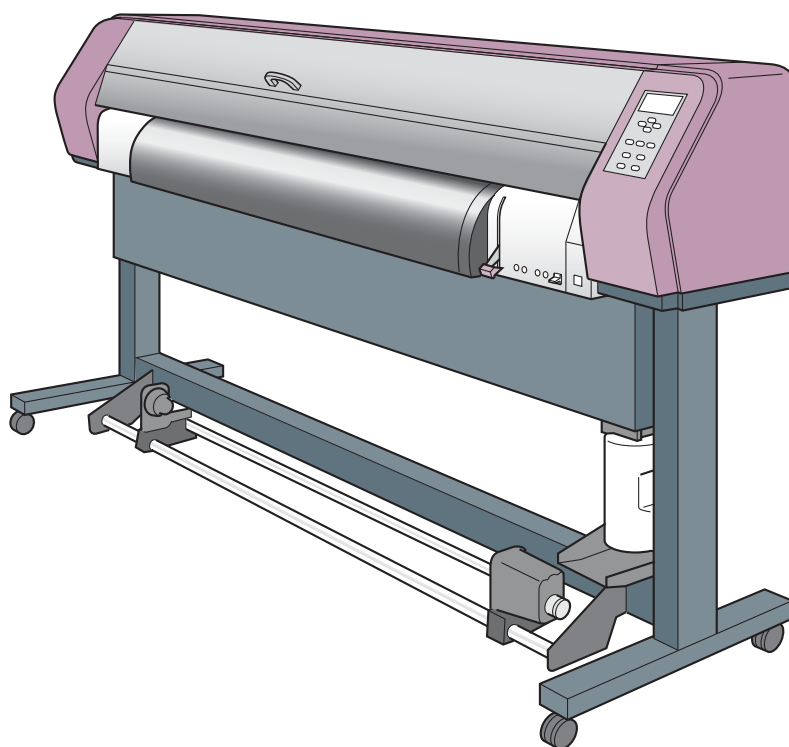


Mimaki

JV3-130SL

OPERATION MANUAL



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D201427

Foreword

Congratulations on your purchase of a MIMAKI "JV3-130SL" model of color ink jet printer.

The JV3-130SL is a color ink-jet printer applicable to high quality printing with solvent ink. This is a 4 - color model consist of cyan, magenta, yellow, and black ink cartridges. Read this Operation Manual carefully and make the most effective use of your printer. Before starting to operate the printer, be sure to read this Operation manual carefully.

DISCLAIMER OF WARRANTY:

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

Requests:

- This Operation Manual has been carefully prepared for your easy understanding, however, please do not hesitate to contact a distributor in your district or our office if you have any inquiry.
- Description contained in this Operation Manual are subject to change without notice for improvement.
- It is also necessary to keep this Operation manual on hand.
- In the case where this Operation manual should be illegible due to destruction or lost by fire or breakage, purchase another copy of the Operation manual from our office.

- 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 case the user will be required to correct the interference at his own expense.



- In the case where MIMAKI-recommended cable is not used for connection of this 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.

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How to read this Operation Manual

The following documents have been attached to JV3-130SL:

<p>Setup Guide (separate volume)</p> <p>“Setup Guide” explains how to install JV3-130SL.</p>
<p>Operation Manual (this document)</p> <p>“Operation Manual” explains how to operate JV3-130SL.</p>
<p>Request for daily care (separate volume)</p> <p>“Request for daily care” explains how to operate daily care of JV3-130SL.</p>

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.

Pictorial signs used in this manual

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	• WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	• CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
	• CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.
	• NOTE indicates notice which is not applied above three symbols.
	• The symbol "💡" indicates helpful information that will facilitate the use of the device.
	• The symbol "👉" 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.

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.

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.

Newly developed high-reliability high-coloring solvent ink

The newly developed solvent ink allows the use of raw tarpaulin or other commercially available media, realizing high quality plotting with a low running cost.

This ink has a high water resistance and high weather resistance.

(No lamination is required, and the outdoor durability in weather-resistance is up to 3 years.)

High-quality (1440 dpi) full-color print

Plotting with 1440dpi high quality is suitable both for small and large posters.

Intelligent heater

Mounts two heaters (preheater and print heater) with independent temperature setting and intelligent functions (standby mode and automatic off),

The device detects the ambient temperature to perform temperature control, allowing heating temperature setup which best suits the media used.

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.

If the device is not in use for a prolonged period of time, it automatically performs Nozzle-clogging preventive operation at fixed intervals. However, the main power must be left turned on.

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.

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 media 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 media as it is plotted on, even a long media can be used.

A newly provided media support bar

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

Selectable head height

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

Prevents lifts at both ends of media

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.



- 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.



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

Example of pictorial signs



- The symbol " \triangle " 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 " \otimes " 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 " \bullet " 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.



WARNING

- Be sure to setup the appropriate air-moving system in case of using the device in a closed room or a room with bad ventilation.
- Be sure to use the device with the power supply specifications indicated.
- To avoid fires or electrical shocks, the two power cables must be plugged to separate receptacles that are grounded separately.
- Set voltage selectors according to the power voltage to be used.
 - 110V : JV3 ••• 100-120V
 - 220V : JV3 ••• 200-240V
- 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.
- The ink used for this device contains organic solvent. Since the ink is flammable, never use fire when using the device.
- 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.
- 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.
- 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 spill liquid on the platen as this may cause failure of the heater or ignition.

Precautions in use

CAUTION

Heater

- Do not touch the platen heater with bare hand while it is hot as this may cause burn.
- When moving the device, wait until the heater temperature drops.
As a criterion, wait at least 30 minutes since you turn off the power of the heater.
The device can be moved within the same floor without steps. When moving it to a different place, contact representative of Mimaki Engineering.
- The pack of the device is as heavy as approximately 350 kg.
Perform the assembly work by at least four persons.

Ink

- Ink is organic solvent. If ink settles on the skin or clothes, immediately wash it off with detergent or water. If you get ink in your eyes, immediately wash your eyes with a lot of clean water for at least 15 minutes. In this case, also wash the backside of eyelids to rinse ink away completely. Then, consult a doctor as soon as possible.
- If anyone drinks ink in mistake, keep him or her quiet and see a doctor immediately. Do not allow him or her drink vomit. Then, contact the Poison Control Center.
- If you absorb a lot of vapor and feel bad, immediately move to a location where fresh air is present and then keep yourself warm and quiet. Then, consult a doctor as soon as possible.

Maintenance

- When cleaning the ink station and head, be sure to wear the supplied goggle and gloves since you may get ink in your eyes.

CAUTIONS and NOTES

Handling of ink cartridges

- Use the JV3 genuine ink. 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.
- The printer does not operate with other ink than the JV3 genuine ink.
- Do not use the JV3 genuine ink for other printers as doing so may cause damage to other printers.
- 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.
- 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.
- Make sure to store ink cartridges in a cold and dark place.
- Store ink cartridges and waste ink tank in a place that is out of the reach of children.
- Be sure to thoroughly consume the ink in the ink cartridge, once it is opened, within three months. If an extended period of time has passed away after opening the cartridge tank, printing quality would be poor.
- Neither pound the ink cartridge nor shake it violently so as to prevent leakage of ink.
- Do not touch or stain the contacts of the ink cartridge as doing so may cause damage to the print circuit board.
- Waste ink is equivalent to waste oil of industrial waste. Request an industrial waste processor for processing of waste ink.



Power supply

- Leave the breaker turned ON.
- Do not turn OFF the main power switch on the rear face.

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

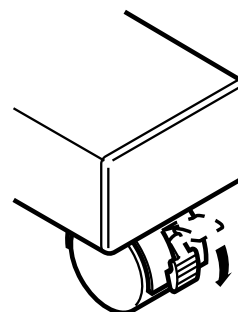
- It is strongly recommended to use the device in a room that is not dusty. Set the Refresh level 2 or 3 when in bad environment. ( page 4.9)
- Keep the front cover to be closed also when the device is not engaged in printing. If not, dust can accumulate on the head nozzle.
- When leaving the workshop after the working hours, be sure to take off any media from the roll hanger. If any media is left on the roll hanger, dust can put on it.
- Store media in a bag. Wiping off dust accumulated on a media will adversely affect the media due to static electricity.
- Frequently wipe the capping station clean to eliminate dust and paper chips.
- Dust in the head will also cause drops of ink to fall abruptly down on the media during printing. If this phenomenon takes place, be sure to clean up the head. ( page 2.22, 4.10)

Media

- If media that is likely to tightly curl, flatten first the paper before using it for printing. Heavily-curved media affect the printed result.

Locking the casters

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



Periodic exchange parts

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

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

⚠ 注意	⚠ 注意	⚠ CAUTION	⚠ ACHTUNG	⚠ ATTENTION
滾輪转动时, 请勿将手插入前面外盖的内部。	キャリッジ動作中は、フロントカバーの中に指を入れないでください。	-MOVING CARRIAGE- Do not put fingers inside this area	-Beweglicher Wagen- Finger nicht in diesen Bereich bringen.	-CHARIOT MOBILE- Ne pas mettre de doigts dans cette zone.

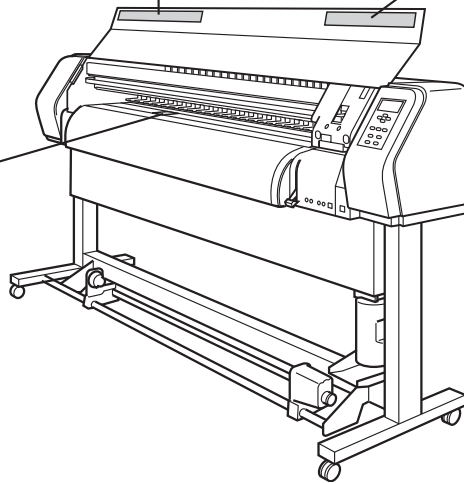
Front cover caution label : M901549

印刷時、请不要打开盖子。如果打开盖子的话打印机会停止。禁止之后再度打印时，请将数据再行计算机中输出。	印刷中、このカバーを開けないでください。途中で作業が終了してしまいます。再度、作業する場合は、もう一度コンピュータからデータを送信してください。	Do not open this cover during printing. The carriage will stop and ruin the print.	Diese Abdeckung während des Druckens nicht öffnen. Der Wagen hält sonst an, wodurch der Druck ruiniert wird.	Ne pas ouvrir ce couvercle pendant l'impression. Le chariot peut s'arrêter, abîmant l'impression.
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Front cover caution label : M901607



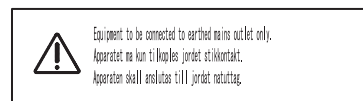
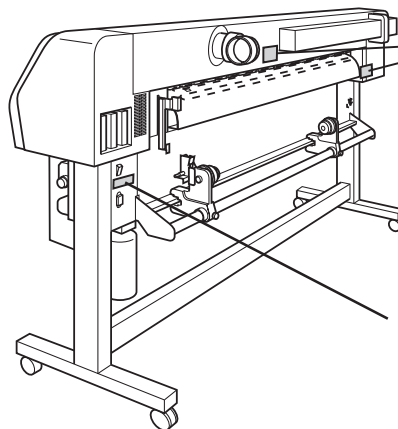
Temperature caution label :
M903239



The Rear



Temperature caution label :
M903239



Socket label : M902396

CHAPTER 1

Before Use

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

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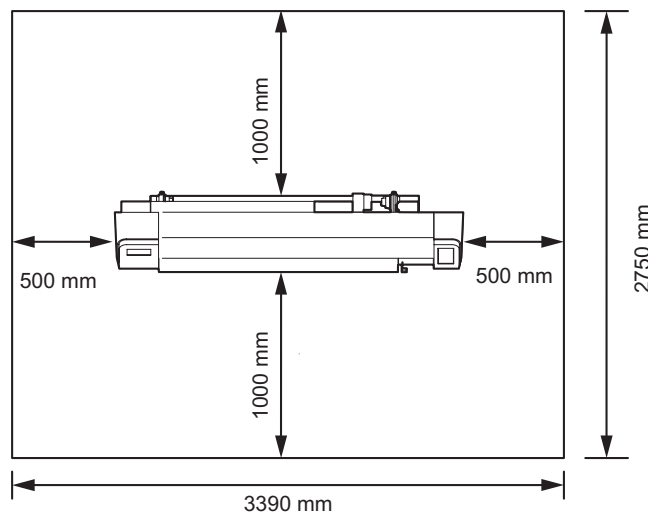
Moving the device

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 (with exhaust unit)
JV3-130SL	2390 mm	750 mm	1240 mm	About 165kg



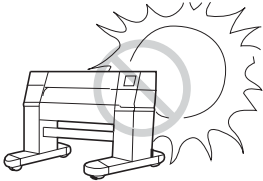
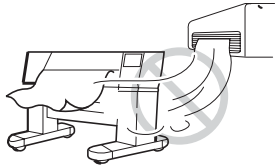

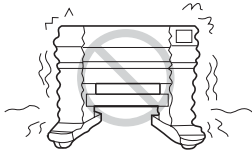
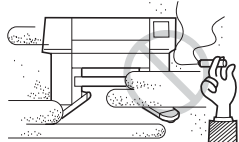
Working environmental temperature

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

According to the surrounding temperature condition, the temperature may not rise to the set value.

