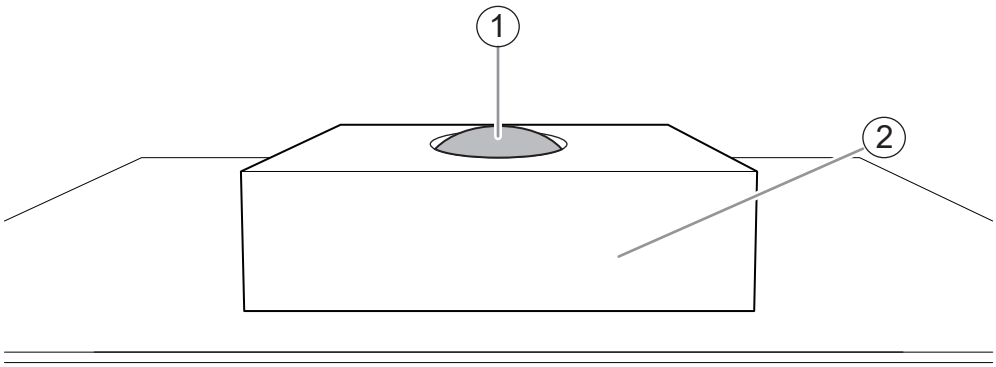
2. Attaching the Object to Be Printed on

Procedure

1. **Secure the object (①) to be printed on.**

   A jig (②) might be required according to the shape of the object to be printed on.

   The following figure shows an example of using jigs to fit the shape of the object to be printed on.



RELATED LINKS

- P. 22 Printable Materials and Shapes

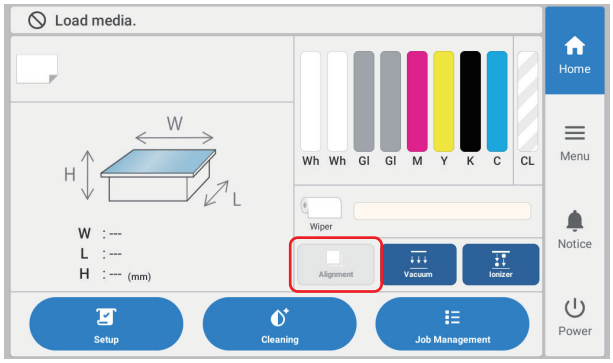
3. Detecting the Height of the Object to Be Printed on Automatically

The height of the object to be printed on is automatically detected, and the print heads are adjusted to the appropriate height for printing.

IMPORTANT

If the height of the object to be printed on is 4.0 mm (0.15 in.) or less, switch off [**Alignment**] and lower the positioning pins. If the positioning pins are higher than the object to be printed on, the height is set with the positioning pins, not the object to be printed on, used as the reference.

If the object to be printed on presses firmly against the positioning pins, they may not lower even if [**Alignment**] is switched off. In this case, lower the positioning pins by pressing them with your fingers.



Procedure

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

   Refer to Steps 1 through 6 of Determining the Print Surface Height and Printing Position(P. 79) to perform [**Select**] of [**Preset**].

2. **Tap [Change] next to [Table Height].**

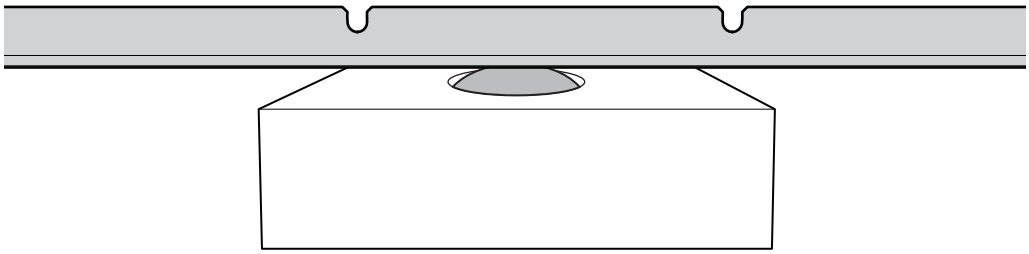
3. **Move the highest position of the printing surface closer to the head gap sensor.**

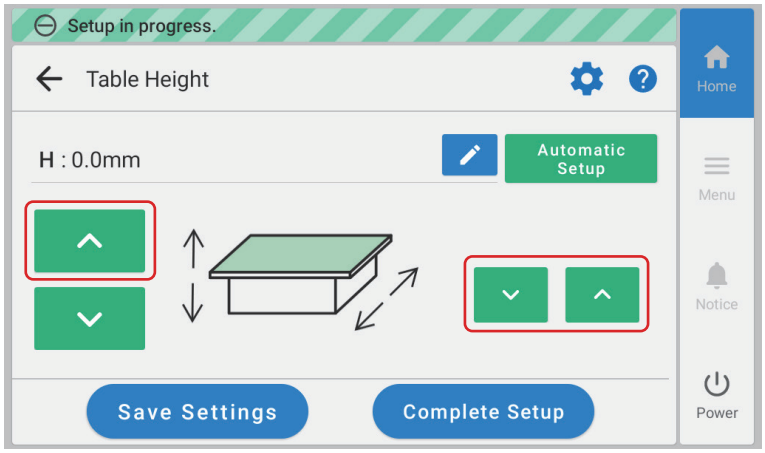
   (1) **Move the object to be printed on so that it is under the head gap sensor.**

   Long tap or tap ^ v lined up on the right side of the screen to move the flat table forward or backward.

   (2) **Move the highest position of the printing surface closer to the head gap sensor.**

Long tap or tap [^] [v] lined up vertically on the left side of the screen to bring the highest printing position of the print surface closer to the head gap sensor.





4. **Tap [Automatic Setup].**

The height of the object to be printed on will be set automatically to a position about 1 mm (39.4 mil) away from the print head's ink emission surface.

MEMO

You can change the distance between the ink emission surface of the print heads and the object to be printed on.

5. **Tap [OK].**

RELATED LINKS

- P. 96 Adjusting the Distance between the Object to Be Printed on and the Print Heads

4. Setting the Printing Area

For a printing test, set the printing area with W (width) of 110 mm (4.34 in.) or more and L (length) of 110 mm (4.34 in.) or more. An error will occur and printing tests cannot be performed if the area is smaller than this.

Procedure

1. **Tap [Change] next to [Printing Area].**

2. **Tap [^], [v], [<], or [>] once.**

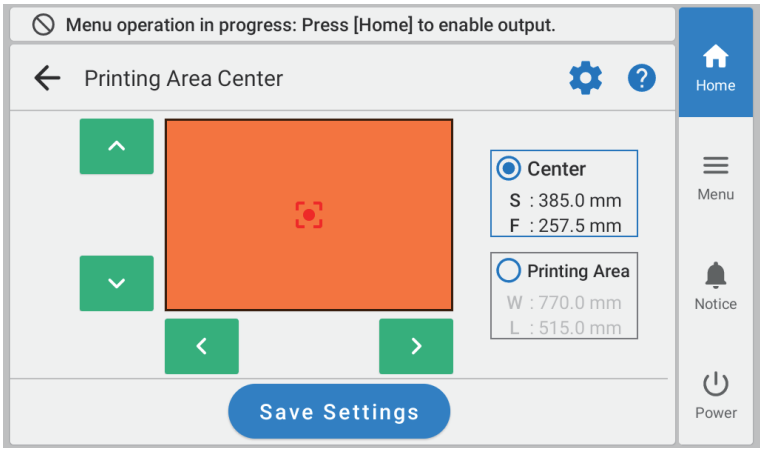
The flat table and print-head carriage will move, and the pointer will point to the previously-set print origin.

Subsequently, when you have finished setting the printing area, the print-head carriage will automatically return to the standby position to protect the print heads from drying out if they have not been moved by the user for approximately three minutes. Perform the procedure again.

3. **Long tap or tap [^], [v], [<], and [>] to move the pointer to the position (print origin) so that it points to the center of the printing area.**

MEMO

If [**Use coordinates to specify the printing area without moving the carriage or table.**] is enabled, specify the values for [**S**] and [**F**].

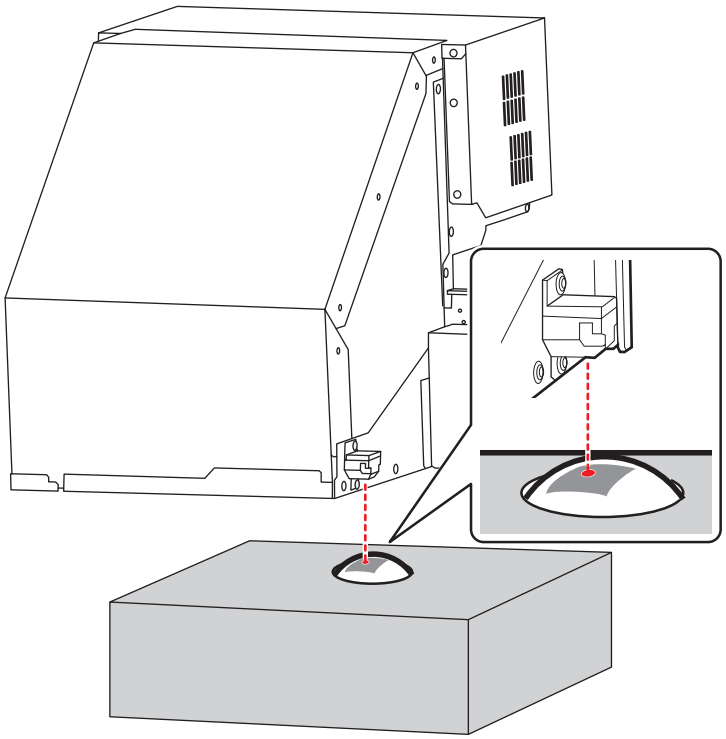


MEMO

[**Print Origin**] cannot be changed if [**Base Printing Position**] is set to [**Center**] and [**Printing Area**] is set to the maximum. If [**Printing Area**] is set to the maximum, perform [**Printing Area Settings**] first.

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.
- By opening the front cover, this work can be performed while viewing up close. However, because the print-head carriage or flat table may start moving, be careful not to touch any moving parts.

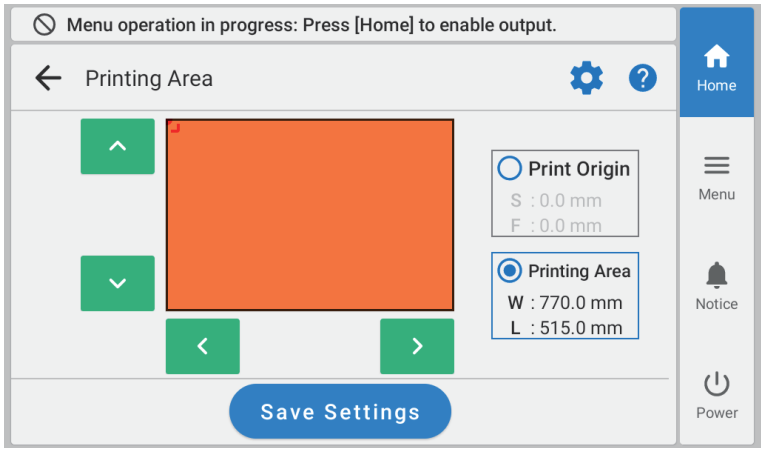


4. **Tap [Printing Area] to select it.**

5. **Tap ^, v, <, and > to set the printing area W (width) and L (length).**

MEMO

The print-head carriage will not move if [**Base Printing Position**] is set to [**Center**].



Make sure that the W and L values for the [**Printing Area**] are the values intended.

6. **Close the front cover if it is open.**

7. **Tap [Complete Setup].**

The printing area is specified and the print-head carriage returns to the standby position.

MEMO

Tap [**Save Settings**] to return to the setup item selection screen to change the settings as necessary.

MEMO

Select the [**Center on the Media**] under [**Position**] in VersaWorks to print.

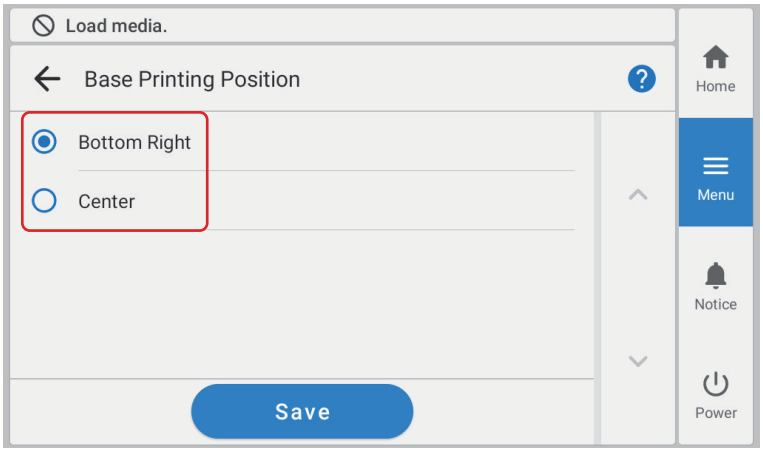
Changing Just the Printing Position Reference Setting (Origin)

You can change just the position reference (origin) for each printing operation.

1. Checking That the Base Printing Position Setting Is Set to the Lower Right

Procedure

1. Tap ☰.
2. Tap [Preferences]>[Base Printing Position].
3. When [Center] is selected for [Base Printing Position], tap [Bottom Right] to select it.
   If [**Bottom Right**] is already selected, proceed to step 5.



4. Tap [Save].
5. Tap ⌂ to return to the home screen.

2. Changing the Print Origin

Procedure

1. Tap on the home screen.
   Make sure that the media for which the print origin is to be changed is displayed in [**Preset**].
   If the media is not displayed, tap [**Select**] and select the media to be changed.
2. Tap [Change] next to [Printing Area].
3. Tap [Print Origin], and then tap ∧, ∨, ‹, or › once.
   The flat table and print-head carriage will move, and the pointer will point to the previously-set print origin.
   Subsequently, when you have finished setting the printing area, the print-head carriage will automatically return to the standby position to protect the print heads from drying out if they have not been moved by the user for approximately three minutes. Perform the procedure again.

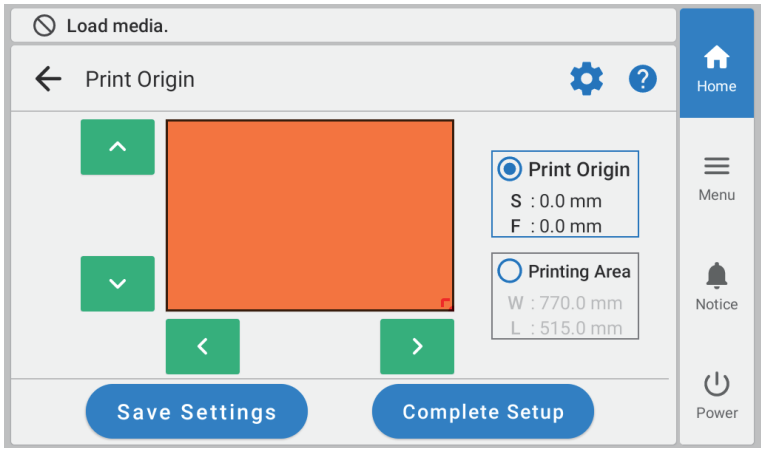
MEMO

If **[Use coordinates to specify the printing area without moving the carriage or table.]** is enabled, the print-head carriage will not move, so the print-head drying protection function will not work.

4. Long tap or tap ^, v, <, and > to move the pointer to the position (origin) so that it points to the right front of the printing area.

MEMO

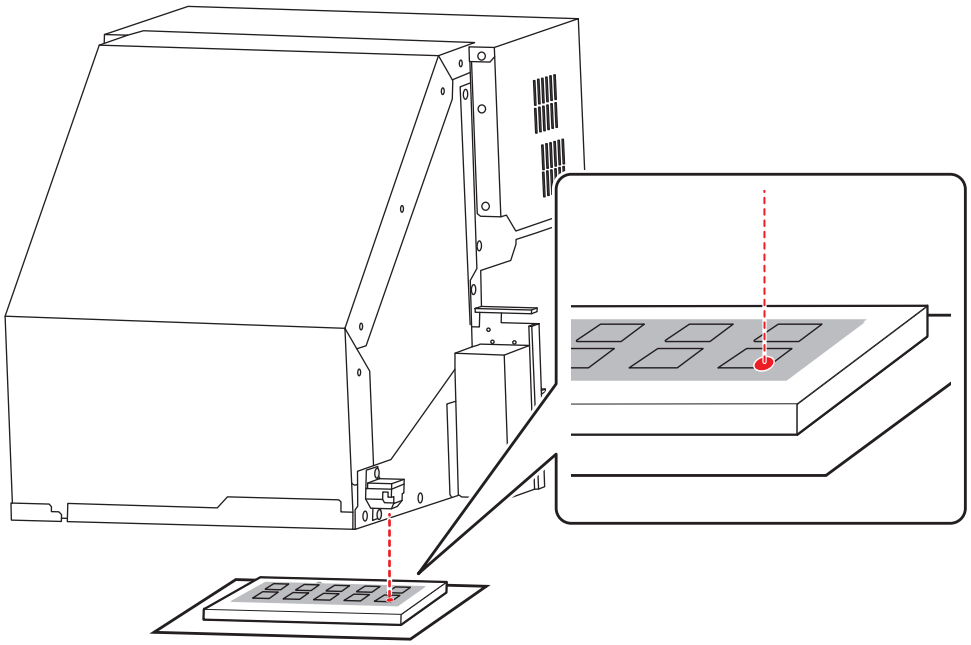
If **[Use coordinates to specify the printing area without moving the carriage or table.]** is enabled, specify the values for **[S]** and **[F]**.



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.
- By opening the front cover, this work can be performed while viewing up close. However, because the print-head carriage or flat table may start moving, be careful not to touch any moving parts.



5. **Close the front cover if it is open.**

6. **Tap [Complete Setup].**
   The print origin is changed and the print-head carriage returns to the standby position.

MEMO

Tap [**Save Settings**] to return to the setup item selection screen to change the settings as necessary.

Changing the Operation Performed When Setting Up the Printing Area

This section explains how to change the operation of the machine when setting the print origin and printing area. You can configure settings without moving the print-head carriage or flat table, or you can set the operation of the up/down buttons to be opposite(*1) to the direction of flat table movement.

*1: This is an operation setting for the flat table that assumes the print-head carriage moves in the forward/backward direction.

Procedure

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

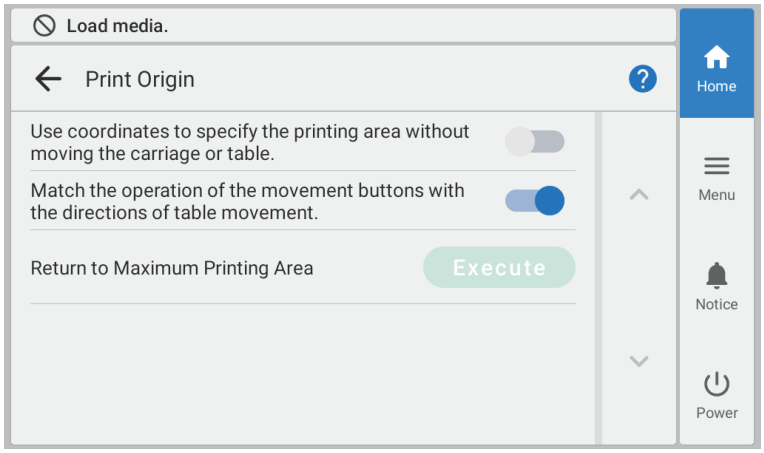
   Refer to steps 1 through 10 of Determining the Print Surface Height and Printing Position(P. 79) to configure settings for outside the printing area.

2. **Tap [Change] next to [Printing Area].**

3. **In the [Printing Area Settings] screen, select the [Print Origin].**

4. **Tap** ⚙.

   The [**Print Origin**] screen appears.



5. **Tap** ●, ○, **or [Execute] to change the settings.**

[Use coordinates to specify the printing area without moving the carriage or table.]	Description
●	Configure settings without moving the print-head carriage or flat table. This is used when it is clear in advance at which position on the flat table the object is placed, such as when a retainer is used to hold the object. Tap ∧, ∨, ‹, and › on the operation panel to specify the location.
○	Move the print-head carriage or flat table, and then use the pointer to check the position of the print-head carriage or table as you configure settings. The print-head carriage and flat table are moved in conjunction with the ∧, ∨, ‹, and › operations on the operation panel.

[Match the operation of the movement buttons with the directions of table movement.]	Description
	Tap ^ on the operation panel to move the flat table toward the back or v to move the flat table forward.
	Tap ^ on the operation panel to move the flat table forward or v to move the flat table toward the back.

[Return to Maximum Printing Area]	Description
[Execute]	You can tap [**Execute**] when [**Use coordinates to specify the printing area without moving the carriage or table.**] is set to  and the setup of the object to be printed on is not completed.

MEMO

You can select [**Printing Area**] in the [**Printing Area Settings**] screen and then tap  to change the settings.

6. Tap ←.

7. **Set the [Print Origin] and [Printing Area].**

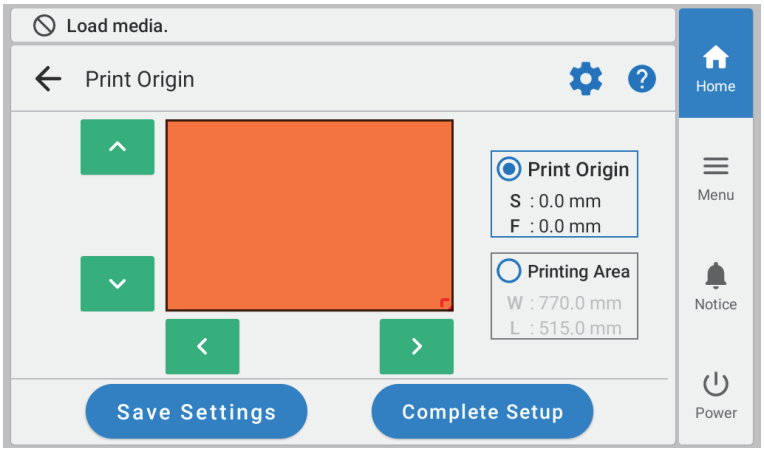
Refer to steps 12 through 15 of Determining the Print Surface Height and Printing Position(P. 79) to set the printing area.

8. **Close the front cover if it is open.**

9. **Tap [Complete Setup].**

MEMO

- Tap [**Save Settings**] to return to the setup item selection screen to change the settings as necessary.



- When [**Setup**] has completed for the object to be printed on, you can also change the settings from ☰ > [**Media Settings**]>[**Printing Zone**].

MEMO

Default setting:

- [**Use coordinates to specify the printing area without moving the carriage or table.**]: Off

- [**Match the operation of the movement buttons with the directions of table movement.**]: Selected

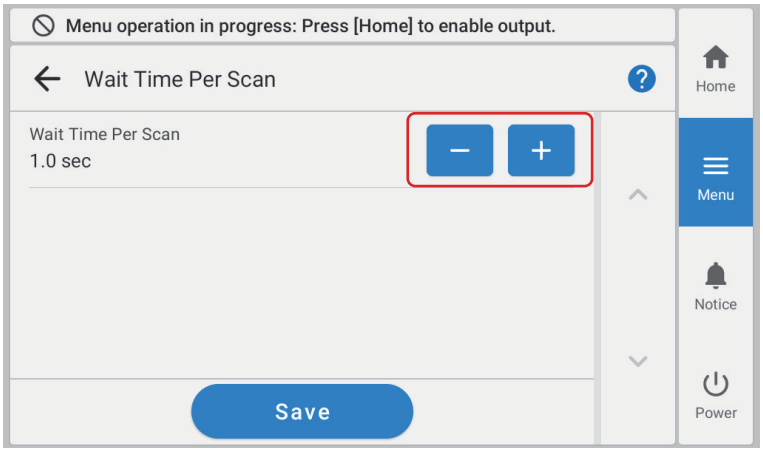
Stabilizing Image Quality

Set the [Wait Time Per Scan].

The image quality may be rough due to recoil caused by the movement of the print-head carriage during printing. In this situation, you may be able to stabilize the image quality by making the print-head carriage pause when it returns to the opposite side. If the image quality feels coarse, set the [**Wait Time Per Scan**].

Procedure

1. Tap ☰.
2. Tap [Media Settings]>[Wait Time Per Scan].
3. Tap − or + to set [Wait Time Per Scan].



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

MEMO

- Default setting: [**Off**]

Optimizing Work Efficiency

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Managing the Media Settings

Changing the Media Settings

Use the following procedure to change the media settings. These settings can only be changed for the media being set up.

Procedure

1. **Set up the object to be printed on.**
   Determining the Print Surface Height and Printing Position(P. 79)
2. **Tap ☰.**
3. **Tap [Media Settings]>[List of Media Settings].**
4. **Tap > next to the setting you want to change to move to the screen for editing this setting.**
   The media settings that can be changed are as follows.

   MEMO

   Of the settings in the **[List of Media Settings]**, **[Table Height]** and **[Table Lowering Amount]** cannot be changed.

[List of Media Settings]	Reference page
[Printing Zone]	Determining the Print Surface Height and Printing Position(P. 79)
[Media Suction Force]	Adjusting the Suction Force(P. 93)
[Printing Movement Range]	Speeding Up Printing for Narrow Objects(P. 129)

5. **If you have changed a setting, tap [Save Settings] or [Save].**
6. **Tap ⌂ to return to the home screen.**

Changing the Settings with Batch Media Settings

This section explains how to change media settings as a batch during setup.

Procedure

1. Tap ☰.

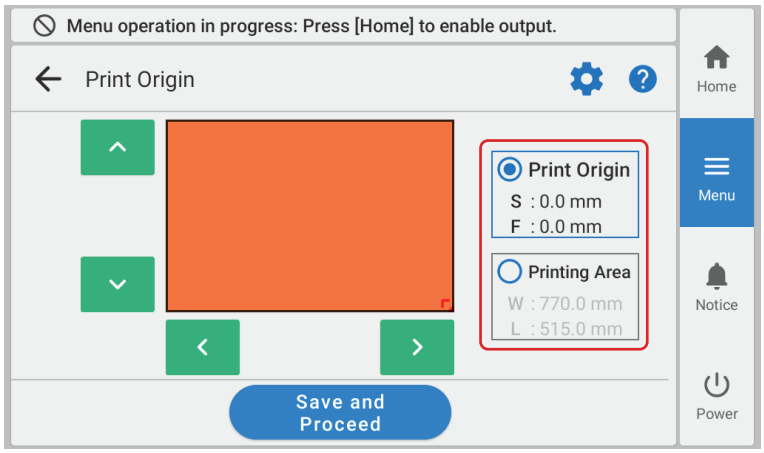
2. **Tap [Media Settings]>[Batch Media Settings].**

   Change the settings for [**Print Origin**], [**Printing Area**], [**Media Suction Force**], [**Output Start Location**] under [**Nozzle Drop-out Test**], and [**Printing Movement Range**] in that order.

