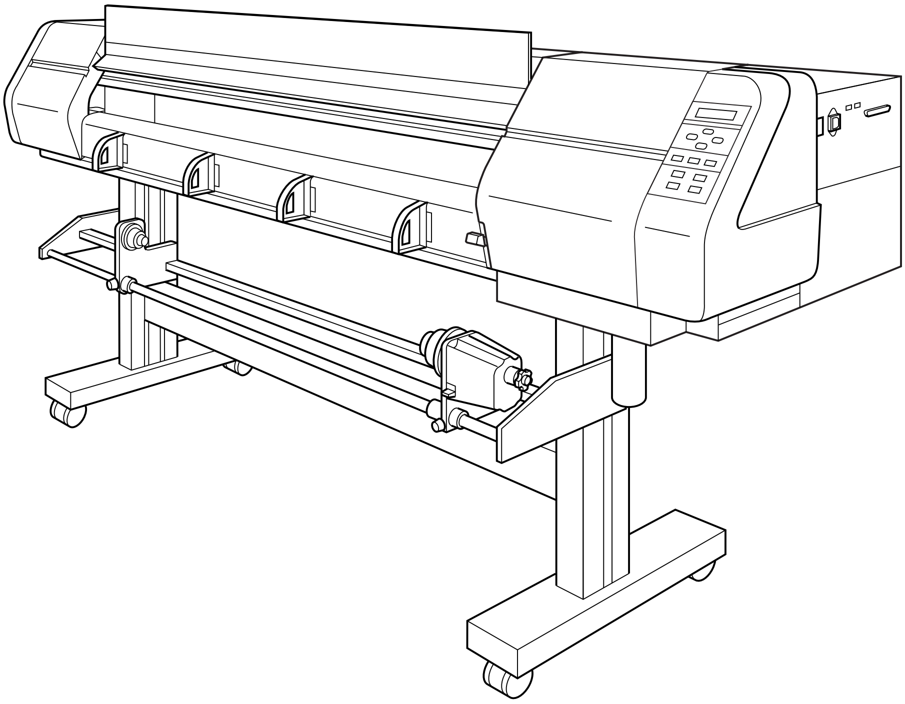
JV4 Series

COLOR INKJET PLOTTER

OPERATION MANUAL



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D200571

CAUTION

MIMAKI ENGINEERING CO., LTD. shall have no liability for any damage of any kind (including but not limited to unearned profits, indirect damages, special losses and other debts) caused by the use of malfunction of the product unless otherwise specified in MIMAKI warranty provisions. The same applies to any case where MIMAKI ENGINEERING CO., LTD. has been informed of the possible risk of such damages in prior.
For example, MIMAKI shall not be liable to any damage to medium (works) due to the use of the product or any indirect damage that is caused by a product that is manufactured with damaged medium.

Please be noted that MIMAKI ENGINEERING CO., LTD. shall have no liability for any debts, unearned profits and any claims from any third party resulting from the use of the device.

Requests

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

- Generally, names and designations referred to in this Instruction Manual are trade marks or registered trade marks of the manufacturers or suppliers.

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FCC Statement (USA)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio commnications.

Operation of this equipment in a residential area is likely to cause harmful interference in which cause the user will be required to correct the interference at his own expense.

WARNING

- In the case where MIMAKI-recommended cable is not used for connection of this device, limits provided by FCC rules can be exceeded. To prevent this, use of MIMAKI-recommended cable is essential for the connection of this device.

INTERFERENCE TO TELEVISIONS AND RADIOS

The product covered by this Instruction Manual produces low radio waves while it is in operation. The product can interfere with radios and televisions if set up or commissioned under improper conditions. The product is not guaranteed against any damage to specific-purpose radio and televisions.

The product's interference with your radio or television will be checked by turning on/off the power switch of the product.

In the event that the product is the cause of interference, try to eliminate it by taking one of the following corrective measures or taking some of them in combination.

- Change the direction of the receiving antenna or the feeder of your radio/television.
- Change the installing direction of the product.
- Move the receiver away from the product.
- Use a power line for the receiver that is not shared with the product.

FOREWORD

Congratulations on your purchase of a MIMAKI "JV4 Series" model of color ink jet printer.

Model JV4 Series is a color ink jet plotter which is capable of producing images in up to six different colors at high speeds.

Read this instruction manual carefully and make the most effective use of your plotter.

⚠ WARNING

- Model JV4 Series has parts which move at dangerously high speeds, such as the plotting head. Before starting to operate the plotter, be sure to read this instruction manual carefully in order to prevent injuries to persons and damage to the plotter.

ON THIS INSTRUCTION MANUAL

- This instruction manual describes the operation and maintenance of Model JV4 Series Color Ink Jet Plotter (hereinafter referred to as the device).
- Please read and fully understand this Instruction Manual before putting the machine into service. It is also necessary to keep this Instruction Manual on hand.
- Make arrangements to deliver this Instruction Manual to the person in charge of the operation of this device.
- This Instruction Manual has been carefully prepared for your easy understanding, however, please do not hesitate to contact a distributor in your district or our office if you have any inquiry.
- Description contained in this Instruction Manual are subject to change without notice for improvement.
- In the case where this Instruction Manual should be illegible due to destruction by fire or breakage, purchase another copy of the Instruction Manual from our office.

FEATURES

The features of the device are described below. Together with the method of operation of the device explained in this manual, they help you understand how to use the device properly.

SETTING FOR 1-WAY HIGH-SPEED PRINTING

New piezo electric heads, the staggered-layout print head provides more attractive, faster printing, and allows ultra high-precisions 6-head 1-way printing.

SETTING FOR 2-WAY MULTI PRINTING

Alternatively, using two sets of three heads in 2-way printing mode, each with different inks, gives you the functionality of two 6-color plotters in a single unit.

APPLICABILITY OF NEW TYPES OF INK (WATER-SOLUBLE DYE INK AND DISPERSE DYE INK)

MIMAKI offers the following three types of ink that can be used with the device.

• **Water-soluble pigment ink**	The conventional pigment-based ink. Having excellent light fastness, this type of ink is most suitable for outdoor print on large-sized color sign displays (e.g., signboards).
• **Water-soluble dye ink**	This type of ink has good color development and is most suitable for indoor print, such as posters.
• **Disperse dye ink**	A disperse dye-based ink is used to transfer an image plotted on a medium to another medium.

HIGH-PRECISION PLOTTING AND HIGH-QUALITY IMAGES

The variable dot mode allows for a high-precision plotting operation.
The device is capable of plotting high-quality images with a maximum resolution of 1,440 dpi.

APPLICABILITY OF MEDIUM UP TO 7 MM IN THICKNESS

Even thick medium, such as boards, can be used.
The device accepts medium whose thickness is in the range of 0.1 mm to 7.0 mm.

PREVENTION OF WARPING OF THE RIGHT AND LEFT EDGES OF A WIDE MEDIUM

The maximum width of medium that can be used is 1,381 mm for Model JV4-130, 1,620 mm for Model JV4-160 and 1,910 mm for Model JV4-180. The edge holders that hold down the medium being plotted on prevent warping of the medium at the edges, thereby reducing the contact between the medium and the head.

INDICATION OF THE AMOUNT OF REMAINING INK

Since the amount of ink that remains can be checked even during operation of the device, you can use the ink and medium without waste.

EASY-TO-SEE DISPLAY

The LCD panel displays the device setting menu in two lines (not one line), making it easier to see.
Since the LCD panel is provided with a backlight, the display can be clearly seen even in a dark place.
The LCD panel is capable of displaying six different languages, including English and Spanish.

DISPLAY OF INFORMATION FOR CONFIRMATION

It is possible to have the printing length displayed on the LCD panel and the plotting conditions to be plotted for confirmation during operation of the device.

HIGH-SPEED INTERFACE

The "IEEE-1394" interface allows for high-speed data reception from the computer.

PLOTTING FOR ARTWORK OF SCREEN PRINTING

By using the exclusive block-copy film, it is possible to prepare a block copy with a maximum resolution of 1440 x 1440 dpi.

TAKE-UP DEVICE FOR PLOTTING ON A LONG MEDIUM

Since the take-up device that is interlocked with the device winds up the medium as it is plotted on, even a long medium can be used.

A NEWLY PROVIDED MEDIUM SUPPORT BAR

The device is provided with a medium support bar at the back. It is useful when a heavy medium, such as Tarpaulin, is set on the device.

OPTIONAL MEDIUM UNLOADING EQUIPMENT

The medium unloading equipment applicable to the JV4-180 model has been provided as an option. It allows the use and setup of medium which cannot be used with the roll holder of the main unit.

FOR SAFE OPERATION

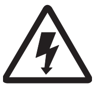
PICTORIAL SIGNS

Pictorial signs are used in this Instruction Manual for safe operation of and in prevention of damages to the device. Pictorial signs and their meanings are given below. Read and fully understand before reading the text.

⚠ WARNING
- Indicates the case where it is assumed that misuse of the machine, ignoring this sign, can expose the operator to danger of injury or death.

⚠ CAUTION
- Indicates the case where it is assumed that misuse of the machine, ignoring this sign, can cause damage only to property.

EXAMPLE OF PICTORIAL SIGNS



- The symbol "△" indicates the case where some phenomenon that requires a CAUTION sign (including "DANGER" and "WARNING" signs) exists. A concrete precaution (precaution against an electric shock in the case of the sketch given on the left) is shown in the illustration.

- The symbol "⊘" indicates a prohibited behavior. A concrete illustration of prohibition (disassembly is prohibited in the sketch given on the left) is shown in or next to the illustration.

- The symbol "●" indicates a thing that is forced to be done and instruction that is forced to be followed. A concrete illustration of instruction (the removal of a plug from the receptacle is instructed in the sketch given on the left) is drawn in the illustration.

- The symbol "💡" indicates helpful information that will facilitate the use of the device.

NEVER DO THE FOLLOWING

⚠WARNING

During assembly

- The pack of the device is as heavy as approximately 200 kg.

  Perform the assembly work by at least four persons.

Do not disassemble or remodel the device.

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

Do not use the device in damp places.

- Avoid damp environments when putting the device into service. Do not splash water onto the device.

  High-humidity or water will give rise to fire, electric shocks or breakdown of the device.

Abnormal event occurs.

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

Roll paper

- Roll paper is heavy. Be careful not to drop it. If you drop it on your foot, or any other part of your body, personal injury can result.

Power supply and voltage

- Be sure to use the device with the power supply specifications indicated.
- Be sure to connect the plug of the power cable to a grounded receptacle.

  If not, fire or electric shocks can result.

Handling of the power cable

- Take care not to damage, break or work on the power cable.

  If a heavy matter is placed on the power cable, heated or drawn, the power cable can break to cause fire or electric shocks.

Handling of ink cartridges

- Store ink cartridges and waste ink tank in a place that is out of the reach of children.
- If ink settles on the skin or clothes, immediately wash it off with detergent or water.

  In the event that ink gets in eyes, immediately rinse it off with water and consult a medical doctor.
- Neither pound the ink cartridge nor shake it violently so as to prevent leakage of ink.
- Never refill the ink cartridge with ink.

  MIMAKI assumes no responsibility for malfunction caused by using the device after replenishment of ink.

PRECAUTIONS IN USE

⚠CAUTION

Locking the adjuster foot

- Be sure to lock the adjuster foot before starting printing. If the device performs printing without the casters locked, the device can move out of position.

Front cover and lever

- Never open the front cover and/or lever during printing. Opening the cover or lever will abort printing.

Protection against dust

- It is strongly recommended to use the device in a room that is not dusty.
- Keep the front cover held closed also when the device is not engaged in printing. If not, dust can accumulate on the head nozzle.
- When leaving the workshop after the working hours, be sure to remove any medium from the roll hanger. If any medium is left on the roll hanger, dust can gather on it.
- Store medium in a bag. Wiping off dust accumulated on a medium will adversely affect the medium due to static electricity.
- Frequently wipe the capping station clean to eliminate dust and paper chips. Wiping with a fluffy wiper only rubs dust over the capping station. Replace the fluffy wiper immediately with a new one.
- Dust in the head will also cause drops of ink to fall abruptly down on the medium during printing. If this phenomenon takes place, be sure to clean up the head. (See “Chapter 4 Maintenance functions.”)

Periodic exchange parts

- There are some parts which must be replaced by service men after JV4 series are in use for 5000 hours from 3000 hours. Therefore, we would like to suggest that you make a contract with distributors or dealers for after-sale service.

Medium

- Use specific cloth designated medium exclusive to JV4 series. Mimaki assumes no responsibility for any damage caused by the use of any medium other than the aforementioned one.
- If medium that is likely to tightly curl, flatten first the paper before using it for printing. Heavily-curled medium affect the plotted picture quality.

Locking the casters

- Be sure to lock the casters before starting plotting. If the device performs plotting without the casters locked, the device can move out of position.

Warning labels

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

  Refer to Appendix for the label adhering locations.

⚠CAUTION

Ink cartridges

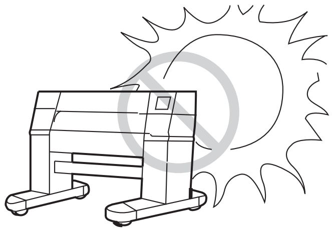
- If the ink cartridge is moved from a cold place to a warm place, leave it in the room temperature for three hours or more before using it.
- Open the ink cartridge just before installing it in the printer. If it is opened and left for an extended period of time, normal printing performance of the printer may not be ensured.
- Be sure to thoroughly consume the ink in the ink cartridge, once it is opened, within six months.

  If an extended period of time has passed after opening the cartridge tank, printing quality would be poor.
- Be sure to store ink cartridges in a cold and dark place.
- Never replenishes the ink cartridge with ink.
- Using any ink type other than the exclusive one can cause a trouble. Remember that the user shall be charged for a repair to correct any damage resulting from the use of ink other than the exclusive type.

PRECAUTIONS IN INSTALLATION

⚠CAUTION

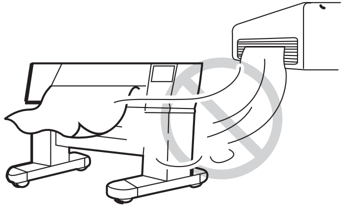
A place exposed to direct sunlight



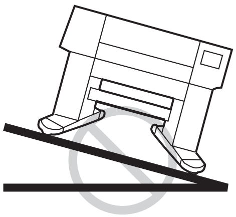
A place in which temperature and humidity vary by a great margin

Use the device under the following environment.
Operating environment:
15 to 30°C
35 to 65% (Rh)

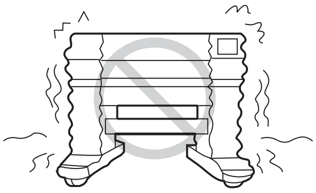
A place exposed to direct air blow from air conditioner, etc.



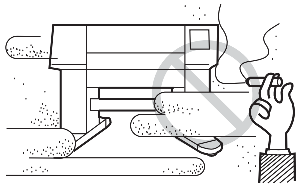
A place that is not horizontal



A place that vibrates



A place filled with dirt, dust or tobacco smoke



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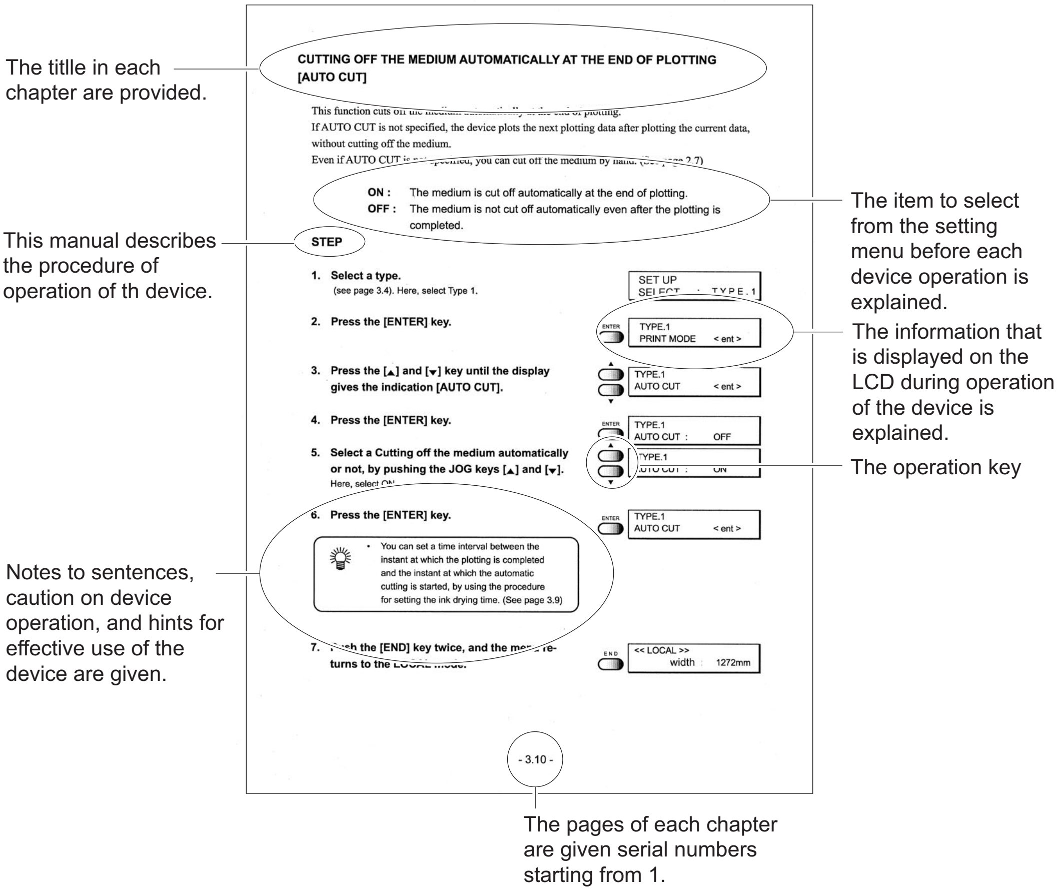
HOW TO READ THIS OPERATION MANUAL



CUTTING OFF THE MEDIUM AUTOMATICALLY AT THE END OF PLOTTING [AUTO CUT]

This function cuts off the medium automatically at the end of plotting.
If AUTO CUT is not specified, the device plots the next plotting data after plotting the current data, without cutting off the medium.
Even if AUTO CUT is not specified, you can cut off the medium by hand. (See page 2.7)

ON : The medium is cut off automatically at the end of plotting.
OFF : The medium is not cut off automatically even after the plotting is completed.

STEP

1. **Select a type.**
   (see page 3.4). Here, select Type 1.
   SET UP
   SELECT : TYPE.1
2. **Press the [ENTER] key.**
   TYPE.1
   PRINT MODE < ent >
3. **Press the [▲] and [▼] key until the display gives the indication [AUTO CUT].**
   TYPE.1
   AUTO CUT < ent >
4. **Press the [ENTER] key.**
   TYPE.1
   AUTO CUT : OFF
5. **Select a Cutting off the medium automatically or not, by pushing the JOG keys [▲] and [▼].**
   Here, select ON.
   TYPE.1
   AUTO CUT : ON
6. **Press the [ENTER] key.**
   TYPE.1
   AUTO CUT < ent >

   - You can set a time interval between the instant at which the plotting is completed and the instant at which the automatic cutting is started, by using the procedure for setting the ink drying time. (See page 3.9)
7. **Push the [END] key twice, and the menu returns to the LOCAL mode.**
   << LOCAL >>
   width : 1272mm

- 3.10 -

The titlle in each chapter are provided.

This manual describes the procedure of operation of th device.

Notes to sentences, caution on device operation, and hints for effective use of the device are given.

The item to select from the setting menu before each device operation is explained.

The information that is displayed on the LCD during operation of the device is explained.

The operation key

The pages of each chapter are given serial numbers starting from 1.

DISPLAY ON THE LCD AND INDICATION OF THE KEYS

In this instruction manual, the characters displayed on the LCD of the operation panel (see page 2.2) and the keys used to operate the device are explained, together with the operation procedure. Operate the device while confirming the display on the LCD.

Display on the LCD

The content of display is shown in characters in a box as shown at right.
Operate the device according to the explanation of the operation procedure and the content of display on the LCD.
In this instruction manual, each setting and messages displayed on the LCD is enclosed in [ ], like [TYPE.1], [Pigcm], [EXTEND], [PLEASE WAIT], etc.

```
FUNCTION
SET UP                  < ENT >
```

```
SET UP
SELECT        :         TYPE.1
```

Operation keys

In the text of this instruction manual, the operation keys are shown enclosed in brackets.
[▲] and [▼] indicate JOG keys.
The other operation keys are enclosed in brackets, as [FUNCTION]. (See page 2.2.)

STRUCTURE OF THIS INSTRUCTION MANUAL

CHAPTER 1 SET-UP

This chapter describes the procedures for unpacking and assembling the device, and for setting up the device such as setting inks and medium.

CHAPTER 2 HOW TO USE THE BASIC FUNCTIONS

This chapter describes the basic operations of the device, from the beginning to the end of plotting.

In order to use the application functions, it is indispensable to understand the basic functions of the device explained in this chapter.

CHAPTER 3 HOW TO USE THE APPLICATION FUNCTIONS

This chapter describes the application functions of the device, such as the function menu for setting plotting conditions.

CHAPTER 4 MAINTENANCE FUNCTIONS

This chapter describes functions intended to correct adverse influences on picture quality and to check abnormal conditions as well as the procedure to be taken to replace a used ink tank and cutter blade.

CHAPTER 5 WHEN ABNORMAL CONDITIONS ARE ENCOUNTERED

This chapter describes how to correct troubles after the occurrence of an abnormal condition on the device.

APPENDIX

This appendix describes the specifications of the device, function menu structure and output samples and introduces separately-available consumables.

CHAPTER 1

SET-UP

This chapter describes the procedures for unpacking and assembling the device, and for setting up device such as setting inks and medium.

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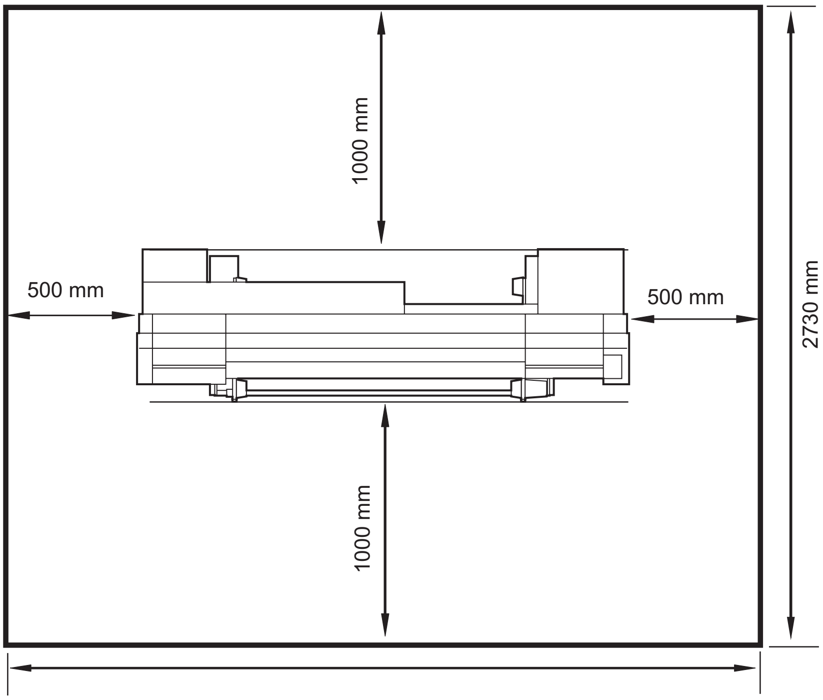
WHERE TO INSTALL THE DEVICE

Secure a suitable installation space before assembling the device.
The place of installation must have space required not only for the device itself but also for plotting operation.

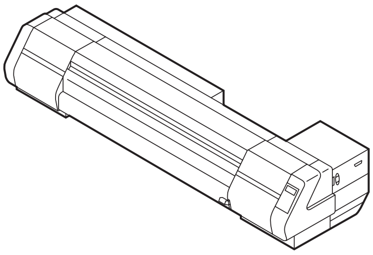
Model	Width	Depth	Height	Gross weight
JV4-130	2410 mm	730 mm	1205 mm	About 140 Kg
JV4-160	2740 mm	730 mm	1205 mm	About 153 Kg
JV4-180	3025 mm	730 mm	1205 mm	About 158 Kg



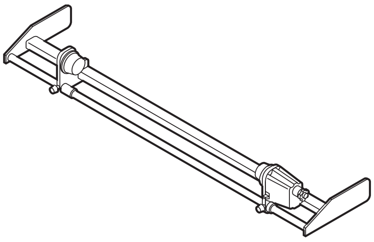
3405 mm (JV4-130)
3740 mm (JV4-160)
4025 mm (JV4-180)

CHECKING THE ACCESSORIES

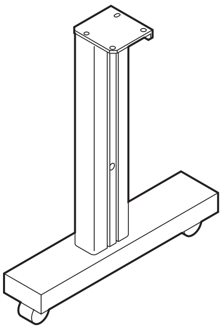
Open the packing box and check the components in it.
If you find any missing accessory or damaged one, contact your local dealer or MIMAKI office.



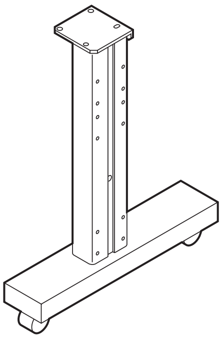
Main unit



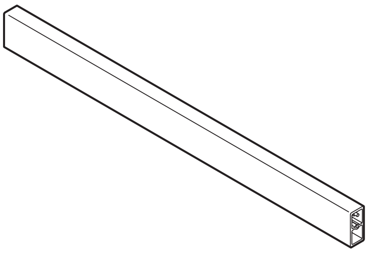
Take-up device



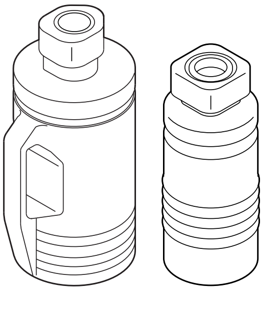
Left stand



Right stand



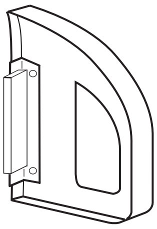
Stay



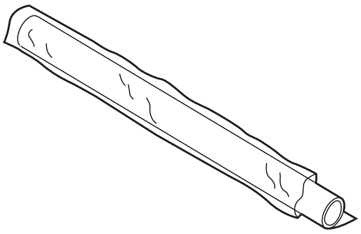
Waste ink tank (2 pcs.)

1000 cc (1 pcs.)

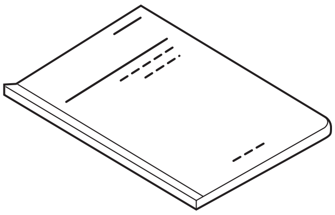
2000 cc (2 pcs.)

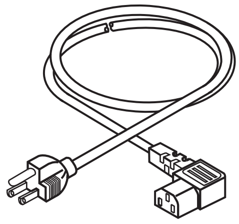


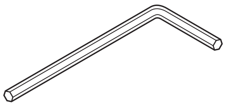
Medium support (4 pcs.)

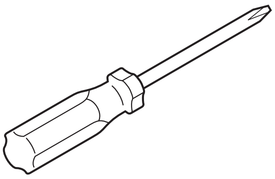


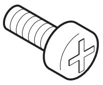
Plotting film (for adjustment of the device)

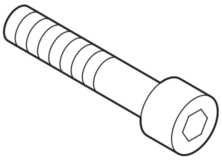

Instruction manual (this manual)

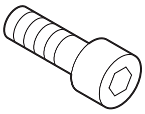

Power cable

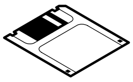

Hexagonal wrench (L)

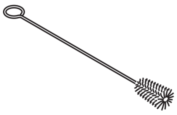

Phillips screwdriver


M4 cap bolt for fitting the
take-up device (4 pcs, 8 pcs JV4-180)


M8 cap bolt (long)
for fitting the stay (2 pcs)

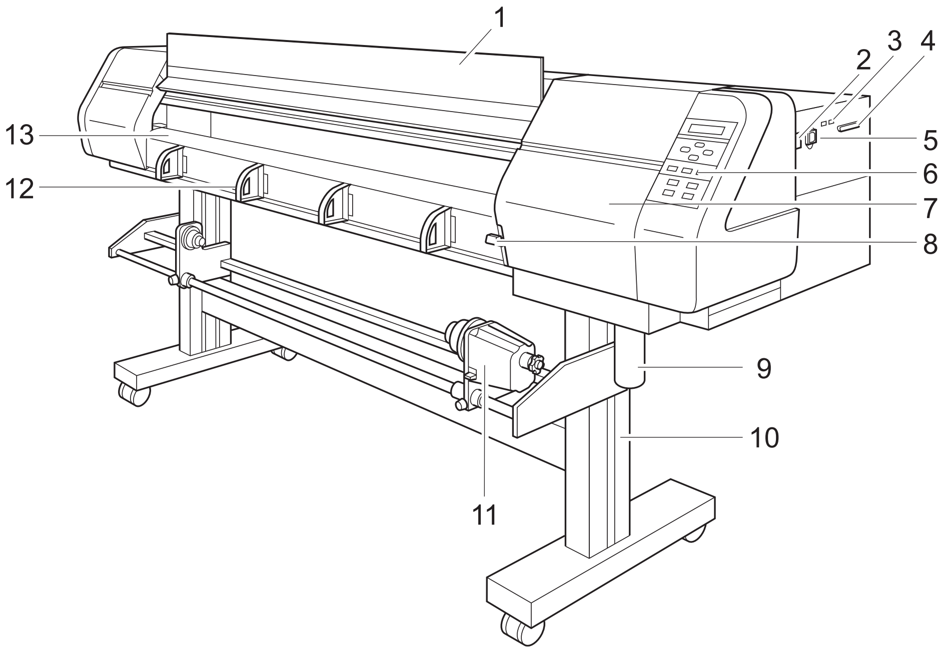

M8 cap bolt (Short)
for fitting the main unit (2 pcs)


IEEE1394 Driver
(for Windows2000)


Blush

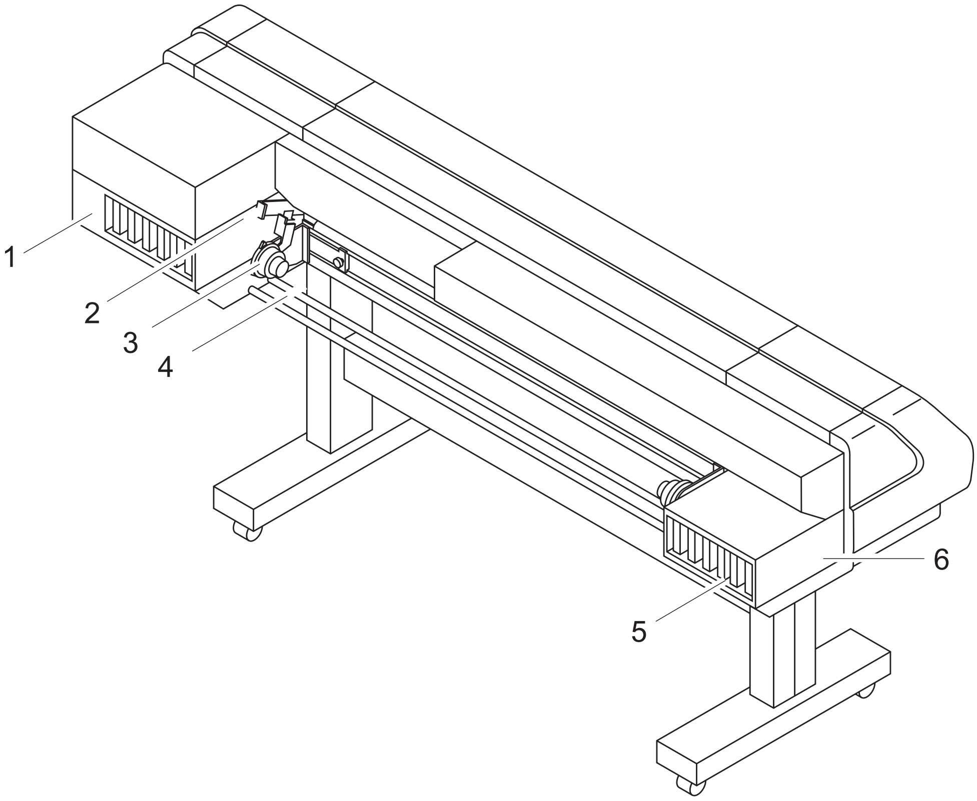
CONFIGURATION AND FUNCTION

FRONT FACE



	Name	Function
1.	Front cover	It is opened when setting medium or taking a corrective measure against a medium jam.
2.	Power switch	It turns on/off the power to the device.
3.	IEEE-1394 connector	A 400M bps interface connector compatible with IEEE-1394.
4.	Parallel connector	Bi-directional parallel interface connector (complies with IEEE1284)
5.	AC inlet	The power cable is connected to the AC inlet.
6.	Operation panel	This panel has the operation keys required for operating the device and the LCD for displaying set items, etc.
7.	Maintenance cover	This is the carriage cover. During maintenance of the station (See page 4.8), open it by loosening the screws.
8.	Clamp lever	It is made to go up-down the pinch roller for holding medium.
9.	Waste ink tank	Waste ink gathers in this tank. One waste ink tank is provided on each side of the device.
10.	Stand	It supports the main unit. It is provided with casters that are used to move the device.
11.	Take-up device	It supports to wind up the roll medium printed, and have the operation named FORWARD / OFF / REVERSE.
12.	Medium support	It supports to send the medium smoothly. It has merit for preventing rises of hard medium such as canvas.
13.	Platen	It puts out the medium as it is plotted on.

REAR FACE



	Name	Function
1.	F ink station	This station houses up to six ink cartridges.
2.	Clamp lever	It is made to go up-down the pinch roller for holding medium.
3.	Roll holder	Roll holder is inserted in the right and left core of roll medium to hold the roll medium. The roll holder is applicable to diameter of medium cores with 2 and 3 inches.
4.	Paper roll setting bar	This bar facilitates a paper roll to be set in position.
5.	Ink cartridge	Each cartridge contains ink of a specific color.
6.	R ink station	This station houses up to six ink cartridges.

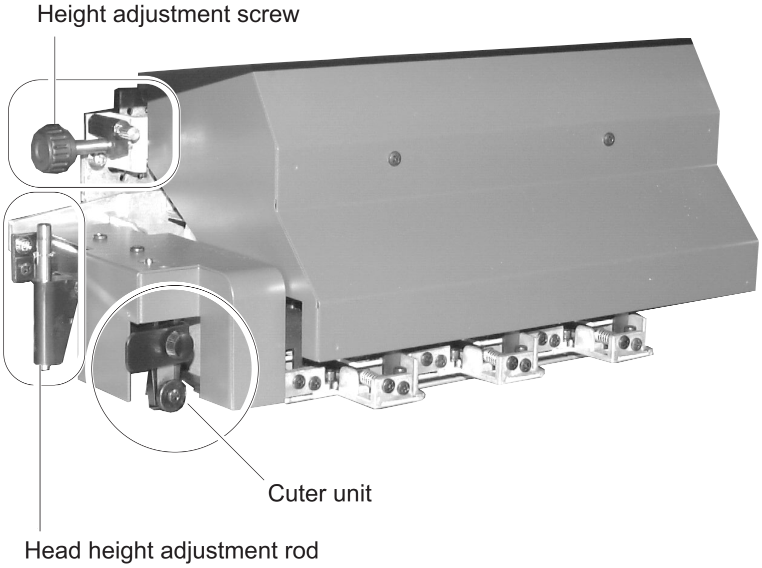
NAMES AND FUNCTIONS OF THE PARTS UNDER THE FRONT COVER

Under the front cover, there are the carriage, capping station, etc. necessary for plotting operation. The mechanisms provided under the front cover are explained below.

