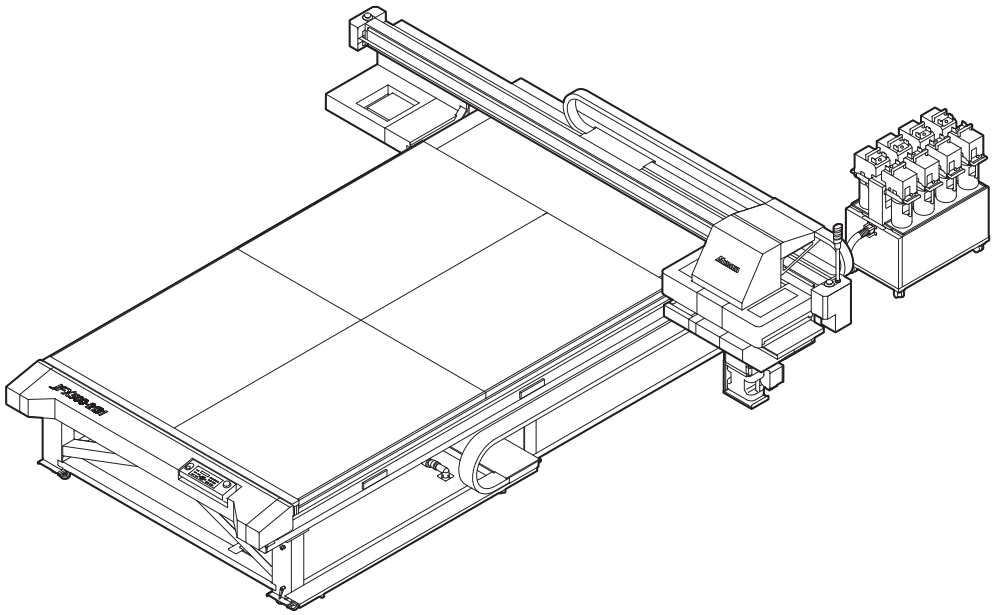
OPERATION MANUAL

Mimaki

UV INKJET PRINTER

JFX500-2131

OPERATION MANUAL



MIMAKI ENGINEERING CO., LTD.

URL: https://mimaki.com/

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Original instructions

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CAUTION

DISCLAIMER OF WARRANTY

THIS LIMITED WARRANTY OF MIMAKI SHALL BE THE SOLE AND EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS, AND MIMAKI NEITHER ASSUMES NOR AUTHORIZES DEALER TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY OR MAKE ANY OTHER WARRANTY OR MAKE ANY OTHER WARRANTY IN CONNECTION WITH ANY PRODUCT WITHOUT MIMAKI'S PRIOR WRITTEN CONSENT.
IN NO EVENT SHALL MIMAKI BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR LOSS OF PROFITS OF DEALER OR CUSTOMERS OF ANY PRODUCT.

Requests

- This Operation manual has been carefully prepared for your easy understanding.
  However, please do not hesitate to contact a distributor in your district or our office if you have any inquiry.
- Description contained in this Operation manual are subject to change without notice for improvement.

FCC Statement (USA)

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

Interference to televisions and radios

The product described in this manual generates high frequency when operating.
The product can interfere with radios and televisions if set up or commissioned under improper conditions.
The product is not guaranteed against any damage to specific-purpose radio and televisions.
The product's interference with your radio or television will be checked by turning on/off the power button of the product.
In the event that the product is the cause of interference, try to eliminate it by taking one of the following corrective measures or taking some of them in combination.

- Change the orientation of the antenna of the television set or radio to find a position without reception difficulty.
- Separate the television set or radio from this product.
- Plug the power cord of this product into an outlet which is isolated from power circuits connected to the television set or radio.

Restriction in use

Restriction in use

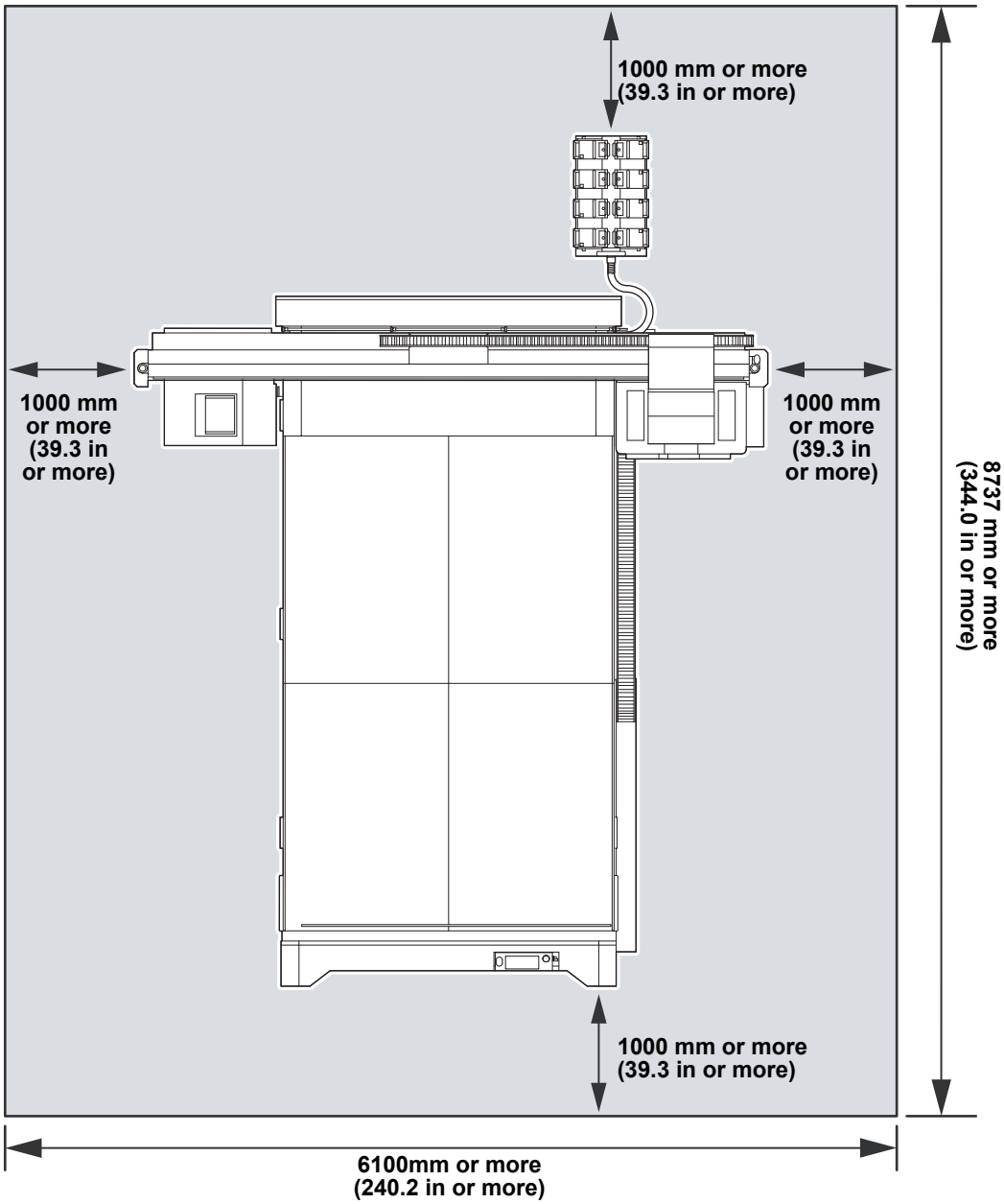
This machine is very dangerous as it has high-speed movable part, hot part and UV irradiating part. Use of this machine is limited to the user who understands this dangerousness completely.

Restriction for user

The user of this machine shall get proper training. Limit to the user those who got proper training to operate this machine.

Restriction area

Coming closer to the machine is prohibited for the person other than the user who got proper training. Set up the restriction area within the range indicated below. You have to install this machine in the dedicated room, or, set up a fence and make the person recognize that it is a dangerous area.



Foreword

Congratulations on your purchase of MIMAKI color ink jet printer "JFX500 Series" .
“JFX500 Series” is a UV inkjet printer that can print with UV ink realizing high speed and high image quality.

About usable ink

Usable ink for this machine is UV ink (four-color / six-color model).

- 4-colors version : 2 each of Cyan, Magenta, Yellow and Black color ink bottle are used.
- 4-color +special color version : 2 each of Cyan and Magenta ink bottles, 1 each of Yellow and Black, and 2 of the Special color (White, Primer, and Clear) are used.

On This Operation manual

- This Operation manual is describing the operations and maintenance of "UV inkjet printer JFX500 Series" (called as this machine hereafter)
- JFX500-2131 are identical with models IPPR813.
- Read this Operation manual carefully and understand them thoroughly to use.
- This Operation manual has been carefully prepared for your easy understanding, however, please do not hesitate to contact a distributor in your district or our office if you have any inquiry.
- Descriptions contained in this Operation manual are subject to change without any notice for improvement.
- You can also download the latest manual from our website.

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Symbols

Symbols are used in this Operation Manual for safe operation and for prevention of damage to the machine.
The indicated sign is different depending on the content of caution.
Symbols and their meanings are given below. Please follow these instructions as you read this manual.

Examples of symbols

Meaning	
	Failure to observe the instructions given with this symbol can result in death or serious injuries to personnel. Be sure to read it carefully and use it properly.
	Failure to observe the instructions given with this symbol can result in injuries to personnel or damage to property.
	Important notes in use of this machine are given with this symbol. Understand the notes thoroughly to operate the machine properly.
	Useful information is given with this symbol. Refer to the information to operate the machine properly.
	Indicates the reference page for related contents.
	The symbol " △ " indicates that the instructions must be observed as strictly as the CAUTION instructions (including DANGER and WARNING instructions). A sign representing a precaution (the sign shown at left warns of hazardous voltage) is shown in the triangle.
	The symbol "⃠" indicates that it is the forbidden action. If there is a concrete instruction, it is indicated in or around the symbol "⃠".
	The symbol "●" indicates that the action is forced to be done or the instruction must be observed. If there is a concrete instruction, it is indicated in the symbol "●".

Warning for Use

⚠ WARNING

- Be sure to setup the appropriate air-moving system in case of using this machine in a closed room or a room with bad ventilation.
- The ink used for this machine falls into the category of UN No.3082 and UN Class 9. Since the ink is flammable, never use fire when using this machine.
- When cleaning the ink station and head, be sure to wear the supplied goggle and gloves since you may get ink or washing liquid in your eyes.
- If anyone drinks ink or washing liquid in mistake, get the person to vomit and see a doctor immediately.Do not allow him or her drink vomit.Then, contact the Poison Control Center.
- If you absorb a lot of vapor and feel bad, immediately move to a location where fresh air is present and then keep yourself warm and quiet.Then, consult a doctor as soon as possible.
- Discard the waste ink according to the local regulations of the area this unit is used.
- If the ink leakage occurs, unplug the power plug to turn off the main power switch, and contact our service office or distributor.
- Keep children away from this machine.

Do not disassemble or remodel this machine

- Never disassemble or remodel the main unit of the printer and the ink cartridge.Disassembling/ remodeling any of them will result in electric shocks or breakdown of this machine.

Do not use this machine in damp places

- Avoid damp environments when putting this machine into service. Do not splash water onto this machine. High humidity or water will give rise to fire, electric shocks or breakdown of this machine.

Abnormal event occurs

- If this machine is used under an abnormal condition where this machine produces smoke or unpleasant smell, fire or electric shocks can result.Be sure to turn off the power switch immediately and detach the plug from the receptacle.Check first to be sure that this machine no longer produces smoke, and contact a distributor in your district for repair.
- Never repair your device by yourself since it is very dangerous for you to do so.

Wearing protective devices

- When cleaning the suction nozzle, which may scatter ink, be sure to wear safety glasses and gloves, or ink and washing liquid might enter your eyes or ink and washing liquid put on your hands might make your hands rough.

Handling of ink bottles

- Some of the ingredients (UV Curing initiator) have toxic consequences to aquatic life.Avoid leak into water system or sewage containing water.
- Store ink bottles and waste ink tank in a place that is out of the reach of children.
- If ink settles on the skin or clothes, immediately wash it off with detergent or water.If you get ink in your eyes, immediately wash your eyes with a lot of clean water for at least 15 minutes. In this case, also wash the backside of eyelids to rinse ink away completely. Then, consult a doctor as soon as possible.

Grounding work

- This unit requires grounding work to prevent electrical shock.
- Carry out the grounding work.

Handling of the power cable

- Use a power cable attached to this unit.
- Take care not to damage, break or work on the power cable.If a heavy matter is placed on the power cable, heated or drawn, the power cable can break to cause fire or electric shocks.

⚠ WARNING

Power supply and voltage

- This unit contains parts applied high voltage.Carrying out electrical work by those unauthorized for that work is prohibited.
- Use it with the displayed power supply specifications. The power-supply voltage of this machine shall be single-phase 200 to 240 Vac 20 A and less. (You cannot use this machine in the 100V system.)

- To prevent electrical shock, be sure to set OFF the main power circuit breaker and disconnect the power plug before carrying out maintenance.For some units, capacitors may take one minute for discharging; therefore, start maintenance work three minutes after setting OFF the main power circuit breaker and disconnecting the power plug.
- Be sure to carry out grounding work to prevent electrical shock.

- The main power circuit breaker should be set ON only by personnel with sufficient knowledge about operations of this unit.
- Do not touch the LED UV unit on or right after the lamp off with bare hands to avoid from burn injury.

Handling the Anti-freezing liquid

- Use the exclusive Anti-freezing liquid by Mimaki ,or the LED UV cooling device may be damaged.
- If the Anti-freezing liquid or mixed soft water with anti-freezing liquid gets on the skin or clothes, immediately wash it off with soap.
  If you get the Anti-freezing liquid or mixed soft water with anti-freezing liquid in your eyes, immediately wash your eyes with a lot of clean water.
  Then, consult a doctor as soon as possible.If high temperature Anti-freezing liquid or mixed soft water with anti-freezing liquid gets on the skin, immediately wash it off with soap and cool with iced water. Then, consult a doctor as soon as possible.
- Before using the Anti-freezing liquid, be sure to read the Material Safety Data Sheet (SDS).
- If you swallowed the Anti-freezing liquid or mixed soft water with antifreezing liquid accidentally, try to get to vomit, and then consult a doctor as soon as possible.
- When unused the Anti-freezing liquid or used mixed soft water with anti-freezing liquid should discard as followings,
  ● Incinerating the fluid which is absorbed to the sawdust or waste cloth.
  ● Entrust them to an industrial waste disposal contractor, clarifying their contents.
- Avoid ignition such as static electricity and impact spark.

- Be sure to wear safety glasses and gloves for handling the Anti-freezing liquid.

Handling of the LED UV

- Do not place combustibles under the UV-LED unit, and do not cover it with paper or cloth. There is a risk of fire or burns.
- Small amounts of ultraviolet light may leak from the UV-LED unit. Wear UV safety glasses or face shields, masks, gloves, and long-sleeved clothing to avoid UV exposure to the eyes and skin.
  (1) Exposure to ultraviolet light may result in skin inflammation. Even if no inflammation occurs, extended or repeated exposure may lead to chronic problems.
  • Acute problems: Inflammation
  • Chronic problems: Skin cancer, wrinkles, blotches
  (2) Looking directly at the lamp while the lamp is on may result in eye pain or damage to eyesight. Even if no eye pain occurs, extended or repeated exposure may lead to chronic problems.
  • Acute problems: Ultraviolet keratitis, conjunctivitis, discomfort, pain, watery eyes
  • Chronic problems: Pterygium, cataracts
- Do not apply ultraviolet (UV) light directly to your skin, or it may cause irritation on your skin.
- If LED UV has been damaged, you should replace the LED UV that has reached or has past its rating life.

- Be sure to use the UV safety glasses provided. Disregarding this precaution may result in eye pain or damage to eyesight.

- Be sure to wear gloves and long-sleeved clothing. May cause skin inflammation and skin damage due to ultraviolet (UV) radiation.

Disposition of this machine

- When discarding this machine, request the treatment of it for an industrial waste disposal contractor.
- Treat it properly in compliance with regulation in the local area.

Precautions in Use

⚠ CAUTION

Protection against dust

- It is strongly recommended to use this machine in a room that is not dusty.
- When leaving the workshop after the working hours, be sure to take off any media from the roll
- hanger.If any media is left on the roll hanger, dust can put on it.
- Store media in a bag.Wiping off dust accumulated on a media will adversely affect the media due to static electricity.
- Dust in the head will also cause drops of ink to fall abruptly down on the media during printing.If this phenomenon takes place, be sure to clean up the head. (☞ P.2-12)

Periodic exchange parts

- There are some parts which must be replaced by service men.You have to make a contract with distributors or dealers for after-sale service.

Keep the machine flatly

- Be sure to adjust the level foot to keep the machine flatly.

Handling of maintenance liquid

- Be sure to store the maintenance liquid in a cold and dark place.Store the maintenance liquid in a place that is out of the reach of children.

Warning labels

- This machine is adhered with a warning label. Be sure understand firmly the warnings given on the labels.In the case where any of the warning label has become so soiled that the warning message is illegible or has come off, purchase a new one from your local distributor or our office.

Note on maintenance

- When cleaning the External ink supply unit or the heads, make sure to wear the attached gloves.

Handling the Anti-freezing liquid

- Be sure to store the Anti-freezing liquid in a cold and dark place.
- Store the Anti-freezing liquid in a place that is out of the reach of children.

Power supply

- Leave the breaker turned ON.
- Do not turn off the main power switch on the right side of this machine.

Handling of ink bottles

- Use the JFX500 genuine ink. Remember that the user shall be filled for a repair to correct any damage resulting from the use of ink other than the exclusive type.
- The machine does not operate with any ink other than the JFX500 genuine ink.
- Do not use the JFX500 genuine ink with other printers, as doing so may cause damage to such machines.
- Do not refill ink other than the one specified by our company in the bottle. We are not responsible for any defects caused by your using such an ink.
- If the ink bottle is moved from a cold place to a warm place, leave it in the room temperature for three hours or more before using it.
- Open the ink bottle just before installing it in the machine. If it is opened and left for an extended period of time, normal printing performance of the machine may not be ensured.
- Make sure to store ink bottles in a cool and dark place.
- Store ink bottles and waste ink tank in a place that is out of the reach of children.
- Be sure to thoroughly consume the ink in the ink bottle, once it is opened, within three months. If an extended period of time has passed away after opening the ink bottle, printing quality would be poor.
- Neither pound the ink bottle nor shake it violently, as doing so can cause leakage of ink.
- Do not touch or stain the contacts of the IC chip, as doing so may cause damage to the print circuit board.
- Waste ink is equivalent to waste oil of industrial waste. Request an industrial waste disposal company for disposal of waste ink.

Handling of media

- Use media recommended by MIMAKI to ensure reliable, high-quality printing.
- Pay attention to the expansion and contraction of the media.
  Do not use media immediately after unpacking. The media can be affected by the room temperature and humidity, and thus it may expand and contract. The media have to be left in the atmosphere in which they are to be used for 30 minutes or more after unpacked.
- Do not use curled media.
  The use of curled media can not only cause a media jam but also affect print quality. Straighten the sheet of media, if significantly curled, before using it for printing. If a regular-sized coated sheet of media is rolled and stored, the coated side has to face outside.

CAUTION

Notes on LED UV unit

- When handling the LED UV or the silica glass on the bottom of the irradiation device, be sure to wear the gloves attached and never touch them with bare hands, or the UV ink curing level is significantly lowered. If the LED UV or silica glass is contaminated, wipe it with clean gauze moistened with alcohol. (Do not use alcohol for cleaning the exterior cover, or the paint will peel off.)
- The LED UV performance and service life are significantly affected by the UV irradiation and UV power supply units used.Never use those UV devices other than those recommended by Mimaki. We would take no responsibility for any troubles caused through the use of a UV devices not recommended by Mimaki.

About the High Temperature of the LED UV Unit.

- The LED UV and the interior of the UV irradiation device will have a very high temperature. When carrying out maintenance, wait until the temperature has been sufficiently lowered after the lamp is turned OFF. The UV-LED unit becomes extremely hot. Be careful not to touch the LED after it has been turned off until it has sufficiently cooled.
- Some parts outside the unit will have a very high temperature.A high temperature caution label is placed on such parts.Do not touch the parts with the caution label placed and their vicinity, or burn injury may occur.
- Do not expose the skin or eyes directly or indirectly to light from the UV-LED unit. The UV-LED unit emits ultraviolet (UV) light. Skin or eye exposure may result in inflammation.

About cleaning

- After using the unit long time, foreign materials and dust may be gathered on the conductive and insulating parts, causing electric leakage.Periodically clean such parts.
- For cleaning, do not use compressed air because it scatters foreign materials and dust, which may cause malfunctions when put inside the conductive parts.Be sure to use vacuum cleaner for cleaning of foreign materials and dust.
- Do not use the unit in a place where there is a possibility of being wet, or electrical leakage may occur.
- Electrical leakage, if it should occur, may lead to electrical shock of personnel or fire.
- In order to prevent accidents from occurring, be sure to carry out periodic inspections and replacement of time change components.

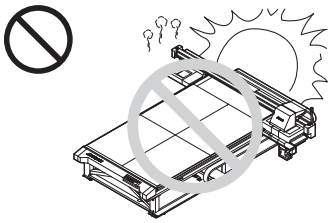
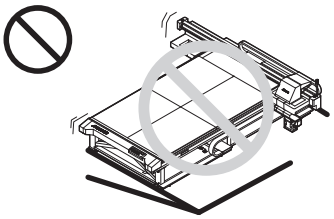
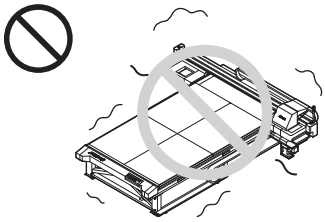
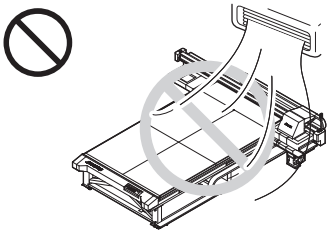
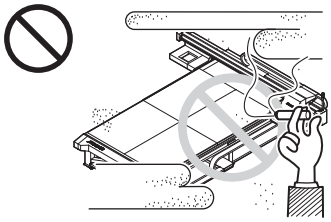
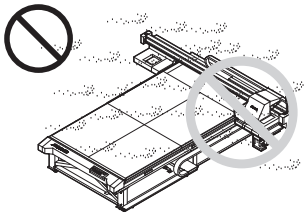
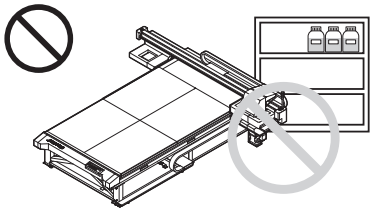
About firing and smoking

- Touching hot parts such as the LED UV unit with combustible materials may cause firing and/or smoking. Leaving combustible materials under the UV LED unit for a couple minutes may also cause firing and/or smoking.
- After the unit is used long time, foreign materials or dust gathered on the stabilizer or other parts may cause electrical leakage or insulation deterioration may cause firing and/or smoking.Periodically clean the parts and measure the insulation resistance, replacing deteriorated parts, if any.
- After the unit is used long time, screws, etc. on the conductive parts may be loosened, causing firing and/or smoking.Periodically tighten such screws.
- Because this unit is not of explosion proof type, do not use it in an ambience with hazardous materials, or a possibility of explosion may arise.
- If abnormalities of the unit such as a strange odor, a smoking or a spark burn are found, turn the power off and call Mimaki immediately.

Handling of operation panel

- When handling operation panel, be careful not to drop it. If you drop it, it may cause damage of the operation panel or injury.

Cautions on Installation

CAUTION		
A place exposed to direct sunlight	**On an inclined surface**	**A place where temperature or humidity varies significantly**
		• Use the machine under the following environmental conditions: • Operating environment: 15 to 30 °C (59 to 86 °F) 35 to 65 % (Rh)
A place that vibrates	**A place exposed to direct air flow from an air conditioner or the like.**	**Around a place where fire is used**
		
A place with much dust	**A place with chemicals around**	
		

Chapter 1
Before Use

This chapter

describes the items required to understand before use, such as the name of each part of the machine or the installation procedures.

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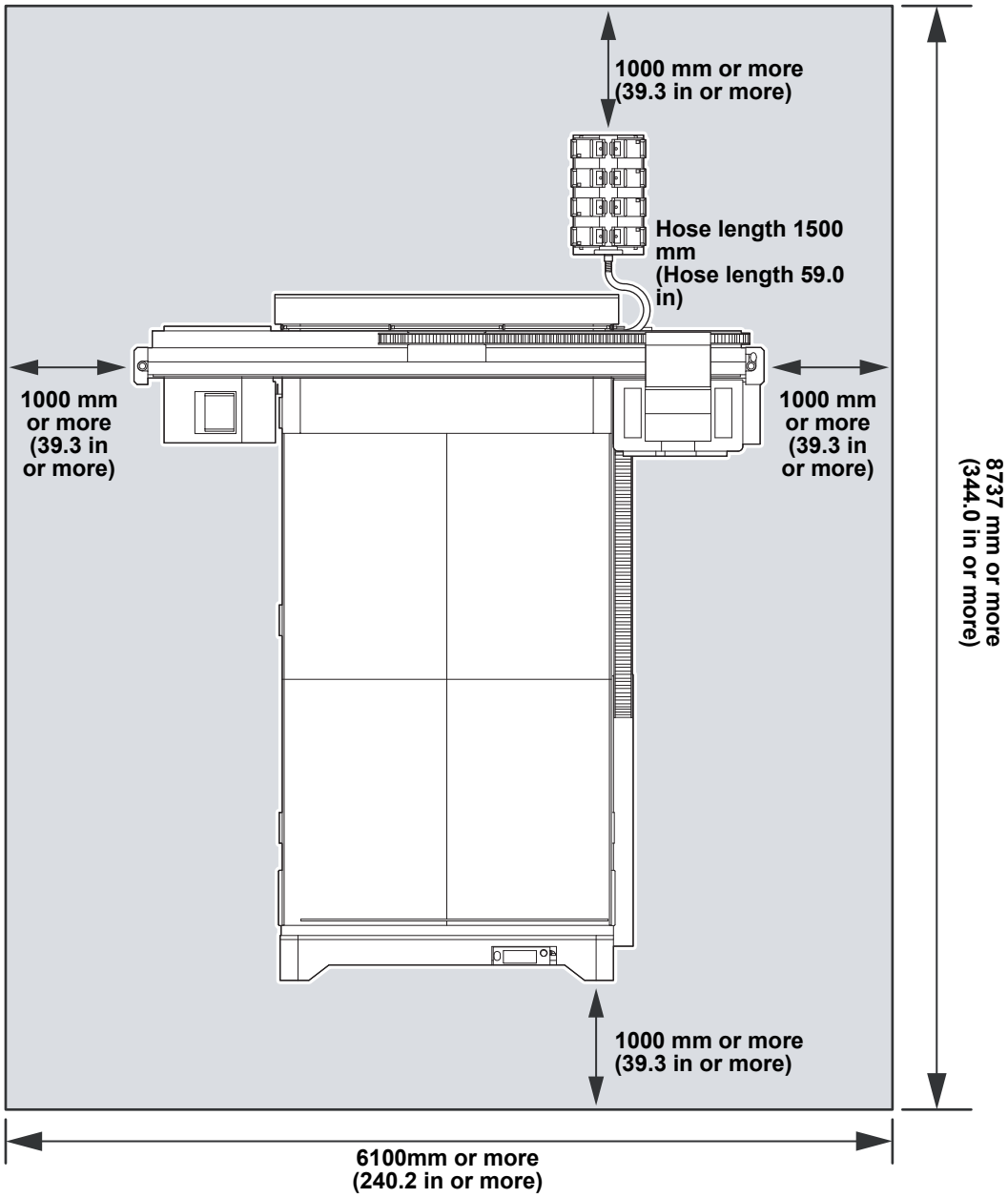
Where to Install This Machine

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
JFX500-2131	4100mm (161.4in)	4462mm (175.7in)	1490mm (58.7in)	1353kg (2982.9 lb)
External ink supply unit	775mm (30.5in)	455mm (17.9in)	900mm (35.4in)	40kg (88.2 lb)

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. After fully understanding that content, use this machine safely.



Caution

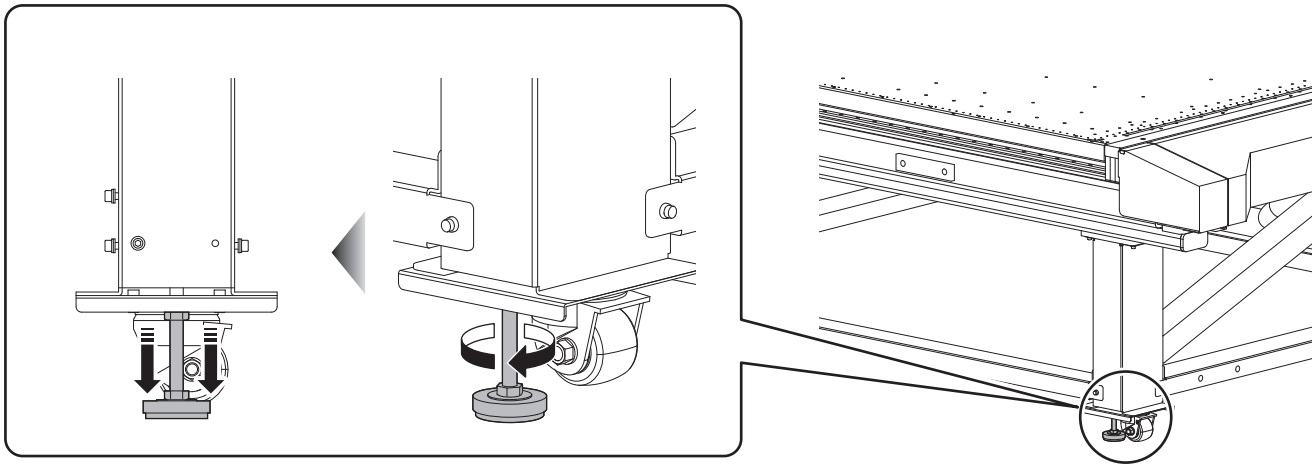
- When you usually use photographic fixer, do not install this machine in a room filled with vapor of photographic fixer. If you install this machine in such a room, ink adhering to the head hardens and it may cause image quality defect that cannot be improved even if you perform head cleaning many times and may cause nozzle clogging.
- Besides photographic fixer, if you leave this machine in an environment where acidic vapor (acetic acid, muriatic acid, etc.) is generated, the same phenomenon occurs.
- Do not use this machine in environments where cutting fluid or other volatile substances are present in large quantities (e.g., amines, modified amine alcohol).Additionally, keep this machine, ink, and maintenance kit away from such environments.Disregarding this precaution may result in nozzle clogging.

Working Environmental Temperature

Use this machine in an environment of 15 to 30°C to ensure reliable printing.

About fixing machine

The leg of this machine has the level foot to fix the machine.
Before turning the power ON, 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.



- Put the supplied base plate (gray) made of resin between each leveling foot and the floor. To hold the weight of the printer, using plate is recommended.

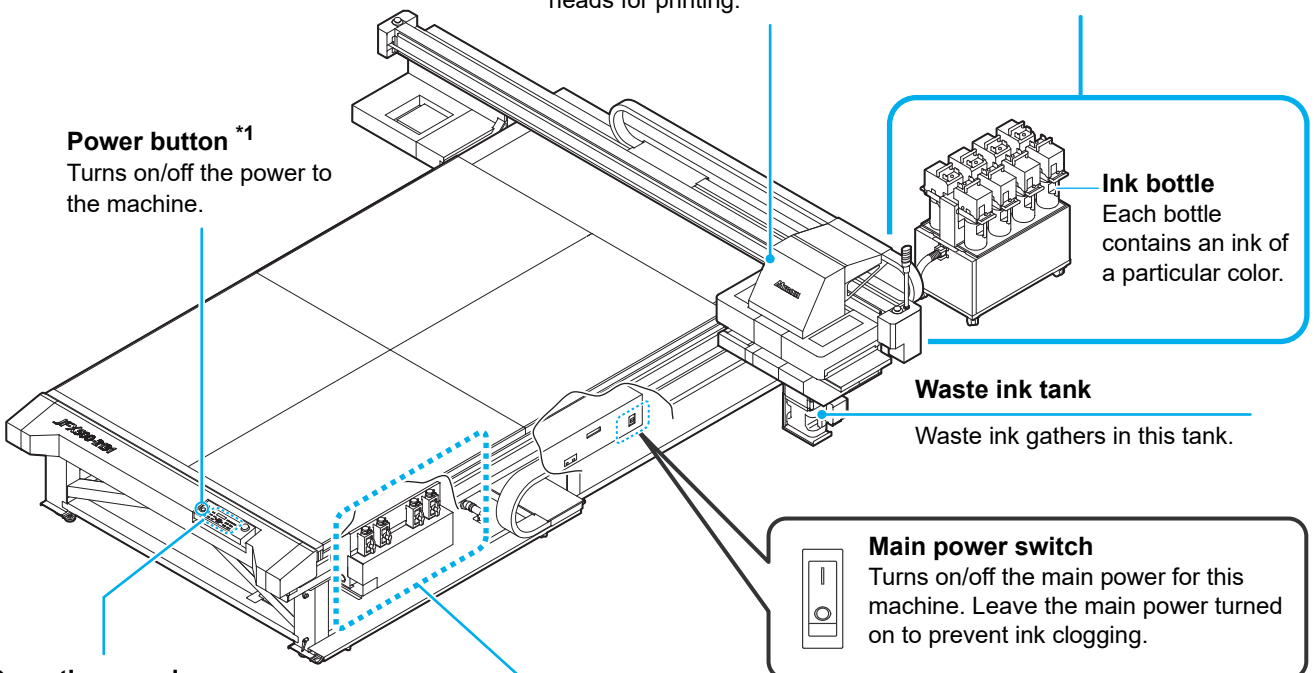
Moving This Machine

Important!

- When the machine is moved to any place other than on the same step-free floor, contact your distributor or our service office.
  If you move it by yourself, failure or damage may occur.
  Be sure to request your distributor or our service office to move this machine.

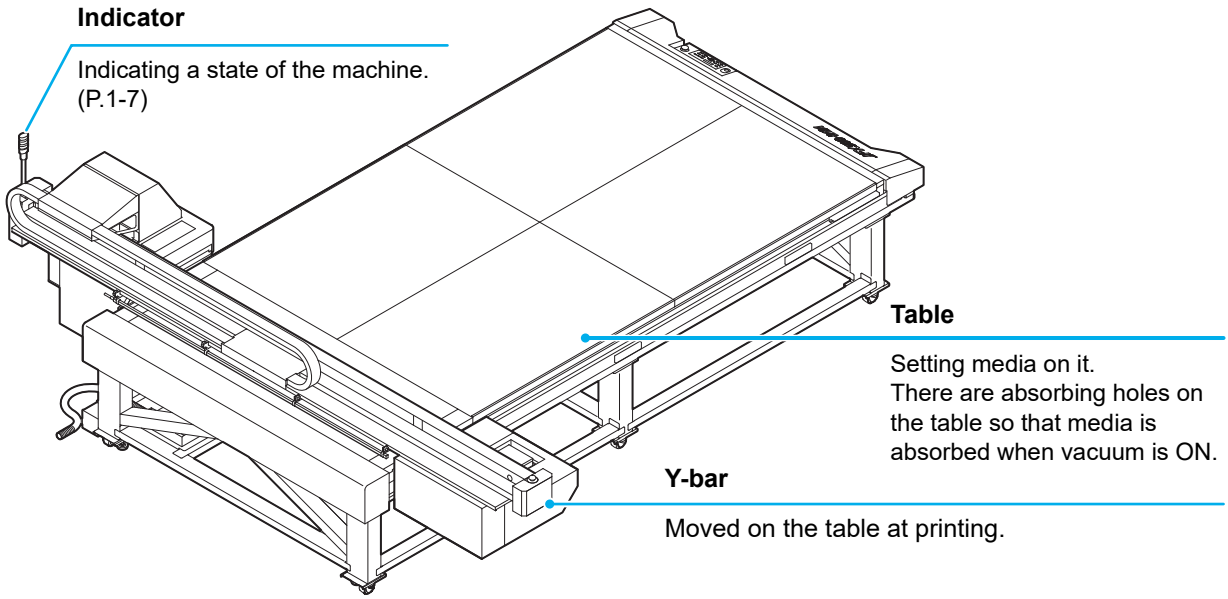
Names of Parts and Functions

Front Side of the Machine



*1 : When the power supply button is turned ON, it lights in green, and when it is OFF, it goes out. The ink clogging prevention function is periodically operated even when the power button is OFF if the main power switch keeps being ON. (Auto maintenance function)

Rear Side and Right Side of the Machine



Operation Panel

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

VACUUM key
Press to vacuum the media on the table.

UP key
Press to elevate the carriage.

DOWN key
Press to down the carriage.

ADJUST key
Performs the adjusting function such as “Drop.POScorrect” and “Feed COMP.”

MAINT. key
Performs the maintenance function such as station maintenance.

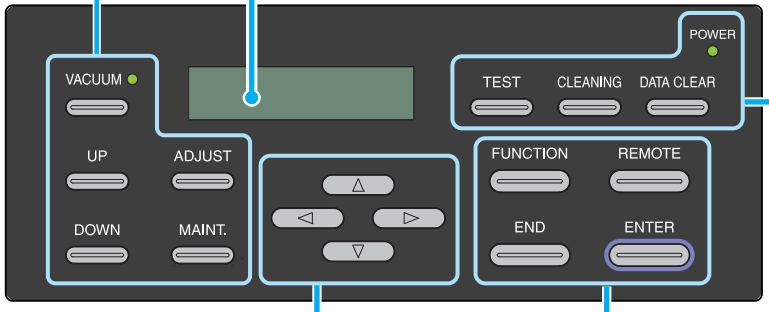
POWER Lamp
Lit when the power is ON.

TEST key
Prints test patterns to check if there are any printing failures such as ink clogging.

CLEANING key
Head cleaning at ink clogging.

DATA CLEAR key
Deletes the data that have been received.

Display
Displays the status of the machine, set items and errors.



JOG key
Use these keys to shift the carriage or the Y-bar in [LOCAL]. Also use them to select an item of printing conditions.

FUNCTION key
Press to use each function.

REMOTE key
Switching the Remote and the Local, and vice versa.

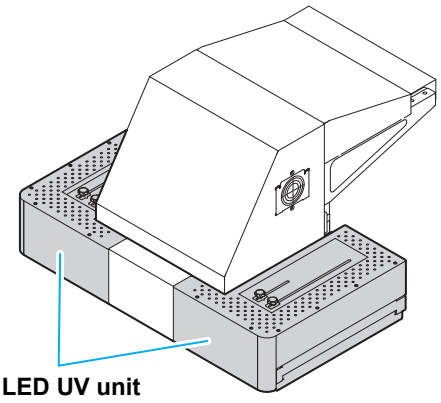
END key
Press to finish the setting.

ENTER key
Press to determine a setting.

- If an optional blower is connected to this machine, you can use the vacuum function, to hold the media to the table, as well as the blow function, to remove the held media. Press and hold the VACUUM key to use the blow function.

Carriage

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



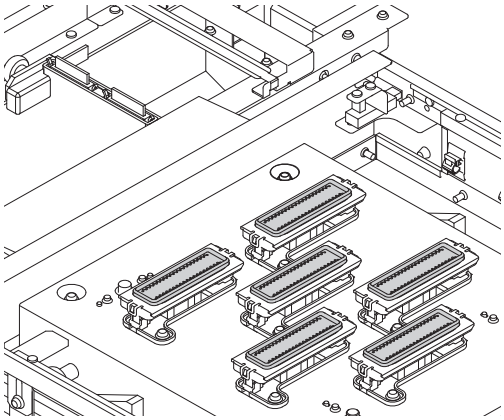
Warning

- Do not expose your naked eyes directly to the light irradiated from the LED UV when it lights.
- Do not touch the LED UV unit when it is being lit or just after it is set OFF. It may cause a burn injury, as it is very hot.

Capping station

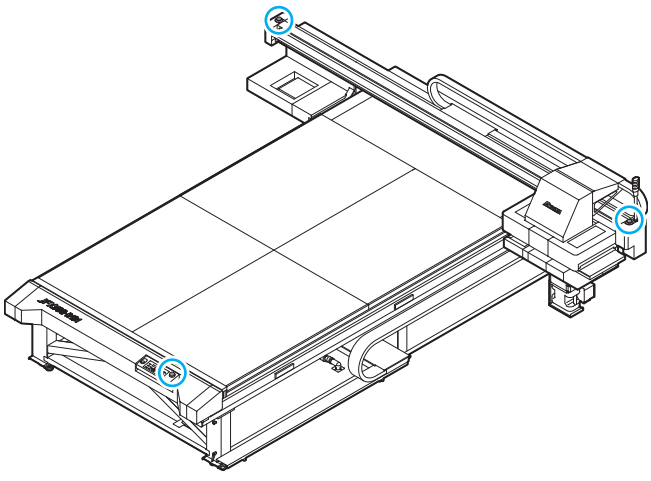
- Be sure to wear the attached safety glasses in cleaning within the capping station to protect your eyes against ink. Otherwise, you may get ink in your eyes.

The capping station consists of the ink caps, the wiper for cleaning the heads, etc.
The ink caps prevent the nozzles in the heads from drying up.
The wiper cleans the nozzles in the heads.
The wiper is consumable.If the wiper is deformed or the media is stained, replace the wiper with a new one. (☞ P.4-24)



EMERGENCY SWITCH

One EMERGENCY switch is placed on the front face of the unit and 2 are placed on Y-bar.
When stopping the machine for safety reason, press the switch.