Precautions in installation

Do not install the device at the following environment.

<p>A place exposed to direct sunlight</p> 	<p>A place in which temperature and humidity vary by a great margin</p> <p>Use the device under the following environment.</p> <p>Operating environment: 68 to 95°F (20 to 35°C) 35 to 65% (Rh)</p>	<p>A place exposed to direct air blow from air conditioner, etc.</p> 
<p>A place that is not horizontal</p> 	<p>A place that vibrates</p> 	<p>A place where fire is present</p> 

Moving the device

- NOTE!**
- 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.

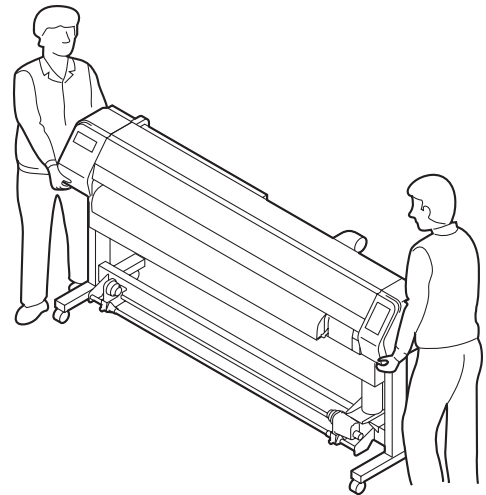
When moving the device, unlock the caster stoppers.

- CAUTION**
- 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.

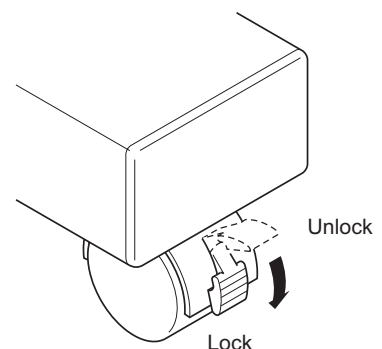


Locking/unlocking the casters

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

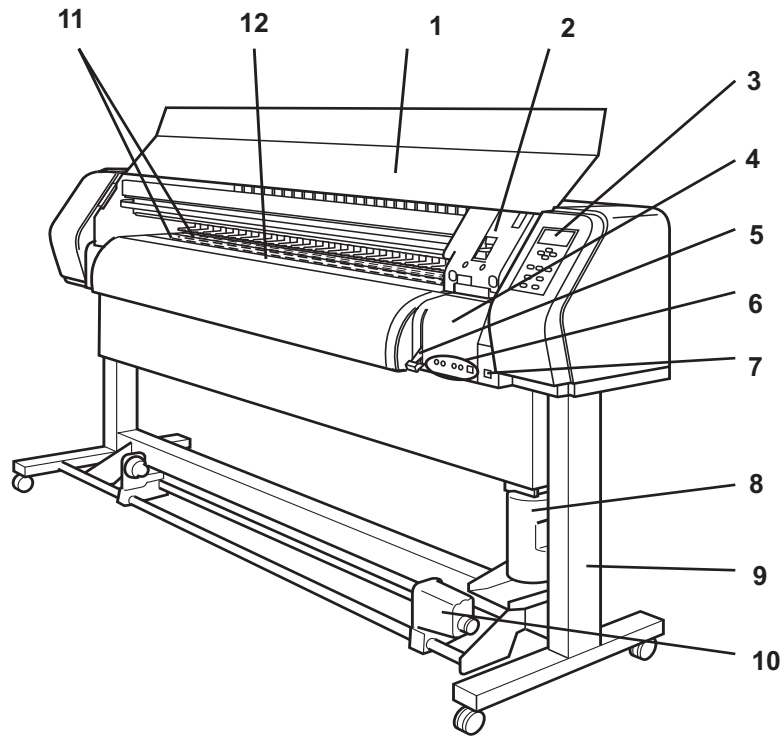
Each of the casters on the pedestals is provided with a stopper.

When installing the device, push down the stoppers to lock the casters.



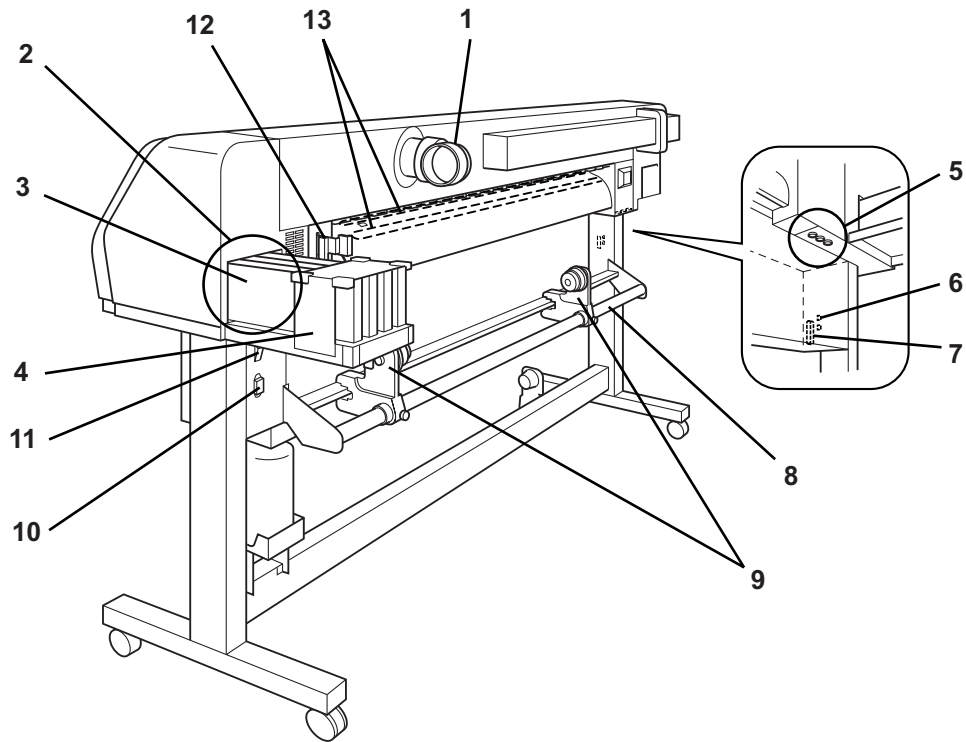
Configuration and function

The Front



	Name	Function
1	Front cover	It is opened when setting media or taking a corrective measure against a media jam. Even if the power switch is off, keep the front cover closed.
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 media.
6	Heater operation panel	Provides the heater power switch and the heater status LED indicator.
7	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)
8	Waste ink tank	Waste ink gathers in this tank.
9	Stand	It supports the main unit. It is provided with casters that are used to move the device.
10	Take-up device	It supports to wind up the roll media printed.
11	Printer heater	Fixes and dries printing ink. (Attached inside the platen)
12	Platen	It puts out the media as it is plotted on. Inside the platen, two heaters is including.

The REAR



	Name	Function
1	Rear exhauster	Discharges plotting smell from the media to out of the room.
2	Ink station	Set the ink cartridges specified.
3	Ink cartridge	Each cartridge contains ink of a specific color.
4	Cartridge protection cover	This cover is protect injuries, etc. due to protrusion of 440cc cartridge.
5	Voltage selector switch	Switches between 100-120 V and 200-240 V according to the power voltage used.
6	IEEE-1394 connector	A 400M bps interface connector compatible with IEEE-1394.
7	Parallel connector	Bi-directional parallel interface connector (complies with IEEE1284)
8	Paper roll setting bar	This bar facilitates a paper roll to be set in position.
9	Roll holder	Roll holder is inserted in the right and left core of roll media to hold the roll media. The roll holder is applicable to diameter of media cores with 2 and 3 inches. The attachment position (height) of the roll holder can be set in three steps. To increase the heater contact time, attach it at the bottom position.
10	AC inlet	The power cable is connected to the AC inlet.
11	Main power switch	Turns on/off the main power of the device. Leave the main power turned on to prevent ink clogging.
12	Clamp lever	Works together with the clamp lever on the font face of the device.
13	Preheater	Preheat the media before plotting. (Attached inside the platen)

Operation Panel

The operation panel that is used to operate the device.

JOG keys [▲] [▼] [◀] [▶]

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

[HEATER] key

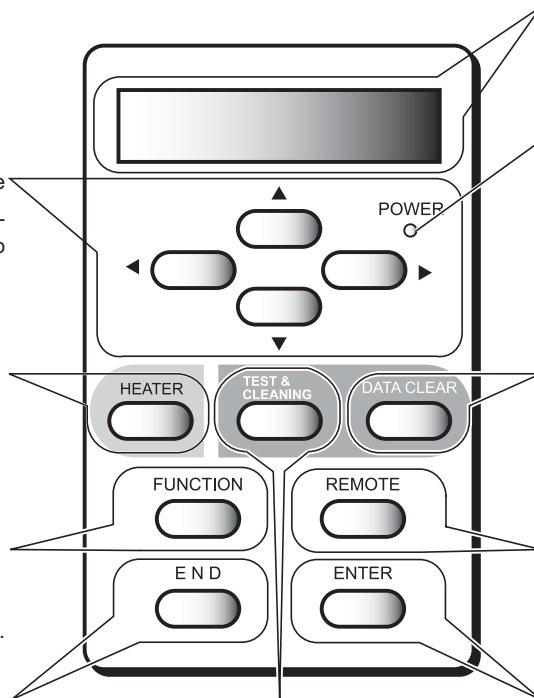
Used to set the temperature of the printer heater and preheater and check the current temperature of the platen.

[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.



Display

Displays a set item, a guidance error, etc.

POWER lamp

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

[DATA CLEAR] key

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.

[TEST & CLEANING] key

Plots the test pattern for checking Nozzle clogging, and performs head cleaning when ink clogging occurs.

Functions of the JOG keys

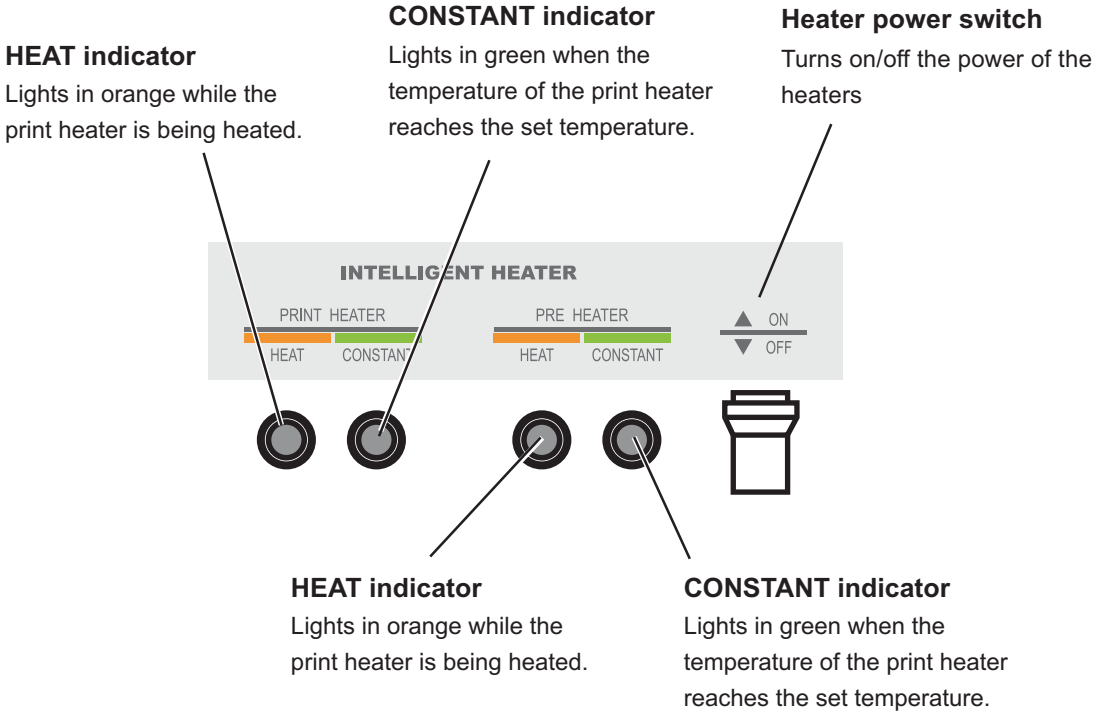
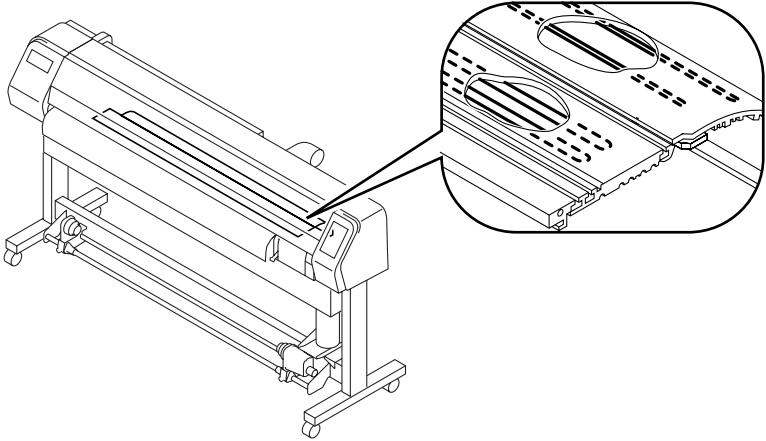
Each of the JOG keys varies in function according to the time at which it is used.