CARRIAGE

The carriage is provided with ink heads for plotting, a cutter unit for cutting off medium, etc. It is also provided with a head height adjustment screw for adjusting the head height according to the thickness of the medium used. The carriage moves during plotting, medium cutting, and medium detection.

When cleaning the interior of the capping station, execute the STATION MAINTENANCE function to move the carriage. (See page 4.8 "Moving the Carriage for Cleaning the Station Interior [Carriage Out].")



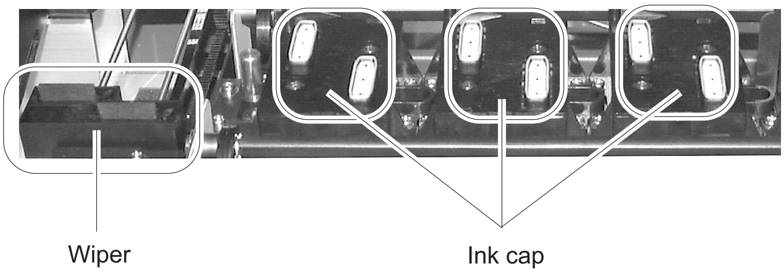
CAUTION

- When setting a medium in position for plotting, be sure to adjust the carriage height. (See page 1.34)
- Starting the plotting operation without adjusting the carriage height can cause damage not only to the medium but also to the device itself.

CAPPING STATION

The capping station consists of ink caps, wipers for cleaning the heads, etc.

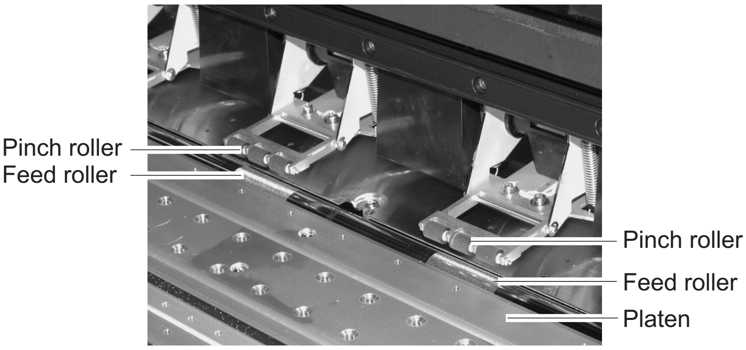
Cap	:	It covers the nozzle so as to prevent the head nozzle from drying up.
Wiper	:	It is used to clean the head nozzle.


Wiper
Ink cap

THE PINCH ROLLER AND THE FEED ROLLER

This device retains a medium with the pinch roller and the feed roller.

During plotting operation, the feed roller feeds the medium forward.

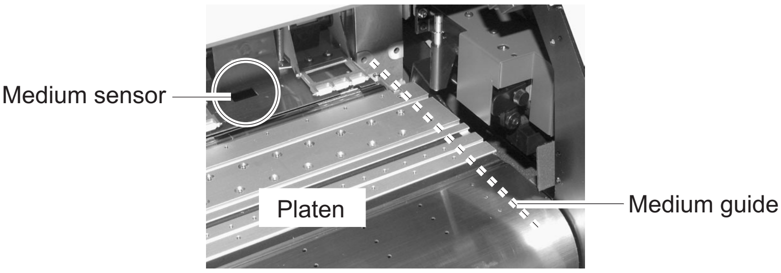

Pinch roller
Feed roller
Pinch roller
Feed roller
Platen

CAUTION

- While the device is not being used, keep the pinch roller in the raised position. If the pinch roller is left lowered for an extended period of time, it can deform and fail to securely retain the medium.

CAUTION

- When a sheet of paper is used as the medium, set it in position taking care that it does not come outside the guide holes in the right-hand part of the platen.



THE MEDIUM SENSOR

The medium sensors detects the presence of the medium and the medium length.

There is a medium sensors on the platen.

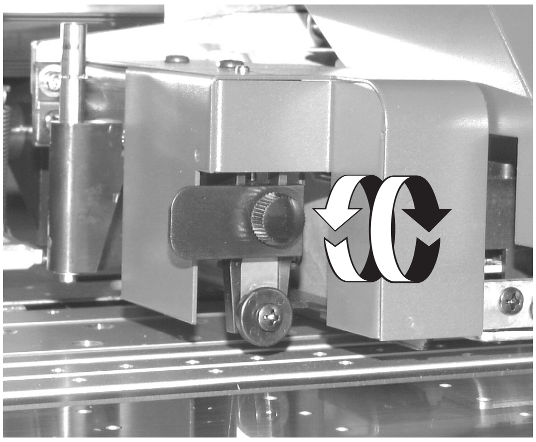
CAUTION

- Set up medium to cover medium sensor at the back side of platen absolutely. If the part of medium is not on medium, the medium con not be detected.

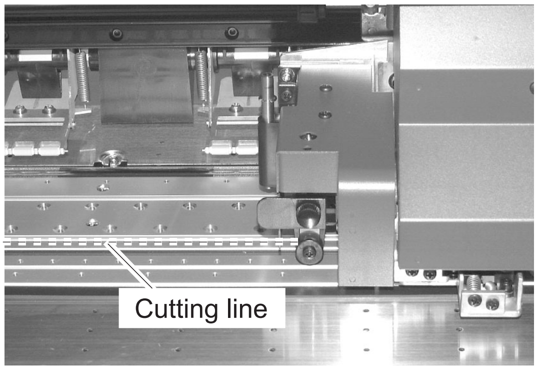
CUTTER BLADE AND CUTTING LINE

The carriage is provided with a cutter unit for cutting off the medium that has been plotted on.
The cutting line along which to cut off the medium is shown below.
For the method of cutting a medium, see “Cutting by Hand” (page 2.7) or “Automatic Cutting [AUTO Cut]” (page 3.10).

CUTTER UNIT



CUTTING LINE



HEAD HEIGHT ADJUSTMENT ROD AND ADJUSTMENT SCREW

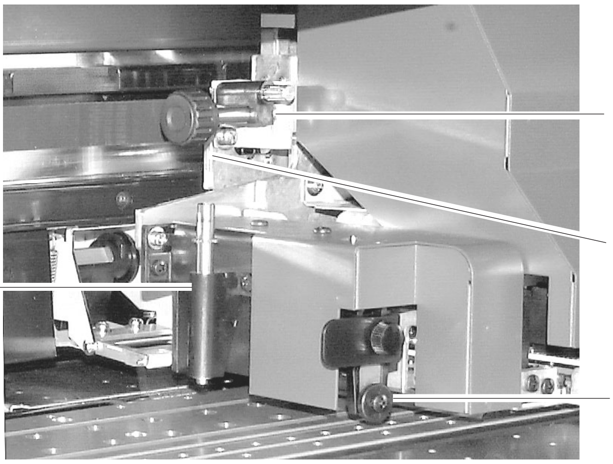
When a medium is set on the device for the first time or when a medium different in thickness from the current medium is set on the device, it is necessary to adjust the height of the heads.

CAUTION

- If the device is operated without adjusting the head height, the heads may get caught on the medium, causing damage to the heads.

CAUTION

- For the method of head height adjustment, see Adjusting the Head Height [Height Adjustment] (page 1.34) in Chapter 1 "Set-up".



Support screw
Secures the Height adjustment screw to prevent it from coming loose.

Height adjustment screw
Used to adjust the head height.

Head height adjustment rod
Measures the thickness of the medium to be used as a reference for head height adjustment.

Cutter unit
Cuts the media.

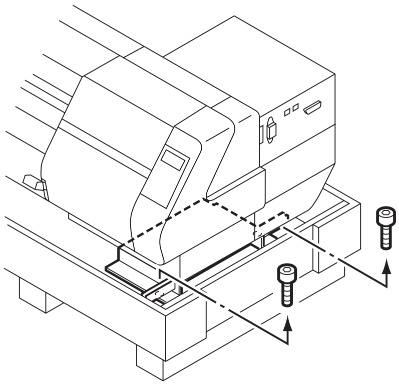
UNPACKING AND ASSEMBLING

ASSEMBLING THE PEDESTALS AND THE DEVICE

⚠ WARNING

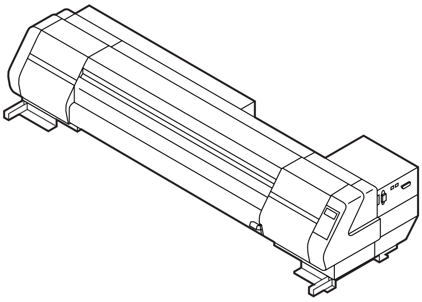
- The pack of the device is as heavy as approximately 200 kg. Perform the assembly work by at least four persons to ensure safety.
- Exercise added care not to drop the main unit on your feet.

1. **Remove the four bolts that fixes the packed pedestals and packed pads.**



Packed pedestals

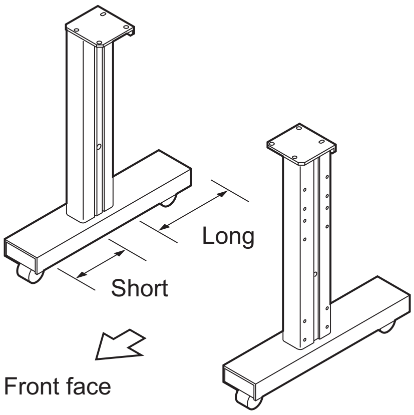
2. **Take the main unit together with the packed pedestals out of the package and place them on the floor.**



3. Take the stands out of the package.

Direct the stands so that round tapped holes for the screws are faced outside.

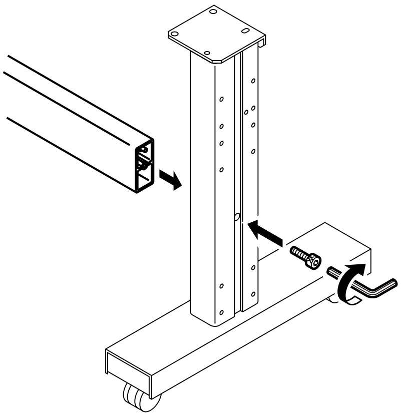
Set up each stand with the side having a groove for fitting the stay coming inside.



4. Fit the stay to each of the stands.

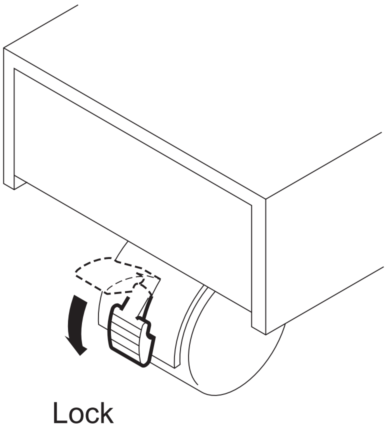
Fit the stay to the stands.

Insert the stay into the groove of each stands and tighten the screw using the furnished L-shaped wrench.



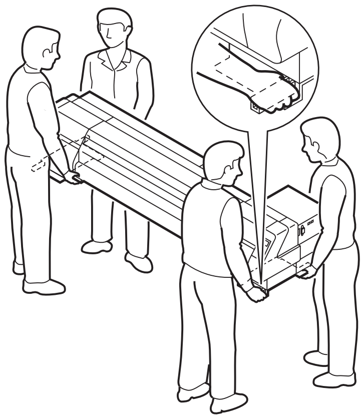
5. Lock the stand stoppers.

Lock the stand stoppers so that the stand assemblies will not move.



6. **Holding both ends of the main unit with four persons.**

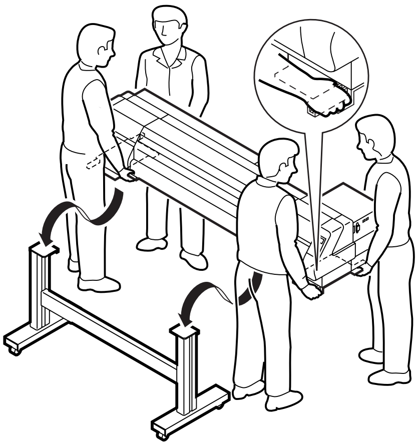
   Hold up the device at the pedestal support bars.



7. **Place the main unit on the stands while exercising care not to allow hands to be caught between them.**

   Set the device on the stand at the position where the screw holes in the device align with the screw holes in the tops of the stands.

   Fix the device to the stands with the screws from under the stands tops.



WARNING

- The device is very heavy. Take care that it does not fall: it is very dangerous.

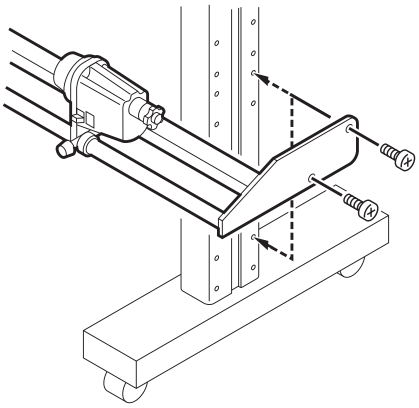
INSTALL THE TAKE-UP DEVICE

1. **Set the take-up device in position.**

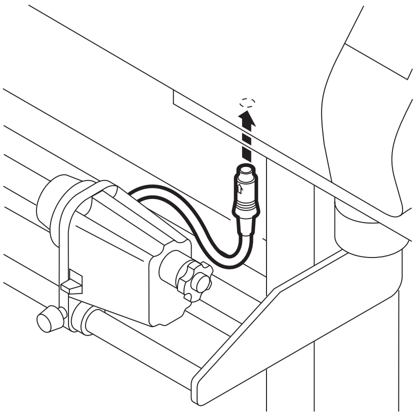
   Align the screw holes in the take-up device with the screw holes in the outer side of each stand, then fix the take-up device to the stands with the screws.

   There are a number of screw holes for installation of the take-up device.

   Fix the take-up device at the most convenient height.



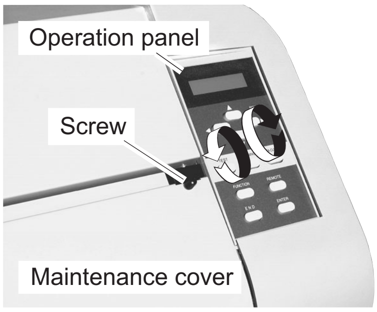
2. **Insert the cable of take-up device into the connector located at the bottom of the capping station.**



PUTTING ON THE MAINTENANCE COVER

1. **Put on the maintenance cover.**

2. **Fix the maintenance cover with the screws.**



> CAUTION
>
> - Do not open the maintenance cover except when it is necessary to clean the station interior (page 4.8 through 4.14).
>   Opening the maintenance cover during plotting interrupts image plotting and disables continuous processing.

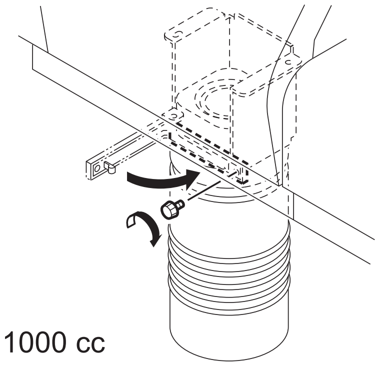
INSTALLING THE WASTE INK TANKS

Different size of waste ink tank is attached each side of right and left.
Install the large waste ink tank (2000 cc) in right side - the right seen from front.

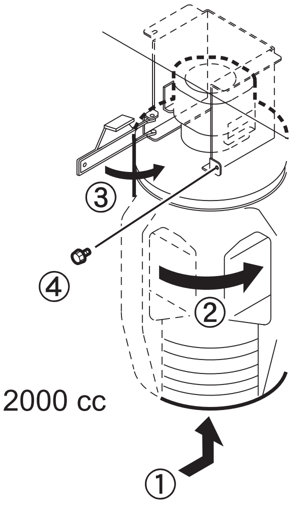
Left side of Waste Ink tank

1. **Insert the small waste ink tank assy to the bracket at left side.**

2. **Close the bracket and fix with the stop screw.**

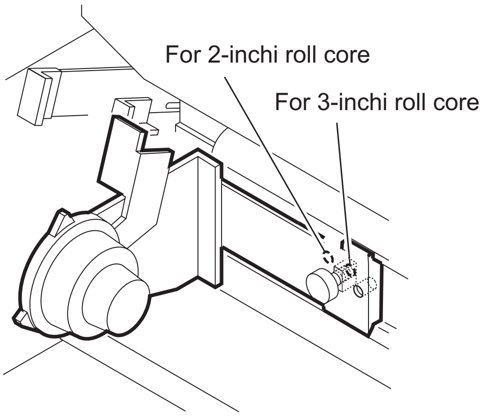


Right side of Waste ink tank.



1. **Insert the large waste ink tank to the right side bracket and raise up.**
2. **Rotate the waste ink tank assy 90 degrees to back.**
3. **Close the bracket and fix with the stop screw.**

INSTALLING THE ROLL HOLDERS

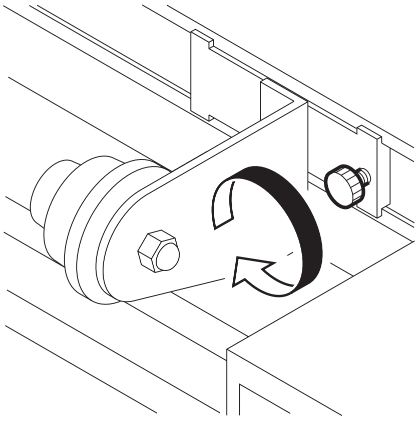


1. **Change the fixed position of the left-hand roll holder.**

   The left-hand roll holder can be fixed at either of two positions. Determine the fixing position of the left-hand roll holder according to the thickness of the roll core used, then fix it with the screw.

   2-inch roll core: Use the outer fixing hole.
   3-inch roll core: Use the inner fixing hole.

CAUTION
- When the device is shipped from the factory, the left-hand roll holder is set in the position for 3 inch roll core.



2. **Fix the right-hand roll holder with the furnished screw.**

   Fix the right-hand roll holder in the position appropriate to the width of the medium used.

MOVING THE DEVICE

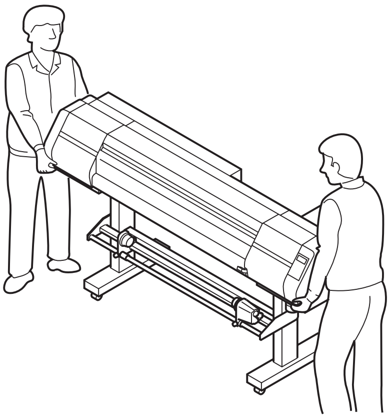
The method of moving the assembled device to the place of installation, etc. is explained below.
When moving the device, unlock the caster stoppers.

WARNING
- When moving the device, take care not to apply excessive shock to it.
- After moving the device, be sure to lock the caster stoppers.

Method of moving the device

When moving the device, it must be held up by at least two persons as illustrated at right.

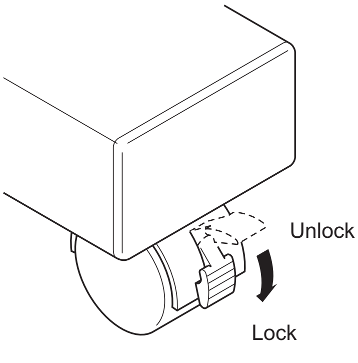
The cover of the device may break if it is pressed hard.



Locking/unlocking the casters

When moving the device, unlock each of the casters by pushing up the stopper.

Each of the casters on the pedestals is provided with a stopper.
When installing the device, push down the stoppers to lock the casters.



CONNECTING THE CABLES

CONNECTING THE INTERFACE CABLE

Connect the device to the computer with the appropriate interface cable.
Two types of interface cables are available with the device. Select the interface cable appropriate to the computer and output software used.

CAUTION

- Turn off the power switch of the device (the switch has to be tilted toward the “O” side) in prior to the connection of the interface cable and the power cable.

CAUTION

- When connecting the cables, first turn off the power to the device, then connect the interface cable and the power cable. Be sure to connect the interface cable first, then the power cable. Othewise mal-fanction will result.

When Windows 2000 is used (IEEE 1394)

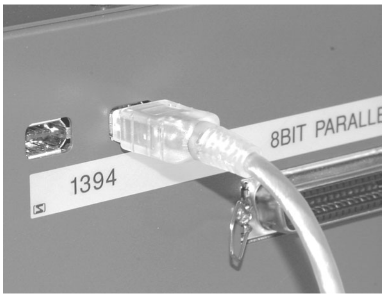
When the computer is operated with Windows 2000, use an IEEE 1394 interface cable to connect the computer and the device together.
It is possible to use an IEEE 1284 interface cable for connection between the computer and the device. In this case, however, the data transmission speed decreases.

CAUTION

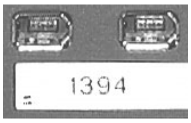
- The application used must be applicable to IEEE 1394.

CAUTION

- Either of the two IEEE 1394 connectors can be used.



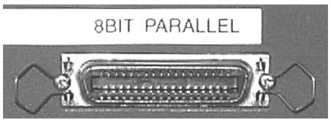
Configuration of connector (IEEE1394)

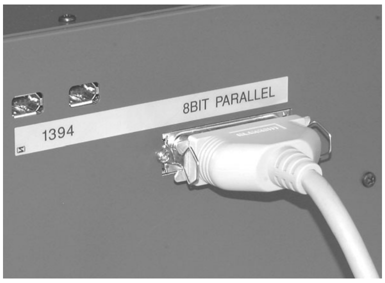


When software other than Windows 2000 is used (IEEE 1284)

When the software used is other than Windows 2000, use an IEEE 1284 interface cable to connect the computer and the device together.

Configuration of connector (IEEE1284)





CAUTION

- If the customer uses Windows 2000 and the computer is not provided with an IEEE 1394 board, contact your nearest RIP provider or MIMAKI sales office.

CONNECTING THE POWER CABLE

Connect the power cable as described below.

Connect the power cable to the receptacle of the following specifications.

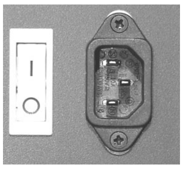
• **Voltage**	:	AC 100 – 240 V ±10%
• **Frequency**	:	50/60 Hz ±1%
• **Capacity**	:	4 A or more (400 W or more)

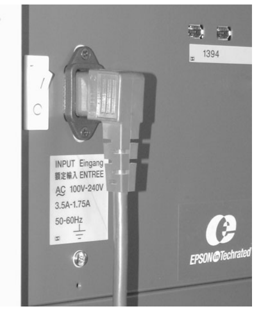
CAUTION

- Be sure to insert the power cable into an approriately-grounded receptacle. If not, there is a fear of arising electric shock hazards and damage to the device.
- Be sure to turn off the power switch of the device in prior to the connection of the power cable.

1. **Connect the power cable to the AC inlet.**

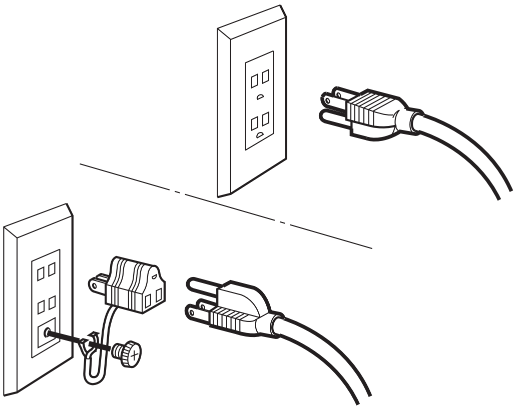
Configuration of power cable





2. **Connect the power cable to the 3-pole receptacle.**

For a 2-pole receptacle, connect the grounding adapter supplied with the device to the power cable plug.
Properly ground the green wire (ground lead) of the grounding adapter.

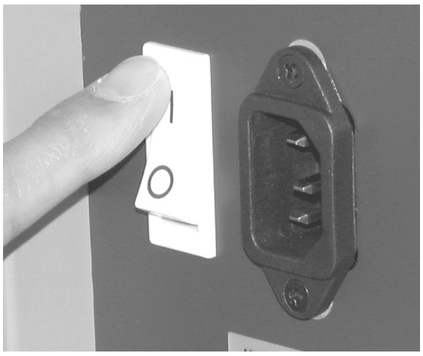


SWITCHING ON/OFF THE POWER SUPPLY

After setting up the device, switch on and off the power as described below.

TURNING THE POWER ON

1. **Turn on the power to the device.**
   Tilt the power switch toward the " I "side, and the power to the device is turned on.



CAUTION
- At this time, the front cover must be closed. (See page 1.18)
- With the front cover kept open, the carriage does not move even when the power is switched on.

When the power is switched on, the firmware version is displayed on the LCD and the initial operation of the device is performed.

2. **The message "Please Wait" appears flashing on the LCD.**
3. **The device enters the LOCAL mode.**
4. **Turn on the power to the connected devices, such as a computer.**

```
BOOT
```

```
                    Ver.X.XX
```

```
PLEASE WAIT
```

```
           << LOCAL >>
```

CAUTION
- When the power is switched on for the first time, the prompt for installation of ink cartridges is displayed on the LCD.
  Install the ink cartridges (see page 1.26).

```
Ink Type
R : Pigcm          F : Dye
```

CAUTION
- If a medium has been set on the device, the prompt "Media Select" is displayed on the LCD when the power is switched on.
  After selecting medium, the device detects the medium and returns to the LOCAL mode (see page 3.16).

```
       MEDIA SELECT
ROLL  <              >  LEAF
```

```
           << LOCAL >>
              width : 1272mm
```

TURNING THE POWER OFF

To turn the power off, check first whether or not there is data received and there remains data that has not yet been output in the device.

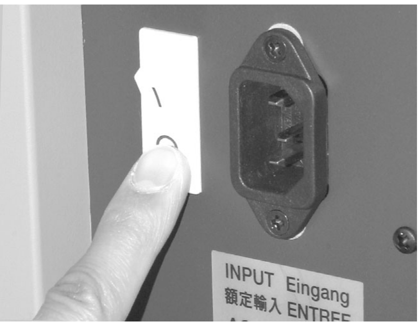
Also be sure that the head rests at the capping station.

CAUTION

- If the power is turned off while the device is engaged in plotting, the head may fail to be retracted in the capping station. If the head is left without capped for an extended period of time, the nozzle will be clogged with dust. If the power to the device is turned off without the head capped, re-turn on the power to the device.

1. **Turn off the power to the computer, etc. that are connected to the device.**

2. **Turn off the power to the device.**
   Tilt the power switch to the “O“ side.



FRONT COVER

OPENING/CLOSING THE FRONT COVER

Do not open the front cover while the device is in operation.
If you open the front cover during plotting, the carriage will stop for safety, reselting in abortion of plotting. In this case, re-start the device and computer following the procedure described below.

CAUTION

- Keep the front cover closed during plotting operation. Opening the front cover during plotting interrupts image plotting and disables continuous processing.

CAUTIONS DURING OPERATION

STEP

1. **When opening the cover during plotting, the message shown on the right will be displayed.**
   Stop the drawing.

Close a cover

2. **Stop the data transmission from the computer.**

3. **Close the front cover.**

PRESS < ENT > KEY

4. **Push the [ENTER] key.**

ENTER

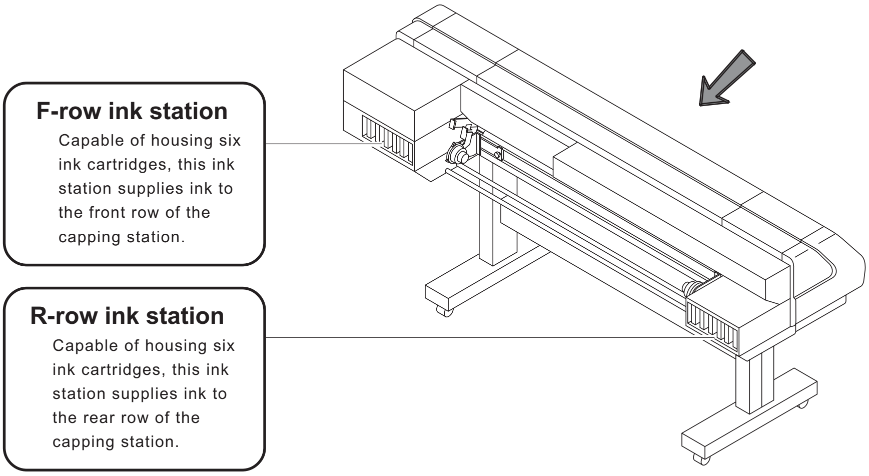
PLEASE WAIT

5. **The carriage will start to move.**
   The carriage will carry out a series of performance same as that taken after turning on the power to the device (i.e., the predetermined initial performance). (See page 1.20)

INK CARTRIDGES

INK STATIONS

As viewed from the front of the device, the ink station on the right side is called the “R-row ink station” and the ink station on the left side is called the “F-row ink station.”



F-row ink station
Capable of housing six ink cartridges, this ink station supplies ink to the front row of the capping station.

R-row ink station
Capable of housing six ink cartridges, this ink station supplies ink to the rear row of the capping station.

CAUTION

- The figure shows the unit when viewed from rear side.

CAUTION

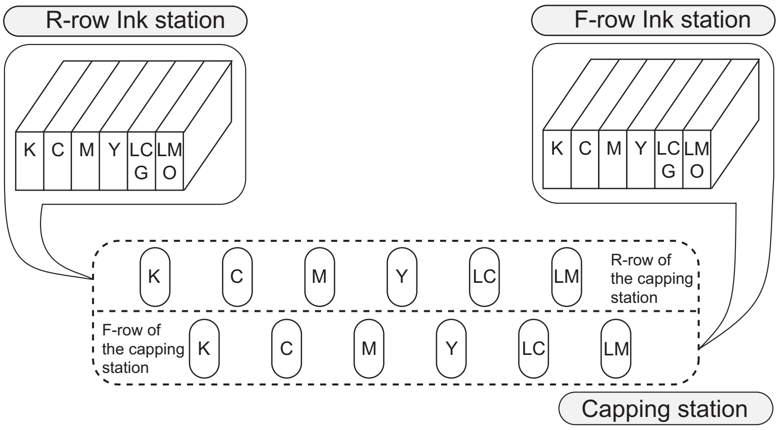
- In each ink station, set six ink cartridges containing ink of the same type. The position of each ink cartridge containing ink of a specific color is predetermined. Set the ink cartridges in their right positions.

Relationships between ink station and head row

The F-row ink station supplies ink to the front row (F-row) of heads.

The R-row ink station supplies ink to the rear row (R-row) of heads.

Remember these relationships when checking the heads for clogged nozzles and replenishing inks.


R-row Ink station
K C M Y LC G LM O
F-row Ink station
K C M Y LC G LM O
K C M Y LC LM
R-row of the capping station
F-row of the capping station
K C M Y LC LM
Capping station

TYPES OF INK

In each of the two ink stations of the device, four types of ink can be used. The characteristics of each ink type are described below.

CAUTION

- Be sure to use the inks and ink cartridges specified by MIMAKI.

- **Water-soluble pigment ink [Pigcm] :** A pigment-based ink having good weather resistance. The conventional pigment-based ink. Having excellent light fastness, this type of ink is most suitable for outdoor print on large-sized color sign displays (e.g., signboards).
  A six-color set (black, cyan, magenta, yellow, light cyan and light magenta) is available.

- **Water-soluble pigment ink [PigOG] :** A pigment-based ink having good weather resistance. The conventional pigment-based ink. Having excellent light fastness, this type of ink is most suitable for outdoor print on large-sized color sign displays (e.g., signboards).
  A six-color set (black, cyan, magenta, yellow, light cyan, Orange and Green), is available.

- **Water-soluble dye ink [Dye] :** This type of ink has good color development and is most suitable for indoor print, such as posters. Black is used in the art work creation mode.
  A six-color set (black, cyan, magenta, yellow, light cyan and light magenta) is available.

- **Disperse dye ink [Sub] :** A disperse dye-based ink used to transfer an image plotted on a medium to another medium.
  A six-color set (black, cyan, magenta, yellow, light cyan and light magenta) is available.

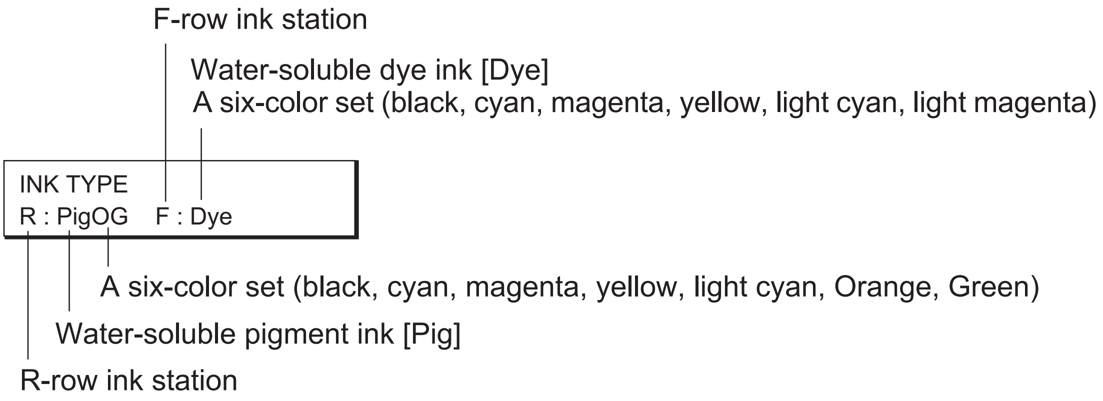
PRECAUTIONS IN HANDLING THE INK CARTRIDGE

CAUTION

- Never disassemble the ink cartridge.
- The ink is not toxic. However, avoid direct contact with the ink. If ink contacts the skin or clothes, immediately wash it off with detergent or water. In the event that ink gets in eyes, immediately rinse it off with a large amount of running water and consult a medical doctor.
- Do not shake the ink cartridge violently. Shaking or turning it roughly can cause leakage of ink.
- Never refill the ink cartridge with ink. Refilling the ink cartridge can cause a trouble. Remember that Mimaki assumes no responsibility for any damage caused by the use of the ink cartridge replenished with ink.
- Using any ink type other than the exclusive one can cause a trouble. Remember that the user shall be charged for a repair to correct any damage resulting from the use of ink other than the exclusive type.
- 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.
- Be sure to thoroughly consume the ink in the ink cartridge, once it is opened, within six months. If an extended period of time has passed after opening the cartridge tank, plotting quality would be poor.
- Be sure to store ink cartridges in a cold and dark place.
- Store ink cartridges in a place that is out of the reach of children.
- Dispose empty ink cartridges and waste ink tanks in accordance with national and local ordinances effective in the area in which the device is used.

DISPLAY OF INK TYPE

Ink type is displayed when an ink cartridge is newly set, an ink cartridge of different type is set, or a type of ink is selected from the ones that have already been set.
The information displayed on the LCD consists of the row of ink station (R or F row), the type of ink, and the ink set colors (light cyan/light magenta or orange/green).


