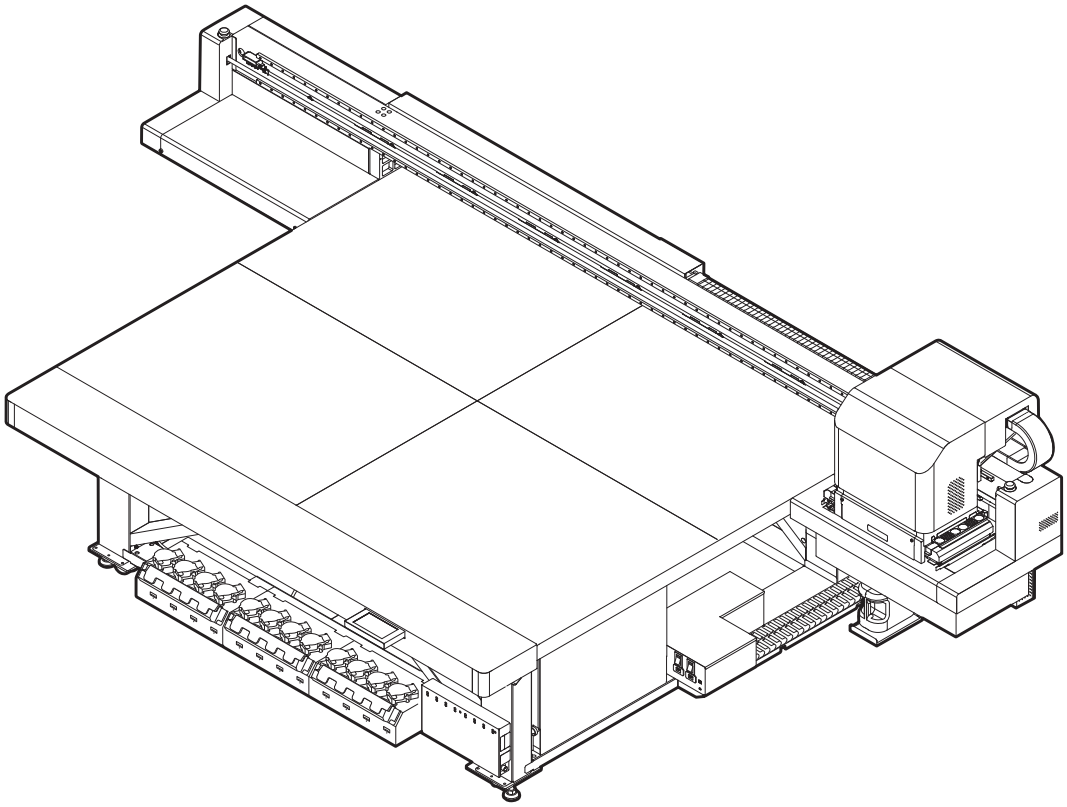
Operation Manual

UV INKJET PRINTER

JFX220-2515

Operation Manual



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MIMAKI ENGINEERING CO., LTD.

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Original instructions

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Introduction

Thank you for purchasing the UV-LED curable inkjet printer JFX220-2515.

Read this operating manual ("this document" hereinafter) thoroughly and make sure you understand its contents to ensure safe and correct use of the product.

Please note that the illustrations contained in this manual are intended to show functions, procedures, or operations and may sometimes differ slightly from the actual machine.

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DISCLAIMERS

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TV and radio interference



- The machine emits high-frequency electromagnetic radiation while operating. Under certain circumstances, this may result in TV or radio interference. We make no guarantee that this machine will not affect special radio or TV equipment.

If radio or TV interference occurs, check the radio or TV reception after turning off the machine. If the interference disappears when the power is turned off, the machine is likely to be the cause of the interference.

Try any of the following solutions or combinations of these solutions:

- Change the orientation of the TV or radio antenna to find a position where interference does not occur.
- Move the TV or radio away from this machine.
- Plug the TV or radio into a power outlet on a power circuit other than the power circuit to which this machine is connected.

To Ensure Safe Use

Safety and Information Symbols

This manual uses the following symbols to indicate safety and operational precautions. The symbols displayed differ depending on the type of precaution. Make sure you fully understand the meaning of each symbol and use the machine safely and correctly.

● Example of symbol

		Description
⚠WARNING	Warning	Indicates cases where failure to follow the instructions or improper handling may result in death or serious injury. Be sure to read these instructions carefully and use the machine correctly.
⚠CAUTION	Caution	Indicates cases where failure to follow the instructions or improper handling may result in minor or moderate injury.
	General Warning	Indicates general matters that require attention. The specific precaution is indicated within △.
	General Mandatory Action	Indicates general matters that must be performed. The specific instruction is indicated within ●.
	General Prohibition	Indicates actions that must not be performed. The specific prohibited action is indicated within ⃠.
	Important	Provides information that is important to know before use. Please use this as a reference during operation.
	Tip	Provides a useful tip that is good to keep in mind. Please use this as a reference during operation.
	Reference Information	Indicates a page that contains related information. Click on a word to view the corresponding page.

Usage Precautions

● In the event of abnormal conditions

⚠ WARNING



- If someone accidentally swallows ink or cleaning solution, keep them calm and take them to see a doctor immediately. Do not let the person swallow their vomit.
- If someone inhales a large amount of vapor and feels ill, immediately move them to a well-ventilated area where they can stay warm and rest. Take them to see a doctor as soon as possible.
- In the unlikely event that a foreign object, such as metal, water, or other liquid, enters the interior of the device, turn off the power immediately and then unplug the power cord from the outlet. Continuing to use the device may cause a fire or electric shock.
- If ink leaks, turn off the main power switch and unplug the power cable. After that, contact your local distributor, our sales office, or service center.



- Immediately turn off the main power supply and disconnect the power cable from the machine if a problem such as an abnormal smell, smoke, or sign of spark occurrence is detected in the machine. Continuing to use the product under such abnormal conditions may cause a fire or electric shock. After confirming that smoke is no longer coming out, please contact your dealer or our service office.
- Never attempt to repair the machine yourself, as it is hazardous.

● Ink and washing liquid

⚠ WARNING



- Be sure to read the safety data sheet (SDS) before handling ink or maintenance washing liquid.
- Some of the ingredients may be toxic to aquatic organisms. Be sure to prevent leakage and runoff into natural water bodies and domestic wastewater.
- If the ink gets on your skin or your clothes, rinse it out immediately with soap or water. If you get the ink in your eyes, wash them immediately with water and consult a doctor.
- Discard the waste ink according to the local regulations of the area where this printer is used.
- Store the ink and maintenance washing liquid in a cool and dark place. Also, be sure to keep it out of reach of children.





- When handling ink and washing liquid, pay close attention to ventilation and be sure to wear the included safety glasses and gloves. The ink or washing liquid may get in your eyes.

⚠ CAUTION



- Using ink other than the designated type may cause a malfunction. Please note that in this case, the product will not be covered by the warranty, and the customer shall be responsible for the cost of any repairs that are required due to the use of ink other than the designated type.
- Do not refill any ink bottles. In this case, the product will not be covered by the warranty, and the customer shall be responsible for any malfunctions caused by the use of refilled ink.
- Do not use the ink designed for this printer with other printers. Doing so may cause damage to the printer.

● Handling of ink bottles

⚠ WARNING

- There are precautions regarding handling of the ink printed on the ink bottle. Thoroughly read them and make sure you understand the contents.
- Be sure to keep the ink bottles and waste ink tanks out of reach of children.

⚠ CAUTION

- If an ink bottle is moved from a cold to a warm place, keep it in the new place for at least three hours before use.
- Open each ink bottle just before installing it, and use it up as quickly as possible. If the bottles are left open for a long time, the printing quality may degrade.
- For device protection, do not use any ink other than the dedicated ink.

- Do not strike the ink bottle with great force nor shake it violently. Failure to do so may result in leaking ink.

● Be careful of moving parts

⚠ WARNING

- Keep fingers and other body parts away from dangerous moving parts. Failure to do so may result in injury.
- When performing maintenance on the head or capping station, the carriage may suddenly move and cause injury. During such work procedures, ensure that the emergency stop button remains easily accessible and keep a magnetic emergency switch on hand.

● Warning Labels

⚠ CAUTION

- Warning labels are affixed to this printer. Be sure to fully understand the warnings indicated on the labels. If any of the warning labels has become so soiled that the warning message is illegible or has come off, purchase a new one from your local distributor.

● Ultraviolet (UV) radiation and the UV LED

⚠ WARNING



- The UV-LED units become very hot. Before starting maintenance, turn off the UV-LED unit and wait until it cools down sufficiently. There is a risk of burns.



- There is some UV leakage from around the UV-LED unit. Be sure to wear gloves, long-sleeved clothing, and a face shield or UV-protective glasses to prevent the UV rays from reaching your skin and eyes.
  - (1) Exposure of the skin or eyes to UV rays may result in inflammation or skin cancer.
  - (2) Even if the UV rays are too weak to cause inflammation, repeated exposure may lead to chronic damage.
  - (3) Looking directly at the lamp while it is on may result in eye pain or damage to eyesight.
  - (4) Eye damage may occur due to UV rays.
    - Acute symptoms: a foreign-body sensation in the eyes, pain, watery eyes, etc.
    - Chronic symptoms: cataracts, etc.



- Do not look directly at the UV-LED unit with the naked eye when lit. Doing so may result in eye pain and vision problems. Be sure to wear the included safety glasses.
- Be sure to also wear gloves to protect the skin on your hands.



- Do not expose your skin directly to UV rays. Doing so may result in skin inflammation.

⚠ CAUTION



- If flammable materials come into contact with high-temperature parts such as the UV-LED unit, there is a risk of ignition or smoke generation. There is also a risk of ignition or smoke generation if flammable materials are left under the UV-LED unit, even for just a few seconds.



- Be sure to wear gloves when handling the glass on the underside of the UV-LED unit, and do not touch it with bare hands. Doing so may cause a significant drop in UV hardening efficiency. If it gets dirty, wipe it with a clean piece of cloth moistened with ethanol, such as gauze. (Do not wipe the outer cover with ethanol. This may cause the paint to peel.)



- Never use any UV-LED unit or UV power supply equipment other than the models specified by our company. Failure to use our specified models may result in fire or damage to the equipment. In this case, the product will not be covered by the warranty, and our customer shall be responsible for any malfunctions caused by using models other than those recommended by our company.
- Because this part is made of glass, do not drop it, hit it against objects, apply excessive force, or scratch it.

Grounding Work

⚠ WARNING

- Increasing the number of power outlets requires installation work to provide grounding to protect against electric shock.
- Carry out the grounding work.
- Always perform grounding to prevent electrocution accidents.

Installation Location and Operating Environment

⚠ WARNING



- As there is a risk that the ink may catch fire, ensure that there are no open flames in the area where the machine is used.



- A ventilation system must be provided if the machine is installed in a poorly ventilated area or sealed room.
- This machine is not explosion proof. Do not use the machine in an atmosphere containing hazardous substances. There is a risk of explosions.
- When installing the exhaust port, be sure to observe the following precautions to prevent failure of the machine.
  (1) Exhaust port installation must conform to local environmental, health, and safety (EHS) guidelines.
  (2) If the exhaust port is fitted with a shutoff valve, the valve must be open when the machine is in use.



- Do not use the machine in environments where there is a risk of ignition (such as those containing gasoline, flammable spray, paint thinner, lacquer, or dust particles). Doing so may cause an electric shock or ignition resulting in a fire.
- Ensure that paper or cloth is not in the vicinity or covering the UV-LED unit. Failure to do so may result in a fire.



- Do not use the machine in humid environments. In addition, do not splash water on the machine. Doing so may result in a fire, electric shock, or failure.



- Do not install the machine in a place where children may enter.

⚠ CAUTION



- Be sure to use it in a space with as little dust as possible.
- Keep children away from this machine.
- If dust adheres around the head, it may cause ink droplets to fall. Be sure to perform head cleaning.
- Ensure that the machine is level.

Do Not Climb on the Table

⚠ WARNING

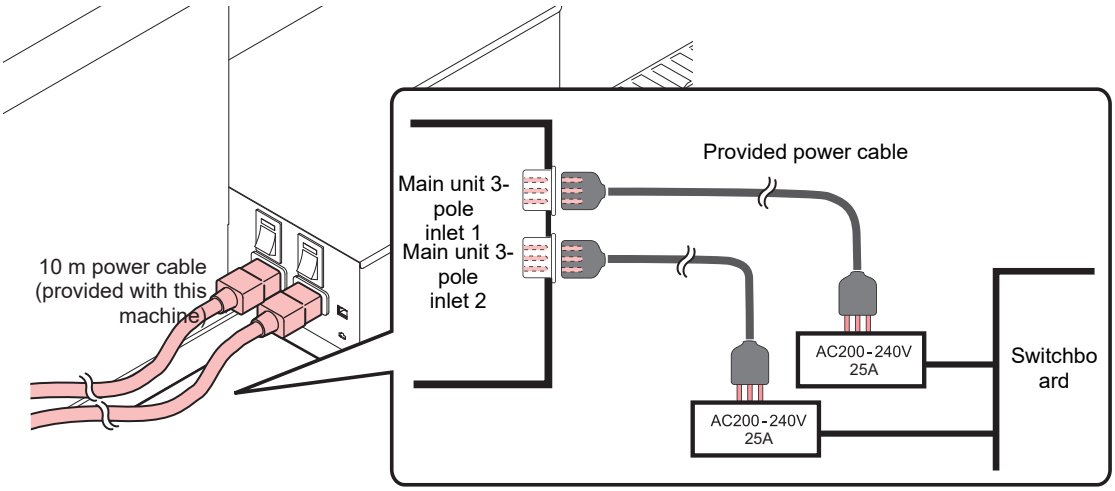


- Never climb on the table where the machine is placed. Doing so may cause the board surface accuracy to go wrong.

Power supply and voltage

⚠ WARNING

- The set of power cables provided with this machine is for use with this machine only. The cables provided are exclusively for this machine and must not be used for other electrical equipment. Also, do not use any set of power cables other than the one provided with this machine. Doing so may result in a fire or electric shock.
- Do not use an extension cord. Doing so may result in a fire or electric shock.
- Metal or other objects coming into contact with the power plug prongs may result in a fire or electric shock.
- Do not use power strips. Doing so may result in a fire or electric shock.
- Do not use this machine if the power cable is damaged or has exposed or broken core wires. Using the machine in this state may result in a fire or electric shock. Please contact a service agent to have the cable replaced.
- Do not handle the power plug with wet hands. Doing so may result in an electric shock.
- Always hold the plug when pulling out the power cable. Pulling on the power cable itself may damage it and cause a fire or electric shock.
- Do not supply any voltage other than the indicated power supply voltage. Doing so may result in a fire or electric shock.
- Do not use any frequency other than the indicated power supply frequency. Doing so may result in a fire or electric shock.
- When connecting the power cable, check the input voltage of the power outlet and the capacity of the breaker. Also, connect each cable to a separate power source with an independent breaker. Connecting this machine to power outlets connected to the same breaker may cause the breaker to trip.



- Only use a power supply that satisfies the indicated specifications. Also, be sure to insert the power cable plug into a grounded outlet. Failure to do so may result in a fire or electric shock.

- Do not damage, break, or modify the power cable. Also, placing heavy objects on the power cable, exposing it to heat, or pulling on it may cause damage, resulting in a fire or electric shock.
- Only people who are thoroughly familiar with the operation of the machine should be allowed to turn on the main power supply switch.

Power Supply

⚠ WARNING

- Make sure the breaker is always on.

Power Cable

⚠ WARNING

- Use the power cable provided.

Disposal

⚠ WARNING

- If you want to dispose of this machine, please contact your local distributor or service center. If you want to dispose the machine by yourself, please contact an industrial waste processor.
- Give the waste ink or the ink bottles that you no longer to your local distributor or service center. If you want to dispose of them by yourself, please contact an industrial waste processor or dispose them according to local regulations.

Handling Vacuum

⚠ WARNING

- Never disassemble or modify the vacuum. Also, do not touch the relief valve (pressure regulating valve) or block the vacuum exhaust port. This can cause a decrease in suction force, heat generation or malfunctions. (The vacuum is directly below the table.)

⚠ CAUTION

- Using this machine in a low temperature environment can sometimes cause the vacuum to emit a highpitched sound, but this is not a malfunction.

Do not disassemble or modify this printer

⚠ WARNING

- Never disassemble or modify this machine or ink bottle. Disassembling or modifying will result either in electric shock or malfunction of this machine.

Handling Media

⚠ WARNING

- When setting heavy media, be sure to use at least two people.
- Do not leave the media set on the machine when returning home for the night. This can cause dust to adhere to the media.
- When setting media weighing 50 kg or more, be sure to use dedicated lifting equipment.

⚠ CAUTION



- Use our recommended media to ensure stable and high-quality printing.
- Be careful about the expansion and contraction of the media. Do not use media immediately after removing from the packaging. Media may expand or shrink depending on the temperature and humidity of the room. After opening the package, let the media sit for at least 30 minutes at the place of use before installing it in the device.
- Do not use curled media. This not only causes media jams, but also affects image quality. Straighten the media before using if it is severely curled. When storing coated fix-sized paper in rolls, make sure the coated surface is on the outside.
- Keep the media away from dust. Wiping dust off the media creates static electricity, which has a counterproductive effect.

Maintenance

⚠ WARNING



- To prevent electric shocks during maintenance, always turn the main power switch off, and remove the power plug. Capacitors of some units may take one minute to discharge. Be sure to wait three minutes before starting any work after turning off the main power supply switch and unplugging the power plug.



- Avoid touching the components to which a high temperature caution label is attached and the surrounding areas. Touching these areas may result in burns. If you absolutely must touch hot components, be sure to wear insulated gloves to protect your hands.



- Using the printer in a place exposed to water will increase the possibility of electric leakage. Avoid using this machine in places where it may be exposed to water. In the unlikely event that there is electrical leakage, it may lead to an electric shock or fire.

⚠ CAUTION



- After long-term use, dirt and dust may accumulate on the conductive and insulating parts, resulting in electrical leakage. Be sure to clean it periodically.
- Do not blow with compressed air. Doing so may cause the dirt and dust to scatter and enter the conductive parts, resulting in a malfunction. Be sure to use a vacuum cleaner to remove any dirt or dust.
- To prevent accidents, be sure to perform periodic inspections and replacement of parts.
- This machine contains parts that require periodic replacement. We recommend that you enter into a maintenance contract.
- After long-term use, dirt and dust may accumulate on the ballast and other components, posing a risk of fire or smoke generation due to electrical leakage or deterioration of the insulation. Be sure to periodically clean and replace any deteriorated parts after measuring the insulation resistance.
- There is a risk of fire or smoke generation if the screws on conductive components become loose after long-term use. Be sure to retighten the screws periodically.

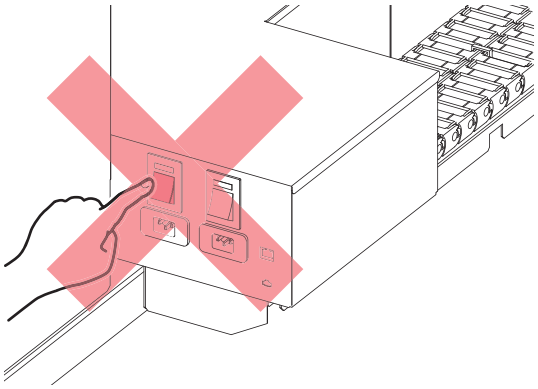
Power supply precautions

⚠ WARNING

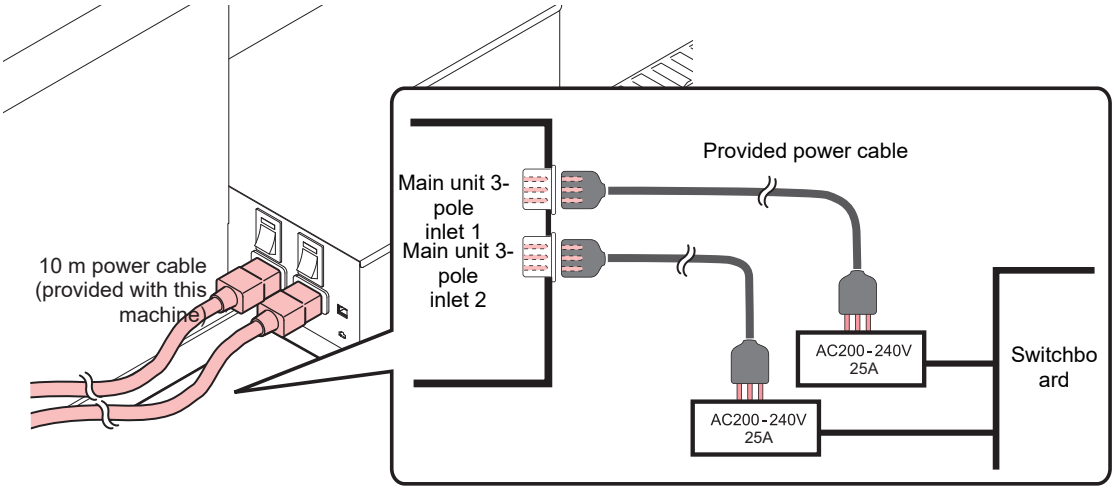
- Use the power cable provided. Otherwise there is a risk of failure, electric shock, or fire. The power cable provided is exclusive for the machine, and must not be used for other electrical equipment.
- Always hold the plug when removing the power cable. Pulling out the power cable may damage the cable, leading to failure, electric shock, or fire.
- Do not use the machine with dust accumulated on the power plug. Otherwise there is a risk of failure, electric shock, or fire.
- Take care to prevent metals from touching the power plug blades. Otherwise there is a risk of failure, electric shock, or fire.
- Do not damage or modify the power cable. Do not place heavy objects on, heat or stretch it. Doing so may damage the cable, leading to electric shock or fire.
- Do not use extension cords or power strips. Otherwise there is a risk of failure, electric shock, or fire.
- Do not use the power cable if it is damaged or broken or if the core wire is exposed. Otherwise there is a risk of failure, electric shock, or fire.
- Do not handle the power plug with wet hands. Disregarding this precaution may result in electric shock.

- Plug the power cable plug into a grounded power outlet. Otherwise there is a risk of failure, electric shock, or fire.
- When installing electrical outlets, perform grounding work to prevent electric shock. All electrical work (Class C grounding work; formerly Type 3 grounding work) must be handled by a licensed electrician.

- During normal operation, do not suddenly turn off the power to the machine. Turning off the power supply will disable the automatic maintenance function (including nozzle clogging prevention function and ink discharge channel cleaning function). This increases the risk of ejection failures (such as nozzle clogging or deflection).
  If you have no choice but to turn off the power to the machine, such as when there is a suspected abnormality, be sure to turn off both switches and cut off the power supply. Failure to turn off both switches may result in an electric shock.



- Use the machine with a power supply that meets specifications.
- Be sure to plug the power cable into a power outlet close to the machine. Insert the power plug blade securely.
- When connecting the power cable, check the input voltage of the power outlet and the capacity of the breaker. Also, connect each cable to a separate power source with an independent breaker. Connecting to power outlets linked with the same breaker will cause the breaker to trip.



Prohibited Dangerous Actions

The following actions are dangerous and must never be performed when the power is on. If the carriage suddenly moves during regular maintenance, it may cause serious injury (crushing or shearing).

● Do not place any part of your body behind the Y-bar

- Do not place any part of your body behind the Y-bar while the power is on. The Y-bar may suddenly start moving, leading to an accident.

● Keep your face, hands, and other body parts away from the area around the carriage

- Do not bring any part of your body, such as your face or hands, close to or into the gap between the carriage and the Y-bar.

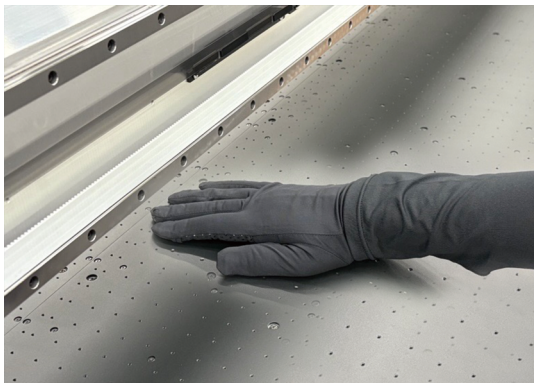


- Do not bring any part of your body, such as your face or hands, close to or into the gap between the carriage and the table or station.



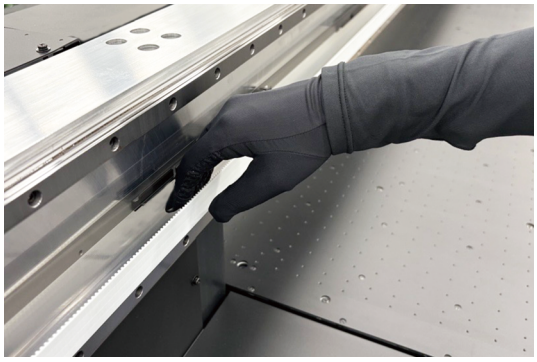
● Keep body parts, such as your face or hands, away from the gap between the Y-bar and the table

- Do not bring any part of your body, such as your face or hands, close to or into the gap between the Y-bar and the table.



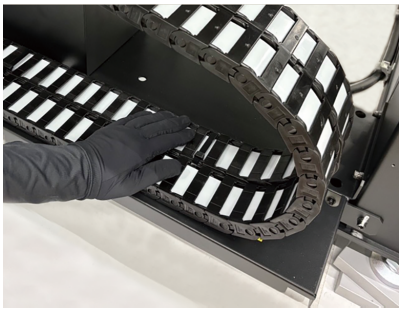
● Keep body parts, such as your face or hands, away from moving parts

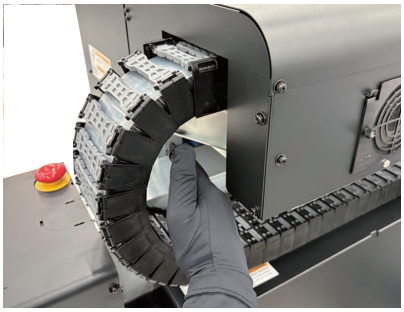
- Do not bring any part of your body, such as your face or hands, close to or inside the Y-bar belt.



● Keep body parts, such as your face or hands, away from the cableveyor parts, and do not place objects in the vicinity

- Do not bring any part of your body, such as your face or hands, close to or into the Y-bar or the cableveyor under the table, and do not place any objects around the area.



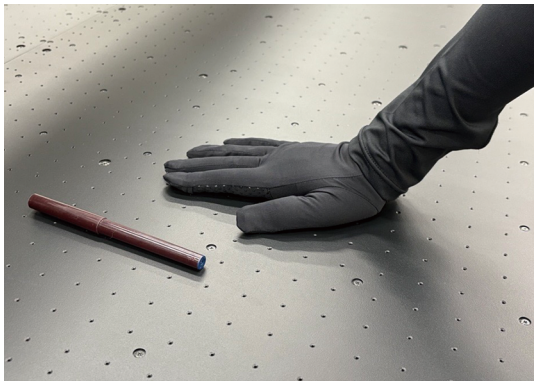


● Keep body parts, such as your face or hands, away from the area under the table

- Do not crawl under the table or place any part of your body, such as your face or hands, under it.

Do not put your hands or any object on the table

- Do not place body parts, such as your face or hands, or any objects other than media (thickness less than 101.6 mm) on the table.



Do not look directly at the UV-LED.

- Do not look directly at the UV-LED. Take particular care when working while sitting in a chair, as your head will be at the same height as the carriage.



Do not obstruct the movement of the carriage.

- Do not force the carriage to move while it is in operation (such as during printing or cleaning).

Wear safety glasses and gloves when using the machine

Be sure to wear safety glasses when using the machine to prevent eye damage due to UV light leakage.
Also, wear gloves to protect your skin from UV rays.

Pay attention to following when replacing the ink

- To prevent the ink from sticking to your hands or eyes when it splashes, be sure to wear the included safety glasses and gloves.
- Do not pull the ink cover too much.
  Pulling it too much might damage the tubes and cables.
- Replace the ink bottle after cleaning the surroundings with a waste cloth, etc. The portion around the bottle becomes dirty as the ink oozes from the float part.

Wear safety glasses and gloves when performing maintenance

When performing maintenance such as ink replacement, be sure to wear the included safety glasses and gloves.
Also, wear a gas mask if necessary.

Installation Precautions

Be sure to observe the following precautions when installing the machine.

⚠ WARNING



- This machine should be installed in a dedicated private room, in a location where it can be reliably isolated by physical means such as an enclosure. The isolated area should be set up so that no one can easily reach the printer and ink supply unit.
- This isolated area should be prohibited for everyone except the trainees of our safety education program or those who have been trained by such a trainee.
  If an untrained person enters the restricted area while the machine is in operation, there is a risk of accidental contact with the Y-bar that is in the process of printing, resulting in injury.
- The machine must only be operated by persons who have received Mimaki safety training or who have been trained by them.

⚠ CAUTION



Use the printer under the following environmental conditions:

- Operating environment: 15 to 30˚C (59 to 86˚F) 35 to 65% Rh (without condensation)
- Accuracy assurance temperature: 18 to 25°C (64.4 to 77°F)



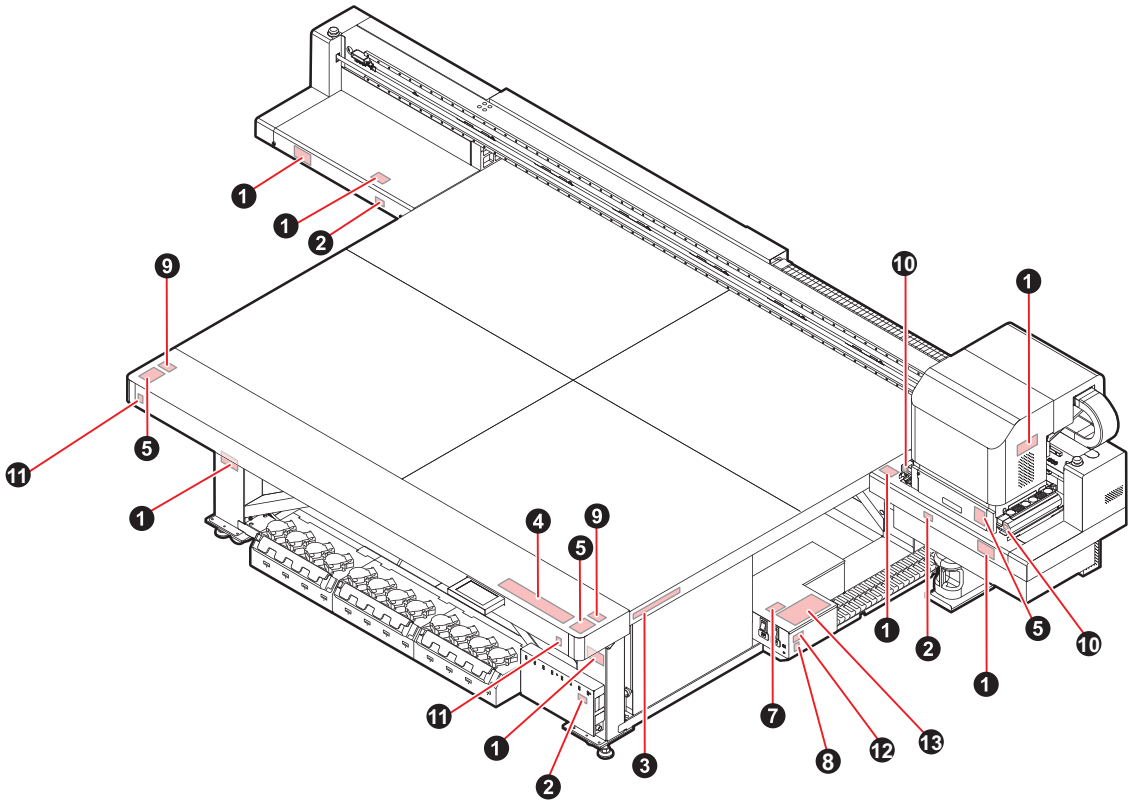
Do not use the printer in the following environments:

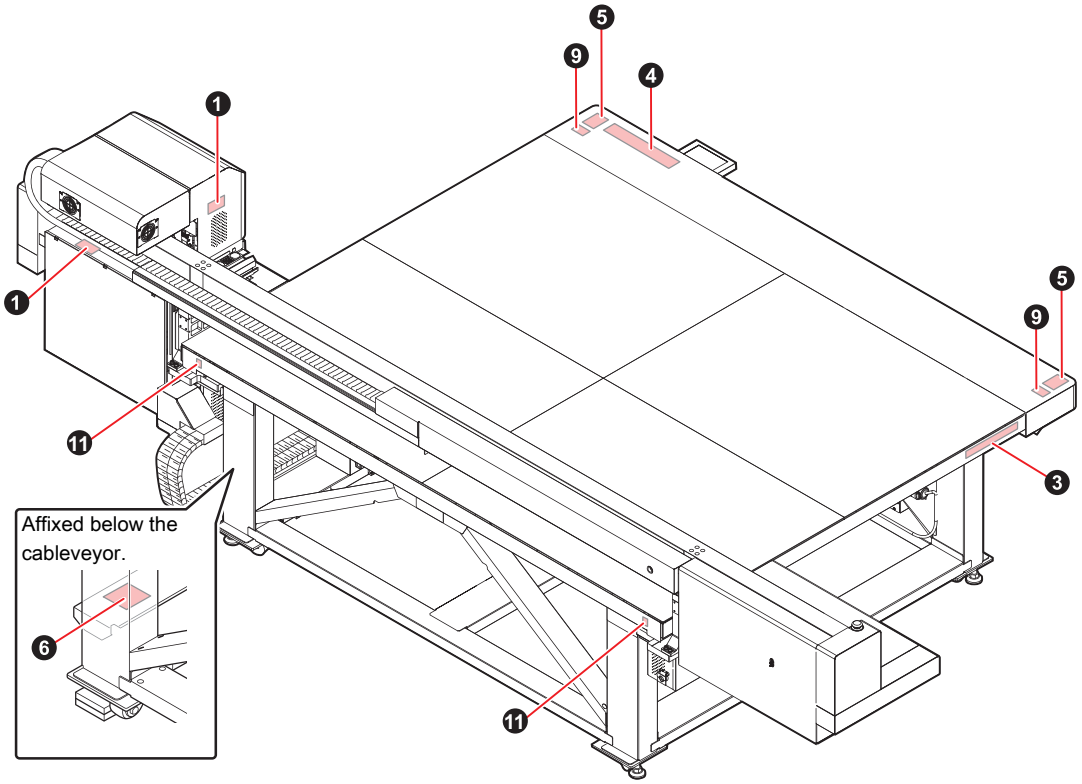
- Exposed to direct sunlight
- Places that are not level
  (If the machine is not level, it may cause poor image quality)
- Where vibration occurs
- Exposed to direct air flow from an air conditioner or similar location
- Near where fire is used
- Places with lots of dust
- Places where there are chemicals

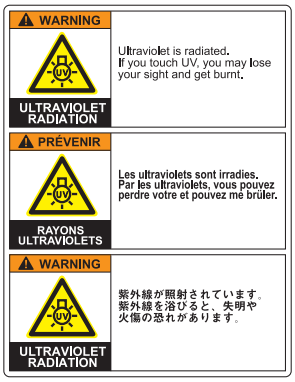
Warning Labels

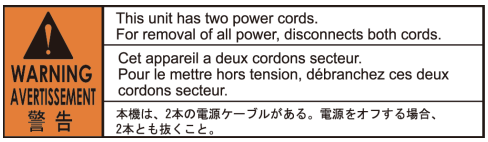
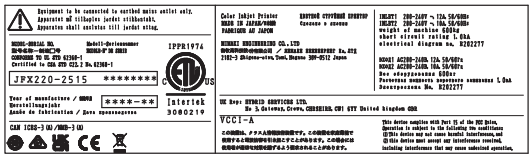
As shown below, variouswarning labels are attached to the machine. Make sure you fully understand the details indicated on the various warning labels.

If any of the warning labels become dirty and illegible or peel off, contact your local dealer or our service office and request new warning labels.





No.	Order code	Label	Details
1	M909381		Be careful of hazardous moving parts. Keep your fingers and other body parts well clear of the Y-bar or carriage when they are in motion, as this could result in serious injury (crushing or shearing).
2	M903330		Liquids such as ink may splash onto your skin or into your eyes. Be sure to wear safety glasses and gloves when working.
3	M906115		Be careful of hazardous moving parts. Keep your fingers and other body parts well clear of the Y-bar or carriage when they are in motion, as this could result in serious injury (crushing or shearing).
4	M902663		When the head is moving, or it is in remote mode, there is a risk of injury due to being hit by the moving Y-bar. Be sure to keep your hands and face well clear.
5	M905980		The machine emits UV radiation. Take care to avoid exposure to UV light, as it may lead to blindness or burns.
6	M909385		Standing at this location may cause the metal sheet to deform, resulting in a fall. Also, do not stand on a metal sheet that has deformed, as coming into contact may result in injury.
7	M903281	See SET UP GUIDE before connecting to the supply. 電源を接続する前に、必ず セットアップガイドを読むこと。 在接通电源之前请一定阅读安装说明书。	Be sure to read the Installation Guide before connecting the power supply. Improper connection may result in equipment failure, electric shock, or fire.
8	M907935		There are high-voltage components inside. Take extreme care not to touch high-voltage components, as there is a risk of electric shock.

No.	Order code	Label	Details
9	M917420		The machine emits UV radiation. (Risk Group 3) UV radiation may cause inflammation of the skin and eyes, so please take care to avoid exposure.
10	M903239		Indicates hot parts. Do not touch the heater while it is turned on, as there is a risk of burns. • Head unit • UV units (right and left)
11	M918531		Be careful when lifting heavy objects.
12	M906031		Describes the power cable. Be sure to follow all indicated safety precautions.
13	M921051		Describes the power cable. Be sure to follow all indicated safety precautions.

Chapter 1 Before Use



This chapter

This chapter describes information essential before use, such as part names and installation methods.

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1.1 Usage Restrictions

Usage Restrictions

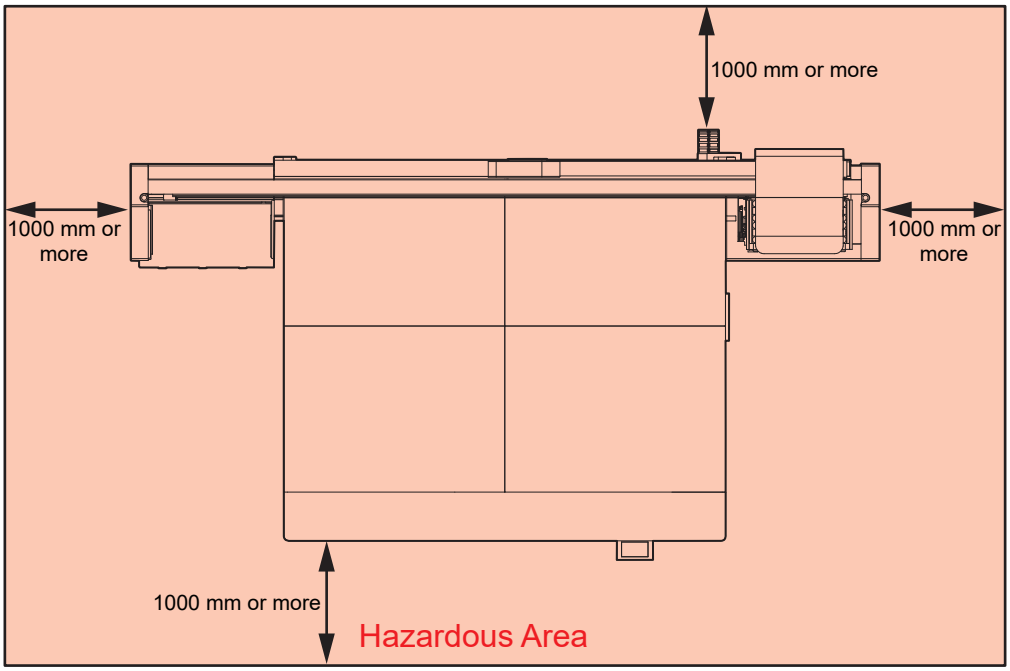
This machine can be dangerous due to parts that move at high speeds, parts with high temperature and UV curing units. The machine must only be used by operators who are fully aware of these hazards.

Operator Restrictions

The machine must only be operated by persons who have received Mimaki safety training or who have been trained by them.

Area Restrictions

- Persons other than users who have received the appropriate training are prohibited from approaching the machine. Set area restrictions within the range shown in the following figure. The area restrictions must make it clear that the area is hazardous. For example, install the machine in a dedicated room or set up a barrier around it.
- Take steps to keep people other than those who have received Mimaki safety training or who have been trained by them out of the hazardous area. If an untrained person enters the restricted area while the machine is in operation, there is a risk of accidental contact with the Y-bar that is in the process of printing, resulting in injury.
- Follow EN ISO13857 standards when securing the area with safety trellis.
- If the machine is installed in a dedicated room, a lock or safety interlock should be fitted to the room door, and a risk assessment should be conducted for the installation site before use.



- The UV-LED in the printer is classified as "Risk Group 3" in accordance with IEC 62471. Please use it in accordance with the warning labels displayed on the unit and the safety instructions in this manual.



- This machine is classified as "Risk Group 3" in accordance with IEC 62471. When accessing the inside of this machine, be sure to wear UV safety glasses, a light-blocking face shield, protective gloves (UPF 15 or higher, UV blocking rate of 93 to 96% recommended), and long-sleeved clothing. When working in restricted areas, make sure your bare skin and eyes are properly covered.

1.2 Installing this Machine

Installation Environment

- Do not use the machine in dusty or particle-filled environments. If used in an area where particles are generated, the suction holes in the vacuum table may become clogged, preventing the media from being properly held down. This may also cause the printer itself to malfunction or result in poor print quality. If the suction holes on the vacuum table become clogged with particles or other debris, it will be difficult to fix the problem through maintenance, and the parts will generally need to be replaced.
  We recommend using the machine in an environment where dust or other particles are adequately controlled and removed.
- For stable printing, use this machine in an environment with a temperature in the range of +15 ℃ to +30 ℃ (59°F to 86°F) and Rh in the range of 35 to 65%.

Where to Install This Machine

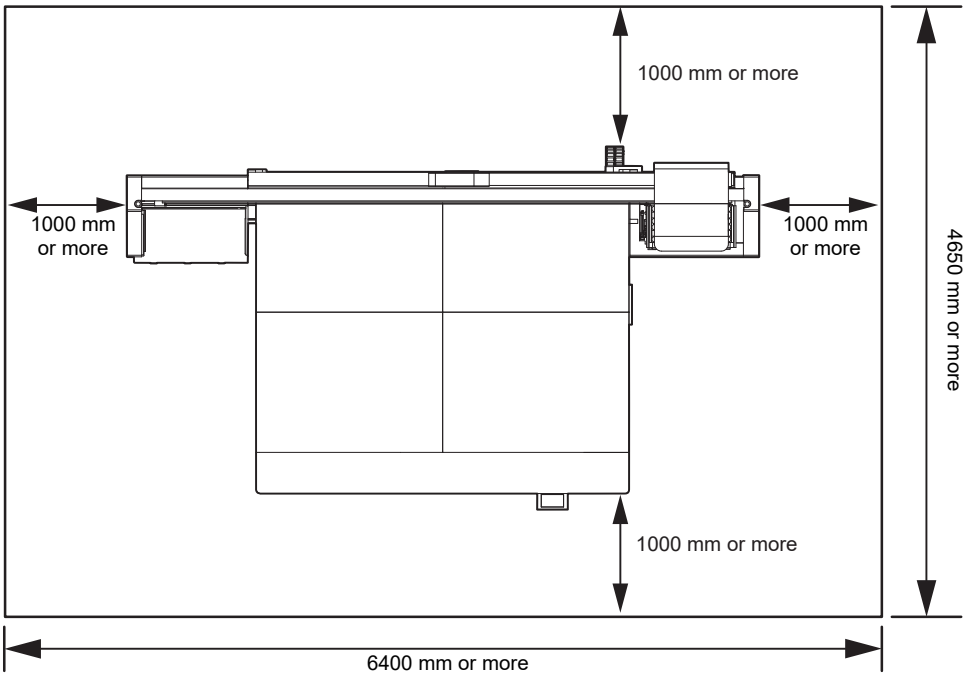
Secure a suitable installation space before assembling this machine.

The place of installation must have enough space for not only this machine itself, but also for the printing operation.

Model	Width	Depth	Height	Gross weight
JFX220-2515	4400 mm	2550 mm	1490 mm	920 kg

Important!

- A service engineer will perform installation work of this machine. At this time, he/she will contact you and explain about the usage and the installation of this machine.



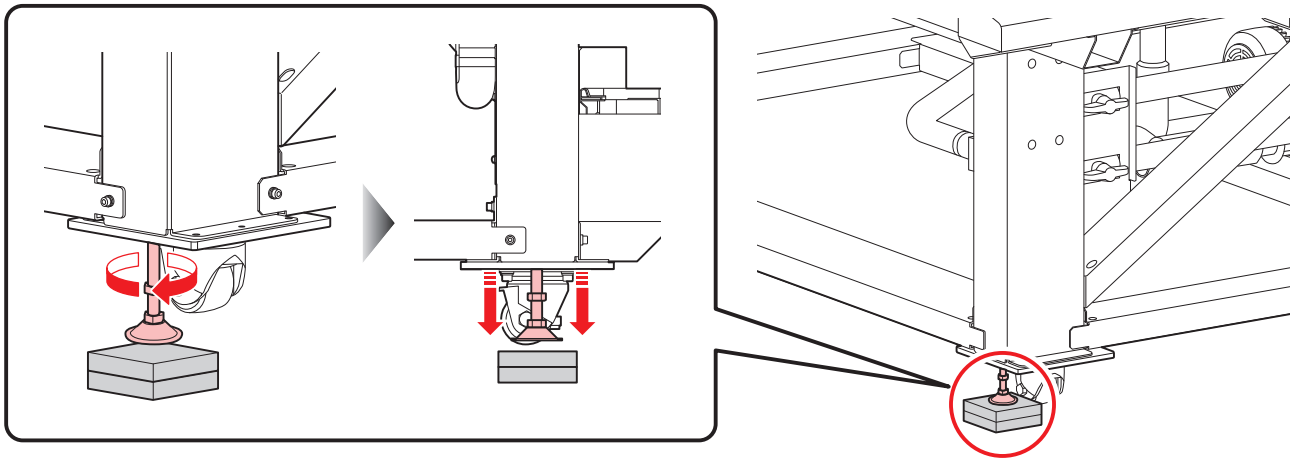
- If you usually use photographic fixers, refrain from installing this machine in a room filled with the steam of photographic fixers. If this machine is installed in a room filled with photographic fixers, the ink adhering to the head solidifies and the image quality degrades no matter how many times the head is cleaned, or the nozzles may get clogged.
- Apart from photographic mixers, the same problem occurs if you keep this machine in an environment where acidic steam (acetic acid, hydrochloric acid, etc.) is generated.
- Do not use the machine in an environment full of metal cutting fluids or materials containing highly volatile substances (amines, amine-denatured alcohols). Also, isolate ink, maintenance kits and the machine from such an environment. This may cause nozzle clogging.

Fixing This Machine

The legs of the machine have level feet to fix the machine.

Before turning on the power, make sure that the printer body is fixed with the leveling feet.

The printer body may start moving during operation if it is not fixed with the leveling feet.



- To support the weight of the machine, be sure to place the provided resin (gray) base plate between the leveling feet and the floor.

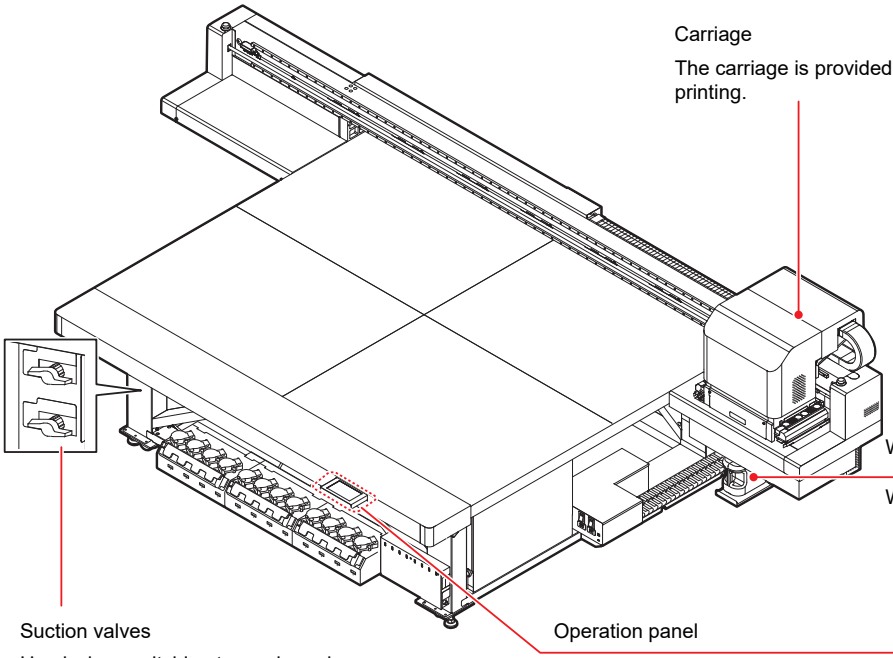
Moving This Machine

Important!

