



Operation Manual

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2. Basic Operations

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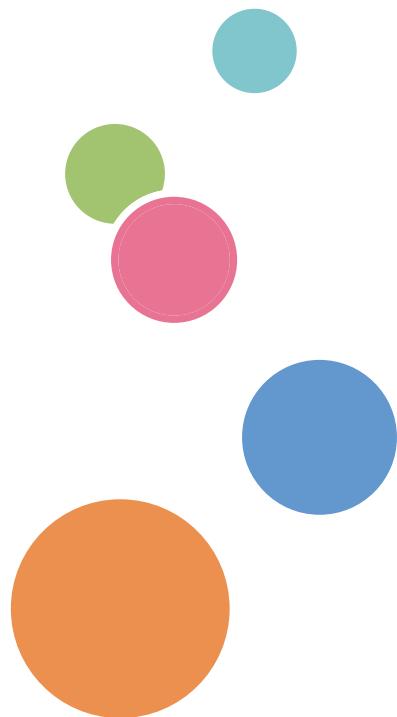


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Information

Introduction

Read this manual carefully before you use this machine and keep it handy for future reference. For safe and correct use, be sure to read the Safety Precautions in this manual before using the machine.

Legal Prohibition

Do not copy or print any item for which reproduction is prohibited by law.

Copying or printing the following items is generally prohibited by local law:

bank notes, revenue stamps, bonds, stock certificates, bank drafts, checks, passports, driver's licenses.

The preceding list is meant as a guide only and is not inclusive. We assume no responsibility for its completeness or accuracy. If you have any questions concerning the legality of copying or printing certain items, consult with your legal advisor.

CAUTION

DISCLAIMER OF WARRANTY

Contents of this manual are subject to change without prior notice.

To the maximum extent permitted by applicable laws, in no event will the manufacturer be liable for any damages whatsoever arising out of failures of this machine, losses of the registered data, or the use of this product and operation manuals provided with it. Make sure that you always copy or have backups of the data registered in this machine. Documents or data might be erased due to your operational errors or malfunctions of the machine. In no event will the manufacturer be responsible for any documents created by you using this machine or any results from the data executed by you.

FCC Statement (USA)

Note:

This equipment has been tested and found to comply with the limits for a Class A digital devices, 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 instruction 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.

Caution:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note to users in the state of California (USA)

Perchlorate Material - special handling may apply. See: www.dtsc.ca.gov/hazardouswaste/perchlorate

User Information on Electrical & Electronic Equipment

Users in the countries where this symbol shown in this section has been specified in national law on collection and treatment of E-waste

Our Products contain high quality components and are designed to facilitate recycling.

Our products or product packaging are marked with the symbol below.



The symbol indicates that the product must not be treated as municipal waste. It must be disposed of separately via the appropriate return and collection systems available. By following these instructions you ensure that this product is treated correctly and help to reduce potential impacts on the environment and human health, which could otherwise result from inappropriate handling. Recycling of products helps to conserve natural resources and protect the environment.

For more detailed information on collection and recycling systems for this product, please contact the shop where you purchased it, your local dealer or sales/service representatives.

All Other Users

If you wish to discard this product, please contact your local authorities, the shop where you bought this product, your local dealer or sales/service representatives.

For Users in India

This product complies with the "India E-waste Rule 2011" and prohibits use of lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers in concentrations exceeding 0.1 weight % and 0.01 weight % for cadmium, except for the exemptions set in Schedule 2 of the Rule.

For Turkey only

EEE Yönetmeliğine Uygundur.

Bu sistem sarf malzemeleri ve yedek parçaları da dahil olmak üzere EEE Yönetmeliğine Uygundur.

complies with EEE regulation:

The system including supply and parts complies with Directive

Üretici:

Ricoh Company, Ltd.

8-13-1 Ginza,

Chuo-ku, Tokyo 104-8222 Japan

+81-36278-2111(English only/Sadece İngilizce)

Note for the Battery and/or Accumulator Symbol (For EU countries only)



In accordance with the Battery Directive 2006/66/EC Article 20 Information for end-users Annex II, the above symbol is printed on batteries and accumulators.

This symbol means that in the European Union, used batteries and accumulators should be disposed of separately from your household waste.

In the EU, there are separate collection systems for not only used electrical and electronic products but also batteries and accumulators.

Please dispose of them correctly at your local community waste collection/recycling centre.

Warning on Class A Product

Warning:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

DECLARATION OF CONFORMITY

We, RICOH CO., Ltd. at address 3-6, Naka-magome 1-Chome, Ohta-Ku, Tokyo 143-8555, Japan declare under our sole responsibility that the product consisting of the following;

Product Name : Inkjet Printer
Model Name : Pro L4160, Pro L4130

to which this declaration relates is in conformity with the following standards.

EN 60950-1:2006+A11:2009+A1:2010+A12:2011
EN ISO 12100:2010
EN 60204-1:2006+A1:2009
EN 55022:2010 ClassA
EN 55024:2010
EN 61000-3-2:2006+A2:2009
EN 61000-3-3:2008
EN 62311:2008
EN 50581:2012

following the provisions of

EMC Directive 2004/108/EC
Low Voltage Directive 2006/95/EC
Machinery Directive 2006/42/EC
RoHS Directive 2011/65/EU

CE Mark is affixed in 2013

Place : Tokyo, Japan
Date : September 26, 2013

Importer:
Ricoh Europe PLC
20 Triton Street, London, NW1 3BF, U.K.

Safety Precautions

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	
 Warning	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.
 Caution	Failure to observe the instructions given with this symbol can result in injuries to personnel or damage to property.
 Important!	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 the action shown is prohibited. A sign representing a prohibited action (the sign shown at left prohibits disassembly) is shown in or around the circle.
	The symbol " ● " indicates that the action shown must be taken without fail or the instructions must be observed without fail. A sign representing a particular instruction (the sign shown at left instructs to unplug the cable from the wall outlet) is shown in the circle.

Warning for Use



WARNING

- The set of power cables provided with this machine is for use with this machine only, and cannot be used with other electrical devices. Do not use any power cables other than the ones provided with the machine. Failure to observe those instructions may result in fire or electric shocks.
- Take care not to damage, break or work upon the power cable. If a heavy material is placed on the power cable, or if it is heated or pulled, the power cable can break, thus resulting in fire or electric shocks.
- Do not use this machine in an environment where humidity is high or the machine may get wet. Using the machine under such environment may result in fire or electric shock, or cause malfunction.
- Use of the machine under an abnormal condition where it produces smoke or strange smell can result in fire or electric shocks. If such an abnormality is found, be sure to turn off the power switch immediately and unplug the cable from the wall outlet. Check first that the machine no longer produces smoke, and then contact your distributor or a sales office of RICOH for repair.
- Never repair your machine by yourself since it is very dangerous for you to do so.
- Never disassemble or remodel the main unit of the machine or the ink cartridge. Disassembly or remodeling can result in an electric shock or breakdown of the machine.
- Take care that no dust or dirt sticks to Media Transfer Surface heaters. Dust and dirt sticking heaters can cause fire.
- Do not use extension cords. Doing so may result in fire or electric shocks.
- Keep the power plug prong clear of any foreign object such as a piece of metal. Failure to do so may result in a fire or electric shocks.
- Do not plug too many leads into a single socket. Doing so may result in fire or electric shocks.
- Do not use the machine if the power cord or plug is damaged. Using the machine with damaged power cord may result in fire or electric shocks. Contact your service representative for replacement cord.
- Do not handle the power plug with wet hands. Doing so may result in electric shocks.
- Grasp by holding the plug itself when removing the power plug from wall outlet, and never hold by the cord. Holding and pulling the cord may damage the cord, leading to fire or electric shocks.



Hazardous Moving Parts

- Keep Fingers and Other Body Parts Away
- If a foreign object such as a small piece of metal or a liquid such as water gets inside the machine, turn off the machine and unplug the power cord immediately, then consult your service representative. Continuing to use the machine without proper maintenance or repair may result in fire or electric shocks.



- Do not use a flammable spray or solvent inside or around the machine. Doing so may result in fire or electric shocks.
- Do not place a vase, flower pot, water glass, container with liquid such as water or chemicals inside, or small metallic object near or on top of this machine. Liquid or foreign object may get inside the machine, leading to fire or electric shocks.



CAUTION

Handling of the power cable	Power supply
<p>!</p> <ul style="list-style-type: none">• Connect to a socket-outlet with determinate polarity.• For Inlet 1 and 2, be sure to supply power from the outlet of the same voltage.• for PLUGGABLE EQUIPMENT, the socket-outlet shall be installed near the equipment and shall be easily accessible.• Unplug the cord from the wall outlet and remove dust from the power plug periodically, at least once a year. Failure to do so may result in fire or electric shocks.• Do not use the machine unless it is connected to a power supply that satisfies the displayed voltage condition.• Check the voltage of the wall outlet and the capacity of the circuit breaker before you plug the power cords. Plug each power cord to different outlet that has independent circuit breaker. If you plug more than one power cord to wall outlets that share the same circuit breaker, the power may be cut off by the breaker.	<p>!</p> <ul style="list-style-type: none">• Leave the breaker turned ON.• Do not turn off the main power switch on the right side of this machine.
	<p>Handling of ink</p> <p>!</p> <ul style="list-style-type: none">• Keep ink away from an open flame. Also keep the room well ventilated when you use or handle ink.• If you get ink in your eyes, immediately wash your eyes with a lot of clean water for at least 15 minutes. In doing so, also wash eyes to rinse ink away completely. Then, consult a doctor as soon as possible.• If anyone drinks ink by mistake, keep him or her quiet and see a doctor immediately. Do not allow him or her to swallow the vomit. After that, contact the Poison Control Center.• If you inhale a lot of vapor and feel bad, immediately move to a location of fresh air and then keep yourself warm and quiet. Then, consult a doctor as soon as possible.• Store ink cartridges in a place that is out of the reach of children.• Black and white cause serious eye irritation, suspected of damaging fertility or the unborn child, causes damage to the lungs through prolonged or repeated exposure. Please use protective equipment in order to avoid exposure to liquid.• Orange, green, cyan, magenta and yellow cause serious eye irritation, suspected of damaging fertility or the unborn child. Please use protective equipment in order to avoid exposure to liquid.
<p>Heater</p> <p>!</p> <ul style="list-style-type: none">• Do not spill liquid on the Media Transfer Surface as this may cause failure of the heater or firing.• Do not touch Media Transfer Surface heaters with bare hand while it is hot; otherwise, you can get burned.	
<p>Note on maintenance</p> <p>!</p> <ul style="list-style-type: none">When cleaning the ink-station or the heads, make sure to wear the attached goggles and gloves.The gloves supplied with the machine are disposable. When all the gloves are expended, purchase an equivalent product on the market. <p>!</p> <ul style="list-style-type: none">Do not touch the sharp edge of the blade when replacing the cutter. Touching the sharp edge may result in injury.Turn off the machine and unplug the power cord from the wall outlet for safety when moving the machine.	



CAUTION

Notes on Handling the Machine



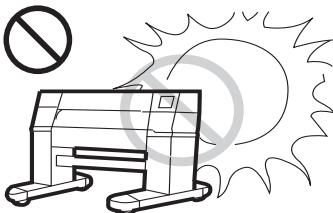
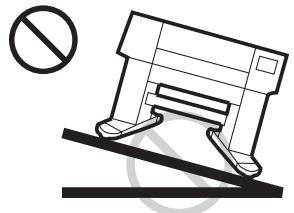
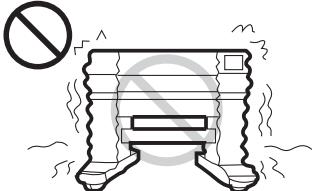
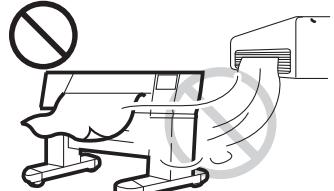
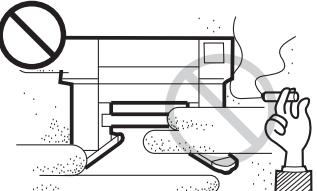
- Do not use the machine in a confined or poorly ventilated room.
- Keep the room well ventilated when using the machine.
- Do not use the machine under humid or dusty environment. Doing so may result in fire or electric shocks.
- Do not place the machine on unstable or inclined surface. The machine may fall or topple over and cause a damage or injury.
- There is a cutter inside the machine for cutting print media. Do not touch any other parts other than the ones described in this manual when loading or replacing paper, or removing jammed paper. Otherwise, it may cause an injury.
- Be careful not to get your fingers get caught inside the machine and injured when replacing print paper.
- The dust collected inside the machine may result in fire or cause malfunction. If the machine has not been cleaned for a long period of time, contact your service representative for cleaning the machine. For the cleaning charge, consult your sales or service representative.
- Consult our service office in your area before moving this machine.

CAUTIONS and NOTES

 Warning	
Handling of ink cartridges	Front cover and lever
<ul style="list-style-type: none"> The safety evaluation of this machine assumes that the ink recommended by this company is used. For safe usage of this machine, use the ink recommended by this company. Never refill the ink pack and white ink cartridge with ink. Refilled ink cartridge can cause a trouble. Remember that RICOH assumes no responsibility for any damage caused by the use of the ink cartridge replenished with ink. If the ink cartridge 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 cartridge 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 cartridges in a cool and dark place. Store ink cartridges and waste ink bottle in a place that is out of the reach of children. Be sure to thoroughly consume the ink in the ink cartridge, once it is opened, within three months. If an extended period of time has passed away after opening the cartridge tank, printing quality would be poor. Neither pound the Eco-cartridge nor shake it violently, as doing so can cause leakage of ink. Do not touch or stain the contacts of the ink cartridge, as doing so may cause damage to the print circuit board. Consult your sales or service representative for proper disposal of ink cartridge, ink pack, and waste ink. Otherwise, commission an industrial waste disposal company. 	<ul style="list-style-type: none"> Never open the front cover or raise the lever during printing. Opening the cover or raising the lever will abort printing.
	Handling of media
	<ul style="list-style-type: none"> Use media recommended by RICOH to ensure reliable, high-quality printing. Set the heater temperature to meet the characteristics of the media. Set the temperature of the Pre-heater, Print heater and Post-heater according to the type and characteristics of the media used. Automatic temperature setting can be made on the operation panel by setting the profile on the dedicated RIP. For setting on the RIP, refer to the instruction manual for your RIP. 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. Do not leave the media with the heater ON for a long time.
	Protection of media from dust
	<ul style="list-style-type: none"> Store media in a bag. Wiping off dust accumulated on media will adversely affect the media due to static electricity. When leaving the workshop after the working hours, do not leave any media on the roll hanger. If any media is left on the roll hanger, it can get dusty.

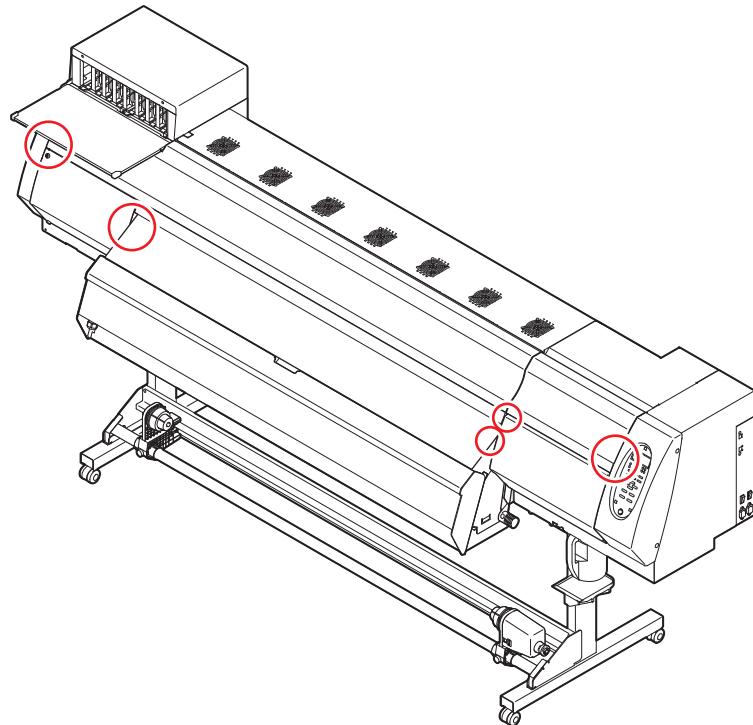
 Warning	
Notes on maintenance	
<ul style="list-style-type: none"> It is strongly recommended to use the machine in a room that is not dusty. Keep the front cover closed even when the machine is not printing. If not, dust can accumulate on the nozzles in the heads. Dust in the heads can also cause drops of ink to fall suddenly down on the media during printing. In such a case, be sure to clean up the heads. (P.4-13 "Cleaning the Head and the Area around It (every day)") When cleaning the ink-station or the heads, make sure to wear the attached gloves. Perform wiping (removal of dust and paper powder) of the capping station and wiper frequently. 	
Periodic replacement parts	
<ul style="list-style-type: none"> Some parts of this machine must be replaced with a new one periodically by service personnel. Be sure to make a contract with your distributor or dealer for After sale service to ensure a long life of your machine. 	
Disposition of this machine	
<ul style="list-style-type: none"> Consult your sales or service representative for proper disposal of this machine. Otherwise, commission an industrial waste disposal company. 	

Cautions on Installation

CAUTION		
A place exposed to direct sunlight	On an inclined surface	A place where temperature or humidity varies significantly
		 <ul style="list-style-type: none"> • Use the machine under the following environmental conditions: • Operating environment: 20 to 30 °C (68 to 95 °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
		

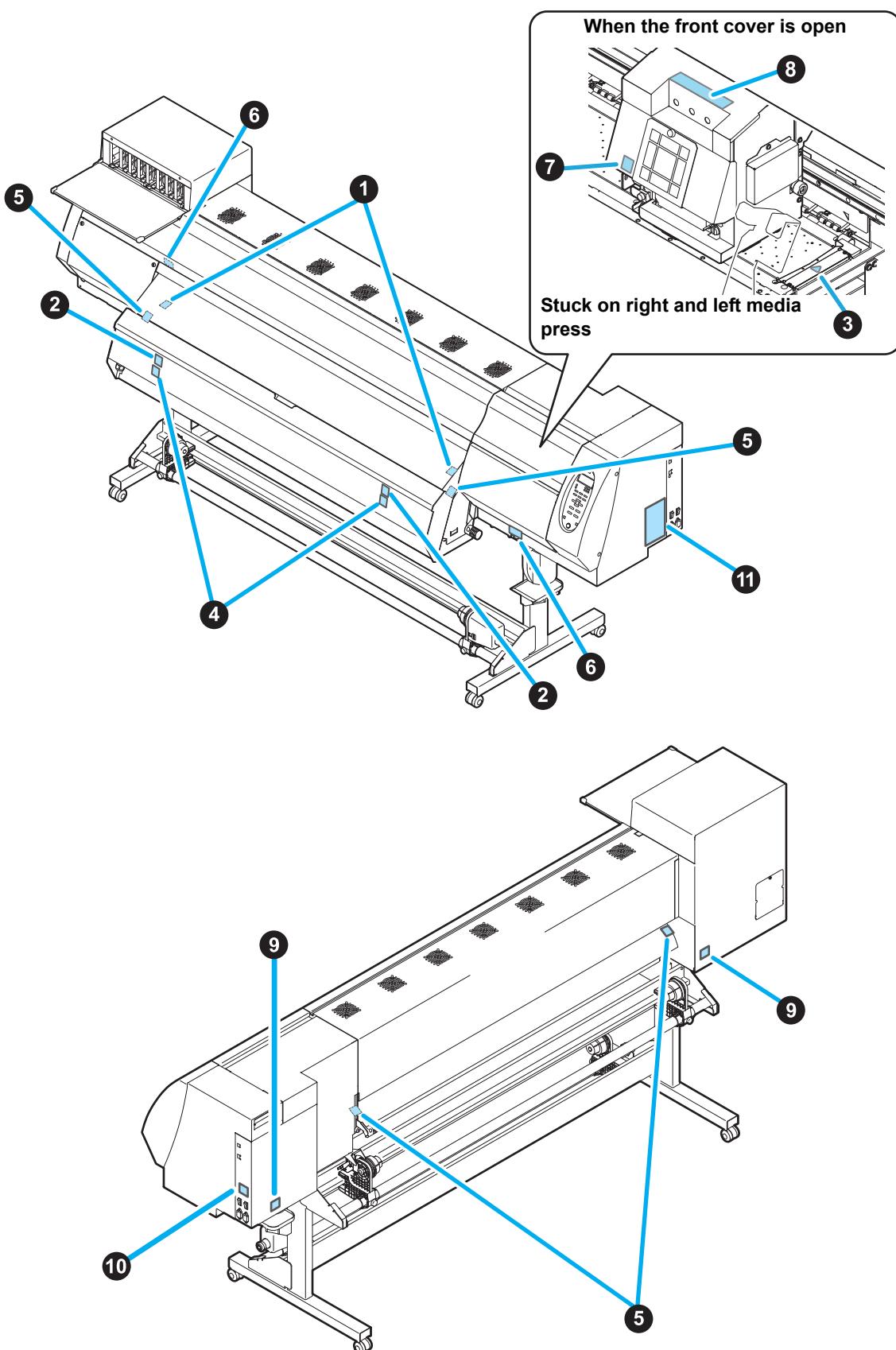
Safety interlock

This machine is equipped with interlocks to terminate the operation for your safety when the cover opens during printing etc. (red circle parts in the figure below).



Warning labels

Warning labels are stuck on the machine. Be sure to fully understand the warning given on the labels.



No.		
1		Always follow the procedure described in this manual when loading and replacing paper, removing jammed paper, cleaning the media transfer surface, and performing any other operations inside the machine. Otherwise, the carriage may hit or catch your hand and cause injury.
2 - 5	2 3 4 5	There are hot surfaces inside the machine. Do not touch any parts other than the ones described in this manual when removing jammed paper. Otherwise, burn injury may result.
6		Always wear the goggle and gloves provided with this machine to prevent your skin to come in contact with the cleaning fluid when cleaning the ink station and print head.
7 - 8	7 8	There is a cutter inside the machine for cutting print media. Do not touch any parts other than the ones described in this manual when loading and replacing paper, removing jammed paper, and cleaning the media transfer surface.
9 - 10	9 10 •Ensure that all plugs are disconnected before conducting any maintenance. •Vor dem Beginn von Wartungsarbeiten sicherstellen, dass alle Stecker gezogen wurden.	Electrical power is supplied to this machine via multiple power cables. To completely disconnect all supply of power to the machine, all power cables must be disconnected..
	(Pro L4130)	(Pro L4160)
11	 	

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.

Moving This Machine	1-2	Connecting Cables	1-10
Where to Install This Machine	1-2	Connecting USB2.0 Interface Cable	1-10
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Names of Parts and Functions	1-3	How to assemble ink cartridge	1-12
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Operation Panel	1-5	Setting orders of ink cartridges	1-15
Signs on the power switch	1-5	Caution in handling of ink cartridges	1-17
Heater	1-6	Media	1-18
Media sensor	1-6	Usable sizes of media	1-18
Carriage	1-7	Caution in handling of medias	1-18
Cutter blade and slot for cutting	1-7	About antistatic sheet	1-19
Connector of Temperature sensor/			
Drying heater/ Take-up device	1-8		
Capping station	1-8		
Pinch rollers and Feed rollers	1-9		

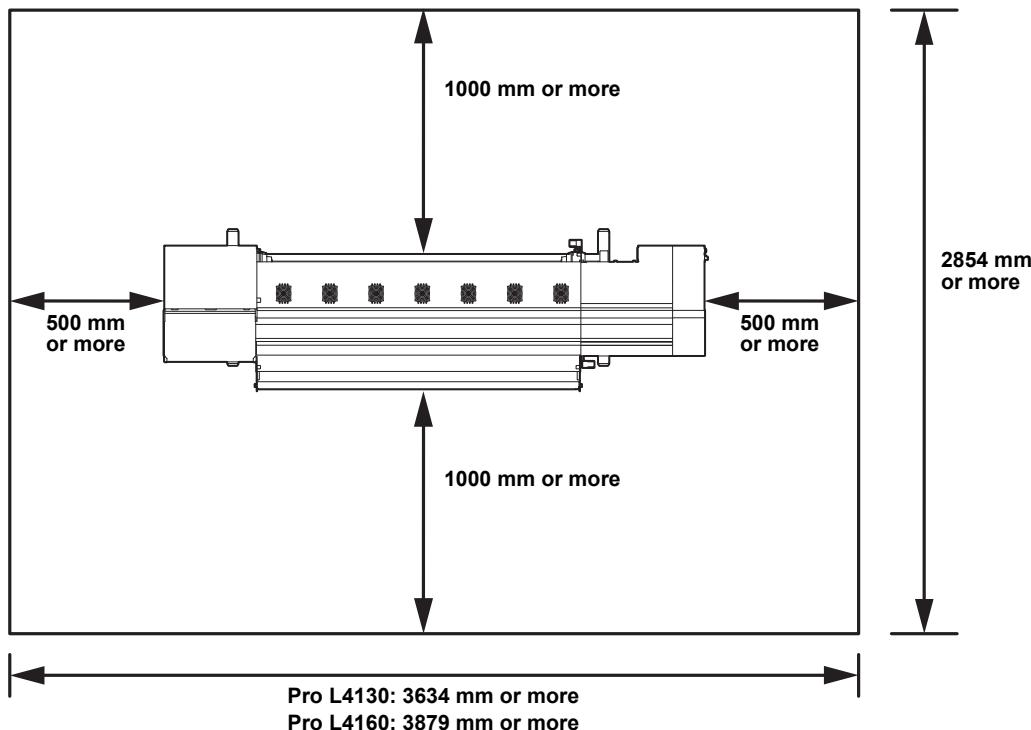
Moving This Machine

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
Pro L4130	2634mm	854mm	1435mm	216kg
Pro L4160	2879mm	854mm	1435mm	231kg



- 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.

Working Environmental Temperature

Use this machine in an environment of 20 to 30°C to ensure reliable printing.

The heater temperature may not reach the set value, depending on the ambient temperature.

Moving This Machine

Consult our service office in your area before moving this machine.

Names of Parts and Functions

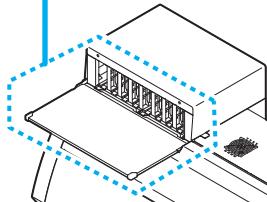
Front Side of the Machine

Left maintenance cover

Open the cover in maintenance.
Even when the power switch is off, keep all covers closed.

Ink cartridge setting section

Set the ink cartridge for each color.



Take-up device

Take up the output drawn with a roll medium automatically.

Clamp lever (front)

Moves the pinch rollers up and down to hold or release the media.

Front cover

Open the cover in setting of medias, taking of measures against jamming of medias or in maintenance inside the station.
Even when the power switch is off, keep this cover and the other covers closed.

Drying heater

The dryer blows warm air on the printed paper to fix and dry ink.

Maintenance cover (upper right)

Open this cover when performing maintenance on the print head and the surrounding parts.

Maintenance cover (lower right)

Open this cover when performing maintenance on the print head and the surrounding parts.

Operation panel

This panel has the operation keys required for operating the machine and the LCDs for displaying setting items, etc.

Power switch^{*1}

Turns on/off the power to the machine.

Waste ink bottle

Waste ink gathers in this bottle.

Stand

Supports the main body of the machine. It is provided with casters that are used to move this machine.

Media Transfer Surface

Print media is retained and transferred along the media transfer surface by vacuum. Three heaters are installed inside the media transfer surface.

Print heater/ Post-heater

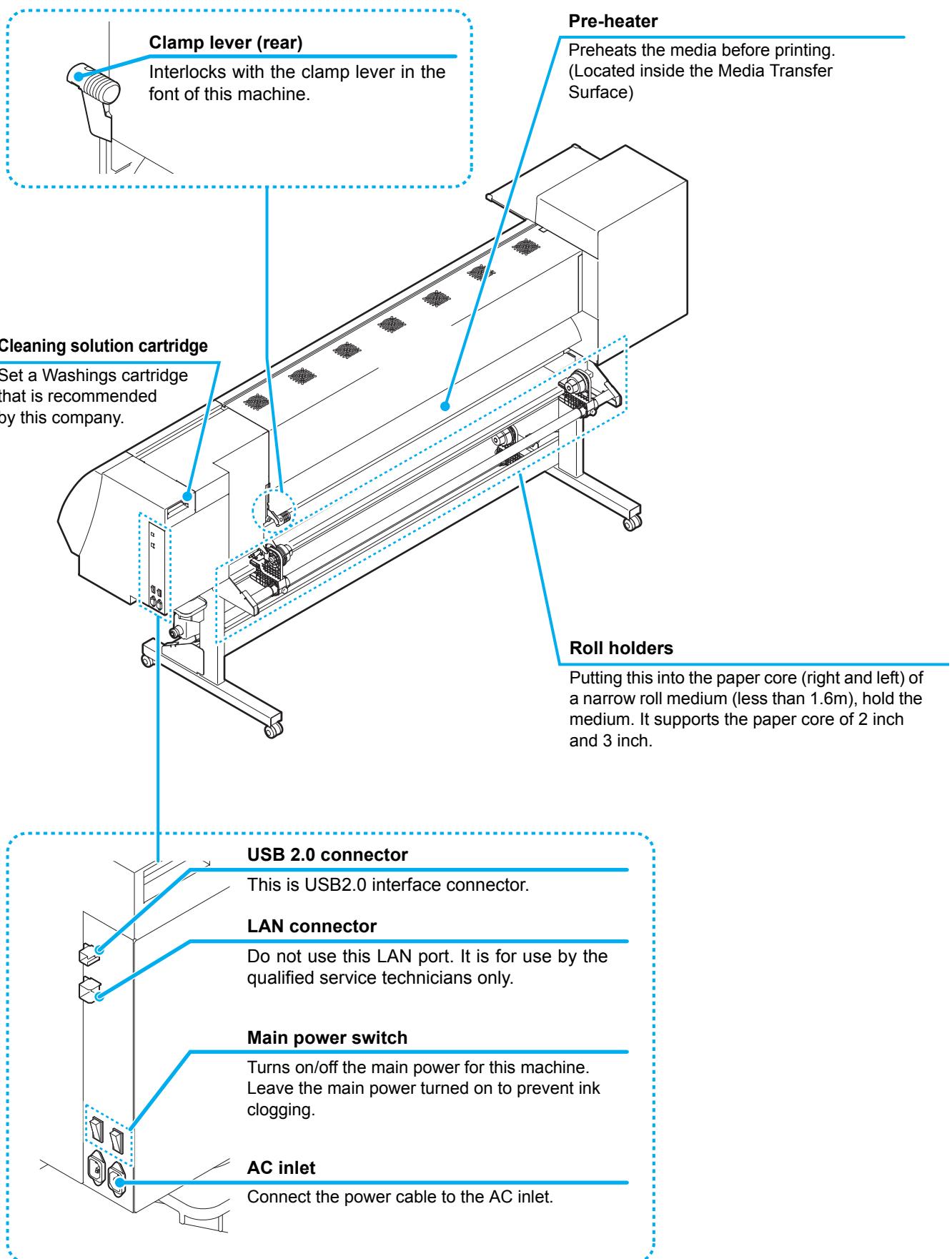
Fixes and dries the ink on the currently produced print. (Located inside the Media Transfer Surface)

Electrostatic sheet

Prevents the media from sticking to the Media Transfer Surface due to static.

*1 : The power switch under the operation panel lights in green when the power is turned on. The ink clogging prevention function is periodically operated even when the power switch is OFF if the main power switch keeps being ON. (Auto maintenance function) ☺ P.1-4

Rear Side and Right Side of the Machine



Operation Panel

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

Display

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

ACTIVE lamp

It lights when the power supply is turned on.

ADJUST key

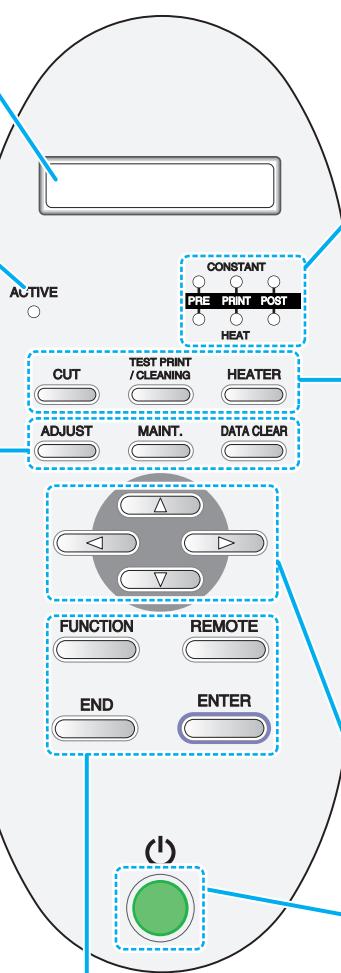
Performs the adjusting function such as "Drop.POScorrect" and "Feed COMP."

MAINT. key

Performs the maintenance function such as station maintenance.

DATA CLEAR key

Deletes the data that have been received.



CONSTANT lamp

Lights in green when the heater temperature reaches the set temperature.

HEAT lamp

Lights in orange during heating up of the heater.

CUT key

Use this key on cutting .

TEST PRINT/CLEANING key

Draws test patterns to check if there are any drawing failures such as ink clogging. Or executes Head cleaning at ink clogging.

HEATER key

Use this key to set the temperatures of the Pre-heater, Print heater, Post-heater and Drying heater or check the current temperature of the Media Transfer Surface.

JOG key

Use these keys to shift the carriage or the media in [LOCAL]. Also use them to select an item of printing conditions.

Power switch

Turns on/off the power to the machine.

FUNCTION key

Use this key to display function setting menu.

END key

Cancels the last input value or returns the setting menu to the immediate higher level of the hierarchy.

REMOTE key

Use this key to switch between [REMOTE] and [LOCAL].

ENTER key

Registers the last input value as the setting value or goes to the immediate lower level of the hierarchy.

Signs on the power switch

The meaning of the signs on the machine's power switch are as follows:

- | : Power is on
- ○ : Power is off
- ○ (with power symbol) : Standby

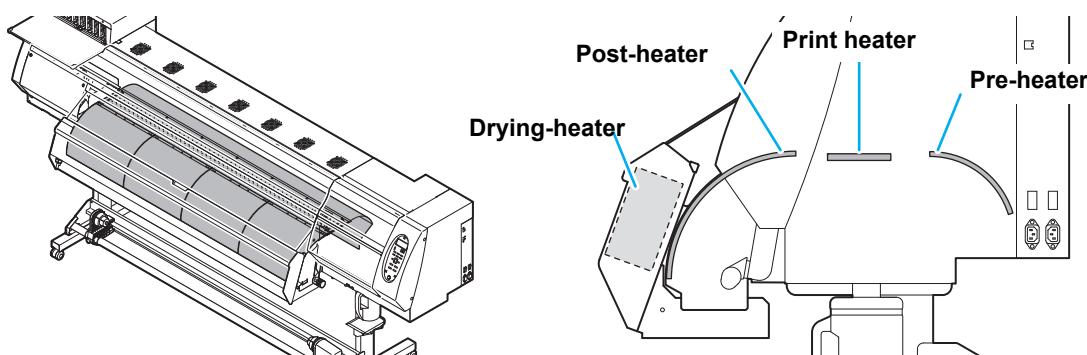
Heater

Pre-heater/Print heater/Post-heater are equipped on the Media Transfer Surface.

The Pre-heater is used for pre-heating of the media prior to printing to prevent rapid changes in temperature. The Print-heater improves the image quality in printing. The Post-heater and drying-heater dries ink after printing.



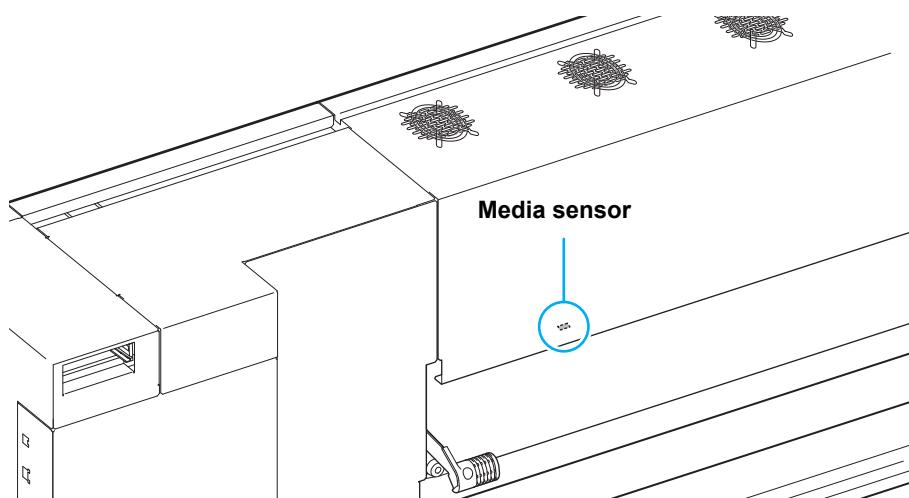
- While the heater is on, the Media Transfer Surface is very hot. When the front cover is to be opened or media is to be replaced, lower the heater temperatures and wait until the Media Transfer Surface temperature drops; otherwise, you can get burned.
- When the media is to be replaced with a thin one, lower the heater temperatures and wait until the Media Transfer Surface temperature drops adequately. Setting a thin sheet of media while the Media Transfer Surface is hot may cause the media to stick to the Media Transfer Surface or cause wrinkling or curling of the media.



Media sensor

The media sensor detects the presence of the media and the media length.

This machine has a media sensors on the Media Transfer Surface (in the rear).

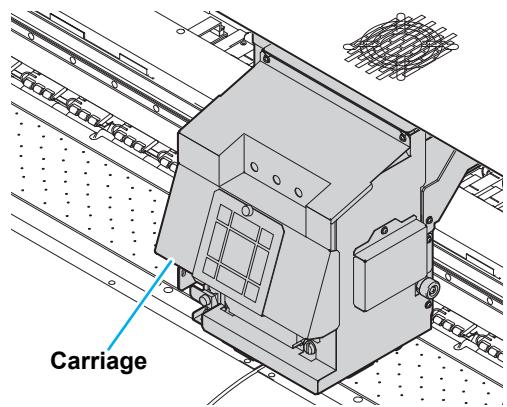


- When setting a medium, be sure to cover the medium sensors located on the rear of the Media Transfer Surface. The media cannot be detected unless it is placed over the sensor.
- In case that you use 210mm-wide media, media cannot be detected if it is set in accordance with □. Set media approximately 15mm inner than □.