3. **Change the settings for [Print Origin] and [Printing Area].**

   Refer to steps 12 through 15 of Determining the Print Surface Height and Printing Position(P. 79) to change the settings.

   When you have finished configuring the settings, tap [**Save and Proceed**].

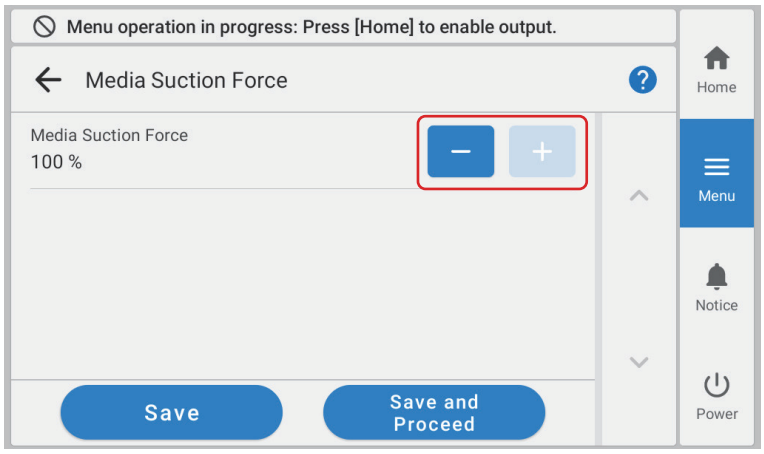


4. **Change the [Media Suction Force].**

   Refer to step 5 of Adjusting the Suction Force(P. 93) to change the setting.

   When you have finished configuring the settings, tap [**Save and Proceed**].

> **MEMO**
>
> If you want to stop after making changes up to this point, tap [**Save**]>⌂.



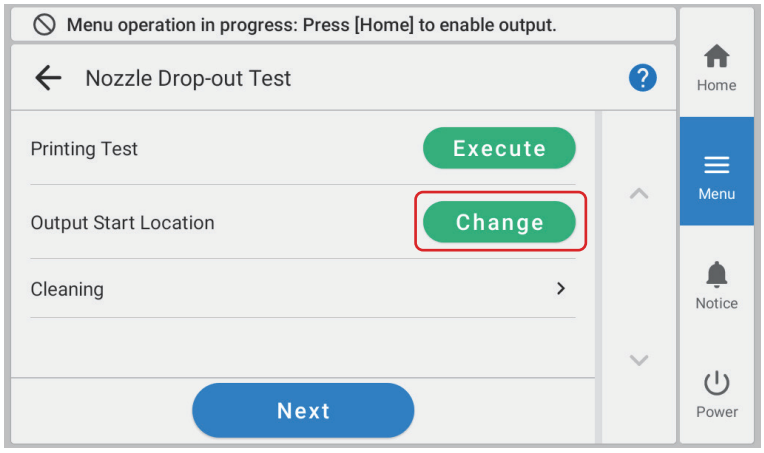
5. **Change the [Output Start Location].**

Refer to Step 3 of Step 2: Performing a Nozzle Drop-out Test(P. 55) to perform the test.

Once you have performed the test, tap **[Next]**.

MEMO

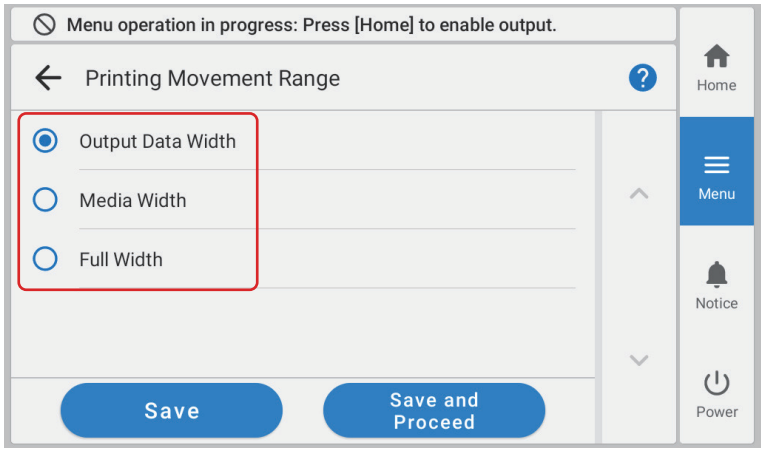
If you want to stop after making changes up to this point, tap .



6. **Change the [Printing Movement Range].**

Refer to step 3 of Speeding Up Printing for Narrow Objects(P. 129) to change the setting.

When you have finished configuring the settings, tap **[Save and Exit]**.



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

Checking the Registered Media Settings

Procedure

1. Tap .
2. Tap [Media Management].
   The registered media are displayed in a list.
3. Tap a media setting.
4. Tap [List of Media Settings].
   The registered media setting values are displayed in a list.

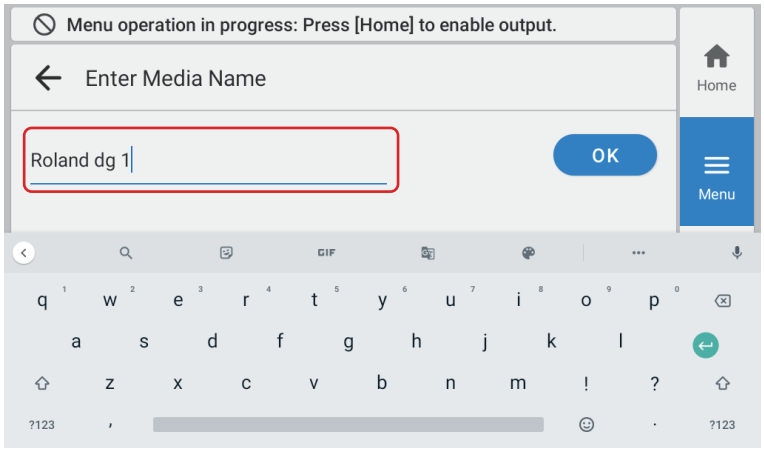
[List of Media Settings]
[Printing Zone]
[Media Suction Force]
[Printing Movement Range]

5. Tap to return to the home screen.

Changing the Media Name

Procedure

1. Tap ☰.
2. Tap [Media Management].
   The registered media are displayed in a list.
3. Tap the media whose name you want to change.
4. Tap ✎.
5. Tap the input field and enter the media name.



6. Tap [OK] to confirm your entry.
7. Tap ⌂ to return to the home screen.

Duplicating Media Settings

This section explains how to duplicate existing media.

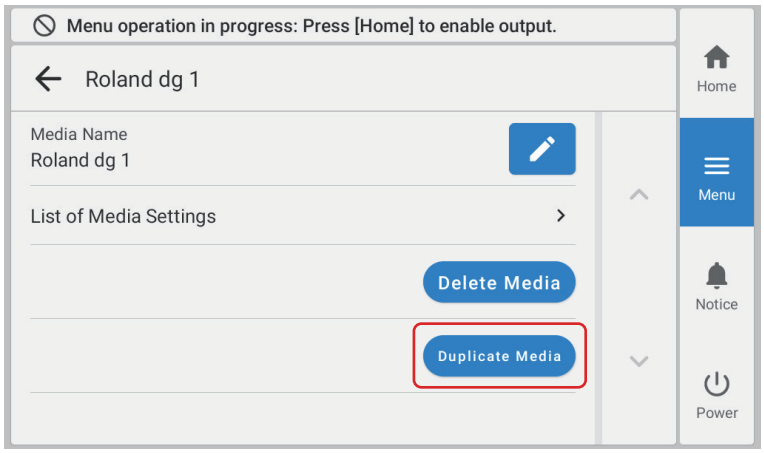
Procedure

1. **Tap** .

2. **Tap [Media Management].**
   The registered media are displayed in a list.

3. **Tap the media to duplicate.**

4. **Tap [Duplicate Media].**



   A screen for entering the name of the duplicated media appears. To create this name, **[COPY]** is added at the start of the name of the media being duplicated.

5. **Enter the media name and tap [OK].**

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

Deleting Media Settings

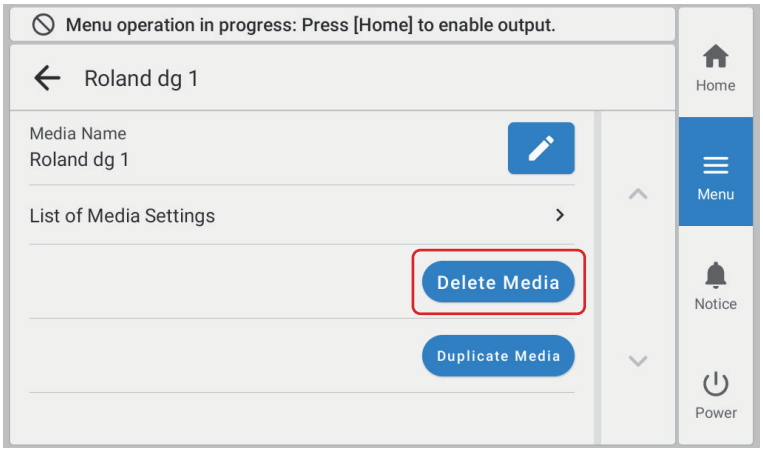
This deletes registered media.

MEMO

This operation cannot be performed on the object to be printed on being set up. To perform this operation, first cancel setup for the object to be printed on.

Procedure

1. **Tap ☰.**
2. **Tap [Media Management].**
   The registered media are displayed in a list.
3. **Tap the media to be deleted.**
4. **Tap [Delete Media].**



5. **Tap [Yes] when the confirmation screen appears.**
   The media is deleted, and you are returned to the screen listing the registered media.
6. **Tap ⌂ to return to the home screen.**

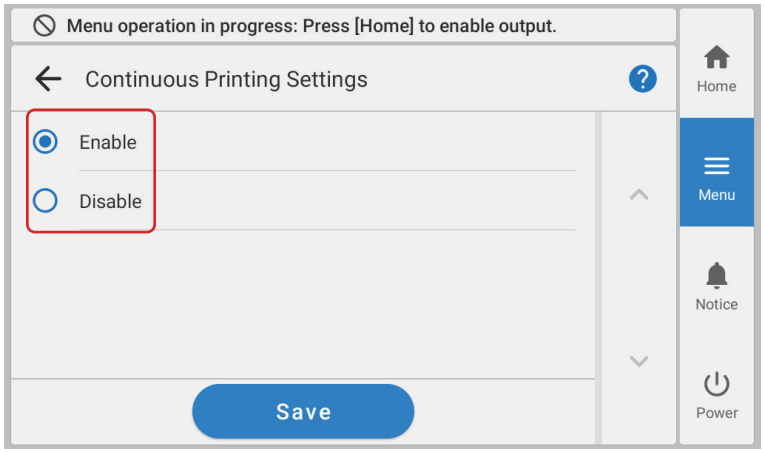
Reducing Output Time

Continuously Printing Multiple Sets of Data

You can set up printing so that when multiple sets of print data are sent at a time from the computer, the sent data is continuously printed.

Procedure

1. Tap ☰.
2. Tap [Preferences]>[Continuous Printing Settings].
3. Select [Continuous Printing Settings] from the following.



[Continuous Printing Settings]	Description
[Enable]	Select this setting when outputting multiple data entries in a row without replacing the object. This function is useful when you want to overlay multiple images on a single object to be printed on.
[Disable]	Select this setting when the object is to be replaced each time one data entry is printed. Even when multiple data entries are sent at a time from the computer, they are not output as a batch, and a message indicating that printing is finished is displayed after each single data entry is printed. Check the message, and then tap [**Exit**].

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

MEMO

- Default setting: [**Disable**]

Speeding Up Printing for Narrow Objects

This shortens printing time by reducing the width of print-head carriage movement to the minimum necessary. This feature is effective when the object to be printed on or the print data has a small width.

Procedure

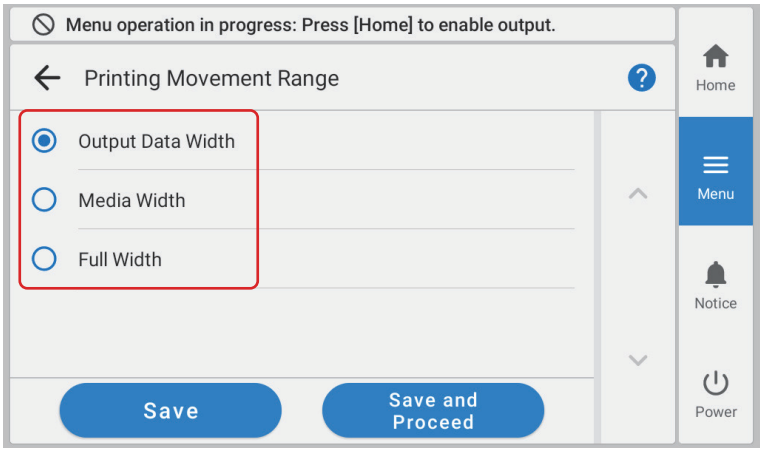
1. **Set up the object to be printed on.**

   P. 79 Determining the Print Surface Height and Printing Position

2. **Tap** ☰.

3. **Tap [Media Settings]>[Printing Movement Range].**

4. **Select [Printing Movement Range] from the following.**



[Printing Movement Range]	Description
[Output Data Width]	Matches the range of print-head carriage movement to the printing data. Movement is limited to the minimum amount necessary, and this can be expected to yield the fastest printing. When this setting is used, the time needed for the ink to harden is not constant, and an uneven color may result.
[Media Width]	This setting aligns the movement range of the print-head carriage with the preset printing area.
[Full Width]	The print-head carriage moves from one end of the machine to the other. This setting makes the speed of print-head carriage movement 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 irradiation distance of the ultraviolet light after printing.

IMPORTANT

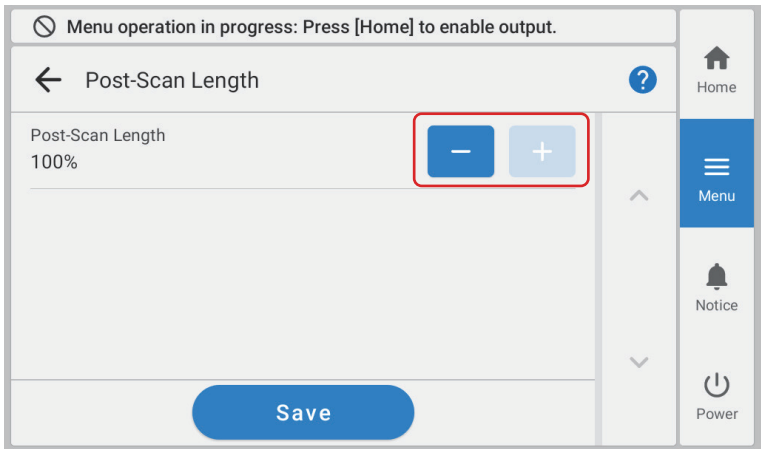
If this distance is too short, the ultraviolet light's irradiation time will also be too short, possibly preventing the ink from being cured. Be sure to try printing and check that the ink is cured.

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-Scan Length].**
3. **Tap − or + to set the irradiation distance of the ultraviolet light.**



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

IMPORTANT

You can change the irradiation 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 settings: [**100%**]

Setting the Smallest Possible Printing Area

When [**Media Width**] is selected under [**Printing Movement Range**], you can reduce printing time by specifying the printing area to be a minimum. Specify the printing area to the minimum necessary. This restricts the range of the print-head carriage movement, which reduces the print time. When this setting is used, the time needed for the ink to harden is not constant, and an uneven color may result.

Example of good settings	Example of bad settings
	
The blank area in the printing area is minimized.	The printing area has a lot of unnecessary blank areas.

Specifying the Flat Table Position After Setup Completion

After the object to be printed on is set up, you can specify the movement destination of the flat table in advance. This action eliminates unnecessary table movement after setup, allowing printing to start immediately and reducing the time required to begin printing.

Procedure

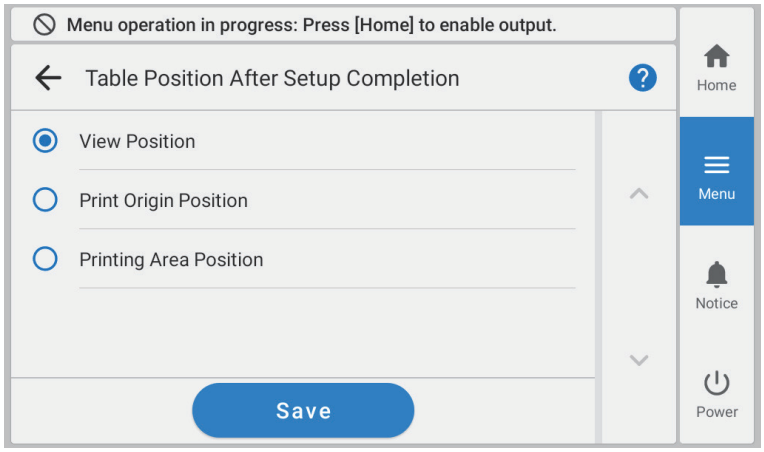
1. **Set up the object to be printed on.**

   P. 79 Determining the Print Surface Height and Printing Position

2. **Tap ☰.**

3. **Tap [Preferences]>[Table Position After Setup Completion].**

4. **Select [Table Position After Setup Completion] from the following.**



[Table Position After Setup Completion]	Description
[View Position]	After setup finishes, the flat table moves forward.
[Print Origin Position]	After setup finishes, the flat table moves to the print origin position. Use this option in print modes that reference the print origin.
[Printing Area Position]	After setup finishes, the flat table moves to the trailing edge of the printing area. Depending on the print mode,*1 the reference will be the trailing edge of the printing area, not the print origin, so the flat table moves to this trailing edge.

*1 Such as during one pass multilayer printing of [White]>[CMYK] or [Primer]>[CMYK].

5. **Tap [Save] to confirm your entry.**

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

MEMO

- Default setting: [View Position]

Managing VersaWorks Jobs

Outputting a Job

From the operation panel, perform [**VersaWorks**] and [**Queue Folder**] via Roland DG Connect Hub, and then print the job.

First, check the following items:

- Roland DG Connect Hub version 3.2.0 or later is installed on the computer where VersaWorks is installed.
- The VersaWorks version is 7.3.0 or later.
- Roland DG Connect Hub has started, and you have signed in.
- VersaWorks is running.
- The printer is ready to print (media has been set up).

Procedure

1. **Tap > [Job Management] > [Direct Printing].**

   The VersaWorks list (VersaWorks nicknames that were set with Connect Hub) is displayed.

   MEMO

   You can also switch to the [**Direct Printing**] selection screen by tapping [**Job Management**] on the home screen.

2. **Tap the desired VersaWorks.**

   A list of the queue folders is displayed.

3. **Tap the desired queue folder.**

   The job list is displayed.

4. **Tap to update the job and get the latest job status information.**

5. **Tap the job you want to print.**

6. **Tap [Execute].**

   The job is printed.

Displaying the Printing Log

Displays [**Printing Log**].

The [**Job Properties**] for each job, and the [**Total Time**] and [**Total Area**] for all jobs, can be checked.

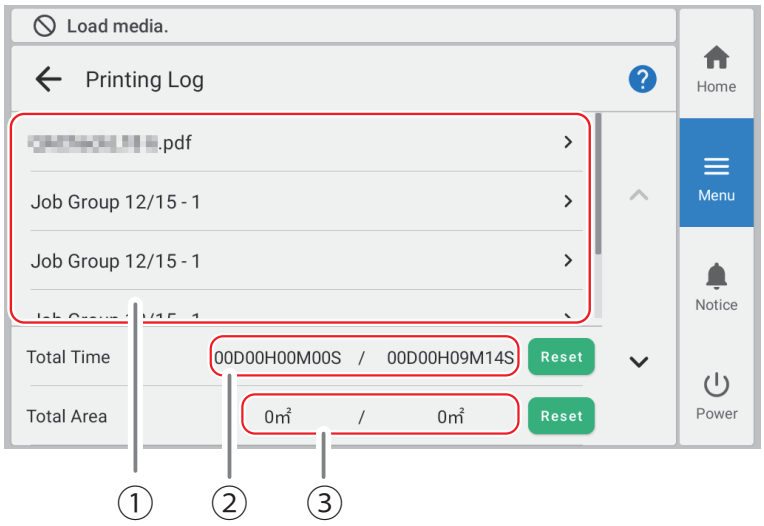
First check that VersaWorks is version 7.5.0 or later.

Procedure

1. **Tap ☰ > [Job Management] > [Printing Log].**

> **MEMO**
>
> You can also switch to the [**Printing Log**] selection screen by tapping [**Job Management**] on the home screen.

The following is displayed.



①	[**Printing Log**] Tap a job to display the following [**Job Properties**]. • [**Job Name**] • [**Copy**] • [**Print Start Time**] • [**Print End Time**] • [**Required Time**]
②	[**Total Time**] */* is displayed. The left side indicates the trip [**Total Time**], and the right side indicates the total [**Total Time**]. • Trip [**Total Time**] Displays the total printing hours for any period of time, such as daily or weekly. To reset to 0, tap [**Reset**]. Reset when you wish to start measurement. • Total [**Total Time**] Displays the total cumulative printing time. This function cannot be reset.

③	[**Total Area**] */* is displayed. The left side indicates the trip [**Total Area**], and the right side indicates the total [**Total Area**]. • Trip [**Total Area**] Displays the total printing area for any period of time, such as daily or weekly. To reset to 0, tap [**Reset**]. Reset when you wish to start measurement. • Total [**Total Area**] Displays the total cumulative printing area. This function cannot be reset.

2. **To check the [Job Properties] for a specific job, select the job.**

The [**Job Properties**] appears.

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

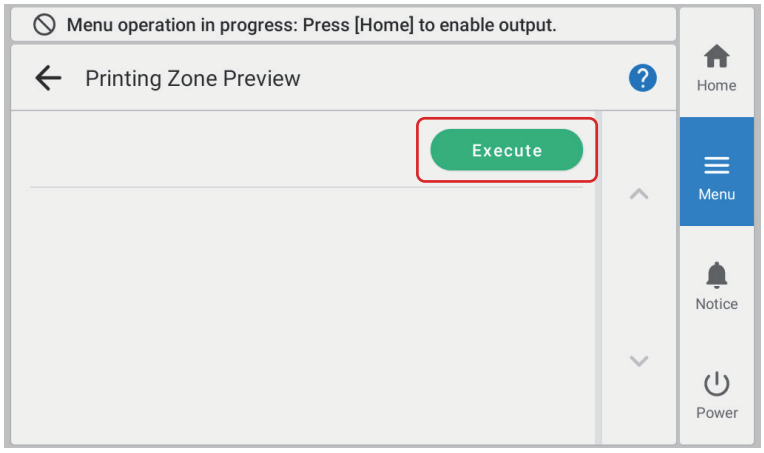
Other Useful Functions

Using the Printing Zone Preview

The printing zone of the set up media is indicated with pointers.

Procedure

1. **Set up the object.**
   Determining the Print Surface Height and Printing Position(P. 79)
2. **Tap ☰.**
3. **Tap [Preferences]>[Printing Zone Preview].**
4. **Tap [Execute].**
   The set print range is indicated by the pointer.



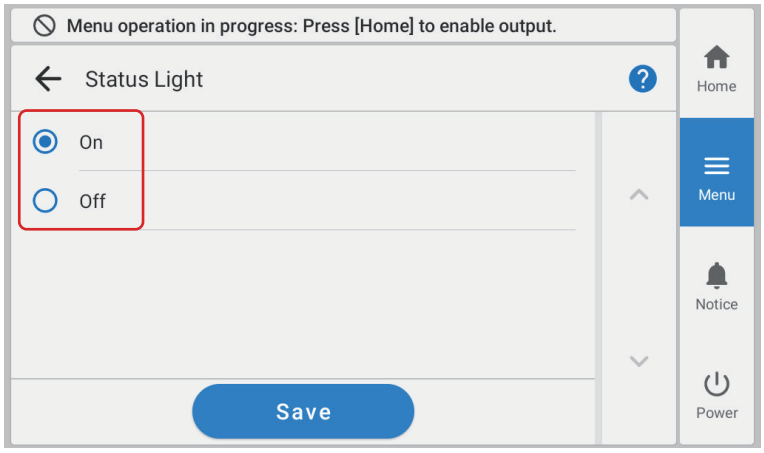
5. **Tap ⌂ to return to the home screen.**

Using the Status Light

This section explains how to set whether to turn the status light to indicate the status of the machine on or off.

Procedure

1. Tap ☰.
2. Tap [Preferences]>[Status Light].
3. Select the [Status Light] setting from the following.



[Status Light]	Description
[On]	Activates the status light that indicates the status of the machine.
[Off]	Turns off the status light.

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

MEMO

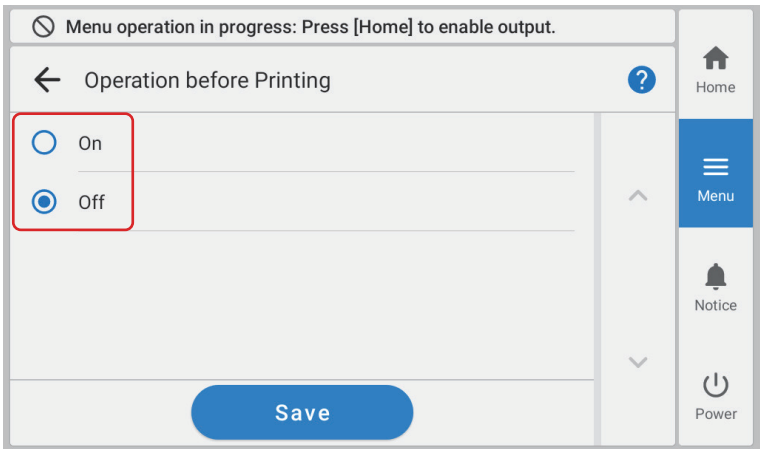
- Default setting: [On]

Performing [Operation before Printing]

Set whether to check the height of the object before starting printing.

Procedure

1. Tap .
2. Tap [Preferences]>[Operation before Printing].
3. Select [Operation before Printing] from the following.



[Operation before Printing]	Description
[On]	The flat table moves all the way to the back and then to the starting printing position so that the height of the object to be printed on can be checked before printing begins.
[Off]	The height of the object is not checked before printing.

