Mimaki

JV22 Series

JV22-130
JV22-160

OPERATION MANUAL
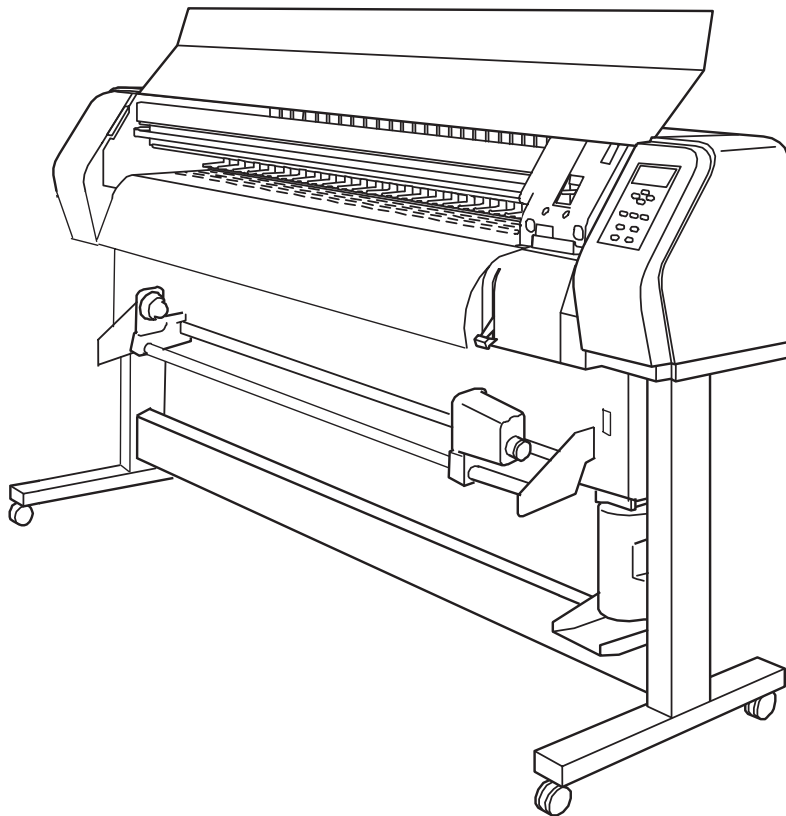
CAUTION

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

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

FCC Statement (USA)

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

Operation of this equipment in a residential area is likely to cause harmful interference in which 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 described in this manual generates high frequency when operating.
The product can interfere with radios and televisions if set up or commissioned under improper conditions. The product is not guaranteed against any damage to specific-purpose radio and televisions.
The product's interference with your radio or television will be checked by turning on/off the power 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 orientation of the antenna of the television set or radio to find a position without reception difficulty.
- Separate the television set or radio from this product.
- Plug the power cord of this product into an outlet which is isolated from power circuits connected to the television set or radio.

Foreword

Thank you very much for purchasing a MIMAKI "JV22 Series" model of color ink jet printer.

The JV22 series is a color ink-jet plotter applicable to high quality plotting with 4-color ink or 6-color ink.

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

Before starting to operate the plotter, be sure to read this Operation manual carefully .

On This Operation manual

- This Operation manual describes the operation and maintenance of Model JV22 Series Color Ink Jet Plotter (hereinafter referred to as the device).
- Please read and fully understand this Operation manual before putting the machine into service. It is also necessary to keep this Operation manual on hand.
- Make arrangements to deliver this Operation manual to the person in charge of the operation of this device.
- This Operation manual has been carefully prepared for your easy understanding, however, please do not hesitate to contact a distributor in your district or our office if you have any inquiry.
- Description contained in this Operation manual are subject to change without notice for improvement.
- In the case where this Operation manual should be illegible due to destruction by fire or breakage, purchase another copy of the Operation 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.

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).

- **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.

Easy ink replacement

The ink cartridge can be replaced safely and easily without getting your hands dirty.

Easy maintenance

The automatic capping system allows not to wash the Heads the need of head cleaning before turning off the power.
Nozzle clogging can be recovered by performing the cleaning function.
The device monitors the time period when not in use. When the power is turned on or when plotting is started, it automatically performs head cleaning to prevent from clogging Nozzle.

Prevention of warping of the right and left edges of a wide medium

The maximum width of medium that can be used is 1,371 mm for Model JV22-130, 1,620 mm for Model JV22-160. 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 INK Remains

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.

Simple 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 can display six different languages for each, including English and Spanish.

Display plotting condition

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.

TAKE-UP DEVICE for plotting on a long length

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.

Selectable head height (Low range, High range)

The head height can be set to 2 or 3 mm using the adjustment lever.

Depends on the ink or media, select "Lo range (High 2.5 mm) <-> (Low 1.5 mm)" or "Hi range (High 4.5 mm) <-> (Low 3.5 mm)". Please ask a service person for details on the procedure.

Prevents lifts at both ends of medium

The use of the curl stopper prevents lifts at both ends of diverse media and contact with the head.

For safe operation

Pictorial signs

Pictorial signs are used in this Operation 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, as this may cause fire or poisoning. Be sure to read this manual for proper operation.

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

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

☞	• Indicates the reference page for related contents.

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.

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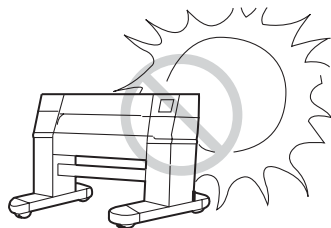
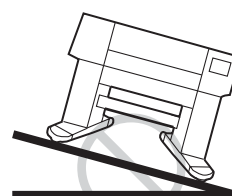**A place in which temperature and humidity vary by a great margin**

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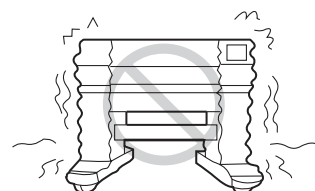Operating environment:
15 to 30°C
35 to 65% (Rh)

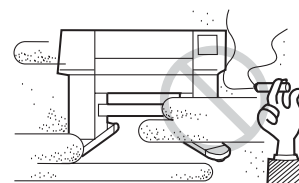**A place exposed to direct air blow from air conditioner, etc.**
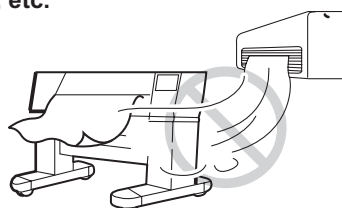
A place that is not horizontal

A place that vibrates

A place filled with dirt, dust or tobacco smoke

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CHAPTER 5 Maintenance

CHAPTER 6 When abnormal conditions are encountered

APPENDIX

How to read this operation manual

Display on the LCD and Indication of the Keys

In this Operation manual, the characters displayed on the LCD of the operation panel and the keys used to operate the device are explained, together with the operation procedure. ☞ page 1.6. 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 Operation manual, each setting and messages displayed on the LCD is enclosed in [ ], like [TYPE.1], [PLEASE WAIT], etc.

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

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

Operation keys

In the text of this Operation manual, the operation keys are shown enclosed in brackets.

[▲] and [▼] indicate JOG keys.

The other operation keys are enclosed in brackets, as [FUNCTION]. ☞ page 1.6.

Structure of this Operation manual

This manual consists of the following seven chapters to describe the handling of the device.

Chapter 1 Before Use

This chapter describes the name and function of each section of the device as well as ink and media.

Chapter 2 Operations

This chapter describes a series of operations and settings, ranging from power-on to end of plotting.

Chapter 3 Daily Cleaning

This chapter describes the recovery procedure for ink clogging and the cleaning procedure for each section.

Chapter 4 Setting Function

This chapter describes the setting function.

Chapter 5 Maintenance Functions

This chapter describes the maintenance functions and how to replace a wiper and a worn cutter blade.

Chapter 6 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
Before Use

This chapter describes the name and function of each section of the device as well as ink and media.

Table of contents

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
JV22-130	2400 mm	640 mm	1240 mm	About 145 Kg
JV22-160	2660 mm	640 mm	1240 mm	About 158 Kg

1000 mm

500 mm

500 mm

2640 mm

1000 mm

3400 mm (JV22-130)

3660 mm (JV22-160)
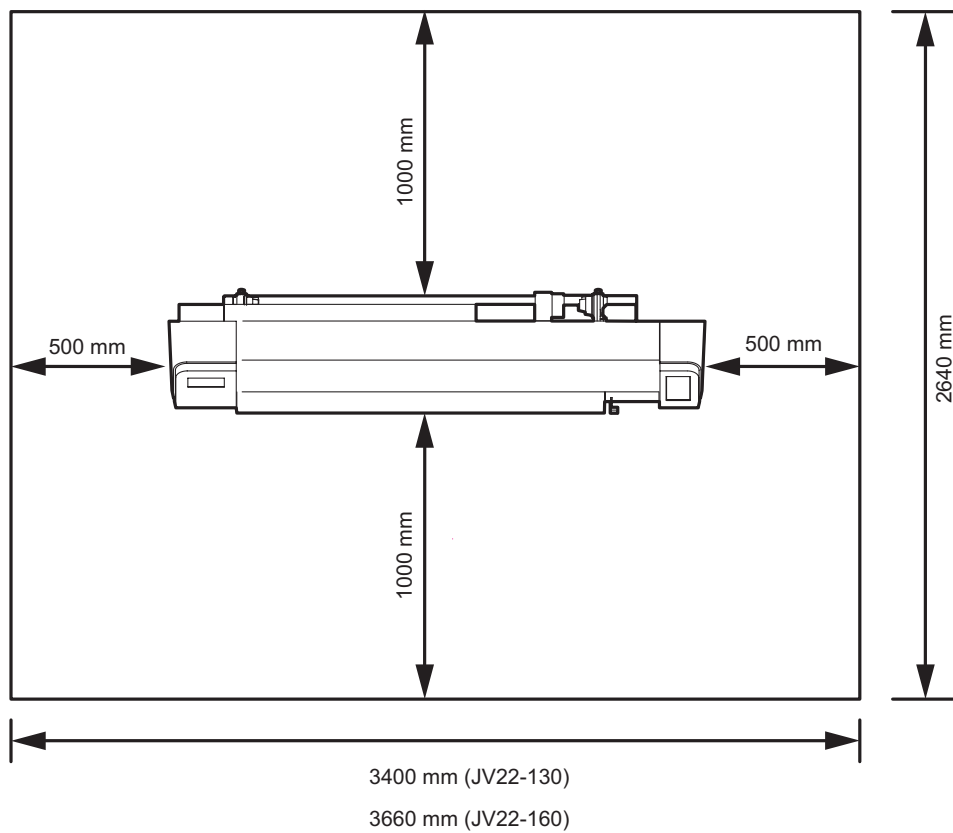
Working environmental temperature

This equipment should be used at 20-35 °C to implement a stable print.

Moving the device

⚠️ **CAUTION**

- When moving the device to a different place, contact local representative of Mimaki Engineering. If you move it, failure of damage may occur.
  Be sure to request a specialist to move the device.

When moving the device by necessity within the same floor without steps, perform the following procedure.
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.
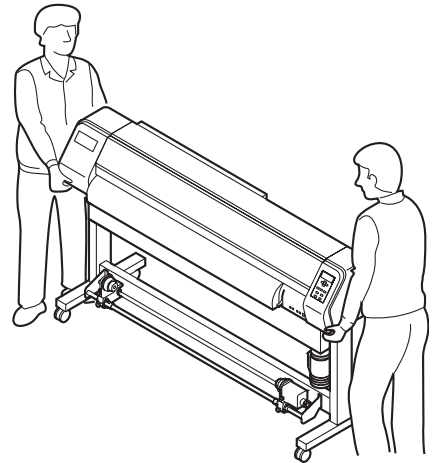
Locking/unlocking the casters

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.

Unlock

Lock
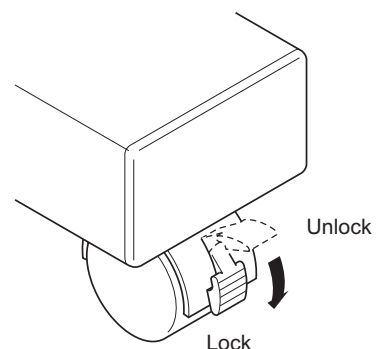
Configuration and function

The Front
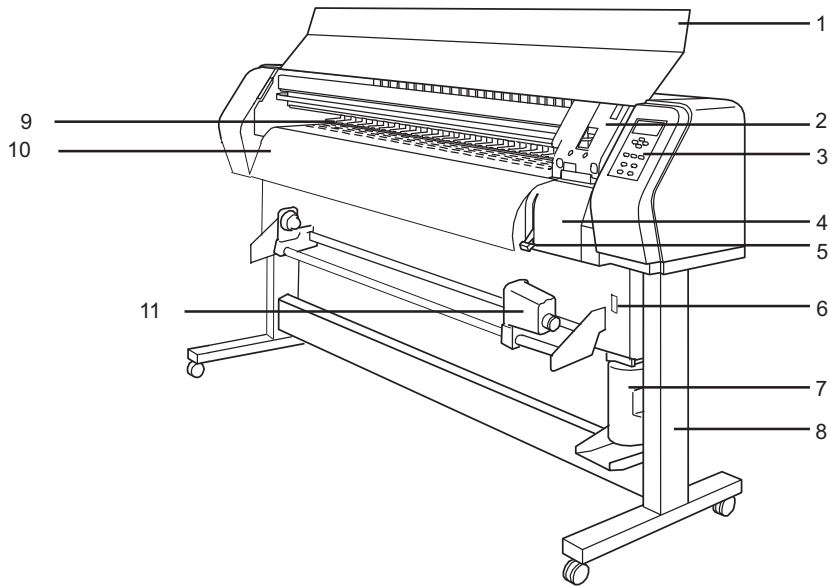
	Name	Function
1	Front cover	It is opened when setting medium or taking a corrective measure against a medium jam. Even if the power switch is off, keep the front cover closed to perform the ink clogging preventive operation.
2	Carriage	Moves the print head from side to side.
3	Operation panel	This panel has the operation keys required for operating the device and the LCD for displaying set items, etc.
4	Capping station	Incorporates the ink cap to be capped on the head and the wiper, etc.
5	Clamp lever	It is made to go up-down the pinch roller for holding medium.
6	Power switch	It turns on/off the power to the device.
		When the power switch is turned on, the POWER indicator lights in green. While the main power switch is on, the ink clogging preventive operation is performed periodically even if the power switch is off. (Flashing)
7	Waste ink tank	Waste ink gathers in this tank.
8	Stand	It supports the main unit. It is provided with casters that are used to move the device.
9	Platen	It puts out the medium as it is plotted on.
10	Maintenance cover	It is opened when performing maintenance.
11	Take-up device	It supports to wind up the roll medium printed.

The REAR
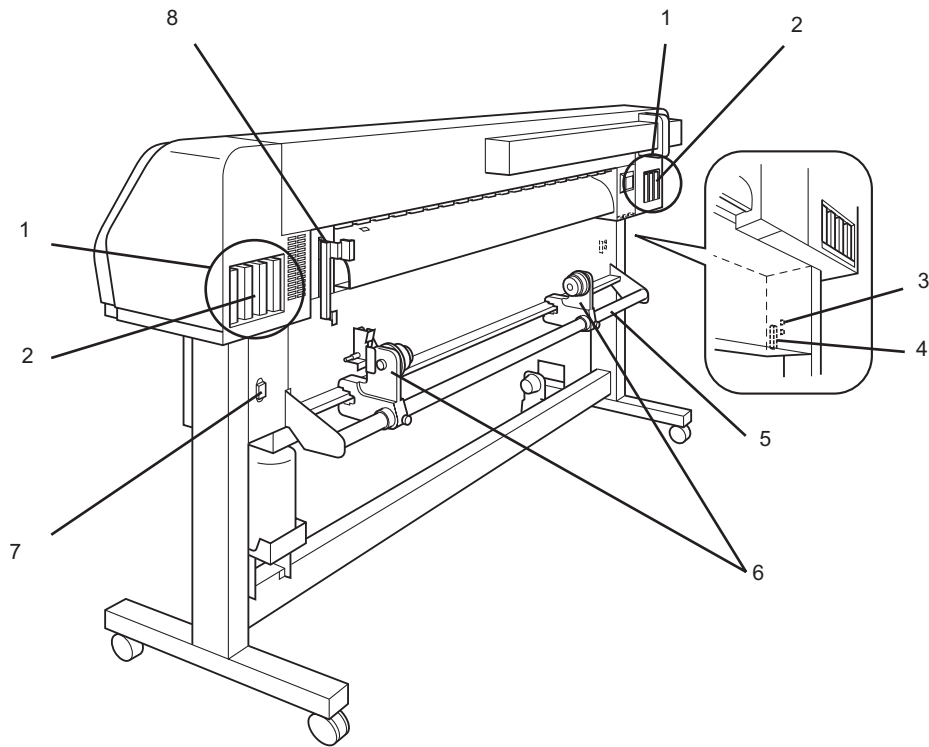
	Name	Function
1	Ink station	Set the ink cartridges specified.
2	Ink cartridge	Each cartridge contains ink of a specific color.
3	IEEE-1394 connector	A 400M bps interface connector compatible with IEEE-1394.
4	Parallel connector	Bi-directional parallel interface connector (complies with IEEE1284)
5	Paper roll setting bar	This bar facilitates a paper roll to be set in position.
6	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. The attachment position (height) of the roll holder can be set in three steps.
7	AC inlet	The power cable is connected to the AC inlet.
8	Clamp lever	Works together with the clamp lever on the font face of the device.

Operation Panel

The operation panel that is used to operate the device.

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.

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

Plots a test pattern for checking ink clogging.

[FUNCTION] key

Enter to the setting function menu.

[END] key

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

[DATA CLEAR] key

Erase the data has been received.

[REMOTE] key

Change the operation mode between the REMOTE mode and the LOCAL mode.

[ENTER] key

Used to move to the lower-level menu and establish the settings.

[CLEANING] key

Performs head cleaning when ink clogging occurs.

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.

Carriage

The carriage is provided with ink heads for printing, a cutter unit for cutting off medium, etc. It is also provided with a lever for adjusting the head height according to the thickness of the medium used.

Adjusting lever

Cutter Unit
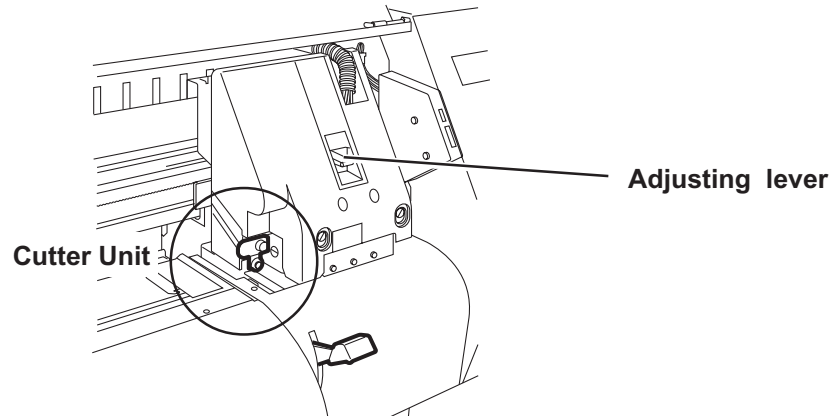
The carriage is adjusted to "Lo" or "Hi" range by a service person depending on the media. (Default setting is "Lo" range.)

Use a adjusting lever to change the height in each range. However, when in need of switching to "Lo" or "Hi" range, please ask your dealer for performing range switching. Note, the range switching is performed under voltage.

⚠ CAUTION   • Do not tear down the device.

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.

The wipers are consumable parts. If the wiper is deformed, wiper replacement is indicated on the panel, or the medium is stained, replace the wiper with a new one.

☞ See P.3.4 for detail procedure on replacing a wiper.

Cap

Wiper

The pinch roller and The feed roller

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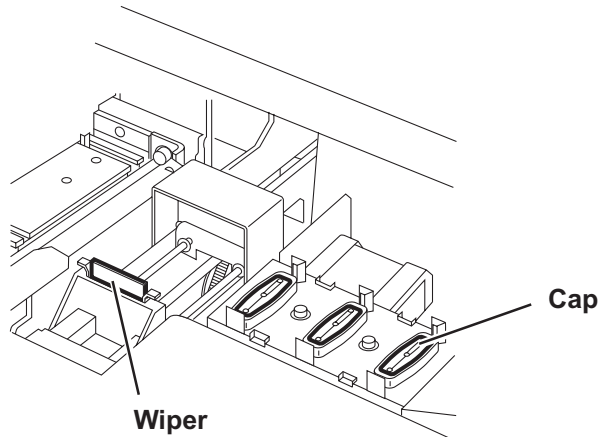
• While the device is not being used, keep the pinch roller in the upper position. If the pinch roller is left lowered for an extended period of time, it can deform and fail to securely retain the medium.