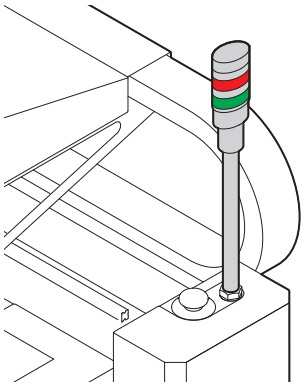
Important!

When you press the emergency switch and the machine stops, be sure to follow the procedures below:

(1) Turn off the main power supply and then remove (resolve) the abnormal cause.
(2) After checking the safety, pull the emergency switch upward (or rotate) to release.
(3) Turn on the main power supply.

Indicator

Functions of the Indicator on the top right of this unit are described here.
The indicator has a green and a red lamp.



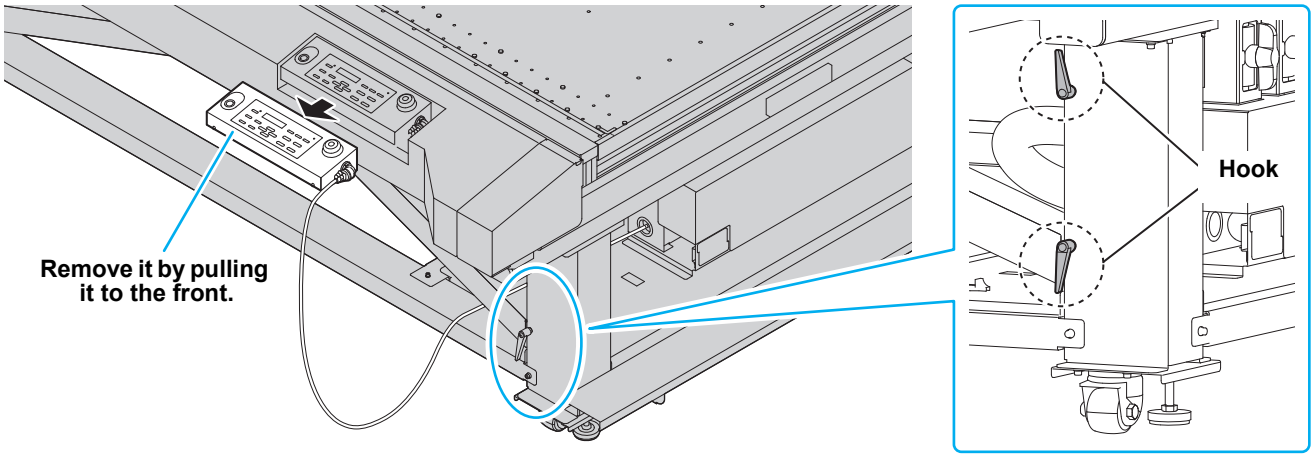
Color of lamp	State of lamp	State of machine
Green	Lighting	REMOTE
	Blinking	REMOTE (printing)
	Off	LOCAL
Red	Lighting	Error has occurred
	Off	Normal

Operation Panel Cable

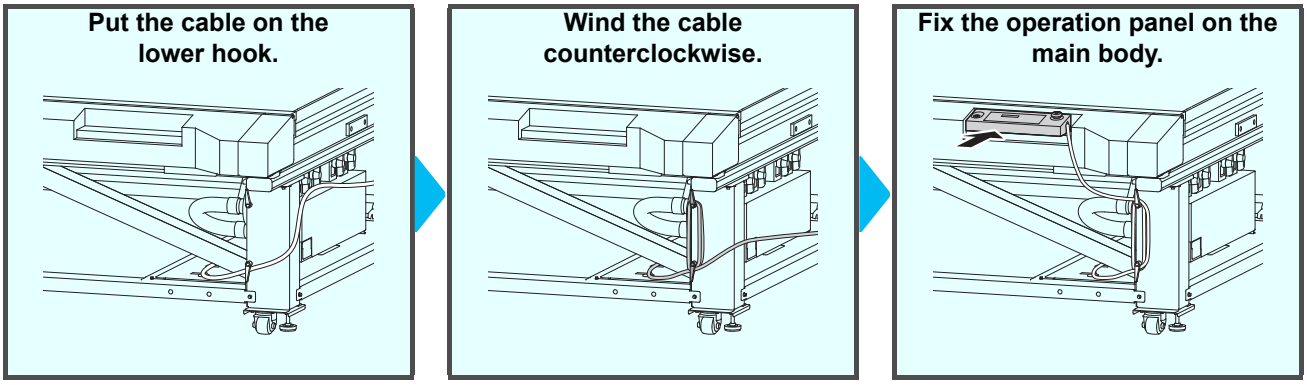
You can remove the operation panel from the main body when using this machine.

Important!

- The operation panel is fixed on the main body with a magnet.
- When performing the work, place the operation panel near yourself so that you can push the emergency button.
- When you remove the operation panel to use this machine, fully be careful about wiring so that the operation panel cable may not be taken into the belt on the right side of the main body.
- When you use this machine with the operation panel, wind the cable on the hook of the leg at the front right side of the main body. At this time, check that the cable does not touch the melt on the right side of the main body.



How to wind operation panel cable

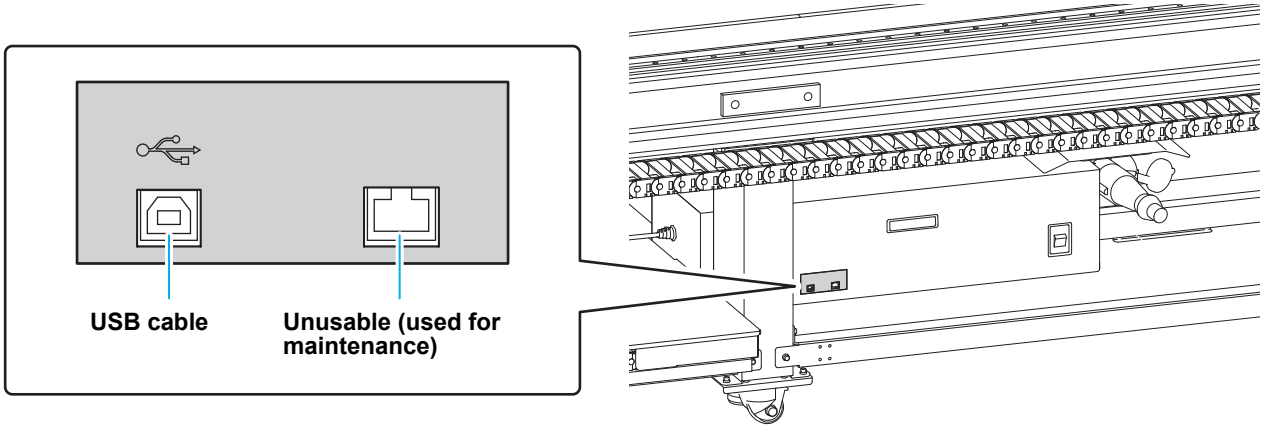


Connecting USB2.0 Interface Cable

Connect the PC and this machine with the USB2.0 interface cable.

Caution

- Your RIP must be compatible with USB 2.0.
- Contact a RIP maker near your location or our office when the USB2.0 interface is not attached to the PC.



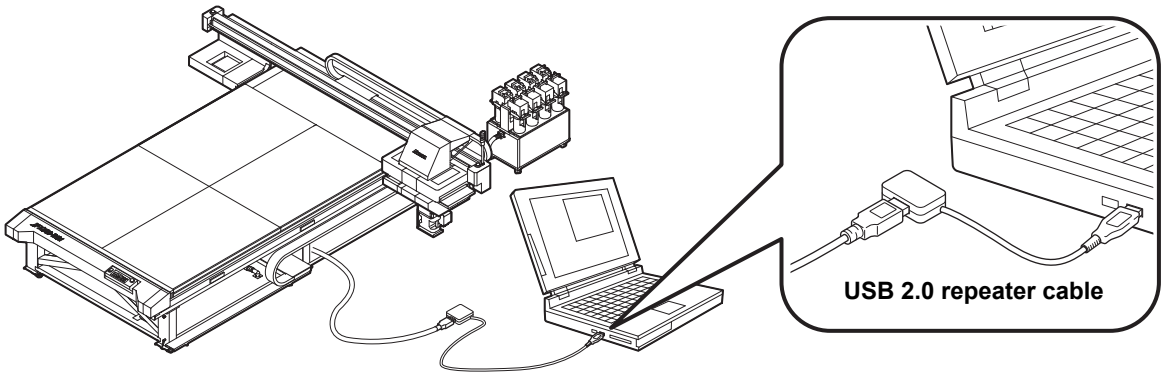
Notes on USB 2.0 Interface

Important!

- Your RIP must be compatible with USB 2.0.

● When two or more JFX500 machines are connected to one personal computer

When two or more JFX500 machines are connected to one personal computer, the personal computer may not recognize all the JFX500 machines normally.
Reconnect the unrecognized JFX500 machine to another USB port, if available, and check to see if it is recognized.If the JFX500 machine is not recognized by the newly connected USB port, use USB 2.0 repeater cables available on the market.

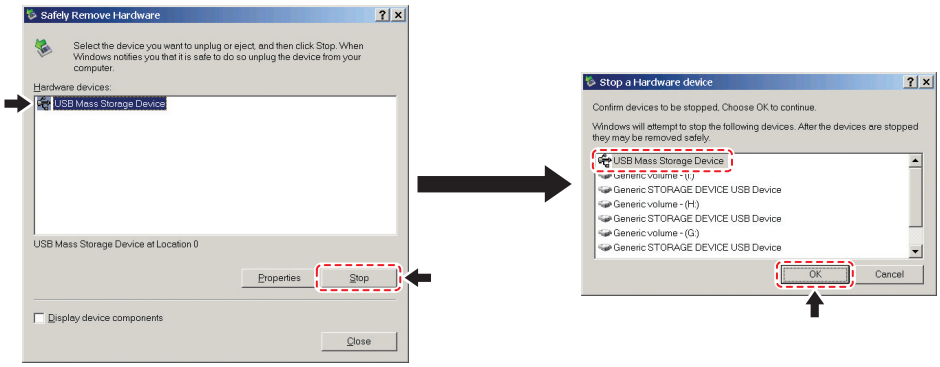


● Notes on peripheral devices in USB high speed mode

When a peripheral device (USB memory or USB HDD) to be operated in USB high speed mode is connected to the same personal computer that a JFX500 machine is connected to, the USB device may not be recognized.
When JFX500 is connected to the personal computer to which an external HDD is connected via USB, the speed of data output to JFX500 may drop.That can cause the head unit to stop temporarily at the right or left end during printing.

● Removing USB memory

If a USB memory module is inserted in the personal computer to which a JFX500 machine is connected, click "Stop" in the "Safely Remove Hardware" window by following the instructions given there first and then remove the module.
Leaving a USB memory module inserted can cause [ERROR 201 COMMAND ERROR].
Copy the data onto the hard disk before outputting it for printing.



Connecting Power Supply Cable

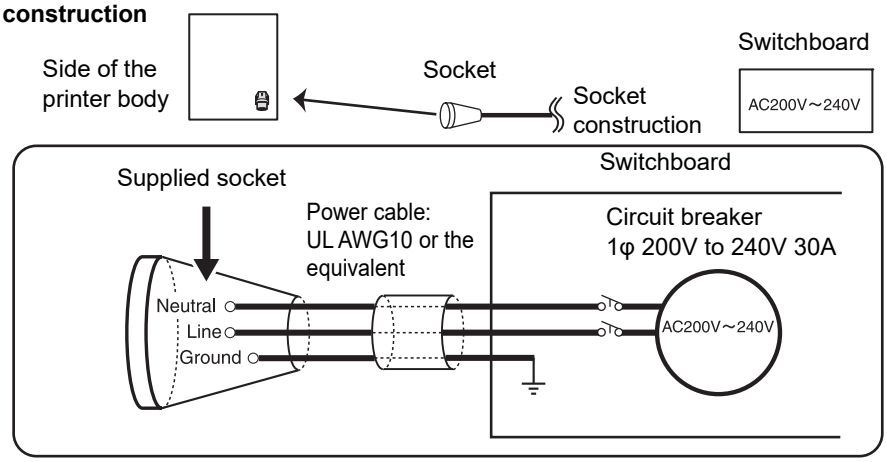
You are not allowed to install the printer by yourself. Be sure to request MIMAKI's service personnel and an electrician to install the printer.

- The power supply specifications of this machine is as below:
  Single-phase 200 to 240 Vac 20 A or less (cannot be used with 100 V system)
- For the power supply to the main body of the printer, electrical work is required as described below.
  Request an electrician to perform electrical work.
  Socket installation onto the circuit breaker
  Grounding work
- Ensure that a wall outlet is available near the printer. Also ensure that the power cable can be easily unplugged whenever necessary.
- To prevent electrical shock hazard, it is prohibited for anyone other than electrician licensees to perform the electrical work for this printer.
- Take care not to miswire, which can result in a fire or an electric shock.

- When any power cable other than the supplied one is to be used, make sure that the cable is equivalent to one of the following types. Connect the cable as shown below.
  VCT-5.5m m^2 x33 cores (600 V)
  UL-AWG10x3C (600V)

For power supply connection, this printer uses the Type B plug and socket in compliance with IEC 60309.
When a socket construction meeting the plug of the power cable of this printer is required, use the supplied socket and perform construction between your switchboard and the socket.

Socket construction

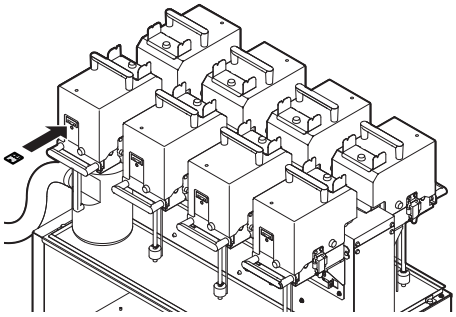


Setting ink bottles

Set the ink bottle on the external ink supply unit.

1 Insert the IC chip.

- Insert the IC chip with the surface with metal upward. If you insert the wrong side by accident, it causes faulty or damage of the IC chip.
- Do not touch the metal part of the IC chip. It may break the IC chip by static, or may cause read error by stain or flaw.
- For the setting orders of the ink bottles, refer to P.6-4.



Important!

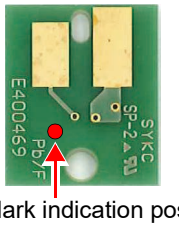
About IC chip

- The IC chip has information of ink color, remaining amount of ink, expiration data, etc. When setting the ink bottle, insert the IC chip packed with the ink bottle into the IC chip inserting port attached with the ink cover.
- If you set the IC chip not being the pair of the ink bottle, image quality defect etc. may occur.
- The mark indicating color information is pasted on the IC chip.

Ink color and indication mark

Ink color	Indication mark
Black	(one black circle)
Cyan	(one blue circle)
Magenta	(one red circle)
Yellow	(one yellow circle)
White	(one white circle)
Clear	(two white circles)

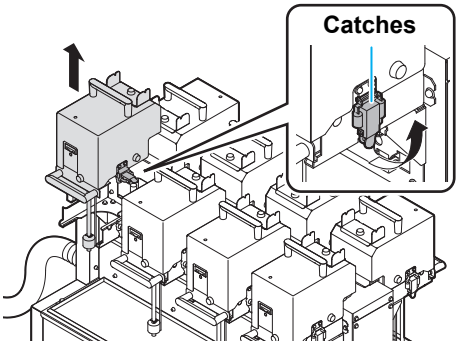
IC chip

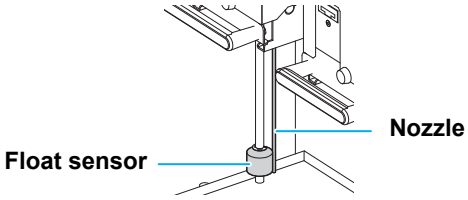


Mark indication position

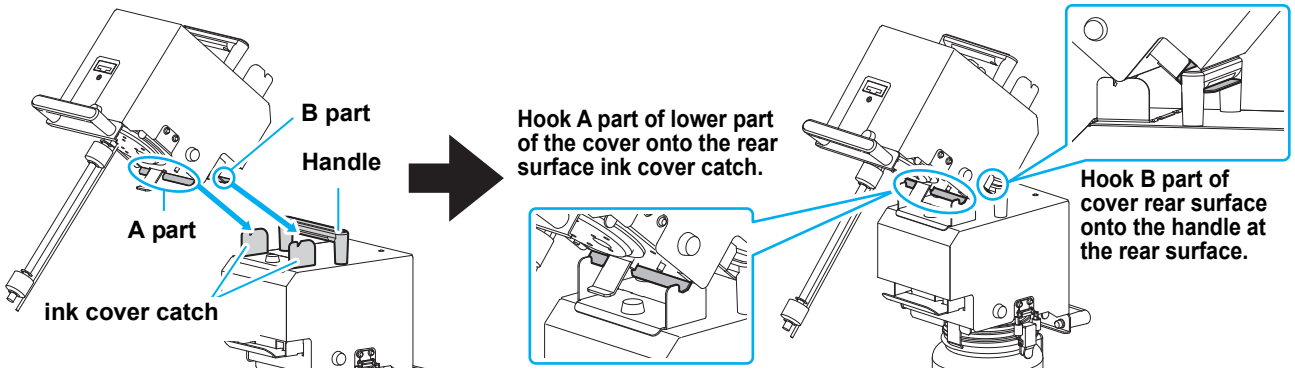
2 Remove the ink cover.

- Remove both catches of the ink cover and remove the cover.
- The rear surface of the ink cover has the nozzle (stick shape) for ink absorption and the float sensor for detecting remaining amount of ink.





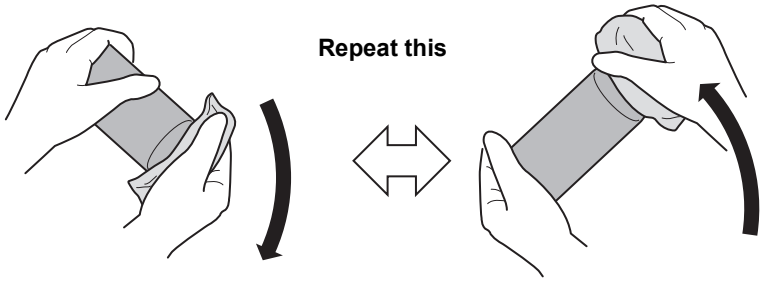
3 Put the removed ink cover on the ink cover of the rear surface side.



4 Take out the 1 liter ink bottle, and slowly shake it twenty times and more.

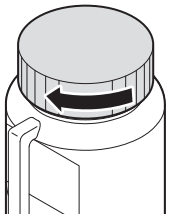
• To prevent ink from leaking when you shake it, wear gloves and cover the ink bottle cap with a paper towel etc. Being in that status, slowly shake it twenty times and more by flowing ink.

- Before shaking it, check that the cap is firmly closed.
- If you shake it too strong, it may cause ink leakage. Therefore, perform this carefully.
- If the remaining amount of ink is less, ink in the bottle cannot be beaten enough. Tilt the ink bottle until it becomes vertical.



Cover with paper towel firmly and shake ink slowly

5 Remove the lid of the ink bottle to set on the external ink supply unit.

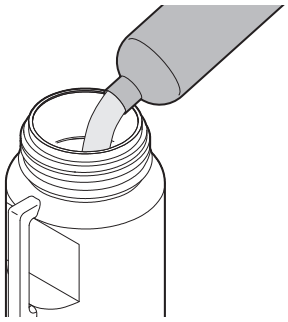


6 Pour ink in the 1 liter ink bottle into the ink bottle of the external supply unit.

• Depending on the ink type, aluminum sheet adheres to the bottle top surface. In such a case, remove it with a cutter.

Important!

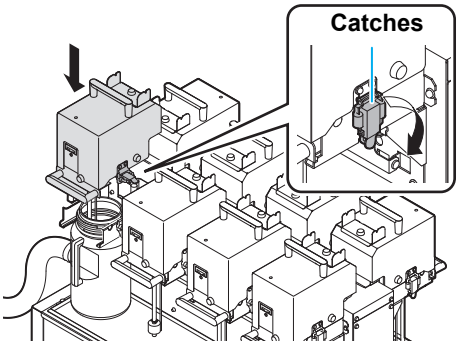
- Be sure to fill 1 liter ink each time. As ink information of 1 liter ink has been written in the IC chip attached with the 1 liter ink bottle, the machine cannot manage ink if you fill 2 liter ink at a time.



Caution **Never put any foreign object (such as the 1 L ink bottle cap) other than ink into the ink bottle of the external ink supply unit.**

7 Set the external ink bottle on the bottle holder, and attach the ink cover.

• Make the nozzle (stick shape) for absorbing ink and the float sensor for detecting remaining amount of ink so that they may be in the ink bottle.
• If the ink tray got dirty with ink etc., wipe it off with a waste cloth etc.

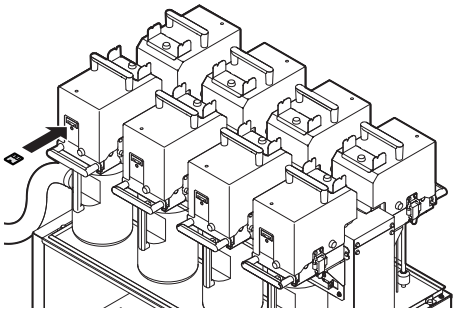


Fill ink

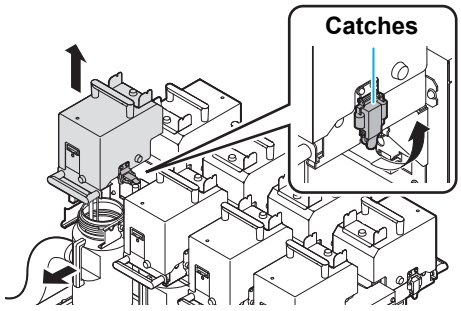
Perform as follows when [INK END] or [INK NEAR END] is displayed on the display.

- **When [INK END] is displayed**

1 **Insert the IC chip.**



2 **Remove the cover of ink bottle to be filled with and remove it.**



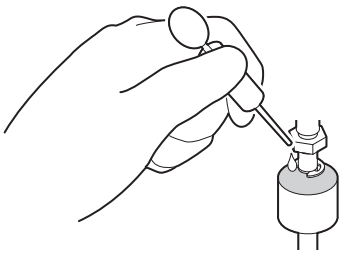
Caution

- When replacing the ink bottle, ink may spatter. Be careful not to get ink into your eyes.
- Before replacing the ink bottle, cover around it with a waste cloth etc. Ink may drop from the float part and may stain around the part.

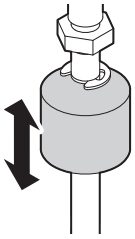
3 **Check the up/ down movement of the float.**

- If there is an abnormality on the float movement because dry ink adhered to it etc., perform the following procedures:

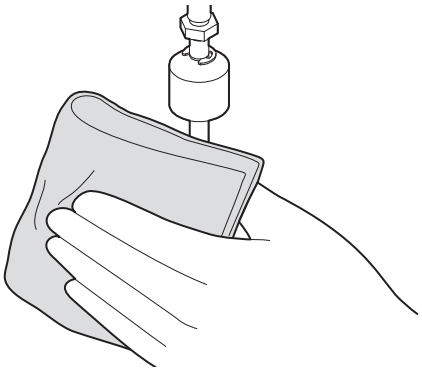
(1) Place a few drops of washing liquid on the upper part of the float.



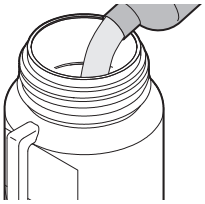
(2) Move the float up/ down to spread washing liquid evenly.



(3) When the float comes to move smoothly, wipe washing liquid adhering to the float and the pipe with a waste cloth etc.
- Move the float up/ down again and check that there is no abnormality.



4 Prepare new 1 liter ink bottle and fill ink into the ink bottle of the external ink supply unit.

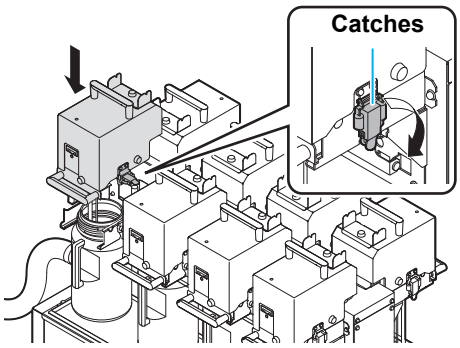


Important!

- Be sure to fill 1 liter ink each time. As ink information of 1 liter ink has been written in the IC chip attached with the 1 liter ink bottle, the machine cannot manage ink if you fill 2 liter ink at a time.

Caution **Never put any foreign object (such as the 1 L ink bottle cap) other than ink into the ink bottle of the external ink supply unit.**

5 Set the external ink bottle on the bottle holder, and attach the ink cover.



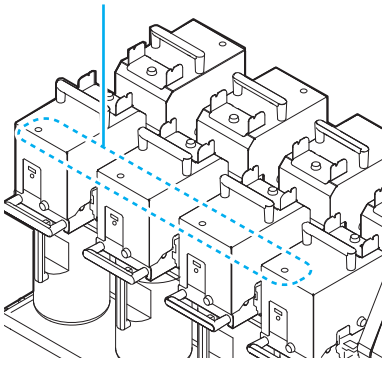
● When [INK NEAR END] is displayed

There is a little of ink left. It is recommended to replace the ink bottle soon since ink may become empty in printing while printing is continuously enabled.
When you press the ENTER key in LOCAL, you can check the bottle to be replaced in the local guidance. (☞ P.3-36)

For Ink bottle lamps

The condition of the ink bottles set in the machine is confirmable with lamps located over the ink bottles.

Ink bottle lamps



Condition of Ink bottle lamp	Description
OFF	No error
Blinks in red.	There is less ink in the ink bottle (Near End). Or, one month has passed from the expiration date of ink. It will become unusable soon.
Lights in red.	There is no ink in the ink bottle, or the ink bottle cannot be used due to other ink error. (☞ P.5-4)
Blinks in red (fast).	As two months have passed from the expiration date of ink, you cannot use the ink bottle.
Lights in green.	Indicates that ink is supplied. When you use four-color ink set, this machine first supplies ink from the ink bottle whose ink expires soon.
Blinks in red and green alternately.	It blinks in red and lights in green alternately.

About ink expiration date

The ink bottle has its expiration date.
You can use the bottle in two months after the expiration date indicated on it, however, you cannot use it when three months have passed from the expiration date.
When it becomes unusable, the ink bottle lamp blinks fast in red to inform you of it. At this time, replace it with new one.

Ex.) When the expiration date is April 2012
May : Usable
June : Usable (Ink bottle lamp blinks in red.)
July : Unusable (Ink bottle lamp blinks fast in red.)

About ink end and ink near end

When it becomes Ink near end (remaining amount of ink is less), the ink bottle lamp blinks in red to inform you of it. It is recommended to replace it with new one as soon as possible.
When it becomes Ink end (remaining amount of ink is none), the ink bottle lamp lights in red to inform you of it. Replace the ink bottle.

Caution in handling of ink bottles

- If you get ink in your eyes, immediately wash your eyes with a lot of clean running water for at least 15 minutes. In doing so, also wash the eyess to rinse ink away completely. Then, consult a doctor as soon as possible.
- Use genuine ink bottles for this machine. This machine functions by recognizing the genuine ink bottles. In case of troubles caused by modified ink bottles or the like, it shall be out of the warranty even within the warranty period.
- If the ink bottle is moved from a cold place to a warm place, leave it in the room temperature for three hours or more before using it.
- Make sure to store ink bottles in a cool and dark place.
- Store ink bottles and waste ink tank in a place that is out of the reach of children.
- Request an industrial waste processor for processing of empty ink bottles.
- Be sure to thoroughly consume the ink in the ink bottle, once it is opened, within three months. If an extended period of time has passed away after opening the ink bottle, printing quality would be poor.
- Do not shake ink bottles violently. This may result in ink leakage from the ink bottles.
- Never refill the ink bottles with ink. This may result in troubles.
  MIMAKI will not bear any responsibility for any damage caused by the use of the ink bottles refilled with ink.
- Do not touch or stain the contacts of the IC chip. This may cause damages on printed circuit boards.

Usable media sizes and notes for handling are described.

Usable sizes of media

Model	JFX-2131
Maximum width	2100mm
Maximum length	3100mm
Maximum printing width	2100mm
Thickness	Less than 50mm
Weight *1	Less than 325kg

*1. A rough guide is 50 kg per 1 m^2.

Caution in handling of medias

Pay attention to the followings for handling of medias.

Important!

- **Extension and shrinkage of the media**
  Do not use the media in the sheet form shortly after the package was opened. The media could extend or shrink depending on the temperature and humidity inside the room. For more than 30 minutes after opening of the package, the media has to be exposed to the ambient air of the location it is to be used.
- **Warping of the media**
  As for the media of the sheet form, use the flat one, or the one warping downward (the one with floating central part when placed the printing surface facing upward.) The media warping upward could not be absorbed in some cases onto the table. Store the media liable to be warped on the slightly smaller platform or palette so that it may warp downward.
  Be careful not to warp the media out of the absorption area.
- **Absorption of the media**
  To maintain the absorption effect, cover the suction holes not covered by the media with other media which is thinner than the media.
- **Other precautions**
  a Do not place any article on the surface of the coated paper. Some coated paper could change its color.
  b Curled media that cannot be absorbed or the media that misaligns when the Y-bar is moved may not be used. Before using, fix the media with adhesive tape, etc.
  c Do not use the media that will generate warping or deformation even if the logical seek is set “OFF”.
  d As the bed surface is constructed of multiple boards, their joint lines could be reflected on the printed images depending on the thickness and elasticity of the media. Similarly, the suction holes could affect the printed images. Perform the printing after confirming that there is no problem by making the test printing in advance.

About operation of jigs

A jig is a tool used to fix the media to the correct position. Using a jig, all users can easily print at the exact position.

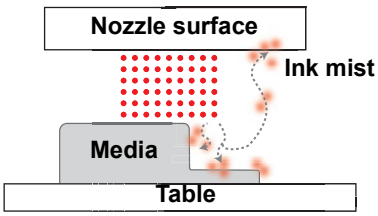
Advantages of using jigs

Using a jig offers the following advantages.

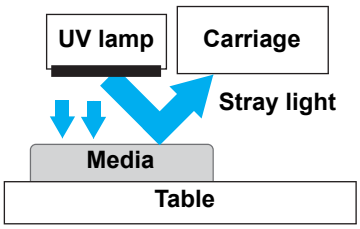
- **Maintaining consistent print quality**
  - The media can be fixed to the correct position to prevent print misalignment.
  - An appropriate gap is easy to be maintained, suppressing the occurrence of ink mist and stray light. (☞ P.1-16 [Explanation of terms])
- **Improving work efficiency**
  - Media setting is easier, enabling smooth continuous printing of multiple sheets.
  - Printing can be performed with minimal operator variability and consistent cycle times.
- **Preventing issues and reducing maintenance workload**
  - Ink adhesion and dirt buildup on the head surface are reduced to prevent nozzle clogging.
  - The frequency of maintenance and cleaning required to clear nozzle clogging is decreased, easing the load on the device.

Explanation of terms

- **Ink mist**
  - Ink mist is a phenomenon in which ink disperses in a mist during printing; the larger the gap between the head and the media, the more likely the ink mist is to become airborne.



- **Stray light**
  - Stray light is a phenomenon in which UV light intended to irradiate the ink on the media is reflected and scattered, causing it to hit unintended areas such as the head surface.

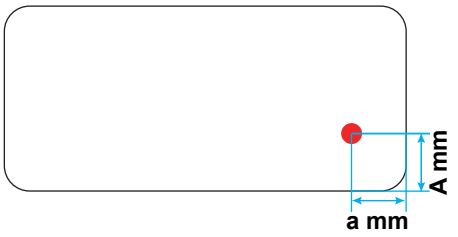


Important! • If ink mist or stray light occurs, it can lead to ejection failures such as nozzle missing.

Jig fabrication process

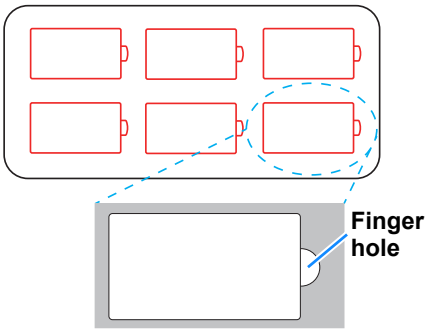
1 Check the print area and jig size.

- Check the product's recommended jig size (☞ P.1-20).
- Specify the print start position (printing origin).



2 Set media placement (orientation/insertion directionvmargins).

- Set the media orientation and insertion direction.
- Check how easy it is to replace the media.
  As needed, provide a finger access opening (finger hole).
- Set the margins (edge margins, media spacing).
  Place the media with equal spacing.

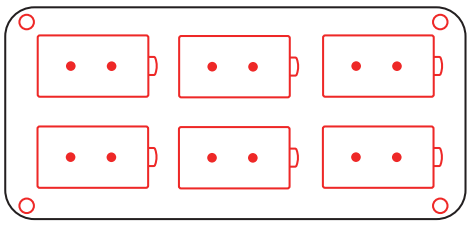


3 Select the material for the jig.

- Use a material that is less prone to warping.
  (aluminum, aluminum composite panel, ABS resin, etc.)
- Use a material in colors that do not reflect UV light.
  Recommended: black, matte finish

4 Design the jig (thickness/weight/vacuum holes/jig fixing).

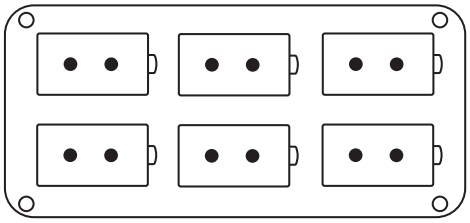
- Configure so that the combined thickness of the jig and media is within the specification range (☞ P.1-20).
- Check that the combined weight of the jig and media is within the specification range (☞ P.1-20).
- Provide vacuum holes.
- Check the table tap positions (☞ P.2-7) and determine how to fix the jig.



Layout plan
• Material: Aluminum composite panel, matte black finish • Thickness: 10 mm • Weight: Estimated 1.5 kg

5 Fabricate a jig.

- When making it yourself: Based on the layout plan, cut and shape it.
- When making a request to an external party: Based on the layout plan, make a request.
  - Media size and shape
  - How to place media (orientation, insertion method, margins, etc.)
  - Printer model name and specifications (table tap positions, allowable media weight)
  - Detailed information about the jig (material, color, fixing method, etc.)



Layout plan
• Material: Aluminum composite panel, matte black finish • Thickness: 10 mm • Weight: Estimated 1.5 kg

Precautions during jig fabrication

To suppress the occurrence of ink mist and stray light, fabricate the jig with attention to the following points. Symptoms such as the following may occur, including reduced print quality, insufficient ink curing, and operational malfunctions.
After the media is set, ensure that the jig's weight and thickness are within the specification range of the UV printer being used. Operational malfunctions or head collisions may cause machine failure.

- Lay out so that it fits within the printer's printable area.
- Ensure consistent spacing between media.

Symptoms that may occur
• Some of the data is missing. • Data placement becomes more difficult. • Uneven color and curing inconsistencies occur.

● Jig material

- Use a material that is less prone to warping. Do not use materials that are prone to warping, such as acrylic sheets and wood.
  Recommended: aluminum, aluminum composite panel, ABS resin, etc.

Symptoms that may occur
• Scuffing occurs on the printed surface. • The print position is misaligned. • A head collision occurs. **[If an obstacle sensor is present]** • When the sensor is triggered, the table lowers, generating ink mist and stray light. **[If a media jam sensor is present]** • The sensor is triggered and printing stops.

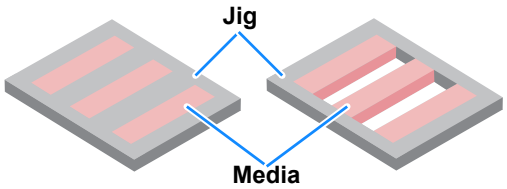
● Jig color

- Use a color that does not reflect UV light. Do not use colors that easily reflect UV light, such as white, silver, or clear.
  Recommended: black, matte finish

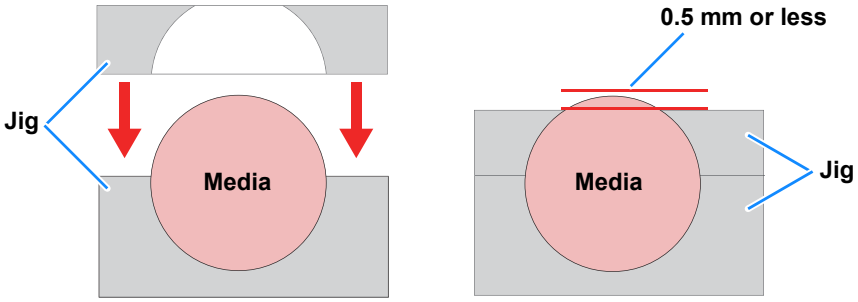
Symptoms that may occur
• UV light strikes the nozzle surface due to stray light and diffuse reflections, causing nozzle malfunctions.

● During jig design

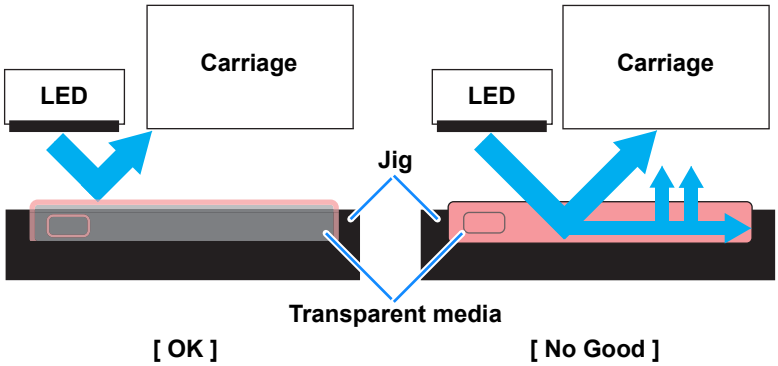
- Fill the media's margins with a jig.



- Ensure that the media's surface unevenness is 0.5 mm or less.



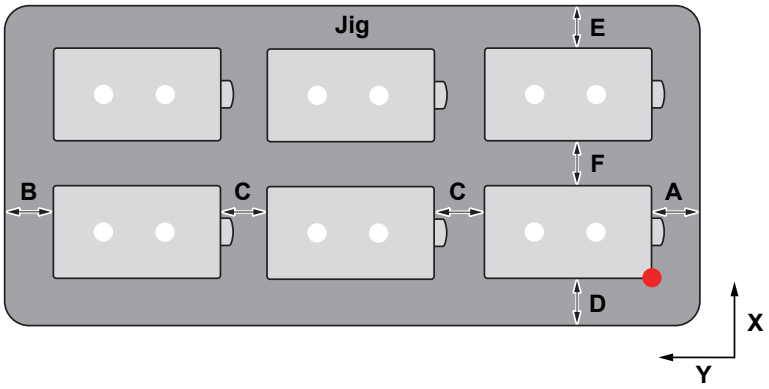
- When printing on transparent media, make sure that the jig is fabricated so that there are no voids (gaps) between the jig and the media.



Symptoms that may occur
• Ink mist occurs. • UV light passes through and strikes the nozzle surface due to stray light and diffuse reflections, causing nozzle malfunctions.

Recommended jig size / Product specifications and weight

[Top view]



Recommended jig size (for full-width printing *1)			
		JFX200series, JFX500-2131, JFX600-2513, UJF-7151Plus/PlusII/PlusIIe, UJF-3042/6042MkII(e)	JFX600-2531
Y	A	60mm	50mm
	B		
	C	Optional*2	
X	D	120mm	
	E		
	F	Optional*2	

*1 See the table below.
*2 Fill the space between the two media using a jig so there are no gaps.

*1 Settable jig size when printing at full width				
	Y		X	
	A	B	D	E
JFX200series	40mm	40mm	120mm	120mm
JFX500-2131	7.5mm	7.5mm	47mm	47mm
UJF-7151Plus/PlusII	49mm	49mm	53mm	19mm
UJF-3042/6042MkII(e)	32mm	32mm	22mm	22mm
JFX600-2513	40mm	40mm	50mm	120mm
JFX600-2531	40mm	40mm	20mm	120mm

Product specifications and weight	
	Weight
JFX200series	50kg/m^2 or less (No concentrated load)
JFX500-2131	
JFX600	
UJF-7151Plus	10kg or less
UJF-7151PlusI(e)	30kg or less
UJF-3042MkII (e)	5kg or less
UJF-6042MkII (e)	8kg or less

Chapter 2
Basic Operations

This chapter

describes procedures and setting methods for ink and media preparation, and printing.

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Workflow

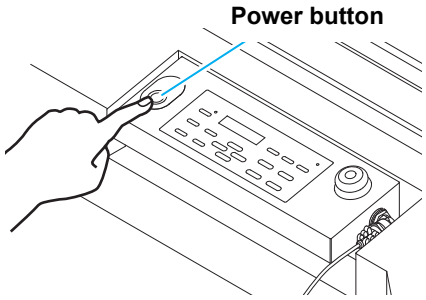
1	Turning the Power ON/OFF	Referring to “Turning the Power ON/OFF” (☞ P.2-3).
2	Setting a Media	Referring to “Setting a Media” (☞ P.2-5).
3	Check the irradiation position of the LED UV lamp	Referring to “Check the irradiation position of the LED UV lamp” (☞ P.2-8).
4	Test Printing	Referring to “Test Printing” (☞ P.2-10).
5	Head Cleaning	Referring to “Head Cleaning” (☞ P.2-12).
6	Printing Data	Referring to “Printing Data” (☞ P.2-13).