- Before moving this machine, contact our sales office or your local distributor.
  If you move it by yourself, failure or damage may occur.
  When moving this machine, contact the experts.

1.3 Names of Parts and Functions

Front Side of this Machine



Carriage

The carriage is provided with the ink heads for printing.

Waste ink tank

Waste ink gathers in this tank.

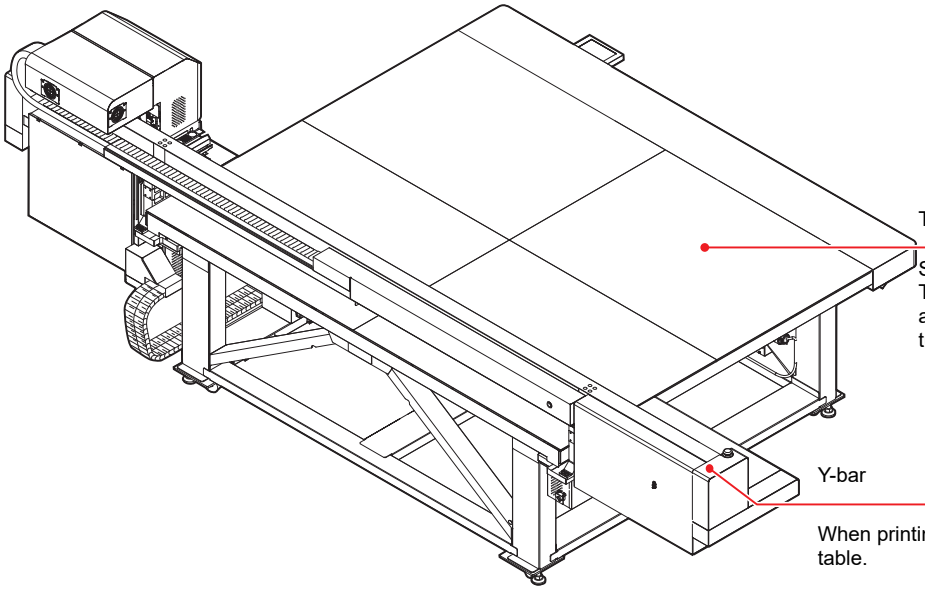
Suction valves

Used when switching to weak mode.

Operation panel

This panel has the operation keys required to perform the machine settings and a display for showing the operations.

Rear Side and Right Side of this Machine



Table

Set the media on it.
There are suction holes on the table to absorb the media when the vacuum is turned on.

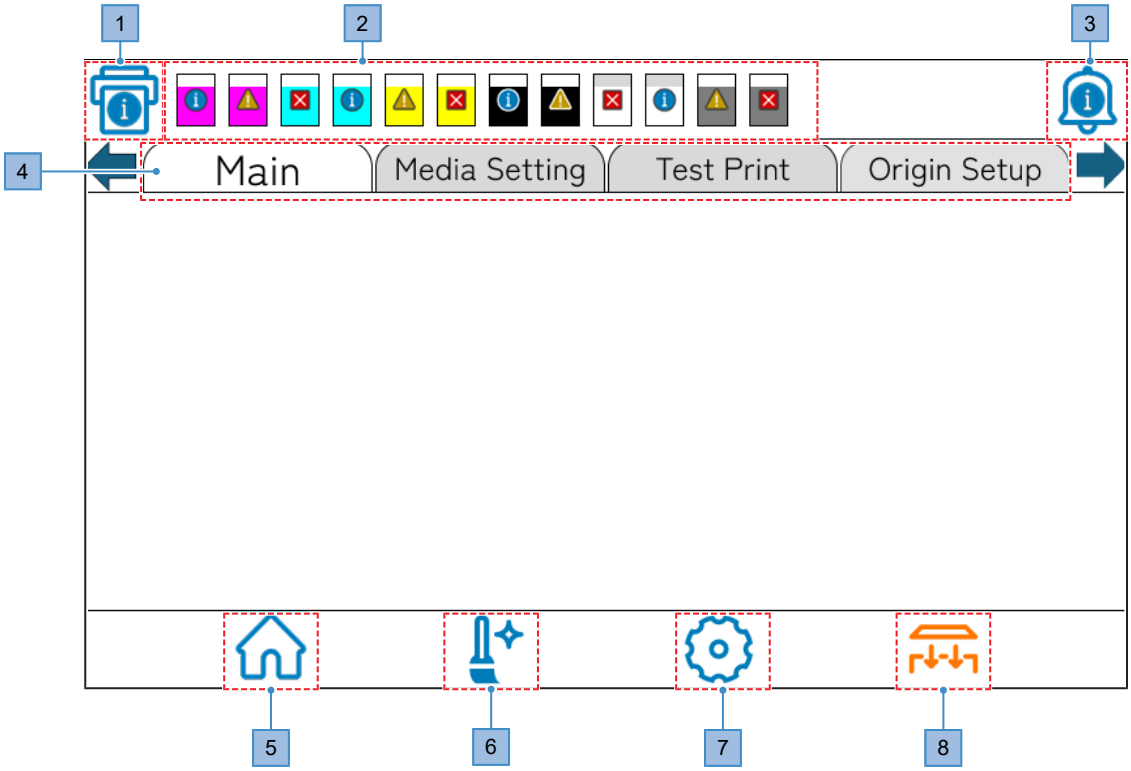
Y-bar

When printing starts, it moves along the top of the table.

Operation Panel

Use the operation panel to perform settings for printing or operate this machine.

- Do not apply excessive force to the operation panel. The maximum allowable weight is eight kilograms.



No.	Item	Overview
1	Printer information	This icon indicates the current printer status. Tap the icon to bring up a screen where you can check information such as the usage conditions and maintenance history.
2	Ink information	Displays the amount of ink remaining in each slot. Tap the icon to bring up a more detailed information screen.
3	Alarm information	Notifies you of any errors. Tap the icon to bring up a screen displaying a list of errors that have occurred.
4	Tab area	Tap each tab to bring up the corresponding function and setting screen.
5	Home	Displays the Home menu. The Home menu displays items related to basic printer operations.
6	Maintenance	Displays the Maintenance menu. This menu contains functions related to machine maintenance such as cleaning and carriage out.
7	Setup	Displays the Setup menu. This menu contains various setting items such as function settings and maintenance settings.
8	Vacuum	Tap this icon to toggle the vacuum on or off.

プリンターステータスについて

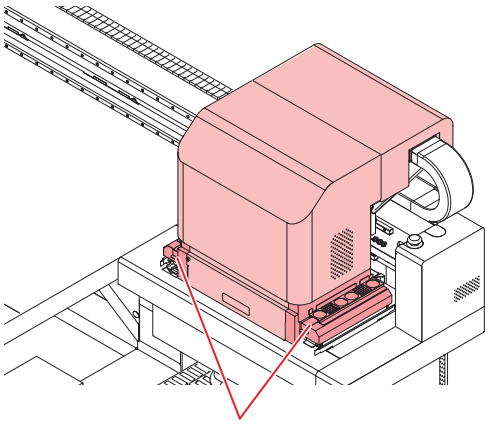
List of icons

Icon	Status	Overview
	Information Available	If there is any information, it will be displayed.
	Pause	Printing is currently paused.
	Printing	Printing is in progress.
	Warning Active	A warning error has occurred.
	Maintenance	Cleaning or other maintenance operations are in progress.
	Error Active	Printing are not possible due to an error.

Carriage

The carriage is provided with the heads for printing and UV LED unit.

- Do not look at the light emitted from the UV LED with a naked eye when lit.
- Do not touch the UV LED unit when the LED is lit or just after it is set off. You may suffer serious burns, as the unit is very hot.



Capping Station

- When cleaning the inside of the capping station, be sure to wear the included safety glasses and gloves. Otherwise, the ink may get into your eyes.

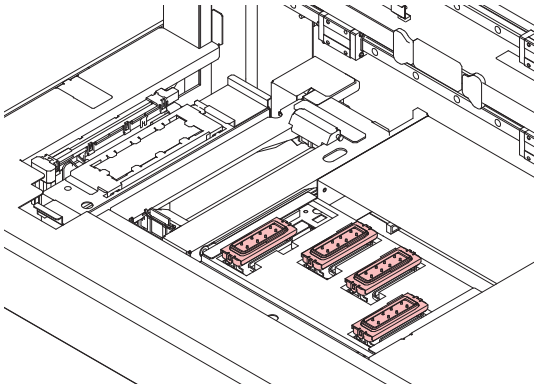
The capping station consists of parts such as ink caps and the wipers necessary for maintenance of the heads.

The ink cap prevents the nozzles in the heads from drying up.

The wiper is used for head cleaning.

The wiper is a consumable good. If the wiper is deformed or the media is stained, replace the wiper with a new one.

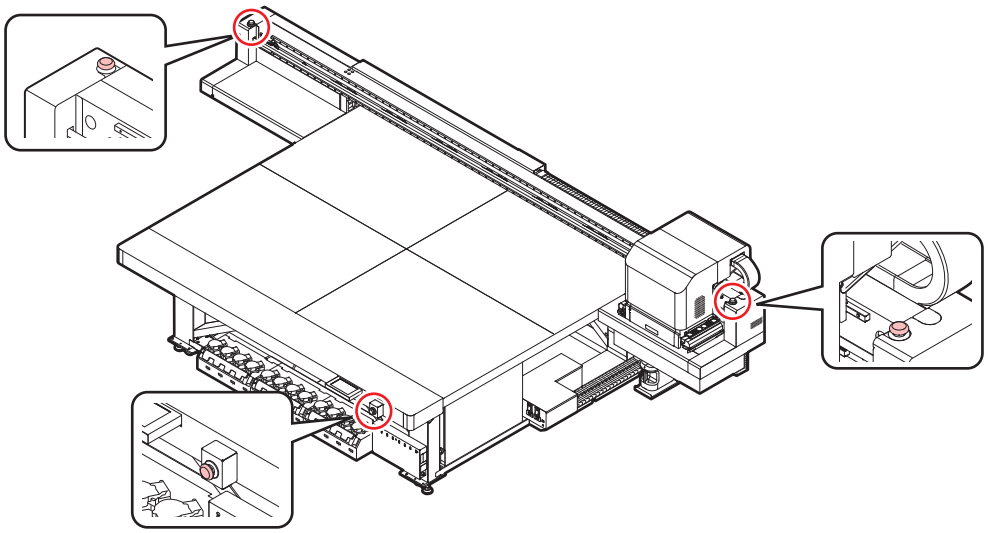
☞ "Replacing the wiper"(P. 154)



Stop Switch

Press the switch when you want to stop the machine for security reasons.

There is one magnetic emergency stop switch at each end of the Y-bar, on the left and right.



When you press the stop switch to stop this machine, follow the procedure given below to release it.

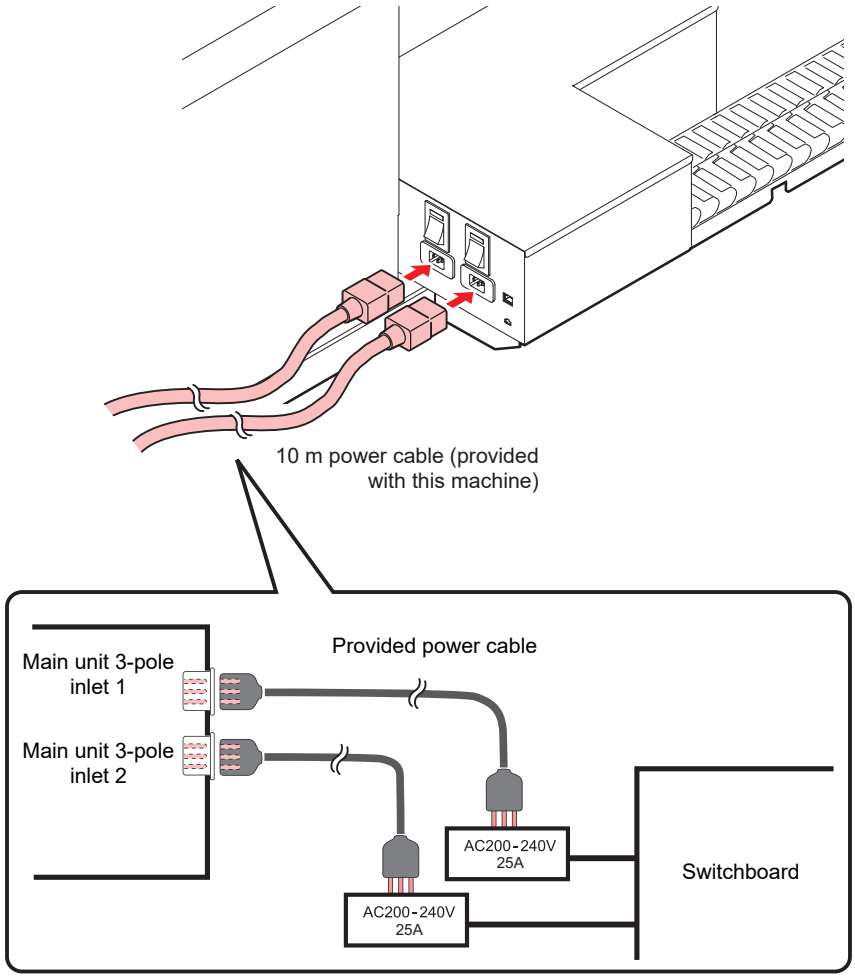
(1) Resolve the fault.

(2) After confirming safety, turn the stop switch to release it.

(3) Press the [ENTER] key.

1.4 Connecting the Cables

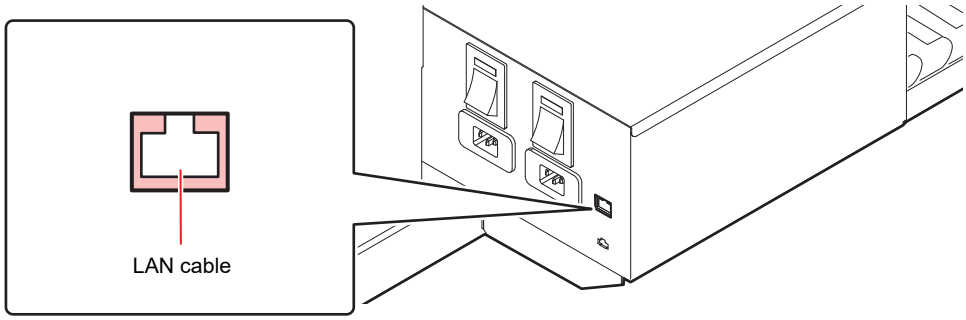
Connecting the Power Cable



Connecting a LAN Cable

Observe the following precautions when connecting the LAN cable.

Important!
- Make sure you push it in firmly until you hear a clicking sound.
- Do not plug or unplug the cable while data is being transferred.



Printing Data via a Network

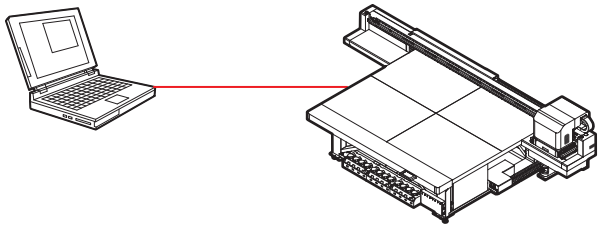
If you want to print data via a network, you must construct the network in the following environment.

Constructing in an improper environment may cause printing to stop.

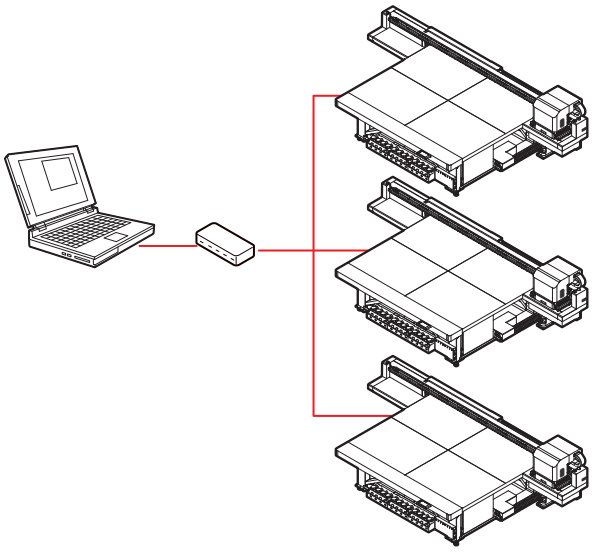
- Use a Category 6 or 6A LAN cable.
- Use 1000BASE-T compatible PCs and switching hubs.

Important!
- Make sure the printer and the PC sending the print data are in the same network.
- They cannot be connected through a router.

● Connecting directly to the printer



● Connecting through switching hubs



Printing cannot be done unless the PCs and devices connected to the printer are 1000BASE-T. After connecting, check the following:

1. Check the printer screen display.
   – From the LOCAL screen or MEDIA DETECT screen, press the [ENTER] key several times to display the information screen.
   – Check whether the LAN status field displays [1000 Mbps].

1.5 Ink Bottles

Types of Usable Inks

Following inks can be used with this machine.

4-color model (ELS-120)	Uses three bottles each of cyan, magenta, yellow, and black.
4-color + white + clear + primer model (ELS-120)	Uses one bottle each of cyan, magenta, yellow, and black; four bottles of white; and two bottles each of clear and primer.
6-color + fluorescent pink + fluorescent yellow + white + clear + primer model (ELS-120, EFS-150)	Uses one bottle each of cyan, magenta, yellow, black, fluorescent yellow, fluorescent pink, light cyan, light magenta, clear, and primer, as well as two bottles of white.

ClearInk to be used varies depending on the ink type used.

Ink type	Ink type of ClearInk	Fluorescent yellow and fluorescent pink ink type
ELS-120	ELS-120	EFS-150

Please note that a combination other than those mentioned above cannot be used.

Setting Ink Bottles

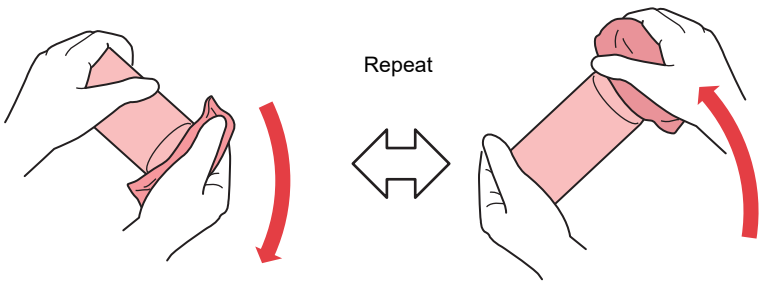
1 **Take out the ink bottle and gently shake it side to side 20 times or more.**

- To prevent the ink from leaking when the bottle is shaken, wear hand gloves and close the lid of the ink bottle with a paper towel. Then shake the bottle from side to side at least 20 times to ensure a slow ink flow.

Important!

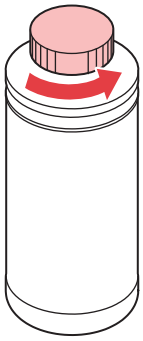
- Make sure that the lid is closed tightly before shaking the bottle.
- Be careful while shaking the bottle, because the ink may leak to outside if you shake the bottle too hard.
- If only a small amount of ink is remaining, it may not be possible to stir it properly. Hence, to stir the ink properly, tilt the ink bottle until it becomes vertical.

- Be sure to perform this procedure with the operation panel pushed all the way in. During the procedure, be careful not to let your head touch the operation panel or table.



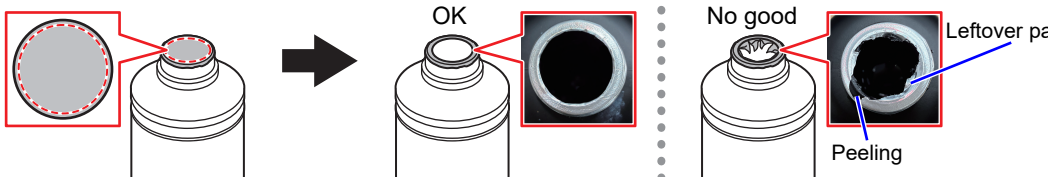
Hold down tightly with a paper towel and shake well

2 Remove the ink bottle lid.



Important! If the mouth of the ink bottle is fitted with a seal

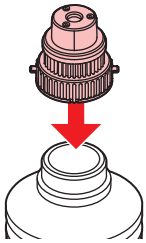
- Cut the seal open using a craft knife. There is a risk of ink leakage if parts of the seal remain.

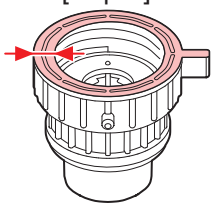


- Take care not to damage the mouth of the ink bottle or the area where the seal is attached. There is a risk of ink leakage if the mouth is damaged.
- Be careful not to drop any of the seal fragments into the ink bottle. If the ink bottle is used with seal fragments inside, these may clog the bottle cap, preventing ink from being supplied.

3 Set the specialized cap on the ink bottle.

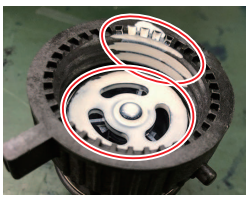
- The cap to be used differs depending on the type of ink to be used.



Ink type	Cap type
• Primer ink • ELS-120 ink	[Cap B] 

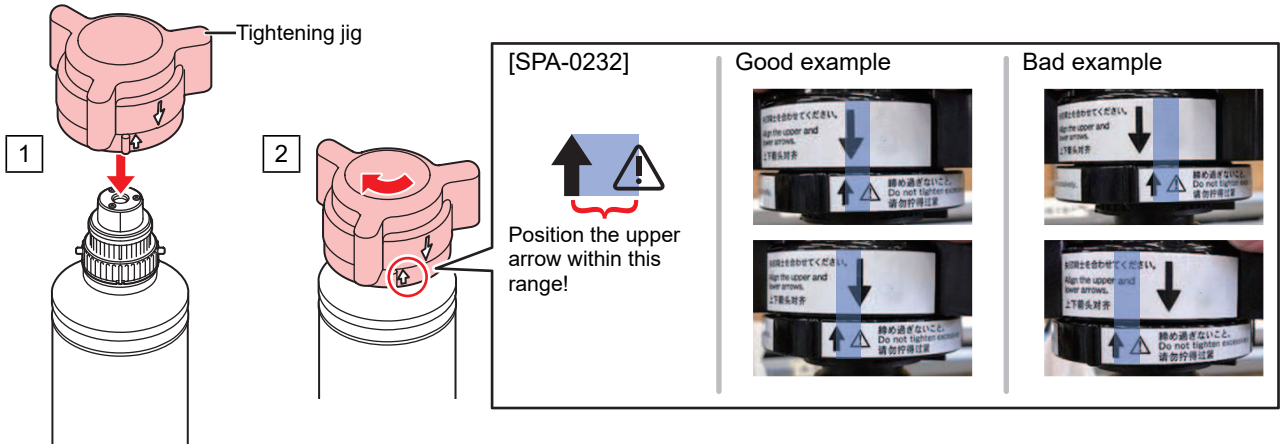
- Wipe off any ink or maintenance liquid remaining on the ink bottle or the bottle cap. Otherwise, there is a risk of ink leakage due to loosening of the ink bottle cap.





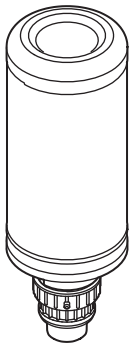
- Check to confirm that there is no foreign matter, such as paper towel scraps or dust, adhering to the ink bottle caps. If foreign matter is present, this may block the ink path and lead to leakage.

4 Use the tightening jig to tighten the special caps.



- Do not overtighten the ink bottle caps. Disregarding this precaution may result in damage, idling, or ink leakage. If the arrow goes beyond the range indicated above, loosen the bottle cap and repeat the steps again.
- Do not leave ink bottles with the ink bottle caps fitted for extended periods. Disregarding this precaution may result in the ink hardening.

5 Turn the bottle upside down to make sure that the ink does not leak.



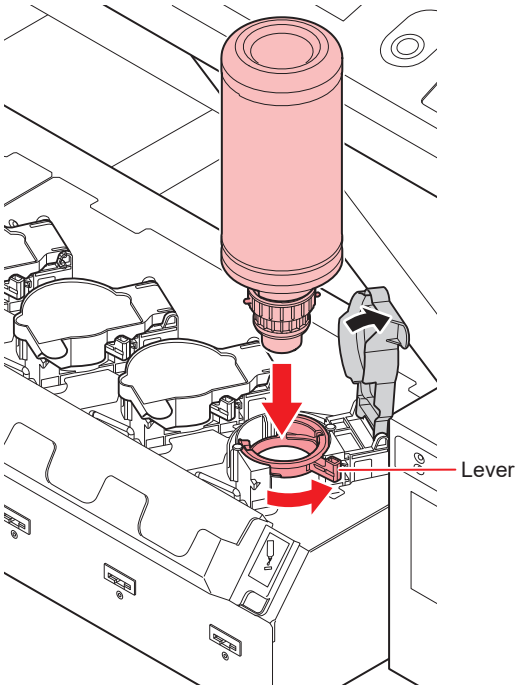
Important!

- Do not leave the ink bottle with the specialized cap attached in a location where it is exposed to light for a long period of time. Doing so may cause the ink inside the bottle to harden.

6 Set the ink bottle over the tank.

- Move the tank lever completely to the right and set the ink bottle.

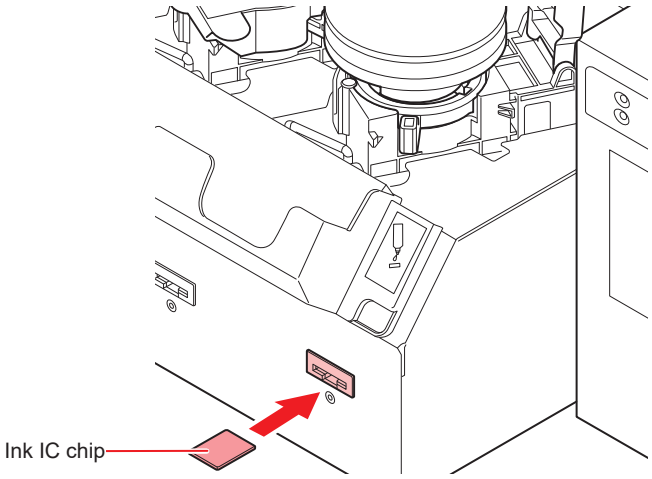
Important! • Never rotate the ink bottle after setting it over the tank. Doing so may result in ink leakage.



7 **Turn the tank lever from right to left.**

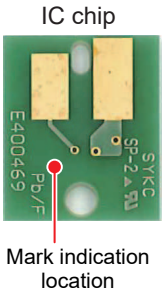
8 **Insert the Ink IC chip.**

- Insert the Ink IC chip with its metal part on the left. Inserting an Ink IC chip with its wrong side inward may damage the Ink IC chip or cause it to malfunction.
- Do not touch the metal part of the Ink IC chip. The static electricity generated when you touch the metal part may damage the Ink IC chip and/or cause reading errors due to transfer of dirt to or development of scratches on the chip surface.
- See "Order of Ink Bottles"(P. 191) for setting the order of ink bottles.



Important!

- The Ink IC chip has information on items such as ink color, remaining amount of ink, expiration date. When setting an ink bottle, insert the Ink IC chip included in the ink bottle package into the Ink IC chip insertion port provided on the ink cover.
- If the Ink IC chip not meant for a particular ink bottle is inserted, it may cause poor image quality.
- A mark indicating color information is pasted on the Ink IC chip.



Ink Color	Marking
Black	(One black circle)
Cyan	(One blue circle)
Magenta	(One red circle)
Yellow	(One yellow circle)
Light cyan	(Two blue circles)
Light magenta	(Two red circles)
White	(One white circle)
Clear	(Two white circles)
Primer	(Three white circles)
Fluorescent pink	(Two orange circles)
Fluorescent yellow	(Two yellow circles)

Replacing an Ink Bottle

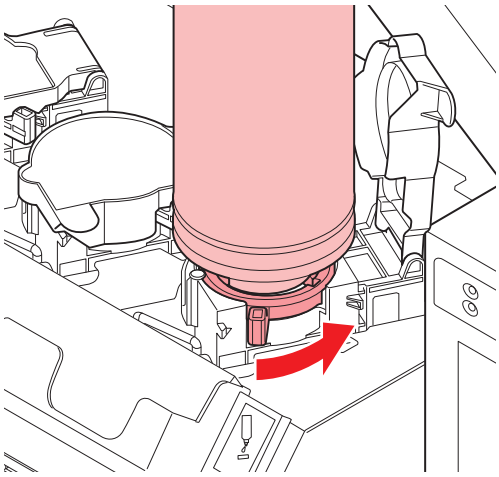
When [INK END] or [INK NEAR END] are shown on the display, perform the following procedure:

- Be sure to perform this procedure with the operation panel pushed all the way in. During the procedure, be careful not to let your head touch the operation panel or table.

When [INK END] is displayed

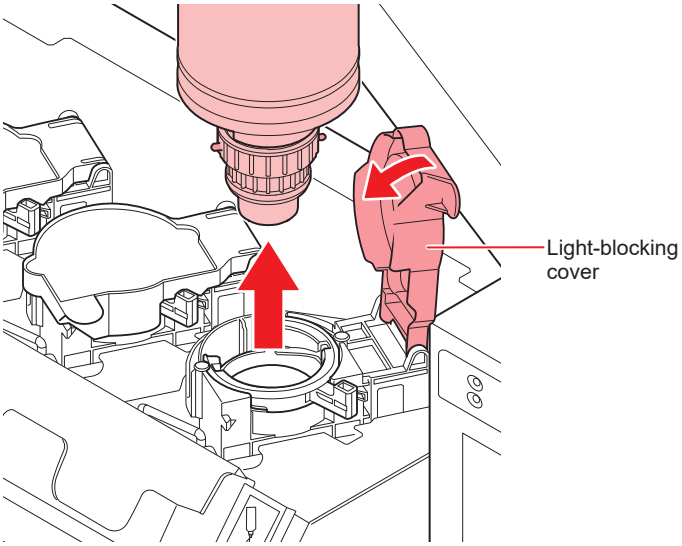
1 **Turn the tank lever from the left to the right.**

Important!
- Make sure not to rotate the ink bottle. Doing so may result in ink leakage.

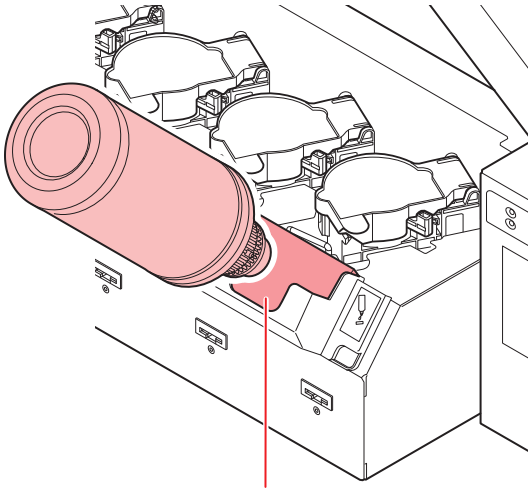


2 Lift the ink bottle vertically.

Important!
- When the ink bottle is removed from the tank, make sure that the light-blocking cover is shut.
- If the lid is not shut, close it manually. If the light-blocking cover is left open, the ink may harden.

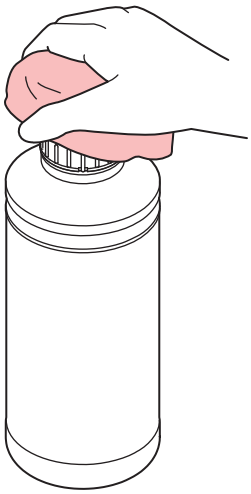


3 **Wipe off the ink adhering to the bottom of the cap with the wiping filter.**



Cap wiping part

4 **Keep the bottle in an upright position and remove any ink adhering to the cap surface by using a disposable wipe such as KimWipe.**



5 **Remove the cap from the used ink bottle.**

- If the cap is hard to remove, use the fastening jig to remove it.

6 **Set a new ink bottle.**

- "Setting Ink Bottles"(P. 38)

Important!
- Do not leave the ink bottle with the specialized cap attached in a location where it is exposed to light for a long period of time. Doing so may cause the ink inside the bottle to harden.

- Before mounting the bottle, check to confirm that there is no foreign matter adhering to the cap. Paper scraps or dust adhering to the cap may clog the path.

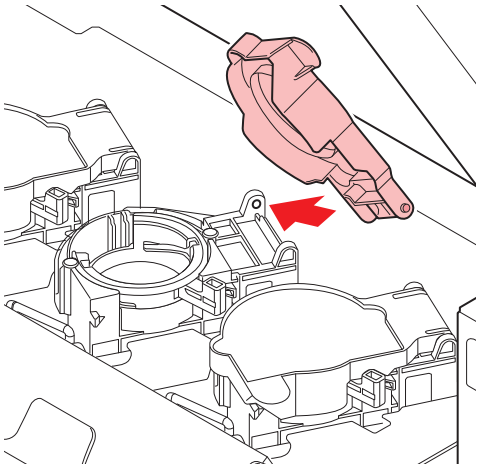
When [INK NEAR END] is displayed

It indicates that only a small amount of ink is remaining. Even though you can continue to print in this condition, note that the ink may finish completely before you finish your printing job. We recommend that you replace the ink bottles as soon as possible.

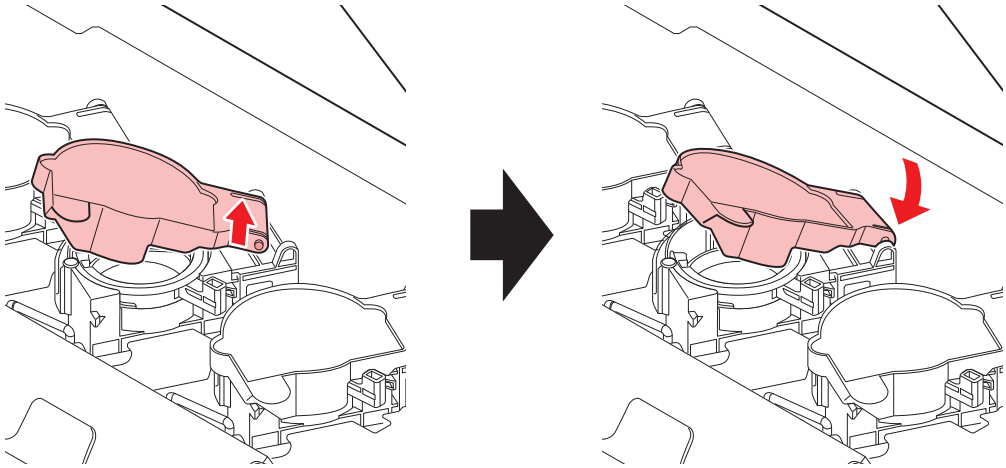
If the light-blocking cover comes off

When the light-blocking cover comes off, light penetrating into the tank may cause the ink to harden.
If the light-blocking cover comes loose, reattach as follows:

1 **Insert the light-blocking cover (one nub) into the cover insertion hole on the tank.**



2 **While pressing the cover into the cap insertion hole as explained in Step 1, insert the other nub into the other insertion hole.**



Ink expiration date

The ink expiration date is indicated on the ink bottle.

Expired ink may cause ejection failures or alter the color tone.

Printing is possible even if the ink has passed its expiration date. Nevertheless, we recommend replacing with new ink or using up as quickly as possible.

Example: Expiration date of April 2020

May: Replace with new ink or use up as quickly as possible. Printing is possible.

June: Replace with new ink or use up as quickly as possible. Printing is possible.

July: Replace with new ink. Printing will be impossible soon.

- The message appears on the display.

Storage of Ink Bottles

Pay attention to the following points when storing ink bottles.

- Store in a place with low humidity and no direct sunlight.
- Do not drop or smash the ink bottle.
- Avoid contamination or electrostatic discharge of the Ink IC chip.
- Always store the ink bottle and Ink IC chip together.



Ink bottle and ink IC chip

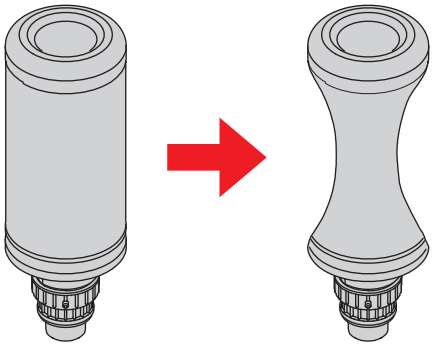
Precautions on Handling Ink Bottles

- If the ink gets in your eyes, immediately hold your eyes under clean, running water for at least 15 minutes to rinse away ink completely from your eyes and eyelids. Seek medical advice as soon as possible.
- Store the ink bottles in a place not more than 1 m off the ground. This is because if an ink bottle stored in a place higher than 1 m falls, its bottle cap may come off, spilling the ink.
- Keep the ink bottle out of reach of children.
- Use genuine ink bottles for this machine. This machine functions upon recognizing the genuine ink bottles. We provide no guarantee against machinery failure caused by altered ink bottles or similar reasons, even during the guarantee period.
- If an ink bottle is moved from a cold to warm place, keep it at room temperature for at least 3 hours before use.
- Store the ink bottles in a cool place.
- Request an industrial waste processor to process the empty ink bottles.
- Use all the ink from the bottle within three months of opening. Note that the print quality deteriorates if the ink is used for too long after opening.

- Do not shake the ink bottle too vigorously. Vigorous shaking may cause the ink to leak from the bottle.
- Never refill an ink bottle. This may cause malfunction. Mimaki bears no responsibility for problems caused by such refilling.
- Do not touch or stain the IC chip circuit contacts. This may cause malfunction of the circuit board.

Important!

- The ink bottle installed in the device may become dented as shown in the figure. This is normal, and does not affect the use or operation of this machine.



1.6 Media

Usable media sizes and notes for handling are described below.

Usable media sizes

Item name	JFX220-2515
Maximum width	2580 mm
Maximum length	1940 mm
Maximum print width	2500 mm
Minimum size	200 × 200 mm
Thickness	101.6 mm (4 inches) or less
Weight*1	Not exceeding 50 kg per square meter (No concentrated loads, includes the weight of the jig)

*1. Roughly 50 kg per 1 m^2.

Storing Media

Store the media in a dust-proof place with no direct sunlight. Also, avoid storing the media in hot or highly humid places.

Precautions when handling media

Note the following precautions on handling the media.

● Media elasticity

Do not use the media in the sheet form immediately after opening the package. Media may expand or shrink depending on the temperature and humidity of the room. After opening the package, the media must be exposed to the atmosphere in which it will be used, for at least 30 minutes.

● Warping of the media

When using tabular media, use the ones that are flat, bent back with respect to the upward facing printed surface (raised in the center). Media bent in an upward direction may not adhere to the table. The media prone to bending should be stored on a platform or on a palette one size smaller than the media to ensure that it bends downward. Also, make sure that there are no bends in the media protruding out from the suction area.

● Attaching the media

If the print extends beyond the edge of the media, excess ink or toner may be pulled into the suction holes, increasing the speed of deterioration of the vacuum table. If there is a risk that the print will extend beyond any edge, we recommend taking measures such as protecting the suction holes.

Depending on the permeability of the media, some types are more prone to adsorption than others. Highly permeable media may be difficult or impossible to be held in place by the vacuum table. Please check this before printing.

Other precautions

- Do not keep anything on the surface of the coated paper. Certain types of coated paper may undergo discoloration.
- Curled media that cannot adhere firmly to the table and the media that gets misaligned when the Y-bar is moved cannot be used. Before printing, secure the media to the table by using material such as a tape.
- Refrain from using the media that bends or gets deformed even when the LOGICAL SEEK setting is "OFF".
- As the table surface is made of multiple boards, the board joints may be reflected in the printed image depending on the media thickness or strength of the paper. Also, suction holes may affect the printed images in the same way. Take a test print before the actual printing, to ensure a smooth printing process. (When using thin media, you can reduce the risk of indentations by switching the vacuum suction to weak mode. ☞ "Setting the Media"(P. 63))

1.7 Table

Mask-Less Function

This refers to the ability to adhere small media without having to mask off areas where vacuum adhesion is not required.

Deterioration of the Mask-Less Function

- Vacuum tables with the mask-less function may experience deterioration due to dust and dirt accumulating in the suction holes.
- Environments where dust tends to accumulate in the suction holes will accelerate the deterioration of the mask-less function. (Suction will become difficult without masking.)
- If the mask-less function deteriorates significantly, it is possible to replace the vacuum table assembly.
- To ensure a long service life, we recommend cleaning the table with a vacuum cleaner or air duster each time you change the media.
- For suction holes that will not be used for a long period of time, we recommend covering them with a material such as masking tape to prevent deterioration.
- Usage such as printing that utilizes the entire vacuum table area provides the most durable and user-friendly environment.

1.8 Use of Jigs

A jig is a tool used to secure the media in the correct position. By using a jig, anyone can easily print in the exact desired position.

Benefits of Using Jigs

The use of jigs provides the following benefits.

● Consistent print quality

- As jigs help to secure the media in the correct position, they prevent positional shifts during printing.
- This also makes it easier to maintain an appropriate gap, helping to suppress the generation of ink mist and stray light. (☞ "Explanation of Terms"(P. 50))

● Improved work efficiency

- They make it easier to set media, allowing for smooth and continuous printing of multiple sheets.
- Minimizes differences between operators, enabling printing with consistent work times.

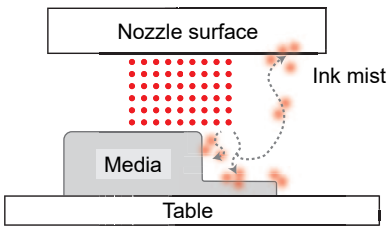
● Prevents problems and reduces maintenance burden

- Jigs help to prevent nozzle clogging by suppressing the adhesion of ink and contamination on the print head surface.
- This reduces the frequency of maintenance and cleaning to clear clogged nozzles, reducing the burden on the equipment.

Explanation of Terms

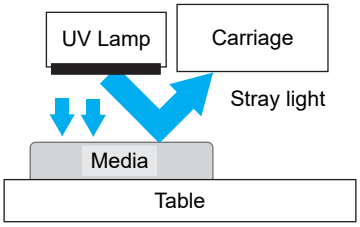
● Ink mist

This is a phenomenon in which ink spreads through the air in a fine mist during printing. As the distance (gap) between the print head and the media increases, ink mist is more likely to disperse into the air.



● Stray light

This is a phenomenon in which the UV light that would normally irradiate the ink on the media is reflected and diffused, reaching unintended areas, such as the print head surface.

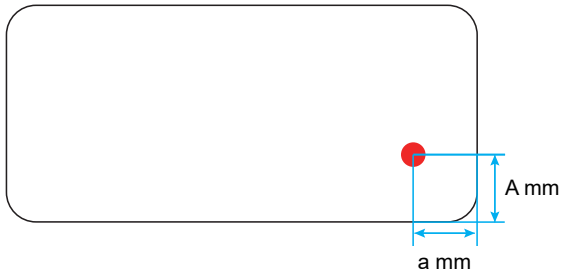


Important! • The generation of ink mist or stray light may cause ejection failures, such as nozzle clogging.

Jig Fabrication Process

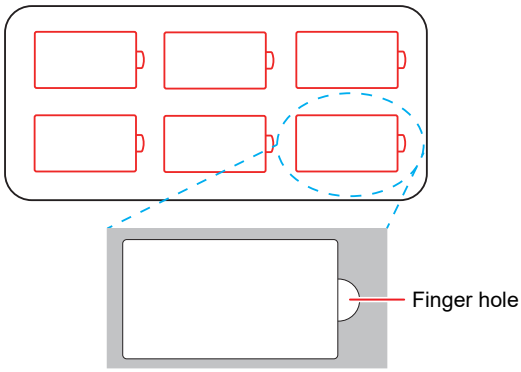
1 **Check the print area and required size of the jig.**

- Check the product's recommended jig size. (☞ P. 54)
- Determine the print start position (drawing origin).



2 **Determine the media layout (orientation/insertion direction/margins).**

- Determine the orientation and insertion direction of the media.
- Check how easy it is to replace the media. If necessary, provide finger holes.
- Determine the margins (edge margins and spacing between media). Arrange the media so that the spacing between them is uniform.

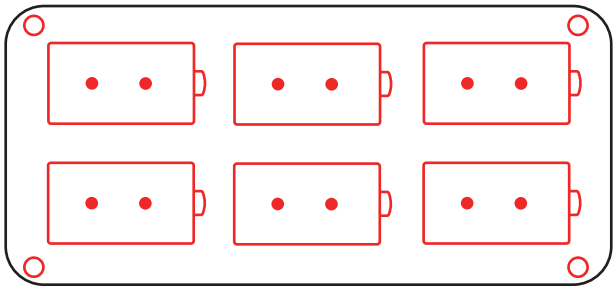


3 **Select the material for the jig.**

- Use a material that is resistant to warping (such as aluminum, aluminum composite panels, or ABS resin).
- Be sure to use materials with a color that does not reflect UV light.
  Recommended: Black, matte finish

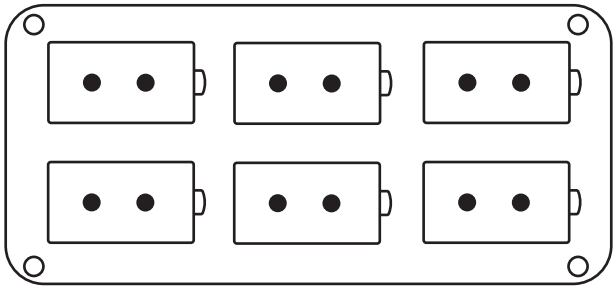
4 **Design the jig (thickness/weight/suction holes/jig mounting configuration).**

- Design the jig so that the combined thickness of the jig and the media falls within the specified range. (☞ P. 54)
- Confirm that the combined weight of the jig and the media is within the specified range. (☞ P. 54)
- Be sure to provide suction holes.

Layout example		
Materials	Aluminum composite panels, black matte finish	
Thickness	10 mm	
Weight	Estimated 1.5 kg	

5 **Fabricate the jig.**

- If you're fabricating the jig yourself, cut the material according to the layout design.
- If you are outsourcing the work, place an order based on the layout design and include the following information:
  - Media size and shape
  - Media placement method (Orientation, insertion method, margins, etc.)
  - Printer model and specifications (Power strip location, maximum media weight)
  - Detailed jig information (Material, color, fixation method, etc.)

Layout example		
Materials	Aluminum composite panels, black matte finish	
Thickness	10 mm	
Weight	Estimated 1.5 kg	

Precautions During Jig Fabrication

To minimize the generation of ink mist and stray light, please observe the following precautions during jig fabrication. Issues such as degraded print quality, improper ink curing, and malfunctions may occur as described below.
Ensure that the weight and thickness of the jig after setting the media are within the specifications of the UV printer being used. Operational malfunctions or print head collisions may result in failure of the machine.

- Ensure that the layout fits within the printing area of the printer.
- Ensure that the spacing between the media is uniform.

Issues that may occur
• Parts of the data are missing. • Organization of the data becomes difficult. • Uneven color or uneven curing occurs.

● Jig materials

- Be sure to use a material that is resistant to warping. Do not use materials that are prone to warping, such as acrylic sheets or wood.
  Recommended: Aluminum, aluminum composite panels, ABS resin, etc.

Issues that may occur
• Scratches are on the printed surface. • Misalignment of the printing position. • The jig collides with the print head.
If an obstacle sensor is present: • When the sensor is triggered, the table lowers, leading to the generation of ink mist and stray light.
If a media jam sensor is present: • When the sensor is triggered, printing stops.

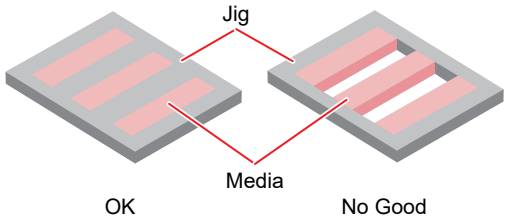
Jig color

- Be sure to use colors that do not reflect UV light. Do not use colors such as white, silver, or transparent materials, which tend to reflect UV light.
  Recommended: Black matte finish

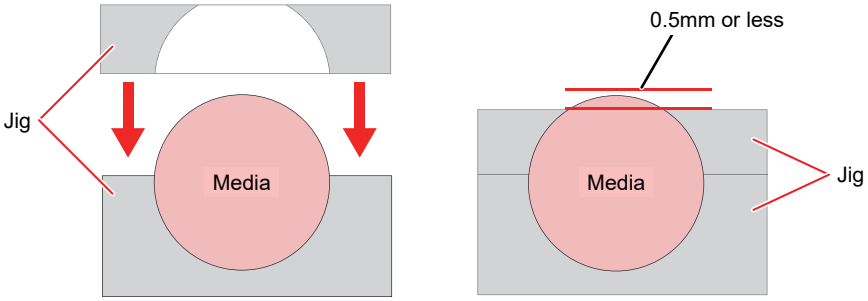
Issues that may occur
• UV light reaches the nozzle surface due to stray light or diffuse reflection, resulting in malfunctioning nozzles.