This device retains a medium with the pinch roller and the feed roller.
During plotting operation, the feed roller feeds the medium forward.

Feed roller

Pinch roller
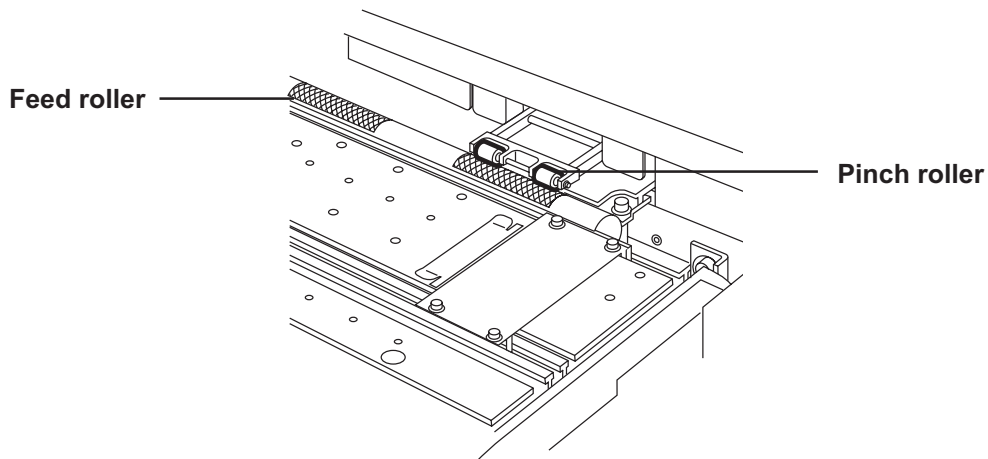
The medium sensor

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

There is a medium sensors on the platen.

- 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.

Medium sensor
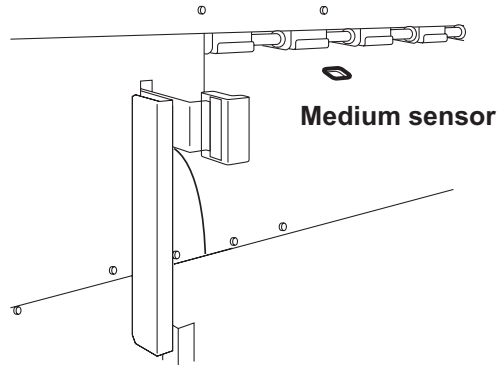
Cutter blade and cutting line

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.

☞ "Cutting by Hand" (page 2.26) "Automatic Cutting [AUTO CUT]" (page 4.7).

Cutter blade   **Cutting Line**
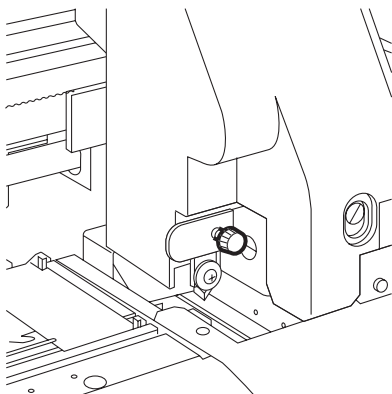
Cutting line
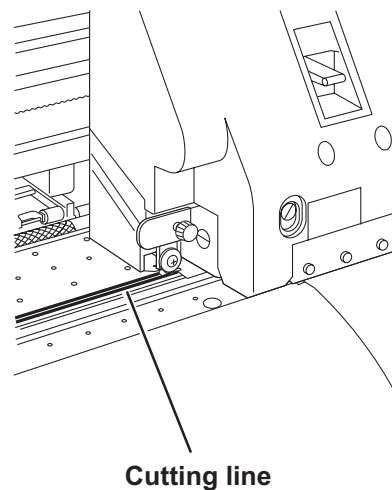
Information on medium

Precautions in handling the medium

Carefully observe the following when handling the medium.

- **Use media recommended by MIMAKI for stable, high-quality plotting.**

- **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.

Information on ink cartridge

Types of ink

Seven types of ink can be used. The characteristics of each ink type are described below.

> ⚠ CAUTION
>
> • Be sure to use the genuine MIMAKI ink cartridges.

Aqueous pigment ink: [Pigcm]
A pigment-based ink have good weather resistance.
This type of ink is most suitable for outdoor print on large-sized color sign displays (e.g., signboards).
Four-color set (black, cyan, magenta, yellow) and six-color set (black, cyan, magenta, yellow, light cyan, light magenta) is available.

• Aqueous pigment ink : [PigGO]
A pigment-based ink have good weather resistance.
This type of ink is most suitable for outdoor print on large-sized color sign displays (e.g., signboards).
Four-color set (black, cyan, magenta, yellow) and six-color set (black, cyan, magenta, yellow, green, orange) is available.

• Aqueous dye ink [Dye] :
A dye-based ink have weather resistance, but it is inferior to aqueous pigment ink. This type of ink is most suitable for outdoor print on billboard.
Four-color set (black, cyan, magenta, yellow) and six-color set (black, cyan, magenta, yellow, light cyan, light magenta) is available.

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

• Textile pigment ink [TPig] :
A pigment-based ink. Print on fabric directly. For staining on fabric, heater press is required as aftertreatment. This ink is easy to handle and suitable for print on T-shirt.
Four-color set (black, cyan, magenta, yellow) is available.

• Reactive dye ink [Reac] :
This ink stains on fabric by alkaline solution in a chemical reaction. For staining on fabric, heater press is required as aftertreatment.
This type of ink is suitable for print on fabric such as cotton, hemp and rayon.
Eight-color set of eleven colors (black, cyan, magenta, yellow, light cyan, light magenta, gray, blue, orange, red, golden yellow) is available.

• Acid dye ink [Acid] :
This ink fix on fabric by high-temperature steam after printing. This type of ink is suitable for print on fabric such as wool, silk and nylon.
A eight-color set of nine colors (black, cyan, magenta, yellow, light cyan, light magenta, gray, blue, red) is available.

> ❗
>
> • Two washing liquid cartridges are needed for using six-color set.

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.

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
   Pig-4 (KKCCMMYY)
   ```

2. **By pressing the [▲] or [▼] key, specify the type of ink set in the ink station.**

   ```
   Ink Type
   Pig-6 (KCMYcm)
   ```

[Pig-4(KKCCMMYY)]	Aqueous pigment ink
[Pig-6(KCMYcm)]	Aqueous pigment ink (Light cyan, Light magenta)
[Pig-6(KCMYGO)]	Aqueous pigment ink (Orange, Green)
[Pig-8(KCMYcmGO)]	Aqueous pigment ink (Light cyan, Light magenta, Orange, Green)
[Dye-4(KKCCMMYY)]	Aqueous dye ink
[Dye-6(KCMYcm)]	Aqueous dye ink (Light cyan, Light magenta)
[Sub-4(KKCCMMYY)]	Sublimation dye ink
[Sub-6(KCMYcm)]	Subliimation dye ink (Light cyan, Light magenta)
[TPig4(KKCCMMYY)]	Textile pigment ink
[Reac8]	Reactive dye ink
[Acid8]	Acid dye ink

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

   ENTER

   ```
   CARTRIDGES SET
   ```

4. **Install the ink cartridges into the ink stations.**
   Align two projecting portions at bottom of the ink cartridge with rails on the ink stations. Once the ink cartridge is installed to reach the normal position, the buzzer will sound.

5. **The print head is automatically filled with ink.**
   Ink fill up starts automatically.

   ```
   FILL UP
   ```

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

   ```
   < LOCAL >
   ```

Available media

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

Available media type

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

Detail information on available media type

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

Available media size

The size of medium varies according to model of the JV22 series.

Refer to the following table for the model used.

	Medium Size	JV22-130	JV22-160
Roll medium	Maximum	1371 mm	1620 mm
	Mimimum	210 mm	
	Plotting width *1	1361 mm	1610 mm
	Thickness	1.0 mm or less	
	Roll outside diameter	Ø 180 mm or less	
	Roll weight	25 Kg or less. (Make sure no flexure on the roll when holding up the roll.)	
	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	1371 mm	1620 mm
	Minimum	210 mm	
	Plotting width *1	1371 mm	1600 mm

*1 : Note, plotting width shortened in a high speed scan mode at 360x360, 360x540, and 360x720 dpi.
JV22-130 : 1321 mm
JV22-160 : 1570 mm

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.

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.

MENU mode

There are the following five mode in this device.
Each of the four modes is explained below.

< NOT-READY > mode

This is the mode before the medium detector.
The keys other than the [REMOTE] key are effective.

< LOCAL > mode

This is the mode after the medium detection.
All keys are effective to enable setups.
The device is able to receive data from computer, however, it will not perform plotting.
In this mode, it is possible to perform the following operations.

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

< REMOTE > mode

The device plots an image from data it receives.
During the plotting operation, push the [REMOTE] key to interrupt the plotting operation.

< FUNCTION > mode

This is the mode in which plotting conditions can be set.
While the device is in the LOCAL mode, push the [FUNCTION] key to put the device into the FUNCTION mode.

< GUIDANCE > mode

While the device is in the LOCAL mode, push the [FUNCTION] key to put the device into the GUIDANCE mode. Push the [ENTER] key to display the follwing information.

1. Amount of remaining ink
2. Head height
3. Ink type
4. Firmware version, comamnd name and the version

CHAPTER 2
Operation

This chapter describes a series of operations and settings, ranging from power-on to end of plotting.

Table of contents

Operation

The following shows a series of operations and settings, ranging from power-on to end of plotting. For details on each item, refer to the reference page.

Turn on the power on	☞ **P. 2.3**

⬇

Check the head height	☞ **P. 2.6**

⬇

Set the medium	☞ **P. 2.8**

⬇

Plot the test pattern	☞ **P. 2.17**

⬇

Correct the medium feed rate	☞ **P. 2.20**

⬇

Start the plotting	☞ **P. 2.21**

⬇

Turn off the power	☞ **P. 2.24**
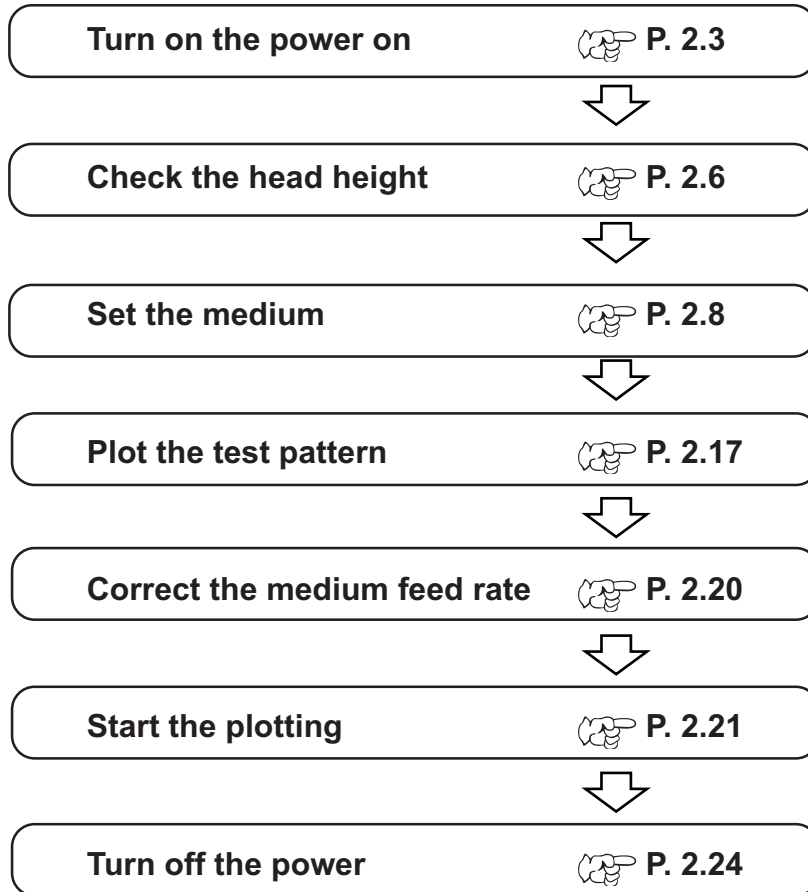
Switching on the power supply

Power switch   :   Located on the front face of the device.

Turning the power on

1. Turn on the power to the device.

Tilt the power switch toward the " I "side.

! • Make sure that the front cover is closed.
     If it is open, initialization is not performed.

When the power is switched on, the LCD first displays
"BOOT" and then displays the firmware version number.

```
BOOT
```

⬇

```
                              V X.XX
```

⬇

2. The message "PLEASE WAIT" appears flashing on the LCD.

The initial operation of the device is performed.

```
PLEASE WAIT
```

⬇

3. The device enters the LOCAL mode.

If a medium has been set on the device, the prompt Media
Select is displayed on the LCD.

```
< LOCAL >
```

4. Turn on the power to the computer which is connected to the device.

```
MEDIA SELECT
ROLL  <            > LEAF
```
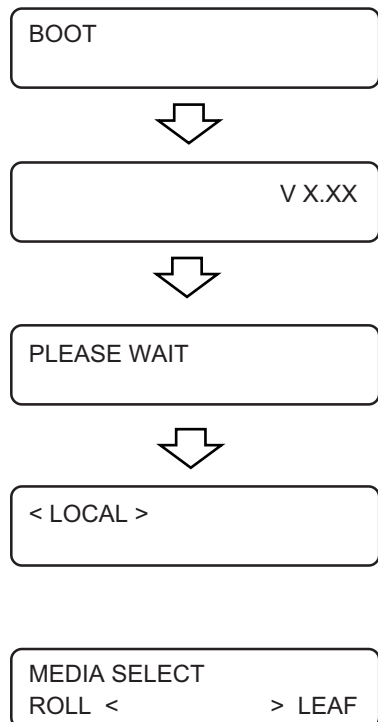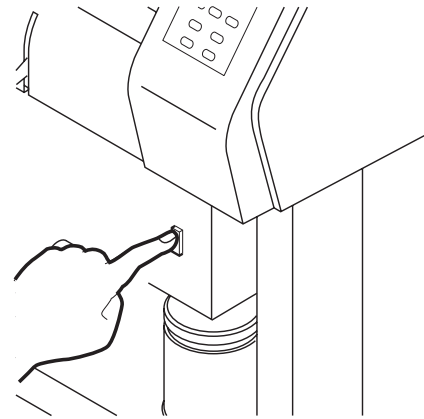
Front cover / Maintenance cover

Opening/closing the front cover

⚠ **CAUTION**

- Keep the front cover closed during plotting operation. Opening the front cover during plotting interrupts image plotting and disables continuous processing.
- Open and close the front cover while holding the handles. Doing so while holding the resin face may cause damage to the device.

If you open the front cover during plotting, the carriage will stop for safety, resulting in abortion of plotting. In this case, re-start the device and computer following the procedure described below.

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.**

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

   ```
   ( C O V E R   O P E N )
   PRESS < ENT > KEY
   ```

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). 👉 page 2.3

   ENTER

   ```
   INITIALIZING
   PLEASE WAIT
   ```

Cautions on maintenance cover

⚠ **CAUTION**

- This cover enables to perform a ease head cleaning. Normally, plot operation cannot be performed without the maintenance cover for the cover protects the monitor and other parts of the device.
- Make sure to attach the maintenance cover at the appropriate location before plotting.
- When attaching the maintenance cover, the same message appears on the panel as the front cover.

Relationships between ink station and head row

A carriage mount four heads and two nozzle lines are located on each head.

One color ink is applied to each row of nozzles.

Remember these relationships when checking the heads for clogged nozzles, replacing ink cartridge and filling up ink.

Placement of ink cartridges in the ink station is different from the selection of 4/6/8 color ink set when the fill up ink is performed.

Bk	Bk	C	C	**4 color ink set**	M	M	Y	Y
Bk	C	M	Y	**6 color ink set**	Lc/G	Lm/O	W	W
Bk	C	M	Y	**8 color ink set**	Lc	Lm	G	O

Front side

Head 1   Head 2   Head 3   Head 4

4 color ink set

Two ink cartridges for each color.

| Bk | C | M | Y |

6 color ink set

One ink cartridge for each color.
Set the washing fluid cartridges (SPC-0188S) for the left spaces of ink station.

| Bk | C | M | Y | Lc/G | Lm/O | W | W |

8 color ink set

One ink cartridge for each color.

| Bk | C | M | Y | Lc | Lm | G | O |

* Bk:Black/ M:Magenta / C:Cyan / Y:Yellow / Lc:Light Cyan / Lm:Light Magenta / G:Green / O: Orange / W:Washing fluid (SPC-0188S)

Adjusting the head height

- The head can be adjusted in height in two different stages, upper and lower, according to thickness of a medium used for plotting.
  This adjusting function enables the device to respond to light-weight medium such as paper and film and heavy-weight medium such as tarpaulin as thick as 0.5 mm.
- Depends on the purpose, head and the initial height can be set to two ranges.
- The height ranges for the JV22 series are : Lo range (1.5 mm/2.5 mm) for normal plot, and High range (3.5 mm/4.5 mm) for transfer plot. The default set range is Lo range (1.5 mm).

⚠ CAUTION
- Adjust the head height before placing a medium on the device. If the head height has been set for light-weight media when a heavy-weight medium is to be placed on the device, moving the carriage from the capping station for adjusting the head height after the medium is placed on the device can cause paper jamming or head breakage.
- When in bidirection mode, adjust the head height before executing print adjust in the maintenance function. ☞ Page 5.7

Range	Adjustment lever	Head height	Switching area	
Lo range (Normal plot)	Thin	1.5mm (Default)	User ↕	Service man
	Thick	2.5mm		Call for switching between Lo and Hi ranges.
Hi range (Transfer plot)	Thin	3.5mm	User ↕	
	Thick	4.5mm		

⚠ CAUTION
- If changing the ink to transfer ink (or water soluble pigment ink) after installing the device, head initial height adjustment(Hi / Lo range) is needed. For details, please ask your dealer.

1. Move the carriage to the platen.

When the device is turned on : Execute [CARRIAGE OUT].

☞ page 5.4

When the device is turned off : Open the front cover, then move the carriage.

2. Loosen two screws mounted on the front face of the head with a coin or the like.
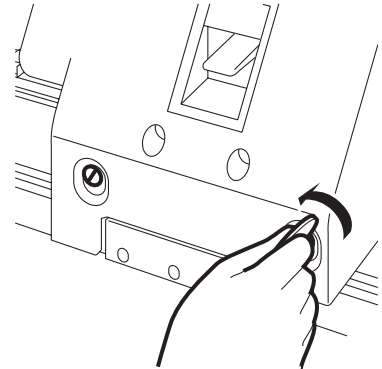
3. Adjust the height adjusting lever according to the medium to be used.

⚠ CAUTION
• Set the height adjusting lever to the highest stage or the lowest stage.
Setting it to the intermediate height, a plotting fault can result.
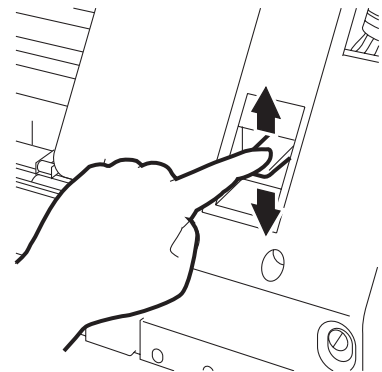
4. Keeping the height adjusting lever held at the aforementioned position, tighten the two screws.

⚠ CAUTION
• If you tighten the screws without keeping the height adjusting lever held at the set position, the head may not be secured at the normal position.
• Fasten the screw securely.
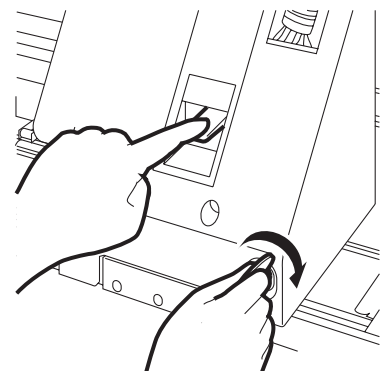
5. Return the carriage to the station position.

Setting the medium on the device

The medium that can be used with the device are roll medium and leaf medium.

Use the medium commended by MIMAKI.

⚠️
CAUTION

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