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

MEMO

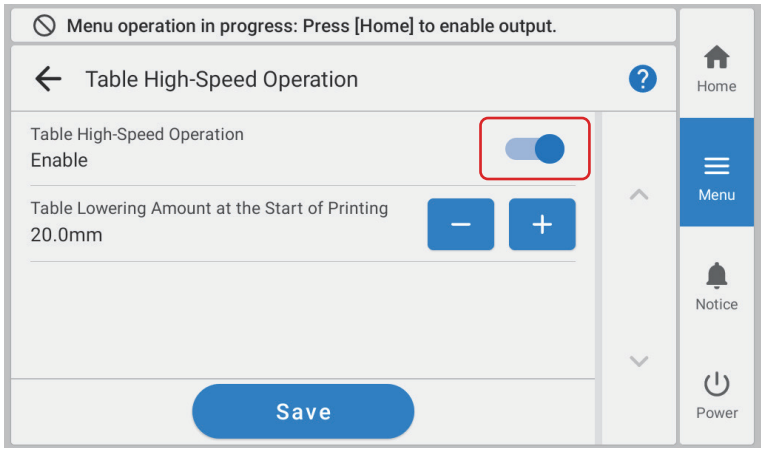
- Default setting: [Off]

Changing the Flat Table Operating Speed

The flat table forward/backward operation speed can be increased for operations other than printing. The speed at which the flat table moves, such as the printer initialization speed, can be changed.

Procedure

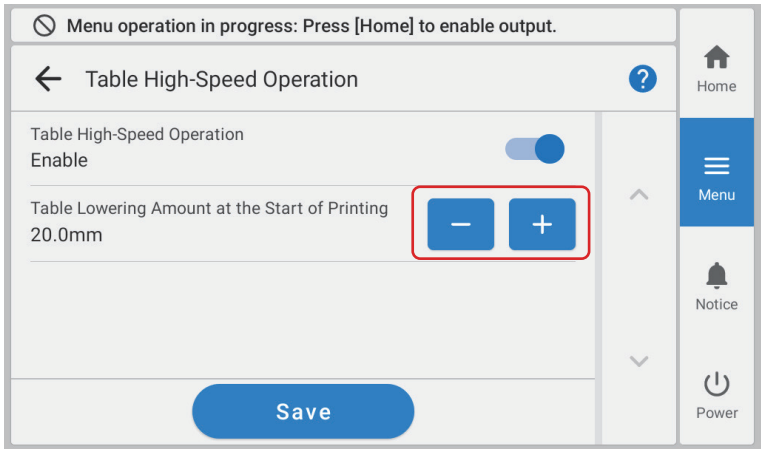
1. Tap ☰.
2. Tap [Preferences]>[Table High-Speed Operation].
3. Tap  or  to change the settings.



[Table High-Speed Operation]	Description
	The flat table moves forward/backward at a faster speed for operations other than printing.
	The flat table operates more slowly.

IMPORTANT

When [**Table High-Speed Operation**] is set to , the head gap sensor may come into contact with the object to be printed on during the operation of the flat table before printing. To prevent this contact, set a larger lowering amount in advance.



4. Tap [Save] to confirm your entry.

5. Tap  to return to the home screen.

MEMO

[Table High-Speed Operation]

- Default setting: 

[Table Lowering Amount at the Start of Printing]

- Default setting: 3.0 mm (0.12 in.)

Changing the Operation Performed when Setting the Printing Test Start Location

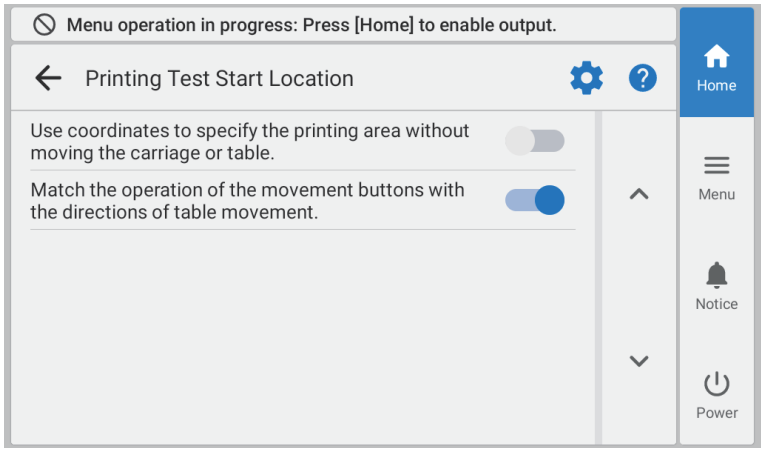
Procedure

1. **Set up the object to be printed on.**
   Determining the Print Surface Height and Printing Position(P. 79)

2. **Tap on the home screen.**

3. **Tap [Change] next to [Output Start Location].**
   The [**Printing Test Start Location**] screen appears.

4. **Tap .**



5. **Tap or to change the settings.**

[Use coordinates to specify the printing area without moving the carriage or table.]	Description
	Configure the [**Printing Test Start Location**] settings without moving the print-head carriage or flat table. Tap , , , and on the operation panel to specify the location.
	Move the print-head carriage or flat table, and then use the pointer to check the position of the print-head carriage or table as you configure settings. The print-head carriage and flat table are moved in conjunction with the , , , and operations on the operation panel.

[Match the operation of the movement buttons with the directions of table movement.]	Description
	Tap on the operation panel to move the flat table toward the back or to move the flat table toward you.
	Tap on the operation panel to move the flat table toward you or to move the flat table toward the back.

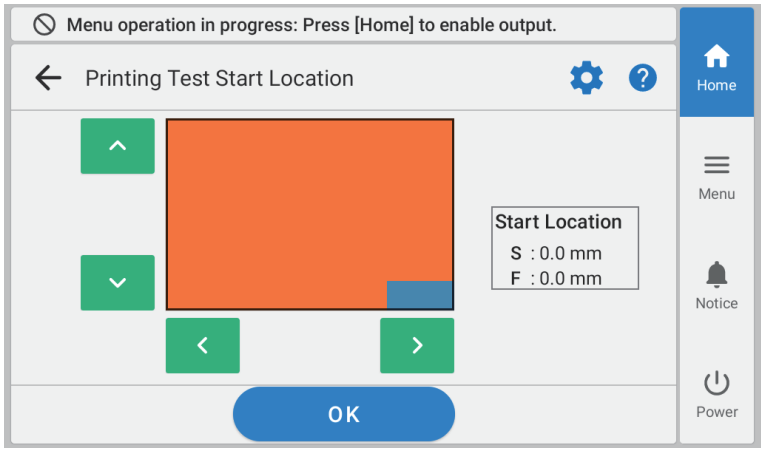
6. **Tap .**

7. **Set the printing test start location.**

Tap [^], [v], [<], and [>] to set the printing test start location.

MEMO

The [S] and [F] coordinate values are displayed as the printing area required for the printing test (displayed in blue) is moved up, down, left, and right.



8. **Tap [OK].**

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

Printing of the test pattern starts.

MEMO

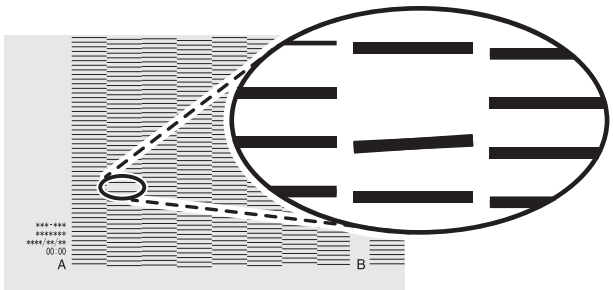
Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern.

Tap on the home screen, select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** in that order, and then tap **[Execute]** 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.

10. **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.



11. **If dot drop-out or dot displacement is present, perform normal cleaning.**

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 you perform normal cleaning two or three times. In that situation, perform **[Medium Cleaning]**.

If there is no dot drop-out or dot displacement, proceed to the next step.

12. Tap to return to the home screen.

MEMO

Default setting:

- **[Use coordinates to specify the printing area without moving the carriage or table.]**: Off
- **[Match the operation of the movement buttons with the directions of table movement.]**: On

RELATED LINKS

- P. 202 When Dot Drop-out or Dot Displacement Occurs
- P. 204 Medium Cleaning Method

Changing the Printing Test Printing Position

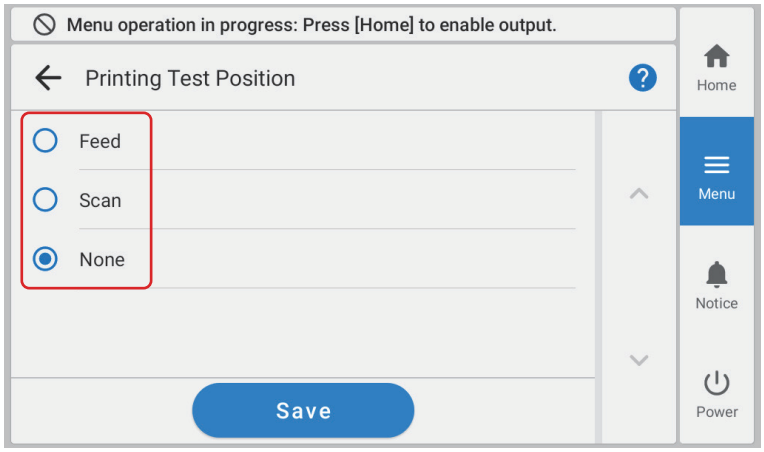
When performing printing tests successively, you can select [**Feed**] (vertical printing), [**Scan**] (horizontal printing), or [**None**] (same location printing) as the printing position for the second and later tests in comparison to the first test.

MEMO

This setting changes the printing test position for the nozzle drop-out test. The printing test position for the nozzle mask test is not changed.

Procedure

1. Tap .
2. Tap [Preferences]>[Printing Test Position].
3. Select the printing test position.



[Printing Test Position]	Description
[Feed]	When performing printing tests successively, the second and subsequent printing positions are printed vertically in relation to the first printing position.
[Scan]	When performing printing tests successively, the second and subsequent printing positions are printed at the same position as the first printing position.
[None]	When performing printing tests successively, the second and subsequent printing positions are printed at the same position as the first printing position. *1

*1 When performing the second or subsequent printing tests, replace the object.

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

MEMO

Default setting: [**None**]

Printing with Crop Marks

"Crop marks" are marks used to align positions. They are also called "alignment marks."

With this machine, you can perform the following operations with crop marks.

- **Printing on an object to be printed on that has crop marks**

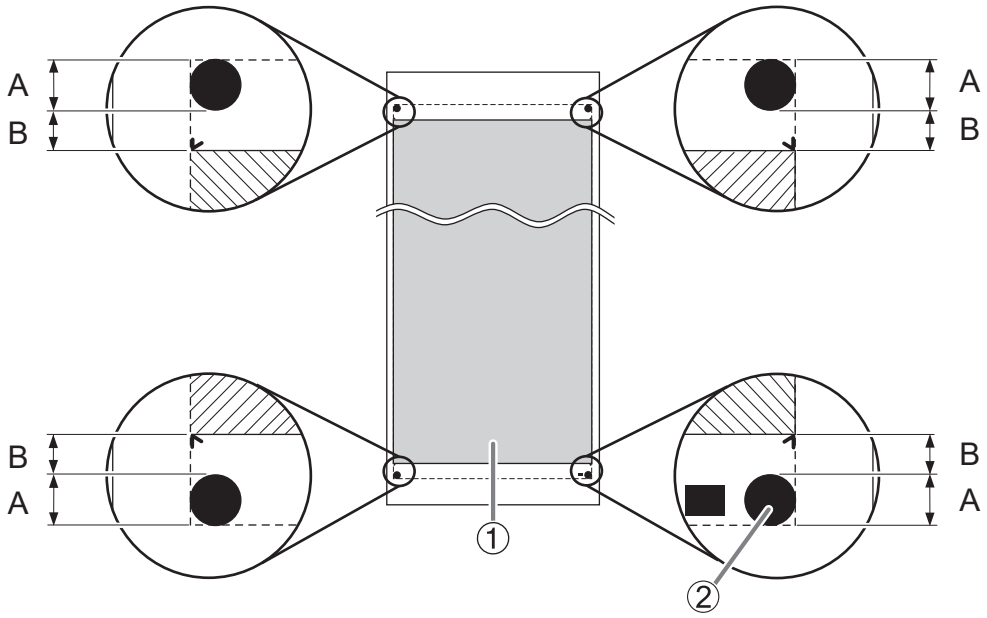
  With an object to be printed on that has already been printed with crop marks, you can print with this machine using these crop marks as references.

- **Printing with crop marks**

  If you are removing the object that has been printed on and cutting it with a Roland DG Corporation machine that is capable of cutting, you have to align the printing and cutting positions. By printing the data together with crop marks, you can make it possible to align the positions using the crop marks.

MEMO

- When you print crop marks with this machine, the result is as shown in the following figure.
  When printing crop marks, use your software RIP to configure the settings for printing crop marks. For information on how to make the setting, refer to the documentation for the software RIP you're using.
  VersaWorks manual
- When cutting with a Roland DG Corporation machine that is capable of cutting, the cuttable margin varies depending on the model. For details, refer to the user's manual of the model you will use to perform cutting.



①	Printing or cutting area*1
②	Crop Marks
A	12.5 mm (0.5 in.)
B	10.0 mm

*1 When printing crop marks, print data with a width of 61 mm (2.41 in.) or more is required. If the print data has a width of 60 mm (2.36 in.) or less, a [**Printing Size Error**] occurs.

RELATED LINKS

• P. 261 [**Printing Size Error**]

Setting the Sensitivity for Reading of Crop Marks

You can set this function to increase the sensitivity for reading crop marks to detect crop marks even with the types of objects to be printed on that make it difficult to detect crop marks.

Procedure

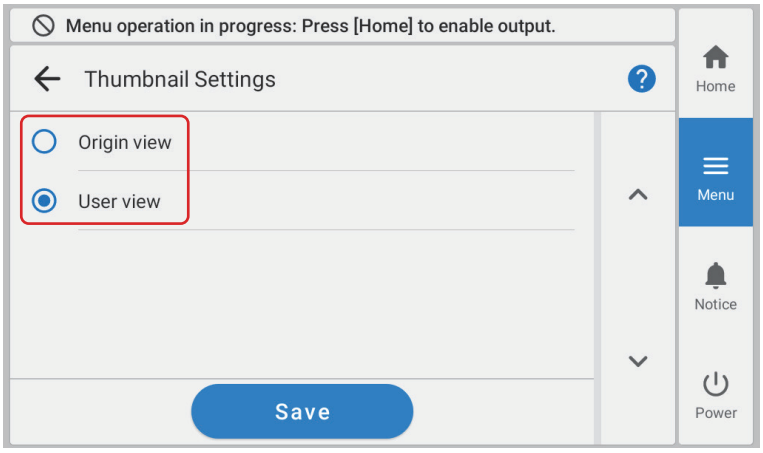
1. Tap .
2. Tap [Preferences]>[Crop Mark Detection Sensitivity].
3. Tap [High].
4. Tap [Save...] to confirm your entry.
5. Tap to return to the home screen.

Setting the Orientation of the Thumbnail

You can change the orientation of the image (thumbnail) that is being output and is displayed on the operation panel.

Procedure

1. Tap .
2. Tap [Preferences]>[Thumbnail Settings].
3. Select [Enable] or [Disable].



[Enable]	The orientation of printing and the orientation of the image (thumbnail) are the same.
[Disable]	The image (thumbnail) is rotated 180 degrees in relation to the orientation of printing.

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

MEMO

Default setting: [Disable]

Changing the Operation Panel Color Theme

Procedure

1. Tap ☰.
2. Tap [System Information]>[Appearance].
3. Select [Dark] or [Light].
4. Tap [Save...] to confirm your entry.
   You are returned to the home screen.

MEMO

Default setting: [**Light**]

Displaying the 2D Code for Viewing the Manual on the Operation Panel

Displays the 2D code for viewing the manual using a smartphone or other mobile terminal.

Procedure

1. Tap .
2. Tap [System Information]>[2D Codes]>[User's Manual].
   The 2D code is displayed.
3. Scan the 2D code with the smartphone.
   The manual can be viewed.
4. Tap [OK].
5. Tap to return to the home screen.

Displaying the Roland DG Connect 2D Code on the Operation Panel

Display the 2D code for accessing Roland DG Connect using a smartphone or other mobile terminal.

Procedure

1. **Tap ☰.**
2. **Tap [System Information]>[2D Codes]>[Roland DG Connect].**
   The 2D code is displayed.
3. **Scan the 2D code with the smartphone.**
   Roland DG Connect will open.
4. **Tap [OK].**
5. **Tap ⌂ to return to the home screen.**

Optimizing Operation Management

Managing the Operations Appropriately and Efficiently 152
- Sounding a Buzzer to Notify the User of the End of Printing 152
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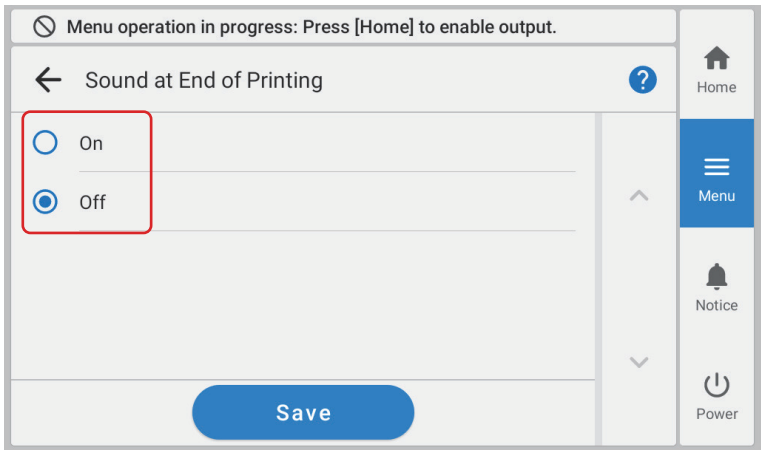
Managing the Operations Appropriately and Efficiently

Sounding a Buzzer to Notify the User of the End of Printing

You can configure the settings so that the user is notified of the end of printing with a buzzer.

Procedure

1. Tap ☰.
2. Tap [Preferences]>[Sound at End of Printing].
3. Tap [On] to select it.



4. Tap [Save].
5. Tap ⌂ to return to the home screen.

MEMO

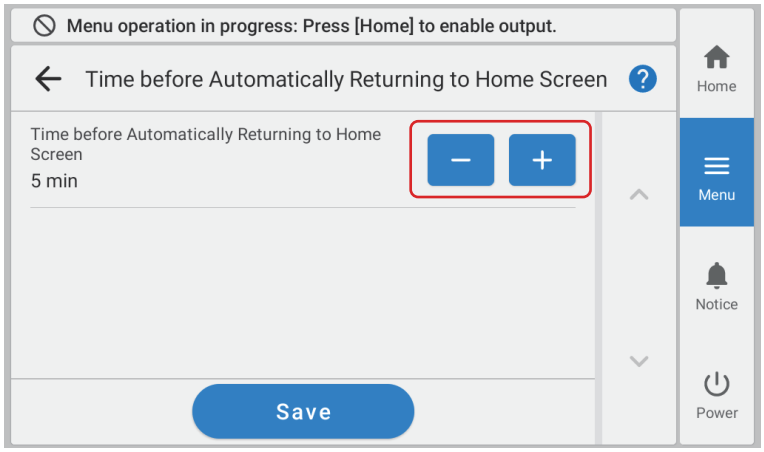
- Default setting: **[Off]**

Setting the Time before Automatically Returning to Home Screen

When [**Menu operation in progress.**] is displayed in the status bar, such as when each setting screen is open, the system will automatically return to the home screen after a set amount of time has elapsed.

Procedure

1. Tap .
2. Tap [Preferences]>[Time before Automatically Returning to Home Screen].
3. Tap − and + to set the [Time before Automatically Returning to Home Screen].



[Time before Automatically Returning to Home Screen]	Description
Off to 30 min*1	This setting automatically closes the open menu screen and returns to the home screen after a set amount of time has elapsed. If the menu screen is open while printing is possible, printing will not start even if print data is sent to the machine. Close the open menu screen and return to the home screen so that you can start printing.

*1 Increase or decrease in 1 minute increments.

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

MEMO

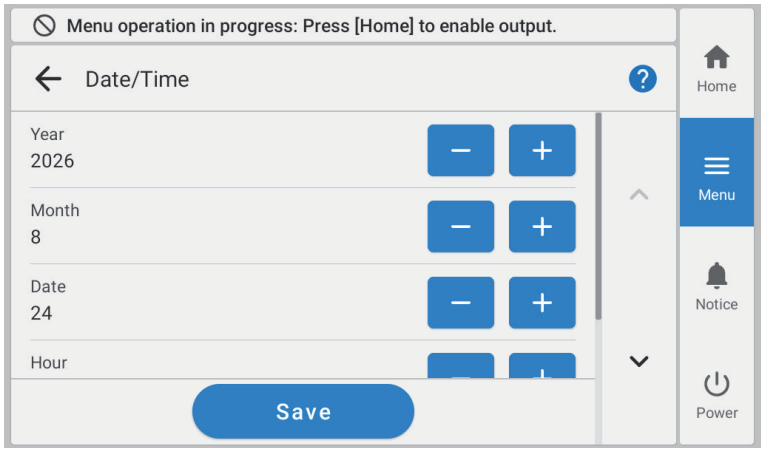
- Default setting: 5 min

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.



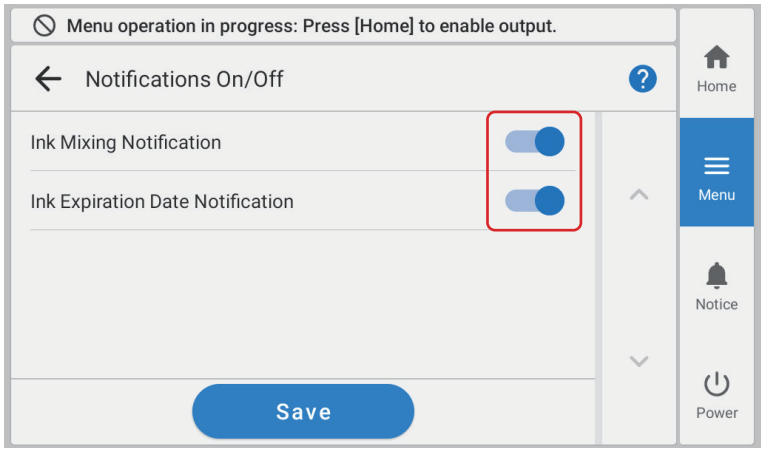
4. Tap [Save] to confirm your entry.
5. Tap ⌂ to return to the home screen.

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]*1	[The time for ink mixing has arrived.]	Notification for white ink. Prompts you to mix the ink cartridge to prevent white 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 as soon as possible.Ink Replacement Method(P. 64)

*1 Not displayed when using a four-color (CMYK) ink type and white ink is not used.

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

MEMO

Default setting:

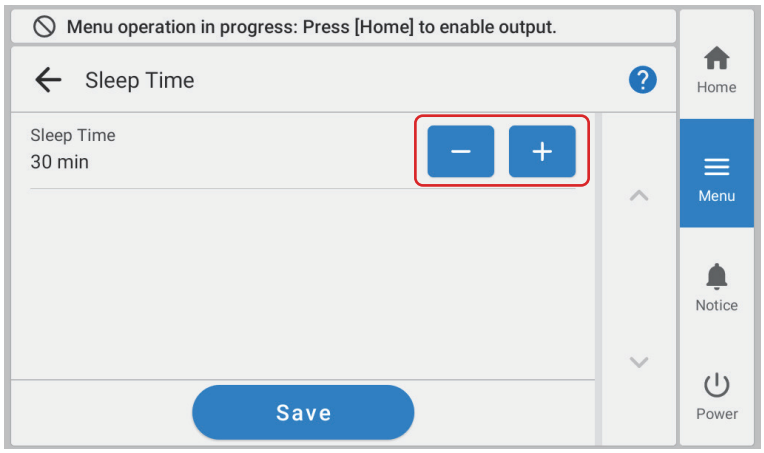
- [Ink Mixing Notification]: On
- [Ink Expiration Date Notification]: On

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.



[Sleep Time]	Description
15 to 120 min*1	The machine goes into sleep mode (state in which the power-saving feature is active) when no output data is received and no operations are performed for a set amount of time.

*1 Increase or decrease in 15 minute increments.

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

MEMO

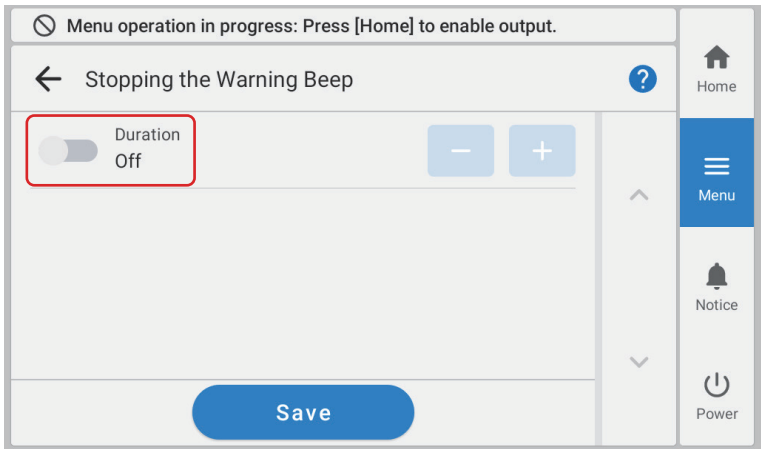
- Default setting: 30 min.

Setting the Duration of the Warning Beep

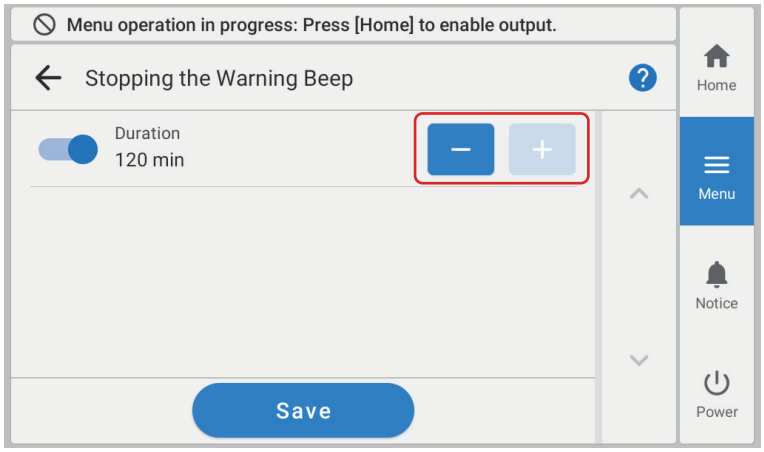
This feature sets the duration of the warning beep that sounds when, for example, an error occurs. If you turn this timer off, the warning beep will continue until the cause of the problem is eliminated.