Turning the Power ON/OFF

Turning the Power ON

1 **Push the power button.**

- Push the power button located on the left side of the operation panel.



- The firmware version is displayed when the power is turned ON.
- The machine performs its initial operation.

```
JFX500      Start-up
Ver 1.00
```

2 **The machine enters LOCAL.**

```
<LOCAL>
```

3 **Turn ON the power of the connected PC.**

- Always make the main power switch ON. If you leave it OFF, it may cause nozzle clogging of the head. In some cases, recovery may become difficult.

Turning the Power OFF

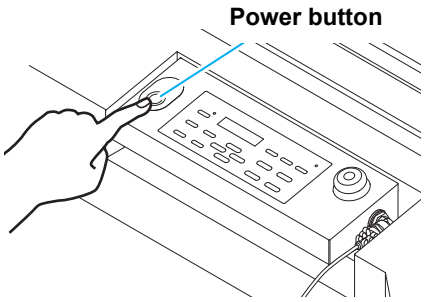
When having ended the operation of the machine, turn the power OFF by pressing the power button located on the front side.
Check the following items when turning the power OFF.

- If the machine is receiving data from the PC or if there is any data that has not been output yet
- If the head has returned to the capping station
- If any error has occurred （☞ P.5-14 “Error messages”）

1 **Turn OFF the power of the connected PC.**

2 **Push the power button to turn the power OFF.**

- The power supply button goes out.
- Do not turn off the main power switch under the table.
- To use this machine again, light the green lamp by pressing the power button.



Cautions about Turning the Power OFF

● Do not turn the main power switch OFF.

When the main power switch is ON, the power periodically turns ON and the nozzle clogging prevention function (flushing function) and the pressure adjusting function operate.
When the main power switch has been turned OFF, the auto maintenance functions, such as flushing, do not operate, and this may cause nozzle clogging.

● Turn the power OFF after having checked the position of the head.

If the power is turned OFF in a state where the head has not returned to the capping station, the head dries, which may cause nozzle clogging.
In this case, turn the power ON again and check that the head has returned to the capping station, and then turn the power OFF.

● Do not turn the power OFF during printing.

The head may not return to the capping station.

● After having turned the power button OFF, turn the main power switch OFF.

When turning off the main power switch to move the machine or for countermeasure against the error of the machine, be sure to push the power supply button on the operation panel. Check that the lamp went out, and then turn off the main power switch.

● Even if you press the emergency switch, the power supply is not turned off.

The emergency switch is to stop the machine when the situation requires emergency stop. Even if you press the emergency switch, you cannot turn off the power supply.

Setting a Media

This machine can be used with a leaf media.
For usable medias, refer to P.1-15 “Usable sizes of media”.

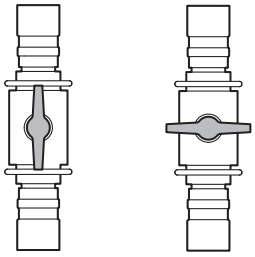
Setting the Media

Important!

- If, within the absorption area, there are suction holes not closed by the media, close such suction holes placing thin sheet form material such as paper, film or tape.
- The peripheral parts of the media could roll up due to heat. Fix the media supplementarily using adhesive tapes, etc.
- There are guide holes into which the attached positioning pin is inserted at the edge of the table (two sides of upper and lower of the table). Use them as the guides for setting the media straight. (P.2-7)

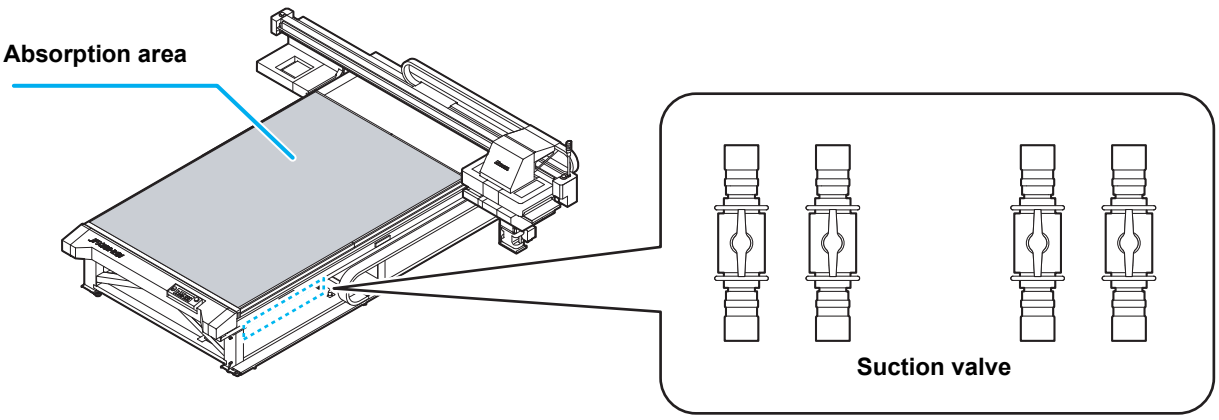
1 Switch over the suction valve at the right side of the table adjusting with the size of the media to be set.

- The valve is opened when the knob is turned vertically and closed when it is turned horizontally.



2 Press the VACUUM key to light the “VACUUM” lamp and vacuum the media.

- As for the details of the absorption area, please refer to P.2-6.

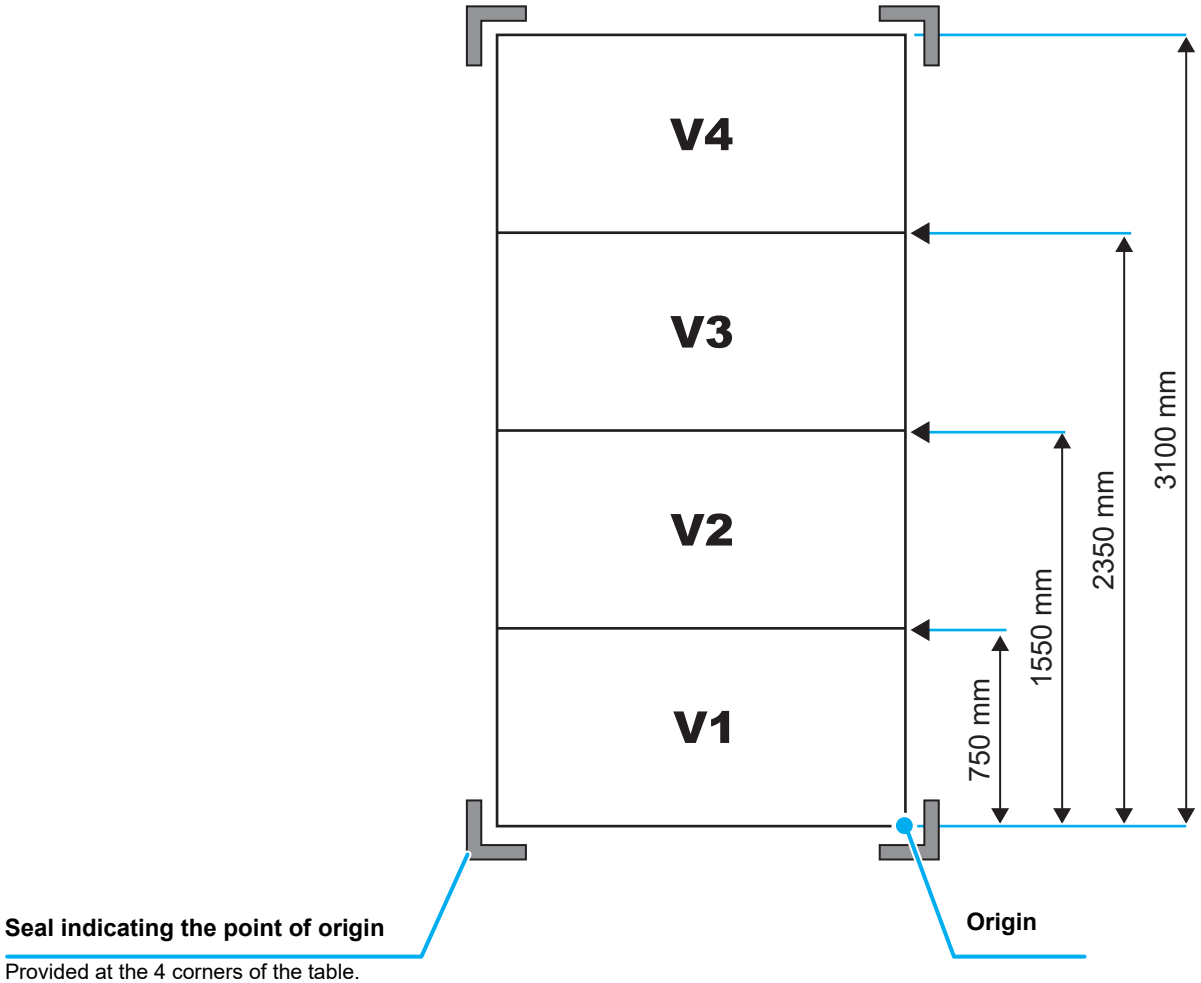


After setting the media, set the followings.

- Register the thickness of the set media. (P.3-4)
- Register the head gap. (P.3-6)

On the absorption area

The absorption area of JFX-2131 is shown in the following figure.



• When changing the point of origin, please refer to P.3-2 .

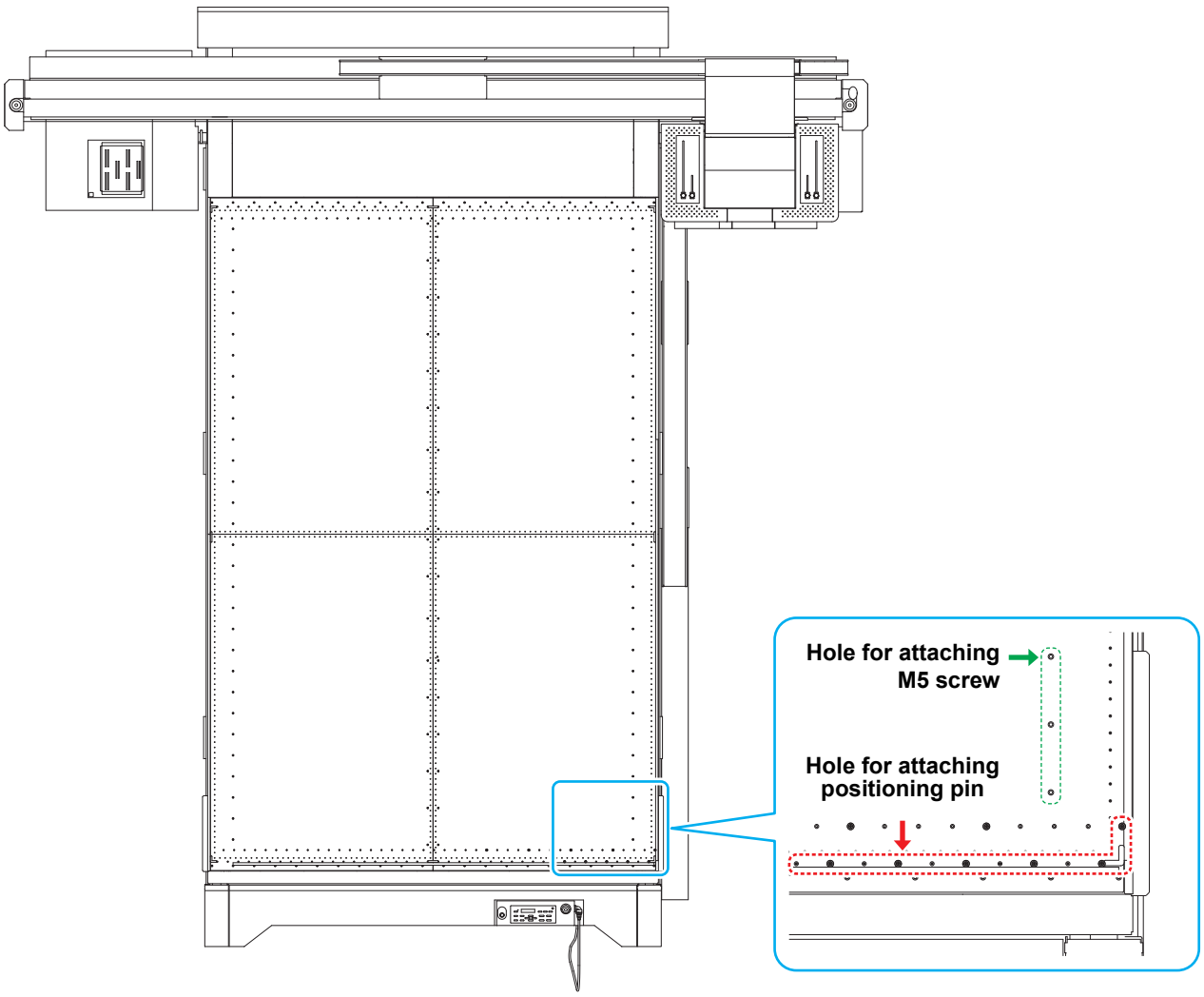
About the media guide hole

There are guide holes into which the attached positioning pin is inserted at the edge of the table (two sides of upper and lower of the table). Use these as a guide to set the media straight.

- You can attach the M5 screw in the marketplace instead of the attached screw. In this case, you can attach the screws on the right/ left and the upper side of the table (total of three).

Important!

- If you use the attached positioning pin, you cannot use the media of 5mm thickness and below.



Check the irradiation position of the LED UV lamp

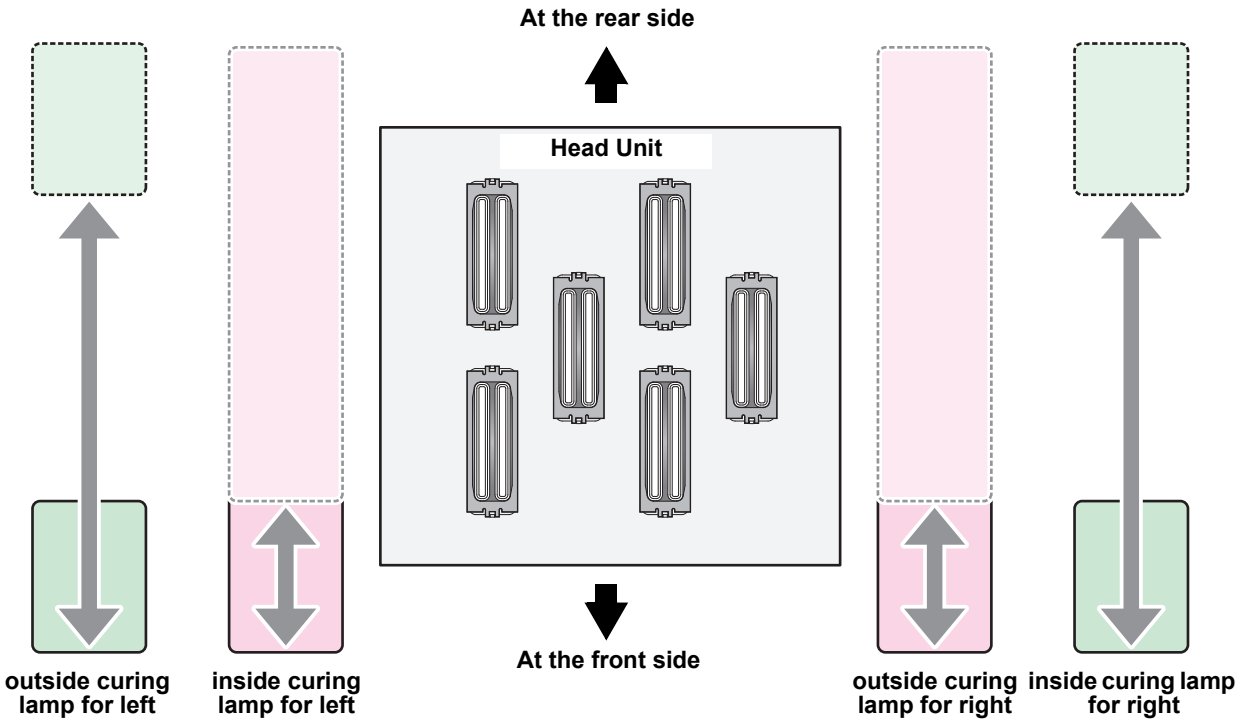
When printing with this machine, you can move the position of the LED UV lamps before printing.

This machine provides three printing methods:

- **Single-layer printing: printing color ink layer on media**
- **Two-layers printing: printing white ink layer on color ink layer**
- **Two-layers printing: printing color ink layer on white ink layer**

Best-suited position of LED UV lamp

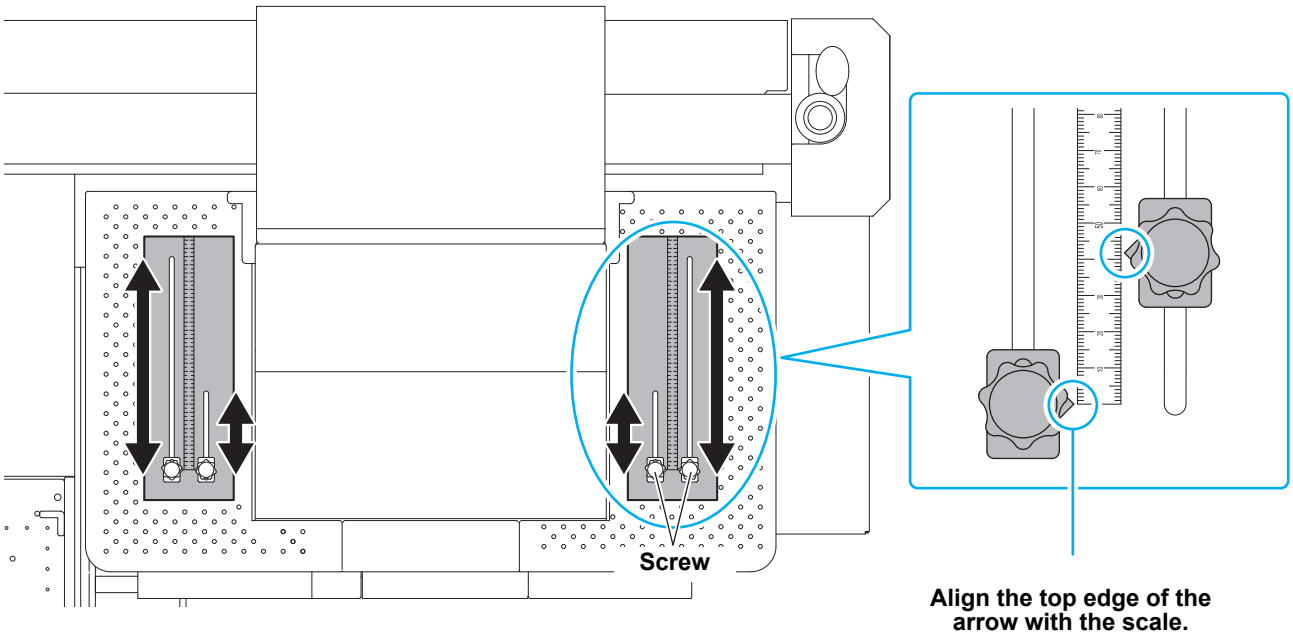
This machine is equipped with four LED UV lamps around the head unit as below.
Move the LED UV lamp.



- The recommended positions for the LED UV lamps are as follows.
  Inside curing lamp : Move the inside curing lamp for right and left to the position of 30mm far from the gauge.
  Outside curing lamp : Move the outside curing lamp for right and left to the position of 80mm far from the gauge.

Positioning method of LED UV lamp

This part explains the method to move the inside/ the outside curing lamp for right and left of the carriage.
Loosen the screw of the lamp you move, slide it.



Caution

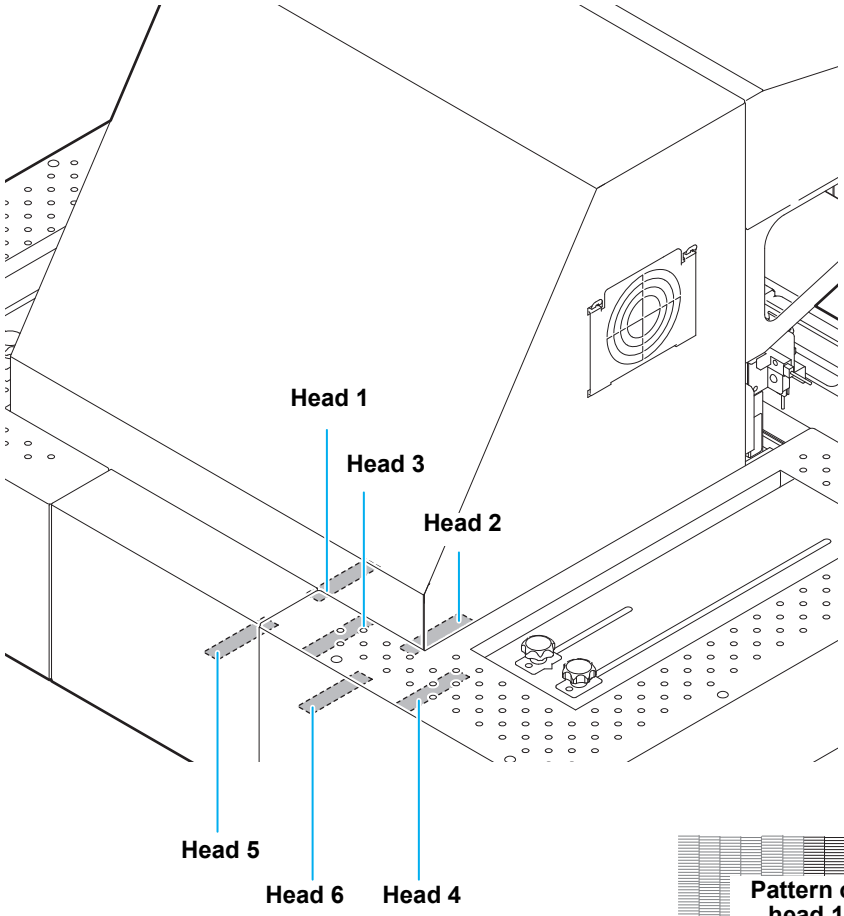
- Be careful not to drop foreign object into the groove for moving the LED UV lamp. If metal substance such as a screw may drop there, it may cause ignition.

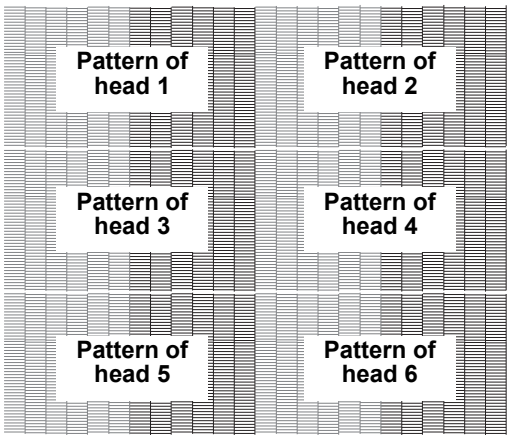
Test Printing

Print a test pattern to check that there are no discharging defects such as nozzle clogging (slight touching of ink or nozzle missing).

Relationship between head row and test pattern

The relations between head row and test pattern print position are as follow.



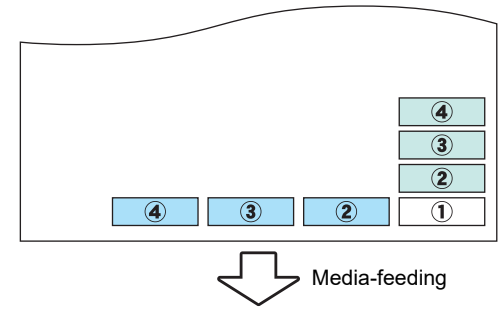


Test Printing

Print a test pattern to check that there are no discharging defects such as nozzle clogging (slight touching of ink or nozzle missing).

In addition, you can select the orientation of the test pattern to print from two types in order to perform test printing repeatedly. Select one depending on your use.

Check before test printing.	
• If a media has been set ☞ P.2-5	• If the origin position has been set
• If the head height has been adjusted ☞ P.3-6	



: When the set value is "FEED DIR."

: When the set value is "SCAN DIR."

1 Press the TEST key in LOCAL.

• Press ▲ ▼ to change the test pattern orientation.

```
TEST PRINT
(FEED DIR.)     [ENT]
```

2 Press the ENTER key.

3 Press ▲ ▼, to select NOZZLE RECOVERY function ON/OFF.

```
TEST PRINT
NOZZLE RECOVERY  :ON
```

ON : Print the pattern of nozzles with recovered nozzles by other nozzles, which have been registered by the nozzle recovery of the maintenance function.

OFF : Print the pattern without recovering the clogged nozzles.

Important!

• Operation of this procedure can not be set if the nozzle recovery of maintenance function is not registered or “CONFIRM MENU” of nozzle recovery is OFF.

4 Press the ENTER key.

• Test printing starts.

```
** PRINTING **
PLEASE WAIT
```

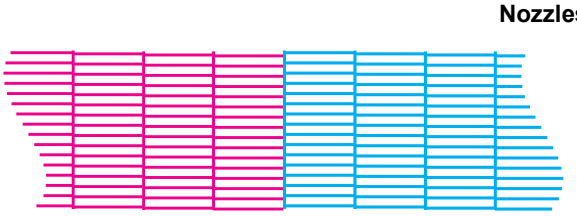
• When the printing has been completed, the screen returns to step1.

```
TEST PRINT
(FEED DIR.)     [ENT]
```

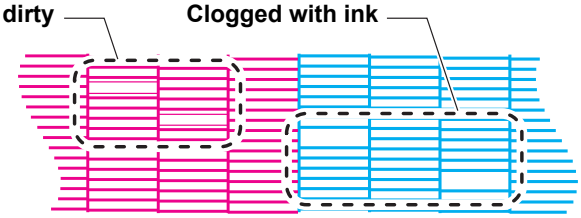
5 Check the printed test pattern.

• When the result is normal, end the operation.

• When the result is abnormal, perform head cleaning. (☞ P.2-12)



Normal pattern



Abnormal pattern

Head Cleaning

About head cleaning

Check the printed test pattern result and perform cleaning depending on the status.
Select one from the three types below:

SOFT : When lines are bent, when any line is missing
NORMAL : When any line is missing, when colors are mixed
HARD : When poor image quality cannot be improved even by NORMAL or SOFT cleaning

Perform head cleaning depending on the test printing result

There are three types of head cleaning. Use one by checking the test pattern.

1 **In Local, Press the CLEANING key.**

```
CLEANING
SOFT                [ENT]
```

2 **Press ▲▼ to select the cleaning type.**

```
CLEANING
NORMAL              [ENT]
```

SOFT : When lines are bent, when any line is missing
NORMAL : When any line is missing, when colors are mixed
HARD : When poor image quality cannot be improved even by NORMAL or SOFT cleaning

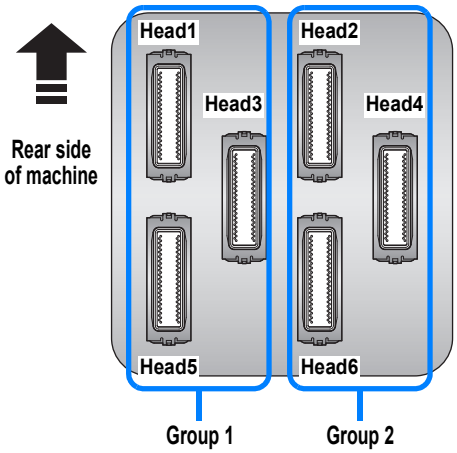
3 **Press the ENTER key.**

```
SELECT HEAD
:12
```

4 **Press ▲▼ to select a head to cleaning.**

```
SELECT HEAD
:1_
```

- Set Value : 12 (Cleaning all heads.)
  1_ (Head of Group 1)
  _2 (Head of Group 2)



5 **Press the ENTER key.**

- The remaining cleaning time is displayed on the bottom row of the display.

```
** CLEANING **
00:01:10
```

6 **Perform test printing again, and check the result.**

- Repeat the cleaning and the test printing until the printing result becomes in normal.

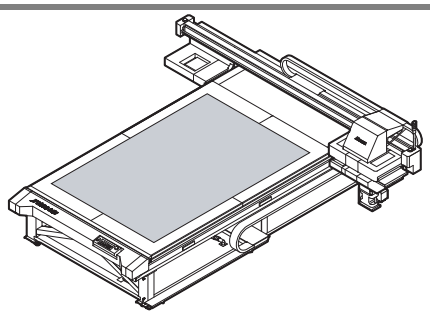
When the image quality is not improved after the head cleaning.

- Clean the wiper and ink cap. (☞ P.4-4)
- By referring to “NOZZLE RECOVERY: When nozzles missing can not be improved at specific points, other good nozzles can be used as alternatives for printing.”, set the nozzle recovery (☞ P.4-17).

Starting a Printing Operation

1 Setting a Media (☞ P.2-5)

(1) Open/Close the suction valve adjusting to the media size.
(2) Press the VACUUM key to light the VACUUM lamp and vacuum the media.

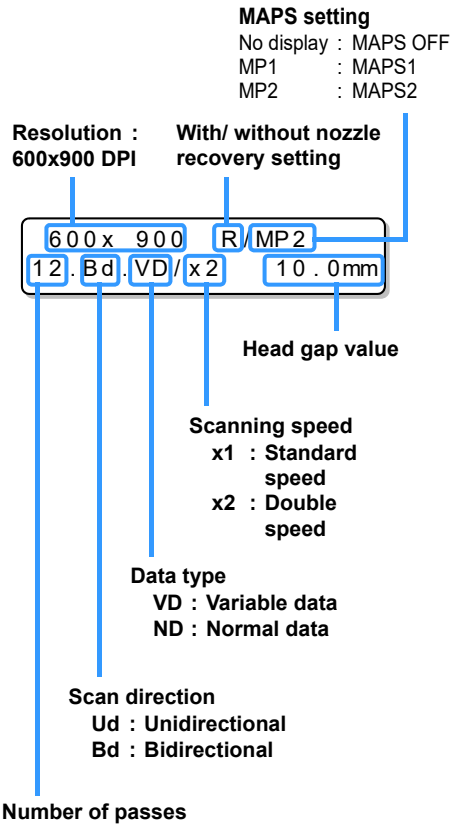


2 Press the REMOTE key in LOCAL.

• The screen changes to REMOTE, and data can be received from the PC.

3 Transmit data to be printed from the PC.

• The printing conditions are displayed.
• For the method of data transmission, see the instruction manual for the output software.



4 Start printing.

5 Taking out the media after completion of printing

(1) Follow the “Move the Y-bar” (☞ P.2-15) to evacuate the Y-bar from the table.
(2) Press the VACUUM key to turn the suction OFF.
(3) Remove the media.

Important!

• During printing, media may be heated by the LED UV and raised, causing printing to be interrupted. In this case, set new media and restart printing.

Stopping a printing operation halfway

Perform the following operation when stopping a printing operation halfway.

1 **Press the (REMOTE) key during printing.**

- The printing operation stops.
- Interrupt data sending at the PC side during the data is sent from the PC.
- Printing restarts from the interrupted data by repressing the (REMOTE) key.

Deleting Received Data (Data Clear)

When you want to stop printing, delete the already received data.

1 **Press the (DATA CLEAR) key in LOCAL.**

2 **Press the (ENTER) key.**

- The received data is erased then it returns to the Local.

Move the Y-bar

When you wish to check the printing results etc., you can move the Y-bar.
Set the evacuation position (view position) of the Y-bar in advance.

Setting the view position

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                    [ENT]
```

2 **Press the ENTER key.**

```
VIEW                  ****mm
START                   [ENT]
```

3 **Press ▼.**

```
VIEW                  ****mm
SET VIEW POS            [ENT]
```

4 **Press the ENTER key.**

```
SET VIEW POS
=              ****  mm
```

5 **Set the moving position by pressing the ▲ or ▼ keys.**

```
SET VIEW POS
=                500  mm
```

If you press ▲ : The Y-bar will move to the back of the table centering the origin. (in 1mm increment)
If you press ▼ : The Y-bar will move to the front of the table centering the origin. (in 1mm increment)
If you press ◀ : The Y-bar will move to the back of the table centering the origin. (in 10mm increment)
If you press ▶ : The Y-bar will move to the front of the table centering the origin. (in 10mm increment)
If you press FUNCTION : The Y-bar will move in 775mm increments.

6 **Press the ENTER key.**

• The value is set, and the screen returns to Step 2.

Evacuation of Y-bar from the table

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                    [ENT]
```

2 **Press the ENTER key.**

```
VIEW                  ****mm
START                   [ENT]
```

3 **Press the ENTER key.**

• The Y-bar moves.

```
**MOVING NOW**
   PLEASE WAIT
```

Chapter 3
Extended Functions

This chapter

describes the operation procedures for using the machine more conveniently and each setting procedure.

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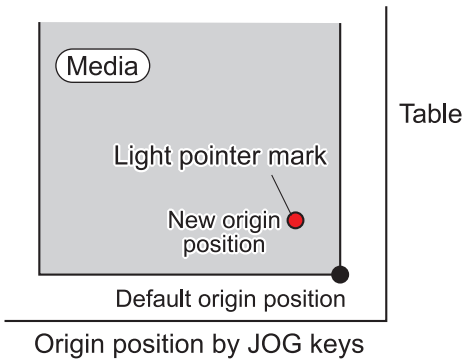
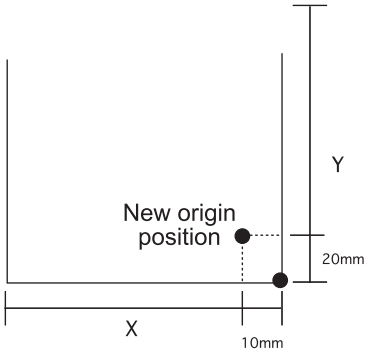
Changing origin

The default origin position can be changed.
There are following 2 changing methods.

Changing with the JOG keys



Changing with the ÅgORIGINÅh in the FUNCTION menu



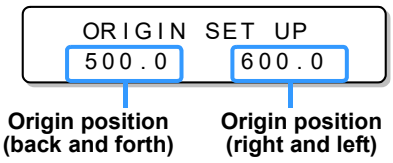
Changing origin with JOG keys

1 **Press ▲ ▼ ◀ ▶ in the local.**

- The origin setting mode starts
- A red light pointer mark [●] is projected on the table or the media.

2 **Move the light pointer mark by pressing ▲ ▼ ◀ ▶.**

- Move the light pointer mark to the position to set a new origin.



3 **Press the ENTER key when the printing origin is determined.**

- The origin is changed.

Important!

- The setting value for the origin set with the JOG keys is cleared by cutting the power.

Changing origin with FUNCTION menu

To precisely set the origin of coordinates, set its X- and Y- coordinates from the FUNCTION menu. This setting value becomes the origin position (0, 0).

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲▼ to select [ORIGIN] and press the ENTER key twice.**

- X-axis offset value setting screen is displayed.

```
ORIGIN    3000 mm
XOFFS :    100 mm
```

3 **Press ▲▼ to input the X offset value.**

- Setting the origin position of X-axis.

```
ORIGIN    2900 mm
XOFFS :    200 mm
```

4 **Press the ENTER key.**

```
ORIGIN     200mm
SELCT:X OFFSET
```

5 **Press ▲▼ to select [Y OFFSET] and press the ENTER key.**

```
ORIGIN     100mm
SELCT:Y OFFSET
```

6 **Input the Y offset value.**

- Setting the origin position of Y-axis.

▲▼ : The value can be changed in 1mm increments.
◀▶ : The value can be changed in 10mm increments.
FUNCTION : The value can be changed in 525mm increments.

```
ORIGIN    1800 mm
YOFFS :    300 mm
```

7 **Press the ENTER key.**

```
ORIGIN     300mm
SELCT:Y OFFSET
```

8 **Press the END key several times to end the setting.**

Important!

- The set value is not cleared by cutting the power.

Registering the thickness of the media

Register the thickness of loading media.
There are three types of registering; “Register the thickness of the media manually”, “Adjust the gap with the UP or DOWN keys”, and “Measuring the thickness of the media automatically”.

Use media with the correct thickness.

- If the media’s thickness is not correct, the head gap becomes wider and the ink becomes misty, resulting in poor application.
- Also, mist can be sucked into the UV cooling fan, resulting in a malfunction that requires part replacement. In addition, reflected UV light can cause the ink inside the nozzle to be cured.

Register the thickness of the media manually

1 **Press the FUNCTION key in the local.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select the [HEAD HEIGHT].**

```
FUNCTION
HEAD HEIGHT         [ENT]
```

3 **Press the ENTER key twice.**

```
MEDIA THICKNESS
=              2.5 mm
```

4 **Press ▲ ▼ to enter the thickness of loading media.**

- Set value : 0.0 to 50.0mm

```
MEDIA THICKNESS
=             10.5 mm
```

5 **Press the ENTER key.**

```
FUNCTION
HEAD HEIGHT         [ENT]
```

6 **Press the END key to end the setting.**

Adjust head gap with the [UP] or [DOWN] keys

1 **Press the UP or DOWN key.**

```
   ORIGIN SET UP
Z HEIGHT = 45.0
```

2 **Adjust with pressing the UP or DOWN key.**

```
   ORIGIN SET UP
Z HEIGHT = 50.0
```

3 **Press the ENTER key.**

```
   ORIGIN SET UP
HEAD GAP = 1.2mm
```

↓

```
   ORIGIN SET UP
MEDIA t = *.*mm
```

Measuring the thickness of the media automatically

Thickness of media is automatically measured with the gap pin on the left of the carriage.

1 **Set a media.**

Caution

- Be sure to set a media on the printing area. If measured automatically without media, the head can break.

2 **Press the FUNCTION key in the local.**

```
FUNCTION
VIEW                [ENT]
```

3 **Press ▲ ▼ to select the [HEAD HEIGHT].**

```
FUNCTION
HEAD HEIGHT         [ENT]
```

4 **Press the ENTER key.**

```
HEAD HEIGHT
MEDIA THICKNESS[ENT]
```

5 **Press ▲ ▼ to select the [THICKNESS CHECK].**

```
HEAD HEIGHT
THICKNESS CHECK[ENT]
```

6 **Press the ENTER key.**

- In preparation for the measuring, the Y-bar will move up to the top position.
- The carriage will move to the printing area.

```
**MOVING NOE**
  PLEASE WAIT
```

↓

```
THICKNESS CHECK
CHECK START         [ENT]
```

7 **Press the ENTER key.**

- The media thickness will be measured automatically.
- The measured thickness will be displayed.
- The carriage will move to the evacuation position and the screen returns to the one displayed in Step 5.

```
THICKNESS CHECK
    **CHECING**
```

↓

```
THICKNESS CHECK
            3.0mm :ent
```

8 **Press the END key several times to end the setting.**

Important!

- Difference of automatic measure is ±0.5mm.

Registering Head gap value

Set the head gap (height from the media to the nozzle plane of the heads).
When the carriage is to move above the platen for printing or maintenance, it moves while keeping the head gap at the preset value.
The upper limit of the head gap varies with media thickness.
Available setting values: [1.2 mm to 3.0 mm] (in units of 0.1 mm / Default : 2.0 mm)

1 **Press the (FUNCTION) key in the local.**

2 **Press (▲)(▼) to select the [HEAD HEIGHT].**

3 **Press the (ENTER) key.**

4 **Press (▲)(▼) to select the [HEAD GAP].**

5 **Press the (ENTER) key.**

6 **Press (▲)(▼) to set a value of the head gap.**

- **Set value** : 1.2 to 3.0mm

7 **Press the (ENTER) key.**

8 **Press the (END) key several times to end the setting.**

Caution

- If a correct value is not set to the head gap value, the print quality may be deteriorated because of dropping of large ink droplets on the media at printing

How to check the value of the head gap

When you check the head gap value currently set, perform the following procedures:

Press the (ENTER) key in Local. → **Press the (ENTER) key several times to display [HEAD GAP].**
- The head gap value currently set is displayed.

List of Functions

This section describes the overview of each function to be set and set values that can be registered in user types.

Important!

- **About default "HOST" function**
  You can operate this by the setting value specified in RIP software.
  When you set to other than "HOST", it operates by that setting value, not by the instruction from RIP software.
  Depending on RIP software, there are some functions that cannot be instructed by software. In such a case, it operates by the setting value of "When no instruction from RIP exists".
- For the specifying method with the RIP software, refer to the operation manual of the RIP software.