F-row ink station
Water-soluble dye ink [Dye]
A six-color set (black, cyan, magenta, yellow, light cyan, light magenta)
INK TYPE
R : PigOG F : Dye
A six-color set (black, cyan, magenta, yellow, light cyan, Orange, Green)
Water-soluble pigment ink [Pig]
R-row ink station

INITIAL SETTING OF INKS

When using the device for the first time, it is necessary to install ink cartridges in the device. Use the following procedure to install the ink cartridges.

STEP

1. **Turn the power on.**
   After the initial operation, the device displays the type of ink set in each ink station.

```
INK TYPE
R : Pigcm            F : Dye
```

2. **By pushing the JOG keys [▲] and [▼], specify the type of ink set in the R-row ink station.**

```
INK TYPE
R : Dye              F : Dye
```

[Pigcm]	Water-soluble pigment ink (light cyan, light magenta)
[PigOG]	Water-soluble pigment ink (Orange, Green)
[Dye]	Water-soluble dye ink
[Sub]	Disperse dye ink

3. **Move the cursor by pushing the JOG keys [◀] and [▶].**

```
INK TYPE
R : Dye              F: Dye
```

4. **By pushing the JOG keys [▲] and [▼], specify the type of ink set in the F-row ink station.**

```
INK TYPE
R : Dye              F : Pigcm
```

5. **Push the [ENTER] key.**

```
CARTRIDGES SET
```

6. **Insert the ink cartridges into the ink stations.**
   Align two projecting portions of the ink cartridge with rails on the ink stations. Once the ink cartridge is inserted to reach the normal position, the buzzer will sound.

7. **The print head is automatically filled with ink.**

```
FILL UP
```

8. **Once the ink-filling procedure completes, the device enters the LOCAL mode.**

```
<< LOCAL >>
```

SETTING INK CARTRIDGES

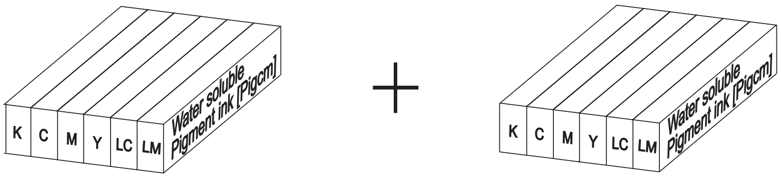
SETTING FOR 1-WAY HIGH-SPEED PRINTING

New piezo electric heads, the staggered-layout print head provides more attractive, faster printing, and allows ultra high-precisions 6-head 1-way printing.

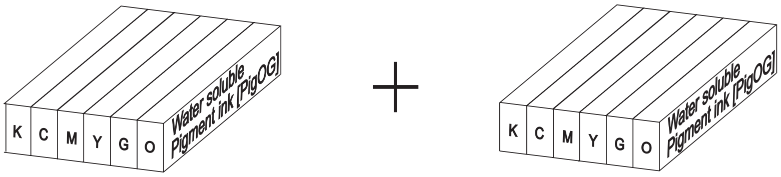
SAME SETS

R-row ink station A six-color set = **F-row ink station A six-color set**

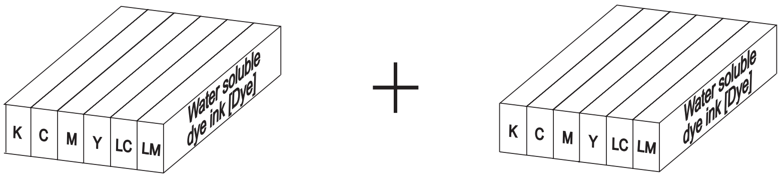
High-speed plotting using water-soluble pigment ink (Light set)


K
C
M
Y
LC
LM
Water soluble Pigment ink [Pigcm]
+
K
C
M
Y
LC
LM
Water soluble Pigment ink [Pigcm]

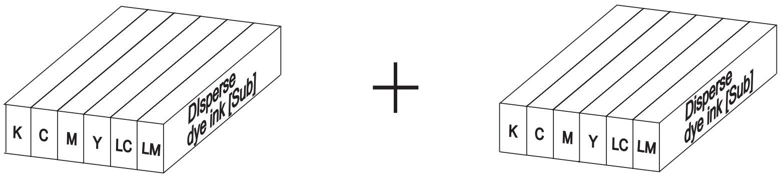
High-speed plotting using water-soluble pigment ink (Orange, Green set)


K
C
M
Y
G
O
Water soluble Pigment ink [PigOG]
+
K
C
M
Y
G
O
Water soluble Pigment ink [PigOG]

High-speed plotting using Water-soluble dye ink


K
C
M
Y
LC
LM
Water soluble dye ink [Dye]
+
K
C
M
Y
LC
LM
Water soluble dye ink [Dye]

High-speed plotting using Disperse dye ink


K
C
M
Y
LC
LM
Disperse dye ink [Sub]
+
K
C
M
Y
LC
LM
Disperse dye ink [Sub]

- During initial ink setting or ink change, register the appropriate ink type for each ink station (See page 1.26).
  The registered ink type is necessary when checking the plotting information and changing the heads used.

- When two ink sets of the same type are loaded to two ink stations, if [INKnearEND] occurs during plotting, only one ink set is used.
  Therefore, the [PRINT CONT.] function can be used which allows continuous data plotting without interrupting the plot operation(See page 3.27).

SETTING FOR 2-WAY MULTI PRINTING

Alternatively, using two sets of three heads in 2-way printing mode, each with different inks, gives you the functionality of two 6-color plotters in a single unit.

The following six combinations are possible.

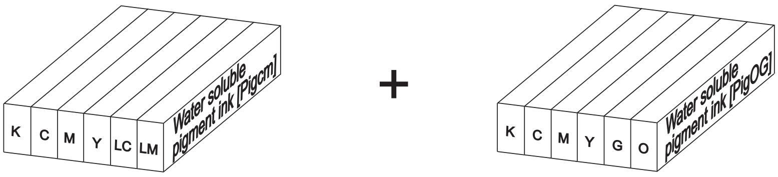
- Before starting the plotting operation, select the ink type to be used (See page 1.26).

- The different types of ink can be set in either of the R-row ink station or the F-row ink station. In either case, the plotting operation is performed in the same way since the heads are selected when used.

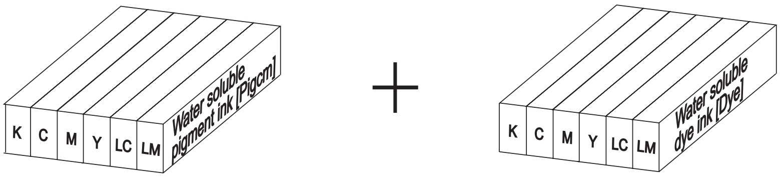
DIFFERENT SETS

R-row ink station A six-color set ≠ **F-row ink station A six-color set**

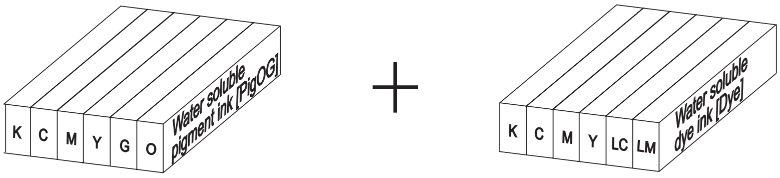
Setting water-soluble pigment ink (Light set) and water-soluble pigment ink (Orange, Green set)


K
C
M
Y
LC
LM
Water soluble pigment ink [Pigcm]
+
K
C
M
Y
G
O
Water soluble pigment ink [PigOG]

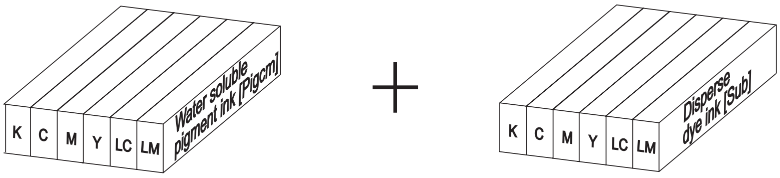
Setting water-soluble pigment ink (Light set) and water-soluble dye ink


K
C
M
Y
LC
LM
Water soluble pigment ink [Pigcm]
+
K
C
M
Y
LC
LM
Water soluble dye ink [Dye]

Setting water-soluble pigment ink (Orange, Green set) and water-soluble dye ink


K
C
M
Y
G
O
Water soluble pigment ink [PigOG]
+
K
C
M
Y
LC
LM
Water soluble dye ink [Dye]

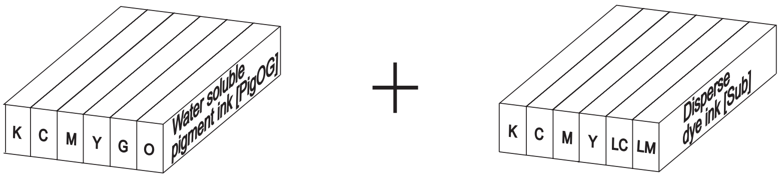
Setting water-soluble pigment ink (Light set) and Disperse dye ink


K
C
M
Y
LC
LM
Water soluble pigment ink [Pigcm]
+
K
C
M
Y
LC
LM
Disperse dye ink [Sub]

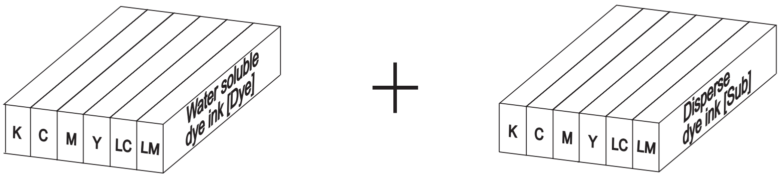
DIFFERENT SETS

R-row ink station A six-color set ≠ **F-row ink station A six-color set**

Setting water-soluble pigment ink (Orange, Green set) and Disperse dye ink


K
C
M
Y
G
O
Water soluble pigment ink [PigOG]
+
K
C
M
Y
LC
LM
Disperse dye ink [Sub]

Setting water-soluble dye ink and Disperse dye ink


K
C
M
Y
LC
LM
Water soluble dye ink [Dye]
+
K
C
M
Y
LC
LM
Disperse dye ink [Sub]

- During initial ink setting or ink change, register the appropriate ink type for each ink station (See page 1.26).
  The registered ink type is necessary when checking the plotting information and changing the heads used.

TO REPLENISH INK, SET A NEW INK CARTRIDGE IN THE INK STATION.

Ink replenishment is done by replacing the ink cartridge with a new one.
If the ink cartridge is not replaced, plotting is interrupted if the ink runs out.
If the message [INKnearEND] appears, immediately load a new ink cartridge.

1. **When the amount of ink becomes small during plotting.**
   The amount of ink of the color indicated is running out. Set a new ink cartridge of K (black) in the R-row ink station.

```
< LOCAL >    INKnearEND
 K - - - - -          - - - - - -
```

2. **When the amount of ink completely runs out during plotting.**
   The amount of ink of the color indicated has completely run out.Set a new ink cartridge of C (Cyan) in the F-row ink station.

```
< LOCAL >          INKEND
- - - - - -          - C - - - -
```

STEP

1. **Either of the messages shown above is displayed on the LCD during plotting.**
   When [INKnearEND] appears, the local mode is entered and the operation stopped each time plotting of a single data is completed. Proceed with Step 2 at the end of the plotting operation. Proceed to Step 2 at the end of the plotting operation.
   When [INKEND] appears, plotting cannot be continued.
2. **Install a new ink cartridge.**
   Pull out the ink cartridge of the indicated color and then load a new ink cartridge.
3. **When the ink cartridge has been loaded, drawing is possible again.**

- When two ink sets of the same type are loaded to two ink stations, if [INKnearEND] occurs during plotting, only one ink set is used.
  Therefore, the [PRINT CONT.] function can be used which allows continuous data plotting without interrupting the plot operation(See page 3.27).

MEDIUM THAT CAN BE USED

This section describes the types of medium that can be used with the device and the method of setting the medium used.

TYPES OF MEDIUM THAT CAN BE USED

The types of medium that can be used with the device are roll medium, cut sheet medium, and board. The types and sizes of medium that can be used with the device are explained below.

Types of medium that can be used

Glossy medium : Glossy white PET, Photo paper, Glossy PVC
Matte medium : Mat-PVC, Tarpaulin, Back-lit film
Cloth : Nonflamable cloth
Other : Artwork film, Canvas, Tarpaulin, Waterproof olefin film, (Board)

Sizes of medium that can be used

The size of medium varies according to model of the JV4 series.
Refer to the following table for the model used.

	Medium Size	JV4-130	JV4-160	JV4-180
Roll medium	Maximum	1381 mm	1620 mm	1910 mm
	Plotting width	1371 mm	1600 mm	1870 mm
	Thickness	1.0 mm or less		
	Roll outside diameter	Ø 150 mm or less		
	Roll weight	20 Kg or less		
	Roll inside diameter	3 or 2 inches		
	Plotting surface	Faces OUT		
	Roll end treatment	Light-adhesive tape is used to allow the paper to be removed from the core with ease.		
Cut sheet medium	Maximum	1381 mm	1620 mm	1910 mm
	Minimum	210 mm		
	Plotting width	1371 mm	1600 mm	1870 mm
Board	Thickness	7.0 mm or less		
	Deflection	1.0 mm or less		

PRECAUTIONS IN HANDLING THE MEDIUM

Carefully observe the following when handling the medium.

CAUTION

- **Use the medium specified by MIMAKI.**
  Use the medium exclusive for the device. Please be noted that MIMAKI ENGINEERING CO., LTD. shall have no liability for any trouble that arises when using any medium other than the medium exclusively developed for the device.

- **Medium thickness**
  When setting the medium used, be sure to adjust the head height. Otherwise, the medium and/or the head can be damaged.

- **Expansion and contraction of the medium**
  Do not use medium immediately after unpacking. The medium can expand and contract due to the room temperature and humidity.
  The medium have to be left in the atmosphere in which they are to be used for 30 minutes or more after unpacked.

- **Curled medium**
  Avoid the use of curled medium. They can be a cause of a medium jam.
  If regular-sized coating medium is stored with rolled, the coating face has to face outside.

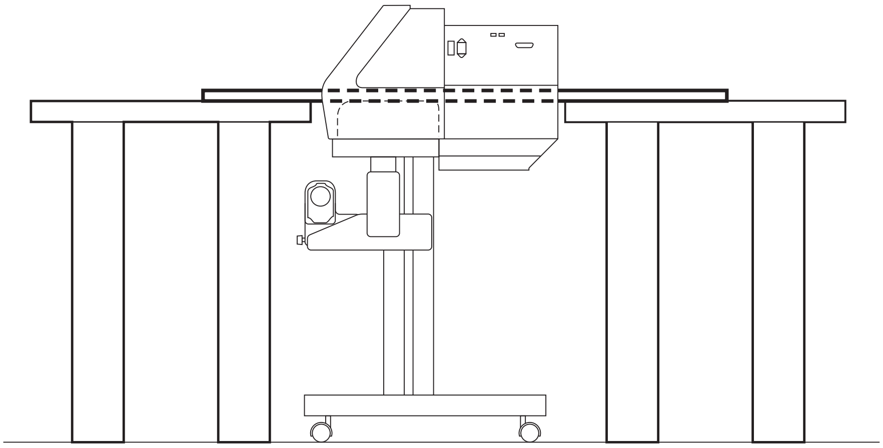
- **Other precautions**
  - Place nothing on the surface of coated medium. Some types of coated medium may change in color.
  - The device may sometimes fail to properly detect a transparent medium or a medium whose revers side is colored in black.
  - For any type of medium other than the exclusive one, the end of the medium may have adhered on the paper core. If this has occured, be sure to remove the paper core before placement so as to protect against future troubles.
  - Refer to the “Catalog for options and consumables” given on the separate sheet for the exclusive medium.

NOTES ON HANDLING A BOARD FOR THE MEDIUM

CAUTION

- When a board is used as the medium, be sure to adjust the head height beforehand. Otherwise, the head can be damaged by making contact with the board during plotting.
- When the medium is changed from a board to a thinner medium, be sure to adjust the head height too.
- When a board exceeding 300 mm in length or a flexible board is used as the medium, place a stand which is nearly the same in height as the platen top surface on the front and rear sides of the device. Otherwise, it can happen that the printing surface of the board makes contact with the head or the board is not fed properly.
- Make sure that the amount of warp of the board is not more than 1 mm.
  A board which warps more may not be fed properly.
- Avoid using a board having an irregular surface on the back (the side opposite to the printing surface). Otherwise, the board may not be fed properly or defective printing (e.g., unwanted streaks on the printing surface) may occur.

Prepare stands for preventing the board from hanging down.



BEFORE SETTING THE MEDIUM ON THE DEVICE

ADJUSTING THE HEAD HEIGHT WHEN THE MEDIUM USED IS CHANGED [HEAD HEIGHT]

When the medium used is changed, it is necessary to adjust the head height according to the thickness of the new medium.

If the height of the head is inappropriate to the thickness of the medium, the plotter cannot work properly.

More important, operating the device without adjusting the head height is very dangerous: it can damage the medium and the device.

When a new medium different in thickness from the current medium is to be used, be sure to make proper adjustment of the head height.

CAUTION

- Adjust the head height before setting the medium on the device.
  If an attempt is made to adjust the head height with the medium kept set on the platen, the medium gets caught on the carriage during “carriage out” operation, causing damage to the head.

STEP

1. **Put the device into the FUNCTION mode.**
   (See to Page.4.3)

```
FUNCTION
MAINTENANCE        < ENT >
```

2. **Push the [ENTER] key.**

ENTER

```
FUNCTION
LIST               < ent >
```

3. **Push theJOG keys[▲] and [▼] until the LCD gives the indication [HEAD HEIGHT].**

▲ ▼

```
FUNCTION
HEAD HEIGHT        < ent >
```

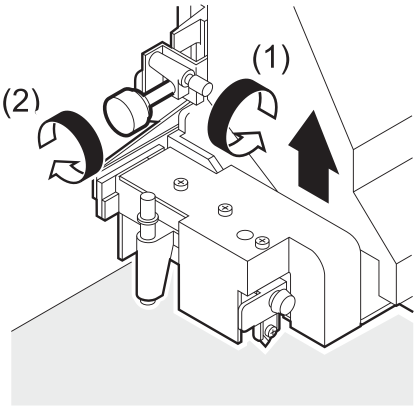
4. **Push the [ENTER] key.**
   The carriage will come out of the capping station.

ENTER

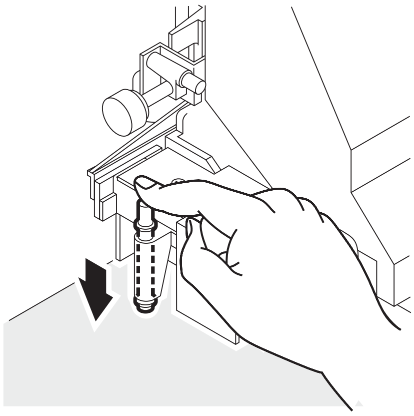
```
HEAD HEIGHT
CARRIAGEout          :  ent
```

5. **Set the new medium on the platen.**
   The carriage has moved to the out side of the ink station.

6. **Adjust the head height.**
   1. Loosen the support screw (1), turn the height adjustment screw (2) in the direction shown, and move the head upward.



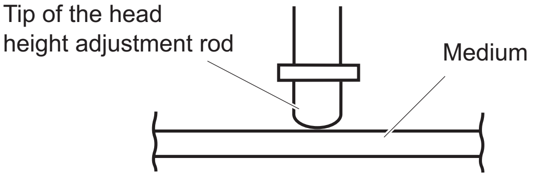
2. Push down the head height adjustment rod by the right hand.
   Push down the head height adjustment rod till it stops moving anymore.

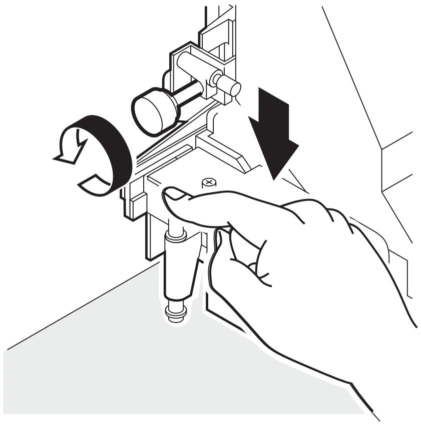


CAUTION

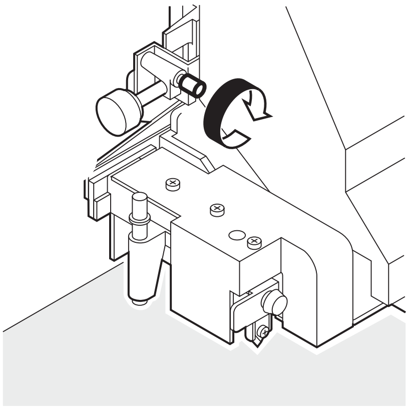
- If the tip of the head height adjustment rod makes contact with the surface of the medium, repeat step (6)-1 shown on the preceding page to raise the head.

3. Turn the head height adjustment screw in the direction shown and move the head downward.
   With the head height adjustment rod kept pushed, lower the head till the tip of the rod makes contact with the surface of the medium used.





4. Retighten the support screw after completing the head height adjustment.



7. Close the front cover.

8. Push the [ENTER] key.

The carriage will come back to the capping station.

ENTER

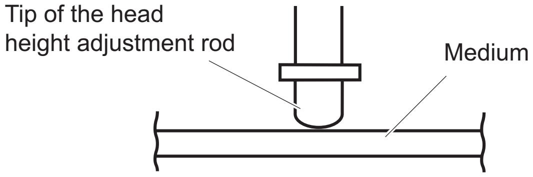
9. The device enters the LOCAL mode.

<< LOCAL >>
width : 1272mm

POINTS IN HEAD HEIGHT ADJUSTMENT

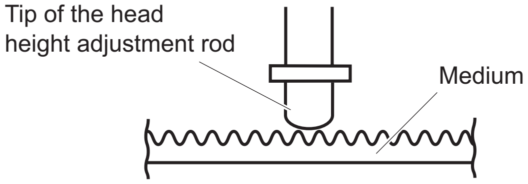
- When the head height is so adjusted that the tip of the head height adjustment rod just makes contact with the surface of the medium, the distance between the head and the printing surface of the medium becomes optimum.
- As long as the head height is so adjusted that the tip of the head height adjustment rod just makes contact with the surface of the medium, the distance between the head and the printing surface of the medium remains unchanged even when the head is raised.
- To avoid fluffing of the medium surface, warp of the medium edge, or waving of the medium during plotting, the distance between the head and the printing surface of the medium can be increased.
- When the distance between the head and the printing surface of the medium is increased, the print quality deteriorates.

Optimum distance



Distance increased

When a medium having fluffy surface, warp, or irregular surface is used.



CAUTION

- When the head height is adjusted, the plotting points shift in position. After head height adjustment, be sure to correct the dot positions. (See page 4.6)

SETTING THE MEDIUM ON THE DEVICE

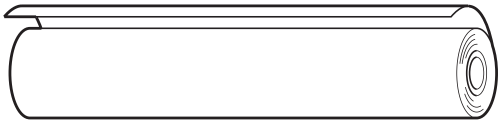
The medium that can be used with the device are roll medium, cut sheet medium, and board (See page 1.31).

SETTING A PAPER ROLL ON THE DEVICE

The procedure for setting roll medium on the device is described below. Use roll medium exclusive for the device. (See page 1.31)

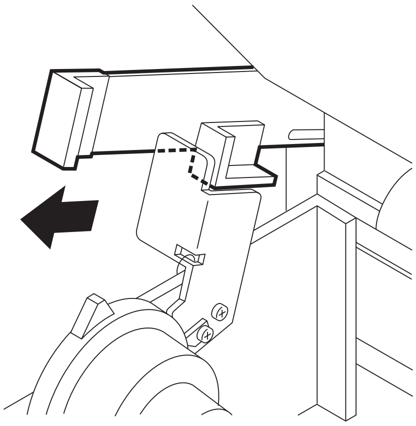
CAUTION

- The roll medium is heavy in weight. Take care not to drop it on your foot.
- When setting the medium, be sure to check that the head height has been properly adjusted. (See page 1.34)

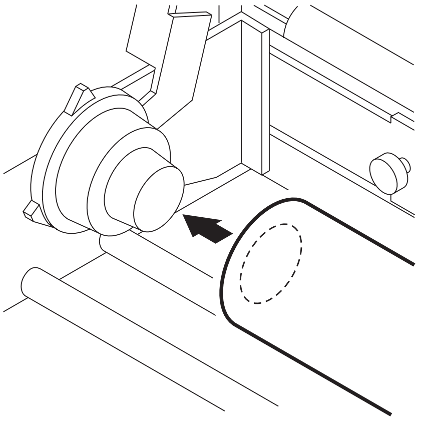


STEP

1. **Pull up the clamp lever at the back of the device.**
   The roll holder is prevented from moving forward anymore. It can freely move backward.

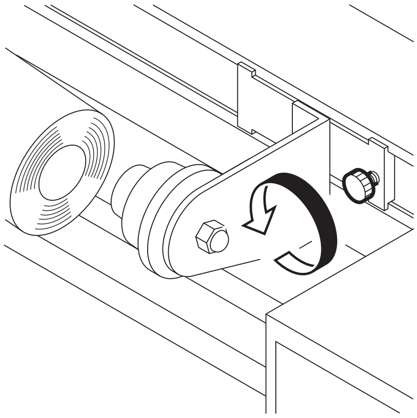


2. **Insert the let-hand roll holde into the core of the roll medium.**
   Push roll medium onto the roll holder till the roll core no longer moves.
   The inside diameter of the roll medium core may be 2 inches or 3 inches.
   Fit the roll medium to the roll holder appropriate to the core inside diameter. (See page 1.16)



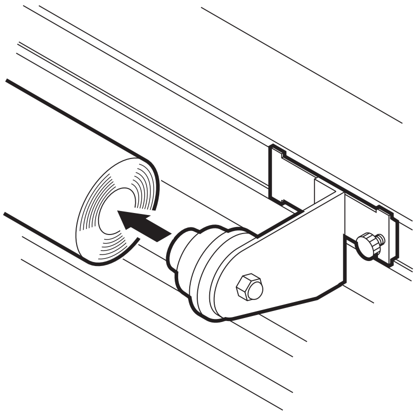
3. **Loosen the screw of the right-hand roll holder.**

   Adjust the roll holder position to the width of the roll medium. By placing the roll medium on the medium support bar, the position of roll holder can be adjusted easily.

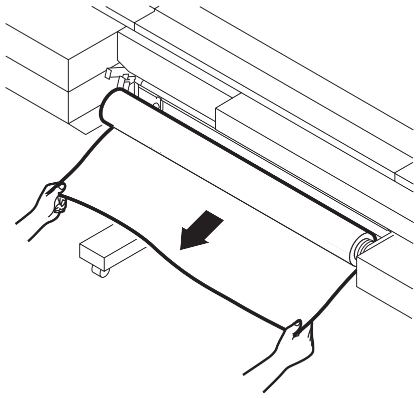


4. **Insert the right-hand roll holder into the core of the roll medium.**

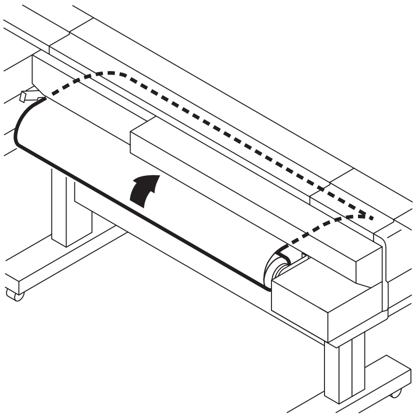
   After inserting the roll holder completely into the core of the roll medium, fix it with the screw.



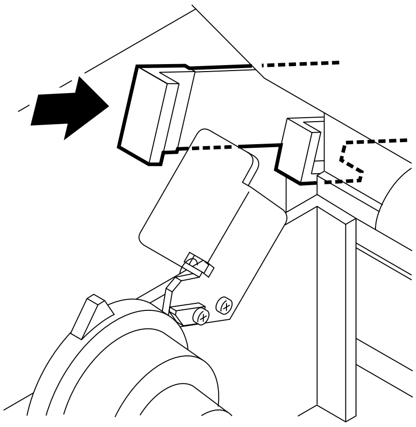
5. **Pull out the roll medium by 50 to 60 cm from the back of the device.**



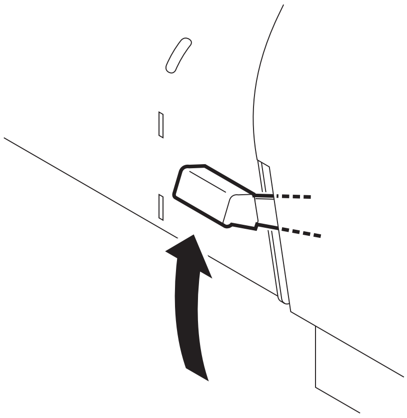
6. **Insert the roll medium that has been pull out between the platen and the pinch rollers and pull it to the front of the device.**



7. **Push the clamp lever at the back of the device.**
   Fix the roll medium with the pinch rollers to prevent it from slipping out.

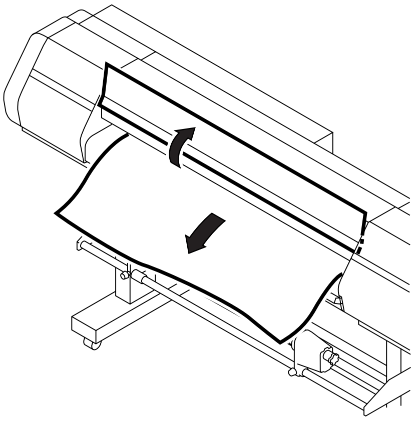


8. **Pull up the clamp lever at the front of the device.**
   The roll holder is set free again, allowing the roll medium to be moved.



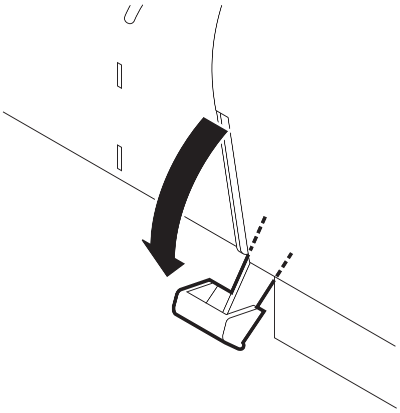
9. Open the front cover and pull out the roll medium.

Take care not to crease the roll medium while it is pulled out.



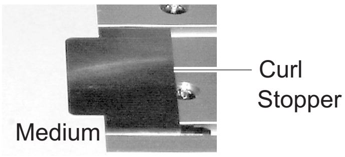
10. Push down the clamp lever at the front of the device.

Fix the roll medium that has been pulled out with the pinch rollers.



- Check that there is no slack or wrinkle, caused by uneven tension, on the roll paper in the range between the roll holder and the platen. While pulling the roll paper from side to side evenly, clamp the lever. (See page 3-25.)

- If the roll medium used is wide, the edges of the paper may get loose from the platen during plotting. Use the medium edge holder to hold down the edges of the medium. This prevents the medium from being stained with the ink by getting loose from the platen.

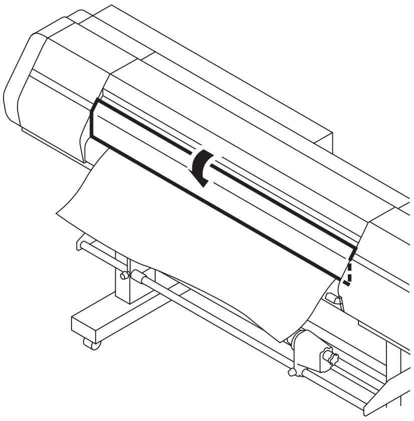


CAUTION

- When using a thick medium, remove the curl stopper from the medium before plotting.

11. Close the front cover.

With the front cover kept open, the device cannot perform the plotting operation.



After setting the medium

After the medium is set and the front cover is closed, the carriage starts moving to detect the medium. When the medium is detected, the device enters the LOCAL mode.

```
      << LOCAL >>
         width : 1272mm
```

Display on the LCD

When couting the amount of remaining roll media, input the length of set media.

1. **Push the JOG keys [▲], [▼] to input the length of media.**

```
   MEDIA LENGTH SET
        50 m
```

2. **Push the [ENTER] or [END] key to return to the local mode.**

```
      << LOCAL >>
         width : 1272mm
```

CAUTION

- If a transparent or plotted medium is set, the following message appears on the LCD and the medium may not be detected.

```
   ERROR  50
  MEDIA SENSE
```

- For the method of setting up the medium detection function, see page 3.16.
- When the device is shipped from the factory, the medium detection function is set to [SELECT]. Select the type of medium set and execute the medium detection function.
- If the medium is exposed to direct sunshine, the medium width may not be detected correctly.

Changing media

CAUTION

- When changing medium, be sure to check that the head height has been adjusted.

SETTING CUT SHEET MEDIUM ON THE DEVICE

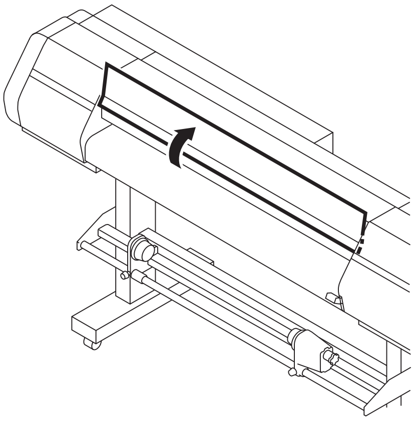
Unlike roll medium, the cut sheet medium need not be fixed onto the roll holders. The sheet paper may be set on the device either from the front or back of the device.

CAUTION

- When using cut sheet medium, take care that it is set straightforward. The medium guides provided on the platen help set the medium correctly. (See page 1.9)

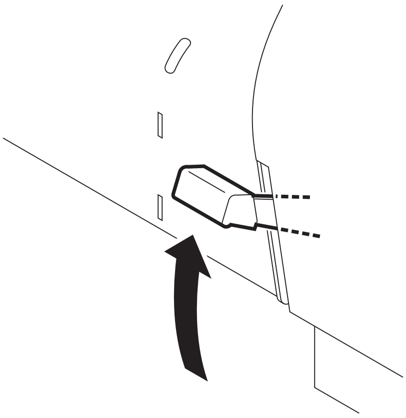
STEP

1. **Open the front cover.**



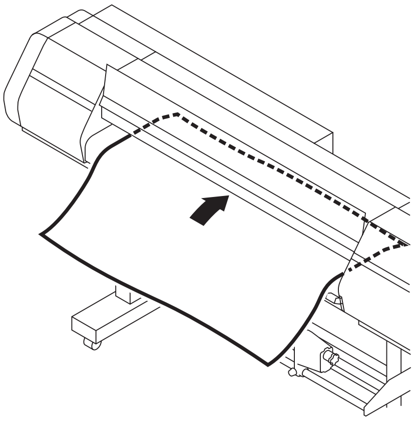
2. **Push up the clamp lever.**

   The clamp lever may be either the one at the front or the one at the back of the device.



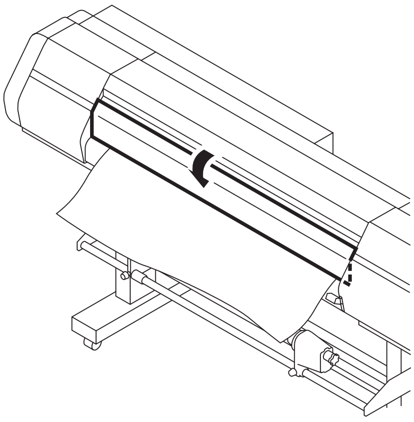
3. **Insert the cut sheet medium between the platen and the pinch rollers.**

   The cut sheet medium may be set on the device either from the front or back of the device.