Procedure

1. Tap .
2. Tap [Preferences]>[Stopping the Warning Beep].
3. Tap to switch the setting.



4. Tap − or + to set the time.



[Stopping the Warning Beep]	Description
15 to 120 min*1	Sets the duration of the warning beep that sounds when, for example, an error occurs.

*1 Increase or decrease in 15 minute increments.

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

MEMO

- Default setting: **[Off]**

Specifying the [Automatic Sub Power On] Setting

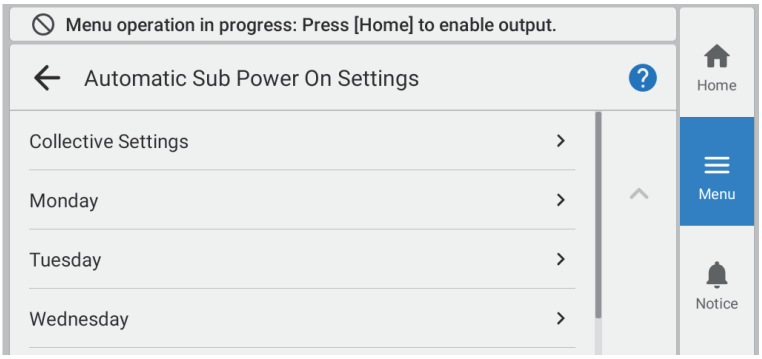
You can configure the settings so that the printer's sub power switches on automatically on the specified days of the week. You can also set the time when the sub power switches on, whether to perform cleaning, and whether to perform circulation when sub power automatically switches on.*1

You can also use a calendar to specify the days on which to not switch the sub power on automatically.

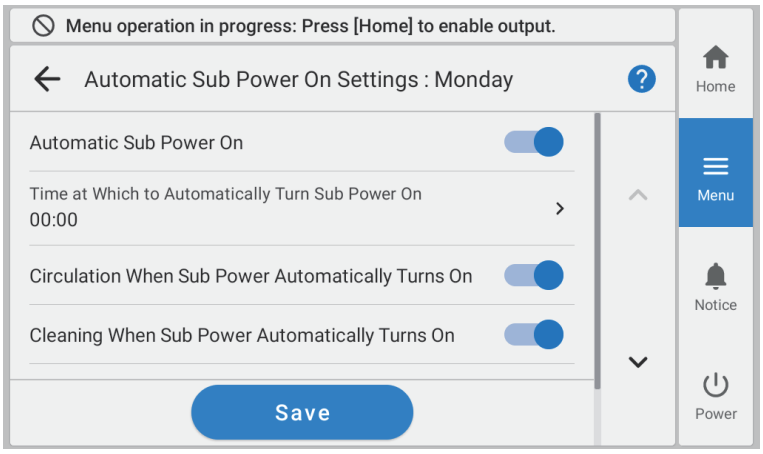
Switching the Sub Power On Automatically Every Day or on Specified Days

Procedure

1. Tap ☰.
2. Tap [Maintenance]>[Automatic Sub Power On Settings].
3. Tap [Collective Settings]. Alternatively, tap the applicable day from [Monday] through [Sunday].
   - [**Collective Settings**]: Daily
   - [**Monday**] to [**Sunday**]: Specified days

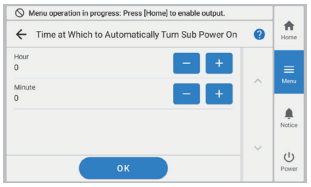
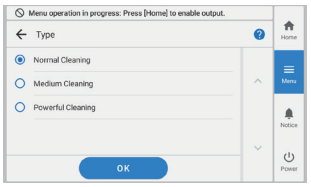


4. Set the following with [Automatic Sub Power On Settings].



①	[**Automatic Sub Power On**]	On: ●, off: ○

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

②	[Time at Which to Automatically Turn Sub Power On]	Tap [**Time at Which to Automatically Turn Sub Power On**], and then set the time.  After setting the time, tap [**OK**].
③	[Circulation When Sub Power Automatically Turns On]*1	On: , off: 
④	[Cleaning When Sub Power Automatically Turns On]	On: , off: 
⑤	[Type]	Tap [**Type**], and then select the cleaning type that is performed when the sub power switches on. • [**Normal Cleaning**] • [**Medium Cleaning**] • [**Powerful Cleaning**]  After setting the cleaning type, tap [**OK**].

*1 This menu item is only displayed when the machine ink type includes white ink.

5. Tap [**Save...**].

6. Tap  to return to the home screen.

Setting Days on Which to Not Switch the Sub Power on Automatically

Procedure

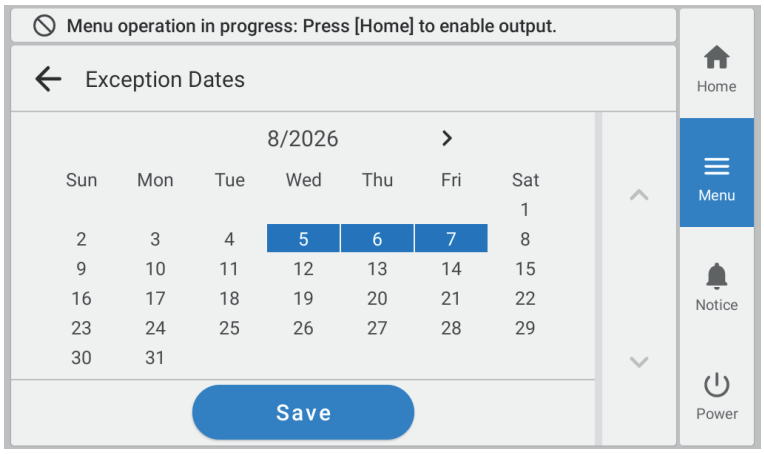
1. Tap .

2. Tap [**Maintenance**]>[**Automatic Sub Power On Settings**].

3. Tap [**Exception Dates**].

4. Tap the days on which to not switch the sub power on automatically.

> **MEMO**
>
> You can set dates up to 12 months in advance.



5. Tap [Save...].

6. Tap to return to the home screen.

Limiting Operator Operations

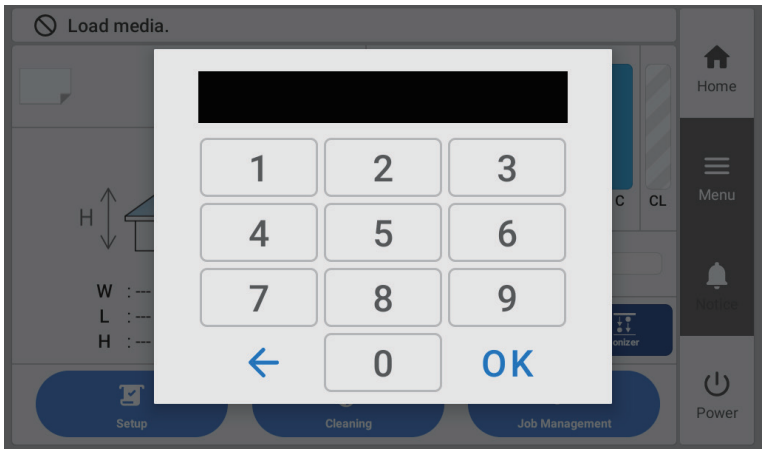
To prevent operators from performing inadvertent panel operations, you can enable [**Operator Mode**] to limit [**Menu**] and [**Notifications**] operations on the home screen. (① in the following figure)

Additionally, you can enable [**Disable Preset Creation/Editing**] together with [**Operator Mode**] to limit the editing of the [**Table Height**] and [**Printing Area**] under [**Preset**] and the new creation of [**Preset**] items. (② and ③ in the following figure)



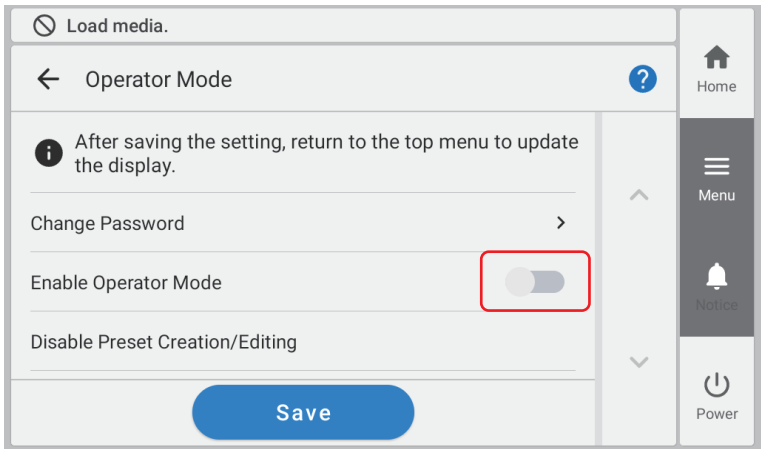
MEMO

You can perform [**Menu**] and [**Notifications**] operations by entering the password. Tap [**Menu**] or [**Notifications**], and then enter the password.



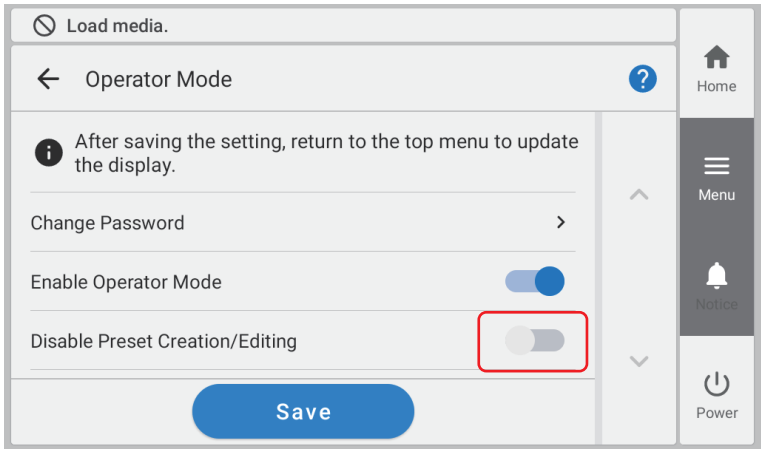
Procedure

1. Tap ☰.
2. Tap [Preferences]>[Operator Mode].
3. Tap ⬭ next to [Enable Operator Mode] to switch the setting.



	Disable
	Enable

You can set [**Disable Preset Creation/Editing**] when [**Operator Mode**] is enabled.



4. **Tap [Save...] to confirm your entry.**

You are returned to the home screen.

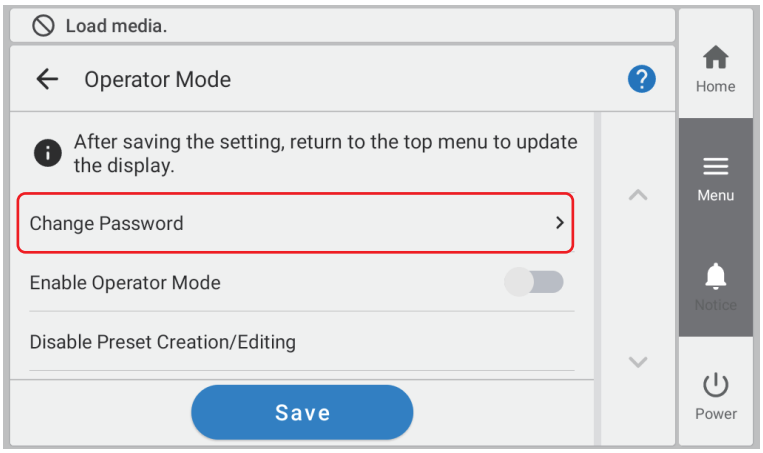
MEMO

Default settings

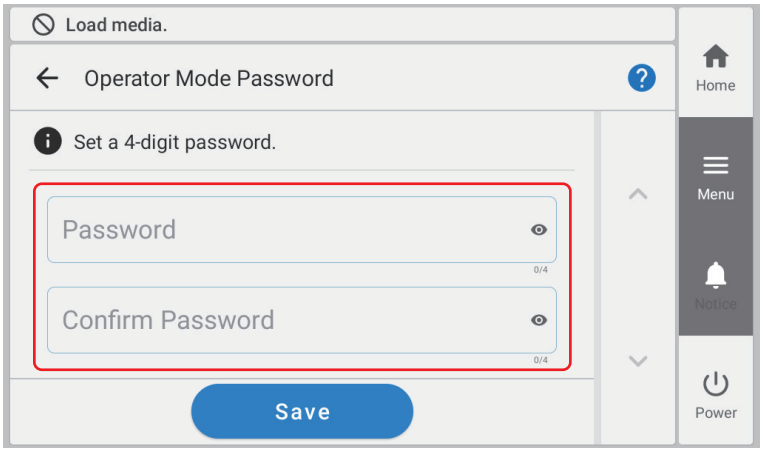
- Password: 0000
- [**Enable Operator Mode**]:
- [**Disable Preset Creation/Editing**]:

To change the password

1. Tap [**Change Password**] on the screen in step 3.



2. On the [**Operator Mode Password**] screen, enter a new four-digit password, and then enter the same password again for confirmation.



3. Tap [**Save...**].

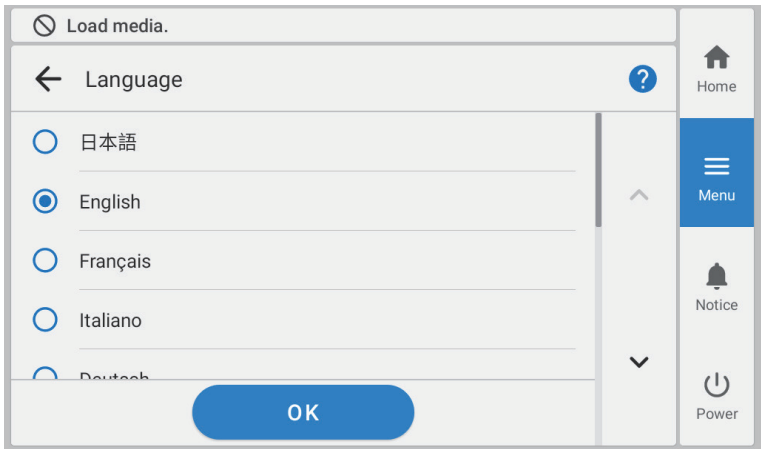
Managing the Basic Settings of the Printer

Changing the Display Language

This feature sets the language displayed on 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 setting

- **[Language]**: ENGLISH

Changing the Units of Measurement

This feature sets the units displayed on 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 setting
  - [**Length**]: mm
  - [**Temperature**]: ˚C

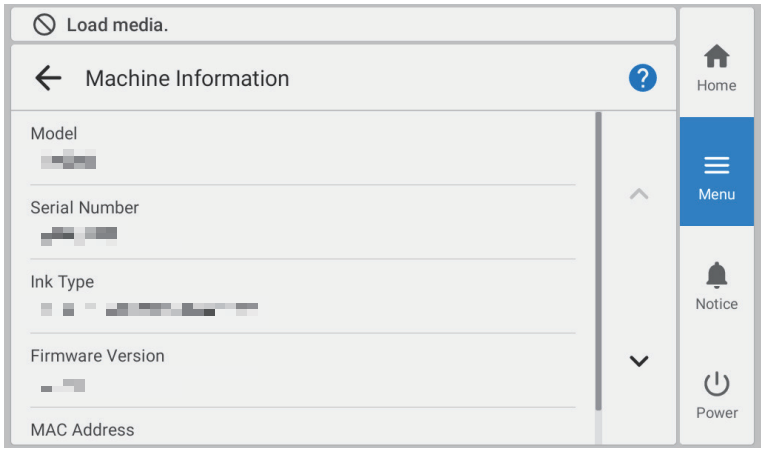
Viewing Printer Information

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.**

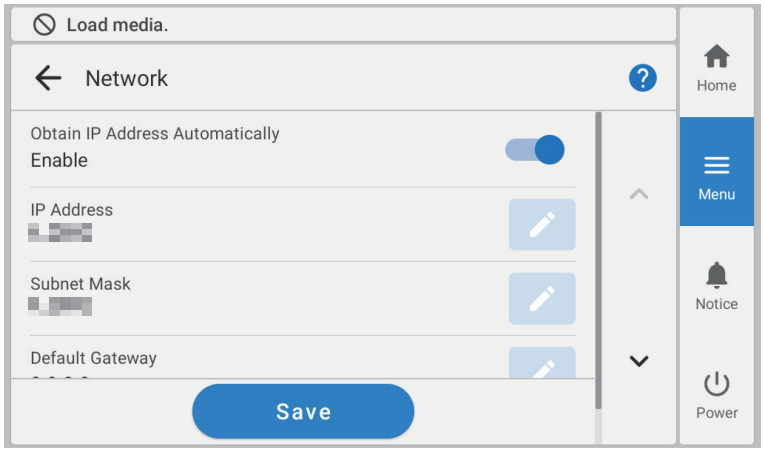
Viewing Network Information

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]**

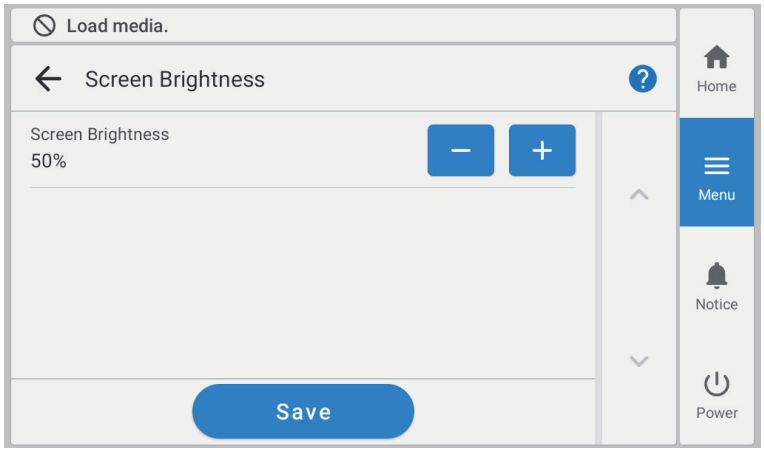
3. **Tap [Save...] to confirm your entry.**

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

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

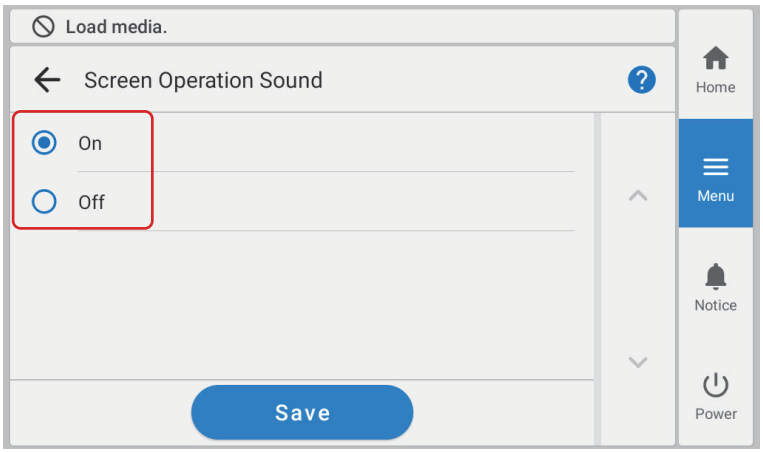
- Default setting: 100%

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].



4. Tap [Save] to confirm your entry.
   The operation sound stops.
5. Tap to return to the home screen.

MEMO

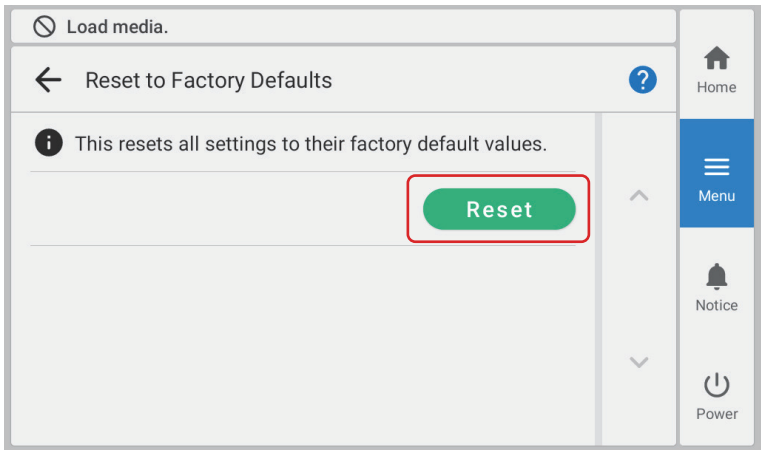
- Default setting: [On]

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.**
   The setting is reset and the screen returns to the home screen.

Maintenance

Introduction

Basic Maintenance Knowledge 175
Types and Timing of Maintenance 175
Automatic Maintenance Feature and Notes 177
Measures When the Printer Is Not in Use for a Prolonged Period 179

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	Category	Item
Before daily operations	Print head check	Step 2: Performing a Nozzle Drop-out Test(P. 55)
	Ink mixing (white ink)	Maintenance of Ink Cartridges(P. 181)
After daily operations	Cleaning the machine	Cleaning the Machine(P. 184)
If a message appears	Cleaning around the print heads	Cleaning around the Print Heads(P. 185)
	Disposing of discharged fluid	If the Discharged Fluid Disposal Message Appears(P. 199)
	Cleaning the UV-LED devices	Cleaning the UV-LED Device(P. 192)

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.

Dot Drop-out or Dot Displacement

Timing	Category	Procedure	Item
When dot drop-out or dot displacement occurs	Checking and cleaning the print heads	①	Performing a Nozzle Drop-out Test(P. 181)
		②	Normal Cleaning Method(P. 202)
		③	Medium Cleaning Method(P. 204)
		④	Powerful Cleaning Method(P. 207)
		⑤	Manual Cleaning Method(P. 186)
		⑥	Method for Ink Renewal Inside Damper(P. 214)
When dot drop-out and dot displacement are not resolved even by performing the above operations	Replacing the ink in all ink paths	⑦	Ink Renewal Method(P. 217)*1

Uneven Color (Ink Other Than White Ink)

Timing	Category	Procedure	Item
When uneven color issues occur (ink other than white ink)	Eliminating drops in ink concentration	①	Maintenance of Ink Cartridges(P. 181)
		②	Method for Ink Renewal Inside Damper(P. 214)
		③	Ink Renewal Method(P. 217)

Uneven Color (White Ink)

Timing	Category	Procedure	Item
When uneven color issues occur (white ink)	Performing ink circulation and replacing ink in an ink path	①	Maintenance of Ink Cartridges(P. 181)
		②	Ink Circulating Method(P. 210)
		③	Method for Eliminating Uneven Color Issues with Powerful Cleaning(P. 212)
		④	Method for Ink Renewal Inside Damper(P. 214)*1
		⑤	Ink Renewal Method(P. 217)

*1 This cleaning consumes a large amount of ink.

Operation Panel

Timing	Category	Procedure	Item
When the operation panel is dirty	Cleaning the operation panel	①	Operation Panel Cleaning Method(P. 227)

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	Category	Item
When a message appears	Replacing consumable parts • Wiper • UV mist filters • Flushing sponge • Print head caps	Replacing the Wiper(P. 229)
		Replacing the UV Mist Filters(P. 233)
		Replacing the Flushing Sponges(P. 235)
		Replacing the Print Head Caps(P. 231)

Automatic Maintenance Feature and Notes

This machine has a feature that automatically performs maintenance periodically.

Set the maintenance items that are performed automatically and the [**Type**] and [**Frequency**] according to the printer service environment, types of products that are frequently output, and other factors. A maximum of five settings for automatic maintenance can be saved.

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

- **Always keep the main power switched on.**
- **Do not leave the front, left, and right covers and the front and rear UV shields open for a prolonged time.**
- **Return to the home screen after specifying settings in the menus.**

The setting items for automatic maintenance are as follows.

Setting item	Contents	Setting value
[**Cleaning When Sub Power Automatically Turns On**]	Set [**Type**] and [**Frequency**] for cleaning that is performed when the sub power is turned on. This prevents discharge issues during printing.	[**Type**] • [**Normal Cleaning**] • [**Medium Cleaning**] • [**Powerful Cleaning**] [**Frequency**] • [**No Cleaning**] • [**Periodically**] 1 to 24 hours
[**Cleaning before Printing Starts**]	Set [**Type**] and [**Frequency**] for the cleaning that is performed at the start of printing. This prevents discharge issues during printing.	[**Type**] • [**Normal Cleaning**] • [**Medium Cleaning**] • [**Powerful Cleaning**] [**Frequency**] • [**No Cleaning**] • [**Periodically**] 0.5 to 12 hours • [**Each Time**]
[**Cleaning during Printing**]	Set the [**Type**] and [**Frequency**] of the cleaning during printing. This prevents discharge issues during printing.	[**Type**] • [**Normal Cleaning**] • [**Medium Cleaning**] • [**Powerful Cleaning**] [**Frequency**] • [**No Cleaning**] • [**Periodically**] 5 minutes to 3 hours
[**Cleaning after Printing Finishes**]	Set [**Type**] and [**Frequency**] for the cleaning that is performed when printing ends. This prevents the risk of malfunctions during standby and discharge issues at the next printing.	[**Type**] • [**Normal Cleaning**] • [**Medium Cleaning**] • [**Powerful Cleaning**] [**Frequency**] • [**No Cleaning**] • [**Periodically**] 20 minutes to 3 hours • [**Each Time**]
[**Daily shut down cleaning**]	Set [**Type**] and [**Frequency**] for cleaning that is performed when the sub power of the machine is turned off or when sleep mode activates. This prevents discharge issues during printing.	[**Type**] • [**Normal Cleaning**] • [**Medium Cleaning**] • [**Powerful Cleaning**] [**Frequency**] • [**Disable**] • [**Enable**]
[**Ink Circulation when Sub Power Turns On**][*1]	Set [**Frequency**] for the ink circulation performed when the sub power is turned on. This prevents uneven colors and printer malfunctions caused by ink precipitation.	[**Frequency**] • [**No Cleaning**] • [**Periodically**] 1 to 12 hours

Setting item	Contents	Setting value
[Ink Circulation before Printing Starts][*1]	Set **[Frequency]** for the ink circulation that is performed at the start of printing. This prevents uneven color issues caused by precipitation.	[Frequency] • **[No Cleaning]** • **[Periodically]** 1 to 12 hours • **[Each Time]**
[Ink Circulation after Printing Ends][*1]	Set **[Frequency]** for the ink circulation that is performed when printing is completed. This prevents uneven colors and printer malfunctions caused by ink precipitation.	[Frequency] • **[No Cleaning]** • **[Periodically]** 1 to 12 hours
[Ink Discharge before Printing Starts][*1]	Set **[Frequency]** for the discharge of ink that cannot be mixed by ink circulation at the start of printing. This prevents uneven color issues caused by precipitation.	[Frequency] • **[Disable]** • **[Enable]**
[Periodic Ink Circulation][*1]	Set **[Frequency]** for the ink circulation that is performed after the previous ink circulation. This prevents printer malfunctions caused by ink precipitation.	[Frequency] • **[Periodically]** 1 to 12 hours
[Periodic Cleaning]	Set **[Type]** and **[Frequency]** for the cleaning that is performed periodically. This prevents print head malfunction.	[Type] • **[Normal Cleaning]** • **[Medium Cleaning]** • **[Powerful Cleaning]** [Frequency] • **[Periodically]** 1 to 72 hours

*1 White ink only

IMPORTANT

If the automatic maintenance settings are configured without an adequate understanding, the maintenance results may not be as the customer wanted. Before configuring the automatic maintenance settings, be sure to contact your authorized dealer.