Function name			Set value	Default	When no instruction from RIP exists *1	Outline
FEED COMP. (☞ P.3-8)			-255 to 255	0	———	Prints the pattern to correct the feeding amount of the Y bar.
DROP. POS CORRECT (☞ P.3-10)			-40.0 to 0 to 40.0	0.0	———	Used to adjust the dot position in go and return printing.
LOGICAL SEEK(☞ P.3-12)			HOST / ON / OFF	HOST	ON	Sets the scan movable area during printing.
OVER PRINT (☞ P.3-27)			HOST /1 to 9	HOST	1	Sets the number of layers in which ink is to be applied.
UV MODE (☞ P.3-27)	PATTERN	HOST	-50%+50%	0%	Pattern 2	Designates the UV illumination pattern during printing.
		MANUAL	Pattern1 to 7, NOPRINT			
	CONTROL	FULL			———	Sets the light control method for the UV lamp.
		PRINT	Inside/ 0 to 80 mm	30mm	———	
			Outside/ 0 to 245 mm	80mm	———	
REFRESH (☞ P.3-27)			HOST / Lv.0 (Refresh interval long) to 3 (Refresh interval short)	HOST	Lv.3	Refreshes the print heads during printing.
WORK CHANGE (☞ P.3-27)			ON/OFF		———	Sets the operation when printing is finished.
IONIZER (☞ P.3-27)			ON/OFF		———	Set the optional ionizer.
VACUUM (☞ P.3-27)			HOST / STANDARD / STRONG	HOST	———	Sets the absorbability of the media.
MAPS (☞ P.3-19)			OFF/MAPS1/MAPS2	MAPS2	———	Perform setting to reduce stripes between passes.
	MAPS1	PRINT SPEED ADJUST	-50 to +50%	0%	———	
	MAPS2	AUTO				
		MANUAL	PATTERN(1 to 5)/ Smoothing level (AUTO/ 5 to 100%)			
AUTO CLEANING (☞ P.3-24)	OFF, PAGE			OFF	———	Sets the automatic cleaning operation for the head performed before printing.
	PAGE INTERVAL		1 to 1000 page	1 page	———	
	TYPE		NORMAL / SOFT / HARD	SOFT	———	
INTERVAL WIPING (☞ P.3-25)	OFF, PAGE, TIME			OFF	———	Sets the wiping operation performed before printing (when PAGE is set) and during printing (when TIME is set).
	PAGE INTERVAL		1 to 100 page	1 page	———	
	TIME INTERVAL		3 to 50 min	3 min	———	
INK HEATER	Standby Switchovetr TIM		NONE /0 to 60min	2 min	———	Sets the time until the head heater and ink heater change to standby status.

*1. This is the setting value to be used for printing when setting value is not specified at the RIP software (host) side, or, you give priority to the setting value at the machine side, even if you set "Host" to the type registration of this machine.

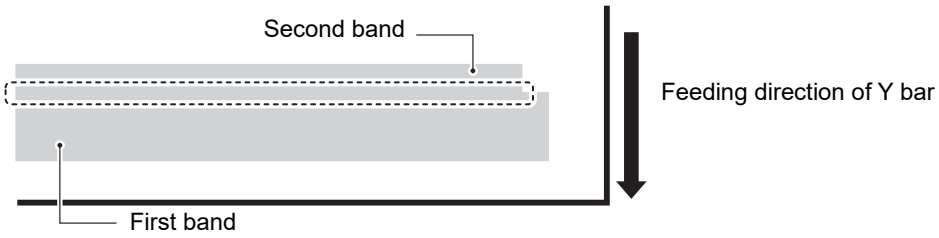
Set the feeding amount of the Y bar

Correct the feeding amount of the Y bar.
If the feeding amount of the Y bar is not proper, stripes may appear on the printed image, thus resulting in a poor printing.

Setting Feed Correction

A pattern for media correction is printed and a media-feeding rate is corrected.

- Two bands are printed in the correction pattern.
- Make adjustment so that an even color density is obtained in the boundary between the two bands.



1 **Set a media. (☞ P.2-5)**

2 **Press the ADJUST key in LOCAL.**

```
FEED COMP.
                [ENT]
```

3 **Press the ENTER key.**

```
FEED COMP.
PRINT           [ENT]
```

4 **Press the ENTER key to print a correction pattern.**

```
** PRINTING **
 PLEASE WAIT
```

5 **Check the correction pattern and enter a correction value.**

```
FEED COMP.
=                 0
```

Enter a correction value in "+": The boundary between the two bands is widened.
Enter a correction value in "-": The boundary between the two bands is narrowed.

- When you change the correction value by “20”, the band moves about 0.01mm. By referring to this correction amount, determine the correction value.

6 **Press the ENTER key.**

- Print a correction pattern again and check it.
- When media correction is needed, perform the operation in Step 5 to make correction.

```
FEED  COMP.
PRINT              [ENT]
```

7 **Press the END key several times to end the setting.**

Performing the station maintenance without ADJUST key

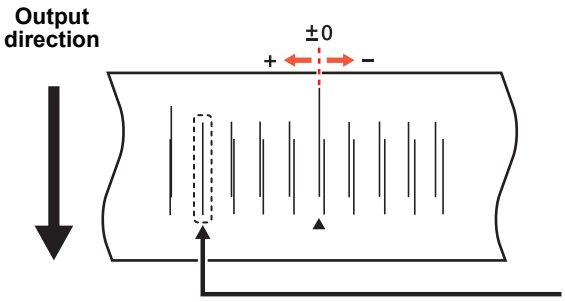
You can select “FEED COMP.” by using the FUNCTION key in the Local without pressing the ADJUST key.

Press the FUNCTION key in Local. → **Press ▲ ▼ to select [SETUP].** → **Press the ENTER key twice.**
- The screen in the Step 3 is displayed. Perform the procedures from the Step 4.

Correct the ink drop position for bidirectional printing

When the condition for printing (media thickness/head height/etc.) has been changed, perform the following operation to correct the ink drop position for bidirectional (Bi) printing and obtain the proper printing result.

Example of a Drop Position correct Printed Pattern



The dots at the fourth position counted from the zero position in the positive direction form a straight line. In this case, the dot position correction value is 4.0.

1 **Set a media on the machine and set a printing origin. (☞ P.2-5)**

2 **Press the ADJUST key twice in LOCAL.**

```
DROP.POScorrect
                [ENT]
```

3 **Press the ENTER key.**

```
DROP.POScorrect
:Y300dpi
```

4 **Press ▲ ▼ to select the resolution.**

- Setting value: Y300dpi / Y600dpi / Y900dpi / Y1200dpi
- Perform correction for all resolutions.

```
DROP.POScorrect
:Y600dpi
```

5 **Press the ENTER key.**

```
DROP.POScorrect
PRINT           [ENT]
```

6 **Press the ENTER key to start pattern printing.**

- Test pattern is printed. (The printed patterns are called Pattern 1, Pattern 2, Pattern 3... in the order of printing.)

```
** PRINTING **
  PLEASE WAIT
```

7 **Press ▲ ▼ to correct the dot position of Pattern 1~.**

```
PATTERN1
=               0.0
```

- Corrected feeding rate: -40.0 to 40.0
- Check the test patterns. The position where an outward feeding line and a return feeding line become one straight line is the correction value.
- When the correction value in not between -40.0 and 40.0, adjust the height of the printing heads and then perform the operations in Step 2 and later.

8 **Press the ENTER key.**

- Input for the next pattern is displayed.
- Repeat step7.

9 **Press the END key several times to end the setting.**

Performing to correct the dot position without ADJUST key

You can select “DROP.POScorrect” by using the FUNCTION key in the Local without pressing the ADJUST key.

Press the FUNCTION key in Local. → **Press ▲ ▼ to select [SETUP], and press the ENTER key.** → **Press ▲ ▼ to select [DROP.POScorrect], and press the ENTER key twice.**

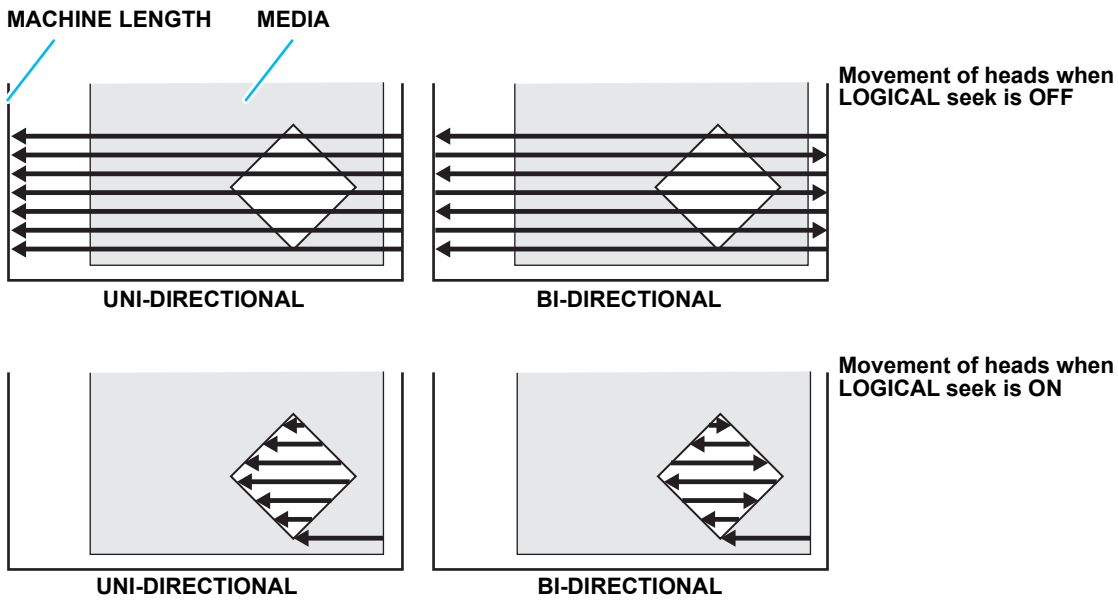
- It becomes the same condition as the key is pressed from Local.

Setting Logical Seek

The motion of Head varies depending on the set of Logical-seek.

Important!

- You cannot specify the logical seek at the RasterLink side. When you set this machine to “Host”, printing will be performed in “LOGICAL SEEK=ON” status.



1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select [SET UP].**

```
FUNCTION
SETUP               [ENT]
```

3 **Press the ENTER key.**

```
SETUP
FEED COMP.          [ENT]
```

4 **Press ▲ ▼ to select [LOGICAL SEEK].**

```
SETUP
LOGICAL SEEK        [ENT]
```

5 **Press the ENTER key.**

```
LOGICAL SEEK
:HOST
```

6 **Press ▲ ▼ to select a set value.**

- **Set value** : HOST / ON / OFF

```
LOGICAL SEEK
:ON
```

7 **Press the ENTER key.**

```
SETUP
LOGICAL SEEK        [ENT]
```

8 **Press the END key several times to end the setting.**

Setting UV mode

Set the intensity of the UV lamp on the LED UV device.

Adjusting the intensity set in RIP

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
SETUP              [ENT]
```

2 **Press the ENTER key.**

```
SETUP
FEED COMP.         [ENT]
```

3 **Press ▲▼ to select [UV MODE].**

```
SETUP
UV MODE            [ENT]
```

4 **Press the ENTER key.**

```
UV MODE
:PATTERN
```

5 **Press ▲▼ to select [PATTERN].**

```
UV MODE
:PATTERN
```

6 **Press the ENTER key.**

```
UV MODE
:HOST
```

7 **Press ▲▼ to select [HOST].**

- To print at the intensity set in the printer, select [MANUAL].

```
UV MODE
:HOST
```

8 **Press the ENTER key.**

```
UV MODE
LIGHT ADJUST :     0%
```

9 **Press ▲▼ to set the adjustment value for the intensity of the LED UV device.**

Set Value : -50% to +50%

- If the value is set to 0%, the value specified in RIP is applied.
- Setting a negative value reduces the intensity; setting a positive value increases the intensity.

```
UV MODE
LIGHT ADJUST :    10%
```

10 **Press the ENTER key.**

```
SETUP
UV MODE            [ENT]
```

11 **Press the END key several times to end the setting.**

Printing at the intensity set in the printer

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
SETUP              [ENT]
```

2 **Press the ENTER key.**

```
SETUP
FEED COMP.         [ENT]
```

3 **Press ▲ ▼ to select [UV MODE].**

```
SETUP
UV MODE            [ENT]
```

4 **Press the ENTER key.**

```
UV MODE
:PATTERN
```

5 **Press ▲ ▼ to select [PATTERN].**

```
UV MODE
:PATTERN
```

6 **Press the ENTER key.**

```
UV MODE
:HOST
```

7 **Press ▲ ▼ to select [MANUAL].**

- To print at the intensity set in the printer, select [MANUAL].

```
UV MODE
:MNUAL
```

8 **Press the ENTER key.**

```
UV MODE
:PATTERN 1
```

9 **Press ▲ ▼ to select [MANUAL].**

- Set values : Pattern 1 to 7, NOPRINT
- The following indicates the recommended printing mode for each irradiation pattern.

```
UV MODE
:PATTERN 4
```

Ink set	4-colors	4-colors + white
Pattern 1	300x450HQ	300x450HQ (only color print)
Pattern 2	Not normally used	Not normally used (Irradiation is weakened directly after ink is applied.)
Pattern 3	When the crack of ink occurs.	When the crack of ink occurs.
Pattern 4	600x600	600x600 (only color print)
Pattern 5	600x900, 1200x1200	600x900, 1200x1200 (only color print)
Pattern 6	When contact with the media is poor	When contact with the media is poor
Pattern 7	Not normally used	300x450HQ, 600x600, 600x900, 1200x1200 (color white overlapping print, white print)
NOPRINT	Only irradiation	Only irradiation

10 **Press the ENTER key.**

```
UV MODE
LEVEL     :10
```

11 **Press ▲ ▼ to set the level for the intensity of the LED UV device.**

```
UV MODE
LEVEL     :  5
```

Set Value : 1 to 10 (Default=5)
- The intensity is at maximum with the initial setting value of 10.
- Decreasing the level reduces the intensity.

12 **Press the ENTER key.**

```
SETUP
UV MODE          [ENT]
```

13 **Press the END key several times to end the setting.**

Important!
- Depending on the level setting, a UV-related error, such as overheating, may occur. If an error occurs, set the intensity to a lower level.

If you want to print using the UV lamp light control set in this machine

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
SETUP            [ENT]
```

2 **Press the ENTER key.**

```
SETUP
FEED COMP.       [ENT]
```

3 **Press ▲ ▼ to select [UV MODE].**

```
SETUP
UV MODE          [ENT]
```

4 **Press the ENTER key.**

```
UV MODE
:PATTERN
```

5 **Press ▲ ▼ to select [CONTROL].**

```
UV MODE
:CONTROL
```

6 **Press the ENTER key.**

```
UV MODE
UV CTRL AREA:FULL
```

7 **Press ▲ ▼ to select the control method.**

If you selected "FULL" : Printing is performed with the LED outside the print range lit up when the print begins and ends.

If you selected "PRINT" : Printing is performed with the LED outside the print range lit up when the print begins and ends.

8 **Press the ENTER key.**

• If you selected "FULL" in Step 7, proceed to Step 16.

```
UV MODE
UV1 INSIDE : 0mm
```

9 **Press ▲ ▼ to input the left side inside cure lamp scale position.**

Set Value : 0 to 80mm (The LED UV lamp's normal position is "30mm".)

```
UV MODE
UV1 INSIDE : 0mm
```

10 **Press the ENTER key.**

```
UV MODE
UV1 OUTSIDE : 0mm
```

11 **Press ▲ ▼ to input the left side outside cure lamp scale position.**

Set Value : 0 to 245mm (The LED UV lamp's normal position is "80mm".)

```
UV MODE
UV1 OUTSIDE : 0mm
```

12 **Press the ENTER key.**

```
UV MODE
UV2 INSIDE : 0mm
```

13 **Press ▲ ▼ to input the left side inside cure lamp scale position.**

Set Value : 0 to 80mm (The LED UV lamp's normal position is "30mm".)

```
UV MODE
UV2 INSIDE : 0mm
```

14 **Press the ENTER key.**

```
UV MODE
UV2 OUTSIDE : 0mm
```

15 **Press ▲ ▼ to input the left side outside cure lamp scale position.**

Set Value : 0 to 245mm (The LED UV lamp's normal position is "80mm".)

```
UV MODE
UV2 OUTSIDE : 0mm
```

16 **Press the ENTER key.**

```
SETUP
UV MODE [ENT]
```

17 **Press the END key several times to end the setting.**

Setting Work Change

Set whether to return to the local mode or keep the remote mode after online drawing.

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select [SET UP].**

```
FUNCTION
SETUP               [ENT]
```

3 **Press the ENTER key.**

```
SETUP
FEED COMP.          [ENT]
```

4 **Press ▲ ▼ to select [WORK CHANGE].**

```
SETUP
WORK CHANGE         [ENT]
```

5 **Press the ENTER key.**

```
WORK CHANGE
WORK CHANGE  :OFF
```

6 **Press ▲ ▼ to select a set value.**

OFF : After online drawing, remote mode is maintained (if receiving the next drawing data, it is overwritten.)
ON : After online drawing, the Y bar moves to the position set in view, and the menu returns to local mode.

```
WORK CHANGE
WORK CHANGE  :ON
```

7 **Press the ENTER key.**

```
WORK CHANGE
VACUUM:OFF
```

8 **Press ▲ ▼ to select a set value.**

OFF : After returning to local, the vacuum stays on.
ON : After returning to local, the vacuum turns off.

• If you selected "OFF" in step 6, proceed to step 10.

```
WORK CHANGE
VACUUM:ON
```

9 **Press the ENTER key.**

```
WORK CHANGE
VACUUM:OFF
```

10 **Press the END key several times to end the setting.**

Setting Ionizer

Set the operation if you have an optional ionizer equipped.

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select [SET UP].**

```
FUNCTION
SETUP               [ENT]
```

3 **Press the ENTER key.**

```
SETUP
FEED COMP.          [ENT]
```

4 **Press ▲ ▼ to select [IONIZER].**

```
SETUP
IONIZER             [ENT]
```

5 **Press the ENTER key.**

```
IONIZER
:ON
```

6 **Press ▲ ▼ to select a set value.**

```
IONIZER
:OFF
```

ON : During normal printing, the ionizer is on and removes static electricity before and during printing. For reverse printing, it removes static electricity before beginning the print. The ionizer turns on while moving to [VIEW].

OFF : Static electricity is not removed.

7 **Press the ENTER key.**

```
SETUP
IONIZER             [ENT]
```

8 **Press the END key several times to end the setting.**

Perform setting to reduce stripes between passes

What is the MAPS Function?

If performing media correction does not resolve feeding stripes, use the MAPS (Mimaki Advanced PassSystem) function to disperse the pass boundary to make the feeding stripes less visible.
With the JFX500, you can use both the MAPS1 function and the MAPS2 function.

- With MAPS1, the printing speed can be adjusted, but depending on the image to be printed, there may be color changes. With MAPS2, both feeding stripes and color changes can be reduced, but speed cannot be adjusted. Choose the function based on the image to be printed.
- MAPS1 effect differs depending on the set value of the printing speed. Use it after checking effect in advance.
- When you speed up the printing speed, it takes shorter time to print. However, MAPS1 effect becomes weak.
- When you slow down the printing speed, it takes longer time to print. However, MAPS1 effect becomes strong and feeding stripes become less visible.
- Enabling the MAPS function, slight color change may be found compared to when the MAPS function disable. Use it after checking effect in advance.
- MAPS may not be effective depending on image to be printed. Use it after checking effect in advance.

Conditions for the MAPS1 Function to be Effective

- When printing, if you set the printing speed to 0% and more, MAPS1 becomes invalid. In addition, it prints at 0% speed. When you use MAPS1, set the printing speed to “minus (-)”.
- The MAPS1 function may not be effective depending on the image to be printed.

For 4-color

Resolution	Pass	Scan speed
300 x 450 HQ	3 pass	Normal speed
600 x 600	2 pass	Normal speed
	4 pass	High speed
600 x 900	3 pass	Normal speed
	6 pass	High speed

For 4-color + special color

Resolution	Pass	Scan speed
600 x 450	3 pass	Normal speed
	6 pass	High speed
600 x 600	4 pass	Normal speed
	8 pass	High speed
600 x 900	6 pass	Normal speed
	12 pass	High speed

Conditions for the MAPS2 Function to be Effective

- The following are the resolutions and pass numbers where MAPS2 is effective.
- Under conditions other than those below, printing is performed in a format equal to MAPS-OFF.
- The MAPS1 function may not be effective depending on the image to be printed.

	For 4color		For 4-color + special color (color print)		For 4-color + special color (white overlapping print)	
Resolution	Pass	Scan speed	Pass	Scan speed	Pass	Scan speed
300 x 450 HQ VD	6 pass	Normal speed	6 pass	Normal speed	———	———
600 x 600 VD	8 pass	High speed	8 pass	High speed	8 pass	High speed
					16 pass	
600 x 900 VD	12 pass	High speed	12 pass	High speed	12 pass	High speed
					24 pass	
1200 x 1200 ND	16 pass	Normal speed	16 pass	Normal speed	16 pass	Normal speed
	32 pass		32 pass		32 pass	

Setting MAPS1 Function

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select [SET UP].**

```
FUNCTION
SETUP               [ENT]
```

3 **Press the ENTER key.**

```
SETUP
FEED COMP.          [ENT]
```

4 **Press ▲ ▼ to select [MAPS].**

```
SETUP
MAPS                [ENT]
```

5 **Press the ENTER key.**

```
MAPS
:OFF
```

6 **Press ▲ ▼ to select MAPS1.**

• Set Value：MAPS1, MAPS2, OFF

```
MAPS
:MAPS 1
```

7 **Press the ENTER key.**

• If you selected MAPS2 or OFF in step 5, proceed to step 8.

```
PRINT SPEED ADJUST
=                    0%
```

8 **Press ▲ ▼ to change print speed.**

• Set Value:-50 to +50%

```
PRINT SPEED ADJUST
=                   10%
```

Important! • When you change the speed, nozzle recovery effect cannot work in some cases. Use it after checking.

9 **Press the ENTER key.**

```
SETUP
MAPS                [ENT]
```

10 **Press the END key several times to end the setting.**

Setting MAPS2 Function (4 color)

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲▼ to select [SET UP].**

```
FUNCTION
SETUP               [ENT]
```

3 **Press the ENTER key.**

```
SETUP
FEED COMP.          [ENT]
```

4 **Press ▲▼ to select [MAPS].**

```
SETUP
MAPS                [ENT]
```

5 **Press the ENTER key.**

```
MAPS
:OFF
```

6 **Press ▲▼ to select MAPS2.**

- Set Value：MAPS1, MAPS2, OFF

```
MAPS
:MAPS 2
```

7 **Press the ENTER key.**

- If you selected OFF in step 5, proceed to step 12.

```
MAPS 2
:AUTO
```

8 **Press ▲▼ to select “AUTO” or “MANUAL”.**

- **AUTO**:Set the print pattern and smoothing level to the recommended value automatically depending on printing mode.
- **MANUAL**:You can adjust the set value.

```
MAPS2
:AUTO
```

Important!

- If feeding stripes and color change is not improved by “AUTO” setting, please adjust the print pattern and smoothing level by “MANUAL” setting.

9 **Press the ENTER key.**

- When selecting the “AUTO” in the Step 7, proceed to the step 12.
- When selecting the “MANUAL” in the Step 7, proceed to the step 9.

```
MAPS2
PATTERN:1
```

10 **Press ▲▼ to select pattern to print.**

- **Set value**：Pattern1 to Pattern 5

```
MAPS2
PATTERN:2
```

Important!

- MAPS2 effect differs depending on image to be printed. Change the printing pattern and use it after checking effect in advance.

11 **Press the ENTER key.**

```
MAPS2
SMOOTHING LV.:AUTO
```

12 **Press ▲ ▼ to change the smoothing level.**

```
MAPS2
SMOOTHING LV.:100%
```

- **Set Value** : AUTO, 5 to 100% (set in units of 5%)
  AUTO : Set the smoothing level automatically depending on printing mode.
  5 to 100% : The MAPS2 effect become strong as the set value increase, and become weak as the set value decrease.

13 **Press the ENTER key.**

```
SETUP
MAPS                [ENT]
```

14 **Press the END key several times to end the setting.**

Setting MAPS2 Function (4color + special color ink)

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select [SET UP].**

```
FUNCTION
SETUP               [ENT]
```

3 **Press the ENTER key.**

```
SETUP
FEED COMP.          [ENT]
```

4 **Press ▲ ▼ to select [MAPS].**

```
SETUP
MAPS                [ENT]
```

5 **Press the ENTER key.**

```
MAPS
:OFF
```

6 **Press ▲ ▼ to select “MAPS2” and press the ENTER key.**

```
MAPS2
:AUTO
```

- Set Value：MAPS1, MAPS2, OFF
- If you selected OFF, proceed to step 11.

7 **Press ▲ ▼ to select “AUTO” or “MANUAL”.**

```
MAPS2
:AUTO
```

AUTO : Set the print pattern and smoothing level to the recommended value automatically depending on printing mode.
MANUAL : You can adjust the set value.

Important! • If feeding stripes and color change is not improved by “AUTO” setting, please adjust the print pattern and smoothing level by “MANUAL” setting.

8 **Press the ENTER key.**

- When selecting the “AUTO” in the Step 6, proceed to the step 11.
- When selecting the “MANUAL” in the Step 6, proceed to the step8.

```
          COLOR      >
PATTERN : 1
```

9 **Press ▲▼◀▶ and select pattern and color to be printed.**

```
<         SPOTR
PATTERN : 2
```

▲▼ : Select the Pattern1 to Pattern 5.
◀▶ : Select color(COLOR or SPOT(special color))

Important! • MAPS2 effect differs depending on image to be printed. Change the printing pattern and use it after checking effect in advance.

10 **Press the ENTER key.**

```
<         SPOTR
SMOOTHING LV. : AUTO
```

11 **Press ▲▼ to change the smoothing level and color.**

```
<         SPOTR
SMOOTHING LV. : 100%
```

Set Value : AUTO, 5 to 100% (set in units of 5%)
AUTO : Set the smoothing level automatically depending on printing mode.
5 to 100% : The MAPS2 effect become strong as the set value increase, and become weak as the set value decrease.

- ▲▼ : Select the smoothing level.
- ◀▶ : Select color (COLOR or SPOT(special color))

12 **Press the ENTER key.**

```
SETUP
MAPS                [ENT]
```

13 **Press the END key several times to end the setting.**

Setting Auto Cleaning

You can set the machine so that it counts the number of printed files after printing has been completed, and performs cleaning automatically if required.
The machine can perform a stable printing operation with its heads always kept clean.

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select [SET UP].**

```
FUNCTION
SETUP               [ENT]
```

3 **Press the ENTER key.**

```
SETUP
FEED COMP.          [ENT]
```

4 **Press ▲ ▼ to select [AUTO CLEANING].**

```
SETUP
AUTO CLEANING       [ENT]
```

5 **Press the ENTER key.**

```
AUTO CLEANING
:OFF
```

6 **Press ▲ ▼ to select the type of auto cleaning.**

- When you select auto cleaning “PAGE”, after set number of printings has been completed, head cleaning will be performed automatically.
- If you do not set auto cleaning, first select “OFF” and then proceed to the Step 11.

```
AUTO CLEANING
:PAGE
```

7 **Press the ENTER key.**

8 **Press ▲ ▼ to set the cleaning interval.**

- Setting value : 1 to 1000 page

```
INTERVAL
=                   10page
```

9 **Press the ENTER key.**

```
TYPE
:SOFT
```

10 **Press ▲ ▼ to set the cleaning type.**

- Setting value : NORMAL/ SOFT/ HARD

```
TYPE
:NORMAL
```

11 **Press the ENTER key.**

12 **Press the END key several times to end the setting.**

Important!

- Depending on the state of the heads, etc., the image quality deterioration may not be improved even with this function performed.In this case, contact our service office or the distributor in your region.

Setting nozzle face cleaning

The nozzle face of the head is automatically cleaned and any ink stuck to the nozzle face is removed before starting and during printing.

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲▼ to select [SET UP].**

```
FUNCTION
SETUP               [ENT]
```

3 **Press the ENTER key.**

```
SETUP
FEED COMP.          [ENT]
```

4 **Press ▲▼ to select [INTERVAL WIPING].**

```
SETUP
INTERVAL WIPING[ENT]
```

5 **Press the ENTER key.**

```
SETUP
INTERVAL WIPING[ENT]
```

6 **Press ▲▼ to select the type of interval wiping.**

- When you select interval wiping "PAGE", after set number of printings has been completed, head nozzle cleaning is automatically performed before the next printing starts.
- When you select "TIME" for periodic wiping, head nozzle cleaning is automatically performed when the set time elapses during printing.
- If you do not set interval wiping, first select “OFF” and then proceed to the Step 9.

```
INTERVAL WIPING
:PAGE
```

7 **Press the ENTER key.**

8 **Press ▲▼ to set the wiping interval.**

Setting value (PAGE) : 1 to 100 page
Setting value (TIME) : 3 to 50 min

```
INTERVAL
=                   1page
```

9 **Press the ENTER key.**

Setting Ink Heater

Set the time until the head heater and ink heater change to standby status after the print is finished.
(In standby status, the heaters' temperatures decrease and they go on standby.)

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲▼ to select [SET UP].**

```
FUNCTION
SETUP               [ENT]
```

3 **Press the ENTER key.**

```
SETUP
FEED COMP.          [ENT]
```

4 **Press ▲▼ to select [INK HEATER].**

```
SETUP
INK HEATER          [ENT]
```

5 **Press the ENTER key.**

```
StanbySwitchoverTIM
=                   10min
```

6 **Press ▲▼ to select setting time.**

- Set Value：NONE, 0 to 60 min
- If you set "NONE", the heaters do not change to standby status.

```
StanbySwitchoverTIM
=                   30min
```

7 **Press the ENTER key.**

```
PRINT SPEED ADJUST
=                    0%
```

8 **Press the END key several times to end the setting.**

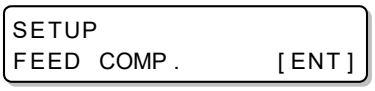
Other Settings

Change the settings according to the types of use.

1 **Press the FUNCTION key in LOCAL.**

2 **Press ▲ ▼ to select [SET UP].**

3 **Press the ENTER key.**



4 **Press ▲ ▼ to select an item for setting.**

- Select it, referring to P.3-7 “List of Functions”.

5 **Press the ENTER key.**

6 **Press ▲ ▼ to select the setting value.**

- Select it, referring to P.3-7 “List of Functions”.

7 **Press the ENTER key.**

8 **Press the END key several times to end the setting.**

Important!

- The set value is retained even when the power is turned "OFF".

Machine Settings

Machine settings are functions for using this machine easily.
The following items can be set in Machine settings.

Item		Set value	Default	Meaning
AUTO Power-off (☞ P.3-28)		NONE/ 10 to 600min	30min	When no operation has been performed for the set time, the power supply is automatically turned “OFF”.
TIME SET (☞ P.3-29)		+4h to -20h	Japan time	Time difference is corrected.
UNIT (☞ P.3-30)	TEMP.	°C (Centigrade) /°F (Fahrenheit)	°C	A unit for displaying temperature is set.
	LENGTH	mm / inch	mm	A unit for displaying length and area is set.
KEY BUZZER (☞ P.3-31)		OFF / ON	ON	A buzzer sound when keys are pressed is set.
LANGUAGE (☞ P.3-32)		English ニホンゴ Deutsch Français Español Italiano Português	English	Displayed language is changed.
RESET(☞ P.3-33)		————	————	All setting values are returned to the status default.

Setting a AUTO Power-off

When no operation has been performed for the set time, the power supply is automatically turned “OFF”.

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select [MACHINE SETUP].**

```
FUNCTION
MACHINE SETUP       [ENT]
```

3 **Press the ENTER key twice.**

```
AUTO Power-off
=                    30min
```

4 **Press ▲ ▼ to set time to turn OFF the power supply.**

- Set Value : none, 10 to 600min

```
AUTO Power-off
=                    60min
```

5 **Press the ENTER key.**

```
MACHINE SETUP
AUTO Power-off      [ENT]
```

6 **Press the END key several times to end the setting.**

Important! • If it has received data from the PC in the auto-power-off status, the power supply is turned on, however, the printing operation does not start automatically.

Setting Time

You can set time of your country (time difference).

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select [MACHINE SETUP].**

```
FUNCTION
MACHINE SETUP       [ENT]
```

3 **Press the ENTER key.**

```
MACHINE SETUP
AUTO Power-off      [ENT]
```

4 **Press ▲ ▼ to select [TIME SET].**

```
MACHINE SETUP
TIME SET            [ENT]
```

5 **Press the ENTER key.**

```
TIME SET
2012.10.05  21:30:00
```

6 **Press ▲ ▼ ◀ ▶ to enter time.**

Year/Month/Day/Time selecting : by the ◀ ▶ keys.
Year/Month/Day/Time inputting : by the ▲ ▼ keys.

7 **Press the ENTER key.**

• The entered date is displayed.

```
TIME SET
2012.10.05  15:30:00
```

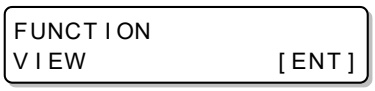
8 **Press the END key several times to end the setting.**

• -20 hours to +4 hours can be set.

Setting Units

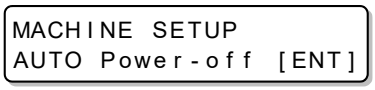
Units used by this machine are set.

1 **Press the key (FUNCTION) in LOCAL.**



2 **Press (▲)(▼) to select [MACHINE SETUP].**

3 **Press the (ENTER) key.**



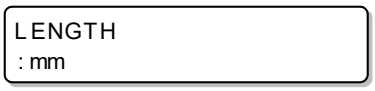
4 **Press (▲)(▼) to select [UNIT].**

5 **Press the (ENTER) key.**

6 **Press (▲)(▼) to select a unit of the temperature.**

- **Set value** : °C / °F

7 **Press the (ENTER) key.**



8 **Press (▲)(▼) to select a unit of the length.**

- **Set value** : mm / inch

9 **Press the (ENTER) key.**

10 **Press the (END) key several times to end the setting.**

Setting a KEY BUZZER

You can turn off the buzzer sound when pressing the key.

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select [MACHINE SETUP].**

```
FUNCTION
MACHINE SETUP       [ENT]
```

3 **Press the ENTER key.**

```
MACHINE SETUP
AUTO Power-off      [ENT]
```

4 **Press ▲ ▼ to select [KEY BUZZER].**

```
MACHINE SETUP
KEY BUZZER          [ENT]
```

5 **Press the ENTER key.**

```
KEY BUZZER
:ON
```

6 **Press ▲ ▼ to select ON/OFF.**

```
KEY BUZZER
:OFF
```

7 **Press the ENTER key.**

```
MACHINE SETUP
KEY BUZZER          [ENT]
```

8 **Press the END key several times to end the setting.**

- When the key buzzer is set to "OFF", the buzzer sound for errors, warnings, operation completion, etc. cannot be shut off.

Setting a LANGUAGE

You can change the displayed language.

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select [MACHINE SETUP].**

```
FUNCTION
MACHINE SETUP       [ENT]
```

3 **Press the ENTER key.**

```
MACHINE SETUP
AUTO Power-off      [ENT]
```

4 **Press ▲ ▼ to select [LANGUAGE].**

```
MACHINE SETUP
LANGUAGE            [ENT]
```

5 **Press the ENTER key.**

```
LANGUAGE
:English
```

6 **Press ▲ ▼ to select language.**

- **Set Value**：ニホンゴ / English / Deutsch / Français / Español / Italiano / Português

```
MEDIA SIDUAL
:ﾆﾎﾝｺﾞ
```

7 **Press the ENTER key.**

```
MACHINE SETUP
LANGUAGE            [ENT]
```

8 **Press the END key several times to end the setting.**

Initializing the Settings

You can return the setting of “SETUP”, “MAINTENANCE” and “MACHINE SETUP” to the status before shipment.

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲ ▼ to select [MACHINE SETUP].**

```
FUNCTION
MACHINE SETUP       [ENT]
```

3 **Press the ENTER key.**

```
MACHINE SETUP
AUTO Power-off      [ENT]
```

4 **Press ▲ ▼ to select [RESET].**

```
MACHINE SETUP
RESET               [ENT]
```

5 **Press the ENTER key.**

```
RSET ALL SETTING
OK?                 [ENT]
```

6 **Press the ENTER key.**

- The already configured settings are initialized.

```
RESET
EXECUTE             [ENT]
```

7 **Press the END key several times to end the setting.**

Confirming Machine Information

The information of this machine can be confirmed.
The following items can be confirmed as machine information.

Item		Description
ERROR HISTORY *1		This displays the history of errors and warnings to date. When you press (▲)(▼), the date of occurrence (year/ month/day/hour/minute) and the error/warning information are displayed alternately in the order of occurrence.
USAGE	WIPING	The information of this machine can be confirmed.
	PRINT LENGTH	
	PRINT AREA	
	USE TIME	
	UV LAMP	
VERSION		This displays the firmware version of the machine.

*1. Supported from the firmware Ver.2.30

Check the using status of the machine

You can check machine information such as wiping information and length printed by this machine.

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press (▲)(▼) to select [INFORMATION].**

```
FUNCTION
INFORMATION         [ENT]
```

3 **Press the ENTER key.**

```
INFORMATION
USAGE               [ENT]
```

4 **Press the ENTER key.**

```
WIPING
=                   0
```

- The wiping Information is displayed.
- Every time you press the ENTER key, machine information below are displayed in series.

WIPING

Displays wiping information.

```
WIPING
=                   0
```

PRINT LENGTH

Displays printed length up to now.

```
PRINT LENGTH
=                   0m
```

PRINT AREA

Displays printed area up to now.

```
PRINT AREA
=                   0m²
```

USE TIME

Displays used time information of machine.

```
USE TIME
=                   0h
```

UV lamp

The used hours of the UV lamp is displayed by LED.

```
UV LAMP1 :LED *
=                   0h
```

∗ : A to H

- **When you reset the used count of the Wiper**
  Press the MAINT. key while WIPING is displayed.
  When you press the ENTER key, the number of wipings is reset.

```
WIPING
RESET?              [ENT]
```

- **When you reset the used hours of the UV LAMP**
  Press the MAINT. key while WIPING is displayed.
  When you press the ENTER key, the number of wipings is reset.

```
UV LAMP1 :LED *
RESET?              [ENT]
```

Check the machine version information

1 **Press the FUNCTION key in LOCAL.**

```
FUNCTION
VIEW                [ENT]
```

2 **Press ▲▼ to select [INFORMATION].**

```
FUNCTION
INFORMATION         [ENT]
```

3 **Press the ENTER key.**

```
INFORMATION
USAGE               [ENT]
```

4 **Press ▲▼ to select [VERSION].**

```
INFORMATION
VERSION             [ENT]
```

5 **Press the ENTER key.**

- The version Information is displayed.

```
JFX500-2131   V1.00
MRL-III       V1.90
```

About displayed Information

This section describes how to read displayed information.

ERROR HISTORY *1

Displaying the occurrence date

```
[00000]
2014/09/26 22:13:00
```

◀▶

Displaying the contents of error

```
ERROR 12a
HDC SPEED
```

VERSION

Displaying the version information such as F/W or the like.

```
JFX500-2131   V2.30
MRL-III       V2.20
```

*1. Supported from the firmware Ver.2.30

Displaying the Information of this machine

1 **Press the ENTER key in LOCAL.**

```
LUS-150        MMBBYYKK
REMAIN         99999999
```

2 **The information is displayed sequentially with the ENTER key .**

• The information shown on the below appear.

Remaining amount of ink

```
LUS-150        MMBBYYKK
REMAIN         99999999
```

Error (when ink error occurs)

```
NON INK IC
MMBBYYKK
```

Warning (when warning occurs)

```
WARNING
Replace a Wiper[MNT]
```

Serial No.