Carriage

The carriage is provided with the heads for printing, the cutter unit for cutting off the sheet of media, etc.

A lever is also provided to adjust the height of Head in 3 stages according to the thickness of media. (☞ P.2-5)



Cutter blade and slot for cutting

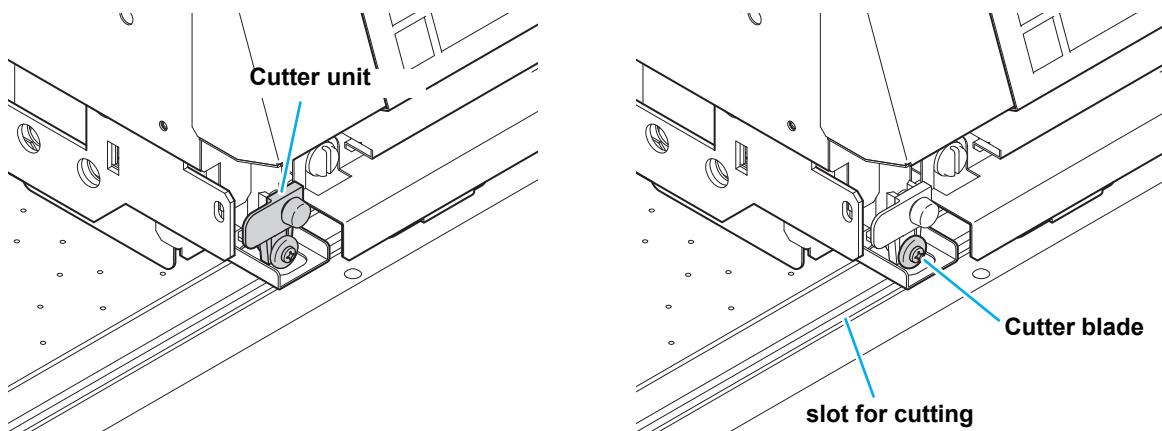
The carriage is provided with a cutter unit for cutting off the media that has been printed on.

The cutter cuts off the sheet of media along the slot for cutting on the Media Transfer Surface.

The cutter blade is consumables. If it gets dull, replace it with new one. (☞ P.4-32)



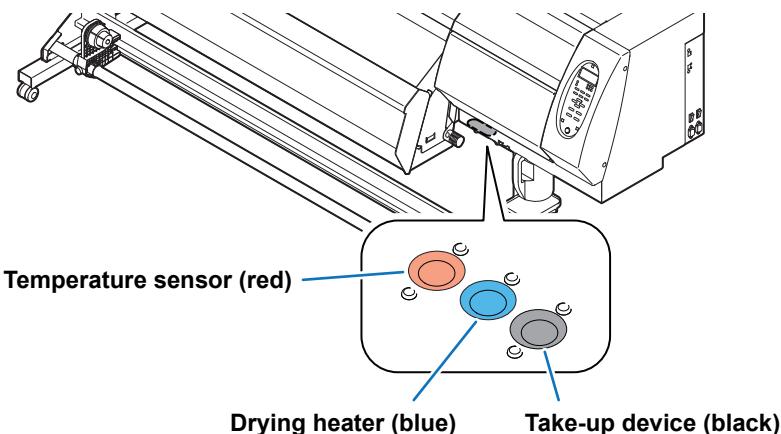
- The blade is sharp. Be careful not to hurt yourself or anyone else.



Connector of Temperature sensor/ Drying heater/ Take-up device

Connector of Temperature sensor/ Drying heater/ Take-up device

If an error related to the Temperature sensor/ Drying heater/ Take-up device occurs, refer to the Chapter 5 and check the connector.



Capping station



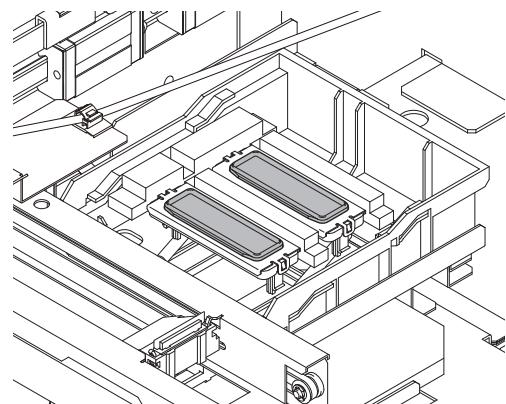
- Be sure to wear the attached goggles in cleaning within the capping station to protect your eyes against ink. Otherwise, you may get ink in your eyes.

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.

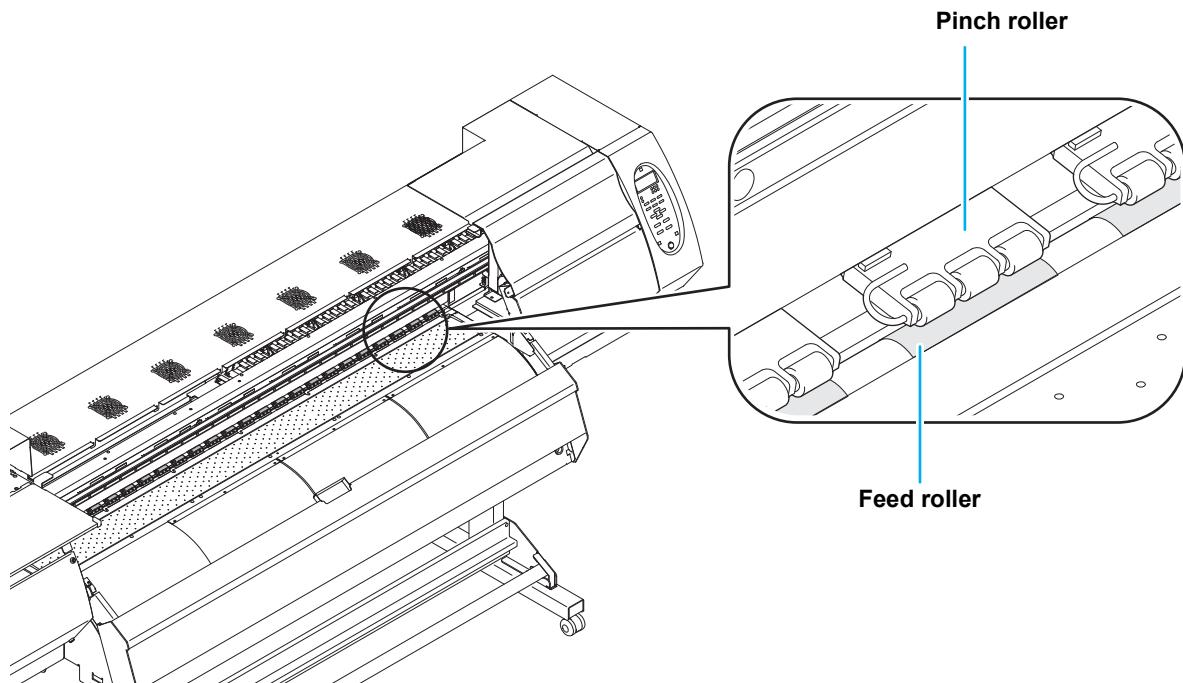
The wiper is consumable. If the wiper is deformed or the media is stained, replace the wiper with a new one. (☞ P.4-28)



Pinch rollers and Feed rollers

- Important!**
- Keep the pinch rollers lifted up when this machine is not in use. If the pinch rollers are left lowered for an extended period of time, they can be deformed and fail to securely retain the media.

This machine retains the media with the pinch rollers and feed rollers. During printing operation, the feed rollers feed the media forward.



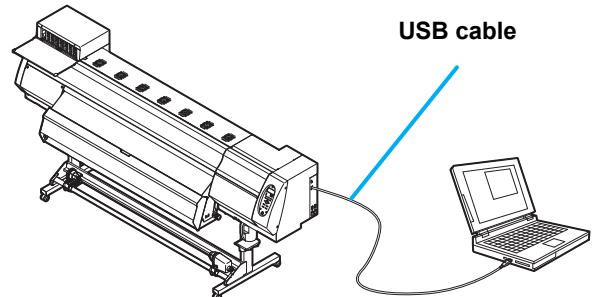
Connecting Cables

Connecting USB2.0 Interface Cable

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



- Your RIP must be compatible with USB 2.0.
- When you connect USB cable, do not touch the connector contact point with your bare hand. Static may be generated and it may break the PCB of this machine.



Notes on USB 2.0 Interface

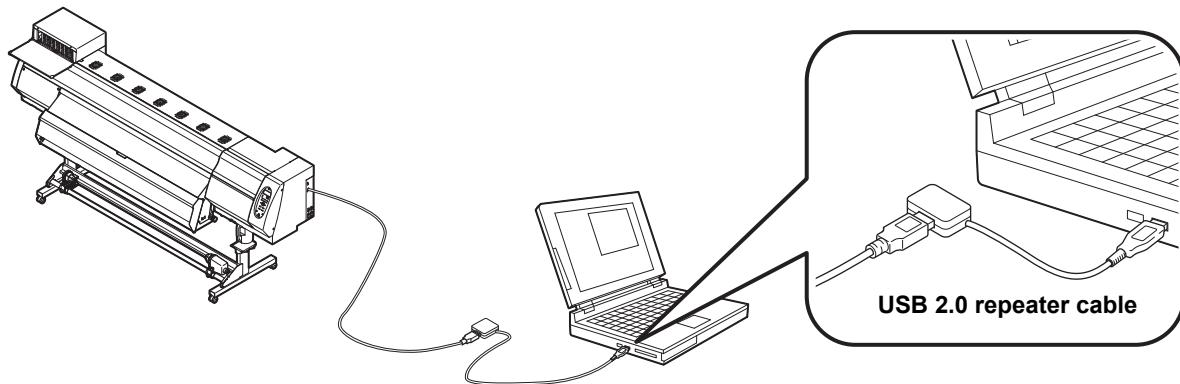
Important!

- Your RIP must be compatible with USB 2.0.

● When two or more Pro L4160/L4130 machines are connected to one personal computer

When two or more Pro L4160/L4130 machines are connected to one personal computer, the personal computer may not recognize all the Pro L4160/L4130 machines normally.

Reconnect the unrecognized Pro L4160/L4130 machine to another USB port, if available, and check to see if it is recognized. If the Pro L4160/L4130 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 Pro L4160/L4130 machine is connected to, the USB device may not be recognized.

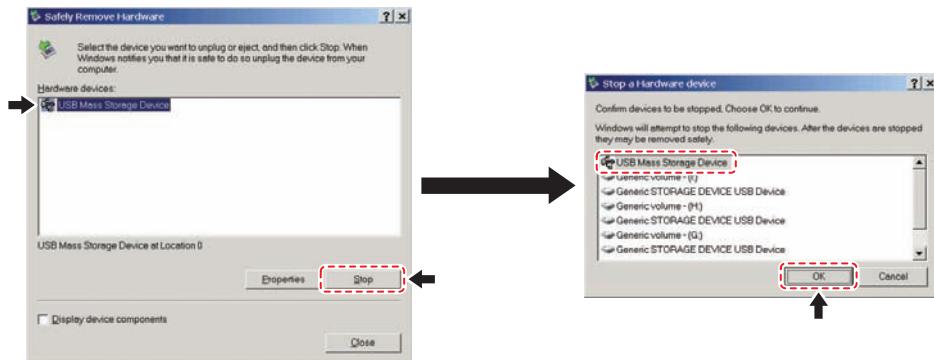
When Pro L4160/L4130 is connected to the personal computer to which an external HDD is connected via USB, the speed of data output to Pro L4160/L4130 may drop. That can cause the head unit to stop temporarily at the right or left end during printing.

● Removing USB memory

If a USB memory module is inserted in the personal computer to which a Pro L4160/L4130 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.

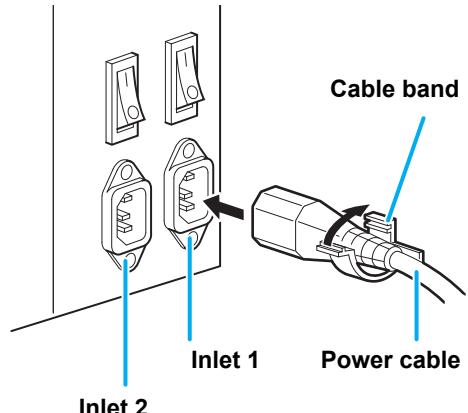


Connecting the power cable

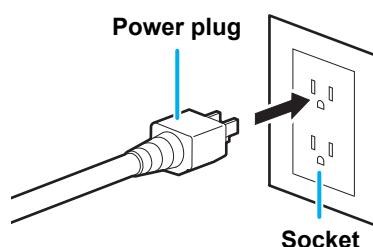
1 Insert the power cable into an inlet of the machine.

2 Secure a cable band.

- Secure the cable with the cable band attached to this machine.



3 Insert the power plug into a plug socket.



- Do not use any power cables other than the attached power cable.
- For Inlet 1 and 2, be sure to supply power from the outlet of the same voltage.

Important!

- Be sure to connect the power cable to the outlet near this machine, and make sure that the power cable can be easily removed.
- Connect the power cable to the grounded outlet. Otherwise, it may result in fire or an electric shock.
- Check the voltage of the wall outlet and the capacity of the circuit breaker before you plug the power cords. Plug each power cord to different outlet that has independent circuit breaker. If you plug more than one power cord to wall outlets that share the same circuit breaker, the power may be cut off by the breaker.

Inserting ink cartridge

Insert an ink cartridges.

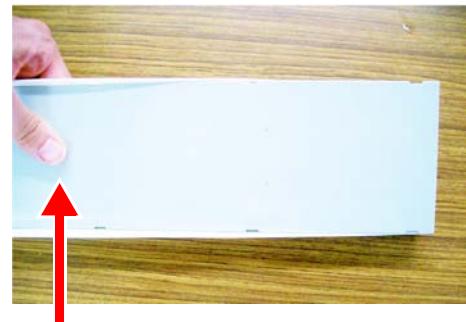
How to assemble ink cartridge

Before setting the ink cartridge, it is required to set the ink pack on the eco cartridge.
By following the next procedures, assemble the ink cartridge.

1

Open the cover of the eco cartridge.

- (1) Press the center part of the cover with your finger.
- The claw on the side without attaching part of IC chip comes off.

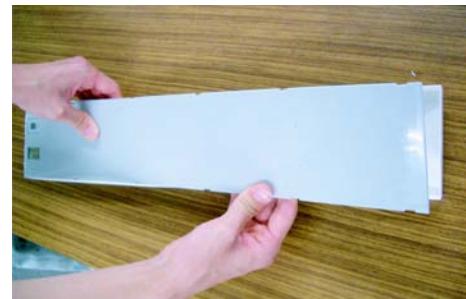


Press the center part with your finger.

- (2) Raise the cover as described in the photo.
- At this time, the claw on the IC chip side does not come off.
 - Do not raise the cover forcibly so that you may not damage the claw.



- (3) Remove the remaining claw while pressing the cover as indicated in the photo, and remove the cover.



2

Set the ink pack on the eco case.

- (1) Turn the side with double coated tape downward and insert the stopper.
- After inserting the stopper, push it firmly with your finger.



(2) Peel the seal of double coated tape.



3

Firmly fix the ink pack on the eco case with double coated tape so that it may not move.

- Fix the ink pack after pulling it so that the ink pack may not go slack.



(Important!)

- Fix the ink pack so that it may not be biased in the eco case.

Good example



The corner of the case matches the ink pack corner.

Bad example



The ink pack has gone too far downward.



The ink pack goes slack in spots.

4

Attach the cover.

- Hang the claw on the IC ship side and then insert the cover into the case.

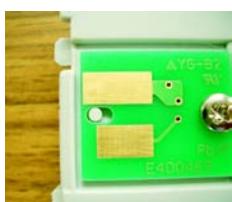


5

Attach the IC chip.

- Attach the IC chip as indicated in the photo.
- Attach it so that there is no gap in the part indicated with an arrow.

Bad example of attaching IC chip



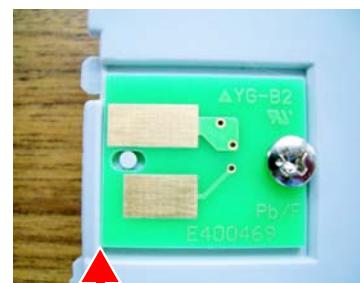
There is a gap.



The ins and the outs is reverse.



The back and the forth is reverse.



No gap shall be found.

About the ink that can be used with this machine

The following three types of ink sets can be used with this machine: 4 color, 6 color, and 6 color+white versions

- **4-color version:** 2 each of Cyan, Magenta, Yellow and Black ink cartridges are used.
- **6-color version:** 1 each of Yellow, Orange, Green, and Black, 2 each of Cyan and Magenta ink cartridges are used.
- **6-color+white version:** 1 each of Cyan, Magenta, Yellow, Orange, Green and Black, and 2 White ink cartridges are used.

White ink is fed from an ink cartridge, but the inks for Cyan, Magenta, Yellow, Orange, Green and Black are supplied from an ink-pack. Set the inks in the eco case before you set the ink cartridge. Also, the white ink is contained in a eco cartridge that is shorter in length than the cartridge of Cyan, Magenta, Yellow, Orange, Green and Black inks.

1

Slowly shake the white ink cartridge more than twenty times right and left.

- To prevent ink from leaking when you shake the Eco-cartridge, wear gloves and firmly cover the A part of the upper surface of the cartridge and the B part of the bottom surface of the Eco-cartridge with paper towels. Then, shake it more than twenty times right and left so that ink flows inside the cartridge.



- If you shake it too strong, the pack inside may be damaged and it may cause ink leakage. Therefore, perform this carefully.
- If the remaining amount of ink is less, ink in the Eco-cartridge cannot be beaten enough. Tilt the cartridge until it becomes vertical.

(Important!)

- When you use white ink:

When 24 hours have passed with the power supply is ON, or, when the power supply is ON, the message is displayed.

SHAKE WHITE INK
CARTRIDGES [ENT]

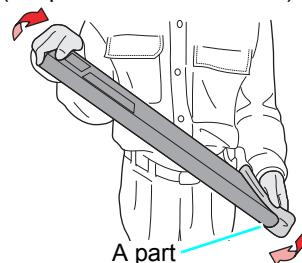
As the component of white ink is easy to settle out, it is necessary to shake it periodically.



A part
(the place to stick a needle)

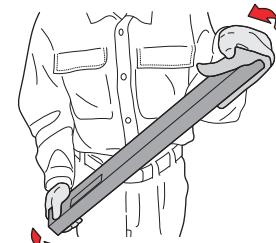


B part
(the slot on the bottom)



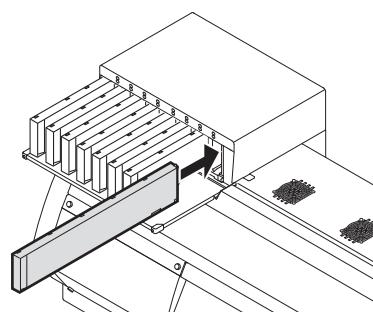
Repeat this

Cover with paper towel firmly
and shake ink slowly



2**Insert the ink cartridge.**

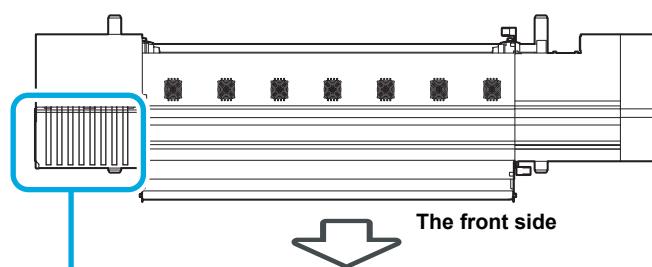
- Insert the ink cartridge lengthwise with the surface having IC chips pointing to the left side.

**Setting orders of ink cartridges**

The orders of ink cartridges set in the ink station differ depending on the ink set you use.



- Set the ink cartridge according to the cartridge label under the ink station.



4 colors model	Inks	M	M	C	C	Y	Y	K	K
6 colors model		M	M	C	C	Or	G	Y	K
6 colors+W model		M	Or	C	G	Y	K	W	W

1**Before Use**

Changing an ink cartridge

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

● When [INK END] is displayed

- (1) Pull out an ink cartridge to be replaced.
- (2) Insert a new ink cartridge, paying attention to the direction of IC chip.

● When [INK NEAR END] is displayed

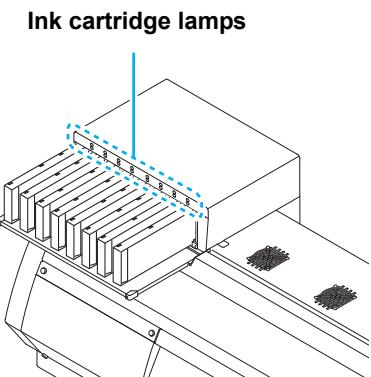
There is a little of ink left. It is recommended to replace the ink cartridge soon since ink may become empty in printing while printing is continuously enabled.

When you press the **ENTER** key in LOCAL, you can check the Eco-cartridge to be replaced in the local guidance. (☞ P.3-26)

- Important!** • When you changed the ink pack, be sure to change the IC chip, too.

For Ink cartridge lamps

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



Condition of Lamp		Description
Upper row Red lamp	OFF	No error
	Blinking	There is less ink in the ink cartridge (Near End), or ink has expired. It will become unusable soon.
	ON	There is no ink in the ink cartridge, or the ink cartridge cannot be used due to other ink error. (☞ P.5-6)
	Quick blinking	As ink has expired, the ink cartridge cannot be used.
Lower row Green lamp	OFF	No error
	ON	Indicates that ink is supplied. When you use four-color ink set, this machine first supplies ink from the ink cartridge whose ink expires soon.

About ink expiration date

The ink cartridge has its expiration date.

You can use the Eco-cartridge in two months after the expiration date indicated on it, however, you cannot use it when three months have passed from the expiration date.

As LED will blink quickly to inform you of it, replace the Eco-cartridge.

Ex.) When the expiration date is April 2018

May 2018: Usable; [Expiration] displayed in LOCAL

June 2018: Usable (LED blinks); [Expiration(1M)] displayed in LOCAL

July 2018: Unusable (LED blinks quickly); [Expiration(2M)] displayed in LOCAL

About cartridge ink end and ink near end

When ink near end (less ink) occurs, LED "red" blinks to inform you of it. It is recommended to replace it as soon as possible.

When ink end (no ink) occurs, LED "red" is lit to inform you of it. Replace the ink cartridge.

Caution in handling of ink cartridges



- 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.
- Depending on how the machine is used, the [INK END] message may be displayed even if the [INK NEAR END] message is not yet displayed. The remaining amount of ink in a cartridge is calculated based on the printed data and the estimated amount of ink used by maintenance processes, and may not show the actual amount of ink in the cartridge.
- Use genuine ink cartridges for this machine. This machine functions by recognizing the genuine ink cartridges. In case of troubles caused by modified ink cartridges or the like, it shall be out of the warranty even within the warranty period.
- If the ink cartridge 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 cartridges in a cool and dark place.
- Store ink cartridges and waste ink bottle in a place that is out of the reach of children.
- Request an industrial waste processor for processing of the ink cartridges that are no longer required.
- Do not shake ink cartridges violently. This may result in ink leakage from the Eco-cartridges.
- Do not refill the ink in the ink-pack and white ink cartridge. This may result in troubles. RICOH will not bear any responsibility for any damage caused by the use of the ink cartridges refilled with ink.
- Do not touch or stain the contacts of the ink cartridge. This may cause damages on printed circuit boards.
- Do not disassemble the white ink cartridge.



Media

Usable media sizes and notes for handling are described.

Usable sizes of media

Model	Pro L4130	Pro L4160
Type of Recommended media	Thin coat paper/PET/Tarpaulin/Weatherproof PVC/Polyester cloth/Cotton	
Maximum width	1371mm	1620mm
Minimum width	210mm	
Maximum printing width	1361mm	1610mm
Thickness	0.3mm or less ^{*1}	
Roll outside diameter	Φ180mm and less	
Roll weight	25kg and less (for small-size media holder, 25kg and less)	
Roll inside diameter	3 or 2 inches	
Side printed	Side facing outward	
Roll end treatment	The roll end is gently fixed to the core with weak-adhesive tape or weak glue for easy removal.	

*1. Some media have bad drying characteristics. Please check this beforehand.

Caution in handling of medias

Pay attention to the followings for handling of medias.

Important!

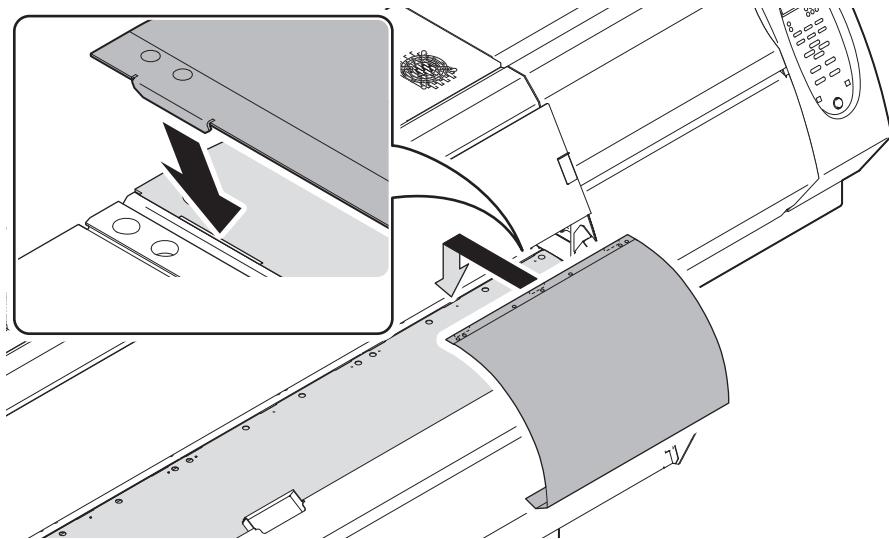
- **When handling media, wear the gloves.**
If you touch the media with your bare hand, the media may be stained due to fingerprints or oil of your finger. Be careful about it.
- **Do not leave the media with the heater ON for a long time.**
Waviness may occur on the media and it may cause media clogging.
When the pinch roller is at the lower position, even if it is for a short time, impression produced by the pinch roller is left depending on the media material. Perform test feeding (☞ P.2-19) to check the media status.
- **Use media recommended by RICOH to ensure reliable, high-quality printing.**
Set the heater temperature to meet the characteristics of the media.
- **Set the temperature of the Pre-heater, Print heater and Post-heater according to the type and characteristics of the media used.**
Automatic temperature setting can be made on the operation panel by setting the profile on the dedicated RIP. For setting on the RIP, refer to the instruction manual for your RIP.
- **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.**
This may result in paper jamming.
If a regular-sized coated sheet of media is rolled and stored, the coated side has to face outside.
- **Be careful to dusts on the edge face of the medium.**
Some rolls have dusts contained in the package gathered on the edge surface of the roll. If you use as it is, the drawing quality may be degraded due to nozzle missing or ink drops. Be sure to set the roll after removing dusts adhering on the edge face of the roll.
- Use a media wider than 450 mm when performing the ink drop position correction for bidirectional printing. Correcting the ink drop position for bidirectional printing cannot be performed on narrower media. Use unidirectional printing in such a case. Also, select [STRONG] in the [VACUUM] setting if the media is not securely adhered to the media transfer surface when using a media such as narrow media.

About antistatic sheet

Pro L4130: three antistatic sheets, Pro L4160: four antistatic sheets are attached in this machine.
The electrostatic sheet is used to prevent the media from clinging due to static.
Use this when static or deflection of the media on the post heater occurs and affects the media feeding.

● Fix the electrostatic sheet

Hang the claw of the antistatic sheet on the groove of the Media Transfer Surface.

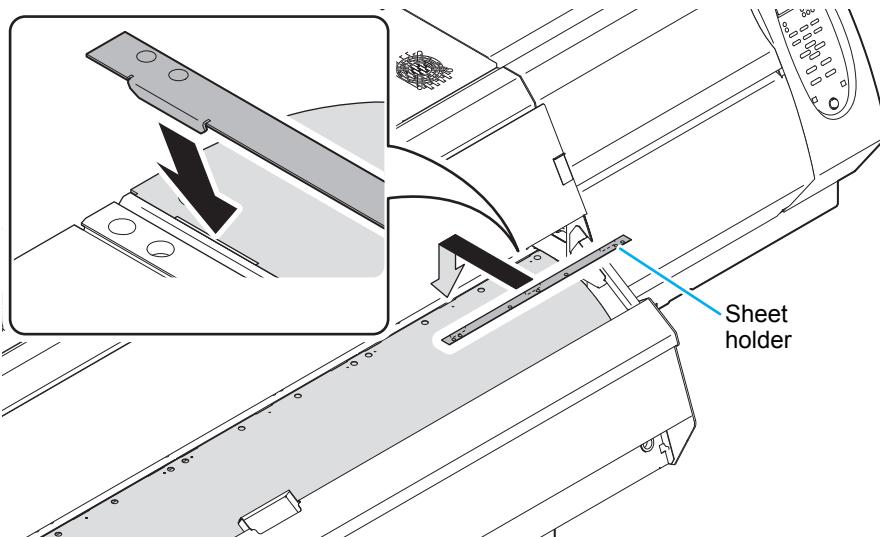


● Remove the electrostatic sheet

Remove the sheet by reversely performing the fixing procedure, and store it properly.

If you removed the antistatic sheet, attach the sheet holder on the Media Transfer Surface (Pro L4130: three positions / Pro L4160:four positions).

If you do not attach the sheet holder, the heater temperature drops and drying may become not enough.



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 Preparing for the Heaters

Referring to “Preparing for the Heaters”
(☞ P.2-17).

4 Test Printing

Referring to “Test Printing” (☞ P.2-20).

5 Set the media feeding

Referring to “Set the media feeding” (☞ P.2-23).

6 Correct the ink drop position for bidirectional printing

Referring to “Correct the ink drop position for bidirectional printing” (☞ P.2-25).

7 Printing Data

Referring to “Printing Data” (☞ P.2-27).

Turning the Power ON/OFF

Turning the Power ON

This machine is provided with the following two power switches:

Main power switch: Two switches are located on the side of this machine. Keep this switch ON all the time.

Power switch : Normally, use this switch to turn the power ON/OFF.

The power switch lights in green when the power is ON.

1

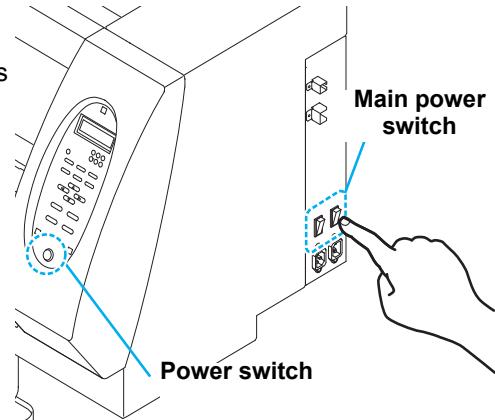
Turn the main power switch ON.

- Set the two main power switches located on the side of this machine to the "I" side.

2

Turn the power switch ON.

- Push the power switch located on the operation panel.



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

Start-up
Ver 1.00

3

The machine enters LOCAL.

<LOCAL>

4

Turn ON the power of the connected PC.

(Important!)

- Turn the power ON after the front cover and maintenance cover are closed.
- Use the machine with always turning "ON" the main power. The function preventing nozzle clogging operates automatically to protect the head of the nozzle.
- The head nozzle may result in nozzle clogging if the main power switch is left OFF for a long time.

2

Basic Operations

Turning the Power OFF

When having ended the operation of the machine, turn the power OFF by pressing the power switch 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.5-22 "Error messages")

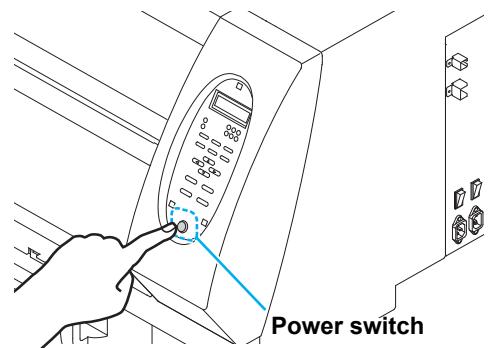
1

Turn OFF the power of the connected PC.

2

Press the power switch to turn the power OFF.

- Do not turn OFF the main power switch located on the side of the machine.
- To use this machine again, light the green lamp by pressing the power switch.



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) 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.

● **Keep the front cover and the maintenance cover closed.**

If the cover is opened, the auto maintenance function such as the flushing function does not work.

● **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 switch OFF, turn the main power switch OFF.**

When turning the main power switch off for moving the machine or for solving the error or the like, press the power switch on the front of the machine, check the display is turned off on the operation panel, and then turn the main power switch off.

Setting a Media

This machine can be used with a roll media and leaf media.
For usable medias, refer to P.1-18 "Usable sizes of media".

Adjusting the Head Height

Adjust the head height according to the thickness of the media you use.

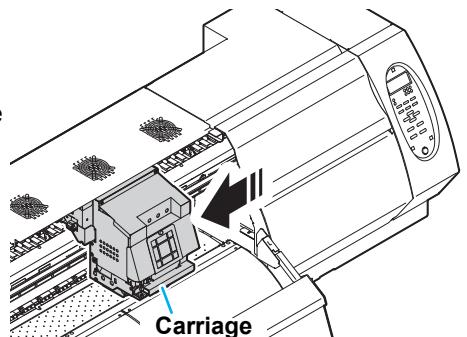
(Important!)

- Turn OFF heater and perform this after temperature dropped.
- Adjust the head height prior to setting the media. If the head height is adjusted after the media is set, this may cause a media jamming, deterioration of the print quality or head damage.
- The range of the initial head height is adjustable by 3 levels according to the purpose of use.
- The range of the printing height of Pro L4160/L4130 is from L (1.8 mm), M (2.3 mm), H range (2.8 mm). (Set to L range 1.5 mm at shipping)

1

Move the carriage to the Media Transfer Surface.

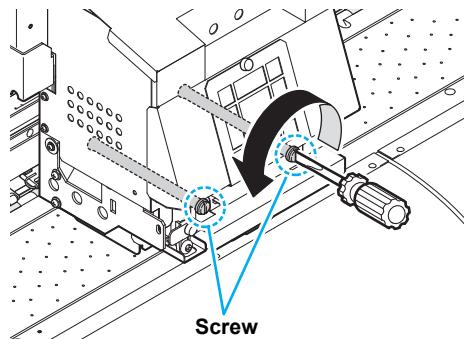
- When the device is turned ON
Execute [STATION - CARRIAGE OUT] of the Maintenance functions. (P.4-5 Step1,2)
- When the device is turned off :
Open the front cover, then move the carriage by hand.



2

Loosen two screws located at the front.

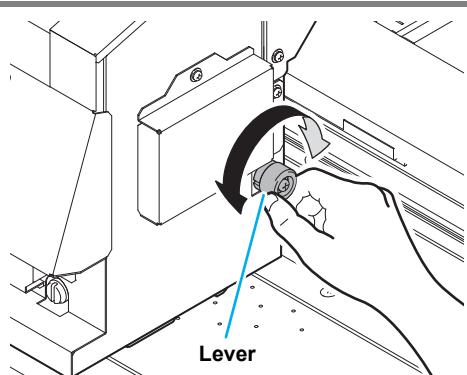
- Loosen the screws, rotating each by one turn of a flat-blade screwdriver.



3

Loosen two screws located at the front.

- The print head moves upward when you turn this lever to the right (clockwise).
- The print head moves downward when you turn this lever to the left (counter-clockwise).

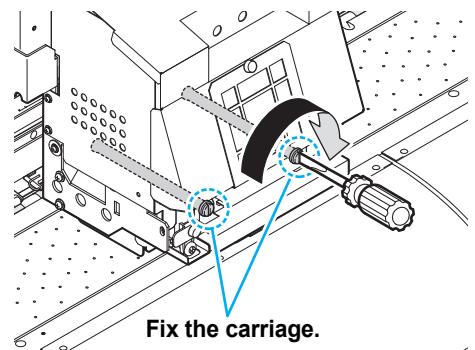


2

Basic Operations

4**Fix the carriage.**

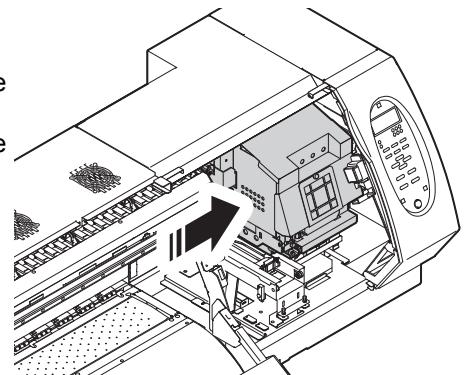
- Fastening the screw in front, you can fix the carriage.
- Fasten the screw securely.



5**Return the carriage to the station position.**

- When the power supply is off, return the carriage to the station manually.
- When the power supply is on, press the **ENTER** key if the screen below is displayed.