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

    If the Discharged Fluid Disposal Message Appears(P. 199)

- 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.

- Do not leave the front, left, and right covers and the front and rear UV shields open for a prolonged time.

  If left open, it may cause the print heads to dry out or allow dust and debris to enter the machine.

RELATED LINKS

- P. 64 Ink Replacement Method
- P. 69 Cleaning Liquid Replacement Method

Regular Maintenance

Print Head Check before Printing 181
Maintenance of Ink Cartridges 181
Performing a Nozzle Drop-out Test 181
Cleaning the Machine 184
Cleaning the Machine on a Daily Basis 184
Cleaning around the Print Heads 185
Manual Cleaning Method 186
Consumable Products and Parts Related to Manual Cleaning 191
Cleaning the UV-LED Device 192
When UV-LED Device Cleaning Is Necessary 192
UV Lamp Manual Cleaning Method 193
Cleaning the Nozzle Surface (Only for Machines Equipped with White Ink) 196

Print Head Check before Printing

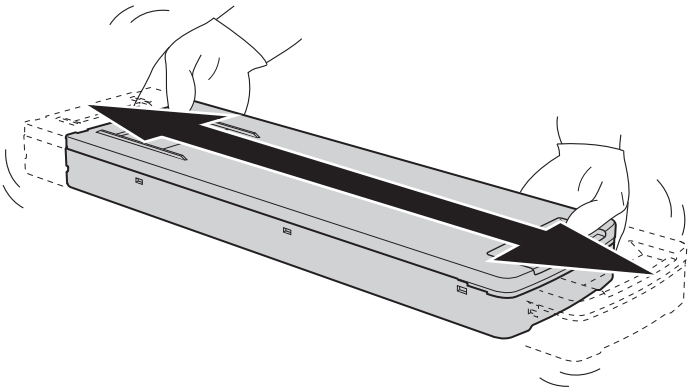
Maintenance of Ink Cartridges

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.
- Ink other than white ink: If Colors Are Uneven
- White ink: Every day (before starting the day's work), pull out the white ink cartridge once, shake it 50 times (for about 20 seconds), and insert it again.

  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 and ink pouch coming loose and falling may lead to damage or printer failure.
- 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.

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), [**Scan**] (horizontal printing), or [**None**] (same location printing) as the printing position for the second and later tests in comparison to the first test.

Changing the Printing Test Printing Position(P. 144)

Procedure

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

Determining the Print Surface Height and Printing Position(P. 79)

For a printing test, set the printing area with W (width) of 110 mm (4.34 in.) or more and L (length) of 110 mm (4.34 in.) or more. An error will occur and printing tests cannot be performed if the area is smaller than this.

2. **Tap on the home screen.**

3. **To change the printing test start position, tap [Change] under [Output Start Location].**

If you have tapped on the [**Printing Test Start Location**] screen and enabled [**Use coordinates to specify the printing area without moving the carriage or table.**], specify the values for [S] and [F].

For more information on settings, refer to Changing the Operation Performed when Setting the Printing Test Start Location(P. 141).

(1) **Tap , , , or once.**

The flat table and print-head carriage will move, and the pointer will point to the previously-set print origin.

Subsequently, when you have finished setting the print start position, the print-head carriage will automatically return to the standby position to protect the print heads from drying out if they have not been moved by the user for approximately three minutes. Perform the procedure again.

MEMO

If [**Use coordinates to specify the printing area without moving the carriage or table.**] is enabled, the print-head carriage will not move, so the print-head drying protection function will not work.

(2) **Set the [Printing Test Start Location].**

Long tap or tap , , , and to set the printing test start position.

MEMO

- If [**Use coordinates to specify the printing area without moving the carriage or table.**] is enabled, specify the values for [S] and [F].
- The printing test start position you have set will remain in effect until you change to a different media.

(3) **Tap [OK].**

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

Printing of the test pattern starts.

MEMO

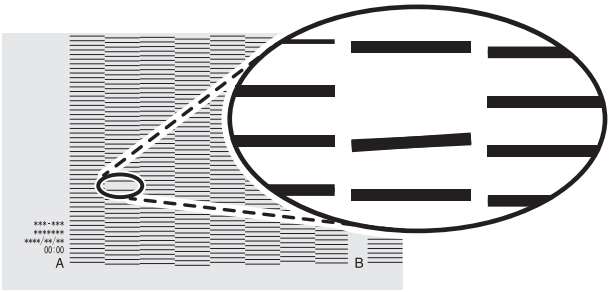
Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern.

Tap on the home screen, select [**Cleaning**]>[**Printing Test**]>[**Nozzle Drop-out Test (Base: Black)**] in that order, and then tap [**Execute**] 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.

5. **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.



6. **If dot drop-out or dot displacement is present, perform normal cleaning.**

P. 57 Normal Cleaning Method

If there is no dot drop-out or dot displacement, proceed to the next step.

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

RELATED LINKS

- P. 202 When Dot Drop-out or Dot Displacement Occurs

Cleaning the Machine

Cleaning the Machine on a Daily Basis

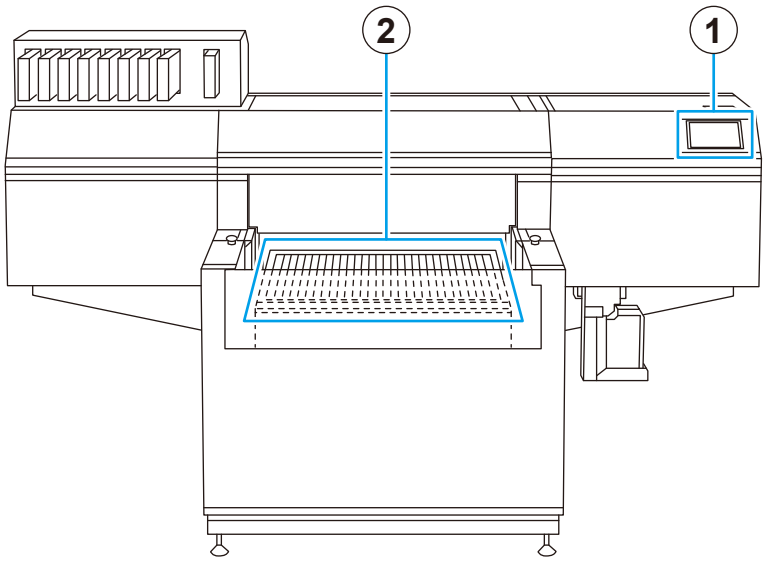
As part of daily cleaning, wipe away any buildup of ink or grime that has adhered to the machine. In particular, the flat table is likely to have a buildup of grime. Clean by wiping with a cloth moistened by neutral detergent diluted with water then wrung dry or a soft, dry cloth.

⚠ WARNING

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

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.
- Before cleaning, remove the object to be printed on.



①	Operation panel	The panel used to operate the machine. If grime or ink is affixed to this panel, wipe it clean with a cloth moistened by anhydrous ethanol or isopropyl alcohol.
②	Flat Table	These are where the object be printed on is fixed in place, so it is easy for grime to adhere to these positions. Clean it by wiping with a cloth moistened by neutral detergent diluted with water then wrung dry or a soft, dry cloth.

MEMO

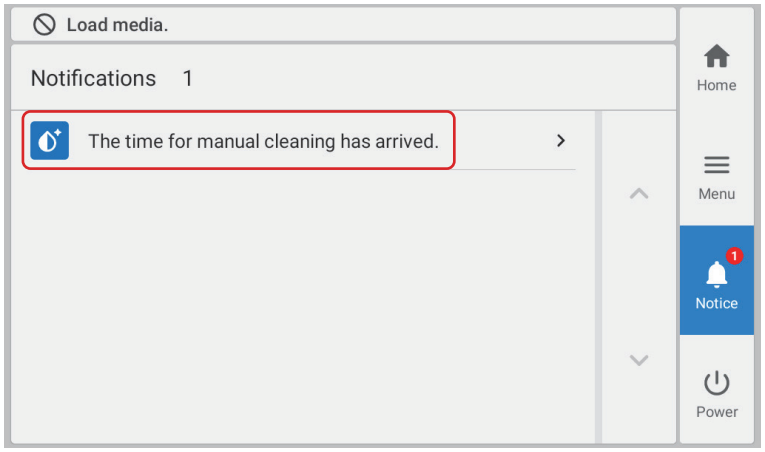
Frequently clean the inside of the machine using a vacuum cleaner or by wiping with a cloth moistened with water then wrung dry. If dust and dirt accumulate in the machine, they are likely to affix to printed materials.

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

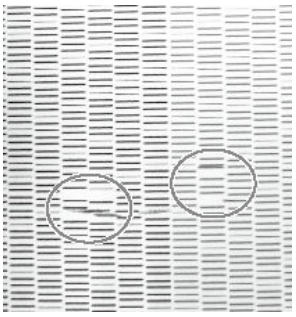
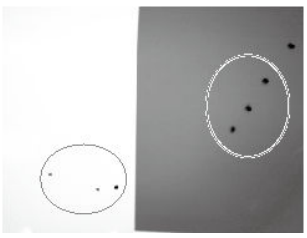
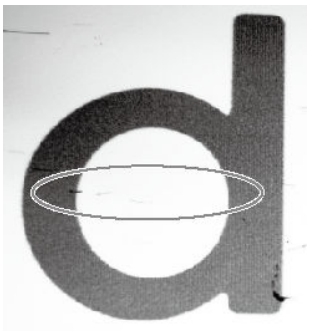
When a message appears, you can tap on the home screen to check the notification details. Tap the notification to display the manual cleaning menu screen.



Before sending the print data if you want to perform unmanned printing at night.

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. 229 Replacing the Wiper

Manual Cleaning Method

Perform manual cleaning:

- 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.

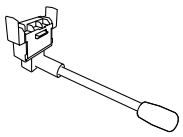
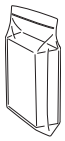
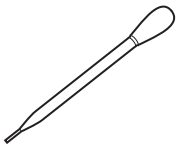
IMPORTANT

Important notes on this procedure

- Before performing this operation, remove any objects.
- To prevent the print heads from drying out, finish this procedure in 30 minutes or less. A warning beep sounds after 30 minutes.
- Never use any implements other than the included cleaning sticks. Cotton swabs or other lint-producing items may damage the print heads.
- Never use any implements other than the included cleaning sheet.
- 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.
- Be sure to use a new cleaning sheet. Reusing a cleaning sheet 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, cleaning sheets, or cleaning liquid, contact your authorized dealer or visit our website (https://www.rolanddg.com/).

If a warning beep sounds during cleaning

- A warning beep sounds 30 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 sticks	Head nozzle refresher	Cleaning sheets	Dropper

Required items			
 Cleaning liquid			

1. Cleaning the Print Head Caps

Procedure

1. **Remove the object to be printed on.**
2. **Tap on the home screen.**
3. **Tap [Manual Cleaning].**
4. **Tap [Execute].**
   Tap [**Execute**] to display a message reminding the user to wear protective gear.
5. **Tap [OK].**
   Tap [**OK**] to move the print-head carriage and flat table.
6. **Follow the instructions on the operation panel to clean the print head caps.**
   - Tap ‹ or › to check the procedure.
   - If you complete the work without viewing the instructions, tap [**Finish All**].

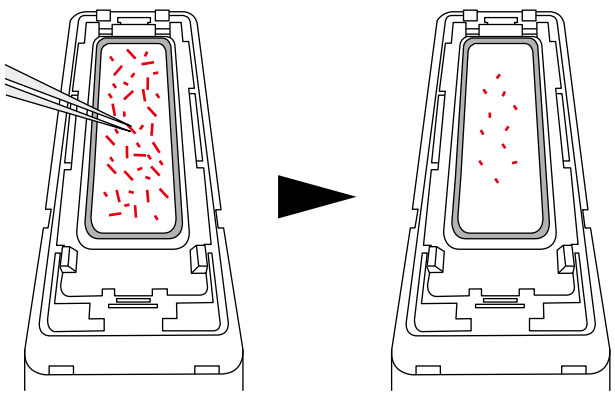
IMPORTANT

- 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. Cleaning the Print Heads

Procedure

1. **Follow the instructions on the operation panel to clean the print heads.**

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

IMPORTANT

- Be sure to use the included cleaning sticks and cleaning sheets.
- Do not use a previously used cleaning stick or cleaning sheet.
- Do not put a previously used cleaning stick into the cleaning liquid.



2. **Close the left cover.**

3. **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.

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

3. Performing a Printing Test to Check the Results

Procedure

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

   Determining the Print Surface Height and Printing Position(P. 79)

   For a printing test, set the printing area with W (width) of 110 mm (4.34 in.) or more and L (length) of 110 mm (4.34 in.) or more. An error will occur and printing tests cannot be performed if the area is smaller than this.

2. **Tap on the home screen.**

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

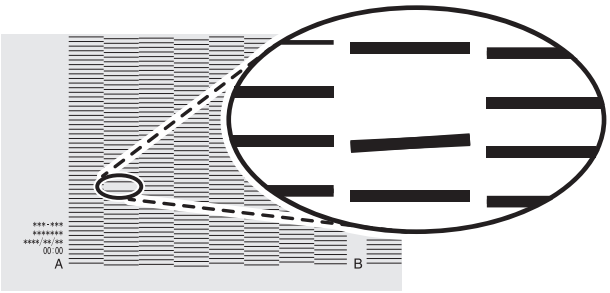
   Printing of the test pattern starts.

   MEMO

   Depending on the color of the object to be printed on, it may be difficult to check the white ink test pattern. Tap on the home screen, select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** in that order, and then tap **[Execute]** 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.

   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. 202 When Dot Drop-out or Dot Displacement Occurs

Consumable Products and Parts Related to Manual Cleaning

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

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

Cleaning the UV-LED Device

When UV-LED Device Cleaning Is Necessary

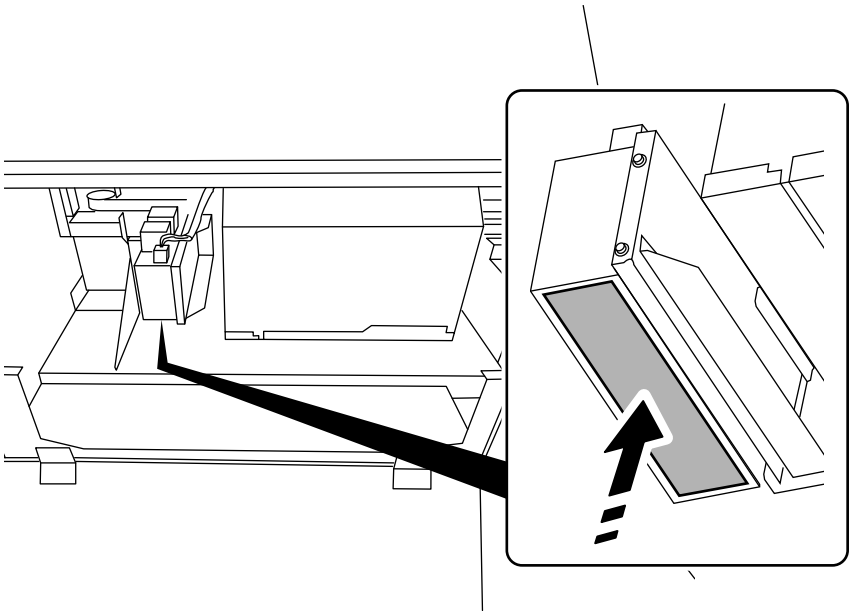
The UV-LED device is an important component for ink adhesion. They require periodic and appropriate maintenance. It is important to clean the UV-LED device with the appropriate timing.

Perform the UV lamp manual cleaning at the following times.

- When the notification **[The time for UV lamp manual cleaning has arrived.] appears.**

  To keep a stable printing condition at all times, perform manual cleaning whenever the notification is displayed.
- **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.

UV Lamp Manual Cleaning Method

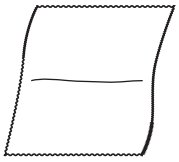
IMPORTANT

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 UV lamp 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. Tap ☰.
2. Tap [Maintenance]>[UV Lamp Manual Cleaning].

3. **Tap [Execute].**

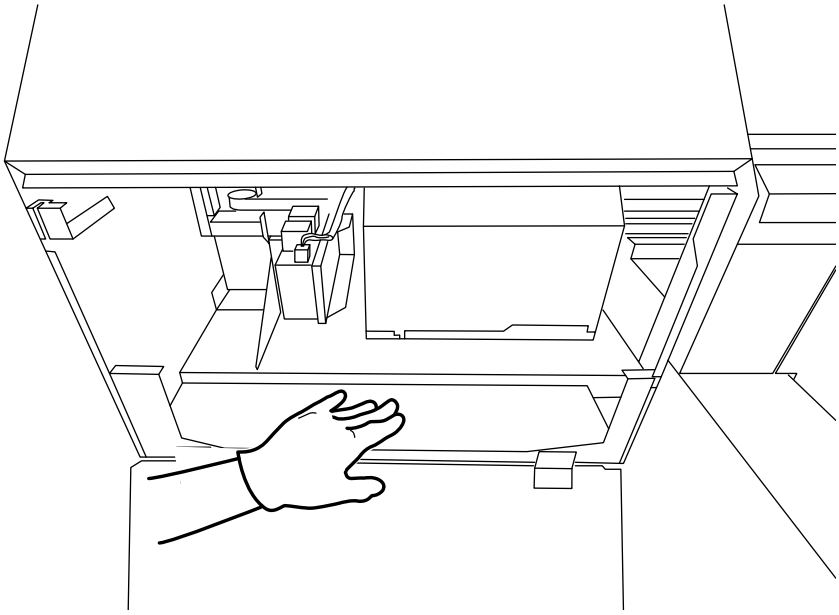
   Tap [**Execute**] to display a message reminding the user to wear protective gear.

4. **Tap [OK].**

   Tap [**OK**] to move the print-head carriage and flat table.

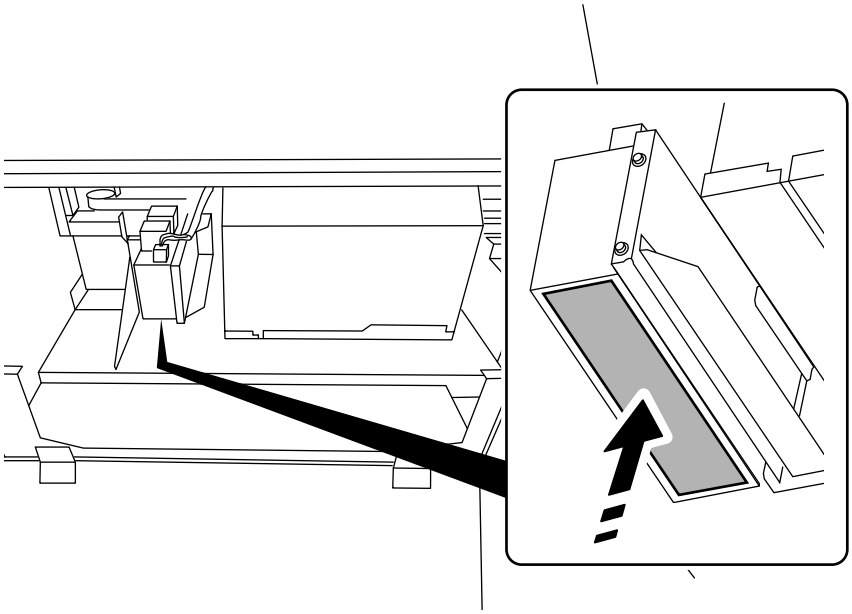
5. **Open the left cover.**

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



7. **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 UV lamp for approximately 10 round trips until all the dirt is cleared away.



8. **Close the left cover.**

9. **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.

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

RELATED LINKS

- P. 192 When UV-LED Device Cleaning Is Necessary

Cleaning the Nozzle Surface (Only for Machines Equipped with White Ink)

When you perform the following types of printing, dot drop-out may occur with the white ink. To ensure that the printer is used without solidified ink and other contaminants adhered to the nozzle surface of the print head, clean this nozzle surface.

- **When printing on acrylic and other highly reflective materials**

  Clean the nozzle surface for the white ink after work is finished on the day when you performed printing.

- **When printing for a total of 3 hours with a large distance between the object to be printed on and the print head**

  Clean the nozzle surface for the white ink after you have performed printing for a total of 3 hours.

IMPORTANT

Clean the nozzle surface after work is finished on the day when you performed printing. Leaving this cleaning to the following day may result in dot drop-out.

Procedure

1. **Start manual cleaning.**

   Operate the machine's panel to start manual cleaning. When manual cleaning starts, the print-head carriage moves to the left.

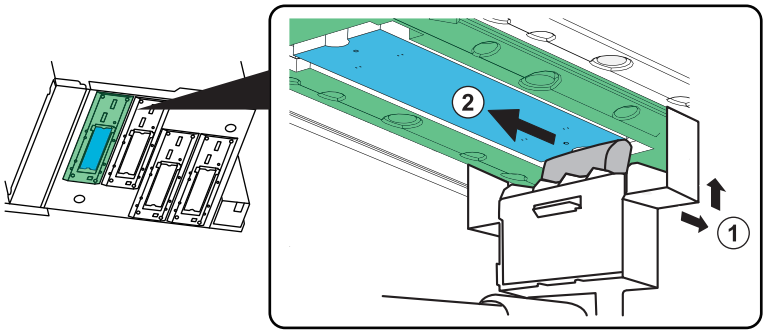
   P. 185 Cleaning around the Print Heads

   MEMO

   Only use the manual cleaning in this section to clean the nozzle surface for the white ink. It is not necessary to clean the print head caps or the nozzle surfaces for the other inks.

2. **Clean the nozzle surface for the white ink.**

   Use the included head refresher, cleaning liquid, and cleaning sheet to clean the nozzle surface for the white ink.



3. **Follow the instructions on the operation panel to finish manual cleaning.**

Disposing of Discharged Fluid

Precautions for Disposing of Discharged Fluid 198
If the Discharged Fluid Disposal Message Appears..... 199

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.

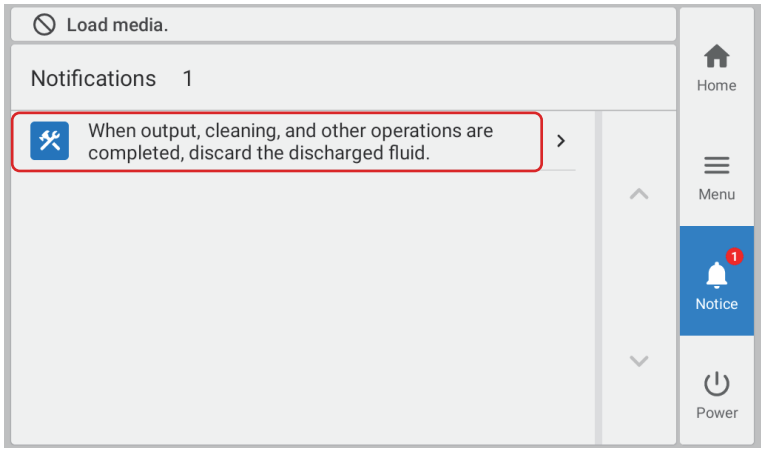
Discharged fluid is flammable and contains toxic ingredients. Never attempt to incinerate discharged fluid or discard it with ordinary trash. Also, do not dispose of it in sewer systems, rivers, or streams. Doing so may have an adverse impact on the environment.

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.

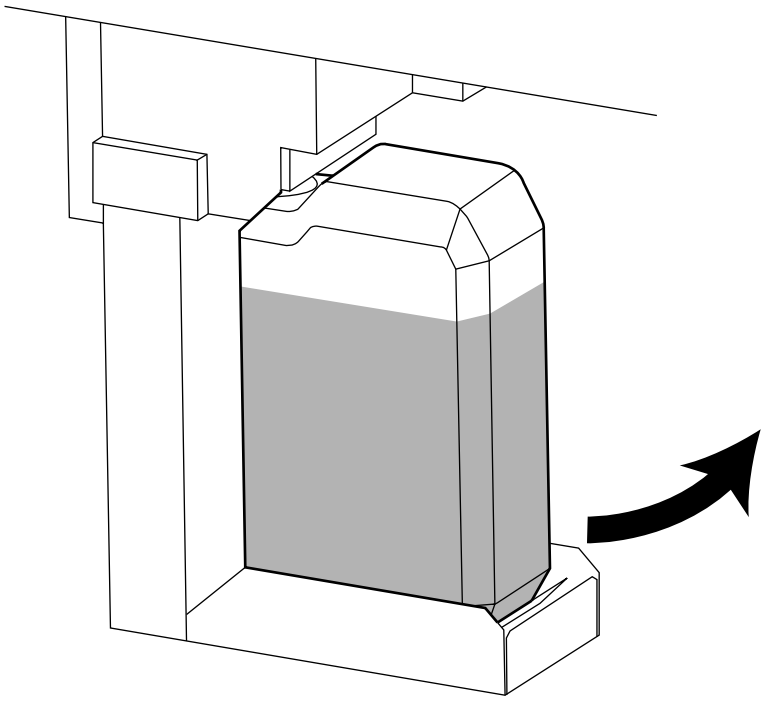
MEMO

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].**

   Tap [**Execute**] to display a message reminding the user to wear protective gear.
5. **Tap [OK].**
6. **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.

7. **Quickly attach the emptied bottle to the machine once more.**
8. **Tap [Finish].**
9. **Tap to return to the home screen.**

Advanced Maintenance

When Dot Drop-out or Dot Displacement Occurs 202
Normal Cleaning Method 202
Medium Cleaning Method 204
Powerful Cleaning Method 207
If Colors Are Uneven 210
Ink Circulating Method 210
Method for Eliminating Uneven Color Issues with Powerful Cleaning 212
Method for Ink Renewal Inside Damper 214
Handling Severe Dot Drop-out, Dot Displacement, and Uneven Colors 217
Ink Renewal Method 217
Partially Restricting the Print Heads Used for Printing 222
Emergency Measure) Cleaning the Print Head Surface 224
When the Operation Panel Is Dirty 227
Operation Panel Cleaning Method 227

When Dot Drop-out or Dot Displacement Occurs

If dot drop-out or dot displacement occurs, perform cleaning of the print head.