```
ERROR 50
MEDIA  SENSE
```

- If the medium is exposed to direct sunshine, the medium width may not be detected correctly.
- Do not use printed media, or ink adheres to a pinch roller and media may not be detected.
- Strong or internal curled media must be set to be along the platen by rolling it in the opposite direction.

Setting a paper roll on the device

The procedure for setting roll medium on the device is described below.

⚠️ **CAUTION**
- The roll medium is heavy in weight. Take care not to drop it on your foot.

1. **Pull up the clamp lever at the back of the device.**

2. **Loosen the screw of the left-hand roll holder.**

3. **Determine the position of the roll holder.**
   The inside diameter of the roll medium core may be 2 inches or 3 inches.
   A roll holder is tighten with screws along the sticker [Roll holder set].

4. **Insert the let-hand roll holder into the core of the roll medium.**
   Push roll medium onto the roll holder till the roll core no longer moves.
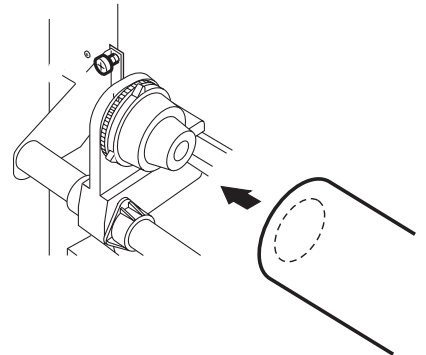
5. **Loosen the screw of the right-hand roll holder.**
   Adjust the roll holder position to the width of the roll medium.

   💡
   - By placing the roll medium on the medium support bar, the position of roll holder can be adjusted easily.
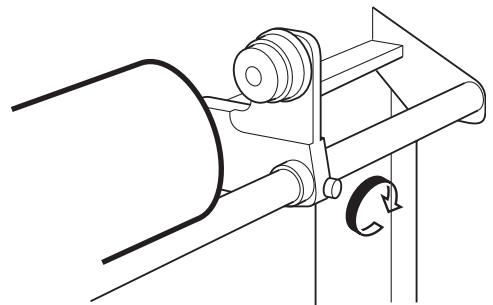
6. Insert the right-hand roll holder into the core of the roll medium.

After inserting the roll holder completely into the core of the roll medium, fix it with the screw.
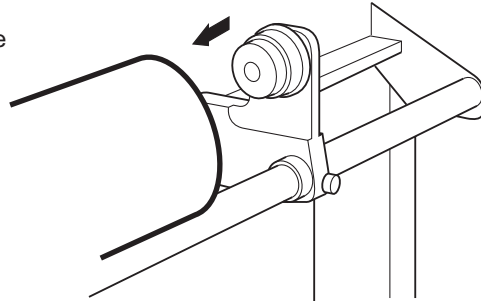
7. Pull out the roll medium from the back of the device until it reaches the end of the platen.
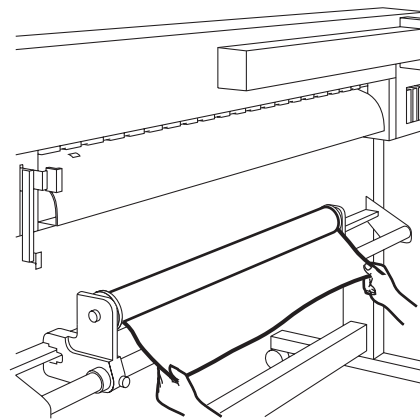
8. Insert the roll medium that has been pull out between the platen and the pinch rollers and pull it to the front of the device.
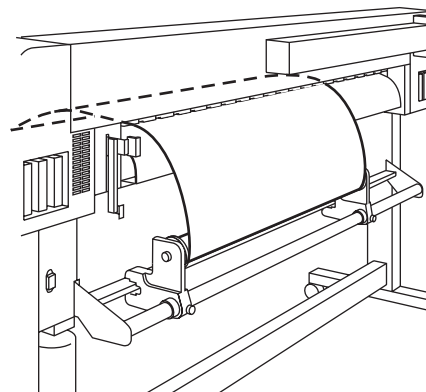
9. Push the clamp lever at the back of the device.

The clamp lever on the front face is lowered to hold the medium. (for temporary setting)
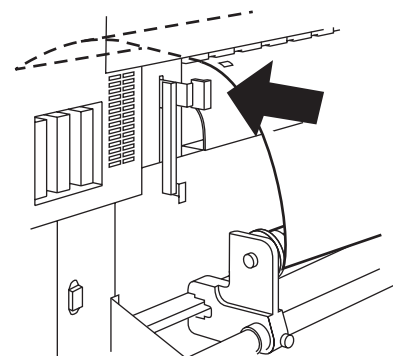
10. Open the front cover and pull up the clamp lever at the front of the device.
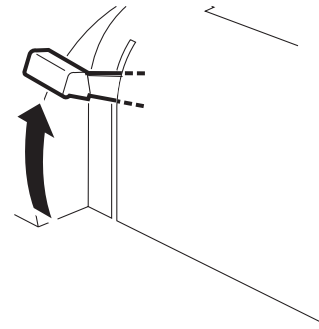
11. Pull out the roll medium gently and then stop pulling when locked lightly.
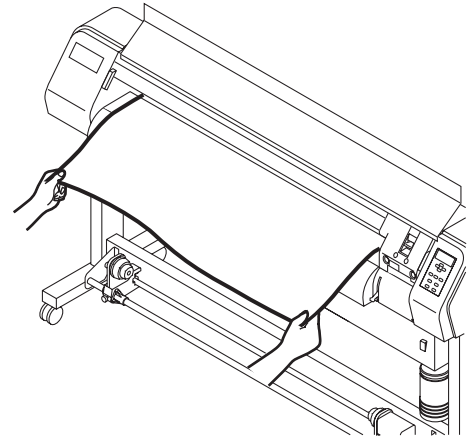
⚠️ **CAUTION**

- When using a leaf medium, set it so that it does not run off to the right of the pinch roller at the right end.
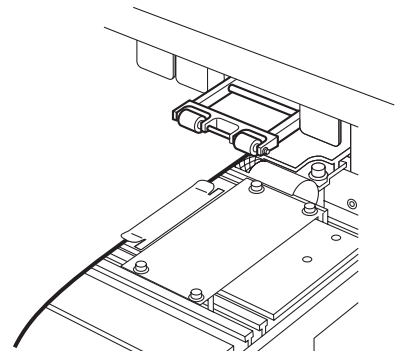
12. Pull the roll medium from side to side evenly and push down the clamp lever.

When the roll holder is attached at the top or bottom position, it is necessary to use the lock pin.

☞
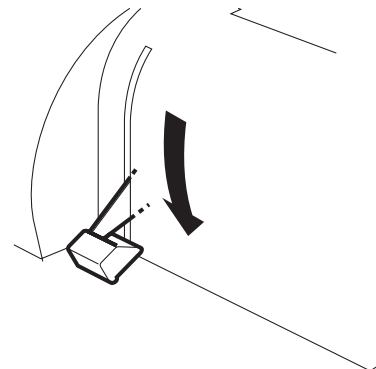
13. Set an empty paper tube to the take-up device.
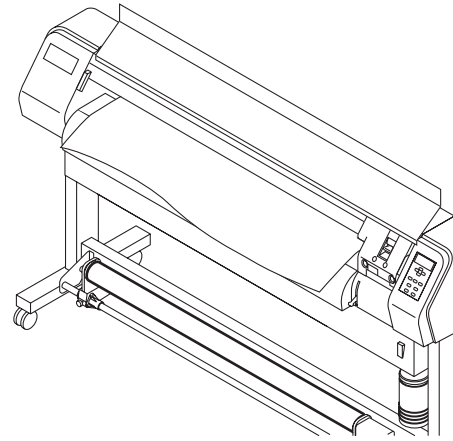
14. Close the front cover and push the [ENTER] key.

The width of the medium is detected.

Press the [▼] jog key to feed the medium up to the paper tube position of the take-up device.
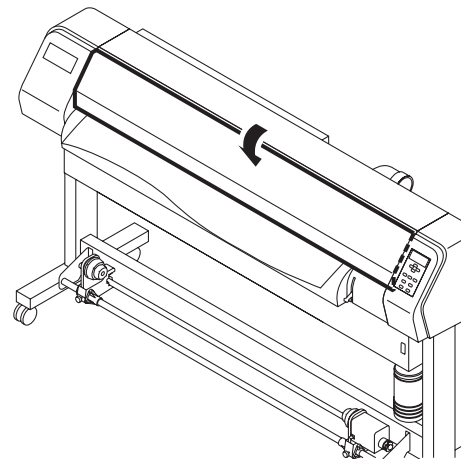
15. Fix the medium to the empty paper tube using an adhesive tape.

- • Check that there is no slack or wrinkle, caused by uneven tension, on the roll medium in the range between the roll holder and the platen.
  While pulling the roll medium from side to side evenly, clamp the lever.
- • If the roll medium used is wide, the edges of the paper may get loose from the platen during plotting. Use the media plate 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
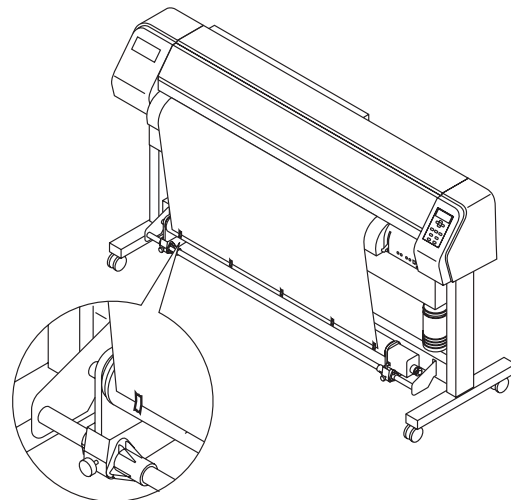
- • When using a thick medium, remove the media plate from the medium before plotting.

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.

Switch
Torque limiter
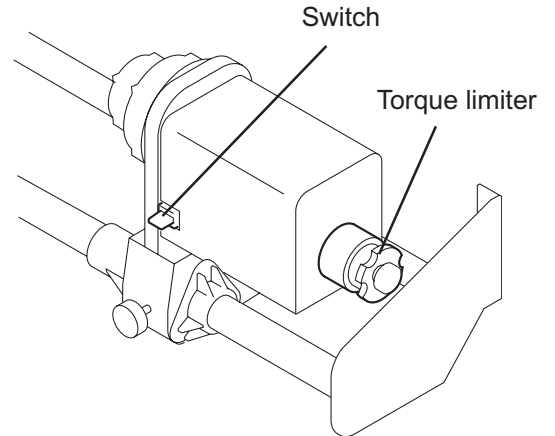
Setting the torque limiter

There is torque limiter adjustment mechanism in take-up device.

Strength of take-up is possible to be changed by adjusting the torque limiter.

(When shipping, it's set at the strongest.)

When using this media and tension is too strong, weaken the adjustment for the torque limiter.

• Clockwise : It becomes strong
Medium to be used : The thick media, such as Tarpaulin.

• Anti-clockwise : It becomes weak
Medium to be used : A light medium

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

Adjustment nut
Torque Limiter mark
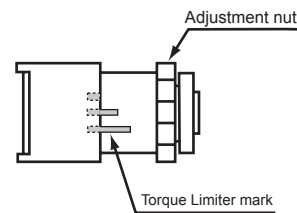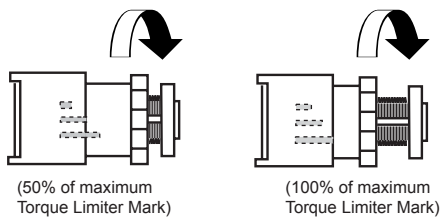
⚠ CAUTION
• If the torque limiter on the take-up device side is adjusted weaker than the roll holder side, a roll paper fails to be sent smoothly.
In case adjustment of the torque limiter is too strong, weaken the adjustment for the torque limiter.

Setting cut sheet medium on the device

Unlike roll medium, the cut sheet medium need not be fixed onto the roll holders.

CAUTION   •   When using cut sheet medium, take care that it is set straight forward.

1. **Open the front cover.**
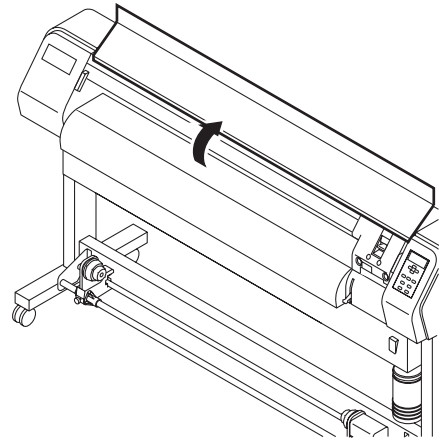
2. **Push up the clamp lever.**
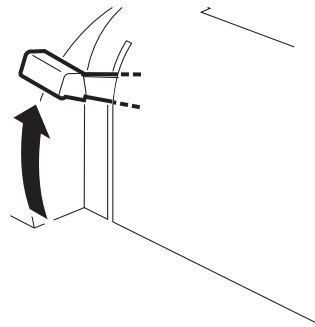
3. **Insert the cut sheet medium between the platen and the pinch rollers.**
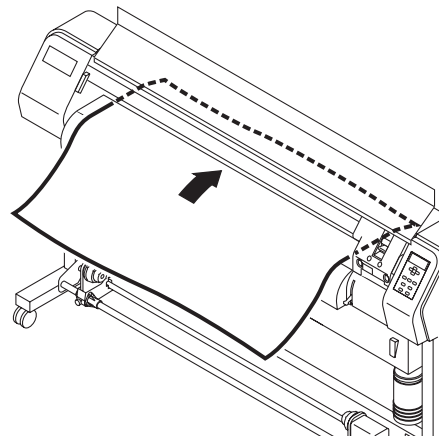
CAUTION
- When using a leaf medium, set it so that it does not run off to the right of the pinch roller at the right end.
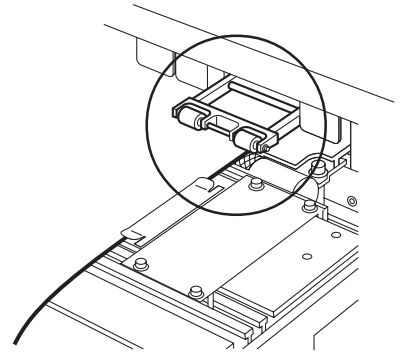
4. Push down the clamp lever.
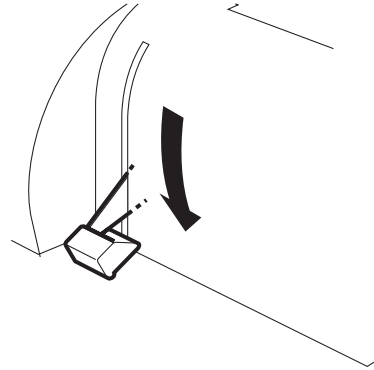
5. Close the front cover.
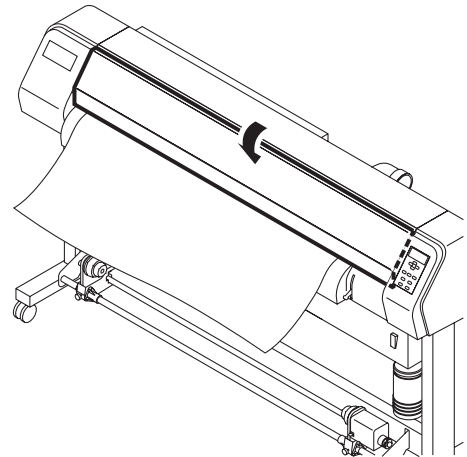
6. Push the [ENTER] key.

After the initial operation, the device enter the LOCAL mode.

ENTER

```
( COVER   OPEN )
PRESS  < ENT > KEY
```
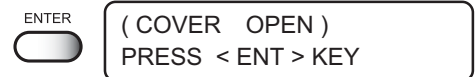
7. Push the [▶] key.

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

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

```
< LOCAL >
            width : 1272 mm
```
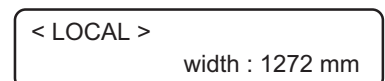
Checking and solving nozzle clogging

Make test plotting to check whether there is nozzle clogging or other plotting failures.
If the finished test pattern shows any sign of abnormal conditions, carry out the cleaning function.

⊘   •   To perform the test plot on a cut sheet medium, use a medium whose size is A4 or larger with placed in landscape configuration.

⚠ CAUTION   •   If a normal test pattern cannot be obtained even after the cleaning function is executed, clean the wiper and ink cap. ☞ page.3.4

⚠ CAUTION   •   When in use of a roll medium, the back side of roll medium will loosen after test plotting, for the medium returns to the plot original point by pushing the [REMOTE] or [FUNCTION] key.
Uproll the roll medium by hands before plotting, and set it tidily. The loosened roll medium will cause the inferior image quality.

Test pattern

Out put direction
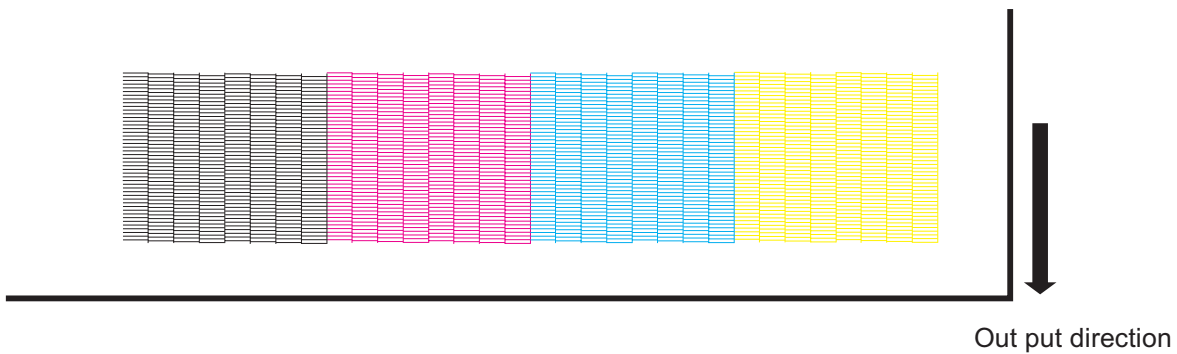
Normal pattern

Abnormal pattern

Nozzle is dirty   Clogged with ink
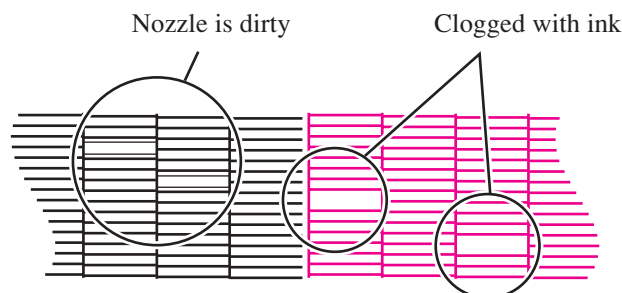
STEP

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

REMOTE

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

2. Push the [TEST] key.

TEST

```
TEST DRAW
                    < ENT >
```

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

ENTER

```
    ∗∗  TEST DRAW  ∗∗
```

4. Check the test patterns.
If a failure occurs, proceed with step 5; otherwise, terminate the operation.

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

5. Push the [CLEANING] key.

CLEANING

```
CLEANING
HEAD SET        : 1 2 . 3 4
```

6. Push the jog key [▲][▼][◄][►] to select the head for cleaning.
Select the head number by the set, 12 or 34.

▲
▼
◄
►

```
CLEANING
HEAD SET        : - - . 3 4
```

```
CLEANING
HEAD SET        : - - . 3 4
```

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

soft	**:**	Select this if there is any missing line.
normal	**:**	Select this if any line is bent.
strong	**:**	Select this if inferior plotting cannot be recovered after [normal] or [soft] cleaning.

▲
▼

```
CLEANING
TYPE              : normal
```

```
CLEANING
TYPE              : soft
```

```
CLEANING
TYPE              : strong
```

8. Push the [ENTER] key.
Cleaning starts. The operation status is displayed as * in the second line.

ENTER

```
CLEANING    ACTIVE
* * * * * _ _ _ _ _ _ _ _ _ _
```

9. The device revert the LOCAL mode.

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

10. Repeat steps 2, and check the result of the test plotting.
Repeat steps 2 to 8 until normal plotting result is obtained.

Correcting the medium feed rate [MEDIA COMP.]

When the medium type or heater temperature is changed, the amount of medium feed changes. Be sure to correct dot positions.

If the correction value is not appropriate, stripes may occur in the plotting, disturbing neat plotting.

⚠ • When in use of a roll medium, the back side of roll medium will loosen after executing media comp., for the medium returns to the plot original point.

CORRECTING PATTERN

Plot two bands.

Adjust the plot density so that the boundary of the two bands is plotted with an even density,

Setting value : -255 - 255

Out put direction

Second band   First band
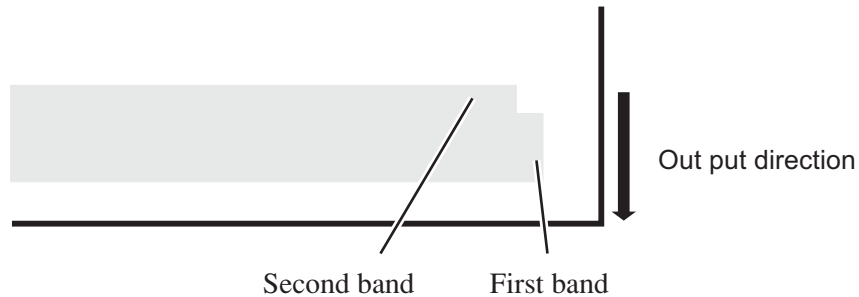
Correction value is too large

Get between lines

Correction value is too small

Overlap
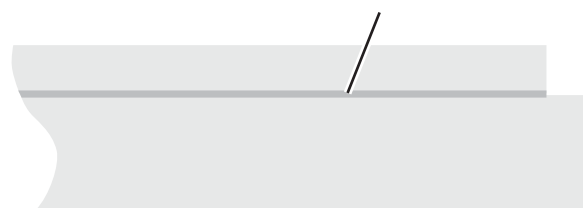
STEP

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

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

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

FUNCTION

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

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

ENTER

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

4. **Push the [▲] and [▼] key to select a type.**
   ☞ page 4.4

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

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

ENTER

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

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

ENTER

```
TYPE. 1
PRINT  START          : ent
```

7. **Enter a correction value from the output pattern.**
   Enter the correction value by pushing the JOG keys [▲] and [▼].