STATION COMPLETED	[ENT]
----------------------	---------



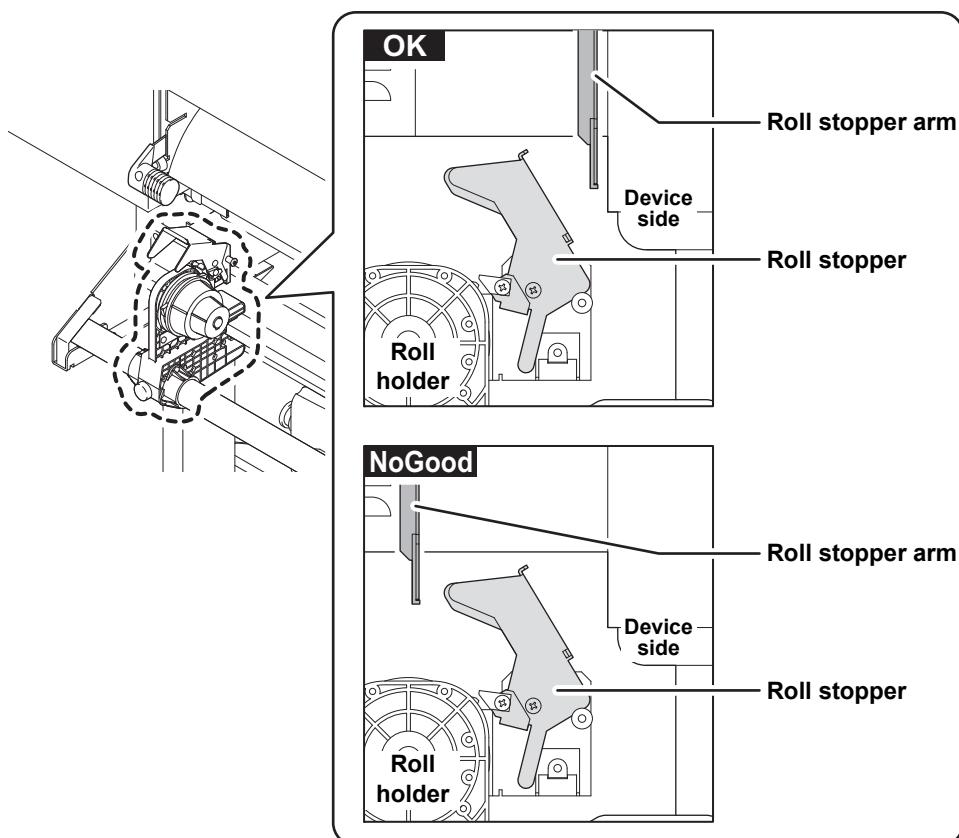
6**Close the front cover.**

Note for media setting

When setting media, read the following notes carefully.



- Take care not to drop the media on a foot or so when the media is set. It may cause an injury due to the media.
- There is a cutter inside the machine for cutting the print media. Do not touch any parts other than the ones described in this manual when loading and replacing paper, removing jammed paper, and cleaning the media transfer surface.
- Be careful not to get your fingers caught inside the machine and injured when replacing paper.
- Be careful not to get your fingers caught inside the machine when opening and closing the cover of the paper feed section.
- Hold the roll paper horizontally with both of your hands. When the roll paper is set in the paper holder, the paper may fall off from the folder and cause injury if you hold the holder vertically.
- The roll stopper arm works with the clamp lever. Do not push the clamp lever down while roll stopper is caught between the roll stopper arm and this machine. The roll stopper arm might be broken and roll stopper function ^{*1} might be disabled.



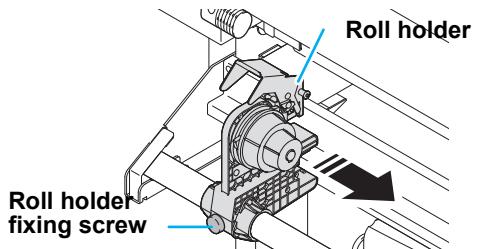
^{*1}. The function that once pulled out a certain amount of media, media pullout is temporarily locked.

Setting a roll media

1

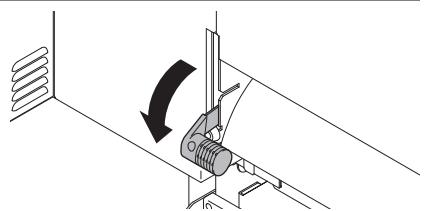
Move the roll holder located in the back of the device to the direction of the middle of the device.

- Loosen the roll holder fixing screw and then move it.



2

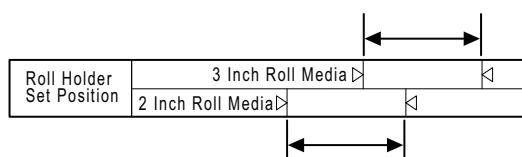
Check the clamp lever located in the back of the device is lowered.



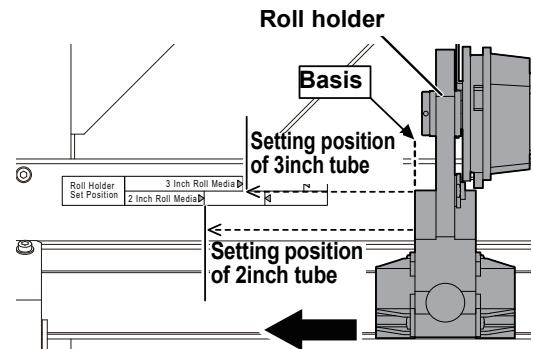
3

Move the roll holder to the roll setting position.

Set the base position of roll holder within this range.



- There are two types of the internal diameter of the roll media paper tube: 2 inch and 3 inch.



**Roll Holder Side
(The back of this machine)**

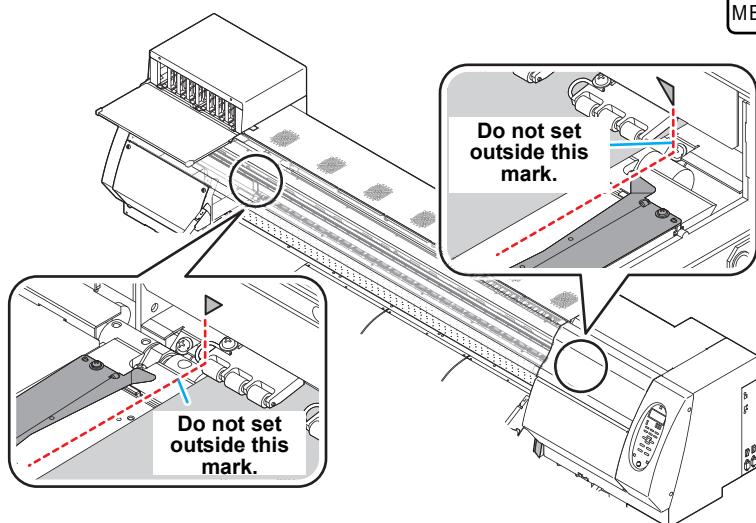
- Check the roll stopper is not caught between the roll stopper arm and this machine.



- When using a media of greater width, set this so that the media width can be more inside than □□.
- If a media is misaligned to the right/left more than fixed position, a warning is displayed. Set the media again.

ERROR 516
MEDIA SET POSITION R

ERROR 516
MEDIA SET POSITION L

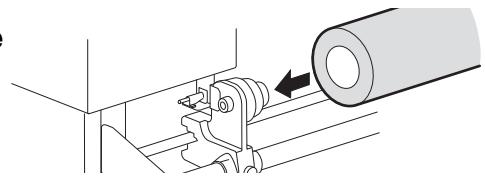


4**Tighten the roll holder fixing screw.**

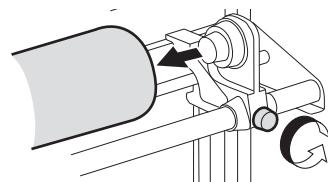
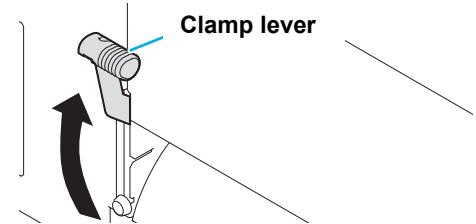
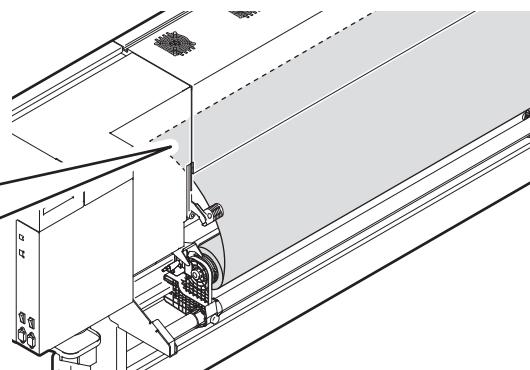
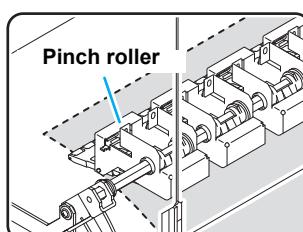
- Check the Step 2 to 3 again.

5**Set the left end of the core of the roll media on the left roll holder.**

- Push the roll media onto the roll holder until the roll core is all the way seated.
- Set the media so that the leading end of the media droops down and toward the front.

**6****Loosen the screw of the right side roll holder then insert the holder into the core of the roll media.**

- When the roll holder is not firmly pressed against the core of the roll media, the feeding media may be loosened and thereby the media reaches to the floor. (☞ P.5-15)

**7****Tighten the screw of the roll holder****8****Raise the clamp lever in the front of this machine.****9****Insert the roll media in this machine.**

- The roll media can be smoothly inserted by slanting the media.

- (1) Pull the media out of the roll to the head of the Media Transfer Surface.
- (2) Insert the media between the Media Transfer Surface and the feed roller.
- Pull the media out of the roll so that the media can be grasped from the front of the machine.
- (3) Push down the clamp lever from the back of this machine.
 - The media is held.

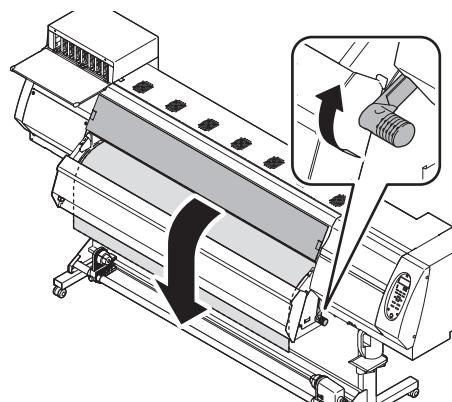
10

Pull out the roll media out.

- (1) Open the front cover.
- (2) Raise the clamp lever from the back of this machine.
- (3) Pull out the roll media gently and then stop pulling when locked lightly.

Important!

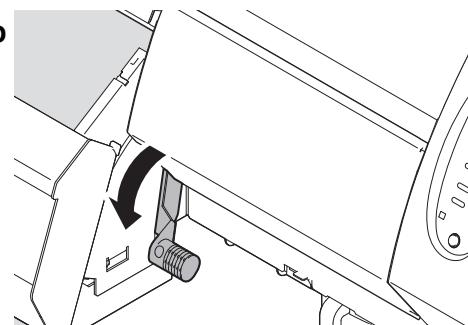
- When setting a medium, be sure to cover the medium sensors located on the rear of the Media Transfer Surface. The media cannot be detected unless it is placed over the sensor.



11

Make the roll media even then lower the clamp lever.

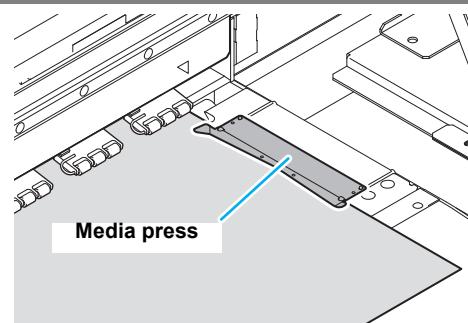
- Pulling several positions of the media lightly, Lower the clamp lever after confirming that the amount of the roll media pulled out is almost even.



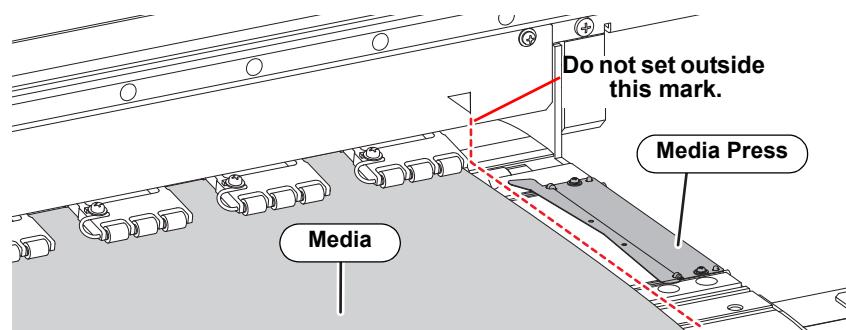
12

Hold the media with the media press gently.

- Set the media so that no media sticks out from the right end pinch roller to the right side.
- When using a thick media, remove the media press from the media before printing.



- In case that you use 240-mm wide or narrower media, media cannot be detected if it is set in accordance with □. Set media approximately 30mm inner than □.
- Do not set the media outside □. As media may tilt and be lifted, it could break the head.

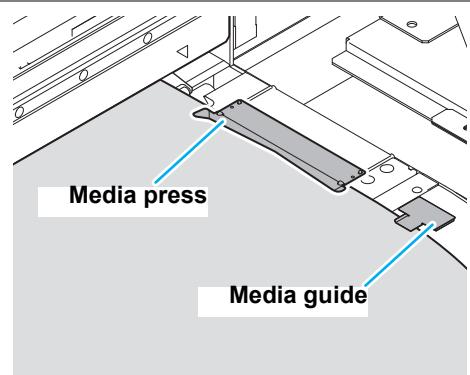


- If a media is misaligned to the right more than fixed position, a warning is displayed. Set the media again.

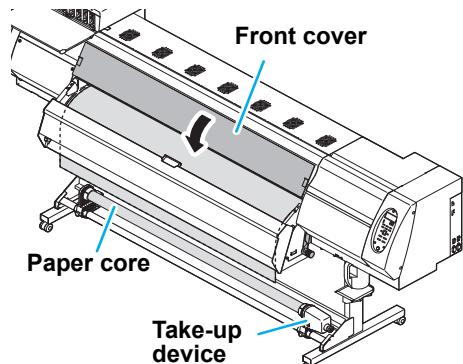
ERROR 516
MEDIA SET POSITION R

13**Hold the media with the media guide gently.**

- If the printing result indicates that drying is not enough, use the media guide to improve adhesion of the media to the Media Transfer Surface.
- Use the media guide with it hit slightly against the sheet holder.
- Make the media pass around the center of the claw of the media guide.

**14****Prepare for the take-up device.**

- (1) Set an empty core of the roll media on the take-up device.
- (2) Close the front cover.

**15****Press the key to select "ROLL".**

- Detects the media width.
- Width of the printable area that has been calculated from the detected media width is displayed on the screen.

Important!

- Make sure that the width of the printable area that has been detected is correct. The printable width will be displayed shorter than the actual media width by the left and right margins (default: 30mm=left 15mm+right 15mm).
- Depending on the usage conditions and loaded media, the media width may not be detected correctly. Perform the following if the media width cannot be detected correctly:
 - Remove the media and then set it again.
 - Make sure that the external lighting on the media surface does not interfere with the media sensor.
 - Clean the media sensor by performing the procedure described in "Cleaning the Media Sensor" (☞ P.4-4), Cleaning.
- When [MEDIA REMAIN] of the machine setup is "ON" (☞ P.3-12), the screen for entering media remaining amount is displayed after detecting the media width.(☞ P.2-12)

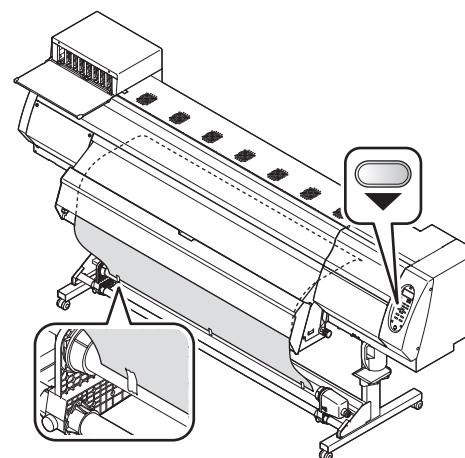


16

Fix the media on the take-up device.

(☞ P.2-13)

- (1) Feed the media up to the core of the roll media of the take-up device by pressing the  key.
 - Check the media end is not caught into the slot on the post-heater, and then feed the media.
- (2) Fix the middle of the media with adhesive tape.
- (3) In the same manner, fix the left side and right side of the media.
 - Make sure that there is no slack or wrinkle on the media in such condition that the roll media is pulled to right and left evenly, and then stick the tape.
- (4) Press the  key.



- Depending on the media to use, attach/ remove the antistatic sheet. (☞ P.1-19)
- If media floats at the detecting position, it may not be detected correctly.

Entering the media remaining amount

When [MEDIA RESIDUAL] of the maintenance function is "ON" (☞ P.3-12), the screen for entering media remaining amount is displayed after detecting the media width.

1

Display the screen for entering media remaining amount.

INPUT MEDIA LENGTH
= 50 . 0m

2

Press  and  key to enter the media remaining amount.

INPUT MEDIA LENGTH
= 50 . 0m

3

Press the  key.

Take-up device

With the switch of the take-up device, select the take-up direction of the media or others.

Lever in top position (REVERSE) :

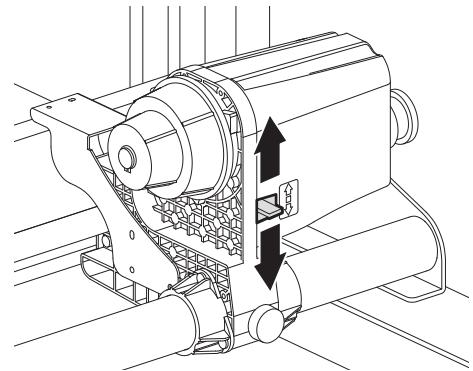
The take-up device winds the media with the printed side facing in.

Lever in middle position (OFF) :

The take-up device does not wind the media.

Lever in bottom position (FORWARD) :

The take-up device winds the media with the printed side facing out.



Setting the torque limiter

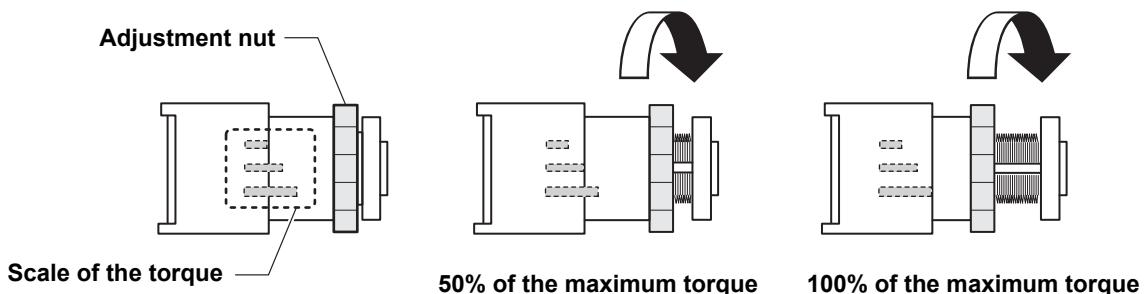
The take-up device is provided with a torque limiter.

The take-up torque can be adjusted with the torque limiter.

(The torque limiter is set at the maximum value when shipped from the factory.)

If the tension is too strong to use a thin or narrow sheet of media, lower the take-up torque with the torque limiter.

- Clockwise turn :
 - Increases torque (a heavy and thicker media such as tarpaulin or the like)
- Counterclockwise turn :
 - Decreases torque (For thin or narrow media)



(Important!)

- When the torque limiter is adjusted too weak ;
 - The media can not be taken up firmly.
- When the torque limiter is adjusted too strong ;
 - The slack may occur depending on the media and cause influence on the image quality.

Setting leaf media

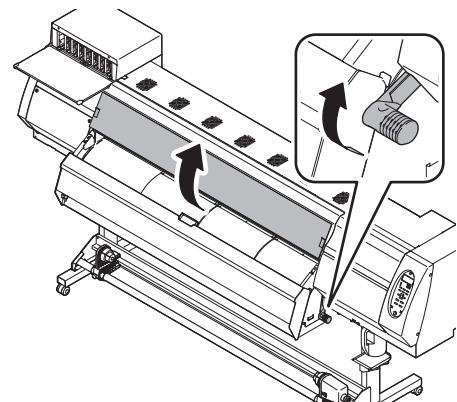
Unlike roll media, leaf media does not need to be retained with the roll holders.

Important!

- After printing, in case that there is not a margin of more than 600mm from the edge, drying feed cannot be fully performed. Therefore, please note that some places cannot pass the drying heater, and drying unevenness and difference in printing quality occur.
- Depending on the condition of the media, a media jam may occur.
- Perform the following procedure if a media jam has occurred:
 - Remove the media and then set it again.
 - Set the leaf media in a way so that the leading edge of the media sticks out from the drying heater exit.

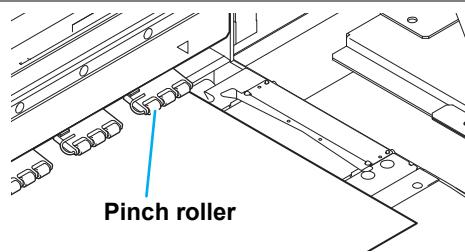
1

Open the front cover.



2

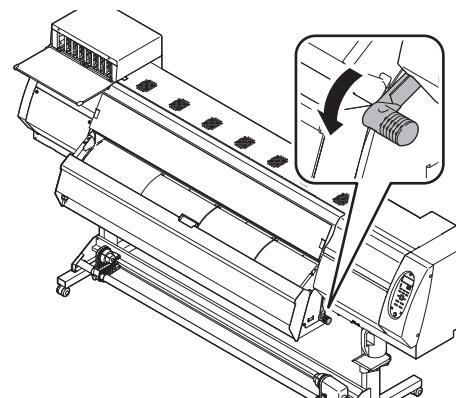
Raise the clamp lever.



3

Insert the leaf media between the Media Transfer Surface and the pinch rollers.

- Set the media so that no media sticks out from the right end pinch roller to the right side.
- Set the media so that the media end does not reach the slot of the post-heater.

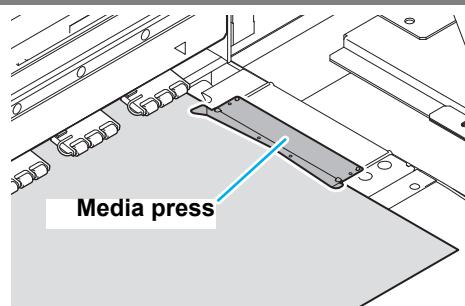
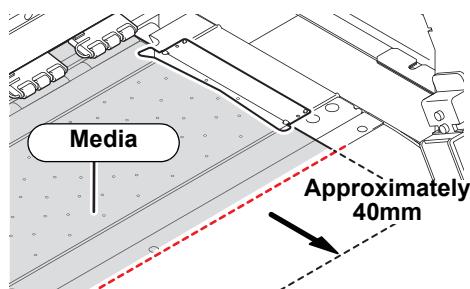


4

Push down the clamp lever.



- Align the leading edge of the media parallel to the line on the heater. After lowering the clamp lever, close the front cover and then press **ENTER**.
Press **▼** to feed the media forward by approximately 40mm.



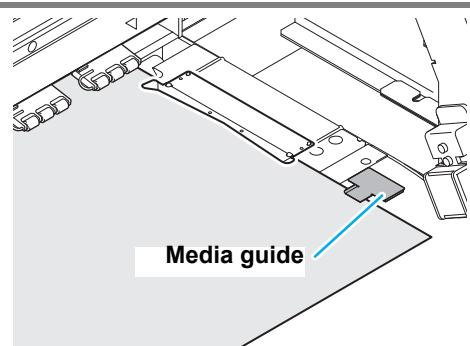
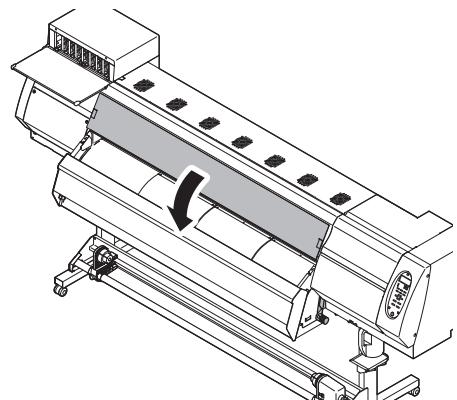
5

Hold the media with the media press gently.

- Set the media so that no media sticks out from the right end pinch roller to the right side.
- When using a thick media, remove the media press from the media before printing.

6**Hold the media with the media guide gently.**

- If the printing result indicates that drying is not enough, use the media guide to improve adhesion of the media to the Media Transfer Surface.
- Use the media guide with it hit slightly against the sheet holder.
- Make the media pass around the center of the claw of the media guide.

**7****Close the front cover.****8****Press the **ENTER** key.****9****Press the **▶** key to select "LEAF".**

MEDIA SELECT
ROLL < > LEAF

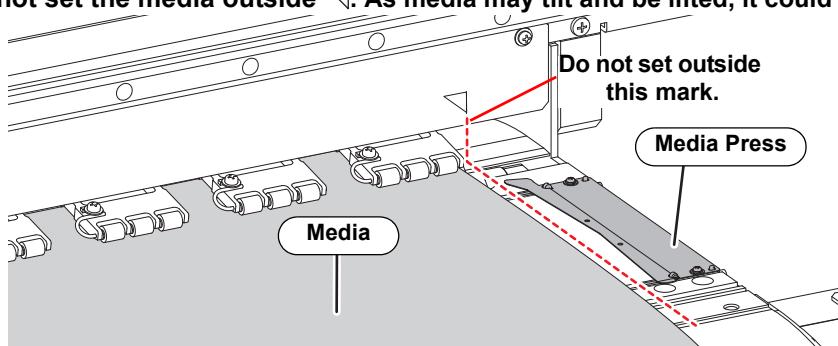
10**The media detection is started.**

* * MEDIA DETECT * *

- (1) The media width is detected.
- (2) The media is fed then the rear end of media is detected.
- (3) It returns to the local mode when the detection is completed.

Notes when using media press

- In case that you use 240-mm wide or narrower media, media cannot be detected if it is set in accordance with □. Set media approximately 30mm inner than □.
- Do not set the media outside □. As media may tilt and be lifted, it could break the head.



- If a media is misaligned to the right more than fixed position, a warning is displayed. Set the media again.

ERROR 516
MEDIA SET POSITION R

Changing the printing origin

The position of the printing origin can be changed.

Moving the LED pointer to the changing position and deciding the position.

1

In Local, Press .

- It enters into the origin setting mode.

ORIGIN SETUP
0.0 - - -

2

Set a light point of the LED pointer to the changing position by pressing .

- Select the carriage and media, moving the point with .
- When you press the **CUT** key here, you can perform media cutting.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.

ORIGIN SETUP
0.0 0.0
Origin (Length) Origin (Width)

3

After determining the origin, press the **ENTER** key.

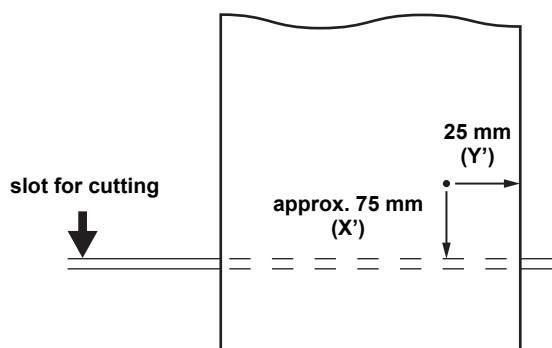
- The printing origin is changed.

ORIGIN SETUP
** ORIGIN **

Typical setting position of printing origin

The printing origin in the depth direction (X') is positioned at about 75 mm rearward from the slot for cutting on the Media Transfer Surface. The printing origin in the scanning direction (Y') is positioned at 15 mm from the right end of the media. The value in the scanning direction (Y') can be changed using [MARGIN] in FUNCTION mode.

(☞ P.3-5) This can be changed by using the Jog key.



Preparing for the Heaters

Changing the Temperature Settings for the Heaters

Set the heater temperature.

Depending on the media and the profile to use, set the heater temperature.

- It may take several minutes to tens of minutes for the set temperature to be reached, depending on the ambient temperature.



- You can change the temperature set here also in [HEATER] of the [SETUP] menu. (☞ P.3-2)

1

Press the **HEATER** key.

PRE 23 °C	PRT 23 °C	POST 23 °C
--------------	--------------	---------------

Heater temperature confirming display

2

Press the **HEATER** key.

The set temperature: 20 to 70°C

OFF (23 °C)	OFF (23 °C)	OFF (23 °C)
------------------	------------------	------------------

3

Press **▲ ▼ ◀ ▶** to set the temperature of each heater.

OFF (23 °C)	OFF (23 °C)	OFF (23 °C)
------------------	------------------	------------------

Heater selecting : Select with **◀ ▶**
Temperature setting : Set with **▼ ▾**

Current heater temperature

- The heater starts to get hot.(The [HEAT] lamp lights in orange.)
- When the heater temperature reaches the set temperature, the [HEAT] lamp goes off and the [CONSTANT] lamp lights in green.

4

Press the **ENTER** key to end the setting.

- The screen moves to the temperature setting of FAN HEATER.



- The Heater temperature is controllable at the RIP side if the RIP in use has a function controllable. (For the setting procedures, refer to the instruction manual of the RIP in use.)
 - Depending on the power supply voltage, amount of heat generation differs. For the power supply voltage of 100V to 120V, it may not reach 70 °C.
 - If you set [VACUUM] of the [SETUP] menu more than needs, it may cause temperature decrease of the print heater.
- Important!**
- Use this machine under 20 to 30°C. The temperature may not reach the set value due to the environmental temperature condition.
 - When you lower the heater temperature, ensure drying time with the procedures below:
 - Set [SET UP] – [DRYING TIME].
 - Increase the number of printing passes.
 - Print unidirectionally.

2

Basic Operations

Checking the Heater Temperature

1

Press the **HEATER** key.

- The current heater temperature is displayed.

PRE

PRT

POST

35 °C

40 °C

50 °C

2

Press the **END** key at the end of confirmation.

- The screen returns to LOCAL.

Changing the Temperature Settings for the Drying Heater

1

Press the **HEATER** key three times.

FAN HEATER

:READY(10 °C)

2

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

- Set value : OFF / POST setting value+1 to 20°C

FAN HEATER

:READY(20 °C)

3

Press the **ENTER** key to end the setting.

- The screen returns to LOCAL.

Test Feeding

Since heater is used at high temperature, cockles may occur in some of your media. (☞ P.5-14)
Perform this function before printing, and check whether the media can be fed normally.

1 Press the **TEST PRINT/CLEANING** key in LOCAL three times.

TEST FEED
[ENT]

2 Press the **ENTER** key.

BACKWARD FEED
: ON

3 Press **▲** **▼** to select ON/OFF.

BACKWARD FEED
: ON



- When setting "ON", rewind the roll media to take up the slack before printing.

4 Press the **ENTER** key.

TEST FEED
START
[ENT]

5 Press the **ENTER** key.

- Start test feeding.

** TEST FEED **
PLEASE : WAIT

6 Press the **END** key.

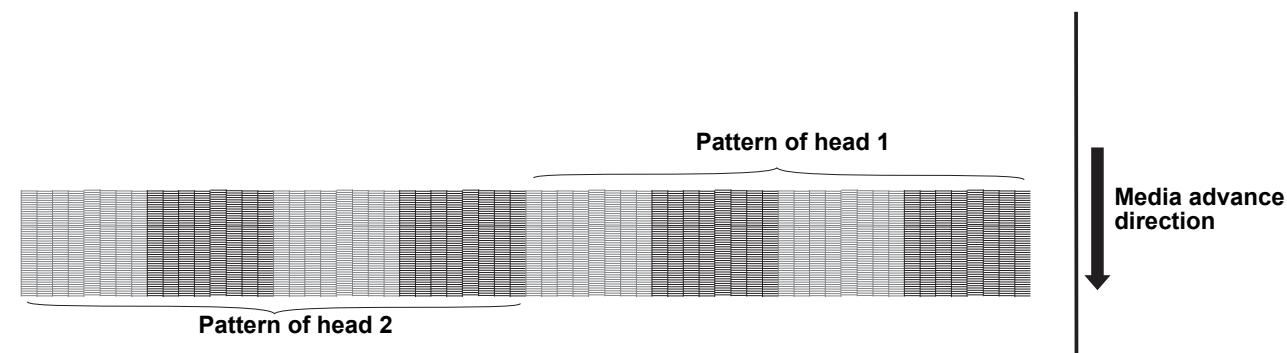
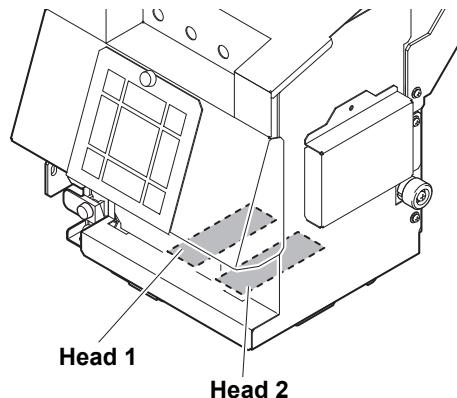
- The feeding operation is continued until you press the **END** key.
- Feed it to some extent and check the feeding status, and then press the **END** key to terminate.

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.



Note on test printing

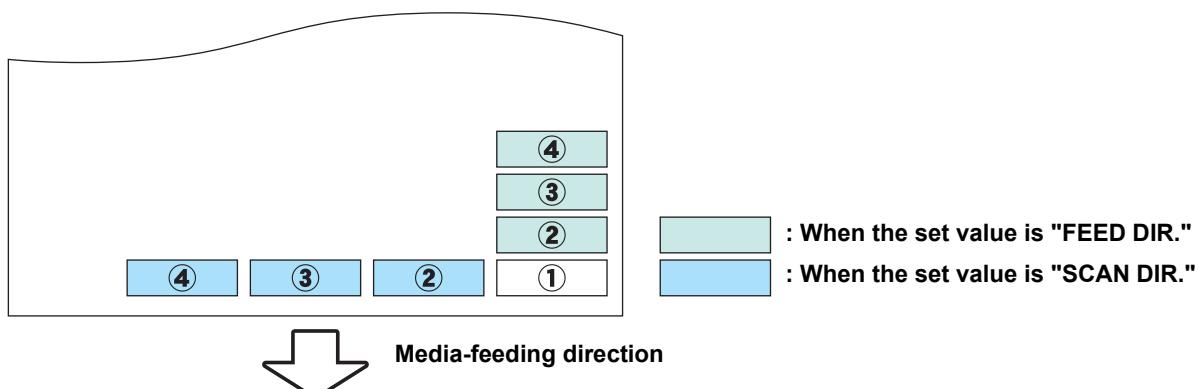
Important!

- When using a roll medium, rewind the medium by hand before printing so that it is not loose. When the roll medium has not been rewound tightly, it may cause image quality to deteriorate.

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.	<ul style="list-style-type: none"> If a media has been set (P.2-5) If the origin position has been set
	<ul style="list-style-type: none"> If the head height has been adjusted (P.2-5)

- 1** Press the **TEST PRINT/CLEANING** key in LOCAL.
 • Press **▲** **▼** to change the test pattern orientation.

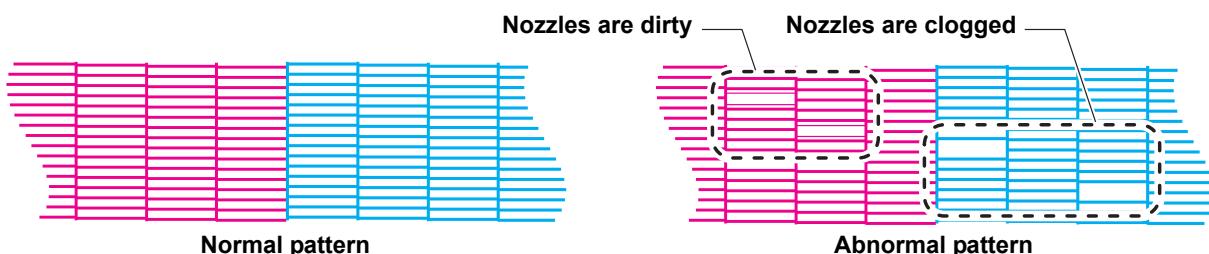
TEST PRINT
(SCAN DIR.) [ENT]

- 2** Press the **ENTER** key.
 • Test printing starts.
 • When the printing has been completed, the screen returns to step1.

** PRINTING **
PLEASE WAIT

TEST PRINT
(SCAN DIR.) [ENT]

- 3** Check the printed test pattern.
 • When the result is normal, end the operation.
 • When the result is abnormal, perform head cleaning. (P.2-22)



Head Cleaning

About head cleaning

Perform test printing to check if lines are missing or bent unexpectedly. If this is the case, repeat cleaning and test printing as shown below until print results become satisfactory.

- 1) Head cleaning [SOFT]: 3 times (each followed by test printing)
- 2) Head cleaning [NORMAL]: 3 times (each followed by test printing)
- 3) Head cleaning [HARD]: 1 time

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 two times.

CLEANING
SOFT

[ENT]

2

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

CLEANING
HARD

[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.

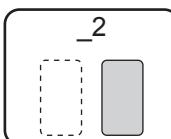
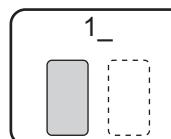
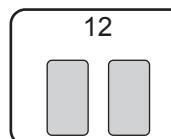
SELECT HEAD
: 12

4

Press **▲** **▼** **◀** **▶** to select a head to cleaning.

SELECT HEAD
: 1_

- Set Value : 12 (Cleaning both heads.)
1_ (Cleaning Head 1 only.)
_2 (Cleaning Head 2 only.)



5

Press the **ENTER** key.

- On completion of cleaning, the screen returns to step1.

** CLEANING **
PLEASE : WAIT

6

Perform test printing again, and check the result.

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



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

- Clean the wiper and ink cap. (☞ P.4-5)
- Wash the head nozzle. (☞ P.4-17)
- Solve the failure of the image quality, referring to When Nozzle Clogging Cannot Be Solved. (☞ P.4-22)

Set the media feeding

Correct the feeding rate of media.

If the correction value is not appropriate, stripes may appear on the printed image, thus resulting in a poor printing.

Important!