The functions of the JOG keys are explained below.

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

Heater panel

The platen has heater built-in for printing and pre-printing. Turns on/off the power of the heaters and displays their statuses with LED indicators. When the power switch of the device is turned off, the power of the heaters is also turned off.

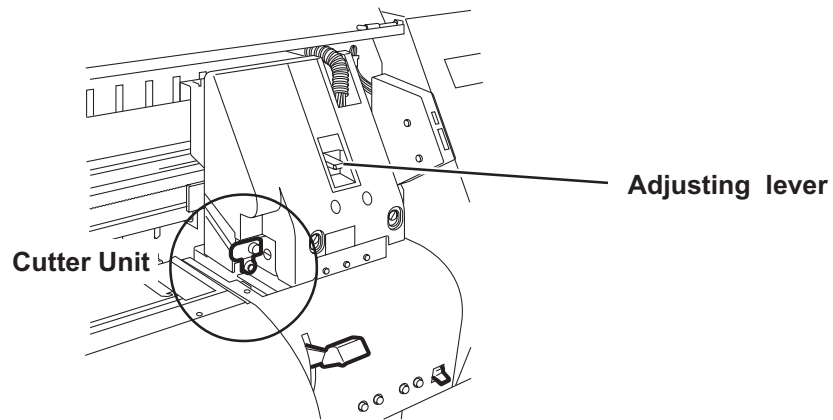


- The HEAT indicator may go off while the CONSTANT indicator is lighting. This is not an error but an indication that the temperature of the print heater have reached the set temperature and heating is interrupted.

Carriage

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

 Page 2.6



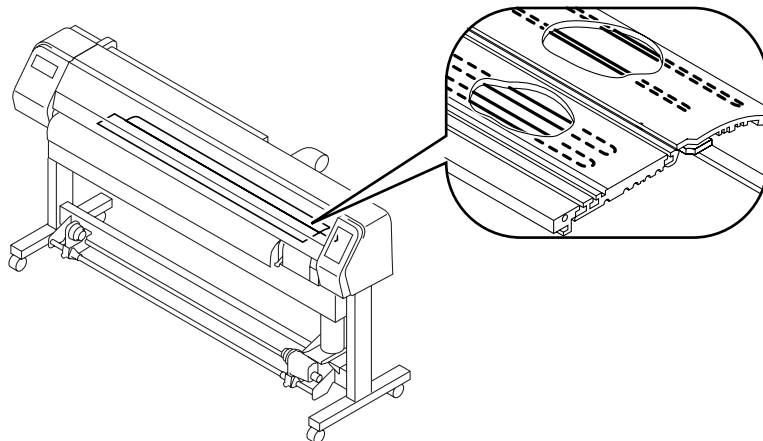
Heater

The platen has heater built-in for printing and preprinting.

The preheater preheats the media before plotting to prevent rapid temperature change at the printing section. The print heater improves the plot quality and dries ink after printing.



- While the heater is heating, the platen is very hot. When opening the front cover or replacing the media, lower the heater temperature and wait until the platen temperature drops. Doing so while the platen is hot may cause burn.
- When replacing the media with a thin one, lower the heater temperature and wait until the platen temperature drops. Doing so while the platen is hot may cause the media to stick to the platen or cause wrinkles or curls of the media.



Capping station



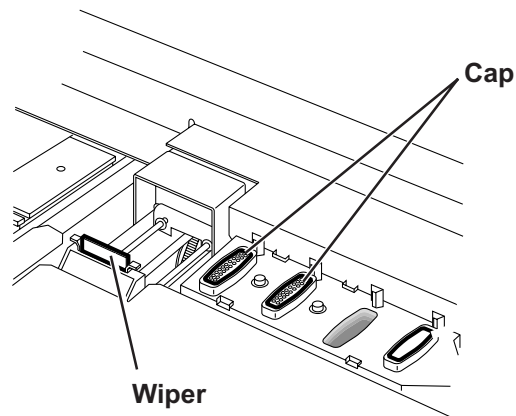
- When cleaning the capping station, be sure to wear the supplied goggle and gloves since you may get ink in your eyes.

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 or the media is stained, replace the wiper with a new one.



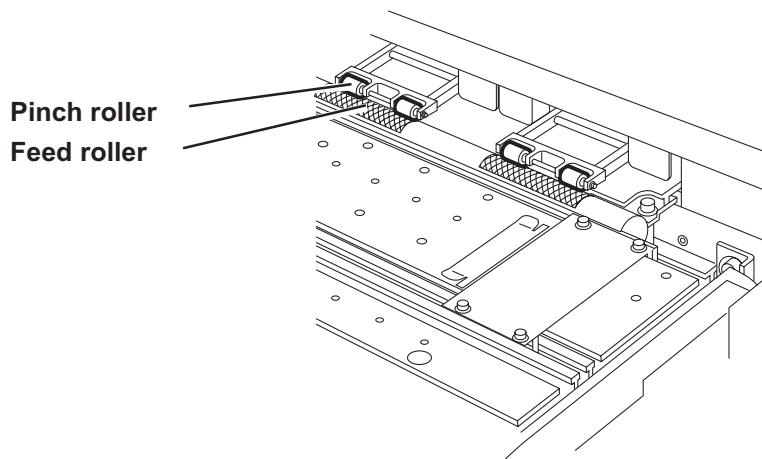
Pinch roller and Feed roller

(NOTE!)

- 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 media.

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

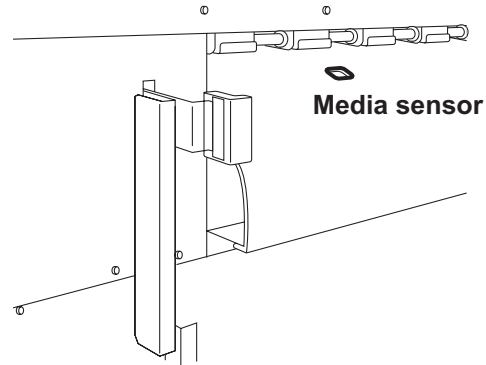
During plotting operation, the feed roller feeds the media forward.



Media sensor

The media sensor detects the presence of the media and the media length.
There is a media sensor on the platen.

- NOTE!**
- Set up media to cover media sensor at the back side of platen absolutely.
If the part of media is not on media, the media can not be detected.

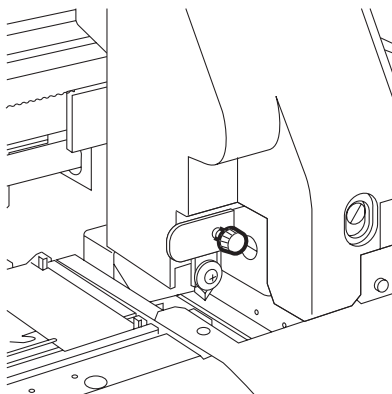


Cutter blade and cutting line

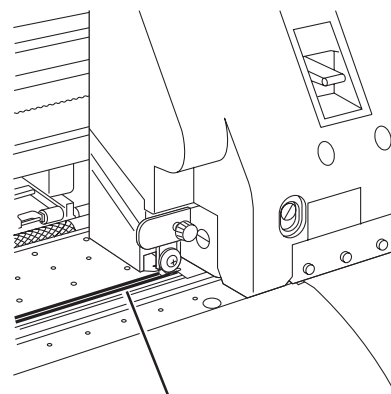
The carriage is provided with a cutter unit for cutting off the media that has been plotted on.
The cutting line along which to cut off the media is shown below.

☞ "Cut off the media by Hand" (page 2.28) "AUTO CUT" (page 4.8).

Cutter blade



Cutting Line



Cutting line

Precautions in handling the ink cartridge



- Ink is organic solvent. If ink settles on the skin or clothes, immediately wash it off with soap and water.

If you get ink in your eyes, immediately wash your eyes with a lot of clean water for at least 15 minutes. In this case, also wash the backside of eyelids to rinse ink away completely. Then, consult a doctor as soon as possible.



- Never disassemble the ink cartridge.



- 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.



- Use the JV3 specified 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 three 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.



- Request an industrial waste processor for processing of empty cartridges.



- Do not touch or stain the contacts of the ink cartridge as doing so may cause damage to the print circuit board.

Precautions in handling the media

Carefully observe the following when handling the media.

NOTE!

- **Use media recommended by MIMAKI for stable, high-quality plotting.**
- **Heater temperature setting according to media characteristics**
Set the temperature of the preheater and print heater according to the type and characteristic of the media used. Automatic temperature setting can be made from the operation panel through profile specification from the dedicated RIP.
- **Expansion and contraction of the media**
Do not use media immediately after unpacking. The media can expand and contract due to the room temperature and humidity.
The media have to be left in the atmosphere in which they are to be used for 30 minutes or more after unpacked.
- **Curled media**
Avoid the use of curled media. They can be a cause of a media jam.
If regular-sized coating media is stored with rolled, the coating face has to face outside.

Types of media that can be used

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

Types of media that can be used

- Tarpaulin
- FF (Flexible Face)
- PVC

Sizes of media that can be used

	Media Size	JV3-130SP II
Roll media	Maximum	1371 mm
	Minimum	210 mm
	Plotting width *1	1610 mm
	Thickness	1.0 mm or less
	Roll weight *2	25 kg or less
	Roll outside diameter	Ø 180 mm or less In case attaching roll holder to the most upper parts, roll outside diameter is Ø 140 mm or less.
	Roll inside diameter	3 or 2 inches
	Plotting surface	Faces OUT
	Roll end treatment	Light-adhesive tape is used to allow the paper to be removed from the core with ease.
Cut sheet media	Maximum	1371 mm
	Minimum	210 mm
	Plotting width *1	1361 mm

*1 In the case of high speed scanning , the maximum drawing range would be 1321 mm.

*2 Without slack on the roll when it is retained at both ends.

Setting the heater voltage

Set the heater voltage according to the supply voltage to the plotter.

For the voltage setting, use the voltage selectors under the left back of the cover.

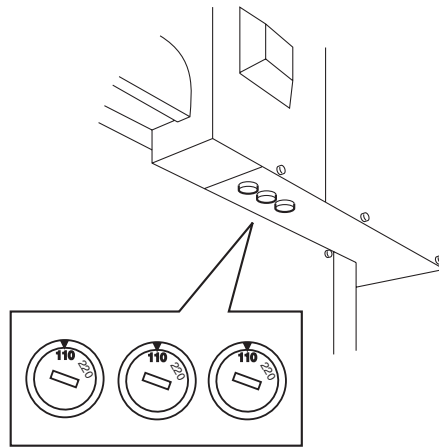
At shipping from the factory, the voltage is set to 220 V for safety.



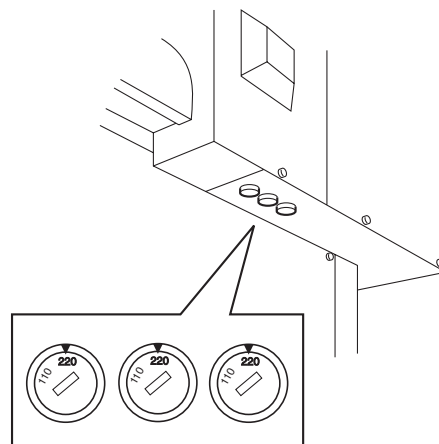
CAUTION

- The plotter may be damaged if it is plugged to a 200-240V source while the voltage selector is set to 110V.
- The heater temperature will not rise to the set temperature if it is plugged to a 100-120V source while the voltage selector is set to 220V.

Connecting to a 100-120V source



Connecting to a 200-240V source



MENU mode

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

NOT-READY mode

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

LOCAL mode

This is the mode after the media 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. Pressing the appropriate [JOG] keys to detect a media and set up an origin.
2. Pressing the [TEST&CLEANING] key to start test plotting and cleaning the head.
3. Pressing the [DATA CLEAR] key to erase the plotting data the device has received.
4. Pressing the [FUNCTION] key to set plotting conditions. (FUNCTION mode)
5. Pressing the [HEATER] key to set temperature of the heater.
6. Pressing the [ENTER] key to check the remaining amount of ink, the error of cartridges, the firmware version, and so on.

REMOTE mode

The device plots an image from data it receives.
During the plotting operation, press 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, press the [FUNCTION] key to put the device into the FUNCTION mode.