```
TYPE. 1
ADJUST              =   20
```

> • When [ADJUST] is changed to 30, the pattern moves by about 0.1 mm. Determine the correction value referencing this amount of movement.

8. **Push the [ENTER] key.**
   Register the correction value.
   Repeat steps 6 to 8 until normal plotting result is obtained.

ENTER

```
TYPE. 1
PRINT  START          : ent
```

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

END

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

Correcting the medium 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.([MEDIA COMP.] (☞ page 2.17).

STEP

1. **Press the [REMOTE] key.**

   REMOTE

   ```
   ∗ REMOTE ∗
   TYPE. 1            0. 0 0m
   ```

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.

   ▲
   ▼

   ```
            FEED  COMP.
         0 ▶            1
   ```
   current value
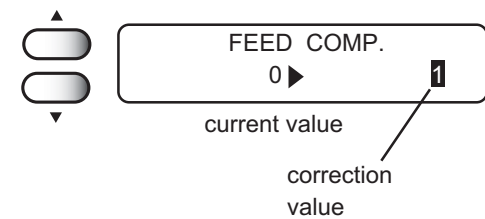
   correction value

   💡 • 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.
      (☞ page 2.18)

   💡 • Press the [END] key to return to the REMOTE display. The altered value ceases to be in effect, and returns to the previous value.

5. **Press the [ENTER] key.**
   Confirm the medium feed rate before saving it.

   ENTER

   ```
            FEED  COMP.
   SAVE                 : ent
   ```

6. **Press the [ENTER] key to return to the RE-MOTE 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.

   ENTER

   ```
   ∗ REMOTE ∗
   TYPE. 1+           0. 0 0m
   ```
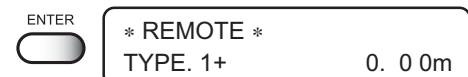
   Press the [END] key to save the value contemporary. Make sure the value ceases to be in effect performing media detection and invalid in the next power on.

Plotting an Image from source data

Starting the plotting operation

The following describes the mode selection for data reception from the computer and LCD display during plotting.

For various function settings necessary for plotting, refer to "CHP4 Setting Function".

⚠ CAUTION
- When in use of a roll medium, make sure the back side of roll medium is not loosened before executing plotting. The loosened medium will cause the inferior image quality.

When plotting is started, the LCD displays the following information.

```
∗ REMOTE ∗   3 6 0 x 3 6 0
S T D  /  4 / U /  0 . 5 0 m
```

Resolution: 360/540/720/1440 DPI

Length of medium that has been plotted on

Dividing method : U : Unidirectional, B : Bidirectional

Passes : 1~32 pass

QUALITY STD : STANDARD, FINE : HIGHQUALITY, FAST : HIGHSPEED

HOST : When plot setting is made on the computer
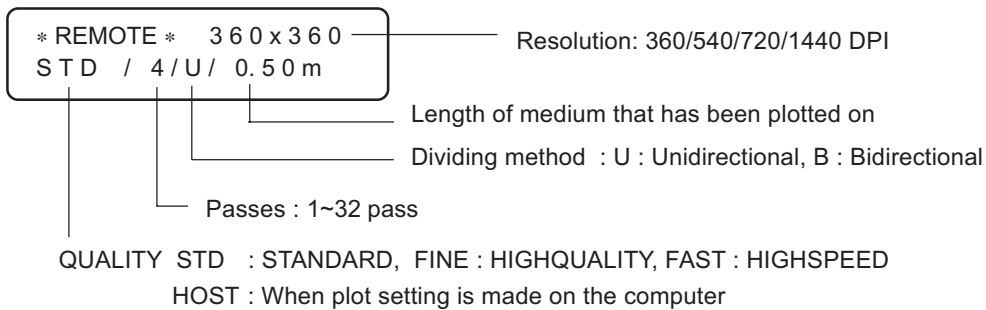
STEP

1. **Push the [REMOTE] key.**
    The type of the currently selected plotting condition can be confirmed.

    REMOTE
    ```
    ∗ REMOTE ∗
    TYPE. 1            0.  0 m
    ```
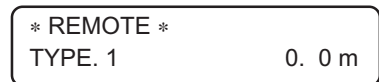
2. **Transmit data from the computer.**
    The plotting conditions that have been set for the data are displayed.
    For the method of data transmission, see the manual for the output software.

3. **During the plotting.**
    During the plotting operation, the length of the medium plotted on is displayed.

    ```
    ∗ REMOTE ∗   3 6 0 x 3 6 0
    S T D  /  4 / U /  0 . 5 0 m
    ```
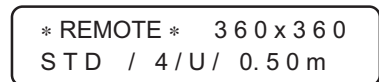
4. **After the plotting operation is completed, push the [REMOTE] key to put the device back into the LOCAL mode.**

    REMOTE
    ```
    < LOCAL >
              width : 1272 mm
    ```
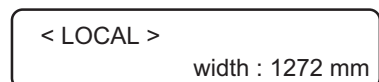
Interrupting the plotting operation

To interrupt the plotting operation, 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 : 1272 mm
```
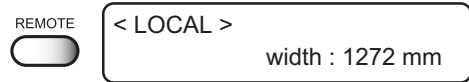
2. **If data is being transmitted from the computer to the device, stop the data transmission.**

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

DATA CLEAR

```
DATA CLEAR
                      < ENT >
```
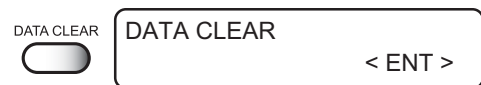
4. **Push the [ENTER] key.**
   The device enters the LOCAL mode.

ENTER

```
< LOCAL >
              width : 1272 mm
```
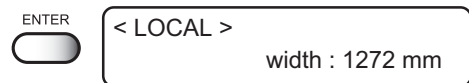
After completing the plotting operation

Cutting off the medium at the end of the plotting operation is explained below.

> • When Auto Cut has not been specified (☞ page 4.7), cut off the medium using the following procedure.

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: 1272 mm
```
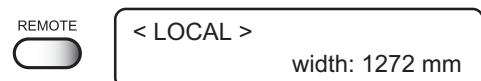
2. **Push the [JOG] key until the LCD gives the indication [ORIGIN SET UP].**
   Any of the JOG keys can be used.

```
 ORIGIN SET UP
0. 0               - - - - - -
```

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

FUNCTION

```
MEDIA  CUT
                      < ENT >
```
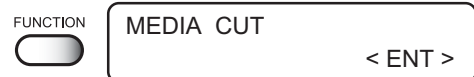
4. **Push the [ENTER] key.**
   Cut off the medium that has been plotted on.

ENTER

```
MEDIA CUTTING
PLEASE  WAIT
```

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

```
< LOCAL >
              width : 1272 mm
```
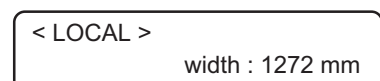
To replenish ink, set a new ink cartridge in the ink station

If ink in the cartridge comes to an empty, the corresponding message appears.
Plotting can be continued but ink may run out during plotting.
Immediately put a new ink cartridge.

⚠ **CAUTION**
- In case [NEAR END] is indicated on the LCD, replace a ink cartridge in good time. When carrying out continuous output, after checking the ink level, start printing. In case ink finish, printing stops, or replacing the ink may result in color change during printing.

< When the amount of ink becomes small during plotting >
Indicate the ink color which has run out.
The display at right indicates that black ink comes to an end.

```
< LOCAL >
NEAR END        K - - - - - -
```
(4-color model)
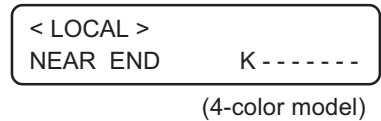
< When the amount of ink completely runs out during plotting >
Indicate the ink color which has completely run out.
The display at right indicates that magenta ink runs out.

```
< LOCAL >
INK END         - - M - - - - -
```
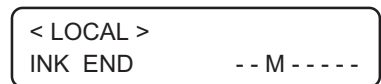
STEP

1. **Either of the messages shown above is displayed on the LCD during plotting.**
   When [INKnearEND] appears, the local mode is resumed 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.
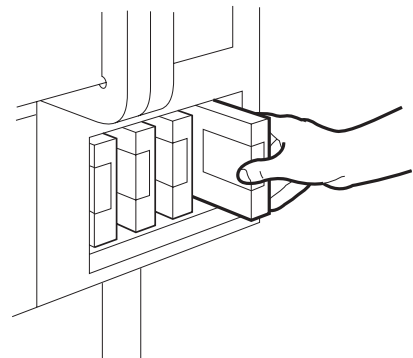
2. **Install a new ink cartridge.**
   Pull out the ink cartridge of the indicated color and then set a new ink cartridge.

3. **The device enters the LOCAL mode.**
   Continuous plotting is possible.

Display ink information

This information allows you to check the remaining amount of ink.

1. **Press the [ENTER] key in the local mode.**
   The remaining amount of ink is displayed with a number from 1 to 9.
   1 indicates near end and 9 full.

```
< LOCAL >    K K C C M M Y Y
REMAIN      9 8 7 8 5 6 7 7
```

2. **Press the [ENTER] key again to return to the local mode.**
   If the ink cartridge is defective, the error details are displayed.
   ☞ P.6.6, 6.7, 6.8

NEAR END ◄——————— FULL
1 2 3 4 5 6 7 8 9

Turning the power off

When plotting is completed, press the power switch on the front face to turn 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 make sure that the head rests at the capping station.

⚠ CAUTION

- When using the RasterLink(xx), make sure to exit it before turning off the printer power. In case turning off the printer power before exiting the RasterLink(xx), the using PC may not be able to work.

- 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, return on the power to the device.

1. Turn off the power to the device.
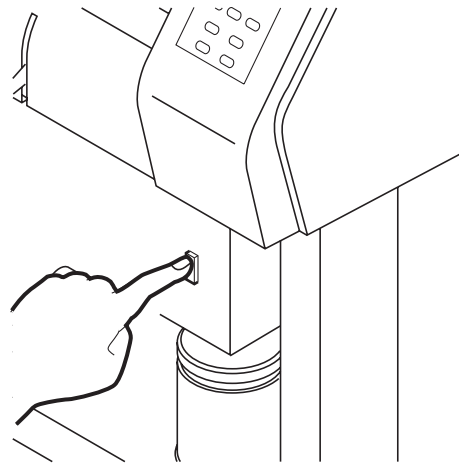
CHAPTER 3
Daily cleaning

This chapter describes daily cleaning.

Table of contents

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.

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 wipe the nozzles, wiper, or cap of the head with water of alcohol as doing so may cause nozzle clogging or damage to nozzles.

- 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.

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.
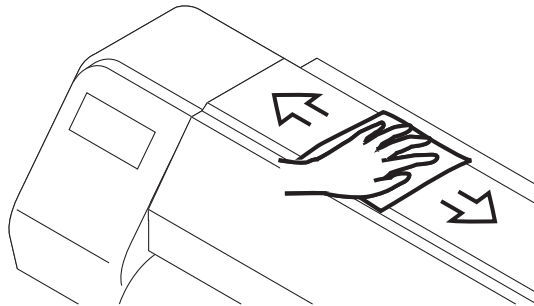
Cleaning the platen

! • Do not use chemicals to clean the platen for it is made of plastic materials.

The platen may be stained by lint or dust since the medium is cut on it.
Wipe out dirt using the supplied paper towel.
If it is stained by ink, drop the cleaning fluid using a dropper and then wipe out dirt using a paper towel.
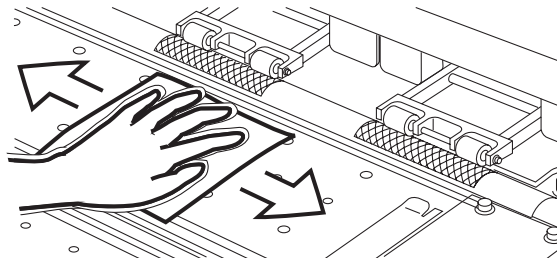
Cleaning the media sensor

Using the cotton buds, wipe out dust or dirt on the surface of the sensor.
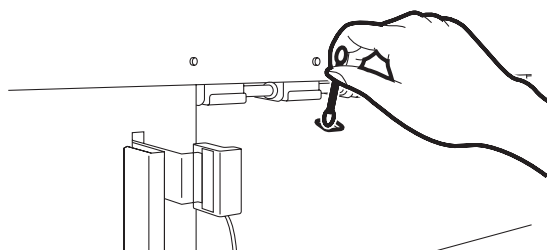
Cleaning the wiper and ink caps

The ink cap prevents clogging of the head nozzle caused by dried nozzle.

The wiper wipes out ink adhered to the head nozzle.

As the device is used to plot images, the wipers and ink caps gradually become stained with ink and dust.

Use the cotton buds to clean the ink and wiper.

Clean the wiper and the ink cap periodically so as to keep the plotter in good operation condition.

⚠ CAUTION
- Do not move the carriage out of the capping station by hand. Use the appropriate operation key to move the carriage.

STEP

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

   FUNCTION

   FUNCTION
   SET UP   < ENT >

2. **Push the [▲] and [▼] key until the display gives the indication [MAINTENANCE].**

   FUNCTION
   MAINTENANCE   < ENT >

3. **Push the [ENTER] key.**
   [STATION] is displayed.

   ENTER

   MAINTENANCE
   STATION   < ent >

4. **Push the [ENTER] key.**
   [CARRIAGE out] is displayed.

   ENTER

   STATION
   MENT : CARRIAGEout
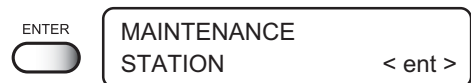
5. **Push the [ENTER] key.**
   Move the carriage on the platen.

   ENTER

   STATION
   COMPLETED   : ent

6. **Open the front cover.**

7. **Holding the projections at both ends, draw out the wiper.**
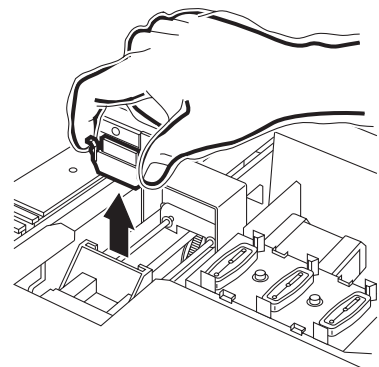
8. **Remove the ink at the wiper and the bracket using a cotton bud dampened with cleaning fluid(SPC-0137).**

• If dirt of curl is serious, replace the wiper with a new one. At the time of replacement, be sure to terminate the plotter operation and follow the wiper replacement procedure.
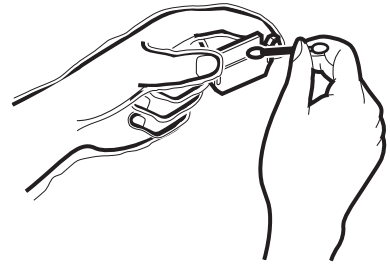
9. **Holding the projections at both ends, insert the wiper which has cleaned into place.**
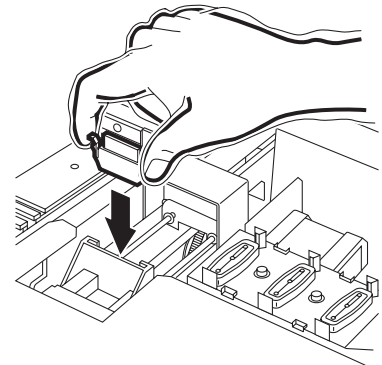
Wiper Cover

10. **Wipe off ink or dirt adhered to the rubber of the cap and the ceiling of the wiper cover using cotton buds.**

CAUTION

• Be careful not to leave lint of the cotton bud. Lint may cause plotting failure.
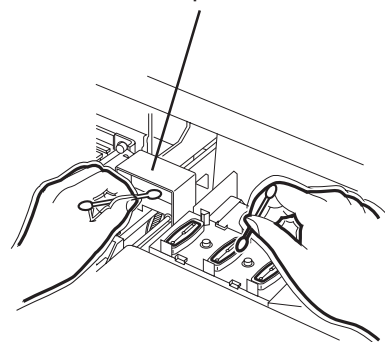
• Wipe the head sides with a cotton bud as ink may be adhering there also.
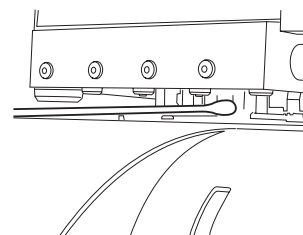
11. **Push the [ENTER] key.**
   The carriage return to the capping station, and the initial operation is performed.

INITIALIZING
PLEASE WAIT

ENTER

< LOCAL >
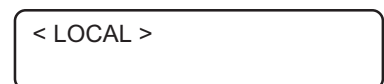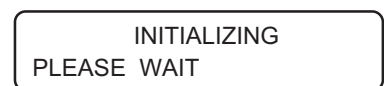
Cleaning the nozzle [NOZZLE WASH]

If nozzle missing occures when using Textile pigment ink (TPig), Reactive dye ink (Reac) or Acid dye ink (Acid), clean the nozzle.

⚠ CAUTION
- If nozzle missing cannot be resolved even after operating this function several times, execute the [FILL UP INK] function (☞ page 5.10). If this trouble cannot be resolved with these functions, contact the dealer.
- If there exist cartridges with [NEAR END] and/or [INK END], the cleaning operation (suctioning through nozzles) is not activated. Replace cartridges with [NEAR END] and/or [INK END], before operating this function.

Cleaning tool: Ink-Cleaning Kit (SPC-0137:option)

STEP

1. **Press the [FUNCTION] key.**

FUNCTION

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

2. **Press the [▲] or [▼] key to select [MAINTENANCE].**

```
FUNCTION
MAINTENANCE          < ENT >
```

3. **Press the [ENTER] key.**
   [STATION] is displayed.

ENTER

```
MAINTENANCE
STATION              < ent >
```
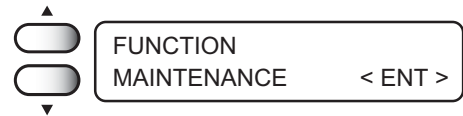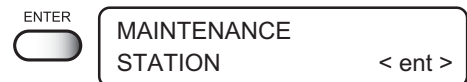
4. **Press the [ENTER] key.**
   [NOZZLE WASH] is displayed.

ENTER

```
STATION
MENT : NOZZLE WASH
```

5. **Press the [ENTER] key.**
   The carriage moves to the platen.

ENTER

```
Wiper Cleaning
COMPLETED             :ent
```

6. **Open the front cover.**

7. **Holding the projections at both ends, draw out the wiper.**

8. Remove the ink at the wiper and the bracket using a swab dampened with cleaning fluid(SPC-0137).

- If the wiper wears out, replace the wiper with a new one. Complete this function before replacing the wiper. (page 5.5)

9. Holding the projections at both ends, insert the wiper which has cleaned into place.

10. Press the [ENTER] key.

ENTER

Fill the Liquid.
COMPLETED   :ent

11. Fill the cap with the cleaning fluid(SPC-0137) using a dropper.

12. Close the front cover.

13. Press the [ENTER] key.

ENTER

14. Press the [▲] and [▼] key to select the time to leave. (1-99 min)

Normally set 1 min.

```
         STATION
         LEAVING          : 1 min
```

15. Press the [ENTER] key.

The indication at the right display blinks on and off until leaving time goses by.

After the leaving time goes by, the device operates to suck the cleaning fluid and clean the head nozzle.

Return to the LOCAL mode.