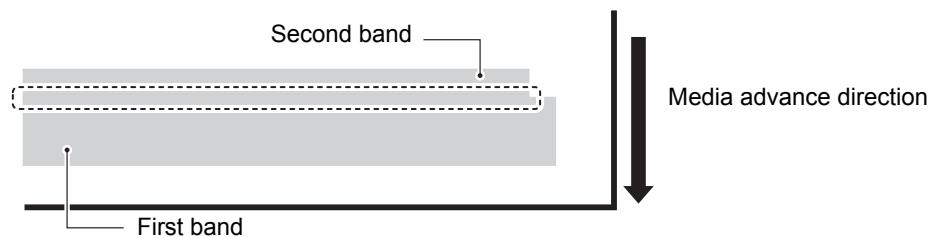
- When you have changed the media type, check the pattern and perform adjustment depending on the status.
- When you have changed the temperature of the heaters, make sure that the [CONSTANT] lamp lights up and that the preset temperature is reached, and then start the correction.
- When using a roll medium, rewind the medium by hand before printing so that it is not loose. When the roll medium has not been rewound tightly, it may cause image quality to deteriorate.
- When printing with a take-up device, set the media first and then perform media correction.

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.
- If the correction pattern that has been printed on a media such as transparent film is difficult to discern, feed the media forward so that the printed area is out of the drying heater, place a sheet of paper on the back of the media, and then rewind the media.
- When making adjustment to the media-feeding rate, use of a magnifying glass is recommended.



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.

Input example: In case that patterns overlaps



When entering the value in "+"

In case that patterns are separate



0

When entering the value in "-"

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.

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

Correcting Media-feeding during Printing

A media-feeding rate can be corrected even in the remote mode or when image data is printed.

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

* REMOTE *

* * . * * mm

FEED COMP.

0 ► 0

Current [FEED COMP.] value

2**Press **▲** **▼** to enter a corrected feeding rate.**

- Corrected feeding rate: -255 to 255
- The value entered here is reflected in the corrected feeding rate soon.

3**Press the **ENTER** key.**

- The changed value is registered.
- When you press the **ENTER** key instead of the **END** key, the value entered here will be invalid.

* REMOTE *

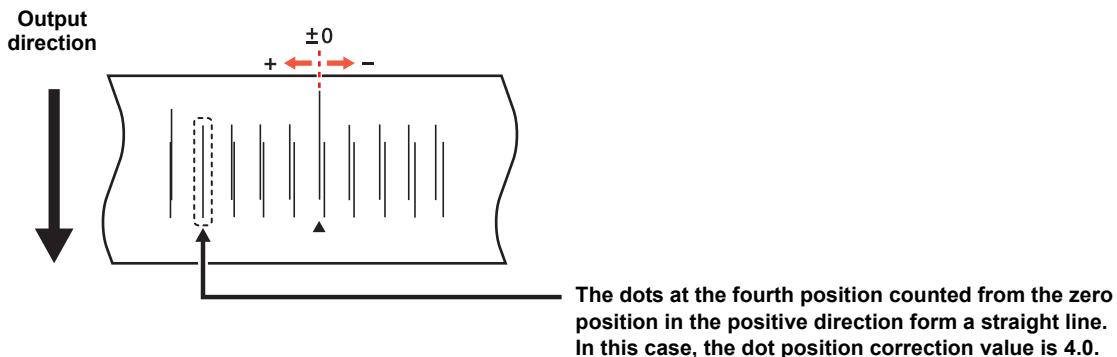
* * . * * mm

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

- Important!**
- The correction pattern for aligning the ink drop position cannot be printed on a media whose width is less than 450 mm. Print quality cannot be guaranteed in such a case. Use unidirectional printing.



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
: Y600dpi

4

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

- Setting value: 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
- Open the front cover and 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 is 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.

- Next test pattern is printed.
- Repeat step6 and 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.

Printing Data

Checking the Status of Ink Cartridges

Check the status of the ink cartridges before you start printing. If the amount of the remaining ink is low, or the [NEAR END] or [INK END] message is displayed, replace the ink cartridge.



- Checking the Ink Cartridges
→ Displaying the Information of this machine (☞ P.3-26)
- When the ink cartridge is nearly empty
- When [NEAR END] warning is displayed
- When [INK END] warning is displayed
→ Changing an ink cartridge (☞ P.1-16)



- While [NEAR END] warning is displayed, the current mode returns to LOCAL after each printing has been completed. You cannot make multiple prints consecutively.
- When [INK END] error occurs while making a print, printing stops and the current mode returns to LOCAL.
- Printing cannot be started while [INK END] warning is being displayed.

Checking the Status of Waste Ink Bottle

Check the condition of the waste ink bottle before you start printing. If the bottle is nearly full, or a waste ink bottle confirmation message is displayed, replace the bottle.



- Checking the Waste Ink Bottle
→ Confirming Machine Information (☞ P.3-24)
- The waste ink bottle is nearly full
- A waste ink bottle confirmation message is displayed
→ Replace the waste ink bottle with another (☞ P.4-30)



- When a waste ink bottle confirmation message appears while making a print, printing stops and the current mode returns to LOCAL.
- Printing cannot be started while a waste ink bottle confirmation message is being displayed.

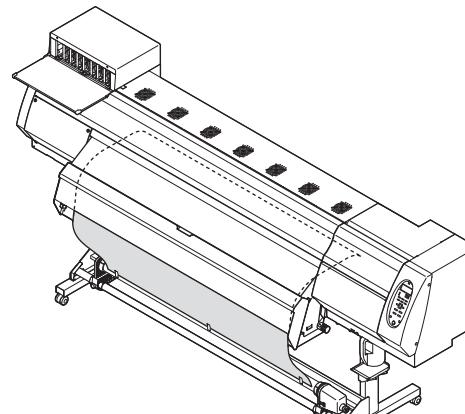
Starting a Printing Operation

Important!

- When using a roll media, rewind the media by hand before printing so that it is not loose. When the roll media has not been rewound tightly, it may cause the image quality to deteriorate.
- When making a test print, printing the actual image data is recommended. Depending on the image data, you may not be able to achieve the desired image quality.

1

Setting a Media (☞ P.2-5)



2

Checking the Heater Temperature

- Check the CONSTANT lamp lights in [PRE], [PRINT], and [POST] below the display.



3

Press the **REMOTE** key in LOCAL.

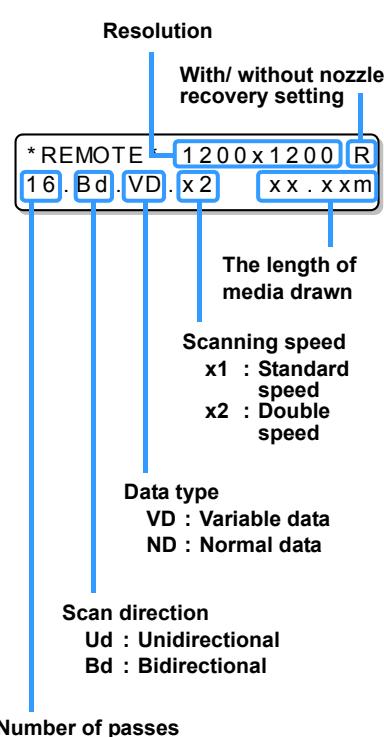
TEMPERATURE CONTROL !
PLEASE WAIT

- If the heater temperature has not reached the setting value, the right screen is displayed.
Even if it has not reached, you can move to REMOTE when pressing the **ENTER** key.
- The screen changes to REMOTE, and data can be received from the PC.

4

Transmit data to be printed from the PC.

- The ACTIVE lamp blinks and the printing conditions are displayed.
- For the method of data transmission, see the instruction manual for the output software.



5

Start 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.

<LOCAL>

width : 1272mm

Deleting Received Data (Data Clear)

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

1

Press the **DATA CLEAR** key in LOCAL.

DATA CLEAR

[ENT]

2

Press the **ENTER** key.

** DATA CLEAR **

Behavior after printing has been completed

Drying Feed

When printing has been completed, the feeding operation is performed to dry the printed surface with the drying heater.

- Perform the feeding operation until the back edge of printing passes the drying heater.
- When you press the **END** key, the operation is terminated.
- When the machine has been received next data continuously, it will operate after the last data is received.

Screen display during drying feeding

Drying
*** : *** : ***

2

Basic Operations

Cutting a media

For a roll media, two ways are available to cut the media after printing is completed, as follows.

Important!

- When a media is cut, be careful that the printed side does not touch the floor or the printed side of other already cut media.
- When using the take-up device, take up a cut medium using the switch of the take-up device.

1

Press the **CUT** key.

MEDIA CUT

[ENT]

2

Press the **ENTER** key.

MEDIA CUT

CUT POSITION

[▲▼]

3

Press **▲** **▼** to specify the cutting position.

CUT POSITION

0 . 0 - - - -

4

Press the **ENTER** key.

** CUTTING **

PLEASE WAIT



- During the origin setting with the jog keys, you can also perform media cutting by pressing the **CUT** key. (☞ P.2-16)

When [NEAR END] error occurs while printing

The following occurs when [NEAR END] error occurs while printing:

- When each printing has been completed, the current mode returns to LOCAL.
- When each printing has been completed, the current mode returns to LOCAL even if you are making multiple prints consecutively (cannot perform continuous printing).
- Subsequent printing starts when you press the **REMOTE** key, but the current mode returns to LOCAL after each printing has been completed.
- In order to resume continuous printing, clear [NEAR END] message by performing the following procedure:
 - (1) Changing an ink cartridge (☞ P.1-16)
 - (2) Press the **REMOTE** key.

When [INK END] error occurs while printing

- Printing is canceled, and the current mode returns to LOCAL.
- Printing cannot be started while [INK END] warning is being displayed.
- In order to resume printing from where it has been paused, clear [NEAR END] message by performing the following procedure:
 - (1) Changing an ink cartridge (☞ P.1-16)
 - (2) Press the **REMOTE** key.

When a waste ink bottle confirmation message appears while printing

- Printing is canceled, and the current mode returns to LOCAL.
- Printing cannot be started while a waste ink bottle confirmation message is being displayed.
- In order to resume printing from where it has been paused, clear the waste ink bottle confirmation message.
 - (1) Replace the waste ink bottle with another. (☞ P.4-30)
 - (2) Press the **REMOTE** key.

Chapter 3

Extended Functions



This chapter

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

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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.2-23)	-9999 ~ 0 ~ 9999	0	_____	Used to print a pattern for correcting a media-feeding rate and correct it.	
DROP. POS CORRECT (☞ P.2-25)	-40.0 ~ 0 ~ 40.0	0	_____	Used to adjust the dot position in go and return printing.	
HEATER (☞ P.2-17)	Pre-Heater	OFF/ 20 ~ 70°C (OFF/ 68 ~ 122°F)	OFF	Sets heater conditions.	
	Print Heater	OFF/ 20 ~ 70°C (OFF/ 68 ~ 122°F)	OFF		
	Post Heater	OFF/ 20 ~ 70°C (OFF/ 68 ~ 122°F)	OFF		
	FAN HEATER(☞ P.2-18)	OFF/ POST+0 ~ 20°C ^{*2}	OFF	Sets drying heater conditions.	
LOGICAL SEEK(☞ P.3-3)	HOST / ON / OFF	HOST	OFF	Sets the scan movable area during printing.	
INK LAYERS (☞ P.3-9)	HOST / 1 ~ 9	HOST	1	Sets the number of layers in which ink is to be applied.	
DRYING TIME (☞ P.3-4)	SCAN	HOST / 0.0 ~ 9. 9 sec	HOST	0.0 sec	Sets the time to wait for ink drying.
MARGIN (☞ P.3-5)	LEFT	HOST / -10 ~ 85mm (1mm unit)	HOST	0 mm	Sets a non-printing area along the right and left edges of the media.
	RIGHT	HOST / -10 ~ 85mm (1mm unit)	HOST	0 mm	
VACUUM (☞ P.3-9)	HOST / STANDARD / STRONG	HOST	STANDARD	Sets the absorbability of the media.	
FEED SPEED (☞ P.3-9)	HOST / 10 ~ 200%	HOST	100%	Changes the media feeding speed in printing. ^{*3}	
MAPS (☞ P.3-6)	OFF / ON	OFF	_____	Perform setting to reduce stripes between passes.	
	PRINT SPEED ADJUST	-50 ~ +50%	0%		
AUTO CLEANING (☞ P.3-7)	INTERVAL	OFF / 1 ~ 1000 page	OFF	Sets the automatic cleaning operation of the head at the start of printing.	
	TYPE	SOFT / NORMAL / HARD	SOFT		
INTERVAL WIPING (☞ P.3-8)	TYPE1	Lv1 ~ Lv6, MANUAL(90~600sec)	Lv4	Set wiping interval performed during printing.	
	TYPE2	Lv1 ~ Lv6, MANUAL(10~90min)	Lv4		

*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.

*2. The setting value range shall be within the POST heater setting value +20 °C .

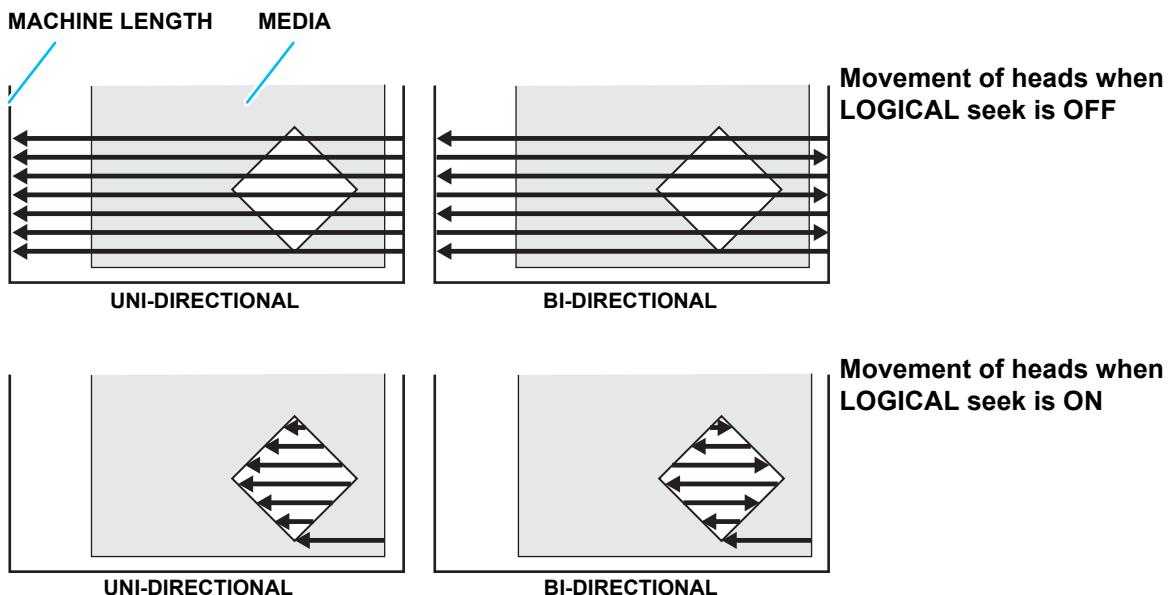
*3. When you set this to “100%” or more, required time for completion of printing will be shortened. However, enough drying time cannot be ensured and it may affect the image quality.

Setting Logical Seek

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

(Important!)

- You cannot specify the logical seek at the RICOH Software RIP side. When you set this machine to "Host", printing will be performed in "LOGICAL SEEK=OFF" status.
- **When you set this to "ON" or "HOST"**
Required time for completion of printing will be shortened. However, enough drying time cannot be ensured and it may affect the image quality.



1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP [ENT]

2

Press the **ENTER** key.

SETUP
FEED COMP. [ENT]

3

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

SETUP
LOGICAL SEEK [ENT]

4

Press the **ENTER** key.

LOGICAL SEEK
:HOST

5

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

• Set value : HOST / ON / MEDIA LENGTH / MACHINE LENGTH

LOGICAL SEEK
:OFF

6

Press the **ENTER** key.

SETUP
LOGICAL SEEK [ENT]

7

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

3

Convenient use

Setting Drying Time

In the drying time setting, the following items for ink drying time are set.

- SCAN : Ink drying time for each scanning is set. (During bidirectional printing, the machine stops for a certain period of time specified for each of the outward and return scanning.)

- Important!**
- When you give priority to the setting at the RICOH Software RIP side, make the setting value "Host".
 - "SCAN" set in this machine is displayed as "Pause Time per Scan" in the RICOH Software RIP.

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP [ENT]

2

Press the **ENTER** key.

SETUP
FEED COMP. [ENT]

3

Press **▲** **▼** to select [DRYING TIME].

SETUP
DRYING TIME [ENT]

4

Press the **ENTER** key.

SCAN
= HOST

5

Press **▲** **▼** to set drying time for scanning.

SCAN
= HOST

- To enable the drying time specified in your RIP, select "Host".
- **Scanning setting value** : Host or 0.0 sec. to 9.9 sec.

6

Press the **ENTER** key.

SETUP
DRYING TIME [ENT]

7

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

Setting Margins

Set a non-printing area along the right and left edges of the media.
The offset value against the standard margin 15mm is set hereupon.

Important!

- When you give priority to the setting at the RIP software side, make the setting value "Host".
- You cannot specify the margins at the attached RIP software (RICOH Software RIP). When you use the RICOH Software RIP, if you set this machine to "Host", printing will be performed in "Margins for right and left off set value= 0 mm" status.

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP [ENT]

2

Press the **ENTER** key.

SETUP
FEED COMP. [ENT]

3

Press **▲** **▼** to select [MARGIN].

SETUP
MARGIN [ENT]

4

Press the **ENTER** key.

LEFT
= HOST

5

Press **▲** **▼** to set the left margins.

LEFT
= 0mm

Set Value :HOST or -10 to 85mm (in 1mm increment)

6

Press the **ENTER** key.

RIGHT
= HOST

7

Press **▲** **▼** to set the right margins.

RIGHT
= 0mm

Set Value :HOST or -10 to 85mm (in 1mm increment)

8

Press the **ENTER** key.

SETUP
MARGIN [ENT]

9

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



- Pay attention to that printing may start on the media press if a right and left margin is set to 5 mm or less when the media press is used in printing.

Perform setting to reduce stripes between passes

In case that feeding stripes cannot be resolved even though media correction (P.2-23) is performed, make MAPS (Media Advance PassSystem) valid. Feeding stripes become less visible by distributing the pass boundary.



- Depending on the printing condition, the effect cannot be recognized.

-
- | | | |
|----------|--|---|
| 1 | Press the FUNCTION key in LOCAL. | FUNCTION
SETUP [ENT] |
|----------|--|---|
-
- | | | |
|----------|--|---|
| 2 | Press the ENTER key. | SETUP
FEED COMP. [ENT] |
|----------|--|---|
-
- | | | |
|----------|--|---|
| 3 | Press ▲ ▼ to select [MAPS]. | SETUP
MAPS [ENT] |
|----------|--|---|
-
- | | | |
|----------|--|---|
| 4 | Press the ENTER key. | MAPS
: OFF |
|----------|--|---|
-
- | | | |
|----------|--|--|
| 5 | Press ▲ ▼ to set ON/OFF.
• Set Value : OFF, ON | MAPS
: ON |
|----------|--|--|
-
- | | | |
|----------|---|--|
| 6 | Press the ENTER key.
• When you select OFF, proceed to the Step 9. | PRINT SPEED ADJUST
= 0% |
|----------|---|--|
-
- | | | |
|----------|--|---|
| 7 | Press ▲ ▼ to change print speed.
• Set Value : -50 ~ +50%
<small>(Important!) • When you speed up, nozzle recovery effect cannot work in some cases. Use it after checking.</small> | PRINT SPEED ADJUST
= 10% |
|----------|--|---|
-
- | | | |
|----------|--|---|
| 8 | Press the ENTER key. | SETUP
MAPS [ENT] |
|----------|--|---|
-
- | | | |
|----------|---|--|
| 9 | Press the END key several times to end the setting. | |
|----------|---|--|

Setting Auto Cleaning

You can set items so that the head cleaning is automatically performed when printing has been completed for the set interval.

When printing has been completed, the machine count the print count printed after the previous head cleaning and performs the cleaning automatically if necessary.

The machine can perform a stable printing operation with its heads always kept clean.

The first cleaning is performed immediately before the first printing after the machine is started. Then subsequent cleaning is performed every printing on the specified count of print.

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP [ENT]

2

Press the **ENTER** key.

SETUP
FEED COMP. [ENT]

3

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

SETUP
AUTO CLEANING [ENT]

4

Press the **ENTER** key.

INTERVAL
= OFF

5

Press **▲** **▼** to set a cleaning interval.

INTERVAL
= 1 page

- Set value : OFF / 1 to 1000page
- When selecting OFF, proceed to Step 8.

6

Press the **ENTER** key.

TYPE
: SOFT

7

Press **▲** **▼** to set a cleaning type.

TYPE
: NORMAL

- Set value : NORMAL / SOFT / HARD

8

Press the **ENTER** key.

9

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

Setting nozzle face cleaning time

When the set time has passed, nozzle face of the head is cleaned automatically to remove ink droplets on the nozzle face.

In case that deflection, nozzle missing, or symptom which ink droplets fall down occurred, increase the level for each type. If you increase the level, the intervals become shorter.

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP

[ENT]

2

Press the **ENTER** key.

SETUP
FEED COMP .

[ENT]

3

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

SETUP
INTERVAL WIPING[ENT]

4

Press the **ENTER** key.

INTERVAL WIPING
: TYPE1

5

Press **▲** **▼** to select types.

- Set Value : TYPE1, TYPE2
- TYPE1 is simple wiping performed for a short period.
- TYPE2 is normal wiping performed for a long period.

INTERVAL WIPING
: TYPE2

6

Press the **ENTER** key.

TYPE2
: Lv 4

7

Press **▲** **▼** to set levels, and press the **ENTER** key.

TYPE2
: Lv 5

- Set Value : Lv1 to Lv6, MANUAL
- When Lv1 to Lv6, the operation interval is changed automatically depending on the device temperature. The cleaning interval is the longest when Lv1 is selected, and becomes shorter as you select higher levels.
- When [MANUAL] is set, set the intervals in step8.

8

Press **▲** **▼** to set intervals, and press the **ENTER** key.

TYPE2
:

10 min

- Set Value : TYPE1: 90 to 600 sec
- TYPE2: 10 to 90min
- Example of behavior: When it is set to 90Sec, wiping is performed one head by one per 45Sec.

9

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.

FUNCTION
SETUP [ENT]

- 2** Press the **ENTER** key.

SETUP
FEED COMP. [ENT]

- 3** Press **▲** **▼** to select an item for setting.

- Select it, referring to P.3-2 "List of Functions".

- 4** Press the **ENTER** key.

- 5** Press **▲** **▼** to select the setting value.

- Select it, referring to P.3-2 "List of Functions".

- 6** Press the **ENTER** key.

- 7** 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

Common 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.3-11)		NONE/ 10 ~ 600min	30min	When no operation has been performed for the set time, the power supply is automatically turned "OFF".
MEDIA REMAIN (☞ P.3-12)	ON	0.0 to 500.0m	OFF	You can control the remaining amount of media.
	OFF			
INK REMAIN (☞ P.3-14)	Cart. Weight	1 to 8		
	Case Weight	1 to 8		
	Alarm Display	ON / OFF	OFF	
TIME (☞ P.3-19)		+4h ~ -20h	Japan time	Time difference is corrected.
UNIT (☞ P.3-20)	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.3-21)		OFF / ON	ON	A buzzer sound when keys are pressed is set.
LANGUAGE (☞ P.3-22)		English ニホンゴ Deutsch Français Español Italiano Português	English	Displayed language is changed.
RESET(☞ P.3-23)		_____	_____	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
SETUP [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.

AUTO Power - off
= 60min

- Set Value : none, 10 to 600min

- 5** Press the **ENTER** key.

MACHINE SETUP
AUTO Power - off [ENT]

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

- (Important!)**
- If the machine received data from the PC in the auto-power-off status, the power supply is turned ON, however, printing operation is not started automatically.

Setting the Display of Media Residual

Whether the screen displays the remaining amount of a media is set.

When the media remaining amount display is turned to "ON"	the remaining amount of a media is displayed in Remote. (However, when a leaf media is used, the length of the media to be printed is displayed.)
When the media remaining amount display is turned to "OFF"	the remaining amount of a media is not displayed in the Remote.



- The amount of a media that has been fed by the printing and jog keys is reflected in the remaining amount of a media.
- The length of a media (initial value of the remaining amount) is entered when a roll media is detected. (☞ P.2-12)
- The setting configured here does not become effective unless media detection is performed after the setting has been complete.

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP [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 **[MEDIA REMAIN]**.

MACHINE SETUP
MEDIA REMAIN [ENT]

5

Press the **ENTER** key.

MEDIA REMAIN
: OFF

6

Press **▲** **▼** to select ON/OFF.

MEDIA REMAIN
: ON

7

Press the **ENTER** key.

- If you select "ON" in step 6 : proceed to step 8.
- If you select "OFF" in step 6 : proceed to step 9.

8

Press **▲** **▼** to input the media remain.

- Set Value : 0.0 to 500.0 min

INPUT MEDIA LENGTH
= 50.0m

9

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

Printing the Remaining Amount of a Media

The present remaining amount of a media can be printed.



- Set "Remaining amount of a media to display" to "ON".
- When you replace the media you use now with another, it is recommended that you print the remaining amount of the media on it. With the remaining amount of a media having been printed beforehand, when you use the replaced media again, you can enter an accurate value in the screen for entering the remaining amount of a media (☞ P.2-12) that appears after media detection.

1

In LOCAL, Press **▲ ▼ ← →**.

- LOCAL changes to the origin setting mode.

ORIGIN	SETUP
0 . 0	- - -

2

▲ ▼ ← → Press to set a light point of the LED pointer to the changing position.

- Move the carriage and media with **▲ ▼ ← →** and set the origin.
- When you do not change the origin, do not press **▲ ▼ ← →** and proceed to Step 3.
- When you press the **ENTER** key here, the origin is changed, and the screen returns to LOCAL.

ORIGIN	SETUP
0 . 0	0 . 0
Origin (Length)	Origin (Width)

3

Press the **REMOTE** key.

MEDIA	REMAIN	PRINT
<ENT>		

- When you press **▲ ▼ ← →**, the screen returns to Step 2.
- When you press the **END** key, the screen returns to LOCAL.

4

Press the **ENTER** key.

- The remaining amount of a media starts to be printed.
- When the printing has been completed, the screen returns to LOCAL.

Important!

- When the remaining amount of a media has been printed with the origin changed, the origin set here is effective even when subsequent data are printed.

3

Convenient use

Adjusting the Remaining Amount in the Ink Cartridge

The remaining amount of ink in the ink cartridge can be adjusted.



- You need a scale (which can weigh up to 1200g in 1g) to adjust the remaining amount of ink.
Please prepare your scale.

1 Setting the INK REMAIN

This setting allows you to adjust the remaining amount of ink or use the eco case. For details, refer to P.3-14.

2 Registering the case weight

When using the eco case, you need to register the case weight in order to be able to adjust the remaining amount of ink inside the ink cartridge accurately. Refer to P.3-16 and register the weight.

3 Registering the cartridge weight

By weighing the whole ink cartridge including the IC chip and the ink pack, you can adjust the remaining amount of ink inside the cartridge. Follow the instructions on P.3-17 and register the weight.

Setting the INK REMAIN

By setting INK REMAIN to "ON", you enable the following functions.

- You can detect the remaining amount of ink inside the ink cartridge and adjust the cartridge weight.
- When the ink inside the ink cartridge is low, a message is displayed reminding you to weigh the cartridge.
(☞ P.5-8)



- If there are any slots with unregistered case weight when using the eco case, register the case weight.

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP [ENT]

2

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

FUNCTION
MACHINE SETUP [ENT]

3

Press the **ENTER** key.

4 Press to select [INK REMAIN].

MACHINE SETUP
INK REMAIN [ENT]

5 Press the key.

6 Press to select [SET UP].

INK REMAIN
: SET UP

7 Press the key.

8 Press to select ON/OFF.

INK REMAIN
: ON

9 Press the key.

- If you select “ON” in step 8 : proceed to step 10.
- If you select “OFF” in step 8 : proceed to step 14.

10 Press to select “YES”.

- The slots with unregistered case weight are displayed.

Use Eco Case?
NO< >YES

11 Use a scale to weigh the eco case in the slot shown on the display.

- Do not attach the IC chip and the ink pack when weighing.

12 Press to enter the weight checked at the Step 11 and press the key.

Cart. Slot 1
Case Weight = 326g

13 Repeat steps 11 and 12 until the case weight is registered on all the slots shown on the display.

14 Press the key several times to end the setting.

Registering the case weight

When using the eco case, you need to register the case weight. Follow the steps below to register the case weight.

Important!

- If you replace the eco cartridge because the eco case is damaged, you need to register the case weight again in order to set the remaining amount in the ink cartridge correctly.
- You can only register the case weight when SET UP (☞ P.3-14) in INK REMAIN is set to "ON", and the eco case use is enabled.

1

Weigh the case of an empty cartridge on the scale.

- Do not attach the IC chip and the ink pack when weighing.

2

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP [ENT]

3

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

FUNCTION
MACHINE SETUP [ENT]

4

Press the **ENTER** key.

5

Press **▲** **▼** to select [INK REMAIN].

MACHINE SETUP
INK REMAIN [ENT]

6

Press the **ENTER** key.

7

Press **▲** **▼** to select [Case Weight].

INK REMAIN
: Case Weight

8

Press the **ENTER** key.

9

Press **▲** **▼** to choose the cartridge for which you wish to register the weight.

Case Weight
Cart.Slot : 1

10

Press the **ENTER** key.

- 11** Press to enter the weight checked at the Step 1.

Cart. Slot 1
Case Weight = 326g

- 12** Press the .

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

Registering the cartridge weight

Calculate the remaining amount of ink from the ink cartridge weight including the IC chip and ink pack, and adjust the amount.

- (Important!) • You can only register the case weight when SET UP in INK REMAIN is set to "ON". (☞ P.3-14)

- 1** Weigh the ink cartridge on the scale.

- Attach the IC chip and the ink pack when weighing.

- 2** Press the in LOCAL.

FUNCTION
SETUP [ENT]

- 3** Press to select [MACHINE SETUP].

FUNCTION
MACHINE SETUP [ENT]

- 4** Press the .

- 5** Press to select [INK REMAIN].

MACHINE SETUP
INK REMAIN [ENT]

- 6** Press the .

- 7** Press to select [Cart. Weight].

INK REMAIN
: Cart. Weight

8

Press the **ENTER** key.

9

Press **▲** **▼** to choose the cartridge (1 to 8) for which you wish to register the weight.

InkLevelSet
Cart.Slot : 1

10

Press the **ENTER** key.

11

Press **▲** **▼** to enter the weight checked at the Step 1.

Cart.Slot1
INK REMAIN = 640g

12

Check the weight and press the **ENTER** key.

13

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



- When total entered weight of ink exceeds certain quantity, "Save Failure" error occurs again and entry becomes invalid.

Setting Time

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

1

Press the **FUNCTION** key in LOCAL.

FUNCTION SETUP	[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].

MACHINE SETUP TIME	[ENT]
-----------------------	-------

5

Press the **ENTER** key.

TIME 2013.10.05 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 2013.10.05 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.
FUNCTION
SETUP [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 **[UNIT]**.
MACHINE SETUP
UNIT [ENT]
- 5** Press the **ENTER** key.
TEMP
: °C
- 6** Press **▲** **▼** to select a unit of the temperature.
• Set value : °C / °F
- 7** Press the **ENTER** key.
LENGTH
: mm
- 8** Press **▲** **▼** to select a unit of the length.
• Set value : mm / inch
- 9** Press the **ENTER** key.
MACHINE SETUP
UNIT [ENT]
- 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 SETUP	<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
SETUP

[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.

LANGUAGE
: ニホンゴ

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
SETUP [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.

RESET 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.

• The initial setting screen is displayed. (LANGUAGE/TIME)

Confirming Machine Information

The information of this machine can be confirmed.

The following items can be confirmed as machine information.

Item	Description
USAGE	WIPING
	WASTE INK BOTTLE
	PRINT LENGTH
	PRINT AREA
	USE TIME
VERSION	This displays the firmware version of the machine.
LIST	This allows you to print the settings of the machine.
Ink REPL. Report	This prints ink history of this machine.

Displaying the Information

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP

[ENT]

2

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

FUNCTION
INFORMATION

[ENT]

3

Press the **ENTER** key.

INFORMATION
USAGE

[ENT]

4

Press **▲** **▼** to select [USAGE].

5**Press the **ENTER** key.**

- The wiping Information is displayed.
- Every time when you press the **ENTER** key, the next machine information is displayed sequentially.

WIPING

Displays wiping information.

WI PING
= 0**WASTE INK BOTTLE**

Displays waste ink bottle information.

WASTE INK BOTTLE
= 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

- 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.

WI PING
RESET? [ENT]**3**

Convenient use

Check such as the machine version information

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

FUNCTION
SETUP

[ENT]

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

FUNCTION
INFORMATION

[ENT]

3 Press the **ENTER** key.

INFORMATION
USAGE

[ENT]

4 Press **▲** **▼** to select a type of information.

INFORMATION
VERSION

[ENT]

5 Press the **ENTER** key.

- When [VERSION] is selected, the version Information is displayed.
- When [List] is selected, the setting contents of the machine are printed.
- When [Ink REPL. Report] is selected, ink history of this machine are printed.

V1.00
MRL - 111

V1.80

Displaying the Information of this machine

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

*** INK
REMAIN

MMCCYYKK
99999999

2 The information is displayed sequentially with the **ENTER** key .
 • The information shown on the below appear.

Remaining amount of ink

*** INK
REMAIN

Error (when ink error occurs)

NON INK IC
MMCCYYKK

Warning (when warning occurs)

WARNING
Replace WI PPER [MNT]

Media width

MEDIA WIDTH
= 1000mm

Serial No.

SERIAL No.
: * * * * * * *

Version

V1.00
MRL - 111

V1.80

MAIN PCB INFORMATION

MAIN PCB EPL *

RECOVERY NOZZLE

NOZZLE RECOVERY
CONFIRM DETAILS [MNT]

* : EPL or EPL2

Press the **MAINT.** key and confirm the description

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.

Maintenance	4-2	Replacing method of absorber kit	4-15
Precautions for Maintenance	4-2	When Nozzle Clogging Cannot Be Solved ..	4-17
About Cleaning Fluid	4-2	Washing of Head nozzle	4-17
Cleaning the Exterior Surfaces	4-3	Washing nozzle surface	4-20
Cleaning the Media Transfer Surface	4-3	Alternative nozzles for printing, when nozzles missing can not be improved	4-22
Cleaning of after heater cover and pre heater cover	4-3	Automatic Maintenance Function	4-25
Cleaning the Media Sensor	4-4	Setting the Refreshing Intervals	4-25
Cleaning the Media Holder	4-4	Setting the Cleaning Intervals	4-26
Maintaining the Capping Station	4-5	Setting the Cleaning Intervals	4-27
Cleaning the Wiper and Cap	4-5	Replacing consumables	4-28
Washing the Ink Discharge Passage (DISWAY WASH)	4-8	Replacing the wiper	4-28
When the Machine Is Not Used for a Long Time (CUSTODY WASH)	4-9	If a Waste Ink Bottle Confirmation Message Appears	4-29
Cleaning the Head and the Area around It (every day)	4-13	Replacing the Cutter Blade	4-32

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.

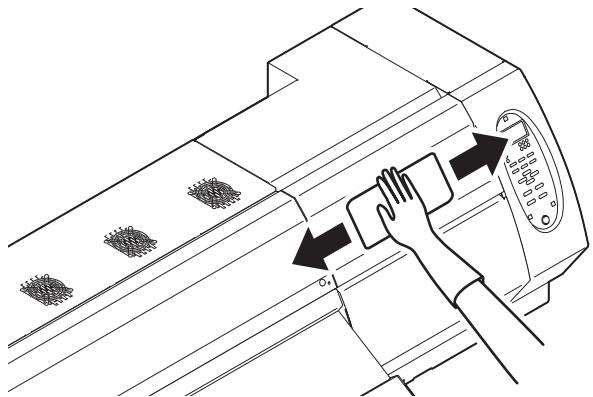
	<ul style="list-style-type: none">When using Cleaning Fluid for maintenance, be sure to wear the supplied protective glasses.
	<ul style="list-style-type: none">The ink contains organic solvent. When cleaning the machine, be sure to wear gloves so that no ink will make direct contact with your skin.
	<ul style="list-style-type: none">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 switch and main power switch, and unplug the power cable; otherwise, an unexpected accident may occur.
	<ul style="list-style-type: none">Prevent moisture from entering the machine. Moisture inside the machine can cause electric shock hazards or damage to the machine.
	<ul style="list-style-type: none">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.When the machine is not to be used for a long time, turn off only the power switch on the front side, leave the main power switch at the side turned ON (in the position of), and leave the power cable connected.
	<ul style="list-style-type: none">If organic solvent ink is mixed with water or alcohol, coagulation is generated. Do not wipe the nozzle face of the heads, wiper, caps, etc. with water or alcohol. Doing so can cause nozzle clogging or machine failure.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 Fluid, ink, etc. not to stick to the cover because this may cause the surface of the cover to deteriorate or deform.

About Cleaning Fluid

Use the cleaning fluid that is recommended by this company.

Cleaning the Exterior Surfaces

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.



Cleaning the Media Transfer Surface

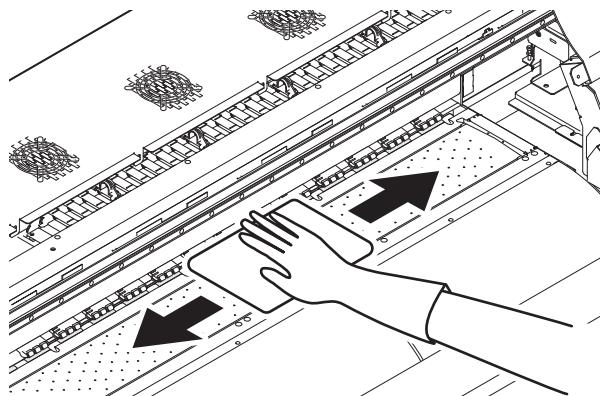
The Media Transfer Surface easily gets dirty with lint, paper dust, etc. generated when a media is cut. Wipe off conspicuous stains with a soft-hair brush, a dry cloth, a paper towel, etc.



- When the Media Transfer Surface is stained with ink, wipe it off with a paper towel containing a small amount of Cleaning Fluid for maintenance.