CHAPTER 2

Operation

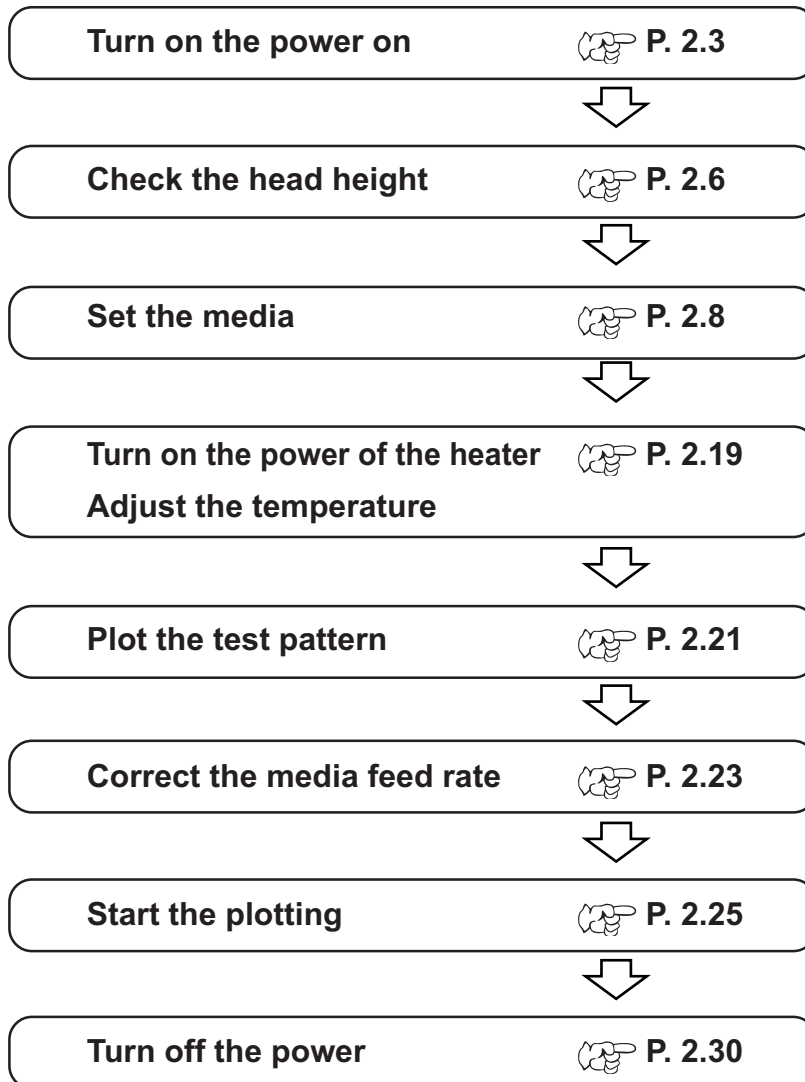
This chapter describes a series of operations and settings, ranging from power-on to end of plotting.

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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.



Switching on the power supply

The device is provided with the following two different power switches.

Main power switch : Located on the rear face of the device. Normally, leave this switch turned on. If this switch is left turned off, the head nozzles may be clogged. Nozzle clogging may not be recovered depending on the symptom.



- When the main power switch is turned ON with the power switch set to OFF, the nozzle clogging preventive function operates. After operation, the power is turned OFF automatically.

Power switch : Located on the front face of the device. Normally, use this switch. Push this switch once to turn on the power of the device. Push it again to turn off the device. Even when the power switch is off, the power is turned on periodically and the nozzle clogging preventive function is activated.

Turning the power on

1. Turn on the power to the device.

Tilt the power switch toward the “ I ” side.

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

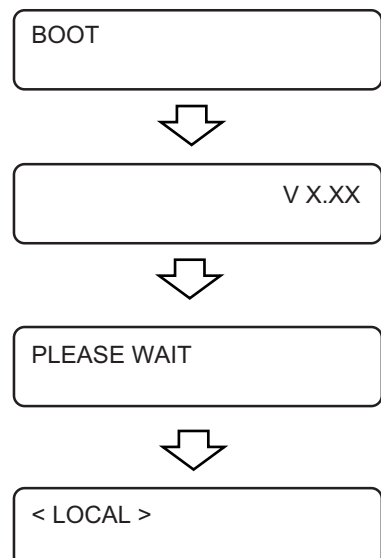
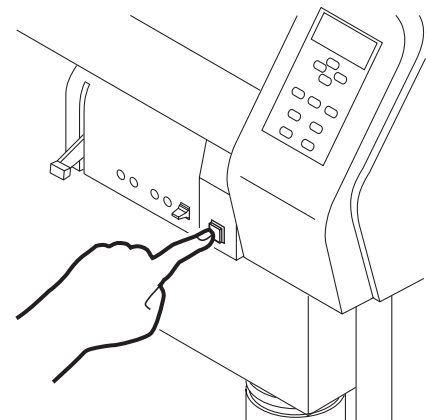
When the power is switched on, the LCD first displays “BOOT” and then displays the firmware version number.

The message “PLEASE WAIT” appears flashing on the LCD.

The initial operation of the device is performed.

The device enters the LOCAL mode.

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



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

Front cover /Maintenance cover

Opening/closing the front cover and maintenance cover

- (NOTE!)** • Keep the front cover and maintenance cover closed during plotting operation. Opening the cover during plotting interrupts image plotting and disables continuous processing.

If you open the 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.

Cautions during operation

STEPS:

- 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.**


(COVER OPEN)
PRESS < ENT > KEY

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



INITIALIZING
PLEASE WAIT

- 5. The carriage will start to move.**

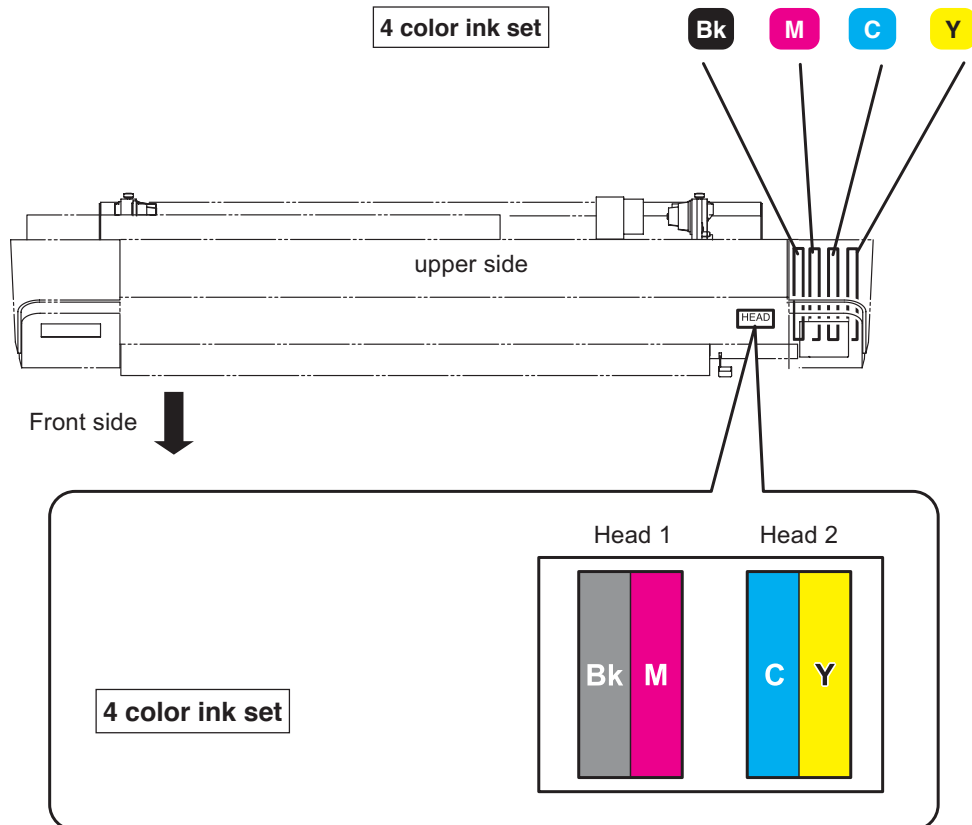
The carriage will carry out a series of performance same as that taken after turning on the power to the device (i.e., the predetermined initial performance).  page 2.3

Relationships between ink station and head row

The carriage mounts two heads each with two rows of nozzles.

One color ink is applied to each row of nozzles.

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




* Bk:Black/ M:Magenta / C:Cyan / Y:Yellow


Adjusting the head height

The head can be adjusted in height in two different stages, upper and lower, according to thickness of a media used for plotting.

This adjusting function enables the device to respond to light-weight media such as paper and film and heavy-weight media such as tarpaulin as thick as 1.0 mm.

- (NOTE !)**
- Adjust the head height before placing a media on the device. If the head height has been set for light-weight media when a heavy-weight media is to be placed on the device, moving the carriage from the capping station for adjusting the head height after the media 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 5.12


Media	Height adjusting lever
PVC	Thin : light-weight
Tarpaulin FF	Thick : heavy-weight

-  • Set the lever to the lower stage (Thick) if dust is likely to gather in the head or the head is likely to rub the media to leave ink on it.

STEPS:

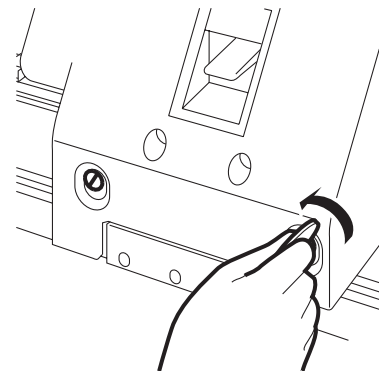
1. Move the carriage to the platen.

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

 page 5.4

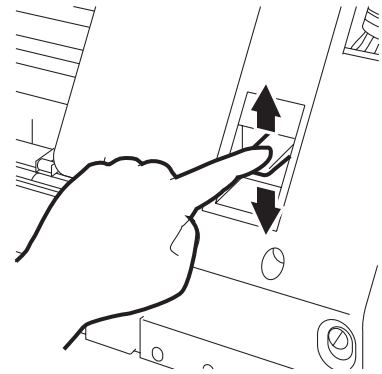
When the device is turned off : Open the front cover, then move the carriage.

2. Loosen two screws mounted on the front face of the head with a screw driver, etc.



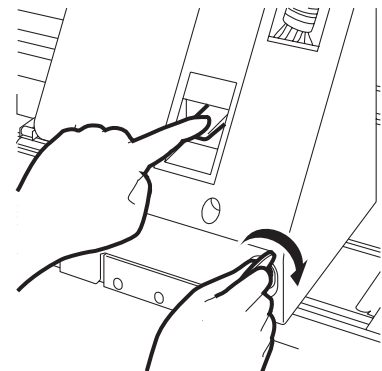
3. Adjust the height adjusting lever according to the media to be used.

- 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.

- NOTE!**
- 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.

How to check of the head height

Check the head height as following procedure.

STEPS:

1. Make sure that the mode is LOCAL mode.

< LOCAL >
width : 1272 mm

2. Press the [FUNCTION] key twice.

The head information is displayed.

FUNCTION

Head Heigt
THIN

The head position is settled THIN.

Head Heigt
THICK

The head position is settled THICK.

Head Heigt
- - -

The error occurs.

3. Press the [END] key.

END

Setting the media on the device

The media that can be used with the device are roll media and leaf media.
Use the media commended by MIMAKI.

- (NOTE!)**
- If a transparent media is set, the following message appears on the LCD and the media may not be detected.

ERROR 50
MEDIA SENSE

- If the media is exposed to direct sunshine, the media 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 roll holder

- (NOTE!)**
- Attach the roll holder with two people.

The attachment position (height) of the roll holder can be set in three steps.

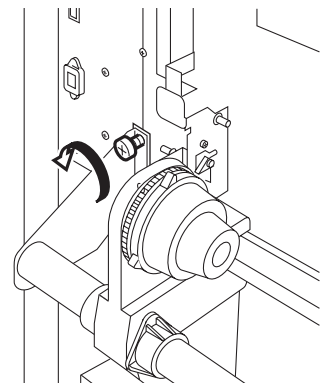
Depending on the media, change the attachment position of the roll holder by reducing or increasing the heater contact time.

To reduce the heater contact time, attach the roll holder at the top position ; to increase the heater contact time, attach it at the bottom position.

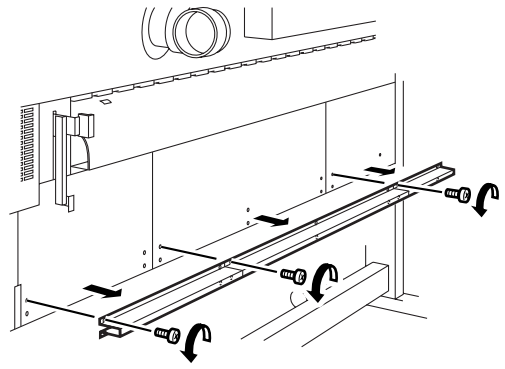
When it is attached to the top or bottom position, it is necessary to use the lock pin to set the media.  page 2.15

STEPS:

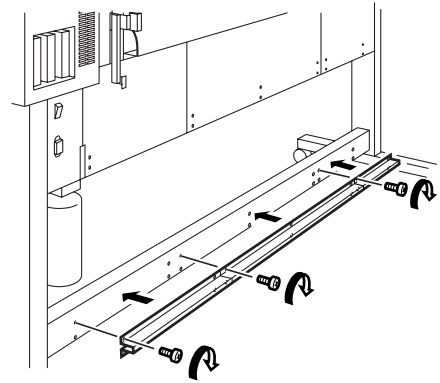
1. **Remove the four screws, and then remove roll assembly.**



2. Remove the 3 roll guide rails.

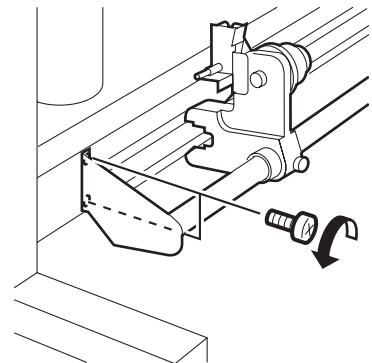


3. Attach the roll guides rail to another position.



4. Fit the roll assembly.

Fit the roll assembly so that the horseshoe-shaped section at the end of the roll base fits the roll guide rail.