Perform the following operations.

1. Perform [**Normal Cleaning**].
   P. 202 Normal Cleaning Method
2. If the dot drop-out or dot displacement issue is not improved after performing Step 1, perform [**Medium Cleaning**].
   P. 204 Medium Cleaning Method
3. If the dot drop-out or dot displacement issue is not improved after performing Step 2, perform [**Powerful Cleaning**].
   P. 207 Powerful Cleaning Method
4. If the dot drop-out or dot displacement issue is not improved after performing Step 3, perform [**Manual Cleaning**].
   P. 186 Manual Cleaning Method
5. If the dot drop-out or dot displacement issue is not improved after performing Step 4, perform [**Ink Renewal Inside Damper**].
   P. 214 Method for Ink Renewal Inside Damper
6. If the dot drop-out or dot displacement issue is not improved after performing Step 5, perform [**Ink Renewal**].
   P. 217 Ink Renewal Method

Normal Cleaning Method

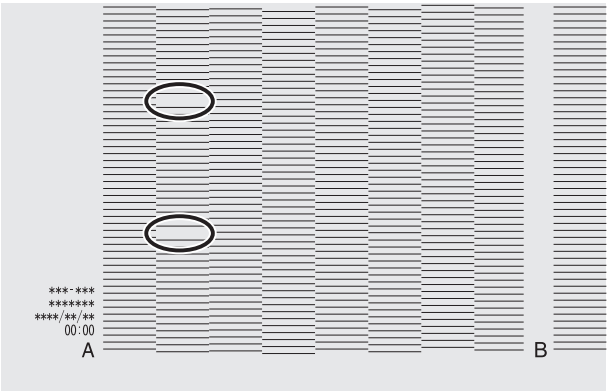
MEMO

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 print head with dot drop-out or dot displacement by viewing the results of the printing test.**

   In the case of the figure below, the space from [A] to [B] is head A.



MEMO

If the printing-test results are difficult to interpret

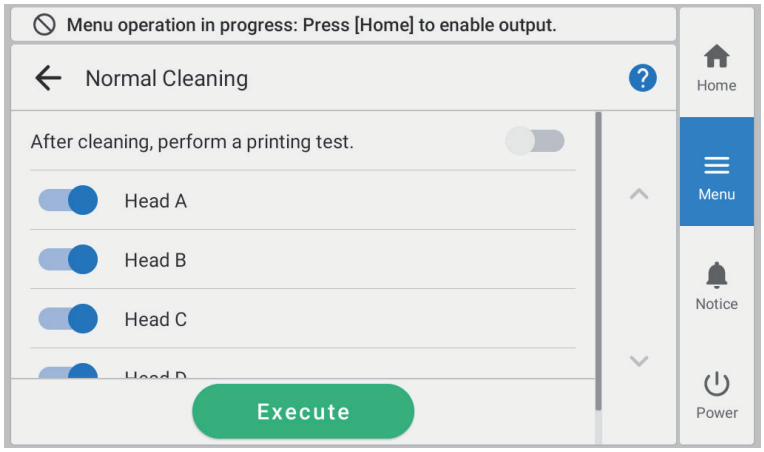
Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

2. **Tap on the home screen.**

3. **Tap [Cleaning].**

4. **Tap [Normal Cleaning].**

   The screen shown below appears.



5. **Set the print heads to clean to and the print heads to not clean to .**

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 on the home screen, select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** in that order, and then tap **[Execute]** 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.

10. **If dot drop-out or dot displacement is present, perform 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. In that situation, perform **[Medium Cleaning]**.

If there is no dot drop-out or dot displacement, proceed to the next step.

11. Tap to return to the home screen.

RELATED LINKS

- P. 55 Performing a Nozzle Drop-out Test
- P. 204 Medium Cleaning Method

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**].

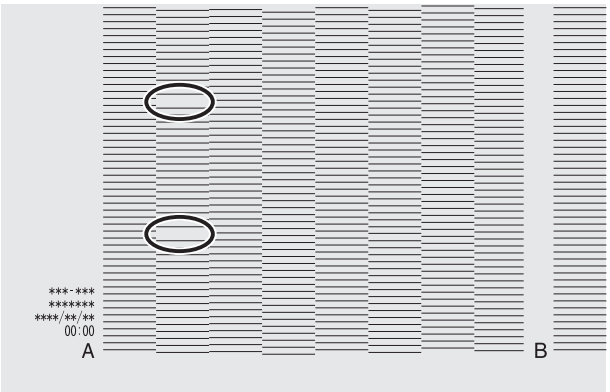
MEMO

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. Check for the print head with dot drop-out or dot displacement by viewing the results of the printing test.

In the case of the figure below, the space from [A] to [B] is head A.



MEMO

If the printing-test results are difficult to interpret

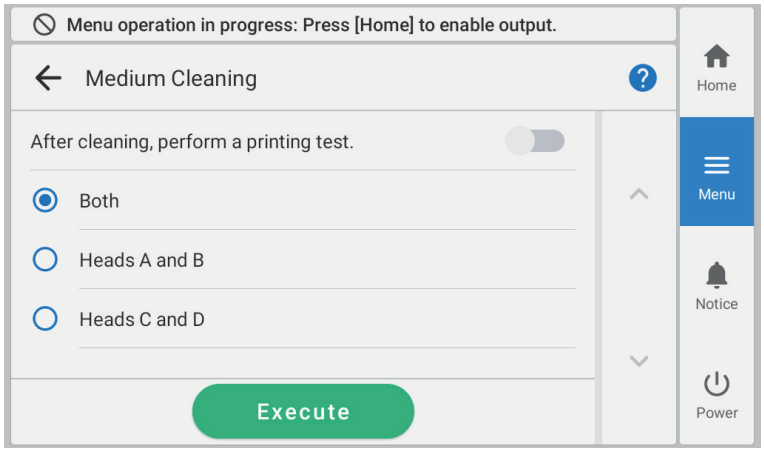
Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

2. Tap on the home screen.

3. Tap [Cleaning].

4. **Tap [Medium Cleaning].**

The screen shown below appears.



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

MEMO

- [**Both**]: The following two items are both applicable.
- [**Heads A and B**]: Dot drop-out or dot displacement occurs at [A], [B], or both.
- [**Heads C and D**]: Dot drop-out or dot displacement occurs at [C], [D], or both.

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 on the home screen, select [**Cleaning**]>[**Printing Test**]>[**Nozzle Drop-out Test (Base: Black)**] in that order, and then tap [**Execute**] 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.

10. **If dot drop-out or dot displacement is present, perform 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**].

If there is no dot drop-out or dot displacement, proceed to the next step.

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

RELATED LINKS

- P. 207 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**].

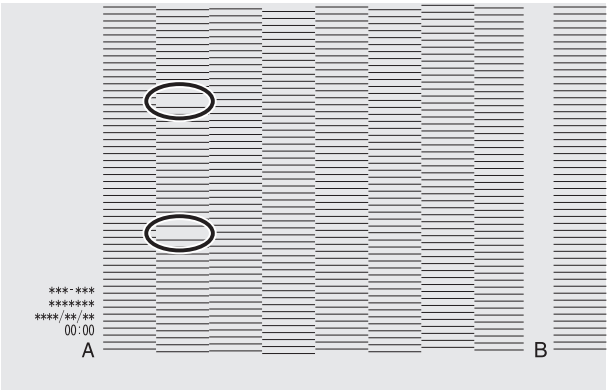
MEMO

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

   In the case of the figure below, the space from [A] to [B] is head A.



   MEMO

   If the printing-test results are difficult to interpret

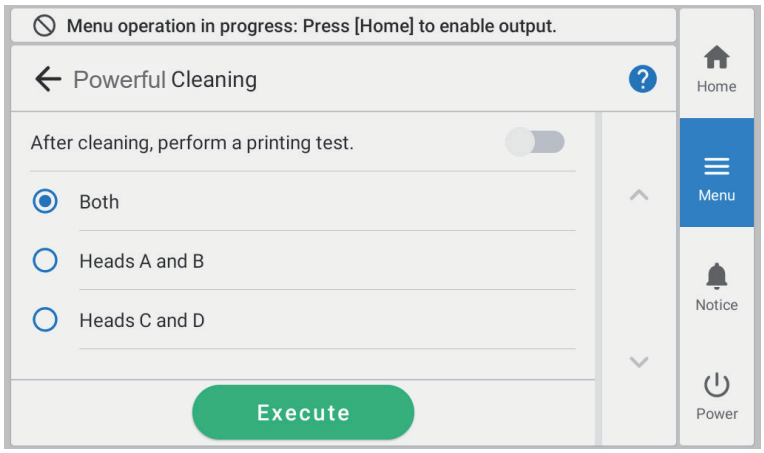
   Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

2. **Tap on the home screen.**

3. **Tap [Cleaning].**

4. **Tap [Powerful Cleaning].**

   The screen shown below appears.



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

MEMO

- **[Both]**: The following two items are both applicable.
- **[Heads A and B]**: Dot drop-out or dot displacement occurs at [A], [B], or both.
- **[Heads C and D]**: Dot drop-out or dot displacement occurs at [C], [D], or both.

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 on the home screen, select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** in that order, and then tap **[Execute]** 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.

10. **If dot drop-out or dot displacement is present, perform 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]**.

If there is no dot drop-out or dot displacement, proceed to the next step.

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

RELATED LINKS

- P. 186 Manual Cleaning Method

If Colors Are Uneven

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.

When uneven color issues occur, perform the following procedure to resolve these issues.

If Uneven Color Issues Occur with Ink Other than White Ink

Perform the following operations.

1. Shake the ink cartridge to mix the ink.
   P. 181 Maintenance of Ink Cartridges
2. If the uneven color issue is not improved after performing Step 1, perform [**Ink Renewal Inside Damper**].
   P. 214 Method for Ink Renewal Inside Damper
3. If the uneven color issue is not improved after performing Step 2, perform [**Ink Renewal**].
   P. 217 Ink Renewal Method

If Uneven Color Issues Occur with White Ink

Perform the following operations.

1. Shake the ink cartridge to mix the ink.
   P. 181 Maintenance of Ink Cartridges
2. If the uneven color issue is not improved after performing Step 1, perform [**Ink Circulation**].
   P. 210 Ink Circulating Method
3. If the uneven color issue is not improved after performing Step 2, perform [**Powerful Cleaning**].
   P. 212 Method for Eliminating Uneven Color Issues with Powerful Cleaning
4. If the uneven color issue is not improved after performing Step 3, perform [**Ink Renewal Inside Damper**].
   P. 214 Method for Ink Renewal Inside Damper
5. If the uneven color issue is not improved after performing step 4, perform [**Ink Renewal**].
   P. 217 Ink Renewal Method

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**].

MEMO

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.
Note that [**After ink circulation, perform a printing test.**] is not displayed if a rotary axis unit is attached.

Procedure

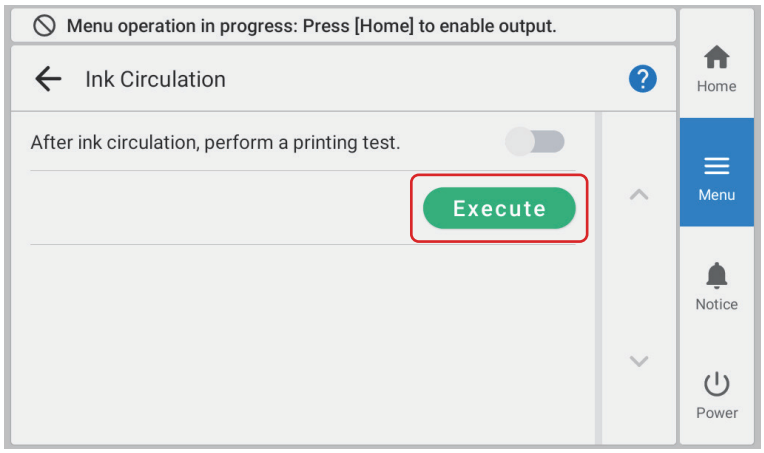
1. Tap ☰.

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. 212 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.

IMPORTANT

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

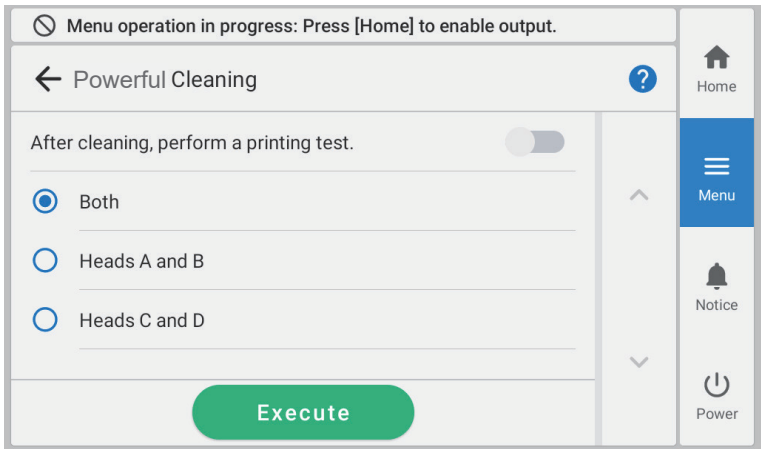
MEMO

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 on the home screen.**
2. **Tap [Cleaning].**
3. **Tap [Powerful Cleaning].**

   The screen shown below appears.



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

   If the uneven color issues are resolved, proceed to the next step.

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

RELATED LINKS

- P. 214 Method for Ink Renewal Inside Damper

Method for Ink Renewal Inside Damper

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

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

When dot drop-out and dot displacement issues are not resolved even after performing the work below

- [**Normal Cleaning**]
- [**Medium Cleaning**]
- [**Powerful Cleaning**]
- [**Manual Cleaning**]

When uneven color issues (except for white ink) are not resolved even after performing the work below

- Ink mixing

When uneven color issues (white ink) are not resolved even after performing the work below

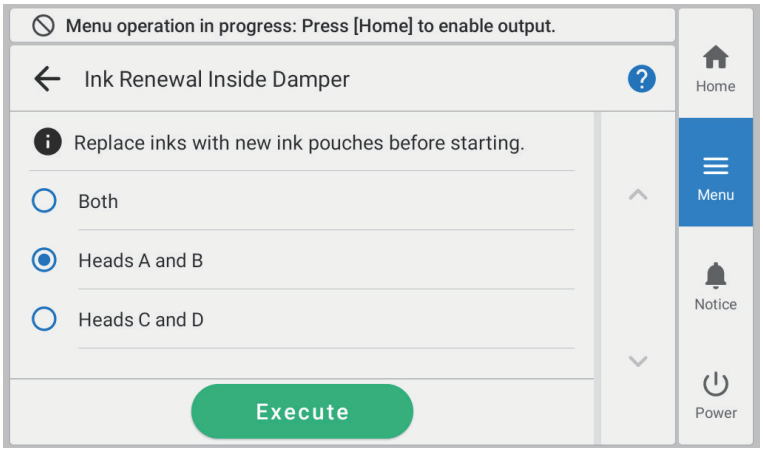
- Ink mixing
- [**Ink Circulation**]
- [**Powerful Cleaning**]

IMPORTANT

- [**Ink Renewal Inside Damper**] consumes more ink than [**Powerful Cleaning**].
- When you perform [**Ink Renewal Inside Damper**], replace the ink pouch in the target ink cartridge with a new ink pouch. 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 the ink pouch in the target ink cartridge with a new ink pouch.**
   Ink Replacement Method(P. 64)
4. **Select the group of print heads for which you will perform ink renewal inside the damper.**



5. Tap [Execute].

Starts the [**Ink Renewal Inside Damper**] function. 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.

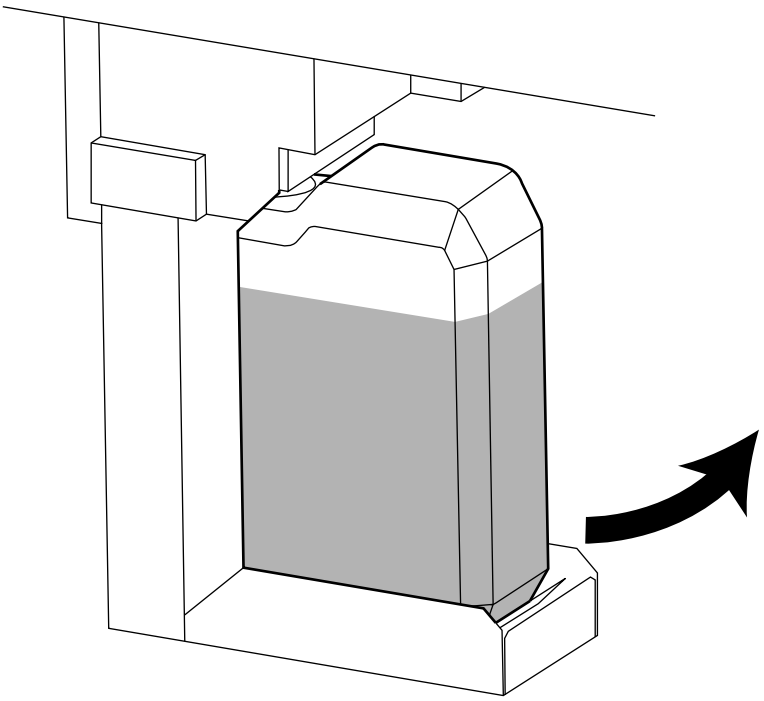
MEMO

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.

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

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

RELATED LINKS

- P. 217 Ink Renewal Method
- P. 263 [Cleaning Error]
- P. 264 [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 dot drop-out and dot displacement issues are not resolved even after performing the work below

- [**Normal Cleaning**]
- [**Medium Cleaning**]
- [**Powerful Cleaning**]
- [**Manual Cleaning**]
- [**Ink Renewal Inside Damper**]

When uneven color issues (except for white ink) are not resolved after performing the work below

- Ink mixing
- [**Ink Renewal Inside Damper**]

When uneven color issues (white ink) are not resolved after performing the work below

- Ink mixing
- [**Ink Circulation**]
- [**Powerful Cleaning**]
- [**Ink Renewal Inside Damper**]

IMPORTANT

A large amount of ink will be discharged during this operation. Perform only when discharge issues and uneven color issues are not resolved after performing the above work.

RELATED LINKS

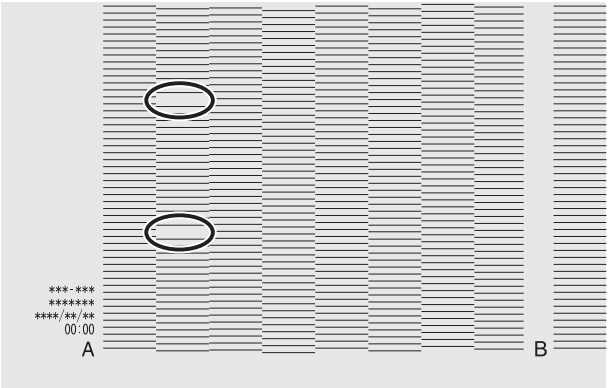
- P. 202 When Dot Drop-out or Dot Displacement Occurs
- P. 210 If Colors Are Uneven

1. Start the [Ink Renewal] menu.

Procedure

1. **Check for the print head with dot drop-out, dot displacement, or uneven colors by viewing the results of the printing test.**

   In the case of the figure below, the space from [A] to [B] is head A.



MEMO

If the printing-test results are difficult to interpret

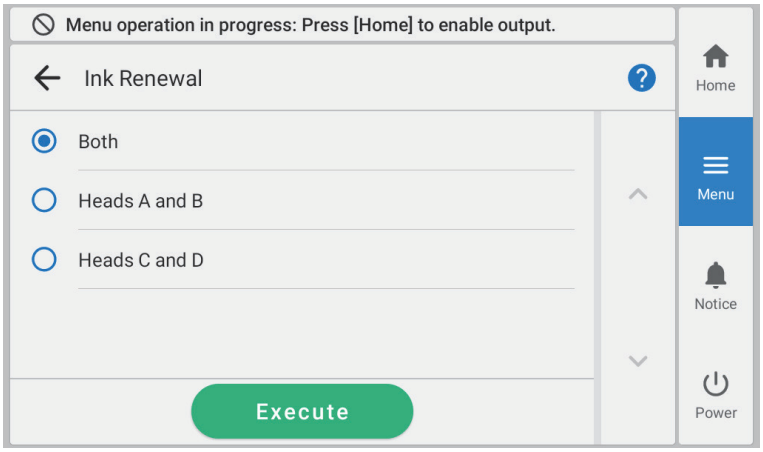
Check the results in a bright location, changing your line of vision. They are visible using the reflection of the light.

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

3. **Tap** ☰.

4. **Tap [Maintenance]>[Ink Renewal].**

The screen shown below appears.



5. **Select the print heads to renew the ink of.**

MEMO

- **[Both]**: The following two items are both applicable.
- **[Heads A and B]**: Dot drop-out or dot displacement occurs at [A], [B], or both.
- **[Heads C and D]**: Dot drop-out or dot displacement occurs at [C], [D], or both.

6. **Tap [Execute].**

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

7. **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

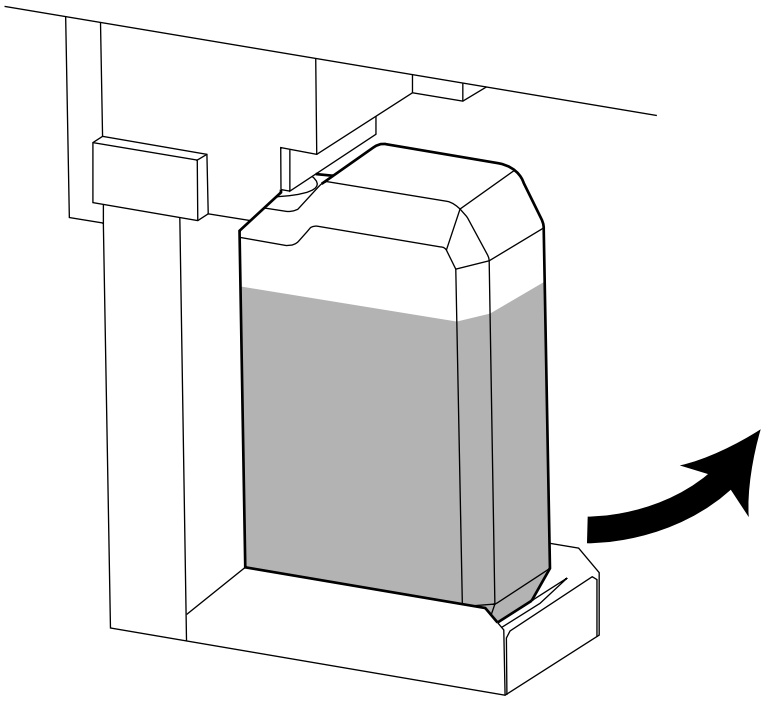
Do not store discharged fluid in a location where it is exposed to direct sunlight.

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.



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

9. **Tap [Finish].**

Ink renewal starts.

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.

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

2. Performing a Printing Test to Check the Results

Procedure

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

   Determining the Print Surface Height and Printing Position(P. 79)

   For a printing test, set the printing area with W (width) of 110 mm (4.34 in.) or more and L (length) of 110 mm (4.34 in.) or more. An error will occur and printing tests cannot be performed if the area is smaller than this.

2. **Tap on the home screen.**

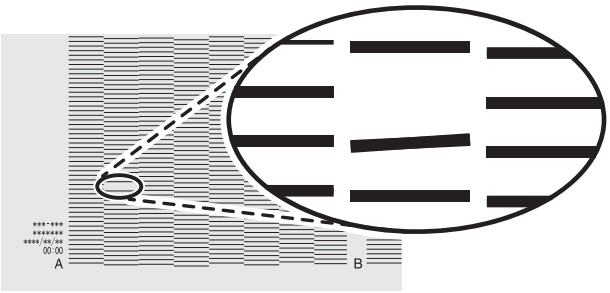
3. **Tap [Execute] next to [Printing Test].**

   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 on the home screen, select **[Cleaning]**>**[Printing Test]**>**[Nozzle Drop-out Test (Base: Black)]** in that order, and then tap **[Execute]** 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.**

   If no dot drop-out or dot displacement occurs and if there are no uneven colors, this operation is finished.

5. **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. Performing a Printing Test for the Nozzle Mask

Procedure

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

   Determining the Print Surface Height and Printing Position(P. 79)

   For a printing test, set the printing area with W (width) of 185 mm (7.29 in.) or more and L (length) of 136 mm (5.36 in.) or more. An error will occur and printing tests cannot be performed if the area is smaller than this.

2. **Tap** ☰.

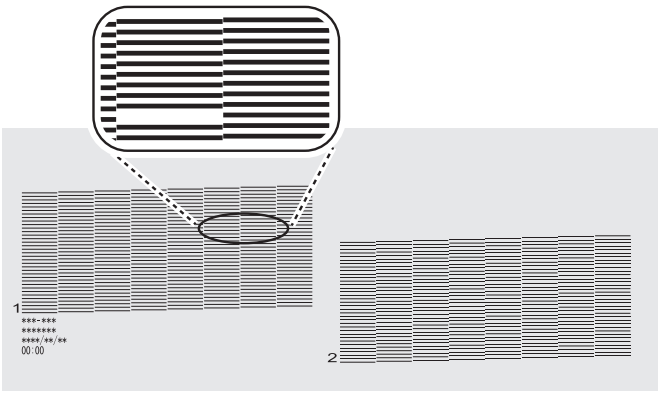
3. **Tap [Cleaning]>[Printing Test].**

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

2. Limit the print heads used for printing.

Use VersaWorks to select the nozzle group used for printing. For the detailed procedure, see the VersaWorks Master Guide.

RELATED LINKS

- VersaWorks manual

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.com/).

When a warning beep 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 on the home screen.**

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

4. **Tap [Execute].**

Tap **[Execute]** to display a message reminding the user to wear protective gear.