When designing jigs

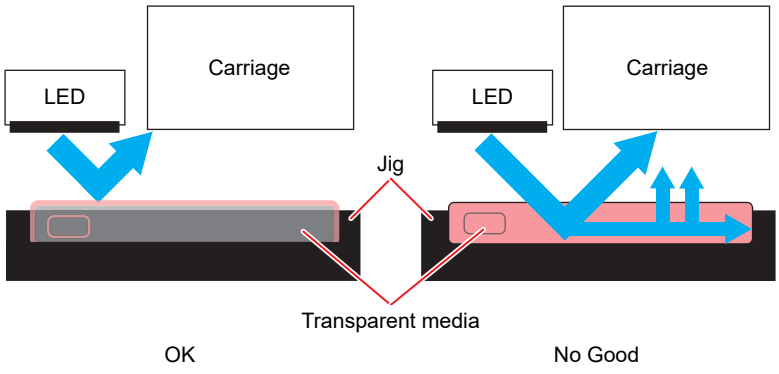
- Use the jig to fill in the margins around the media.



- Design it so that the height difference between the media and jig does not exceed 0.5 mm.



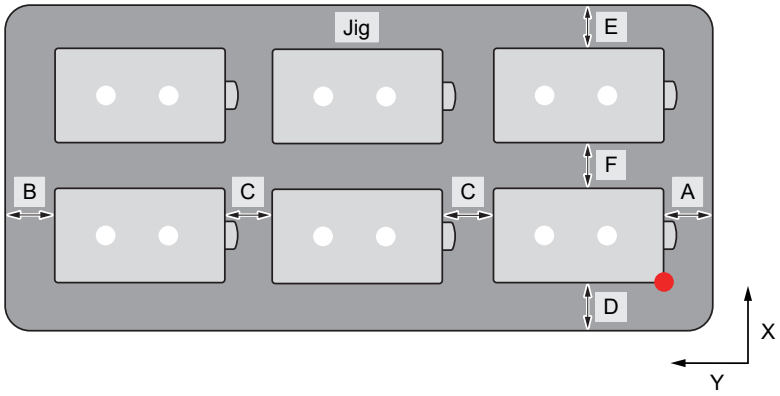
- When printing on transparent media, ensure that the jig has no gaps between it and the media.



Issues that may occur
• Ink mist is generated. • UV light passes through the media and reaches the nozzle surface due to stray light or diffuse reflection, resulting in malfunctioning nozzles.

Recommended Jig Size/Product Specifications—Weight

[View from above]



● Recommended jig size (For full-width printing*1)

		JFX200 Series, JFX220-2515, JFX500-2131, JFX600-2513, UJF-7151 Plus / Plus II / Plus IIe, UJF-3042/6042MkII(e)	JFX600-2531
Y	A	60 mm	50 mm
	B		
	C	Optional*2	
X	D	120 mm	
	E		
	F	Optional*2	

*1. See the table below.

*2. Fill the gaps between the media with the jig.

● *1 Jig sizes that can be set for full-width printing

	Y		X	
	A	B	D	E
JFX200series	40 mm	40 mm	120 mm	120 mm
JFX220-2515	40 mm	40 mm	120 mm	120 mm
JFX500-2131	7.5 mm	7.5 mm	47 mm	47 mm
UJF-7151Plus/PlusII	49 mm	49 mm	53 mm	19 mm
UJF-3042/6042MkII (e)	32 mm	32 mm	22 mm	22 mm
JFX600-2513	40 mm	40 mm	50 mm	120 mm
JFX600-2531	40 mm	40 mm	20 mm	120 mm

● Product Specifications—Weight

	Weight
JFX200series	Max. 50 kg/m^2 (No concentrated loads)
JFX220-2515	
JFX500-2131	
JFX600	
UJF-7151Plus	Max. 10 kg
UJF-7151PlusI (e)	Max. 30 kg
UJF-3042MkII (e)	Max. 5 kg
UJF-6042MkII (e)	Max. 8 kg

1.9 Notes Regarding Work Environment, etc.

The frequency of configuring print settings and conducting maintenance is largely influenced by the work environment in which printing is performed and the conditions of the used media. Make sure that you have completely understood the following items before using this machine.

If there is a lot of dust or dirt in the work environment

- Change the automatic maintenance settings according to the amount of dust or dirt.

When the head gap value is set to large due to reasons such as fibers protruding from the media

When media that can easily reflect UV light, such as glass or glossy metal is used

- UV light may get exposed onto the nozzle due to frequent mist scattering. Increase the refresh level during plotting and set automatic cleaning for maintenance during printing. ☞ "Maintenance Settings Menu"(P. 94)
- Increase the frequency of all types of maintenance.

In case of low usage ink (print head)

- Ink discharge of less used print heads tends to become unstable as compared to other print heads. Increase the refresh level during plotting, then keep the head usage rate above a certain value. ☞ "Maintenance Settings Menu"(P. 94)

When printing on media that is prone to electrostatic charge

When printing in an environment with low humidity (in winters, etc.)

- Take thorough measures against electrostatic charging with the help of humidifier, etc. Static electricity attracts mist and dust around the printing area and the head. If you plan to print continuously for an extended period, set automatic cleaning for maintenance during printing. ☞ "Maintenance Settings Menu"(P. 94)

When printing on uneven media (three-dimensional medium)

- If the edges of the media lift up, use material such as masking tape as needed to secure the media so that the head gap remains uniform during printing. If deterioration of the head due to reflected light is neglected for a long period of time, it may cause malfunction to the point where the head may have to be replaced.

Chapter 2 Basic Operation



This chapter

This chapter describes preparations of ink/media for printing, procedures before printing and settings.

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2.1 Operation flow

1. Turning the Power On/Off

☞ "Turning the Power On/Off"(P. 59)

2. Loading the Media

☞ "Setting the Media"(P. 61)

3. Registering the Media Thickness

☞ "Registering the Media Thickness"(P. 70)

4. Setting the Head Gap

☞ "Setting the Head Gap"(P. 73)

5. Test Printing

☞ "Test Printing"(P. 76)

6. Head Cleaning

☞ "Head Cleaning"(P. 80)

7. Adjust the drop position for bi-directional printing.

☞ "Correcting the Drop Position"(P. 82)

8. Printing the Data

☞ "Printing the Data"(P. 84)

2.2 Turning the Power On/Off

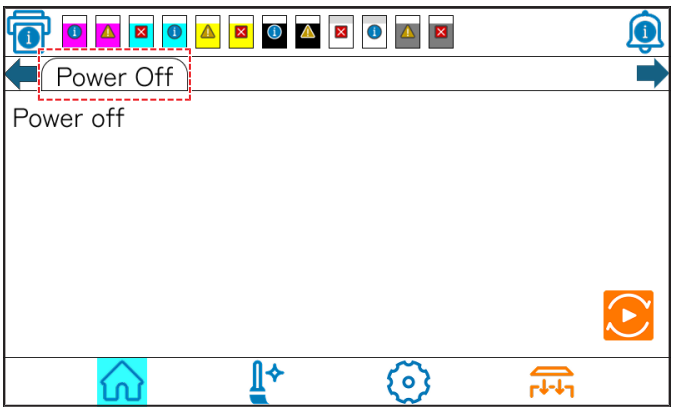
Turning On the Power

Turn on the printer's main power supply switch to start printer initialization.

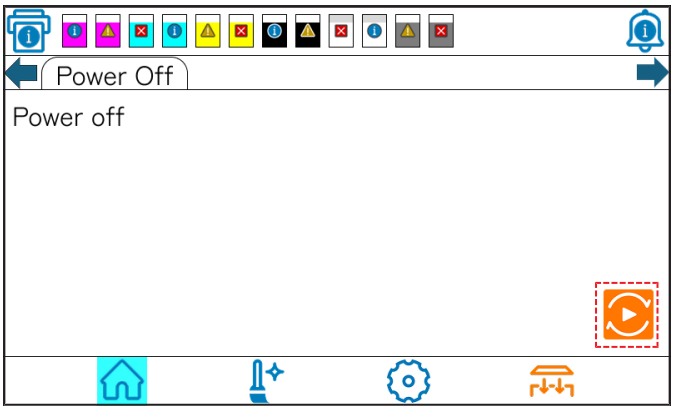
- You should normally leave the machine power cord plugged into the power outlet. Keeping the power cord unplugged may clog the head nozzle. Depending on the symptoms, it might be difficult to remedy the fault.

Turning Off the Power

1 Once you have finished using the printer, tap [Power Supply Off] on the home screen of the operation panel.



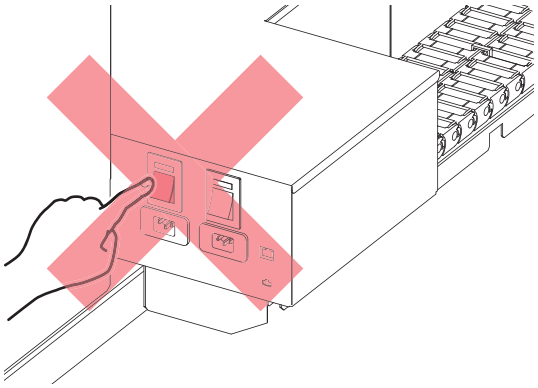
2 Tap .



Before turning off the power, check if:

- Data is being received from the PC and if any data is still to be output.
- The head has returned to the capping station.
- Any error has occurred.
☞ "Error Message"(P. 176)

- During normal operation, do not suddenly turn off the power to the machine. Turning off the power supply will disable the automatic maintenance function (including nozzle clogging prevention function and ink discharge channel cleaning function). This increases the risk of ejection failures (such as nozzle clogging or deflection).
  If you have no choice but to turn off the power to the machine, such as when there is a suspected abnormality, be sure to turn off both switches and cut off the power supply. Failure to turn off both switches may result in an electric shock.



Precautions on turning off the power

● Do not pull out the power cord from the power outlet.

If the power cord is left plugged in, the power turns on periodically to run the nozzle clog prevention function (flushing function) and pressure regulation function.

On the other hand, if the power cord is removed from the plug, the automatic maintenance functions such as flushing do not run, causing nozzle clogs.

● Check the head position and turn off the power.

If the power is turned off before the head returns to the capping station, the head may dry out and clog the nozzle.

At this time, turn the power back on and make sure the head returns to the capping station before turning off the power.

● Do not turn off the power during printing.

The head may not return to the capping station.

● Turn OFF the main power, and then unplug the cable.

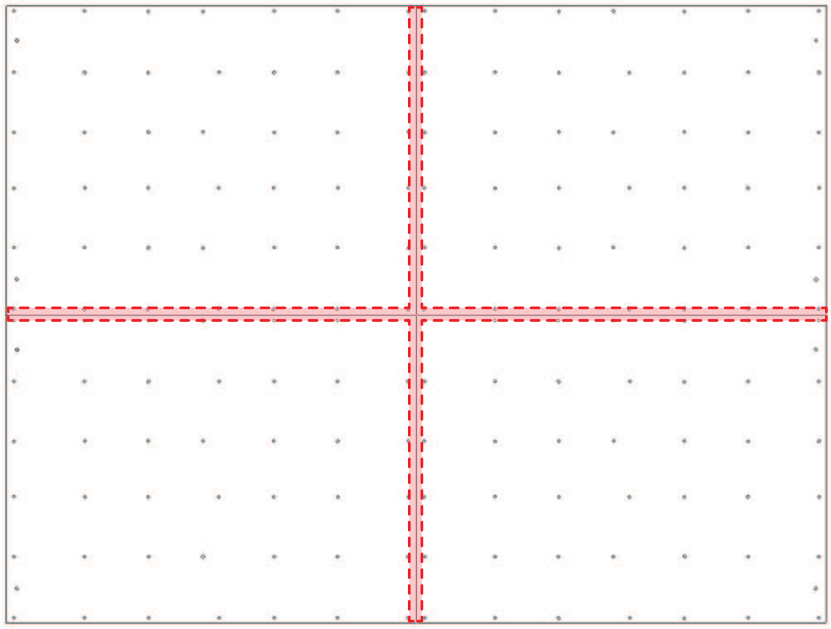
When turning off the power for reasons such as moving this machine to a different place or fixing a machine error, press the power button on the operation panel and make sure that the lamp is turned off before removing the power cable from the outlet.

2.3 Setting the Media

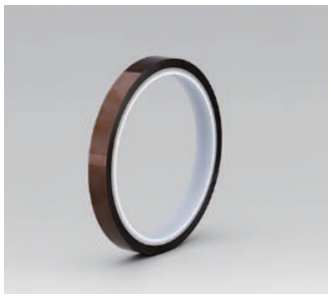
This machine can be used with a leaf media.

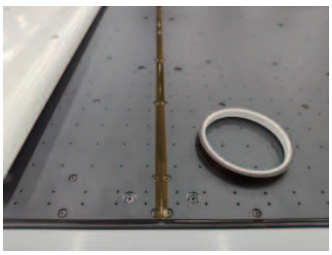
When using leaf media, the media may lift near the joints between the vacuum panels. If media lifting occurs, apply the supplied Kapton tape to the areas between the vacuum panels where there are no vacuum holes. Kapton tape (PN:SP-01054) is also available for purchase as a consumable item.

Kapton Tape Application Area

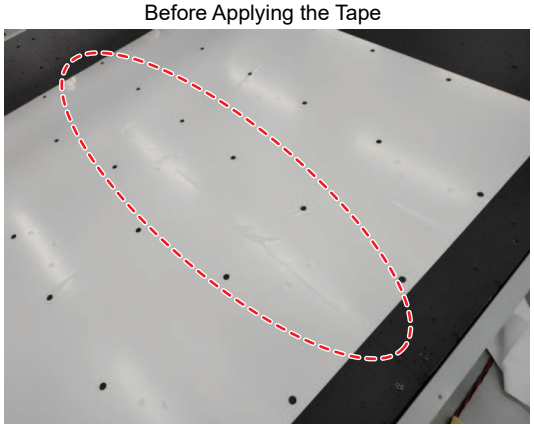


Kapton Tape
(PN: SP-01054)

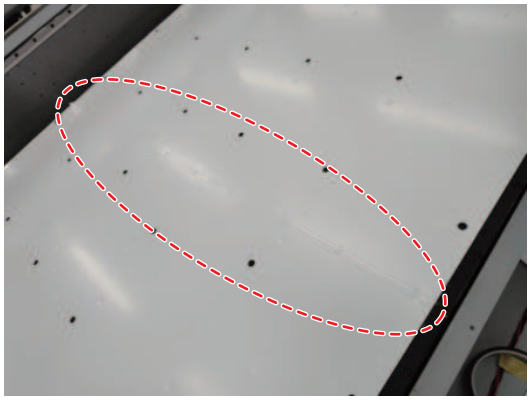




Before Applying the Tape



After applying the tape



For usable media, see ☞ "Usable media sizes"(P. 47) .

Proper Media Placement

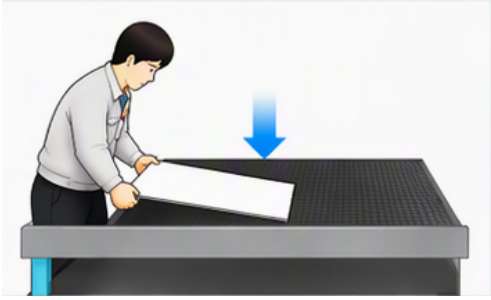
Lower the media close to the table surface, avoid dropping corners, and place it gently with the entire surface.

Important!

- Always hold the media by hand and place it slowly following the instructions below.
- If the table is subjected to a strong impact, or if changes in print quality are observed, contact your dealer or service representative.

Up to 5 kg

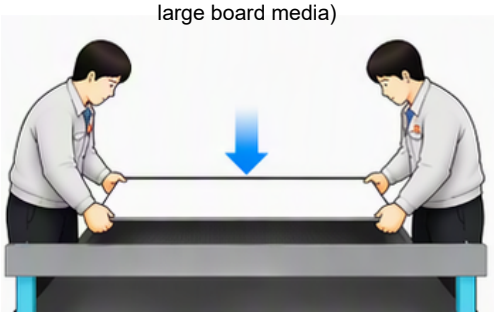
(Example: Boards up to A0 size, thin panels,etc.)



- Can be handled by one person.
- Lower the media close to the table surface.
- Place the media so that adge contacts the table surface.

5 to 20 kg

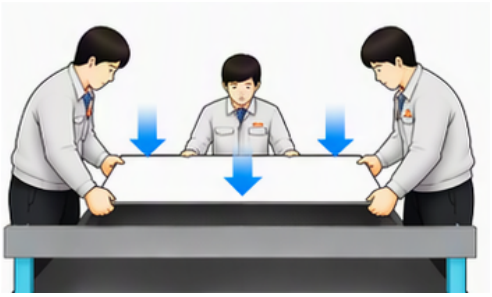
(Example: Aluminum composite panels and other large board media)



- Use more than one person if necessary.
- Keep a firm grip on the media while placing it.
- Place the media so that adge contacts the table surface.

20 to 30 kg

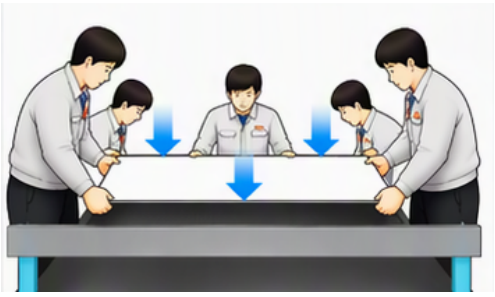
(Example: Large resin boards or thick panels, etc. (relatively heavy media))



- Use more than one person if necessary.
- Keep the media as level as possible while placing it.
- Place the media so that adge contacts the table surface.

More than 30 kg

(Example: Large glass panels or other very heavy media)



- Use more than one person if necessary.
- Consider using a cart or auxiliary equipment as needed.
- Keep the media as level as possible while placing it.
- Place the media so that adge contacts the table surface.

- For heavy media, use more people and talk to each other while working.
- Keep a stable posture and maintain afirm grip.
- Consider the size, shape, and ease of handling of the media, and a safe method.

How to Place the Media Gently

Lower the media to just above the table surface, place the edge first, and then gently lay it down.

1. Lower close to the table surface
2. Place the edge first
3. Gently lay it down



Reduce the gap between the media and the table surface to Within 30mm (approx.)

Do not drop the corners.
Bring the edge close to the table surface and place it horizontally.

When the entire surface is in contact with the table, release your hands slowly.

Actions to Avoid (Examples)



Dropping the media

(Releasing it so it falls onto the table)

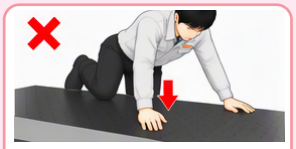


Hitting the table with a corner

(corner drop)



Dropping tools or fixtures



Standing on the Table

Setting the Media

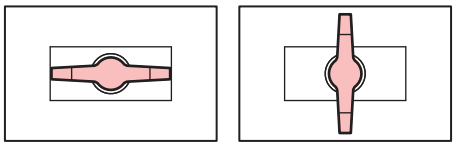
Important!

- If there is a possibility that the print area may extend beyond the media, be sure to protect the suction holes.
- The outer edges of the media may warp due to heat buildup from the UV light or due to shrinkage caused by ink curing. Use adhesive tape or a jig as an additional means of securing it in place.

- When setting the media, make sure the operation panel is pushed all the way in. Take care not to allow the media to hit the operation panel or the table.

1 Adjust the suction valve on the front of the table according to the thickness of the media you wish to set.

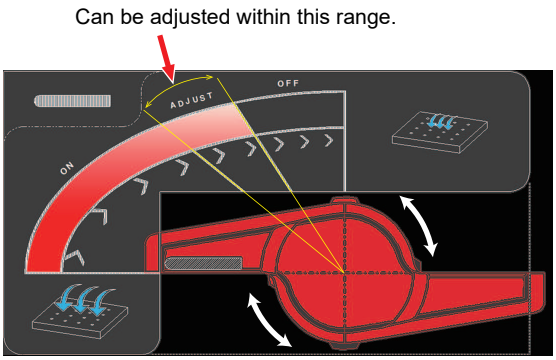
- The valve is open when the handle is horizontal and close when it is vertical.



Open Close

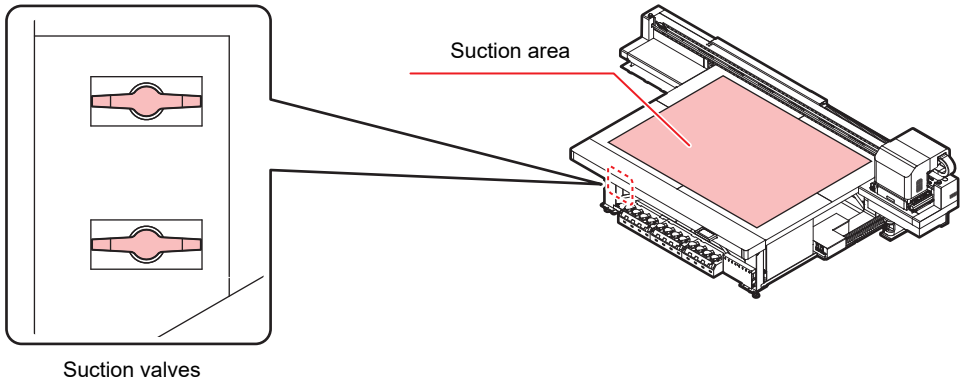
- When using thin media, switch to weak mode.

- If the suction force is too strong when using thin media, the outlines of the vacuum holes and recesses in the table surface may become visible on the media surface. In such cases, adjust the suction force by turning the suction valve.



2 Tap the vacuum icon ☞ "Operation Panel"(P. 31) on the operation panel or press the foot pedal to turn on the VACUUM lamp and secure the media in place.

- For details about the suction area, see ☞ "Suction Area"(P. 65).



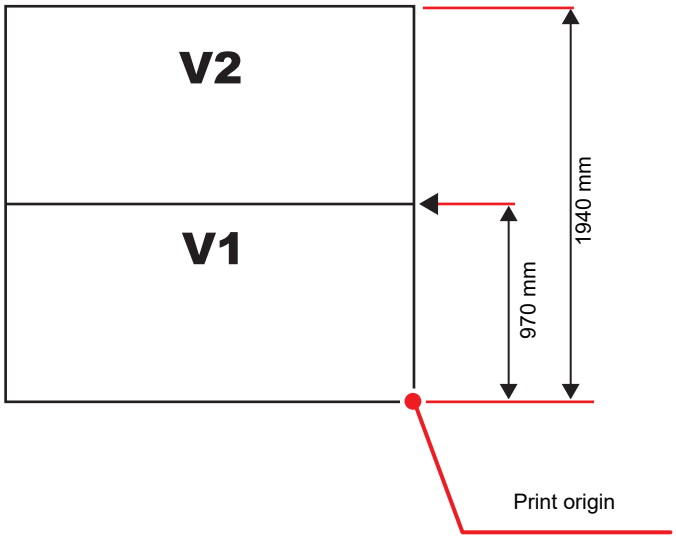
● After setting up the media, perform the following settings:

- ☞ "Registering the Media Thickness"(P. 70)
- ☞ "Setting the Head Gap"(P. 73)

- Do not drop heavy media on the table as the table may get deformed due to its weight. Also, ensure the weight is not concentrated in a single point (up to 50 kg/m^2). ☞ "Machine specifications"(P. 188) (If you frequently use heavy media, we recommend purchasing an optional blower. It has a function that blows air back out through the suction holes, which can be useful during operation.)

Suction Area

The following figure shows the suction area.

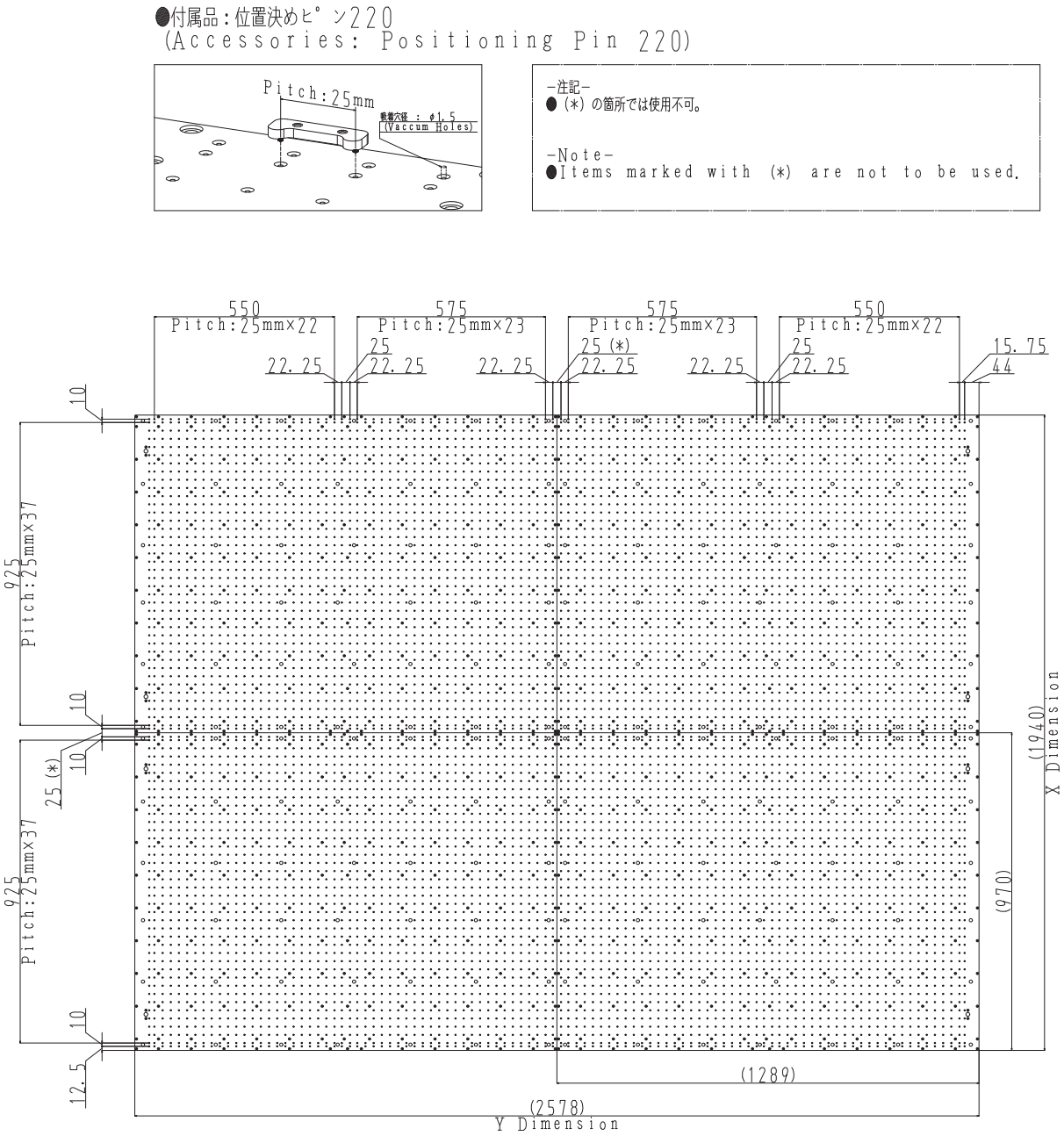


- To change the point of origin, see ☞ "Changing the Point of Origin"(P. 84).

Media Guides

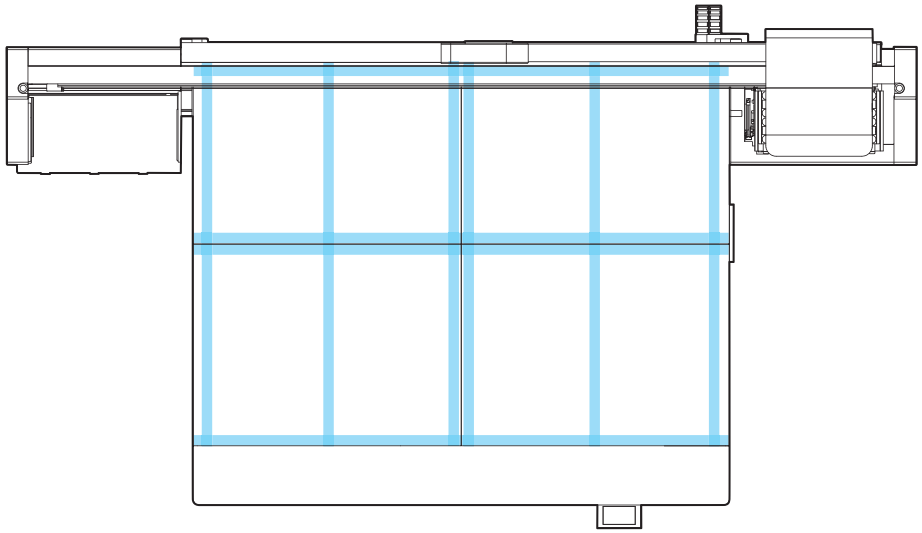
The table is equipped with four automatic pop-up positioning pins at the front and two at the sides, as well as manual positioning pins that fit into the suction holes. Eight of these pins are included as standard. Use these guide holes to keep the media straight.

Important! • Ensure that the jig does not extend beyond the table.

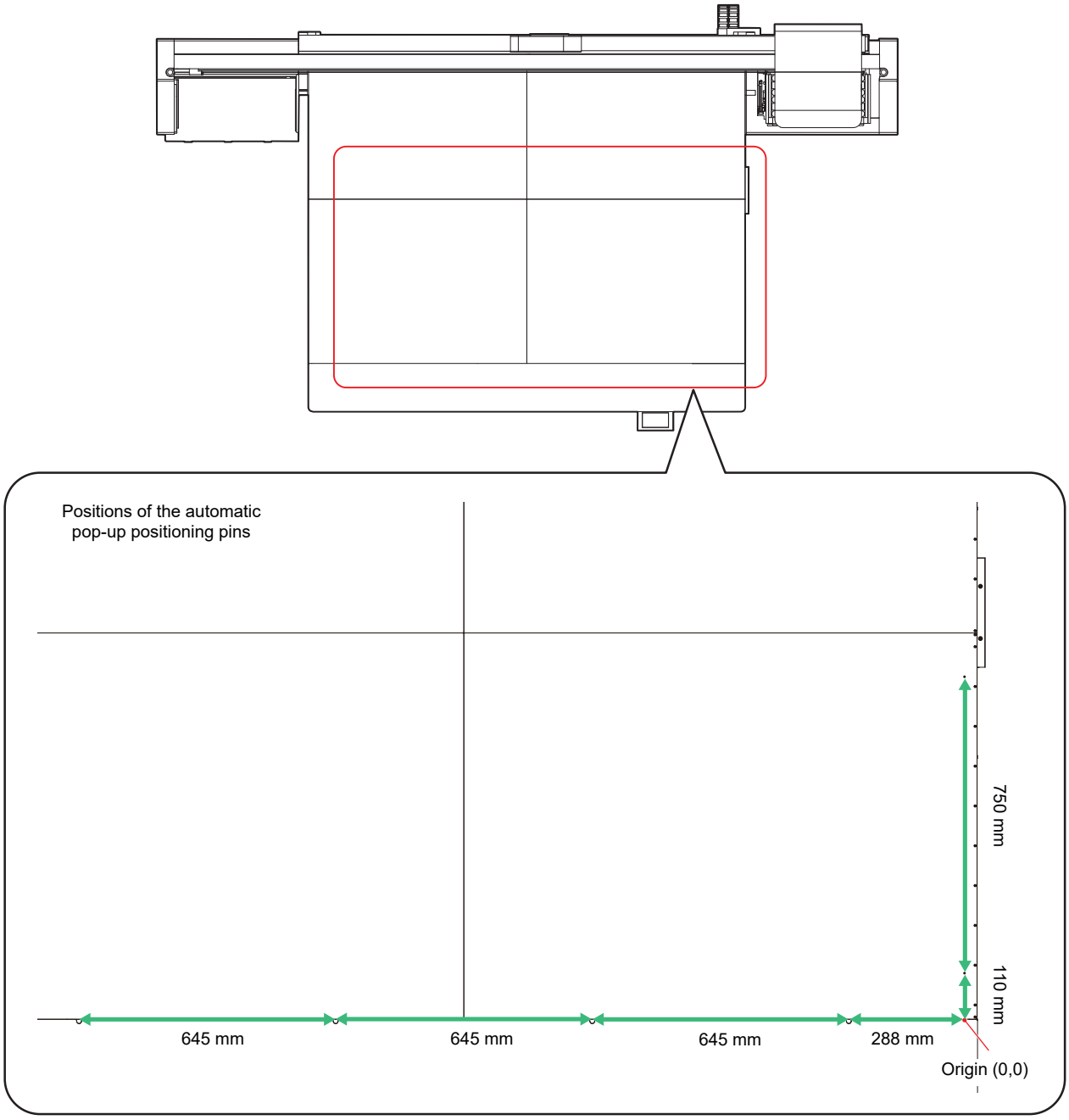


Important!

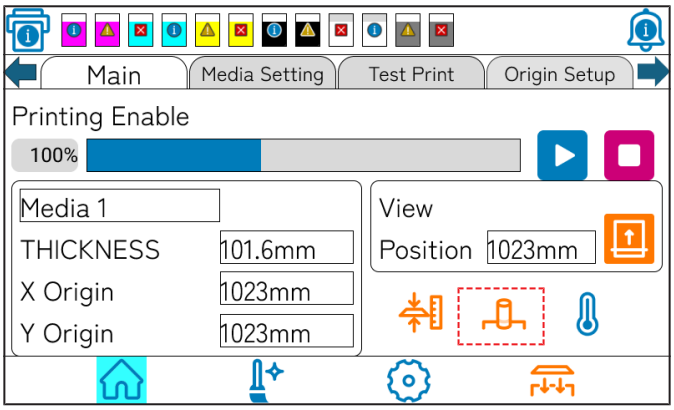
- When using the provided layout pin, the media thinner than 5 mm cannot be used.
- When printing on a media having a thickness of 5 mm or less, make sure that the layout pin has been removed from the top of the table.



Positions where you cannot place manual positioning pins



This operation can be performed by tapping on the [Main] tab of the Home screen. "Operation Panel"(P. 31)



- Depending on the type of media, the automatic pop-up positioning pins may not easily retract. This issue may be more common when using heavy or non-slip media. Printing will not start until the automatic pop-up positioning pins have returned to their original retracted positions. Gently press the pins down to retract them.

2.4 Registering the Media Thickness

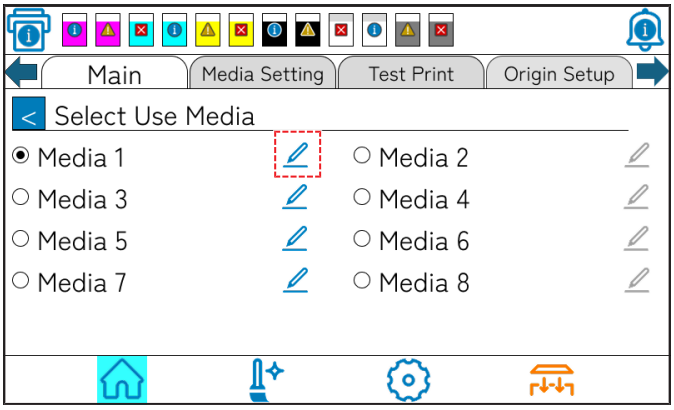
Register the thickness of the media to be set.

There are two types of registration methods:

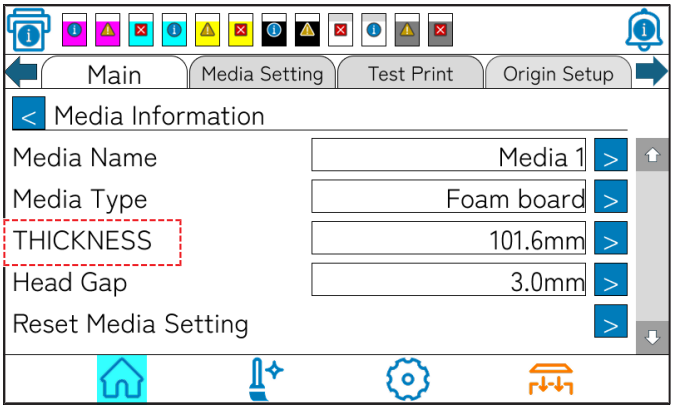
- Registering the thickness manually
- Checking the thickness automatically

Registering the Media Thickness Manually

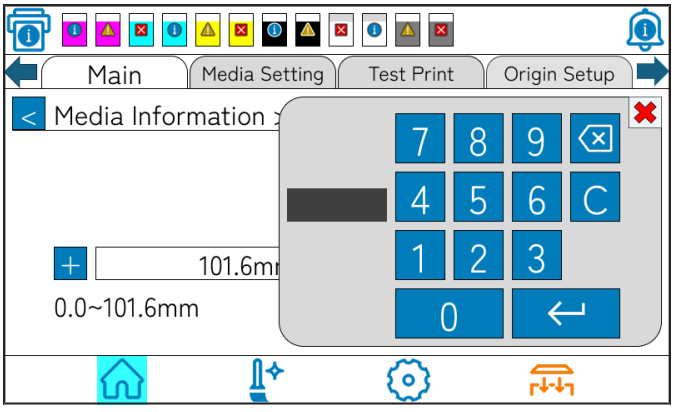
1 On the [Main] tab of the Home screen, select the media and tap . Alternatively, tap [Media Setting] > [Media Information].



2 Tap [Thickness].



3 Tap + - or enter a number.



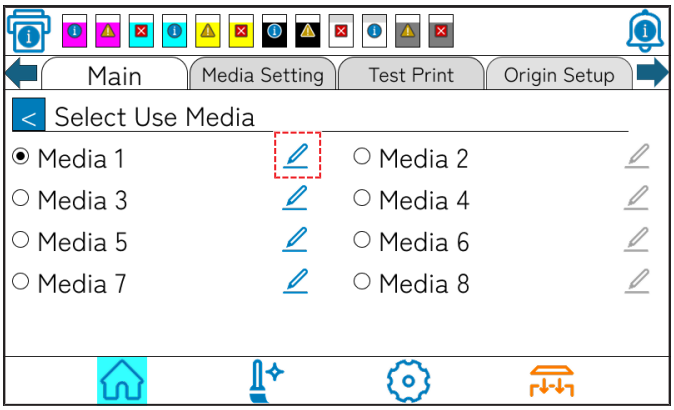
4 Tap .

Automatic Checking of the Media Thickness

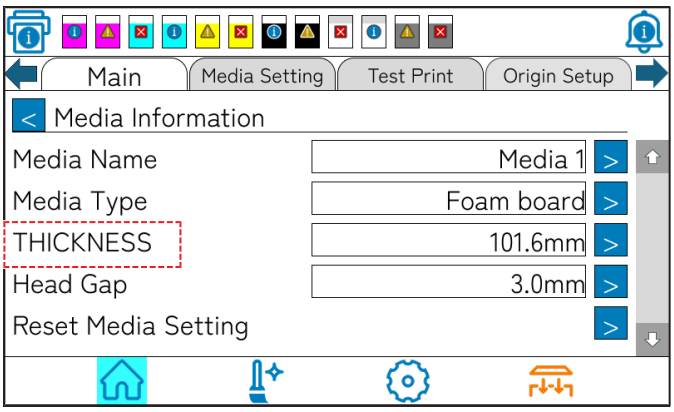
1 **Set the media.**

- Be sure to set the media within the print range. If automatic thickness check is conducted without inserting the media, the print heads may get damaged.

2 **On the [Main] tab of the Home screen, select the media and then tap . Alternatively, tap [Media Setting] > [Media Information].**

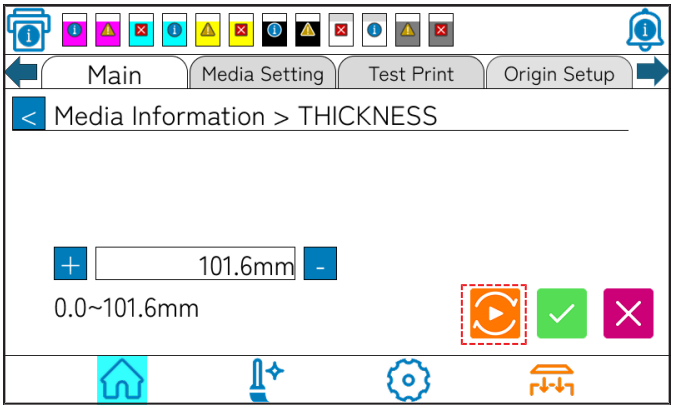


3 **Tap [Thickness].**

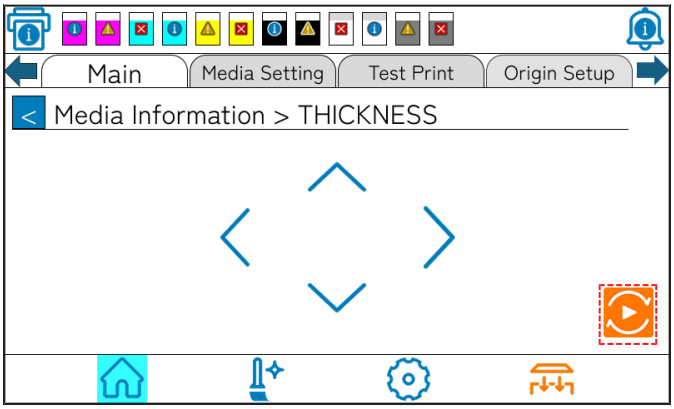


4 **Tap** .

- The carriage will move.



5 **When the following screen appears, tap** .

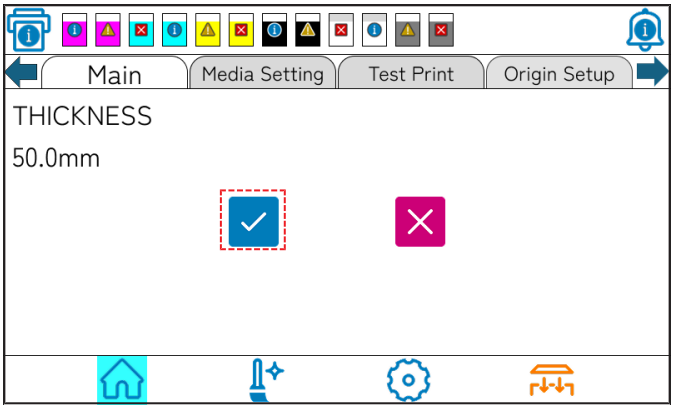


- It will automatically measure the thickness of the media.

Important!

- Tolerance of the automatic thickness check is ±0.1 mm.

6 **Tap** .



2.5 Setting the Head Gap

Set the head gap (height from media to head nozzle surface).

When the head is to be moved onto the table for operations such as printing or maintenance, upon moving, it will maintain the head gap at the pre-set value.

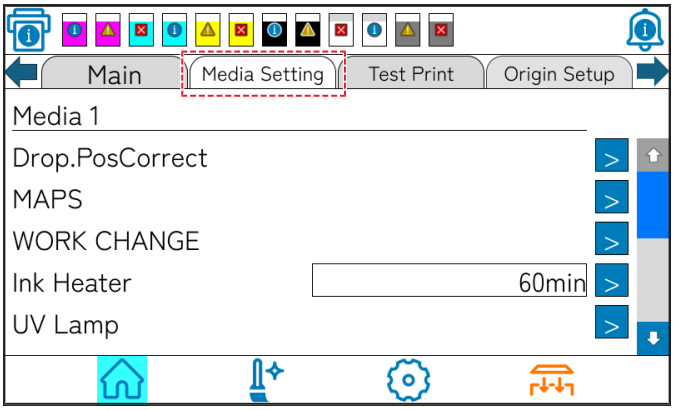
The upper limit of head gap varies depending on the thickness of the media.

Available settings: [1.2 mm to 20.0 mm] (per 0.1 mm/default: 1.5 mm)

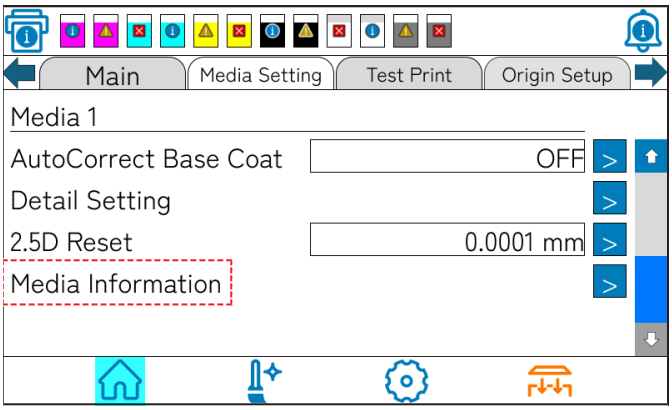
Registering the Head Gap Value

Perform the following operations when you want to register the currently set head gap value.

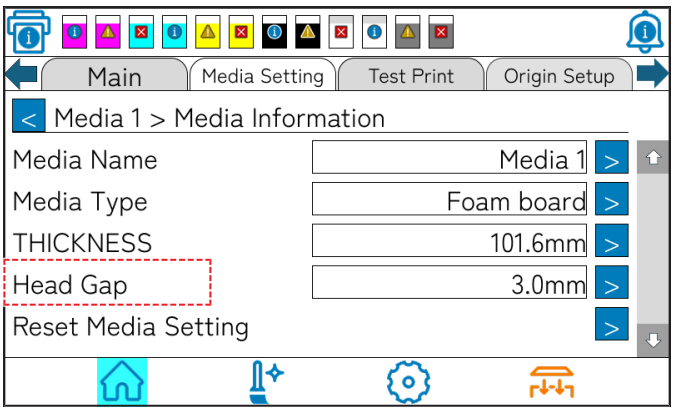
1 **Tap [Media Setting] on the Home screen.**



2 **Tap [Media Information].**

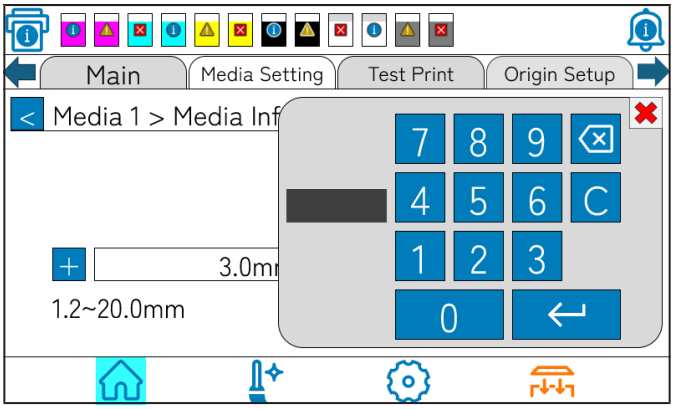


3 **Tap [Head Gap].**



4 **Enter the head gap value.**

- Available settings: 1.2 to 3.0 mm

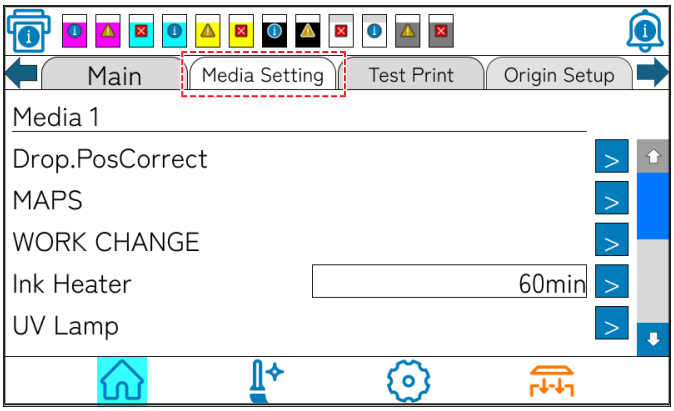


- An incorrect head gap value may deteriorate the print quality, due to large drops of ink dropped on the media in some cases or other such issues.

5 **Tap** .

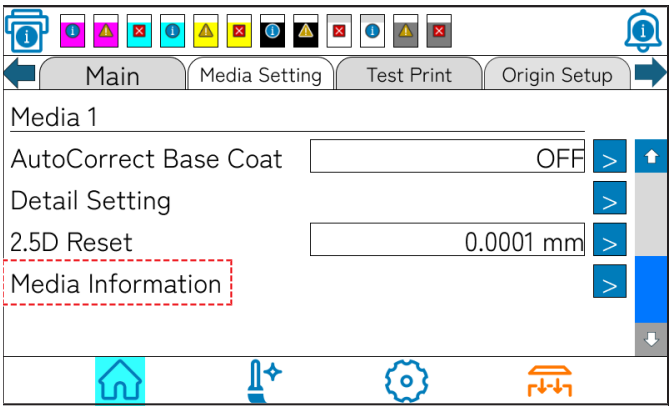
Checking the Head Gap Value

1 **Tap [Media Setting] on the Home screen.**



2 **Tap [Media Information].**

- The head gap value will be displayed.



2.6 Test Printing

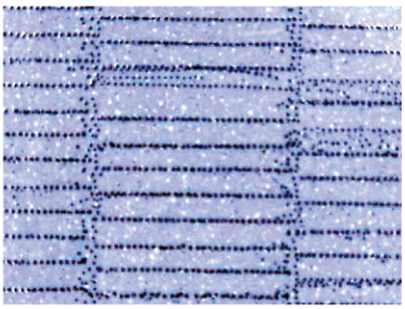
Print the test pattern to make sure that there are no ink discharge problems such as clogged nozzle (blurred print or missing nozzles).

Examples of Plotting Failure

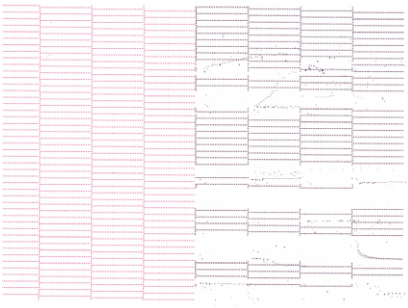
Discharge failure of the head (head nozzle) due to dust is a typical example of plotting failure.