4. **Close the front cover.**

   The device starts detecting the medium.



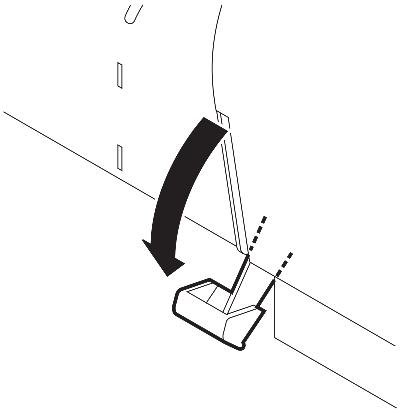
5. **Push the [ENTER] key.**

   After the initial operation, the device enter the LOCAL mode.
   (See page 1-20)

ENTER

```
         << LOCAL >>
            width : 1272mm
```

6. **Push down the clamp lever at the front of the device.**



7. **Push the [▶] key.**

   The carriage moves to detect the medium.
   Then, the device enters the LOCAL mode.

▶

```
        MEDIA SELECT
ROLL  <                 >  LEAF
```

Display on the LCD

```
         << LOCAL >>
            width : 1272mm
```

SETTING A BOARD MEDIUM ON THE DEVICE

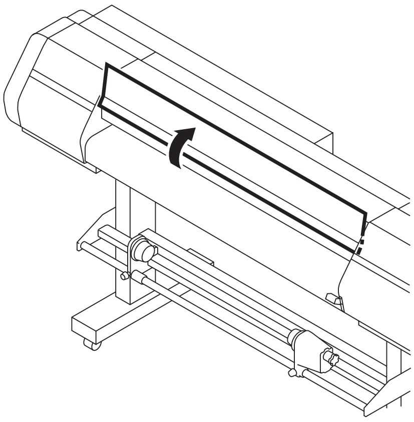
Unlike a paper roll, the board medium need not be fixed onto the roll holders. The board medium may be set on the device either from the front or back of the device.

CAUTION

- Adjust the head height before setting the board medium on the device. (See page 1.34)
- Prepare stands for preventing the board from hanging down. (See page 1.33)
- When the board is used, set [BOARD] detection to ON. (See page 3.17)

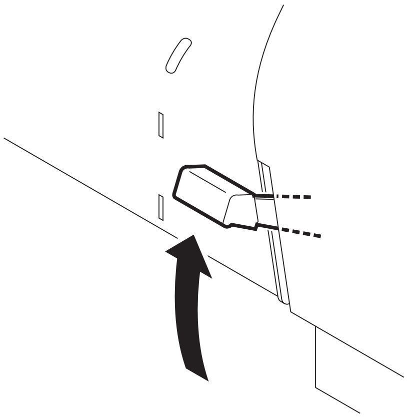
STEP

1. Open the front cover.



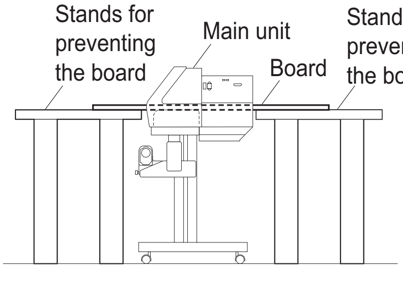
2. Push up the clamp lever.

The clamp lever may be either the one at the front or the one at the back of the device.



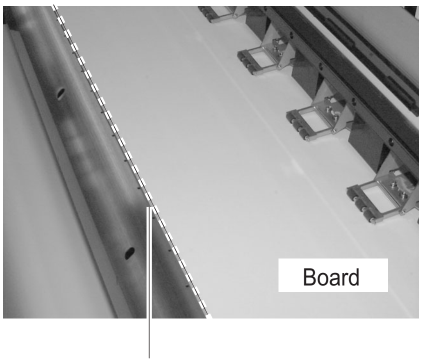
3. Insert the board between the pinch roller and the platen.

Prepare a board support bench with the same height as the platen.


Stands for preventing the board
Main unit
Board
Stands for preventing the board

CAUTION

- Align the edge of the front side of the board with the guide (absorption hole) which is the closest to you provided on the platen.



Guide for Board medium

4. **Close the front cover.**

   The device starts detecting the medium.

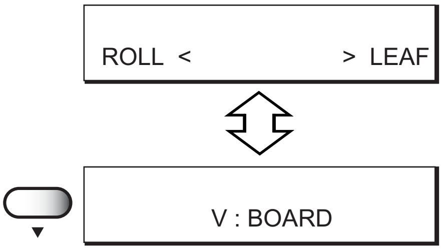
5. **Push the [ENTER] key.**

   After the initial operation, the device enter the LOCAL mode.
   (See page 1-20)

After setting the medium on the device

The medium can be detected after setting it and push down the clamp lever at the front of the device. Turn ON the [BOARD] setting for media detection to detect the board.

Display on the LCD



ROLL < > LEAF

▼

V : BOARD

Press the JOG key [▼] to detect the board.

After detection of the medium width, return the board to the position where the leading dead space becomes 5mm.

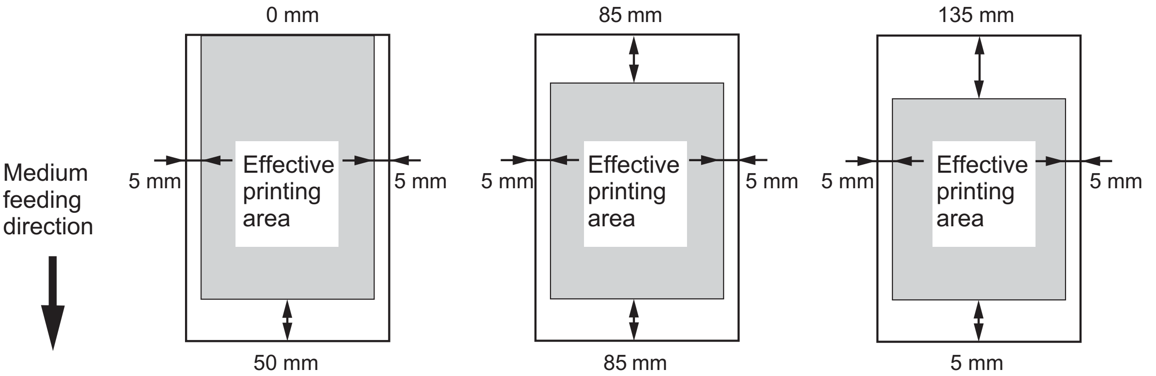
SPECIFYING THE SCOPE OF PLOTTING ON THE MEDIUM USED (EFFECTIVE PLOTTING AREA)

The device has an area which cannot perform printing, due to mechanical reasons. This area is called “dead space.”

The effective printing area is obtained by excluding the dead space from the printing medium.

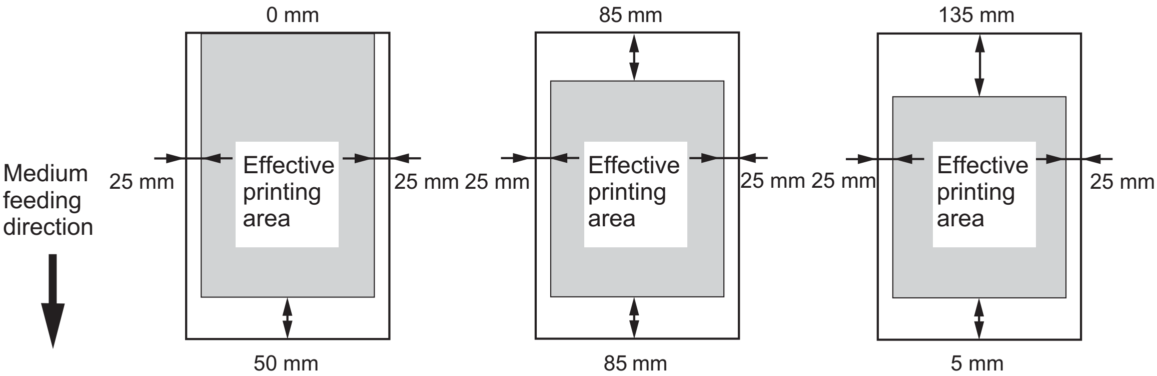
Note that the minimum value of dead space differs from one model to another.

<JV4-130/160>


Medium feeding direction
0 mm
5 mm
Effective printing area
5 mm
50 mm
85 mm
5 mm
Effective printing area
5 mm
85 mm
135 mm
5 mm
Effective printing area
5 mm
5 mm

Roll medium **Cut sheet medium** **Board medium**

<JV4-180>


Medium feeding direction
0 mm
25 mm
Effective printing area
25 mm
50 mm
85 mm
25 mm
Effective printing area
25 mm
85 mm
135 mm
25 mm
Effective printing area
25 mm
5 mm

Roll medium **Cut sheet medium** **Board medium**

CHANGING THE DEAD SPACE

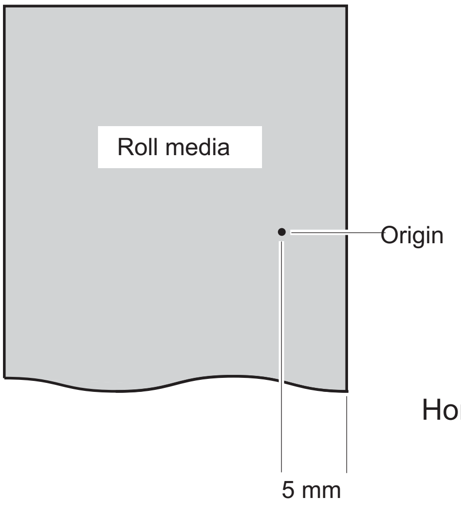
The dead space may be changed as required.

The effective plotting area can be changed by changing the dead space.

For the method of setting a dead space, see page 3.13.

ESTABLISHING AN ORIGIN

Establish an origin in terms of data on medium loaded on the device. Place the medium on the device and cause the device to detect the medium, the origin is automatically established at the location shown in the illustration given below.



Horizontal direction : At a point of 5 mm from the right end.

INITIAL VALUE OF ORIGIN

As the ORIGIN position, the initial value corresponding to the head and operating mode is set. The origin positions shown below are specified until new origin is set.

Origin position of X-direction (Medium feeding direction)

The following numerical values indicate the distance between the plotting origin and the cutter line.

USE HEAD	TEST DRAW	REMOTE
ALL	7mm front side	17mm back side
REAR	7mm front side	17mm back
FRONT	7mm front side	7mm back

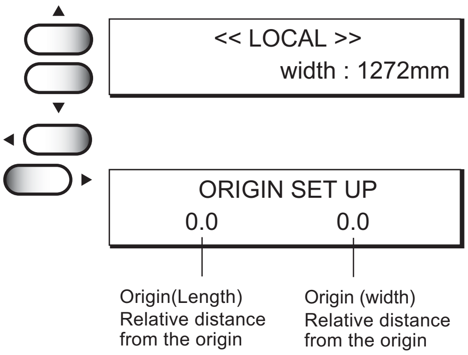
SETTING OF AN ORIGIN

If you want to perform printing at another location of a roll medium that provides a wider printing area, it is necessary to re-establish another origin.

STEP

1. **After the medium detection is completed, move the carriage to the position at which to establish an origin by pushing the JOG keys [▲], [▼], [◀], and [▶].**

   As the carriage is moved, the origin shifts in position. The origin that changes with the movement of the carriage is displayed on the LCD.



<< LOCAL >>
width : 1272mm

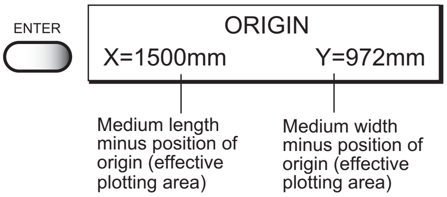
ORIGIN SET UP
0.0 0.0

Origin(Length)
Relative distance from the origin

Origin (width)
Relative distance from the origin

2. **After deciding the origin, push the [ENTER] key.**

   The origin has been changed.
   The effective plotting area is displayed on the LCD, and the device enters the LOCAL mode.
   When a roll medium is used, X (medium length) is not detected, hence it is not displayed on the LCD either.
   When the device starts plotting the next time, it uses the origin that has been established unless the origin is changed.



ORIGIN
X=1500mm Y=972mm

Medium length minus position of origin (effective plotting area)

Medium width minus position of origin (effective plotting area)

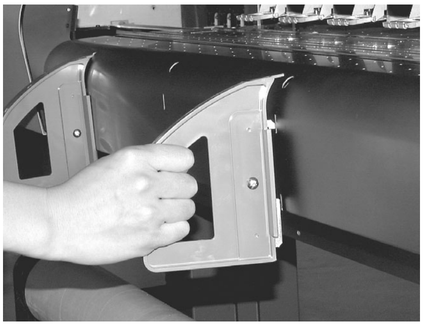
OTHER SETTINGS

INSTALLING THE MEDIUM SUPPORT

Install the media support to the platen so as to prevent hard media such as canvas from rising.

Put the hook of medium support in the hole of platen.

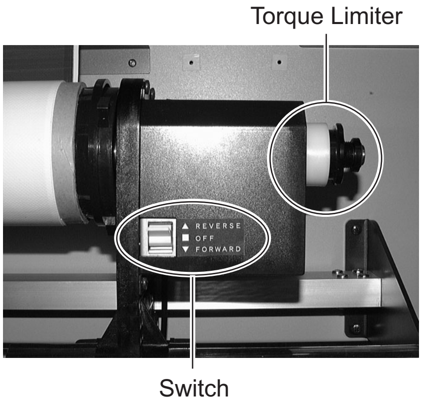
Change the installing location and the number of media supports to be installed according to the width of medium to be used.



SWITCHING THE DIRECTION OF WINDING OF THE MEDIUM

The take-up device is mounted with a switch that specifies the direction in which a medium is wound.

FORWARD : The take-up device winds the medium with its plotting face faced out.
OFF : The take-up device will not wind the medium.
REVERSE : The take-up device winds the medium with its plotting face faced in.

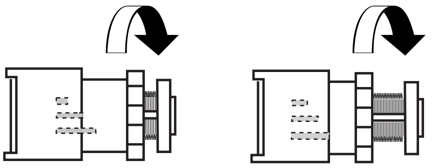


SETTING THE TORQUE LIMITER

There is torque limiter adjustment mechanism in take-up device.
The torque limiter is in two place of the take-up device ane the roll-holder.
Strengthen the adjustment of the Torque Limiter when a roll paper is heavy and hard to keep tension.

- **Clockwise : It becomes strong.**

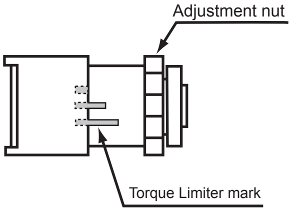
Medium to be used : The thick media, such as Tarpourin.



(50% of maximum Torque Limiter Mark) (100% of maximum Torque Limiter Mark)

- **Anti-clockwise : It becomes weak.**

Medium to be used : A light medium

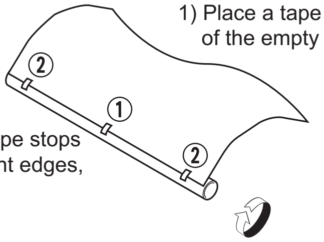


CAUTION

- If the torque limiter on the take-up device side is adjusted weaker than the roll holder side, a roll paper fails to be sent smoothly.

A TAPE STOP FOR MEDIUM CORE

When a medium broad in width is used, it may be hard to wind around the medium core.



1) Place a tape stop in the center of the empty paper core.

2) Then place two tape stops on the left and right edges, as shown.

3) Medium can now be wound around the paper core.

CHAPTER 2
HOW TO USE THE BASIC FUNCTIONS

This chapter describes the basic operations of the device, from the beginning to the end of plotting.
Before using the application functions, understand how to use the basic functions of the keys on the operation panel and the modes in which the menus are displayed on the LCD.

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OPERATION

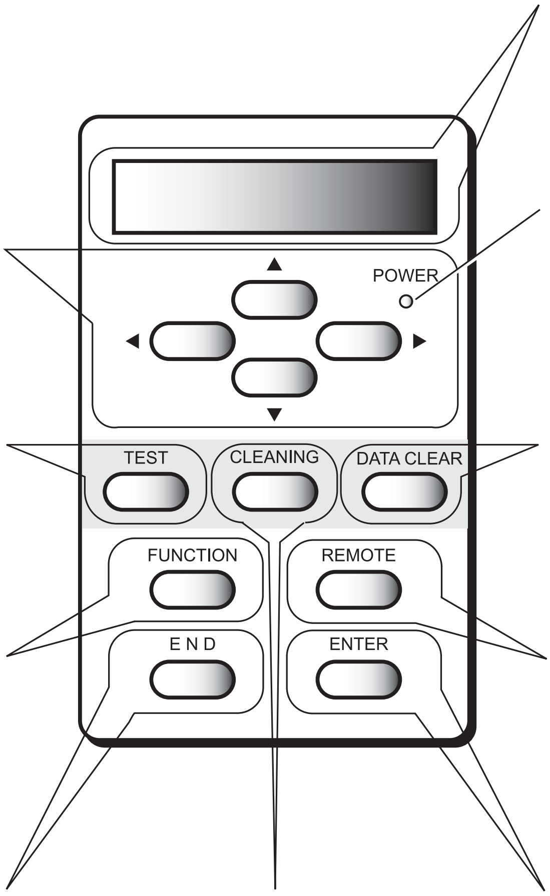
This section describes the operation panel that is used to operate the device and the menus from which to choose the desired item.

OPERATION PANEL

The operation panel that is used to operate the device and a method of maintenance of the device after operation, etc.

The operation panel must be used when operating the device.

Therefore, it is indispensable to understand how to use the operation panel.



JOG keys [▲] [▼] [◀] [▶]

They are used to shift the carriage and the medium under the LOCAL mode. In addition they are used to select a set value.

[TEST] key

Used to start test plotting on the setting menu.

[FUNCTION] key

Used to set plotting conditions.

[END] key

Used to cancel the last set item that has been input or to return to the previous setting menu.

[CLEANING] key

Used to start cleaning of the head.

Display

Displays a set item, a guidance error, etc.

POWER lamp

It lights up (in green) when the power to the device is turned on.

[DATA CLEAR] key

Used to erase the data that has been input to the device.

[REMOTE] key

It is used to change the operation mode between the REMOTE mode and the LOCAL mode.

[ENTER] key

Used to input set items, such as plotting conditions.

Functions of the JOG keys

Each of the JOG keys varies in function according to the time at which it is used.

The functions of the JOG keys are explained below.

	Before the detection of a sheet	**After the detection of a sheet**	**When selecting a function**	**When inputting a choice selected among several alternatives**
◀	Detects the width and length of the medium.	Shifts the carriage to the left.	—	—
▶	Detects the width and length of the medium.	Shifts the carriage to the right.	—	—
▲	—	Shifts the medium away from you.	Restores the last previous function.	Selects the next value.
▼	—	Moves the medium toward you.	Moves to the next function.	Selects the last previous value.

MENU mode

A list of setting items displayed on the LCD is called a menu.

A specific operation specified on the operation panel is displayed on the LCD in one of the following three modes.

Each of the three modes is explained below.

<< LOCAL >> mode

This is the mode in which the preparations for plotting operation are made.

When the power is switched on and the detection of a medium is completed, the device enters the LOCAL mode. In this mode, it is possible to perform the following operations. (See page 1.20)

1. Pushing the appropriate [JOG] keys to detect a medium and set up an origin.
2. Pushing the [TEST] key to start test plotting.
3. Pushing the [CLEANING] key to clean the head.
4. Pushing the [DATA CLEAR] key to erase the plotting data the device has received.
5. Pushing the [FUNCTION] key to set plotting conditions.

⚠ CAUTION

- In the LOCAL mode, the device cannot plot data received from the computer. To put the device into operation, change the mode to the REMOTE mode by pushing the [REMOTE] key.

<< REMOTE >> mode

This is the mode in which the device plots an image from data it receives from the computer.

If the device is in the LOCAL mode, push the [REMOTE] key to put the device into the REMOTE mode.

<< FUNCTION >> mode

This is the mode in which plotting conditions can be set.

To set plotting conditions, push the [FUNCTION] key while the device is in the LOCAL mode and switch to the FUNCTION mode (plotting function setting mode).

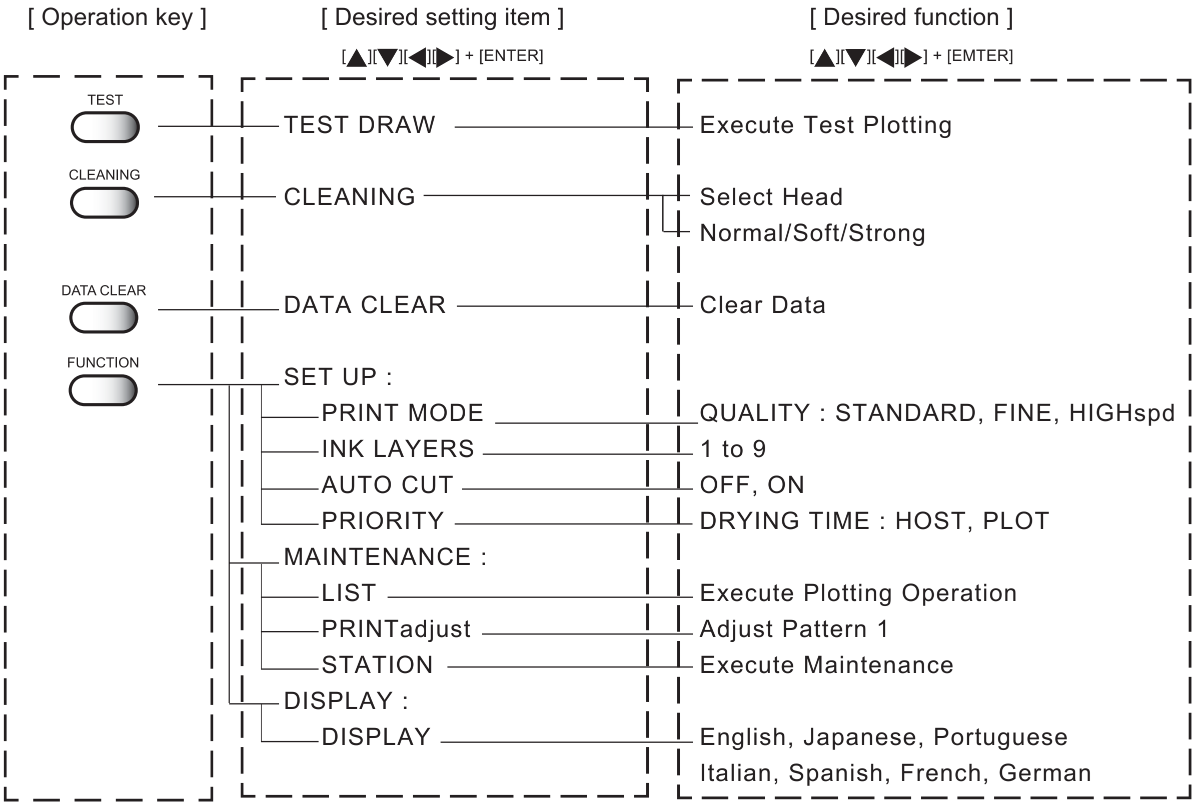
MENU TREE

The operation of device and plotting conditions are set by pushing the appropriate operation keys, selecting the desired setting item and setting detailed conditions.
In order to operate the device properly, it is necessary to understand the structure of the menu tree (See page Appendix.5). The menu tree shown below makes plain the relationships between the operation keys on the operation panel and the functions that can be set by using them.

CAUTION
- To set any of the functions, the device must be in the LOCAL mode.

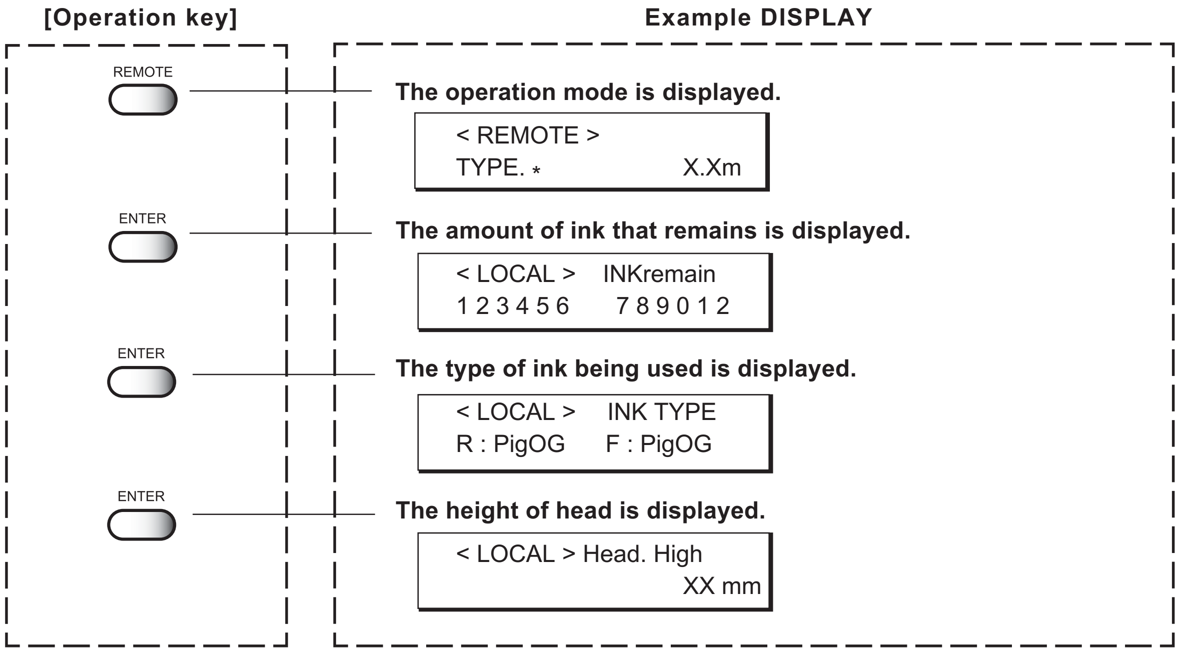
(1) POWER ON Turning the power on. (See page 1.20)
(2) << LOCAL >> Invoke the local mode on the LCD.
(3) To set up a specific function from the operation panel, follow the procedure shown below.

1. Push the appropriate operation key on the operation panel.
2. Select the desired setting item.
3. Set up the desired function.


[Operation key]
[Desired setting item]
[▲][▼][◀][▶] + [ENTER]
[Desired function]
[▲][▼][◀][▶] + [EMTER]
TEST
CLEANING
DATA CLEAR
FUNCTION
TEST DRAW
CLEANING
DATA CLEAR
SET UP :
PRINT MODE
INK LAYERS
AUTO CUT
PRIORITY
MAINTENANCE :
LIST
PRINTadjust
STATION
DISPLAY :
DISPLAY
Execute Test Plotting
Select Head
Normal/Soft/Strong
Clear Data
QUALITY : STANDARD, FINE, HIGHspd
1 to 9
OFF, ON
DRYING TIME : HOST, PLOT
Execute Plotting Operation
Adjust Pattern 1
Execute Maintenance
English, Japanese, Portuguese
Italian, Spanish, French, German

CAUTION
- The menu tree above does not include all menu items.
  For details, see [FUNCTION MENU STRUCTURE] on page A-5.

Some menus simply list items which do not require the operator to set any of them.
In this case, the operator is required to select the content to be displayed on the LCD.



The operation mode is displayed.

```
< REMOTE >
TYPE. *          X.Xm
```

The amount of ink that remains is displayed.

```
< LOCAL >   INKremain
1 2 3 4 5 6   7 8 9 0 1 2
```

The type of ink being used is displayed.

```
< LOCAL >   INK TYPE
R : PigOG   F : PigOG
```

The height of head is displayed.

```
< LOCAL > Head. High
                XX mm
```

Changing the display language

With this device, it is possible to change the language in which characters are displayed on the LCD. For the method of changing the display language, see Chapter 3 “How to Use the Application Functions.” (See page 3.3)

PLOTTING AN IMAGE FROM SOURCE DATA

STARTING THE PLOTTING OPERATION

This section describes the basic operation of the device.
Plotting conditions can be set on the device side. In this section, however, the method of plotting an image from data that has been set on the computer side and transmitted to the device is explained.
For the method of setting plotting conditions on the device side, see Chapter 3 "How to Use the Application Functions."

STEP

1. **Turning the power on.**
   (See page 1.20)
2. **Set the medium in position.**
   (See page 1.37)
3. **The device enters the LOCAL mode.**

```
        << LOCAL >>
          width : 1272mm
```

4. **Push the [REMOTE] key.**
   The type of the currently selected plotting condition can be confirmed. (See page 3.4.)

REMOTE

```
< REMOTE >
TYPE. *                 0.0m
```

5. **Receive data from the computer.**
   The plotting conditions that have been set for the data are displayed.
   For the method of data transmission, see the manual for the output software.
6. **During the plotting.**
   During the plotting operation, the length of the medium plotted on is displayed.

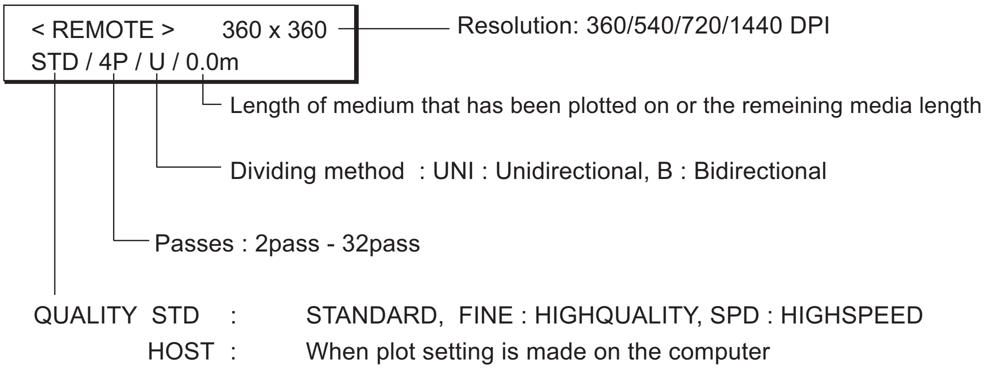
```
< REMOTE >    360 x 360
STD / 4P / U / 0.0m
```

7. **After the plotting operation is completed, push the [REMOTE] key to put the device back into the LOCAL mode.**

REMOTE

```
        << LOCAL >>
         width : 1272 mm
```

Information on drowing data.



```
< REMOTE >     360 x 360
STD / 4P / U / 0.0m
```

Resolution: 360/540/720/1440 DPI

Length of medium that has been plotted on or the remeining media length

Dividing method : UNI : Unidirectional, B : Bidirectional

Passes : 2pass - 32pass

QUALITY STD : STANDARD, FINE : HIGHQUALITY, SPD : HIGHSPEED
HOST : When plot setting is made on the computer

INTERRUPTING THE PLOTTING OPERATION

To interrupt the plotting operation that has been started, stop the carriage and erase (the receive data) from the device.

STEP

1. **Push the [REMOTE] key to stop the plotting operation.**

REMOTE

<< LOCAL >>
width : 1272mm

2. **If data is being transmitted from the computer to the device, stop the data transmission.**

DATA CLEAR
< ENT >

3. **Push the [DATA CLEAR] key.**
   The data that has been received is erased.

DATA CLEAR

<< LOCAL >>
width : 1272mm

4. **Push the [ENTER] key.**
   The device enters the LOCAL mode.

ENTER

AFTER COMPLETING THE PLOTTING OPERATION

The operation to be performed by the operator at the end of the plotting operation (cutting off the medium and switching off the power) is explained below.

CAUTION

- When Auto Cut has not been specified (See page 3.10), cut off the medium using the following procedure.
- If the head height is 3mm or more, cutting is not possible.

STEP

1. **Put the device back into the LOCAL mode.**
   Push the [REMOTE] key and put the device back into the LOCAL mode.

REMOTE

<< LOCAL >>
width : 1272mm

2. **Push the [JOG] key until the LCD gives the indication [ORIGIN SET UP].**
   Any of the JOG keys can be used.

▲

ORIGIN SET UP
0.0 - - - - - -

3. **Push the [FUNCTION] key.**

FUNCTION

MEDIA CUT
< ENT >

4. **Push the [ENTER] key.**
   Cut off the medium that has been plotted on.

ENTER

MEDIA CUTTING
PLEASE WAIT

5. **The device enters the LOCAL mode.**
   The device returns to its initial condition.

<< LOCAL >>
width : 1272mm

6. **Turn off the power to the device.**
   (See page 1.21)

CHECKING FOR HEADS CLOGGED WITH INK AND MISSING LINES

EXECUTING THE TEST DRAW [TEST DRAW]

In prior to the actual plotting or after the execution of the cleaning function, a test pattern is plotted to check whether the finished test pattern has blurred and missing lines on test pattern)

CAUTION

- If the finished test pattern shows any sign of abnormal conditions, carry out the cleaning function. (See page 2.9)
- If the picture quality fails to be improved after conducting cleaning several times, contact MIMAKI distributor.
- To perform the test plot on a cut sheet medium, use a medium whose size is A4 or larger with placed in landscape configuration.

STEP

1. **The device enters the LOCAL mode.**
   Push the [REMOTE] key and put the device back into the LOCAL mode.

REMOTE

<< LOCAL >>
width : 1272mm

2. **Push the [TEST] key.**

TEST

TEST DRAW
< ENT >

3. **Push the [ENTER] key.**
   The device plots the test pattern.

ENTER

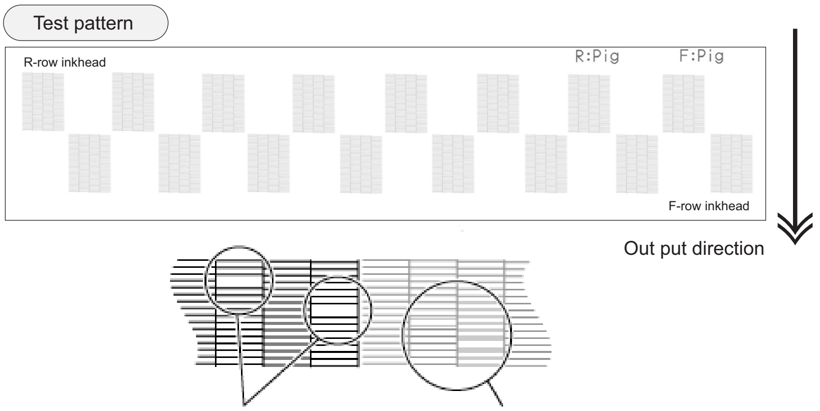
* * TEST DRAW * *

4. **The device enters the LOCAL mode.**

<< LOCAL >>
width : 1272mm

Checking the test patterns

The device plots a test pattern for each of the ink head. Check the test pattern to determine whether or not the ink head need cleaning.



Horizontal lines are not at all drawn.
(Missing lines)

Line are not drawn at uniform intervals.
(BLURRED)

IF THERE ARE HEADS CLOGGED WITH INK OR MISSING LINES

CLEANING INK HEADS

If a test pattern plotted is defective, execute the cleaning function to clean the associated ink head. To clean the head that has a defect while pattern plotting only reduces ink consumption. (However, for Line R and Line F of No.1 and No. 2 heads, selection must be performed as a set.)