Setting roll media on the device

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



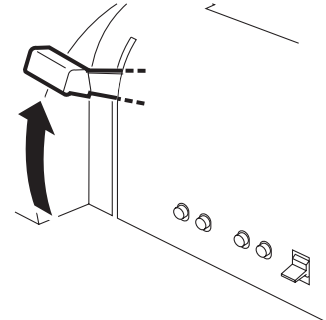
- The roll media is heavy in weight. Take care not to drop it on your foot.

STEPS:

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

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

 page 2.15

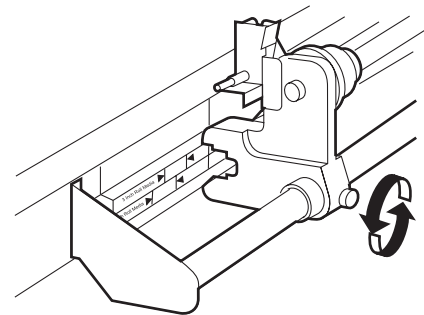


2. Loosen the screw of the left-hand roll holder.

3. Determine the position of the roll holder.

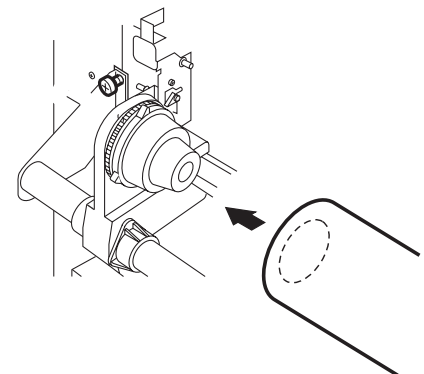
The inside diameter of the roll media core may be 2 inches or 3 inches.

A roll holder is tighten with screws along the sticker [Roll holder set].



4. Insert the left-hand roll holder into the core of the roll media.

Push roll media onto the roll holder till the roll core no longer moves.

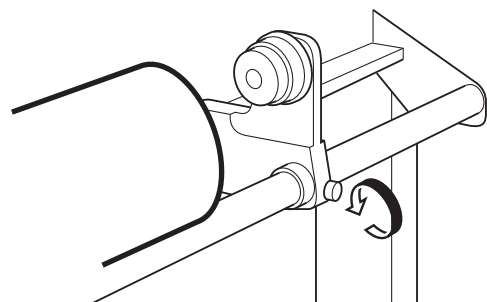


5. Loosen the screw of the right-hand roll holder.

Adjust the roll holder position to the width of the roll media.

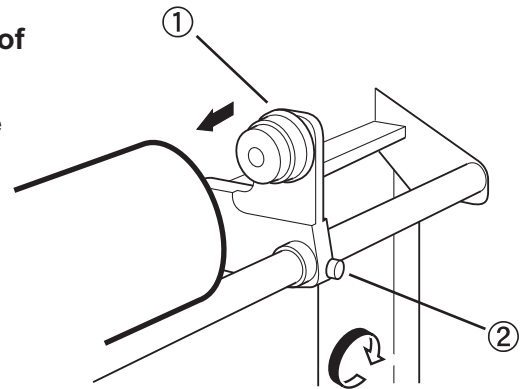


- By placing the roll media on the media support bar, the position of roll holder can be adjusted easily.

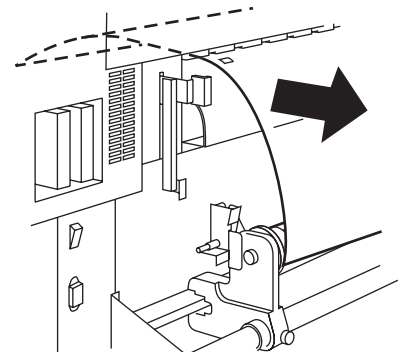


6. Insert the right-hand roll holder into the core of the roll media.

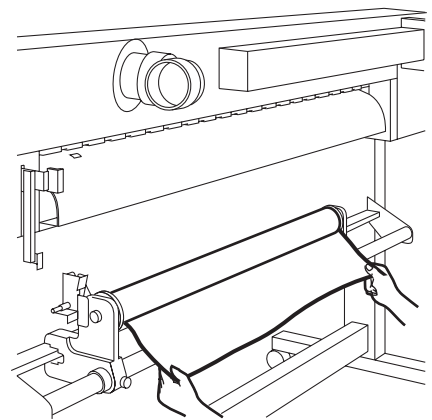
After inserting the roll holder completely into the core of the roll media, fix it with the screw.



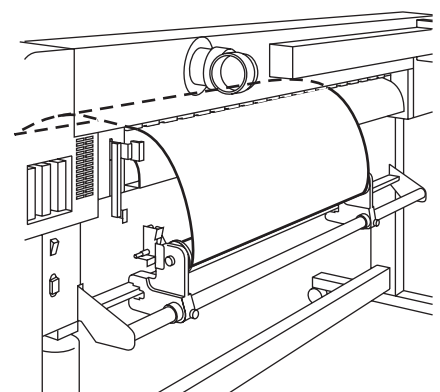
7. Pull the clamp lever at the front of the device.



8. Pull out the roll media from the back of the device until it reaches the end of the platen.



9. Insert the roll media that has been pull out between the platen and the pinch rollers and pull it to the front of the device.

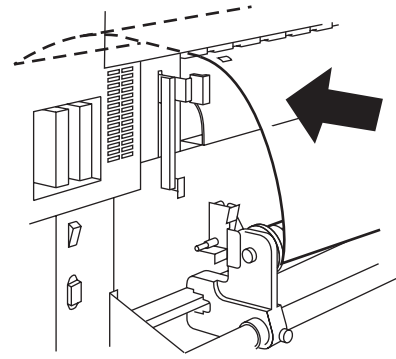


10. Push the clamp lever at the back of the device.

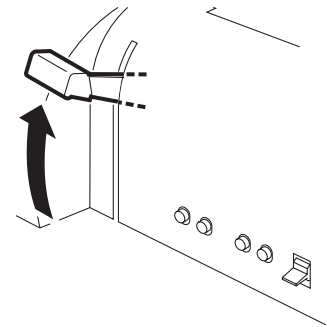
The clamp lever on the front face is lowered to hold the media. (for temporary setting)

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

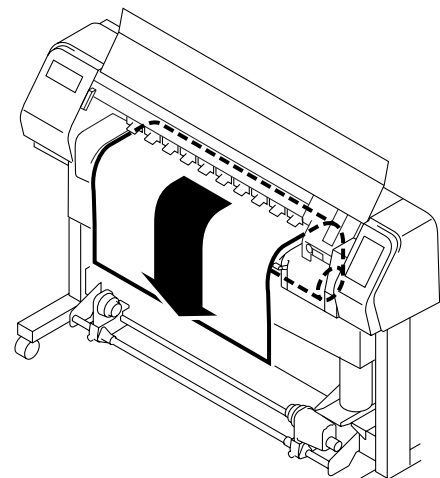
 page 2.15



11. Open the front cover and pull up the clamp lever at the front of the device.



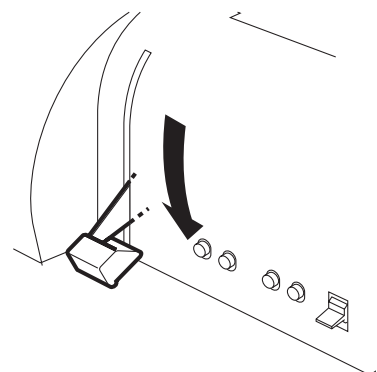
12. Pull out the roll media gently and then stop pulling when locked lightly.



13. Pull the roll media 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.

 page 2.15



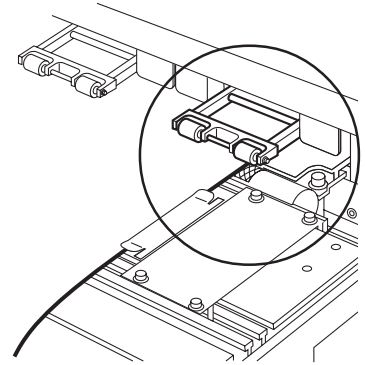
NOTE!

- When using a leaf media, set it so that it does not run off to the right of the pinch roller at the right end.

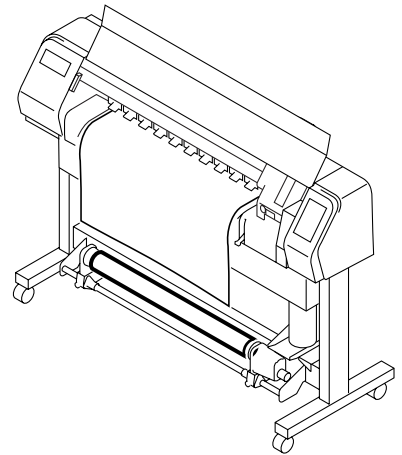
14. Hold midium with a media press lightly.

NOTE!

- When using a leaf media, set it so that it does not run off to the right of the pinch roller at the right end.
- When using a thick media, remove the media press from the media before plotting.



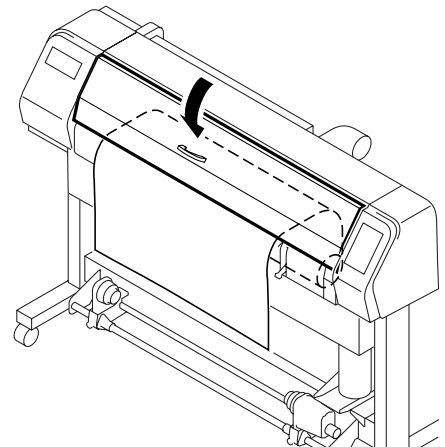
15. Set an empty paper tube to the take-up device.



16. Close the front cover and press the [ENTER] key.

The width of the media is detected.

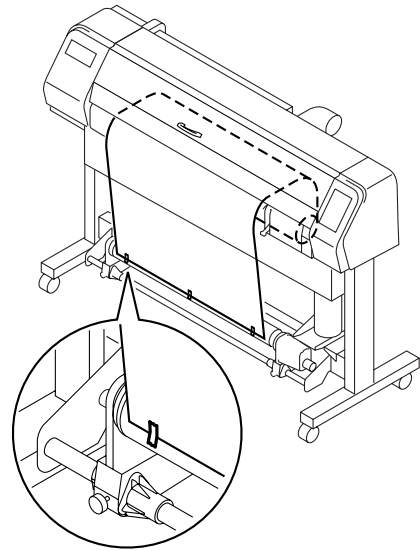
17. Press the Jog key [▼] to feed the media up to the paper tube position of the take-up device.



18. Fix the media to the empty paper tube using an adhesive tape.



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



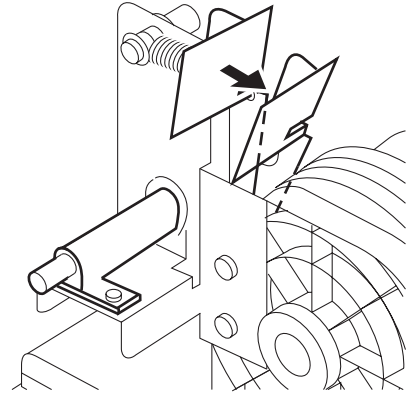
Operating the lock pin

Use the lock pin attached to the roll holder when it is attached to the top or bottom position.

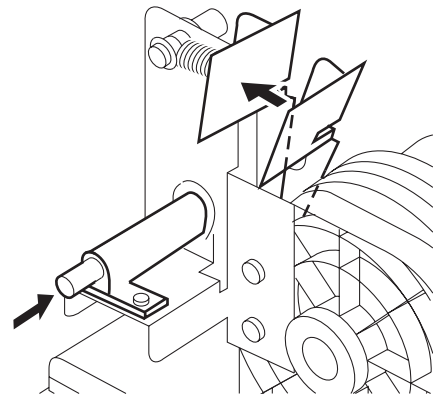
- (NOTE!)** • Be sure to pull out the media on the platen before using the lock pin.
Once unlocked, resetting of the media is necessary.