Periodically check the condition of the nozzle before output or during output to avoid using it in defective state.

The condition of the nozzle can be checked by [TEST PRINT] of this machine.



Deflection



Nozzle clogging



Ink dropping

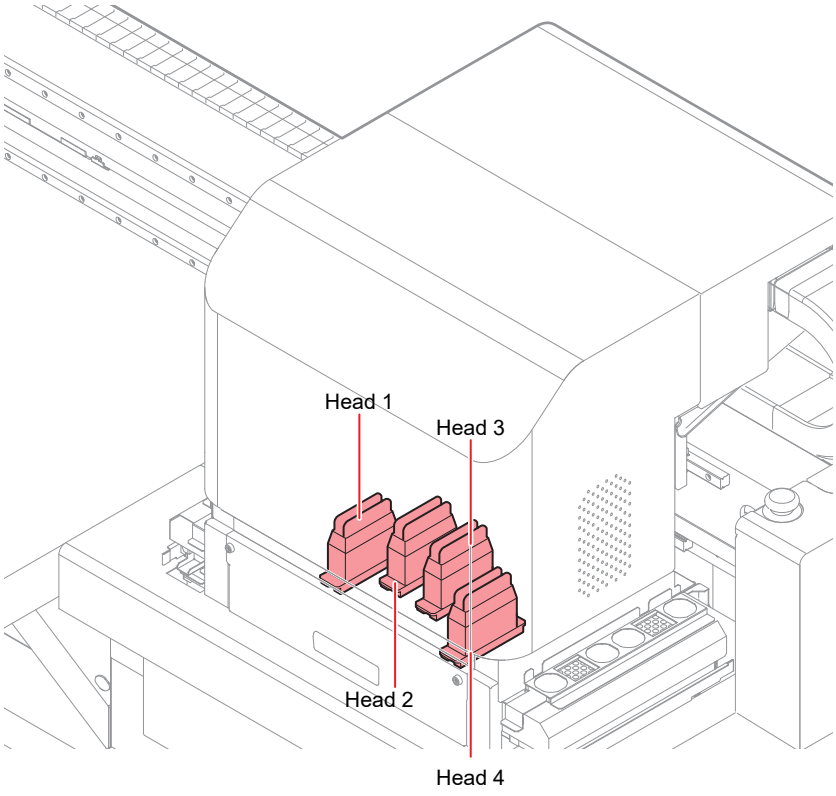


Satellite

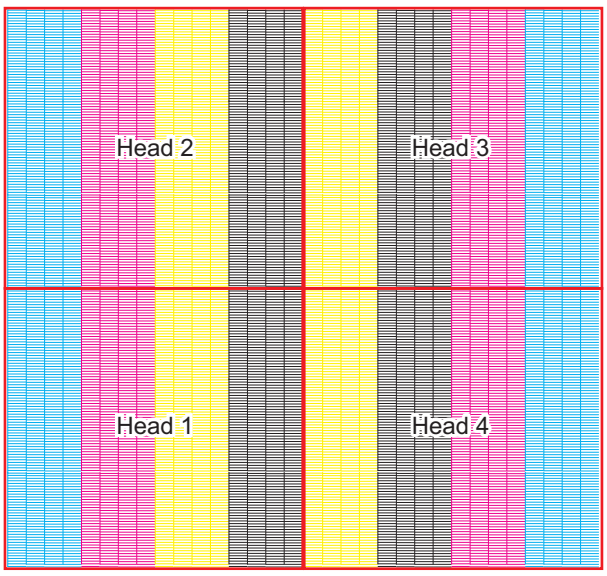
- To ensure that the print head remains in good condition, automatic maintenance is set to the default values (recommended values). Changing the setting values[*1] may increase the risk of ejection failures, such as nozzle clogging and nozzle deflection. (*1: In particular, changes that reduce maintenance frequency.)
  Please note that if ejection failures occur even when using the recommended values, try changing the settings, such as increasing the maintenance frequency.

Relation between the head layout and the test patterns

The following figure shows the relation between head layout and the positions of the printed test pattern.



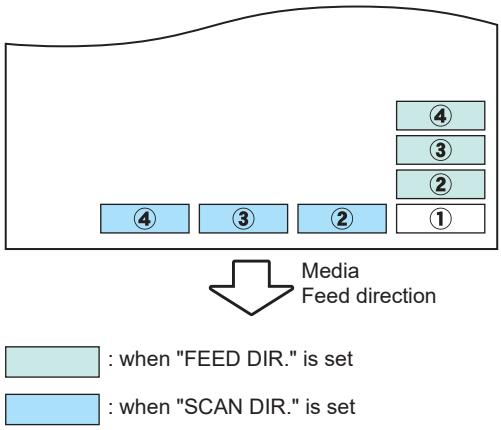
When using 4 colors



Taking a Test Print

Print the test pattern to make sure that there are no ink discharge problems such as clogged nozzle (blurred print or missing nozzles).

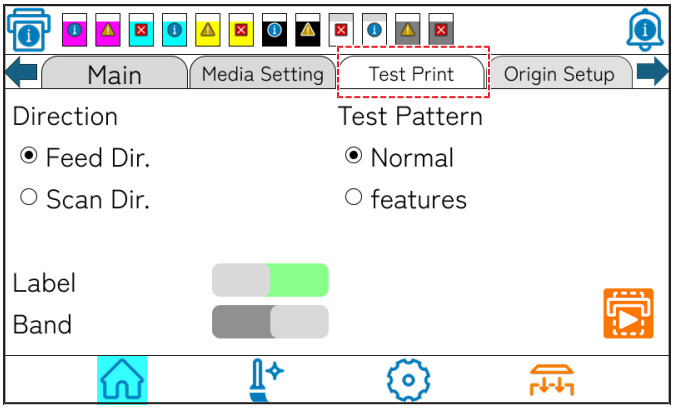
The test pattern alignment direction can be selected for each test printing from the following two types. Select the direction suitable for your printing job.



Before running the test print, confirm that:

- The media is set up
  ☞ "Setting the Media"(P. 63)
- The point of origin is set up
  ☞ "Changing the Point of Origin"(P. 84)
- The head gap is adjusted
  ☞ "Setting the Head Gap"(P. 73)

1 **Tap the [Test Print] tab on the Home screen.**



2 **Select the desired direction.**

3 **Tap**  **.**

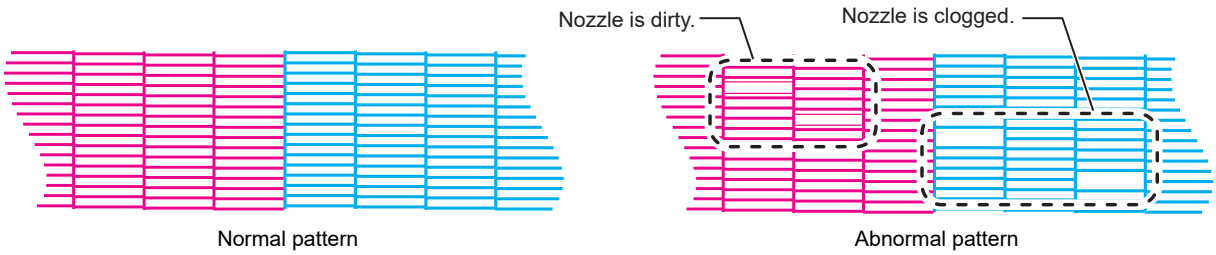
- The test print will start.

4 **Once cleaning is complete, tap**  **.**

- It will return to the screen shown in Step 1.

5 **Check the print results.**

- Under normal circumstances, the operations end here.
- In the case of abnormality, perform head cleaning.
  ☞ "Head Cleaning"(P. 80)



Normal pattern

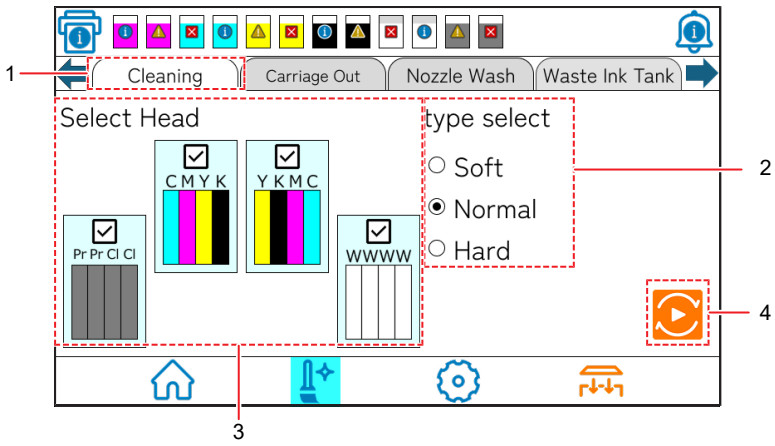
Abnormal pattern

2.7 Head Cleaning

Check the printed test pattern results and perform cleaning depending on the symptoms.

Head cleaning can be done in three ways. Use them based on the pattern print results.

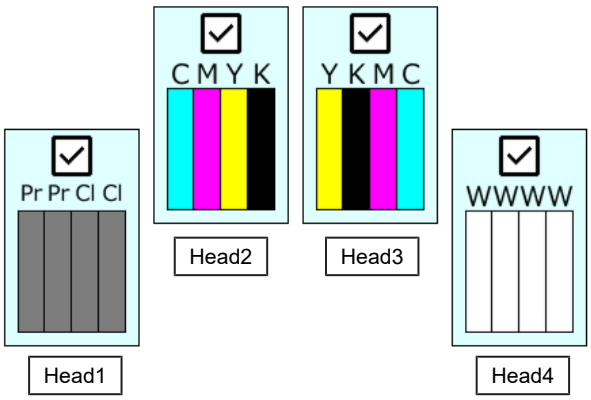
1 **Tap the [Cleaning] tab on the Maintenance screen.**



2 **Select the cleaning type.**

- SOFT:
  When lines are bent or missing
- NORMAL:
  When one or more lines are missing or are composed of mixed colors
- HARD:
  When poor image quality cannot be corrected even if cleaning is performed in NORMAL or SOFT mode

3 **Select the head to clean.**



4 **Tap**  **.**

5 **Run the test print again and check the print results.**

- Repeat the cleaning and test printing until the print results are normal.

● If the image quality does not improve even after head cleaning

- Clean the wiper and ink cap.
  ☞ "Cleaning wiper and cap"(P. 117)

- Perform the nozzle recovery settings.
  ☞ "When Nozzle Clogging Cannot Be Solved"(P. 132)

2.8 Adjusting the Bidirectional Print Drop Position

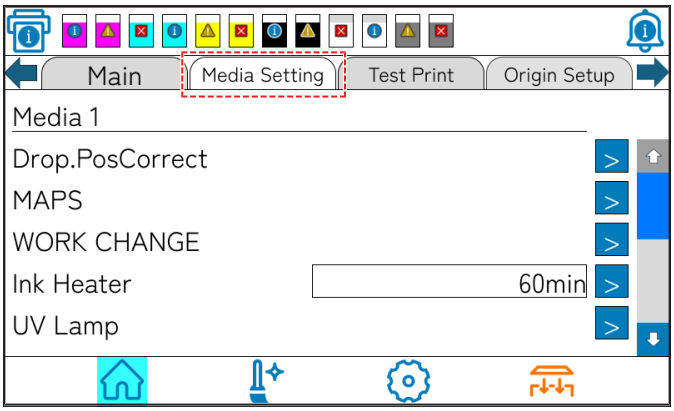
If you change the printing conditions (such as media thickness and head height), do the following to correct the ink drop position for bidirectional printing (Bi) to acquire the proper printing results:

Correcting the Drop Position

1 **Set the media and set the print origin.**

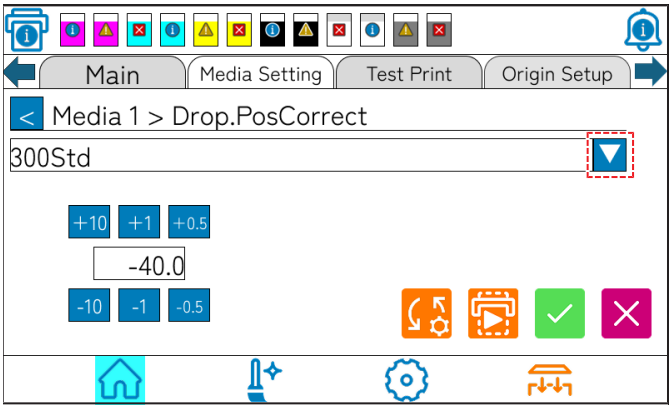
- ☞ "Setting the Media"(P. 63)

2 **Tap [Media Setting] on the Home screen.**



3 **Tap [Drop.PosCorrect].**

4 **Tap ▼ to select a resolution.**



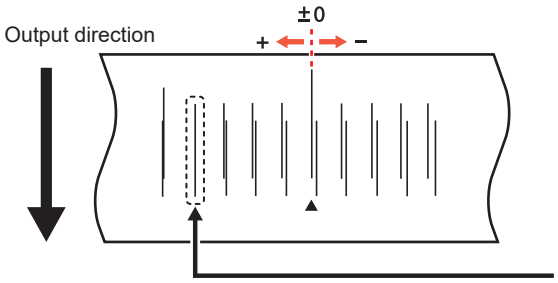
- Make the correction for all the resolutions.

5 **Tap .**

- The test pattern is printed. (They are called pattern 1, 2, 3... in the order in which they were printed)

6 Tap  to perform drop position correction from pattern 1.

- Compensation value: -40.0 to 40.0
- The position at which the outward feed line and the return feed line become one straight line is the correction value.
- If the compensation value is not between -40.0 and 40.0, adjust the height of the printing heads and then re-perform the operations from Step 2 onwards.



The outward feed line and the return feed line of the fourth pattern from 0 position in the positive direction form a straight line.
Hence, in this case the drop position correction value is 4.0.

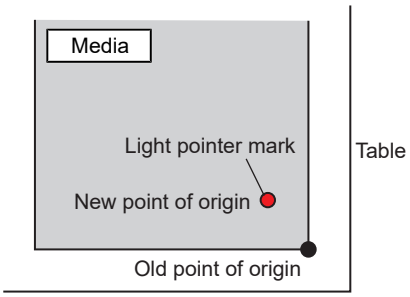
2.9 Printing the Data

Changing the Point of Origin

The factory setting of point of origin can be changed.

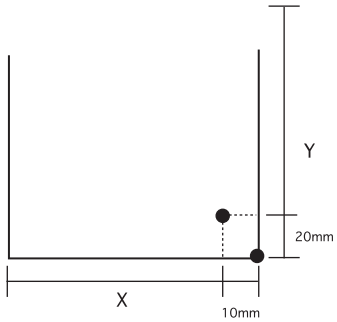
It can be changed in one of the two ways.

Changing with the JOG keys

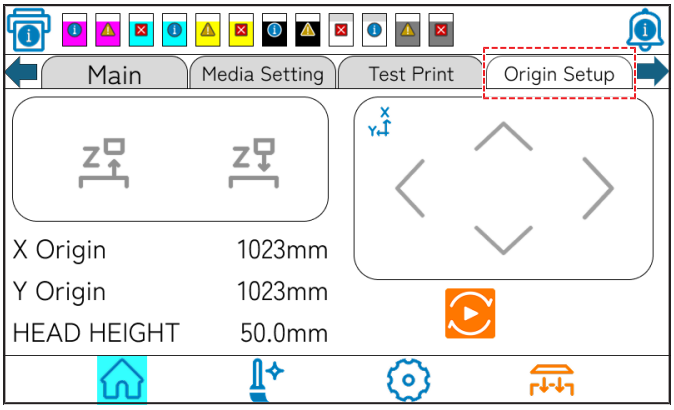


Setting the point of origin by using JOG keys

Changing from "ORIGIN" in the [FUNCTION] menu



1 **Tap [Set Origin] on the Home screen.**



2 **Move the light pointer mark.**

3 **After setting the print origin, tap**  **.**

- The origin will be updated.

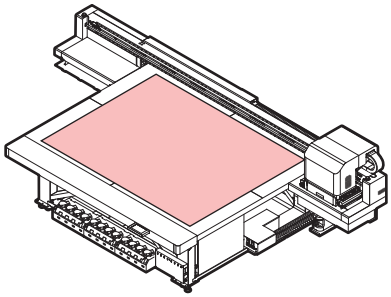
Starting Printing

1 **Set the media.**

- ☞ "Setting the Media"(P. 63)

(1) Open or close the suction valve according to the media size.

(2) Tap the vacuum icon ☞ "Operation Panel"(P. 31) on the operation panel to turn on the VACUUM lamp and secure the media in place.

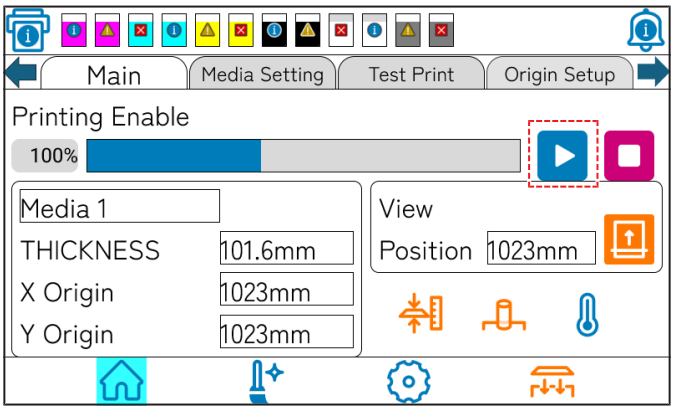


2 **Send the data to be printed from the PC to the printer.**

- View the printing conditions.
- For how to send the data, read the instruction manual of the output software.

3 **Tap** .

- Printing will begin.



4 **Remove the media after the completion of printing.**

(1) Move the Y-bar outside the table.
☞ "Moving the Y-Bar"(P. 87)

(2) Tap the vacuum icon ☞ "Operation Panel"(P. 31) on the operation panel to turn off the suction.

(3) Take out the media.

Important!

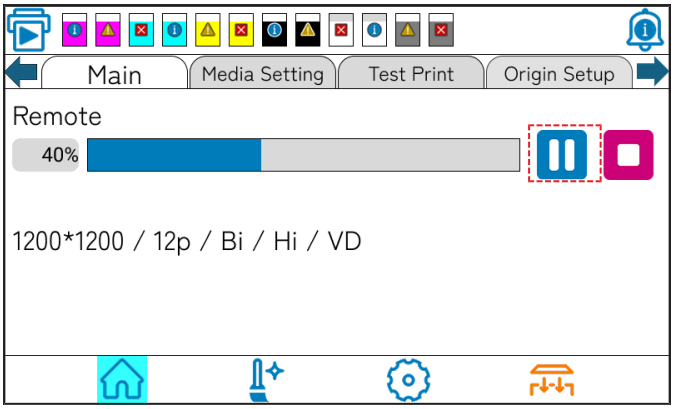
- The media may get lifted and the print may get aborted due to the heat generated by the UV LED during printing.
  Reset the new media and start printing.

Pausing Printing

If you wish to pause printing halfway through, perform the following operations.

1 Tap  while printing.

- The printing operation will pause.

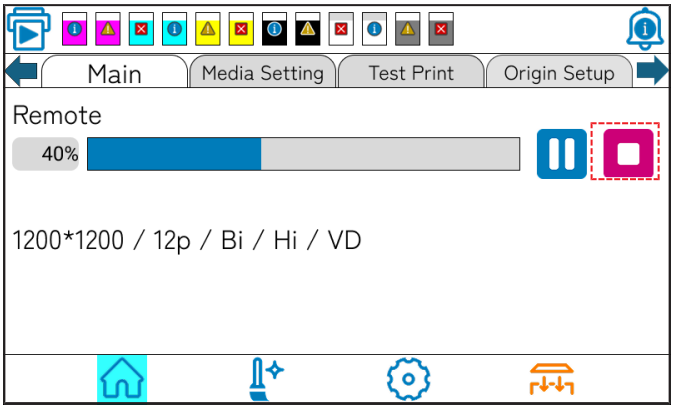


Aborting a Printing Operation

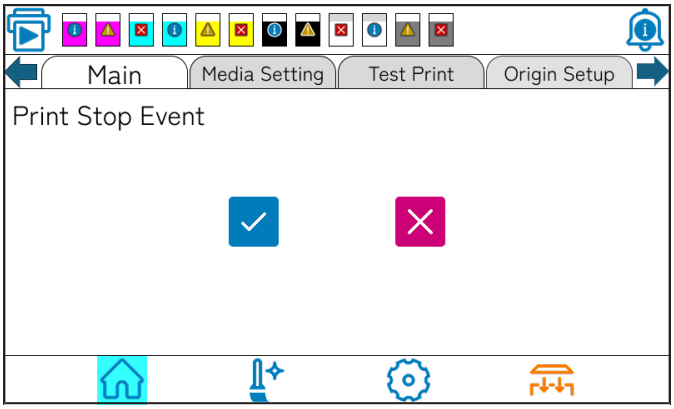
To stop printing halfway through, perform the following operations:

1 Tap  while printing.

- The printing operation stops.



2 The following screen appears. To abort the print, tap .

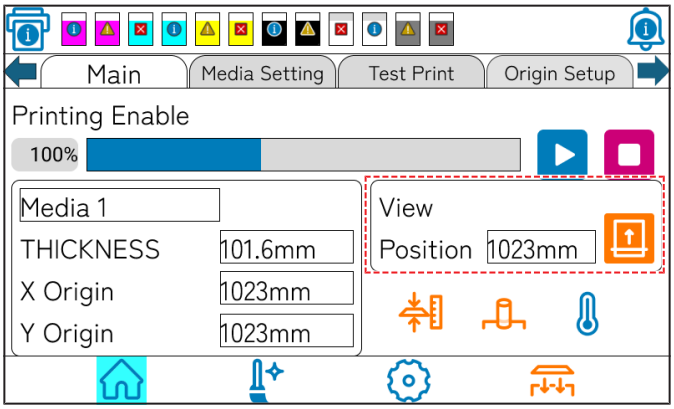


- Tapping will not abort the print.

Moving the Y-Bar

The Y-bar can be moved to check the print results or to perform similar operations.
Set the Y-bar retracting position (VIEW position) in advance.

1 Enter the view position on the [Main] tab of the home screen.



2 Tap .

- Y-bar moves.

Chapter 3 Setup



This chapter

This chapter describes the procedures to configure various settings for this machine.

Media Setting Menu 90
WORK CHANGE Settings..... 92
Maintenance Menu 93
Maintenance Settings Menu 94
Nozzle Check 95
Function Setting Menu 96
Environment Setting Menu 97
Time Settings 97
Unit Settings.....99
Key Buzzer Settings.....101
Language Settings 102
Network Settings.....103
External Stop I/F 104

3.1 Media Setting Menu

The user can select to prioritize the settings on the machine or the settings on the PC. Setting individual menus to "Host" prioritizes PC settings. To prioritize settings for this machine, select a setting other than "Host".

- For more information on how to specify RIP software, refer to the RIP software operating manual.

Menu List

Item			Setting value *1	Setting value *2	Details
Drop.PosCorrect			-	-	Corrects the drop position for bi-directional printing. "Correcting the Drop Position"(P. 82)
	(Resolution)		*	-	Select the resolution to be corrected. When "All" is selected, correction patterns will be printed for all resolutions. * The available resolutions vary according to the model.
	(Correction Value)		-40.0 to 0 to 40.0	-	Check the pattern and enter correction values.
MAPS			-	-	MAPS: Mimaki Advanced Pass System This function disperses the boundaries between passes to make feed streaks between passes less visible. Altering MAPS may alter the color. This function may be less effective with certain types of images.
	Mode		AUTO/ MANUAL	-	This should normally be set to "AUTO". When set to "MANUAL", the following items are displayed:
		Speed	50 to 100 %	-	Reducing speed will make streaks less visible. However, printing will be slower.
		Smoothing Level (Color)	0 to 100 %	-	Increasing smoothing makes streaks less visible. Make separate settings for color and spot color (white).
		Smoothing Level (Spot Color)			
Work Change			-	-	
	Action Test		ON/OFF	-	Sets the operations to complete the printing. • ON: Initiates a work change after remote printing. Moves the Y-bar to the view position. • OFF: Does not initiate a work change after remote printing.
	Vacuum Fan		ON/OFF	-	Sets whether to automatically turn off the vacuum during a workpiece change. • ON: Automatically turns off the vacuum during a work change. OFF: Does not automatically turn off the vacuum during a work change.
Ink heater			-	-	
	Transition to Standby		ON/OFF		Sets whether to maintain the ink heater at the standby temperature.

Item		Setting value *1	Setting value *2	Details
				• ON: Transitions to the standby temperature after the time set in [Transition Time] has elapsed. • OFF: Turns off the ink heater without transitioning to the standby temperature.
	Transition Time	0 to 60min		After the time specified in this setting has elapsed, the temperature will transition to the standby temperature.
UV Settings		-	-	
	Mode	ON/OFF/ NoPrint	ON	Sets whether to turn on or off the UV-LED lamp. • ON: Turns on the lamp. • OFF: Does not turn on the lamp. • NoPrint: Turns on the lamp without printing. (Not used under ordinary conditions)
	Brightness Adjustment	-50 to 0 to +50 %	-	The preset UV-LED lamp brightness can be altered. Check the performance (e.g. stickiness and odor) after printing. • Minus direction: Reduces hardness. • Plus direction: Increases hardness.
Detail Setting		-	-	This is used to set various functions.
Over Print		Host, 1 to 9	1	This is used to set various functions.
Ionizer		ON/OFF	-	Set this when the ionizer (option) is used. The machine prints while the ionizer removes static electricity from media. The electrode probes are not on unless the machine is printing. • ON: The ionizer is activated. • OFF: The ionizer is not activated.
Media Information		-	-	Enter the media information.
	Media Name	-	-	
	Media Type	-	-	Select the media type to be used. The available media types vary depending on the model.
	Media thickness	0 to 50 to 101.6 mm	-	Sets the media thickness.
	Head Gap	1.2 to 1.5 to 3.0 mm		Set the head gap.
	Reset Media Setting	-	-	Resets the media settings.

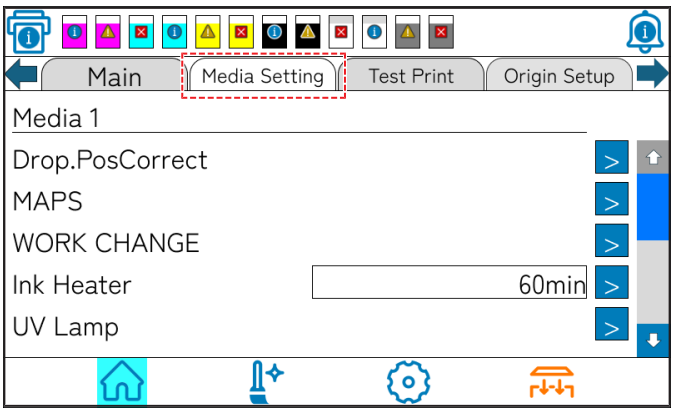
*1. The default settings are shown underlined.

*2. Settings applied if no settings can be made in the RIP software (host) or if this machine is prioritized.

WORK CHANGE Settings

Set whether to return to LOCAL mode or keep the REMOTE mode after online plotting is complete.

1 **Tap [Media Setting] on the Home screen.**



2 **Tap [Work Change].**

3 **Select the setting for [Behavior].**

- OFF:
  Remote mode is maintained after online plotting. (When the next drawing data is received, it will be overwritten.)
- ON:
  The Y-bar is retracted after online plotting, and the machine returns to local mode.

- The position where the Y-bar is retracted is the position set with Setting the VIEW Position.

3.2 Maintenance Menu

This menu is used for maintenance actions. It also lets the user perform nozzle recovery if nozzle clogging persists even after cleaning and nozzle washing.

Menu List

Item		Setting *1	Details
Cleaning		-	Several head cleaning methods are available. Choose the head cleaning method based on test print results. ☞ "Head Cleaning"(P. 80)
Carriage Out		-	This moves the carriage to allow station and print head maintenance.
	Move to the Right	-	Cleans around the station, including the cap, wiper, and NCU. Cap Rubber Cleaning ☞ "NCU Cleaning"(P. 122)
	Move to the Maintenancespace	-	Cleans around the print head. ☞ "Maintenance of Head Surroundings"(P. 126) ☞ "Maintenance the Print Head Nozzle Surface"(P. 130)
Nozzle Wash		1 to 99 min	Washes the print head nozzle surface with maintenance liquid to resolve ejection failures (e.g., nozzle clogging or deflection). ☞ "Washing of head nozzle"(P. 133)
Waste Ink Tank		-	Resets or corrects the waste ink tank usage count. ☞ "Disposing the Waste Ink"(P. 157)
	Reset Waste Ink Volume	-	Resets the waste ink tank usage count. Replacing the Waste Ink Tank
	Adjust Waste Ink Volume	-	Corrects the waste ink tank usage count. When "Check Waste Ink Tank" message appears
	Tank Capacity	-	Displays the waste ink tank capacity.
Custody Wash		1 to 99 min	Perform this step if the machine will not be used for extended periods. Washes nozzles and drainage channels to keep the machine operating smoothly.
Pump Tube Cleaning		-	Washes the suction pump tube (below the cap). ☞ "Washing the Ink Discharge Passage"(P. 124)
Ionizer Static Elimination			
Pressure Adjustment			
Sub-Tank		-	
Air PG		-	Expels any air in the ink paths.
Parts Replacement		-	
	Replace Wiper	-	Use this function when replacing the wiper. Replacing the wiper resets the machine wiper usage counter. ☞ "Replacing the wiper"(P. 154)
	Flushing Filter Replacement	-	

*1. The default settings are shown underlined.

3.3 Maintenance Settings Menu

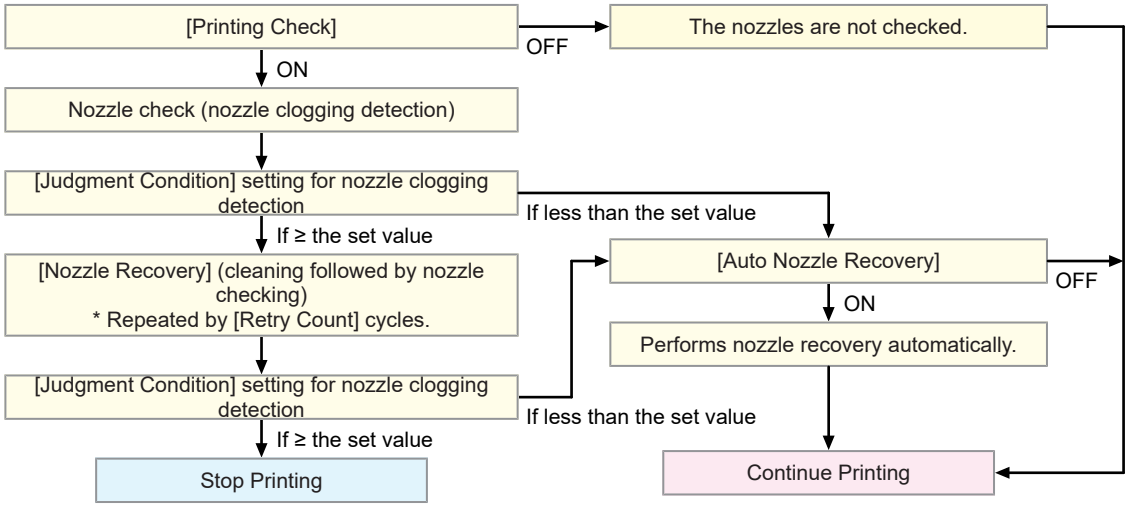
Menu List

Item	Setting *1	Details
Nozzle Recovery	-	Allows other nozzles to be used for printing if maintenance actions like nozzle washing fail to resolve ejection failures (e.g., nozzle clogging or deflection).
Pattern Printing	-	Prints a pattern to check nozzle condition and register the nozzle. ☞ "Nozzle Recovery Registration"(P. 145)
Entry	-	Registers the nozzle without printing a pattern. ☞ "Nozzle Recovery Registration"(P. 145)
Reset	-	Initializes the details set.
Test Printing	ON/OFF	Sets whether to perform nozzle recovery before test printing.
Nozzle Check	-	☞ "Nozzle Check"(P. 95)
Printing Check	ON/OFF	Performs nozzle clogging detection before printing starts.
Auto Nozzle Recovery	ON/OFF	Performs nozzle recovery automatically if "nozzle clogging" is detected. See below if you wish to perform nozzle recovery manually. ☞ "Nozzle Recovery Registration"(P. 145)
Judgment Condition	OFF / 1 to 64 nozzles	Set the number of nozzles to be detected as clogged before "nozzle clogging" is detected. Up to 16 nozzles per row can be set. The next print will not start if "nozzle clogging" is detected during continuous printing.
Auto Maint.	-	Sets various maintenance actions to be performed automatically. Set the interval between individual maintenance actions. • If the warning message "Replace Wasteinktank" appears, the automatic maintenance function is disabled. ☞ "Disposing the Waste Ink"(P. 157)
Refresh	0.5/1.0 h	Sets the refresh interval (when a small amount of ink is ejected from the print head nozzles).
Cleaning Interval	1 to 48 h	Sets print head cleaning intervals. This will help prevent nozzle clogging.
Type	Normal/Soft/ Hard	Sets the cleaning type for head cleaning.
Print Maint.	-	Sets the maintenance to be performed automatically midway during printing.
Refresh	Weak/ Standard/ Strong	Select the refresh (flushing) time during printing.
Auto Cleaning	-	Sets the conditions to perform head cleaning after the preset number of files are printed.
Setup	File/Length/ Time/OFF	Sets the conditions to perform head cleaning.
Interval	-	Sets head cleaning intervals.
(File)	1 to 1,000	Cleaning starts when the set number of files is exceeded.
Type	Normal/Soft/ Hard	Sets the cleaning type for head cleaning.

Item			Setting *1	Details
		LD Mode Level	Standard/ Strong/Weak	Sets the cleaning interval level when printing in LD mode.
		Nozzle Check	ON/OFF	Sets whether nozzle checking is performed after head cleaning is completed.

Nozzle Check

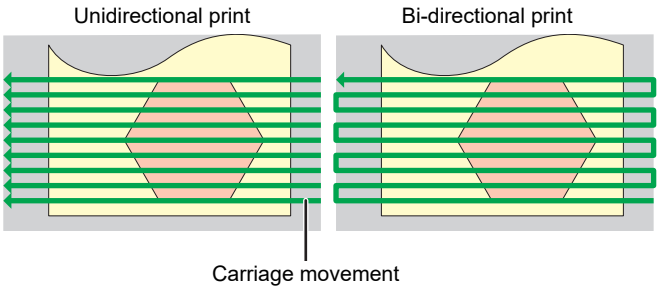
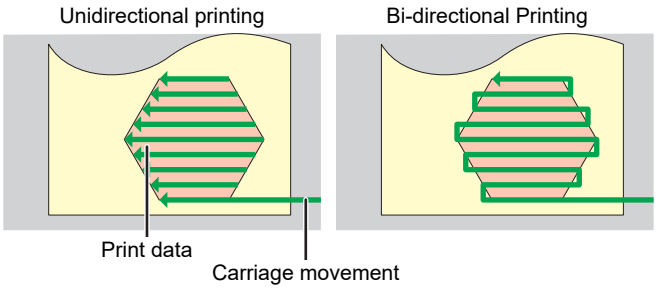
This is used to check for nozzle clogging before printing starts. Sets whether to perform maintenance functions automatically if nozzle clogging is detected.



3.4 Function Setting Menu

This is used to set various operations to ensure optimal machine performance.

● Menu List

Item	Setting*1	Details
Logical Seek	Host/OFF/ON	Sets the range of carriage movement. • OFF: Machine size area  • ON: Print data area 
Locating Pin Settings		
Vacuum Linkage	OFF/ON	The locating pins are automatically turned off (lowered) when the vacuum is turned on.
Work Change Linkage	OFF/ON	The locating pins are automatically turned on (raised) once the work change operation is complete.

*1. The default settings are shown underlined.

3.5 Environment Setting Menu

This is used to set various operations to ensure optimal machine performance.

● Menu List

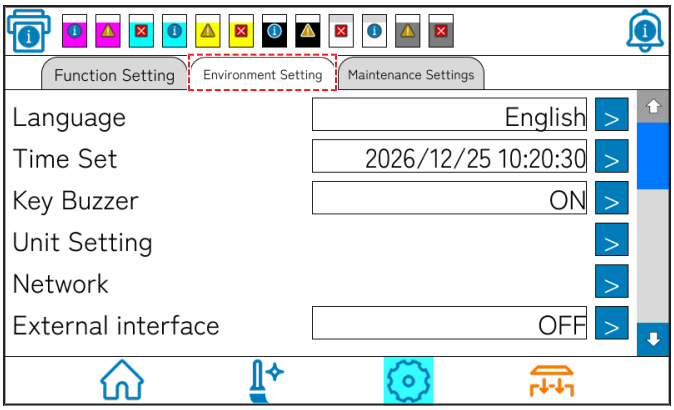
Item	Setting*1	Details
LANGUAGE	English / 日本語 / Deutsch / Português / Español/ Italiano / Korean	Sets the display language.
Time Set	-20 to 0 to +4 h	Sets the current time and date. (With respect to JST) • This can be set within the range of -20 to +4 hours.
Key Buzzer	ON/OFF	Sets an audible tone when keys are pressed. • Audible signals indicating errors, warnings, and operation end cannot be muted, even if "OFF" is selected for this setting.
Unit Setting	-	Set the display units.
Temp.	°C/°F	Sets the display unit for temperature (Celsius/Fahrenheit).
Length	mm/inch	Sets the display units for length and area. • Some items are displayed in "mm" even if "inch" is selected.
Network	-	Sets the network address. The machine must be restarted to enable this setting.
Check MAC Address	-	Displays the machine's current MAC address.
DHCP	ON/OFF	Select "ON" to use the IP address assigned by the DHCP server.
AutoIP	ON/OFF	Select "ON" to use the IP address set by the AutoIP protocol. Note that DHCP takes priority if DHCP is set to "ON".
Ip Address	-	Sets the IP address used by the machine. • This can be set when both [DHCP] and [AutoIP] are disabled.
Default Gateway	-	Sets the default gateway used by the machine. • This can be set when both [DHCP] and [AutoIP] are disabled.
DNS Address	-	Sets the DNS server address used by the machine. • This can be set when both [DHCP] and [AutoIP] are disabled.
Sub Net Mask	-	Sets the subnet mask used by the machine. • This can be set when both [DHCP] and [AutoIP] are disabled.
Machine Reset	-	Initializes the details set.

*1. The default settings are shown underlined.

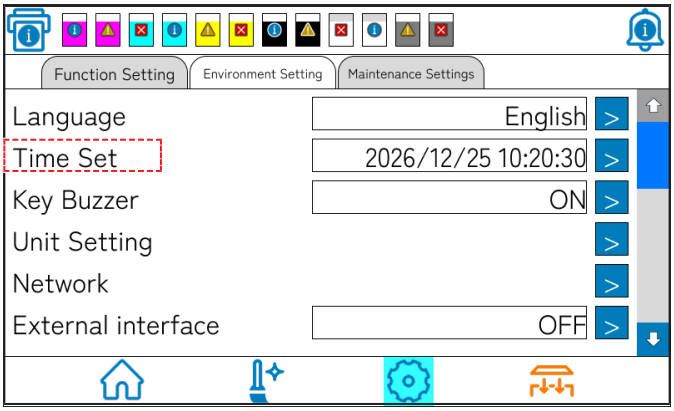
Time Settings

You can set the time (time difference) according to the country in which the machine is used.

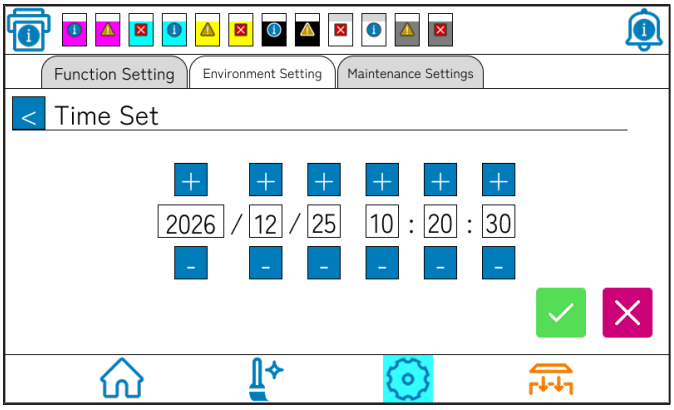
1 **Tap [Environment Setting] on the Setting screen.**



2 **Tap [Time Set].**



3 **Enter the time.**

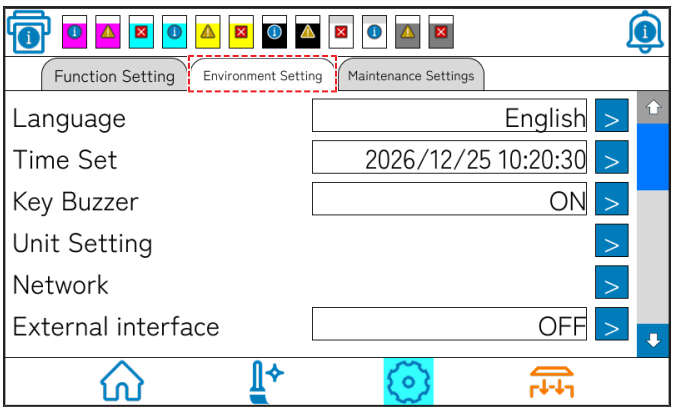


- Time can be set from -20 to +4 hours.

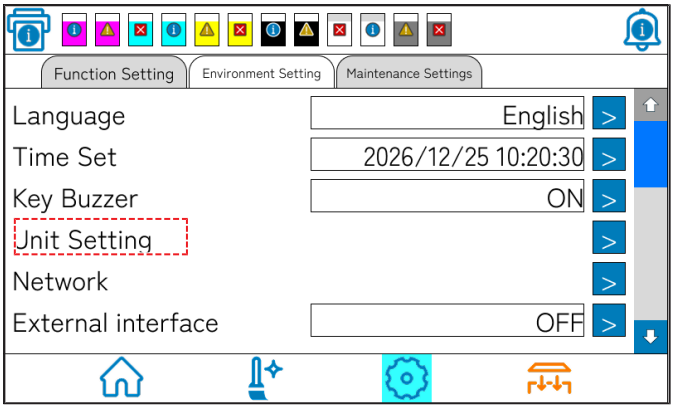
Unit Settings

You can set the units to be used for this machine.

1 **Tap [Environment Setting] on the Setting screen.**

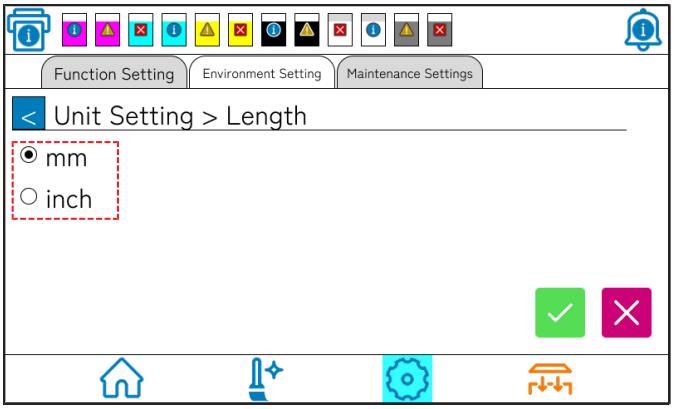


2 **Tap [Unit Setting].**



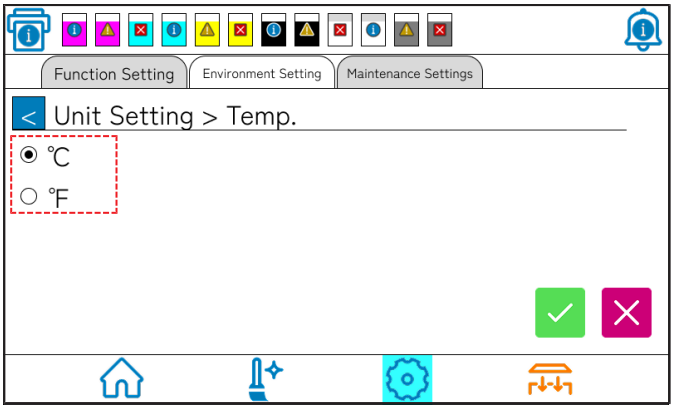
3 **Select the unit of length.**

- Available settings: mm/inch



4 **Select the unit of temperature.**

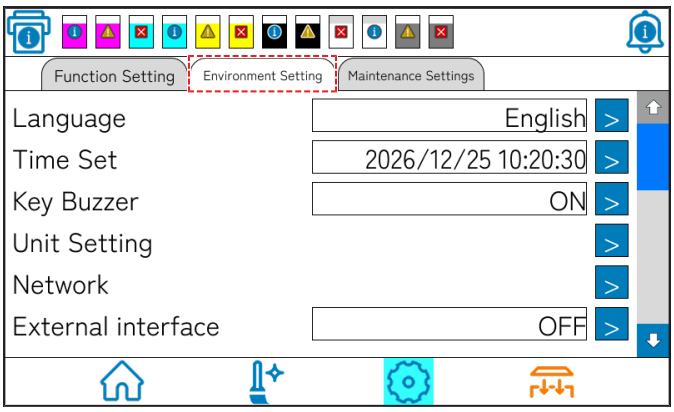
- Available settings: °C/°F



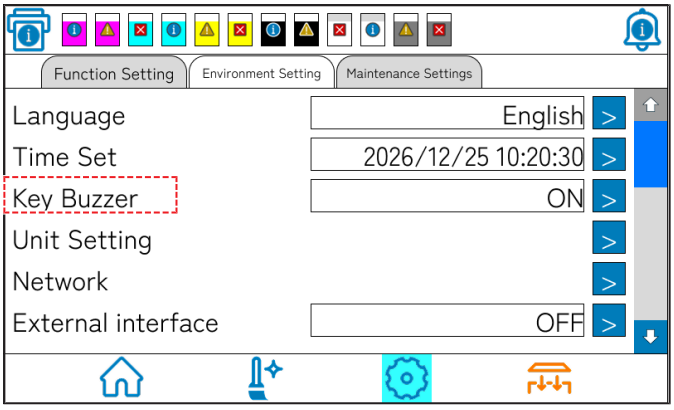
Key Buzzer Settings

You can turn off the buzzer that sounds when you press a key.

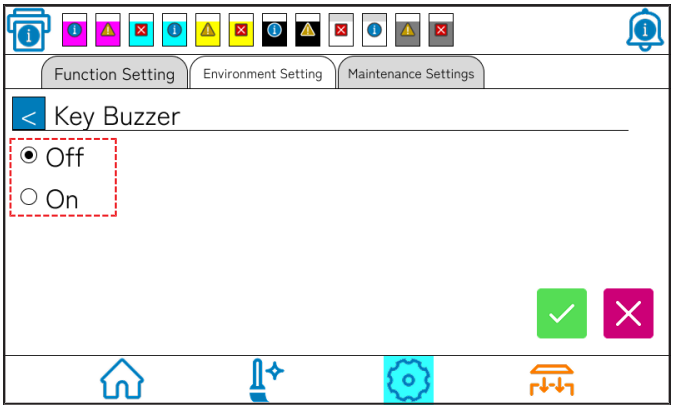
1 **Tap [Environment Setting] on the Setting screen.**



2 **Tap [Key Buzzer].**



3 **Select [ON] or [OFF].**

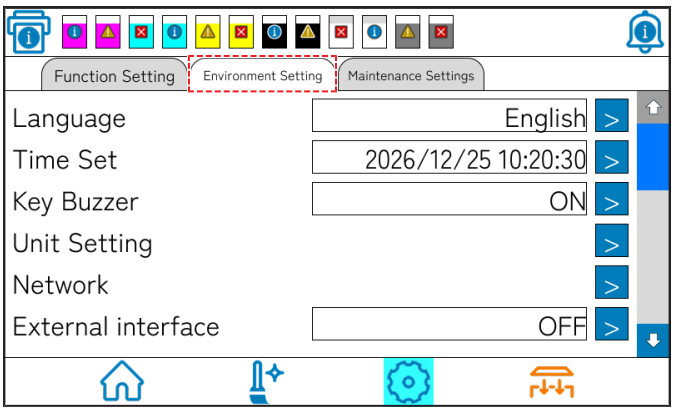


- Even if the key buzzer is turned "OFF" the buzzer sounds for errors/warnings/completed operations cannot be turned off.

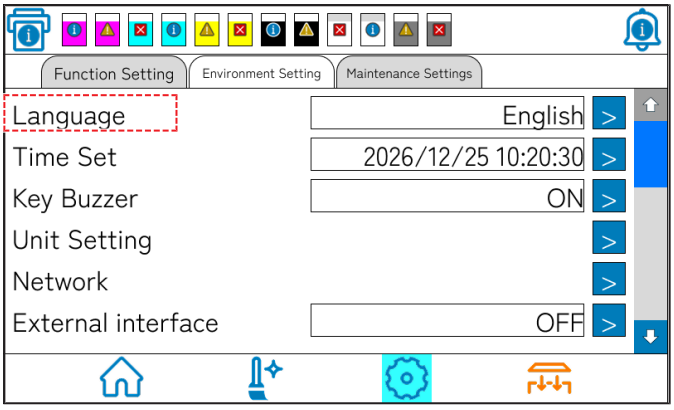
Language Settings

You can change the display language.