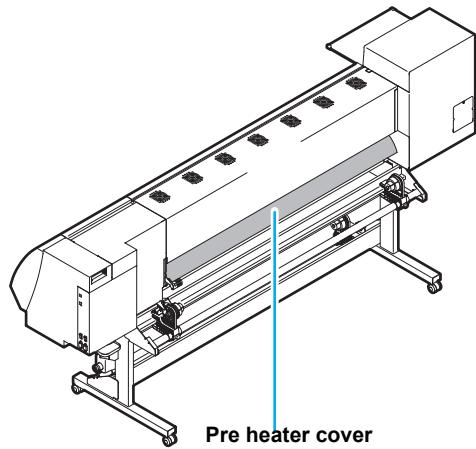
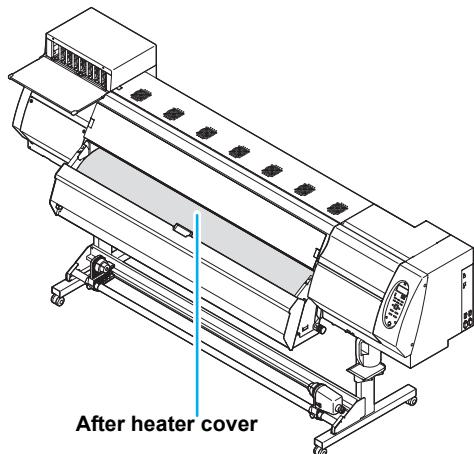
(Important!)

- Before cleaning the Media Transfer Surface, make sure that the Media Transfer Surface has cooled adequately.
- Because dust and dirt are easily accumulated in the slots for holding a media and cutting paper (cutter slot), be sure to clean these parts carefully.



Cleaning of after heater cover and pre heater cover

The after heater cover and the pre heater cover are easy to be dirty because of the powder of the medium etc. If it shows dirt, wipe it with a soft cloth soaked in water or waterish mild detergent and wrung.

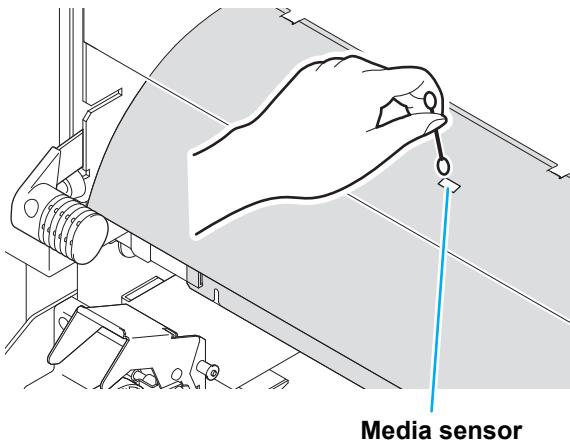


Cleaning the Media Sensor

The media sensors are located on the Media Transfer Surface in the backside and the bottom surface of the head. When the sensor is covered with dust, etc., it may cause false detection of media. Using a cotton swab, remove the dust, etc. accumulated on the surface of the sensor.

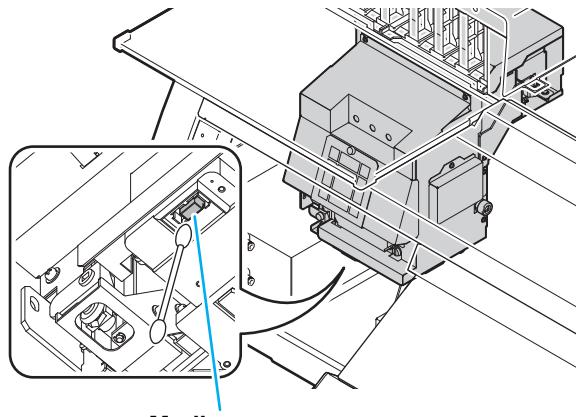
When cleaning the sensor on the lower surface of the head is cleaned, move the carriage to the left end by the operations of step 1 of P.4-13 "Cleaning the Head and the Area around It (every day)", and then clean it.

The backside of the machine



Media sensor

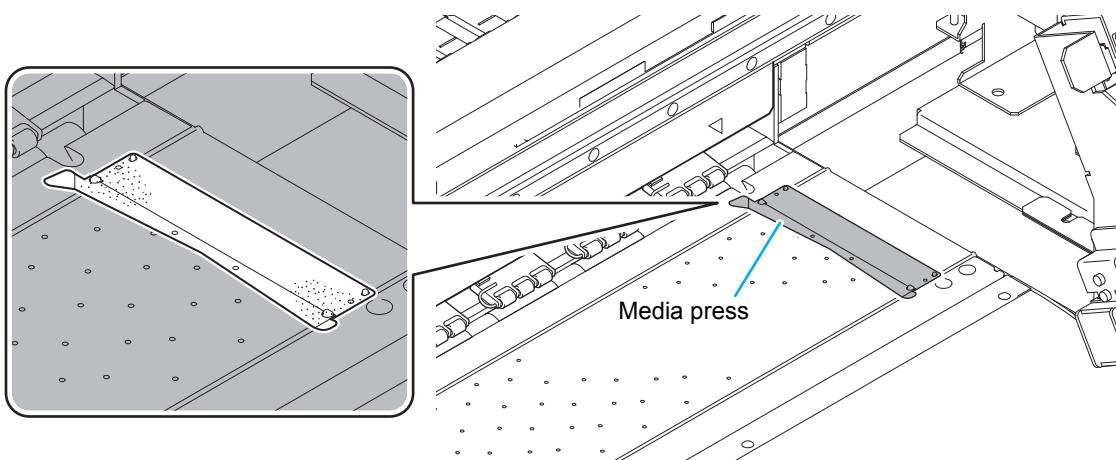
The lower surface of the head



Media sensor

Cleaning the Media Holder

When the media holder is covered with lint, dust, etc., a media cannot be fed normally during printing or dust sticks to the nozzles, which may result in abnormal printing. Clean the media holder regularly.



Maintaining the Capping Station

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

Important!

- To keep the nozzle status normal, perform wiper cleaning frequently.
- The right message is displayed periodically in LOCAL. When you press the **MAINT.** key, it moves to cleaning function.

WIPER CLEANING

[MNT]

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.2-22) has been performed, Clean this machine using the cleaning supplies that are recommended by this company.

Tools required for Maintenance	• Maintenance kit	• Gloves
	• Clean stick	• Goggles



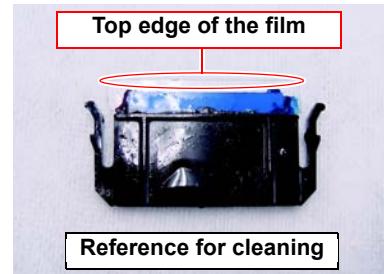
- Be sure to wear the supplied goggles and gloves when maintaining the capping station. Otherwise, you may get ink in your eyes.
- Do not move the carriage out of the capping station by hand. When it is desirable to move the carriage, press the **MAINT.** key to execute the carriage-out. (☞ P.4-5 Steps 1 to 2)

Cleaning the Wiper and Cap

Ink, dust, or paper waste is pooled on the wiper. To keep stable printing quality, wash the wiper and cap at the end of the day.

Important!

- Further, in the cases as explained below, replace the wiper with the new one. (☞ P.4-28)
Even if you clean the wiper enough, nozzle clogging etc. occurs frequently
When the wiper is deformed
When the stuck ink can not be wiped off
When the warning for wiper replacement is indicated
- When cleaning the wiper, be careful that lint from the clean stick or kimwipe® does not get left on the wiper. Remaining lint may cause image quality to deteriorate.
- Clean the wiper completely until the stained ink on the top edge of the wiper film is washed away after soaking the wiper in the Cleaning Fluid for 1-24 hours. It is recommended to prepare two or more wipers and use them alternately.
- If cleaning of the wiper is not enough, it may cause nozzle clogging.
- Do not wash the wiper with other than the Kimwipe®.
Otherwise, lint may remain on the wiper.



Reference for cleaning

1

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

CARRIAGE OUT

[ENT]

2

Press the **ENTER** key.

MOVE POSITION
: STATION MAINT.

3

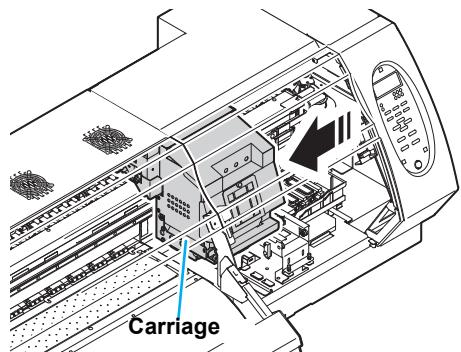
Press **▲** **▼** to select [STATION MAINT.]

MOVE POSITION
: STATION MAINT.

4

Press the **ENTER** key.

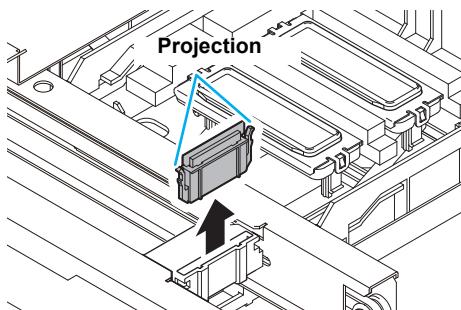
- The carriage moves to the maintenance position.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.



5

Open the right maintenance cover cover then remove the wiper.

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



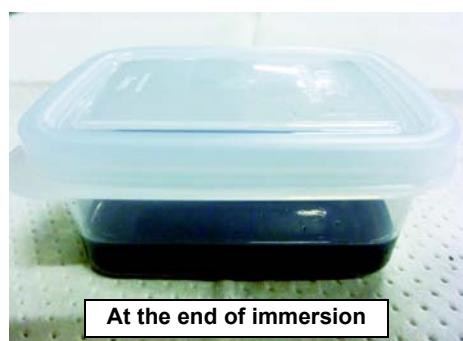
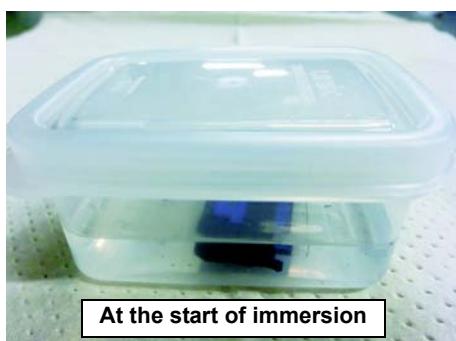
6

Put the wiper that you used for one day into a provided case or solvent-resistance-covered-container (glass, earthenware, etc.) and pour Cleaning Fluid.

- Time to immerse the wiper shall be for 1 to 24 hours.

(Important!)

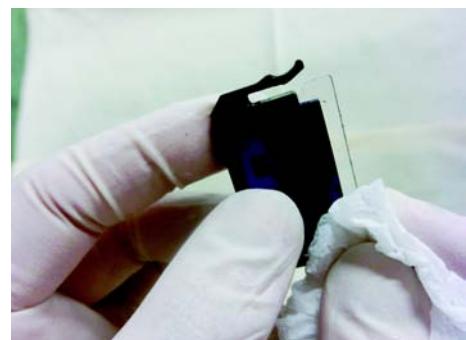
- If you leave the wiper immersed in Cleaning Fluid too long, the wiper may be deformed.
- Dispose the Cleaning Fluid for soaking the wiper if it gets dirty. (As a guide, replace it in a week). Regarding disposal of unused Cleaning Fluid, please ask Industrial waste disposer and pursuant to the regulations of your district.
- For case for immersing the wiper, please use provided case or solvent-resistance-covered-container. In case that you want to immerse the wiper by using your resin case, please make sure to test whether there are no problems such as case deformation before you try.



7

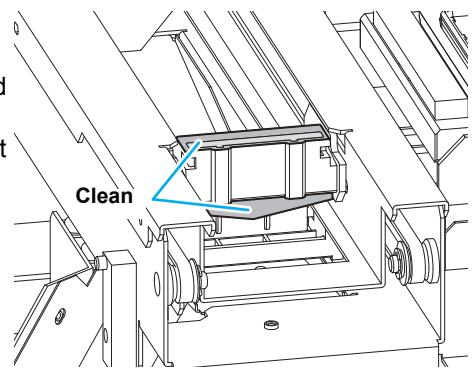
Take out the wiper and remove ink blot etc. with a Kimwipe®.

- Wipe off well so that any lint etc. do not remain on the top edge of the wiper film.

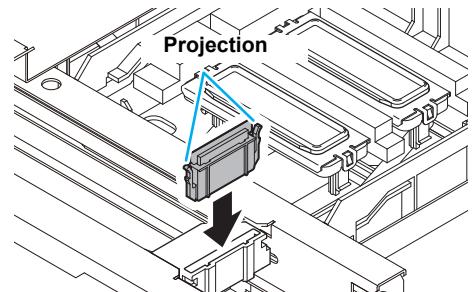


8**Clean the wiper slider.**

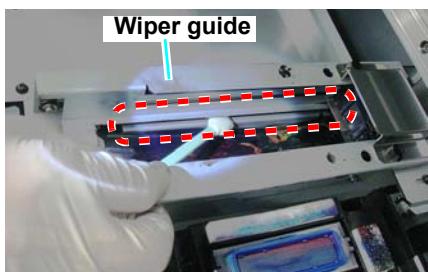
- Wipe off the ink sticking of the figure with a clean stick dipped in Cleaning Fluid for maintenance.
- Wipe off so that Cleaning Fluid for maintenance will not remain.

**9****Set the wiper at the original position.**

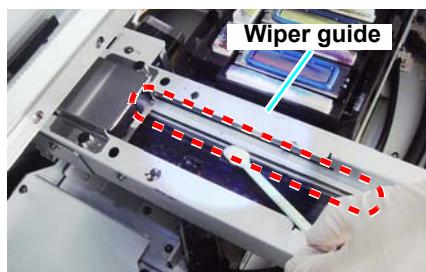
- Insert the wiper by holding both ends of the wiper.

**10****Clean the area around the wiper.**

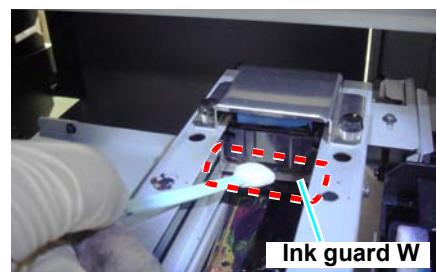
- Dip the clean stick in the cleaning liquid for maintenance, and wipe the space below the wiper guide, and the space between the wiper slider and ink guard W.



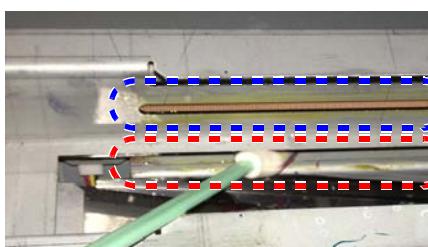
Space below the wiper guide



Wiper guide



Space between the wiper slider and ink guard W



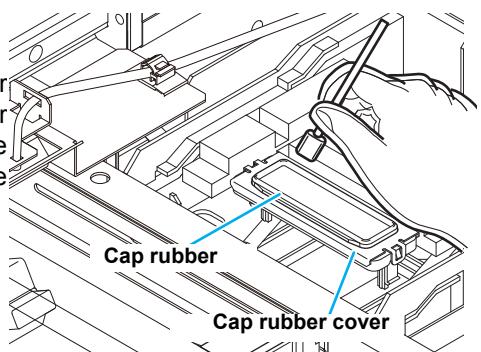
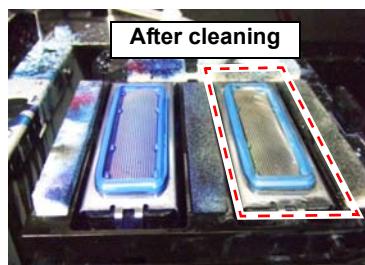
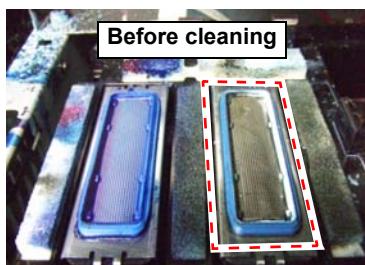
Enlarged view of the Wiper Slider and Ink Guard W

4**Routine Maintenance**

11

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 Fluid for maintenance. (Wipe off so that you can see blue color of the cap rubber.) Wipe off so that Cleaning Fluid for maintenance will not remain.

**12**

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

CLOSE COVER
COMPLETED

[ENT]

13

Close the right maintenance cover then press the **ENTER** key.

- 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(about once a week) 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].

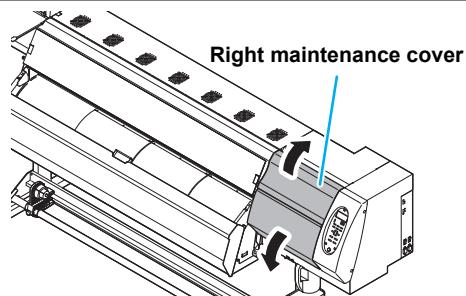
DISWAY WASH

[ENT]

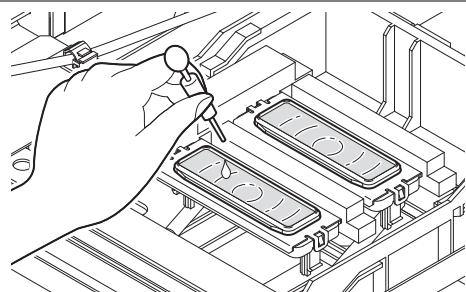
3**Press the **ENTER** key.**

- The carriage moves to the maintenance position.
- Dry suction operation is performed repeatedly until the washing work is completed.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.

D I SWAY WASH
COMPLETED [ENT]

4**Open the right maintenance cover.****5****Fill up the cap with Cleaning Fluid for maintenance.**

- Suck Cleaning Fluid into a dropper and fill up the cap with it. Fill up the cap with cleaning solution on the verge of overflow from the cap.

**6****Close the right maintenance cover and press the **ENTER** key.**

D I SWAY WASH
PLEASE WAIT

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

When the Machine Is Not Used for a Long Time (CUSTODY WASH)**4****Routine Maintenance**

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.

(Important!)

- Use the machine with always turning "ON" the main power. The function preventing nozzle clogging operates automatically to protect the head of the nozzle.
- The head nozzle may result in nozzle clogging if the main power switch is left OFF for a long time.

Check the items on the right beforehand.	Is [NEAR END] or [INK END] displayed? <ul style="list-style-type: none"> The Cleaning Fluid or ink is absorbed when the nozzles are washed. At this time, if the state of "no ink" or "almost no ink" is detected, the nozzle washing operation cannot start. Replace the Eco-cartridge with another from which the state of "almost no ink" or "no ink" is not detected.
---	--



- When the following messages are indicated, check the waste ink bottle, and then operate it, referring to P.4-29 "If a Waste Ink Bottle 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.

WI PER CLEANING
COMPLETED

[ENT]

- The carriage moves to the maintenance position.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.

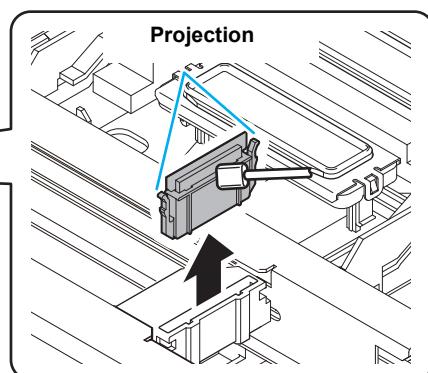
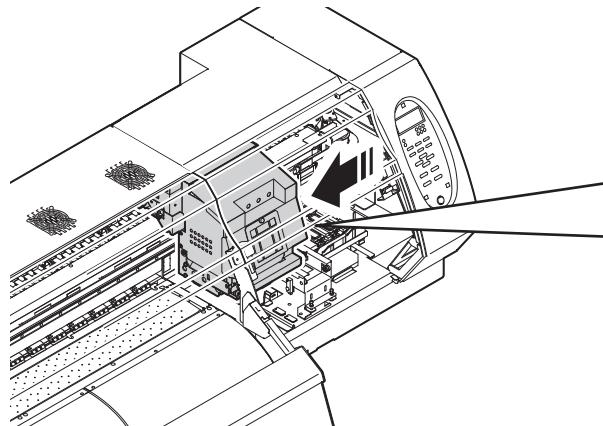
(Important!)

- Until wiper/ bracket cleaning is completed, [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

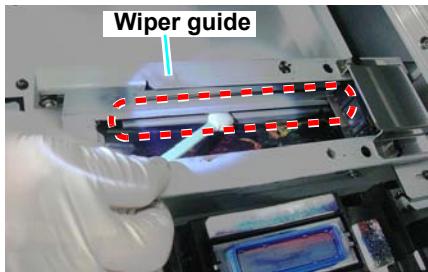
Clean the wiper and the bracket.

- (1) Open the right maintenance cover then 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 Fluid for maintenance. Wipe off so that Cleaning Fluid for maintenance will not remain.
- (3) Insert it in the original position by holding the projections at both ends of the wiper.

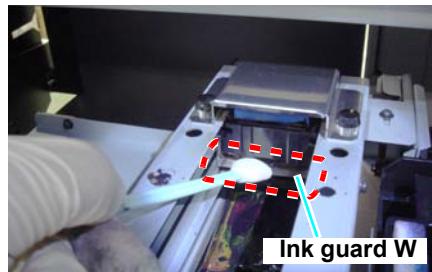
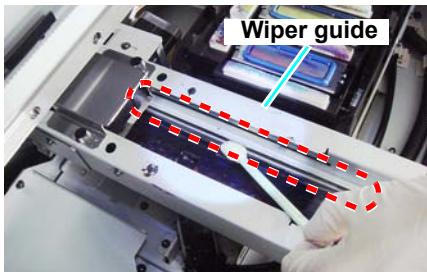


5**Clean the area around the wiper.**

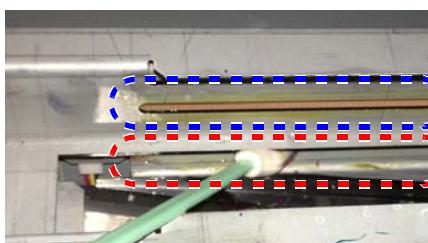
- Dip the clean stick in the cleaning liquid for maintenance, and wipe the space below the wiper guide, and the space between the wiper slider and ink guard W.



Space below the wiper guide



Space between the wiper slider and ink guard W



Enlarged view of the Wiper Slider and Ink Guard W

Do not clean this part

Clean this part along the rail

6**Press the [ENTER] key.**

CAP CLEANING
COMPLETED (NEXT) [ENT]

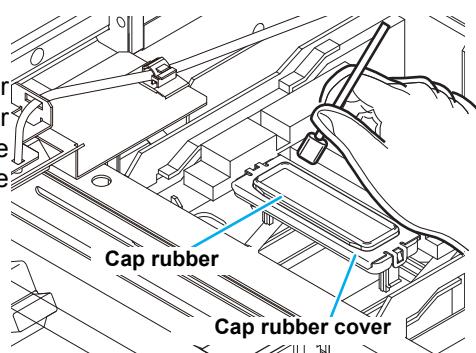
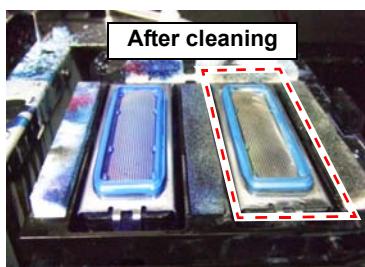
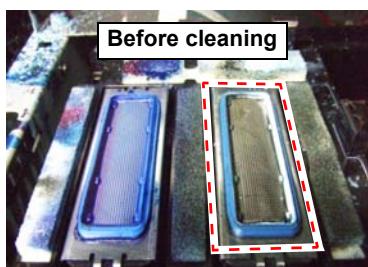
- The carriage moves onto the Media Transfer Surface.

(Important!)

- Until wiper cleaning is completed, [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.

7**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 Fluid for maintenance. (Wipe off so that you can see blue color of the cap rubber.) Wipe off so that Cleaning Fluid for maintenance will not remain.
- At this time, the discharge passage is cleaned automatically.

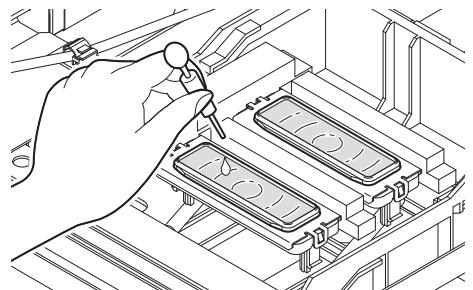
**4****Routine Maintenance**

8**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 right maintenance cover, press the **ENTER** key. If you press the **ENTER** key before washing liquid is filled, the carriage returns to the original position.

9**Fill up the cap with Cleaning Fluid for maintenance.**

- Suck Cleaning Fluid into a dropper and fill up the cap with it. Fill up the cap with cleaning solution on the verge of overflow from the cap.

**10****Close the right maintenance cover and press the **ENTER** key.****LEAVING TIME
= 1 min****11****Press **▲** **▼** to set the time for the Cleaning Fluid to be left as it is.****LEAVING TIME
= 2 min**

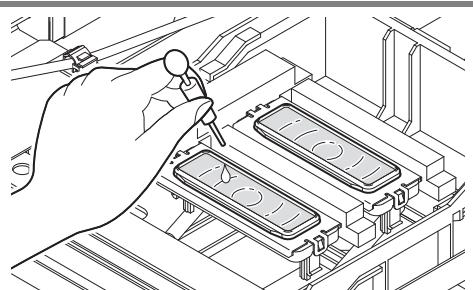
- Set Value: 1 to 99 min (by the unit of 1 min)

12**Press the **ENTER** key.****D ISWAY WASH
COMPLETED [ENT]**

- The nozzles are washed.
- When the nozzles have been completely washed, the head moves to the maintenance position.

13**Open the right maintenance cover.****14****Fill up the cap with Cleaning Fluid for maintenance.**

- Suck Cleaning Fluid into a dropper and fill up the cap with it. Fill up the cap with cleaning solution on the verge of overflow from the cap.

**15****Close the right maintenance cover and press the **ENTER** key.****PLEASE WAIT**

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

Cleaning the Head and the Area around It (every day)

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	• Gloves	• Goggles
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- Be sure to wear the attached goggles and gloves when cleaning the area around the head. Otherwise, you may get ink in your eyes.
- The ink contains organic solvent. If you get the ink on your skin or in your eyes, wash it away with plenty of water immediately.

1

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

CARRIAGE OUT

[ENT]

2

Press the **ENTER** key.

MOVE POSITION
: STATION MAINT.

3

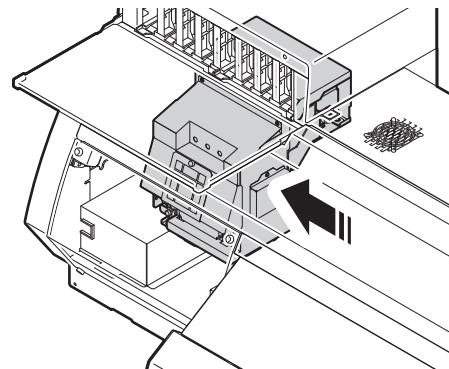
Press **▲** **▼** to select [HEAD MAINT.]

MOVE POSITION
: HEAD MAINT.

4

Press the **ENTER** key.

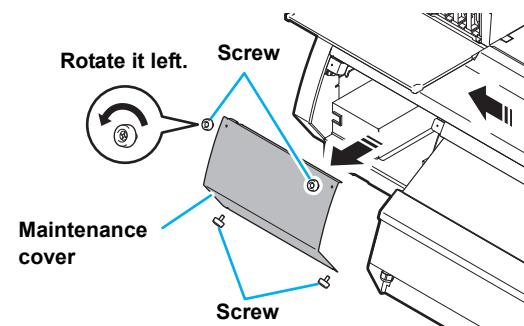
- Carriage will move to the left end of this device.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.



5

Open the left maintenance cover.

- (1) Turn four screws that fix the maintenance cover to the left, and remove them.
- (2) Remove the maintenance cover.
 - If the maintenance cover is hard to remove, use the supplied screwdriver.



4

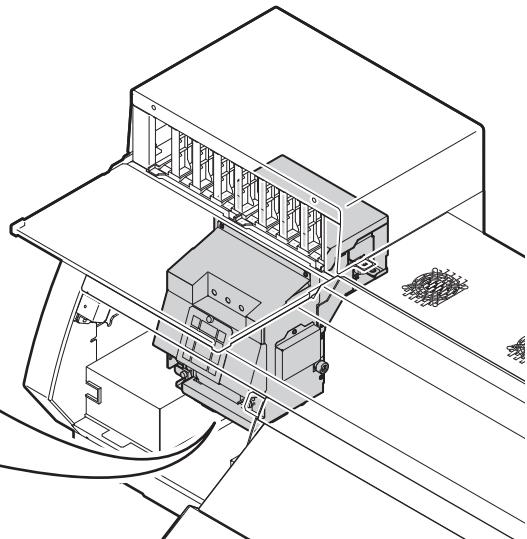
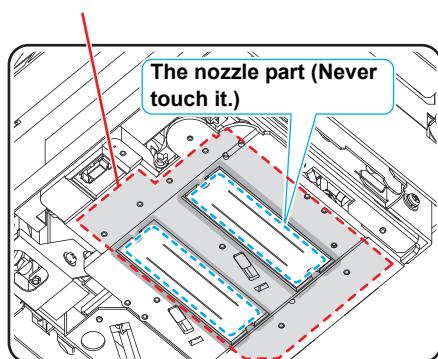
Routine Maintenance

6

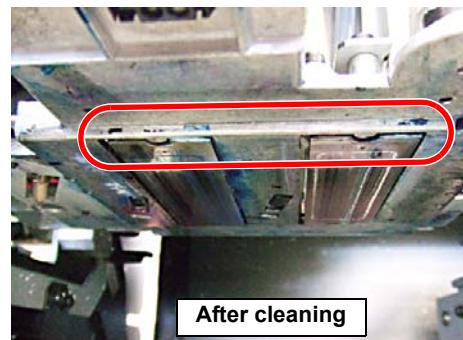
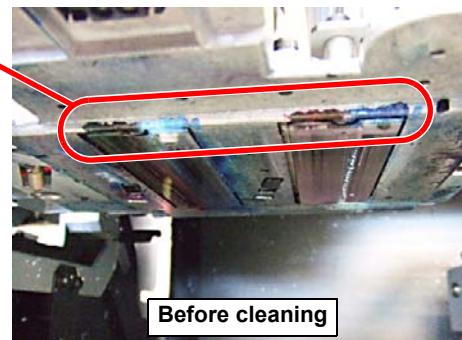
Wipe ink sticking to the side of the head off with a clean stick.

- To prevent gelled/ solid ink ground from pooling at the front of the carriage, scrape them off with clean stick etc.
- Clean the side surface of the head (shown in deep gray) with a clean stick.
- Never rub the nozzles.

Clean with a clean stick.



Wipe off the gelatinous or solid ink residue.



7

Press the **[ENTER] key after the cleaning.**

**Close cover
COMPLETED [ENT]**

8

Close the left maintenance cover then press the **[ENTER] key.**

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

Replacing method of absorber kit

If ink adheres to the absorber, it is required to replace the absorber.

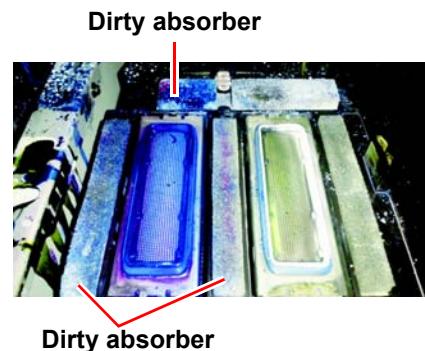
Rough guide for replacement:

Replace when the concavity and convexity of the surface of the absorber are filled with ink as indicated in the right photo.

In addition, when you replace the absorber, clean ink adhering to the capping station at the same time.



- To replace the absorber, the absorber kit separately sold is required. Contact a distributor in your district or our office for purchasing it.

**1**

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

CARRIAGE OUT

[ENT]

2

Press the **ENTER** key.

MOVE POSITION
: STATION MAINT .

3

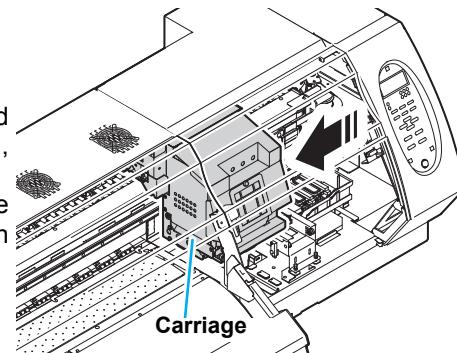
Press **▲** **▼** to select [STATION MAINT.].

MOVE POSITION
: STATION MAINT .

4

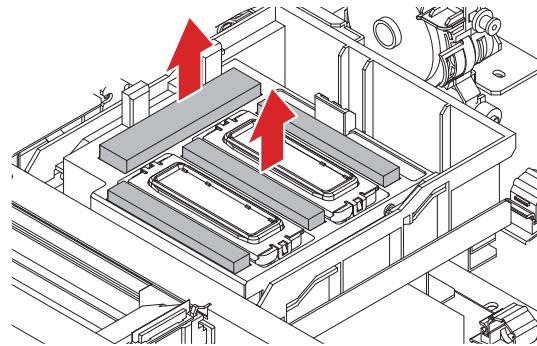
Press the **ENTER** key.

- The carriage moves to the maintenance position.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.

**5**

Open the right maintenance cover then remove the absorber.

- Pull out the absorbers (x 4).

**4**

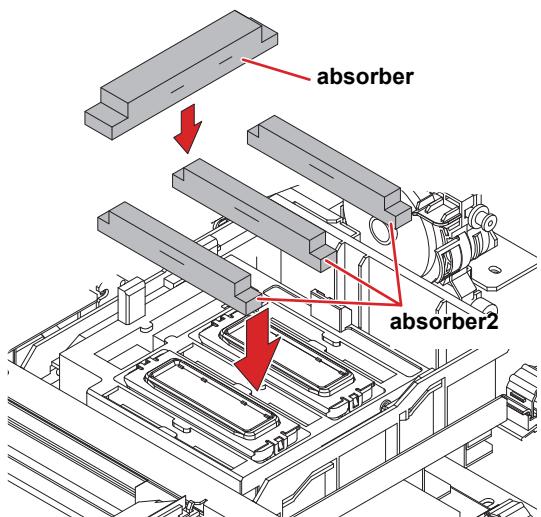
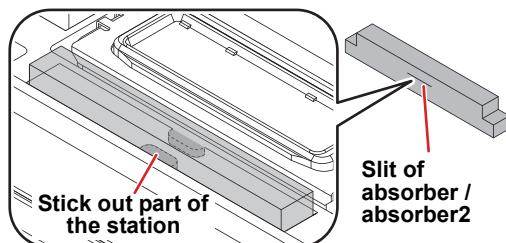
Routine Maintenance

6**Insert a new absorber.**

- There are two types' absorbers and four in total (absorber x 1, absorber 2 x 3).
- Be careful not to mess up the positions to which they are inserted.

Important!

- Check whether stick out part of the station is inserted to slit of the absorber/ absorber 2.

**7****Press the **ENTER** key after the cleaning.**
**CLOSE COVER
COMPLETED**

[ENT]

8**Close the right maintenance cover then press the **ENTER** key.**

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

When Nozzle Clogging Cannot Be Solved

When nozzle clogging cannot be solved even after the head cleaning (☞ P.2-22) has been done, perform the following two functions:

NOZZLE WASH	• Wash the head nozzle. (☞ P.4-17)
Washing nozzle surface	• Wash the nozzle surface. (☞ P.4-20)
NOZZLE RECOVERY	• Alternative nozzles for printing, when nozzles missing can not be improved. (☞ P.4-22)

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 [NEAR END] or [INK END] displayed?

- The Cleaning Fluid or ink is absorbed when the nozzles are washed. At this time, if the state of "no ink" or "almost no ink" is detected, the nozzle washing operation cannot start.
- Replace the Eco-cartridge with another from which the state of "almost no ink" or "no ink" is not detected.

1

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

CARRIAGE OUT

[ENT]

2

Press **▲** **▼** to select [NOZZLE WASH].

NOZZLE WASH

[ENT]

3

Press the **ENTER** key.

WIPER CLEANING

COMPLETED (NEXT) [ENT]

- The carriage moves to the maintenance position.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.

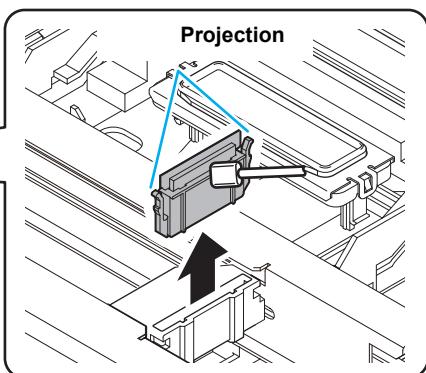
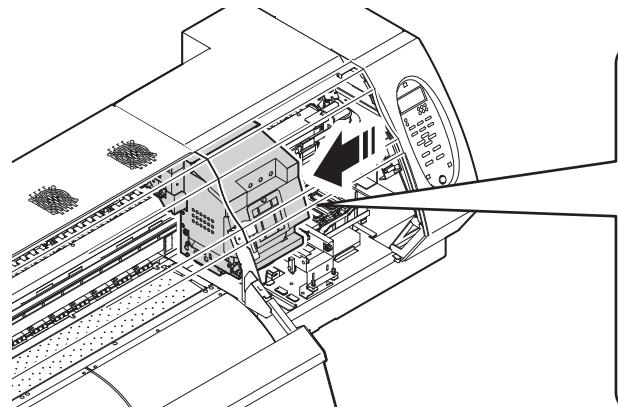
(Important!)

- Until wiper cleaning is completed, [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) Open the right maintenance cover then 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 Fluid for maintenance. Wipe off so that Cleaning Fluid for maintenance will not remain.
- (3) Insert it in the original position by holding the projections at both ends of the wiper.