```
SERIAL No.
:*********
```

Version

```
JFX500         V1.00
MRL-III        V1.90
```

Main PCB information

```
MAIN PCB       EPL*
```

＊: EPL or EPL2

RECOVERY NOZZLE

```
RECOVERY NOZZLE:*
CONFIRM DETAILS[MNT]
```

Press the MAINT. key and confim the description

Head gap

```
HEAD GAP
=                1.2mm
```

Media thick

```
MEDIA THICKNESS
=                10.2mm
```

3 **Press the ENTER key to return to LOCAL.**

Chapter 4
Maintenance

This chapter

describes the items required to use this machine more comfortably, which are the methods for the daily care, the maintenance of the ink unit etc.

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Maintenance of frame component 4-2
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Maintenance

Maintain the machine regularly or as necessary so that its accuracy will be maintained and it can continue to be used for a long time.

Precautions for Maintenance

Pay attention to the following items when maintaining this machine.

- When using cleaning solution for maintenance, be sure to wear the supplied protective glasses.

- Never disassemble the machine.Disassembling it can result in electric shock hazards or damage to the machine.
  Before maintenance, be sure to turn off the power button and main power switch, and unplug the power cable;otherwise, an unexpected accident may occur.

- Prevent moisture from entering the machine.Moisture inside the machine can cause electric shock hazards or damage to the machine.

- To ensure stable ink jetting, it is necessary for the machine to eject a small amount of ink (flushing) regularly when a printing (outputting) operation has not been performed for a long time.
- In case you do not use this machine for a long time, be sure to turn off the main power switch at the left side surface of the machine and remove the set media.
- Make maintenance after the LED UV has been sufficiently cooled, or burn injury may occur.

- Do not use benzene, thinner, or any chemical agent containing an abrasive.Such materials can deteriorate or deform the surface of the cover.
- Do not apply a lubricant, etc. to any parts inside the machine. Doing so can cause printing failure.
- Be careful that the cleaning solution, ink, etc. not to stick to the cover because this may cause the surface of the cover to deteriorate or deform.

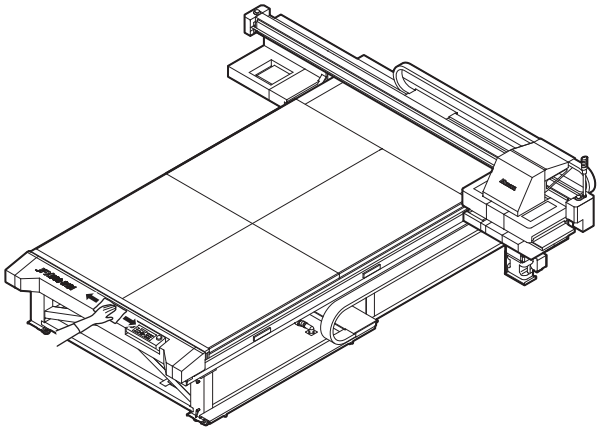
About Cleaning liquid

Use the cleaning liquid dedicated for the ink being used.

Type of Ink	Applicable maintenance washings
UV ink	Cleaning liquid for maintenance (SPC-0568)

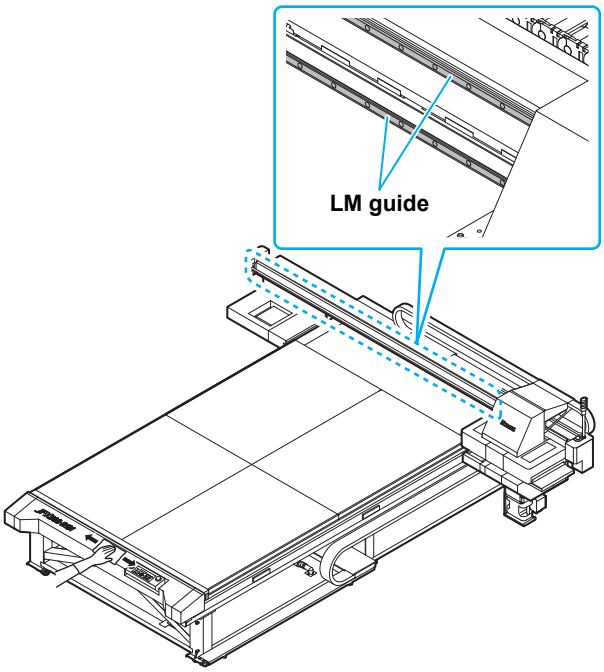
Maintenance of frame component

When the exterior surfaces of the machine are stained, dampen a soft cloth with water or a neutral detergent diluted with water, squeeze it, and wipe the surfaces with the cloth. Clean dust on the table.



Cleaning the LM guide

When the LM guide gets dirty, immerse soft cloth into water or neutral detergent diluted with water, squeeze it and wipe the LM guide.



Maintaining the Capping Station

Maintain the ink cap, wiper, etc. located in the capping station. (SATION MAINT.)

The ink cap and wiper function as follows.

- **Wiper** : It wipes off ink sticking to the head nozzles.
- **Ink cap** : It prevents the head nozzles from clogging due to dryness.

As the machine is used repeatedly, the wiper and ink cap gradually become dirty with ink, dust, etc.
If nozzle missing cannot be corrected even after head cleaning (☞ P.2-12) has been performed, use a Cleaning liquid 03 maintenance kit and clean stick.

Tools required for Maintenance	• Cleaning liquid for maintenance (SPC-0568)		
	• Clean stick (SPC-0527)	• Gloves	• Safety Glasses

Caution

- Be sure to wear the supplied safety glasses and gloves when maintaining the capping station.Otherwise, you may get ink in your eyes.
- Do not move the carriage out of the capping station by hand.When it is desirable to move the carriage, press the MAINT. key to execute the carriage-out. (☞ P.4-4Steps 1 to 2)
- Be sure to perform maintenance for the ink cap and the wiper of capping station every day.
  If you leave it dirty, dirt may adhere to the nozzle surface, or, dust and dry ink may be rubbed against the nozzle. It may cause discharge defect.

Cleaning the Wiper and Cap

It is recommended that the wiper and cap be cleaned frequently in order to maintain the high image quality of the machine and keep the machine itself in good working order.

Important!

- Clean the wiper and the area around it about twice a week (it varies, depending on frequency in the use of the machine).
- Replace the wiper with a new one when it is extremely dirty or bent.(☞ P.4-24)
- When cleaning the wiper, be careful that lint from the clean stick does not get left on the wiper.Remaining lint may cause image quality to deteriorate.

1 **Press the MAINT. key in LOCAL.**

```
CARRIAGE OUT
                [ENT]
```

2 **Press the ENTER key.**

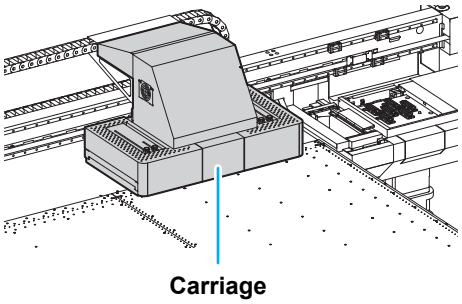
```
MOVE POSITION
:STATION MAINT.
```

3 **Press ▲ ▼ to select [STATION MAINT.].**

```
MOVE POSITION
:STATION MAINT.
```

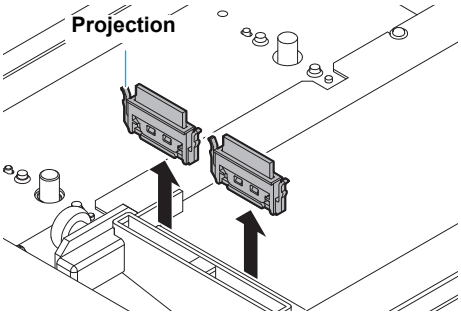
4 **Press the ENTER key.**

- The carriage moves onto the table.



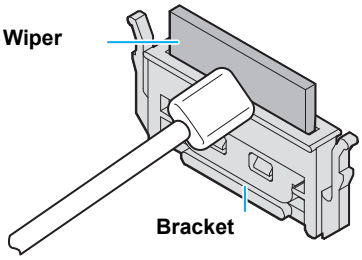
5 Remove the wiper.

• Pull out the wiper by holding the protrusions at its both ends.



6 Clean the wiper and bracket.

• Wipe off the ink sticking to the wiper and bracket with a clean stick dipped in cleaning liquid for maintenance.
Wipe off so that cleaning solution for maintenance will not remain.

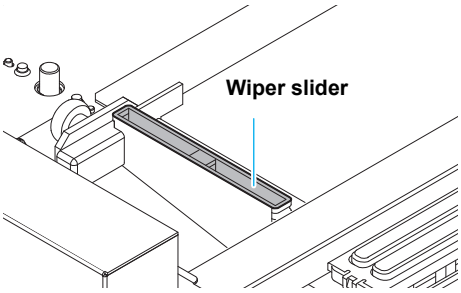


Important!

- Clean the wiper and bracket until it looks as shown in the photo on the right.
- After cleaning, make sure that the bracket and wiper are aligned horizontally.

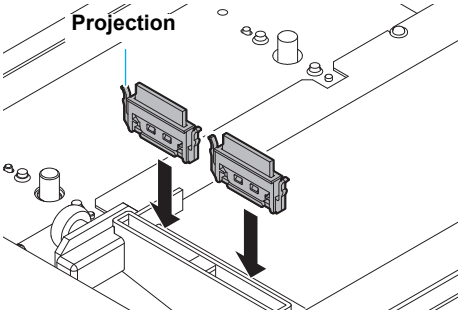
7 Clean the wiper slider.

• Wipe off the ink sticking to the wiper slider with a clean stick dipped in cleaning liquid for maintenance.
Wipe off so that cleaning solution for maintenance will not remain.



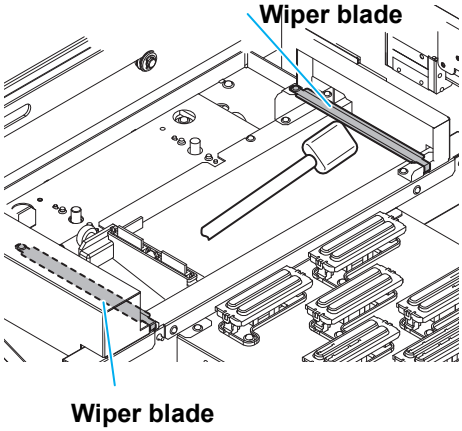
8 Set the wiper at the original position.

• Insert the wiper by holding both ends of the wiper.



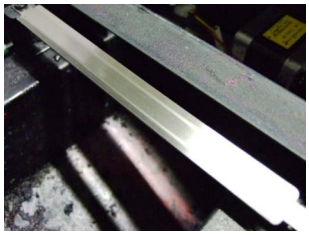
9 Clean the wiper blade.

- Soak the clean stick in the maintenance cleaning liquid, and then remove the ink that has adhered to the wiper blade.



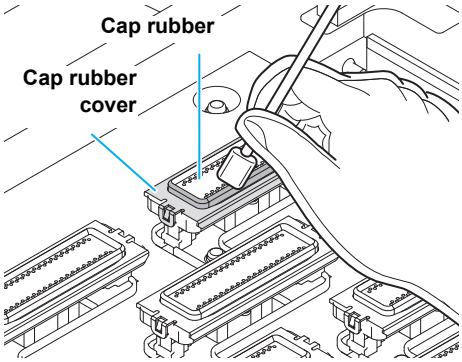
Important!

- Make sure to be careful with the edge of the wiper blade, and thoroughly clean the side (back side) where the wiper touches.
- Clean the wiper blade until it looks as shown in the photo below.



10 Clean the cap rubber and cap rubber cover.

- Wipe off the ink sticking to the cap rubber and cap rubber cover with a clean stick dipped in cleaning liquid for maintenance.
  Wipe off so that cleaning solution for maintenance will not remain.



Important!

- Clean the cap rubber and cap rubber cover until it looks as shown in the photo on the right.
- Make sure that the cap rubber and mesh inside the cap have not come off after cleaning.

11 Press the ENTER key after the cleaning.

- After its initial operation, the machine returns to step1.

Performing the station maintenance without MAINT. key

You can select station maintenance by using the FUNCTION key in the Local without pressing the MAINT. key.

Press the FUNCTION key in Local. → **Press ▲ ▼ to select [MAINTENANCE].** → **Press the ENTER key twice.**
- It becomes the same condition as the MAINT. key is pressed from Local.

Washing the Ink Discharge Passage (DISWAY WASH)

Wash the ink discharge passage regularly to prevent the head nozzles from clogging due to ink coagulation inside the passage.

1 **Press the (MAINT.) key in LOCAL.**

```
CARRIAGE OUT
                [ENT]
```

2 **Press (▲)(▼) to select [DISWAY WASH].**

```
DISWAY WASH
                [ENT]
```

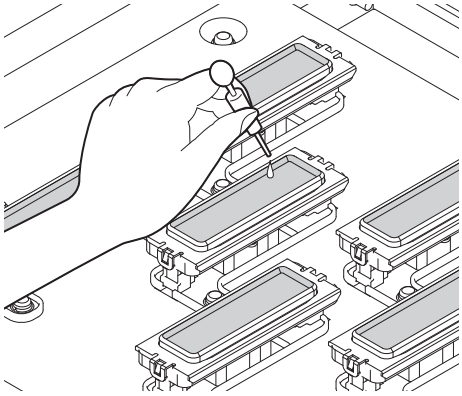
3 **Press the (ENTER) key.**

- The carriage moves onto the table.

```
DISWAY WASH
COMPLETED       [ENT]
```

4 **Fill up the cap with cleaning solution for maintenance, using a dropper.**

- Fill the cap with the cleaning solution just before the solution overflows from the cap.



5 **Press the (ENTER) key.**

- After the idle absorbing operation has been performed for 30 seconds, the screen returns to step2.

```
DISWAY WASH
PLEASE WAIT
```

When the Machine Is Not Used for a Long Time (CUSTODY WASH)

When the machine is not going to be used for a week or more, use the cleaning function for custody to clean the head nozzles and ink discharge passage.After this, keep the machine in custody.

Check the items on the right beforehand.	**Is [INK END] displayed?** • The ink is absorbed when the nozzles are washed. At this time, if the state of "INK END" is detected, the nozzle washing operation cannot start. • Replace the ink bottle with another from which the state of "INK END" is not detected.

• When the following messages are indicated, check the waste ink tank, and then operate it, referring to P.4-26 “If a Waste Ink Tank Confirmation Message Appears” according to the situation.

```
Check waste ink[ENT]
```

1 Press the MAINT. key in LOCAL.

```
CARRIAGE OUT
                [ENT]
```

2 Press ▲ ▼ to select [CUSTODY WASH].

```
CUSTODY WASH
                [ENT]
```

3 Press the ENTER key.

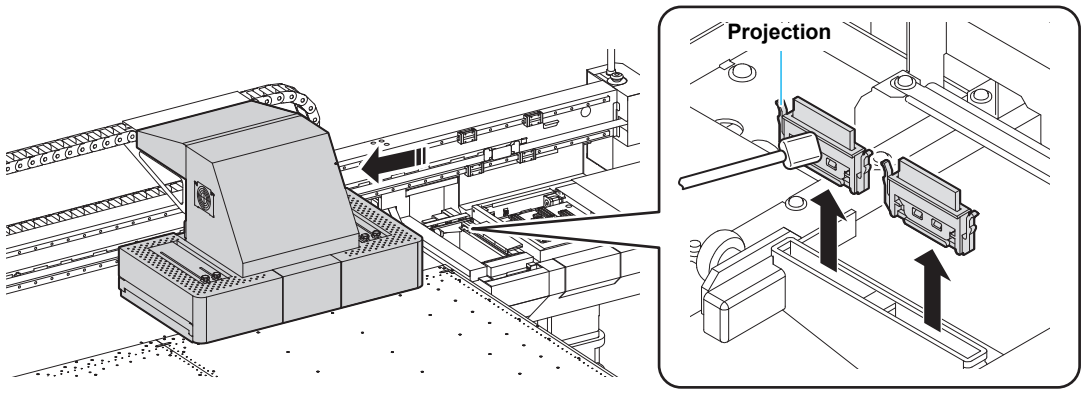
• The carriage moves onto the table.

```
WIPER CLEANING
COMPLETED(NEXT)[ENT]
```

Important! • Until wiper/ bracket cleaning is competed, [COMPLETED (NEXT): ENT] is displayed on the screen. After the work up to the step 4 is completed, press the ENTER key. If you press the ENTER key before cleaning is completed, the machine moves to the next washing procedure.

4 Clean the wiper and the bracket.

(1) Pull out it by holding projections at both ends of the wiper.
(2) Clean the wiper and bracket with a clean stick dipped in cleaning solution for maintenance (SPC-0568). Wipe off so that cleaning solution for maintenance will not remain.
(3) Insert it in the original position by holding the projections at both ends of the wiper.



5 Press the ENTER key.

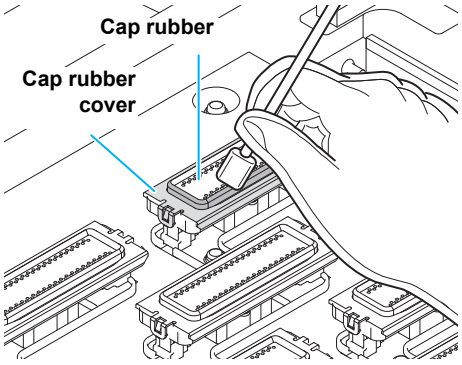
```
CAP CLEANING
COMPLETED(NEXT)[ENT]
```

Important!

- Until wiper cleaning is competed, [COMPLETED (NEXT): ENT] is displayed on the screen. After the work up to the step 6 is completed, press the ENTER key. If you press the ENTER key before cleaning is completed, the machine moves to the next washing procedure.

6 Clean the cap rubber and cap rubber cover.

- Wipe off the ink sticking to the cap rubber and cap rubber cover with a clean stick dipped in cleaning solution for maintenance. Wipe off so that cleaning solution for maintenance will not remain.
- At this time, the discharge passage is cleaned automatically.



7 Press the ENTER key.

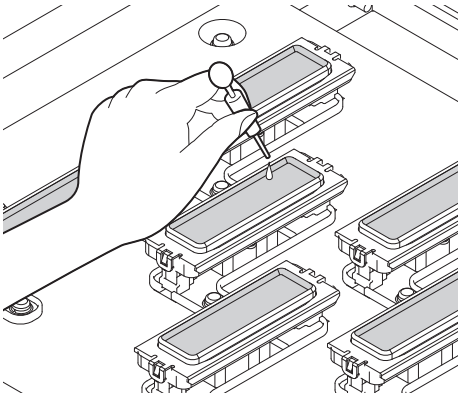
```
Fill the liquid.
COMPLETED(NEXT)[ENT]
```

Important!

- Until washing liquid is filled, [COMPLETED (NEXT): ENT] is displayed on the screen. After the work up to the Step 8 is completed and you close the front cover, press the ENTER key. If you press the ENTER key before washing liquid is filled, the carriage returns to the original position.

8 Fill up the cap with cleaning solution for maintenance, using a dropper.

- Fill the cap with the cleaning solution just before the solution overflows from the cap.



9 Press the ENTER key.

```
LEAVING TIME
=                    1min
```

10 Press ▲ ▼ to set the time for the cleaning solution to be left as it is.

```
LEAVING TIME
=                    2min
```

- Set Value:1 to 15 min (by the unit of 1 min)

11 **Press the ENTER key.**

- The nozzles are washed.
- When the nozzles have been completely washed, carriage moves onto the table.

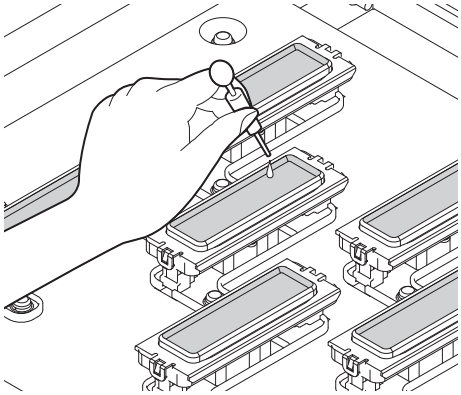
PLEASE WAIT
00:00

↓

** CLEAMING **
PLEASE WAIT

12 **Fill up the cap with cleaning solution for maintenance, using a dropper.**

- Fill the cap with the cleaning solution just before the solution overflows from the cap.



13 **Press the ENTER key.**

- After its initial operation, the machine returns to step2.

CUSTODY WASH
PLEASE WAIT

Cleaning waste ink tray

It is recommended that the wiper and cap be cleaned frequently in order to maintain the high image quality of the machine and keep the machine itself in good working order.

Important!

- Clean the waste ink tray and the area around it about twice a week (it varies, depending on frequency in the use of the machine).
- If ink remaining in the waste ink tray gets cured due to UV light, ink discharged at flushing cannot be moved into the waste ink bottle. It is recommended to clean the waste ink tray frequently.

1 **Press the MAINT. key in LOCAL.**

```
CARRIAGE OUT
                [ENT]
```

2 **Press the ENTER key.**

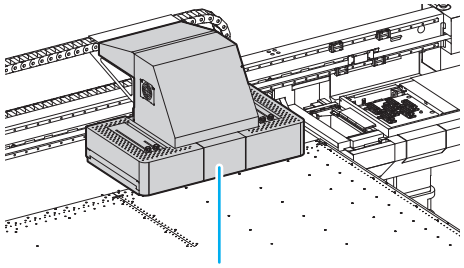
```
MOVE POSITION
:STATION MAINT.
```

3 **Press ▲ ▼ to select [STATION MAINT.].**

```
MOVE POSITION
:STATION MAINT.
```

4 **Press the ENTER key.**

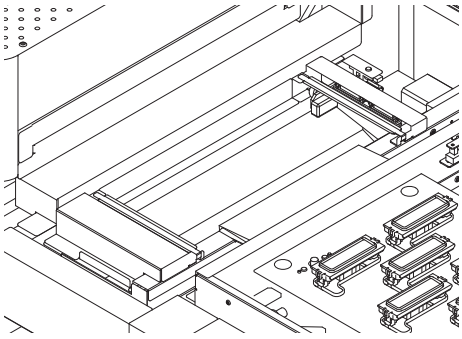
- The carriage moves onto the table.



Carriage

5 **Using a waste cloth etc., wipe off ink adhering to the waste ink tray.**

- When you cannot wipe off ink because it is firmly fixed, scrape it with a spatula etc.



6 **Press the ENTER key after the cleaning.**

- After its initial operation, the machine returns to step1.

Cleaning the Head and the Area around It

Because the head employs a very precise mechanism, due care needs to be taken when it is cleaned. Using a clean stick, etc., rub off gelatinous ink or dust that may stick to the lower part of the slider and the area around the head.In doing so, never rub the nozzles of the head.

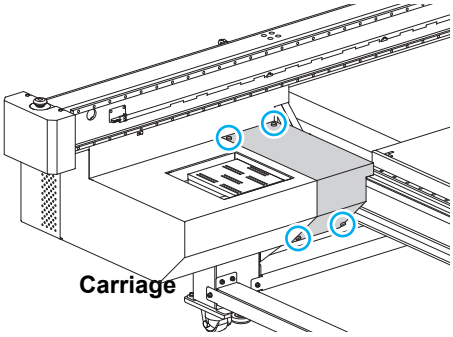
Tools required for cleaning	• Clean stick (SPC-0527)	• Gloves	• Safety Glasses

Caution

- Be sure to wear the attached safety glasses and gloves when cleaning the area around the head.Otherwise, you may get ink in your eyes.
- If you get the ink on your skin or in your eyes, wash it away with plenty of water immediately.
- Clean the bottom of carriage every day so that it will not get dirt from inks or dusts. If you leave it dirty, dust and dry ink may be rubbed against the nozzle at wiping operation when performing head cleaning.
- When you clean the carriage bottom surface, fully be careful not to rub the nozzle surface.

1 **Remove the cover of right side of the flushing.**

• Remove the screws (for four positions) and remove the cover.



2 **Press the MAINT. key in LOCAL.**

```
CARRIAGE OUT
                [ENT]
```

3 **Press the ENTER key.**

```
MOVE POSITION
:STATION MAINT.
```

4 **Press ▲ ▼ to select [HEAD MAINT.].**

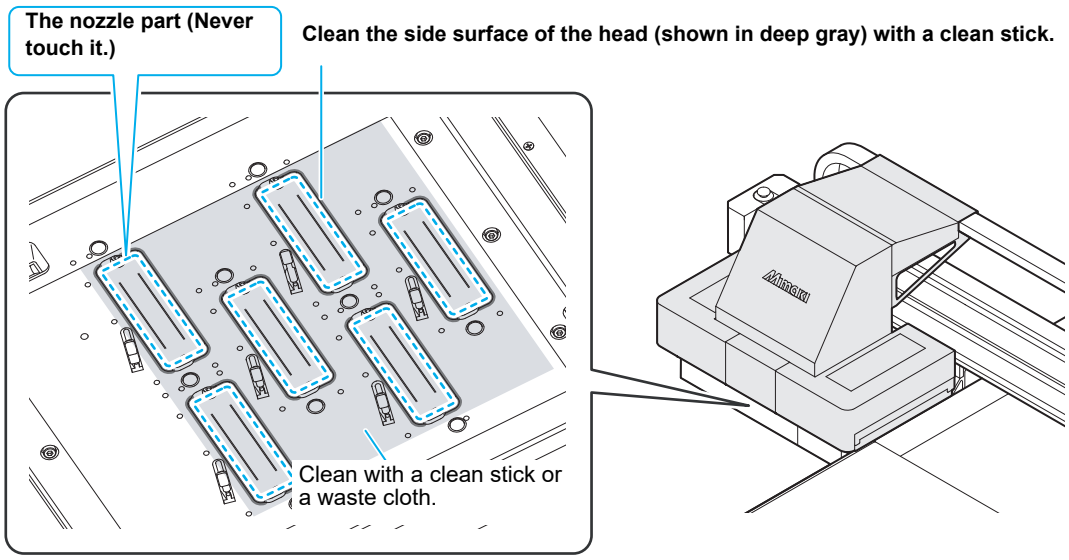
```
MOVE POSITION
:HEAD MAINT.
```

5 **Press the ENTER key.**

• Carriage will move to the left end of this machine.

6 Wipe ink sticking to the side of the head off with a clean stick.

• Never rub the nozzles.



Important!

- Clean the wiper until it looks as shown in the photo on the right.
- If the nozzles have the streaks from the cap rubber, clean the nozzles as well.
- When you leave during maintenance (or cleaning), please make sure to complete the cleaning by pressing ENTER key. Without completing the cleaning, the nozzle part is left uncovered and then outside light makes the ink cure, which causes nozzle clogging or the like.

7 Press the ENTER key after the cleaning.

HEAD MAINTENANCE
COMPLETED [ENT]

When Nozzle Clogging Cannot Be Solved

When nozzle clogging cannot be solved even after the head cleaning (☞ P.2-12) has been done, perform the following three functions:

HEAD FILLUP	• Fills up the head with ink. (☞ P.4-14)
NOZZLE WASH	• Wash the head nozzle. (☞ P.4-15)
NOZZLE RECOVERY	• Alternative nozzles for printing, when nozzles missing can not be improved. (☞ P.4-17)

Fill up ink from the subtank to the head

1 **Select [HEAD FILLUP] of the maintenance menu.**

(1) Press the FUNCTION key in LOCAL.
(2) Press ▲ ▼ to select [MAINTENANCE] and press the ENTER key.
(3) Press ▲ ▼ to select [HEAD FILLUP].
(4) Press the ENTER key.

2 **Press ▲ ▼ ◀ ▶ to select filling head.**

Select head : by the ◀ ▶ keys.
Select whether to fill or not : by the ▲ ▼ keys.

```
SELCT SUBTANK
12______
```

3 **Press the ENTER key.**

• Begin operation to fill the head with ink.

```
** FILL UP **
 PLEASE WAIT
```

• When filling is completed, the screen on the right is displayed.

```
HEAD FILLUP
END<          >RETRY
```

4 **Press ◀ to select "END".**

• If performing filling again, press ▶, then perform from step 2 again.

5 **Press the END key several times to end the setting.**

Washing of Head nozzle

Perform cleaning of the nozzles in the heads to prevent them being clogged with coagulated ink.

Check the items on the right beforehand.	**Is [INK END] displayed?** • The ink is absorbed when the nozzles are washed. At this time, if the state of "INK END" is detected, the nozzle washing operation cannot start. • Add ink in the ink bottle of the external ink supply unit.

Caution

- While working, be careful to avoid subjecting the capping station to direction sunlight. Ultraviolet light will cure UV ink. Take measures to block sunlight, such as closing the curtains on windows.

1 Press the MAINT. key in LOCAL.

```
CARRIAGE OUT
                [ENT]
```

2 Press ▲ ▼ to select [NOZZLE WASH].

```
NOZZLE WASH
                [ENT]
```

3 Press the ENTER key.

- The carriage moves onto the table.

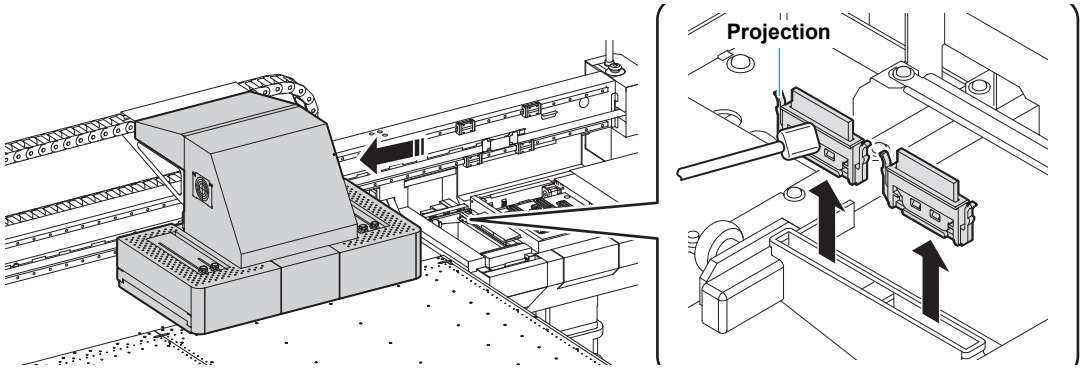
```
WIPER CLEANING
COMPLETED(NEXT) [ENT]
```

Important!

- Until wiper cleaning is competed, [COMPLETED (NEXT): ENT] is displayed on the screen. After the work up to the step 4 is completed, press the ENTER key. If you press the ENTER key before cleaning is completed, the machine moves to the next washing procedure.

4 Clean the wiper and the bracket.

(1) Pull out it by holding projections at both ends of the wiper.
(2) Clean the wiper and bracket with a clean stick dipped in cleaning solution for maintenance. (SPC-0568) Wipe off so that cleaning solution for maintenance will not remain.
(3) Insert it in the original position by holding the projections at both ends of the wiper.



5 Press the ENTER key.

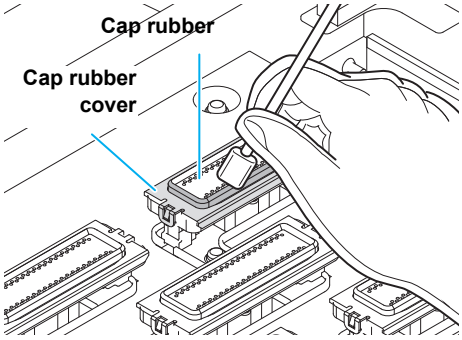
```
CAP CLEANING
COMPLETED(NEXT) [ENT]
```

Important!

- Until wiper cleaning is competed, [COMPLETED (NEXT): ENT] is displayed on the screen. After the work up to the step 6 is completed, press the ENTER key. If you press the ENTER key before cleaning is completed, the machine moves to the next washing procedure.

6 Clean the cap rubber and cap rubber cover.

- Wipe off the ink sticking to the cap rubber and cap rubber cover with a clean stick dipped in cleaning solution for maintenance. Wipe off so that cleaning solution for maintenance will not remain.
- At this time, the discharge passage is cleaned automatically.



7 Press the ENTER key.

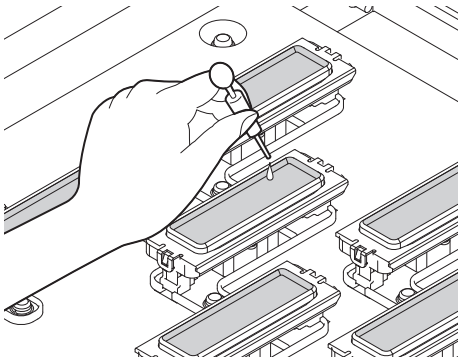
```
Fill the liquid.
COMPLETED(NEXT)[ENT]
```

Important!

- Until washing liquid is filled, [COMPLETED (NEXT): ENT] is displayed on the screen. After the work up to the Step 8 is completed, press the ENTER key. If you press the ENTER key before washing liquid is filled, the carriage returns to the original position.

8 Fill up the cap with cleaning solution for maintenance, using a dropper.

- Fill the cap with the cleaning solution just before the solution overflows from the cap.



9 Press the ENTER key.

```
LEAVING TIME
=                    1min
```

10 Press ▲ ▼ to set the time for the cleaning solution to be left as it is.

- **Set value** : 1 to 15 minutes (Unit: minute)

```
LEAVING TIME
=                    2min
```

11 Press the ENTER key.

- The cleaning solution filled in the cap is absorbed.
- The screen on the right is displayed only for the duration set in the step 10.
- It returns to the step2 after the duration.

```
PLEASE WAIT
00:00
```

↓

```
** CLEAMING **
PLEASE WAIT
```

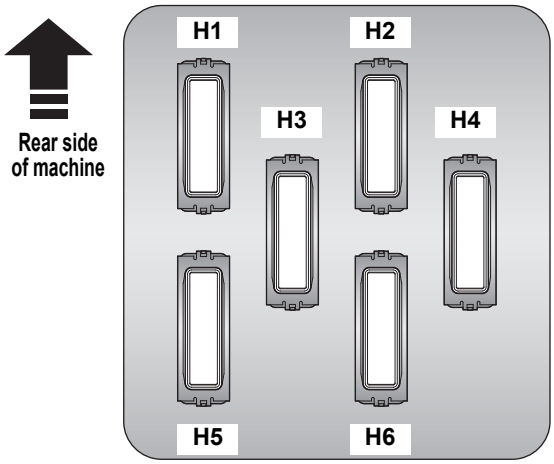
Important!

- When nozzle missing is not cleared even after this washing is carried out several times, contact the distributor in your region or our service office.

Alternative nozzles for printing, when nozzles missing can not be improved

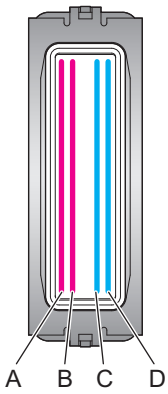
NOZZLE RECOVERY: When nozzles missing can not be improved at specific points, other good nozzles can be used as alternatives for printing.

The head of this machine consists as the right figure.
You can set the recovery by specifying the nozzle line each for the H1-2 (Head 1-2), the H3-4 (Head 3-4) and the H5-6 (Head 5-6).



About nozzle line

- This machine is equipped with four nozzle lines (Line A, Line B, Line C and Line D) for one head.



1 Select [NOZZLE RECOVERY] of the maintenance menu.

(1) Press the FUNCTION key in LOCAL.
(2) Press ▲ ▼ to select [MAINTENANCE] and press the ENTER key.
(3) Press ▲ ▼ to select [NOZZLE RECOVERY].
(4) Press the ENTER key.

2 Press ▲ ▼ to select [PRINT] and press the ENTER key.

```
NOZZLE RECOVERY
:PRINT
```

```
SELECT HEAD
:H1-2
```

3 Press ▲ ▼ to select the head (H1-2/ H3-4/ H5-6) for which you perform nozzle recovery.

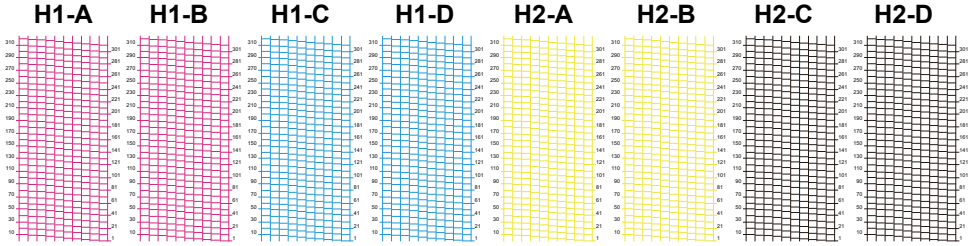
```
SELECT HEAD
:H3-4
```

4 Press the ENTER key twice.

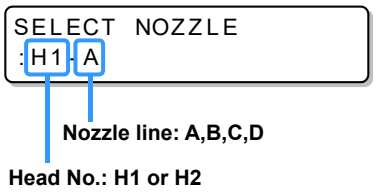
- The nozzle pattern of selected unit is printed.
- When you select “ENTRY” in the Step 2, the machine moves to the nozzle line selection procedures (Step 5) without printing a nozzle pattern.

```
** PRINTING **
PLEASE WAIT
```

Nozzle pattern when selecting H1-2



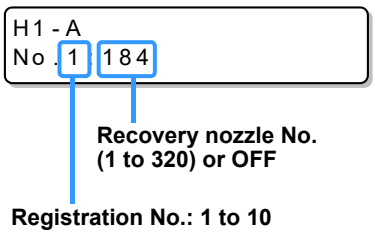
5 Press ▲ ▼ to select the Nozzle line that needs NOZZLE RECOVERY and press the ENTER key.



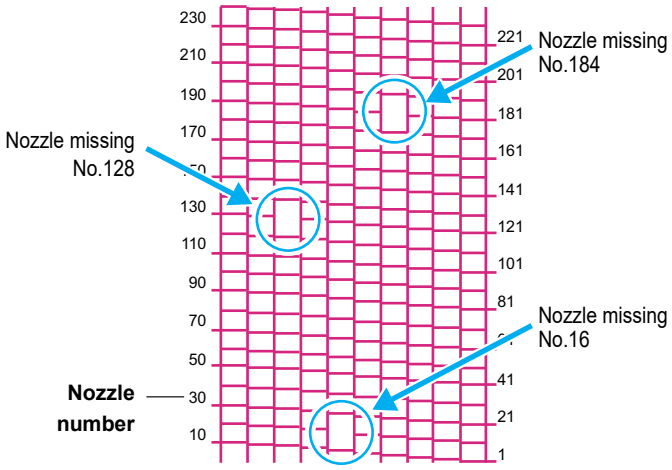
6 Register the Nozzle number that needs NOZZLE RECOVERY and press the ENTER key.

(1) Select the registration number from 1 to 10 by pressing ▲ ▼ and press the ENTER key.

(2) Register the nozzle number that needs recovery by pressing ▲ ▼ and press the ENTER key.



Example of nozzle to be recovered



Registration number	Recovery Nozzle No.	State
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

7 Press the END key several times to end the setting.

Important!

- Up to 10 nozzles can be registered per 1 nozzle line.
- Even if you use this function, time required for printing does not change.
- For the lowest number of paths of the printing mode, the NOZZLE RECOVERY function is invalid.
- Even if you register the NOZZLE RECOVERY, the pattern of test print etc. is not recovered.
- Nozzle numbers 1, 2, 319, and 320 are not used for remote mode printing. When missing nozzles are not fixed, even if these numbers registered, the missing nozzles will not be improved. Therefore, do not register these numbers.

- When you use white ink, print on the clear film to check.

Check if the registered nozzle is recovered

You can check whether registered nozzle has been successfully recovered.
With the following settings “ON”, you can print a test pattern using a recovered nozzle when test print (☞ P.2-10).

1 **Select [NOZZLE RECOVERY] of the maintenance menu.**

(1) Press the FUNCTION key in LOCAL.
(2) Press ▲ ▼ to select [MAINTENANCE] and press the ENTER key.
(3) Press ▲ ▼ to select [NOZZLE RECOVERY].
(4) Press the ENTER key.

2 **Press ▲ ▼ to select [CONFIRM MENU] and press the ENTER key.**

```
NOZZLE RECOVERY
:CONFIRM MENU
```

3 **Press ▲ ▼ to select “ON” and press the ENTER key.**

```
CONFIRM MENU
:ON
```

4 **Press the END key several times to end the setting.**

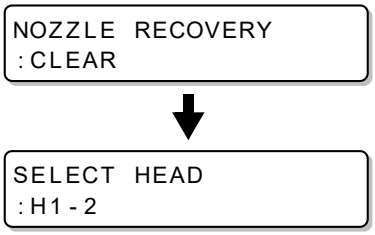
- When test print with the recovered nozzle that was registered in the nozzle recovery, please select “ON” in step 3 of P.2-10 “Test Printing”.

Clear the set value

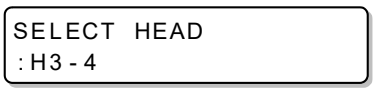
1 **Select [NOZZLE RECOVERY] of the maintenance menu.**

(1) Press the FUNCTION key in LOCAL.
(2) Press ▲ ▼ to select [MAINTENANCE] and press the ENTER key.
(3) Press ▲ ▼ to select [NOZZLE RECOVERY].
(4) Press the ENTER key.

2 **Press ▲ ▼ to select [CLEAR] and press the ENTER key.**

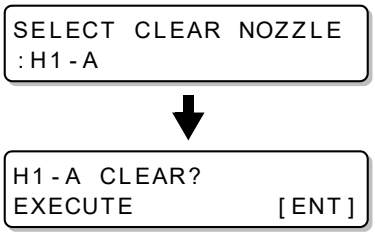


3 **Press ▲ ▼ to select the head (H1-2/ H3-4/ H5-6) for which you reset nozzle recovery.**



4 **Press the ENTER key.**

5 **Press ▲ ▼ to select the Nozzle line that needs reset the setting value and press the ENTER key.**



6 **Press the ENTER key.**

7 **Press the END key several times to end the setting.**

Automatic Maintenance Function

To use this machine comfortably, you can set various maintenances to be performed automatically.
Here, set performing intervals of various automatic maintenances.
You can prevent troubles such as ink clogging by performing automatic maintenance periodically (automatic maintenance function).
For the auto maintenance functions, the following items can be set:

Important!
- When you perform maintenance manually, after manual maintenance is completed and when time set with the automatic maintenance function has passed, maintenance starts automatically.

Function name	Descriptions
REFRESH	The interval between each refreshing operation is set.
CLEANING	The interval between each cleaning operation is set.

Important!
- During the right message is displayed, the operation set in the auto maintenance function is not carried out. Perform the operations of P.4-26 if required.
- When the power button on the front of the machine is turned off, check the waste ink tank.

<LOCAL>
Waste ink full

Setting the Refreshing Intervals

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

1 **Select [AUTO MAINT.] of the maintenance menu.**

(1) Press the FUNCTION key in LOCAL.
(2) Press ▲ ▼ to select [MAINTENANCE] and press the ENTER key.
(3) Press ▲ ▼ to select [AUTO MAINT.].

2 **Press the ENTER key.**

AUTO MAINT.
REFRESH [ENT]

3 **Press the ENTER key.**

REFRESH
:Lv.1

4 **Press ▲ ▼ to set the refreshing interval.**

REFRESH .
:Lv.1

- Set value : OFF, Lv.1, Lv.2, Lv.3
- As the LEVEL increases, the interval between each operation gets shorter.

5 **Press the ENTER key.**

AUTO MAINT.
REFRESH [ENT]

6 **Press END the key several times to end the setting.**

Setting the Cleaning Intervals

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

1 **Select [AUTO MAINT.] of the maintenance menu.**

(1) Press the FUNCTION key in LOCAL.
(2) Press ▲ ▼ to select [MAINTENANCE] and press the ENTER key.
(3) Press ▲ ▼ to select [AUTO MAINT.].
(4) Press the ENTER key.

2 **Press ▲ ▼ to select [CLEANING].**

```
AUTO MAINT.
CLEANING          [ENT]
```

3 **Press the ENTER key.**

```
CLEANING
:Lv.1
```

4 **Press ▲ ▼ to set the interval between each cleaning operation.**

```
CLEANING
:Lv.1
```

- Set value : OFF, Lv.1, Lv.2, Lv.3
- As the LEVEL increases, the interval between each operation gets shorter.

5 **Press the ENTER key.**