```
ENTER

              INITIALIZING
         PLEASE  WAIT
```

```
         < LOCAL >
```
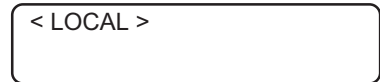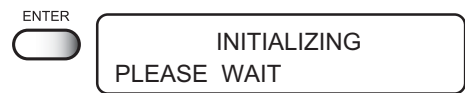
When the waste ink tank becomes full

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.

STEP

1. **Remove screws from the waste tank guard.**
2. **Open the waste tank guard.**

3. **Holding the handle, raise the waste ink tank.**
4. **With the tank raised, turn the tank by 90 degrees and let it down.**
5. **Pull out the tank toward you.**
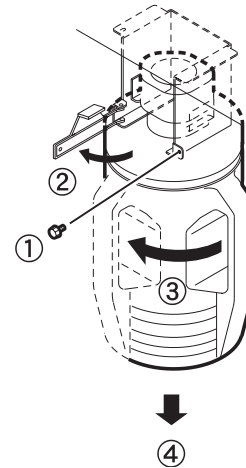
6. **Replace the waste ink tank with a new one.**
   Hold the handle, then insert the tank into the direction shown by the arrow.
   Put a cap over the tank that is full of waste ink and dispose of the tank.

   - 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.
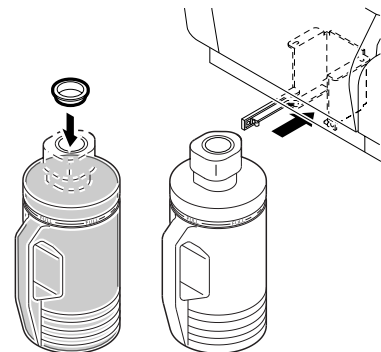
7. **Raise the inserted waste ink tank, then turn it by 90 degrees.**

8. **Close the waste tank guard and secure with the screws.**

   - Refer to your local authorities for industrial waste.
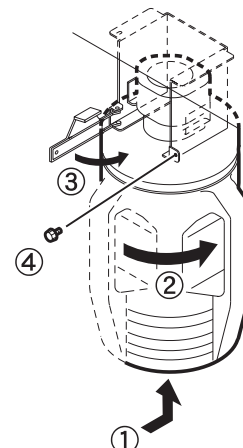
Ink discharge way cleaning [Disway WASH]

When using Textile pigment ink (TPig), Reactive dye ink (Reac) or Acid dye ink (Acid), the ink discharge way may become clogged by coagulated ink. It must be cleaned at regular intervals to avoid clogging.

⚠ CAUTION

• Do not move the carriage out of the capping station by hand. Use the appropriate operation key to move the carriage.

Cleaning tool: Ink-Cleaning Kit (SPC-0137:option)

STEP

1. **Press the [FUNCTION] key.**

   FUNCTION

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

2. **Press the [▲] or [▼] key to select [MAINTENANCE].**

   ```
   FUNCTION
   MAINTENANCE        < ENT >
   ```

3. **Press the [ENTER] key.**
   [STATION] is displayed.

   ENTER

   ```
   MAINTENANCE
   STATION            < ent >
   ```

4. **Press the [ENTER] key.**
   [CARRIAGE out] is displayed.

   ENTER

   ```
   STATION
   MENT : CARRIAGEout
   ```
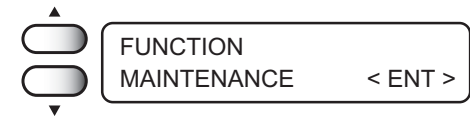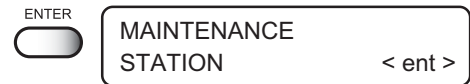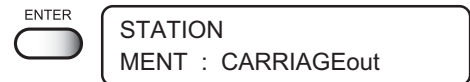
5. **Press the [▲] or [▼] key to select [Disway WASH].**

   ```
   STATION
   MENT : Disway WASH
   ```
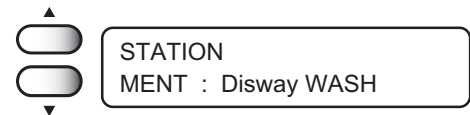
6. **Press the [ENTER] key.**
   The carriage moves to the platen.
   Air suction starts in cycles consisting of 5 seconds of suction followed by 10 seconds of pause.

   ENTER

   ```
   STATION
   COMPLETED          : ent
   ```

7. **Open the front cover.**

8. **During the suction pause period, fill the cleaning fluid(SPC-0137) using a dropper until just before it overflows from the cap. Repeat at all other caps.**
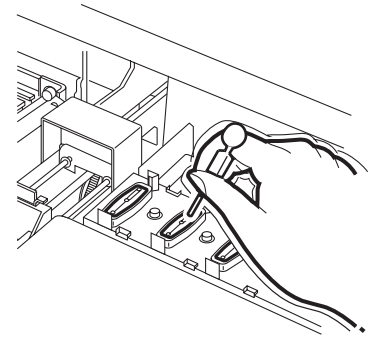
9. **Close the front cover, and press the [ENTER] key.**
Air suction continues for 30 seconds and then the device is returned in Local mode.

ENTER

```
STATION
COMPLETED          : ent
```

```
        INITIALIZING
PLEASE  WAIT
```

```
< LOCAL >
```

When not in use the plotter over the long term [CUSTODYwash]

When not in use the plotter over a week, perform "CUSTODYwash" function to clean the head nozzle and ink discharge way. After performing the function, store the plotter.
When using the following ink, operating this function is recommended.
- Textile pigment ink (TPig)
- Reactive dye ink (Reac)
- Acid dye ink (Acid)

⚠ CAUTION
- If there exist cartridged with [NEAR END] and/or [INK END], the cleaning function (suctioning through nozzles) is not activated. Replace cartridges with [NEAR END] and/or [INK END], before operating this function.

Cleaning tool: Ink-Cleaning Kit (SPC-0137:option)

STEP

1. **Press the [FUNCTION] key.**

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

2. **Press the [▲] or [▼] key to select [MAINTENANCE].**

   ```
   FUNCTION
   MAINTENANCE       < ENT >
   ```

3. **Press the [ENTER] key.**
   [STATION] is displayed.
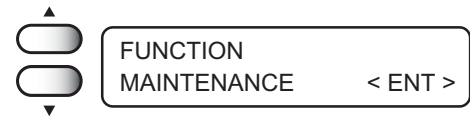
   ENTER
   ```
   MAINTENANCE
   STATION           < ent >
   ```
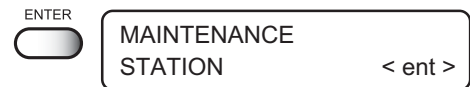
4. **Press the [▲] or [▼] key to select [CUSTODYwash].**

   ```
   TATION
   MENT : CUSTODYwash
   ```

5. **Press the [ENTER] key.**
   The carriage moves to the platen.

   ENTER
   ```
   Wiper Cleaning
   COMPLETED          :ent
   ```

6. **Open the front cover.**

7. **Holding the projections at both ends, draw out the wiper.**

8. **Remove the ink at the wiper and the bracket using a swab dampened with cleaning fluid(SPC-0137).**

   💡 • If the wiper wears out, replace the wiper with a new one. Complete this function before replacing the wiper. (☞ page 5.5)

9. **Holding the projections at both ends, insert the wiper which has cleaned into place.**

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

    ENTER

    | Fill the Liquid. |
    | COMPLETED   :ent |

11. **Fill the cap with the cleaning fluid(SPC-0137) using a dropper.**

12. **Close the front cover.**

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

    ENTER

14. **Press the [▲] and [▼] key to select the time to leave. (1-99 min)**
    Normally set 1 min.

    | STATION |
    | LEAVING   : 2 min |

15. Press the [ENTER] key.

Nozzle cleaning is performed.

After completing the nozzle cleaning, the head moves on the platen.


```
ENTER        ┌─────────────────────┐
( )          │      INITIALIZING   │
             │ PLEASE  WAIT        │
             └─────────────────────┘
```
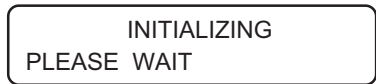
16. Open the front cover.

17. Fill the cap with the cleaning fluid using a dropper.

Repeat the performance several times to clean the ink discharge way for the air suction is performed fitfully. Perform the operation for the each cap.
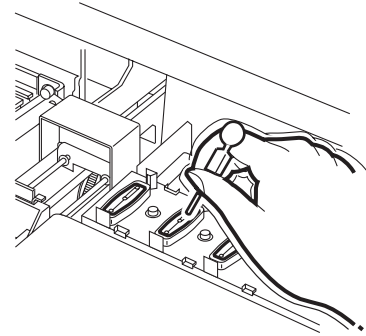
18. Close the front cover, and press the [ENTER] key.

Carriage returns the device to LOCAL mode.

```
ENTER        ┌─────────────────────┐
( )          │ STATION             │
             │ COMPLETED      :ent  │
             └─────────────────────┘

             ┌─────────────────────┐
             │ < LOCAL >           │
             │                     │
             └─────────────────────┘
```

CHAPTER 4
Setting Function

This chapter describes operations and setting necessary for plotting.

Table of contents

Basic operations of menus

This section describes how to change over the operation modes and how to operate the menus.

The following gives the key operation flow to invoke menus.

For detailed menu configuration, refer to Appendix.

```
                                    [REMOTE]
┌──────────────────────────┐              ┌──────────────────────────────┐
│ < LOCAL >                │              │ ∗ REMOTE ∗                   │
│          width : 1272 mm │              │ TYPE. 1            0. 0 0 m   │
└──────────────────────────┘              └──────────────────────────────┘
        │
     [FUNCTION]
        │
┌──────────────────────────┐
│ FUNCTION                 │
│ SET UP          < ENT >  │
└──────────────────────────┘
        │
     [ENTER]                  [ENTER]                        [ENTER]
        │
┌──────────────────────────┐  ┌──────────────────────────┐  ┌──────────────────────────┐
│ SET UP                   │  │ TYPE. 1                  │  │ TYPE. 1                  │
│ SELECT        : TYPE. 1  │  │ MEDIACOMP.       < ent > │  │ PRINT START        : ent │
└──────────────────────────┘  └──────────────────────────┘  └──────────────────────────┘
                                                                     │
                                                                  [ENTER]
                                                                     │
                                                             ┌──────────────────────────┐
                                                             │ TYPE. 1                  │
                                                             │ ADJUST             =  0  │
                                                             └──────────────────────────┘
                                                                     │
                                                                   ⟨∧⟩,⟨∨⟩
                                                                     │
                                                             ┌──────────────────────────┐
                                                             │ TYPE. 1                  │
                                                             │ ADJUST             = 20  │
                                                             └──────────────────────────┘
                                                                     │
                                                                  [ENTER]
                                                                     │
                                                             ┌──────────────────────────┐
                                                             │ TYPE. 1                  │
                                                             │ PRINT START        : ent │
                                                             └──────────────────────────┘

     ⟨∧⟩,⟨∨⟩

┌──────────────────────────┐
│ FUNCTION                 │
│ SET UP        : TYPE. 2  │
└──────────────────────────┘
```
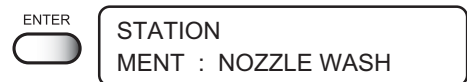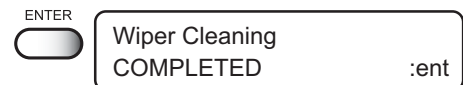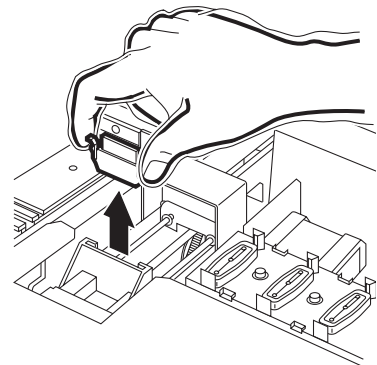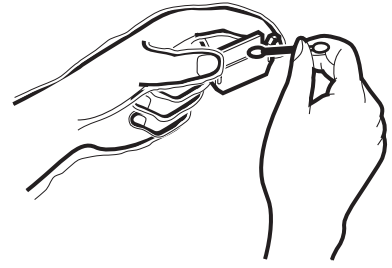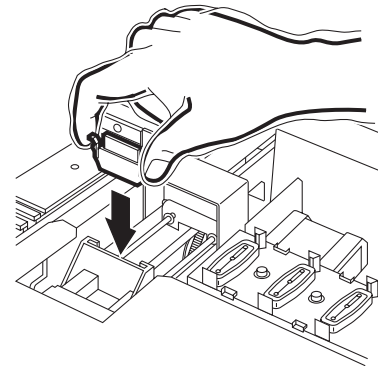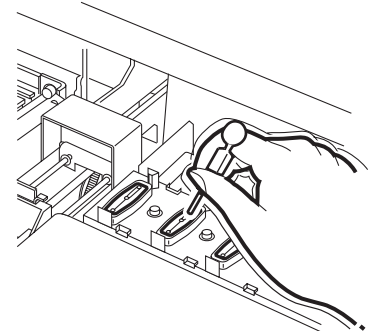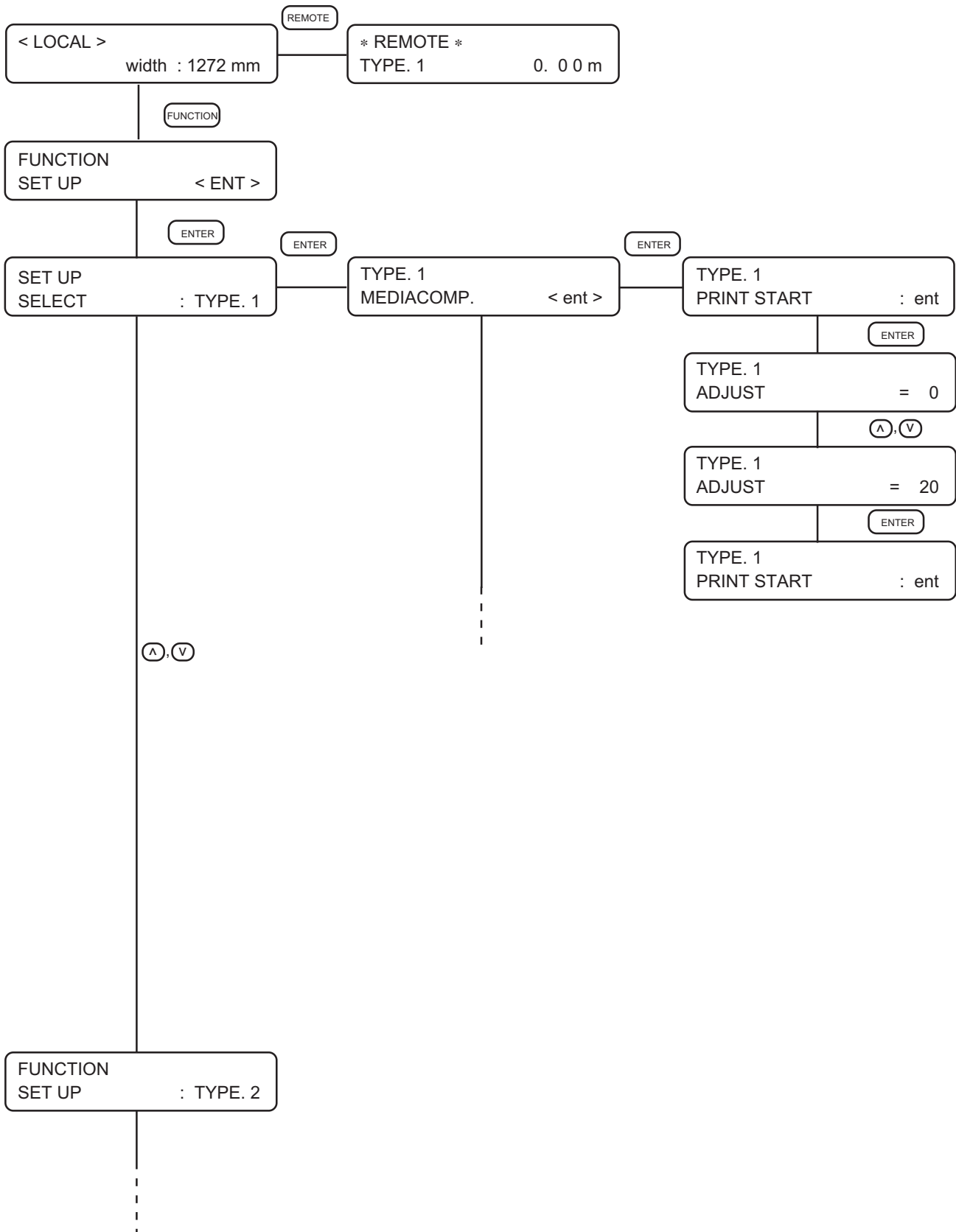
1. Select the LOCAL mode.

Ascertain first that the device does not perform printing under the REMOTE mode, then press the [REMOTE] key to enter the LOCAL mode.

2. Select the FUNCTION mode.

Press the [FUNCTION] key, and the device will enter the FUNCTION mode.
The FUNCTION mode is divided into two: the setup function and maintenance function. Select either function.

3. Select a type.

There are four types. The FUNCTION mode can be set for each type depending on the medium type used.

4. Select the Function.

Select the function pushing the JOG keys [▲] and [▼].

5. Enter the Function selected.

Press the [ENTER] key.

6. Select a parameter.

Press the JOG keys [▲] and [▼] to select a parameter.

7. Enter the specified value.

Press the [ENTER] key.

8. Restore the LOCAL mode.

Press the [END] key several time to restore the LOCAL mode.

Function mode

The FUNCTION mode consists of 16 items.

The 16 items can be registered for each of the following four types.

If the type has been registered for each medium type, it becomes easy to change plotting conditions when the medium type is changed.

Example)   Type1   :   For photo paper

Type2   :   For artificial paper

Type3   :   For white pet gloss paper

Type4   :   PVC

Registering a type

1. **Make sure that the mode is LOCAL mode.**

```
< LOCAL >
                Width : 1272 mm
```

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 [▼].**

```
SET UP
SELECT           : TYPE . 2
```

5. **Push the [ENTER] key.**
    Setting Plotting Conditions.

ENTER

```
TYPE . 1
MEDIA COMP.        < 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.

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

2. **Push the [END] key.**
    Plotting with the plotting condition registered for the selected type is possible.

Setup functions

The following describes the overview of and settings for each function.

Name	Function	☞
MEDIACOMP.	Correct the amount of feed for media	P.4-6
PRINT MODE	Set the plot quality, plot direction, and logical seek	P.4-6
INK LAYERS	Set the number of over writing	P.4-7
DRYING TIMES	Set an ink drying time	P.4-7
AUTO CUT	Cut off the medium automatically at the end of plotting	P.4-7
PRIORITY	Specifies the value set (host /panel)	P.4-7
MARGIN	Set a dead space of the medium	P.4-8
COLOR PATTERN	Plots a color pattern for Nozzle clogging check	P.4-8
REFRESH	Refreshing the head during plotting	P.4-8
MEDIA SET	Set the method of the medium ditection	P.4-9
VACCUM	Set the absorbability of the medium.	P.4-9
MM / INCH	Set a unit of set values.	P.4-9
STAMP	Prints the date of output and plotting condition	P.4-9
AUTO CLEANING	Cleaning the head automatically†everytime plotting complete.	P.4-9
AUTO CLEANING2	Cleaning the head automatically while plotting.	P.4-10
HEAD HEIGHT	Adjust the head height	P.4-9
SETUP RESET	Reset the currenct plotting conditions	P.4-9

MEDIACOMP.   ☞ P.2-18

When the medium type is changed, make sure to correct the amount of feed according to the medium thickness.

(-255-255)

PRINT MODE

Sets the plot quality, plot direction, and logical seek.

QUALITY :

Select the quality image from three items.

(STANDARD, FINE, FAST)

DIRECTION :

Specifies the head movement direction along which plotting is made.

[UNI-D] specifies that plotting is made while the head is moving to the left.

[BI-D] specifies that plotting is made while the head is moving to the left and right.

This mode allows higher plotting speed with a lower plot quality than UNI-D.

(UNI-D, BI-D)

LOGICALseek :

Normally, the head moves all the way to both ends of the medium to make plotting.

With LOGICAL seek, the head moves to the left and right according to the width of the plot image to make plotting.

This can reduce the plotting time.

This mode is effective not for raster data over the entire square area such as photographs but for illustrations.

The head movements are shown below.

OFF (UNI-DIRECTIONAL)   **OFF (BI-DIRECTIONAL)**
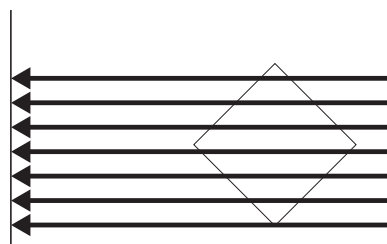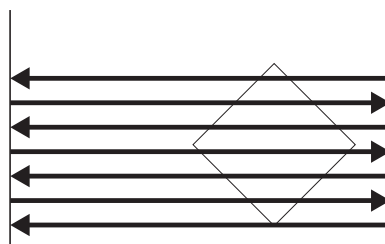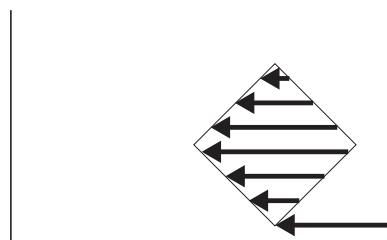
ON (UNI-DIRECTIONAL)   **ON (BI-DIRECTIONAL)**
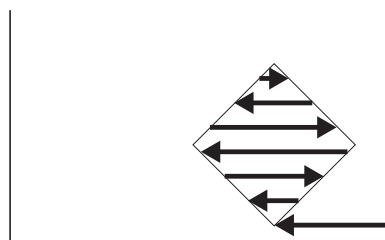
INK LAYERS

Sets the number of overwriting if ink coloring is poor.