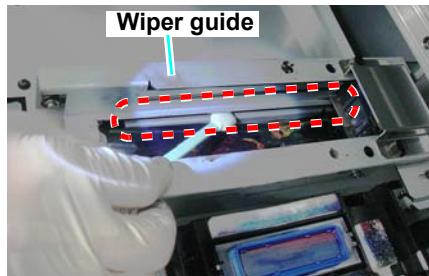
4

Routine Maintenance

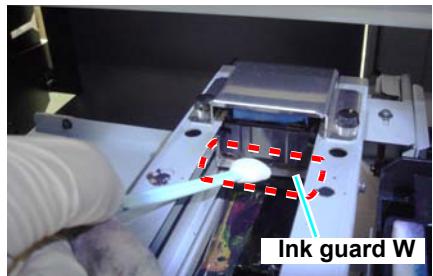
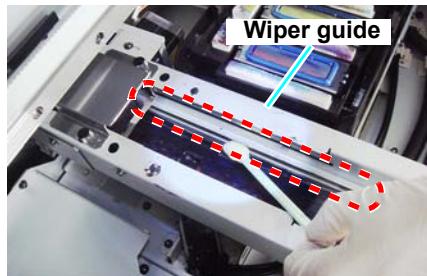
5

Clean the area around the wiper.

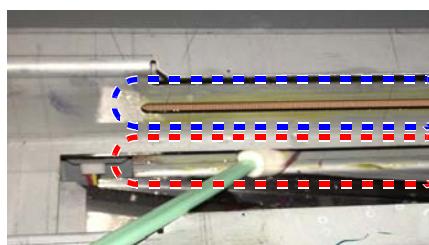
- Dip the clean stick in the cleaning liquid for maintenance, and wipe the space below the wiper guide, and the space between the wiper slider and ink guard W.



Space below the wiper guide



Space between the wiper slider and ink guard W



Enlarged view of the Wiper Slider and Ink Guard W

6

Press the **ENTER** key.

- The carriage moves onto the Media Transfer Surface.

CAP CLEANING
COMPLETED (NEXT) [ENT]

Important!

- Until wiper cleaning is completed, [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.

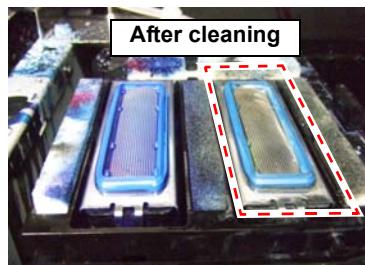
7

Clean the cap rubber and cap rubber cover.

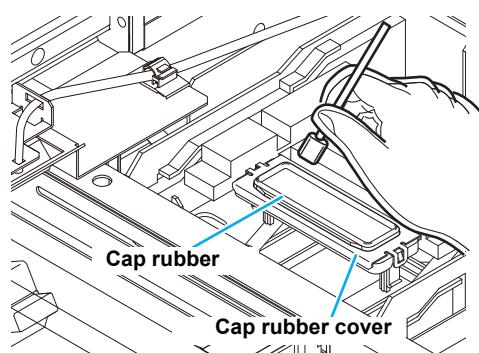
- Wipe off the ink sticking to the cap rubber and cap rubber cover with a clean stick dipped in Cleaning Fluid for maintenance. (Wipe off so that you can see blue color of the cap rubber.) Wipe off so that Cleaning Fluid for maintenance will not remain.
- At this time, the discharge passage is cleaned automatically.



Before cleaning



After cleaning

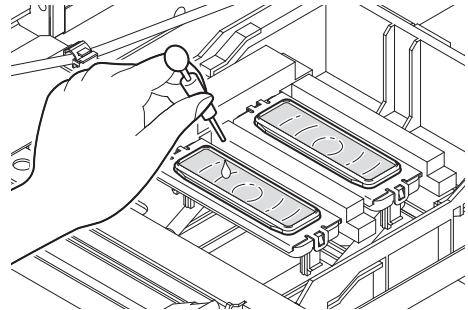


8**Press the **ENTER** key.****Fill the liquid
COMPLETED (NEXT) [ENT]****Important!**

- 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 right maintenance cover, press the **ENTER** key. If you press the **ENTER** key before washing liquid is filled, the carriage returns to the original position.

9**Fill up the cap with Cleaning Fluid for maintenance.**

- Suck Cleaning Fluid into a dropper and fill up the cap with it. Fill up the cap with cleaning solution on the verge of overflow from the cap.

**10****Close the right maintenance cover then press the **ENTER** key.****NOZZLE WASHE
LEAVING TIME : 1 min****11****Press **▲** **▼** to set the time for the Cleaning Fluid to be left as it is.****NOZZLE WASHE
LEAVING TIME : 2 min**

- Set value : 1 to 99 minutes (Unit: minute)

12**Press the **ENTER** key.****PLEASE WAIT
00:00**

- The Cleaning Fluid 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.

**** CLEANING **
PLEASE WAIT****Important!**

- When nozzle missing is not cleared even after nozzle recovery (☞ P.4-22) or this washing is carried out several times, contact the distributor in your region or our service office.

4

Washing nozzle surface

Using dedicated washing liquid and a waste cloth, clean the nozzle surface of the head.

Important!

- Perform this if discharging defect such as nozzle clogging (slight touching of ink or nozzle missing) cannot be improved even if you performed head cleaning (☞ P.2-22) and nozzle washing (☞ P.4-17).

Tools required for Maintenance	• Maintenance kit	• Gloves
--------------------------------	-------------------	----------



- When you usually use photographic fixer, do not leave Wiper for CR in a room filled with vapor of photographic fixer. If you wash the nozzle surface with Wiper for CR left in a room filled with vapor of photographic fixer, 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 use Wiper for CR left in an environment where acidic vapor (acetic acid, muriatic acid, etc.) is generated, the same phenomenon occurs.

1

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

CARRIAGE OUT

[ENT]

2

Press the **ENTER** key.

MOVE POSITION
: STATION MAINT .

3

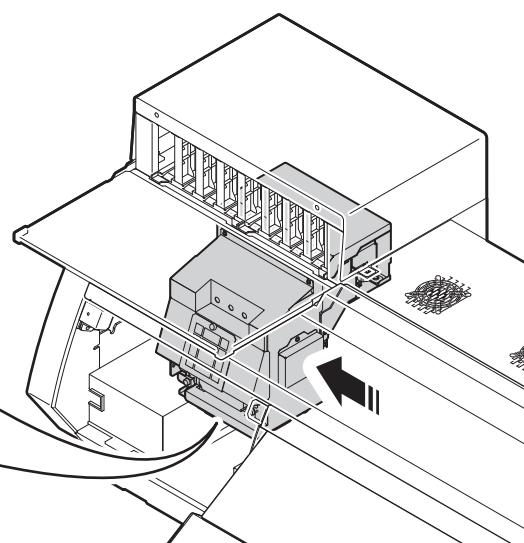
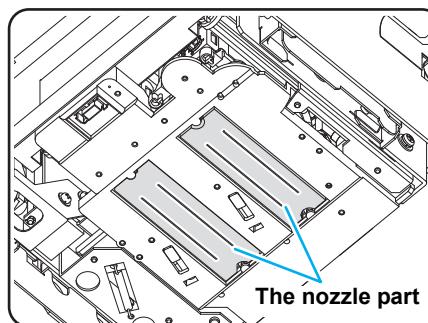
Press **▲** **▼** to select [HEAD MAINT.]

MOVE POSITION
: HEAD MAINT .

4

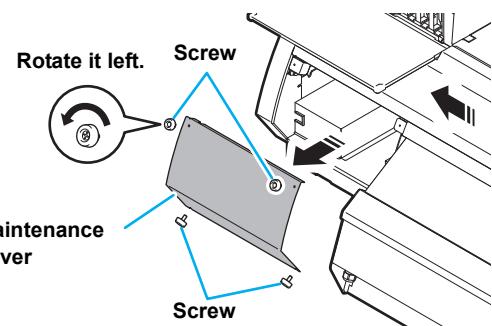
Press the **ENTER** key.

- Carriage will move to the left end of this device.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.



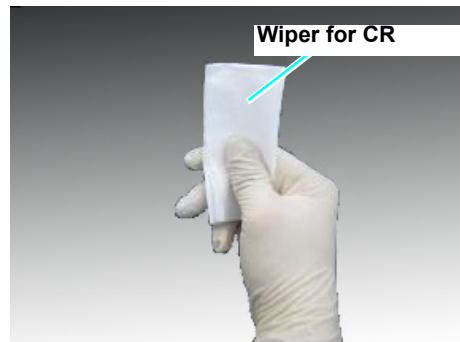
5**Open the left maintenance cover.**

- (1) Turn four screws that fix the maintenance cover to the left, and remove them.
 - (2) Remove the maintenance cover.
- If the maintenance cover is hard to remove, use the supplied screwdriver.

**6****Immerse Wiper for CR in Maintenance kit.**

(Important!)

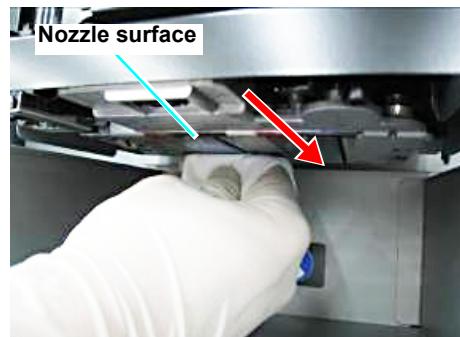
- Immerse much enough so that washing liquid may drip from it.
- Do not wipe the nozzle surface with dry Wiper for CR.

**7****Wipe the nozzle surface of the main body from the front to the rear two or three times with Wiper for CR immersed in the Maintenance kit.**

- Do not rub too strong.

(Important!)

- If Wiper for CR has fluffed, replace it.
- If ink solid adheres to Wiper for CR, change the surface to use for cleaning or replace it.

**8****Press the **[ENTER]** key after the cleaning.**

CLOSE COVER
COMPLETED
[ENT]

9**Close the left maintenance cover then press the **[ENTER]** key.**

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

10**Perform head cleaning. (☞ P.2-22)****11****Perform test printing. (☞ P.2-20)****4**

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.

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

Select the [PRINT] by pressing **▲** **▼** key. Then press **ENTER** key.

NOZZLE RECOVERY
: PRINT

- Select “ENTRY” then “Move to select of the Nozzle line (Step 4) without drawing a pattern”

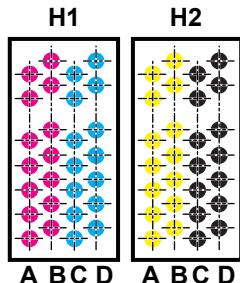
NOZZLE RECOVERY
PRINT [ENT]

3

Press the **ENTER** key.

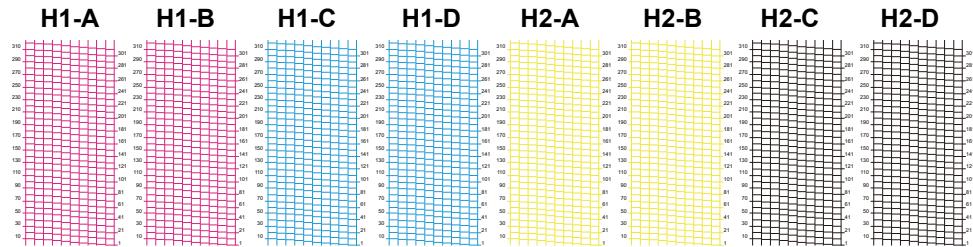
* * PRINTING * *
PLEASE WAIT

Overhead view



Nozzle line

Nozzle pattern



4

Select the Nozzle line that needs NOZZLE RECOVERY by pressing **▲** **▼** key. Then press **ENTER** key.

SELECT NOZZLE
: H1 A

Nozzle line

Head No.: H1 to H2

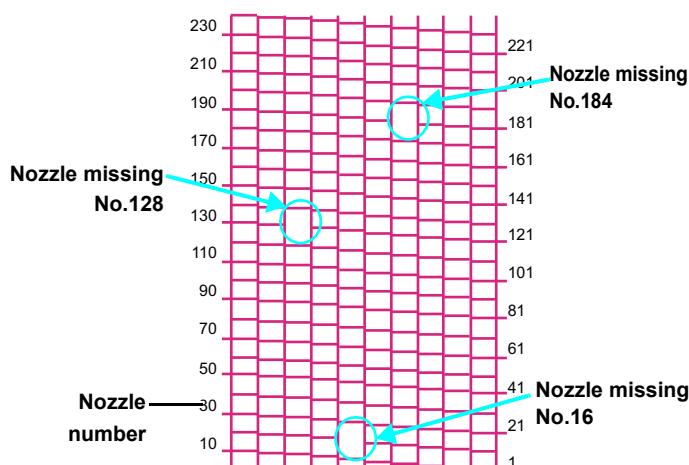
5**Register the Nozzle number that needs NOZZLE RECOVERY and then press [ENTER] key.**

- (1) Select the registration number from 1 to 10 by pressing **[▲]** **[▼]** key and press the **[ENTER]**.
- (2) Register the nozzle number that needs recovery by pressing **[▲]** **[▼]** key and press the **[ENTER]**.
- Check is performed at the same time of the registration. When there is a mode for which nozzle recover is invalid, the screen of the Step 3 of "Check the print condition for which nozzle recovery cannot be performed".

H1 - A
No. 1 184

Recovery nozzle No.:
or OFF

Registration number:
1 to 10

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

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

- Up to 10 nozzles can be registered per 1 nozzle line.
- Even if you use this function, time required for drawing does not change.
- Depending on the registered nozzle, there is a mode on which recovery is not reflected. Check the print condition for which recovery cannot be performed with the check function. (☞ P.4-23)
- When you use white ink, print on the clear film to check.



4

Check the print condition for which nozzle recovery cannot be performed

Depending on the registered nozzle, there is a mode on which recovery is not reflected. Check the print condition for which recovery cannot be performed.



- When there are many registered nozzles, it takes much time to display the checked result.

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

Select the [CHECK] by pressing key.

NOZZLE RECOVERY
: CHECK**3**

Press the key.

- The mode for which nozzle recovery is invalid is displayed.
- If there is no mode for which nozzle recovery is invalid, "NONE" is displayed.

Level at printing
white layerUNRECOVERABLE COND.
: 1200x1200 24p H Lv1

Resolution

Scanning speed

Number of passes

4

Press the key several times to end the setting.

Reset the set value

1

Select [NOZZLE RECOVERY] of the maintenance menu.

- Press the key in LOCAL.
- Press to select [MAINTENANCE] and press the key.
- Press to select [NOZZLE RECOVERY].
- Press the key.

2

Select the [RESET] by pressing key.

NOZZLE RECOVERY
: RESET**3**

Press the key.

SELECT RESET NOZZLE
: H1 - A**4**Select the Nozzle line that needs clear the setting
value by pressing key. Then press
.SELECT RESET NOZZLE
: H1 - AH1 - A RESET
EXECUTE [ENT]**5**

Press the key.

6

Press the 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.
CLEANING(WHITE)	set the cleaning type and intervals between next cleaning to prevent white ink clogging (only when you use white ink).

Important!

- During the right message is displayed, the operation set in the auto maintenance function is not carried out. Perform the operations of P.4-30 if required.
- When the power switch on the front of the machine is turned off, check the waste ink bottle.

<LOCAL>
Check waste ink [MNT]

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.

- Press the **FUNCTION** key in LOCAL.
- Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- 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 : 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.

4

Routine Maintenance

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

5

Press the **ENTER** key.

TYPE
: NORMAL

- The cleaning type selection screen appears.

6

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

TYPE
: SOFT

- Set value : NORMAL, SOFT, HARD



- when white ink is filled, the default setting is "HARD". (For four colors and six colors, it is "SOFT".)
It is recommended for you to use in "HARD" to prevent nozzle clogging.

7

Press the **ENTER** key.

AUTO MAINT.
CLEANING
[ENT]

8

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

Setting the Cleaning Intervals

Set the cleaning type and intervals for cleaning of white ink.

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(White)].

AUTO MAINT.
CLEANING [ENT]

3

Press the **ENTER** key.

CLEANING(White)
: Lv. 1

4

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

CLEANING(White)
: Lv. 1

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

5

Press the **ENTER** key.

TYPE
: NORMAL

- The cleaning type selection screen appears.

6

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

TYPE
: SOFT

- Set value : NORMAL, SOFT, HARD

7

Press the **ENTER** key.

AUTO MAINT.
CLEANING(White) [ENT]

8

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

4

Replacing consumables

Replacing the wiper

The wiper is consumable. When the display indicates that it is necessary to check and 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 WI PER [MNT]

(Important!)

- When the warning message for replacing wiper is shown, confirm whether there is no damage and fuzz at the top edge of the wiper film. If there is no damage on the top edge of the wiper film, it is possible to use the wiper continuously without replacing it.
- A wiper is a consumable. Buy one through the dealer in your region or at our service office.
- When you replace it before the message is displayed, first perform carriage out and then replace it.
(☞ P.4-5 Steps 1 to 2)
After replacing, reset the counter for the number of times the wiper was used. (☞ P.3-25)

1

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

REPLACE WI PER
EXECUTE [ENT]

2

Press the **ENTER** key.

REPLACE WI PER
COMPLETED [ENT]

- The carriage moves to the maintenance position.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.

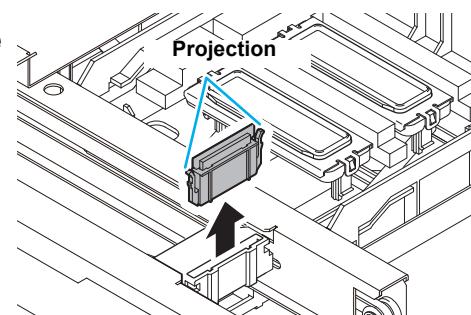
(Important!)

- Until the replacement work is completed, [COMPLETED: ent] is displayed on the screen.
After the work up to the Step 4 is completed and you close the right maintenance cover, press the **ENTER** key.

3

Open the right maintenance cover then remove the wiper.

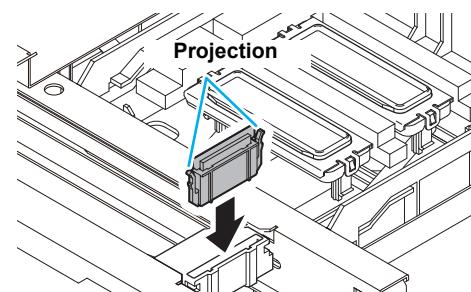
- Pull out the wiper by holding the protrusions at its both ends.



4

Insert a new wiper.

- Insert a new wiper by holding its both ends.



5

Close the right maintenance cover then press the **ENTER** key.

CLOSE A COVER

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



PLEASE WAIT

If a Waste Ink Bottle Confirmation Message Appears

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



- The message "Check waste ink" is displayed when it reaches 80% (1.6L) of the 2L tank.
- When the amount of waste ink reaches 100% (2.0L), the message "WASTE INK FULL" is displayed.

Confirmation Message in LOCAL

1

The message on the right is displayed.

<LOCAL>
Check waste ink [MNT]

<LOCAL>
WASTE INK FULL [MNT]

2

Check the state of the waste ink bottle

- When it is different from the actual amount, press and correct.
- When you correct (80%), press the key to return to LOCAL.
- When you replace (disposal) and clear the count, perform the procedures in "Replace the waste ink bottle with another". (☞ P.4-30)

Check waste ink
Level : 80%(1.6L)

When performing waste ink bottle replacement before a confirmation message appears, be sure to set the waste ink bottle level to 0% after the bottle is replaced.

Setting the waste ink bottle level to 0%

Set the waste ink bottle level to 0%.

1

Select [WASTE INK BOTTLE] of the maintenance menu.

FUNCTION
INFORMATION [ENT]

- Press the in LOCAL.
- Press to select [INFORMATION] and press the .
- Press to select [USAGE] and press the .
- Press to select [WASTE INK BOTTLE].

INFORMATION
USAGE [ENT]

2

Press the .

WASTE INK BOTTLE
= 40%

3

Press to change the setting to 0%, and then press the .

Check waste ink
Level : 40%(0.8L)

4

Routine Maintenance

4

The waste ink bottle level indicates 0%.

WASTE INK BOTTLE
= 0%

Replace the waste ink bottle with another

1

The message on the right is displayed.

<LOCAL>
Check waste ink [MNT]

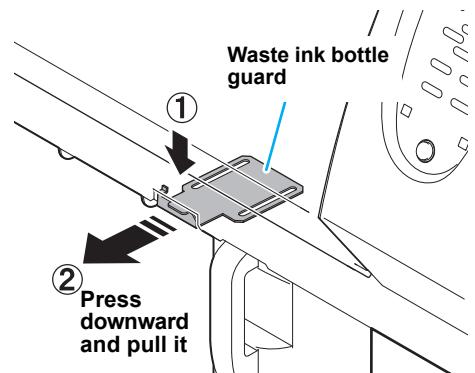
2

Press the **MAINT.** key and check the state of the waste ink bottle

Confirm a waste bott
Level: 80%(1.6L)

3

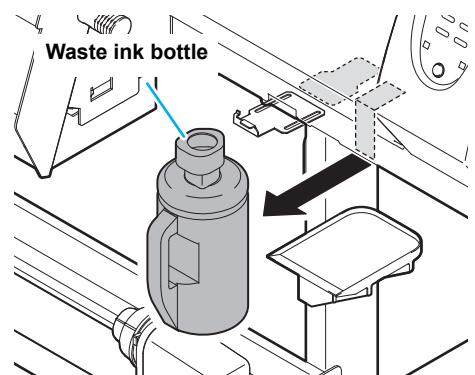
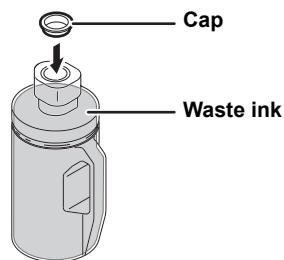
Press the waste ink bottle guard downward to open to the front.



4

Pull it frontward to remove by holding the waste ink bottle handle.

- Put a cap on the waste ink bottle removed.

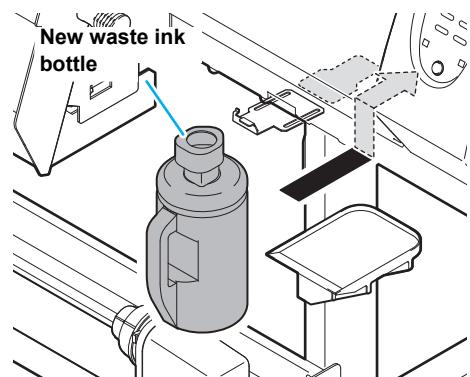
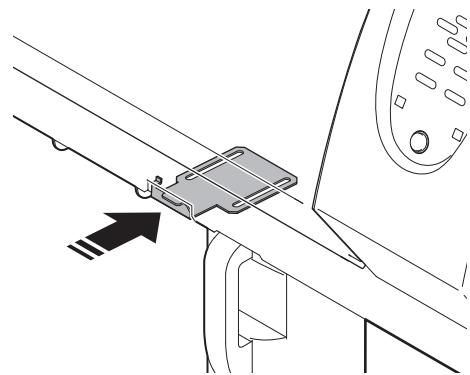


5**Replace the waste ink bottle.**

- (1) Prepare a new waste ink bottle that is recommended by this company.
- (2) Insert the waste ink bottle by holding a handle of the tank.



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

**6****Close the waste ink bottle guard.****7****Press the **ENTER** key.**

- The ink discharging amount that is controlled by the machine is reset and the message is cancelled.

COUNT	RESET
EXECUTE	[MNT]

4**Routine Maintenance**

Replacing the Cutter Blade

The cutter blade is consumable. When the cutter blade gets dull, replace it with a new one that is recommended by this company.



- The blade is sharp. Be careful not to hurt yourself or anyone else.
- Store the cutter blade in a place that is out of the reach of children. In addition, dispose of used cutter blades according to regional laws and regulations.
- When replacing the cutter blade, it is recommended to place a sheet of paper under the cutter blade. This will help pick up the cutter blade if it drops.

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 .

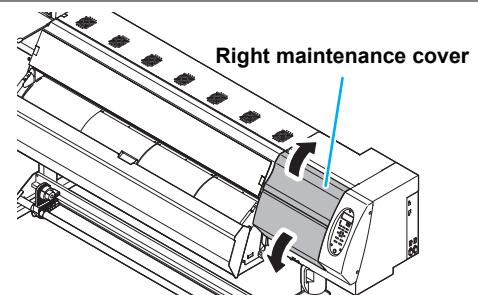
4

Press the **ENTER** key.

- The carriage moves to the maintenance position.

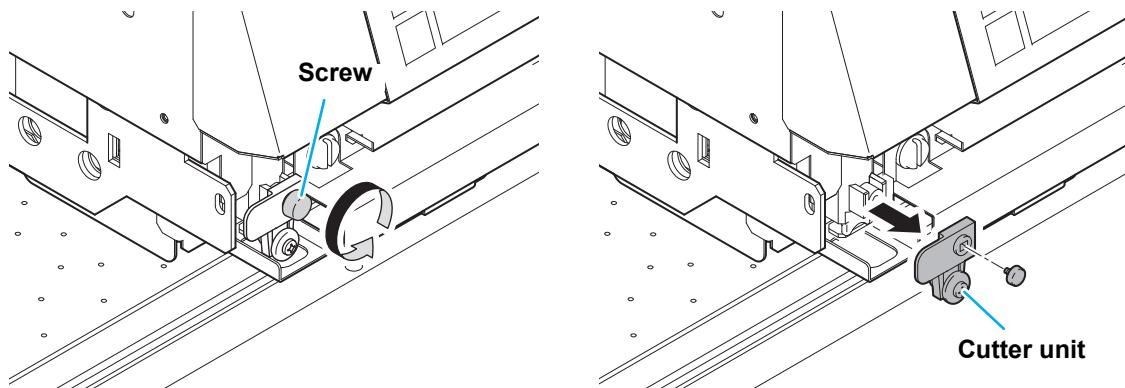
5

Open the right maintenance cover.



6**Replace the cutter unit by the carriage.**

- (1) Loosen the screw of the cutter unit.
- (2) Remove the cutter unit.
- (3) Mount a new cutter unit.
- (4) Fasten the screw of the cutter unit to secure the cutter unit.

**7****Close the right maintenance cover.****8****Press the **ENTER** key.**

- The screen returns to step1.

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.

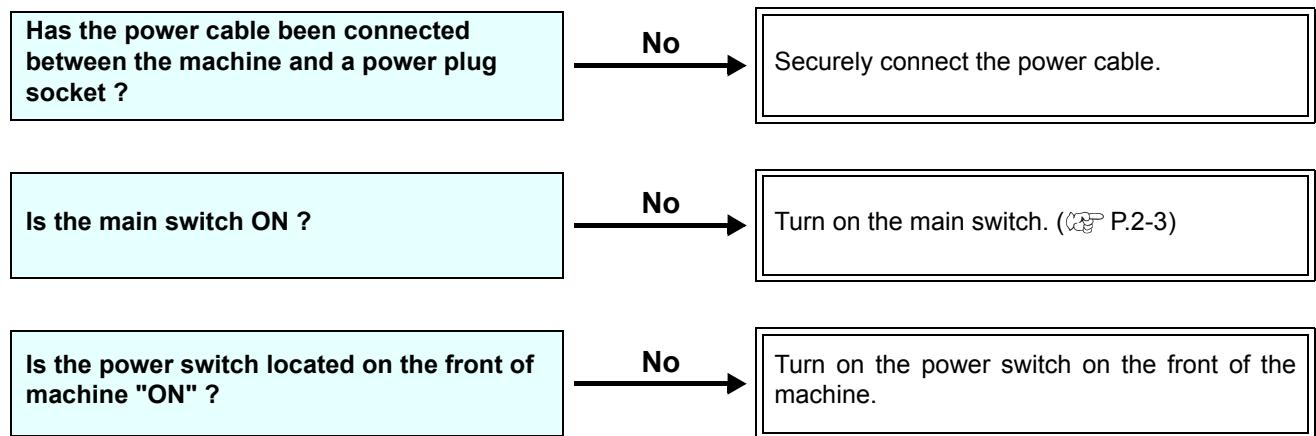
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Warning messages	5-19
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Troubleshooting

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 RICOH.

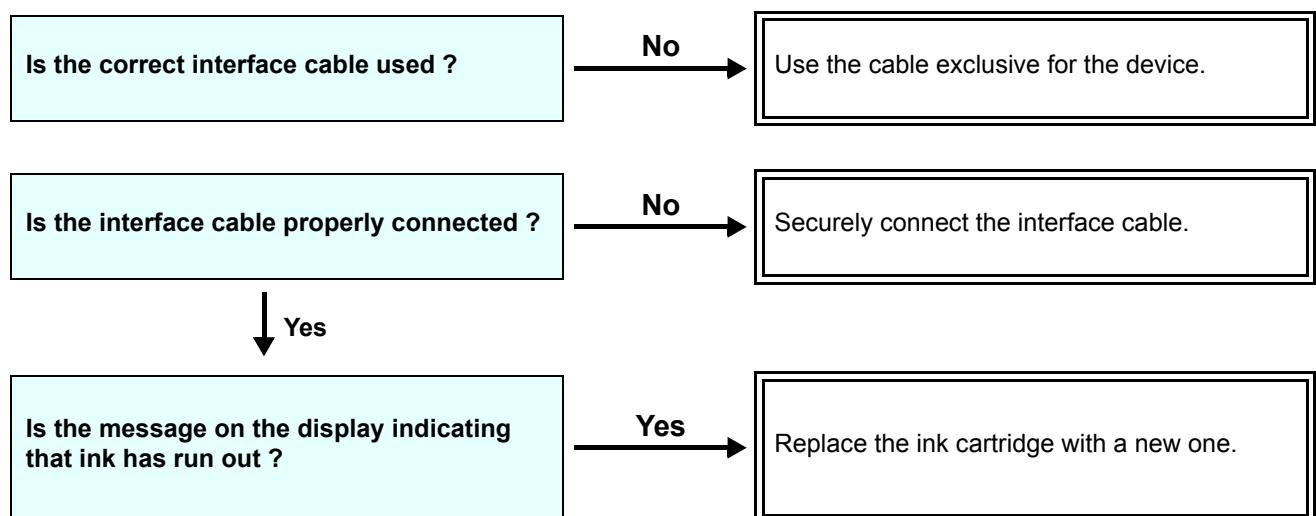
Power does not turn on

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.



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.



Media get jammed / media is soiled



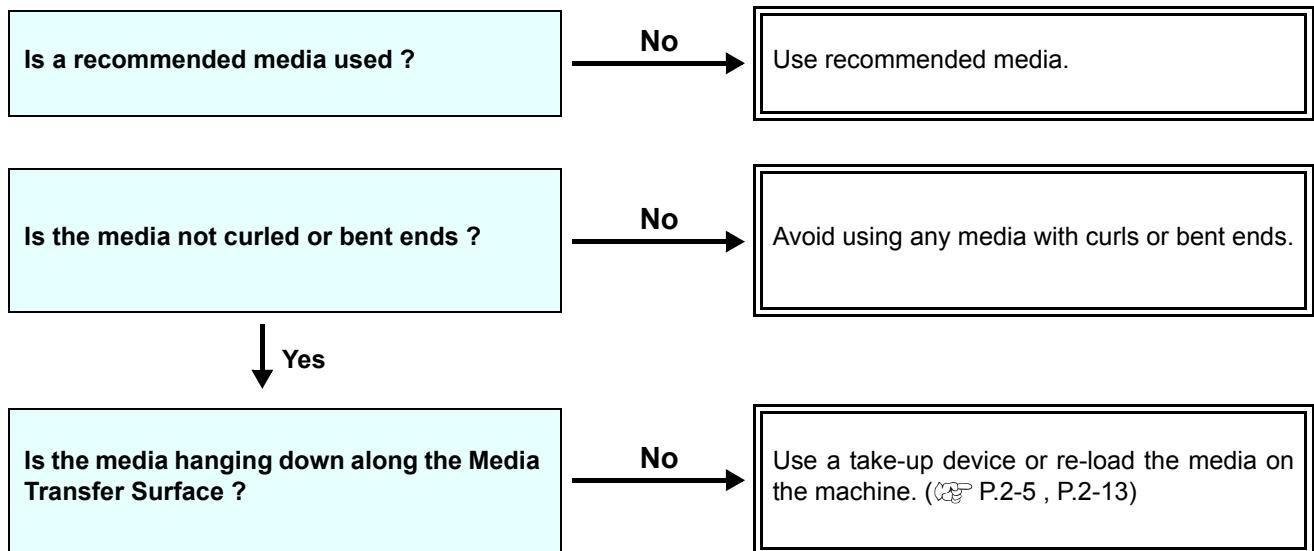
- Do not open or remove the cover or screws other than the ones described in this manual. The machine contains parts that are charged with high voltage and cause electrical-shock hazard. For the checkout, maintenance, or repair of the machine's internal parts, contact your service representative.
- Never disassemble or remodel the machine. Doing so may result in fire or electrical-shock hazard.



- There is a cutter inside the machine for cutting print media. Do not touch any other parts other than the ones described in this manual when replacing media or removing jammed media. Doing so may result in injury.
- Be careful not to get your fingers caught inside the machine and injured when removing jammed media.
- Always wear gloves when removing the jammed media if the ink on the media has not yet dried. Also, be careful not to touch the wet printed surface with your clothes.



- In order to remove the jammed media, open the front cover, pull out the media from the front side of the machine, and then cut the media.
- Be careful not to rip the media and leave a small piece of it inside the machine when removing jammed media. If a piece of media is left inside the machine, it may cause paper jam to occur again. It may also cause the machine to malfunction.
- Be careful not to let the ink on the printed side of the jammed media to come in contact with the interior surface of the machine. It may cause the back side of the media to get dirtied. If the back side of the media gets dirtied after removing a jammed media, clean the media transfer surface. For the procedure for cleaning the media transfer surface, see P.4-3 "Cleaning the Media Transfer Surface".
- If media jam occurs repeatedly, consult your service representative.
- A media being jammed or dirtied may be caused by the problem of the media itself or how it has been set.



[HEAT] or [CONSTANT] LED does not light up

Check the basic operation.

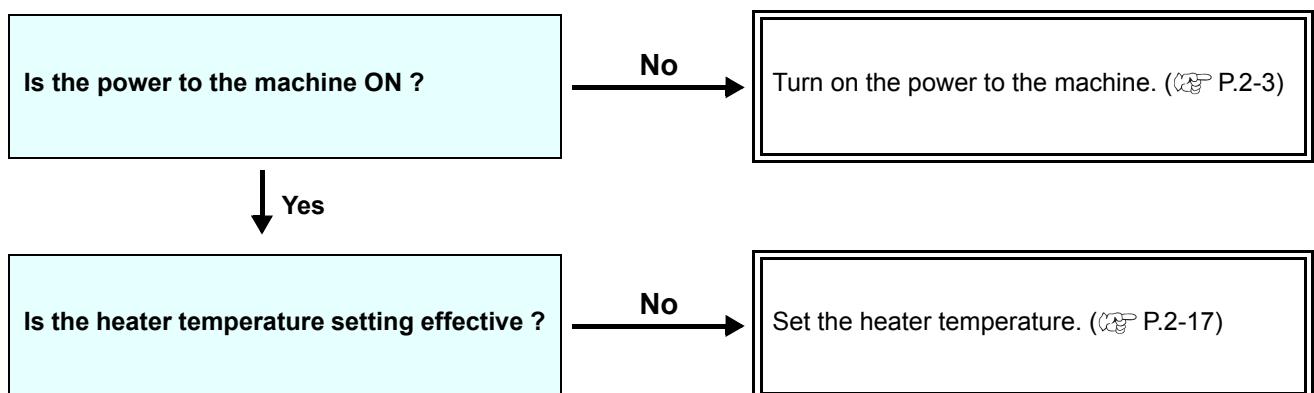


Image quality is poor

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 RICOH.

Phenomenon	Measures
The colors in the printed image appear uneven	(1) Perform the "FEED COMP". If the media feeding rate is too high, areas of uneven or thin colors may appear. Decrease the feeding rate in this case. If the media feeding rate is too low, lines of darker colors appear. Increase the feeding rate in this case. (2) Use unidirectional printing. For the procedure to specify the setting, see RICOH Software RIP Reference Guide. (3) Print using the print mode with increased printing passes.
White lines/blur (in the direction of travel of the heads) that can be resolved by head cleaning frequently appear	(1) This may occur when the machine is placed in an environment where a large change in temperature suddenly occurs. Set the air conditioner in the room so that the room temperature is kept within 22 to 23 degrees Celsius. (2) Repeat the Head Cleaning [HARD] several times. ☞ P.2-22 (3) Perform the ink refresh.

About the Ink Refresh function of L4130/L4160

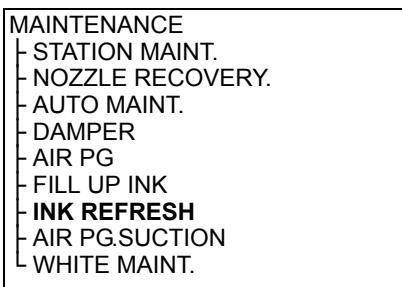
Ink Refresh consumes more ink than head cleaning. Therefore, use the Ink Refresh function only when a satisfactory image quality cannot be obtained after head cleaning is performed several times.

● Purpose

This replaces the old ink in the ink supply path with new ink to prevent clogged nozzles and reduce splashes that occur while printing.

● Description

Select [INK REFRESH] of the maintenance menu to execute the function.



● Ink Refresh Workflow

1**[Start]**

- Select INK REFRESH and press the **ENTER** key.

MAINTENANCE
INK REFRESH [ENT]

2**[Select Color]**

- Use the cursor keys to select the nozzle line to perform the INK REFRESH function. (Nozzle lines on Head 1 and Head 2 cannot be simultaneously selected)
- Press the **ENTER** key. The function will automatically proceed.

SELECT COLOR
: ----- K-

3**[Preparation]**

- Move the target head (the head to which the selected nozzle line belongs) over the wiper unit.
- Supply ink until all the dumpers on the target head are filled to their ink limit.

INK REFRESH
PLEASE WAIT

4**[Purge]**

- Supply ink on the selected nozzle line to purge the old ink from the supply tube.

INK REFRESH
00:10:00

5**[Solved]**

- Use the suction pump to absorb the ink from the target head to resolve its INK LIMIT status.

INK REFRESH
PLEASE WAIT

6**[Hard Cleaning]**

- Perform hard cleaning on all heads, as the heads have been uncovered for too long.