```
TYPE
:NORMAL
```

- When you set other than “OFF” in the Step 4, the cleaning type selection screen is displayed.

6 **Press ▲ ▼ to select a cleaning type.**

```
TYPE
:SOFT
```

- **Set value** : NORMAL, SOFT, HARD

7 **Press the ENTER key.**

```
AUTO MAINT.
CLEANING          [ENT]
```

8 **Press the END key several times to end the setting.**

About white ink circulation function

This machine performs ink circulation automatically to prevent white ink pigment from settling out.

● Display indication during white circulation operation

Important!

- White ink circulation function is performed automatically only when you use 4 colors + white ink set.
- Even if you perform white circulation, ink is not consumed.
- When this machine does not perform the printing operation etc., white circulation is performed once one hour.
- If you stop white circulation on the way, press the END key.
- When white circulation operation has been completed, the display returns to the status before starting white circulation.
- When the machine receives printing data during white circulation, it stops white circulation and the display returns to the status before starting white circulation.
- This machine is automatically started up and white circulation is performed even if the printer power is turned off. ("CIRCULATION" and the remaining circulation time are displayed on the display.) Press the END key to stop white circulation before it is completed. White circulation is stopped or the confirmation screen is displayed. When you select "CANCEL", white circulation is stopped and the power turns on.

Replacing the wiper

The wiper is consumable.When the display indicates that it is necessary to replace the wiper, immediately replace the wiper with a new one.
Also, wipe ink sticking to the lower surface of the slider off.

<LOCAL>
Replace a WIPER[MNT]

Important!
- A cleaning wiper (SPA-0193) is an option.Buy one through the dealer in your region or at our service office.

1 **When the message is displayed, press the MAINT. key.**

REPLACE WIPER
EXECUTE [ENT]

2 **Press the ENTER key.**

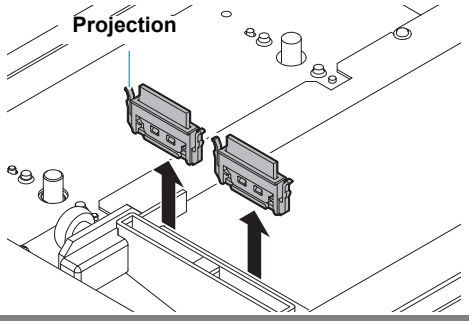
- The carriage moves to the maintenance position.

REPLACE WIPER
COMPLETED [ENT]

Important!
- Until the replacement work is completed, [COMPLETED: ent] is displayed on the screen. After the work up to the Step 3 is completed, press the ENTER key.

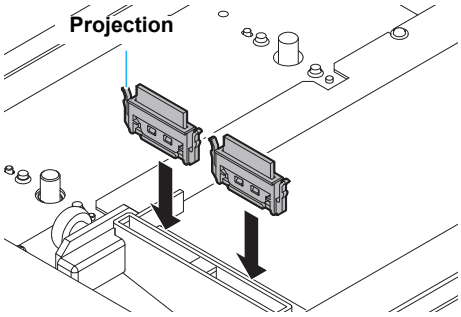
3 **Remove the wiper.**

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



4 **Insert a new wiper.**

- Insert a new wiper by holding its both ends.



5 **Press the ENTER key.**

- After its initial operation, the machine returns to LOCAL.

Being Initialized
PLEASE WAIT

Replace the Ink Absorber

Replace the ink absorber in the cap section before it gets dirty and can no longer absorb ink properly.

Important!

- A ink absorber (SAP-0215/SAP-0216/SAP-0217) is an option.Buy one through the dealer in your region or at our service office.

Caution

- Be sure to wear the supplied safety glasses and gloves when maintaining the capping station.Otherwise, you may get ink in your eyes.
- Do not move the carriage out of the capping station by hand.When it is desirable to move the carriage, press the MAINT. key to execute the carriage-out.

1 **Press the MAINT. key in LOCAL.**

```
CARRIAGE OUT
                [ENT]
```

2 **Press the ENTER key.**

```
MOVE POSITION
:STATION MAINT.
```

3 **Press ▲ ▼ to select [HEAD MAINT.].**

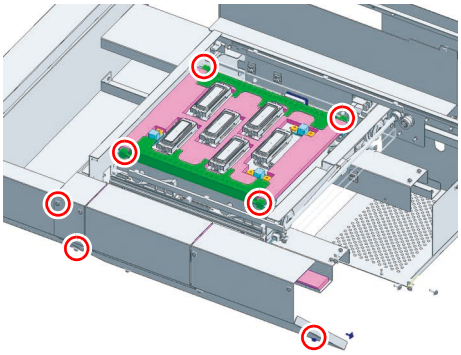
```
MOVE POSITION
:HEAD MAINT.
```

4 **Press the ENTER key.**

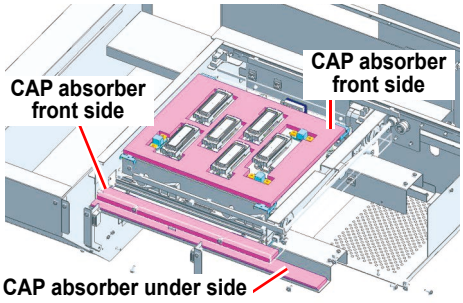
- Carriage will move to the left end of this machine.

5 **Open the cover and remove the ink absorber holder.**

- Remove the 8 screws and remove the cover and ink absorber holder.



6 **Replace the ink absorber.**



7 **Return the ink absorber holder and cover to their original positions and press the ENTER key.**

If a Waste Ink Tank Confirmation Message Appears

Ink used in head cleaning, etc. is stored in the waste ink tank on the lower right side of the machine. The sensor monitors the discharged amount of ink in this machine. When that reaches a specified amount, the machine displays a confirmation message. (When this message is displayed, consider the replacement of the waste ink tank.)

Confirmation Message in LOCAL

1 **The message on the right is displayed.**

<LOCAL>
Waste ink near full

or

<LOCAL>
Waste ink full

or

<LOCAL>
Waste ink tank none

2 **Check the state of the waste ink tank**

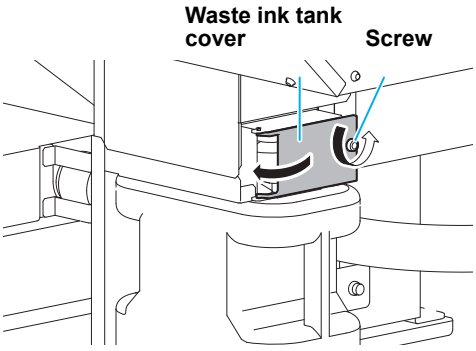
Replace the waste ink tank with another

Important!

- Be sure to wear the supplied safety glasses and gloves when replaceing the waste ink tank. Otherwise, you may get ink in your eyes.
- Do not replace the waste ink tank while this machine operates (during printing or cleaning).
- When waste ink may spill out during the work, wipe it off with a waste cloth etc.

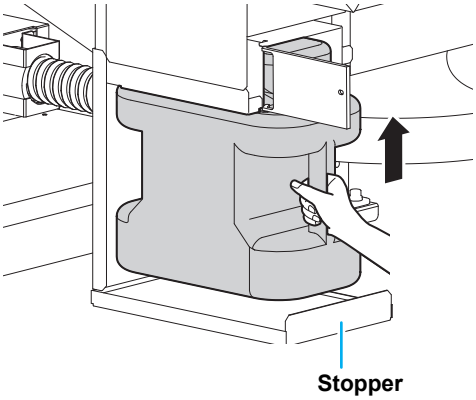
1 **Open the waste ink tank cover.**

- Remove the screw attaching to the waste ink tank cover and open the cover to the front.



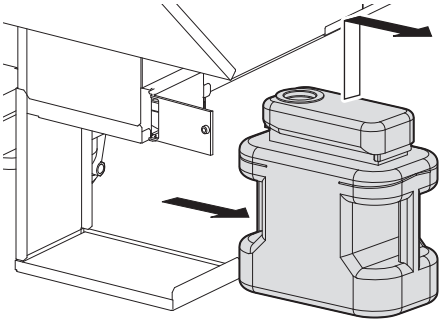
2 **Lift the waste ink tank a little.**

- Lift the waste ink tank up to the position where it does not hit the stopper.

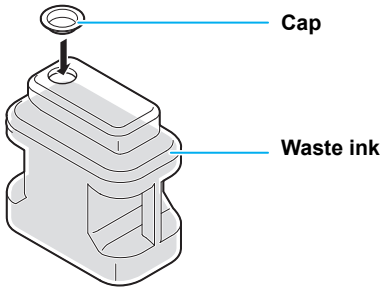


3 Take out the used waste ink tank.

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



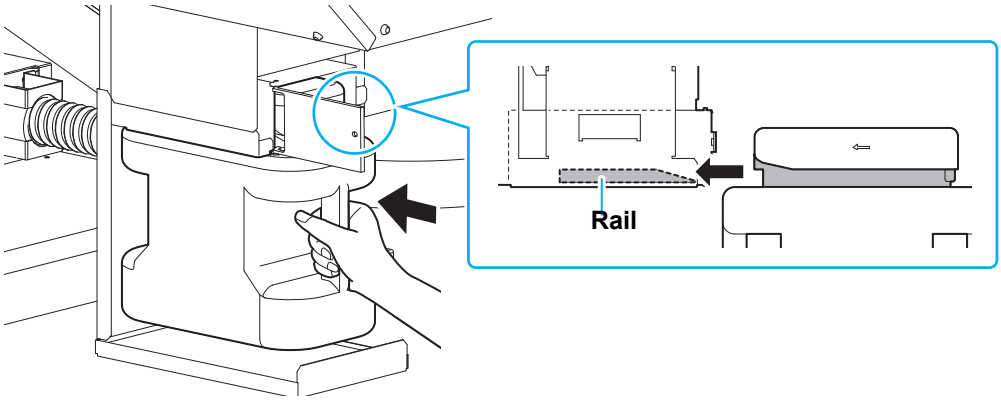
• Put a cap on the waste ink tank removed.



4 Replace the new waste ink tank.

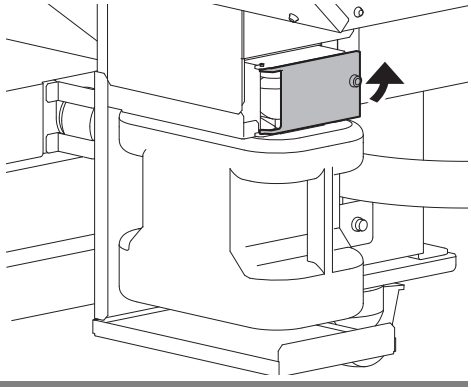
(1) Prepare a new waste ink tank (SPC-0197).
(2) Hold the handle of the waste ink tank and insert it along the rail.
(3) Raise the waste ink tank.

• Waste ink is equivalent to waste oil of industrial waste. Request an industrial waste disposal company for disposal of waste ink.



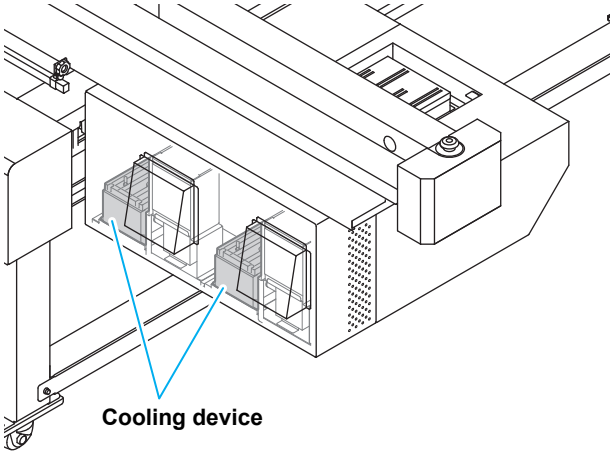
5 Close the waste ink tank cover.

• When the machine recognizes the new waste ink tank, the warning message is released.



Refilling antifreeze mixed water

To cool the LED UV unit, put antifreeze mixed water into the cooling water tank in the cooling device.



Note on refill

- Water and antifreeze liquid compound ratio should be 2(water) to 1(Antifreeze liquid).
- When only water is supplied to the cooling water tank without antifreeze liquid, it may damage the UV unit by freeze.
- When only antifreeze liquid is supplied to the cooling water tank without water, the machine does not work properly, and may cause an error.
- If water in the cooling water tank frequently becomes insufficient, contact a distributor in your district or our office.
- Dispose of the waste water mixed with antifreeze liquid pursuant to the regulations of your district.

Precautions in handling the antifreeze liquid

- Be sure to wear goggle and gloves for handling the antifreeze liquid.

- Use the recommended antifreeze liquid by Mimaki. If not, the cooling device may be broken. (Supplied antifreeze liquid :1000cc x 2 bottles)
- Do not touch the antifreeze liquid directly. If the antifreeze liquid settles on your skin or clothes, immediately wash it off with soap and water. If you get antifreeze liquid in your eyes, immediately wash your eyes with a lot of clean water. Then, consult a doctor as soon as possible.
- Store antifreeze liquid in a dark and cold place.
- Store antifreeze liquid in a place that is out of the reach of children.
- When discarding antifreeze liquid which is no longer needed, entrust them to an industrial waste disposal contractor, clarifying their contents.
- Before using antifreeze liquid, be sure to read the Material Safety Data Sheet (SDS).

- When purchasing a spare cooling water tank, contact a distributor in your district or our office.
- Prepare a tank with a cap to put in the waste water from cooling water tank.
- When water in the cooling water tank is low, an error message is displayed. In this case, replace water in the same way shown as the next page.

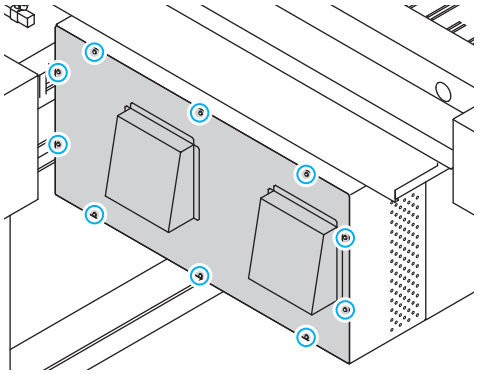
```
<LOCAL>
WATER  LACK  12
```

Refill cooling water

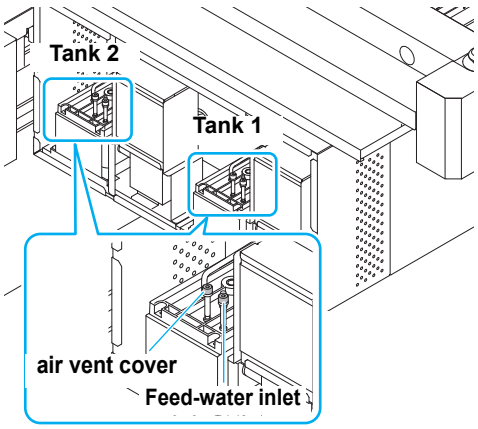
If an error of lack of water, refill cooling water. To fill up its capacity, about 450cc refill is required.

1 **Remove the cover of the left rear surface of the Y bar.**

- Remove the screws (for ten positions) indicated with circles in the figure and remove the cover.

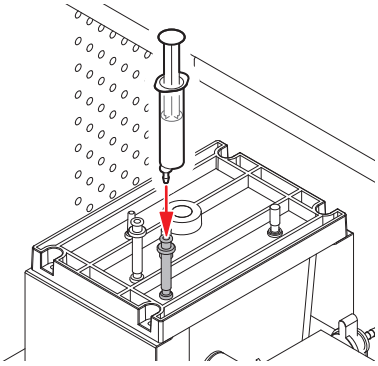


2 **Uncover the Feed-water inlet and the air vent.**



3 **Remove all remaining water in the tank.**

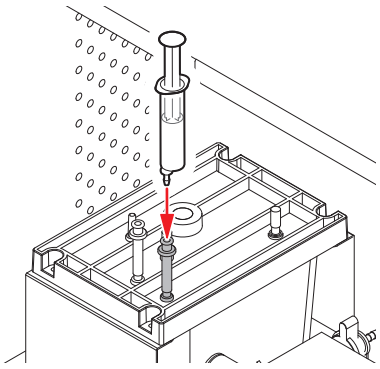
- Remove all water in the tank with a provided syringe from the feed-water inlet.
- Put the removed water into the tank with a cap, and discard it.



4 **Make mixed water (antifreeze liquid: 1, water: 2) in the attached reservoir and move it to the attached syringe.**

5 **Refill antifreeze liquid.**

- Fill the antifreeze liquid from the feed-water inlet.
- Put the liquid of 50ml into the syringe, and put it into the device. Repeat this 9 times to fill up (450ml).



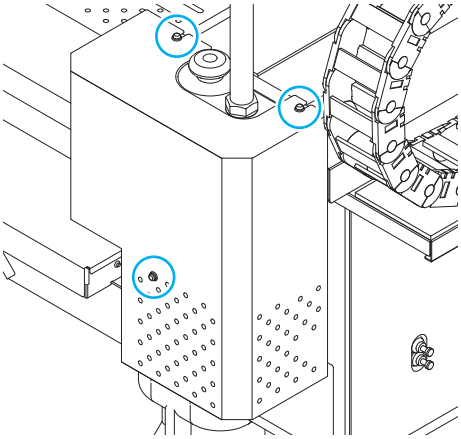
6 **Close the feed-water inlet and the air purge cover, and attach the cover of the left rear surface of the Y bar.**

Cleaning Y motor

When the warning message [Y motor cleaning] is displayed, clean the Y motor with the procedures below:

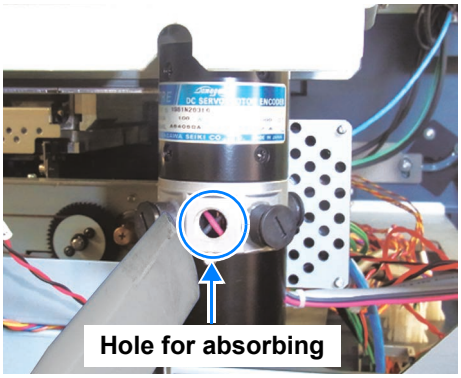
1 **Turn off the power supply, and open the Y-motor maintenance cover.**

- Remove the screws (for four positions) of the Y motor maintenance cover and open the cover.
- The screws are at the circle part in the right figure (for three positions) and one at the bottom.



2 **Open the cover for absorbing abrasion powder, and absorb abrasion powder accumulating in the hole for absorbing abrasion powder with a vacuum.**

- Using a flat-blade screwdriver, open the cover.



3 **Return the cover for absorbing abrasion powder to the original status, and turn on the power supply.**

- Warning message [Y motor cleaning] is displayed on the screen.

4 **Press the MAINT. key and clear the warning message.**

- The machine returns to LOCAL.

Chapter 5
Troubleshooting

This chapter

describes the corrective measures to be taken for a phenomenon suspected to be trouble and the procedures to clear the error number displayed on the LCD.

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Warning messages 5-12
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Troubleshooting

Take appropriate actions as described below before taking the trouble as a failure.
If still the problem is not solved after troubleshooting, contact your dealer or an office of MIMAKI.

Power does not turn on

In most cases, this is due to improper connection of the power cable for the machine or computer. Check that the power cable is connected properly.

Has the power cable been connected between the machine and a power plug socket ?	**No** →	Securely connect the power cable.
Is the main switch ON ?	**No** →	Turn on the main switch. (☞ P.2-3)
Is the power button located on the front of machine "ON" ?	**No** →	Turn on the power button on the front of the machine.
Is the emergency switch pressed?	**Yes** →	Pull the emergency switch upward (or rotate), release it. Then, turn on the main power switch. (☞ P.2-3)

The machine does not start printing

This occurs when the data is not being transmitted to the machine properly.
It can also occur when the printing function does not work properly or the media is not set correctly.

Is the correct interface cable used ?	**No** →	Use the cable exclusive for this machine.
Is the interface cable properly connected ?	**No** →	Securely connect the interface cable.
↓ **Yes**		
Is the message on the display indicating that ink has run out ?	**Yes** →	Replace the ink bottle with a new one.

Image quality is poor

This section describes the corrective actions to be taken in case the image quality is not satisfactory.
Take remedy for particular problems with image quality. If the remedy does not work, contact your dealer or an office of MIMAKI.

Phenomenon	Measures
White lines / blur / dark stripes (in the direction of travel of the heads)	**(1)** Execute the head cleaning. (☞ P.2-12) **(2)** Perform maintenance of the inside of the station. (☞ P.4-4) **(3)** Execute the [MEDIA COMP.] function. (☞ P.3-8)
Characters are misaligned doubly or triply to the Y bar moving direction.	**(1)** Execute the [MEDIA COMP.] function. (☞ P.3-8)
Disagreement in print positions between outward trip and homeward trip	**(1)** Execute the [DROP POSITION] function. (☞ P.3-10)
Ink drops falling on media during printing	**(1)** Execute the wiper cleaning. (☞ P.4-4) **(2)** Execute the ink cap cleaning. (☞ P.4-4) **(3)** Clean around the head. (☞ P.4-12) **(4)** Execute the head cleaning [NORMAL]. (☞ P.2-12) **(5)** Set a shorter interval of INTERVAL WIPING operation. (☞ P.3-25)

Nozzle is clogged

Important!

- When nozzle clogging is not dissolved even after the head cleaning referring to P.2-12, make sure the recovery the nozzle by the operations of P.4-14.

Ink bottle warning appears

If an ink bottle trouble is detected, the bottle LED “red” is lit, and a warning message appears.
None of printing, cleaning and all the other operations that use ink is available.
If an abnormality occurs, perform the following procedures:

- Check that the IC chip in the ink cover is correctly set.
- Replace the ink bottle in question immediately.

Important!

- Once ink bottle trouble is displayed, do not leave the ink bottle without replacing it for a long time; otherwise, the machine will lose the nozzle clogging prevention function.
  If nozzles are clogged, the machine must be repaired by MIMAKI's service engineer.

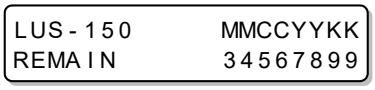
When the ink leakage occurs

If the ink leakage occurs, unplug the power plug to turn off the main power switch, and contact our service office or distributor.

Displaying the description of ink bottle trouble

The contents of ink bottle error are confirmable by the following operations.

1 **Press the ENTER key in LOCAL.**



2 **Press the ENTER key.**

- When multiple bottle defects occur and if you press the ENTER key or ◀ ▶, they are displayed by turns.

If an error related to the sub tank occurs (Error 618 to 61b)

The Error 618 to 61b are related to the sub tank.
Execute following procedures when an error about sub tank occurs, or when the nozzle is not unclogged after cleaning.

1 Select [SUB TANK] of the maintenance menu.

(1) Press the FUNCTION key in LOCAL.
(2) Press ▲ ▼ to select [MAINTENANCE] and press the ENTER key.
(3) Press ▲ ▼ to select [SUB TANK].

2 Press the ENTER key.

```
SELECT SUBTANK
:MMCCYYKK
```

3 Press ▲ ▼ ◀ ▶ and select a sub tank to be maintained.

```
SELECT SUBTANK
:MMCC_YKK
```

- ◀ ▶ : Select a sub tank.
- ▲ ▼ : Select whether you perform maintenance or not.
- If Error 61b occurs, an appropriate head is selected. Press ENTER key.

4 Press the ENTER key.

```
SUB TANK
EXECUTE          [ENT]
```

5 Press the ENTER key.

```
** FILL UP **
 PLEASE WAIT
```

- The automatic discharging operation and the filling operation are performed.
- Then, cleaning is performed.

```
** CLEANING **
 PLEASE WAIT
```

6 Press END the key several times to end the setting.

If nozzle missing due to color mixture of ink or aeration

If nozzle missing occurs due to color mixture of ink in the head or aeration, push ink or air in the head out from the port.

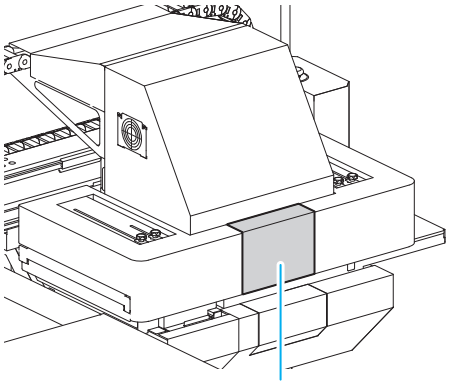
1 Select [AIR PG] of the maintenance menu.

(1) Press the FUNCTION key in LOCAL.
(2) Press ▲ ▼ to select [MAINTENANCE] and press the ENTER key.
(3) Press ▲ ▼ to select [AIR PG].

2 Open the maintenance cover.

Important!

- After the work has been completed, attach the removed cover as soon as possible. If you leave it for a long time, UV light may affect ink.



Maintenance cover

3 Press the ENTER key.

```
SELECT AIR PG
1 <                    > 2
```

4 Press ◀ ▶ and select the ink port for which you perform air purge.

- ◀ : Selects left side port
- ▶ : Selects right side port
- The carriage moves on the wiper.

5 Press the ENTER key.

```
MOVING NOW
   PLEASE WAIT
```

Important!

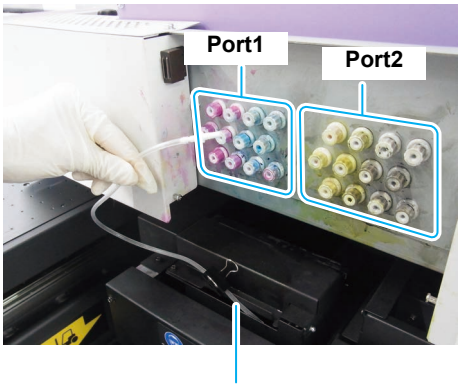
- Perform step 6 after [SET THE TOOL] appears on the display. Removing the cover for the air purge port before this display appears will result in aeration.

```
AIR PG
SET THE TOOL     [ENT]
```

6 Fix the jig on the wiper part and open the ink port valve at the side you selected in the Step 3.

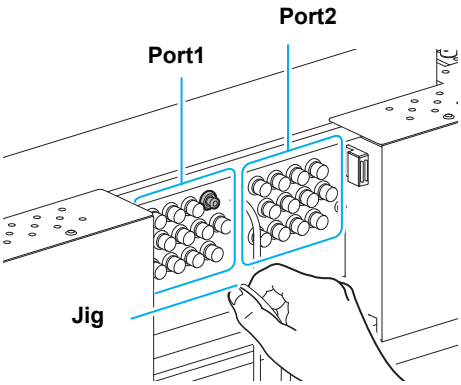
Important!

- Do not open the port valve at the side you did not select in the Step 3. If you open the valve, air is mixed from here.
- When the valve is hard to open, use the attached longnose pliers and open.



Insert the jig into the wiper part and fix it.

7 Set the air purge jig to the ink port valve.



8 Discharge ink or purge air from inkport.

- When you press the ENTER key, ink is discharged from the port for a certain period of time.
- When discharging has been completed, “REMOVE THE TOOL” is displayed on the screen. Do not remove the jig until the message is displayed.

```
AIR PG
START              [ENT]
```

9 Remove the jig from the ink port and close the ink port valve.

```
REMOVE THE TOOL
COMPLETED          [ENT]
```

10 Press the ENTER key.

- Supply ink for the subtank with less ink. Wait for a while until the display changes.

```
**FILL UP/SUBTANK **
    PLEASE WAIT
```

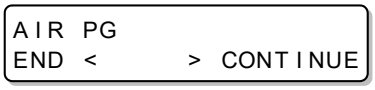
↓

```
AIR PG
END <            > RETRY
```

11 If performing an air purge for another ink port, press ▶ then perform steps 5 to 10.

- Press ◀ to move the cartridge to the capping position.

12 Select the next operation.



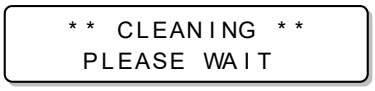
- If selecting another port, press ▶ then perform steps 3 to 11.
- If completing work, close the maintenance cover and remove the tool from the wiper.

Important!

- After completing work, promptly return the cover you removed. If it is left off for a long time, the ink may be affected by ultraviolet rays.
- Wipe away any ink attached near the ink port.

- After closing the cover, press ◀.

13 Perform cleaning and complete the air purge.



14 Press END the key several times to end the setting.

If negative pressure abnormality occurs

By the environment or aging, the pressure controlled in this machine may exceed the control range.
If an error related to pressure abnormality occurs, perform the procedures below:

Important!

- If pressure abnormality occurs, immediately adjust the pressure with the following procedures and return it to the normal value.

1 Select [PRESSURE ADJUST] of the maintenance menu.

(1) Press the FUNCTION key.
(2) Press ▲ ▼ to select [MAINTENANCE] and press the ENTER key.
(3) Press ▲ ▼ to select [PRESSURE ADJUST].

2 Press ▲ ▼ to select POSITIVE or NEGATIVE.

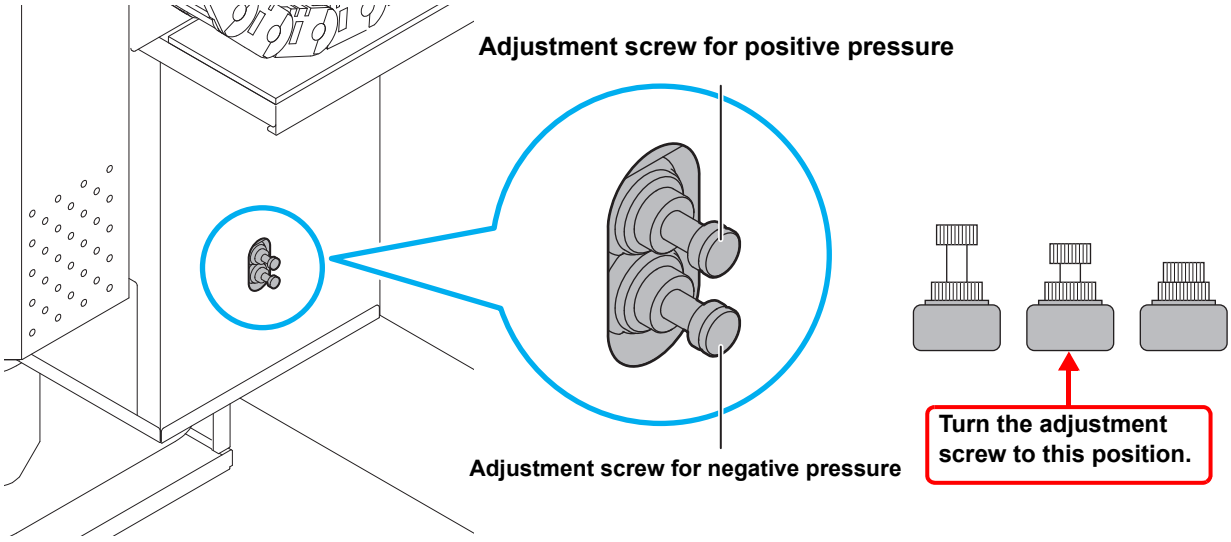
```
PRESSURE ADJUST
:NEGATIVE
```

3 Press the ENTER key.

```
Open Throttle Valve
COMPLETED          [ENT]
```

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

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



5 **Press the ENTER key.**

- Sensor adjustment starts.

```
** ADJUSTING **
PLEASE WAIT
```

6 **Rotate the adjustment screw of the throttle valve to adjust the pressure so that it becomes the proper value.**

```
PRESSURE
=              -5.40kPa
```

- Proper value of negative pressure: -5.40kPa
  Proper value of positive pressure: 15.00kPa
- As the negative pressure changes between ±0.1 and 0.2kPa, adjust so that the intermediate value may become the target pressure.
- Adjust the throttle valve in order of “negative pressure” → “positive pressure” → “negative pressure”.

7 **Press the ENTER key.**

- The error is released and the negative pressure control starts.