(1-9 times)

DRYING TIME

This function sets an ink drying time. It sets the function for drying ink.

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 resolution on a drawing and the type of medium to be used.

SCAN :

Sets the time of temporary stop at the capping station during the reciprocating motion of the head.(0.0-9.9 sec)

- When 3 seconds or longer pause is specified, once the head is capped, for the ink blockage protection function works.

AUTO CUT :

Sets the time between the end of plotting and medium cutting.

However, the AUTO CUT function needs to be enabled.(0-999 sec)

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.

(ON, OFF)

Even if AUTO CUT is not specified, you can cut off the medium by hand.

PRIORITY

Specifies whether the values set on the device (panel) are given priority or the values set on the computer (host) are enabled as for the following seven functions.

(HOST, PLOT)

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

MARGIN

This function sets a dead space to increase/decrease the right and left margins of the medium.

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.

(0-195 mm)

COLOR PATTERN

This functions plots a color pattern for Nozzle cologging check.

REFRESH

Solidification of ink can be prevented by refreshing the head during plotting.

If this function is executed in a dusty place or dry place, ink in the head will be likely to solidify.

A larger level results in more number of refreshes.

(LEVEL0-3)

MEDIA SET

This function sets the method of medium detection.

SELECT :

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 medium are detected.

WIDTH :

Select this method when a roll medium is used.

Only the width of a medium will be detected.

When the medium is set and the clam lever is pushed up, the device detects only the medium width automatically.

VACCUM

Sets the absorbability of the medium. If the medium tends to stick to the platen, select LOW. (STANDARD, LOW, OFF)

MM / INCH

Set a unit of set values displayed. (MM, INCH)

STAMP

Prints the date of output and plotting condition at end of plotting.

MODE STAMP :Print the plotting condition.(ON, OFF)

TIME STAMP :Print the date of output.(ON, OFF)

AUTO CLEANING

The head is cleaned automatically. Perform cleaning for each plot to prevent plotting failures. (ON, OFF)

HEAD HEIGHT

This function adjusts the head height.

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.

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 4.4). 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 selecta cleaning type.**
   There are three cleaning type: [SOFT], [NORMAL] and [STRONG].
   Here, select [NORMAL].

   ```
   TYPE.1
   CL TYPE          :NORMAL
   ```

8. Push the [ENTER] key.

ENTER

```
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.

ENTER

```
TYPE.1
AUTO CLEAN2          < ent >
```
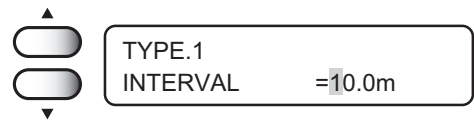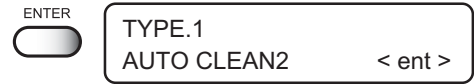
11.Push the [END] key twice, and the menu returns to the LOCAL mode.

END

```
<< LOCAL >>
                width : 1272mm
```
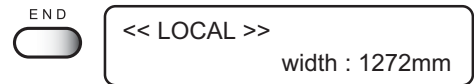
Effective Plotting Area

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

Roll medium

Cut sheet medium
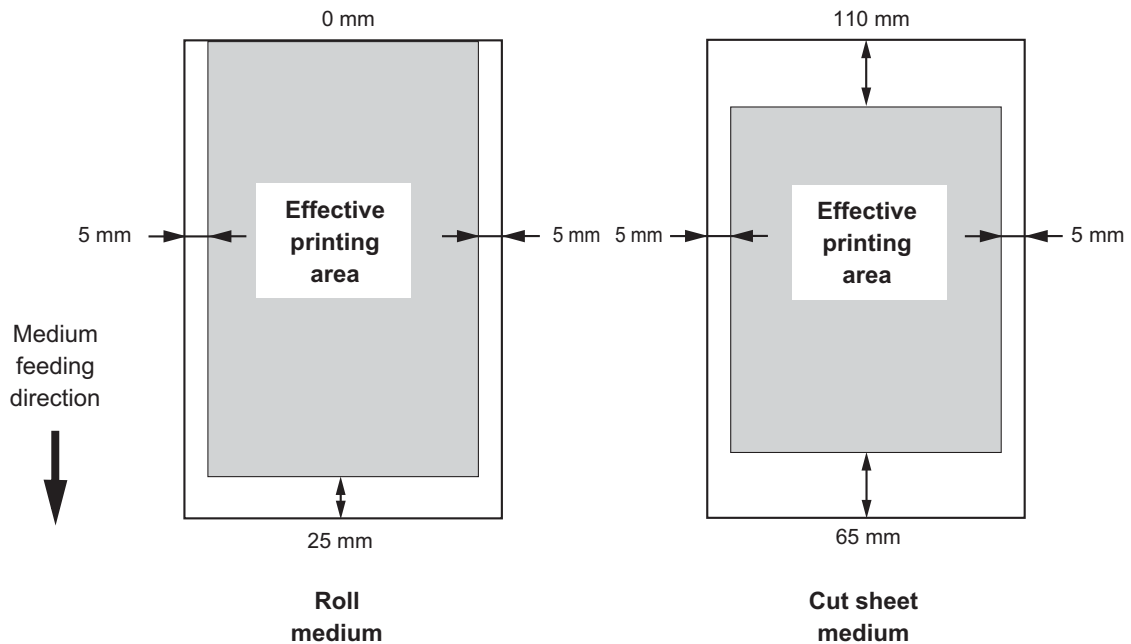
💡 • **Changing the effective printing area...**
Initial value of dead space for right and left of medium is 5 mm each.
The effective plotting area can be changed by changing the dead space.
Dead space is set with [Margin] in FUNCTION mode.

⚠ • The maximum plot area is getting narrow in a high speed scan mode at
CAUTION 360x360, 360x540, and 360x720 dpi.
JV22-130 : 1361 mm -> 1321 mm
JV22-160 : 1610 mm -> 1570 mm

Establishing An Origin

Establish an origin in terms of data on medium loaded on the device.
In the case of printing with the unspecified origin, set the origin again.

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 [▶].

```
<LOCAL>
                    Width : 1272 mm
```

```
          ORIGIN SET UP
   0. 0               0. 0
```

Origin(Length)   Origin(Width)
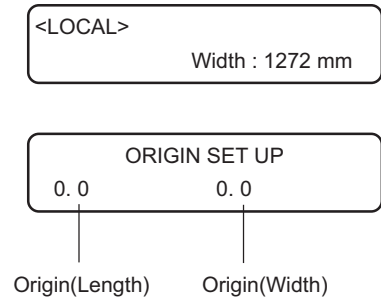
2. After deciding the origin, push the [ENTER] key.

ENTER

```
              ORIGIN
  X = 1500 mm        Y = 972 mm
```
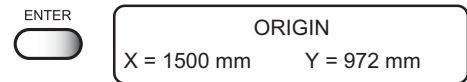
The effective plotting area is displayed on the LCD, and the device enters the LOCAL mode.
(When a roll medium is used, X is not detected.)

When the device stars plotting the next time, it uses the origin that has been established unless the origin is changed.

Standard of printing origin

The printing origin in set like right chart when shipping.

The value of scanning direction (Y') can be changed with [Margin] in FUNCTION mode. 👉 P.4-8

5 mm
(Y')

15 mm
(X')

Cutting line
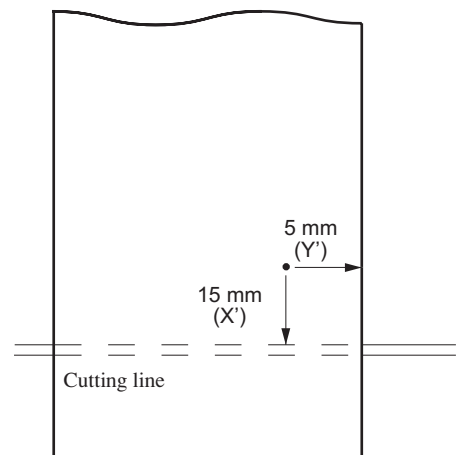
CHAPTER 5
Maintenance

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 worn cutter blade.

The device needs maintenance when it is left out of operation for a long period of time.

Table of contents

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.

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. **Make sure that the mode is LOCAL mode.**
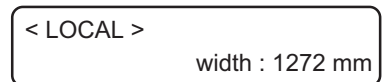
    ```
    < LOCAL >
                    width : 1272 mm
    ```

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.**
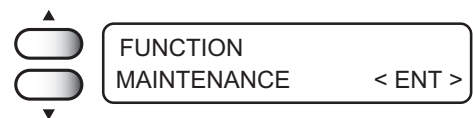
    ENTER
    ```
    MAINTENANCE
    STATION              < ent >
    ```

5. **Select the next operation.**
    Set up the desired maintenance function to carry out maintenance. ☞ page 5.3

Setup functions

The following describes the overview of and settings for each function.

Name	Function	👉
STATION	Clean the inside of the station and replace the wiper. (WIPER EXCHANG, CARRIAGEout)	page 5.4
PRINT ADJUST	Adjust the dot position according to the head height, high/low.	page 5.7
FILL UP INK	Perform this function if nozzle clogging is resolved after head cleaning.	page 5.9
INK CHANGE	Perform this function when changing the currently ink to other inks.	page 5.16
LIST	Plotting the set condition of the device.	page 5.10
DATA DUMP	Plotting data commands received from the computer, in HEX code.	page 5.11
WIPE LEVEL	Makes setting to move up the wiper replacement warning depending on the operating environment.	page 5.12
TIME SET	Sets the date and time of the built-in calender of the device.	page 5.13
INFORMATION	Displays the firmware version, serial number, and dealer number of the device.	page 5.14

Cleaning the station interior [STATION]-[CARRIAGEout]

Move the carriage when cleaning the station interior and replacing the consumable parts.

$\triangle$
CAUTION
 • Do not move the carriage out of the capping station by hand.
   Use the appropriate operation key to move the carriage.

For the [STATION] function, there are two following items.

CARRIAGEout : Move the carriage for maintenance of the station interior.

WIPER EXCHANGE : When the message [REPLACE WIPER] is displayed, replace the wiper. ☞ page 5.5.

STEP

1. **Select [CARRIAGEout], and then carriage moves out.**

```
STATION
MENT          : CARRIAGEout
```

2. **Open the front cover, then perform the following maintenance works for the station interior.**

1.　Cleaning the ink caps Remove ink with a cotton swab from the rubber mounted around the cap. ☞ page 3.4.
2.　Cleaning the wiper Take out the wiper and then wipe out ink with cotton buds. ☞ page 3.4.
3.　Cleaning the wiper cover Wipe off ink to the ceiling of the wiper cover using cotton buds. ☞ page 3.5.
4.　Replacing the cutter blade The cutter blade is a consumable part. When the cutter blade has become blunt, replace it with a new one. ☞ page 5.15

When the message [REPLACE WIPER] is displayed [STATION]-[WIPER EXCHANGE]

The wipers are consumable parts. When the following message is displayed, replace the wipers with new ones.

```
< LOCAL >
REPLACE WIPER
```

At the same time, clean the ink at the bottom of the slider.

- The wiper is optional supply which does not come with the machine.

⚠ CAUTION
- Do not push the [ENTER] key other than the case of replacing wipers.
  The number of wiper operations that is counted in the Device will be reset.
  Do not select [REPLACE WIPER] unless the wiper is to be really changed.

STEP

1. **Select the [WIPER EXCHG], and then the carriage will come out of the capping station.**

```
STATION
MENT          :  WIPER EXCHG
```

2. **Open the front cover, then change the wiper.**

3. **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.
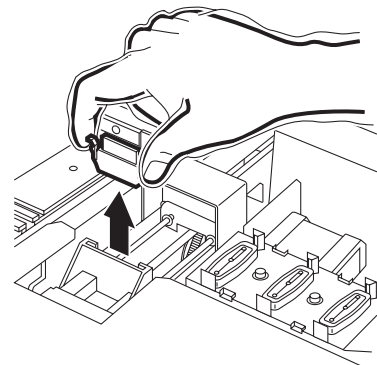
4. **Holding the projections at both ends, insert a new wiper into place.**
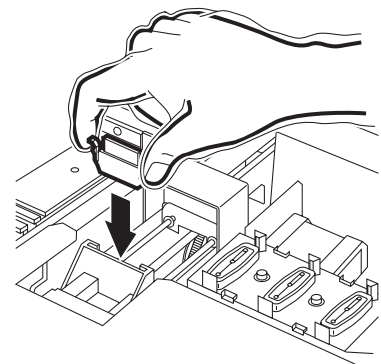
5. **Clean the wiper guide shaft using a cotton bud or cloth.**

   If dirt is hard to remove, use a cotton bud of cloth dampened with cleaning fluid (SPC-0137).
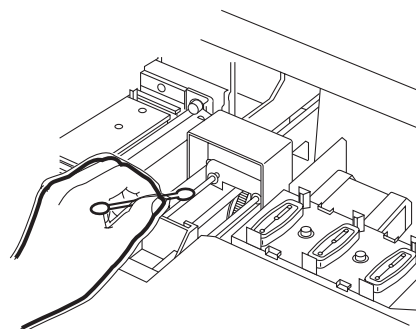
6. **Close the front cover, then push the [ENTER] key.**

   ENTER

   ```
   INITIALIZING
   PLEASE WAIT
   ```
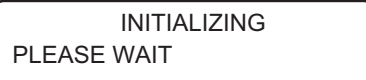
7. **The device enters the LOCAL mode.**

   ```
   < LOCAL >
                    width : 1272 mm
   ```
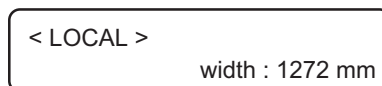
When medium thickness is changed [PRINT ADJUST]

When the head height is adjusted, make sure to correct the dot positions for the appropriate head position is subtly different according to the head height. This function corrects the dot positions to ensure that the accurate plotting result is obtained. Perform the function after adjusted the head height.

The dot positions are corrected by comparing the ink dropping positions on each of the seven test patterns between the two plotting directions.

> • When in use of a roll medium, the back side of roll medium will loosen after executing print adjust, for the medium returns to the plot original point.

STEP

1. Select the [PRINT ADJUST].

```
MAINTENANCE
PRINTadjust          < ent >
```

2. 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.

ENTER

```
MAINTENANCE
PRINT  START          : ent
```

3. 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
PATTERN 1            = 0. 0
```

CAUTION
- If the pattern correction value for straight lines is not within -40 through +40, 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 pattern in two plotting direction.

Out put direction

+   −

±0
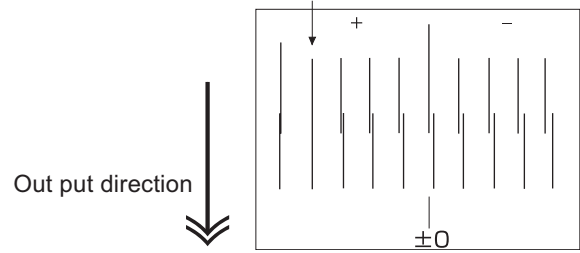
6. Push the [ENTER] key.

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
PATTERN 2          = 0. 0
```

```
MAINTENANCE
PATTERN 3          = 0. 0
```

```
MAINTENANCE
PATTERN 4          = 0. 0
```

```
MAINTENANCE
PATTERN 5          = 0. 0
```

```
MAINTENANCE
PATTERN 6          = 0. 0
```

```
MAINTENANCE
PATTERN 7          = 0. 0
```

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

END

TWICE

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

Regular wiping function [INT.WIPING]

In case plotting has set at HIGH range (Transferring printing), spray, ink blot, or nozzle-clogging may happen.

It is caused by ink drops which flow up and adhere to the head surface by gap between the head and the printing surface.

This function enables to wipe off condensed ink as wiping the nozzle at intervals during plotting.

⚠ **CAUTION**
- **This function is available to set for the head at HIGH range ONLY. (☞ page 2-6)**
  When setting Low range for head, it perform as OFF setting constantly and also doesn't appear on the menu.

STEP

1. **Push the [FUNCTION] key on the LOCAL mode.**

   FUNCTION

   ```
   FUNCTION
   SETUP            < ENT >
   ```

2. **Select the [MAINTENANCE] pushing the [▲] or [▼] key.**

   ```
   FUNCTION
   MAINTENANCE      < ent >
   ```
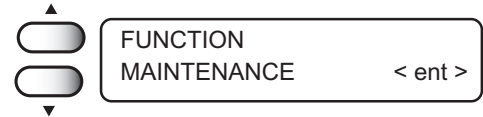
3. **Push the [ENTER] key.**
   Display the [STATION].

   ENTER

   ```
   MAINTENANCE
   STATION          < ent >
   ```
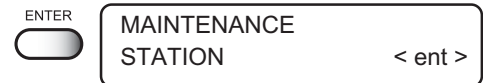
4. **Select the [INT.WIPING] pushing the [▲] or [▼] key.**

   ```
   MAINTENANCE
   INT.WIPING       < ent >
   ```

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

   ENTER

   ```
   INT.WIPING
   RENEW            : OFF
                    : ON
   ```
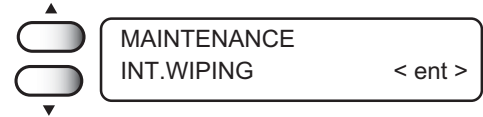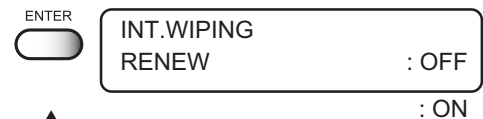
6. **Select the [ON/OFF] pushing the [▲] or [▼] key.**

7. **Push the [ENTER] key.**
   When selecting "OFF", to step10.

   ENTER

8. **Enter the number of the scanning pushing the [▲] or [▼] key. (10-9990 scan)**

   ```
   INT.WIPING
   SCAN  COUNT      = 100
   ```
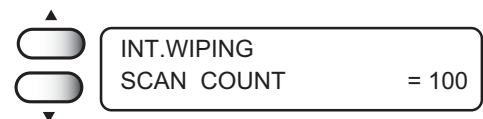
   - The initial value of SCAN COUNT is 100.
     Alter the setting value according to the status of use.

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

   ENTER

10. **Push the [END] key twice.**
    The menu returns to the LOCAL mode.

    END
    TWICE

    ```
    <LOCAL>
    ```
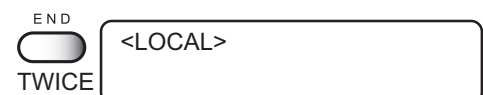
If nozzles are clogged even after the cleaning function is executed

If nozzle clogging is resolved after HEAD CLEANING (☞ page 2.16), perform the following function.

[FILL UP INK]

1. **Select the [FILL UP INK].**

   ```
   MAINTENANCE
   FILL UP INK          < ent >
   ```

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

   ENTER

   ```
   FILL UP INK
   HEAD SEL.        : 1 2.  3 4
   ```

3. **Push the jog key [▲][▼][◄][►] to select the head for fill.**

   Select the head number by the set, 12 or 34.

   ▲
   ▼
   ◄ ►

   ```
   FILL UP INK
   HEAD SEL.        : - -.  3 4
   ```

   ```
   FILL UP INK
   HEAD SEL.        : - -.  3 4
   ```
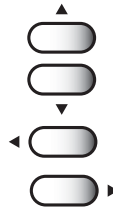
   ```
   FILL UP INK
   HEAD SEL.        : 1 2.  3 4
   ```

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

   Filling of ink is started automatically.

   ENTER

   ```
   FILL UP
   * * * * * * – – – – – – – – – –
   ```

   When filling of ink is completed, the menu returns.

   ```
   MAINTENANCE
   FILL UP INK          < ent >
   ```

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

   END
   TWICE

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

Drawing setup conditions [LIST]

This function outputs the current settings of the device.

They are useful in carrying out maintenance of the device.

1. **SET UP** : Indicates a value that is specified with the FUNCTION.
2. **PRINTadjust** : Indicates a correction value for dot position.
3. **REPLACE COUNTER** : Indicates the number of times the ink cartridges are replaced.
4. **VERSION** : Indicates the version of the firmware and memory capacity of the device.
5. **PARAMETER** : Used for service persons for maintenance.