1 **Tap [Environment Setting] on the Setting screen.**

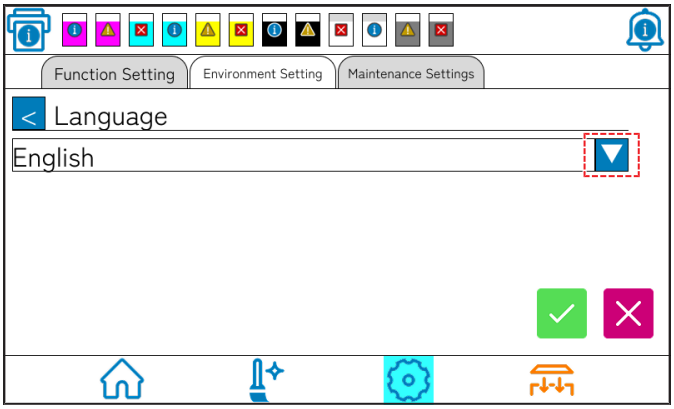


2 **Tap [Language].**



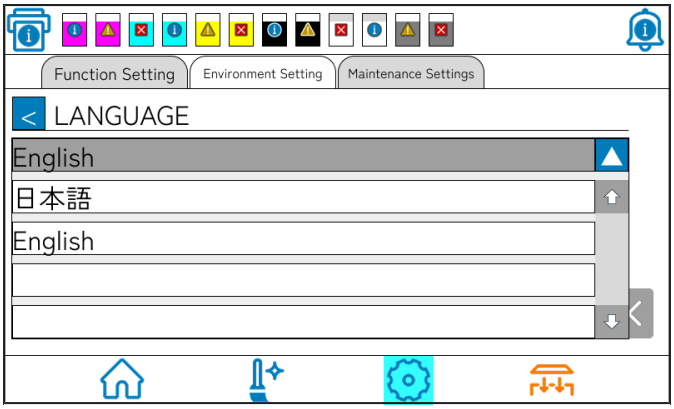
3 **Tap** .

- A drop-down menu will appear.



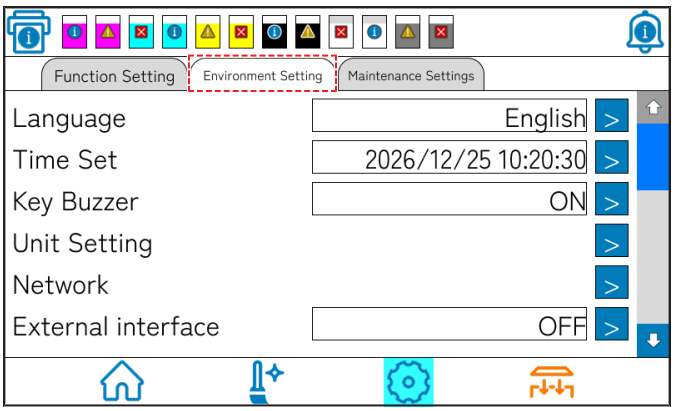
4 **Select the desired language.**

- Available settings: Japanese/English

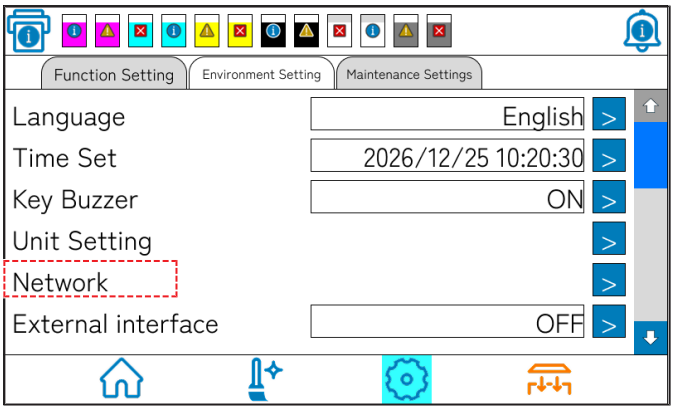


Network Settings

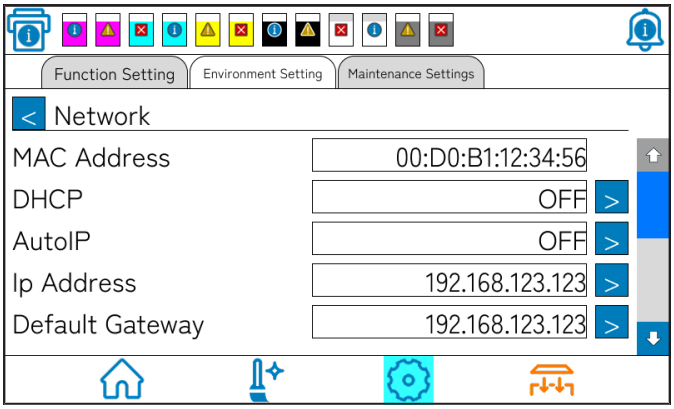
1 **Tap [Environment Setting] on the Setting screen.**



2 **Tap [Network].**



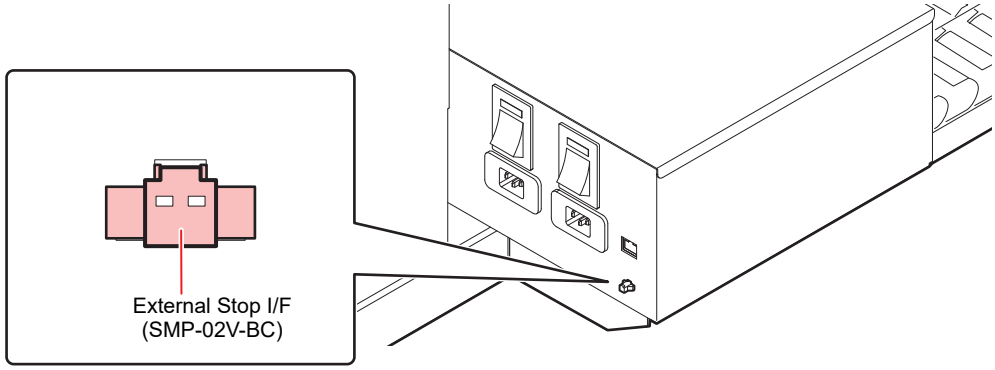
- This displays the IP address the machine is currently using.

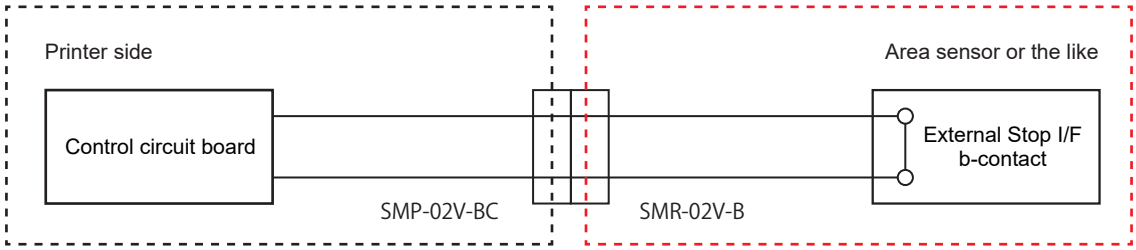


- IP address setting is possible only when DHCP=OFF and AutoIP=OFF.

External Stop I/F

In this machine, you can connect External Stop I/F to the I/F in the figure below (SMP-02V-BC).





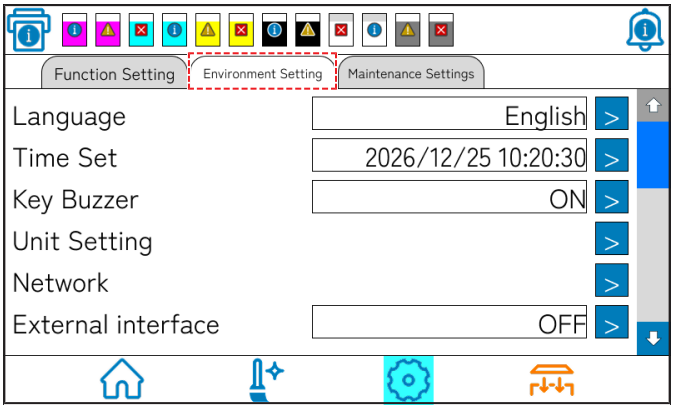
Important!
- Arrange for a connector (SMR-02V-B).
  External Stop I/F specifications: b-contact (Normal Close)

- Never connect the power source of External Stop I/F anywhere except the sensor line.

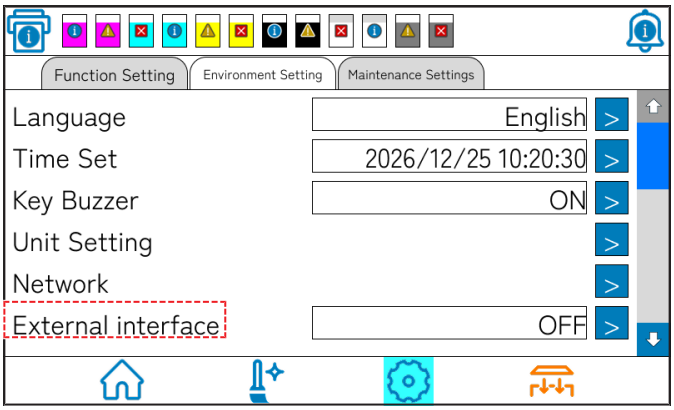
External Stop I/F Settings

You can set the operation for when a stop sensor is connected to the External Stop I/F.

1 Tap [Environment Setting] on the Setting screen.

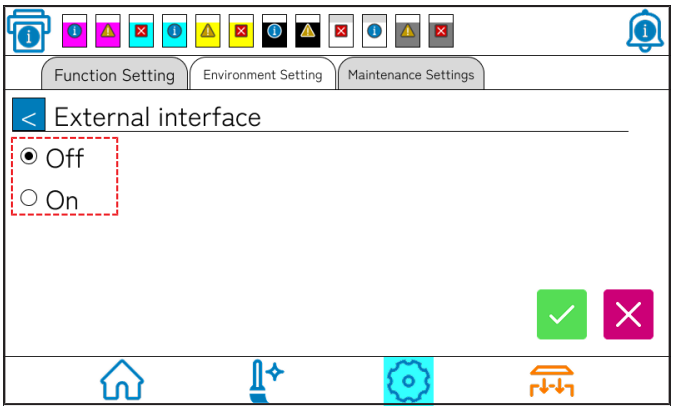


2 Tap [External 1/F].



3 Select [ON] or [OFF].

- ON: Use External Stop I/F.
- OFF: Do not use External Stop I/F.





- If you change the External Stop I/F in REMOTE mode, a "SENSE OBSTRUCTION" warning is displayed, and the machine will switch to LOCAL mode.
- If an obstacle is detected, a warning is displayed, and the machine does not switch to REMOTE mode.
- The printing operation using the built-in pattern (Nozzle check, drop position correction) will continue regardless of the state of External Stop I/F.
- In LOCAL mode, External Stop I/F detection is always "OFF".
- If you do not know whether the sensor you are using is compatible with the I/F, consult our support team.

Chapter 4 Maintenance



This chapter

This chapter explains the necessary items for comfortable use of this machine, such as methods of daily maintenance and ink cartridge maintenance.

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Precautions for maintenance 108
Maintenance Liquid 108
Maintenance timing 109
Maintenance of Machine Exterior 110
Table Maintenance 110
MBIS maintenance 111
LM guide cleaning 113
Ionizer Maintenance 113
Cleaning the Mist Filter 113
Cleaning the UV LED Filter 115
Maintaining the Capping Station 117
Cleaning wiper and cap 117
NCU Cleaning 122
Station Area Cleaning 123
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Maintenance of Head Surroundings 126
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Cleaning DAS and Distance Sensors 129
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4.1 Daily maintenance

Conduct the machine maintenance periodically or depending on the operation frequency of the machine, in order to use it for a long time while maintaining its accuracy.

Precautions for maintenance

Pay attention to the following items when maintaining this machine.



- UV LED unit becomes very hot. Turn off the UV LED unit and perform maintenance once the device cools down sufficiently. There is a risk of burns.



- Switch off the power button and unplug the power cable before cleaning. It may cause unexpected accidents.
- If you will not be using the machine for a long time, make sure you remove the power cable from the outlet and remove the media that is set in the machine.





- When handling ink and washing liquid, pay close attention to ventilation and be sure to wear the included safety glasses and gloves. The ink or washing liquid may get in your eyes.



- Do not use chemicals containing benzine, thinner or abrasives. It may cause degeneration/ deformation of cover surface.
- Do not lubricate the inside of device with lubricating oil or other agents. Doing so may cause malfunction.
- Make sure the washing liquid and ink do not get on the cover. This may cause degeneration/ deformation of the cover surface.
- Aggregates are generated in the UV ink (ultraviolet curable ink) if it is mixed with water and alcohol. Do not let water or alcohol stick on the nozzle surface, cap, wiper, or anywhere near the head.



- Never disassemble or modify this machine or ink bottle. Disassembling or modifying will result either in electric shock or malfunction of this machine.



- Do not let moisture enter this machine. If the inside of the machine gets wet, it may cause electric shock and damage.

Maintenance Liquid

Use the appropriate maintenance liquid to suit the ink being used.

Type of ink	Compatible maintenance liquid
UV ink	• F-200/LF-200 Maintenance Liquid (PN : SPC-0568) • F-200/LF-200 CLEANING KIT (PN : SPC-0569)

Maintenance timing

Maintenance timing	Maintenance items (reference page)
Daily (after one day of work)	☞ "Maintenance of Head Surroundings"(P. 126)
	☞ "Maintenance the Print Head Nozzle Surface"(P. 130)
	☞ "Cleaning wiper and cap"(P. 117)
	☞ "NCU Cleaning"(P. 122)
Twice a week	☞ "Washing the Head Nozzle (When Using the PR-200 Ink)"(P. 135) (PR- 200Ver.2)
Weekly (after a week of work)	☞ "Maintenance of Machine Exterior"(P. 110)
	☞ "Table Maintenance"(P. 110)
	☞ "Washing the Ink Discharge Passage"(P. 124)
	☞ "Disposing the Waste Ink"(P. 157)
	☞ "Station Area Cleaning"(P. 123)
About once every one or two weeks	☞ "Replacing Carriage Filters"(P. 156)
	☞ "MBIS maintenance"(P. 111)
Once a month	☞ "Washing the Head Nozzle (When Using the PR-200 Ink)"(P. 135)(For PR-200 Ver. 3)
	☞ "Cleaning the Mist Filter"(P. 113)
	☞ "Cleaning the UV LED Filter"(P. 115)
When an error occurs	☞ "Replacing the wiper"(P. 154)
Maintenance as necessary	☞ "Cleaning UV LED Unit"(P. 127)
	☞ "Ionizer Maintenance"(P. 113)
	☞ "Ink Bottle Cap Replacement"(P. 160)

Tools necessary for maintenance	
F-200/LF-200 Washing Liquid (PN : SPC-0568)	PR-200 Washing Liquid (PN : C-ML013-Z-B2-1-KW) *When using the PR-200 ink
Cotton swab	Cleaning Stick for Head Surrounding (PN : SPC-0527)
Soft cloth	Gloves

Maintenance of Machine Exterior

Depending on the usage environment, trash and dust may stick to the exterior of the main unit. To prevent dust from entering the head moving part, soak a soft piece of cloth in water, wring it tightly and then wipe off the dust.

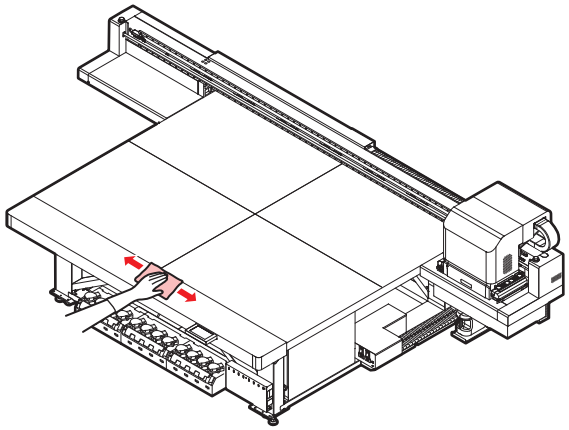
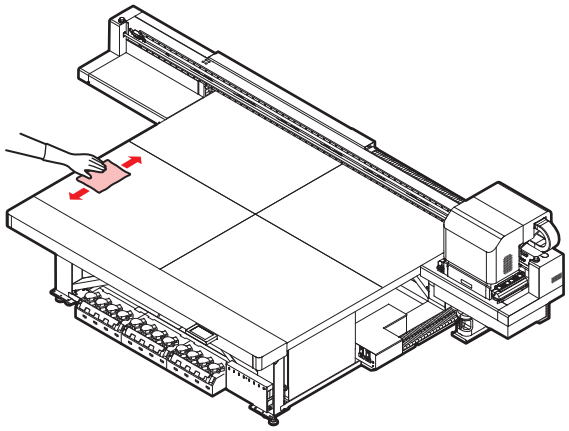


Table Maintenance

- Turn off the main power supply and unplug the power cable before carrying out maintenance.

Continuing to use while dirty will cause dried ink and attached dust to rub against the head nozzle surface, and lead to ejection failures (e.g., nozzle clogging or deflection). Also, there is a risk that the media will not be properly secured in place.



- Do not directly apply organic solvents such as acetone when cleaning the table. Doing so may cause the finish on the table to peel.
  It can be cleaned with paper towels soaked in ethanol.

- Be careful to prevent liquids from getting inside the machine. Otherwise there is a risk of failure, electric shock, or fire.

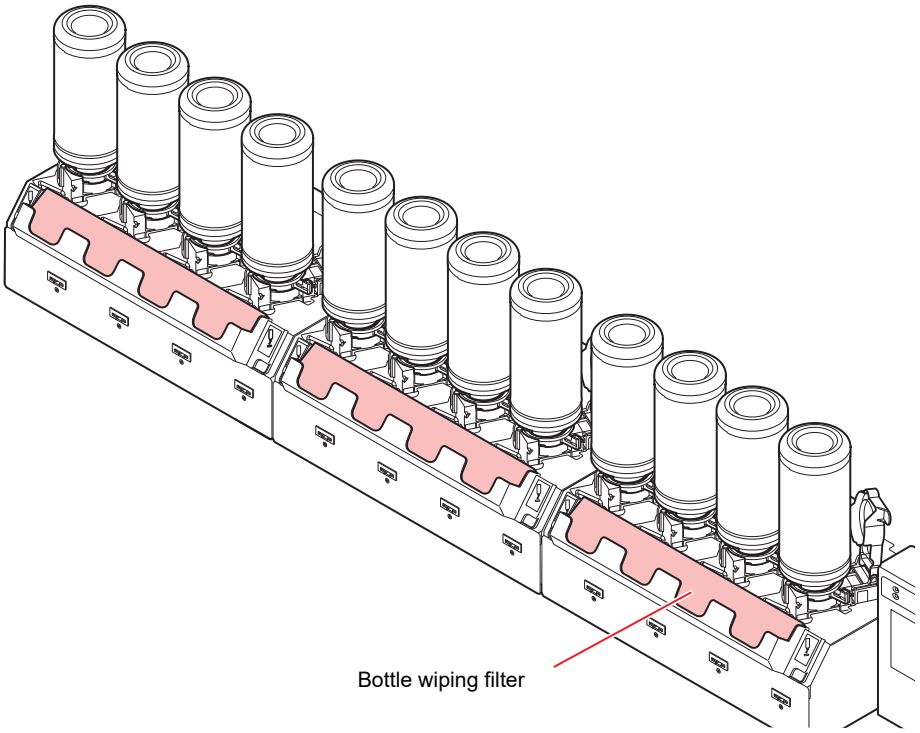
- If you really want to use IPA or ethanol to clean ink or color stains from the table, dampen a soft cloth or paper towel with a small amount of organic solvent and then wipe it off. At this time, be careful not to let excess organic solvent seep into the table.
- Remove debris and solidified ink frequently using a soft brush, dry cloth, or paper towel.
- For heavy soiling, wipe using a soft cloth soaked in diluted neutral detergent and thoroughly wrung out.
- Areas such as the table grooves and screw holes are particularly susceptible to dirt buildup, and should be cleaned frequently.
- Solidified ink on the plate can be removed using a spatula, but care must be taken to avoid scratching the plate.

MBIS maintenance

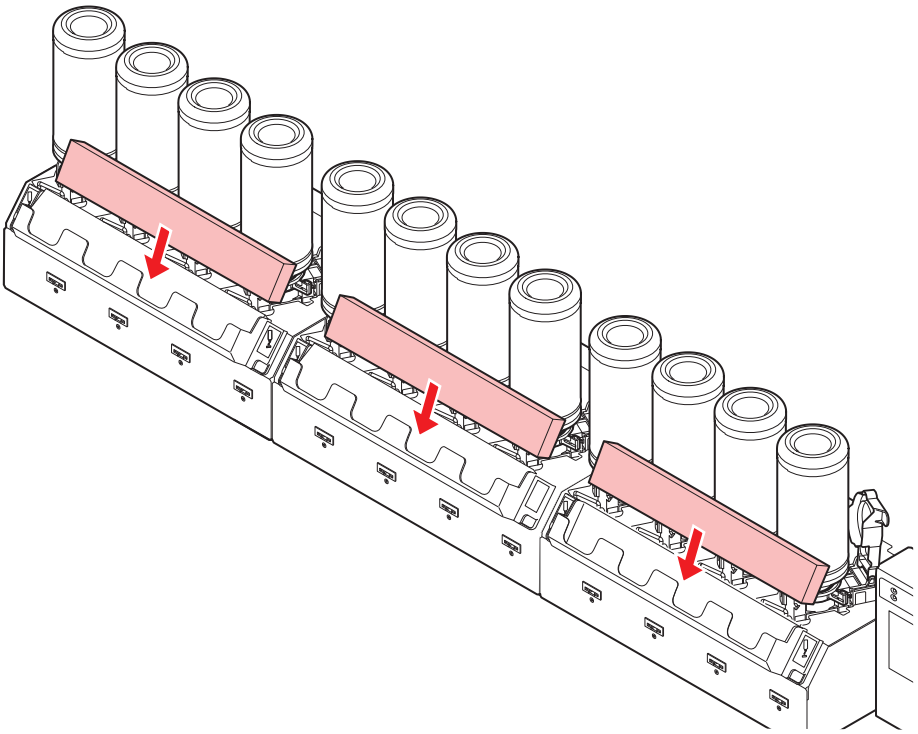
Please replace the Bottle Wiping Filter (PN: SPC-0820) if it gets dirty.

- Be sure to perform this procedure with the operation panel pushed all the way in. During the procedure, be careful not to let your head touch the operation panel or table.

1 **Remove the bottle wiping filter.**



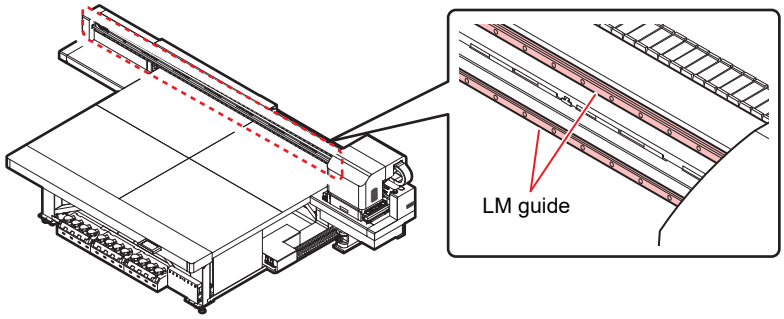
2 **Attach a new Bottle Wiping Filter (PN: SPC-0820).**



LM guide cleaning

When the LM guide gets dirty, wipe it off with a soft, dry cloth.

Important!
- Do not wipe with ethanol.



Ionizer Maintenance

Follow the instruction manual when performing ionizer (option) maintenance.

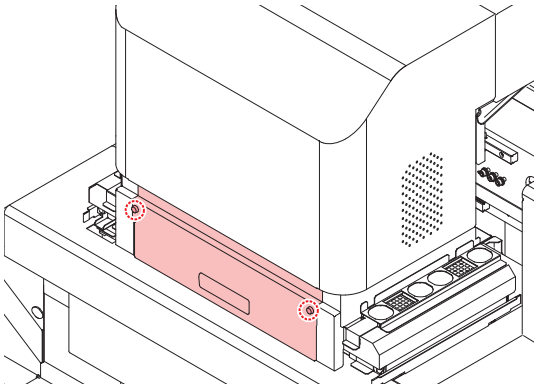
Cleaning the Mist Filter

Check the mist filter. Replace if very dirty.

Important!
- The mist filter is a component that absorbs the mist generated when ink droplets are discharged from the print head. Continuing to use a dirty filter may result in contamination of the final print. Be sure to clean the filter approximately once a month.

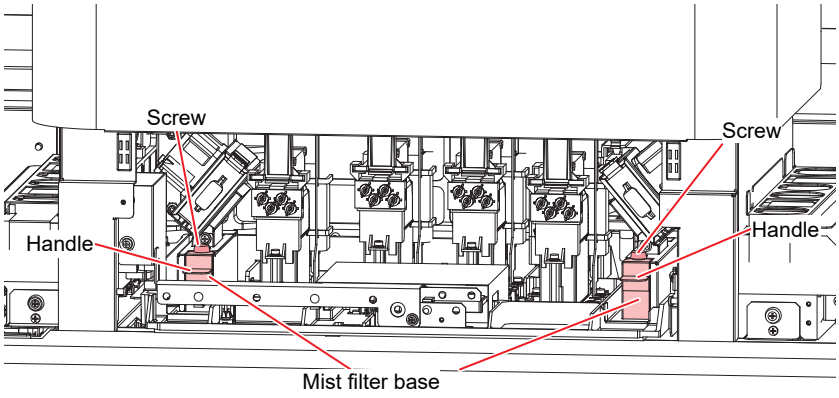
1 Remove the carriage cover DC.

- Remove the screws (2 places) and remove the cover.

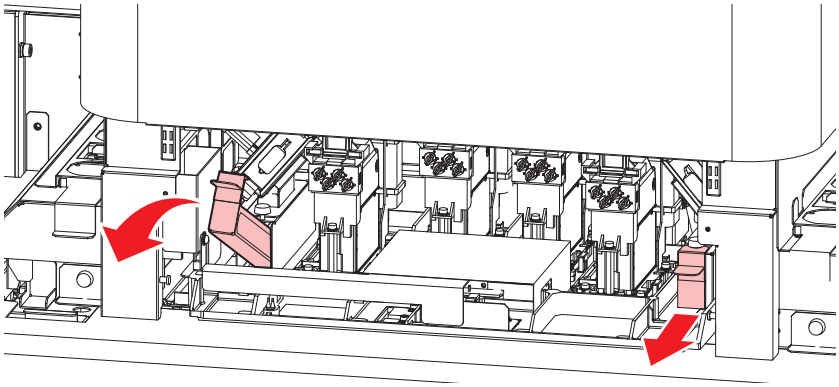


2 Loosen the retaining screws and pull out the mist filter base.

- Pull the handle toward you to remove it.



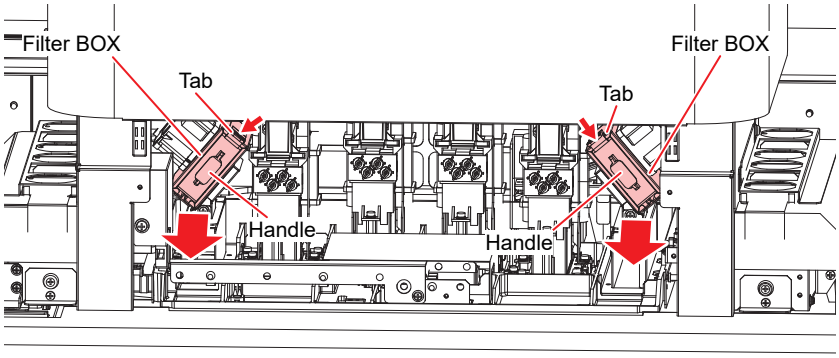
- Pull out the left side while lifting it upward.



3 Pull out the filter box.

- Press down on the tabs and slide it in the direction of the arrow to remove it.

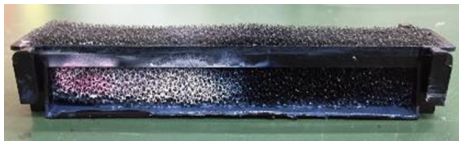
- Lift it in the direction of the tabs, and it will come off easily.



4 Clean the filter.

- Remove the filter and press down on it with a paper towel to remove dirt.
- Wipe off the dirt adhering to the filter case.

- Replace the mist filter if it gets very dirty, such as when there is liquefaction of ink adhering to the filter.
☞ "Mist Filter Replacement"(P. 161)



5 **Insert the clean mist filter.**

6 **Tighten the retaining screws that were removed in Step 2.**

7 **Insert the filter box.**

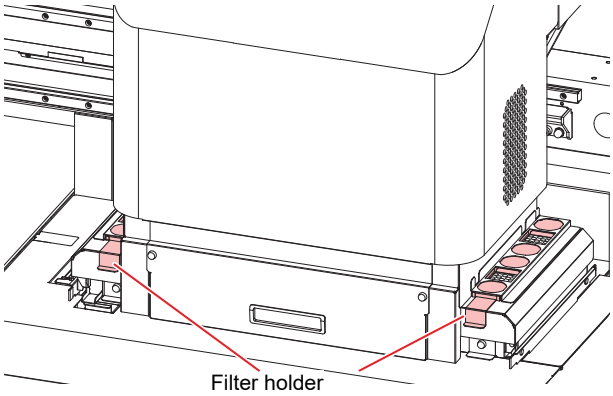
- Insert until it clicks into place. Confirm that the tab is engaged.

8 **Close the carriage cover DC.**

Cleaning the UV LED Filter

Check the condition of the UV LED filter and replace it if it is heavily soiled.

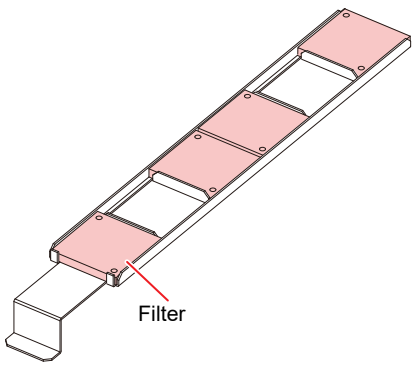
1 **Pull out the filter holder.**



2 **Clean the filter.**

- Remove the filter and press down on it with a paper towel to remove dirt.

- If the filter is heavily soiled, replace it. ☞ "UV LED Filter Replacement"(P. 163)



3 **Return the filter holder to its original position.**



- Insert it all the way in and ensure that it is secured by the magnet.

4.2 Maintaining the Capping Station

Maintain the ink cap and wiper in the capping station. (STATION MAINT.)

The ink cap and wiper function as described below.

- Wiper:
  Wipes off any ink on the head nozzle
- Ink cap:
  Prevents the clogging of head nozzles due to dryness

As you use this machine, the wiper and ink cap start getting dirty from ink and dust.

If nozzle clogging is not resolved even after head cleaning is implemented ☞ "Head Cleaning"(P. 80), use the washing liquid and a clean stick for cleaning.

Tools required for maintenance	• F-200/LF-200 Washing Liquid (PN : SPC-0568)	• Safety glasses
	• Cleaning Stick for Head Surrounding (PN : SPC-0527)	• Gloves




- When performing maintenance for the capping station, be sure to wear the included safety glasses and gloves. Otherwise you may get ink in your eyes.



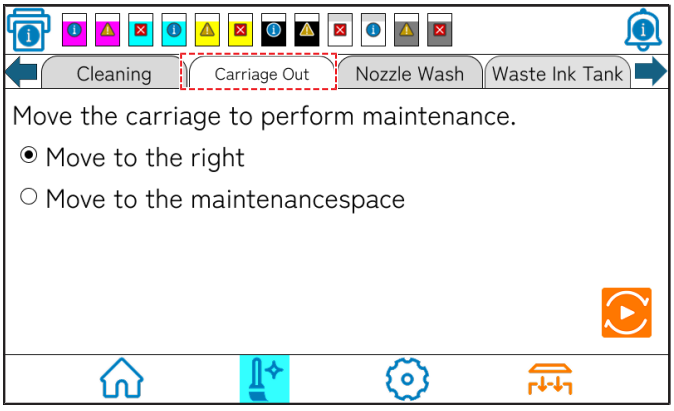
- Do not remove the capping station from the carriage with your hands. If you want to move the carriage, press the [MAINT.] key and execute carriage out.
  ☞ "Cleaning wiper and cap"(P. 117)(Steps 1 to 2)
- Make sure you perform maintenance for the ink cap and wiper in the capping station everyday. If they are left dirty, the nozzle surface may get dirty, dust or hardened ink may get stuck to the nozzle, resulting in poor discharge.

Cleaning wiper and cap

Important!

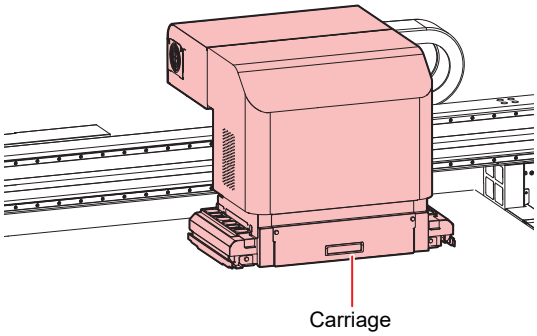
- After finishing work for the day, clean the wiper and the surrounding area (frequency of cleaning differs depending on the usage frequency of the printer).
- If there are severe bends or dirt on the wiper, replace it with a new wiper.
  ☞ "Replacing the wiper"(P. 154)
- When cleaning, make sure no fibers from the clean stick are left behind. Residual fibers may cause the printing quality to deteriorate.

1 **Tap [Carriage Out] on the Maintenance screen.**



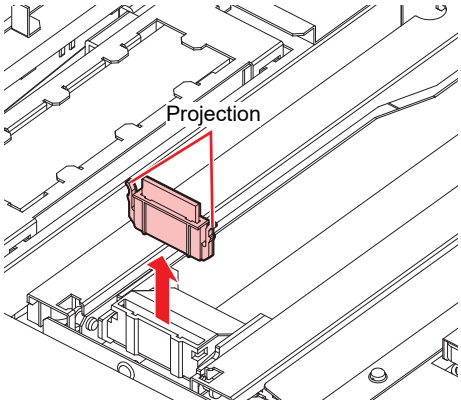
2 **Select [Move to the right] and then tap .**

- Carriage moves onto the table.



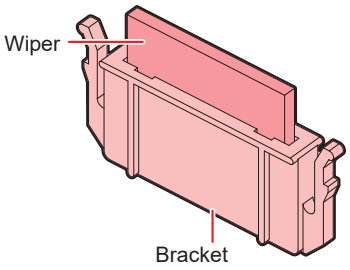
3 **Remove the wiper.**

- Pull out the wiper by holding the protrusions at both the ends.



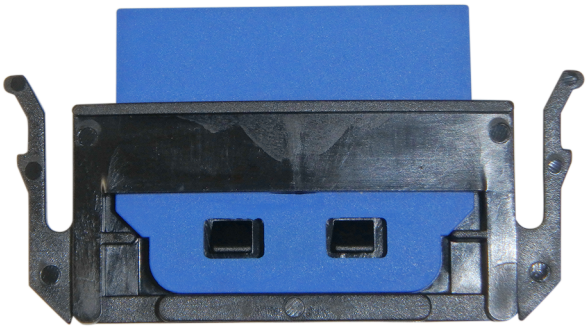
4 **Clean the wiper and the bracket.**

- Wipe off any ink on the wiper and the bracket using a clean stick soaked in washing liquid. Wipe it off properly so that there is no residual washing liquid.



Important!

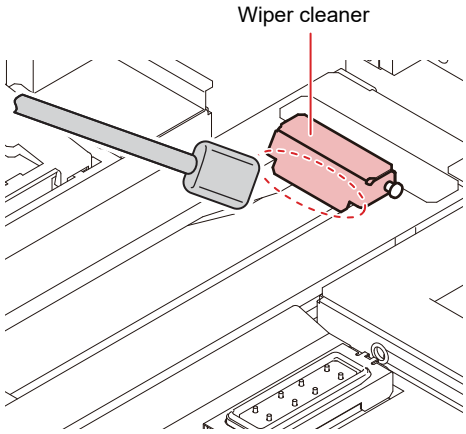
- Clean it until it looks like the picture.



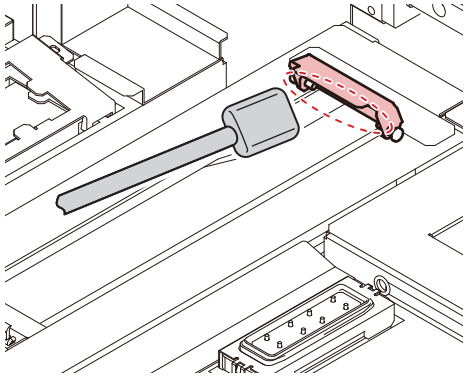
- After cleaning, make sure the wiper and bracket are aligned horizontally.

5 Clean the wiper cleaner.

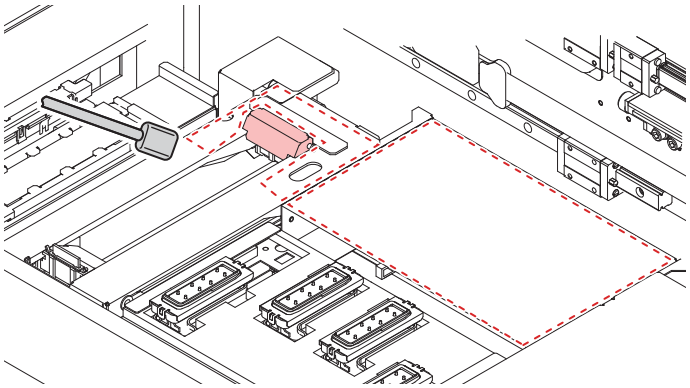
- Clean the tip of the wiper cleaner with a clean stick.



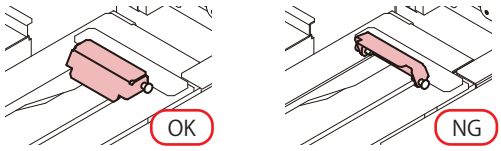
- Lift the wiper cleaner up and clean the ink adhering to the inside with a clean stick.



- Clean the area around the wiper cleaner and the shutter cover.

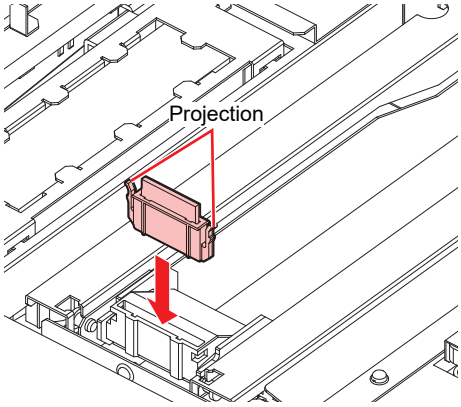


- Do not remove the wiper cleaner from the bracket.
- Only clean the front side of the wiper cleaner. (There is no need to clean the backside)
- After cleaning the wiper cleaner, check that the cleaner is not facing up.



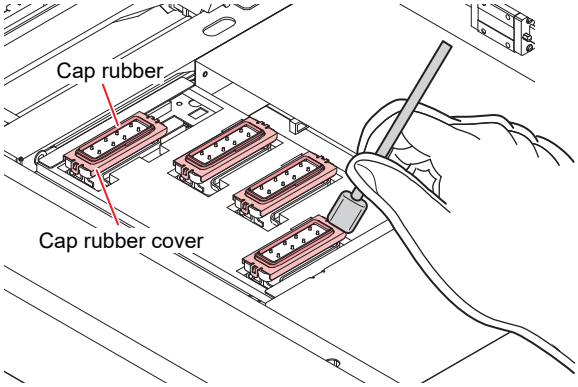
6 **Return the wiper to its original position.**

- Insert the wiper by holding both the ends.



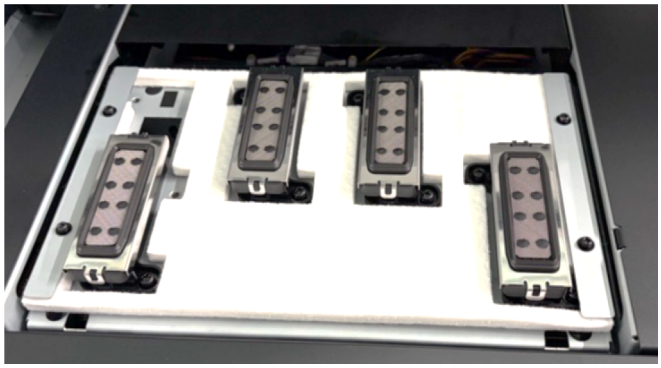
7 **Clean the cap rubber and cap rubber cover.**

- Wipe off any ink on the cap rubber and the cap rubber cover using a clean stick soaked in washing liquid.
  Wipe it off properly so that there is no residual washing liquid.



Important!

- Clean it until it looks like the picture.



- After cleaning, make sure the cap rubber and the mesh inside the cap have not come off.

8 **Once cleaning is complete, check the [Complete] boxes for [Wiper Cleaning] and [Cap Cleaning], and then tap .**

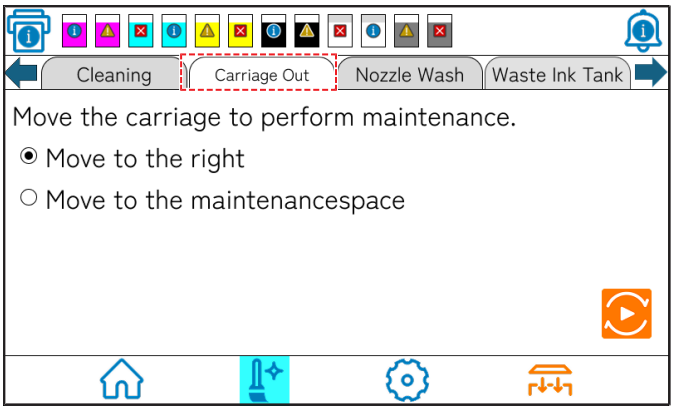
- The carriage will return to its original position.

NCU Cleaning

Ink and dust adhere to the NCU.

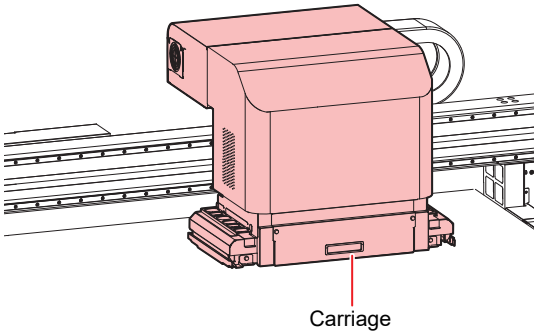
The NCU cannot operate normally if there is ink or dust adhering to it.

1 **Tap [Carriage Out] on the Maintenance screen.**



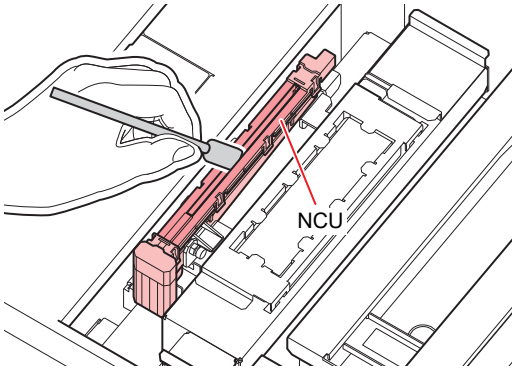
2 **Select [Move to the right] and then tap .**

- Carriage moves onto the table.



3 **Wipe off any ink or dust adhering to the NCU.**

- Wipe the inside and the outside with a clean stick (SPC-0421) soaked in washing liquid.
- Wipe it off properly so that there is no residual washing liquid.



4 **Once cleaning is complete, tap .**

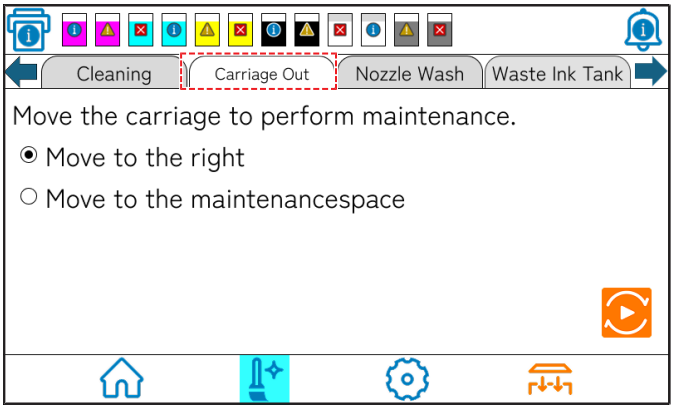
Station Area Cleaning

We recommend that you clean the machine often to maintain the quality of the machine and the images.

Important!

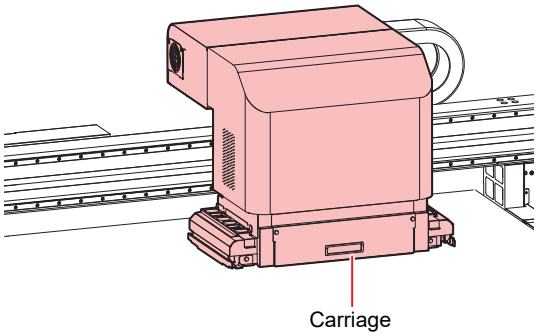
- Clean the area around the station once a week (frequency of cleaning differs depending on the usage frequency of the printer).
- If the ink left in the waste ink tray hardens due to UV light, the ink discharged during flushing cannot move to the waste ink bottle. We recommend that you clean the waste ink tray often.

1 **Tap [Carriage Out] on the Maintenance screen.**



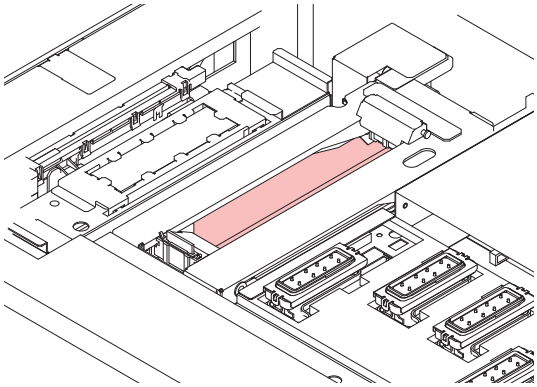
2 **Select [Move to the right] and then tap .**

- Carriage moves onto the table.
- Clean the waste ink tray.



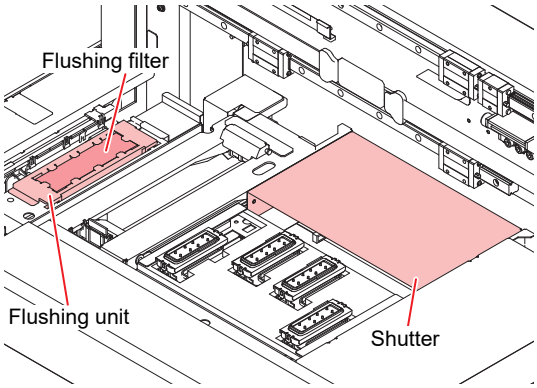
3 **Use a cloth to wipe off the ink around the waste ink tray.**

- Clean the area highlighted in pink in the figure below.
- If the ink is stuck to the surface and cannot be wiped, use a spatula or another similar tool to scrape it off.



4 **Wipe off any ink on the flushing unit or the shutter.**

- Wipe off the ink using a clean stick soaked in washing liquid. Wipe it off properly so that there is no residual washing liquid.



Important!

- If the surface of the flushing filter has become fluff, wipe it using a clean stick soaked in washing liquid.
- If the dirt is severe or hardened, replace the flushing filter. ☞ "Flushing Filter"(P. 166)

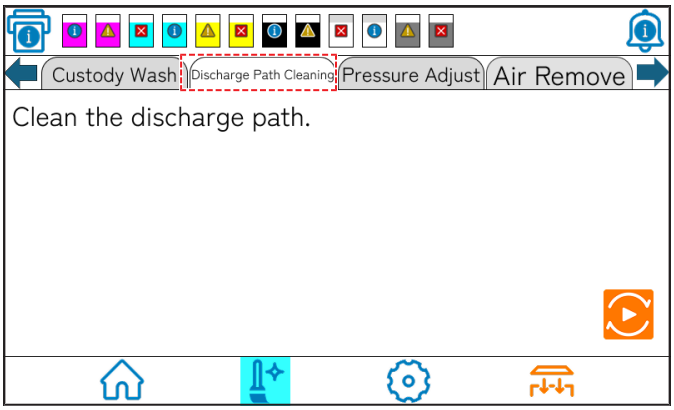
5 **Once cleaning is complete, tap**  **.**

- The carriage will return to its original position.

Washing the Ink Discharge Passage

Wash the ink discharge passage periodically to prevent ink from hardening and clogging inside it.