```
PLEASE WAIT
```

Important!

- When an error occurs even after you adjusted the pressure, contact your local distributor, our sales office, or service center.

Warning / Error Messages

If some trouble occurs, the buzzer sounds and the display shows a corresponding error message.
Take an appropriate remedy for the displayed error.

Warning messages

Errors when performing operations

Message	Cause	Solution
CAN'T OPERATE INK ERROR	An ink error occurred.	• Check the ink bottle for the supply path corresponding to the indicated color.
CAN'T OPERATE DATA REMAIN	Data was received.	• Perform data clear. (☞ P.2-14)

Error displayed during operation

Message	Cause	Solution
!X LINEAR LEVEL L	X The response of the left linear scale sensor is decreasing.	• When displaying multiple times, turn off the power once and then turn on the power again after a while. If still display it, contact your dealer or our sales office or call center.
!X LINEAR LEVEL R	X The response of the right linear scale sensor is decreasing.	
!XLINEAR COUNT L	X The response of the left linear scale sensor is decreasing.	
!XLINEAR COUNT R	X The response of the right linear scale sensor is decreasing.	

Message displayed in LOCAL

Message	Cause	Solution
<LOCAL> Can'tPRINT/CART.[ENT]	Ink errors (unusable ink) occur in multiple ink bottles. Ink supply (print, cleaning, etc.) cannot be performed.	• Press the ENTER key to check the ink bottle generating the warning. Replace them with usable ink bottles.
<LOCAL> Waste ink full	The waste ink tank is full.	• Check the waste ink tank.
<LOCAL> Waste ink near full	The waste ink tank is nearly full.	
<LOCAL> Waste ink tank none	The waste ink tank is not set.	• Set the waste ink tank.
<LOCAL> Replace a WIPER[MNT]	Time to replace the wiper in the capping station with a new one has come. (The wiping count has reached the specified value.)	• Press the MAINT. key and replace the wiper with a new one. (☞ P.4-24)
<LOCAL> DATA REMAIN	The data has been received.	• Press the REMOTE key to perform printing. Or, perform data clear.
<LOCAL> WATER LACK 12	Water in the cooling water tank becomes less.	• Refill cooling water according to P.4-24 "Refilling antifreeze mixed water".

Message	Cause	Solution
<LOCAL> UV LAMP TEMP. HIGH	The LED lamp temperature is high.	• Wait for a while until the temperature lowers and the message disappears.
<LOCAL> NEGATIVE PRESSURE	The value of the negative pressure sensor is abnormal.	• Perform “PRESSURE ADJUST” (☞ P.5-9) of the maintenance. If you cannot adjust it to the normal value, or, even if you perform, it may be displayed, contact your local distributor, our sales office, or service center.
<LOCAL> POSITIVE PRESSURE	The value of the positive pressure sensor is abnormal.	
<LOCAL> INK NEAR END [ENT]	The ink of the ink bottle has been nearly used up.	• Press the ENTER key to check the relevant ink bottle. Be careful because it may be INK NEAR END soon.
<LOCAL> SUPPLY INK :MMCCYYKK	Ink could not be supplied to the sub tank.	• Perform “SUB TANK” (☞ P.5-5) of the maintenance. Also check the remaining amount of ink in the ink bottle. Even if you performed this, when the message is displayed, contact your local distributor, our sales office, or service center.
<LOCAL> SubtankSens:MMCCYYKK	The liquid level sensor abnormality of the sub tank has been detected.	• Turn off the power on the machine and turn it on after a while. • When displaying again, contact your local distributor, our sales office, or service center.
<LOCAL> InkOverflow:MMCCYYKK	Overflow from the sub tank has been detected.	• Perform “SUB TANK” (☞ P.5-6) of the maintenance. Even if you performed this, when the message is displayed, contact your local distributor, our sales office, or service center.
<LOCAL> TANKlevrlH :MMCCYYKK	Though a certain amount was consumed, there is no change in the sub tank sensor High.	
<LOCAL> TANKlevrlL :MMCCYYKK	Though a certain amount was consumed, there is no change in the sub tank sensor Low.	
<LOCAL> Replace DegassModule	The deaeration module in the ink path shall be replaced soon. (One year has passed since you started using it.)	• The deaeration module shall be replaced. Contact a distributor in your district, our office, or our call center.
<LOCAL> MachineTEMP/Hi ***°C	The machine temperature is high.	Adjust the ambient temperature of the installation place.
<LOCAL> MachineTEMP/Lo ***°C	The machine temperature is low.	
<LOCAL> Ymotor Cleaning[MNT]	Time to clean the Y motor has come.	• Turn off the power and vacuum debris of the Y motor from the vacuuming window. (☞ P.4-27) • After the replacement, press the MAINT. key on the local screen to clear the warning.
<LOCAL> Replace Ymotor Brush	Time to replace the brush of Y motor has come.	• The brush of Y motor shall be replaced. Contact a distributor in your district, our office, or our call center.
Carriage Filter Please Replace [ENT]	Time to replace the carriage filter has come.	• Replace the carriage filter referring to the separate “Requests for Daily Care and Maintenance”.
UV FAN Filter Please Replace [ENT]	Time to replace the UV fan filter has come.	• Replace the carriage filter referring to the separate “Procedure Manual to replace UV FAN Filter”.
<LOCAL> REFILL WATER	It has elapsed 7days or more after the water in the cooling water tank was reduced.	• Replenish the cooling water to the cooling water tank whose tank number is displayed. While this warning is displayed, the online print can not be made.

Ink Error

Ink error is displayed also in the local guidance. (☞ P.3-36)

Message	Cause	Solution
NON INK IC :---- YYKK	The IC chip of the ink bottle cannot be read normally.	• Remove the ink bottle generating the warning once and install it again. • If the same warning message still appears, contact your local distributor, our sales office, or service center.
WRONG INK IC :---- YYKK		
KIND OF INK :---- YYKK	The ink of the ink bottle is different in type from the ink currently supplied.	• Check the ink type of the ink bottle generating the warning.
COLOR OF INK :---- YYKK	The ink of the ink bottle is different in color from the ink currently supplied.	• Check the ink color of the ink bottle generating the warning.
WRONG INK BOTTLE :---- YYKK	An error occurred in the IC chip information of the ink bottle.	• Check the ink bottle generating the warning.
NO INK BOTTLE :---- YYKK	The ink bottle is not set on the external ink supply unit.	• Set the ink bottle on the bottle holder with the warning.
INK END :---- YYKK	The ink of the ink bottle has been completely used up.	• Replace the ink bottle generating the warning with a new one.
INK NEAR END :---- YYKK	The ink of the ink bottle has been nearly used up.	• Replace the ink bottle generating the warning with a new one.
CHCK INK BOTTLE :---- YYKK	Even when there are enough ink, ink end has been detected.	• Check the ink bottle setting status.
EXPIRATION :---- YYKK	The specified expiration date of an ink bottle has passed.	The expiration date has passed. However, you can use it until the end of the following month.
EXPIRATION(1MONTH) :---- YYKK	The expiration date of an ink bottle has passed (one month has passed after the specified expiration date).	• One month has passed after the expiration date. However, you can use it until the end of this month. (The ink bottle lamp blinks in red.)
EXPIRATION(2MONTH) :---- YYKK	The expiration date of an ink bottle has passed (two months have passed after the specified expiration date).	Two months have passed after the expiration date. Replace the ink bottle generating the warning with a new one.

Error messages

When an error message is displayed, eliminate the error according to the chart below.
When displaying again, contact your dealer or an office of MIMAKI to call for service.

Message	Cause	Solution
ERROR 108 HD CONNECT[12345678]	Head connection can not be confirmed.	• Turn off the power on the machine and turn it on after a while. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 108 HD THERMIS[12345678]	Head temperature can not be read.	
ERROR 12e HeadFailed /HDC[XXX]	Abnormality of the Driver of the Print head.	
ERROR 122 CHECK:SDRAM	There is no PRAM.	
ERROR 128 HDC FIFO OVER	Data transmission speed is too fast. Control circuit board is defective.	
ERROR 128 HDC FIFO UNDER	Data transmission speed is too slow. Control circuit board is defective.	
ERROR 129 BATTERY EXCHANGE	The battery life end of the internal clock is detected.	• contact your local distributor, our sales office, or service center.
ERROR 130 HD DATA SEQ	Head data transferring sequence error occurred.	• Turn off the power on the machine and turn it on after a while. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 146 E-LOG SEQ	Sequential number abnormality of the event log occurred.	
ERROR 151 Main PCB V12R	An error occurred in the main PCB 1.2V power supply.	
ERROR 152 Main PCB V2R5	An error occurred in the main PCB 2.5V power supply.	
ERROR 153 Main PCB V3R3	An error occurred in the main PCB 3.3V power supply.	
ERROR 154 Main PCB V05	An error occurred in the main PCB 5V power supply.	
ERROR 155 Main PCB V35-1	An error occurred in the main PCB 35-1 power supply.	
ERROR 156 Main PCB V5B	An error occurred in the main PCB 5VB power supply.	
ERROR 157 Main PCB VTT	An error occurred in the main PCB VTT power supply.	
ERROR 158 Main PCB V352	An error occurred in the main PCB 35-2V power supply.	
ERROR 158 Main PCB V3R3B	An error occurred in the main PCB 3.3VB power supply.	

Message	Cause	Solution
ERROR15f HEAD DRIVE HOT	COM driver becomes the high temperature.	• Turn off the power on the machine and turn it on after a while. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 171 NEW HEAD CONNECT	New Print Head was recognized.	
ERROR 172 Main PCB Q6 Check K	The main PCB Q6 is disabled (short mode).	
ERROR 186 HDC OVERFLOW	An error is detected on the waveform printed on.	
ERROR 186 HDC UNDERFLOW		
ERROR 187 HDC SLEW RATE		
ERROR 188 HDC MEMORY		
ERROR 18a Main PCB V_CORE	An error occurred in the main PCB VCORE power supply.	
ERROR 18b Main PCB V1R5B	An error occurred in the main PCB 1.5V power supply.	
ERROR 18c Hain PCB V12	An error occurred in the main PCB 12V power supply.	
ERROR 18e FLS NOT COMP [12__]	Abnormality of the flushing control.	
ERROR 18f OFFSET START [12__]	Abnormality of the head voltage control.	
ERROR 18f OFFSET END [12__]		
ERROR 19d HDC V36 [xxxx]	Abnormality of the HDC substrate voltage.	
ERROR 19F LED CONNCT ERR	The LED UV is not connected.	
ERROR 201 COMMAND	The machine received some data other than command data.	• Securely connect the interface cable in position. • Use an interface cable conforming to the specifications.
ERROR 202 PARAMETER	Any parameter outside the range of acceptable numeric values was received.	
ERROR 203 Ment Command	A maintenance command error occurred.	

Message	Cause	Solution
ERROR 304 USB INIT ERR	USB device initialization failure.	• Turn off the main power to the machine and turn it on after a while. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 305 USB TIME OUT	Occurrence of a time out error on a USB device.	
ERROR 401 MOTOR X	An excessive load was applied to the X motor.	
ERROR 402 MOTOR Y	An excessive load was applied to the Y motor.	
ERROR 403 X CURRENT	An error due to an excessive current of the X motor was detected.	
ERROR 404 Y CURRENT	An error due to an excessive current of the Y motor was detected.	
ERROR 505 MEDIA JAM	The media jam occurs.	• Remove the media and reset it.
ERROR 509 HDC POSCNT	A HDC position counter error occurred.	• Turn off the main power to the machine and turn it on after a while. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 50a Y ORIGIN	Y-origin could not be detected.	
ERROR 50f L-SCALE BLACK	Abnormal Y linear scale.	
ERROR 519 NEGATIVE P.SENSOR	The value of the negative pressure sensor is abnormal.	• Perform “PRESSURE ADJUST” (☞ P.5-9) of the maintenance. If you cannot adjust it to the normal value, or, even if you perform, it may be displayed, contact your local distributor, our sales office, or service center.
ERROR 51a POSITIVE P.SENSOR	The value of the positive pressure sensor is abnormal.	
ERROR 51e PL ENC SNS(L)	The X left-side linear scale has poor sensitivity.	• Turn off the main power to the machine and turn it on after a while. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 51e PL ENC SNS(R)	The X right-side linear scale has poor sensitivity.	
ERROR 607 CAP CLEARNING	It is time to clean the cap.	• Press the MAINT. key to execute the carriage-out and clean the cap. (☞ P.4-4)
ERROR 617 SUBTANK SNN:12345678	The liquid level sensor abnormality of the sub tank has been detected.	• Turn off the main power to the machine and turn it on after a while. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 618 TANKlevelH :12345678	Though a certain amount was consumed, there is no change in the sub tank sensor High.	• Perform “SUB TANK” (☞ P.5-5) of the maintenance. Even if you performed this, when the message is displayed, contact your local distributor, our sales office, or service center.
ERROR 619 TANKlevelL :12345678	Though a certain amount was consumed, there is no change in the sub tank sensor Low.	
ERROR 61a OVER FLOW :12345678	Overflow from the sub tank has been detected.	

Message	Cause	Solution
ERROR 61b SUPPLY INK :12345678	Ink could not be supplied to the sub tank.	• Perform “SUB TANK” (☞ P.5-5) of the maintenance. Also check the remaining amount of ink in the ink bottle. Even if you performed this, when the message is displayed, contact your local distributor, our sales office, or service center.
ERROR 61c NEGATIVE P.CONTROL	Starting of the negative pressure control has an abnormality.	• Perform “PRESSURE ADJUST” (☞ P.5-9) of the maintenance. If you cannot adjust it to the normal value, or, even if you perform, it may be displayed, contact your local distributor, our sales office, or service center.
ERROR 61d NEGATIVE P.NotEnough	The negative pressure cannot be kept properly	
ERROR 61e NEGATIVE P. OVER		
ERROR 61f POSITIVE P.CONTROL	Starting of the positive pressure control has an abnormality.	
ERROR 620 POSITIVE P.NotEnough	The positive pressure cannot be kept properly.	• Perform “PRESSURE ADJUST” (☞ P.5-9) of the maintenance. If you cannot adjust it to the normal value, or, even if you perform, it may be displayed, contact your local distributor, our sales office, or service center.
ERROR 621 POSITIVE P. OVER		
ERROR 627 INSERT CARTRIDGE	There is a slot in which the ink bottle has not been inserted more than a certain time.	Set an ink bottle.