** CLEANING **

5

Important!

- After the ink refresh process is completed, print a test pattern to check the condition of the nozzles. If the colors are mixed, resolve the problem by manually performing procedures such cleaning the heads.
- It will take approximately 15 minutes to perform the procedures from the Step 3. [Preparation] to 6. [Hard Cleaning].
- The ink refresh process cannot be performed until an ink error or waste ink bottle error is resolved or the cover is closed.

Nozzle is clogged

When nozzle clogging is not dissolved even after the head cleaning referring to P.2-22, make sure the following operations.

- Wash the head nozzle by the operations of P.4-17.
- Clean the nozzle surface by performing the operations described on P.4-20.
- Recovery the nozzle by the operations of P.4-22.
- Remove air from inside the print head by performing the operations described on P.5-10.

Ink cartridge warning appears

If an ink cartridge trouble is detected, the cartridge LED "red" is lit, and a warning message appears. None of printing, cleaning and all the other operations that use ink is available. In this case, replace the ink cartridge in question immediately.

Important!

- Once cartridge trouble is displayed, do not leave the ink cartridge 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 RICOH's service engineer.

Displaying the description of ink cartridge trouble

The contents of cartridge error are confirmable by the following operations.

1

Press the **ENTER** key in LOCAL.

INKS
REMA I N

MMCCYYKK
3 4 5 6 7 8 9 9

2

Press the **ENTER** key.

NON INK IC
MMCCYYKK

- When multiple cartridge defects occur and if you press the **ENTER** key or **◀ ▶**, they are displayed by turns.

“Check Ink Pack” appears

When you are using the eco cartridge and there is a problem with the ink pack, the cartridge lamp lights up red, a warning message is displayed and all the operations related to the ink supply become unavailable. Check whether there is any ink left inside the ink pack as soon as possible.

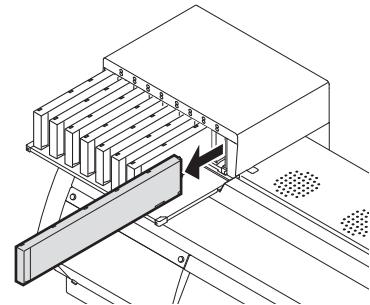
1

Press the  key several times to return to LOCAL.

2

Remove the cartridge for which “Check Ink Pack” is displayed.

- Remove the cartridge where the ink station cartridge lamp has lit up red.

**3**

Check whether there is any ink left in the ink pack.

- Open the eco cartridge lid (see step 1 in “How to assemble ink cartridge” on P.1-12).
 (1) Check the ink pack.
 (2) Return the ink pack to its original position and close the lid of the eco cartridge.

4

Return the eco cartridge that you checked in step 3 to the original ink slot.

- If you are using the firmware version 3.20 or older, “Check Ink Pack” is removed and the cartridge is ready to be used.
- If you are using the firmware version 3.40 or later, the screen on the right is displayed. Perform the following steps according to the status of the ink pack.

Ink Remaining?	: 1
NO <	> YES

If there is ink left inside the ink pack :

Press  and select “YES”.

If there is no ink left inside the ink pack :

Press , select “NO”, and then press the  key.

Ink Remaining?	: 1
INK END	[ENT]



If you press  and select “YES”

- You can continue using the original eco cartridge.

If you press  and select “NO”

- If you press the  key, the eco cartridge status changes to “INK END”. Refer to P.1-12 “How to assemble ink cartridge”, and change the ink pack and the IC chip.

5

When the INK REMAIN Setting Message is Displayed

If the remaining amount of ink inside the cartridge falls below a specified level when [SET UP] in INK REMAIN of MACHINE SETUP is set to "ON" (☞ P.3-14), a warning message appears on the display. When the message appears, perform the following steps to adjust the ink cartridge weight. Please prepare your scale (which can weigh up to 1200g in 1g).

1

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

- The slot with the ink cartridge for which you need to register the weight is selected automatically.

SLOT 1
INK REMAIN = 800 g

2

Weigh the ink cartridge on the scale.

- Attach the IC chip and the ink pack when weighing.

3

Press **▲** **▼** to enter the weight of cartridge checked at the Step 2.

SLOT 1
INK REMAIN = 800 g

4

Press the **ENTER** key.

SLOT 1
800 g OK? [ENT]

5

Check the weight and press the **ENTER** key.

- If there are other slots for which the weight registration is necessary, each slot is automatically numbered. Repeat steps 2 to 4.
- If there are no more slots where the weight registration is necessary, you will automatically return to LOCAL.

When Error 618 to 61b occur

Error 618 to 61b are errors related to the damper.

Execute following procedures when an error about damper occurs, or when the nozzle is not unclogged after cleaning.

1 Select [DAMPER] 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 [DAMPER].

2 Press the **ENTER** key.

SELECT DAMPER
: MMCCYYKK

3 Select the damper to maintenance.

- Select the damper with the **◀** **▶** key.
- If Error 61b occurs, an appropriate head is selected. Press **ENTER** key.
- Selectable unit is three types of "MMCC_ _ _ _", " _ _ _ YYKK", and "MMCCYYKK".

4 Press the **ENTER** key.

DAMPER 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.

Important!

- If "Error 61a" has occurred during printing or waiting, "damper" of the MAINTENANCE MENU is performed automatically.

When nozzle missing occurs due to ink mixture or aeration

Push out ink and air in the head from the port.

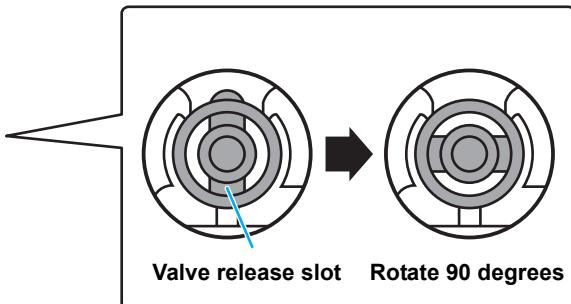
Use this when ink has been mixed in the port, or nozzle missing due to aeration occurs.

In addition, if nozzle missing cannot be solved even if you performed cleaning because it has not been used for long time (for about two weeks), perform air purge.

1

Open the right maintenance cover, and then open the air purge valve.

- Using a flat-blade screwdriver, rotate the air purge valve so that its slot is aligned horizontally.



2

Select [AIR PG] of the maintenance menu.

- Press the **FUNCTION** key in LOCAL.
- Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- Press **▲** **▼** to select [AIR PG].

3

Start air purge by pressing the **▶** key.

- When completing air purge, press the **◀** key to proceed to the Step 14.

AIR PG
END < > START

4

Select the damper to air purge.

- Select the damper with the **◀** **▶** key.
- Selectable unit is two types of "MMCC_ ___" and "___ YYKK".

SELECT DAMPER
: MMCC_ ___

5

Press the **ENTER** key.

AIR PG POSITION
MOVE START [ENT]

6

Press the **ENTER** key.

- The carriage moves onto the wiper.
- Wait for a while until preparation for opening the port has been completed.



- The head corresponding to the damper selected in the Step 4 moves on the wiper.

PLEASE WAIT

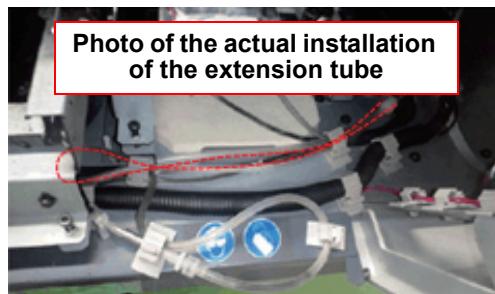
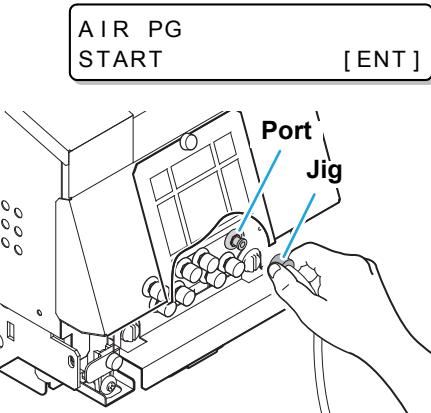
PREPARING
PLEASE WAIT

7**Prepare air purge.**

- Remove the ports in pairs that correspond to the dumper selected in step 4.



- Ink may leak when removing the jig.
Put a paper towel, a piece of cloth, or other material to absorb the leaked ink around the port.
- Important!** • When purging the air, make sure that the attached jig will not come off the waste ink drainage.
- When attaching an additional jig, make sure that the tube opening is kept within the opening of the waste fluid bottle connector.

**8****Press the **ENTER** key to purge air.**

AIR PG
COMPLETED [ENT]

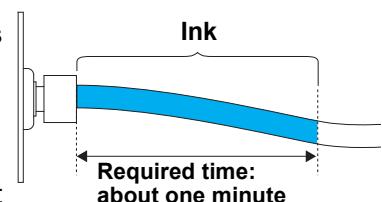
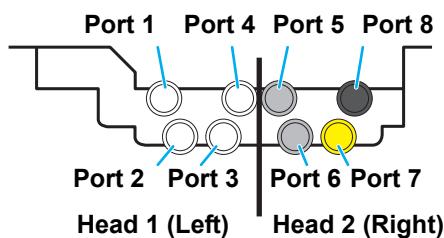
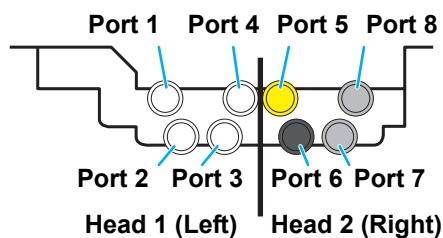
- (1) Open the port and attach the jig when the ink starts dripping from the head upon pressing **ENTER**.

(The display shows the standby screen after the air purge is completed.)

- (2) Pushed out ink flows to the jig.
- (3) Keep the ink flowing for about one minute after it starts to flow.
- (4) After allowing ink to flow for about one minute, close the port.
- (5) Change the jig to the port that air is not yet purged, and repeat the procedure to allow ink to flow from the port for about one minute.
- (6) After allowing ink to flow for about one minute, close the port.

Important!

- For “6-color” or “6-color + White” ink, do not open the yellow port while the black port is open.

**6-color Ink Set****6-color + White Ink Set****9****Terminate air purge by pressing the **ENTER** key.**

CAPPING POSITION
MOVE START [ENT]

- Close the port.



- When removing the jig, ink may leak. Put a paper towel etc. around the port.

10

Press the **ENTER** key.

- The carriage returns to the cap position.
- Filling to the damper starts. Wait for a while until the amount of ink returns to the normal status.
- When filling has been completed, cleaning is performed.
- When ink filling into the damper has been completed, the screen returns to the one in the Step 2. For other dampers, perform the procedures from the Step 3 to 9.

PLEASE WAIT



** CLEANING **
PLEASE WAIT

11

Press the **END** key several times to return to LOCAL.

12

Select [AIR PG.SUCTION] in the MAINTENANCE menu.

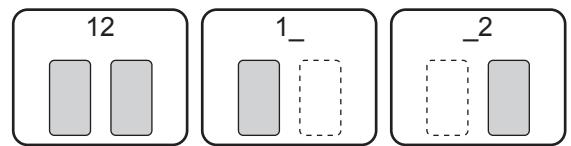
- (1) Press the **FUNCTION** key in LOCAL.
- (2) Press **▲** **▼** to select [MAINTENANCE], and then press the key.
- (3) Press **▲** **▼** to select [AIR PG.SUCTION].

13

Press **▲** **▼** **◀** **▶** to select the head to purge air.

SELECT HEAD
: 1_

- **Settings:** 12 (Both heads)
1_ (Head 1 Only)
2 (Head 2 Only)



14

Press the **ENTER** key.

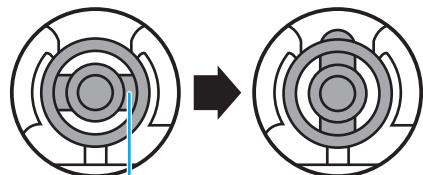
- The screen returns to step 12 after the air purge is completed

15

Close the air purge valve, and attach the right maintenance cover.



- Repeat Cleaning [HARD] a few times if the mixed color remains on the printed image after purging air.



Valve release slot Rotate 90 degrees

Regular maintenance of white ink

White ink precipitates easier than other inks.

- If not printing more than two weeks, white ink may precipitate in the Eco-cartridge or inside of this machine.
 - When an ink precipitates, the nozzle may be clogged and it can not draw normally.
 - Make sure to perform periodical maintenance to avoid precipitation and to keep white ink in good condition.
- Perform the maintenance below before working once a week.**
- Use the specified ink cartridge.**



- Important!**
- When you use white ink:

When 24 hours have passed with the power supply is ON, or, when the power supply is ON, the message is displayed.

As the component of white ink is easy to settle out, it is necessary to shake it periodically.

SHAKE WHITE INK
CARTRIDGES [ENT]

1

Select [WHITE 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 [WHITE MAINT.].

2

Press the **ENTER** key.

* * WHITE MAINTENANCE *
EXECUTE [ENT]

3

Press the **ENTER** key.

- The automatic discharging operation and the filling operation are performed.

* * FILL UP * *
PLEASE WAIT

- Then, cleaning is performed.

* * CLEANING * *
PLEASE WAIT

4

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

5

When media heaves up at feeding

We call the status of heaving media at feeding "cockling".
When media cockling occurs, check the following items:

Note/ checking items	Measures
Checking media set status	(1) Check that the media is set straight and reset it.
Adjusting heater temperature	(1) Raise the pre-heater temperature by 5 to 10 degrees. (2) Lower all heaters' temperatures. (When you lower the heater temperature, drying time may not be enough. Lower the FEED SPEED.)
Media feeding	(1) For roll media, feed the media by about tens of centimeters to one meter. (2) For leaf media, press and perform feed/ back feed.
Do not leave the media in the heater warming status	(1) Do not start printing with the media cockled because it may cause media jam.
Heighten the head	(1) For the thick media, heighten the head from L to M before printing.

When the Leading Edge of the Paper Gets Wrinkled

If the temperature setting for the heater in the profile is set too high, and adjusting the temperature after receiving the print data takes longer time, wrinkles may occur in the leading part of the print media. If wrinkles occur, perform the following procedures:

1

Wait until the heater reaches its set temperature before transmitting the print data.

- You can shorten the time to adjust the heater temperature after receiving the print data and avoid wrinkles from occurring in the paper by preheating the heater to its set temperature.
- Refer to P.2-17 "Changing the Temperature Settings for the Heaters".

2

Before transmitting the print data, perform a preparatory feed from several dozens of centimeters to up to one meter to remove the wrinkles in the leading edge of the media.

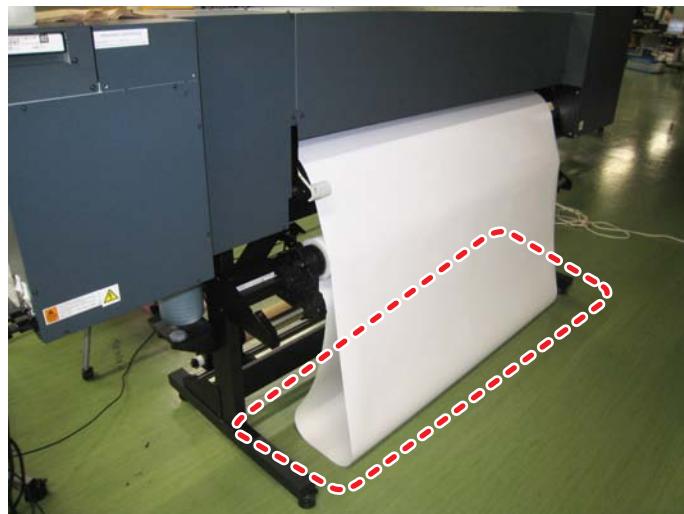
- Refer to P.5-14 "When media heaves up at feeding".

When the feeding media is loosened and reached to the floor

The feeding roll media is loosened and reached to the floor if the holder is not properly pressed against the core of the roll media while the roll media is set to the roll holder on the back side of the printer. When the feeding media is loosened, please take following measures. Loosen the screw of the right side roll holder and firmly press the holder against the core of the roll paper and then tighten the screw. (The indication of pressing power: 15 kgf) (☞ P.2-9)

Please note that the feeding media is more often loosened under conditions described below.

- After printing, when the media is moved backwards against the feeding direction.
- When the heavy roll media like the banner material (tarpaulin) is used.
- When a remaining length of the roll media reaches low during printing. Or when the remaining length of set media is already low.



If the Media and the Media Holder Are Smeared with Dried Ink

In a dry environment, dried ink deposit may form around the print heads and adhere to the media and the media holder. If they are smeared with dried ink, perform the following procedure.

1

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

CARRIAGE OUT

[ENT]

2

Press the **ENTER** key.

MOVE POSITION
: STATION MAINT.

3

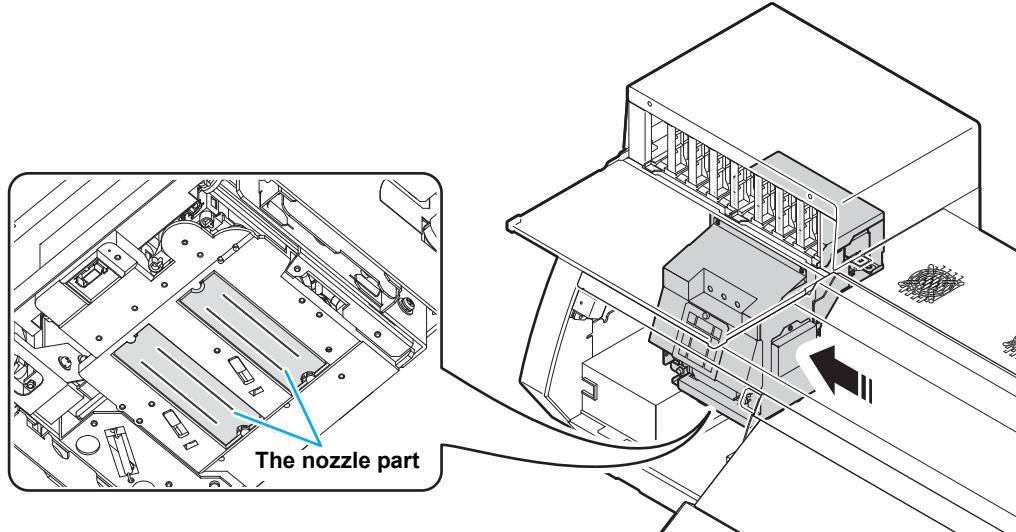
Press **▲** **▼** to select [HEAD MAINT.]

MOVE POSITION
: HEAD MAINT.

4

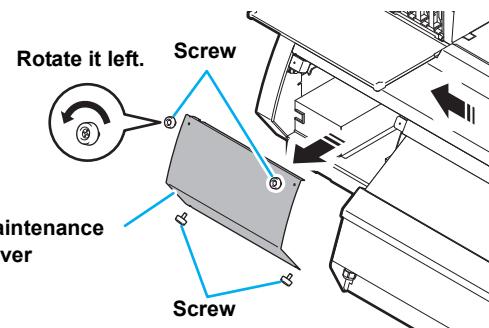
Press the **ENTER** key.

- Carriage will move to the left end of this device.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.



5**Open the left maintenance cover.**

- (1) Turn four screws that fix the maintenance cover to the left, and remove them.
 (2) Remove the maintenance cover.
- If the maintenance cover is hard to remove, use the supplied screwdriver.

**6****Immerse Wiper for CR in Maintenance kit.**

(Important!)

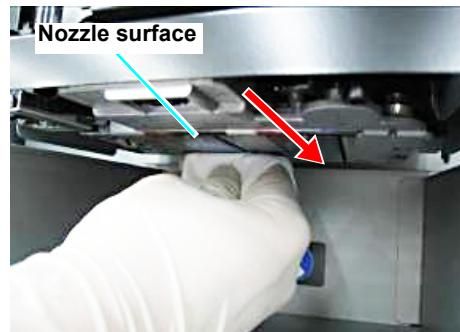
- Immerse much enough so that washing liquid may drip from it.
- Do not wipe the nozzle surface with dry Wiper for CR.

**7****Remove the dried ink deposit on the nozzle surface and the backward area of the print heads by wiping it from the front to the rear of the main body with Wiper for CR immersed in the Maintenance kit.**

- Do not rub too strong.

(Important!)

- If Wiper for CR has fluffed, replace it.
- If ink solid adheres to Wiper for CR, change the surface to use for cleaning or replace it.

**8****Press the **ENTER** key after the cleaning.**
 CLOSE COVER
 COMPLETED

[ENT]

5**9****Close the left maintenance cover then press the **ENTER** key.**

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

10

Perform head cleaning. ( P.2-22)

11

Perform test printing. ( P.2-20)

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
INVALID OPERATION COVER OPEN	The front cover or the maintenance cover is opened.	Check the front cover and maintenance covers. If the same error message appears again even after closing all the covers, contact your local distributor to call for service.
INVALID OPERATION MEDIA UNDETECTED	The media has not been detected.	Perform media detection.
CAN'T OPERATE (MOTOR OFF)	The motor is OFF after the cover was opened etc.	Close the front cover and maintenance covers.
INVALID OPERATION INK ERROR	An ink error occurred.	Check the Eco-cartridge for the supply path corresponding to the indicated color.
INVALID OPERATION DATA REMAIN	Data was received.	Perform data clear. (☞ P.2-29)
CAN'T OPERATE (CLAMP LEVER OFF)	Clamp lever is raise up.	Push down the clamp lever and detect the media.

Message displayed in LOCAL

Message	Cause	Solution
<LOCAL> Can't PRINT / CART. [ENT]	Ink errors (unusable ink) occur in multiple cartridges. Ink supply (print, cleaning, etc.) cannot be performed.	Press the ENTER key to check the Eco-cartridge generating the warning. Replace them with usable cartridges.
<LOCAL> Check waste ink [MNT]	The waste ink bottle is nearly full.	Check the waste ink bottle. Press the MAINT. key to correct or reset the counter. (☞ P.4-29)
<LOCAL> WASTE INK FULL [MNT]	The waste ink tank is full.	Press the MAINT. key and replace the wiper with a new one. (☞ P.4-28)
<LOCAL> Replace 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 clean the wiper. (☞ P.4-5)
<LOCAL> WIPER CLEANING [MNT]	Time to clean 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 register the cartridge weight. (☞ P.5-8)
<LOCAL> INK REMAIN [MNT]	The remaining amount of ink inside the cartridge falls below the specified level.	Press the MAINT. key and register the cartridge weight. (☞ P.5-8)

Message	Cause	Solution
<LOCAL> * * NO MEDIA * *	The media is not set. The sensor has been broken.	Set the media. (☞ P.2-5) If the same error message appears again, contact your local distributor to call for service.
<LOCAL> DATA REMAIN	The data has been received.	Press the REMOTE key to perform printing. Or, perform data clear.
<LOCAL> INK NEAR END [ENT]	The ink of the ink cartridge has been nearly used up.	Press the ENTER key to check the relevant Eco-cartridge. Be careful because it may be INK NEAR END soon.
<LOCAL> SUPPLY INK : MMCCYYKK	Ink could not be supplied to the damper.	Perform "DAMPER (☞ P.5-9)" of the maintenance. Also check the remaining amount of ink in the Eco-cartridge. Even if you performed this, when the message is displayed, contact your local distributor to call for service.
<LOCAL> DAMPER Sens : MMCCYYKK	The liquid level sensor abnormality of the damper has been detected.	Turn off the power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.
<LOCAL> InkOverflow : MMCCYYKK	Overflow from the damper has been detected.	Perform "DAMPER (☞ P.5-9)" of the maintenance. Also check the remaining amount of ink in the cartridge. Even if you performed this, when the message is displayed, contact your local distributor to call for service.
<LOCAL> DAMPER / HIGH : MMCCYYKK	Though a certain amount was consumed, there is no change in the damper sensor High.	
<LOCAL> DAMPER / LOW : MMCCYYKK	Though a certain amount was consumed, there is no change in the damper sensor Low.	
SHAKE WHITE INK CARTRIDGES [ENT]	To prevent settling out in the white ink pack, this is displayed periodically.	Following the procedures, shake the white ink cartridge. (☞ P.1-14)
<LOCAL> Machine TEMP / Hi *** °C	The machine temperature is high.	Adjust the ambient temperature of the installation place.
<LOCAL> Machine TEMP / Lo *** °C	The machine temperature is low.	
HEATER TEMP ERROR POWER OFF [ENT]	After "error 710 HEATER TEMP ERROR" has occurred, the power is forcibly turned off, and when you restart it, this is displayed.	If the ERROR 710 appears again, contact your local distributor to call for service.
<LOCAL> Expiration [ENT]	The specified expiration date of an ink cartridge has passed.	The expiration date has passed. However, you can use it until the end of the following month. Press the ENTER key to check the cartridge generating the warning.
<LOCAL> Expiration (1M) [ENT]	The expiration date of an ink cartridge 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 red LED blinks.) Press the ENTER key to check the cartridge generating the warning.

Message	Cause	Solution
<LOCAL> Expiration (2M) [ENT]	The expiration date of an ink cartridge has passed (two months have passed after the specified expiration date).	Two months have passed after the expiration date. Replace the cartridge generating the warning with a new one. Press the ENTER key to check the cartridge generating the warning.
Check Jam Sensor	The jam sensor detects an error.	Open the maintenance cover and check around the carriage.

Ink Error

Ink error is displayed also in the local guidance. (☞ P.3-26)

Message	Cause	Solution
NON INK IC : ---- YYKK	The IC chip of the ink cartridge cannot be read normally.	Remove the Eco-cartridge generating the warning once and install it again. If the same warning message still appears, contact your local distributor to call for service.
WRONG INK IC : ---- YYKK	The ink of the ink cartridge is different in type from the ink currently supplied.	Check the ink type of the Eco-cartridge generating the warning.
INK TYPE : ---- YYKK	The ink of the ink cartridge is different in color from the ink currently supplied.	Check the ink color of the Eco-cartridge generating the warning.
INK COLOR : ---- YYKK	An error occurred in the IC chip information of the ink cartridge.	Check the Eco-cartridge generating the warning. When you use white ink, check that there is no nozzle missing etc.
WRONG CARTRIDGE : ---- YYKK	An ink cartridge has not been installed in the slot.	Install an appropriate Eco-cartridge in the slot generating the warning.
NO CARTRIDGE : ---- YYKK	The ink of the ink cartridge has been completely used up.	Replace the Eco-cartridge generating the warning with a new one.
INK END : ---- YYKK	The ink of the ink cartridge has been nearly used up.	Replace the Eco-cartridge generating the warning with a new one.
INK NEAR END : ---- YYKK	Even when there are enough ink, ink end has been detected.	Check the ink pack set status in the eco case.
CHCK INKPACk : ---- YYKK	The specified expiration date of an ink cartridge has passed.	The expiration date has passed. However, you can use it until the end of the following month.
EXPIRATION : ---- YYKK	The expiration date of an ink cartridge 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 red LED blinks.)
Expiration:1MONTH : ---- YYKK	The expiration date of an ink cartridge has passed (two months have passed after the specified expiration date).	Two months have passed after the expiration date. Replace the Eco-cartridge generating the warning with a new one.
Expiration:2MONTH : ---- YYKK		

Error messages

When an error message is displayed, eliminate the error according to the chart below.
If the same error message appears again, contact your dealer or an office of RICOH to call for service.

Message	Cause	Solution
ERROR 108 HD CONNECT [12345678]	Head connection can not be confirmed.	
ERROR 108 HD THERMIS [12345678]	Head temperature can not be read.	
ERROR 108 HD MEM EMP [12345678]	The head memory has no data.	
ERROR 108 HD TYPE [12345678]	Solvent ink was used in the head for water.	Turn off the power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.
ERROR 12e Head Failed [xxxx]	Abnormality of the Driver of the Print head.	
ERROR 122 CHECK : SDRAM	There is no PRAM.	
ERROR 128 HDC FIFO OVER	<ul style="list-style-type: none"> • Data transmission speed is too fast. • Control circuit board is defective. 	
ERROR 128 HDC FIFO UNDER	<ul style="list-style-type: none"> • 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 to call for service.
ERROR 130 HD DATA SEQ	Head data transferring sequence error occurred.	
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.	Turn off the power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.
ERROR 155 Main PCB V35-1	An error occurred in the main PCB 35-1 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.	

Message	Cause	Solution	
ERROR 16e Main PCB V3R3B	An error occurred in the main PCB 3.3VB power supply.	Turn off the power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.	
ERROR 15f HEAD DRIVE HOT	COM driver becomes the high temperature.		
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 V_CORE power supply.		
ERROR 18b Main PCB V1R5B	An error occurred in the main PCB 1.5VB power supply.		
ERROR 18c Main PCB V12	An error occurred in the main PCB 12V power supply.		
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.		
ERROR 304 USB INIT ERR	USB device initialization failure.	Turn off the main power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.	
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.		

Message	Cause	Solution
ERROR 505 MEDIA JAM	The media jam occurs.	Remove the media and reset it.
ERROR 50c MEDIA WIDTH SENSOR	The media width has not been detected correctly.	Check the media set position. (☞ P.2-8) Clean the media sensor. (☞ P.4-4)
ERROR 509 HDC POSCNT	A HDC position counter error occurred.	
ERROR 50a Y ORIGIN	Y-origin could not be detected.	
ERROR 50f L-SCALE BLACK	Abnormal linear scale.	Turn off the main power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.
ERROR 516 MEDIA SET POSITION R	The media is set outside the proper area.	Check the media set position. (☞ P.2-8)
ERROR 516 MEDIA SET POSITION L		
! PRE HEATER BRK ! PRT HEATER BRK ! POST HEATER BRK	The temperature in the media heater won't rise.	Check whether the heater power switch near the main power switch is ON. Turn off the main power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.
ERROR 617 DAMPER Sens : 12345678	The liquid level sensor abnormality of the damper has been detected.	Turn off the main power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.
ERROR 618 DAMPER / HIGH : 12345678	Though a certain amount was consumed, there is no change in the damper sensor High.	Perform "DAMPER (☞ P.5-9)" of the maintenance.
ERROR 619 DAMPER / LOW : 12345678	Though a certain amount was consumed, there is no change in the damper sensor Low.	Even if you performed this, when the message is displayed, contact your local distributor to call for service.
ERROR 61a INKOverflow : 12345678	Overflow from the damper has been detected.	
ERROR 61b SUPPLY INK : 12345678	Ink could not be supplied to the damper.	Perform "DAMPER (☞ P.5-9)" of the maintenance. Also check the remaining amount of ink in the Eco-cartridge. Even if you performed this, when the message is displayed, contact your local distributor to call for service.

Message	Cause	Solution
ERROR 627 RE-INSERT CARTRIDGE	There is a slot in which the Eco-cartridge has not been inserted more than a certain time.	Set an Eco-cartridge.
ERROR 702 THERMISTOR CONNECT	The thermistor connection of a heater is defective.	Check the thermistor connection of the drying heater. Turn off the main power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.
ERROR 703 !EXT HEATER BRK	The thermistor is abnormal and the temperature cannot be read normally.	
ERROR 707 !H1 HEATER BREAK	A head heater is disconnected.	Turn off the main power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.
ERROR 710 HEATER TEMP ERROR	The temperature abnormality of the heater has been detected. When this error occurred and if the temperature abnormality cannot be resolved, the power supply of the machine is forcibly turned off.	Turn off the main power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.
ERROR 901 INVALID OPERATION	Due to a certain error, the function cannot be performed.	Return to the local screen, check the error status and take a countermeasure.
ERROR 902 DATA REMAIN	There remains received data that has not yet been printed.	Execute the data clear function. (☞ P.2-29)
ERROR 90d NO HEAD SELECT	The number of mounted heads is "0".	Turn off the main power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.
ERROR 90f PRINT AREA SHORT	The media width or the media length required for printing is not enough.	Change the media to the one with enough width or length. When the media width narrows because the origin moved, slide the origin to the right to widen the effective media width.
ERROR 04 PARAM ROM	The parameter has an error.	Turn off the main power to the machine and turn it on after a while. If the same error message appears again, contact your local distributor to call for service.

SYSTEM HALT

Message	Solution
SYSTEM HALT 000: MESSAGE	Turn off the main power to the machine and turn it on after a while. If the same error message appears again, check the number and contact your local distributor to call for service. ("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
List of consumables	6-4
Sheet for inquiry	6-5
Function Flowchart	6-6

Specifications

Machine specifications

Item	Pro L4130	Pro L4160
Print head	Method	Drop-on-demand piezoelectric print heads
	Specification	2 head
Drawing mode (scan x feed)	4-color	900x600 : Bi/Uni 4/8/16pass 900x900 : Bi/Uni 6/12/24pass 900x1200 : Bi/Uni 8/16/32pass 1200x900 : Bi/Uni 6/12/24pass 1200x1200 : Bi/Uni 8/16/32pass
	6-color 6-color + White	900x600 : Bi/Uni 8/16/32pass 900x900 : Bi/Uni 12/24/48pass 900x1200 : Bi/Uni 16/32/64pass 1200x900 : Bi/Uni 12/24/48pass 1200x1200 : Bi/Uni 16/32/64pass (Depending on the drawing mode, some pass cannot be selected.)
Ink supply	Ink cartridge replacement type	
Media type	Thin coat paper/PET/Tarpaulin/Weatherproof PVC/Polyester cloth/Cotton	
Max. printing width	1361mm	1610mm
Roll Media size	Maximum	1371mm
	Minimum	210mm
	Thickness	0.3 mm or less ^{*1}
	Roll outside diameter	φ 180mm or less
	Roll weight ^{*2}	25kg or less
	Roll inside diameter	3 or 2 inches
	Printing surface	Side facing outward
	Roll end treatment	
Leaf media size	Maximum	1371mm
	Minimum	210mm
Margin	Leaf media	Left end and right end : 15 mm (Default) Front : 150.0 mm Rear : 200 mm
	Roll media	Left end and right end : 15 mm (Default) Front : 150.0 mm Rear : 0 mm
Distance accuracy	Absolute accuracy	Whichever the larger one of ± 0.3 mm or ± 0.3 % of the designated
	Reproducibility	Whichever the larger one of ± 0.2 mm or ± 0.1 % of the designated
Perpendicularity	± 0.5 mm / 500 mm	
Media skew	5 mm or less / 10 m variable	
Head height adjustment	L range : 1.8mm M range : 2.3mm H range : 2.8mm	
Cutting of media	Cutting of Y direction by the head cutter, Cutting accuracy (steps) : 1.0 mm or less.	
Media delivery	Take-up device supplied as a standard accessory (switching possible between face in and face out).	
Waste ink bottle	Bottle type (2,000 cc)	
Interface	USB 2.0	
Command	MRL- III	
Noise	during standby	Less than 58 dB (FAST-A, Front & Rear & Left & Right 1 m)
	during continuous printing	Less than 65 dB
	during discontinuous printing	Less than 75 dB
Safety Standard	VCCI-Class A, FCC-Class A, UL 60950, CE Marking (EMC, Low Voltage Directive, Machinery Directive), CB Report, RoHS	
Power	AC100 - 120 ± 10% , AC220 - 240 ± 10% , 50/60Hz ± 1Hz , 15A or less	
Power consumption ^{*3}	100 to 120V : 1440W x2 200 to 240V : 1800W x2	

Item	Pro L4130	Pro L4160
Recommended Environment	Available temp.	20 °C to 30 °C
	Humidity	35 to 65% Rh (No condensation)
	Guaranteed temp.	20 °C to 25 °C
	Temperature change	± 10 °C / h or less
	Dust	0.15mg/m ³ (Equivalent to normal office level)
	Highest operation height	2000 m
Weight	198 kg	235 kg
Outside dimensions	2634 mm(W) x 854 mm(D) x 1435 mm(H)	2879 mm(W) x 854 mm(D) x 1435 mm(H)

*1. Some media have bad drying characteristics. Please check this beforehand.

*2. Without deflection of the roll when it is retained at both ends.

*3. Main unit and heater included.

Ink specifications

Item	When Recommended ink for RICOH is used
Usable inks	Ink : 4 colors (K,M,C,Y) : 6 colors (K,M,C,Y,Or,G) : 6 colors+W (K,M,C,Y,Or,G,W)
Supply	Ink pack / Ink cartridge(White ink)
Color	Black ink Cyan ink Magenta ink Yellow ink Orange ink Green ink White ink
Ink supply	Supplying from ink cartridges through tubes. Ink cartridge replacement type : For M and C at four colors, six colors : Supplying by Toggle switch over with 2 cartridges / color For Y,Or,G,K at six colors and six colors + W : Supplying with 1 cartridges / color 600cc ink pack(W: 220cc cartridges) supply, 8 slot
Ink capacity	C,M,Y,K,Or,G 600cc W 220cc
Shelf life	2 years from the date of manufacture (at room temperature)
Storage temperature	Storage 0 to 25 °C (Average daily temperature) • Be sure to keep a vessel in the airtight condition.
	Transportation -20 ~ 40 °C • Avoid the condition lower than -20 °C and higher than 40 °C.

Important!

- Do not disassemble or refill the white ink cartridge.
 - 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.
 - If the ink freezes, the quality is changed and the ink becomes unusable.
- Store the ink in an environment that will not freeze the ink.