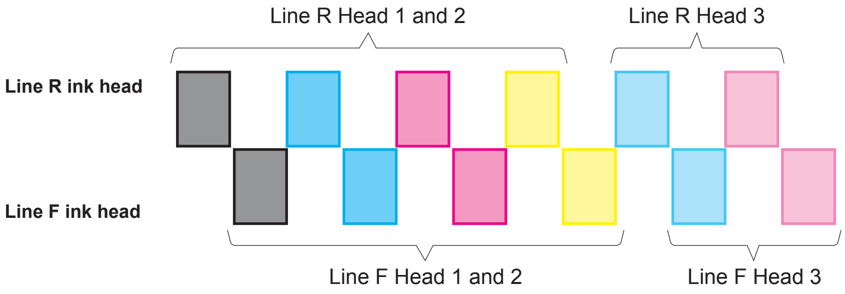
After cleaning the ink head, make the device plot a test pattern again. If the test pattern is defective too, re-clean the ink head. Continue executing the cleaning function till a normal test pattern is obtained.

⚠ CAUTION

- If a normal test pattern cannot be obtained even after the cleaning function is executed many times, clean the ink station interior (See page 4.9).
- Do not CLEANING [strong] regularly because it may absorb the head.

By the result of test pattern plotting, select a head to be cleaned.

Corresponding heads for test pattern plotting



Heads are placed corresponding to the patterns printed in test pattern plotting.
Select the head that has a defect while test pattern plotting and clean it.

How to perform cleaning

SOFT	:	Select this if there is any missing line. Cleaning is carried out for a short period of time.
NORMAL	:	Select this if any line is bent. Cleaning is carried out for a long period of time and a large amount of ink is consumed.
STRONG	:	Select this if inferior plotting cannot be recovered after [normal] or [soft] cleaning. Remove dust and dirt from the head surface.

STEP

1. **The device enters the LOCAL mode.**

```
      << LOCAL >>
    width : 1272mm
```

2. **Push the [CLEANING] key.**

CLEANING

```
CLEANING        :R> 1 2.3
HEAD SEL.       :F> 1 2.3
```

3. **Select a head by pressing jog key [◀] or [▶]**

   Then, push jog key [▲] or [▼] to perform cleaning.

   If you do not perform cleaning, press [▲] or [▼]] to display [-].

```
CLEANING        :R> 1 2.3
HEAD SEL.       :F> 1 2.3
```

```
CLEANING        :R> 1 2.3
HEAD SEL.       :F> - -. 3
```

Explanation of display

Displays a head line.
R: Line R
F: Line F

Displays a head number.

```
CLEANING        :R> 1 2.3
HEAD SEL.       :F> 1 2.3
```

About performing cleaning

When performing:
A head number is displayed.

When not performing:
[-] is displayed for a head number.

4. **Push the [ENTER] key.**

ENTER

```
CLEANING
TYPE                : normal
```

5. **Select the method of cleaning by pushing the JOG keys [▲] and [▼].**

```
CLEANING
TYPE                : soft
```

```
CLEANING
TYPE                : strong
```

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

   Cleaning starts. The operation status is displayed with * in the second line.

ENTER

```
CLEANING ACTIVE
* * * * * * - - - - - - - - - -
```

7. **The device enters the LOCAL mode.**

```
      << LOCAL >>
    width : 1272mm
```

ROUTINE MAINTENANCE

Be sure to conduct maintenance works for the device when necessary or periodically so as to use the device for a long time while keeping its plotting accuracy.

WHEN THE DEVICE IS LEFT UNUSED FOR A LONG PERIOD OF TIME

⚠ CAUTION

- Turn off the power to the device. (See page 1.21)
- Remove the medium that has been set on the device.
- Keep the clamp lever pushed up.

NOTES ON CLEANING

⚠ CAUTION

- Never disassemble the device. Disassembling the device can result in electric shock hazards and breakage of the device.
- Prevent moisture from entering inside the device. If the inner part of the device becomes wet, electric shock hazards and breakage of the device can result.
- Conduct maintenance works after turning off the power switch and detaching the power cable. If not, unexpected troubles can arise.
- Do not use benzine, thinner and chemical agents containing abrasives. Such materials can deteriorate or deform the surface of the cover.
- Do not apply lubricating oil or the like inside the device. Such materials can cause the plotter mechanism to fail.

REMOVING PAPER CHIPS

⚠ CAUTION

- Since the Device is so designed to cut a roll medium, paper chips accumulate in the moving parts of the head, medium sensor surface and cutter line slits. In this case, remove the paper chips with a brush with soft bristles.

CLEANING WIPERS

⚠ CAUTION

- Ink, dust, and paper dust accumulate on the wiper.
  Clean the wiper periodically. (See page 4.11.)
- Do not use dusty wiper to clean the head.
  Dust on the wiper may damage the head, which may cause ink drop from the head to plotting medium resulting in inferior plotting.

CLEANING INK AT SLIDER BOTTOM

When this device is used for a prolonged period of time, gel state ink may accumulate at the bottom of the slider. If ink drop grows, the medium may be stained. Clean ink drop at the bottom of the head periodically using the supplied brush dampened with water. (See step 11 on page 4.14.)

⚠ CAUTION

- Be careful not to rub the head nozzle during cleaning. Damaged head nozzle may cause inferior ink discharge.

MAINTENANCE FOR FRAME COMPONENTS

If the frame components of the device have stained, dampen a piece of soft cloth with water or neutral detergent diluted with water, squeeze it and wipe the frame components clean.

CHAPTER 3
HOW TO USE THE APPLICATION FUNCTIONS

After you have mastered the operations described in Chapter 2 “How to Use the Basic Functions,” you should learn how to use the application functions whereby you can set plotting conditions on the device side and put the device into operation.
By using the application functions, you can set plotting conditions appropriate to data that is provided for the plotting operation.

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SETTING PLOTTING CONDITIONS *3.5*
CORRECTING THE MEDIA FEED RATE DURING OPERATION *3.29*

APPLICATION FUNCTIONS

The application functions make it possible to modify the plotting conditions that have been set for source data received from the computer. The [FUNCTION] key is used to set up the application functions.

FUNCTION MENU

Of the menus that are provided for setting plotting conditions for the device, the menu for setting up the device functions is called the function menu. In order to set plotting conditions properly, it is necessary to understand the structure and operation of the function menu.

The function menu consists of three major items—[Set-up], [Maintenance], and [Display].

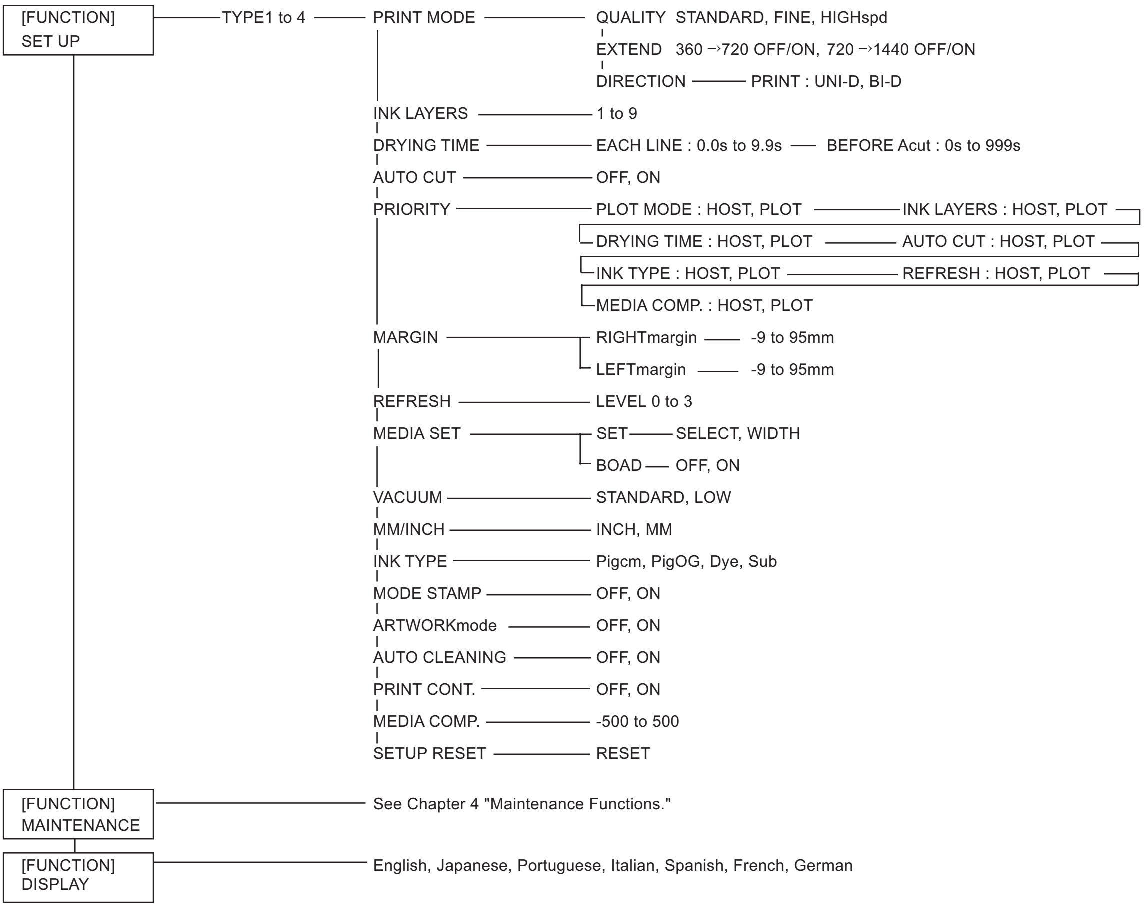
In this chapter, [Set-up] and [Display] of the function menu are explained. (For "Maintenance" of the function menu, see Chapter 4 "Maintenance Functions.")

[SET UP] • [DISPLAY]

The table, below, shows the tree structure of the function menu.

In order to use the application functions of the device, it is necessary to understand the proper sequence of key operations.

In Set-up of the function menu, allocate plotting methods to be set to Types 1 to 4 before detailed setting of the individual plotting conditions so that you can use the plotting conditions registered by type.


[FUNCTION] SET UP
TYPE1 to 4
PRINT MODE
QUALITY STANDARD, FINE, HIGHspd
EXTEND 360 →720 OFF/ON, 720 →1440 OFF/ON
DIRECTION
PRINT : UNI-D, BI-D
INK LAYERS
1 to 9
DRYING TIME
EACH LINE : 0.0s to 9.9s
BEFORE Acut : 0s to 999s
AUTO CUT
OFF, ON
PRIORITY
PLOT MODE : HOST, PLOT
INK LAYERS : HOST, PLOT
DRYING TIME : HOST, PLOT
AUTO CUT : HOST, PLOT
INK TYPE : HOST, PLOT
REFRESH : HOST, PLOT
MEDIA COMP. : HOST, PLOT
MARGIN
RIGHTmargin
-9 to 95mm
LEFTmargin
-9 to 95mm
REFRESH
LEVEL 0 to 3
MEDIA SET
SET
SELECT, WIDTH
BOAD
OFF, ON
VACUUM
STANDARD, LOW
MM/INCH
INCH, MM
INK TYPE
Pigcm, PigOG, Dye, Sub
MODE STAMP
OFF, ON
ARTWORKmode
OFF, ON
AUTO CLEANING
OFF, ON
PRINT CONT.
OFF, ON
MEDIA COMP.
-500 to 500
SETUP RESET
RESET
[FUNCTION] MAINTENANCE
See Chapter 4 "Maintenance Functions."
[FUNCTION] DISPLAY
English, Japanese, Portuguese, Italian, Spanish, French, German

BEFORE SETTING PLOTTING CONDITIONS IN THE FUNCTION MENU

The basic operation of the function menu for setting individual plotting conditions is explained below.

Set the individual plotting conditions in the function menu after performing the following three operations.

1. **Check that the menu mode is the LOCAL mode.**
2. **Check that the language in which to display characters on the LCD has been selected.**
3. **Select a Type to register the sequence of set plotting conditions.**

Before setting the plotting conditions in the function menu, confirm the basic operations and then set the individual plotting conditions described on the pages that follow.

CHECKING THE MENU MODE

Check the menu mode before setting the plotting conditions.

The menu mode must be either the LOCAL mode or the FUNCTION mode.

Check also that the mode displayed on the LCD is either <<LOCAL>> or <<FUNCTION>>.

(See page 2.3)

SETTING THE DISPLAY LANGUAGE

Set the language in which to display characters on the LCD. [English] has been set as the initial display language of the device. Try to change the display language to [Japanese] here.

STEP

1. **Put the device into the LOCAL mode.**

   (See to Page 4.3)

   Push the [REMOTE] key and put the device back into the LOCAL mode.

2. **Push the [FUNCTION] key.**

```
      << LOCAL >>
         width : 1272mm
```

3. **Push the JOG key [▼] twice.**

```
FUNCTION
SET UP            < ENT >
```

4. **Push the [ENTER] key.**

```
FUNCTION
DISPLAY           < ENT >
```

5. **Select the language to be used for the indication on the display using the [▲] and [▼] key.**

   There are seven different languages from which you can select one as the display language.

   [English], [Japanese], [Portuguese], [Italian], [Spanish], [French], [German]

```
DISPLAY
English           < ent >
```

```
DISPLAY
Japanese          < ent >
```

6. **After you have selected the desired display language, push the [ENTER] key.**

7. **The device enters the LOCAL mode.**

```
      << LOCAL >>
         width : 1272mm
```

REGISTERING TWO OR MORE PLOTTING CONDITIONS AT A TIME (SELECTING A TYPE)

Register a sequence of plotting conditions set in the FUNCTION mode in the memory of the device. By allocating the the sequence of plotting conditions to any of Types 1 through 4, it is possible to reuse the same plotting conditions registered by type. It is, therefore, convenient to allocate different plotting conditions to different types according to the medium and plotting method used.
The procedure for allocating a specific sequence of plotting conditions to a type is described below.
Here, the method of registration by allocating plotting conditions to a particular type is explained.

STEP

1. **Make sure that the mode is LOCAL mode.**
   (See to Page 4.3)

```
          << LOCAL >>
            width : 1272mm
```

2. **Push the [FUNCTION] key.**

FUNCTION

```
FUNCTION
SET UP                < ENT >
```

3. **Push the [ENTER] key.**

ENTER

```
SET  UP
SELECT             :  TYPE.1
```

4. **Select any of Types 1 through 4 by pushing the JOG keys [▲] and [▼].**
   There are four types which you can select.
   [Type.1]
   [Type.2]
   [Type.3]
   [Type.4]

▲ ▼

```
SET UP
SELECT              : TYPE.1
```

5. **Push the [ENTER] key.**
   Setting Plotting Conditions.
   (See page 3.5 through 3.28)

ENTER

```
TYPE.1
PRINT MODE            < ent >
```

Changing the type

If plotting conditions for types 1 through 4 have already been registered, settings can be selected according to the plotting simply by selecting the type.

1. **Perform steps 1 through 5 above.**
   Select a type.

2. **Push the [END] key.**
   Plotting can be started immediately without setting each plotting condition. (See page 2.6)

END

SETTING PLOTTING CONDITIONS

CHANGING PLOTTING CONDITIONS ON THE DEVICE SIDE

Set up the plotting method that determines the quality of image.
For the plotting method, there are three setting items—“quality of image”, “extention of resolution”, and “direction of printing”.

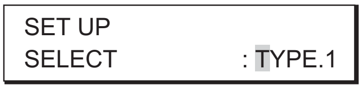
RELATIONSHIP BETWEEN IMAGE QUALITY AND PLOTTING SPEED

For the quality of image, there are three setting items—[STD], [FINE], and [HIGHspd].

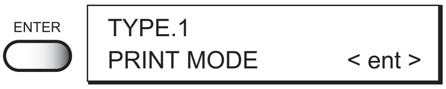
STANDARD : Standard image quality
FINE : High image quality and low plotting speed
HIGHspd : High plotting speed and slightly inferior image quality

STEP

1. **Select a type.**
   (see page 3.4). Here, select [Type.1].

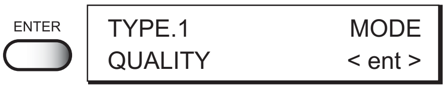

SET UP
SELECT : TYPE.1

2. **Push the [ENTER] key.**



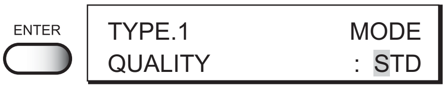
TYPE.1
PRINT MODE < ent >

3. **Push the [ENTER] key.**



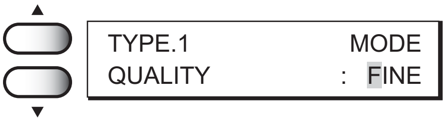
TYPE.1 MODE
QUALITY < ent >

4. **Push the [ENTER] key.**



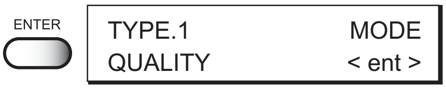
TYPE.1 MODE
QUALITY : STD

5. **Select PRINT MODE by pushing the JOG keys [▲] and [▼].**
   There are three quality types from which you can select one.
   [STD], [FINE], [HIGHspd]



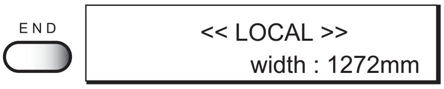
TYPE.1 MODE
QUALITY : FINE

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



TYPE.1 MODE
QUALITY < ent >

7. **Push the [END] key three times, and the menu returns to the LOCAL mode.**



<< LOCAL >>
width : 1272mm

EXTENDING THE RESOLUTION FOR HIGH-DENSITY PLOTTING [EXTEND]

Even when the same data is used, the plotting density may become insufficient depending on the medium used. This function is used in such a case.

ON : Increases the resolution in the direction in which the carriage moves.

- 360 ⟶ 720 : Extends the 360dpi data in the paper feed direction to allow plotting with 720dpi. This increases the amount of ink and the ink density.
- 720 ⟶ 1440 : Increases the resolution of the 720dpi data in the direction in which the carriage moves to allow plotting with a resolution equivalent to 1440dpi.

OFF : The resolution is not extended (increased).
Performs printing with the resolution established by command.

STEP

1. **Select a type**
   (see page 3.4). Here, select [Type.1].

```
SET UP
SELECT              : TYPE.1
```

2. **Push the [ENTER] key.**

```
TYPE.1
PRINT MODE           < ent >
```

3. **Push the [ENTER] key.**

```
TYPE.1                  MODE
QUALITY              < ent >
```

4. **Set a [EXTEND] by pushing the JOG keys [▲] and [▼].**

```
TYPE.1                  MODE
EXTEND               < ent >
```

5. **Push the [ENTER] key.**

6. **Push the JOG keys [▲] and [▼] to select [ON] or [OFF] of the 360dpi extended function.**
   Here, select [ON].

```
TYPE.1                  MODE
360 - ›720              : ON
```

7. **Push the [ENTER] key.**

8. **Push the JOG keys [▲] and [▼] to select [ON] or [OFF] of the 720dpi extended function.**
   Here, select [ON].

```
TYPE.1                  MODE
720 - ›1440            :  ON
```

9. **Push the [ENTER] key.**

```
TYPE.1                  MODE
EXTEND               < ent >
```

10. **Push the [END] key three times, and the menu returns to the LOCAL mode.**

```
         << LOCAL >>
          width :  1272mm
```

PLOTTING DIRECTION [DIRECTION]

This function sets the direction of printing.

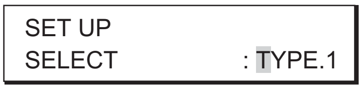
The device prints an image while moving the carriage right and left. By setting the direction of printing, it is possible to adjust the image quality and the printing speed.

UNI-D : The image is printed only in one direction during movement of the carriage.
Image quality is better than when BIDIRECTIONAL is specified

BI-D : The image is printed in both directions during movement of the carriage.
Image quality slightly deteriorates since emphasis is placed on printing carriage.

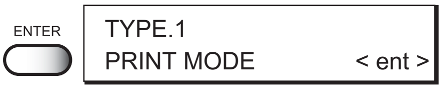
STEP

1. **Select a type.**
(see page 3.4). Here, select [Type.1].



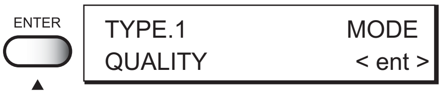
SET UP
SELECT : TYPE.1

2. **Push the [ENTER] key.**



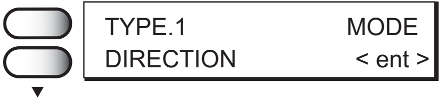
TYPE.1
PRINT MODE < ent >

3. **Push the [ENTER] key.**



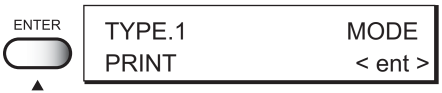
TYPE.1 MODE
QUALITY < ent >

4. **Set a plotting direction [DIRECTION] by pushing the JOG keys [▲] and [▼].**



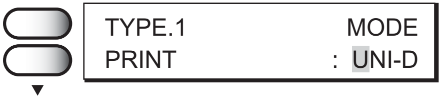
TYPE.1 MODE
DIRECTION < ent >

5. **Push the [ENTER] key.**



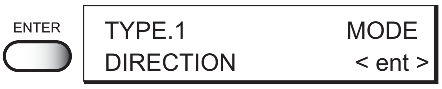
TYPE.1 MODE
PRINT < ent >

6. **Set a plotting direction [UNI-D] or [BI-D] by pushing the JOG keys [▼] and [▼].**
Here, select [UNI-D].



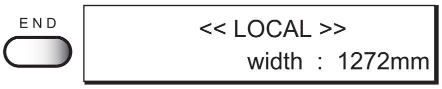
TYPE.1 MODE
PRINT : UNI-D

7. **Push the [ENTER] key.**



TYPE.1 MODE
DIRECTION < ent >

8. **Push the [END] key three times, and the menu returns to the LOCAL mode.**



<< LOCAL >>
width : 1272mm

IMPROVING THE DENSITY OF INK COLOR [INK LAYERS]

This function sprays the ink in two or more layers (wet-on-wet coating) to improve the density of ink color.
If a coarse-surfaced medium (e.g., canvas) is used, the color of ink might be weak. In this case, execute this function (wet-on-wet coating).

> **CAUTION**
>
> - For nonflamable cloth, do not perform wet-on-wet coating. Wet-on-wet coating will cause the medium to expand/contract by ink moisture producing wavy finished surface. As a result, the ink head may rub the medium surface to stain the medium or to cause paper jamming breaking the head.

STEP

1. **Select a type.**
   (see page 3.4). Here, select [Type.1].

```
SET UP
SELECT              : TYPE.1
```

2. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT MODE          < ent >
```

3. **Set a [INK LAYERS] by pushing the JOG keys [▲] and [▼].**

```
TYPE.1
INK LAYERS          < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
TYPE.1
INK LAYERS              : 1
```

5. **Select the number of ink layers using the [▲] and [▼].**
   A number 1 to 9 can be selected as the number of times of reprinting.
   Here, select [3] times.

```
TYPE.1
INK LAYERS              : 3
```

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

ENTER

```
TYPE.1
INK LAYERS          < ent >
```

7. **Push the[END] key twice, and the menu returns to the LOCAL mode.**

END

```
      << LOCAL >>
         width  :  1272mm
```

SETTING THE INK DRYING TIME [DRYING TIME]

This function sets an ink drying time.
The drying time is the wait time by scanning and the time interval between the instant at which the plotting operation is completed and the instant at which the medium plotted is cut off.
Specify the time to be established in accordance with the printing resolituion on a drawing and the type of medium to be used.

> CAUTION
>
> - To enable the medium to be cut off automatically, it is necessary to specify [AUTO CUT]. (See page 3.10)

STEP

1. **Select a type.**
   (see page 3.4). Here, select [Type.1].

```
SET UP
SELECT              : TYPE.1
```

2. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT MODE           < ent >
```

3. **Set a drying time [Drying time] by pushing the JOG keys [▲] and [▼].**

▲ ▼

```
TYPE.1
DRYING TIME          < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
TYPE.1
EACH LINE              : 0.0S
```

5. **Set a drying time after the scanning by pushing the JOG keys [▲] and [▼].**
   This is the drying time from the instant at which the carriage returns to the capping station till the instant at which the carriage starts moving again for plotting. The drying time that can be set is 0.0 second to 9.9 seconds.
   Here, select [1.0].

▲ ▼

```
TYPE.1
EACH LINE              : 1.0S
```

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

ENTER

```
TYPE.1
BEFORE Acut            : 0.0S
```

7. **Set a drying time from the end of plotting to the beginning of automatic cutting of the medium by pushing the JOG keys[▲] and [▼].**
   The drying time that can be set is 0.0 second to 999 seconds.
   Here, select [180].

▲ ▼

```
TYPE.1
BEFORE Acut            : 180S
```

8. **Push the [ENTER] key.**

ENTER

```
TYPE.1
DRYING TIME          < ent >
```

9. **Push the [END] key twice, and the menu returns to the LOCAL mode.**

END

```
        << LOCAL >>
       width  :  1272mm
```

CUTTING OFF THE MEDIUM AUTOMATICALLY AT THE END OF PLOTTING [AUTO CUT]

This function cuts off the medium automatically at the end of plotting.

If AUTO CUT is not specified, the device plots the next plotting data after plotting the current data, without cutting off the medium.

Even if AUTO CUT is not specified, you can cut off the medium by hand. (See page 2.7)

CAUTION
- If the head height is 3mm or more, [AUTO CUT] is not possible.

ON	:	The medium is cut off automatically at the end of plotting.
OFF	:	The medium is not cut off automatically even after the plotting is completed.

STEP

1. **Select a type.**
   (see page 3.4). Here, select [Type.1].

```
SET UP
SELECT              : TYPE.1
```

2. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT MODE           < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [AUTO CUT].**

```
TYPE.1
AUTO CUT             < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
TYPE.1
AUTO CUT               : OFF
```

5. **Select a Cutting off the medium automatically or not, by pushing the JOG keys [▲] and [▼].**
   Here, select [ON].

```
 TYPE.1
AUTO CUT               : ON
```

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

ENTER

```
TYPE.1
AUTO CUT             < ent >
```

- You can set a time interval between the instant at which the plotting is completed and the instant at which the automatic cutting is started, by using the procedure for setting the ink drying time. (See page 3.9)

7. **Push the [END] key twice, and the menu returns to the LOCAL mode.**

END

```
        << LOCAL >>
         width  :  1272mm
```

DECIDING THE PRIORITY OF SETTINGS BY THE COMPUTER OR THE DEVICE [PRIORITY]

This function gives priority to either the plotting conditions set on the computer or the plotting conditions set on the device.
Plotting conditions can be set on data of the device and on data received from the computer using the output software. If these plotting conditions differ, priority is given to either of them at the time when the plotting operation is started.

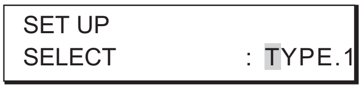
HOST : The plotting operation is performed with priority given to the plotting conditions set on the computer.
PLOT : The plotting operation is performed with priority given to the plotting conditions set on the device.

Priority needs to be specified for each of the following items:

- **PRINT MODE**
- **INK LAYERS**
- **DRYING TIME**
- **AUTO CUT**
- **MEDIA COMP.**
- **INK TYPE**
- **REFRESH**

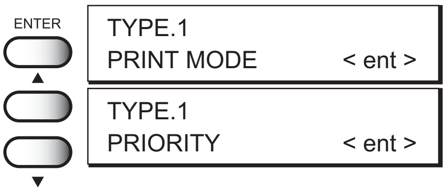
STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].


SET UP
SELECT : TYPE.1

2. **Push the [ENTER] key.**

3. **Push the [▲] and [▼] key until the display gives the indication [PRIORITY].**

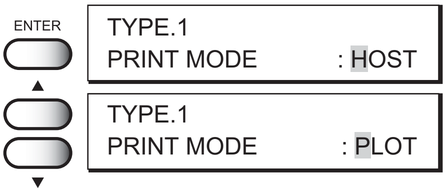


TYPE.1
PRINT MODE < ent >

TYPE.1
PRIORITY < ent >

4. **Push the [ENTER] key.**

5. **Push the [▲] and [▼] key to select priority [HOST] and [PLOT].**
   Here, select [PLOT].

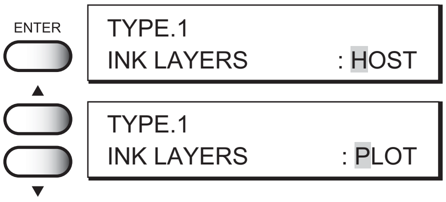


TYPE.1
PRINT MODE : HOST

TYPE.1
PRINT MODE : PLOT

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

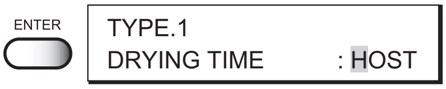
7. **Push the [▲] and [▼] key to select priority [HOST] and [PLOT].**
   Here, select [PLOT].



TYPE.1
INK LAYERS : HOST

TYPE.1
INK LAYERS : PLOT

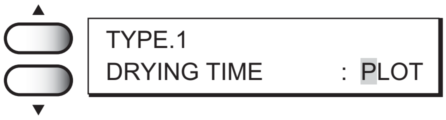
8. **Push the [ENTER] key.**



TYPE.1
DRYING TIME : HOST

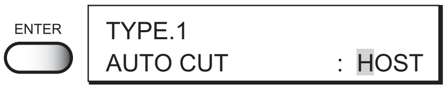
9. Push the [▲] and [▼] key to select priority [HOST] and [PLOT].

Here, select [PLOT].



TYPE.1
DRYING TIME : PLOT

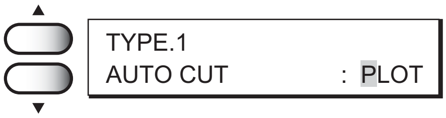
10. Push the [ENTER] key.



TYPE.1
AUTO CUT : HOST

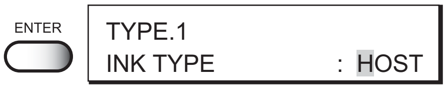
11. Push the [▲] and [▼] key to select priority [HOST] and [PLOT].

Here, select [PLOT].



TYPE.1
AUTO CUT : PLOT

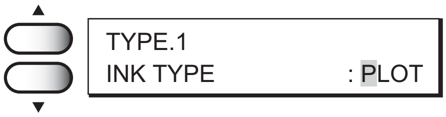
12. Push the [ENTER] key.



TYPE.1
INK TYPE : HOST

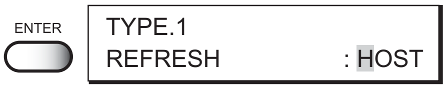
13. Push the [▲] and [▼] key to select priority [HOST] and [PLOT].

Here, select [PLOT].



TYPE.1
INK TYPE : PLOT

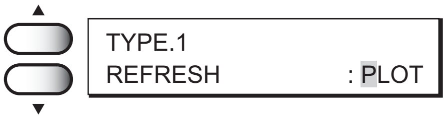
14. Push the [ENTER] key.



TYPE.1
REFRESH : HOST

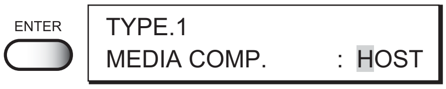
15. Push the [▲] and [▼] key to select priority [HOST] and [PLOT].

Here, select [PLOT].



TYPE.1
REFRESH : PLOT

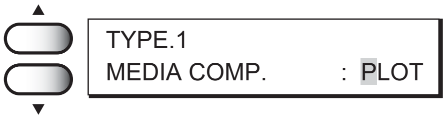
16. Push the [ENTER] key.



TYPE.1
MEDIA COMP. : HOST

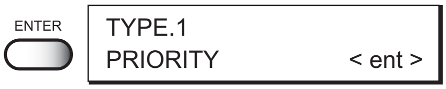
17. Push the [▲] and [▼] key to select priority [HOST] and [PLOT].

Here, select [PLOT].



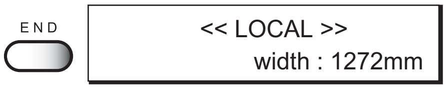
TYPE.1
MEDIA COMP. : PLOT

18. Push the [ENTER] key.



TYPE.1
PRIORITY < ent >

19. Push the [END] key twice, and the menu returns to the LOCAL mode.



<< LOCAL >>
width : 1272mm

INCREASING (DECREASING) THE RIGHT AND LEFT MARGINS OF THE MEDIUM

This function sets a dead space to increase/decrease the right and left margins of the medium. The blank portion of the medium is called dead space. (See page 1.46)

The function is used to increase the margin for binding.

You can set a dead space for each of the right and left margins of the medium.

DEAD SPACE

JV4-130/160 : Can be set in 1 mm increment from -9 mm to 95 mm.
JV4-180 : Can be set in 1 mm increment from -29 mm to 75 mm.

Setting [RIGHTmargin]

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

```
SET UP
SELECT              : TYPE.1
```

2. **Push the [ENTE] key.**

ENTER

```
TYPE.1
PRINT MODE             < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [MARGIN].**

```
TYPE.1
MARGIN                 < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
TYPE.1
RIGHTmargin            < ent >
```

5. **Push the [ENTER] key.**

ENTER

```
TYPE.1
RIGHTmargin      : 0mm
```

6. **Set a dead space by pushing the JOG keys [▲] and [▼] .**
   You can set a dead space in the range -9 mm to 95 mm in increments of 1 mm.
   Here, set [10mm].

```
TYPE.1
RIGHTmargin      : 10mm
```

7. **Push the [ENTER] key.**

ENTER

```
TYPE.1
MARGIN                 < ent >
```

8. **Select the following operation.**
   To set LEFTmargin, push the ENTER key (after setting RIGHTmargin) and select Dead Space (LEFTmargin) by pushing the JOG keys [▲] and [▼] .
   Push the [END] key twice, and the menu returns to the LOCAL mode.