```
        LIST   (System Ver1.00)   (I/F Ver1.50)   S/N : D1406001
(1) SET UP       <  TYPE1 >              TYPE2                 TYPE3                 TYPE4
   MEDIA COMP.   0         :HOST     34        :PLOT     0          :HOST     0          :HOST
   PRINT MODE    STD       :HOST     FAST      :PLOT     STD        :HOST     STD        :HOST
     DIRECTION   BI-D                UNI-D               UNI-D               UNI-D
     LOGICALseekON                   ON                  ON                  ON
   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
   PRE-FEED      OFF                 OFF                 OFF                 OFF
   MARGIN RIG    0mm                 0mm                 0mm                 0mm
        LEFT     0mm                 0mm                 0mm                 0mm
   REFRESH       LEVEL3    :HOST     LEVEL3    :HOST     LEVEL3     :HOST     LEVEL3     :HOST
   MEDIA SET     SELECT              SELECT              SELECT              SELECT
   VACUUM        STANDARD:HOST       STANDARD:HOST       STANDARD:HOST       STANDARD:HOST
   MM/INCH       MM                  MM                  MM                  MM
   STAMP MODE    OFF                 OFF                 OFF                 OFF
        TIME     OFF                 OFF                 OFF                 OFF
   AUTO CLEAN    ON                  OFF                 OFF                 OFF
(2) InkType      Pig-4(KKCCMMYY)
(3) HeadHight    HIGH-range/Thin
(4) WIPE LEVEL   10/10
(5) DISPLAY      English
(6) PRINTadjust
        THIN     PATTERN1            PATTERN2            PATTERN3            PATTERN4
                 1.5                 -1.0                5.5                 0.5
                 PATTERN5            PATTERN6            PATTERN7
                 8.5                 10.0                12.5
        THICK    PATTERN1            PATTERN2            PATTERN3            PATTERN4
                 4.0                 2.0                 9.0                 4.0
                 PATTERN5            PATTERN6            PATTERN7
                 13.5                15.0                20.0
(7) REPLACE CNT
   CARTRIDGE     1: 1    2: 1    3: 1    4: 1    5: 2    6: 4    7: 1    8: 2
   REMAIN        1: 2%   2: 99%  3: 99%  4: 99%  5: 99%  6: 99%  7: 99%  8: 99%
   SHOT COUN     1: 9669         2: 9263         3: 14496        4: 14163
                 5: 23233        6: 22881        7: 16217        8: 15107
   SCAN COUNT    4               (x1000)
   DRAW LENGT    1784m    5855ft
   DRAW AREA     19076m²       205332sq.ft.
   USE TIME      57h
   Date : 04.06.04 10:11
```

Plotting HEX CODE [DATA DUMP]

Use the function when command error or parameter error occurs.(☞ Page 6.6 - 6.8)

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.

Please mailing the output data to our office nearby, or fax it.

⚠ 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. **Select the [DATA DUMP].**

```
MAINTENANCE
DATA DUMP              <ent>
```

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

   Plotting starts automatically.

ENTER

```
∗ REMOTE ∗
     ∗ ∗ DATA DUMP ∗ ∗
```

Wiper Life warning [WIPE LEVEL]

The wipers are consumable parts. The head becomes dirty easily on dusty locations.

The head cannot be cleaned adequately with a curled or worn wiper.

This setting moves up the wiper replacement warning depending on the operating environment.

10/10 : Displays the wiper replacement warning when the standard number of
wiping is reached (initial value).

9/10 : Displays the wiper replacement warning when nine ten of the standard
number of wiping is reached.

8/10 : Displays the wiper replacement warning when eight ten of the standard
number of wiping is reached.

.

.

.

.

1/10 : Displays the wiper replacement warning when one ten of the standard
number of wiping is reached.

Setting time [TIME SET]

The device incorporates a calender. [TIME STAMP] function of the FUNCTION mode displays the date and time depending on this setting. ☞ page 4.9

STEP

1. **Select the [TIME SET].**

```
MAINTENANCE
TIME SET              < ent >
```

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

ENTER

```
MAINTENANCE
DATE       = 2 0 0 2 . 1 0 . 0 2
```

3. **Set the date.**

   Press the [◄] and [►] jog keys to select the digit.
   Press the [▲] and [▼] jog keys to change the value.

   ⚠ CAUTION   • Not available to set the past date.

   ▲
   ▼

```
MAINTENANCE
TIME             = 1 6 : 2 0 : 0 7
```

4. **Push the [▲] and [▼] key to select the [TIME].**

5. **Set the time.**

   Press the [◄] and [►] jog keys to select the digit.
   Press the [▲] and [▼] jog keys to change the value.

ENTER

```
MAINTENANCE
DATE       = 2 0 0 2 . 1 0 . 0 2
```

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

7. **Displays the set date.**

   Press the [▲] and [▼] jog keys to display the time setting.

8. **Push the [END] key twice, the device returns to the LOCAL mode.**

   END

   TWICE

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

Displaying device information [INFORMATION]

Displays the firmware version, serial number, and dealer number of the device.

If trouble occurs, please inform the dealer or MIMAKI sales office of the contents of the trouble as well as this information. This can make solution quicker.

STEP

1. **Select the [INFORMATION].**

    ```
    MAINTENANCE
    INFORMATION        < ent >
    ```

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

    ENTER
    ```
    MAINTENANCE
    VERSION            < ent >
    ```

3. **Push the [ENTER] key to display the firmware version.**

    ENTER
    ```
    MAIN            Ver 1. 0 0
    I / F           Ver 1. 0 0
    ```

4. **Push the [▲] and [▼] key to select the [SERIAL No.].**

    ```
    MAINTENANCE
    SERIAL No.         < ent >
    ```

5. **Push the [ENTER] key to display the serial number.**

    ENTER
    ```
    MAINTENANCE
       S / N ∗ ∗ ∗ ∗ ∗ ∗ ∗ ∗
    ```

6. **Push the [▲] and [▼] key to select the [DEALER No.].**

    ```
    MAINTENANCE
    DEALER No.         < ent >
    ```

7. **Push the [ENTER] key to display the dealer number.**

    ENTER
    ```
    MAINTENANCE
       D / N ∗ ∗ ∗ ∗ ∗ ∗ ∗ ∗
    ```

8. **Push the [END] key twice, the device returns to the LOCAL mode.**

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

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. (SPA-0107)

⚠️ CAUTION
- 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.

💡
- It is recommended to place a sheet of paper under the cutter blade.
  This will help find the cutter blade even if it drops.

STEP

1. **Execute [CARRIAGE out].**

   👉 page 5.4

   ```
   STATION
   MENT : CARRIAGE out
   ```

2. **Open the front cover.**

3. **Replace the cutter unit that is located along-side 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.
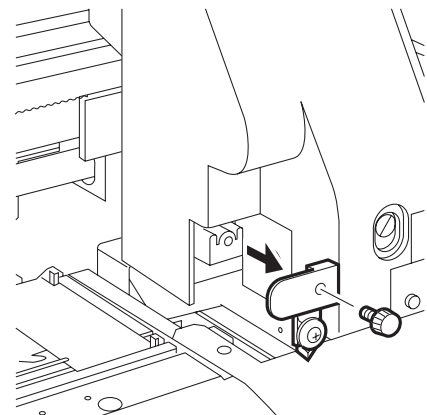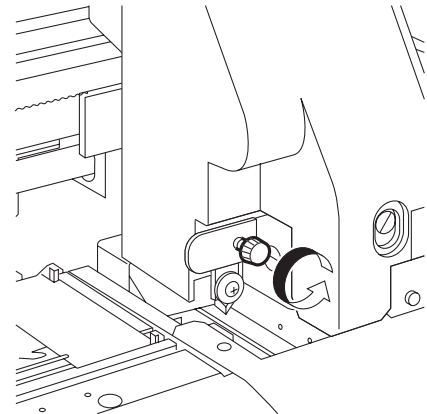
4. **Close the front cover, and push [ENTER] key.**

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

Ink replacing procedure

The current ink set can be altered.
Replace from 4-color ink set to 6/8-color ink set.
Replace from 6-color ink set to 4/8-color ink set.
Replace from 8-color ink set to 4/6-color ink set.

4-color ink set

Two ink cartridges of the same color can be placed per head for fast and high-quality printing. Four colors (Black, Magenta, Cyan, Yellow) are used.

Set the ink cartridge according to the upper color order label shown under the ink station on the back.

6-color ink set

Each of the six colors is placed in each ink station for higher-quality printing. Six colors (Black, Magenta, Cyan, Yellow, Light magenta, Light cyan) are used.

The other two ink stations are for setting the washing fluid cartridges (SPC-0188S).

Set the ink cartridge according to the lower color order label shown under the ink station on the back.

8-color ink set

Each of the eight colors is placed in each ink station for higher-quality printing.

On 8-color ink set of aqueous pigment ink, two types of 6-color ink set (Black, Magenta, Cyan, Yellow, Light cyan, Light magenta or Black, Magenta, Cyan, Yellow, Green, Orange) can be used without ink replacing.

Eight colors (Black, Magenta, Cyan, Yellow, Light cyan, Light magenta, Green, Orange) are used.

On Reactive dye ink, eight of eleven colors (Black, Magenta, Cyan, Yellow, Light cyan, Light magenta, Gray, Blue, Orange, Red, Golden yellow) are used.

On Acid dye ink, eight of nine colors (Black, Magenta, Cyan, Yellow, Light cyan, Light magenta, Gray, Blue, Red) are used.

- On Reactive dye ink and Acid dye ink, arrangement of ink cartridges is affect on operating. Set the ink cartridges depending on conditions.

```
Bk   Bk   C   C              4 color ink set      M      M     Y   Y
Bk   C    M   Y              6 color ink set      Lc/O   Lm/G  W   W
Bk   C    M   Y              8 color ink set      Lc     Lm    G   O
```

STEP

1. **Press the [FUNCTION] key.**

   ENTER

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

2. **Press the [▲] or [▼] key to select [MAINTENANCE].**

   ```
   FUNCTION
   MAINTENANCE      < ENT >
   ```

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

   [STATION] is displayed.

   ENTER

   ```
   MAINTENANCE
   STATION          < ent >
   ```
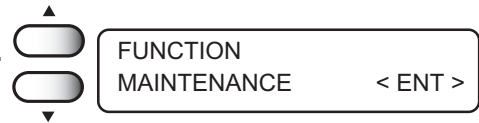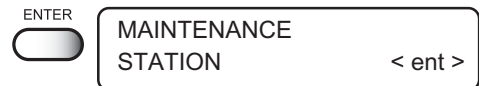
4. **Press the [▲] or [▼] key to select [INK CHANGE].**

   ```
   MAINTENANCE
   INK CHANGE        <ent>
   ```
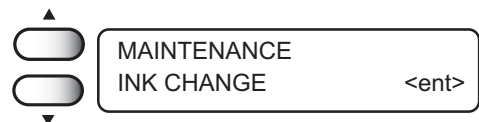
5. **Press the [ENTER] key.**

   Filled ink type is displayed.

   ENTER

   ```
   INK CHANGE
   Pig-4 (KKCCMMYY)
   ```

6. **Press [▲] and [▼] to select the ink type to be replaced.**

	INK CHANGE
	Pig-6 (KCMYcm)

[Pig-4(KKCCMMYY)]   Aqueous pigment ink
[Pig-6(KCMYcm)]   Aqueous pigment ink (Light cyan, Light magenta)
[Pig-6(KCMYGO)]   Aqueous pigment ink (Orange, Green)
[Pig-8(KCMYcmGO)]   Aqueous pigment ink (Light cyan, Light magenta, Orange, Green)
[Dye-4(KKCCMMYY)]   Aqueous dye ink
[Dye-6(KCMYcm)]   Aqueous dye ink (Light cyan, Light magenta)
[Sub-4(KKCCMMYY)]   Sublimation dye ink
[Sub-6(KCMYcm)]   Subliimation dye ink (Light cyan, Light magenta)
[TPig4(KKCCMMYY)]   Textile pigment ink
[Reac8]   Reactive dye ink
[Acid8]   Acid dye ink

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

ENTER

```
          WASH
  REMOVE CARTRIDGE
```

8. **Remove the ink cartridge.**

The ink is discharged into the waste ink tank.

9. **When the display shown at right appears, set the cleaning cartridge.**

Cleaning fluid is suctioned up.

```
         WASH
    SET  CLEAN  TOOL
```

10. **When the display shown at right appears, remove the cleaning cartridge.**

Suck in air.

```
         WASH
    REMOVE  TOOL
```

11. **When the display shown at right appears, set the cleaning cartridge.**

Cleaning fluid is suctioned up.

```
         WASH
    SET  CLEAN  TOOL
```

12. When the display shown at right appears, remove the cleaning cartridge.

Discharge the suctioned cleaning fluid into the waste ink tank.

```
          WASH
      REMOVE  TOOL
```
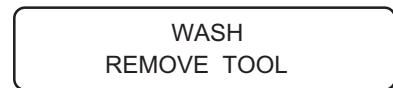
13. When the display shown at right appears, set the new ink cartridge.

Ink is suctioned up.

```
         FILL UP
      Set a CARTRIDGE
```

14. When all steps have been completed, the display shown at right appears.

```
  MAINTENANCE
  INK CHANGE          < ent >
```
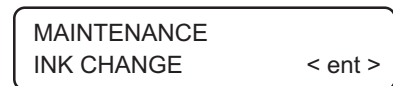
15. Press the [END] key twice to return to the LOCAL mode.

END