STEPS:

1. Turn over the lever of the roll holder toward you.



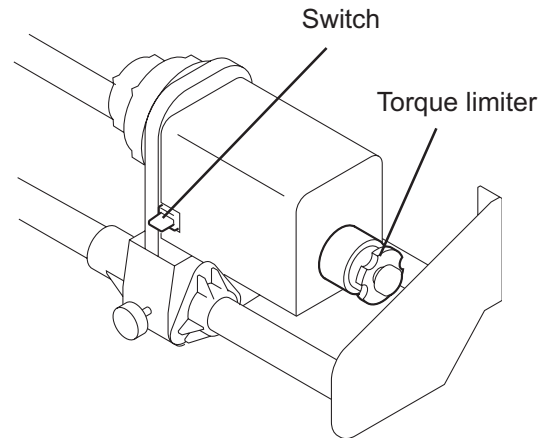
2. Push the lock pin and release the lever.



Switching the direction of winding of the media

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

- LEVER lower part (FORWARD)
 - : The take-up device winds the media with its plotting face faced out.
- LEVER central part (OFF)
 - : The take-up device will not wind the media.
- LEVER upper part (REVERSE)
 - : The take-up device winds the media with its plotting face faced in.



Setting the torque limiter

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

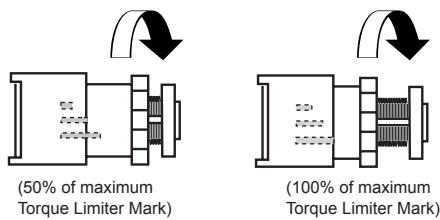
Strength of take-up is possible to be changed by adjusting the torque limiter.

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

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

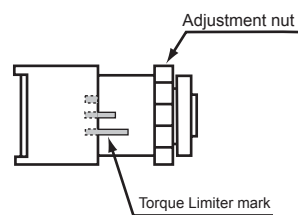
• Clockwise : It becomes strong

Media to be used : The thick media, such as Tarpaulin.



• Anti-clockwise : It becomes weak

Media to be used : A light media



NOTE!

- 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.

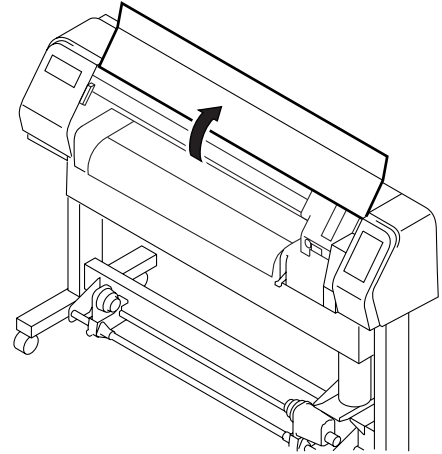
Setting cut sheet media on the device

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

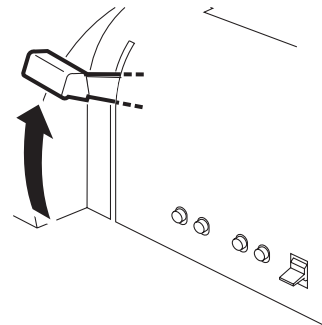
(NOTE!) • When using cut sheet media, take care that it is set straight forward.

STEPS:

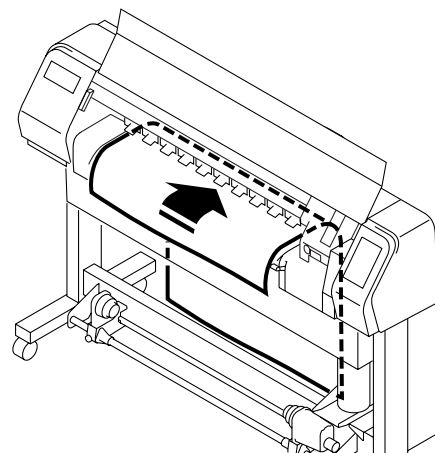
1. Open the front cover.



2. Push up the clamp lever.

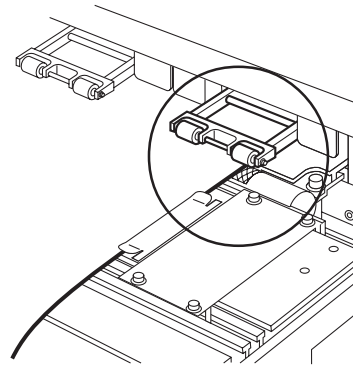


3. Insert the cut sheet media between the platen and the pinch rollers.

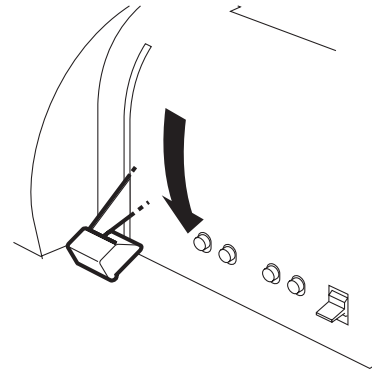


NOTE!

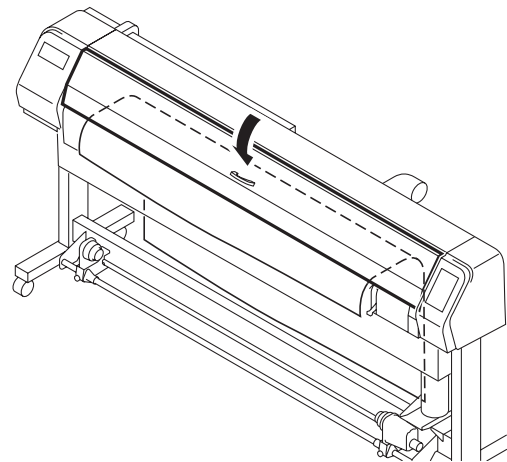
- When using a leaf media, set it so that it does not run off to the right of the pinch roller at the right end.



4. Push down the clamp lever.



5. Close the front cover.



6. Press the [ENTER] key.

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

page 1.15



(COVER OPEN)
PRESS < ENT > KEY

7. Press the [▶] key.

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



MEDIA SELECT
ROLL < > LEAF

< LOCAL >
width : 1272 mm

Heater-Temperature control

To store the Heat temp., set the [HEATER] of the FUNCTION mode.  page 4.6

FUNCTION mode - SET UP - TYPE - HEATER

This section describes how to adjust the Heat Temp., which has been stored at FUNCTION mode beforehand.

It can be adjusted even in printing, and will be expected temp.

However, it takes few minutes or more to get to the expected temp.



- This equipment should be used at 20-35°C to implement a stable print. According to the surrounding temperature condition, the temperature may not rise to the set value.
- Heat temp. will be kept up until the power is turned off or, it is reset under following condition.
 - To change the type of the FUNCTION mode
 - To change the Heat Temp. of the FUNCTION mode
 - To control the Heat Temp. by the computer.



- If the application software has the temp control function, it could be remote. Refer to the Operation manual of that Application Software.

Parameter:

OFF, 20~60 °C (per1 °C)

OFF, 68~140 °F (per1 °F)

According to a rounding error, it's possible not to set by 1 °F unit.

Standard of temperature set value(When SS2 ink used)

Heater temperature for Pre : 35 degree

Heater temperature for Print : 35 degree

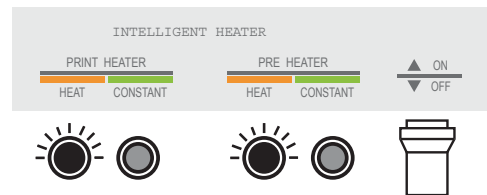
Adjust to the suitable temperature according to the media condition.  page 4.11

STEPS:

1. Make sure the Heater Switch to be ON.

HEAT indication turns on a light when heating.

When the Heater temp. is up to the set temp, CONSTANT indication turns on a light.

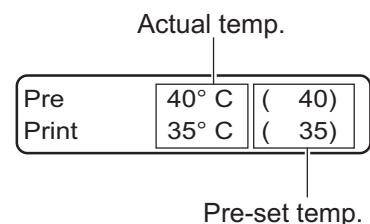


2. Press the [HEATER] key.

Indicate the actual Heater temp. and pre-set temp. at the same time.

Press the [HEAT] key again, then return to previous indication.

Any key operation has not been done up to 30sec., it turns to be LOCAL or REMOTE mode.

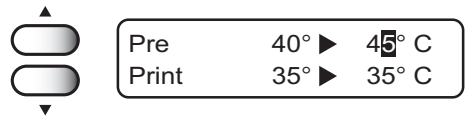


3. Press the [ENTER] key.

The cursor is shown up on the LCD display, then can change the Temp. of Pre-Heater.

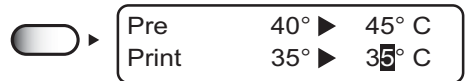


4. Select the temperature by pressing the JOG keys [▲] and [▼].

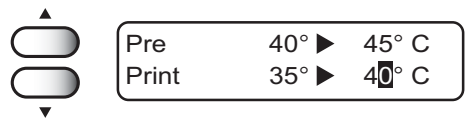


5. Press the Jog key [▶] to select the PRINT HEATER.

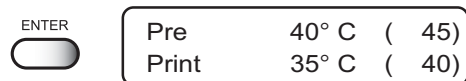
The cursor moves on the indication of Print Heater, and can change the Temp.



6. Change the temperature by pressing the JOG keys [▲] and [▼]

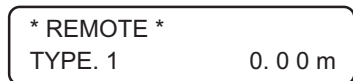


7. Press the [ENTER] key.



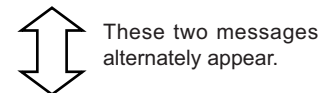
8. Press the [HEATER] key.

Return to LOCAL or REMOTE mode.

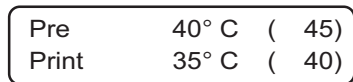


When the Heater temp. is still increasing up to the set temp., the LCD will be the right side of indication.

When the Heater temp. goes up to the set temp., the alarm sounds, the CONSTANT indication of Pre-heater and Print Heater turns on a light, then to be REMOTE mode.



- To start Printing before reaching the set temp., press [ENTER] key and return to REMOTE mode.



In case of faultiness with Heater

In case the Power turns off, or the Heater is in problem, the LCD indicates below.

When pressing the [HEATER] key while indicating below, it shows Error message.

LOCAL mode



REMOTE mode



Checking and solving nozzle clogging (TEST plotting)

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.

- (NOTE!)**
- To perform the test plot on a cut sheet media, use a media whose size is A4 or larger with placed in landscape configuration.
 - When in use of a roll media, the back side of roll media will loosen after test plotting, for the media returns to the plot original point by pressing the [REMOTE] or [FUNCTION] key.
Uproll the roll media by hands before plotting, and set it tidily. The loosened roll media will cause the inferior image quality.

STEPS:

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

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



< LOCAL >
width : 1272 mm

2. Press the [TEST&CLEANING] key.



TEST DRAW
< ENT >

3. Press the [ENTER] key.

The device plots the test pattern.



** TEST DRAW **

4. Check the test patterns.

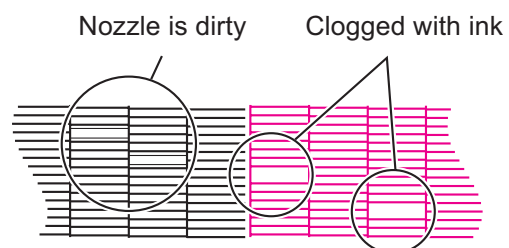
If a failure occurs, proceed with step 5; otherwise, terminate the operation.

< LOCAL >
width : 1272 mm

Normal pattern



Abnormal pattern



If a failure occurs...(Cleaning)

STEPS:

1. Press the [TEST&CLEANING] key twice.



CLEANING
TYPE : normal

2. Press the Jog key [▲] or [▼] to select the type of cleaning.



CLEANING
TYPE : normal

CLEANING
TYPE : soft

- 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 : strong

4. Press the [ENTER] key.



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

Cleaning starts.

The operation status is displayed as * in the second line.


The device revert the LOCAL mode.

< LOCAL >
width : 1272 mm

5. Repeat steps 2, and check the result of the test plotting.

Repeat steps 1 to 3 until normal plotting result is obtained.

NOTE!

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

Correcting the media feed rate [MEDIA COMP.]

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

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

NOTE!

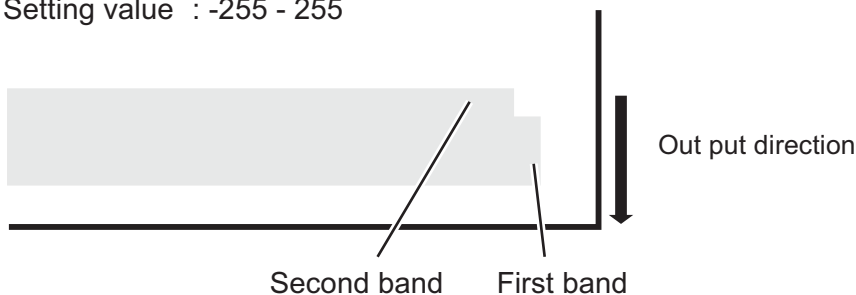
- When the heater temperature is changed, make sure that the CONSTANT indicator is lit and the set temperature is reached before making correction.
- When in use of a roll media, the back side of roll media will loosen after executing media comp., for the media returns to the plot original point.