```
TYPE.1
LEFTmargin             < ent >
```

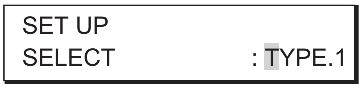
END

```
      << LOCAL >>
         width : 1272mm
```

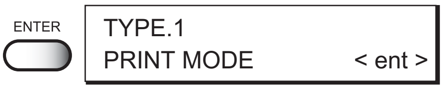
Setting [LEFTmargin]

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

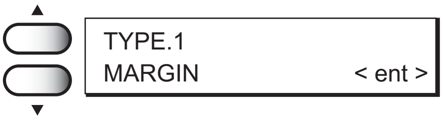

SET UP
SELECT : TYPE.1

2. **Push the [ENTER] key.**



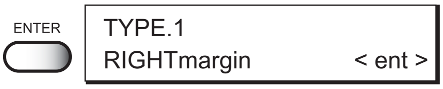
TYPE.1
PRINT MODE < ent >

3. **Push the [▲] and [▼] key until the display gives the indication [MARGIN].**



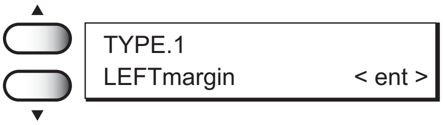
TYPE.1
MARGIN < ent >

4. **Push the [ENTER] key.**



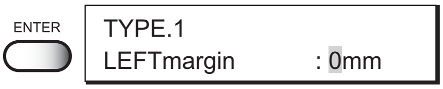
TYPE.1
RIGHTmargin < ent >

5. **Push the [▲] and [▼] key until the display gives the indication [LEFTmargin].**



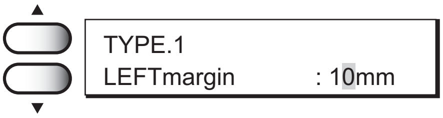
TYPE.1
LEFTmargin < ent >

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



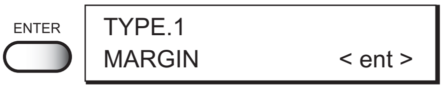
TYPE.1
LEFTmargin : 0mm

7. **Set a dead space by pushing the JOG keys [▲] and [▼] .**
   You can set a dead space in the range -9 mm to 95 mm in increments of 1 mm.
   Here, set [10mm].



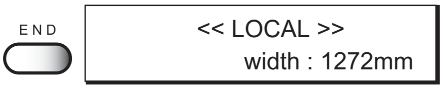
TYPE.1
LEFTmargin : 10mm

8. **Push the [ENTER] key.**



TYPE.1
MARGIN < ent >

9. **Push the [END] key twice, and the menu returns to the LOCAL mode.**



<< LOCAL >>
width : 1272mm

WHEN USING THE DEVICE IN AN EXTREMELY DUSTY OR DRY PLACE [REFRESH]

Solidification of ink can be prevented by refreshing the head during plotting.
If the device is used in a dusty place or dry place, ink in the head will be likely to solidify. Execute the REFRESH function to enable the ink to be ejected properly from the ink head. Concerning the frequency of refreshing of the ink nozzle, there are four levels—Levels 0 to 3.

LEVEL 0 :	Frequency of refreshing is low.
LEVEL 1 :	Frequency of refreshing is normal.
LEVEL 2 :	Frequency of refreshing is slightly high.
LEVEL 3 :	Frequency of refreshing is high.

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

```
SET UP
SELECT            : TYPE.1
```

2. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT MODE         < ent >
```

3. **Push the [▼] and [▲] key until the display gives the indication [REFRESH].**

```
TYPE.1
REFRESH            < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
TYPE.1
REFRESH           : LEVEL1
```

5. **Set a refresh level by pushing the JOG keys [▲] and [▼].**
   There are four refresh levels from which you can select.
   [LEVEL0], [LEVEL1], [LEVEL2], [LEVEL3]
   Here, select [Level2].

```
TYPE.1
REFRESH           : LEVEL2
```

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

ENTER

```
TYPE.1
REFRESH            < ent >
```

7. **Push the [END] key twice, and the menu returns to the LOCAL mode.**

END

```
      << LOCAL >>
         width : 1272mm
```

SETTING THE METHOD OF MEDIUM DETECTION [MEDIA SET]

This function sets the method of medium detection.

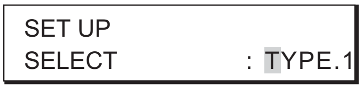
You can select either of the following two methods of medium detection.

SELECT : Select this method when a cut sheet medium is used. During the initial operation, the device displays a menu for selection of “roll medium” or “cut sheet medium”. When “roll medium” is selected, only the width of the medium is detected. When “cut sheet medium” is selected, both the width and length of the me dium are detected.

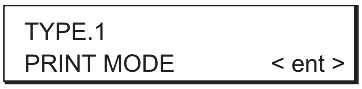
WIDTH : Select this method when a roll medium is used. Only the width of a medium will be detected. When the device power is switched on, the device detects only the medium width automatically.

STEP

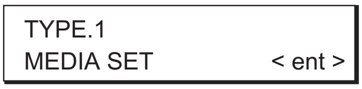
1. **Select a type.**
   (See page 3.4). Here, select [Type.1].


SET UP
SELECT : TYPE.1

2. **Push the [ENTER] key.**

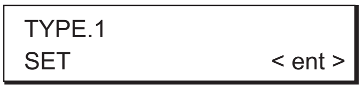

TYPE.1
PRINT MODE < ent >

3. **Push the [▲] and [▼] key until the display gives the indication [MEDIA SET].**


TYPE.1
MEDIA SET < ent >

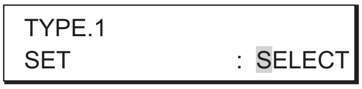
4. **Push the [ENTER] key.**

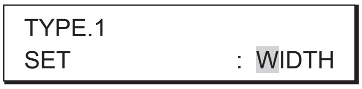
5. **Push the [▲] and [▼] key until the display gives the indication [SET].**


TYPE.1
SET < ent >

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

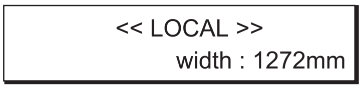
7. **Set a Method of medium detection by pushing the JOG keys [▲] and [▼].**
   Here, select [WIDHT].


TYPE.1
SET : SELECT


TYPE.1
SET : WIDTH

8. **Push the [ENTER] key.**

9. **Push the [END] key three times, and the menu returns to the LOCAL mode.**


<< LOCAL >>
width : 1272mm

SETTING THE METHOD OF MEDIUM DETECTION [BOARD]

Set board detection to ON or OFF.

When the board is used, set board detection to ON.

ON : Board selection is possible at the time of board detection.
OFF : Board detection cannot be selected at the time of board detection.

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

```
SET UP
SELECT              : TYPE.1
```

2. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT MODE           < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [MEDIA SET].**

▲ ▼

```
TYPE.1
MEDIA SET            < ent >
```

4. **Push the [ENTER] key.**

ENTER

5. **Push the [▲] and [▼] key until the display gives the indication [BOARD].**

▲ ▼

```
TYPE.1
BOARD                < ent >
```

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

ENTER

```
TYPE.1
BOARD                : OFF
```

7. **Push JOG keys [▲] and [▼] key to set board detection to [ON] or [OFF].**
   Here, select [ON].

▲ ▼

```
TYPE.1
BOARD                : ON
```

8. **Push the [ENTER] key.**

ENTER

```
TYPE.1
BOARD                < ent >
```

9. **Push the [END] key three times, and the menu returns to the LOCAL mode.**

END

```
       << LOCAL >>
           width : 1272mm
```

IF VERTICAL STRIPES APPEAR IN THE OUTPUT IMAGE [VACUUM]

When nonflammable cloth is used as the medium, set the suction to [LOW]. If the suction is set to [STANDARD] when using nonflamable cloth, ink will be sucked through the suction holes producing vertical streaks on the picture to lose the image quality.

STANDARD	: Medium is sucked with a normal suction.
LOW	: Suction to be applied to the medium will be lowered. (when nonflammable cloth is used)

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

   SET UP
   SELECT : TYPE.1

2. **Push the [ENTER] key.**

   ENTER

   TYPE.1
   PRINT MODE < ent >

3. **Push the [▲] and [▼] key until the display gives the indication [VACUUM].**

   TYPE.1
   VACUUM < ent >

4. **Push the [ENTER] key.**

   ENTER

   TYPE.1
   VACUUM : STANDARD

5. **Set a suction to by pushing the JOG keys [▲] and [▼].**
   Here, select [LOW].

   TYPE.1
   VACUUM : LOW

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

   ENTER

   TYPE.1
   VACUUM < ent >

7. **Push the [END] key twice, and the menu returns to the LOCAL mode.**

   END

   << LOCAL >>
   width : 1272mm

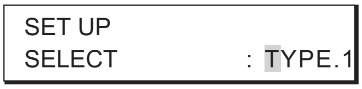
SETTING A UNIT OF LENGTH DISPLAYED ON THE LCD [MM/INCH]

This function sets a unit of set values displayed on the LCD.
Use this function when displaying “width” and “length” of the medium after setting of the origin or detection of the medium. When the device is shipped from the factory, the unit of display is set to MM (millimeter).

MM : Numerics are expressed in millimeters.
INCH : Numerics are expressed in inches.

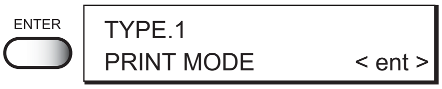
STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].



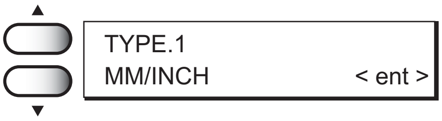
SET UP
SELECT : TYPE.1

2. **Push the [ENTER] key.**



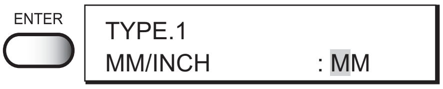
TYPE.1
PRINT MODE < ent >

3. **Push the [▲] and [▼] key until the display gives the indication [MM/INCM].**



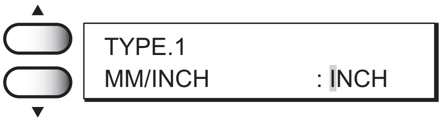
TYPE.1
MM/INCH < ent >

4. **Push the [ENTER] key.**



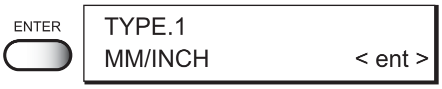
TYPE.1
MM/INCH : MM

5. **Set a unit of length displayed on the LCD by pushing the JOG keys [▲] and [▼] .**
   Here, select [MM].



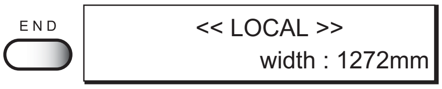
TYPE.1
MM/INCH : INCH

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



TYPE.1
MM/INCH < ent >

7. **Push the [END] key twice, and the menu returns to the LOCAL mode.**



<< LOCAL >>
width : 1272mm

SETTING THE TYPE OF INK TO BE USED [INKTYPE]

This function selects the type of ink that is to be used.
This device permits up to two types of ink to be loaded. When starting an actual plotting operation, however, select only one type of ink to be used according to the plotting data and the medium used.
This function can be used when different types of ink are loaded in the device.
As the ink that can be specified, select from the types of ink that have been set in the ink stations.

Pigcm : Water-soluble pigment (Light set)
PigOG : Water-soluble pigment (Orange, Green set)
Dye : Water-soluble dye
Sub : Disperse ink (for sublimation transfer)

CAUTION

- If the same type of ink is set in the ink stations on both sides, the type of ink cannot be set since [INKTYPE] is not displayed on the LCD.

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

```
SET UP
SELECT              : TYPE.1
```

2. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT MODE            < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [INKTYPE].**

```
TYPE.1
INK TYPE              < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
TYPE.1
INK TYPE             : Pigcm
```

5. **Set a type of ink to be used by pushing the JOG keys [▲] and [▼] .**
   Here, select [Dye].

```
TYPE.1
INK TYPE             : Dye
```

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

ENTER

```
TYPE.1
INK TYPE              < ent >
```

7. **Push the [END] key twice, and the menu returns to the LOCAL mode.**

END

```
        << LOCAL >>
           width : 1272mm
```

PUTTING OUT PLOTTING CONDITIONS THAT HAVE BEEN SET [MODE STAMP]

This function plots the plotting conditions set by the function menu or output software after the image data is output.

The plotting conditions that are put out by this function are convenient since they allow for comparison of output images and provide a record of plotting data.

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

```
SET UP
SELECT              : TYPE.1
```

2. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT MODE           < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [MODE STAMP].**

```
TYPE.1
MODE STAMP           < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
TYPE.1
MODE STAMP           : OFF
```

5. **Set a type of ink to be used by pushing the JOG keys [▲] and [▼] .**
   Here, select [ON].

```
TYPE.1
MODE STAMP           : ON
```

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

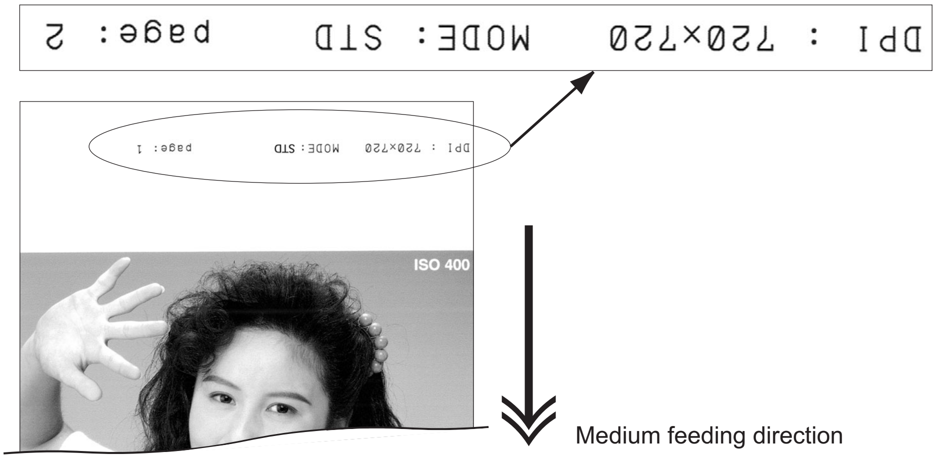
ENTER

```
TYPE.1
MODE STAMP           < ent >
```

7. **Push the [END] key twice, and the menu returns to the LOCAL mode.**

END

```
        << LOCAL >>
          width : 1272mm
```


DPI : 720×720 MODE: STD page: 2
DPI : 720×720 MODE: STD page: 1
ISO 400
Medium feeding direction

USING BLOCK-COPY FILM [ARTWORKMODE]

This function is used when a making artwork for screen printng using artwork film.

When ARTWORKmode is specified, the image is plotted on the artwork film in water-soluble black dye ink.

ON	:	The image is printed only in water-soluble black dye [K] that is compatible with the artwork film.
OFF	:	The image can be printed in any of the types of ink that have been set in the ink stations.

CAUTION

- Water-soluble black dye [K] ink must be previously set in the prescribed position of the ink station. For the method of setting up the ink stations, see the section under “Ink Stations.” (See page 1.27)

ARTWORKmode needs to be specified for each of the following two items.

Specifying image quality in ARTWORKmode.

Specify an image quality in ARTWORKmode as follows.

STANDARD	:	The quality of image improves from 1, 2, and 3 in that order.
QUALITY	:	On the whole, the quality of image is higher than when STANDARD is specified. The quality improves from 1, 2, and 3 in that order.

The following table shows the plotting mode when the image quality is set for each resolution.

Resolution	Image quality	Passes	Using ink station	Extend
720 x 720	STANDARD1	4Pass	F-row and R-row	ON (1440 x 720)
	STANDARD2			――――
	STANDARD3		F-row or R-row	――――
	QUALITY1	8Pass	F-row and R-row	ON (1440 x 720)
	QUALITY2			――――
	QUALITY3		F-row or R-row	――――
1440 x 1440	STANDARD1	16Pass	F-row and R-row	――――
	STANDARD2		F-row or R-row	――――
	STANDARD3			――――
	QUALITY1	32Pass	F-row and R-row	――――
	QUALITY2		F-row or R-row	――――
	QUALITY3			――――

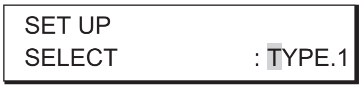
Specifying ink thickness in ARTWORKmode

Specify a plotting density in ARTWORKmode. The thickness (amount) of ink should be set so that the ink may not run on the medium.

NORMAL : Standard plotting density
THIN : The ink runs less on the medium.

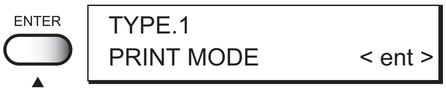
STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].



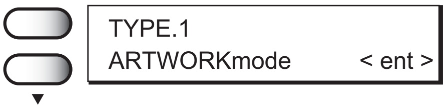
```
SET UP
SELECT                : TYPE.1
```

2. **Push the [ENTER] key.**



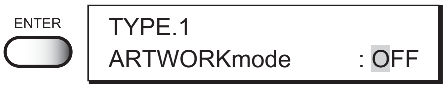
```
TYPE.1
PRINT MODE             < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [ARTWORKmode].**



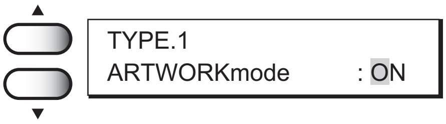
```
TYPE.1
ARTWORKmode            < ent >
```

4. **Push the [ENTER] key.**



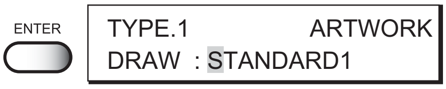
```
TYPE.1
ARTWORKmode            : OFF
```

5. **Set ARTWORKmode by pushing the JOG keys [▲] and [▼].**
   [OFF] : Jump to Step 10.
   [ON] : Specify image quality, plotting density.
   Here, select [ON].



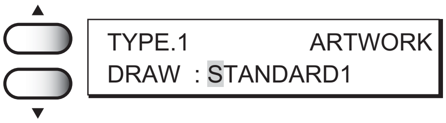
```
TYPE.1
ARTWORKmode            : ON
```

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



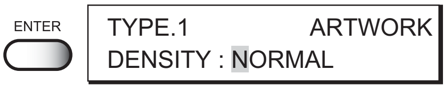
```
TYPE.1              ARTWORK
DRAW  : STANDARD1
```

7. **Select a image quality by pushing the JOG keys [▲] and [▼].**
   Select [STANDARD1 to 3] or [QUALITY1to 3]
   Here, select [STANDARD1].



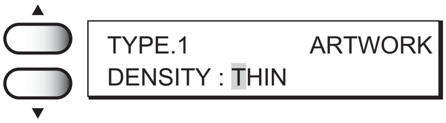
```
TYPE.1              ARTWORK
DRAW  : STANDARD1
```

8. **Push the [ENTER] key.**



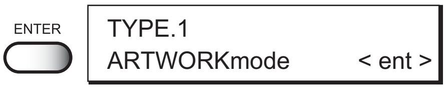
```
TYPE.1              ARTWORK
DENSITY : NORMAL
```

9. **Select a plotting density by pushing the JOG keys [▲] and [▼].**
   Select [NORMAL] or [THIN]
   Here, select [THIN].



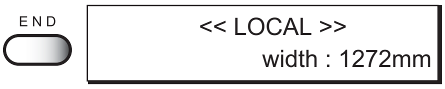
```
TYPE.1              ARTWORK
DENSITY : THIN
```

10. **Push the [ENTER] key.**



```
TYPE.1
ARTWORKmode            < ent >
```

11. **Push the [END] key twice, and the menu returns to the LOCAL mode.**



```
       << LOCAL >>
           width : 1272mm
```

SETTING UP AUTO-CLEANING FUNCTION [AUTO CLEAN]

Set up the [AUTO CLEAN] function. Plotting failures may be remarkable on dusty locations or locations with low temperature. Perform cleaning for each plot to prevent plotting failures.

ON : The head is cleaned automatically.
OFF : The head is not cleaned automatically.

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

```
SET UP
SELECT                : TYPE.1
```

2. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT MODE            < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [AUTO CLEAN].**

▲ ▼

```
TYPE.1
AUTO CLEAN            < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
TYPE.1
AUTO CLEAN            : OFF
```

5. **Set a AUTOcleaning by pushing the JOG keys [▲] and [▼].**
   Here, select [ON].

▲ ▼

```
TYPE.1
AUTO CLEAN            : ON
```

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

ENTER

```
TYPE.1
AUTO CLEAN            < ent >
```

7. **Push the [END] key twice, and the menu returns to the LOCAL mode.**

END

```
       << LOCAL >>
          width : 1272mm
```

TO PERFORM CLEANING AUTOMATICALLY DURING PATTERN PLOTTING [AUTO CLEAN2]

Set the automatic cleaning during pattern plotting.

To prevent from occurring defect during pattern plotting, automatic cleaning is performed.

ON : Performs cleaning of the head automatically during pattern plotting.
OFF : Does not perform cleaning of the head during pattern plotting.

If setting to [ON], you can select a cleaning type and an interval to perform cleaning automatically.

Clean Type : SOFT, NORMAL and STRONG (refer to P2-9)
Performing interval : 0.1 m to 100.0 m (set by 0.1 m)

CAUTION

- If the ink is almost empty, this function will not be performed.
- A normal pattern may not be obtained because of the head status etc. even after performing cleaning.

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

```
SET UP
SELECT                : TYPE.1
```

2. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT MODE            < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [AUTO CLEAN2].**

```
TYPE.1
AUTO CLEAN2           < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
TYPE.1
AUTO CLEAN2            :OFF
```

5. **Push jog key [▲] or [▼] to select [OFF] or [ON].**
   Here, select [ON].

```
TYPE.1
AUTO CLEAN2            :ON
```

6. **Push the [ENTER] key.**
   If selecting [OFF] in Procedure 5, go to Procedure 11.

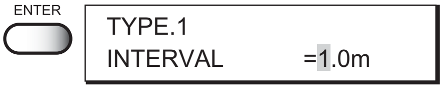
ENTER

```
TYPE.1
CL TYPE            :SOFT
```

7. **Push jog key [▲] or [▼] to select a cleaning type.**
   There are three cleaning type: [SOFT], [NORMAL] and [STRONG].
   Here, select [NORMAL].

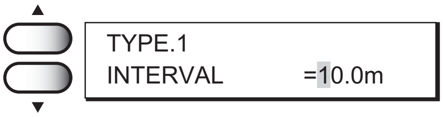
```
TYPE.1
CL TYPE            :NORMAL
```

8. Push the [ENTER] key.



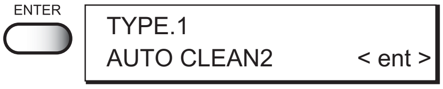
TYPE.1
INTERVAL =1.0m

9. Push jog key [▲] or [▼]to select an interval to perform cleaning.



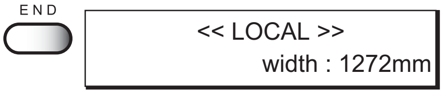
TYPE.1
INTERVAL =10.0m

10. Push the [ENTER] key.



TYPE.1
AUTO CLEAN2 < ent >

11.Push the [END] key twice, and the menu returns to the LOCAL mode.



<< LOCAL >>
width : 1272mm

FOR CONTINUING PLOTTING WITH SMALL AMOUNT OF REMAINING INK [PRINT CONT.]

Even if [INKnearEND] occurs, plotting can be continued using either ink station with remaining ink.

ON	Continues plotting using the other ink station without [INKnearEND] indication. (Each time plotting to one page is completed, plotting is continued without entering the local mode.)
OFF	If [INKnearEND] occurs, each time plotting to one page is completed, the local mode is entered and plotting interrupted.

CAUTION

- If different types of ink are set in the two ink stations, this function cannot be used since [PRINT CONT.] is not displayed on the LCD.

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

   SET UP
   SELECT : TYPE.1

2. **Push the [ENTER] key.**

   ENTER

   TYPE.1
   PRINT MODE < ent >

3. **Push the [▲] and [▼] key until the display gives the indication [PRINT CONT.].**

   TYPE.1
   PRINT CONT. < ent >

4. **Push the [ENTER] key.**

   ENTER

   TYPE.1
   PRINT CONT. : OFF

5. **Set a [PRINT CONT.] by pushing the JOG keys [▲] and [▼].**
   Here, select [ON].

   TYPE.1
   PRINT CONT. : ON

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

   ENTER

   TYPE.1
   PRINT CONT. < ent >

7. **Push the [END] key twice, and the menu returns to the LOCAL mode.**

   END

   << LOCAL >>
   width : 1272mm

CAUTION

- When plotting is made using only one ink station, the plotting time becomes longer.
  At the time [INKnearEND] occurs during plotting, plotting is canceled.

CORRECTING THE MEDIUM FEED RATE ACCORDING TO MEDIUM THICKNESS [MEDIA COMP.]

The device plots an image on the medium while feeding it forward little by little.
When the thickness of the medium changes, the optimum feed rate changes accordingly. If this occurs, the device may not plot a clear image (e.g., unwanted stripes may appear on the image). To correct the medium feed rate according to the medium thickness, execute this function and make a plotting test.

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

```
SET UP
SELECT                : TYPE.1
```

2. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT MODE            < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [MEDIA COMP.].**

▲ ▼

```
TYPE.1
MEDIA COMP.           < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT START           : ent
```

5. **Push the [ENTER] key.**
   Test plotting for correction of the medium feed rate starts.
   Seven types of medium correction patterns are plotted.

ENTER

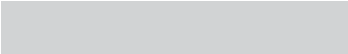
```
        PRINTING
PLEASE WAIT
```

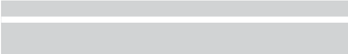
6. **Enter a correction value from the output pattern.**
   Enter the correction value by pushing the JOG keys [▲] and [▼].
   If the printed pattern has a gap between lines
   : Decrease [ADJUST].
   If lines of the printed pattern overlap: Increase [ADJUST].

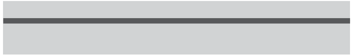
   - When [ADJUST] is changed to 15, the pattern moves by about 0.1 mm. Determine the correction value referencing this amount of movement.

▲ ▼

```
TYPE.1
ADJUST                = 0
```


Optimum pattern


Gap between lines


Overlap

7. **Push the [ENTER] key.**

ENTER

```
TYPE.1
PRINT START           : ent
```

8. **Push the [END] key three times, and the menu returns to the LOCAL mode.**

END

```
      << LOCAL >>
        width : 1272mm
```

CORRECTING THE MEDIA FEED RATE DURING OPERATION

In the “MEDIA COMP.”, operations are in a local mode.
The following describes the procedures altering the medium feed rate during operation or in a Remote mode.

STEP

1. **Press the [REMOTE] key.**

REMOTE

```
< REMOTE >
TYPE. 1       0.  0 m
```

2. **Press the [FUNCTION] key to confirm the current setting value.**
   Press the [END] key when an appropriate value is set or to abort an operation.

FUNCTION

```
       FEED  COMP.
   0
```

3. **Press the [ENTER] key.**
   Available to alter the medium feed rate.

ENTER

```
       FEED  COMP.
     0 >            0
```

4. **Press the jog key [▲] or [▼] as needed to set the amount of correction.**
   The value is incremental/ decremental to the correction value of the current media type.

   - A new value takes effect in real time. The best effect can be obtained while checking the result.

   - The unit of the correction value is the same as in “MEDIA COMP.” in the LOCAL mode.

▲ ▼

```
       FEED  COMP.
     0  >           1
```

current value

correction value

5. **Press the [ENTER] key.**
   Confirm the medium feed rate before saving it.
   Press the [END] key to return to the REMOTE display.
   The altered value ceases to be in effect, and returns to the previous value.

```
       FEED  COMP.
SAVE         :  ent
```

6. **Press the [ENTER] key to return to the REMOTE display.**
   Save the altered medium feed rate. The saved feed rate is effective in the next power on. In case altering the setting on the main unit, it displays “+” after the TYPE. Number.

   Press the [END] key to save the value contemporary. Make sure the value ceases to be in effect performing media detection and invalid in the next power on.

```
* REMOTE *
TYPE. 1+     0.  0 m
```

RESETTING PLOTTING CONDITIONS BY TYPE [SETUP RESET]

This function resets the current plotting conditions to the factory-set plotting conditions.
Execute this function for each of the types of set plotting conditions.

STEP

1. **Select a type.**
   (See page 3.4). Here, select [Type.1].

   SET UP
   SELECT : TYPE.1

2. **Push the [ENTER] key.**

   ENTER

   TYPE.1
   PRINT MODE < ent >

3. **Push the [▲] and [▼] key until the display gives the indication [SETUP RESET].**

   ▲ ▼

   TYPE.1
   SETUP RESET < ent >

4. **Push the [ENTER] key.**

   ENTER

   TYPE.1
   RESET : ent

5. **Push the [ENTER] key.**
   The current plotting conditions are reset to the factory-set plotting conditions.

   ENTER

   TYPE.1
   SETUP RESET < ent >

6. **Push the [END] key twice, and the menu returns to the LOCAL mode.**

   END

   << LOCAL >>
   width : 1272mm

CHAPTER 4
MAINTENANCE FUNCTIONS

In order to keep the plotter in good operating condition, it is necessary to carry out maintenance of the device periodically.

This chapter describes the functions that help solve the problem of deterioration in image quality and replace a waste ink tank and worn cutter blade.

The device needs maintenance when it is left out of operation for a long period of time.

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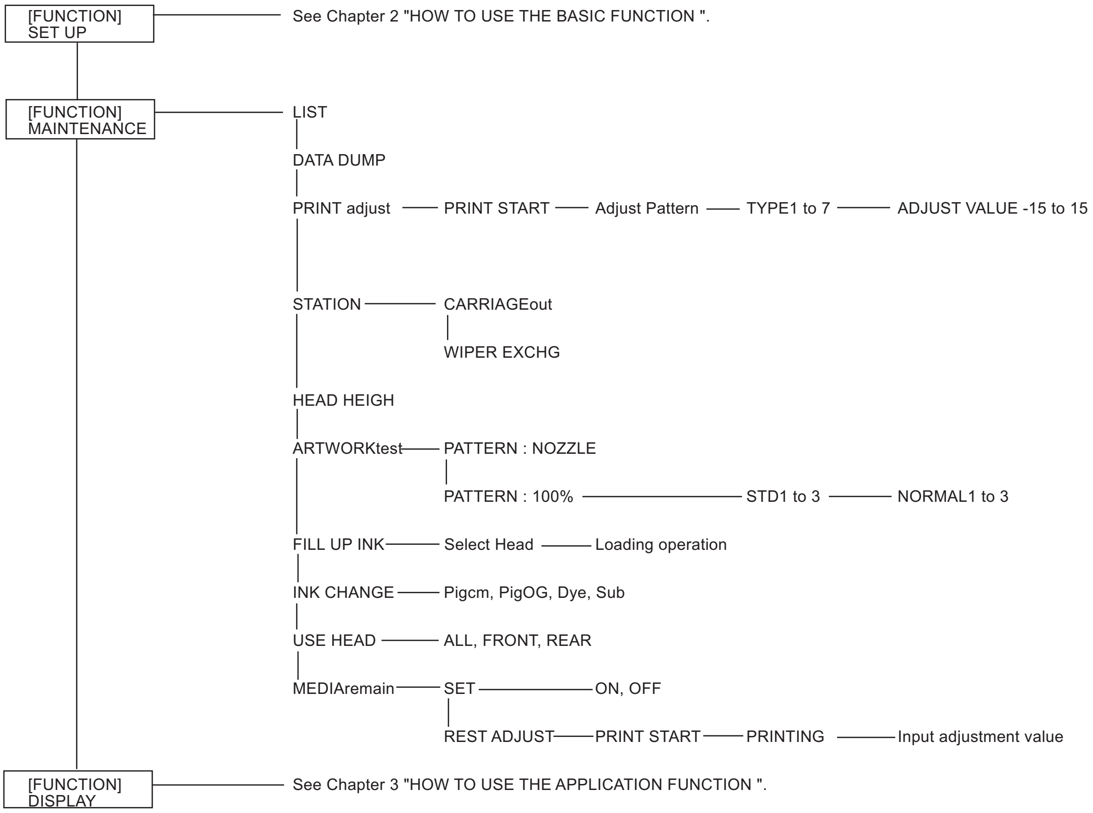
MAINTENANCE OF THE DEVICE

The term “maintenance” as used herein refers to the operation that has to be performed to keep the device in good operating condition.
To carry out maintenance of the device, select [MAINTENANCE] from the function menu and make the necessary settings.

FUNCTION MENU [MAINTENANCE]

The table, below, shows the tree structure of the function menu [MAINTENANCE].
In order to use the application functions of the device, it is necessary to understand the proper sequence of key operations.


[FUNCTION] SET UP
See Chapter 2 "HOW TO USE THE BASIC FUNCTION ".
[FUNCTION] MAINTENANCE
LIST
DATA DUMP
PRINT adjust
PRINT START
Adjust Pattern
TYPE1 to 7
ADJUST VALUE -15 to 15
STATION
CARRIAGEout
WIPER EXCHG
HEAD HEIGH
ARTWORKtest
PATTERN : NOZZLE
PATTERN : 100%
STD1 to 3
NORMAL1 to 3
FILL UP INK
Select Head
Loading operation
INK CHANGE
Pigcm, PigOG, Dye, Sub
USE HEAD
ALL, FRONT, REAR
MEDIAremain
SET
ON, OFF
REST ADJUST
PRINT START
PRINTING
Input adjustment value
[FUNCTION] DISPLAY
See Chapter 3 "HOW TO USE THE APPLICATION FUNCTION ".

BEFORE STARTING MAINTENANCE

CHECKING THE MENU MODE

Before executing any of the maintenance functions, check the menu mode.

The menu mode must be the LOCAL mode or the FUNCTION mode before maintenance can be started.

Make sure that either <<LOCAL>> or <<FUNCTION>> is displayed on the LCD.

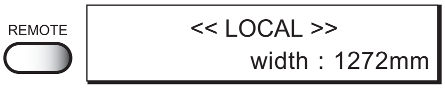
INVOKING A MAINTENANCE FUNCTION

In order to execute any of the maintenance functions, it is necessary to perform the following operation on the operation panel.

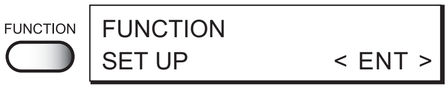
You have to understand how to invoke the desired maintenance function to carry out maintenance.

STEP

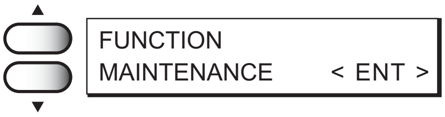
1. **Put the device into the LOCAL mode.**
   Push the [REMOTE] key and put the device back into the LOCAL mode.
   When the menu mode is the FUNCTION mode, simply proceed to Step 2.


REMOTE
<< LOCAL >>
width : 1272mm

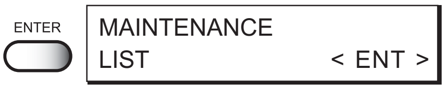
2. **Push the [FUNCTION] key.**


FUNCTION
FUNCTION
SET UP < ENT >

3. **Push the [▲] and [▼] key until the display gives the indication [MAINTENANCE].**


FUNCTION
MAINTENANCE < ENT >

4. **Push the [ENTER] key.**


ENTER
MAINTENANCE
LIST < ENT >

5. **Select the next operation.**
   Set up the desired maintenance function to carry out maintenance. (See page 4.4 through 4.22)

MAINTENANCE FUNCTIONS

Push the [FUNCTION] key and set up the desired maintenance function.

DRAWING SETUP CONDITIONS [LIST]

This function outputs the current settings of the device.
They are useful in carrying out maintenance of the device.

Explanation of the list

1.	**SET UP**	**: Indicates a value that is specified with the FUNCTION.**
2.	**DISPLAY**	**: Indicates a display language specified on the operation panel.**
3.	**PRINTadjust**	**: Indicates a correction value for dot position.**
4.	**REPLACE COUNTER**	**: Indicates the number of times the ink cartridges are replaced.**
5.	**VERSION**	**: Indicates the version of the firmware and memory capacity of the device.**
6.	**PARAMETER**	**: Used for service persons for maintenance.**

STEP

1. Put the device into the LOCAL mode.
(See page 4.3)

```
FUNCTION
MAINTENANCE    < ENT >
```

2. Push the [ENTER] key.

ENTER

```
FUNCTION
LIST           < ENT >
```

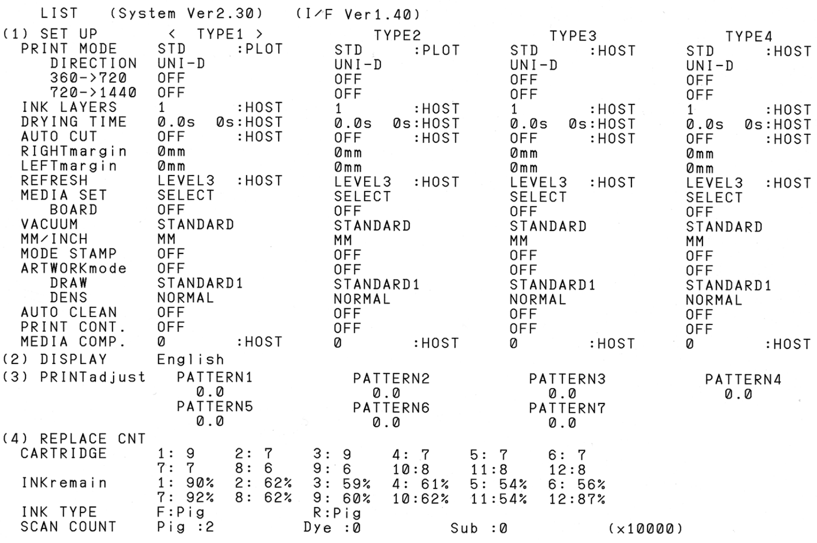
3. Push the [ENTER] key.
Drawing the LIST is started.

ENTER

```
MAINTENANCE
        PRINTING
```

4. The device enters the LOCAL mode.