1 **Tap [Clean the discharge path] on the Maintenance screen.**

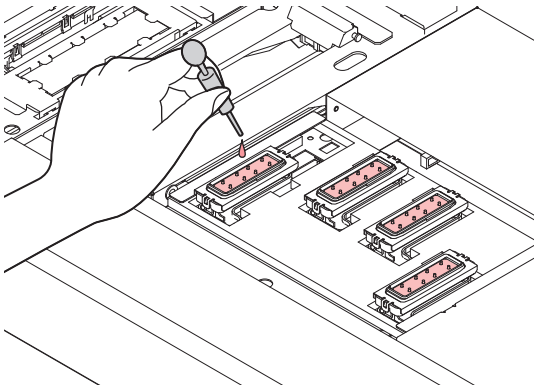


2 **Tap**  **.**

- Carriage moves onto the table.

3 **Take washing liquid in a dropper and fill the cap with it until it is full.**

- Fill the cap with washing liquid until it is about to overflow.



4 **Tap**  **.**

- After the air suction operation is performed for 30 seconds, the carriage returns, and the display goes back to the screen shown in Step 1.

4.3 Maintenance of Head Surroundings

Extremely minute mechanisms are used for the head, and therefore proper care must be taken when performing maintenance.

Some gel-like ink or dust may be stuck in the bottom part of the slider and around the head. Rub it off using a clean stick or another similar tool. When rubbing, make sure you never rub the nozzle part of the head.

Tools required for cleaning	• Cleaning Stick for Head Surrounding (PN : SPC-0527)	• Safety glasses	• Gloves

- If the ink gets on your skin or your clothes, rinse it out immediately with soap or water. If you get the ink in your eyes, wash them immediately with water and consult a doctor.

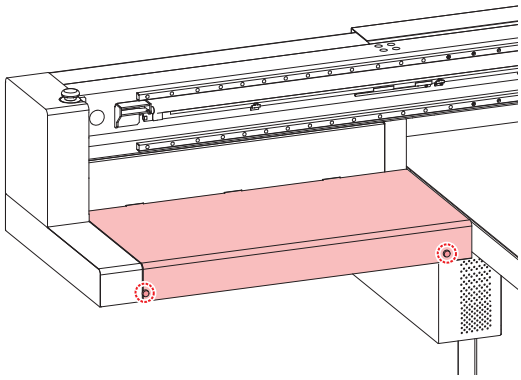
- When handling ink and washing liquid, pay close attention to ventilation and be sure to wear the included safety glasses and gloves. The ink or washing liquid may get in your eyes.

- Make sure you clean the bottom surface of the carriage everyday so that it does not get dirty from ink or dust. If it is left dirty, dirt or hardened ink may smear onto the nozzle due to wiper operation during head cleaning.
- When you clean the bottom surface of the carriage, be careful so as not to rub the nozzle.

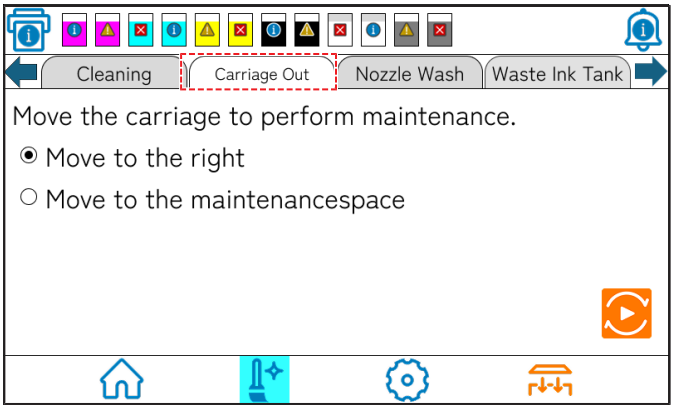
1 **Execute head cleaning[NORMAL].** "Head Cleaning"(P. 80)

2 **Remove the cover on the right side of the Y-bar.**

- Remove the decorative screws (2 places) and then remove the cover.



3 **Tap [Carriage Out] on the Maintenance screen.**

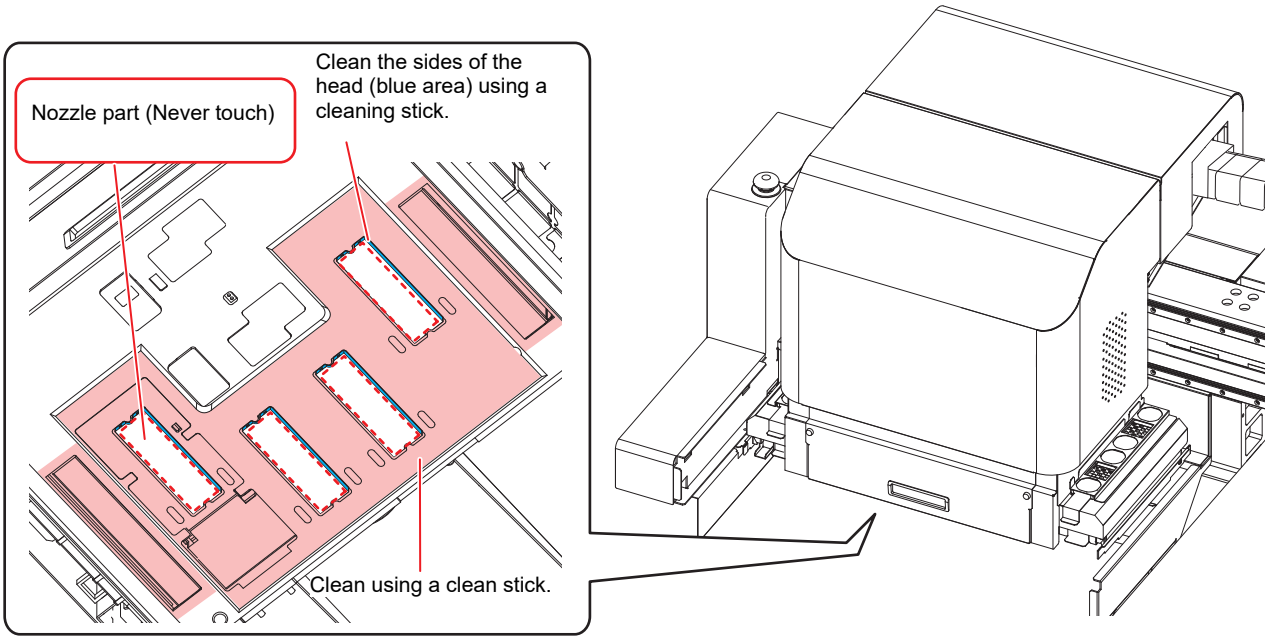


4 **Select [Move to the maintenance space].**

- Carriage moves to the left edge of the machine.

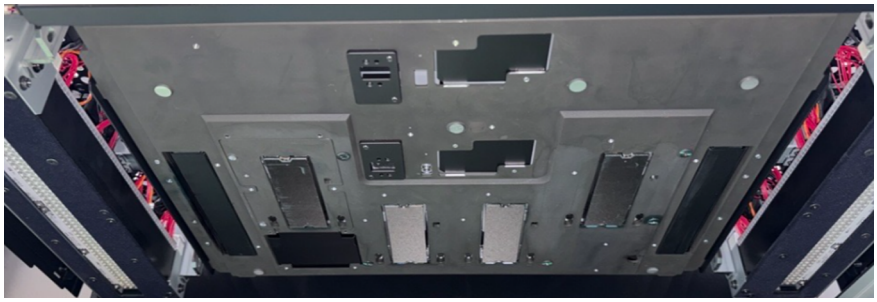
5 **Wipe any ink on the sides of the head and carriage using a clean stick.**

- Never rub the nozzle part.



Important!

- Clean it until it looks like the picture.
- Clean the nozzle surface if the shape of the cap rubber is visible on it.
- If you need to leave your seat during maintenance, press the [ENTER] key to end the cleaning process. If left as-is, the ink will harden due to the effects of external light, resulting in nozzle clogging or other harmful effects.



Cleaning UV LED Unit

Periodically clean any ink or dust that has accumulated on the bottom or glass surfaces of the UV-LED unit.

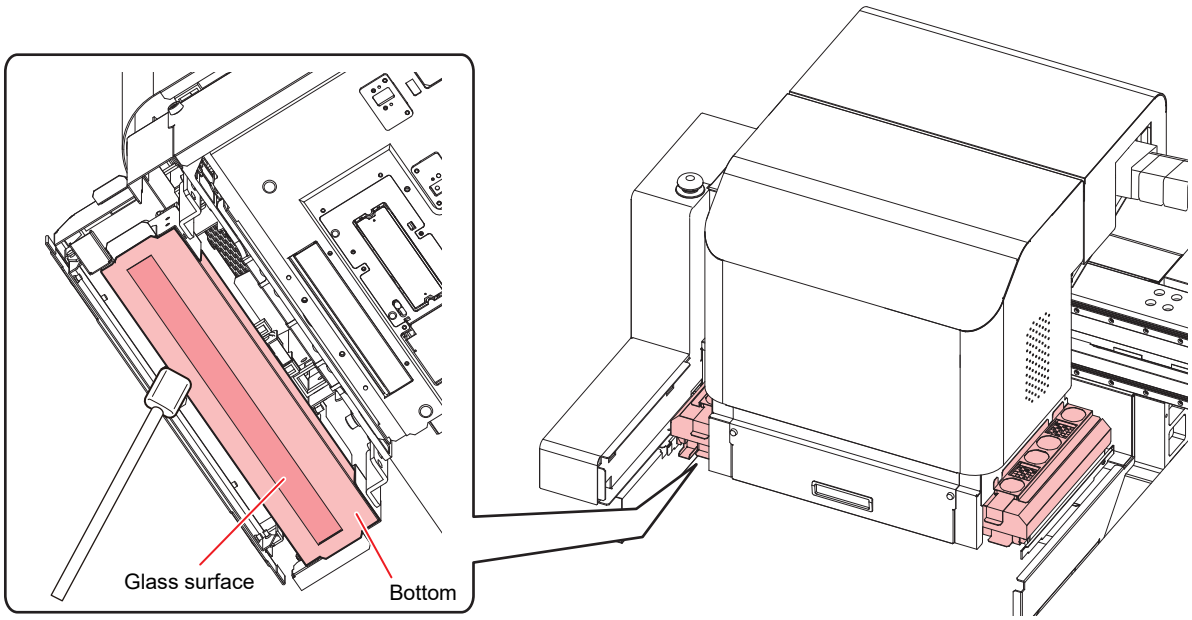
Important!

- Be careful not to damage the irradiation part on the bottom of the unit when cleaning the UV LED. If the dirt or shading on the irradiation part exceeds a certain limit, it may cause banding due to poor curing of the ink.

- If you want to clean only the UV-LED unit, perform maintenance steps 1 to 3 on the area around the head, and then move the carriage before cleaning.

1 **Clean the UV-LED unit.**

- Wipe off any ink and dust adhering using a cleaning stick moistened with maintenance liquid. Wipe off the maintenance liquid. Make sure none remains.



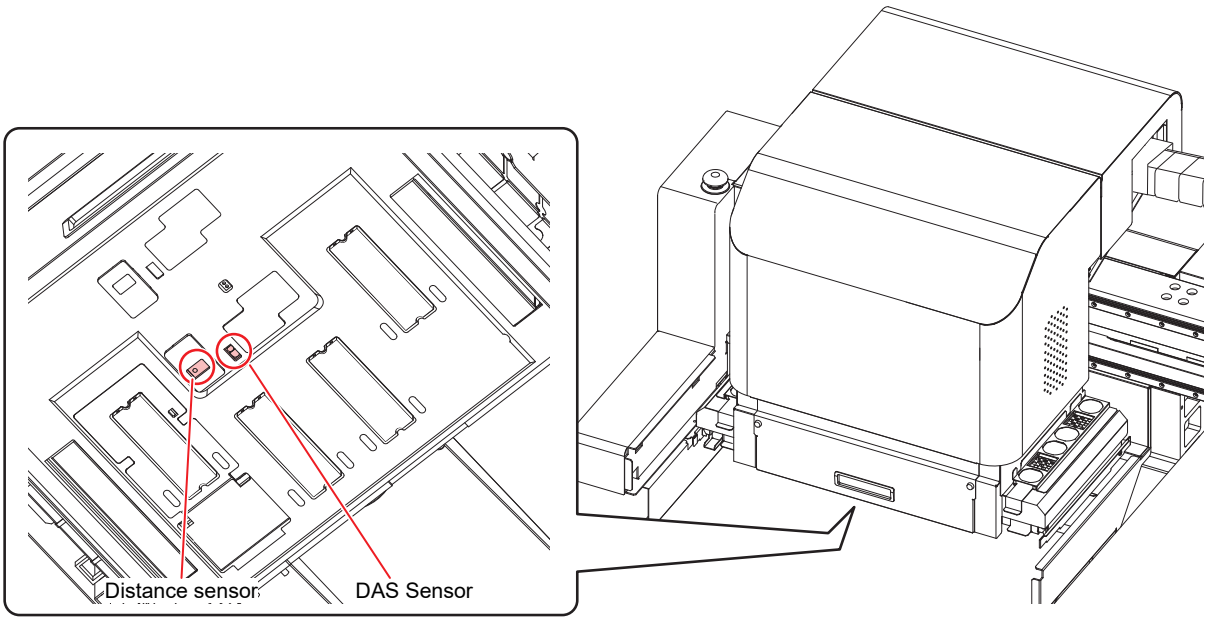
- Avoid strongly scrubbing the UV-LED glass with a cleaning stick. Failure to do so may damage the UV-LED glass.

Cleaning DAS and Distance Sensors

The DAS and distance sensors are located on the carriage underside. If dust or debris accumulates on a sensor, it may prevent the sensor from properly functioning.
Be sure to wipe off any dirt with a cleaning stick or a soft cloth.

- If you want to clean only the DAS and distance sensors, perform maintenance steps 1 to 3 on the area around the head, and then move the carriage before cleaning.

1 Wipe off any dirt from the DAS and distance sensors.



- For heavy soiling, wipe using a soft cloth soaked in diluted neutral detergent and thoroughly wrung out.

4.4 Maintenance the Print Head Nozzle Surface

Clean the print head nozzle surface with maintenance liquid 11 or 15 to prevent ejection failure or deflection.

- Do not use anything other than maintenance liquid 11 or 15 to clean the print head nozzle surface. This will increase the risk of machine failure or ejection failures.

- The print head uses an extremely delicate mechanism. Take great care when handling it.

Tools required for cleaning	• Cleaning Stick for Head Surrounding (PN : SPC-0527)	• Maintenance liquid 11 • Maintenance liquid 15

- If the ink gets on your skin or your clothes, rinse it out immediately with soap or water. If you get the ink in your eyes, wash them immediately with water and consult a doctor.

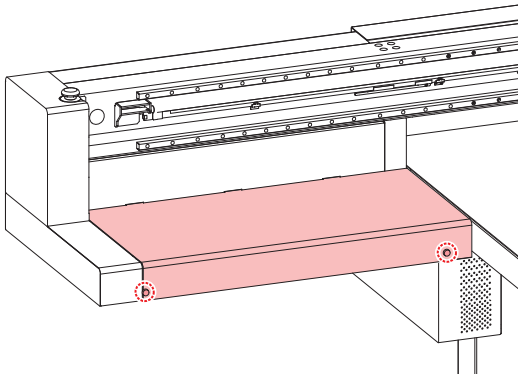
- When handling ink and washing liquid, pay close attention to ventilation and be sure to wear the included safety glasses and gloves. The ink or washing liquid may get in your eyes.

1 **Execute head cleaning[NORMAL].** ☞ "Head Cleaning"(P. 80)

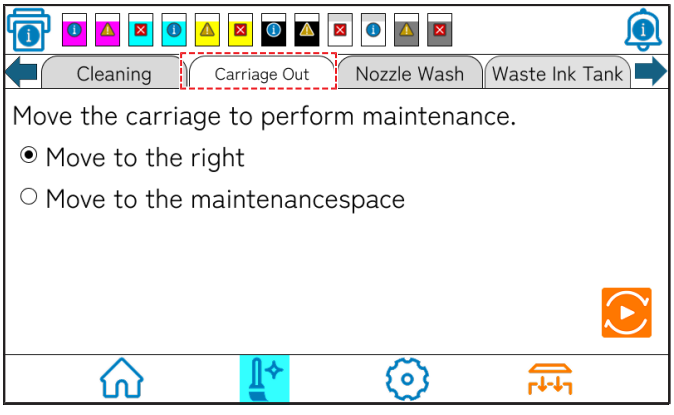
- Perform cleaning before maintenance so that no ink adheres to the nozzle surface.

2 **Remove the cover on the right side of the Y-bar.**

- Remove the decorative screws (2 places) and then remove the cover.



3 **Tap [Carriage out] on the Maintenance screen.**



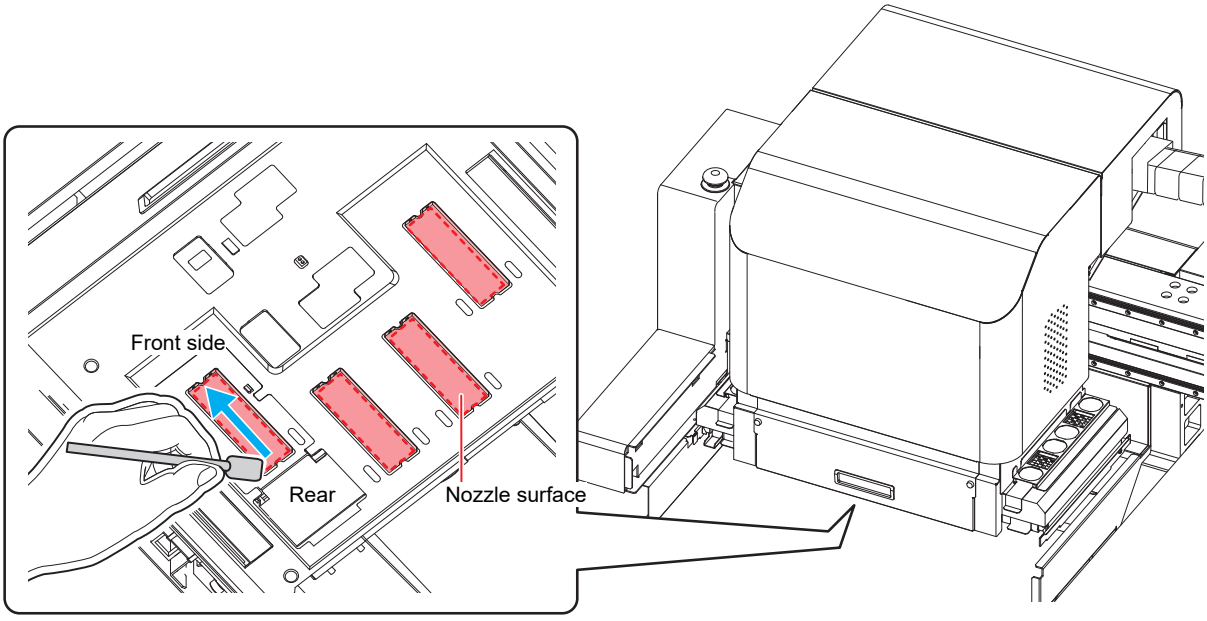
4 **Select [Move to the maintenance space].**

- Carriage moves to the left edge of the machine.

5 **Use a clean stick soaked in the maintenance liquid.**

6 **Clean the print head nozzles surface.**

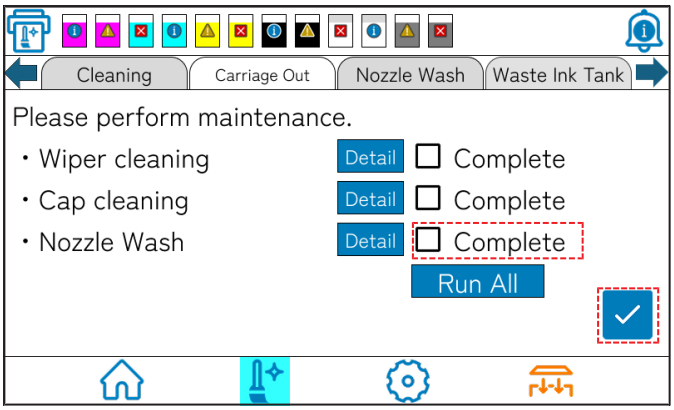
- Clean the head nozzle surface toward the front from the rear of the head using a cleaning stick.



- Be sure to clean using a cleaning stick.
- Do not rub or press firmly on the sponge part with your fingers against the nozzle surface. This may damage the nozzle surface and result in ejection failure.
- Do not reuse cleaning sticks once used. This may cause nozzle clogging.

7 **Once cleaning is complete, check the [Complete] box for [Clean around the nozzles], and then tap** ✓ **.**

- The carriage will return to its original position.



8 **Execute head cleaning[NORMAL].** ☞ "Head Cleaning"(P. 80)

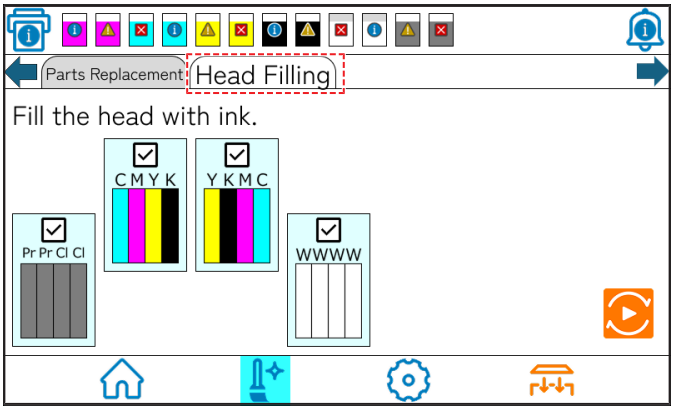
4.5 When Nozzle Clogging Cannot Be Solved

If the nozzle clogging is not resolved even after head cleaning☞ "Head Cleaning"(P. 80) is implemented, execute the following functions.

Cleaning wiper and cap	• Clean the wiper and the cap. ☞ "Cleaning wiper and cap"(P. 117)
Maintenance the Print Head Nozzle Surface	• Clean the head nozzle surface. ☞ "Maintenance the Print Head Nozzle Surface"(P. 130)
Head Filling	• Fill the head with ink. ☞ "Filling with ink from the sub tank to the head"(P. 132)
Nozzle Wash	• Wash the head nozzle. ☞ "Washing of head nozzle"(P. 133)
Air PG	• Remove ink and any trapped air from the head. ☞ "Performing Air Purge"(P. 139)
Nozzle Recovery	• If you cannot fix the nozzle clogging, print using an alternative nozzle. ☞ "Nozzle Recovery Function"(P. 143)

Filling with ink from the sub tank to the head

1 **Tap [Fill Head] on the Maintenance screen.**



2 **Tap**  **.**

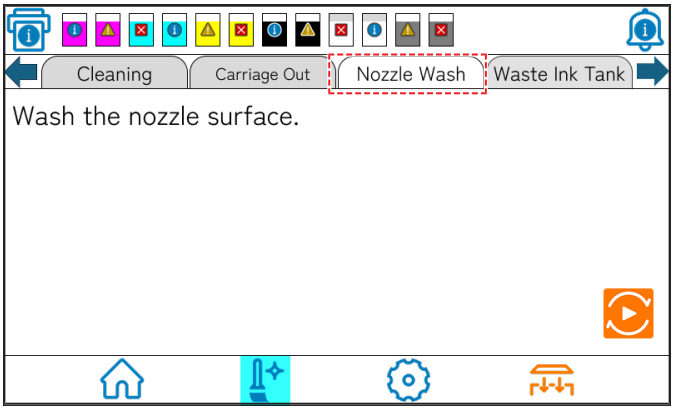
- The carriage will move, and then filling begins.

Washing of head nozzle

Wash the head nozzles to prevent them from getting clogged due to the ink hardening.

Check these items in advance	Is [INK END] displayed? • The ink is absorbed during washing. If the ink end is detected at this time, washing cannot be performed. • Replace the ink bottle with another one for which ink end has not been detected.

1 **Tap [Nozzle Wash] on the Maintenance screen.**



2 **Tap** **.**

- The carriage will move.

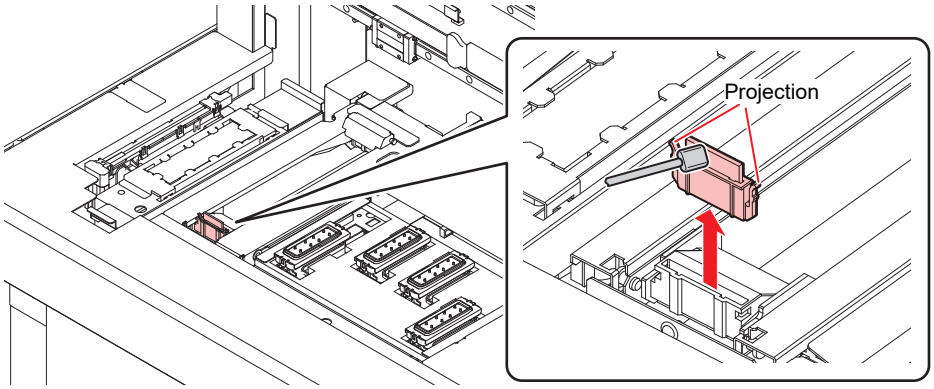
3 **Clean the wiper and the bracket.**

(1) Open the right maintenance cover, hold the protrusions at both the ends of the wiper and pull it out.

(2) Use a clean stick soaked in washing liquid.

- Wipe it off properly so that there is no residual washing liquid.

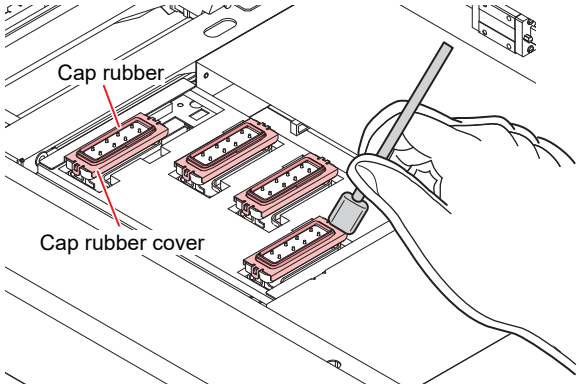
(3) Hold the wiper by the protrusions at both the ends and push it back to the original position.



4 **Once cleaning is complete, tap** **.**

5 **Clean the cap rubber and cap rubber cover.**

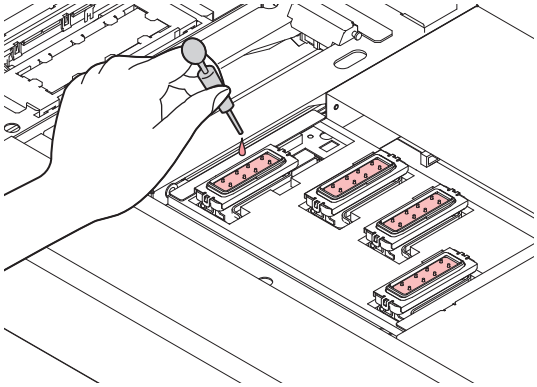
- Wipe off any ink on the cap rubber and the cap rubber cover using a clean stick soaked in washing liquid. Wipe it off properly so that there is no residual washing liquid.
- At this time, the discharge passage is cleaned automatically.



6 **Once cleaning is complete, tap** ✓**.**

7 **Take washing liquid in a dropper and fill the cap with it until it is full.**

- Fill the cap with washing liquid until it is about to overflow.



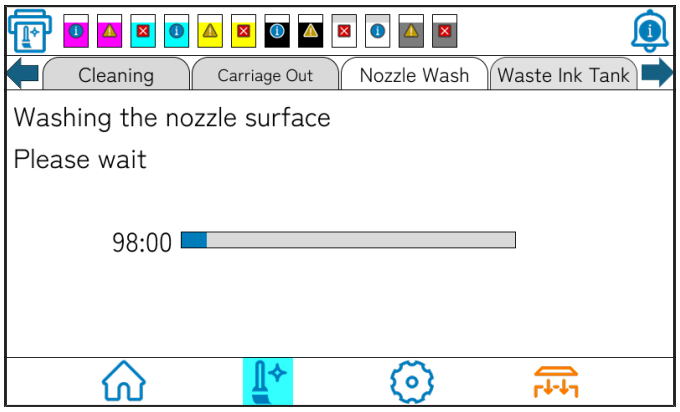
8 **Once you are finished, tap** ✓**.**

9 **Enter the leaving time.**

- When using ML007 washing liquid, the recommended time is one minute.
- Recommended duration for the ML016 washing liquid: 10 minutes, depending on the nozzle condition
- When using PR-200 washing liquid, the recommended time is one minute.

10 Tap .

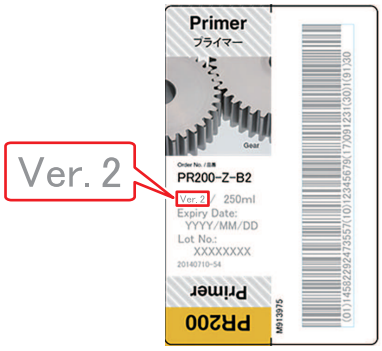
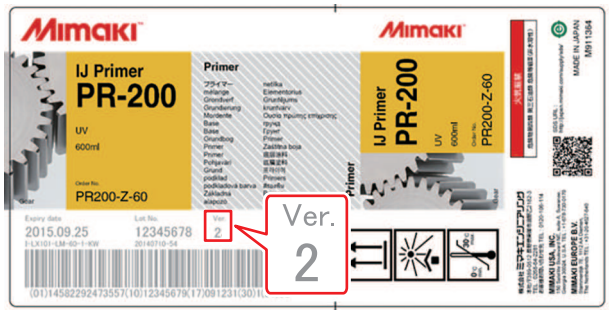
- This will absorb the washing liquid filled in the cap.
- The following screen is displayed while the washing liquid is still left in the cap.



Important! • If the missing nozzle is not resolved even after cleaning multiple times, contact your local distributor, or our sales office or call center.

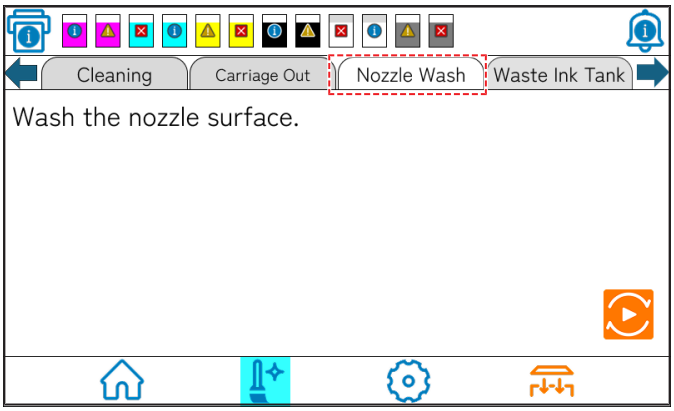
Washing the Head Nozzle (When Using the PR-200 Ink)

Models equipped with PR-200 may cause nozzle clogging. Check the version indicated on the label of the PR-200 ink cartridge/pack/bottle, and wash the nozzle twice a week for Ver. 2 and once a month for Ver. 3.

Version location on the label	
220 mL cartridge	250 mL bottle
	
600 mL pack	1L bottle
	

Required maintenance liquid	• F-200/LF-200 Maintenance Liquid (SPC-0568)	• PR-200 Maintenance Liquid (C-ML013-Z-B2-1-KW)

1 **Tap [Nozzle Wash] on the Maintenance screen.**



2 **Tap**  **.**

- The carriage will move.

Important!
- [COMPLETED (NEXT): ENT] is displayed on the screen until the cleaning work of wiper is complete. Press the [ENTER] key after Step 4 is complete.
  If you press the [ENTER] key before the cleaning is complete, the machine moves to the next washing step.

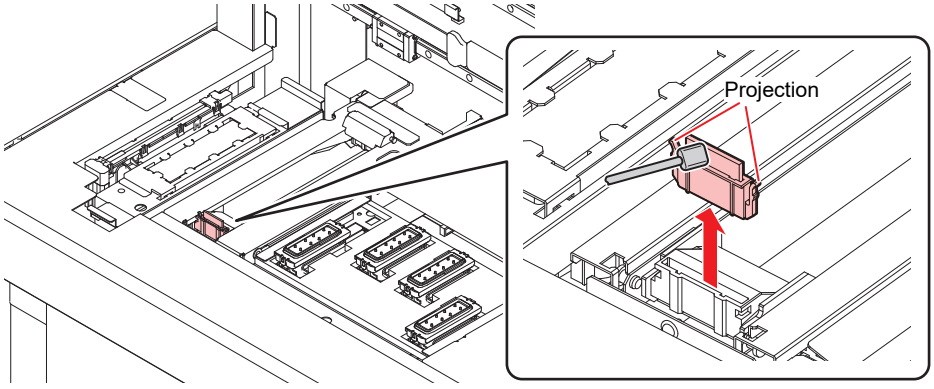
3 **Clean the wiper and the bracket.**

(1) Open the right maintenance cover, hold the protrusions at both the ends of the wiper and pull it out.

(2) Use a clean stick soaked in the F-200/LF-200 Maintenance Liquid (SPC-0568).
- Wipe it off properly so that there is no residual F-200/LF-200 Washing Liquid.

(3) Hold the wiper by the protrusions at both the ends and push it back to the original position.

Important!
- When cleaning the wiper, bracket, cap rubber, and cap rubber cover, only use the F-200/LF-200 Maintenance Liquid. Do not use the PR-200 Maintenance Liquid (C-ML013-Z-B2-1-KW).

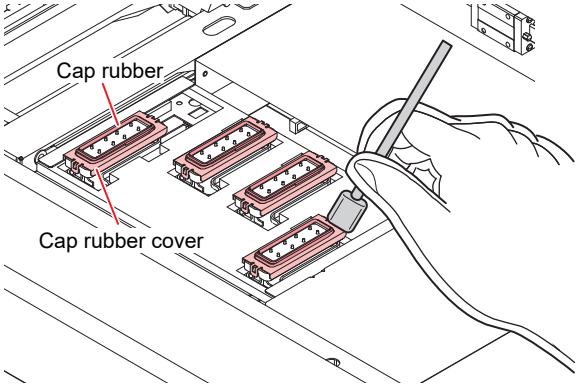


Important!
- [COMPLETED (NEXT): ENT] is displayed on the screen until the cleaning of the cap is complete. Press the [ENTER] key after Step 6 is complete.
  If you press the [ENTER] key before the cleaning is complete, the machine moves to the next washing step.

4 **Once cleaning is complete, tap**  **.**

5 **Clean the cap rubber and cap rubber cover.**

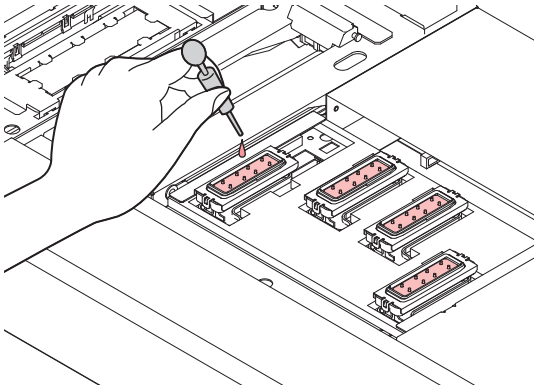
- Wipe off any ink on the cap rubber and the cap rubber cover using a clean stick soaked in the F-200/LF-200 Maintenance Liquid. Thoroughly wipe off, ensuring there is no residual F-200/LF-200 Maintenance Liquid.
- At this time, the discharge passage is cleaned automatically.



6 **Once cleaning is complete, tap** ✓**.**

7 **Using a dropper, fill only the cap of the head equipped with PR-200 with PR-200 Maintenance Liquid (C-ML013-Z-B2-1-KW). Fill until full.**

- Fill the cap with washing liquid until it is about to overflow.



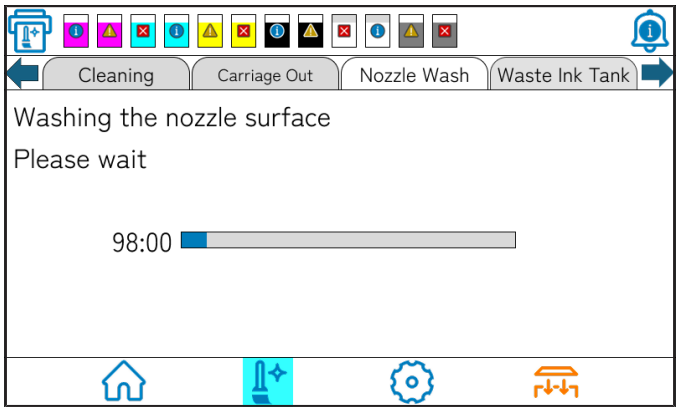
8 **After filling the maintenance liquid, tap** ✓**.**

9 **Enter the leaving time.**

- The recommended duration is one minute.

10 Tap .

- This will absorb the washing liquid filled in the cap.
- The following screen is displayed while the washing liquid is still left in the cap.



- After the duration has passed, the display returns to Step 2.

11 Execute head cleaning (HARD) once for the head equipped with PR-200.

(1) Tap the [Cleaning] tab on the Maintenance menu.

(2) Select [Hard] for the type.

(3) For the head selection, select only Head 3 and then tap .

12 Check the nozzle status by performing a test print.

- When the nozzle clogging occurs, execute nozzle cleaning (HARD) again then check the nozzle status.

Important!

- If the nozzle clogging is not resolved even after repeating this cleaning 3 times, contact your local distributor, or our sales office or call center.

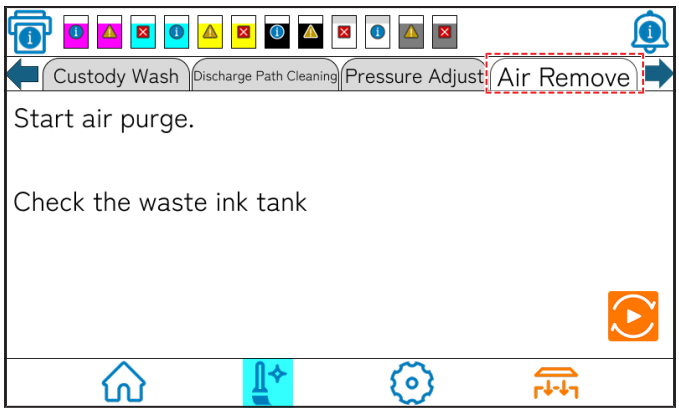
Performing Air Purge

If the nozzles are clogged due to mixing of colors or air in the ink in the head, release the ink in the head or the mixed air from the port.

- We recommend that you implement air purge about once a month to prevent nozzle clogging before it happens, so that the machine can be used comfortably.

1 **Tap the [Air PG] tab on the Maintenance screen.**

- The following screen appears. Check the waste ink tank.

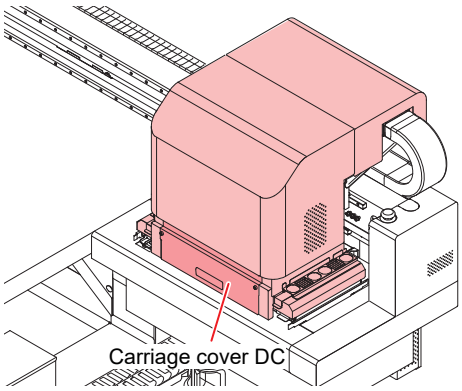


2 **Tap**  **.**

3 **Choose a head.**

- After the Y-bar moves all the way to the front, the carriage moves above the wiper.

4 **Open the carriage cover DC.**



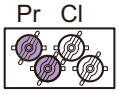
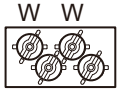
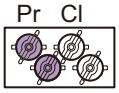
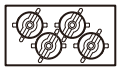
Important!

- After the work is complete, quickly attach the removed cover. If you leave it removed for a long time, ultra-violet rays may affect the ink.

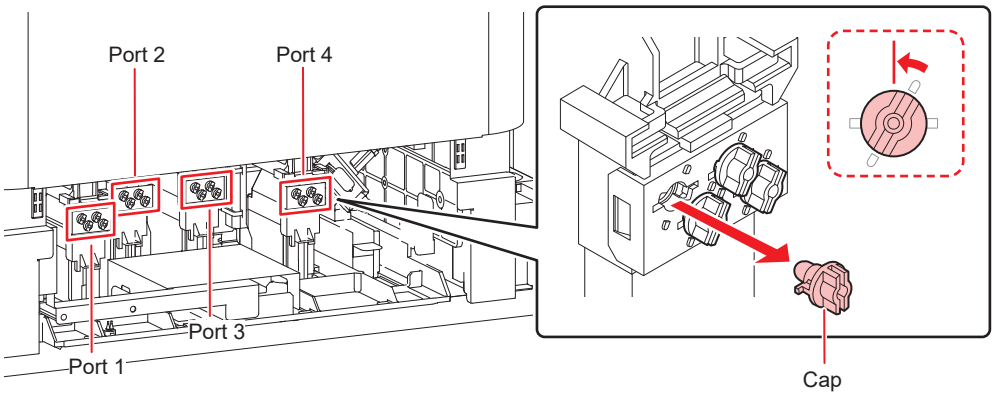
5 **Remove the cap from the target port.**

- Port layout is shown in the following figure.

	Head 1	Head 2	Head 3	Head 4
4-color	C Y M K	C Y M K	Y M K C	Y M K C

4-Color + W + Pr + Cl	Pr Cl  Pr Cl	C Y  M K	Y M  K C	W W  W W
6-Color + Fp + Fy + W + Cl + Pr	Pr Cl  Pr Cl	C Y  M K	Fy Lm  Fp Lc	W W  W W

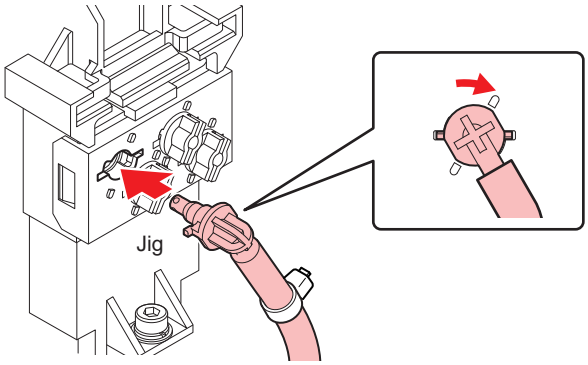
- Turn the cap 30° counterclockwise and then remove it.
- Ink is stuck on the removed cap. Temporarily place it on a paper towel, etc. to avoid contamination of the surrounding area.
- Perform air purge for each head. Do not remove the caps of head 2, head 3, or head 4 when performing air purge for head 1.



- The internal mechanism does not let the ink spill out even if the cap is removed.

6 Connect the air purge jig (SP-01046) that comes with the main unit to the port.

- Similar to the cap, connect the jig by pushing the tip into the port and rotating it clockwise by 30°.

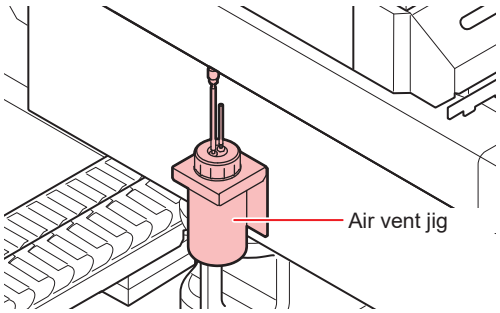


Insert the jig into the air purge port and secure it in place.

- It is possible to purge air from two ports on the same head at once.

Important!

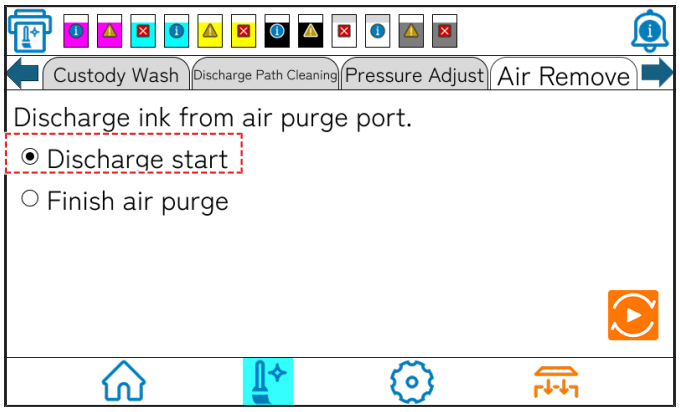
- There is a magnet attached to the bottle of the air vent jig. When purging the air, attach the jig as low as possible on the cover as shown in the diagram below.



- Be sure to connect the jig to any two ports on the same head. If you purge air by connecting the jig to only one port, ink may leak out from the other port.
- Be sure to drain the ink from the bottle in the jig after approximately every three air purges. If too much ink is allowed to accumulate in the bottle, the excessive weight may cause the jig attached to the cover to fall.

7 **Tap** .

8 **Select [Discharge start] and then tap** .



9 **Release the colored ink or the air mixed in the ink.**

- Tap . At this time, the machine is opened to the atmosphere, causing the ink to be forcefully discharged.
- Allow it to discharge until the colored ink or the air in the ink is completely gone. Thereafter, ink without any mixed colors will be discharged.
- The buzzer sound goes off at regular intervals while the ink is being discharged. (This takes approximately 45 seconds each time.)

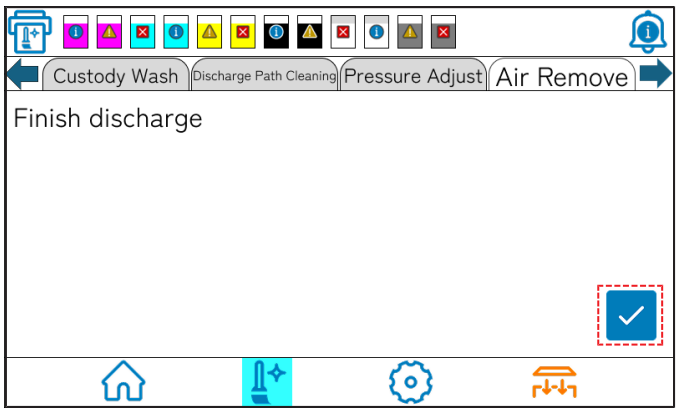
- If the ink does not flow out of the port, temporarily place the jig on the floor to purge the air. Once the ink starts flowing, reattach it to the cover.

- Please note that if the jig is left on the floor after the air is purged, the ink inside the head may flow into the jig under its own weight, allowing air to enter the head.

10 **Perform Step 9 for all ports from which air is purged.**

- The carriage may moves quickly at times. Keep your hands, head, or your body away from the carriage.

11 **When the following screen appears, tap .**

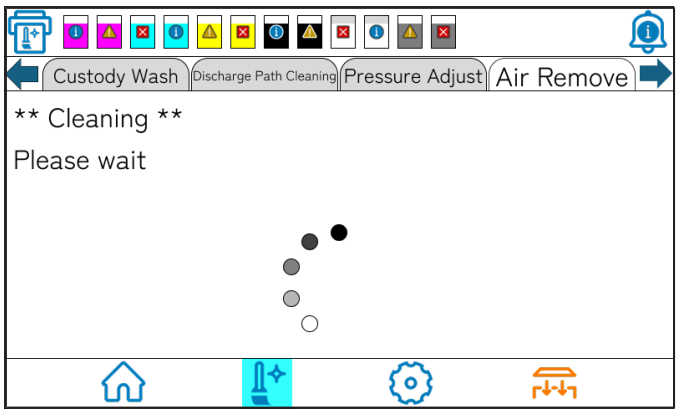


12 **Remove the jig and re-attach the cap.**

- Re-attach the cap immediately after removing the jig.

13 **After attaching the cap, tap .**

- Negative pressure control restarts and wiping begins.



14 **When the following screen appears, tap .**



15 **Close the carriage cover DC.**

Important!

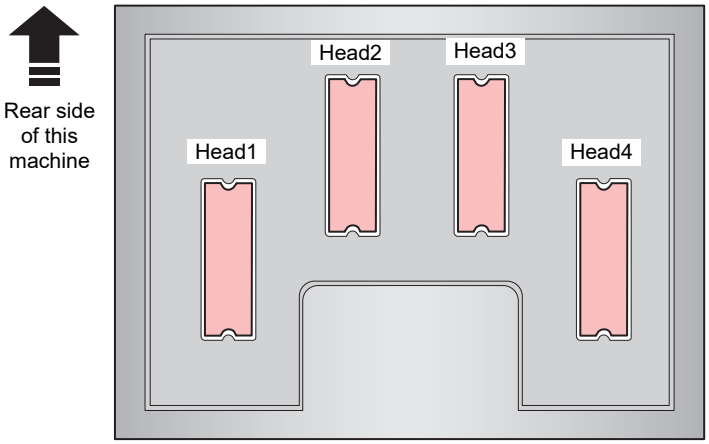
- After the work is complete, quickly attach the removed cover. If you leave it removed for a long time, ultra-violet rays may affect the ink.
- After use, drain the ink from the jig tubing and bottle, and store the jig in a place that is not exposed to light.

Nozzle Recovery Function

If nozzle clogging cannot be improved at the specified points, other good nozzles can be used as alternatives (nozzle recovery) for printing.

The structure of the head is as shown in the following figure.

With the nozzle recovery function, you can set nozzle recovery by specifying the nozzle lines for heads 1 to 4 respectively.