CORRECTING PATTERN

Plot two bands.

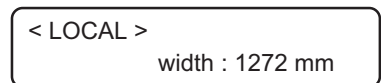
Adjust the plot density so that the boundary of the two bands is plotted with an even density.

Setting value : -255 - 255



STEPS:

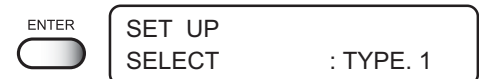
1. Make sure that the menu is the LOCAL mode.



2. Press the [FUNCTION] key.

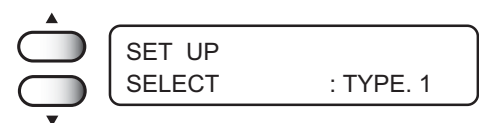


3. Press the [ENTER] key.



4. Press the Jog key [▲] or [▼] to select a type.

page 4.4



5. Press the [ENTER] key.

ENTER
TYPE. 1
MEDIA COMP. < ent >

6. Press the [ENTER] key.

ENTER
TYPE. 1
PRINT START : ent

7. Press the Jog key [▲] or [▼] to enter a correction value from the output pattern.

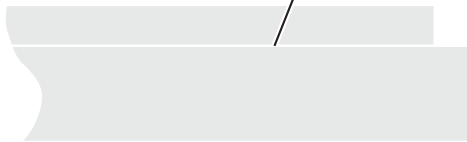
TYPE. 1
ADJUST = 20



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

Correction value is too large

Get between lines



Correction value is too small

Overlap



8. Press 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. Press the [END] key three times.

The menu returns to the LOCAL mode.

END
< LOCAL >
width : 1272 mm

Plotting an Image from source data

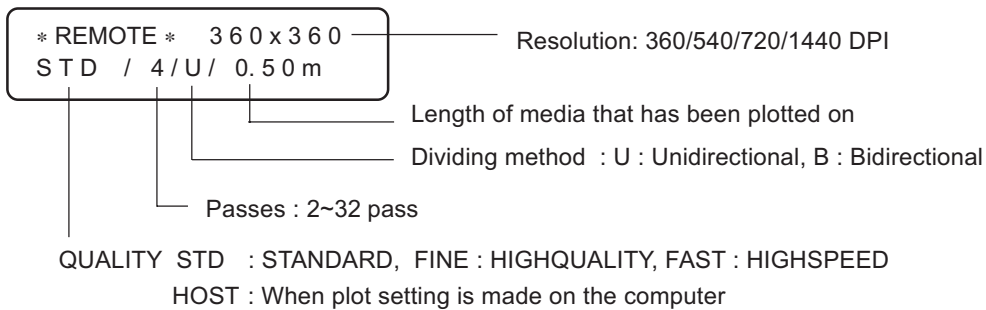
Starting the plotting operation

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".


- (NOTE!)** • When in use of a roll media, make sure the back side of roll media is not loosened before executing plotting. The loosened media will cause the inferior image quality.

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




STEPS:

1. Check the heater temperature.

Make sure that the CONSTANT indicator on the heater panel rights.  page .2.19

2. Press the [REMOTE] key.

The type of the currently selected plotting condition can be confirmed.  page 4.4

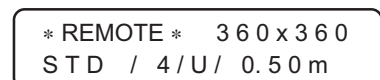


3. Transmit data from the computer.

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.

4. During the plotting.

During the plotting operation, the length of the media plotted on is displayed.

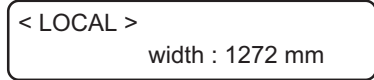


Interrupting the plotting operation

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

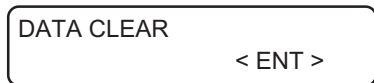
STEPS:

1. Press the [REMOTE] key to stop the plotting operation.

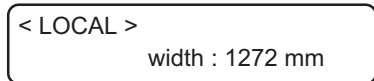


2. If data is being transmitted from the computer to the device, stop the data transmission.

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



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



Display detailed plotting information

On plotting the data received from the computer, the detailed plotting information can be displayed on LCD.

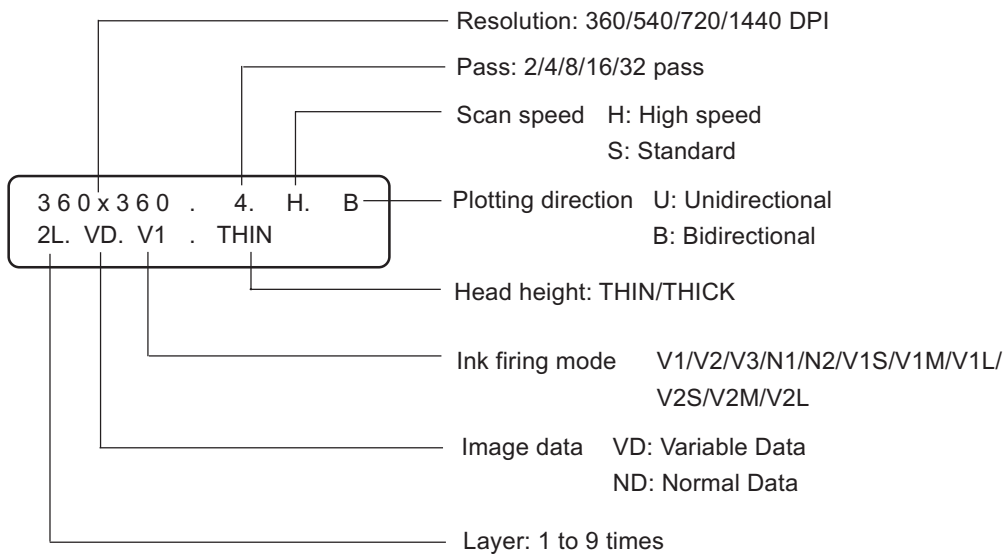
While plotting, the more detailed plotting information can be obtained with the information displayed on LCD during plotting.

When not plotting (REMOTE/LOCAL mode), the latest plotting information is displayed.

When not plotting once since turning on the power of the plotter, there is no plotting information.



- When contacting your dealer or distributor, tell them these information.



STEPS:

<<In case REMOTE mode>>

1. Press the [ENTER] key.

* REMOTE *
1 . 2 3 m



3 6 0 x 3 6 0 . 4. H. B
2L. VD. V1 . THIN

When there is no plotting information.

N o p r i n t
i n f o r m a t i o n .

<<In case LOCAL mode>>

1. Press the [ENTER] key twice.

< LOCAL >
width: 1272 mm



3 6 0 x 3 6 0 . 4. H. B
2L. VD. V1 . THIN

When there is no plotting information.

N o p r i n t
i n f o r m a t i o n .


Cut off the media by hand [MEDIA CUT]

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



- Do not turn off the main power switch on the rear face. If the main power switch is turned off, the nozzle will be clogged.



- When Auto cut function has been on, cutt off each datum automatically. ( page 4.8)

STEPS:

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

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

< LOCAL >
width: 1272 mm

2. Press the Jog key.

Any of the JOG keys can be used.

ORIGIN SET UP
0.0 -----

3. Press the [FUNCTION] key.

FUNCTION



MEDIA CUT
< ENT >

4. Press the [ENTER] key.

Cut off the media that has been plotted on.

The menu returns to the LOCAL mode.

The device returns to its initial condition.

ENTER



MEDIA CUTTING
PLEASE WAIT

< LOCAL >
width : 1272 mm

When [NEAR END] or [INK END] appears

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.

- (NOTE!)**
- 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.

NEAR END

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 ---

INK END

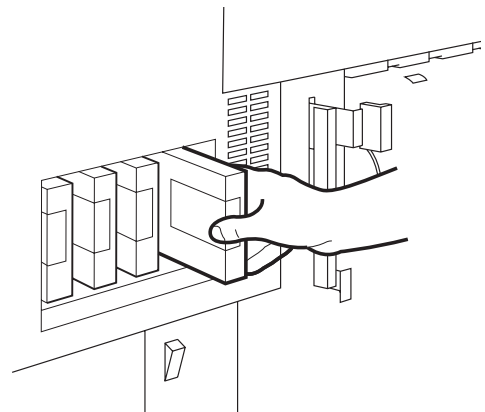
When the amount of ink completely runs out during plotting

Indicate the ink color which has completely run out.
 The display at right indicates that magenta ink runs out.

< LOCAL >	
INK END	-- C -

STEPS:

- Either of the messages shown above is displayed on the LCD during plotting.**
 - When [NEAR END] 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.



- Install a new ink cartridge.**

Pull out the ink cartridge of the indicated color and then set a new ink cartridge.
 The device enters the LOCAL mode.
 Continuous plotting is possible.

Display ink information

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

- Press the [ENTER] key in the LOCAL mode.**

The remaining amount of ink is displayed with a number.
 1 indicates near end and 9 full.
 Also you can check the ink type filling up now.

SS2-INK	K M Y C
REMAIN	9 8 7 8

- Press the [ENTER] key.**

The menu returns to the LOCAL mode.
 If the ink cartridge is defective, the error details are displayed.

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

P.6.6, 6.7

Turning the power off

When plotting is completed, push 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.

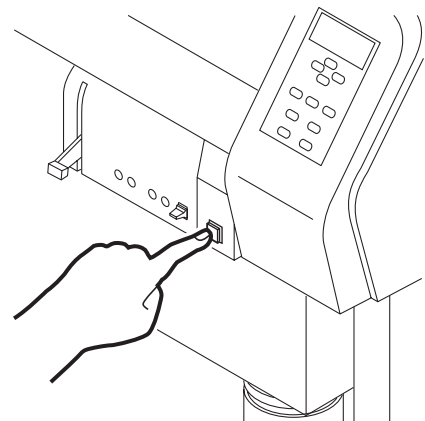
Also make sure that the head rests at the capping station.

- (NOTE!)**
- Do not turn off the main power switch on the rear face. The power is turned on periodically and the nozzle clogging preventive function is activated. (Flushing)
If the main power switch is turned off, the nozzle will be clogged. Repair by service personal is required.
 - Leave the front cover closed. If it is open, the nozzle clogging preventive function is not activated.
 - If the power switch is turned off, the exhaust fan of the device stops. For ventilation, do not turn off the power switch immediately after plotting.
 - 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.

STEPS:

1. Turn off the power to the device.

The POWER indicator on the operation panel goes off.



CHAPTER 3

Daily cleaning

This chapter describes daily cleaning.

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Routine Maintenance	3.2
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Cleaning the nozzle [NOZZLE WASH]	3.8
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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



- When using the maintenance cleaning fluid RS, be sure to wear the protective glasses.



- 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.



- Do not wipe the nozzles, wiper, or cap of the head with water or alcohol as doing so may cause nozzle clogging or damage to nozzles.



- Do not use benzene, thinner and chemical agents containing abrasives. Such materials can deteriorate or deform the surface of the cover.



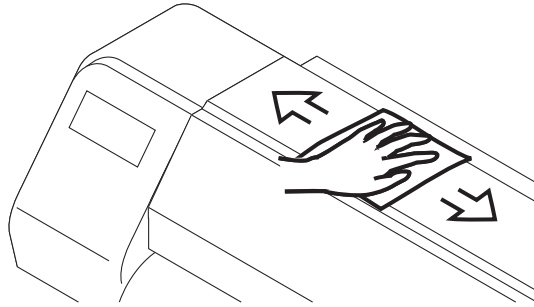
- Do not apply lubricating oil or the like inside the device. Such materials can cause the plotter mechanism to fail.



- Be careful not to allow the maintenance cleaning fluid RS or ink to adhere to the cover as this may cause deterioration or discoloring of the surface of the cover.

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.

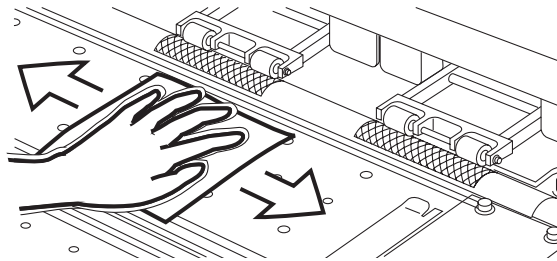


Cleaning the platen

NOTE! • Clean the platen after the platen cools down.

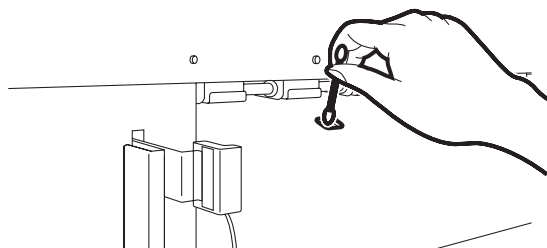
The platen may be stained by lint or dust since the media is cut on it. Wipe out dirt using the supplied paper towel.

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 swabs, 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 swab to clean the ink and wiper.

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



- When cleaning the ink station and head, be sure to wear the supplied goggle and gloves since you may get ink in your eyes.