```
    << LOCAL >>
   width : 1272mm
```



```
    LIST   (System Ver2.30)   (I/F Ver1.40)
(1) SET UP       <  TYPE1 >           TYPE2             TYPE3             TYPE4
  PRINT MODE    STD     :PLOT     STD     :PLOT     STD     :HOST     STD     :HOST
     DIRECTION  UNI-D             UNI-D             UNI-D             UNI-D
     360->720   OFF               OFF               OFF               OFF
     720->1440  OFF               OFF               OFF               OFF
  INK LAYERS    1       :HOST     1       :HOST     1       :HOST     1       :HOST
  DRYING TIME   0.0s  0s:HOST     0.0s  0s:HOST     0.0s  0s:HOST     0.0s  0s:HOST
  AUTO CUT      OFF     :HOST     OFF     :HOST     OFF     :HOST     OFF     :HOST
  RIGHTmargin   0mm               0mm               0mm               0mm
  LEFTmargin    0mm               0mm               0mm               0mm
  REFRESH       LEVEL3  :HOST     LEVEL3  :HOST     LEVEL3  :HOST     LEVEL3  :HOST
  MEDIA SET     SELECT            SELECT            SELECT            SELECT
     BOARD      OFF               OFF               OFF               OFF
  VACUUM        STANDARD          STANDARD          STANDARD          STANDARD
  MM/INCH       MM                MM                MM                MM
  MODE STAMP    OFF               OFF               OFF               OFF
  ARTWORKmode   OFF               OFF               OFF               OFF
     DRAW       STANDARD1         STANDARD1         STANDARD1         STANDARD1
     DENS       NORMAL            NORMAL            NORMAL            NORMAL
  AUTO CLEAN    OFF               OFF               OFF               OFF
  PRINT CONT.   OFF               OFF               OFF               OFF
  MEDIA COMP.   0       :HOST     0       :HOST     0       :HOST     0       :HOST
(2) DISPLAY     English
(3) PRINTadjust   PATTERN1          PATTERN2          PATTERN3          PATTERN4
                    0.0               0.0               0.0               0.0
                  PATTERN5          PATTERN6          PATTERN7
                    0.0               0.0               0.0
(4) REPLACE CNT
  CARTRIDGE     1: 9    2: 7    3: 9    4: 7    5: 7    6: 7
                7: 7    8: 6    9: 6    10:8    11:8    12:8
  INKremain     1: 90%  2: 62%  3: 59%  4: 61%  5: 54%  6: 56%
                7: 92%  8: 62%  9: 60%  10:62%  11:54%  12:87%
  INK TYPE      F:Pig           R:Pig
  SCAN COUNT    Pig :2         Dye :0         Sub :0          (x10000)
```

PLOTTING HEX CODE OF PLOTTING COMMAND [DATA DUMP]

This function plots data commands received from the computer, in HEX code.

The HEX code is an alphanumeric representation of plotting commands.

By using this code, it is possible to check if there are any abnormal data commands.

> ⚠ CAUTION
> - When this function is used to output data commands on a sheet of paper, use A4 or larger size with the long side set horizontally.

- DATA DUMP automatically feeds line according to the size of paper used.

STEP

1. **Put the device into the LOCAL mode.**
   (See page 4.3)

```
FUNCTION
MAINTENANCE        < ENT >
```

2. **Push the [ENTER] key.**

ENTER

```
MAINTENANCE
LIST               < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [DATA DUMP].**

```
MAINTENANCE
DATA DUMP          < ent >
```

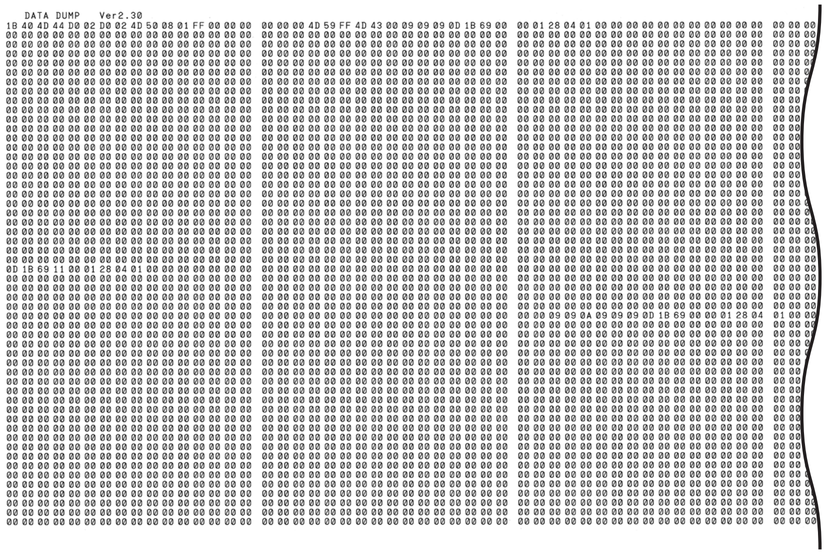
4. **Push the [ENTER] key.**
   Drawing the DATA DUMP is started.

ENTER

```
MAINTENANCE
    * * DATA DUMP * *
```

5. **The device enters the LOCAL mode.**

```
      << LOCAL >>
          width : 1272mm
```



```
   DATA DUMP    Ver2.30
1B 40 4D 44 D0 02 D0 02 4D 50 08 01 FF 00 00 00  00 00 00 4D 59 FF 4D 43 00 09 09 09 0D 1B 69 00  00 01 28 04 01 00 00 00 00 00 00 00 00 00 00 00  00 00 00
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00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00
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00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  00 00 00
```

CORRECTING THE DOT POSITIONS AFTER ADJUSTING THE HEAD HEIGHT [PRINTADJUST]

When the head height is adjusted, be sure to correct the dot positions.
Since the adjustment of head height is done by hand, the head will slightly deviate from the correct position (See page 1.36). This function corrects the dot positions to ensure that the accurate plotting result is obtained.
The dot positions are corrected by comparing the ink dropping positions on each of the seven test patterns between the two plotting directions.

STEP

1. **Put the device into the LOCAL mode.**
   (See page 4.3)

```
FUNCTION
MAINTENANCE     < ENT >
```

2. **Push the [ENTER] key.**

```
MAINTENANCE
LIST            < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [PRINTadjust].**

```
MAINTENANCE
PRINTadjust     < ent >
```

4. **Push the [ENTER] key.**
   Plotting of the test patterns for the correction of dot position starts. There are seven types of test patterns that are plotted.

```
MAINTENANCE
PRINT START       : ent
```

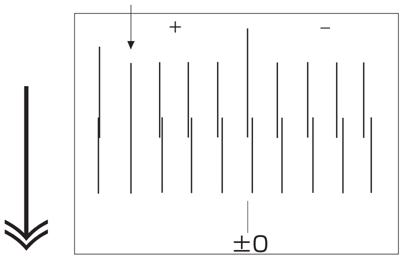
5. **Push the JOG keys [▲] and [▼] to correct the dot position of pattern 1.**
   The seven test patterns that are output are sequentially named [Pattern 1] to [Pattern 7].
   Select the correct dot positions on [Pattern 1] using the JOG keys [▲] and [▼].
   Select the dot positions that make a straight line on the test pattern in the two plotting directions.

```
MAINTENANCE
PATTERN1          = 5.0
```

CAUTION

- If the pattern correction value for straight lines is not within -15 through +15, adjust the head height and then correct it again with [PRINTadjust].

Select the dot positions 4.0 that make a straight line on the test patern in two plotting direction.



Out put direction

6. Push the [ENTER] key.

ENTER

```
MAINTENANCE
PATTERN1              = 0.0
```

7. Repeat Steps 5 and 6 to correct the dot positions on Patterns 2 to 7.

Select the correct dot positions on each of the patterns.
Enter the dot position correction value on Patterns 1 to 7 and then terminate dot position correction.

```
MAINTENANCE
PATTERN2              = 0.0
```

```
MAINTENANCE
PATTERN3              = 0.0
```

```
MAINTENANCE
PATTERN4              = 0.0
```

```
MAINTENANCE
PATTERN5              = 0.0
```

```
MAINTENANCE
PATTERN6              = 0.0
```

```
MAINTENANCE
PATTERN7              = 0.0
```

```
MAINTENANCE
PRINTadjust           < ent >
```

8. Push the [END] key twice, and the menu returns to the LOCAL mode.

END

```
        << LOCAL >>
           width : 1272mm
```

MOVING THE CARRIAGE TO CLEAN THE STATION INTERIOR [CARRIAGEOUT]

This function moves the carriage for maintenance of the ink station.

The interior of the station needs maintenance when a blurred test pattern is not corrected even after the cleaning function (page 2.9) is executed or when a consumable part is to be replaced.

CAUTION

- Do not move the carriage out of the capping station by hand. Use the appropriate operation key to move the carriage.

STEP

1. **Put the device into the LOCAL mode.**
   (See page 4.3)

```
FUNCTION
MAINTENANCE      < ENT >
```

2. **Push the [ENTER] key.**

ENTER

```
MAINTENANCE
LIST               < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [STATION].**

▲ ▼

```
MAINTENANCE
STATION            < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
STATION
MENT          : CARRIAGEout
```

5. **Push the [ENTER] key.**
   Carry out the following maintenance of the station interior.

ENTER

```
STATION
COMPLETED              : ent
```

6. **Open the maintenance cover, then perform the following maintenance works for the station interior.**

CAUTION

- For the method of maintenance of the station, see pages 4.9 through 4.13.

1. **Cleaning the ink cap (See page 4.9)**
   Clean the surfaces around the ink caps in the station.
2. **Replacing the cutter blade (See page 4.10)**
   The cutter blade is a consumable part. When the cutter blade has become blunt, replace it with a new one.
3. **Cleaning or replacing the wiper (See page 4.11 through 4.13)**
   Clean or replace the wiper.

- The device tells when to replace the wiper. When the message [REPLACE WIPER] is displayed on the LCD, replace the wiper.

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

ENTER

```
      INITIALIZING
PLEASE WAIT
```

8. **The device enters the LOCAL mode.**

```
      << LOCAL >>
```

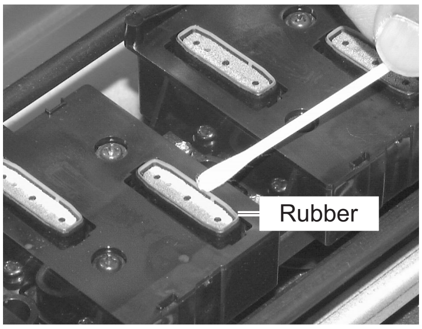
IF A DEFECTIVE PLOTTING IS NOT CORRECTED EVEN AFTER THE CLEANING FUNCTION IS EXECUTED

Cleaning the ink caps

Clean the ink caps if a defective plotting is not corrected or nozzles are clogged even after the cleaning function is executed or when the plotter is left unused for a long period of time.

STEP

1. **Move the carriage.**
   Execute the station maintenance [CARRIAGE OUT]. (Refer to step 1 to 6 on page 4.8)



2. **Remove stains with a cotton swab from the rubber mounted around the cap.**

3. **Execute steps 7 to 8 of the station maintenance [CARRIAGE OUT] on this page.**

WHEN THE CUTTER BLADE HAS BECOME BLUNT

Replace the cutter blade for cutting.

Cutter blades are consumables.When the cutter blade has became blunt, replace the cutter blade with a new one.

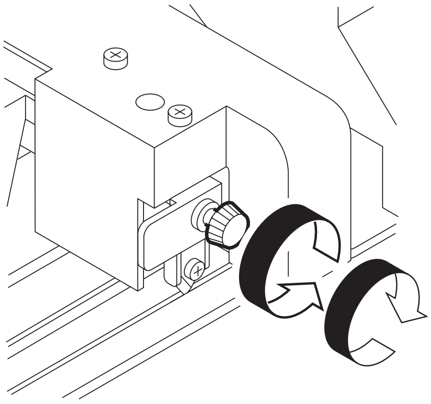
CAUTION

- To replace the cutter blade, move the carriage using the station maintenance function before the replacement.
- The blade tip is sharp. Take care to prevent possible personal injury.
- Store the cutter blades in a place that is out of the reach of children. Be sure to dispose of the worn-out cutter blades according to the relevant national and local ordinances in which the device is used.

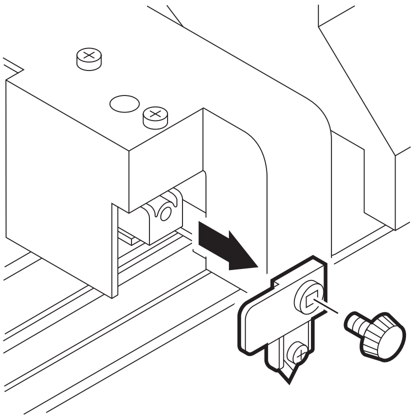
STEP

1. **Move the carriage.**
   Execute the station maintenance [CARRIAGE OUT].
   (Refer to step 1 to 6 on page 4.8)

2. **Open the front cover.**



3. **Replace the cutter unit that is located alongside the carriage.**
   1. Loosen the screws that fix the cutter unit.
   2. Remove the cutter unit.
   3. Put a new cutter unit in place.
   4. Tighten the screws to fix the new cutter unit.



4. **Execute steps 7 to 8 of the station maintenance [CARRIAGE OUT] on page 4.9.**

CAUTION

- Take care to prevent personal injury from the blade.

- It is recommended to place a sheet of paper under the cutter blade. This will help find the cutter blade even if it drops.

PERIODICAL CLEANING OF THE WIPER

Cleaning the wiper

The wipers are provided for cleaning the heads. As the device is used to plot images, the wipers gradually become stained with ink and dust. Clean stained wipers.

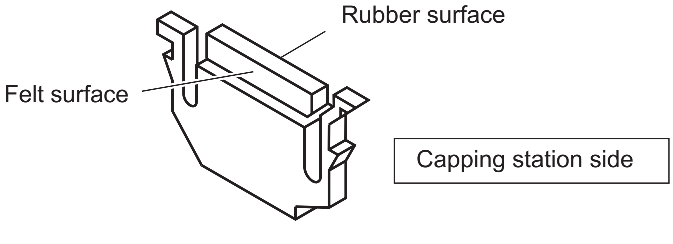
The wiper is separately available from your local distributor or our office.

NOTES ON HANDLING THE WIPERS

CAUTION

- Avoid contacting the rubber portion of the new wiper. Contacting it will result in clogged nozzle.
- Clean the two wipers at a time.
- The front side of each wiper is made of felt, and the rear side is made of rubber.

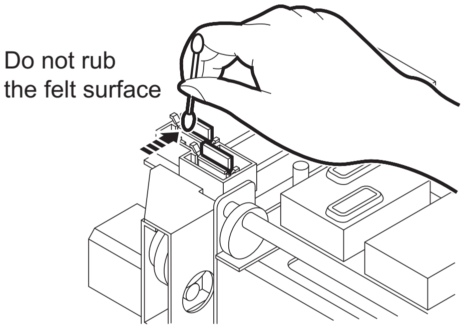
  Do not rub the felt side with a swab. Instead, press the swab against the felt side surface to remove dirt. Rubbing the felt side surface will make it fluffy and result in clogged nozzle. Wipe ink off the rubber side surface with a swab.
- When executing this function, the carriage will come out of the capping station. If the carriage is left in the aforementioned state for an extended period of time, the nozzles can be clogged. Once the replacement of the wiper and the cleaning of the caps have been completed, immediately push the [ENTER] key to allow the carriage to return to the capping station.



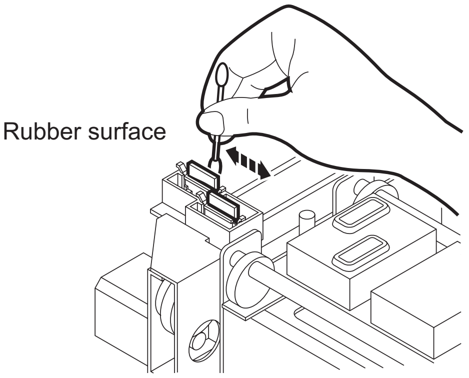
STEP

1. Move the carriage.

Execute the station maintenance [CARRIAGE OUT]. (Refer to step 1 to 6 on page 4.8)


Do not rub
the felt surface

2. Open the maintenance cover, then clean up the wiper as described below.

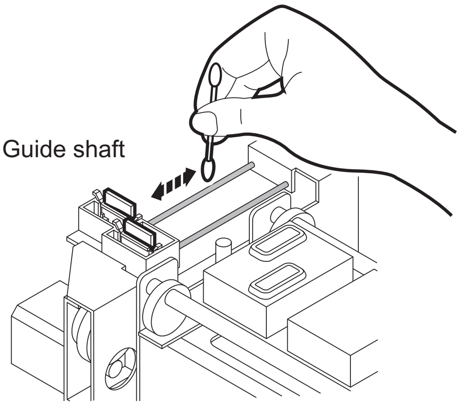

Rubber surface

3. Clean the wiper guide shaft using a cotton bud or cloth.

(If dirt is hard to remove, use a cotton bud of cloth damepened with water.)

CAUTION

- Extremely dirty wiper guide shaft may cause operation failure of the wiper, resulting in error display.


Guide shaft

4. Execute steps 7 to 8 of the station maintenance [CARRIAGE OUT] on page 4.9.

WHEN THE MESSAGE [REPLACE WIPER] IS DISPLAYED [WIPER EXCHG]

The wipers are consumable parts. As the wiper continues cleaning the head, it gets stained with ink and dust. When the message “Replace Wiper” is displayed, replace the wiper with a new one without delay. At the same time, clean the ink at the bottom of the slider.

- The wiper is separately available from your local distributor or our office.

CAUTION

- Do not push the [ENTER] key othe than the case of replacing wipers. The number of wiper operations that is caunted in the Device will be reset. Do not select [REPLACE WIPER] unless the wiper is to be really changed.

The message [Replace Wiper]

The device counts the number of times the wipers are cleaned and tells when to replace them. When the message [Replace Wiper] is displayed on the LCD, replace the wipers with new ones.

The message [Replace Wiper] is displayed while the device is in operation or when the device power is switched on. There are two different [REPLACE WIPER] messages. If either of the messages at right appears, replace the wiper with a new one.

```
       << LOCAL >>
REPLACE WIPER
```

```
<< LOCAL >>          RUB
REPLACE WIPER
```

STEP

1. **Put the device into the FUNCTION mode.**
   (See page 4.3)

```
FUNCTION
MAINTENANCE       < ENT >
```

2. **Push the [ENTER] key.**

ENTER

```
MAINTENANCE
LIST                < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [STATION].**

```
MAINTENANCE
STATION             < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
STATION
MENT        :  CARRIAGEout
```

5. **Push the [▲] and [▼] key until the display gives the indication [WIPER EXCHG].**

```
MAINTENANCE
MENT        : WIPER EXCHG
```

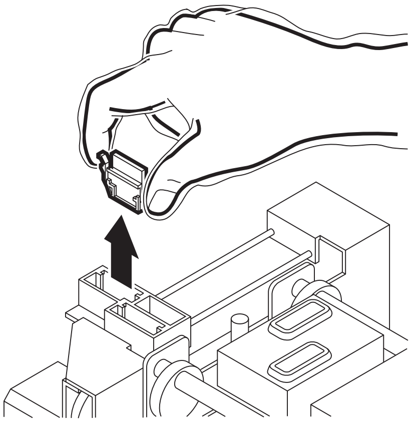
6. **Push the [ENTER] key.**
   The carrige will come out of the capping station.

ENTER

```
STATION
COMPLATED              : ent
```

7. **Open the maintenance cover, then chenging the wiper.**

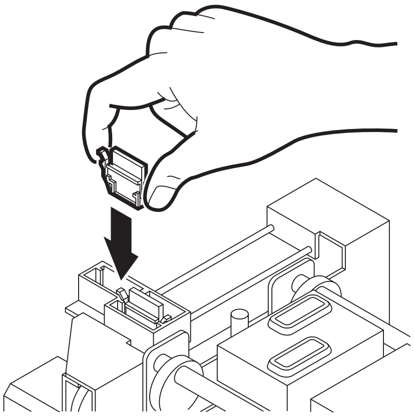
8. **Holding the projections at both ends, draw out the wiper.**
   Use the gloves that are supplied with the separately-available cleaning wiper to protect your hands from stains.



9. **Holding the projections at both ends, insert a new wiper into place.**

CAUTION

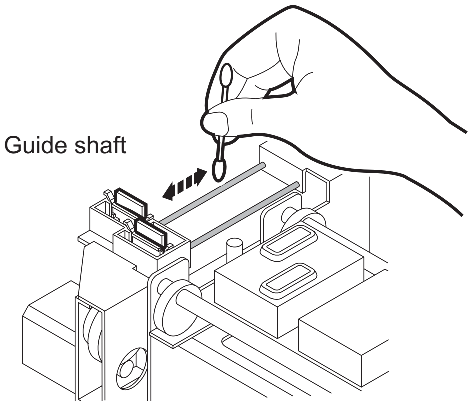
- Contacting the rubber portion of a new wiper shall be avoided. It can cause the nozzle to be clogged.
- Insert the wiper so that its felt side surface is placecd on the left as viewed from your position.



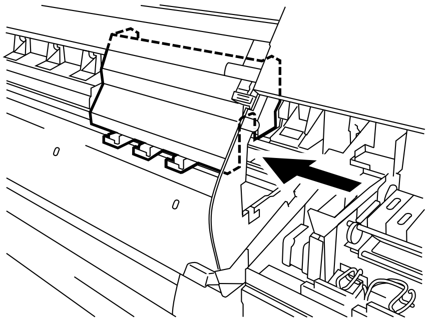
10. **Clean the wiper guide shaft using a cotton bud or cloth.**
    (If dirt is hard to remove, use a cotton bud of cloth damepened with water.)

CAUTION

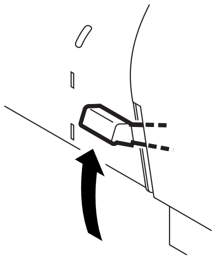
- Extremely dirty wiper guide shaft may cause operation failure of the wiper, resulting in error display.



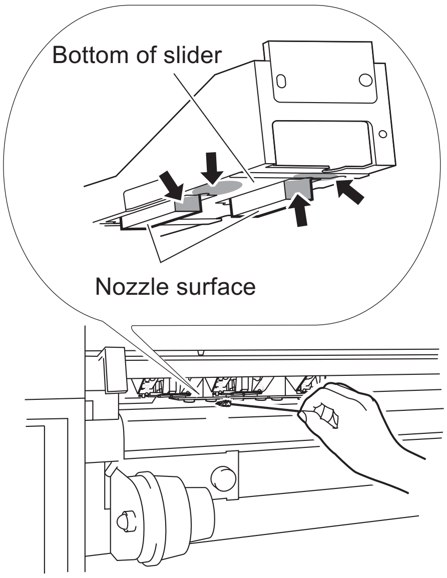
11. **Open the front cover and move the carriage manually.**
    Move the carriage to the position so that the bottom of the slider be cleaned easily.



12. Push up the clamp lever.



13. Remove ink at the locations shown at right using the supplied brush dampened with water. Clean the locations from the back side of the device.



CAUTION

- Never rub the nozzle surface because doing so may cause inferior ink discharge.

15. Close the maintenance cover, then push the [ENTER] key.

ENTER

INITIALIZING
PLEASE WAIT

CAUTION

- In the case where a medium is loaded on the Device, the medium detection display will appear on the LCD after the initialization.

16. The device enters the LOCAL mode.

<< LOCAL >>

ADJUSTING THE HEAD HEIGHT WHEN THE MEDIUM USED IS CHANGED [HEAD HEIGHT]

See page 1-34, “ADJUSTING THE HEAD HEIGHT WHEN THE MEDIUM USED IS CHANGED”

CAUTION

- Before adjusting the head height, be sure to remove the medium from the platen.
  If an attempt is made to adjust the head height with the medium kept set on the platen, the medium gets caught on the carriage during “carriage out” operation, causing damage to the head.

ITEMS TO CHECK BEFORE USING ARTWORK FILM

The plotting operation using artwork film requires a special method of maintenance.

When artwork film is used, be sure to make an ARTWORK test.

The ARTWORK test consists of checking the ink nozzle used and painting out.

CHECKING THIN SPOT AND MISSING OF NOZZLE WHEN USING ARTWORK FILM [ARTWORKTEST]

Check if the ink nozzles (1 color x 2 heads) used in the ARTWORK mode have been clogged or stained with dust.

STEP

1. **Put the device into the FUNCTION mode.**
   (See page 4.3)

```
FUNCTION
MAINTENANCE       < ENT >
```

2. **Push the [ENTER] key.**

ENTER

```
MAINTENANCE
LIST               < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [ARTWORKtest].**

▲ ▼

```
MAINTENANCE
ARTWORKtest        < ent >
```

4. **Push the [ENTER] key.**

ENTER

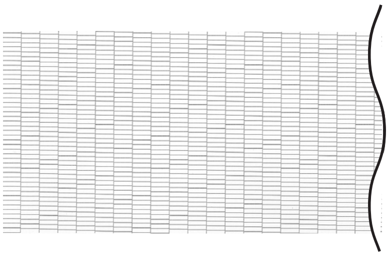
```
MAINENANCE
PATTERN          : NOZZLE
```

5. **Push the [ENTER] key.**
   The ARTWORK test starts.
   During the test plotting, the two heads using black (K) are subjected to the nozzle check.

ENTER

```
MAINTENANCE
          PRINTING
```

6. **Check drawing failures.**
   As in test plotting (page 2.8), check if there are blurred or missing lines in the ARTWORK test patterns. If there is a defective test pattern, execute the cleaning function.
   (See page 2.9)



7. **Complate drawing.**

```
MAINTENANCE
PATTERN          : NOZZLE
```

8. **Select the next operation.**
   To check paint-out in the ARTWORK mode, select PRINT by pushing the JOG keys [▲] and [▼].
   Push the [END] key three times, and the menu returns to the LOCAL mode.

▲ ▼

```
MAINTENANCE
PATTERN          : 100%
```

END

```
      << LOCAL >>
        width : 1272mm
```

CHECK IF THERE IS A GAP BETWEEN LINES OF IMAGE ON ARTWORK FILM [PATTERN 100%]

When artwork film is used, use only black ink. The PAINT function tests whether or not the image is plotted on the film without any gap between lines.

With this function, it is possible to perform test plotting by specifying an image quality and plotting density.

STEP

1. **Put the device into the FUNCTION mode.**
   (See page 4.3)

```
FUNCTION
MAINTENANCE      < ENT >
```

2. **Push the [ENTER] key.**

```
MAINTENANCE
LIST               < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [ARTWORKtest].**

```
MAINTENANCE
ARTWORKtest        < ent >
```

4. **Push the [ENTER] key.**

```
MAINTENANCE
PATTERN          : NOZZLE
```

5. **Select Paint-out [PATTERN 100%] by pushing the JOG keys [▲] and [▼].**

```
MAINTENANCE
PATTERN          : 100%
```

6. **Push the [ENTER] key.**
   The image quality and plotting density that have been specified in the ARTWORK mode are displayed. (See page 2.6, 3.22)
   [STD.] shows STANDARD
   [QUA.] shows QUALITY
   It becomes [STD.3 /NORMAL] when the artwork mode isn't chosen.

```
MAINTENANCE
STD1/NORMAL        < ent >
```

7. **It is possible to change the image quality and plotting density by pushing the JOG keys [▲] and [▼].**
   By specifying the optimum image quality and plotting density according to the medium used, it is possible to obtain optimum result of plotting. (See page 3.22)
   Select from the following 12 patterns.
   STANDARD1 to 3 : [NORMAL] or [THIN]
   QUALITY1 to 3 : [NORMAL] or [THIN]

```
MAINTENANCE
STD1/ THIN        <  ent  >
```

8. **Push the [ENTER] key.**
   The paint-out operation starts.

```
MAINTENANCE
        PRINTING
```

9. Check if there is a defective plotting.

Check whether there are white points or uneven portions in fill patterns.
If there are unpainted dots, execute the cleaning function. (see page 2.9).
Repeat Steps 6 through 9 depending on the result of the test plotting and the medium used.

```
MAINTENANCE
PATTERN          : 100%
```

10. Push the [END] key three times, the device returns to the LOCAL mode.

END

```
       << LOCAL >>
          width : 1272mm
```

MENU DISPLAYED AFTER THE INK CARTRIDGE IS INSTALLED [FILL UP INK]

When the ink cartridge is replaced with a new one or a new ink cartridge is installed, the device charges ink automatically. Therefore, a menu for charging ink is included in the maintenance functions. Normally, however, this function is not used.

WHEN CHARGING INK DIFFERENT FROM THE ONE IN USE [INK CHANGE]

The INK CHANGE function charges ink different from the one currently in use. When the same type of ink as is set in the ink station is to be used, it is unnecessary to execute this function.

CAUTION

- Be sure to use the inks and ink cartridges specified by MIMAKI. Please be noted that MIMAKI ENGINEERING CO., LTD. shall have no liability for any trouble that arises when using any ink cartridge or ink other than the genuine MIMAKI brand ones.
- For ink replacement, please purchase the optional Washing Liquid cartridge in advance.
- Before replacing ink, empty out the waste ink tank.

STEP

1. **Cause the display to give the indication "LOCAL".**
   (See page 4.3)

```
FUNCTION
MAINTENANCE        < ENT >
```

2. **Push the [ENTER] key.**

ENTER

```
MAINTENANCE
LIST               < ent >
```

3. **Push the [▲] and [▼] key until the display gives the indication [INK CHANGE].**

```
MAINTENANCE
INK CHANGE         < ent >
```

4. **Push the [ENTER] key.**
   Specify the type of ink to be filled in the left ink station.

ENTER

```
Ink Type
 R : Pigcm          F : Pigcm
```

5. **Set the type of ink to be filled in the R-row ink station by pushing the JOG keys [▲] and [▼].**

[Pigcm]	: Water-soluble pigment ink (Light set)
[PigOG]	: Water-soluble pigment ink (Orange, Green set)
[Dye]	: Water-soluble dye ink
[Sub]	: Disperse dye ink

```
Ink Type
 R : Dye            F : Pigcm
```

6. Push the JOG key [▶], then set the type of ink to be filled in the right ink station by pushing the JOG keys [▲] and [▼].

```
Ink Type
R : Dye                F : Pigcm
```

7. Push the [ENTER] key.

Cleaning of the head associated with the ink cartridge that is changed starts.

ENTER

```
         WASH
REMOVE CARTRIGE
```

⇕

```
         WASH
KCMYcm              - - - - - -
```

8. Take out the changing ink cartridge from the ink station.

Discharge of the filled ink is started.

```
       WASHING
PLEASE WAIT
```

⇕

```
       WASHING
```

9. Install the washing Liquid cartridge.

Load the Washing Liquid cartridge at the position of the ink discharged in step 8. Washing is started automatically.

```
         WASH
SET CLEAN TOOL
```

⇕

```
         WASH
KCMYcm              - - - - - -
```

10. Take out the washing liquid cartridge from the ink station.

Discharge of the washing liquid is started.

```
         WASH
REMOVE TOOL
```

⇕

```
       WASHING
KCMYcm              - - - - - -
```

11. Repeat steps 9 and 10.

```
       WASHING
PLEASE WAIT
```

⇕

```
       WASHING
```

12. Install new ink cartridges.

Filling of ink is started automatically.

When filling of ink is completed, [INK CHANGE] is ended.