List of consumables

<Used when cleaning the wiper, ink cap, and nozzle surface>

Product name	Product code
Pro Maintenance kit Type A	For North America:841970 For Europe:841973
Pro Cleaning Stick Type A	841909

<Used when cleaning the ink drainage>

Product name	Product code
Pro Flushing Cartridge Type A	For North America:841971 For Europe:841974

<Other consumables>

Product name	Product code
Pro Waste Ink Bottle Type A	841907
Pro Cutter Blade Type A	841908
Pro Absorbent Sponge kit Type A	841910
Pro Eco Cartridge Type A	841911
Pro Wiper kit Type A	841906

<Replacement ink>

Product name	Product code
Pro AR Ink Pack Black L4160	842158
Pro AR Ink Pack Cyan L4160	842159
Pro AR Ink Pack Magenta L4160	842160
Pro AR Ink Pack Yellow L4160	842161
Pro AR Ink Pack Orange L4160	842162
Pro AR Ink Pack Green L4160	842163
Pro AR Ink Cartridge White L4160	842164

Sheet for inquiry

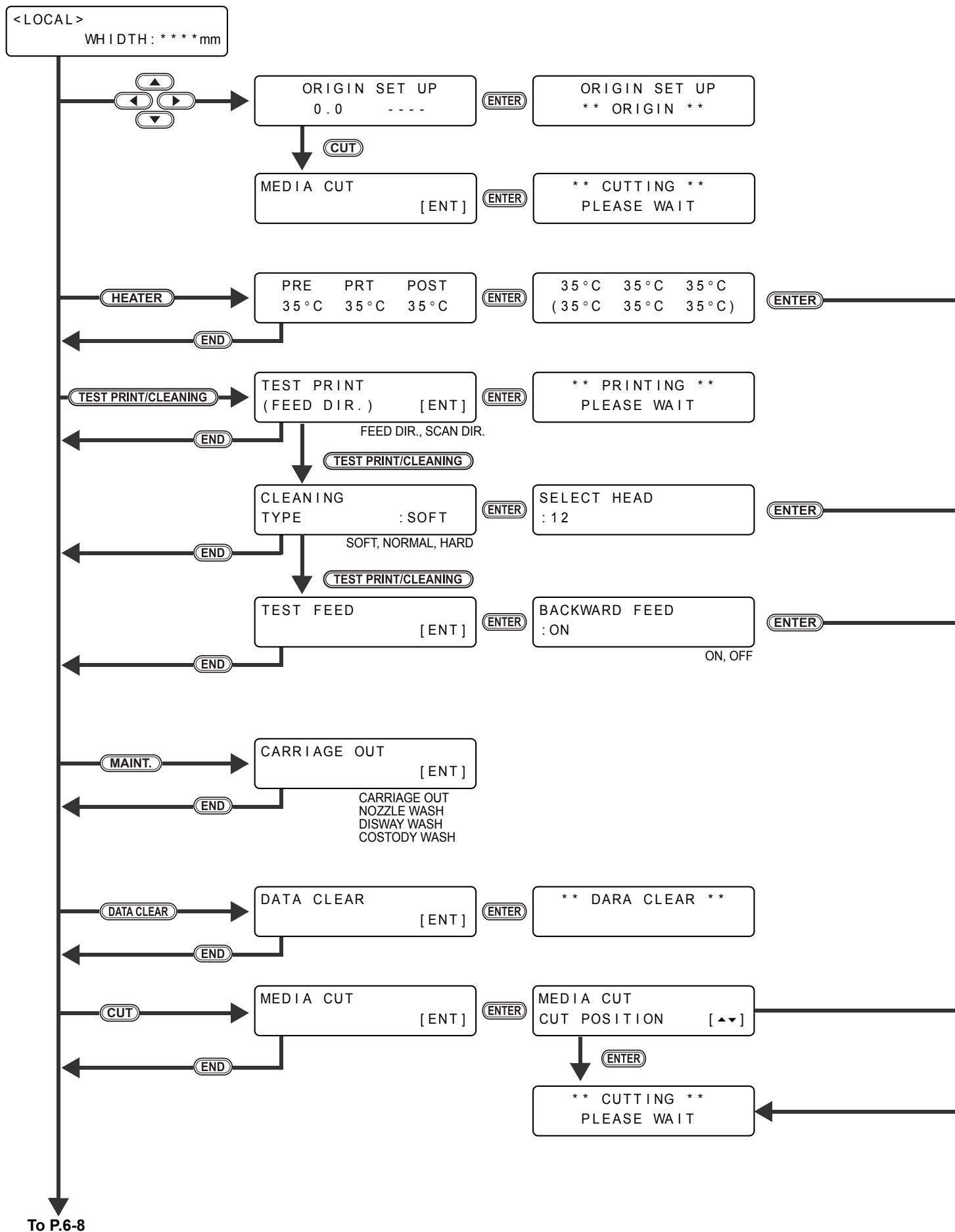
Use this sheet for troubles and abnormal functions of the machine.

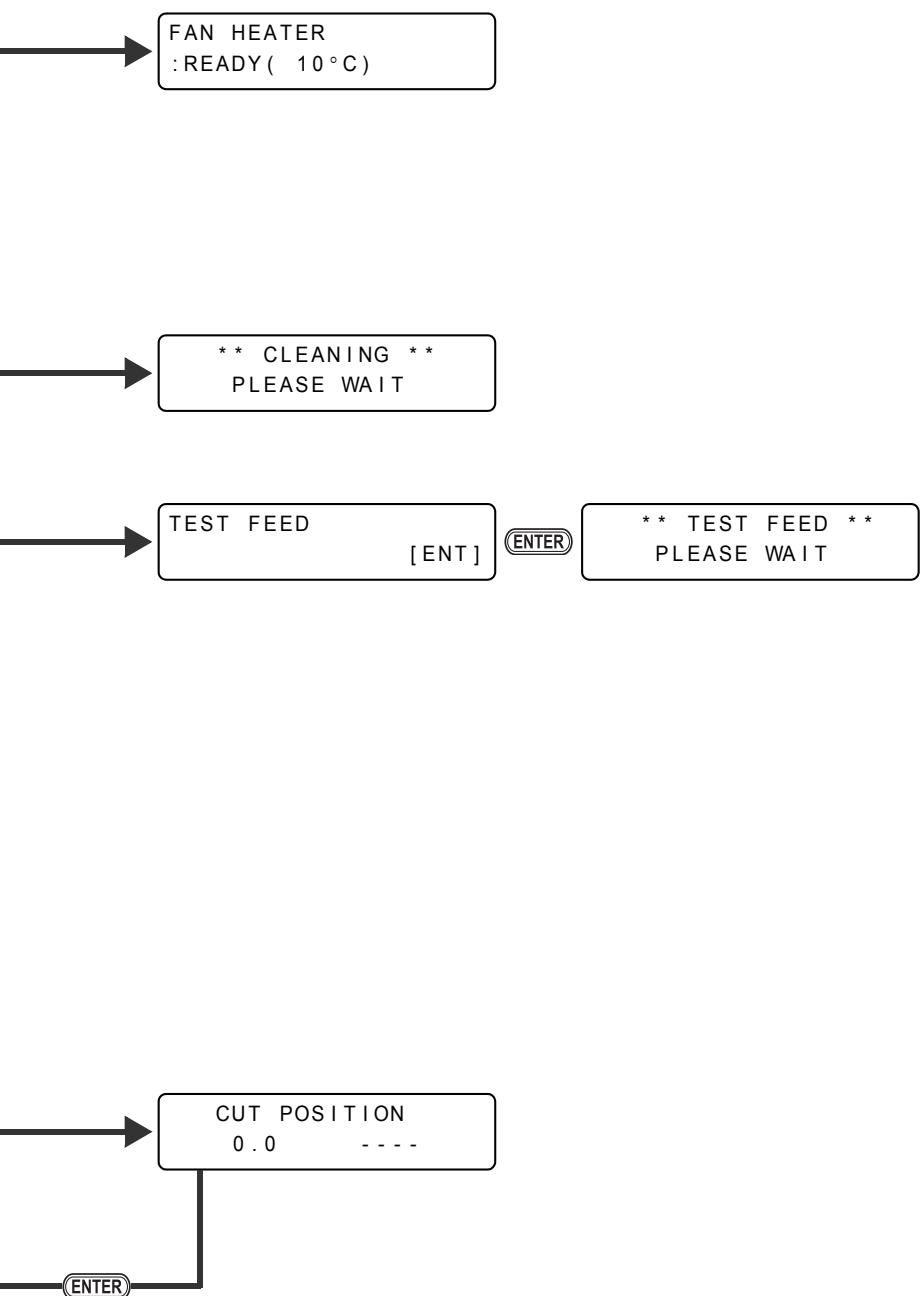
Fill in the following necessary items, and then fax the sheet to our sales office.

Company name	
Person in charge	
Telephone number	
Machine model	
Operating OS	
Machine information *1	
Error message	
Contents of inquiry	

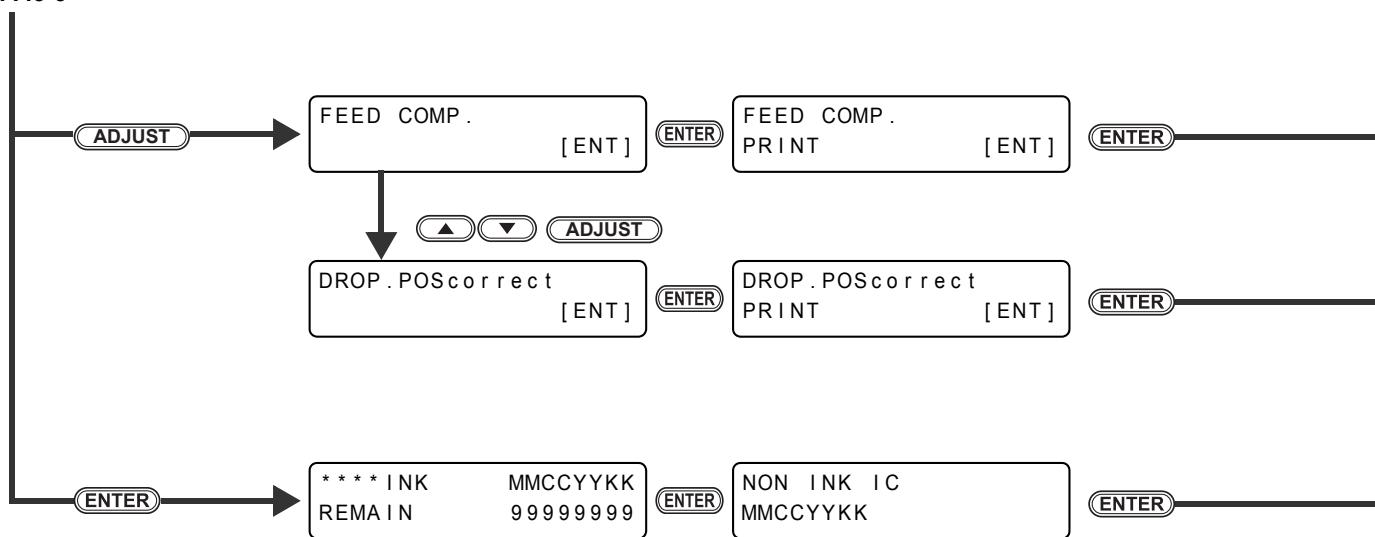
*1. Refer to "Confirming Machine information" of "Convenient using" then fill in necessary information. (☞ P.3-24)

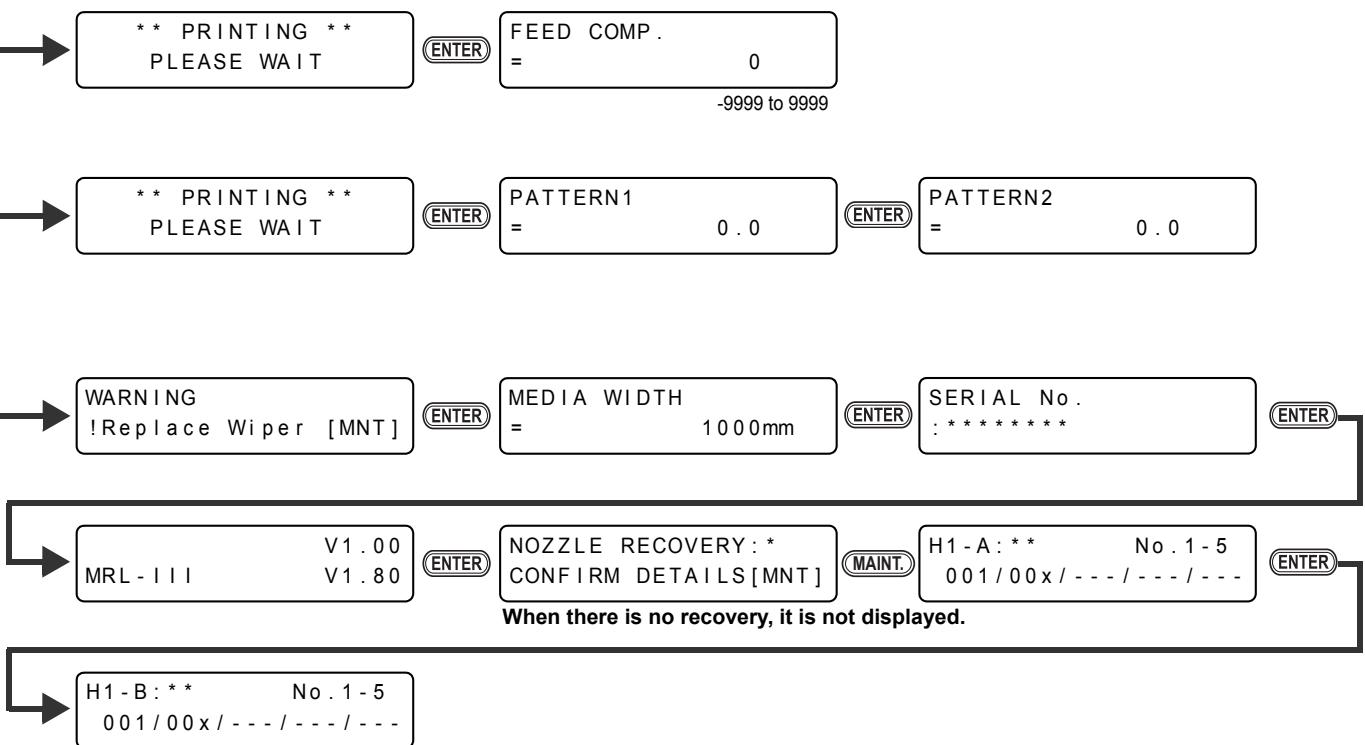
Function Flowchart

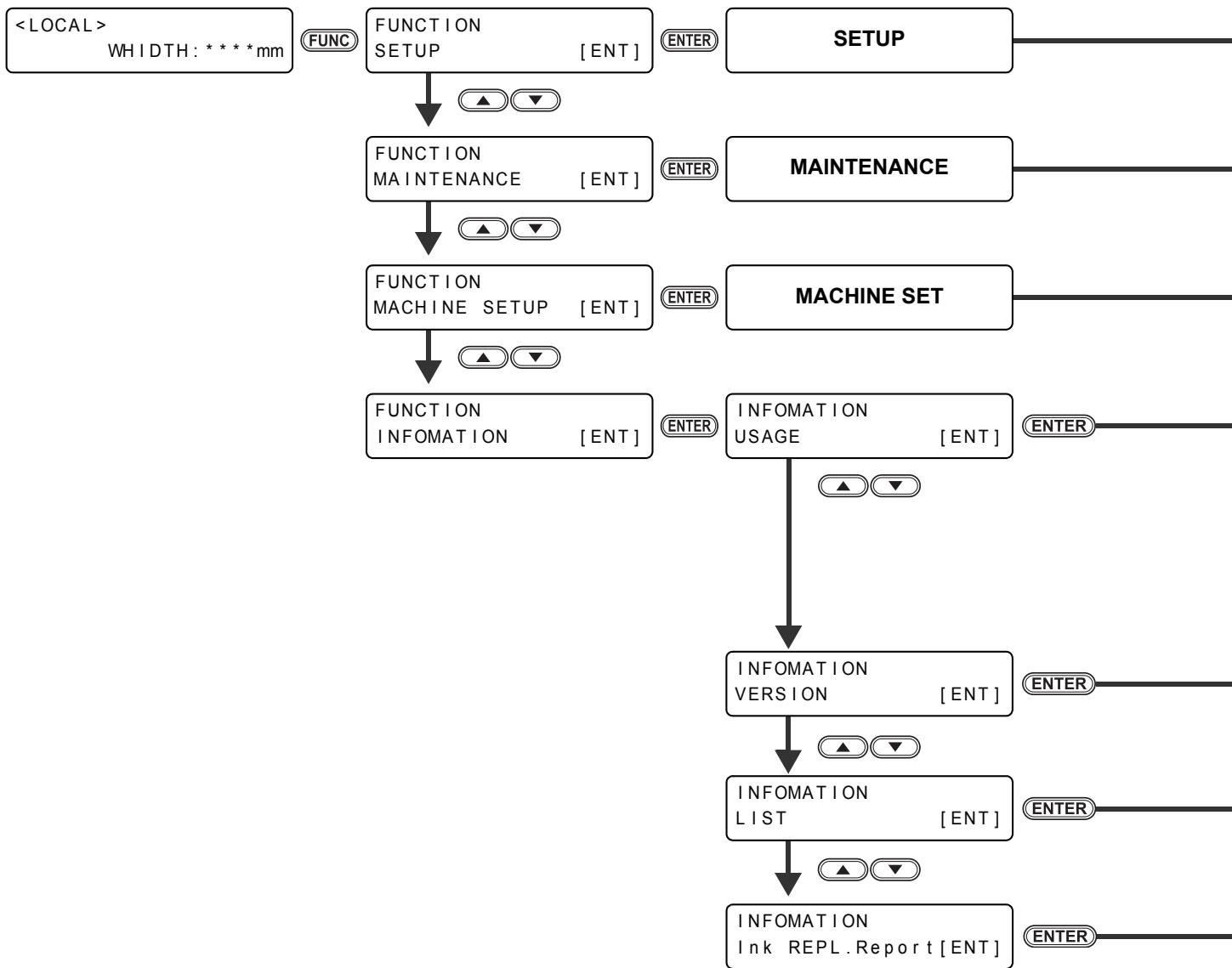


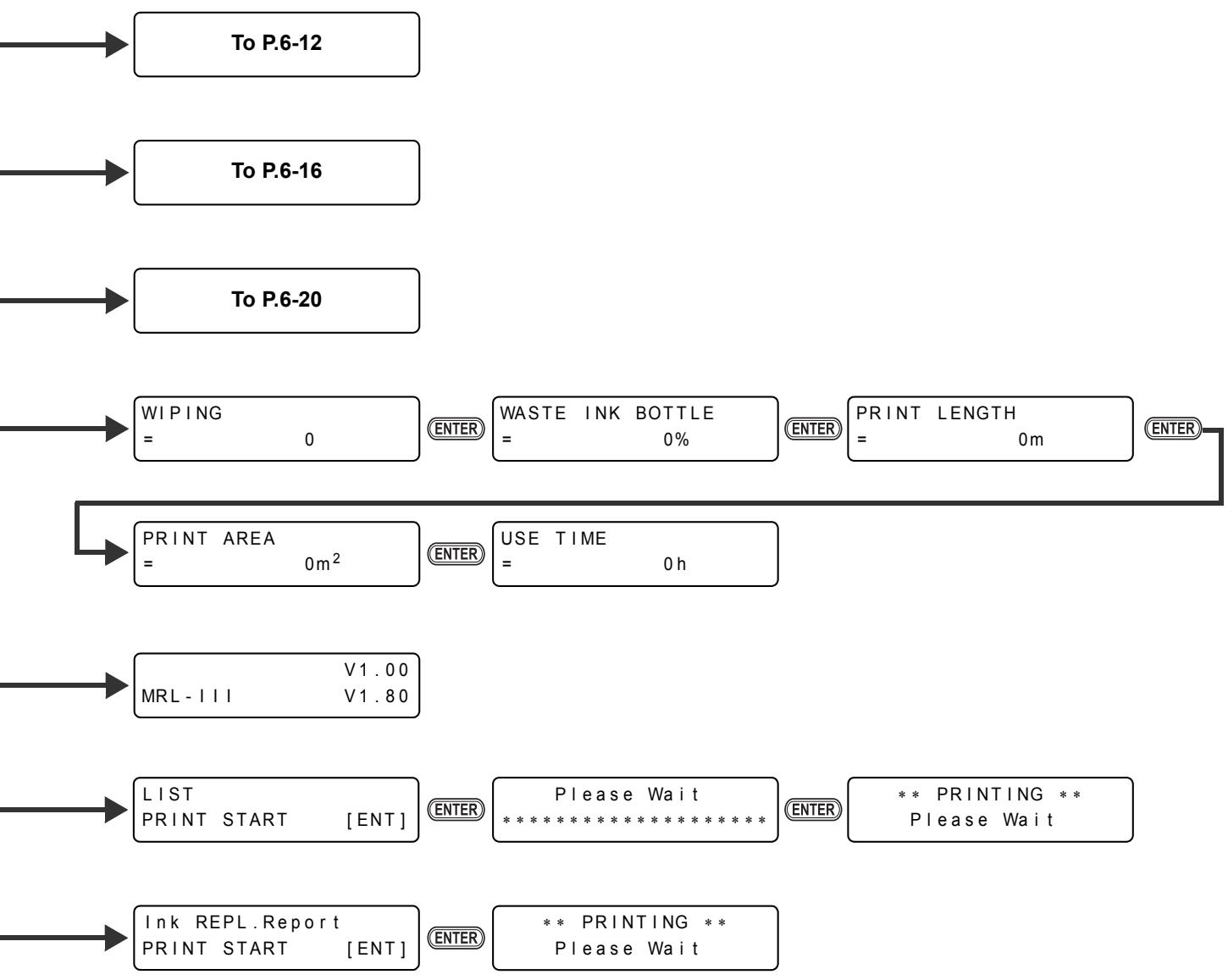


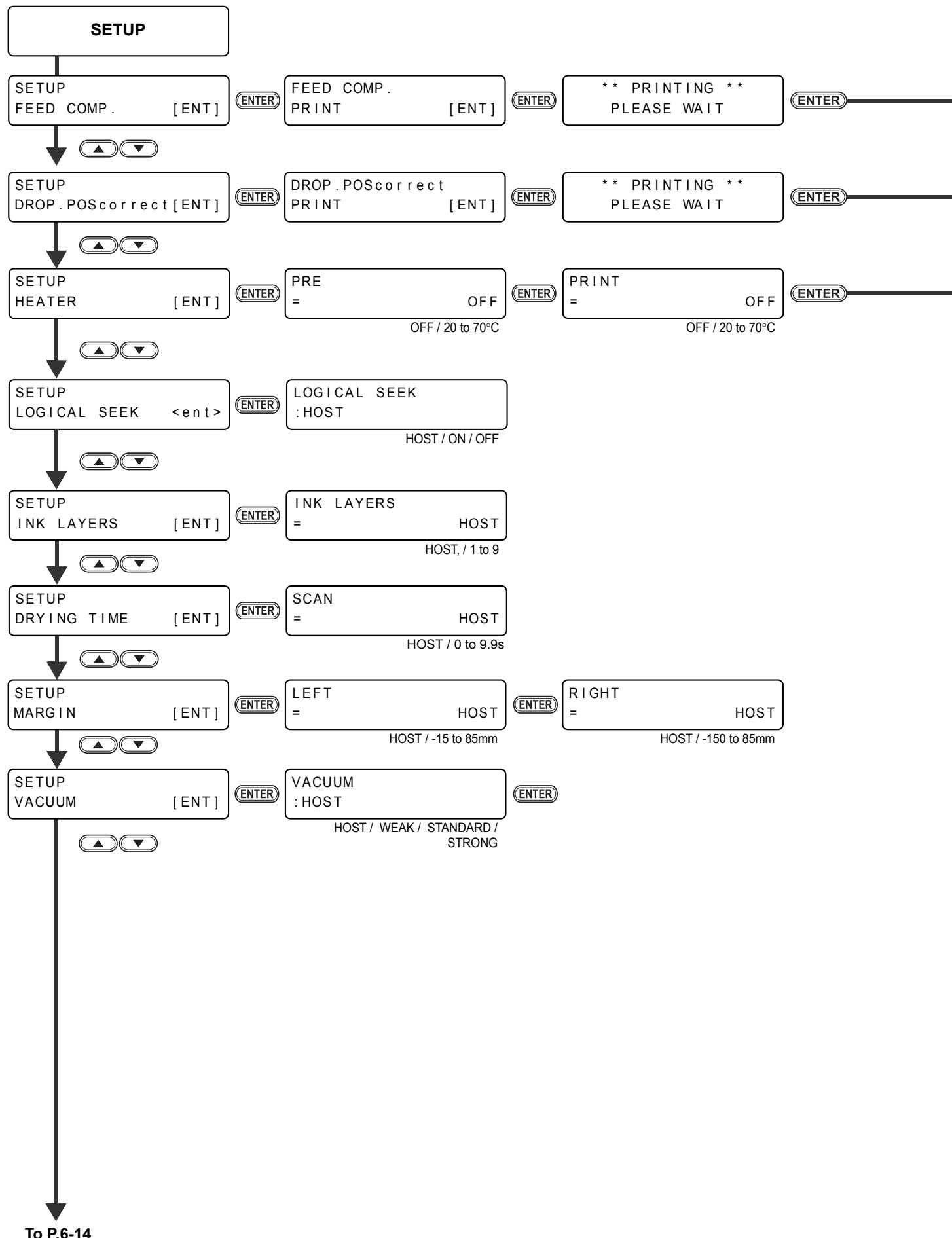
From P.6-6

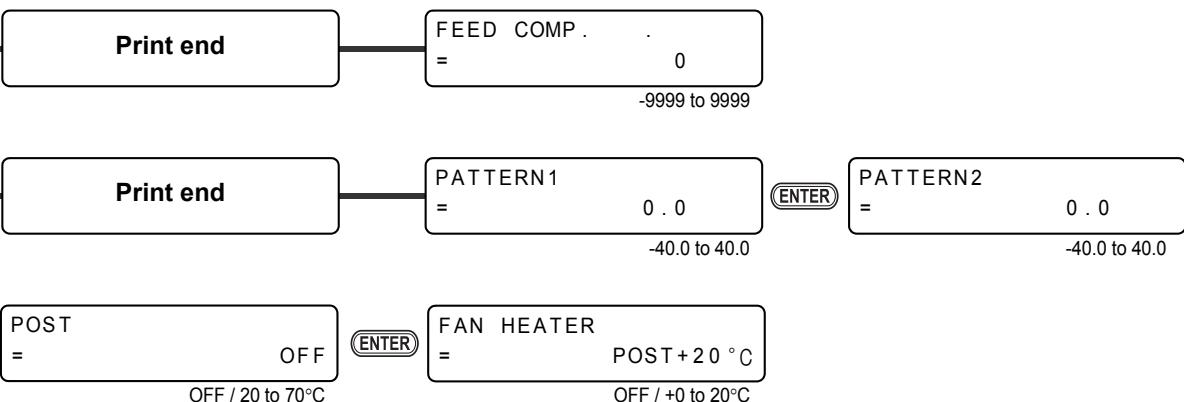




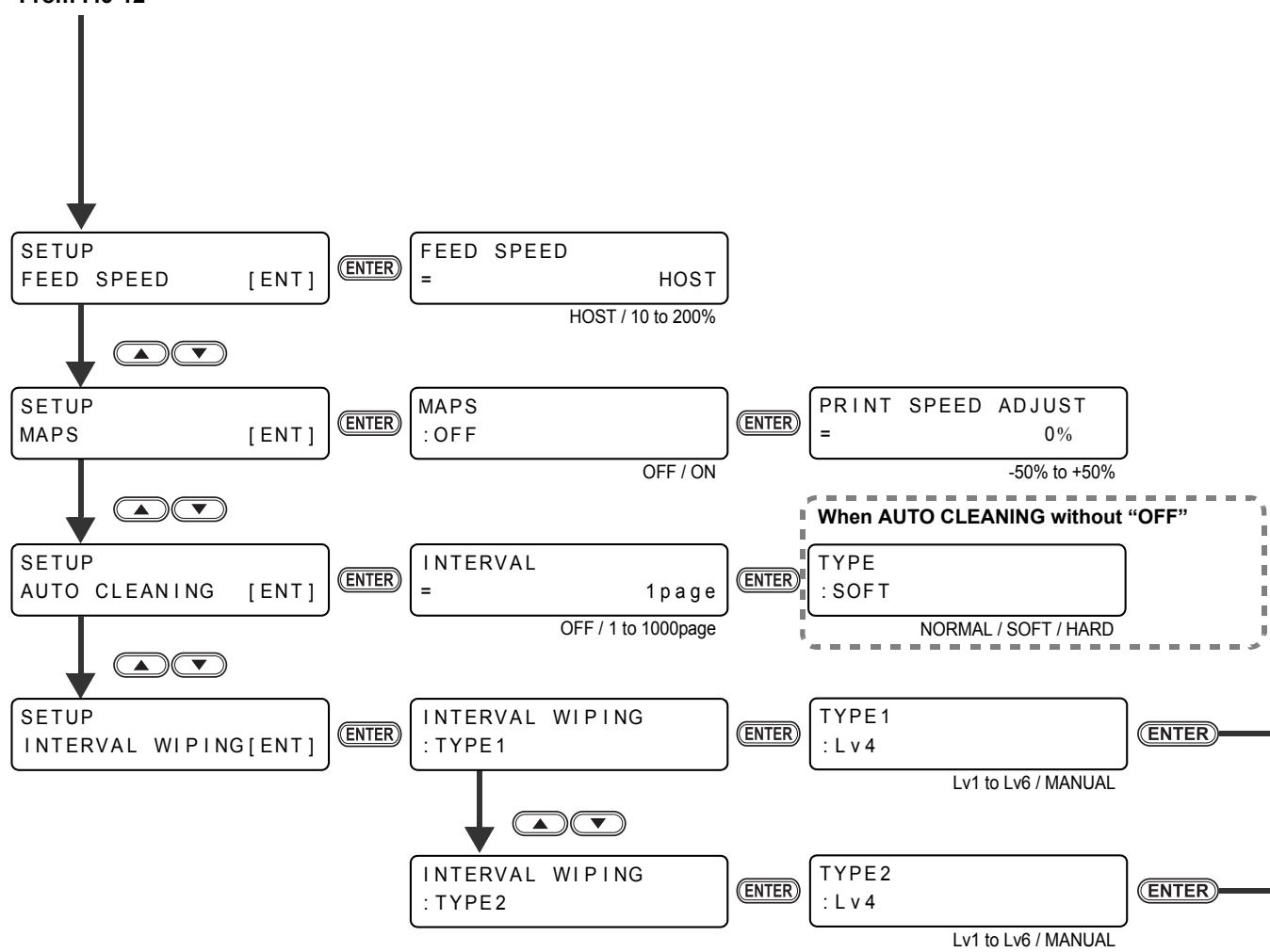


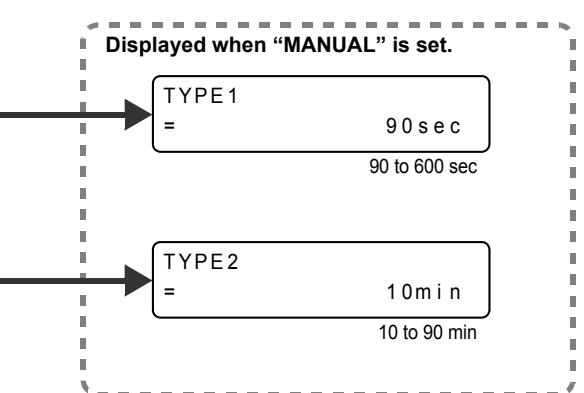


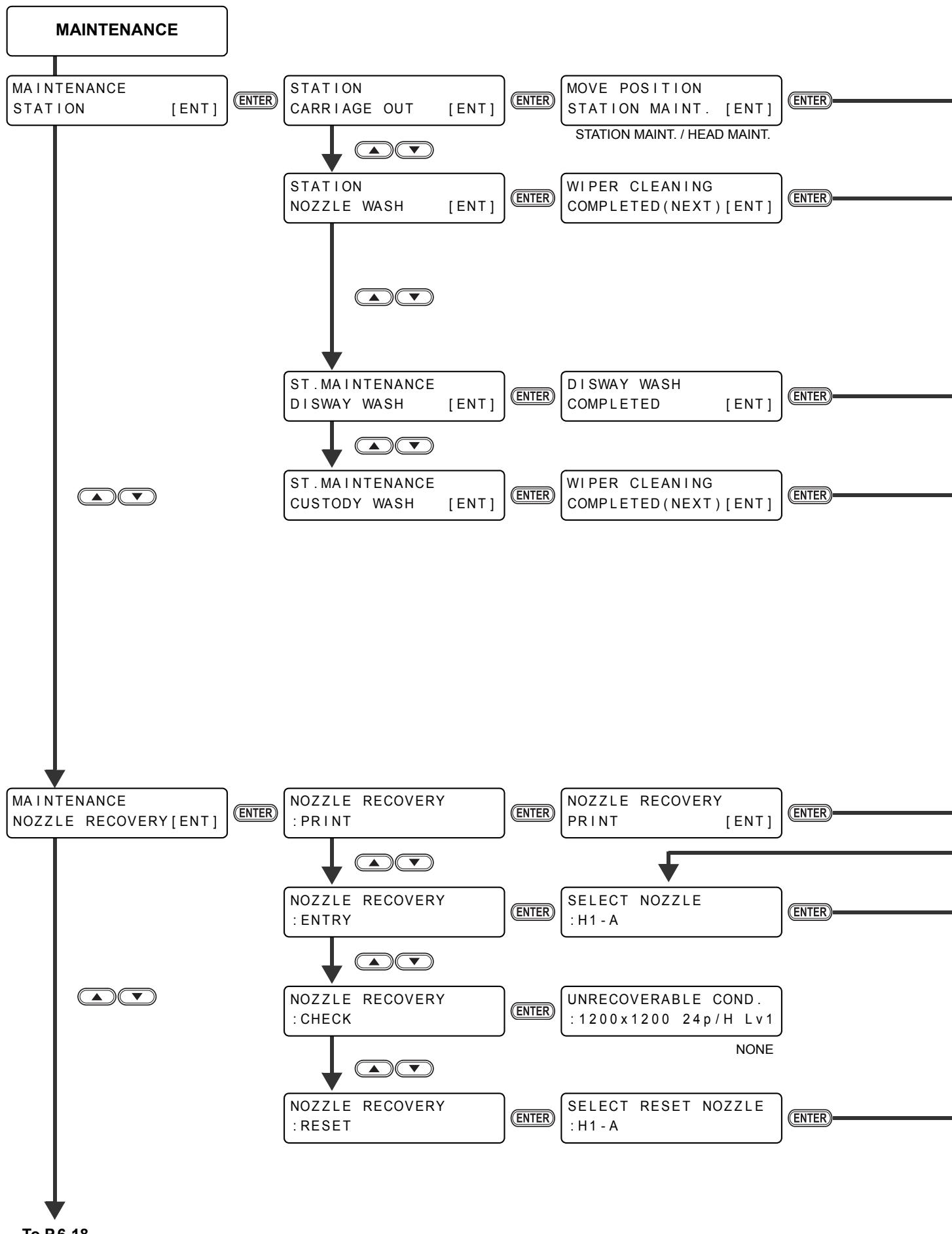


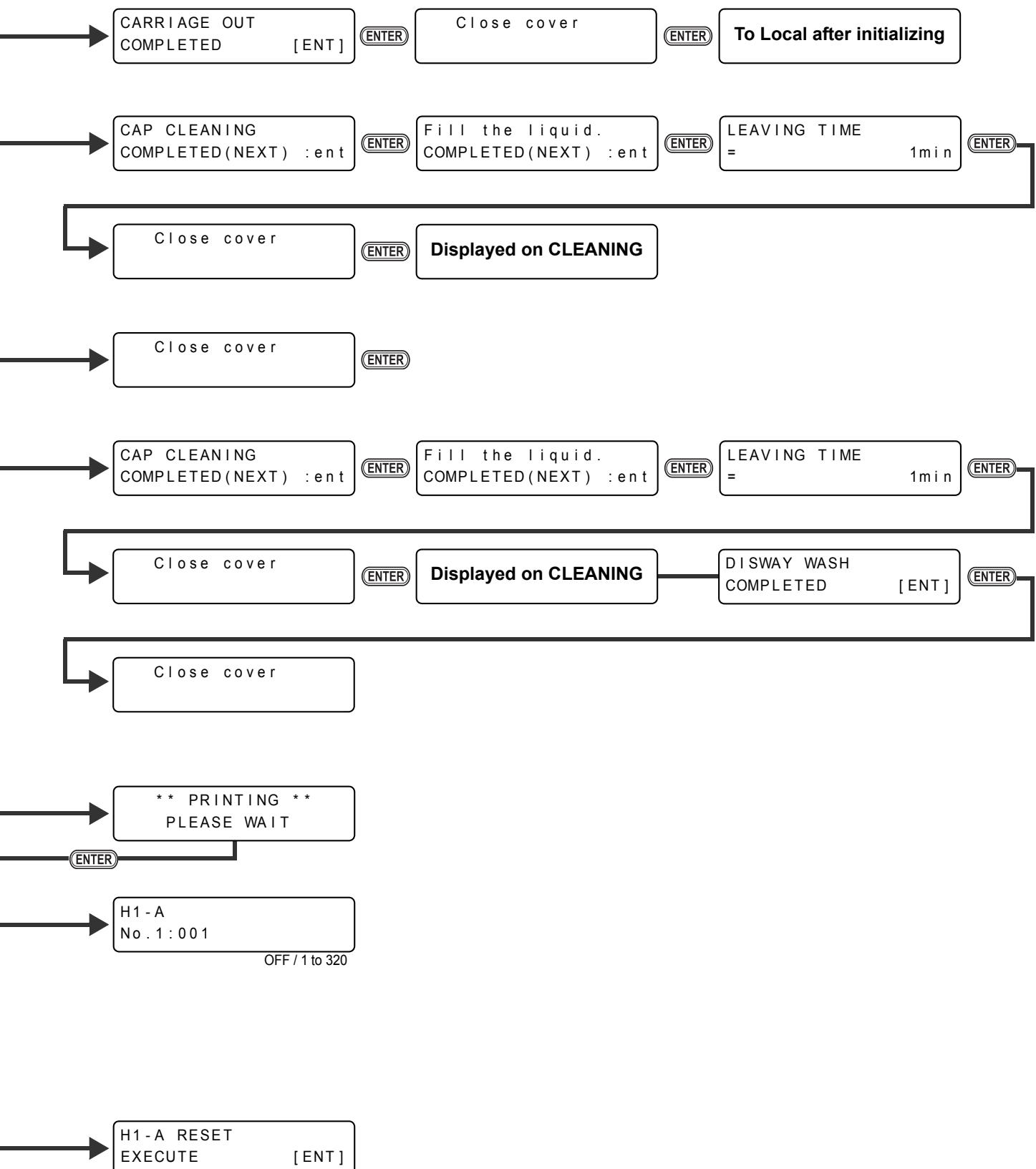


From P.6-12









From P.6-16