5. **Tap [OK].**

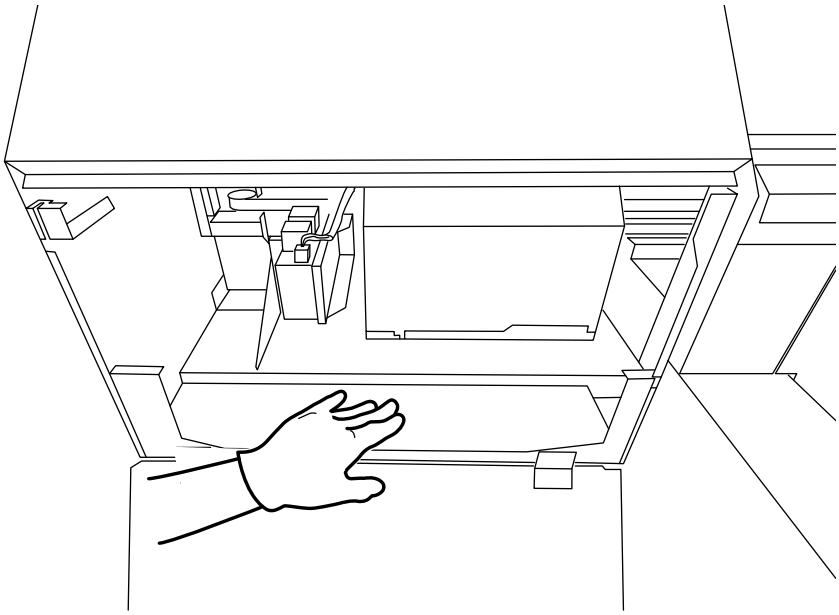
Tap **[OK]** to move the print-head carriage and flat table.

MEMO

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.

6. **Open the left cover.**

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



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

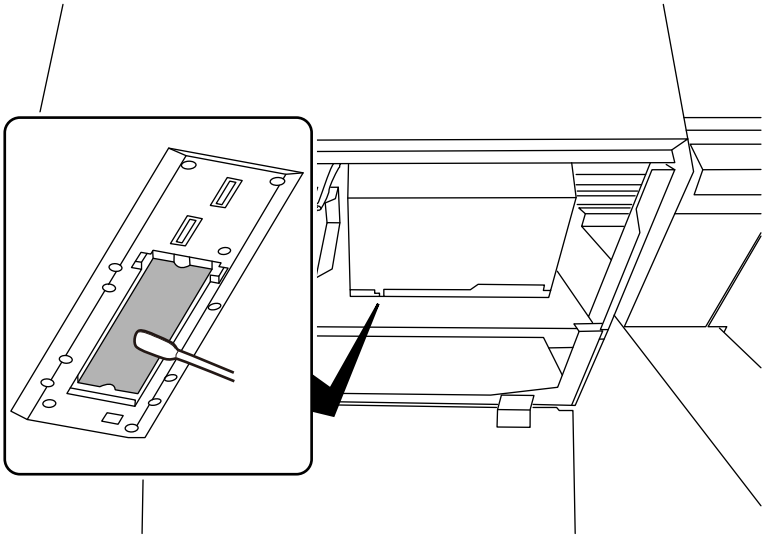
IMPORTANT

- 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.



9. **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.



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.**

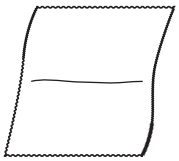
When the Operation Panel Is Dirty

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. **Turn off the sub power followed by the main 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.
3. **Turn on the main power switch.**

Replacing Consumable Parts

Replacing Parts for Maintenance 229
Replacing the Wiper 229
Replacing the Print Head Caps 231
Replacing the UV Mist Filters 233
Replacing the Flushing Sponges 235
Consumable Parts That Require Inquiries before Replacement 237

Replacing Parts for Maintenance

Replacing the Wiper

The wiper periodically cleans the surface of the print heads.

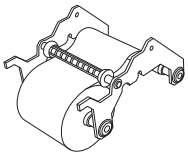
When it is time to replace the wiper, the message [**Replace the wiper immediately.**] appears. In this situation, replace the wiper.

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

⚠ 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.

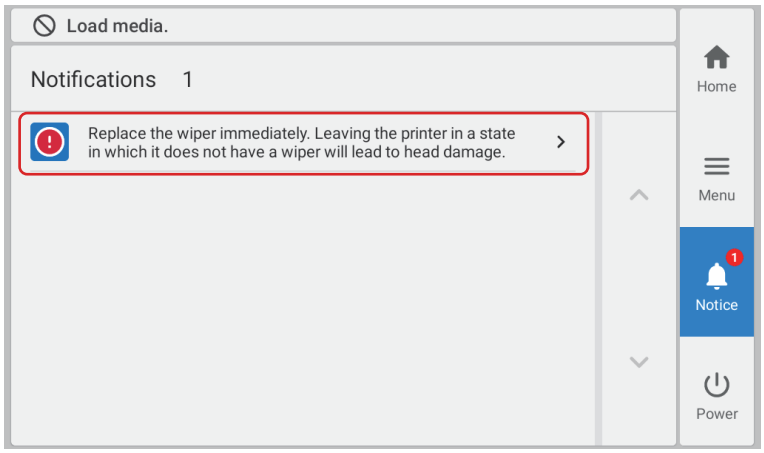
Required item

Wiper

IMPORTANT

- To prevent the print heads from drying out, finish this procedure in 10 minutes or less. A warning beep sounds after 10 minutes. Stop work, close all the covers, and then tap [**Finish All**] to end the procedure. After that, restart the procedure from the beginning.
- Take care to prevent ink from adhering to the operation panel.

Procedure

1. **When the message [Replace the wiper immediately.] appears, tap [OK].**
2. **Remove the object to be printed on.**
3. **Tap  to display the messages.**
4. **Tap [Replace the wiper immediately.].**



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

5. **Tap [Execute].**

Tap [**Execute**] to display a message reminding the user to wear protective gear.

6. **Tap [OK].**

Tap [**OK**] to move the print-head carriage to a location where wiper replacement is possible.

7. **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**].

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

9. **When the message [Close the cover.] appears, close the wiper cover and the right cover.**

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

10. **When the message [Has the cloth wiper been replaced?] appears, tap [Yes].**

The wiping count of the wiper is reset.

MEMO

If you tap [**Yes**] on the wiper replacement confirmation screen even though you have not replaced the wiper, the wiping count of the wiper is reset. In this situation, no notification will appear even if the amount of wiper remaining is very small, and the message [**Wiper Error**] will appear when the wiper runs out. When the message [**Wiper Error**] appears, it is not possible to perform cleaning or to print a new job (this does not apply to printing that is already in progress). To ensure you have enough time to prepare the replacement wiper, tap [**No**] if you have not replaced the wiper.

11. **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.

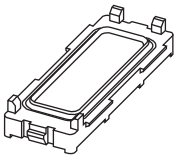
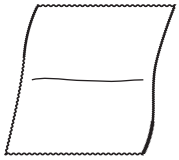
When it is time to replace the print head caps, the message [**The time for cap replacement has arrived.**] appears. In this situation, replace the print head caps.

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

⚠ 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.

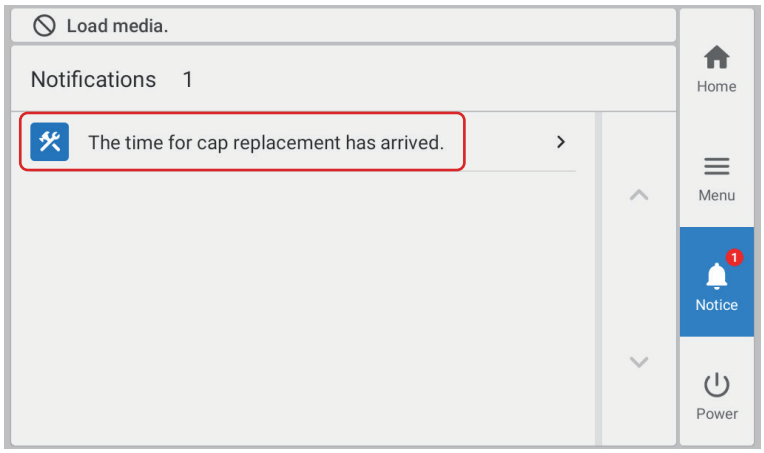
Required items		
		
Print head cap	Cloth (that is not fluffy)	Cleaning stick

IMPORTANT

- To prevent the print heads from drying out, finish this procedure in 10 minutes or less. A warning beep sounds after 10 minutes. Stop work, close all the covers, and then tap [**Finish All**] to end the procedure. After that, restart the procedure from the beginning.
- Take care to prevent ink from adhering to the operation panel.

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].**

Tap [**Execute**] to display a message reminding the user to wear protective gear.

6. **Tap [OK].**

Tap [**OK**] to move the print-head carriage to a location where print head cap replacement is possible.

7. **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.

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

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

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

10. **Tap ⌂ to return to the home screen.**

MEMO

After a print head cap is replaced, dot displacement may occur. You are recommended to perform the following work to check that there is no dot displacement.

1. Perform [**Medium Cleaning**].
2. Perform [Nozzle Drop-out Test].
3. Check for dot displacement.

RELATED LINKS

- P. 204 Medium Cleaning Method
- P. 55 Performing a Nozzle Drop-out Test

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.

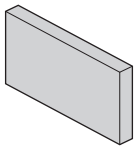
When it is time to replace the UV mist filters, the message [**The time for UV mist filter replacement has arrived.**] appears. If this message appears, replace the UV mist filters.

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

⚠ 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.

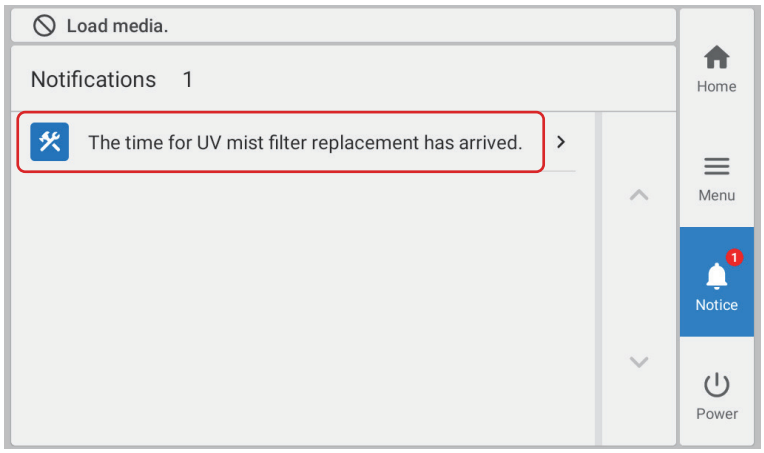
Required item

UV mist filters

IMPORTANT

- To prevent the print heads from drying out, finish this procedure in 10 minutes or less. A warning beep sounds after 10 minutes. Stop work, close all the covers, and then tap [**Finish All**] to end the procedure. After that, restart the procedure from the beginning.
- Take care to prevent ink from adhering to the operation panel.

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].**

   Tap [**Execute**] to display a message reminding the user to wear protective gear.

6. **Tap [OK].**

   Tap [**OK**] to move the print-head carriage to a location where the UV mist filter can be replaced.

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

   - Tap ‹ or › to check the procedure.
   - If you complete the work to replace the 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.

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

9. **When [Close the cover.] is displayed, close the left cover.**

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

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

Replacing the Flushing Sponges

The flushing sponge absorbs the discharged ink to prevent clogging of the print heads.

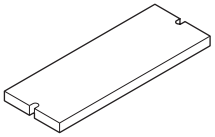
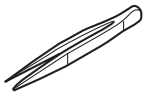
When it is time to replace the flushing sponge, the message [**The time for flushing sponge replacement has arrived.**] appears. In this situation, replace the flushing sponge.

For information about purchasing flushing sponges, contact your authorized dealer or visit our website (https://www.rolanddg.com/).

⚠ 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.

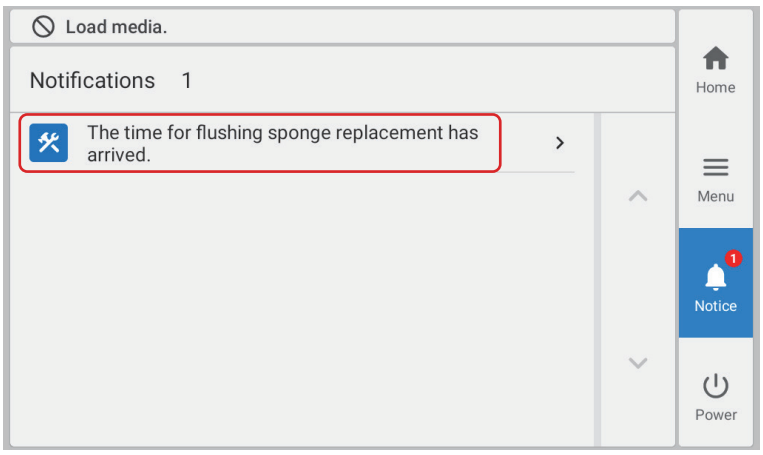
Required items	
	
Flushing sponge	Tweezers

IMPORTANT

- To prevent the print heads from drying out, finish this procedure in 10 minutes or less. A warning beep sounds after 10 minutes. Stop work, close all the covers, and then tap [**Finish All**] to end the procedure. After that, restart the procedure from the beginning.
- Take care to prevent ink from adhering to the operation panel.

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].**

Tap [**Execute**] to display a message reminding the user to wear protective gear.

6. **Tap [OK].**

Tap [**OK**] to move the print-head carriage to a location where flushing sponge replacement is possible.

7. **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.

8. **When the flushing sponge replacement is finished, tap [Finish All].**

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

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

10. **Tap ⌂ to return to the home screen.**

Consumable Parts That Require Inquiries before Replacement

When replacing the following consumable parts, contact your authorized dealer.

Item	Related page
Print heads	Cleaning around the Print Heads(P. 185)

Troubleshooting Methods

Output Quality Problems

Printed results are coarse or contain horizontal bands 240
- Do the Print Heads Cause Dot Drop-out? 240
- Is the printer installed in a level and stable location? 240
- Is the printer installed in a location that is not exposed to direct sunlight? 240
- Are the software RIP settings appropriate? 240
- Is the method of loading the object to be printed on appropriate? 240
- Are the [**Media Settings**] appropriate? 240
- Has [**Wait Time Per Scan**] Been Set? 241

The Object to be Printed on Becomes Soiled When Printed 242
- Are the print heads dirty? 242
- Is the humidity of the room too low? 242

Colors are unstable or uneven 243
- Did you shake the ink cartridges before installing them? 243
- Are Colors Still Uneven After Mixing the Ink by Shaking the Ink Cartridges? 243
- Was printing paused partway through? 244
- Is the printer installed in a level and stable location? 244
- Is the method of loading the object to be printed on appropriate? 244
- Are the operating parameters set to appropriate values? 244
- Is the printer being used in a location subject to severe changes in the operating environment? 245
- Are the [**Media Settings**] appropriate? 245
- Are the irradiation windows of the UV-LED devices dirty? 245

Printed results are coarse or contain horizontal bands

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.

When using the automatic maintenance feature, if the cleaning intensity is low or cleaning is performed infrequently, there will be an increased risk of dot drop-out or dot displacement. If necessary, you can reduce the risk of dot drop-out or dot displacement by performing the various types of cleaning or by increasing the intensity or frequency of cleaning with the automatic maintenance feature.

RELATED LINKS

- P. 55 Performing a Nozzle Drop-out Test
- P. 57 Normal Cleaning Method
- P. 202 When Dot Drop-out or Dot Displacement Occurs
- P. 177 Automatic Maintenance Feature and Notes

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. These factors may lead to dot-dropout 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.

Are the software RIP settings appropriate?

Try using the optimal print mode on software RIP. Specific combinations of the object to be printed on and print mode may cause the colors to be uneven. Results may also vary greatly depending on the color-profile selection. Select settings appropriate for the object to be printed on.

Is the method of loading the object to be printed on appropriate?

If the object to be printed on is not loaded correctly, output may be adversely affected. Load the object to be printed on correctly.

RELATED LINKS

- P. 76 Loading the Object to Be Printed On

Are the [Media Settings] appropriate?

If the settings are not suitable for the object to be printed on, output may be adversely affected. Select settings optimized for the object to be printed on.

RELATED LINKS

- P. 121 Changing the Media Settings

Has [Wait Time Per Scan] Been Set?

The image quality may be rough due to recoil caused by the movement of the print-head carriage during printing. In this situation, you may be able to stabilize the image quality by making the print-head carriage pause when it returns to the opposite side. If the image quality feels coarse, set the [**Wait Time Per Scan**].

RELATED LINKS

- P. 119 Set the [**Wait Time Per Scan**].

The Object to be Printed on Becomes Soiled When Printed

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. 185 Cleaning around the Print Heads

Is the humidity of the room too low?

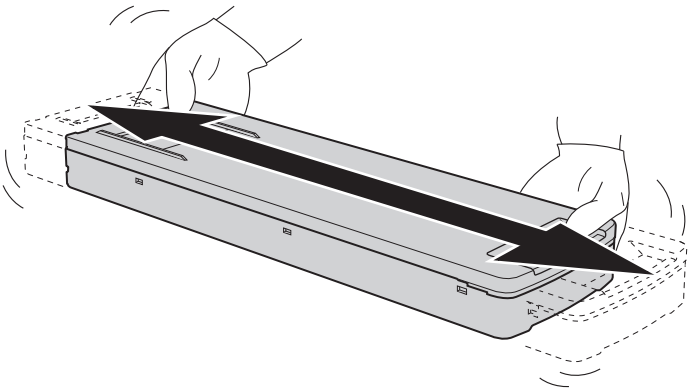
Use the machine in an environment with a humidity of 35 to 80% RH (no condensation).

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.



Shake the ink cartridges:

- White ink: When replaced with a new cartridge and each day (before starting the day's operations)
- Ink other than white ink: When replaced with a new cartridge or when uneven color issues occur

MEMO

To prevent ink precipitation, you can make the machine periodically display a message prompting you to mix the ink.

P. 155 Showing/Hiding Notifications

IMPORTANT

- **The ingredients in white ink tend to settle.**
  Allowing the ink to stand without shaking it can cause the settled material to harden, resulting in malfunction 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 you have finished mixing the ink, reattach the ink cartridge immediately.**
  Taking time to reattach the ink cartridge will adversely affect the ink path.

Are Colors Still Uneven After Mixing the Ink by Shaking the Ink Cartridges?

If colors are still uneven after mixing the ink by shaking the ink cartridges, perform the procedure below.

- White ink
  1. Perform [**Ink Circulation**].
     If the uneven color issue is not corrected after performing [**Ink Circulation**], perform the following procedure.
  2. Perform [**Powerful Cleaning**].
     If the uneven color issue is not corrected after performing [**Powerful Cleaning**], perform the following procedure.
  3. Perform [**Ink Renewal Inside Damper**].

If the uneven color issue is not corrected after performing [**Ink Renewal Inside Damper**], perform the following procedure.

4. Perform [**Ink Renewal**].

- Ink other than white ink
  1. Perform [**Ink Renewal Inside Damper**].

     If the uneven color issue is not corrected after performing [**Ink Renewal Inside Damper**], perform the following procedure.
  2. Perform [**Ink Renewal**].

RELATED LINKS

- P. 210 Ink Circulating Method
- P. 212 Method for Eliminating Uneven Color Issues with Powerful Cleaning
- P. 214 Method for Ink Renewal Inside Damper
- P. 217 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 remaining inside the machine runs out. 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.

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. These factors may lead to dot-dropout or reduced printing quality.

Is the method of loading the object to be printed on appropriate?

If the object to be printed on is not loaded correctly, output may be adversely affected. Load the object to be printed on correctly.

RELATED LINKS

- P. 76 Loading the Object to Be Printed On

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. 129 Speeding Up Printing for Narrow Objects

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.

Are the [Media Settings] appropriate?

If the settings are not suitable for the object to be printed on, output may be adversely affected. Select settings optimized for the object to be printed on.

RELATED LINKS

- P. 121 Changing the Media Settings

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. 192 Cleaning the UV-LED Device

Machine Problems

Why Has the Print-Head Carriage Stopped Moving? 247
What to Do First 247
If the Print Heads Still Do Not Move 247
The printer unit does not run 249
Is the power switched on? 249
Is [**Output possible.**] displayed? 249
Are Any Covers Open? 249
Is an [**Output is currently paused.**] displayed? 249
Is a Message Displayed on the Operation Panel? 249
Are the cables connected? 249
Is the LAN routing appropriate? 249
Are the LAN settings correct? 250
Did the software RIP end abnormally? 250
Is an [**Ink Cartridge Error**] displayed? 250
The flat table does not move 251
Is something stuck in one of the movable components inside of the machine? 251
Are Any Covers Open? 251
The Head Gap Sensor Does Not Detect the Object to Be Printed on 252
Is something covering the head gap sensor or has it attracted dust? 252

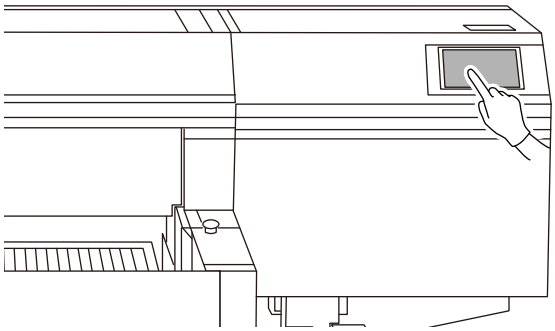
Why Has the Print-Head Carriage Stopped Moving?

If the print-head carriage stopped above the flat table, immediately take 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

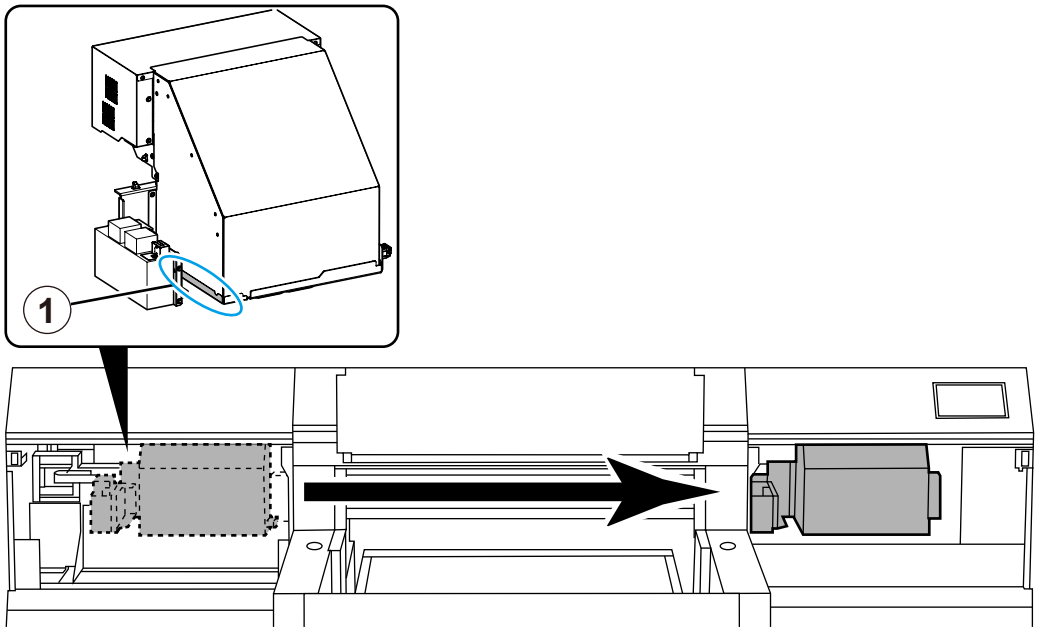
1. **Switch off the sub power.**
2. **Turn off the main power switch.**
3. **Open the front, left, and right covers.**
4. **Grasp the specified position (indicated with ① in the figure) and gently move the print-head carriage to the standby position.**

   Stopping at the place where the audible click is heard locks the print-head carriage in place.

> ⚠ CAUTION
>
> **When moving the print-head carriage by hand, be sure to hold the specified position.**
> Moving it by holding positions other than those specified may deform and damage the cover.

IMPORTANT

When moving the print-head carriage by hand, check that it does not come in contact with the wiper, print head cap, or other parts. 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, left, and right covers.**

The printer unit does not run

Is the power switched on?

Switch on the printer's main power, followed by the sub power and make sure the home screen appears.

RELATED LINKS

- P. 32 Turning the Power On

Is [Output possible.] displayed?

Output is not performed when [**Output possible.**] is not displayed at the top of the operation panel. Load the object to be printed on, tap  on the home screen, and follow the on-screen instructions to complete the setup of the object to be printed on. 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.

Are Any Covers Open?

Close the front, left, and right covers and the front and rear UV shields.

Is an [Output is currently paused.] displayed?

When [**Output is currently paused.**] is displayed on the operation panel, operation is paused. To resume, tap [**Resume**].

RELATED LINKS

- P. 61 Pausing, Resuming, and Canceling Printing

Is a Message Displayed on the Operation Panel?

RELATED LINKS

- P. 254 Messages
- P. 259 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. 168 Viewing Printer Information

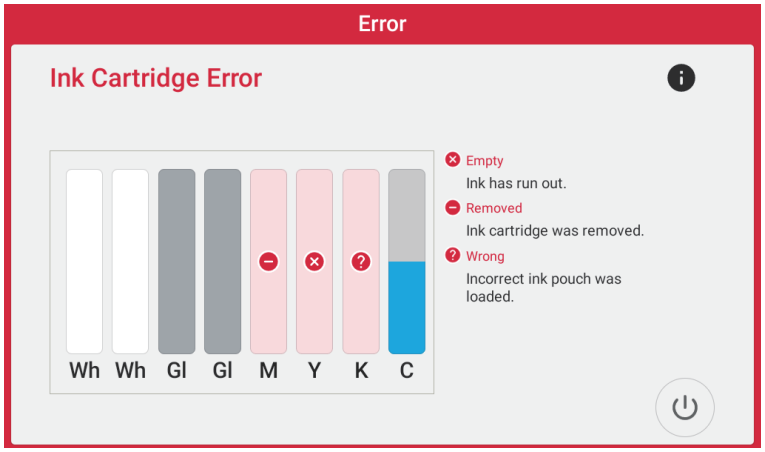
Did the software RIP end abnormally?

Make sure the software RIP is running correctly, then switch the sub power switch off and back on.

RELATED LINKS

- VersaWorks manual

Is an [Ink Cartridge Error] displayed?



When **[Ink Cartridge Error]** appears on the operation panel, 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. 64 Ink Replacement Method
- P. 259 [Ink Cartridge Error]

The flat table does not move

Is something stuck in one of the movable components inside of the machine?

Check whether or not something is catching or stuck and interfering with operation.

Are Any Covers Open?

During printing, close the front, left, and right covers and the front and rear UV shields. If any cover is open during printing, in order to protect operator safety, the flat table will not move.

The Head Gap Sensor Does Not Detect the Object to Be Printed on

Is something covering the head gap sensor or has it attracted dust?

Check whether something is interfering with the head gap sensor's detection.

Messages on the Operation Panel

Messages 254
- **[When output, cleaning, and other operations are completed, discard the discharged fluid.]** 254
- **[The time for manual cleaning has arrived.]** 254
- **[The time for UV lamp manual cleaning has arrived.]** 254
- **[There are not many wipers remaining.]** 254
- **[Replace the wiper immediately.]** 255
- **[The time for cap replacement has arrived.]** 255
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Messages

These are the main messages that appear on the machine'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. 199 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. 186 Manual Cleaning Method

[The time for UV lamp manual cleaning has arrived.]