```
CARTRIDGE SET
KCMYcm              - - - - - -
```

```
MAINTENANCE
INK CHANGE              < ent >
```

13. Push the [END] key twice, and the menu returns to the LOCAL mode.

END

```
        << LOCAL >>
            width : 1272mm
```

FOR PLOTTING WITH ONLY ONE INK STATION [USE HEAD]

This function can be set when making plotting using only one ink station in the "Setting for 1Way high-speed printing" mode. (See page 1-27.)
Use this function if nozzle missing cannot be recovered even after repetitive cleaning or if plotting with higher quality is required.

ALL : Both the F-row ink station and R-row ink station are used for plotting.
REAR : Only the R-row ink station is used for plotting.
FRONT : Only the F-row ink station is used for plotting.

CAUTION

- When different ink types are loaded as in the "Setting for 1Way high-speed printing" mode, the [USE HEAD] function cannot be set because it is not displayed in the menu. (See page1-28)

STEP

1. **Put the device into the FUNCTION mode.**
   (See page 4.3)

   FUNCTION
   MAINTENANCE < ENT >

2. **Push the [ENTER] key.**

   ENTER

   MAINTENANCE
   LIST < ent >

3. **Push the [▲] and [▼] key until the display gives the indication [USE HEAD].**

   ▲ ▼

   MAINTENANCE
   USE HEAD < ent >

4. **Push the [ENTER] key.**

   ENTER

   MAINTENANCE
   USE HEAD : ALL

5. **Select the [USE HEAD] by pushing the JOG keys [▲] and [▼].**
   [ALL], [REAR], [FRONT]
   Hear select [FRONT].

   ▲ ▼

   MAINTENANCE
   USE HEAD : FRONT

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

   ENTER

   MAINTENANCE
   USE HEAD < ent >

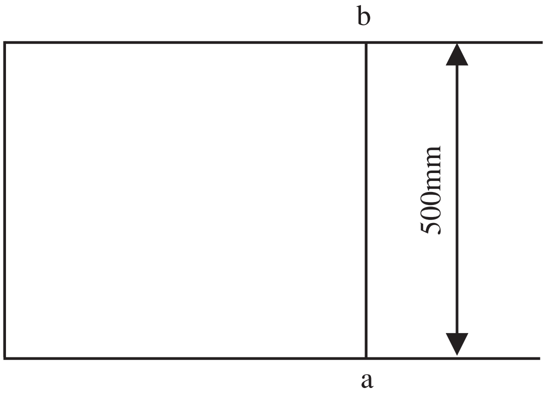
7. **Push the [END] key twice, and the menu returns to the LOCAL mode.**

   << LOCAL >>
   width : 1272mm

COUNT THE AMOUNT OF REMAINING ROLL MEDIA [MEDIAremain]

When using a roll media, you can display the amount of remaining media. The remaining roll media is counted by the amount of fed media. Depends on the used media type or the thickness, the counting error may occur. Plot the adjustment pattern with [REST ADJUST], and input the length of the pattern to reduce the counting error.

Adjustment pattern



STEP

1. **Enter to the function mode.**
   (See page 4.3)

```
FUNCTION
MAINTENANCE      < ENT >
```

2. **Push the[ENTER] key.**

ENTER

```
FUNCTION
LIST             < ent >
```

3. **Push the JOG keys [▲] and [▼] to select [MEDIAremain].**

```
FUNCTION
MEDIAremain      < ent >
```

4. **Push the [ENTER] key.**

ENTER

```
MEDIAremain
SET              < ent >
```

5. **Push the [ENTER] key.**

ENTER

```
MEDIAremain
SET              : OFF
```

6. **Push the JOG keys [▲] and [▼] to select [ON] or [OFF].**

```
MEDIAremain
SET              : ON
```

7. **Push the [ENTER] key.**

   Select [ON] to enable the remaining media counting.

   The amount of remaining media is able to input when detecting the roll media at each time.

   Remaining media is also able to confirm in the remote mode.

ENTER

```
MEDIAremain
SET                 < ent >
```

8. **Push the JOG keys [▲] and [▼] to select [REST ADJUST].**

```
MEDIAremain
REST ADJUST         < ent >
```

9. **Push the [ENTER] key.**

   Start plotting of the adjustment pattern.

ENTER

```
REST ADJUST
PRINT START           : ent
```

10. **Push the JOG keys [▲] and [▼] to input the length inbetween “a” and “b” by 0.1mm.**

```
REST ADJUST
          X=500.0mm
```

11. **Push the [ENTER] key.**

ENTER

```
MEDIAremain
REST ADJUST           <ent>
```

12. **Push the [END] key three times to return to the << LOCAL >> mode.**

END

```
         << LOCAL >>
              width : 1272mm
```

CAUTION

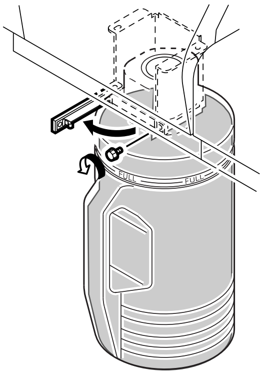
- When [MEDIAremain] is set to ON, the amount of remaining roll media is shown in “m (meter)” unit in the remote mode.
- The amount of remaining roll media is also shown in “F(feet)” unit, however, when the number exceeds 9999F, the unit(F) is shortened, and it will be displayed only with the number.

WHEN THE WASTE INK TANK BECOMES FULL

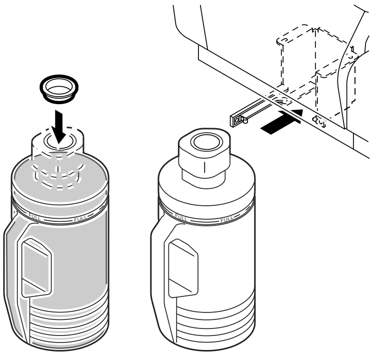
When one of the two waste ink tanks of the device becomes full, replace it with the other (empty) waste ink tank taking care that the waste ink does not spills.
Waste ink used for cleaning the heads will gather in the waste ink tank. When the waste ink has gathered to exceed the marker line on the tank, immediately replace the tank with a new waste ink tank.
To determine when to replace the waste ink tank, visually check the level of waste ink in the tank.

STEP

1. **Remove screws from the waste tank guard.**
2. **Open the waste tank guard.**



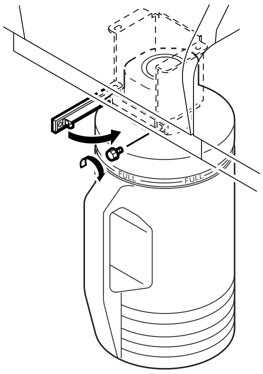
3. **Replace the waste ink tank with a new one.**
   Put a cap over the tank that is full of waste ink and dispose of the tank.



CAUTION

- When pulling out the waste ink tank, hold the opening of the waste ink tank with paper and then slowly pull it out to prevent waste ink from spattering.
- Before replacing ink, put paper on the floor to prevent it from being stained with ink.

4. **Close the waste tank guard and secure with the screws.**



CAUTION

- Dispose of waste ink according to local regulations.

CHAPTER 5

WHEN ABNORMAL CONDITIONS ARE ENCOUNTERED

Chapter 5 describes corrective measures to be taken in the case where an abnormal phenomenon arises on the device and where an error message is given on the display.

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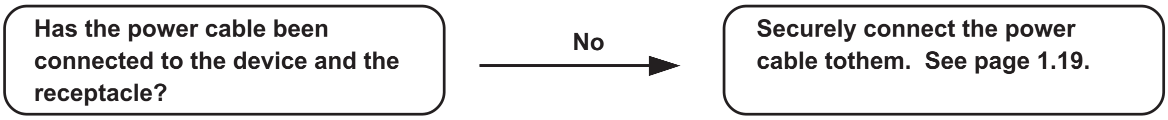
BEFORE TAKING A PHENOMENON AS A SIGN OF FAILURE 5.2
IF IMAGE QUALITY DECLINES 5.4
TROUBLES FOR WHICH ERROR MESSAGES ARE GIVEN ON THE LCD 5.5

BEFORE TAKING A PHENOMENON AS A SIGN OF FAILURE

Corrective measures against troubles in the case where no error message is given on the LCD are described in this section. Be sure to take the following measures before taking the trouble as a sign of failure. If the measures fail restore the device to the normal state, contact your local MIMAKI distributor or MIMAKI office to call for service.

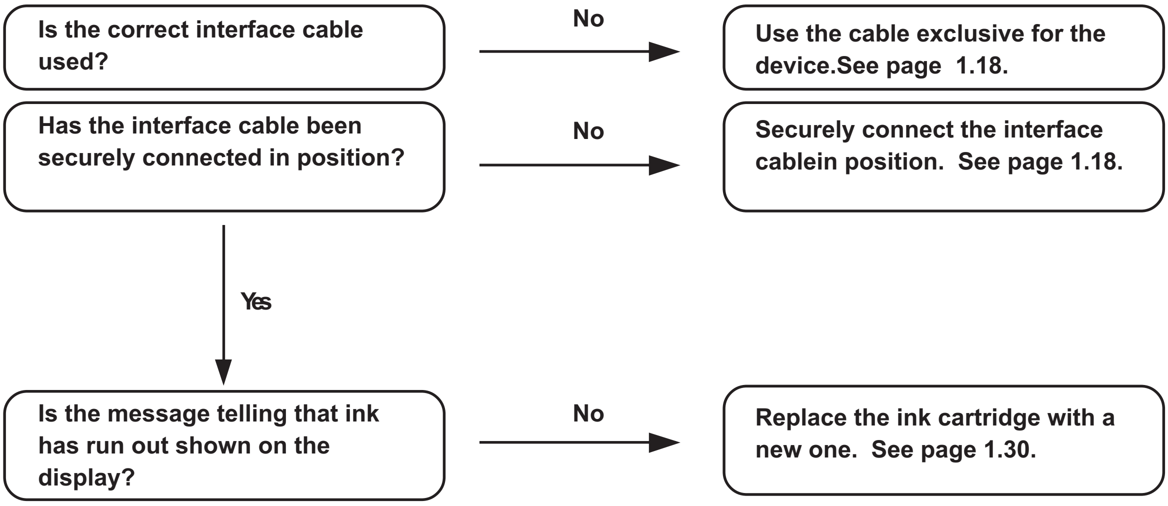
THE DEVICE CANNOT BE ENERGIZED

More often than not, this is due to improper connection of the power cable. Check that the power cable has been properly connected to the power outlet and the computer.


Has the power cable been connected to the device and the receptacle?
No
Securely connect the power cable tothem. See page 1.19.

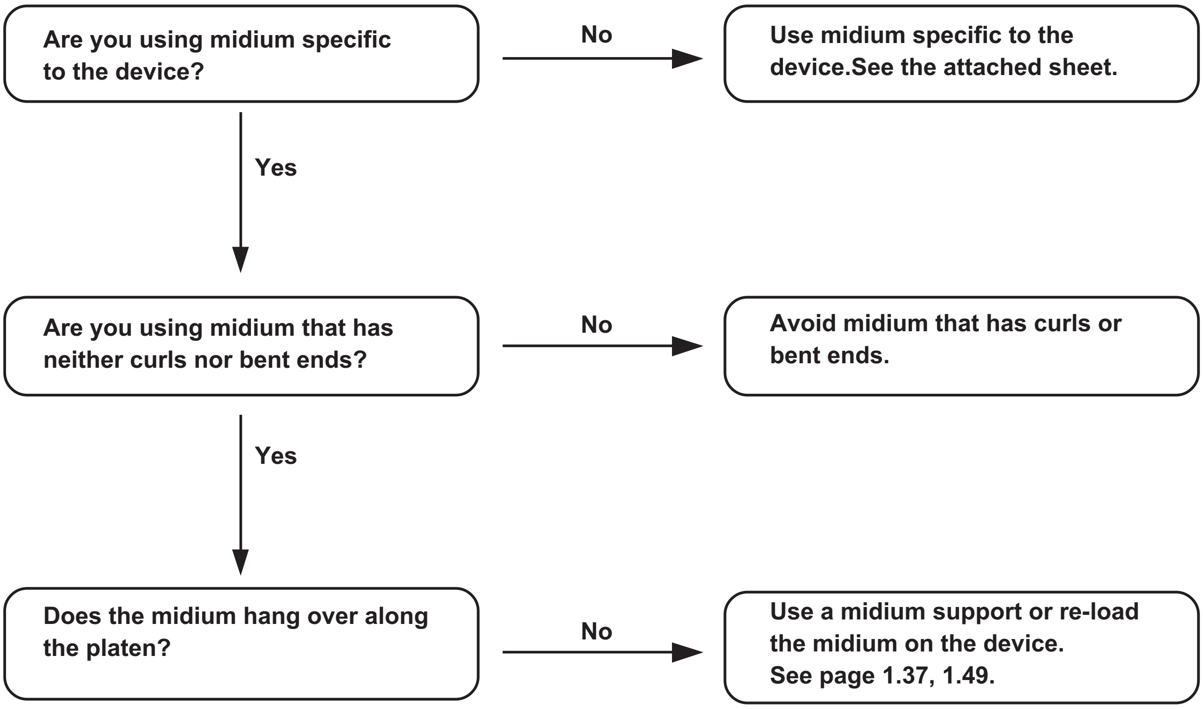
THE DEVICE CANNOT PERFORM PRINTING

This occurs when the data is not being transmitted to the device properly. It can also occur when any of the device functions fails or the medium has been set improperly.


Is the correct interface cable used?
No
Use the cable exclusive for the device.See page 1.18.
Has the interface cable been securely connected in position?
No
Securely connect the interface cablein position. See page 1.18.
Yes
Is the message telling that ink has run out shown on the display?
No
Replace the ink cartridge with a new one. See page 1.30.

PAPER JAMMING ARISES/MEDIUM IS SOILED

A jam of the medium or a stained medium is considered to occur when an unsuitable medium is used or the medium is set improperly.


Are you using midium specific to the device?
No
Use midium specific to the device.See the attached sheet.
Yes
Are you using midium that has neither curls nor bent ends?
No
Avoid midium that has curls or bent ends.
Yes
Does the midium hang over along the platen?
No
Use a midium support or re-load the midium on the device.
See page 1.37, 1.49.

IF IMAGE QUALITY DECLINES

Corrective measures against troubles in the case where satisfactory image quality is not provided are described in this station.

Take measures in accordance with actual state of the picture.

If the measures fail restore the device to the normal state, contact your local MIMAKI distributor or MIMAKI office call for service.

WHILE LINES/THIN SPOTS ARE OBVIOUS OR DARK STRIPES OCCUR (IN THE DIRECTION OF TRAVEL OF THE HEAD)

Corrective measure : Execute the head cleaning. See page 2.9.

Corrective measure : Clean the interior of the station. See Page 4.8.

Corrective measure : Conduct the [MEDIA COMP.] function. See page 3.26.

Corrective measure : If slip of paper is present in the head path, for example, above the curl stopper, remove it.

CHARACTERS OF LIST (PAGE 4.4) FLUCTUATE DOUBLY OR TRIPLY INTO PAPER FEED DIRECTION

Corrective measure : Conduct the [MEDIA COMP.] function. See page 3.28.

DISPLACEMENT IS OBSERVED BETWEEN OUTWARD AND INWARD PRINTING

Corrective measure : Adjust “Y (outward and inward)” in [PRINT ADJUST] function. See page 4.6.

THE RESPECTIVE COLOR INK INJECTED BY THE RESPECTIVE COLOR HEADS DO NOT PROPERLY OVERLAP

Corrective measure : Conduct the [PRINT ADJUST] function. See page 4.6.

LARGE INK DROP ON MEDIUM

Corrective measure :

1. Execute the wiper cleaning. See page 4.11.
2. Execute the ink caps cleaning. See page 4.9.
3. Clean the bottom of the slider. See page 4.13 to 15.
4. Execute the head cleaning [normal]. See page 2.9.
5. If ink drop occurs again over time, perform Head cleaning [strong] See page 2.9.

TROUBLES FOR WHICH ERROR MESSAGES ARE GIVEN ON THE LCD

If something is wrong with the device, the buzzer sounds and a corresponding error message is given on the LCD.
Take an appropriate corrective measure in accordance with the message.

ERRORS ACCOMPANIED BY WARNINGS

These errors arise on the ink-related components.

Warning message	Cause	Corrective measure
< LOCAL > CARTRIDGE KCMYcm KCMYcm	Ink cartridge is not loaded on the ink station.	Attach the ink cartridge(s) corresponding with the number(s) shown on the display.
< LOCAL > INKnearEND KCMYcm KCMYcm	The amount of ink remaining in the ink cartridge is insufficient.	Printing can be continued in file-by-file basis by pushing the [REMOTE] key. However, it is recommended to replace the ink cartridge of which number is shown on the LCD with a new one.
< LOCAL > INK END KCMYcm KCMYcm	The ink cartridge has run out of ink.	Replace the ink cartridge of which number is shown on the LCD with a new one.
<< LOCAL >> REPLACE WIPER << LOCAL >> RUB REPLACE WIPER	Time to replace the wiper in the capping station with a new one has come.	Printing will be enabled by pushing the [REMOTE]. Then, the error message will not appear until the power is re-turned on. It is recommended, however, to replace the wiper with a new one as soon as possible.

ERROR MESSAGES

Error messages indicates error numbers.
If any error message is given on the LCD, turn off the power to the device and turn it on after a while.
If the same error message appears again on the LCD, contact your local MIMAKI distibutor or MIMAKI office to call for service.

Warning message	Cause	Corrective measure
ERROR 01 MAIN ROM ERROR 02 MAIN RAM	Control circuit board is defective.	Turn off the power to the device an turn it on after a while. If the same error message appears again on the LCD, contact your local distributor to call for service.
ERROR 03 POWER +5V	Control circuit board is defective. POWER+5V POWER+35V	
ERROR 04 FRASH ROM ERROR 06 D-RAM	Control circuit board is defective.	
ERROR 07 TEMP (nnnn)	Abnormal temperature is detected.	
ERROR 08 ENCODER n	Trouble with detection of linear encoder.	
ERROR 09 FPGA	Control circuit board is defective. FPGA Error HDC Error	
ERROR 10 COMMAND	The device has received data other than command data.	Securely connect the interface cable in position.
ERROR 11 PARAMETER	A parameter outside the range of acceptable numeric values is received. The interface cable used is not in conformance with IEEE1284.	Turn off the power to the device and turn it on after a while. If the same error message appears again on the LCD, contact your local distributor to call for service. Use an interface cable in conformance with the standard.

Warning message	Cause	Corrective measure
ERROR 20 I / F BOARD	Improper operation has been conducted on the operation panel.	Turn off the power to the device and turn it on after a while. If the same error message appears again on the LCD, contact your local distributor to call for service.
ERROR 21 I / F NONE	No I/F board is attached to the control board.	
ERROR 23 HOST I / F	HOST I/F Timeout error has arisen during communication between the host computer and interface board.	Check to be sure that the cable is securely connected to the host computer and interface board. Also, check to ascertain that no error has arisen on the host computer side.
ERROR 24 I / F INITIAL	Initial operation failure of the I/F board and control board.	Turn off the power to the device and turn it on after a while. If the same error message appears again on the LCD, contact your local distributor to call for service.
ERROR 30 OPERATION	An error occurs on the interface between the I/F board and the control board.	Perform a proper operation.
ERROR 34 DATA REMAIN	Settings for functions have been tried to be changed though there remains received data that has not yet been printed.	Print all pieces of received data or execute the data clear function. Then, change the settings.
ERROR 40 MOTOR X	The Xmotor has been overload.	Turn off the power to the device and turn it on after a while. If the same error message appears again on the LCD, contact your local distributor to call for service.
ERROR 41 MOTOR Y	The Ymotor has been overload.	
ERROR 42 X CURRENT	Overcurrent error on the Xmotor has been detected.	
ERROR 43 Y CURRENT	Overcurrent error on the Ymotor has been detected.	

Warning message	Cause	Corrective measure
ERROR 45 CAPPING	Incorrect height of the capping station has been detected.	Turn off the power to the device and turn it on after a while. If the same error message appears again on the LCD, contact your local distributor to call for service.
ERROR 46 WIPER	The wiper position is not appropriate.	
ERROR 50 MEDIA SENSE	The device has failed to detect the medium.	The rightmost edge of the medium loaded is inadequate. Refer to "Loading cut sheet medium." (Pages 1.42)
ERROR 51 ORIGIN	The device has failed to detect the origin.	Turn off the power to the device and turn it on after a while. If the same error message appears again on the LCD, contact your local distributor to call for service.

APPENDIX

This appendix describes the specifications and components the device, function menu structure.

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BASIC SPECIFICATIONS A.2
SPECIFICATION FOR INK A.4
FUNCTION MENU STRUCTURE A.5
POSITION OF THE WARNING LABEL A.6

BASIC SPECIFICATIONS

Item		JV4-130	JV4-160	JV4-180
Printing head	Method	Piezo-electric drop-on demand		
	Specification	Six-heads (3 x 2 lines)		
	Nozzle	High speed plotting : 360 nozzles for each color		
	Printing speed	Two independent plotting : 180 nozzles for each color		
Resolution		360, 540, 720, 1440 dpi		
Drawing mode	Resolution Pass Printing direction	360 x 360 dpi : 2 / 4 passes, Unidirection / bidirection 360 x 540 dpi : 3 / 6 passes, Unidirection / bidirection 360 x 720 dpi :4 / 8 passes, Unidirection / bidirection 720 x 720 dpi : 4 / 8 / 16 passes, Unidirection / bidirection 1440 x 720 dpi : 8 / 16 passes, Unidirection / bidirection 1440 x 1440 dpi : 16 / 32 passes, Unidirection / bidirection		
Ink type Color	Water-soluble pigment ink	6 Color (Black, Cyan, Magenta, Yellow) + (Light Cyan, Light Magenta) or (Orange, Green)		
	Water-soluble dye ink	6 Color (Black, Cyan, Magenta, Yellow, Light Cyan, Light Magenta)		
	Disperse dye ink	6 Color (Black, Cyan, Magenta, Yellow, Light Cyan, Light Magenta)		
Delivery system of ink		Proprietary system with low ink detection sensor		
Capacity of ink cartrige		220 cc ± 5 cc per cartrige		
Medium type	Glossy medium	Grossy white PET, Photo paper, Glossy PVC		
	Matte medium	Mat-PVC, Tarpaulin, Back-lit film		
	Cloth	Nonflamable cloth		
	Other	Artwork film, Canvas, Tarpaulin, Waterproof olefin film, Board		
Max. Printing width		Width 1371 mm	Width 1600 mm	Width 1870 mm
Medium size (Leaf medium)	Maximum	1381 mm	1620 mm	1910 mm
	Minimum	210 mm		
Medium size (Roll medium)	Thickness	1.0 mm or less		
	Roll outside diameter	Ø 150 mm or less		
	Roll weight	20 Kg or less		
	Roll inside diameter	2 Inch, 3 Inch		
	Plotting surface	Faces OUT		
	Roll end treatment	Light-adhesive tape is used to allow the paper to be removed from the core with ease.		
Medium size (Board)	Thickness	7.0 mm or less		
	Deflection	1.0 mm or less		
Margin (Leaf medium)	Front	85 mm ± 2 mm		
	Rear	85 mm ± 2 mm		
	Left end	5 mm ± 0.5 mm		
	Right end	5 mm ± 0.5 mm		
Margin (Roll medium)	Front	50 mm ± 2 mm		
	Rear	0 mm ± 0.5 mm		
	Left end	5 mm ± 0.5 mm		
	Right end	5 mm ± 0.5 mm		
Distance accuracy	Absolute accuracy	Whichever the larger one of ± 0.3 mm or ±0.3 % of the designated		
	Reorodicibility	Whichever the larger one of ± 0.2 mm or ±0.1 % of the designated		
Perpendecularity		± 0.5 mm / 1000 mm		
Medium skew		5 mm or less / 10 m variable		
Head height adjustment		1.2 mm to 10 mm variable from the platen surface		
Cutting of medium		Cutting of Y direction by the head cutter,Cutting accuracy(steps) 0.5mm or less. Automatic lateral cutting (can be set to ON/OFF), Manual lateral cutting		

Item		JV4-130	JV4-160	JV4-180
Medium delivery		Take-up device as standerd (inside winding / outside winding selectable)		
Waste ink tank		Bottle type(1,000 cc [1pcs.] / 2,000 cc [1pcs.]). Replacement timing is judged visually.		
Interface		IEEE1394 (Max.transmission rate 400 M bps)		
		Bidirectional parallel interface (IEEE1284 compliant), ECP support		
Command		MRL-II (ESC/PV.2 base)		
Noise during standby		Less than 56 dB		
Noise during continuous printing		Less than 66 dB		
Noise during discontinuous printing		Less than 70 dB		
Safety Standard		FCC ClassA		
Power		AC 100 — 240 V 120 W or less		
Power consumption		400 W or less		
Recomended Enviroment	Temperature	15 °C to 30 °C		
	Humidity	35 to 65 % Rh (No condensation)		
	Temperature change	± 10 °C / h or less		
	Dust	Equivalent to normal office level		
Outside dimensions (mm) (W)x(D)x(H)		2406 x 730 x 1220	2740 x 730 x 1220	3025 x 730 x 1220
Weight	Main unit	114 Kg	125 Kg	126 Kg
	Packing box	Less than 140 Kg	Less than 153 Kg	Less than 158 Kg

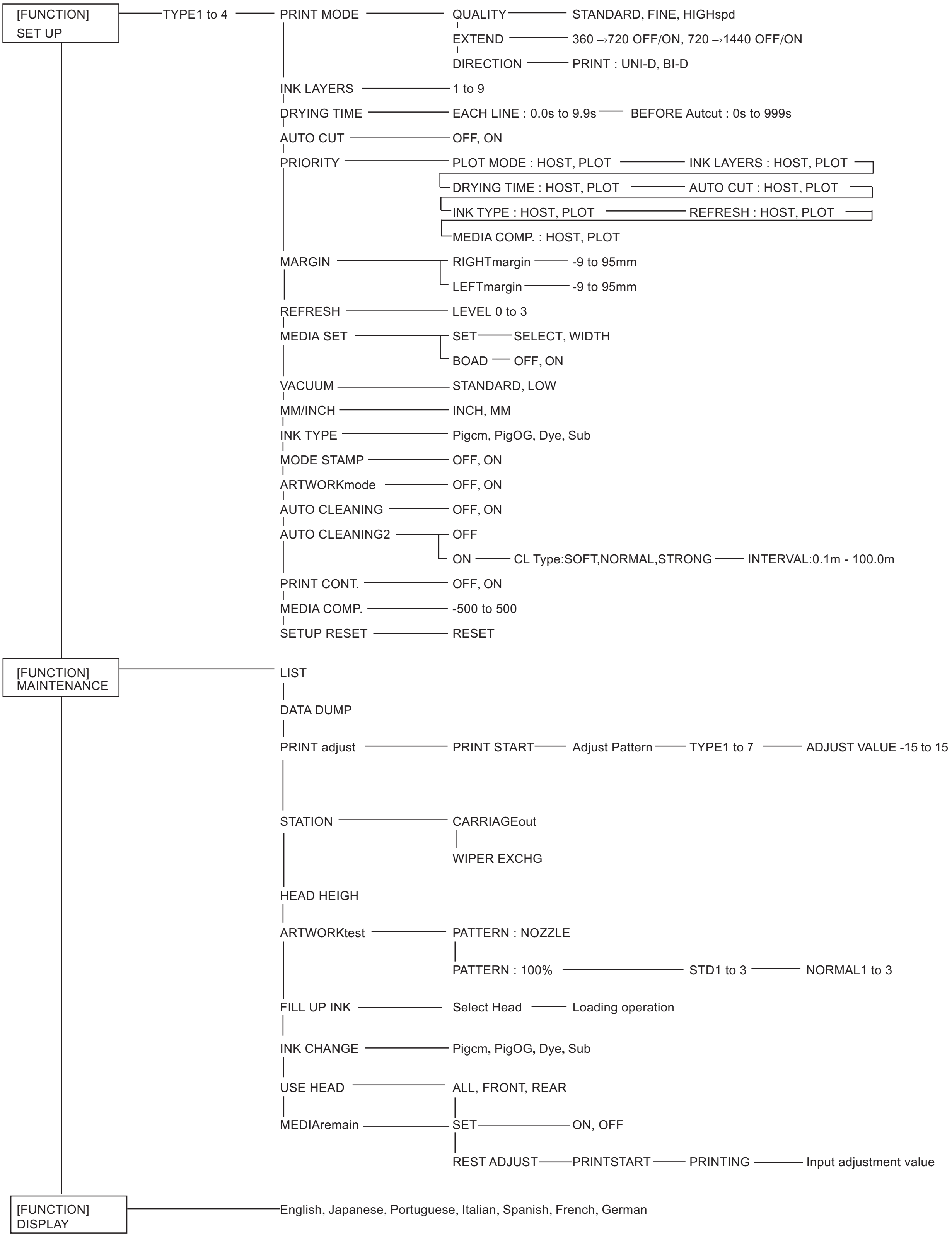
SPECIFICATION FOR INK

Item	Specifications
Form	Ink cartridge exclusive to the device
Color (Water-soluble pigment ink)	Black ink cartridge (SPC-0180K)
	Cyan ink cartridge (SPC-0180C)
	Magenta ink cartridge (SPC-0180M)
	Yellow ink cartridge SPC-0180Y)
	Lightd cyan ink cartridge (SPC-0180LC)
	Light magenta ink cartridge (SPC-0180LM)
	Orange ink cartridge (SPC-0180O)
	Green ink cartridge (SPC-0180G)
Color (Water-soluble dye ink)	Black ink cartridge (SPC-0258K)
	Cyan ink cartridge (SPC-0258C)
	Magenta ink cartridge (SPC-0258M)
	Yellow ink cartridge SPC-0258Y)
	Light cyan ink cartridge (SPC-0258LC)
	Light magenta ink cartridge (SPC-0258LM)
Color (Disperse-dye ink)	Black ink cartridge (SPC-0256K)
	Blue ink cartridge (SPC-0256BI)
	Magenta ink cartridge (SPC-0256M)
	Yellow ink cartridge SPC-0256Y)
	Light Blue ink cartridge (SPC-0256Lbi)
	Light magenta ink cartridge (SPC-0256Lm)
Contents of inkcartridge	220 cc
Shelf life	Two years from the data of manufacture (at room temperature)
	Within six months after opening the package
Storage temperature During storage:	-30 to 40°C (Storage at temperature of 40°C is permitted within a month.)
Storage temperature During:	-30 to 60°C (Storage at temperature of 60°C is only permitted within 120 hours, and at temperature of 40°C is permitted within a month.)

⚠ CAUTION

- The ink will freeze when it is left for a long time under temperature below -4°C. Should it freeze, leave the ink cartridge at room temperature (at 25°C) for three hours or more to allow the ink to melt.
- Disassembling the ink cartridge or refilling the ink shall be avoided.

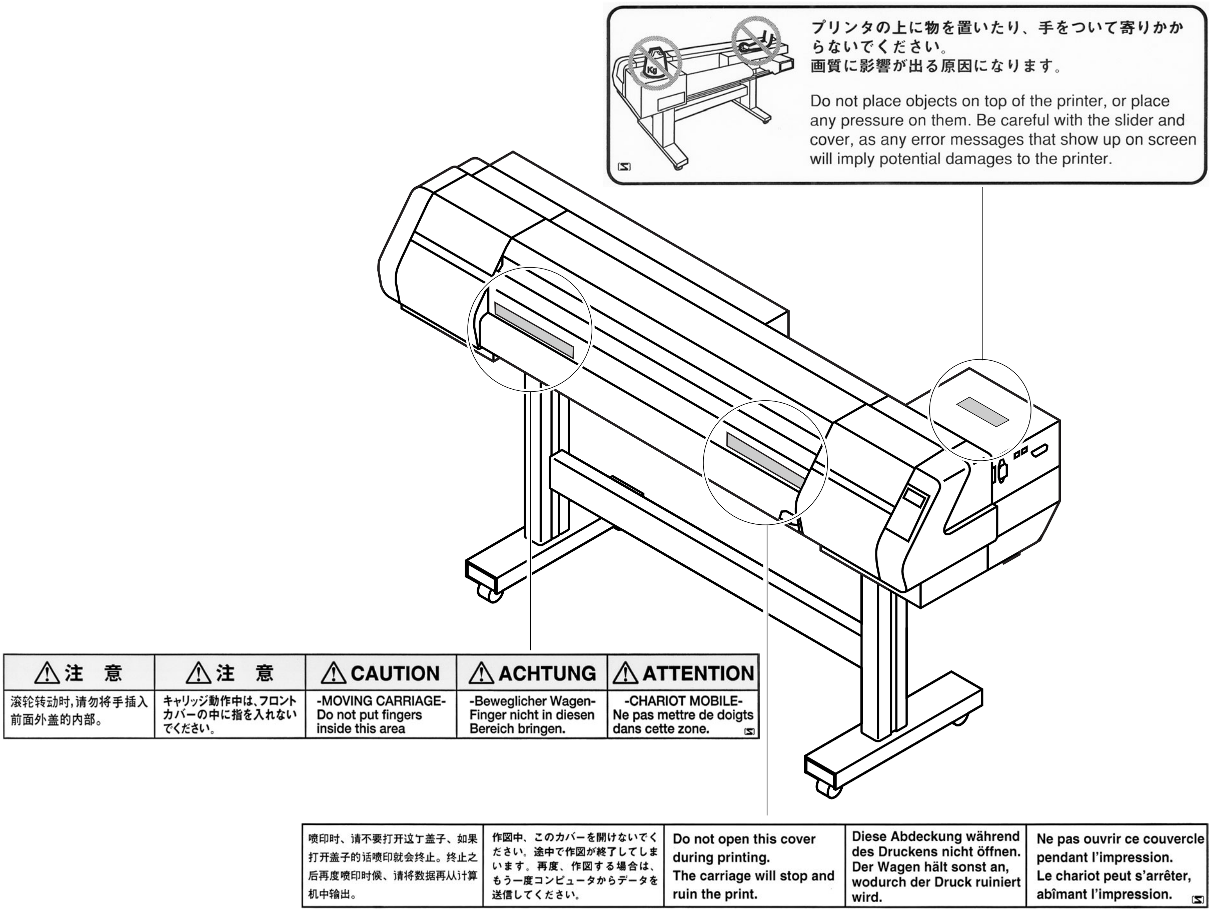
FUNCTION MENU STRUCTURE


[FUNCTION] SET UP
TYPE1 to 4
PRINT MODE
QUALITY
STANDARD, FINE, HIGHspd
EXTEND
360 →720 OFF/ON, 720 →1440 OFF/ON
DIRECTION
PRINT : UNI-D, BI-D
INK LAYERS
1 to 9
DRYING TIME
EACH LINE : 0.0s to 9.9s
BEFORE Autcut : 0s to 999s
AUTO CUT
OFF, ON
PRIORITY
PLOT MODE : HOST, PLOT
INK LAYERS : HOST, PLOT
DRYING TIME : HOST, PLOT
AUTO CUT : HOST, PLOT
INK TYPE : HOST, PLOT
REFRESH : HOST, PLOT
MEDIA COMP. : HOST, PLOT
MARGIN
RIGHTmargin
-9 to 95mm
LEFTmargin
-9 to 95mm
REFRESH
LEVEL 0 to 3
MEDIA SET
SET
SELECT, WIDTH
BOAD
OFF, ON
VACUUM
STANDARD, LOW
MM/INCH
INCH, MM
INK TYPE
Pigcm, PigOG, Dye, Sub
MODE STAMP
OFF, ON
ARTWORKmode
OFF, ON
AUTO CLEANING
OFF, ON
AUTO CLEANING2
OFF
ON
CL Type:SOFT,NORMAL,STRONG
INTERVAL:0.1m - 100.0m
PRINT CONT.
OFF, ON
MEDIA COMP.
-500 to 500
SETUP RESET
RESET
[FUNCTION] MAINTENANCE
LIST
DATA DUMP
PRINT adjust
PRINT START
Adjust Pattern
TYPE1 to 7
ADJUST VALUE -15 to 15
STATION
CARRIAGEout
WIPER EXCHG
HEAD HEIGH
ARTWORKtest
PATTERN : NOZZLE
PATTERN : 100%
STD1 to 3
NORMAL1 to 3
FILL UP INK
Select Head
Loading operation
INK CHANGE
Pigcm, PigOG, Dye, Sub
USE HEAD
ALL, FRONT, REAR
MEDIAremain
SET
ON, OFF
REST ADJUST
PRINTSTART
PRINTING
Input adjustment value
[FUNCTION] DISPLAY
English, Japanese, Portuguese, Italian, Spanish, French, German

POSITION OF THE WARNING LABEL

This device is adhered with a warning label at two locations. Be sure to fully understand the warning given on the labels.

In the case where any of the warning label has become so soiled that the warning message is illegible or has come off, purchase a new one from your local distributor or our office.



プリンタの上に物を置いたり、手をついて寄りかからないでください。
画質に影響が出る原因になります。

Do not place objects on top of the printer, or place any pressure on them. Be careful with the slider and cover, as any error messages that show up on screen will imply potential damages to the printer.

⚠注　意	⚠注　意	⚠CAUTION	⚠ACHTUNG	⚠ATTENTION
滚轮转动时,请勿将手插入前面外盖的内部。	キャリッジ動作中は、フロントカバーの中に指を入れないでください。	-MOVING CARRIAGE- Do not put fingers inside this area	-Beweglicher Wagen- Finger nicht in diesen Bereich bringen.	-CHARIOT MOBILE- Ne pas mettre de doigts dans cette zone.

喷印时、请不要打开这丁盖子、如果打开盖子的话喷印就会终止。终止之后再度喷印时候、请将数据再从计算机中输出。	作図中、このカバーを開けないでください。途中で作図が終了してしまいます。再度、作図する場合は、もう一度コンピュータからデータを送信してください。	Do not open this cover during printing. The carriage will stop and ruin the print.	Diese Abdeckung während des Druckens nicht öffnen. Der Wagen hält sonst an, wodurch der Druck ruiniert wird.	Ne pas ouvrir ce couvercle pendant l'impression. Le chariot peut s'arrêter, abîmant l'impression.

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