ERROR 702 THERMISTOR	The thermistor of a heater is defective.	Turn off the main power to the machine and turn it on after a while. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 707 !H1 HEATER BREAK	A head heater is disconnected.	
ERROR 714 INK HEATER COM ERR	There was a communication error in the ink heater relay board.	• Turn off the main power to the machine and turn it on after a while. During startup, the following message is displayed. INK HEATER CONTROL CANCEL < > START Press the ▶ key and start ink heater control. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 715 InkHeaterHThr:123456	The ink heater thermistor is defective.	• Turn off the main power to the machine and turn it on after a while. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 715 InkHeaterLThr:123456		
ERROR 902 DATA REMAIN	There remains received data that has not yet been printed.	Execute the data clear function. (☞ P.2-14)

Message	Cause	Solution
ERROR 716 InkHeaterHTmp:123456	The ink heater is too hot. • If the temperature continues to rise, the print is cancelled and control becomes impossible.	• Turn off the main power, and wait an hour or more before turning it back on. If control became impossible after the error was displayed, the following message is displayed. INK HEATER CONTROL CANCEL < > START Press the ▶ key and start ink heater control. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 716 InkHeaterLTmp:123456		
ERROR 717 InkHeaterHBrk:123456	The ink heater is disconnected.	• Turn off the main power to the machine and turn it on after a while. When displaying again, contact your local distributor, our sales office, or service center.
ERROR 717 InkHeaterLBrk:123456		
ERROR 718 InkHeaterPCB Thr:12	The thermistor on the ink heater relay board is defective.	
ERROR 719 InkHeaterPCB fuse:12	The fuse on the ink heater relay board was blown.	
ERROR 17a UV-DRV FUSE :XXXXXX	The fuse on the UV LED Driver board was blown.	
ERROR 90d NO HEAD SELECT	The number of mounted heads is 0 (zero).	• Turn off the main power to the machine and turn it on after a while. • When displaying again, contact your local distributor, our sales office, or service center.
ERROR 910 ENVIRONMENT TEMP(LO)	The ambient temperature is out of the usable temperature range (too low).	• Adjust the ambient temperature of the installation place.
ERROR 911 ENVIRONMENT TEMP(HI)	The ambient temperature is out of the usable temperature range (too high).	

SYSTEM HALT

Message	Solution
SYSTEM HALT 000: MESSAGE	Turn off the main power to the machine and turn it on after a while. Check the number and contact your local distributor, our sales office, or service center. (“000” is the error No.)

Chapter 6
Appendix

This chapter

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

Specifications 6-2
Machine specifications 6-2
Ink specifications 6-3
Setting orders depending on ink type 6-4
Setting orders of ink bottles 6-4
Sheet for inquiry 6-5
Warning labels 6-6
Function Flowchart 6-8

Machine specifications

Item		Specifications
Print head	Method	Drop-on-demand piezoelectric print heads
	Specification	6 heads: 3-layered staggered arrangement in 2-line
Printing mode (scan x feed)	4 colors	600x600 : Bi/Uni 4/8/16 pass 600x900 : Bi/Uni 6/12/24 pass
	6 colors or more	600x600 : Bi/Uni 8/16/32 pass 600x900 : Bi/Uni 12/24/48 pass
Usable inks		Dedicated UV curable in (Y, M, C, K, W, Cl, PR(Primer))
Ink supply		Supplying 1L x 8 bottles (For 4-color, UISS switching is available, for 6-color, UISS switching is available only for Y, K.)
Capacity of ink bottle	4 colors	1L-bottle x 2 for each color
	6 colors	M, C: 2 liter bottle x 2 for each color Others: 1 liter bottle x 1 for each color
Usable media	Size	2140mmx3210mm (84.3nx126.4in)
	Thickness	50mm or more (2.0in or more)
Max. printing width		2100mmx3100mm (82.7inx122.0in)
Distance accuracy	Absolute accuracy	Whichever the larger one of ± 0.3 mm or ± 0.3 % of the designated (Whichever the larger one of ± 0.01 in or ± 0.3 % of the designated)
	Reproducibility	Whichever the larger one of ± 0.2 mm or ± 0.1 % of the designated (Whichever the larger one of ± 0.007 in or ± 0.1 % of the designated)
Perpendicularity		± 0.5 mm / 500 mm (± 0.02 in / 19.7 in)
Head height adjustment		1.2mm to 3mm (media thickness automatic recognition) (0.05in to 0.12in (media thickness automatic recognition))
Media absorption		Absorption fixing with vacuum unit
UV unit		UV LED lamp fitting (mounted on carriage) UV power is mounted in the main body.
Waste ink tank		Bottle type (3,200 cc)/ Detected by sensor
Interface		USB 2.0
Command		MRL- III
Noise	during standby	Less than 60 dB
	At operation *1	Less than 79 dB
Safety Standard		VCCI-Class A, FCC-Class A, UL 60950, CE Marking (EMC,Low Voltage Directive,Machinery Directive), CB Report, RoHS
Power		AC200 - 240 ± 10% , 50/60Hz ± 1Hz , 20A or less
Power consumption		2400W or less
Recomended Environment	Available temp.	15 °C to 30 °C (59°F to 86°F)
	Humidity	35 to 65% Rh (No condensation)
	Guaranteed temp.	18 °C to 25 °C (64.4°F to 77°F)
	Temperature change	± 10 °C / h or less (± 50 °F / h or less)
	Dust	0.15mg/m^3 (Equivalent to normal office level)
Weight	Printer main unit	1353 kg (2982.9 lb)
	External ink supply unit	40 kg (88.2lb)
Outside dimensions	Printer main unit	4100 mm(W) x 4462 mm(D) x 1490mm(H) (Including projection) (161.4 in(W) x 175.7 in(D) x 58.7 in(H) (Including projection))
	External ink supply unit	775 mm(W) x 455mm(D) x 900mm(H) (30.5 in(W) x 17.9 in(D) x 35.4 in(H))

*1. 77.6db(A), Operation condition: High-speed scanning, Blower is strong
Method: According to clause 1.7.4.2 of Machinery Directive 2006/42/EC

Ink specifications

Item		Specifications
Supply		1L Ink bottle
Color		Black ink Cyan ink Magenta ink Yellow ink White ink Clear ink Primer
Ink capacity		1 liter
Shelf life		The period is printed on the ink bottle. Within three months after opening the package even in the available period.
Storage temperature	Storage	1 to 40˚C (Storage at temperature of 40˚C is permitted within a month.) (33.8 to 104˚F (Storage at temperature of 104˚F is permitted within a month.))
	Transportation	1 to 60˚C (Storage at temperature of 60˚C is only permitted within 120 hours, and at temperature of 40˚C is permitted within a month.) (33.8 to 140˚F (Storage at temperature of 140˚F is only permitted within 120 hours, and at temperature of 104˚F is permitted within a month.))

Important!

- **Do not disassemble the ink bottle or refill/ add ink other than ink specified by our company.**
- **Ink could freeze if kept in a cold place for an extended period.**
  - If the ink freezes, thaw it at room temperature (25°C) spending more than three hours before use.However, when you use the frozen ink, the printing quality becomes degraded due to altered ink. Store ink in the environment where ink may not freeze.

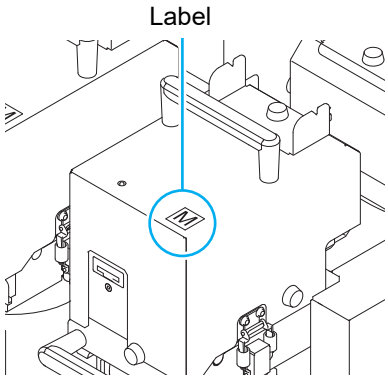
Setting orders depending on ink type

The setting value and the setting orders of the ink bottles differ depending on the ink type you use.

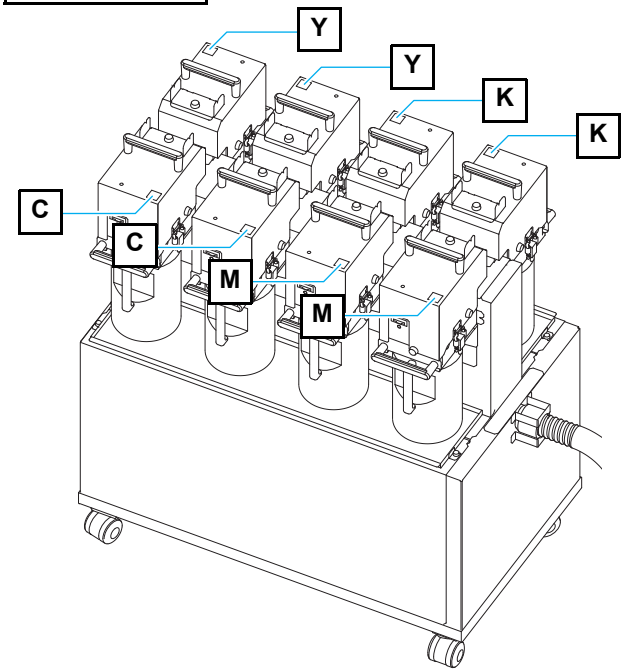
Setting orders of ink bottles

The orders of ink bottles set in the ink station differ depending on the ink set you use.

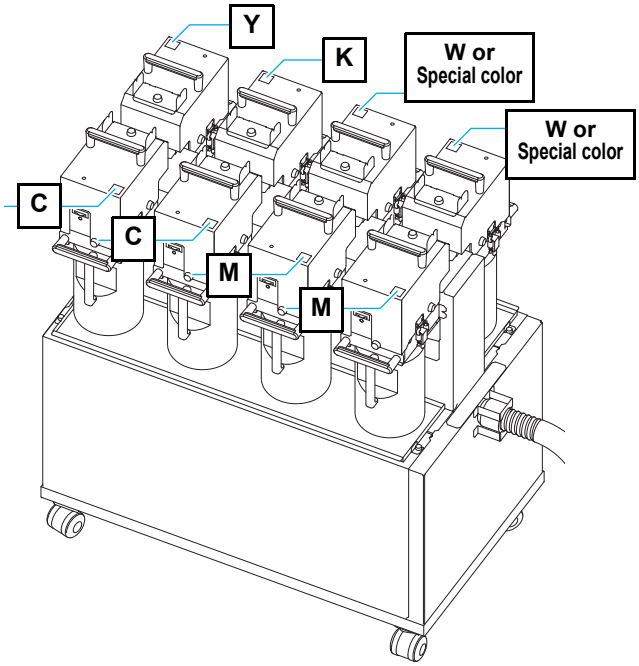
- Set the ink bottle aligning with the label pasted on the top surface of the ink cover.



4-colors ink set



6-colors ink set



Sheet for inquiry

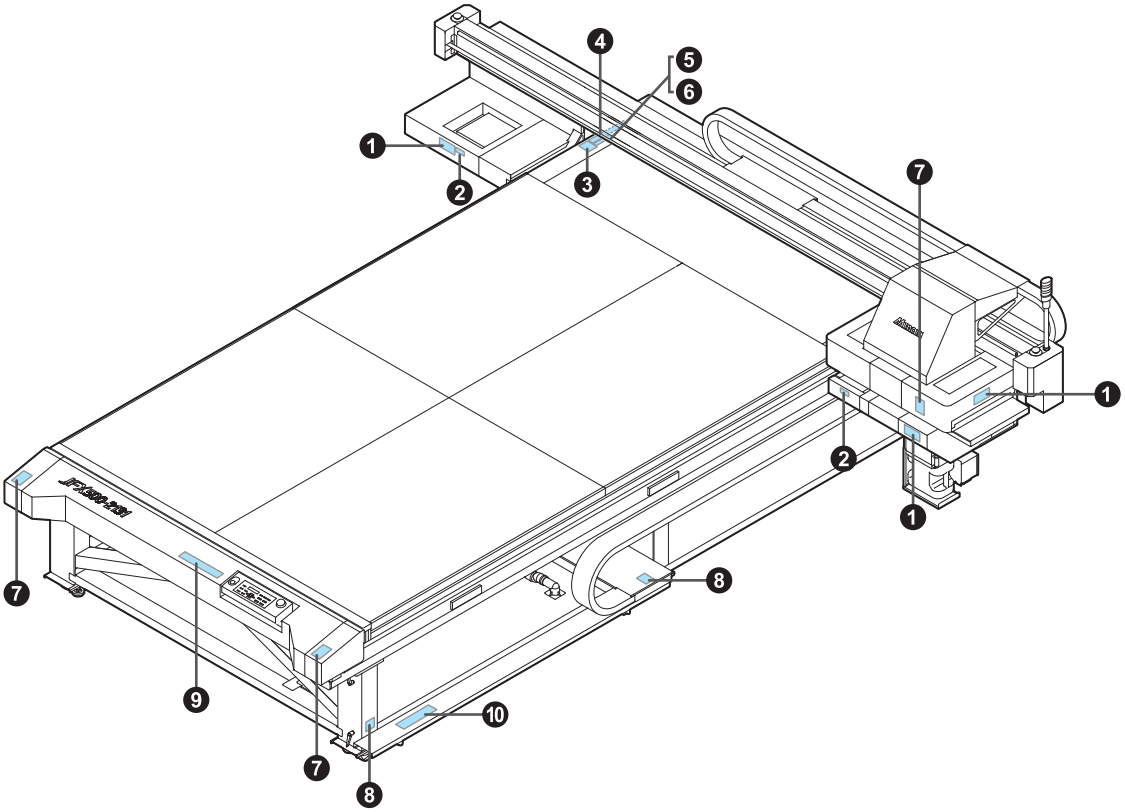
Use this sheet for troubles and abnormal functions of the machine.
Fill in the following necessary items, and then fax the sheet to our sales office.

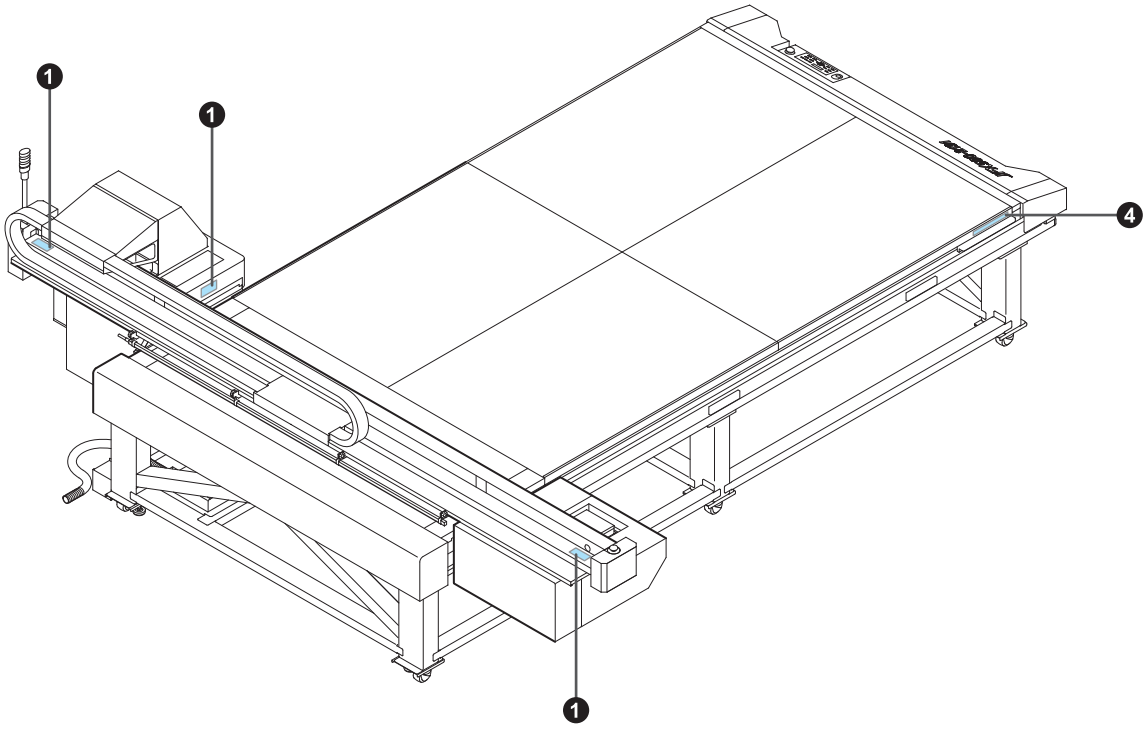
Company name	
Person in charge	
Telephone number	
machine model	
Operating OS	
Machine information *1	
Error message	
Contents of inquiry	

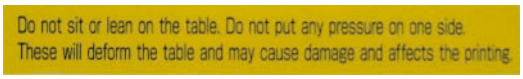
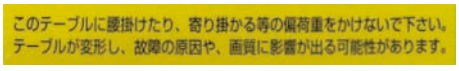
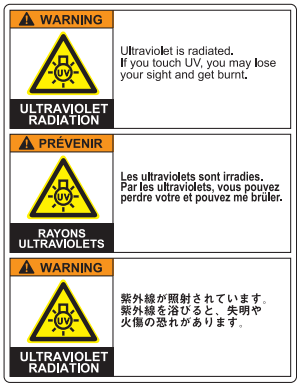
*1. Refer to "Confirming Machine information" of "Convenient using" then fill in necessary information. (☞ P.3-34)

Warning labels

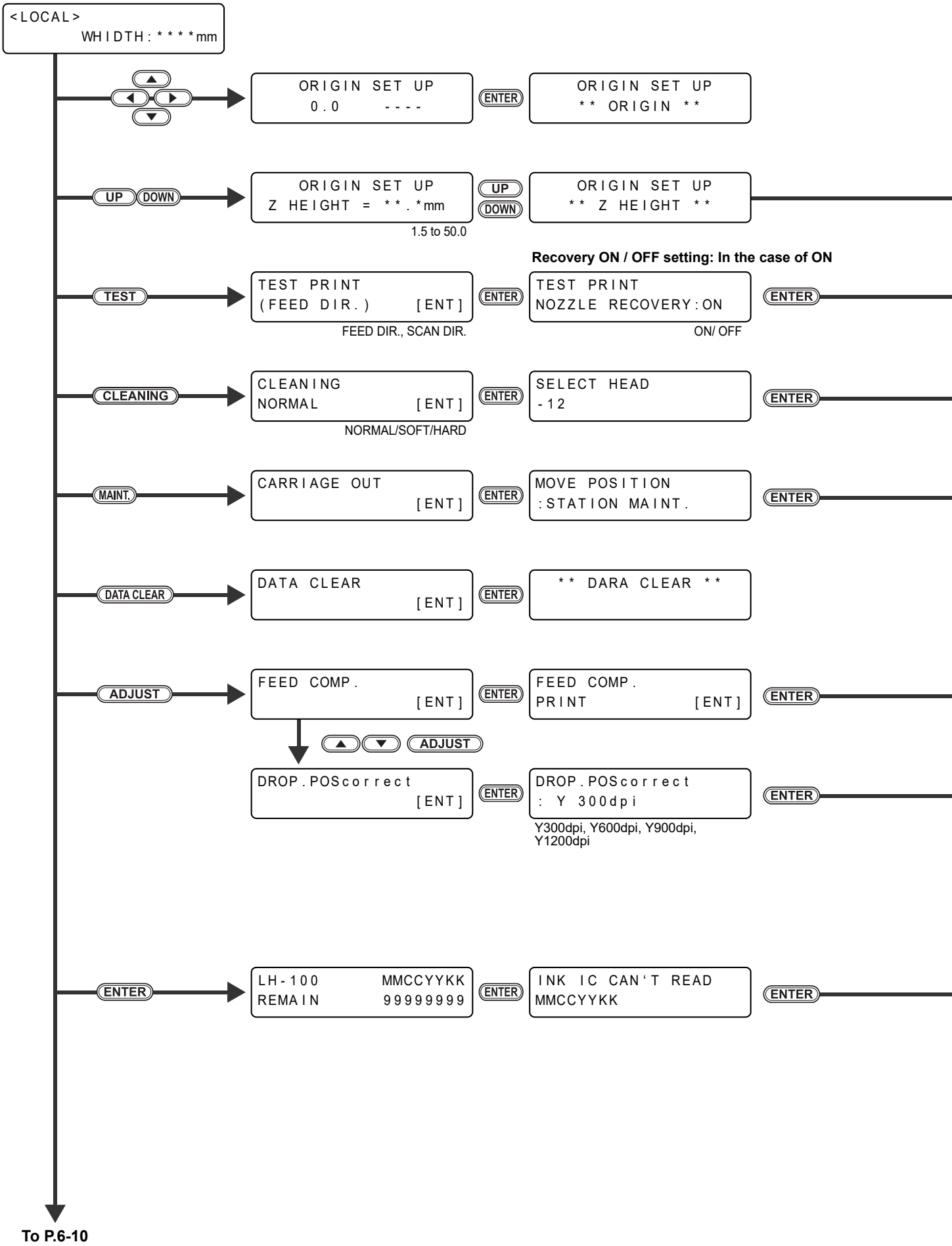
Warning labels are stuck on the machine. Be sure to fully understand the warning given on the labels.
If a warning label is illegible due to stains or has come off, purchase a new one from a distributor or our sales office.

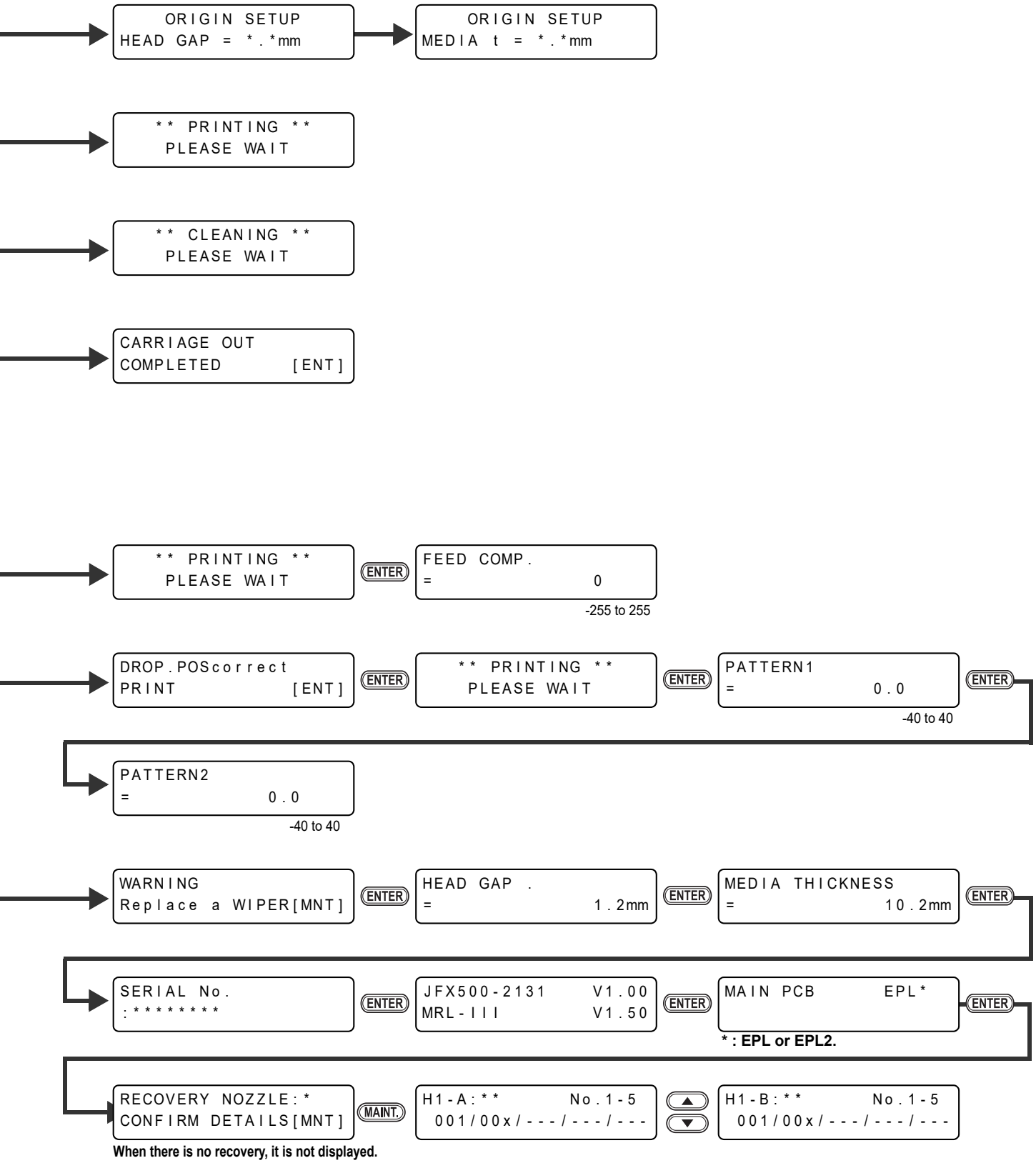




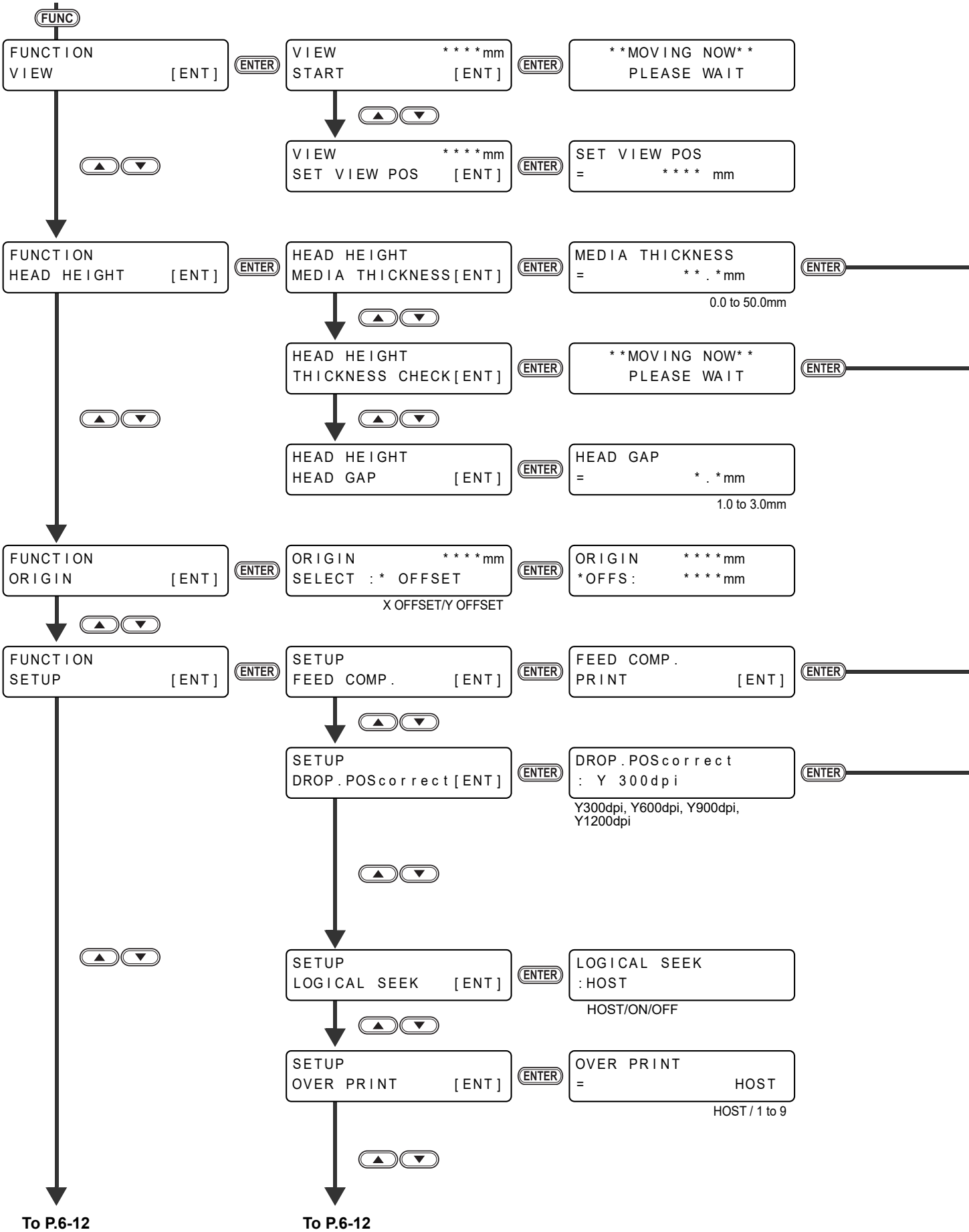
1:Reorder .M909381	2:Reorder .M903330
3:Reorder .M906310	**4:Reorder .M906115**
5:Reorder .M904325	**6:Reorder .M903226**
	
7:Reorder .M905980	**8:Reorder .M906311**
	
9:Reorder .M902663	**10:Reorder .M909385**

Function Flowchart



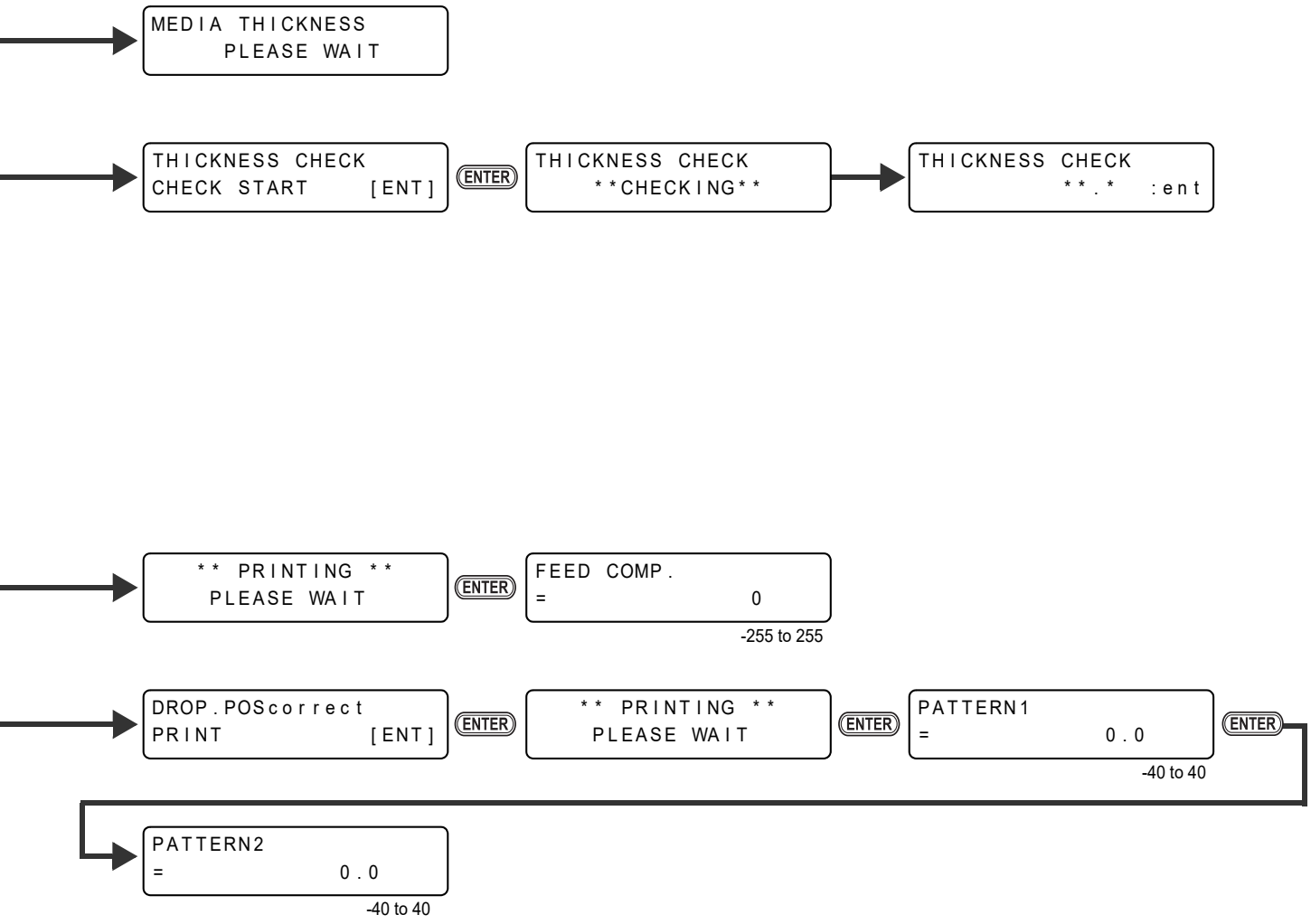

ORIGIN SETUP
HEAD GAP = *.*mm
ORIGIN SETUP
MEDIA t = *.*mm
** PRINTING **
PLEASE WAIT
** CLEANING **
PLEASE WAIT
CARRIAGE OUT
COMPLETED [ENT]
** PRINTING **
PLEASE WAIT
ENTER
FEED COMP.
= 0
-255 to 255
DROP.POScorrect
PRINT [ENT]
ENTER
** PRINTING **
PLEASE WAIT
ENTER
PATTERN1
= 0.0
-40 to 40
ENTER
PATTERN2
= 0.0
-40 to 40
WARNING
Replace a WIPER[MNT]
ENTER
HEAD GAP .
= 1.2mm
ENTER
MEDIA THICKNESS
= 10.2mm
ENTER
SERIAL No.
:********
ENTER
JFX500-2131 V1.00
MRL-III V1.50
ENTER
MAIN PCB EPL*
ENTER
* : EPL or EPL2.
RECOVERY NOZZLE:*
CONFIRM DETAILS[MNT]
MAINT.
H1-A:** No.1-5
001/00x/---/---/---
H1-B:** No.1-5
001/00x/---/---/---
When there is no recovery, it is not displayed.

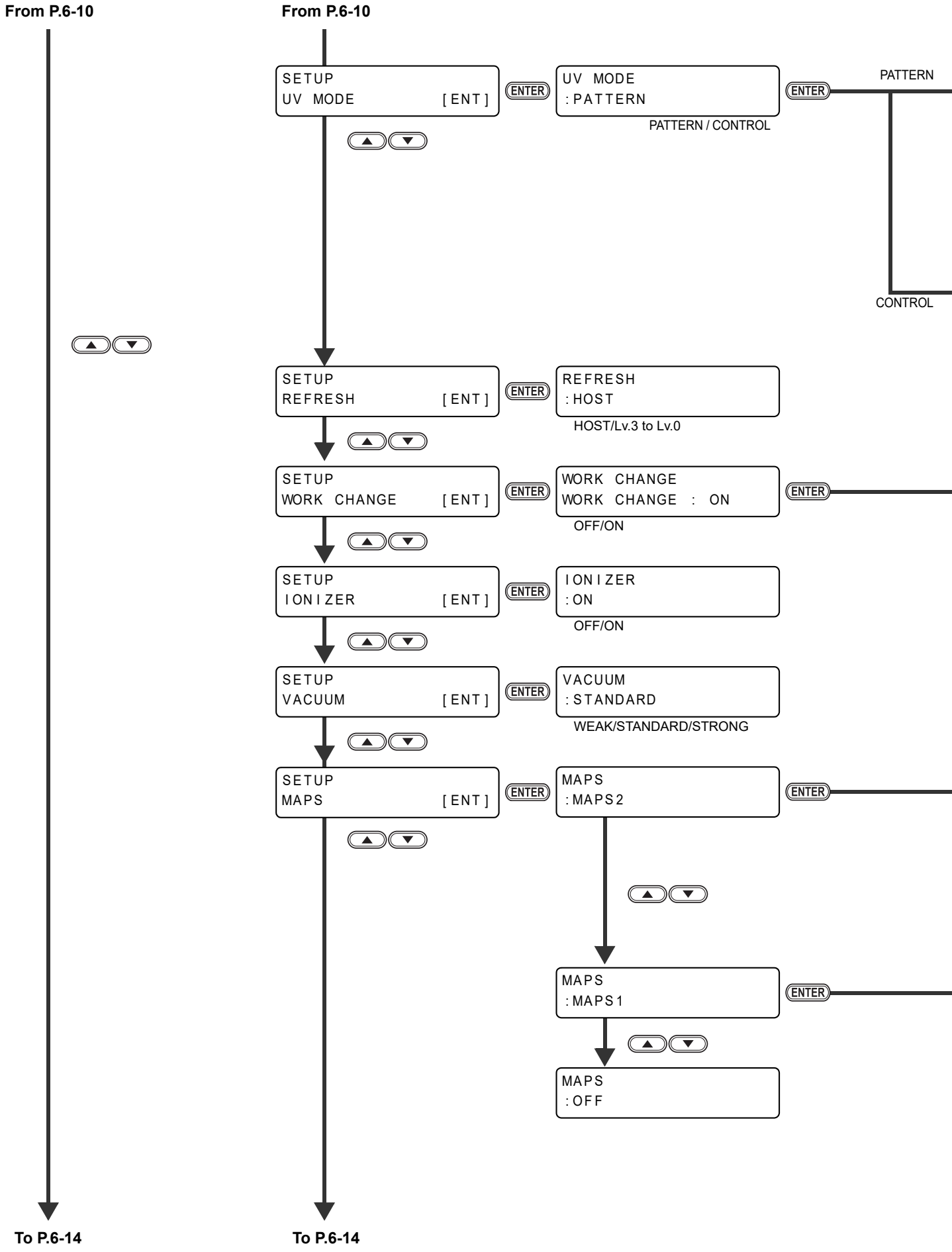
From P.6-8

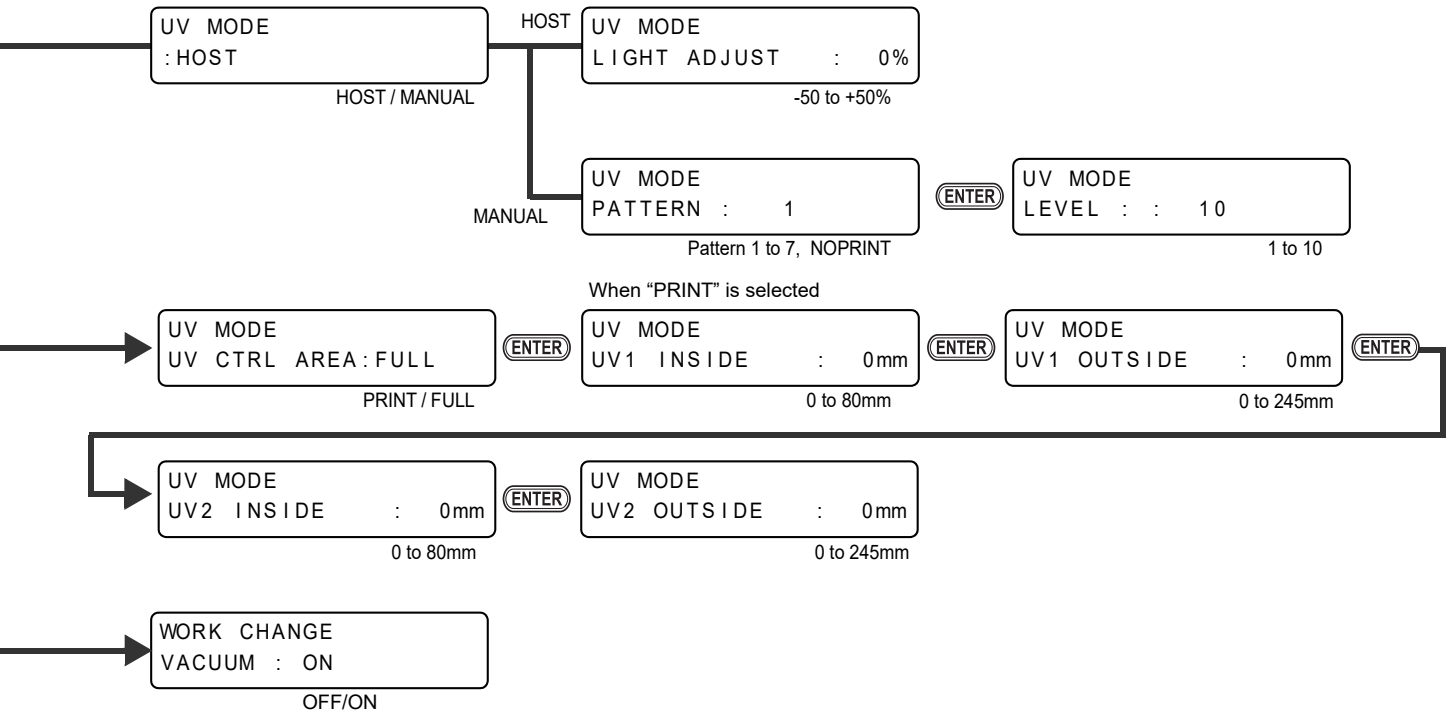


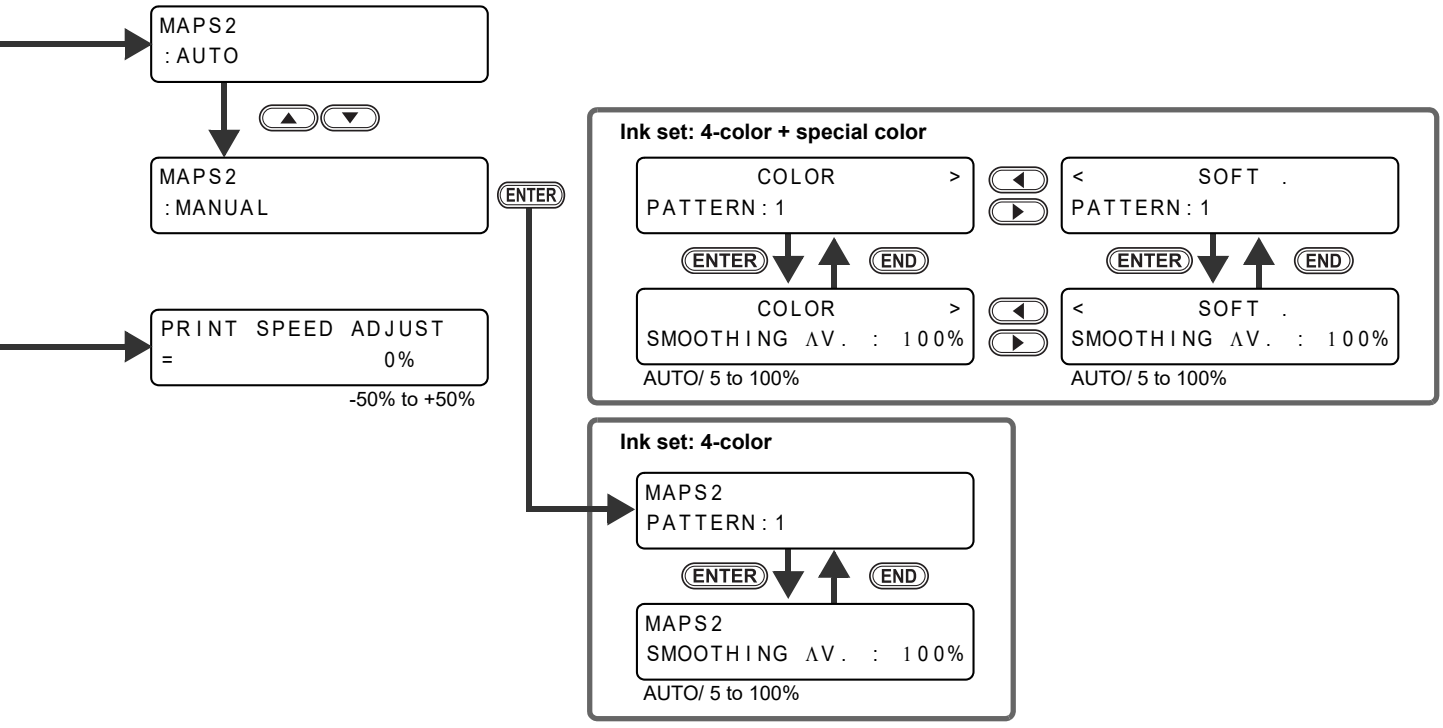
To P.6-12

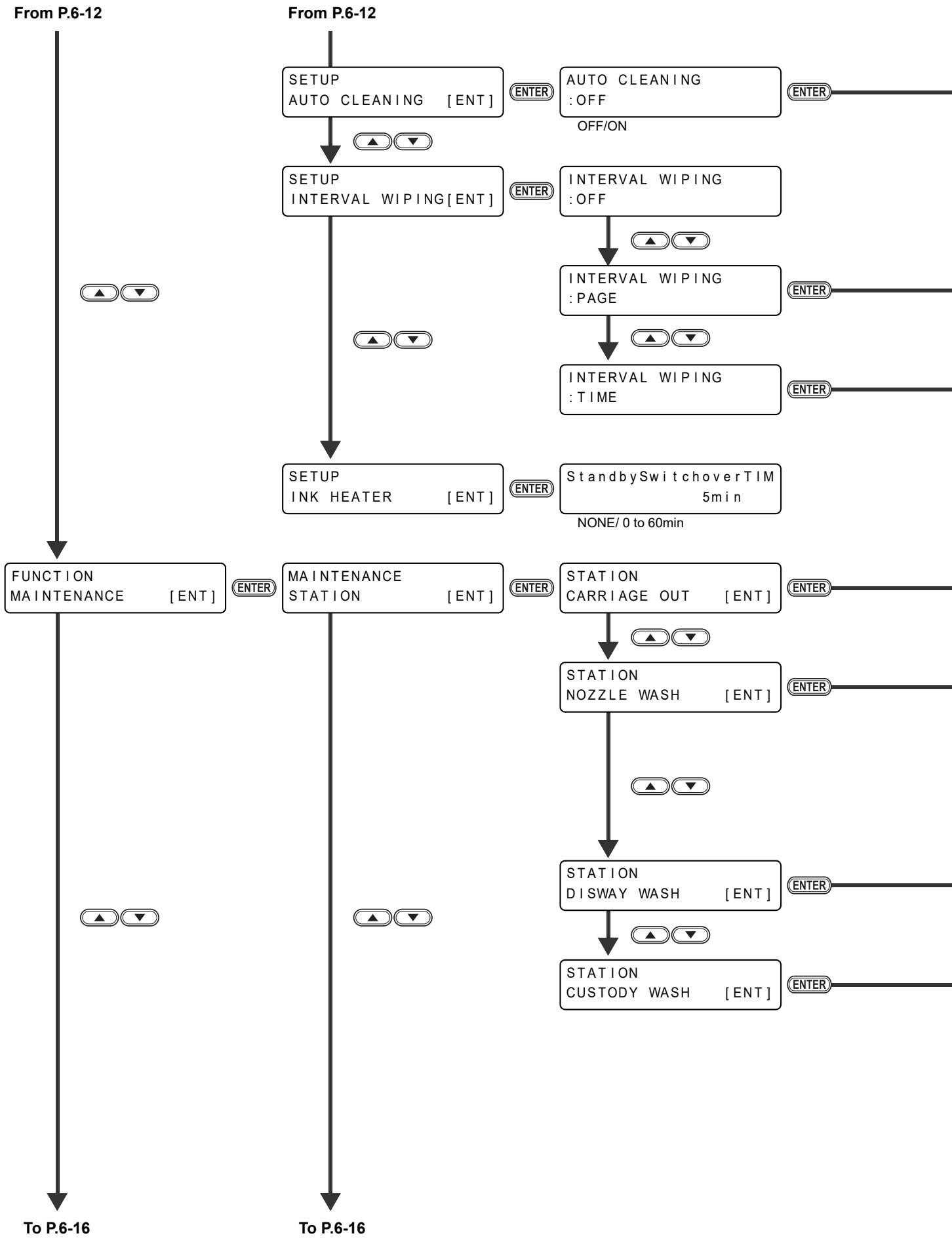
To P.6-12

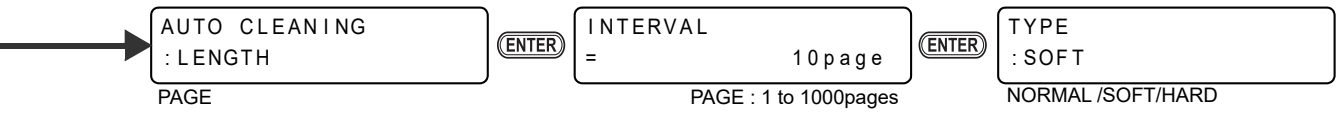

MEDIA THICKNESS
PLEASE WAIT
THICKNESS CHECK
CHECK START [ENT]
ENTER
THICKNESS CHECK
CHECKING
THICKNESS CHECK
**.* :ent
** PRINTING **
PLEASE WAIT
ENTER
FEED COMP.
= 0
-255 to 255
DROP.POScorrect
PRINT [ENT]
ENTER
** PRINTING **
PLEASE WAIT
ENTER
PATTERN1
= 0.0
-40 to 40
ENTER
PATTERN2
= 0.0
-40 to 40


From P.6-10
From P.6-10
SETUP
UV MODE [ENT]
ENTER
UV MODE
:PATTERN
ENTER
PATTERN
CONTROL
PATTERN / CONTROL
SETUP
REFRESH [ENT]
ENTER
REFRESH
:HOST
HOST/Lv.3 to Lv.0
SETUP
WORK CHANGE [ENT]
ENTER
WORK CHANGE
WORK CHANGE : ON
ENTER
OFF/ON
SETUP
IONIZER [ENT]
ENTER
IONIZER
:ON
OFF/ON
SETUP
VACUUM [ENT]
ENTER
VACUUM
:STANDARD
WEAK/STANDARD/STRONG
SETUP
MAPS [ENT]
ENTER
MAPS
:MAPS2
ENTER
MAPS
:MAPS1
ENTER
MAPS
:OFF
To P.6-14
To P.6-14


UV MODE
:HOST
HOST / MANUAL
HOST
UV MODE
LIGHT ADJUST : 0%
-50 to +50%
MANUAL
UV MODE
PATTERN : 1
Pattern 1 to 7, NOPRINT
ENTER
UV MODE
LEVEL : : 10
1 to 10
When "PRINT" is selected
UV MODE
UV CTRL AREA:FULL
PRINT / FULL
ENTER
UV MODE
UV1 INSIDE : 0mm
0 to 80mm
ENTER
UV MODE
UV1 OUTSIDE : 0mm
0 to 245mm
ENTER
UV MODE
UV2 INSIDE : 0mm
0 to 80mm
ENTER
UV MODE
UV2 OUTSIDE : 0mm
0 to 245mm
WORK CHANGE
VACUUM : ON
OFF/ON


MAPS2
:AUTO
MAPS2
:MANUAL
ENTER
PRINT SPEED ADJUST
= 0%
-50% to +50%
Ink set: 4-color + special color
COLOR >
PATTERN:1
ENTER
END
< SOFT .
PATTERN:1
ENTER
END
COLOR >
SMOOTHING AV. : 100%
AUTO/ 5 to 100%
< SOFT .
SMOOTHING AV. : 100%
AUTO/ 5 to 100%
Ink set: 4-color
MAPS2
PATTERN:1
ENTER
END
MAPS2
SMOOTHING AV. : 100%
AUTO/ 5 to 100%

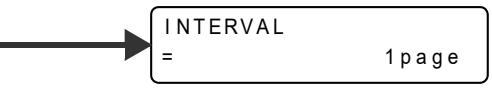

From P.6-12
From P.6-12
SETUP
AUTO CLEANING [ENT]
ENTER
AUTO CLEANING
:OFF
ENTER
OFF/ON
SETUP
INTERVAL WIPING[ENT]
ENTER
INTERVAL WIPING
:OFF
INTERVAL WIPING
:PAGE
ENTER
INTERVAL WIPING
:TIME
ENTER
SETUP
INK HEATER [ENT]
ENTER
StandbySwitchoverTIM
5min
NONE/ 0 to 60min
FUNCTION
MAINTENANCE [ENT]
ENTER
MAINTENANCE
STATION [ENT]
ENTER
STATION
CARRIAGE OUT [ENT]
ENTER
STATION
NOZZLE WASH [ENT]
ENTER
STATION
DISWAY WASH [ENT]
ENTER
STATION
CUSTODY WASH [ENT]
ENTER
To P.6-16
To P.6-16



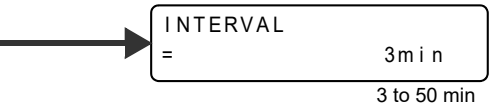
PAGE

PAGE : 1 to 1000pages

NORMAL /SOFT/HARD

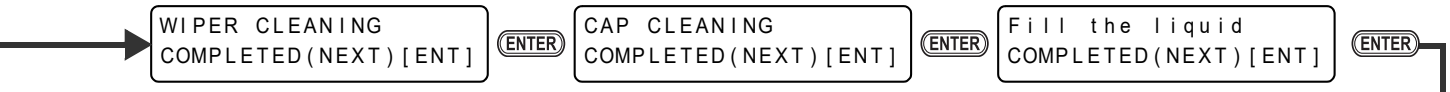


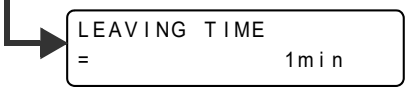
1 to 100 pages



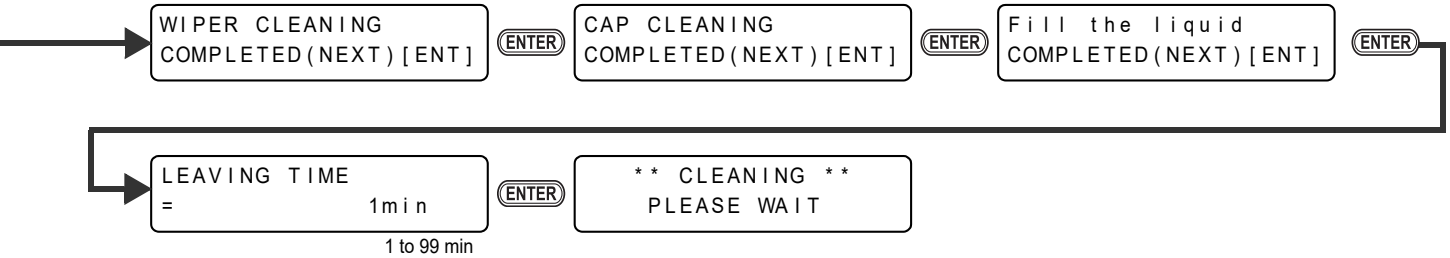
3 to 50 min

STATION MAINT. / HEAD MAINT.





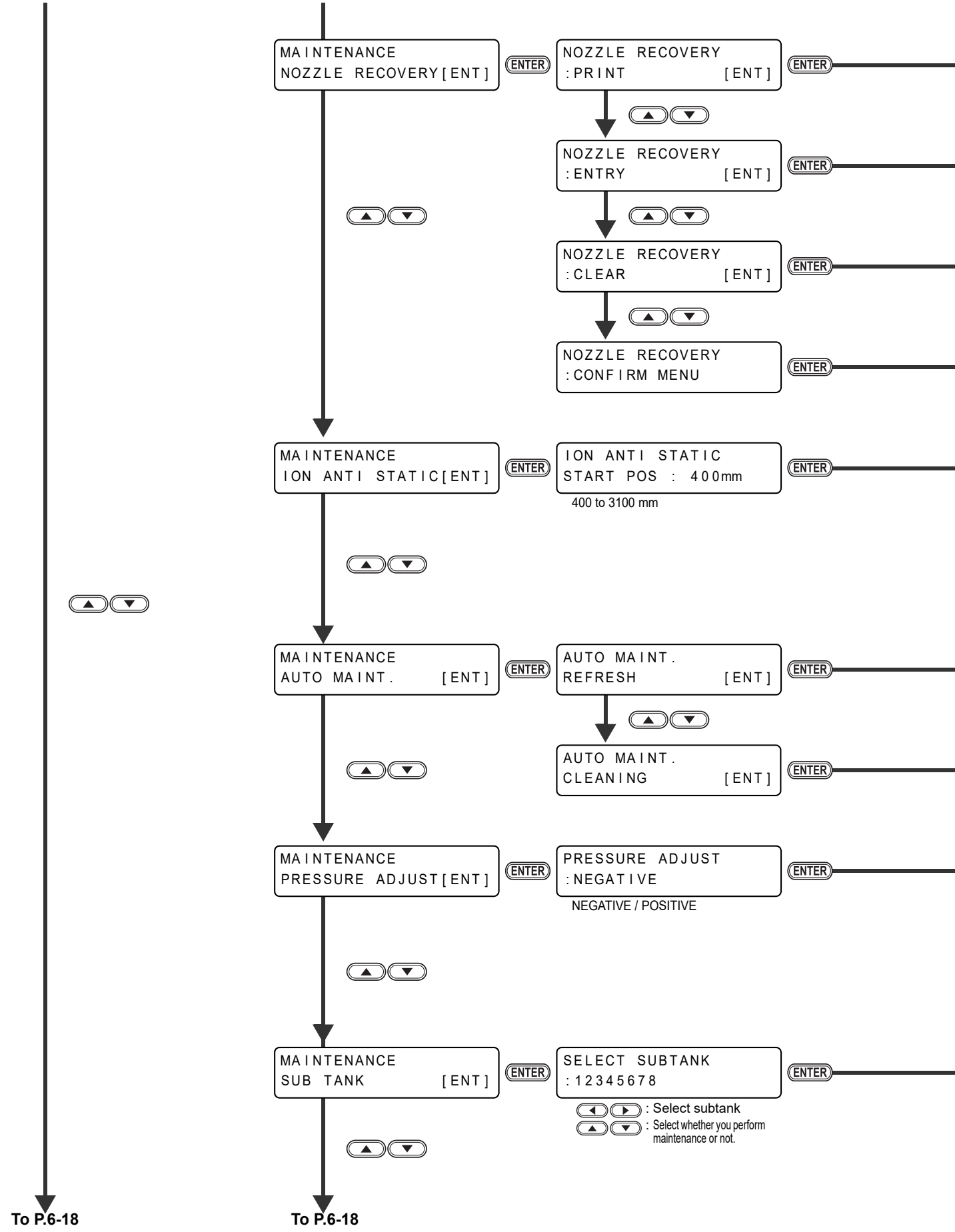
1 to 99 min



1 to 99 min

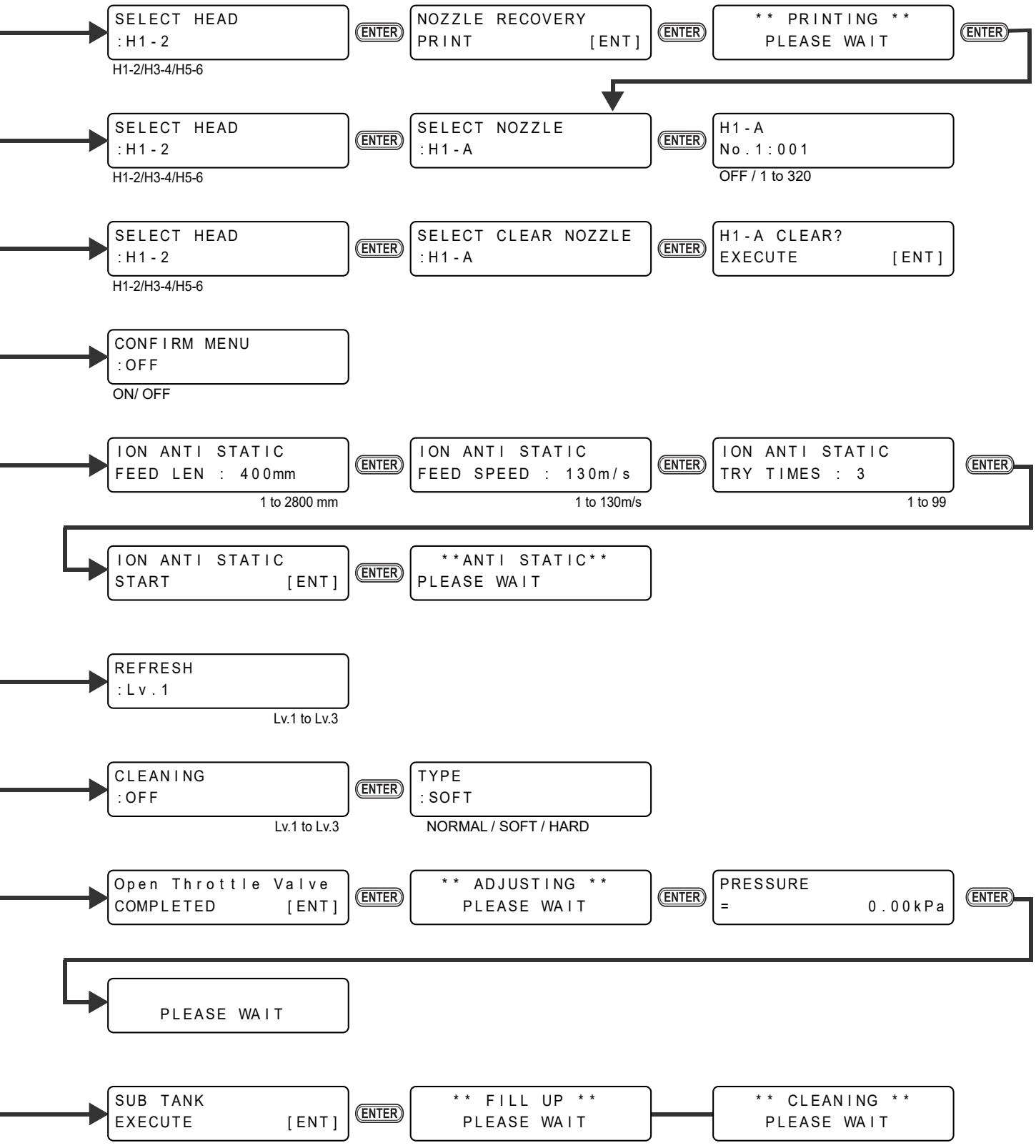
From P.6-14

From P.6-14



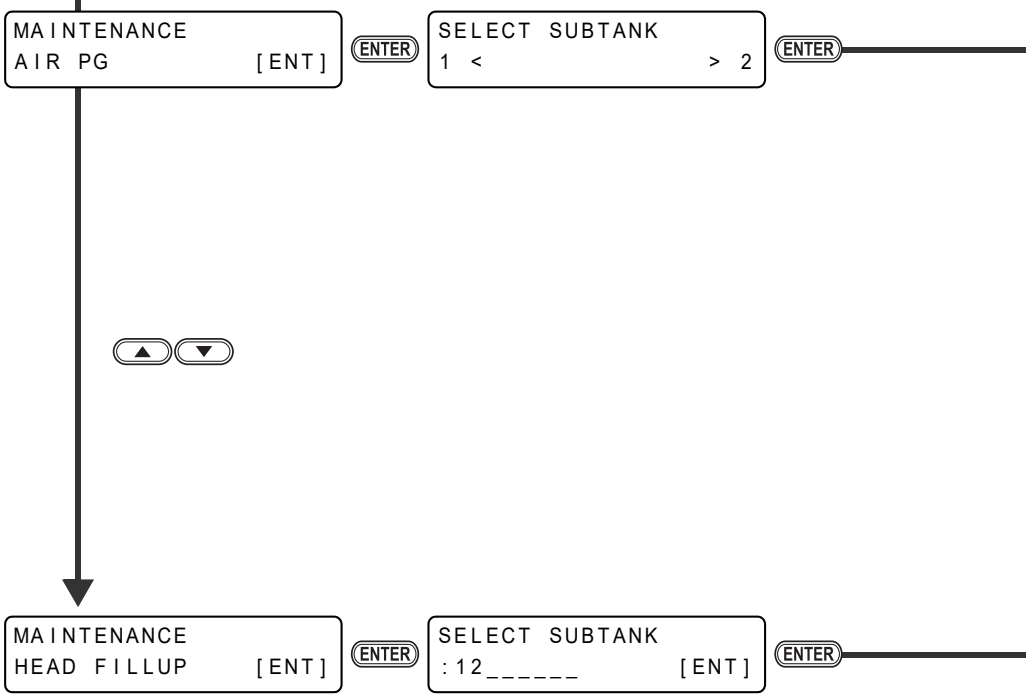
To P.6-18

To P.6-18

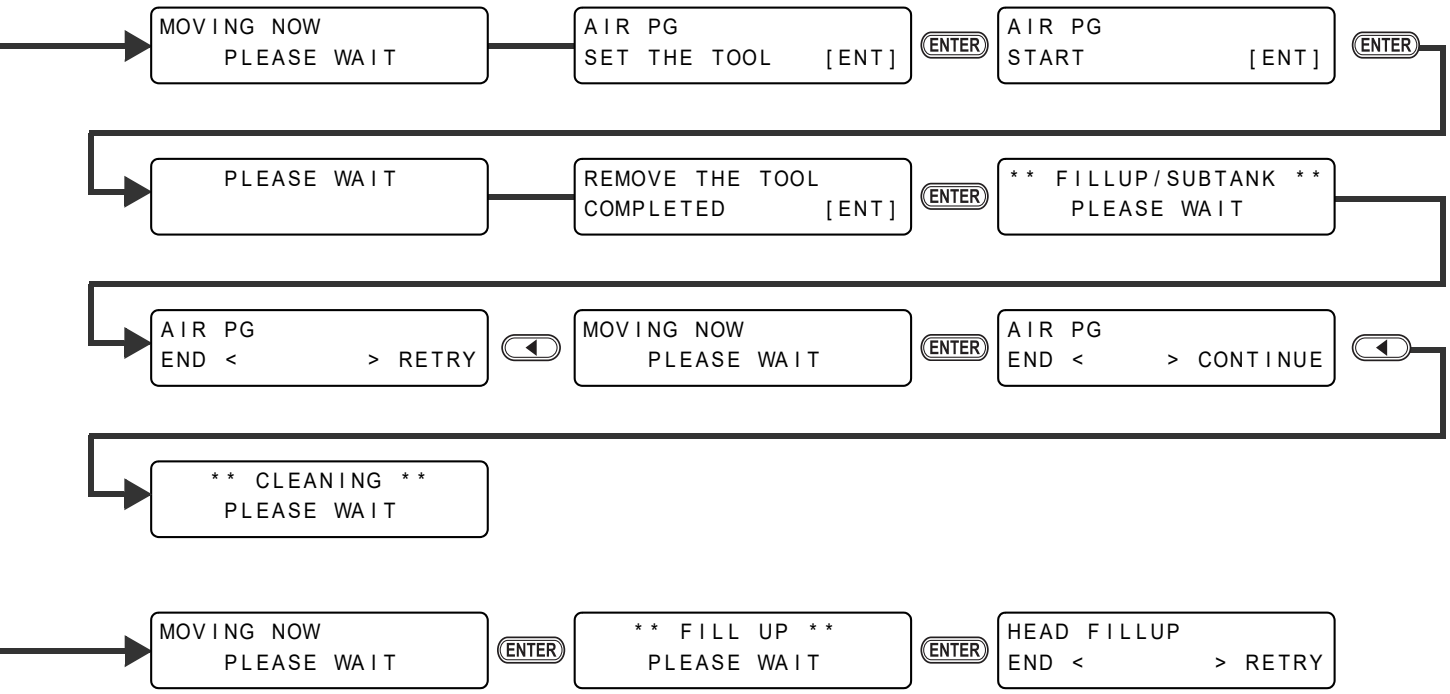

SELECT HEAD
:H1-2
H1-2/H3-4/H5-6
ENTER
NOZZLE RECOVERY
PRINT [ENT]
ENTER
** PRINTING **
PLEASE WAIT
ENTER
SELECT HEAD
:H1-2
H1-2/H3-4/H5-6
ENTER
SELECT NOZZLE
:H1-A
ENTER
H1-A
No.1:001
OFF / 1 to 320
SELECT HEAD
:H1-2
H1-2/H3-4/H5-6
ENTER
SELECT CLEAR NOZZLE
:H1-A
ENTER
H1-A CLEAR?
EXECUTE [ENT]
CONFIRM MENU
:OFF
ON/ OFF
ION ANTI STATIC
FEED LEN : 400mm
1 to 2800 mm
ENTER
ION ANTI STATIC
FEED SPEED : 130m/s
1 to 130m/s
ENTER
ION ANTI STATIC
TRY TIMES : 3
1 to 99
ENTER
ION ANTI STATIC
START [ENT]
ENTER
ANTI STATIC
PLEASE WAIT
REFRESH
:Lv.1
Lv.1 to Lv.3
CLEANING
:OFF
Lv.1 to Lv.3
ENTER
TYPE
:SOFT
NORMAL / SOFT / HARD
Open Throttle Valve
COMPLETED [ENT]
ENTER
** ADJUSTING **
PLEASE WAIT
ENTER
PRESSURE
= 0.00kPa
ENTER
PLEASE WAIT
SUB TANK
EXECUTE [ENT]
ENTER
** FILL UP **
PLEASE WAIT
** CLEANING **
PLEASE WAIT

From P.6-16

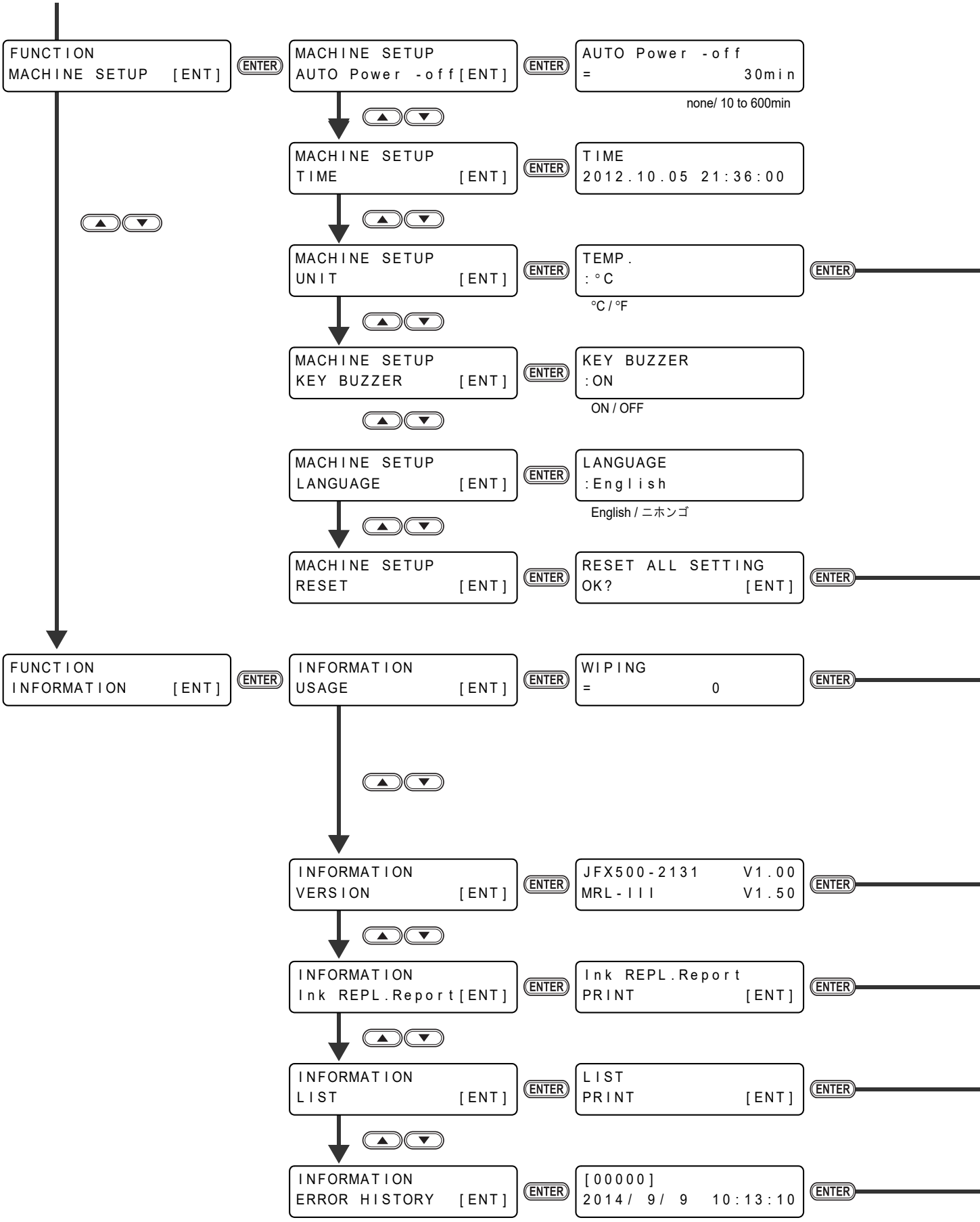
From P.6-16

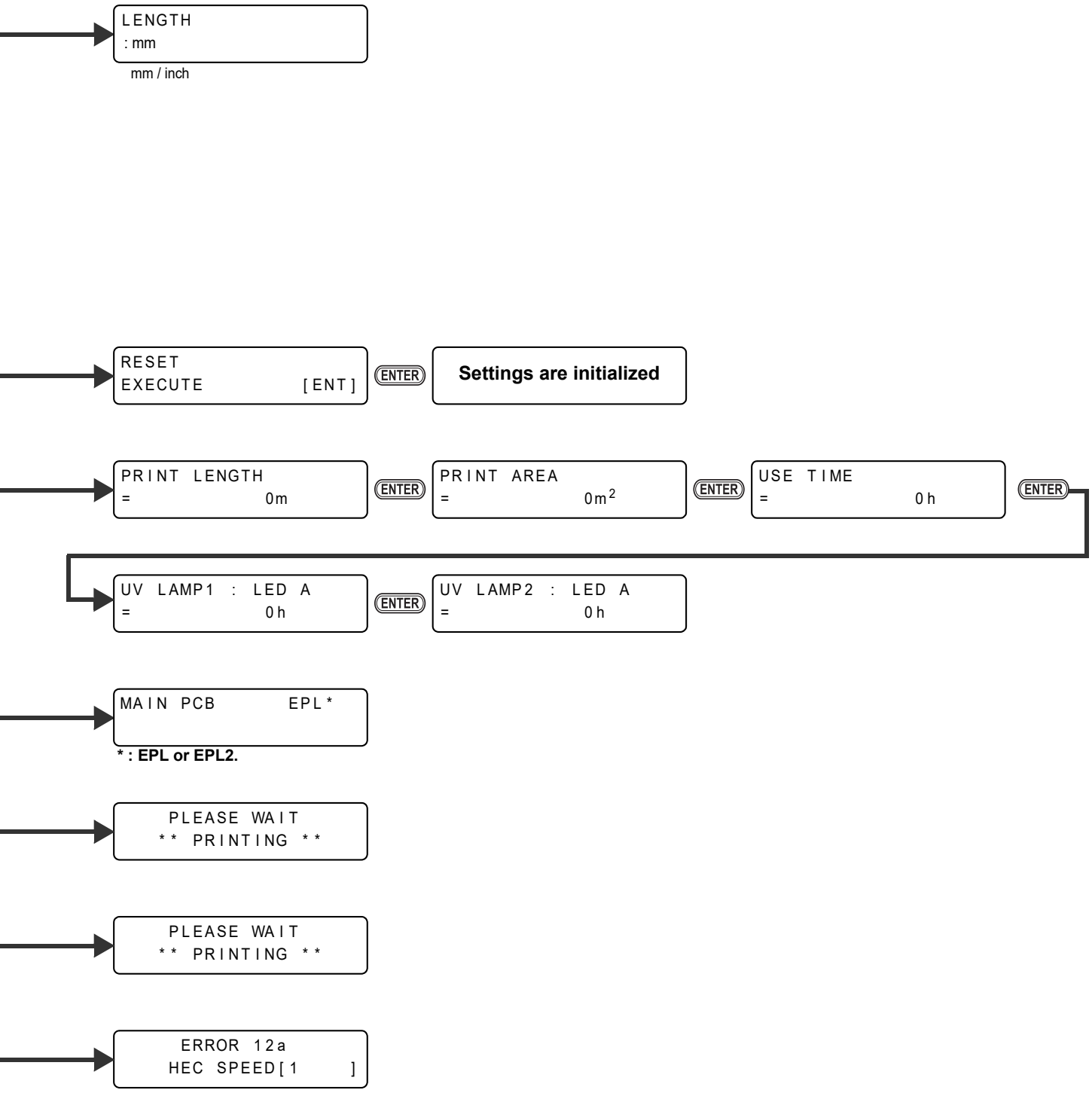


To P.6-20


MOVING NOW
PLEASE WAIT
AIR PG
SET THE TOOL [ENT]
ENTER
AIR PG
START [ENT]
ENTER
PLEASE WAIT
REMOVE THE TOOL
COMPLETED [ENT]
ENTER
** FILLUP/SUBTANK **
PLEASE WAIT
AIR PG
END < > RETRY
MOVING NOW
PLEASE WAIT
ENTER
AIR PG
END < > CONTINUE
** CLEANING **
PLEASE WAIT
MOVING NOW
PLEASE WAIT
ENTER
** FILL UP **
PLEASE WAIT
ENTER
HEAD FILLUP
END < > RETRY

From P.6-18


FUNCTION
MACHINE SETUP [ENT]
ENTER
MACHINE SETUP
AUTO Power -off[ENT]
ENTER
AUTO Power -off
= 30min
none/ 10 to 600min
MACHINE SETUP
TIME [ENT]
ENTER
TIME
2012.10.05 21:36:00
MACHINE SETUP
UNIT [ENT]
ENTER
TEMP.
:°C
°C/°F
ENTER
MACHINE SETUP
KEY BUZZER [ENT]
ENTER
KEY BUZZER
:ON
ON / OFF
MACHINE SETUP
LANGUAGE [ENT]
ENTER
LANGUAGE
:English
English / ニホンゴ
MACHINE SETUP
RESET [ENT]
ENTER
RESET ALL SETTING
OK? [ENT]
ENTER
FUNCTION
INFORMATION [ENT]
ENTER
INFORMATION
USAGE [ENT]
ENTER
WIPING
= 0
ENTER
INFORMATION
VERSION [ENT]
ENTER
JFX500-2131 V1.00
MRL-III V1.50
ENTER
INFORMATION
Ink REPL.Report[ENT]
ENTER
Ink REPL.Report
PRINT [ENT]
ENTER
INFORMATION
LIST [ENT]
ENTER
LIST
PRINT [ENT]
ENTER
INFORMATION
ERROR HISTORY [ENT]
ENTER
[00000]
2014/ 9/ 9 10:13:10
ENTER


LENGTH
: mm
mm / inch
RESET
EXECUTE [ENT]
ENTER
Settings are initialized
PRINT LENGTH
= 0m
ENTER
PRINT AREA
= 0m2
ENTER
USE TIME
= 0h
ENTER
UV LAMP1 : LED A
= 0h
ENTER
UV LAMP2 : LED A
= 0h
MAIN PCB EPL*
* : EPL or EPL2.
PLEASE WAIT
** PRINTING **
PLEASE WAIT
** PRINTING **
ERROR 12a
HEC SPEED[1]

JFX500-2131 Operation Manual

July, 2022

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