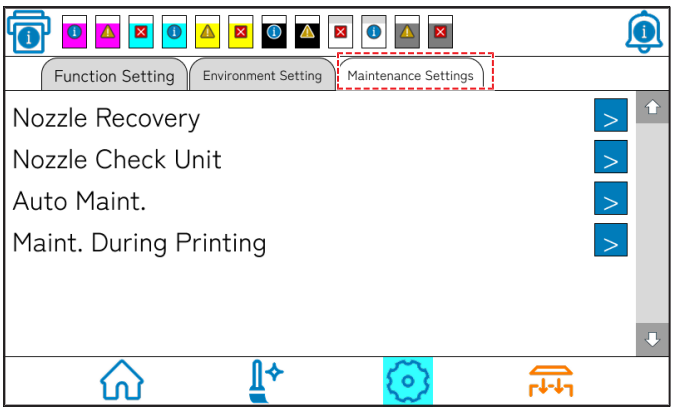


- The machine is equipped with four nozzle lines (A, B, C, and D) for each head.

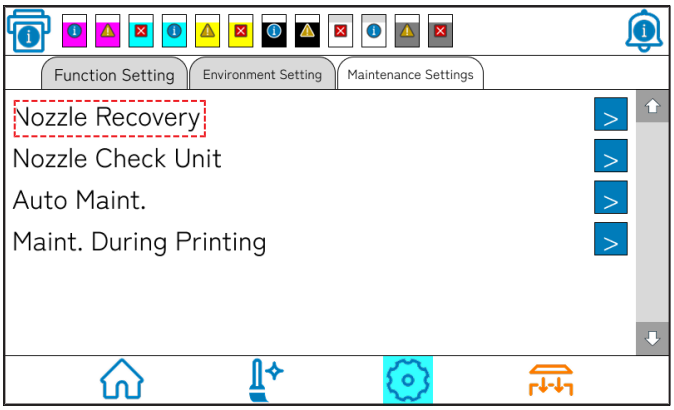


Print and Check the Pattern

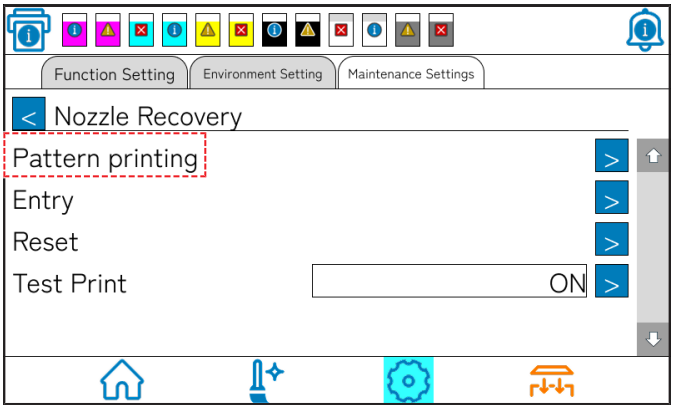
1 **Tap the [Maintenance Settings] tab on the Setting screen.**



2 **Tap [Nozzle Recovery].**

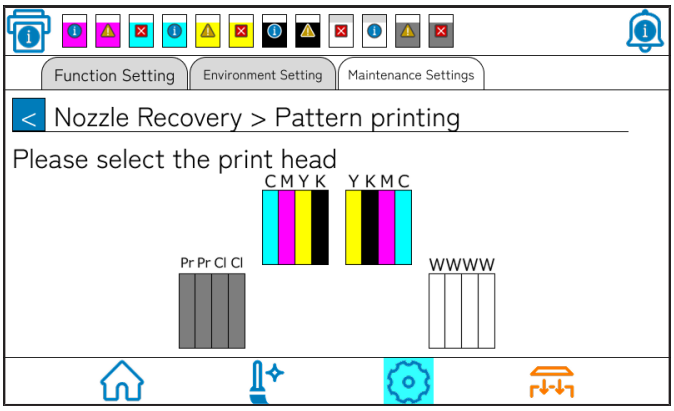


3 **Tap [Pattern Printing].**



4 **Select the print head.**

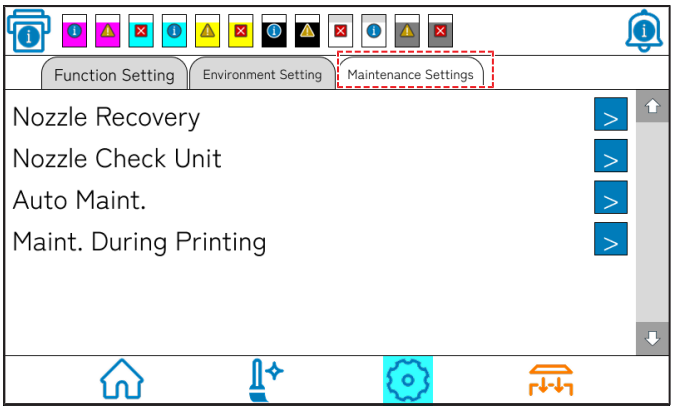
- The nozzle pattern is printed.



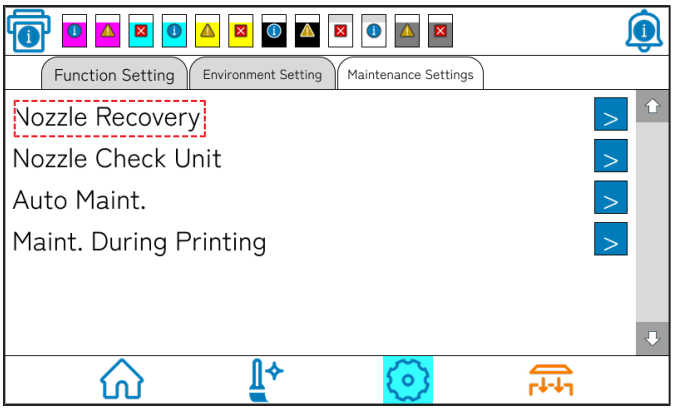
- When using white ink, print on clear film to check.

Nozzle Recovery Registration

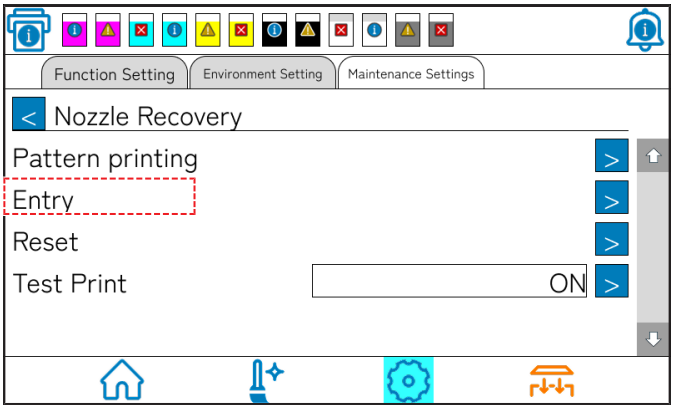
1 **Tap the [Maintenance Settings] tab on the Setting screen.**



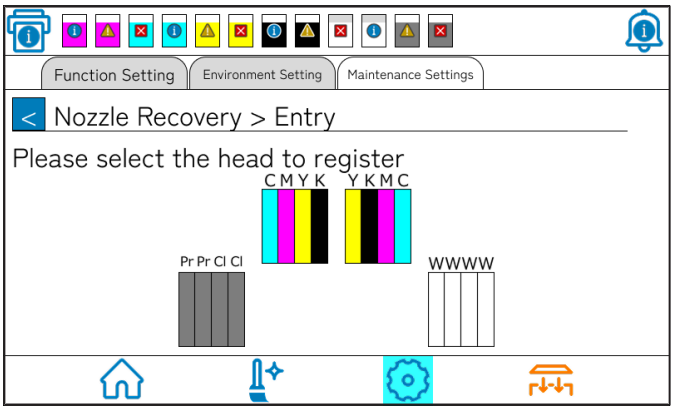
2 **Tap [Nozzle Recovery].**



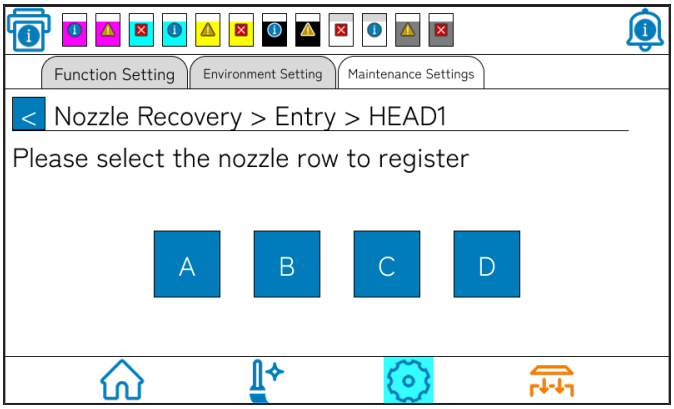
3 **Tap [Entry].**



4 **Select the head you wish to register.**

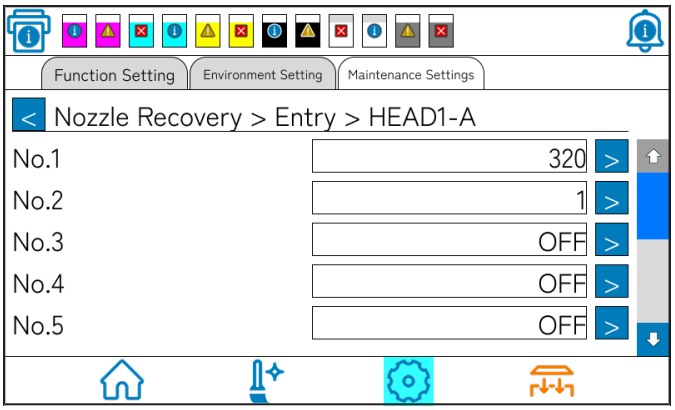


5 **Select the nozzle line to be subject to nozzle recovery.**

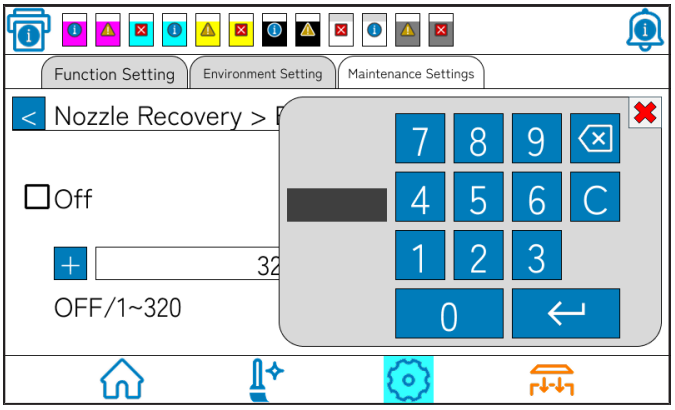


6 Register the nozzle numbers to be subject to recovery.

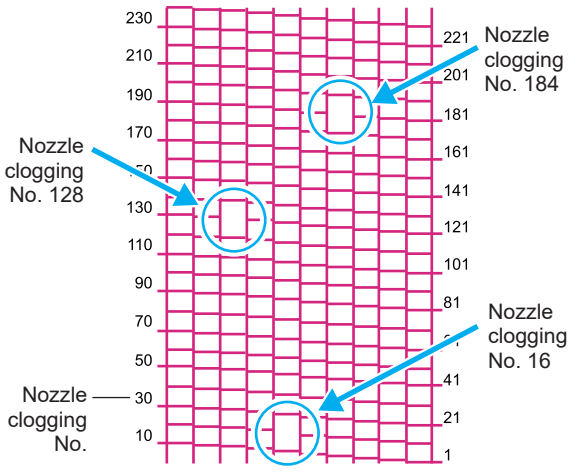
(1) Select a registration number (No. 1 to 10).



(2) Tap + - or enter a number to register the nozzle number to be subject to recovery.



- Example of registration of nozzle for recovery



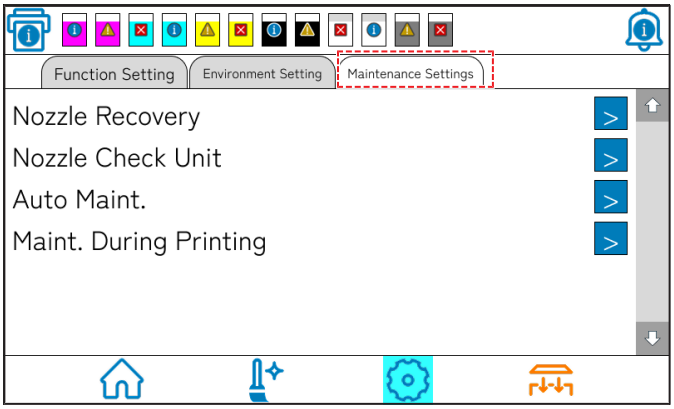
Registration No.	Recovery nozzle No.	Status
1	16	Target for nozzle recovery
2	128	Target for nozzle recovery
3	184	Target for nozzle recovery
4	OFF	No registration
5	OFF	No registration

Important!

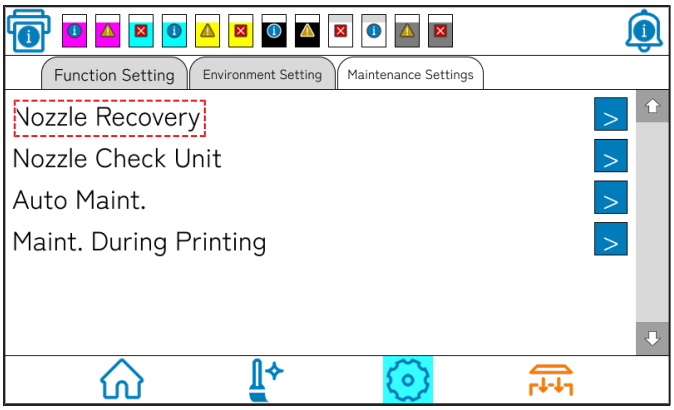
- Up to 10 nozzles can be registered for each nozzle line.
- Time required for printing does not change even if you use this function.
- The nozzle recovery function is invalid for the lowest number of paths in the printing conditions.
- Even if you register nozzle recovery, the pattern of test print and the likes is not recovered.

Resetting the Settings

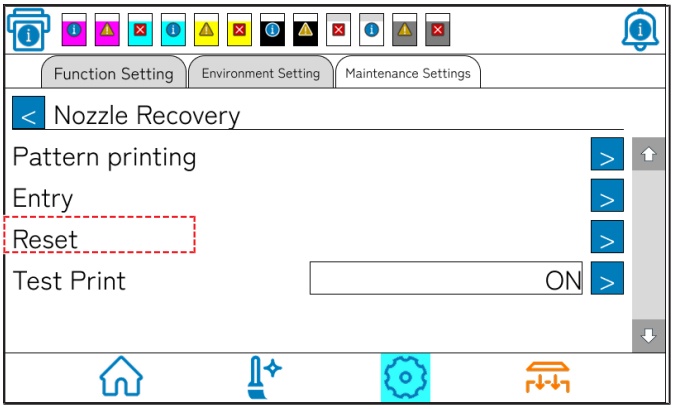
1 **Tap the [Maintenance Settings] tab on the Setting screen.**



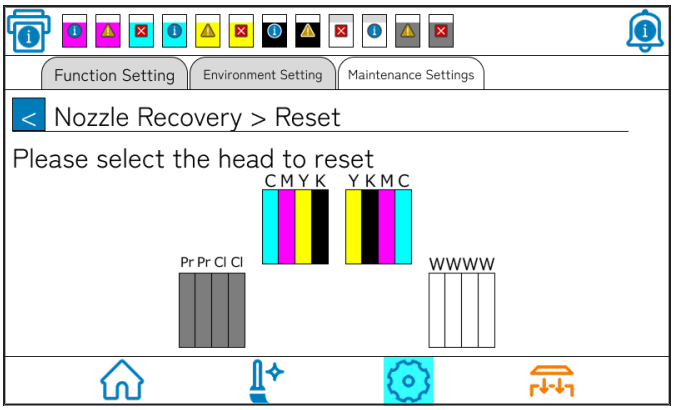
2 **Tap [Nozzle Recovery].**



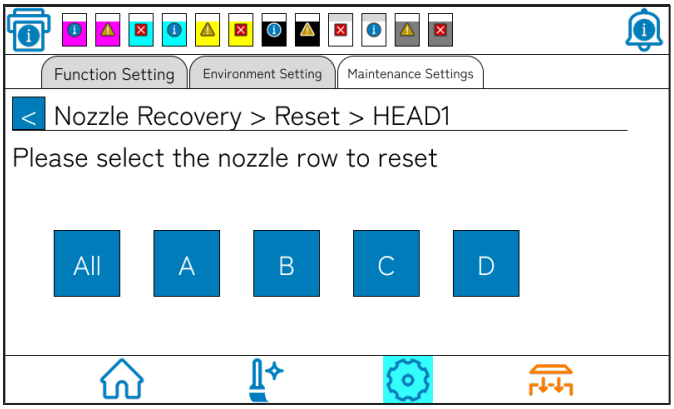
3 **Select [Reset].**



4 **Select the head for which you want to reset the settings.**



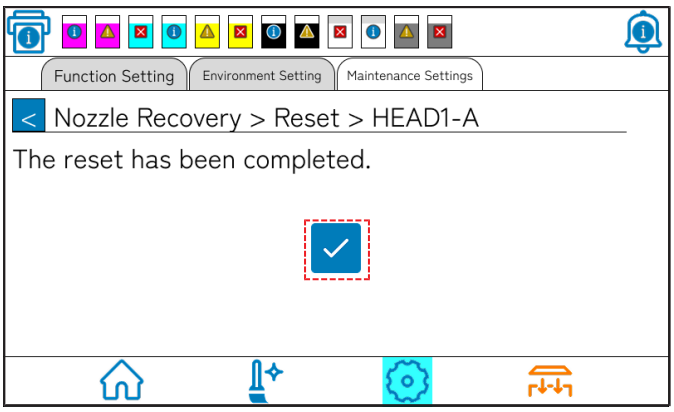
5 **Select the nozzle line to have its settings reset.**



6 **When the following screen appears, tap**  **.**



7 When the following screen appears, tap  to complete the process.



4.6 Automatic Maintenance Function

To use this machine comfortably, you can set the various maintenance functions to be run automatically.

Here, set performing intervals of various automatic maintenance functions.

Issues such as ink clogging can be avoided by performing automatic maintenance periodically. (Automatic maintenance function)

For automatic maintenance function, you can make the following settings.

Important!
- When maintenance is performed manually, after it is complete and when the time set with the automatic maintenance function has passed, maintenance starts automatically.

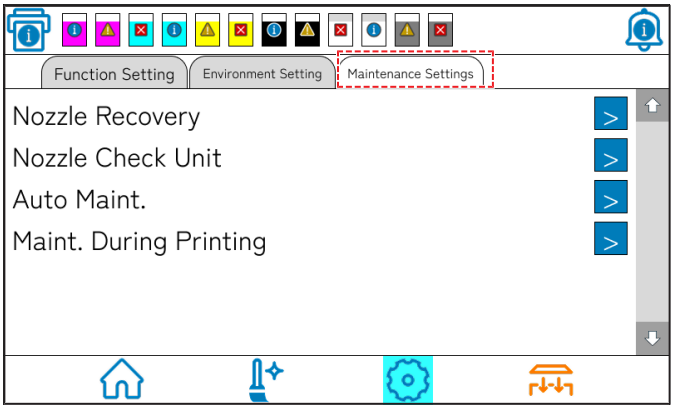
Function name	Description
Refresh	The interval between each refresh operation is set.
Cleaning	Cleaning type and the interval between each cleaning operation are set.

Important!
- When the "Check Waste Ink Tank" message is displayed, the operation set in the automatic maintenance function is not carried out. Perform the operations of☞ "Disposing the Waste Ink"(P. 157) as required.
- When the power button on the front of the machine is turned off, check the waste ink tank.

Setting the refresh intervals

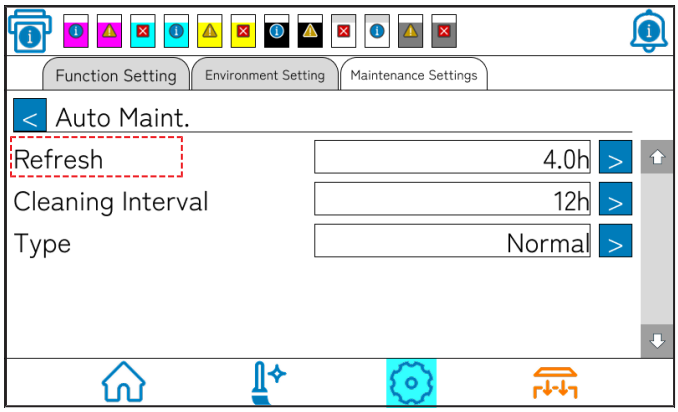
An interval is set between each operation of ejecting small amount of ink from the nozzles to prevent nozzle clogging.

1 Tap the [Maintenance Settings] tab on the Setting screen.



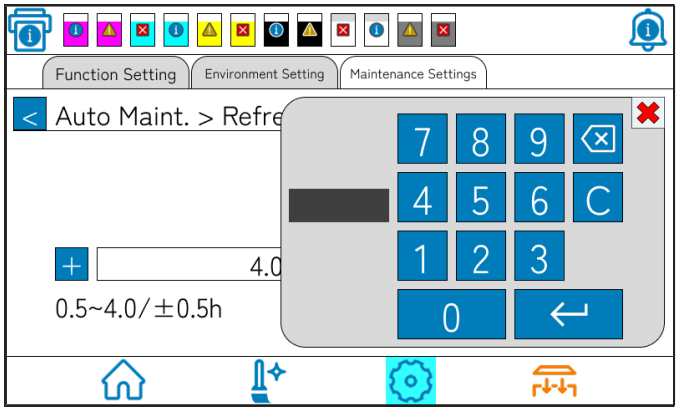
2 Tap [Auto Maint.].

3 **Tap [Refresh].**



4 **Tap [+] [-] or enter a number to set the refresh interval.**

- Available settings: 0.5 h to 4.0 h
- Recommended value: 1.0 h

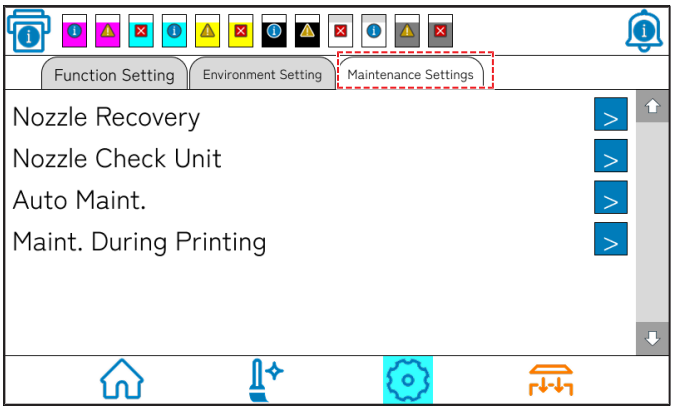


5 **Tap [✓].**

Setting the Cleaning Interval

Cleaning type and the interval between each cleaning operation are set.

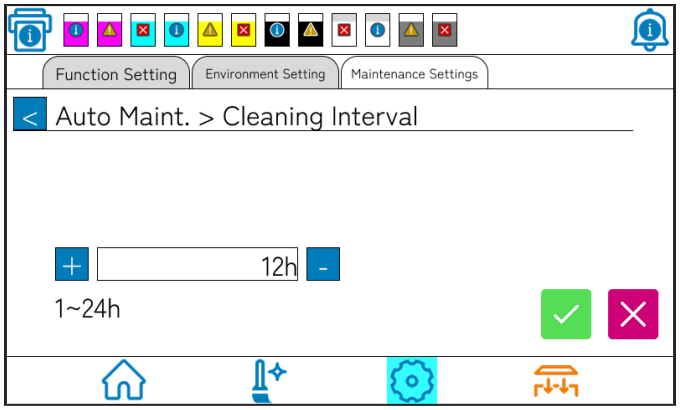
1 **Tap the [Maintenance Settings] tab on the Setting screen.**



2 **Tap [Auto Maint.].**

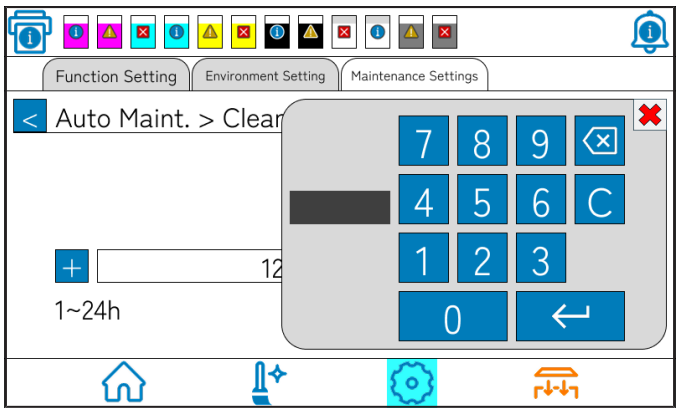
3 **Tap [Cleaning Interval].**

- The following screen appears.



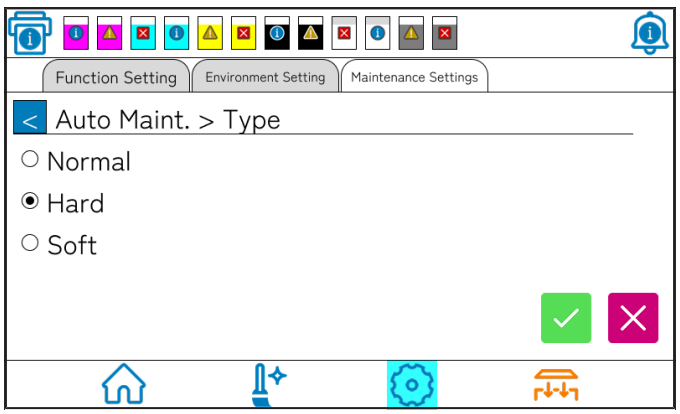
4 **Tap [+] [-] or enter a number to set the cleaning interval.**

- Available settings: 1 h to 24 h
- Recommended value: 12 h



5 **Select the cleaning type.**

- Available settings: NORMAL, SOFT, HARD
- Recommended setting: SOFT



6 **Tap [✓].**

4.7 Consumable Item Replacement

To order replacement consumable items, contact your local dealer or our service office.
For more information on consumable items, refer to our website.
https://mimaki.com/supply/inkjet.html

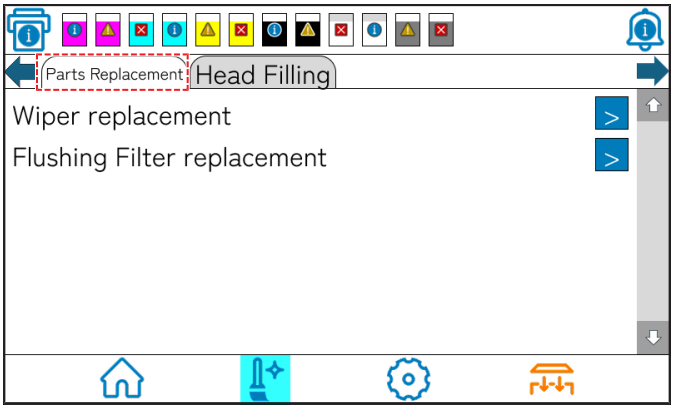
Replacing the wiper

The wiper is a consumable good. If the "Replace Wiper" message is displayed, replace the wiper as soon as possible.

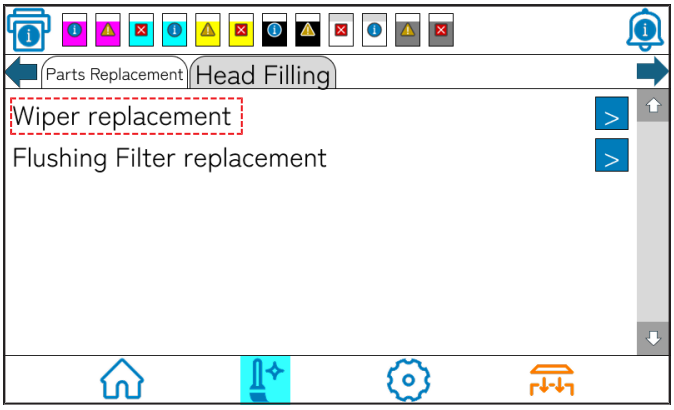
Also, wipe the ink sticking to the lower surface of the slider.

Important!
- Cleaning wipers are sold separately. Purchase one from your local distributor or our sales office.

1 **If the message appears, tap the [Parts Replacement] tab on the Maintenance screen.**

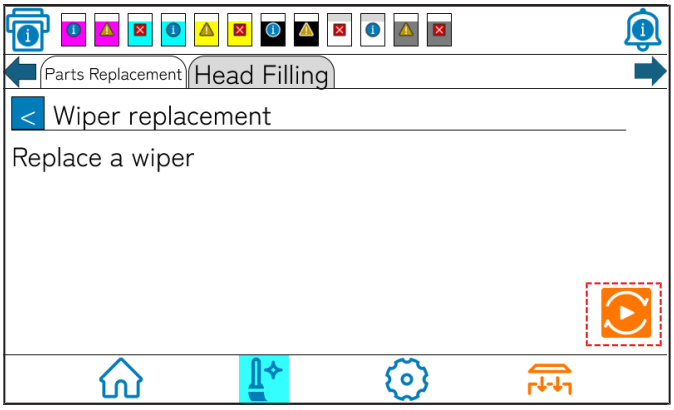


2 **Tap [Wiper replacement].**



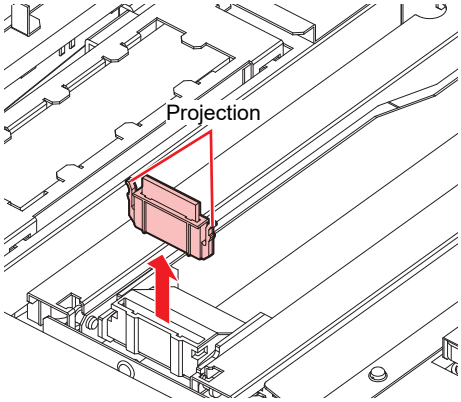
3 **When the following screen appears, tap .**

- Carriage moves onto the table.



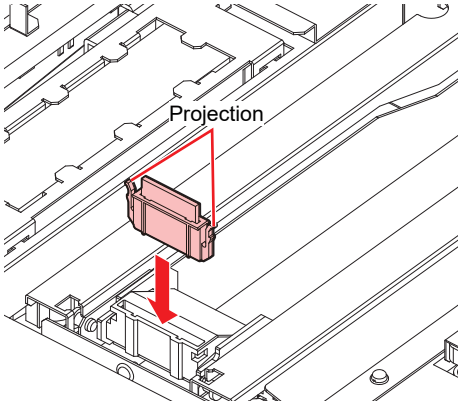
4 **Remove the wiper.**

- Pull out the wiper by holding the protrusions at both the ends.



5 **Insert a new wiper**

- Insert the wiper by holding the protrusions at both the ends.



6 **After replacing the wiper, tap .**

Replacing Carriage Filters

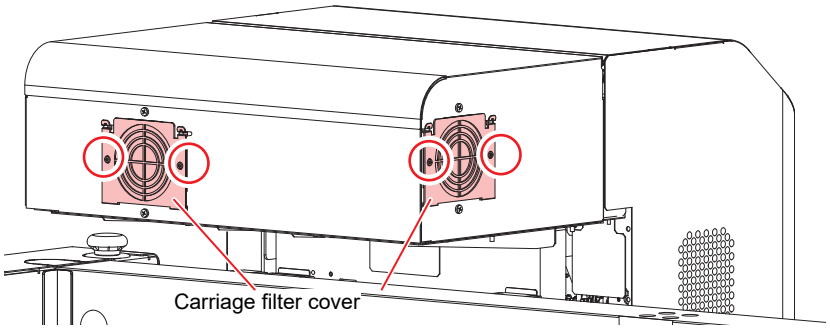
Replace the filters once every 1 or 2 weeks.

- Turn off the main power supply before carrying out maintenance.

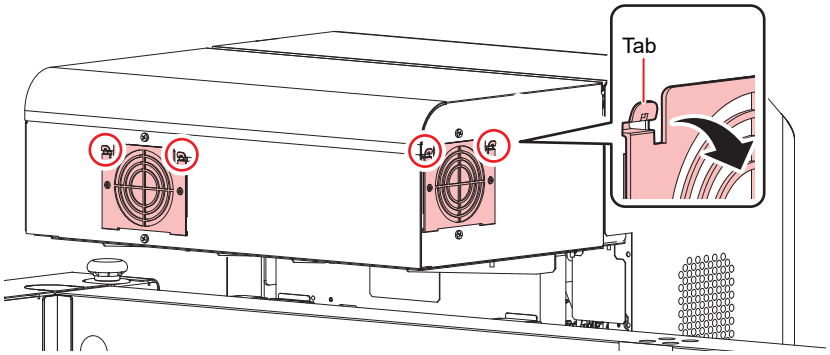
1 Remove the carriage filter covers.

- Remove the carriage filter covers located on the left and rear sides of the carriage.

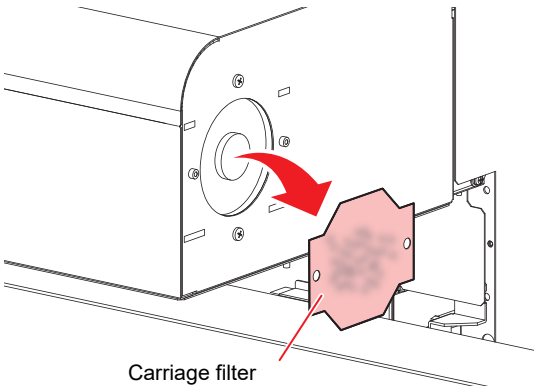
(1) Remove the screws (two for each cover).



(2) Pull on the tabs on the top of the carriage filter cover and pull it toward you.

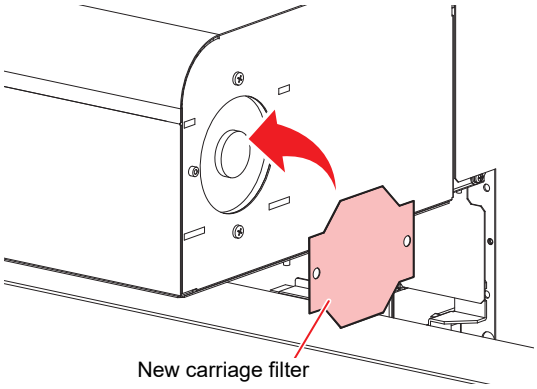


2 Remove the used carriage filter.



3 **Install the new carriage filter (PN : SPA-0189).**

- Place the holes on the left and right sides of each carriage filter over the protrusions on the carriage.



Important!
- Carriage filters are located on the left and rear sides of the carriage. Replace all the filters at same time.

4 **Return the carriage filter covers to their original positions.**

Disposing the Waste Ink

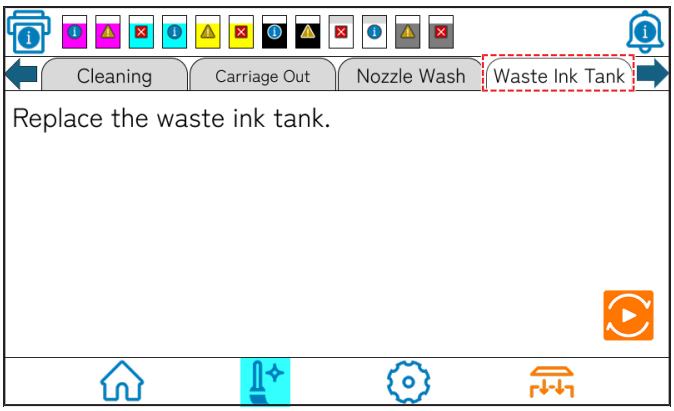
The ink used in head cleaning and other functions is stored in the waste ink tank on the lower right side of the machine. This machine is equipped with a sensor that detects the amount of ink used and displays a warning when the amount reaches a certain level. Consider replacing the waste ink tank when this message is displayed.

- The message is displayed when the remaining ink reaches 70% (2.1 liters remaining in the 2.6-liter tank).

- When disposing of the waste ink from the waste ink tank, be sure to wear the included safety glasses and gloves. Otherwise you may get ink in your eyes.

Important!
- Do not replace the waste ink tank while this machine is in operation (printing or cleaning).
- If waste ink overflows during work, wipe it off with a waste cloth.

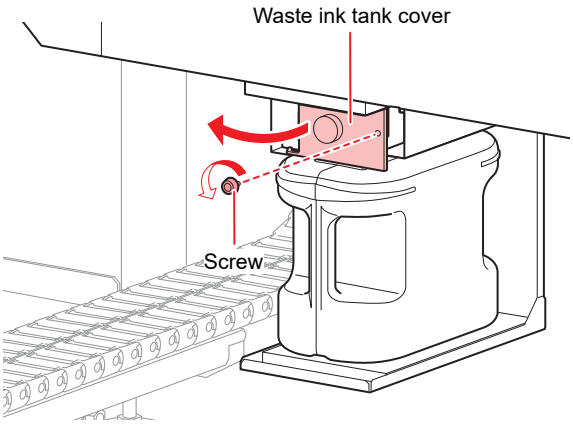
1 **Tap the [Waste Ink Tank] tab on the Maintenance screen.**



2 Tap .

3 **Open waste ink tank cover.**

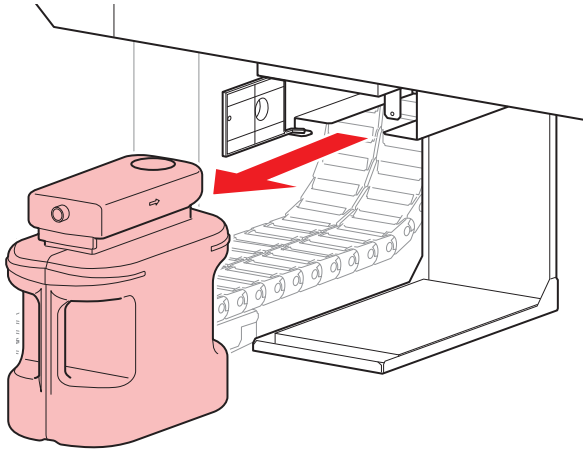
- Remove the screws on the waste ink tank cover, and open the cover to the front.



4 **Remove the waste ink tank.**

(1) Hold the handle of the waste ink tank and pull it to the front.

(2) Put a cap on the waste ink tank removed.

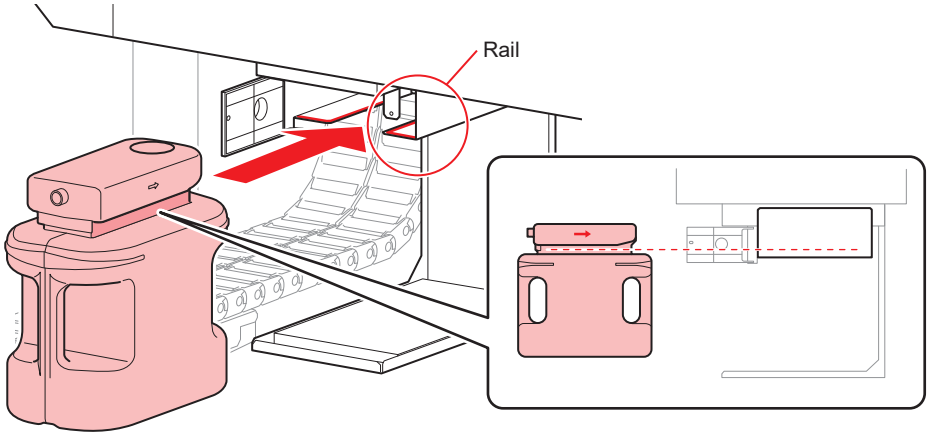


5 **After replacing the waste ink tank, tap** .

6 Replace the waste ink tank.

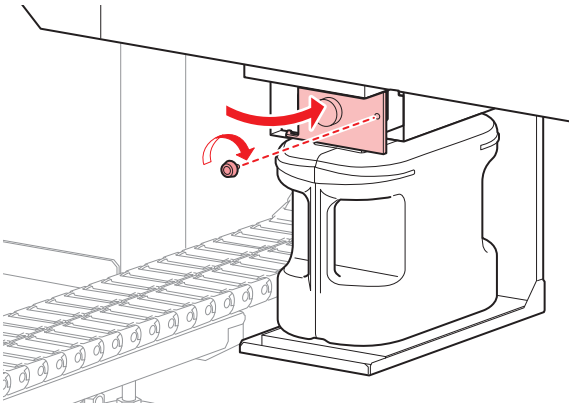
(1) Prepare a new waste ink tank.

(2) Lift the waste ink tank and check that it is set just below the drain port.



- Request an industrial waste processor to process the waste ink.
- Some of the components of (photopolymerization initiator) waste ink are poisonous to aquatic organisms. Prevent leakage flow to natural water bodies (such as rivers) and domestic sewages (such as toilets, roads).

7 Close the waste ink tank cover.



8 Tap .

Ink Bottle Cap Replacement

As a guideline, replace annually. For replacement instructions, see ☞ "Replacing an Ink Bottle"(P. 42).



- Pay close attention to ventilation and be sure to wear safety glasses, gloves, and a mask when handling ink, maintenance liquid, waste ink, or other solutions used with the machine. Leaking ink may adhere to the skin or get into the eyes or mouth.

Mist Filter Replacement




- Be sure to wear the included safety glasses and gloves when performing this procedure. Otherwise you may get ink in your eyes.

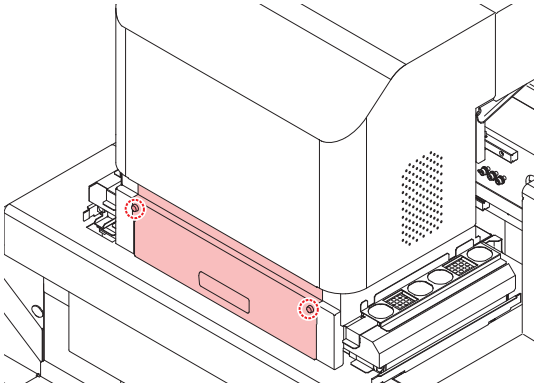
Check the mist filter. Replace if very dirty.

1 Remove the carriage cover DC.

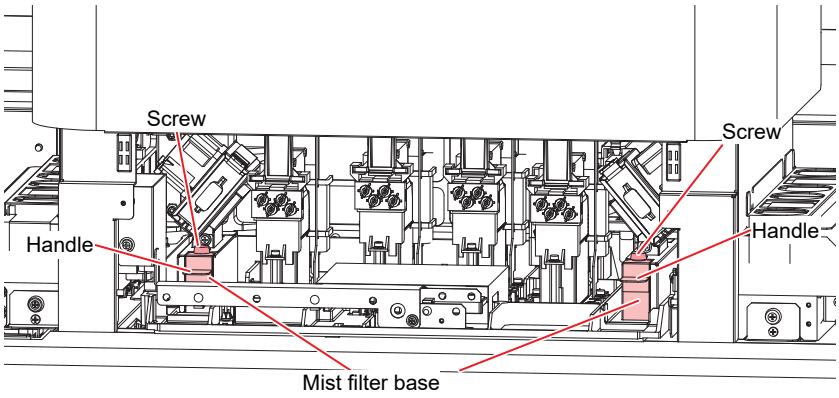
- Remove the screws (2 places) and remove the cover.

Important!

- After the work is complete, quickly attach the removed cover. If you leave it removed for a long time, ultra-violet rays may affect the ink.

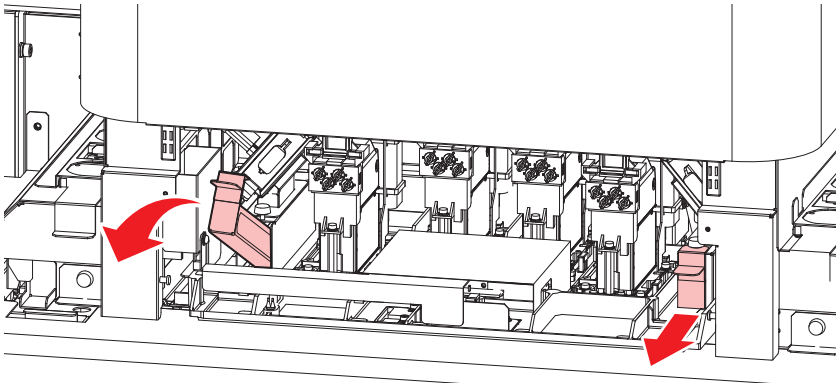


2 Loosen the retaining screws and pull out the mist filter base.





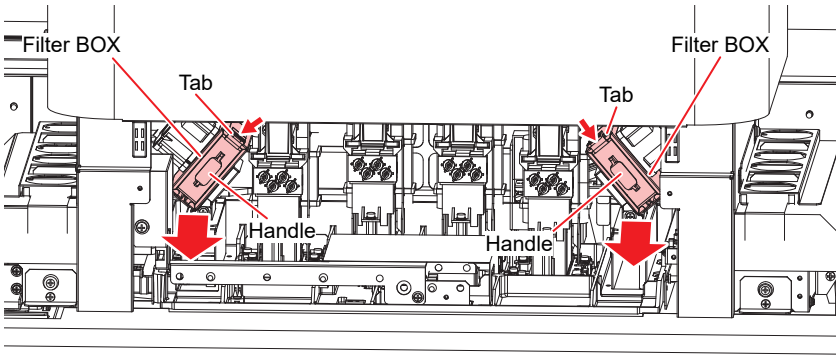
- Pull out the left side while lifting it upward.



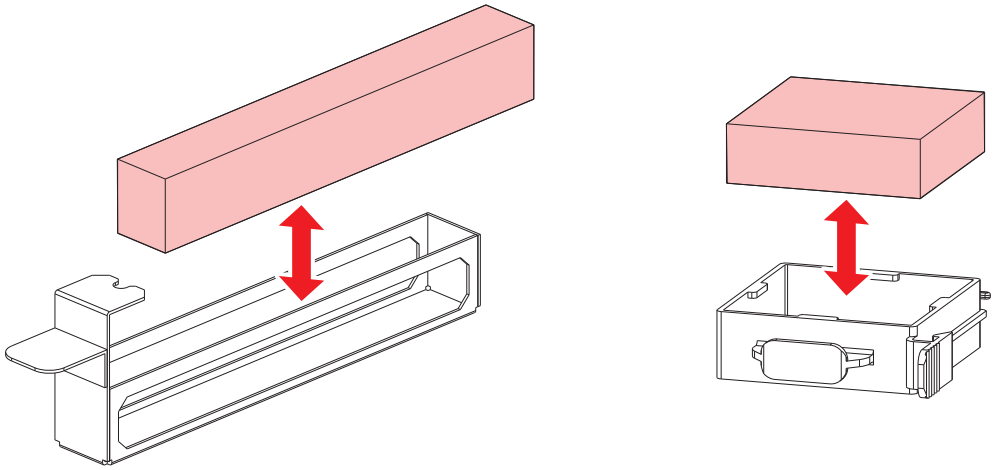
3 **Pull out the filter box.**

- Press down on the tabs and slide it in the direction of the arrow to remove it.

- Lift it in the direction of the tabs, and it will come off easily.



4 **Replace any filter that needs to be changed (Part No.: SPC-819) with a new one.**



5 **Insert the mist filter base.**

6 **Tighten the retaining screws that were removed in Step 2.**

7 **Insert the filter box.**

- Insert until it clicks into place. Confirm that the tab is engaged.

- Take care during the installation, as the left and right sides have different orientations.

8 **Close the carriage cover DC.**

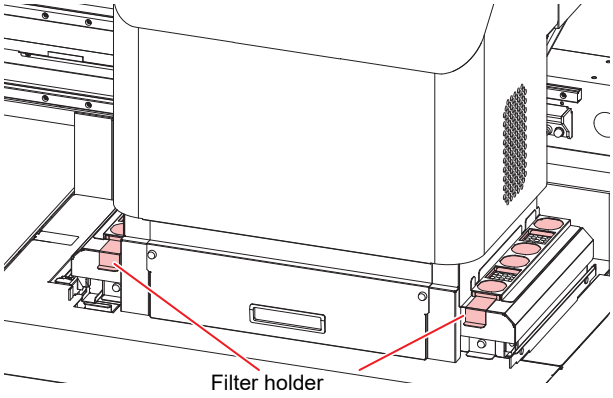
UV LED Filter Replacement



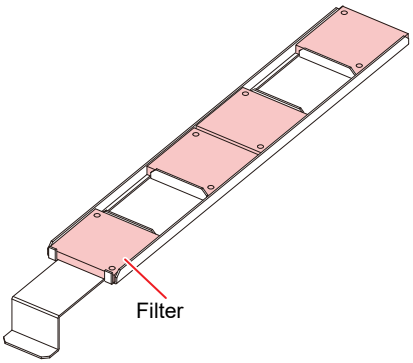

- Be sure to wear the included safety glasses and gloves when performing this procedure. Otherwise you may get ink in your eyes.

Check the condition of the UV LED filters and replace them if they are heavily soiled.

1 **Pull out the filter holder.**



2 **Replace with four new filters on both sides (Part No.: SPC-01044).**



3 **Return the filter holders to their original position.**



- Insert them all the way in and ensure that they are secured by the magnet.