```
  < LOCAL >
               width : 1272 mm
```
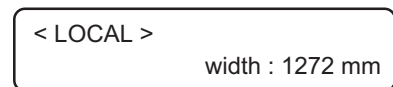
CHAPTER 6
When abnormal conditions are encountered

Chapter 6 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.

Table of contents

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 to them.

Is the switch ON?	**No** →	Turn on the power of the switch. ☞ **page 2.3**
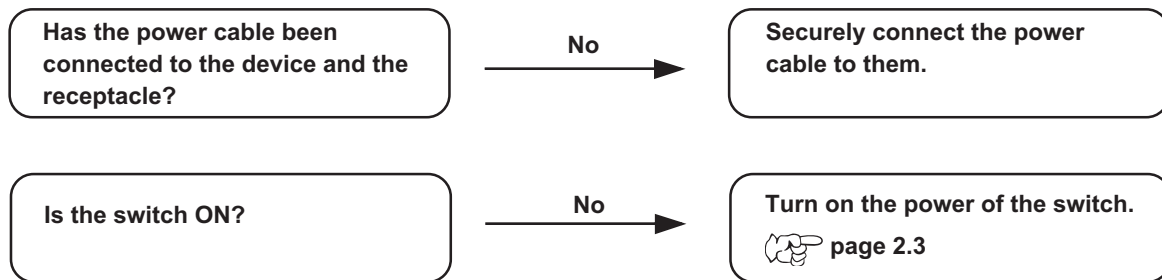
The device cannot perform printing

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.
Has the interface cable been securely connected in position?	**No** →	Securely connect the interface cable in position.

Yes ↓

Is the message telling that ink has run out shown on the display?	**Yes** →	Replace the ink cartridge with a new one. ☞ **page 2.22**
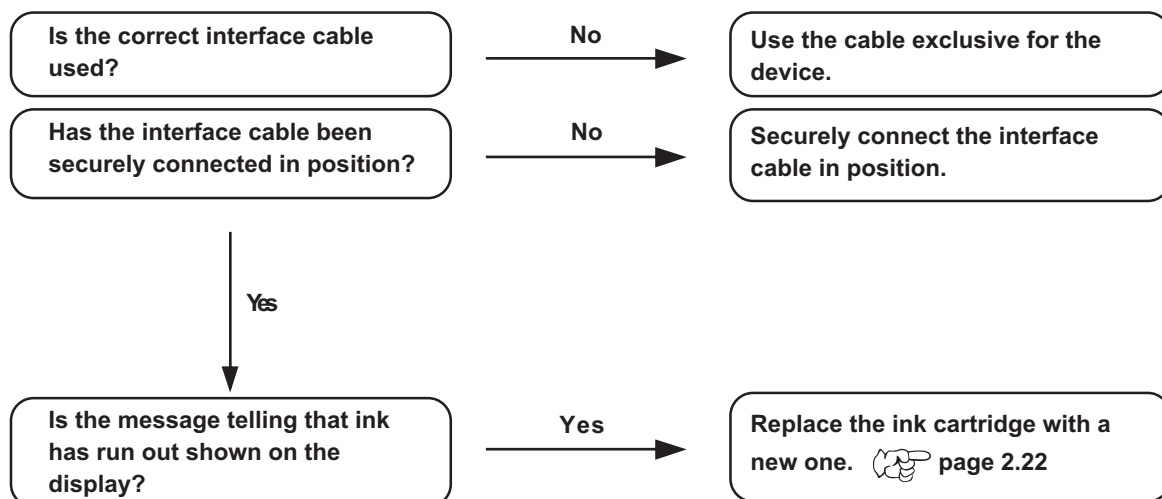
Paper jamming arises/medium is soiled

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 medium specific to the device?	**No** →	Use medium specific to the device.

Yes ↓

Are you using medium that has neither curls nor bent ends?	**No** →	Avoid medium that has curls or bent ends.

Yes ↓

Does the medium hang over along the platen?	**No** →	Use a take-up device or re-load the medium on the device. ☞ **page 2.10, 2.14**
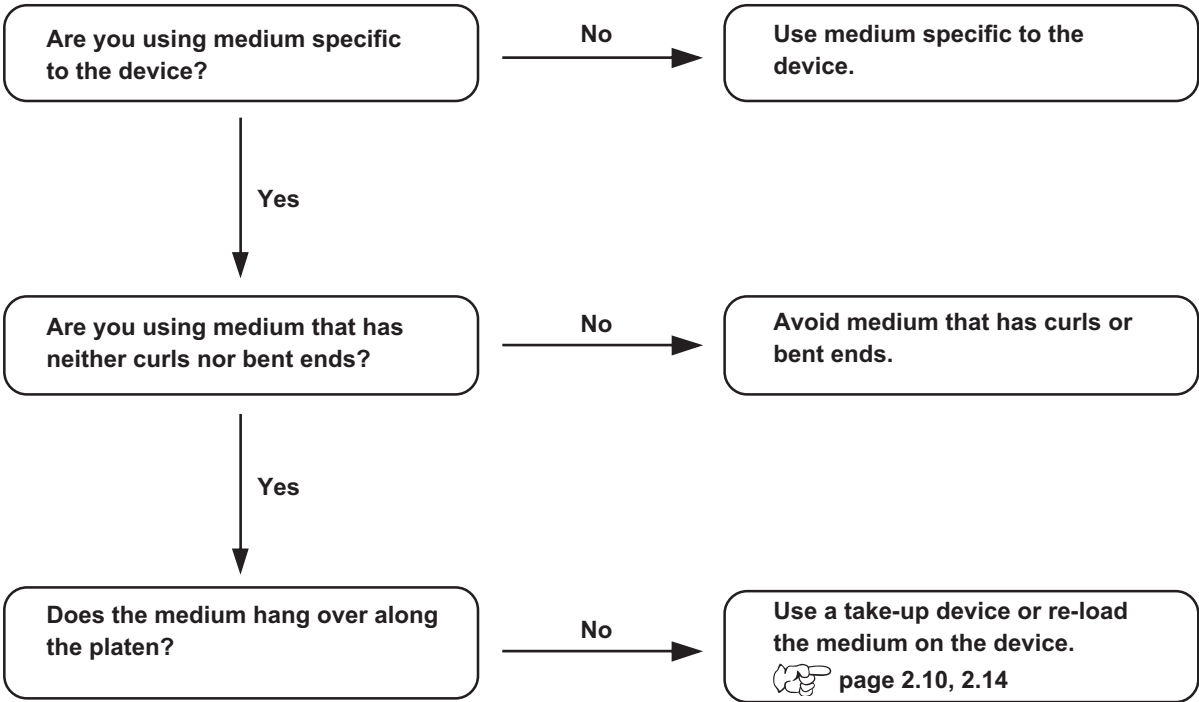
If image quality declines

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. ☞ page 2.17
Corrective measure :	Clean the interior of the station. ☞ page 3.4, 5.9
Corrective measure :	Conduct the [MEDIA COMP.] function. ☞ page 2.18
Corrective measure :	If slip of paper is present in the head path, for example, above the media plate, remove it.

Characters fluctuate doubly or triply into paper feed

Corrective measure :	Conduct the [MEDIA COMP.] function. ☞ page 2.18

Displacement is observed between outward and inward printing

Corrective measure :	Adjust "Y (outward and inward)" in [PRINT ADJUST] function. ☞ page 5.7

The respective color ink injected by the respective color heads do not properly overlap

Corrective measure :	Conduct the [PRINT ADJUST] function. ☞ page 5.7

Large ink drop on medium

Corrective measure :	1. Execute the wiper cleaning. ☞ page 3.4
	2. Execute the ink caps cleaning. ☞ page 3.4
	3. Execute the head cleaning [normal]. ☞ page 2.17

To prevent from cockring

Cockring may occur during printing. In case it occurs and head clashes wih the uneven surface of media, perform the following procedure. Especially, when in use of transfer paper with transfer inks, it may occur easily depending on the used transfer paper type.

Use a winding device

Refer to "Switching the direction of winding of the medium" for details.

Adjust the head height

Refer to "Adjusting the head height" for details.

Put a thin sheet to cover the holes on platen

This device equipeed with vacuum function that enables the media fit flatly onto platen. You can confirm many holes (2mm in diameter) on the platen.

Depending on the media width, some media may not be able to cover all holes on the platen. (See Figure.A) In the case, use the same kind of media or thin sheet to cover the holes, or the air may not be able to vacuum completely from the holes.(See Figure.B)

⚠ CAUTION

Make sure to use a thin sheet (less than 1mm thickness) with no irregular surface, or it may clash with the head.
We recommend you to use the black sheet to prevent a sensor glitch.
The best pitch for a sheet depth is between Feed roller(☞P 1.8) and the Cutting line(☞ P 1.9).
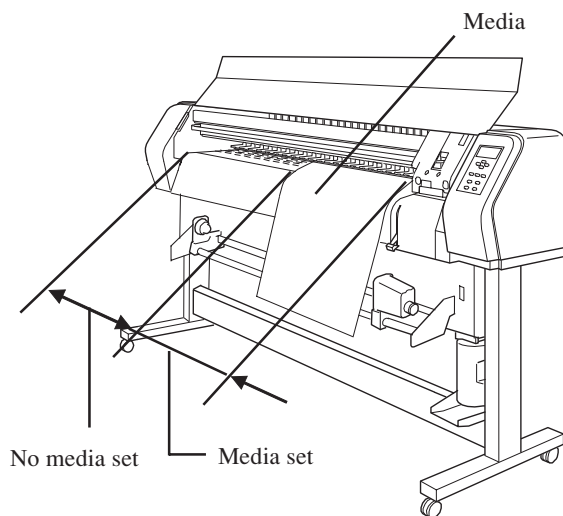
Figure. A
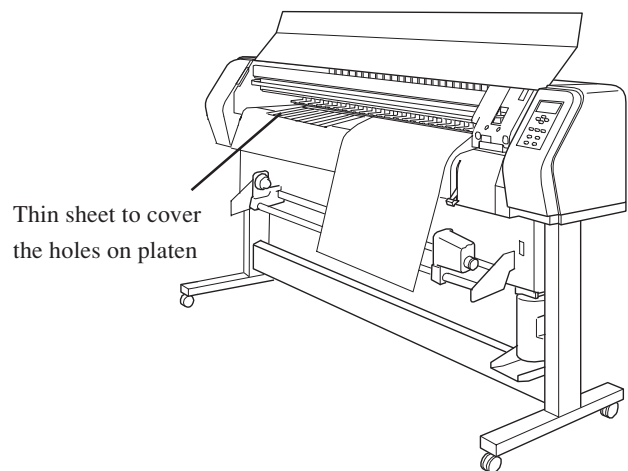
Figure. B

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 KKCCMMYY	The mounted ink cartridge is defective.	Press the [ENTER] key to display the details of the error. Check the error.
< LOCAL > NEAR END KKCCMMYY	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 KKCCMMYY	The ink cartridge has run out of ink.	Replace the ink cartridge of which color is shown on the LCD with a new one.
< LOCAL > 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] key. Then, the error message will not appear until the power is returned 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 distributor or MIMAKI office to call for service.

Error message	Cause	Corrective measure
ERROR 01 MAIN ROM	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 02 MAIN RAM		

ERROR 03
POWER +5V
	Control circuit board is defective.
	    POWER+5V
	    POWER+35V	

ERROR 04 FRASH ROM	Control circuit board is defective.	
ERROR 06 D-RAM		
ERROR 07 HEAD – – * – – –	Head connection failure is detected.	
ERROR 08 ENCODER n	Trouble with detection of linear encoder.	

ERROR 09
HDC
	Control circuit board is defective.
	    FPGA Error
	    HDC Error	

ERROR 10 COMMAND	The device has received data other than command data. The interface cable used is not in conformance with this plotter.	Securely connect the interface cable in position. Use an interface cable in conformance with the standard.
ERROR 11 PARAMETER	A parameter outside the range of acceptable numeric values is received.	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 20 I / F BOARD	Improper operation has been conducted on the operation panel.	
ERROR 21 I / F NONE	No I/F board is attached to the control board.	

Error message	Cause	Corrective measure
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.	
ERROR 46 WIPER	The wiper position is not correct.	
ERROR 50 MEDIA SENSE	Paper could not be detected. The medium set position or medium itself is not correct.	Refer to "Setting the media". ☞ page 2.8. If this error cannot be resolved even after setting it correctly, contact the dealer.
ERROR 51 Y ORIGIN	Origin could not be 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 57 HEAD HEIGHT SENS.	Head height could not be 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.

APPENDIX

This appendix describes the specifications and components the device, function menu structure.

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Basic specifications

Item		JV22-130	JV22-160
Printing head	Method	Piezo-electric drop-on demand	
	Specification	4-heads Inlines	
	Nozzle	360 nozzles / color (4 color set) : 180 nozzles / color (6 color set)	
	Resolution	360, 540, 720, 1440 dpi	
Drawing mode	4-color ink set	360 x 360 dpi : 1 / 2 / 4 passes, Unidirection / bidirection 360 x 540 dpi : 3 / 6 / 12 passes, Unidirection / bidirection 360 x 720 dpi : 2 / 4 / 8 / 16 passes, Unidirection / bidirection 720 x 720 dpi : 2 / 4 / 8 / 16 passes, Unidirection / bidirection 720 x 1440 dpi : 4 / 8 / 16 passes, Unidirection / bidirection 1440 x 1440 dpi : 8 / 16 passes, Unidirection / bidirection	
	6/8-color ink set	360 x 360 dpi : 2 / 4 / 8 passes, Unidirection / bidirection 360 x 540 dpi : 3 / 6 / 12 passes, Unidirection / bidirection 360 x 720 dpi : 4 / 8 / 16 passes, Unidirection / bidirection 720 x 720 dpi : 4 / 8 / 16 passes, Unidirection / bidirection 720 x 1440 dpi : 8 / 16 / 32 passes, Unidirection / bidirection 1440 x 1440 dpi : 16 / 32 passes, Unidirection / bidirection	
Available ink type		4 colors(K,C,M,Y)x2 6 colors:Aqueous pigment ink(K,C,M,Y,Lc,Lm) or (K,C,M,Y,G,O) 6 colors:Aqueous dye ink(K,C,M,Y,Lc,Lm) 6 colors:Sublimation ink(K,C,M,Y,Lc,Lm) 8 colors:Aqueous pigment ink(K,C,M,Y,Lc,Lm,G,O) 8 colors:Reactive dye ink, Acid dye ink	
Delivery system of ink		Supplies ink through a tube from ink cartridge Remaining ink display function (No IC chip) Ink end detecting function Ink cartridge replacement system	
Capacity of ink cartridge		220 cc ± 5 cc per cartridge About 200 cc for each cartridge variable	
Medium type		Photopaper, Artificial paper, Mechanical film	
Max. printing width	Normal Scan	1361 mm	1610 mm
	High-speed Scan	1321 mm	1570 mm
	1440 x 1440 dpi	1361 mm (4-color) / 1000 mm (6/8-color)	1610 mm (4-color) / 1000 mm (6/8-color)
Roll Medium size	Maximum	1371 mm	1620 mm
	Minimum	210 mm	
	Thickness	1.0 mm or less	
	Roll outside diameter	Ø 180 mm or less	
	Roll weight	25 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.	
Leaf medium size	Maximum	1371 mm	1620 mm
	Minimum	210 mm	

Item		JV22-130	JV22-160
Margin	Leaf medium	Left end and right end : 5 mm	
		Front : 65 mm	
		Rear : 110 mm	
Margin	Roll medium	Left end and right end : 5 mm	
		Front : 25 mm	
		Rear : 0 mm	
Distance accuracy	Absolute accuracy	Whichever the larger one of ± 0.3 mm or ±0.3 % of the designated	
	Reproducibility	Whichever the larger one of ± 0.2 mm or ±0.1 % of the designated	
Perpendicularity		± 0.5 mm / 1000 mm	
Medium skew		5 mm or less / 10 m variable	
Head height adjustment		Lo range(1.5 mm / 2.5 mm) : Hi range(3.5 mm / 4.5 mm)	
Cutting of medium		Cutting of Y direction by the head cutter, Cutting accuracy(steps) : 0.5mm or less.	
Medium delivery Waste ink tank		Take-up device as standard (inside winding / outside winding selectable) Bottle type (2,000 cc [1pcs.]) Replacement timing is judged visually.	
Interface		IEEE1394 compliant, IEEE1284 compliant	
Command		MRL-II (ESC/PV.2 base, MIMAKI original command)	
Noise		during standby : Less than 58 dB (FAST-A, Front & Rear & Left & Right 1 m) during continuous printing : Less than 65 dB during discontinuous printing : Less than 70 dB	
Safety Standard		UL, VCCI-classA, FCC-classA, CEmarking, CBreport	
Power		AC 100 — 120 V± 10%, AC 220 — 240 V± 10%, 50/60 Hz ± 1 Hz	
Power consumption		300 VA or less	
Recomended Environment	Available temp.	20 °C to 35 °C	
	Humidity	35 to 65 % Rh (No condensation)	
	Guaranteed temp.	20 °C to 25 °C	
	Temperature change	± 10 °C / h or less	
	Dust	Equivalent to normal office level	
Weight	Main unit	130 Kg	140 Kg
	Packing box	Less than 148kg	Less than 158 Kg
Outside dimensions	Width	2400 mm	2660 mm
	Depth	Less than 640 mm	
	Height	Less than 1240 mm	

Specification for ink

Item	Specifications
Form	Ink cartridge exclusive to the device
Color (* indicates color)	Aqueous pigment ink (SPC-0180*)
	Aqueous dye ink (SPC-0258*)
	Sublimation-dye ink (SPC-0370*)
	Textile pigment ink (SPC-0350*)
	Reactive dye ink (SPC-0357*)
	Acid dye ink (SPC-0355*)
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 delivering:	-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

- Ink will freeze when it is left for a long time under temperature below -4°C. In case it is frozen, leave the ink cartridge at room temperature (at 25°C) for three hours or more to allow the ink to melt.
- Avoid disassemble the ink cartridge or refill the ink.

Position of the warning label

This device is adhered with the warning label. 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.

The Front

Front cover caution label : M901549

Front cover caution label : M901607

The Rear

Socket label : M902396

Function Flowchart

In Media Fitting

END	< , >

<LOCAL> → MEDIA SELECT ROLL<   >LEAF → Detecting MEDIA PLEASE WAIT → ** MEDIA ** Y=xxxx   X=xxxx → <LOCAL> width:xxxxmm

How to set origin

< , > ∧ , ∨

<LOCAL> width:xxxxmm → ORIGIN SETUP 0.0   ------- → [ENT] → ORIGIN SETUP ** ORIGIN **

[FUNCTION] → MEDIA CUT   <ENT> → [ENTER] → MEDIA CUTTING PLEASE WAITS

DATA CLEAR Key :   [DATA CLEAR]

<LOCAL> width:xxxxmm → [DATA CLEAR] → DATA CLEAR   <ENT> → [ENTER] → ** DATA CLEAR **

TEST Key :   [TEST]

<LOCAL> width:xxxxmm → [TEST] → TEST DRAW   <ENT> → [ENTER] → * TEST DRAW *

CLEANING Key :   [CLEANING]

<LOCAL> width:xxxxmm → [CLEANING] → CLEANING HEAD SEL.   : 12.34 → [ENTER] → CLEANING TYPE   : normal → [ENTER] → CLEANING ACTIVE **********------------

normal, soft, strong

Check for ink remains :   [ENTER]

<LOCAL> width:xxxxmm → [ENTER] → <LOCAL> K K CCMMY Y REMAIN 4 3 6 6 7 5 4 3

Near End → Full
1 2 3 4 5 6 7 8 9

FUNCTION Key :   [FUNCTION]

<LOCAL> width:xxxxmm → [FUNCTION] → FUNCTION SET UP   <ENT> → [ENTER] → SET UP SELECT   :TYPE.1 → [ENTER] → TYPE.* MEDIACOMP.   <ent> → [ENTER] → TYPE.* PRINT START   :ent → [ENTER] → PLEASE WAIT PRINTING → TYPE.* ADJUST   = 0

TYPE.1~4   ∧ , ∨   ∧ , ∨   -255~255

>

[FUNCTION] , ∧ , ∨

POWER O

TEST   CLEANING   DATA CLEAR

FUNCTION   REMOTE

E N D   ENTER

To be followed

To be followed

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

Following

```
TYPE.*                    TYPE.*              ENTER    TYPE.*
PRINT MODE    <ent>       QUALITY     <ent>           QUALITY      :STD
                                                      STD, FINE, FAST
                          ^, V
                          TYPE.*              ENTER    TYPE.*
                          DIRECTION   <ent>           PRINT        :UNI-D
                                                      UNI-D, BI-D
                          ^, V
                          TYPE.*              ENTER    TYPE.*
                          LOGICALseek <ent>           LOGICALseek   : ON
                                                      ON, OFF
^, V
TYPE.*              ENTER    TYPE.*
INK LAYERS    <ent>         INK LAYERS        : 1
                                             1~9
^, V
TYPE.*              ENTER    TYPE.*              ENTER    TYPE.*
DRYING TIME   <ent>         EACH LINE    :0.0s         BEFORE  Acut     :0s
                           0.0~9.9s                   0~999s
^, V
TYPE.*              ENTER    TYPE.*
AUTO CUT      <ent>         AUTO CUT      :OFF
                           OFF, ON
^, V
TYPE.*              ENTER    TYPE.*              ENTER    TYPE.*              ENTER    TYPE.*
PRIORITY      <ent>         MEDIA COMP  :HOST          PRINT MODE  :HOST          INK LAYERS    :HOST
                           HOST, PLOT                 HOST, PLOT                 HOST, PLOT
                                             ENTER    TYPE.*              ENTER    TYPE.*
                           TYPE.*                      AUTO CUT    :HOST          DRYING TIME   :HOST
                           REFRESH     :HOST           HOST, PLOT                 HOST, PLOT
^, V                       HOST, PLOT
                           ENTER
                           TYPE.*
                           VACUUM      :HOST
                           HOST, PLOT
TYPE.*              ENTER    TYPE.*
PRE-FEED      <ent>         PRE-FEED      :HOST
                           OFF, ON
^, V
TYPE.*              ENTER    TYPE.*              ENTER    TYPE.*
MARGIN        <ent>         RIGHTmargin  <ent>         RIGHTmargin   : 0mm
                                                      -15~85mm
                           ^, V
                           TYPE.*              ENTER    TYPE.*
                           LEFTmargin   <ent>          LEFTmargin    : 0mm
                                                      -15~85mm
TYPE.*              ENTER    TYPE.*
REFRESH       <ent>         REFRESH      : LEVEL3
                           LEVEL1~3
^, V
TYPE.*              ENTER    TYPE.*
MEDIA SET     <ent>         SET          :SELECT
                           SELECT, WIDTH
^, V
TYPE.*              ENTER    TYPE.*
VACUUM        <ent>         VACUUM:STANDARD
                           STANDARD, LOW, OFF
^, V
```

To be followed

TYPE*
VACCUM   <ent>

(∧),(∨)

FUNCTION
SET UP   <ENT>

TYPE*
MM/INCH   <ent>   → ENTER →   TYPE*
MM/INCH   :MM
MM, INCH

(∧),(∨)

TYPE*
STAMP   <ent>   → ENTER →   TYPE*
MODE STAMP   <ent>   → ENTER →   TYPE*
MODE STAMP   :OFF
OFF, ON

(∧),(∨)

TYPE*
TIME STAMP   <ent>   → ENTER →   TYPE*
TIME STAMP   :OFF
OFF, ON

(∧),(∨)

TYPE*
AUTO CLEAN   <ent>   → ENTER →   TYPE*
AUTO CLEAN   :OFF

(∧),(∨)

TYPE*
AUTO CLEAN2   <ent>   → ENTER →   TYPE*
AUTO CLEAN2   :OFF

(∧),(∨)

TYPE*
AUTO CLEAN2   :ON   → ENTER →   TYPE*
CL TYPE   :SOFT   → ENTER →   TYPE*
INTERVAL   =1.0m
SOFT,NORMAL,STRONG   0.1~100.0m

TYPE*
SETUP RESET   <ent>   → ENTER →   TYPE*
RESET   : ent

FUNCTION , (∧),(∨)

FUNCTION
MAINTENANCE<ENT>   →   MAINTENANCE
STATION   <ent>   → ENTER →   STATION
MENT :WIPER EXCHG   → ENTER →   STATION
COMPLETED   :ent   → ENTER →   INITIALIZING
PLEASE WAIT

(∧),(∨)

FUNCTION , (∧),(∨)

STATION
MENT :CARRIAGEout   → ENTER →   STATION
COMPLETED   :ent   → ENTER →   INITIALIZING
PLEASE WAIT

STATION
MENT :NOZZLE WASH   → ENTER →   Wiper Cleaning
COMPLETED   :ent   → ENTER →   Fill the Liquid.
COMPLETED   :ent   → ENTER →   STATION
LEAVING   :1 min   → ENTER →   INITIALIZING
PLEASE WAIT
1-99 min

STATION
MENT :Disway WASH   → ENTER →   STATION
COMPLETED   :ent   → ENTER →   INITIALIZING
PLEASE WAIT

STATION
MENT:CUSTODYwash   → ENTER →   Wiper Cleaning
COMPLETED   :ent   → ENTER →   Fill the Liquid.
COMPLETED   :ent   → ENTER →   STATION
LEAVING   : 1 min   → ENTER →   INITIALIZING
PLEASE WAIT   → ENTER →   STATION
COMPLETED   :ent
1-99 min

MAINTENANCE
PRINTadjust   <ent>   → ENTER →   **MAINTENANCE**
PRINT START   :ent   → ENTER →   PLEASE WAIT
PRINTING   →   MAINTENANCE
PATTERN1   = 0.0
(>)
PATTERN1~7
-40.0~40.0

FUNCTION , (∧),(∨)

FUNCTION , (∧),(∨)

This fuction appears only when the head set at HIGH range.

MAINTENANCE
INT.WIPING   <ent>   → ENTER →   INT.WIPING
RENEW   : OFF   ON+ → ENTER →   INT.WIPING
SCAN COUNT   = 100
: ON   10 - 9990

OFF+ → ENTER

FUNCTION , (∧),(∨)

FUNCTION
MAINTENANCE<ENT>

FUNCTION , ∧ , ∨

```
MAINTENANCE          ENTER    FILL UP INK          ENTER    FILL UP
FILL UP INK    <ent>           HEAD SEL.    : 12.34          **********------------
```

FUNCTION , ∧ , ∨

```
MAINTENANCE          ENTER    WASH                 WASHING              WASH                 WASHING
INK CHANGE    <ent>           REMOVE CARTRIDGE     PLEASE WAIT          SET CLEAN TOOL       PLEASE WAIT
```

```
                              WASHING              WASH                 WASHING              WASH
                              PLEASE WAIT          SET CLEAN TOOL       PLEASE WAIT          REMOVE TOOL
```

FUNCTION , ∧ , ∨

```
                              WASH                 WASHING              FILL UP              FILL UP
                              REMOVE TOOL          PLEASE WAIT          Set a CARTRIDGE      PLEASE WAIT
```

```
MAINTENANCE          ENTER    MAINTENANCE
LIST          <ent>           PRINTING
```

FUNCTION , ∧ , ∨

```
MAINTENANCE          ENTER    *REMOTE*
DATA DUMP     <ent>           ** DATA DAMP **
```

FUNCTION , ∧ , ∨

```
MAINTENANCE          ENTER    MAINTENANCE
WIPE LEVEL    <ent>           WIPE LEVEL     :10/10
                                            10/10 ~ 1/10
```

FUNCTION , ∧ , ∨

```
MAINTENANCE          ENTER    MAINTENANCE          ENTER    MAINTENANCE          < , >    MAINTENANCE
TIME SET      <ent>           DATE=xxxx.xx.xx               DATE=xxxx.xx.xx               TIME=xx:xx:00
                                          ∧ , ∨
                              MAINTENANCE          ENTER
                              TIME=xx:xx:xx
```

FUNCTION , ∧ , ∨

```
MAINTENANCE          ENTER    MAINTENANCE          ENTER    MAIN     Ver xx.xx
INFORMATION<ent>              VERSION       <ent>           I/F      Ver xx.xx
                                          ∧ , ∨
                              MAINTENANCE          ENTER    MAINTENANCE
                              SERIAL No.    <ent>           S/N *********
                                          ∧ , ∨
                              MAINTENANCE          ENTER    MAINTENANCE
                              DEALER No.    <ent>           D/N *********
```

```
FUNCTION                      DISPLAY
DISPLAY       <ENT>           English       <ent>
                              Japanese, Portguese,
                                 Italian, Spanish,
                                 French, German
```

Mimaki