This message appears when it is time to perform UV lamp manual cleaning.

Tap [**The time for UV lamp manual cleaning has arrived.**]>[**Execute**] to perform UV lamp manual cleaning.

RELATED LINKS

- P. 193 UV Lamp Manual Cleaning Method

[There are not many wipers remaining.]

When it is almost time to replace the wiper, this message appears.

Because the amount of wiper remaining is low, stock up on wipers.

To replace the wiper when this message appears, tap [**There are not many wipers remaining.**]>[**Execute**].

When you replace the wiper, the message [**Has the cloth wiper been replaced?**] appears.

Tap [**Yes**] to reset the wiping count of the wiper and recognize the wiper as a new product.

IMPORTANT

Leaving the printer in a state in which the amount of wiper remaining is zero for a long time may lead to print head malfunctions.

MEMO

If you tap [**Yes**] on the wiper replacement confirmation screen even though you have not replaced the wiper, the wiping count of the wiper is reset. In this situation, no notification will appear even if the amount of wiper remaining is very small, and the message [**Wiper Error**] will appear when the wiper runs out. When the message [**Wiper Error**] appears, it is not possible to perform cleaning or to print a new job (this does not apply to printing that is already in progress). To ensure you have enough time to prepare the replacement wiper, tap [**No**] if you have not replaced the wiper.

RELATED LINKS

- P. 229 Replacing the Wiper

[Replace the wiper immediately.]

This message appears when the amount of wiper remaining is even lower than when the message [There are not many wipers remaining.] appeared.

Tap [**Replace the wiper immediately.**]>[**Execute**] to replace the wiper.

When you replace the wiper, the message [**Has the cloth wiper been replaced?**] appears.

Tap [**Yes**] to reset the wiping count of the wiper and recognize the wiper as a new product.

IMPORTANT

Leaving the printer in a state in which the amount of wiper remaining is zero for a long time may lead to print head malfunctions.

MEMO

If you tap [**Yes**] on the wiper replacement confirmation screen even though you have not replaced the wiper, the wiping count of the wiper is reset. In this situation, no notification will appear even if the amount of wiper remaining is very small, and the message [**Wiper Error**] will appear when the wiper runs out. When the message [**Wiper Error**] appears, it is not possible to perform cleaning or to print a new job (this does not apply to printing that is already in progress). To ensure you have enough time to prepare the replacement wiper, tap [**No**] if you have not replaced the wiper.

RELATED LINKS

- P. 229 Replacing the Wiper
- P. 254 [There are not many wipers remaining.]

[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. 231 Replacing the Print Head Caps

[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. 233 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. 235 Replacing the Flushing Sponges

[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 immediately.]

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.

IMPORTANT

Leaving the printer in a state in which it does not have any cleaning liquid for a long time may lead to print head malfunctions.

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 immediately.**] 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. 69 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 immediately.**] 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. 69 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.

[There is ink that has expired.]

Ink has expired.

Replace with an ink pouch that is within its expiration date.

RELATED LINKS

- P. 64 Ink Replacement Method

Error Messages

This section describes the error messages that may appear on the machine'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 cartridge with the incorrect color is loaded**

  ?[Wrong][Incorrect ink pouch 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.

[Cover Open Error]

The front, left, or right cover or the front or rear UV shield is open.

For safety, the machine stops if a cover is opened during operation.

Close the open cover.

RELATED LINKS

- P. 11 Part Names and Functions

[Drain Bottle Error]

[Discard the discharged fluid in the drain bottle.]

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.**].

[Install the drain bottle.]

This message appears when the drain bottle is misaligned or removed.

Install the drain bottle again.

[Wiper Error]

[Replace the wiper.]

This message appears if there is no wiper when wiping a print head surface during cleaning.

Replace the wiper with a new one.

[Load the wiper correctly.]

This message appears when one of the following situations is detected.

- After the wiper was attached before ink filling, it was not possible to take up the wiper.
- After wiper replacement, it was not possible to take up the wiper.

Load the wiper correctly.

RELATED LINKS

- P. 229 Replacing the Wiper

[Unable to Fill Cleaning Liquid]

[Replace the cleaning liquid pouch.]

This message appears when there is no cleaning liquid and an operation that requires cleaning liquid is performed.

Replace the empty cleaning liquid pouch.

After 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 immediately.**] 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.

[Install the cleaning liquid pouch.]

This message appears under the following conditions.

- When a cleaning cartridge that does not contain a cleaning liquid pouch is loaded or when the cleaning cartridge is removed from the machine
- When an operation that requires cleaning liquid is performed in the above situation

Immediately install a new cleaning liquid pouch or immediately insert the cleaning cartridge. After 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 immediately.**] 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. 69 Cleaning Liquid Replacement Method

[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.

[Insufficient Media Printing Area]

[The printing area is insufficient. Set the printing area again.]

This message appears when the size of the printing area for the printing test of the nozzle drop-out test or nozzle mask test is larger than the printing area of the loaded object to be printed on.

Tap [**OK**] to cancel output. The size of the printing test of the nozzle drop-out test or nozzle mask test is as follows. Increase the size of the printing area to a size larger than this size and perform the printing test again.

- Nozzle drop-out test: approximately 110 mm (4.33 in.) (width) × approximately 110 mm (4.33 in.) (length)
- Nozzle mask test: approximately 185 mm (7.28 in.) (width) × approximately 136 mm (5.35 in.) (length)

[Printing Size Error]

[Crop marks cannot be added. 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 media.**

To continue performing output without making corrections, tap [**Continue Output**]. The data is output without printing the crop marks.

To cancel output, tap [**Cancel**]. Make the printing area wider by replacing the object to be printed on with a larger object, and then send the data again.

- **The width of the print data is 60 mm (2.36 in.) or less.**

  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.

[Table Height Error]

[Check the table height. Press [OK].]

This message is displayed when the head gap sensor interferes with the object during non-printing operations.

Check to see if the object to be printed on does not exceed the size that can be mounted. If it exceeds the size, mount an object to be printed on that is the size that can be mounted.

Tap [**OK**] to clear the message.

[Operation was stopped because the media height is abnormal. Press [OK].]

If the following clearance setting is configured, the flat table is automatically lowered and printing is stopped when an abnormal object height is detected during printing.

- Clearance Settings: [**Stop**]

Check to see if the object to be printed on does not exceed the size that can be mounted. If it exceeds the size, mount an object to be printed on that is the size that can be mounted.

Tap [**OK**] to clear the message.

[The table height was readjusted. Press [OK].]

If the following clearance settings are configured, the flat table height is automatically readjusted and printing resumes when an abnormal object height is detected during printing. When printing is finished, the user is notified that printing has been performed with the flat table height readjusted.

- Clearance Settings: [**Readjust**]
- Warning Display: [**Enable**]

When the message [**The table height was readjusted.**] appears, tap [**OK**] to clear the message.

RELATED LINKS

- P. 22 Printable Materials and Shapes

[External Device Error]

This message is displayed when installation or removal is performed without executing [Rotary Axis Unit Attachment/Removal] on the operation panel or when the wiring is not correctly connected.

Tap [**OK**] to switch to the [**Rotary Axis Unit Attachment/Removal**] menu.

Check the connection status of the rotary axis unit connected to the machine.

[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 14°C (57.2°F) or lower during startup or operation. Operation cannot be continued. Turn off the sub power. Bring the installed location to a temperature of 20°C to 32°C (68°F to 89.6°F), and then turn on the power.

RELATED LINKS

- P. 32 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 46°C (114.8°F) or higher during startup. Operation cannot be continued. Turn off the sub power. Bring the installed location to a temperature at which operation is possible (20 to 32°C [68 to 90°F]), and then turn on the power.

RELATED LINKS

- P. 32 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]

During operation, an error was detected with the internal pressure, and an emergency stop was executed.

Operation cannot be continued. Perform the following operations.

1. Switch the sub power off and back on.
2. Perform [**Manual Cleaning**].

3. Perform [**Ink Renewal Inside Damper**].
4. To check whether the error has been cleared, perform the same operation that you performed when the error occurred (for example, printing).

   You may also perform a printing test. If no error messages appear when you perform the above operations, the work is complete.

   If [**Cleaning Error**] appears again while you perform steps 2 to 4, perform the following operations.
5. Replace the print head cap.
6. Perform steps 2 to 4.

   If, once more, an error message appears during this work, switch the sub power off, and then contact your authorized dealer.

RELATED LINKS

- P. 186 Manual Cleaning Method
- P. 214 Method for Ink Renewal Inside Damper
- P. 231 Replacing the Print Head Caps

[Cleaning Error (Ink Cartridge)]

The printer made an emergency stop for one of the following reasons.

- Ink ran out during [**Ink Renewal Inside Damper**].
- An ink cartridge was removed during [**Ink Renewal Inside Damper**].
- The ink ran out during the first ink fill.
- 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 target head, and then perform [**Ink Renewal Inside Damper**] again.

If an Ink Cartridge Error appears during work, remove and reinsert the corresponding ink cartridge.

RELATED LINKS

- P. 214 Method for Ink Renewal Inside Damper
- P. 217 Ink Renewal Method

[Cleaning Error (Drain Bottle)]

This message appears when one of the following situations is detected.

- The drain bottle was removed while [**Ink Renewal Inside Damper**] was in progress.
- The drain bottle became full while [**Ink Renewal Inside Damper**] was in progress.
- The drain bottle is removed during initial ink filling.
- The drain bottle became full during the first ink fill.

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 target head, and then perform [**Ink Renewal Inside Damper**] again.

If an Ink Cartridge Error appears during work, remove and reinsert the corresponding ink cartridge.

RELATED LINKS

- P. 214 Method for Ink Renewal Inside Damper
- P. 217 Ink Renewal Method

[Emergency Stop In Progress]

This is displayed when the emergency stop button is pressed.

Operation cannot be continued. Perform the following operations.

1. Check the safety of the surrounding area.
2. Release the emergency stop button.
3. Switch the sub power off and back on.

RELATED LINKS

- P. 18 Safety Devices

[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.

[Communication with Roland DG Connect Hub was not possible.]

[Try again later.]

This message is displayed when Roland DG Connect Hub cannot establish an external connection.

Tap [**OK**] and try again later.

[Check the status of the connection between Roland DG Connect Hub and VersaWorks.]

This message is displayed when connecting to Roland DG Connect Hub or VersaWorks fails.

Verify that Roland DG Connect Hub and VersaWorks are running.

[Failed to connect to VersaWorks.]

[Restart VersaWorks.]

This message is displayed when connecting to VersaWorks fails.

Restart VersaWorks and tap [**OK**].

[Printing could not start.]

[Check the status of VersaWorks. (One possibility is that the job could not be found.)]

This message is displayed when no job that has been set to Print in VersaWorks is found.

Check the jobs set to Print in VersaWorks.

[Check the status of VersaWorks. (Two possibilities are that printing is already in progress and that the setup area has been exceeded.)]

This message is displayed when printing is already in progress or when the print data is larger than the printing area.

Check to see if printing is in progress or if the print data is larger than the printing area.

Appendix

Connecting and Removing External Devices

Connecting an Alarm Lamp 269
Removing the Alarm Lamp 271

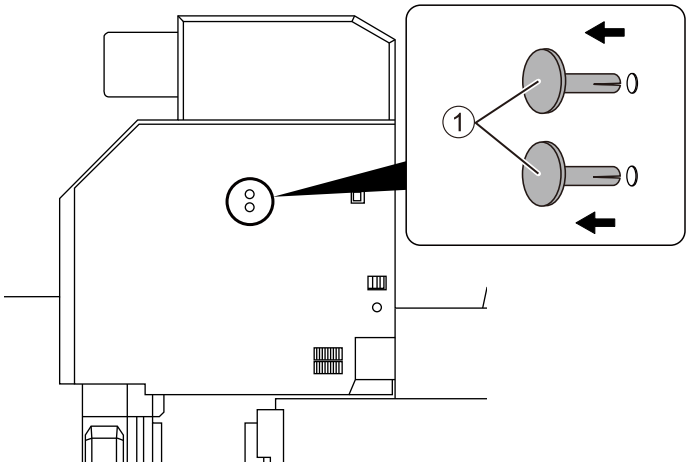
Connecting an Alarm Lamp

You can connect an alarm lamp to this machine. The alarm lamp must be prepared by the user separately.

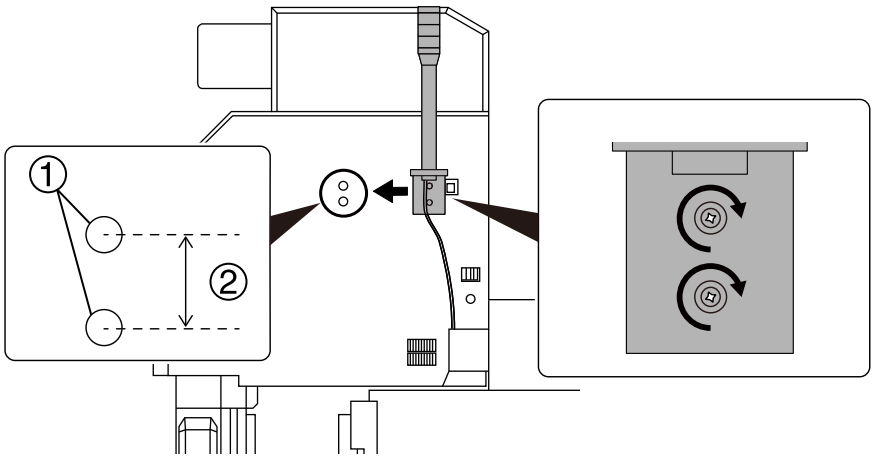
> ⚠ WARNING
>
> **Perform this task with all power switches left switched off.**
> Otherwise sudden movement of the machine may cause injury.

Procedure

1. **Switch off the sub power of the machine.**
2. **Turn off the machine's main power switch.**
3. **Remove the cap (①) on the right side of the machine.**

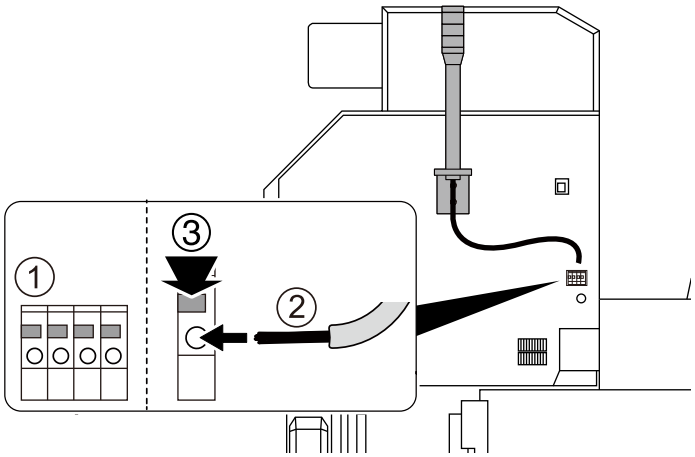


4. **Attach the alarm lamp to the position where you removed the caps.**



- ①: 2 - M8 tap
- ②: 20 mm (0.79 in.)

5. **Connect the alarm lamp wires (①) to the alarm lamp connectors (②).**
   While pressing the release button (③) with the included tweezers, insert the alarm lamp wire.



6. Lightly tug the wire of the alarm lamp to make sure it does not come loose.
7. Switch on the machine's main power.
8. Switch on the machine's sub power.
9. Tap on the home screen.
   Make sure that the alarm lamp turns on.

Removing the Alarm Lamp

⚠ WARNING

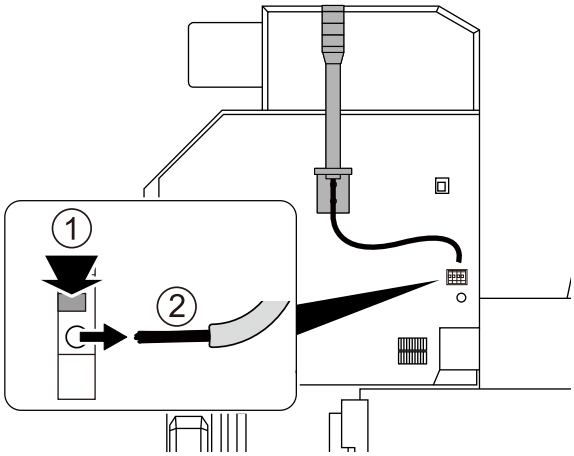
Perform this task with all power switches left switched off.

Otherwise sudden movement of the machine may cause injury.

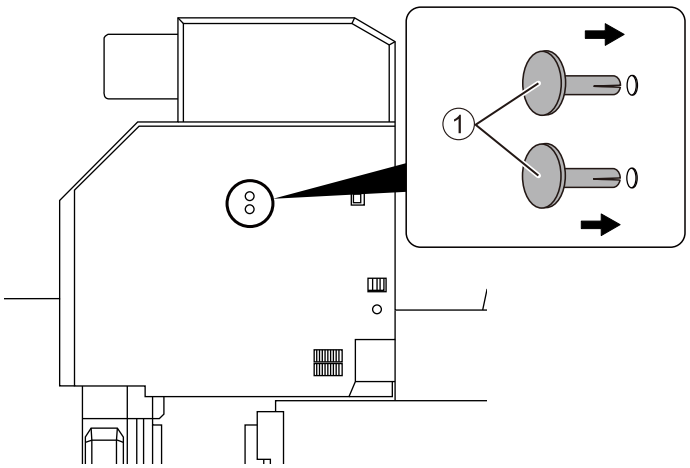
Procedure

1. **Switch off the sub power of the machine.**
2. **Turn off the machine's main power switch.**
3. **Remove the alarm lamp wires.**

   While pressing the release button (①) with the included tweezers, pull out the alarm lamp wire (②).



4. **Remove the alarm lamp and mount caps ① on the screw holes.**



5. **Switch on the machine's main power.**
6. **Switch on the machine's sub power.**

Main Specifications

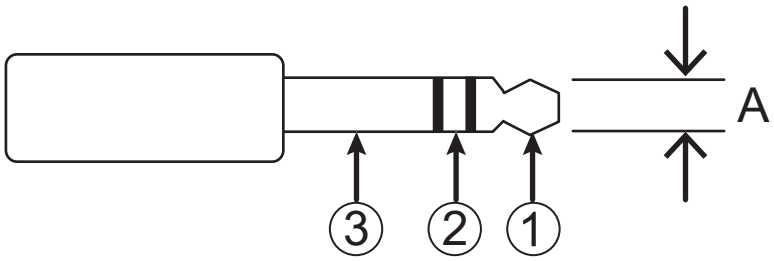
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Connector for an External Deodorizer 273
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Location of the Power Rating and Serial Number Label 276
Specifications 277

Specifications and Diagrams for the External Expansion Terminal

Connector for an External Deodorizer

Compliant plug

Only use three-contact type plugs of the size shown below.

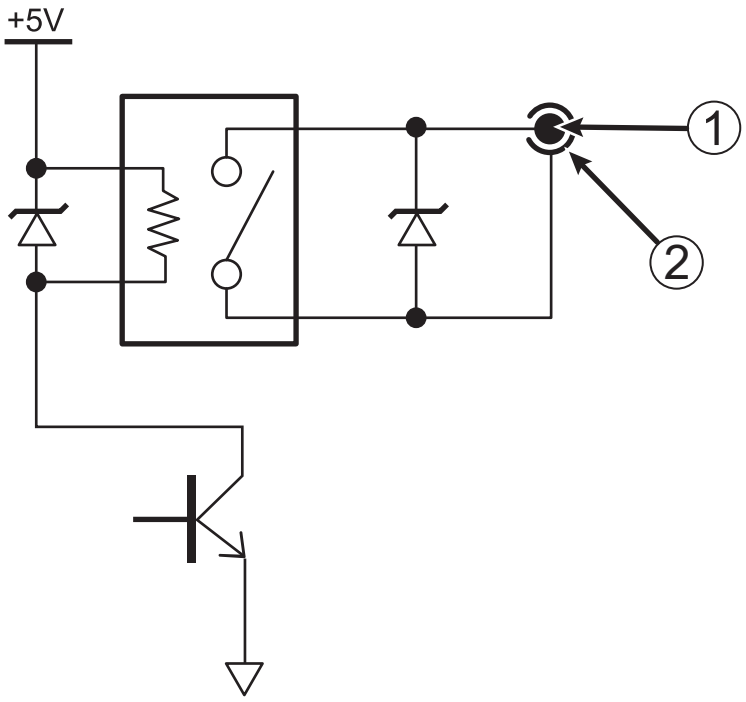


A: Diameter 3.5 mm (0.14 in.)

Output specifications

Output	Relay contact
Output capacity	100 mA or less

Connect to ① and ② of the compliant plug described above. Ensure that the current capacity is 100 mA or less. The output turns on during printing and turns off when printing finishes.



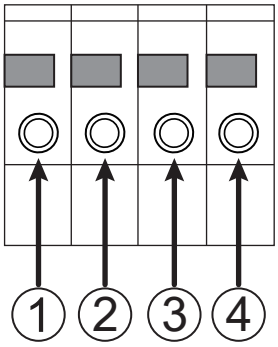
Alarm Lamp Connector

Pin assignment

CN	Signal name	Details
①	+24 V	Power supply for the light
②	ERROR	[**Motor Error**], [**Print Head Dry-out Error**], or [**Temperature Error**] status
③	READY	• Lit In this status, setup has been completed and the machine can start printing. • Flashing In this status, output has been paused.
④	BUSY	Printing.

* Off: This indicates the standby status, warning status, or a similar status. The machine cannot start printing when it is in this status.

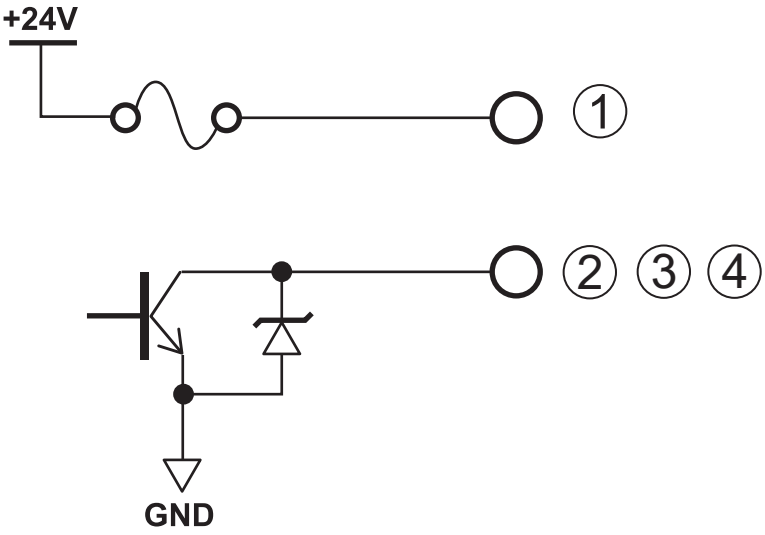
Connector assignment



Output specifications

Power supply	+24 V (Max 150 mA)
Output	Open collector
Output capacity	Max 50 mA / terminal

Connect the lamp between the 24 V power supply (①) and (②), (③), and (④).



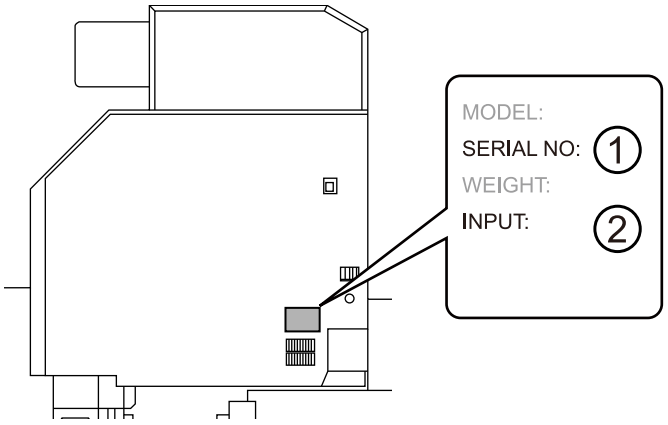
Ventilating Equipment

In preparing ventilating devices, please note the following points.

- You will be required to use the ventilating devices recommended by Roland DG Corporation. For the details of the recommended products, contact your authorized dealer.
- You will need a hose to connect the ventilating equipment and this machine.

Location of the Power Rating and Serial Number Label

Right Side

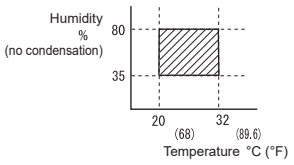


①	Serial number This number is required when you seek maintenance, servicing, or support. Never peel off the label.
②	Power rating Use an electrical outlet that meets the requirements for voltage, frequency, and amperage given here.

Specifications

		IO-300
Printing method		Piezo ink-jet method
Attachable objects to be printed on	Width	Max. 800 mm (31.4 in.)
	Length	Max. 545 mm (21.4 in.)
	Thickness	Max. 204 mm (8 in.)
	Weight	Max. 20 kg (44 lb.)
Maximum printing width/printing length		Max. 770 mm × 515 mm (30.3 in. × 20.2 in.)
Ink	Type	EUV-H, EUV-A 750 ml pouch
	Color	UV-Ink (EUV-H): Six colors (cyan, magenta, yellow, black, gloss, and white x 2) and primer Six colors (cyan, magenta, yellow, black, gloss x 2, and white x 2) Four colors (cyan x 2, magenta x 2, yellow x 2, black x 2) UV-Ink (EUV-A): Six colors (cyan, magenta, yellow, black, gloss x 2, and white x 2)
Ink-curing unit		Built-in UV-LED lamp
Printing resolution (dots per inch)		Max. 1,800 dpi
Connectivity		Ethernet (100BASE-TX/1,000BASE-T, automatic switching)
Power-saving function		Automatic sleep feature
Rated input		100 - 240 Va.c. 50/60 Hz 6.5 A
Power consumption	During operation	Approx. 585 W
	Sleep mode	Approx. 245 W
Acoustic noise level	During operation	67 dB (A) or less
	During standby	64 dB (A) or less
Dimensions (Width × Depth × Height)		2,437 mm × 1,747 mm × 1,495 mm (96.0 in. × 68.8 in. × 58.9 in.)
Weight		475 kg (1,048 lb.)
Environment	During operation *1	Temperature: 20 to 32°C (68°F to 89.6°F), humidity: 35 to 80%RH (no condensation)
	Not operating	Temperature: 5°C to 40°C (41°F to 104°F), humidity: 20 to 80%RH (no condensation)
Included items		Power cord, cleaning liquid, User's Manual, software (VersaWorks, Roland DG Connect Hub), etc.

*1 Operating environment
(1): Use in an operating environment within this range.



Memo

Software 279

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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