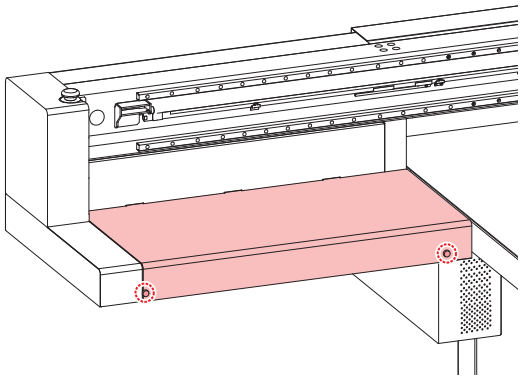
UV-LED Unit Glass Replacement

Check the condition of the UV-LED unit glass and replace it if it is heavily soiled, broken, or cracked.

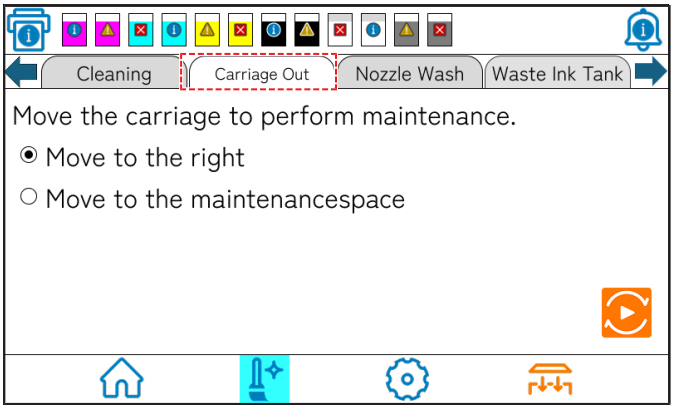
- This component is mainly made of glass. When handling it, take care to avoid damaging or hitting it.
- The UV-LED unit becomes very hot. Before starting maintenance, turn off the UV-LED unit and wait until it cools down sufficiently. There is a risk of burns.
- Be sure to wear the included safety glasses and gloves when performing this procedure. Otherwise you may get ink in your eyes.

1 Remove the cover on the right side of the Y-bar.

- Remove the decorative screws (2 places) and then remove the cover.



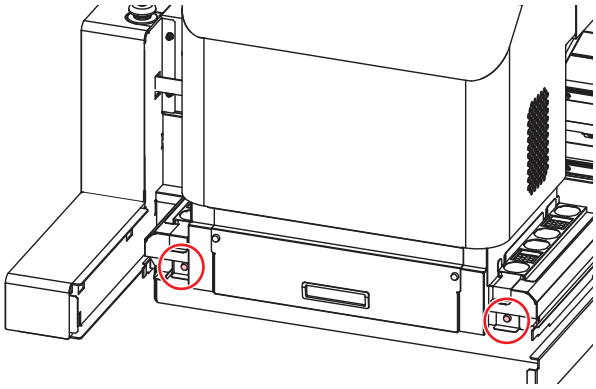
2 Tap [Carriage Out] on the Maintenance screen.



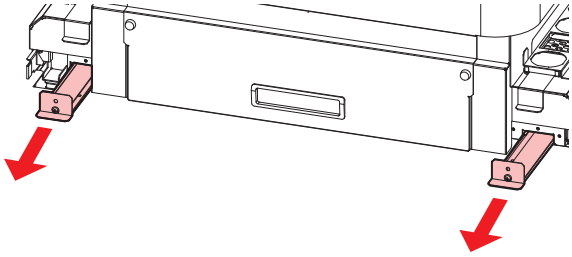
3 Select [Move to the maintenance space].

- Carriage moves to the left edge of the machine.

4 **Remove the screw.**



5 **Pull out the UV-LED unit glass.**



6 **Insert the new UV-LED unit glass.**

- Left UV-LED unit glass Part No.: SP-01042
- Right UV-LED unit glass Part No.: SP-01043

- Do not touch the glass surface.
- Take care during the installation, as the left and right sides have different orientations.
- If the glass is cracked or broken, handle it with care to prevent any glass shards from falling and causing injury.

7 **Tighten the screw.**

4.8 Flushing Filter

Tools required for replacement	• F-200/LF-200 Washing Liquid (PN : SPC-0568)	• Safety glasses
	• Waste cloth	• Gloves




- Be sure to wear the included safety glasses and gloves when performing replacement. As there is ink absorbed in the flushing filter, it may get in your eyes.

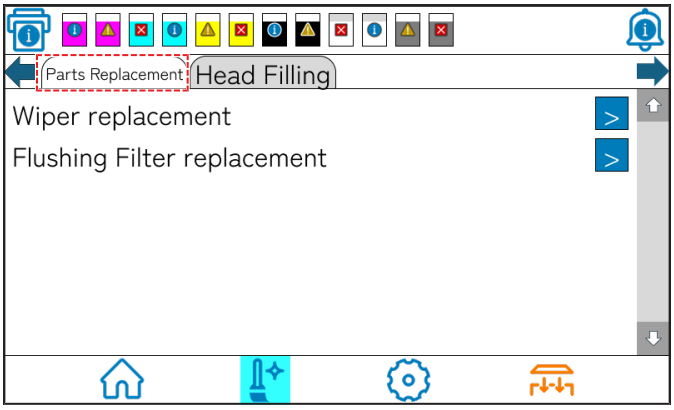
Replacing the Flushing Filter

The flushing filter needs to be replaced periodically.

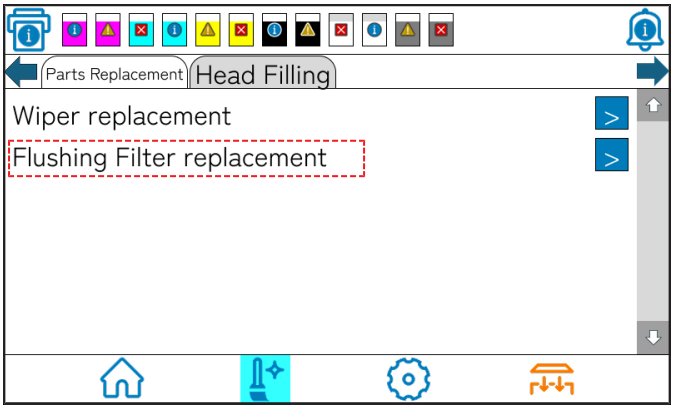
Replace the RF absorbent material (flushing filter; PN: SPC-0768) if a message advising replacement appears (as shown in the following figure).

1 **When it's time to replace the flushing filter, the "Replace flushing filter" message will appear.**

2 **If the message appears, tap the [Parts Replacement] tab on the Maintenance screen.**

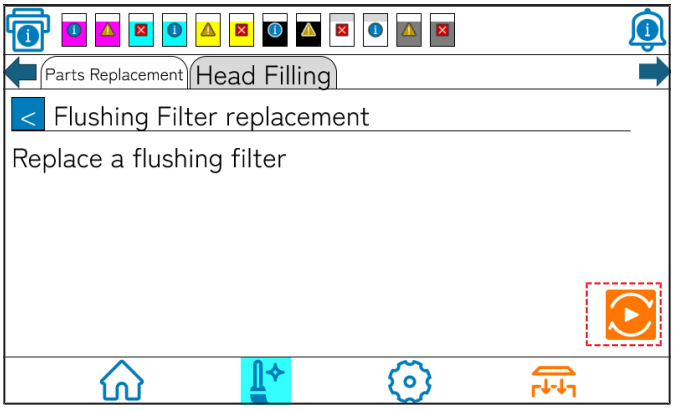


3 **Tap [Replace Flushing Filter].**

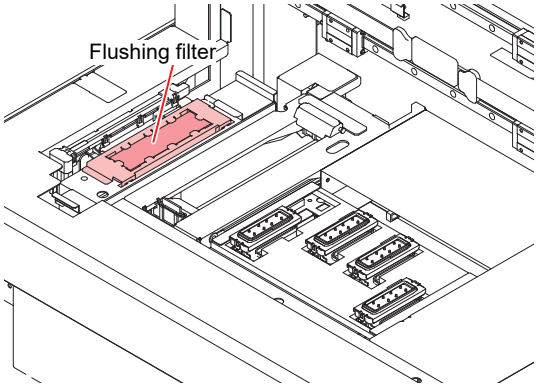


4 **When the following screen appears, tap .**

- The carriage will move.



5 **Replace the flushing filter.**



6 **Once the replacement is complete, tap .**

- The carriage will return to the station.

Chapter 5 Troubleshooting



This chapter

Check again before deciding the trouble as malfunction.

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Warning Messages 176
Error Message 176

5.1 Troubleshooting

Check again before deciding the trouble as malfunction. If there is no improvement even after troubleshooting, contact your local distributor, or our sales office or call center.

The Power Does Not Turn On

In most of the cases, the power does not turn on due to improper connection of the power cable for the machine or the computer. Check that the power cable is connected properly.

Printing is Not Possible

The problem of machine not able to print occurs when the data is not being transmitted to the machine properly.

It may also occur if the printing function does not work properly or the media is not installed correctly.

Check points	Implementation
Is the correct interface cable used?	Use the cable exclusive for this machine.
Is the interface cable connected properly?	Securely connect the interface cable.
Is a message indicating that ink has run out displayed?	Replace the ink bottle with a new one.

Image quality is poor

This section explains the measures to be taken if the print quality is not satisfactory. Take measures according to the cause. If there is no improvement even after troubleshooting, contact your local distributor, or our sales office or call center.

Symptom	Corrective action
White lines/blur/dark lines occur (in the direction of head movement)	1. Execute head cleaning. ☞ "Head Cleaning"(P. 80) 2. Perform maintenance inside the station. ☞ "Maintaining the Capping Station"(P. 117) 3. Clean the dirt, pieces of paper, or any other trash along the area where the head passes. 4. Perform an air purge. ☞ "Performing Air Purge"(P. 139)
Misalignment in reversible printing	1. Correct the drop position. ☞ "Correcting the Drop Position"(P. 82)
Ink drips during printing	1. Clean the wiper. ☞ "Cleaning wiper and cap"(P. 117) 2. Clean the ink cap. ☞ "Cleaning wiper and cap"(P. 117) 3. Clean around the head. ☞ "Maintenance of Head Surroundings"(P. 126) 4. Execute head cleaning [NORMAL]. ☞ "Head Cleaning"(P. 80) 5. Set automatic cleaning for maintenance during printing. ☞ "Maintenance Settings Menu"(P. 94) 6. Adjust the pressure. ☞ "If pressure abnormality occurs"(P. 173)

Nozzle is clogged

Nozzle discharge may become unstable depending on the surrounding temperature or if the machine is not used for a long time.

Try the following method to restore the nozzle discharge to normal.

1 Perform maintenance daily.

- Perform maintenance for every spot mentioned in "Maintenance Required".

2 Execute head cleaning (NORMAL).

- Perform head cleaning after completing Step 1.
  ☞ "Head Cleaning"(P. 80)
- After that, check the nozzle status by running a test print.
  ☞ "Test Printing"(P. 76)



- Try the next step if the nozzle clogging problem is not solved.

3 Execute head cleaning (HARD).

- If the nozzle clogging is not resolved even after repeating Normal cleaning, then set the cleaning mode to HARD and perform head cleaning again.
  ☞ "Head Cleaning"(P. 80)
- After that, check the nozzle status by running a test print.
  ☞ "Test Printing"(P. 76)

4 If nozzle is still clogged even after head cleaning, perform the steps in mentioned for the situation where nozzle clogging cannot be restored.

- ☞ "When Nozzle Clogging Cannot Be Solved"(P. 132)

Important!

- If the missing nozzle is not resolved even after performing the procedure mentioned above, contact your local distributor, or our sales office or call center.

Ink bottle error

If an abnormality occurs with the ink bottle, a warning message is displayed.

None of the operations such as printing and cleaning that discard ink are available.

Perform the following procedure when such an error occurs.

- Check that the ink IC chip in the ink cover is set correctly.
- Replace the ink bottle with a new one immediately.

Important!

- Once the ink bottle error is displayed, do not leave the ink bottle without replacing it for a long time. The machine will lose the nozzle clogging prevention function.
  If the nozzles are clogged, contact your local distributor, or our sales office or call center.

Perform the following operation to check the details of the ink bottle error.

1 Press the [ENTER] key in LOCAL mode.

2 Press the [ENTER] key.

- Details of the ink bottle error are displayed.
- When multiple ink bottle defects occur, they will be displayed in order if you press the [ENTER] key or ◀▶.

Ink leakage

If an ink leak occurs, turn off the main power immediately and unplug the power cable. Contact your local dealer or our service office.

If the message "SHAKE WHITE INK BOTLES" is displayed

White ink tends to settle, and hence you must shake the ink bottle periodically.

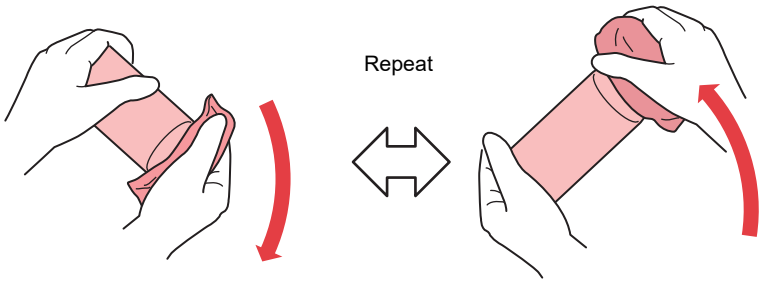
When using white ink, a message will be displayed periodically prompting you to shake the white ink bottle. Follow the procedure below to shake the white ink bottle.

- Be sure to perform this procedure with the operation panel pushed all the way in. During the procedure, be careful not to let your head touch the operation panel or table.

1 Take out the white ink bottle and gently shake it side to side 20 times or more.

- To prevent the ink from leaking when the bottle is shaken, wear hand gloves and close the lid of the ink bottle with a paper towel. Then shake the bottle from side to side at least 20 times to ensure a slow ink flow.

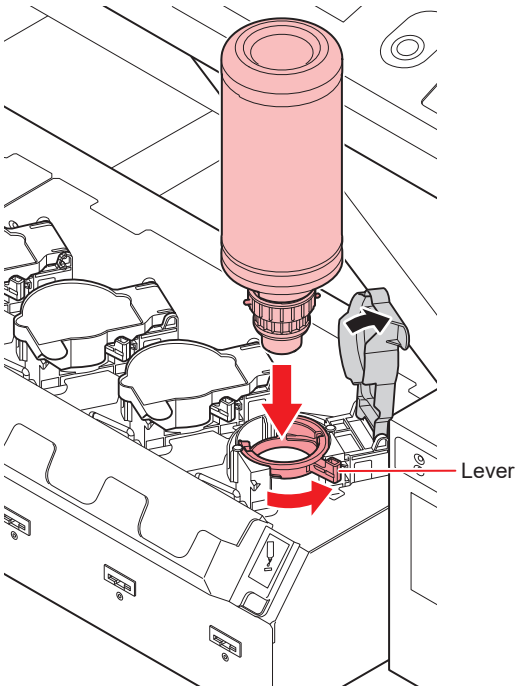
- Make sure that the lid is closed tightly before shaking the bottle.
- The ink may leak outside if you shake the bottle too hard. Shake carefully.
- If only a small amount of ink is remaining, it may not be possible to stir it properly. To stir it properly, tilt the ink bottle until it becomes vertical.



Hold down tightly with a paper towel and shake well

2 **Set the ink bottle over the tank, and turn the tank lever from right to left.**

- Move the tank lever completely to the right and set the ink bottle.



Important! • Never rotate the ink bottle after setting it over the tank. Doing so may result in ink leakage.

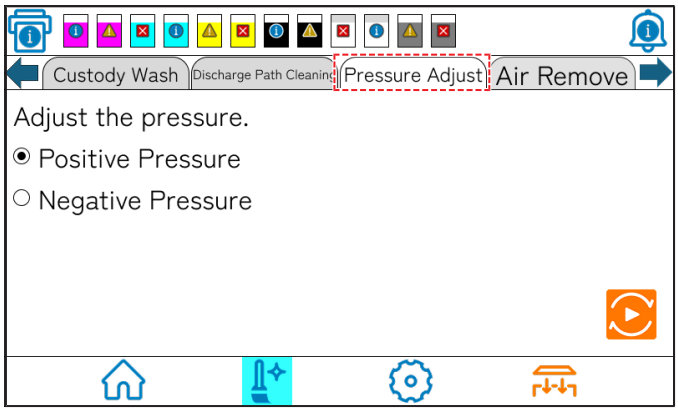
3 **Press the [ENTER].**

If pressure abnormality occurs

The pressure controlled in the machine may exceed the control range due to environment and aging.

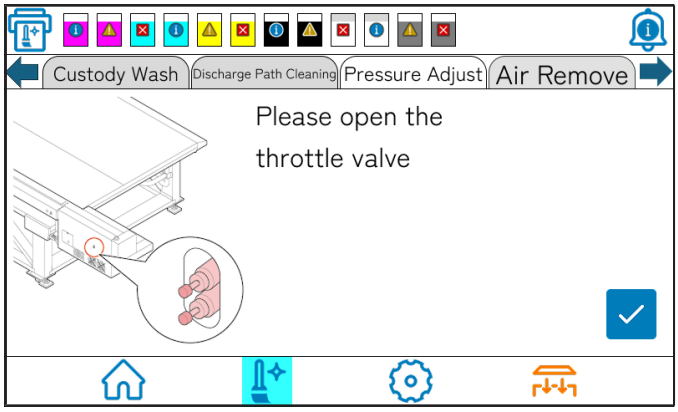
If a pressure abnormality occurs, adjust the pressure immediately with the following procedure and return the pressure to its normal value.

1 **Tap the [Pressure Adjustment] tab on the Maintenance menu.**



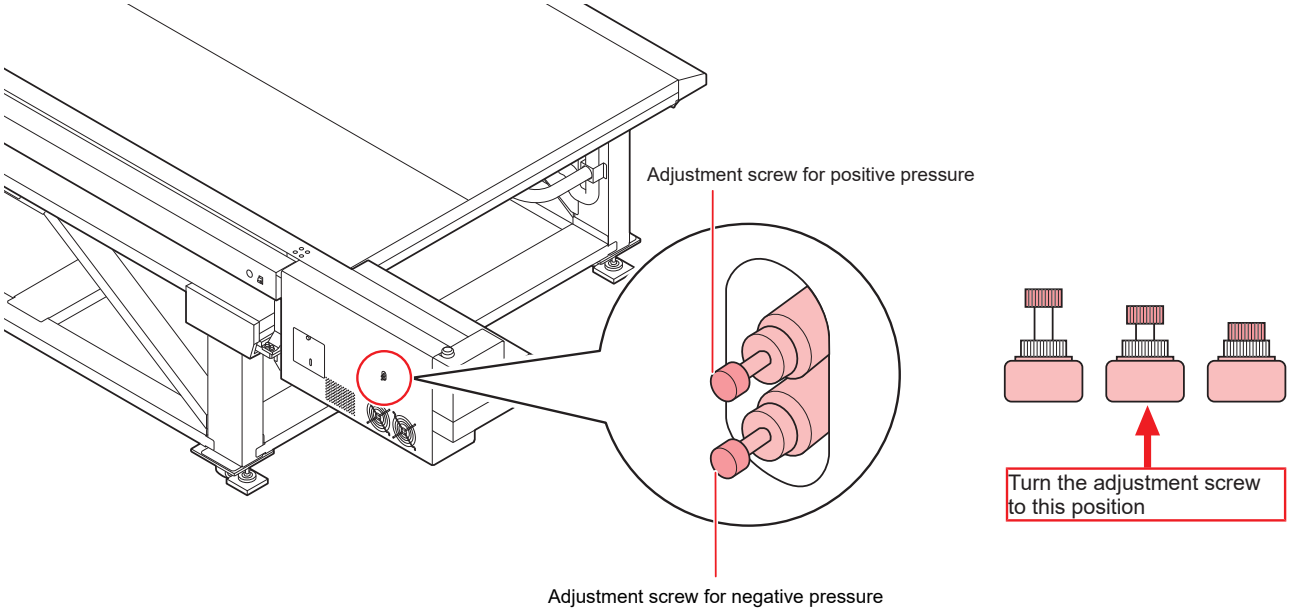
2 **Select "Positive Pressure" or "Negative Pressure", and then tap .**

- The following screen appears.



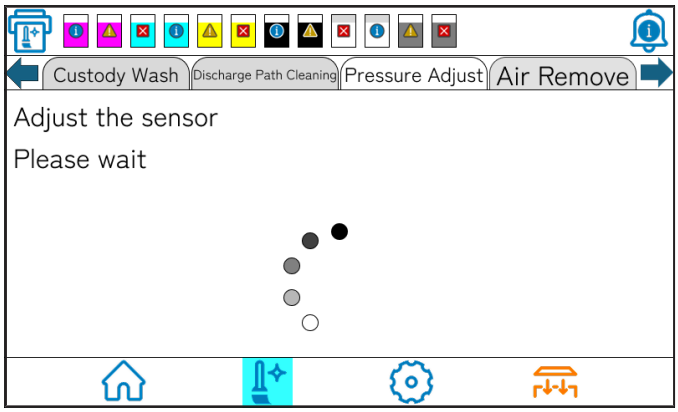
3 **Rotate the adjustment screw of the throttle valve to release it so that air can flow.**

- Rotate the adjustment screw of the throttle valve until it comes to the middle position.



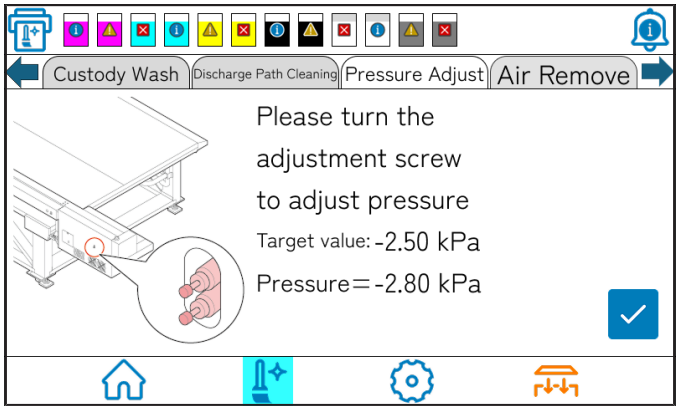
4 **Tap .**

- The sensor adjustment process will start.



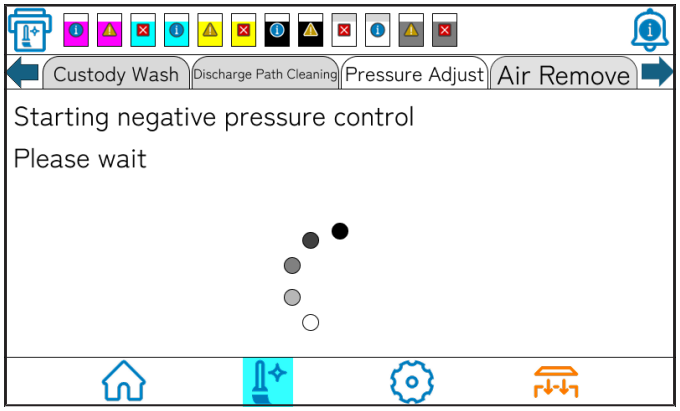
5 **Rotate the adjustment screw of the throttle valve to adjust pressure to its proper value.**

- Proper value of negative pressure: -2.50 kPa
- Proper value of positive pressure: 15.00kPa
- Adjust the throttle valve in the order of "negative pressure" -> "positive pressure" -> "negative pressure".
- As the negative pressure changes between ±0.1 to 0.2 kPa, adjust so that the intermediate value becomes the target pressure.



6 **Tap**  **.**

- Error is resolved and negative pressure control starts.



Important!

- If an error occurs even after adjusting the pressure, contact your local distributor, or our sales office or call center.

5.2 Problems Causing Messages to Appear

When an abnormality occurs, the buzzer rings and the display shows a corresponding message.
Take measures according to the message.

Warning Messages

Ink Errors

Ink errors are also displayed in the local guidance.

Display	Cause	Corrective action
NON INK IC : ---- YYKK	Ink IC chip of the ink bottle cannot be read properly.	• Reinsert the ink bottle for which the warning occurred. If displaying again, contact your local distributor, our sales office, or service center.
WRONG INK IC : ---- YYKK		
INK TYPE : ---- YYKK	The ink of the ink bottle is of a different type than the ink currently supplied.	• Check the ink type of the ink bottle for which the warning occurred.
INK COLOR : ---- YYKK	The color of ink in the ink bottle is of a different type than the currently supplied ink.	• Check the color of the ink bottle for which the warning occurred.
WRONG INK BOTTLE : ---- YYKK	An error occurred in the Ink IC chip information of the ink bottle.	• Replace the ink bottle for which the warning occurred.
NO INK BOTTLE : ---- YYKK	Ink bottle is not set in the external ink supply unit.	• Set the ink bottle on the bottle holder for which the warning occurred.
EXPIRATION : ---- YYKK	The ink has expired.	• Replace with new ink or use up as quickly as possible. Printing is possible. ☞ "Replacing an Ink Bottle"(P. 42)
Expiration:1MONTH : ---- YYKK	The ink is one month past its expiration date and cannot be used.	• Replace with new ink or use up as quickly as possible. Printing is possible. ☞ "Replacing an Ink Bottle"(P. 42)
Expiration:2MONTH : ---- YYKK	The ink is two months past its expiration date and cannot be used.	• Replace with new ink. Printing will be impossible soon. ☞ "Replacing an Ink Bottle"(P. 42)

Error Message

When an error message is displayed, eliminate the error according to the following table.

Message	Cause	Corrective action
ERROR 04 PARAM ROM	A problem was detected with the main PCB.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 108 HD THERMIS [12]	A problem was detected with print head temperature control.	
ERROR 108 HD CONNECT [12]	A problem was detected with the print head connection.	
ERROR 108 HD MEM EMP [12]	A problem was detected with the print head.	
ERROR 10e FROM CLEAR		
ERROR 10f FROM WRITE		
ERROR 115 PCB MAIN-F1		
ERROR 122 CHECK : SDRAM	A problem was detected with the SDRAM.	
ERROR 122 PRAM NONE		
ERROR 123 PRAM DATA	A problem was detected with the main PCB.	
ERROR 124 PRAM ADDR		
ERROR 128 HDC FIFO OVER	A problem was detected with the print head control PCB.	
ERROR 128 HDC FIFO UNDER		
ERROR 129 Battery Exchange	Dead battery of internal clock has been detected.	• Contact your local distributor, our sales office, or service center.
ERROR 12d PCB MAIN-F4	A problem was detected with the main PCB.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 147 DS-IC BUSY	An ink IC control abnormality was detected.	
ERROR 148 E-LOG SEQ	A log control abnormality was detected.	
ERROR 151 Main PCB V1R2	A problem was detected with the main PCB power supply circuit.	
ERROR 152 Main PCB V2R5		
ERROR 153 Main PCB V3R3		
ERROR 154 Main PCB V05		

Message	Cause	Corrective action
ERROR 155 Main PCB V36-1		
ERROR 15f HEAD DRIVE HOT	The COM driver on the G6HDC PCB is too hot.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 171 NEW HEAD CONNECT	A new print head connection was detected.	
ERROR 17e PCB IIO1 (PCB INKCTR1)	A communication error was detected between the boards.	
ERROR 17f PCB IIO2 (PCB INKCTR2)		
ERROR 186 HDC OVERFLOW	A problem was detected with the print head control.	
ERROR 186 HDC UNDERFLOW		
ERROR 187 HDC SLEW RATE		
ERROR 188 HDC MEMORY		
ERROR 18c Main PCB V12	A problem was detected with the main PCB power supply.	
ERROR 18e FLS NOT COMP	A problem was detected with the print head control.	
ERROR 18f OFFSET START [1 2]		
ERROR 18f OFFSET END [1 2]		
ERROR 19e HDC-F*	A blown fuse on the G6HDC PCB was detected.	• The fuse must be replaced. Contact your local distributor, our sales office, or service center.
ERROR 19f LED CONNECT	The UV- LED PCB could not be detected.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 1b5 SLIDER CONNECT	The G6HDC PCB cannot be detected.	
ERROR 1bf PCB MAIN-F2	A problem was detected with the main PCB.	
ERROR 1e6 PRAM Size Shortage	Insufficient memory	
ERROR 1e9 PCB INKCTR*-F*	A blown fuse on the ink supply 2 PCB was detected.	• The fuse must be replaced. Contact your local distributor, our sales office, or service center.

Message	Cause	Corrective action
ERROR 201 Command Error	Data other than print (RIP) data was received, or a problem was detected with the print (RIP) data received.	1. Clear the data and resend. 2. Check the Ethernet cable connection. 3. Only use cables that comply with the relevant standards. 4. Turn off the power on the machine and turn it on after a while. ☞ "Turning Off the Power"(P. 59)
ERROR 202 Parameter Error	A problem was detected with the print (RIP) data received.	
ERROR 206 Print Mode Error	Print (RIP) data was received with print parameters that do not allow printing.	• Change the output parameters and profile using RIP software.
ERROR 20A Driver Version	Printing is not possible because the Mimaki driver version is old.	• Install the latest Mimaki driver available from:
ERROR 303 PCB MAIN ET	A problem was detected with the main PCB.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 401 MOTOR X	The X motor was overloaded.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 402 MOTOR Y	The Y motor was overloaded.	
ERROR 403 X CURRENT	An overcurrent error was detected in the X motor.	
ERROR 404 Y CURRENT	An overcurrent error was detected in the Y motor.	
ERROR 405 STATION ERR	A station error was detected.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 406 Wiper Move Failure	The wiper origin could not be detected.	
ERROR 48b Y MOTOR COM	Y motor communication is not possible.	
ERROR 48c Y MTR I2C COM	Y motor communication is not possible at startup.	
ERROR 496 Y MOTOR DIR	The Y motor operating direction cannot be specified.	
ERROR 4ce Y POSITION ERROR (MAX)	A shift in the coordinates was detected.	1. Display the "Error List (bell icon)" on the touch panel. 2. Tap [Alarm Clear] on the Error List screen.
ERROR 4cf Y POSITION ERROR (MIN)		
ERROR 505 MEDIA JAM	The media jam sensor was triggered.	• Remove the media that has come into contact, and tap [Alarm Clear] on the Error List screen.

Message	Cause	Corrective action
ERROR 506 STATION SNS	Station sensor cannot be detected.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 509 HDC POSCNT	A problem was detected with position control.	
ERROR 50a Y Org Detect Error	A problem was detected with Y origin detection (initialization).	
ERROR 50f L-SCALE BLACK	A problem was detected with the linear scale.	
ERROR 512 CAPSHTR ORIGIN	Cap shutter origin detection failed.	
ERROR 51A NEGATIVE P.SENSOR	A negative pressure sensor abnormality was detected.	
ERROR 520 POSITIVE P.SENSOR	An abnormality was detected in the positive pressure sensor.	
ERROR 525 Wrong Ionizer	The ionizer internal circuit is defective, or an abnormal discharge occurred.	
ERROR 526 Ionizer Ion Level	The amount of generated ions was reduced by fouling and abrasion of the electrode needle.	• Refer to the ionizer instruction manual and clean the electrodes.
ERROR 527 Ionizer Condition	Ambient conditions may cause ions to be absorbed by metals in the vicinity and affect discharge capability.	• Remove any conductors or discharge devices close to the ionizer.
ERROR 528 Pump Motor	A problem was detected with the pump motor.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 542 EMERGENCY STOP DETECTION	The system detected that the emergency stop switch was pressed.	1. Release the emergency stop switch. 2. Display the "Error List (bell icon)" on the touch panel. 3. Tap [Alarm Clear] on the Error List screen.
ERROR 54d G6HDC COOLING FAN ERR	A G6HDC cooling fan rotation abnormality was detected.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 54e UV-LED Fan Err	A UV-LED cooling fan rotation abnormality was detected.	

Message	Cause	Corrective action
ERROR 576 LOCATING PIN OPERATION ERR	A locating pin operation abnormality was detected.	• Check that all the locating pins have lowered.
ERROR 601 INK BOTTLE NEAR END	The level of ink is low.	• Ink is nearly used up.
ERROR 602 INK BOTTLE END	The ink has run out.	• Replace with new ink. ☞ "Replacing an Ink Bottle"(P. 42)
ERROR 604 Check Waste Ink tank	The waste ink tank sensor has detected that it is nearly full.	1. Check the level in the waste ink tank. 2. Replace the waste ink tank. ☞ "Disposing the Waste Ink"(P. 157)
ERROR 605 Replace Wiper	The wiping count has exceeded the specified amount.	• Replace with a new wiper. ☞ "Replacing the wiper"(P. 154)
ERROR 606 Non Ink IC	The ink IC chip cannot be read correctly. Or it has not been properly installed.	1. Check to confirm the ink IC chip was inserted correctly. 2. Turn off the power on the machine and turn it on after a while. ☞ "Turning Off the Power"(P. 59) 3. Replace with new ink. ☞ "Replacing an Ink Bottle"(P. 42)
ERROR 608 Wrong Ink IC	An error occurred with the information on the ink IC chip.	
ERROR 60c Ink Type	The ink type registered on the IC chip is different from the ink type filled.	• Insert an ink IC chip for the correct type of ink.
ERROR 60F Expiration Near	The ink has expired.	• Replace with new ink or use up as quickly as possible. Printing is possible. ☞ "Replacing an Ink Bottle"(P. 42)
ERROR 617 SUB-TANK SENSOR	An abnormality was detected in the sub-tank fluid level detection sensor.	• Turn off the power on the machine and turn it on after a while. ☞ "Turning Off the Power"(P. 59)
ERROR 618 TANK LEVEL H	An abnormality was detected in the sub-tank fluid level detection sensor.	• Turn off the power on the machine and turn it on after a while. ☞ "Turning Off the Power"(P. 59) Check the nozzle condition, and perform cleaning if you find any nozzle clogging. ☞ "Head Cleaning"(P. 80)
ERROR 619 TANK LEVEL L		
ERROR 61a InkOverflow	The sensor detected that the amount of ink in the sub-tank was higher than the specified limit.	• Turn off the power on the machine and turn it on after a while. ☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 61b Ink supply	Ink cannot be supplied.	
ERROR 61C NEGATIVE P.CONTROL	Failure to generate the appropriate negative pressure.	1. Adjust the pressure. ☞ "If pressure abnormality occurs"(P. 173)

Message	Cause	Corrective action
ERROR 61D NEGATIVE P.NotEnough	Failure to maintain the appropriate negative pressure.	2. Turn off the power on the machine and turn it on after a while. ☞ "Turning Off the Power"(P. 59) 3. If displaying again, contact your local distributor, our sales office, or service center.
ERROR 61E NEGATIVE P.OVER		
ERROR 61F POSITIVE P.CONTROL	Failure to generate the appropriate positive pressure.	
ERROR 620 POSITIVE P.NotEnough	Failure to maintain the appropriate positive pressure.	
ERROR 621 PPOSITIVE P.OVER		
ERROR 628 Excess Ink Usage	• The ink usage amount stored in the ink IC chip exceeded the preset value. • The ink IC chip was not replaced when the ink was changed, or the ink was continued to be used with clogged nozzles.	• Replace with new ink. ☞ "Replacing an Ink Bottle"(P. 42)
ERROR 629 Expiration Near	The ink has expired.	• Replace with new ink or use up as quickly as possible. Printing is possible. ☞ "Replacing an Ink Bottle"(P. 42)
ERROR 62a Expiration Over	The ink is two months past its expiration date and cannot be used.	• Replace with new ink. Printing is not possible. ☞ "Replacing an Ink Bottle"(P. 42)
ERROR 631 INK COLOR	The ink color registered on the IC chip is different from the ink color filled.	• Insert an ink IC chip for the correct ink color.
ERROR 637 INK LEAK (INK LEAK UNIT)	The ink leak sensor detected an ink leak.	• Contact your local distributor, our sales office, or service center.
ERROR 649 NEGATIVE PRESSURE ADJUSTMENT	A condition requiring pressure readjustment was detected.	1. Adjust the pressure. ☞ "If pressure abnormality occurs"(P. 173) 2. Turn off the power on the machine and turn it on after a while. ☞ "Turning Off the Power"(P. 59) 3. If displaying again, contact your local distributor, our sales office, or service center.
ERROR 650 NCU CONNECT	A problem was detected with the NCU connection.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.

Message	Cause	Corrective action
ERROR 651 REPLACE NCU	A problem was detected with the nozzle clogging assessment.	• Clean the NCU. ☞ "NCU Cleaning"(P. 122) • Replace the NCU if the error does not clear. Contact your local distributor, our sales office, or service center.
ERROR 652 NCU NZK CHK (HW)	A problem was detected with the nozzle clogging assessment.	• Clean the NCU. ☞ "NCU Cleaning"(P. 122)
ERROR 653 NCU NZK CHK (MARK)		
ERROR 654 NCU CENTER POS	Ink discharge position adjustment failed.	
ERROR 655 NCU FLUSH POS		
ERROR 656 NCU SN ADJST	Sensor sensitivity adjustment failed.	
ERROR 657 REPLACE NCU INK PAD	The NCU ink pad is full.	• The NCU ink absorber must be replaced. Contact your local distributor, our sales office, or service center.
ERROR 658 NCU SENSOR LV LOW	There is a drop in the sensor sensitivity level.	• Clean the NCU. ☞ "NCU Cleaning"(P. 122) • Replace the NCU if the error does not clear. Contact your local distributor, our sales office, or service center.
ERROR 65b NCU SENS ADJ ERR H	Sensor sensitivity adjustment failed.	
ERROR 65c NCU SENS ADJ ERR L		
ERROR 666 REPLACE WASTEINKTANK	The waste ink tank sensor has detected that it is full.	1. Check the level in the waste ink tank. 2. Replace the waste ink tank. ☞ "Disposing the Waste Ink"(P. 157)
ERROR 706 UV Lamp Temp. High	The UV-LED unit became hot.	• If this occurs frequently, contact your local distributor, our sales office, or service center.
ERROR 707 HEAD HEATER BREAK	The head heater is disconnected. (The temperature does not rise even when heated beyond the stipulated duration.)	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 70b DRV OVHT	The UV-DRV PCB became hot.	
ERROR 711 LED OVHT*	The UV-LED PCB became hot.	
ERROR 715 INK HEATER THERM BRK	The ink heater thermistor cannot be read properly.	
ERROR 716 INK HEATER TEMP	An ink heater temperature abnormality was detected.	

Message	Cause	Corrective action
ERROR 717 INKHEATER BRK	The ink heater is defective. (The temperature does not rise even when heated beyond the stipulated duration.)	
ERROR 71a PCB UVDRV*-F*	A blown fuse on the UV-DRV PCB was detected.	• The fuse must be replaced. Contact your local distributor, our sales office, or service center.
ERROR 71e HEAD TEMP ERROR	A head temperature abnormality was detected.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 71f HEAD THERM BREAK	The head thermistor cannot be read properly.	
ERROR 753 INK HEATER TEMP (HW)	An ink heater temperature abnormality was detected.	
ERROR 754 INK HEATER TEMP	An ink heater temperature abnormality was detected for a specified time.	
ERROR 755 HEAD TEMP ERROR (HW)	A head temperature abnormality was detected.	
ERROR 756 HEAD TEMP ERROR	A head temperature abnormality was detected for a specified time.	
ERROR 801 (C) OPCODE	A problem was detected with the main PCB.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR 802 (C) SWI		
ERROR 803 (C) PFTCHABRT		
ERROR 804 (C) DATAABRT		
ERROR 806 FW/SIO bit	A communication error was detected between the boards.	
ERROR 808 FW/STP-MTR **	A problem was detected with the main PCB.	
ERROR 80f FW/SIO Vch	A communication error was detected between the boards.	
ERROR 811 FW/SIO read		
ERROR 81b FW/STACK OV	A problem was detected with the main PCB.	
ERROR 828 PRG ERR L *****		

Message	Cause	Corrective action
ERROR 901 OPERATION ERROR	The function is disabled due to an error.	• Check the error details.
ERROR 902 DATA REMAIN	Print (RIP) data was received.	• As the print data has been received, please start printing. Alternatively, clear the data and cancel printing.
ERROR 90f PRINT AREA SHORT	The media is too small for the print.	• Replace with wider or longer media. If the area is too small after moving the origin, move the origin again to an appropriate position.
ERROR b1a PCB BaseIO	The Base IO PCB could not be detected.	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) If displaying again, contact your local distributor, our sales office, or service center.
ERROR b1b BaseIO PCB Vpow-s	A communication error was detected between the boards.	
ERROR b1c BaseIO PCB V24		
ERROR b1e PCB BaseIO-F **	A problem was detected with the Base IO PCB power supply.	
ERROR b3d INKCT PCB V2R5	A problem was detected with the ink supply 2 PCB power supply.	
ERROR b3c INKCT PCB V3R3		
ERROR b36 PCB INKIO	A communication error was detected between the boards.	
ERROR b42 PCB UVD32B		
ERROR b47 UVD32B PCB Uvpow	A problem was detected with the UVD32B PCB power supply.	
ERROR b51 BaseIO PCB V24adj	A problem was detected with the Base IO PCB power supply.	
ERROR b54 PCB INKIO-F*	A blown fuse on the ink PCB was detected.	• The fuse must be replaced. Contact your local distributor, our sales office, or service center.

SYSTEM HALT

Message	Corrective action
SYSTEM HALT (*). 000: Message	• Turn off the power on the machine and turn it on after a while.☞ "Turning Off the Power"(P. 59) Check the error number, and contact your local distributor, our sales office, or our call center. ("000" is the error number.)

Chapter 6 Appendix



This chapter

contains the lists of the specifications and functions of this machine.

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6.1 Specifications

Machine specifications

Item		JFX220-2515
Print head	Type	On-demand piezo head
	Specifications	4-head: 2 staggered, color 2 in-line, spot color 2 in-line, or color 2 in-line x 2 staggered
Print conditions (scan × feed)	4-color + white + clear + primer (4 colors) x 2 staggered	300 x 600: Bidirectional/Unidirectional 4/8 pass (*4-color x 2 staggered configuration not present) 300 × 900: Bidirectional/Unidirectional 6/12 pass 600 × 600: Bidirectional/Unidirectional 8/16 pass 600 × 900: Bidirectional/Unidirectional 12/24 pass 1200 × 1200: Bidirectional/Unidirectional 16/32 pass (Provisional) LD Mode 600×600 Unidirectional 8 pass
	6-color + fluorescent pink + fluorescent yellow + white + clear + primer	300 × 600: Bidirectional/Unidirectional 8/16 pass 300 × 900: Bidirectional/Unidirectional 12/24 pass 600 × 600: Bidirectional/Unidirectional 16/32 pass 600 × 900: Bidirectional/Unidirectional 24/48 pass 1200 × 1200: Bidirectional/Unidirectional 32/64 pass (Provisional) LD Mode 600×600 Unidirectional 16 pass
Usable ink		Dedicated UV curing ink (Y, M, C, K, Lm, Lc, W, CL, Pr, Fy, Fp)
Ink supply		1 L × 12 bottles
Ink capacity	4-color	C/M/Y/K: 3 each
	4-color + White + Clear + Primer	C/M/Y/K: 1 each, W/CL: 2 each, W: 4
	6-color + fluorescent pink + fluorescent yellow + white + clear + primer	C/M/Y/K/Pr/Cl/Lm/Lc/Fy/Fp: 1 each, W: 2
Usable media	Size	2580 mm × 1940 mm
	Thickness	101.6 mm (4 inches) or less LD Mode (1) 100.6 mm or less (2) 98.6 mm or less (3) 84.6 mm or less
	Weight	Up to 50 kg/m^2, must not be loaded with weight concentrated in one location
Maximum printing size		2500 mm × 1500 mm
Distance accuracy	Absolute accuracy	±0.3 mm or ±0.3% of specified distance, whichever is greater
	Duplicability	±0.2 mm or ±0.1% of specified distance, whichever is greater
Perpendicularity		±0.5 mm/500 mm

Item		JFX220-2515
Head height adjustment		1.2 mm to 3 mm
Media suction		Held in place by a vacuum unit
UV unit		UV LED lamp unit (mounted on carriage)
		With built-in UV power supply unit
Waste ink tank		Bottle type (2,600 cc)/Capacity sensor
Interface		1000BASE-T Ethernet
Command		MRL-III
Noise levels	During standby	Not exceeding 62.3 dB (FAST-A, 1 m on all sides)
	Continuous operation*1	82.1dB or less *A-weighted sound power level of 96.4dB
Compliance with standards		VCCI Class A, FCC Class A, UL62368-1 ETL compliance, CE marking (EMC Directive, Low Voltage Directive, Machinery Directive), IEC/EN62368-1 (CB certified), RoHS compliant, REACH compliant, RCM, KC, UKCA
Power supply specifications		INLET1: 200 to 240 V ±10 % AC, 50/60 Hz ±1 Hz, max. 12 A INLET2: 200 to 240 V ±10 % AC, 50/60 Hz ±1 Hz, max. 10 A
Power consumption		INLET1: Max. 2,880 W INLET2: Max. 2,300 W
Rated output*2		OUTLET1: 200 to 240 V AC, 50/60 Hz, 6.4/8.2 A OUTLET2: 200 to 240 V AC, 50/60 Hz, 6.4/8.2 A
Short-circuit current rating (SCCR)		1.0KA
Installation environment	Allowable temperature	15°C to 30°C (59°F to 86°F)
	Relative humidity	35 to 65 %RH (no condensation)
	Temperature range in which accuracy is guaranteed	18°C to 25°C (64.4°F to 77°F)
	Temperature gradient	Not more than ±10 °C/h
	Dust	0.15 mg/m^3 (typical office)
	Maximum operating altitude	2,000 m
Weight		Approx. 920 kg
External dimensions (including protrusions)	Width (W)	4400 mm
	Depth (D)	2520 mm
	Height (H)	1490 mm

*1. Operation conditions: High-speed scanning, blower is ON: According to clause 1.7.4.2 of Machinery Directive 2006/42/EC.
*2. For the vacuum blower.

Ink Specifications

Item		Specifications
Form		1 L Ink bottle
Color		Black ink Cyan ink Magenta ink Yellow ink White ink Light cyan Light magenta Clear ink Primer ink (PR-200) Fluorescent pink Fluorescent yellow
Ink capacity		1 l
Shelf life		The expiration date is printed on the ink bottle. Should be used within three months after opening regardless of the expiration date.
Storage temperature	When stored	5 to 30°C (storage at 30°C is permitted for a period of 1 month or less)
	Transportation	1 to 60°C (storage permitted only for 120 hours or less if the temperature is 60°C and one month or less if the temperature is 40°C)

Important!

- Do not use any ink other than the MIMAKI designated ink.
  Also, do not disassemble the ink bottles or refill or replenish their ink.
- Ink could freeze if left in a cold place for a long period of time.
  If the ink freezes, thaw it at room temperature (25°C) for at least three hours before using.
  However, if you use thawed ink, the print quality deteriorates due to the deterioration of ink.
  Store ink in an environment where it will not freeze.

Vacuum Blower Specifications

Item	Specifications
Number of connected units	**Up to 2 units**
Rating	200 to 240 V AC, 50/60 Hz, 6.0 A/6.5 A
Mounting holes	4-φ12, Pitch: 225 mm x 130 mm
Weight	Max. 18 kg

Important!

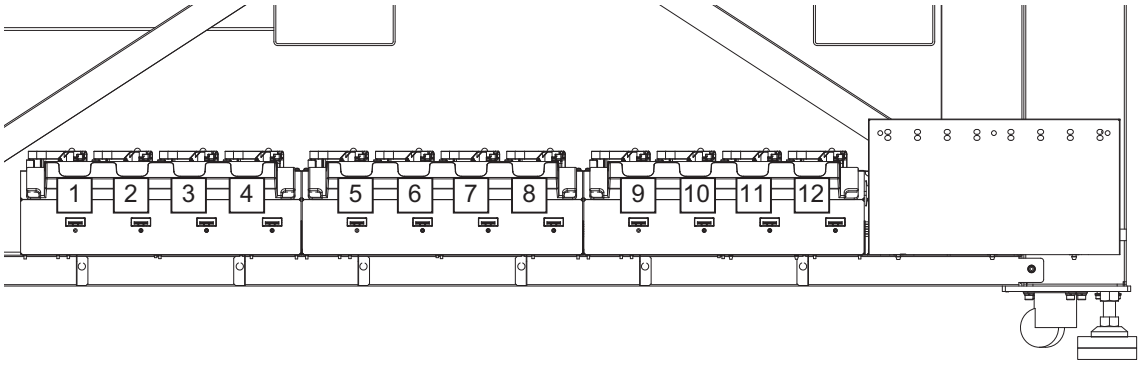
- Only use products that comply with the certifications and legal regulations required in the country or region of use.



- Do not install any model of blower other than those specified.

6.2 Order of Ink Bottles

The order of the set ink bottles differs depending on the ink set used.



Ink set	Ink positions											
	1	2	3	4	5	6	7	8	9	10	11	12
4-color	C	M	Y	K	C	M	Y	K	Y	K	M	C
4-color + white ink + primer + clear	Pr	Pr	Cl	Cl	C	M	Y	K	W	W	W	W
6-colors + fluorescent pink + fluorescent yellow + white ink + clear + primer	C	M	Y	K	Pr	Cl	W	W	Fy	Fp	Lm	Lc

6.3 LICENSE Library

Mimaki printer Firmware

Copyright @2020 MIMAKI ENGINEERING CO.,LTD. All rights reserved.

This product contain open source software listed in the tables below.

Component	License
StarterWare for ARM® based TI Sitara Processors	BSD-TI

The following license terms and conditions shall apply to the open source software listed in the table above:

BSD-TI

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