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

STEPS:

1. Press the [FUNCTION] key.

FUNCTION



FUNCTION
SET UP < ENT >

2. Press the Jog key [▲] or [▼] to select the [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 [ENTER] key.
Move the carriage on the platen.

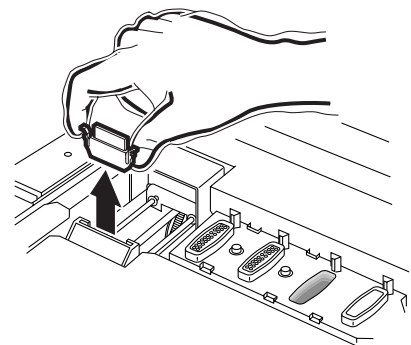
ENTER



STATION
COMPLETED : ent


6. Open the front cover.

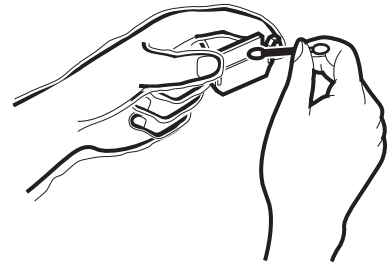
7. Holding the projections at both ends, draw out the wiper.



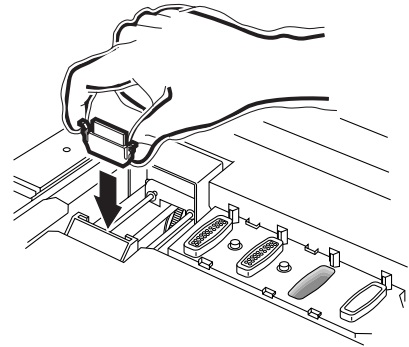
8. Remove the ink at the wiper and the bracket using a swab dampened with cleaning fluid RS.



- 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.  page 5.5



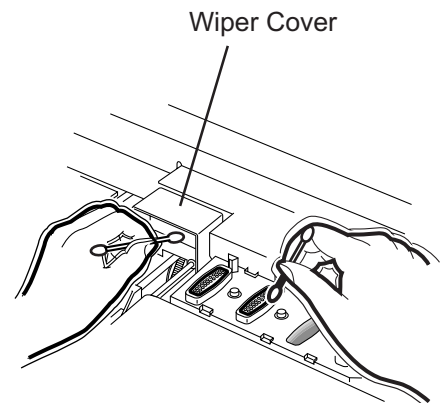
9. Holding the projections at both ends, insert the wiper which has cleaned into place.



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

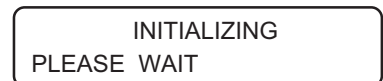
NOTE!

- Be careful not to leave lint of the swab. Lint may cause plotting failure.



11. Press the [ENTER] key.

The carriage return to the capping station, and the initial operation is performed.



Cleaning the head sides

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

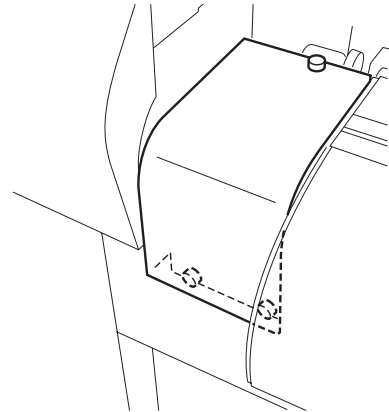
Open the maintenance cover, and wipe the head sides with a swab.

STEPS:

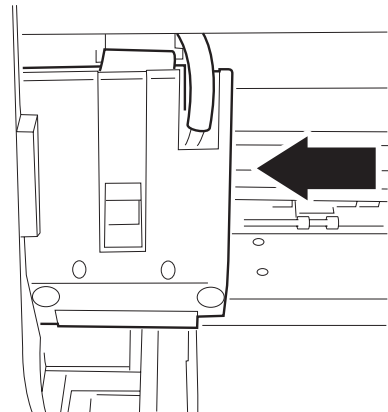
1. Turn off the power to the device.

 Page 2.30

2. Open the maintenance cover and remove three knobs.



3. Move the head by the hands to the extreme left.

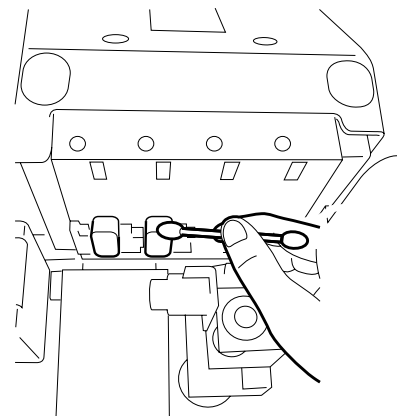


4. Wipe off ink or dirt the head sides using swab.

5. Return the head with your hand to extreme right.

6. Attach the maintenance cover.

Fasten three knobs that removed in STEP2.



7. Turn on the power to the device.

 page 2.3

Use the cleaning kit

In case the internal section is dirty or if nozzle missing cannot be resolved even after cleaning (👉 page 2.22, 4.10), use the cleaning kit.

The cleaning kit contains the following items. Do not use alcohol or water.

When using the supplied maintenance cleaning fluid, be sure to wear the supplied protective glasses.

- Cleaning fluid RS for maintenance (SPC-0336)
- Dropper
- swab
- Glove

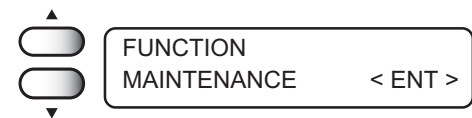
Cleaning the station interior

STEPS:

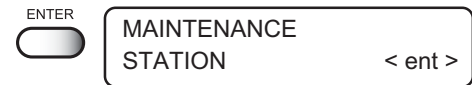
1. Press the [FUNCTION] key in the LOCAL mode.



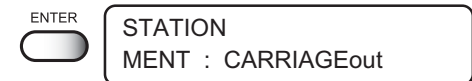
2. Press the Jog key [▲] or [▼] to select the [MAINTENANCE].



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



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



5. Press the [ENTER] key.
Move the carriage on the platen.

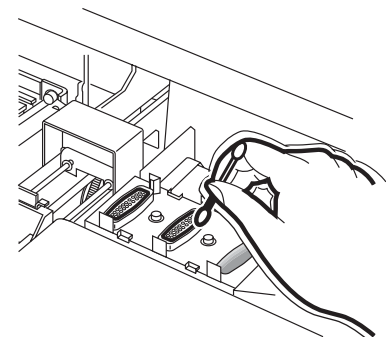


6. Open the front cover.

7. Using the swab dampened with cleaning fluid, wipe out dirt on the wiper and around the cap.

NOTE!

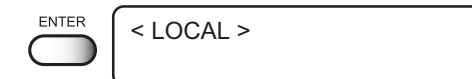
- Be careful not to leave lint of the swab. Lint may cause plotting failure.




9. Close the front cover.

10. Press the [ENTER] key.

The carriage return to the capping station, and the initial operation is performed.



Cleaning the nozzle [NOZZLE WASH]

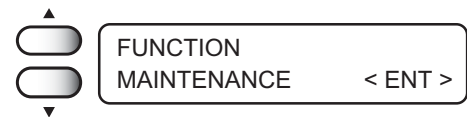
- (NOTE!)**
- If nozzle clogging cannot be resolved even after cleaning several times, execute the [FILL UP INK] and [HEAD WASH] functions.  page 5.18, 19
If this error cannot be resolved with these functions, contact your dealer.
 - If there exist cartridges with [NEAR END] and/or [INKEND], the cleaning function (suctioning through nozzles) is not activated. Replace cartridges with [NEAR END] and/or [INK END], before cleaning.

STEPS:

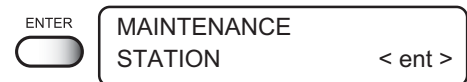
1. Press the [FUNCTION] key in the LOCAL mode.



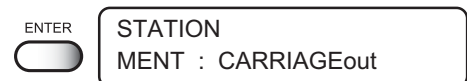
2. Press the Jog key [▲] or [▼] to select the [MAINTENANCE].



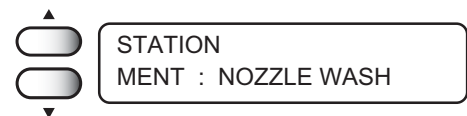
3. Press the [ENTER] key.
[STATION] is displayed.



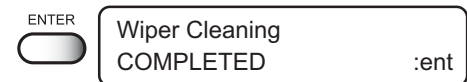
4. Press the [ENTER] key.
[CARRIAGEout] is displayed.



5. Press the Jog key [▲] or [▼] to select the [NOZZLE WASH].

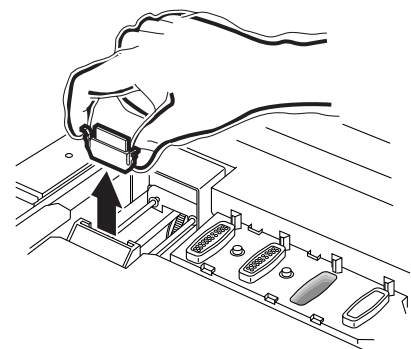


6. Press the [ENTER] key.
Move the carriage on the platen.




7. Open the front cover.

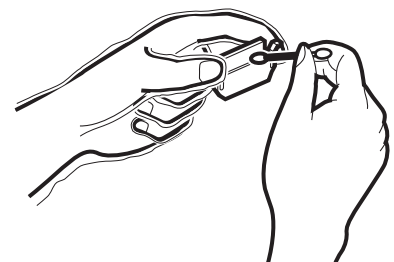
8. Holding the projections at both ends, draw out the wiper.



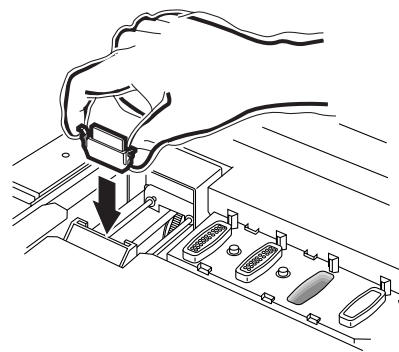
9. Remove the ink at the wiper and the bracket using a swab dampened with cleaning fluid RS.



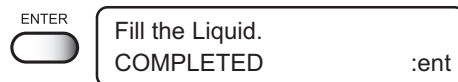
- If dirt or curl is serious, replace the wiper with a new one. At the time of replacement, be sure to terminate the plotter operation and follow the wiper replacement procedure.  page 5.5



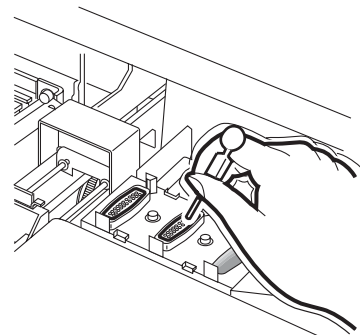
10. Holding the projections at both ends, insert the wiper which has cleaned into place.



11. Press the [ENTER] key.



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



13. Close the front cover,

14. Press the [ENTER] key.



15. Press the [▲] and [▼] key to select the time to leave. (1-99 mins: 1 min unit)

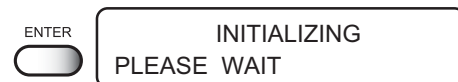
Normally set 1 min.



16. Press the [ENTER] key.

The indication at the right display continues during selected time to leave for sucking the cleaning solution and cleaning.

Return to the LOCAL mode.

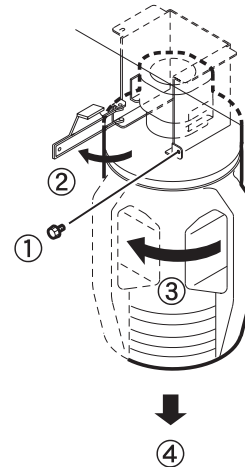


When the waste ink tank becomes full

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.

STEPS:

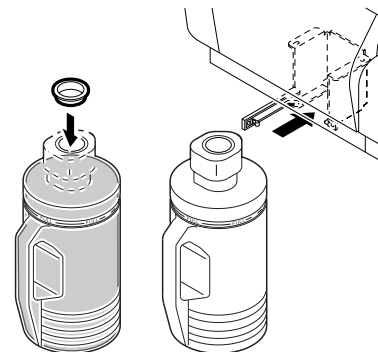
1. Remove screws from the waste tank guard.
2. Open the waste tank guard.
3. Holding the handle, raise the waste ink tank.
4. With the tank raised, turn the tank by 90 degrees and let it down.
5. Pull out the tank toward you.



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.

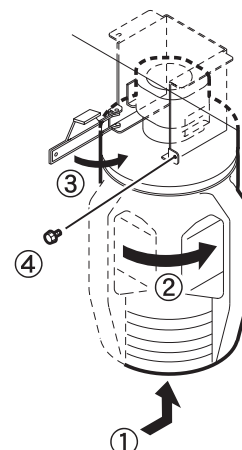


NOTE!

- 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.



NOTE!

- Request an industrial waste processor for processing of empty cartridges.

CHAPTER 4

Setting Function

This chapter describes operations and setting necessary for plotting.

Table of contents

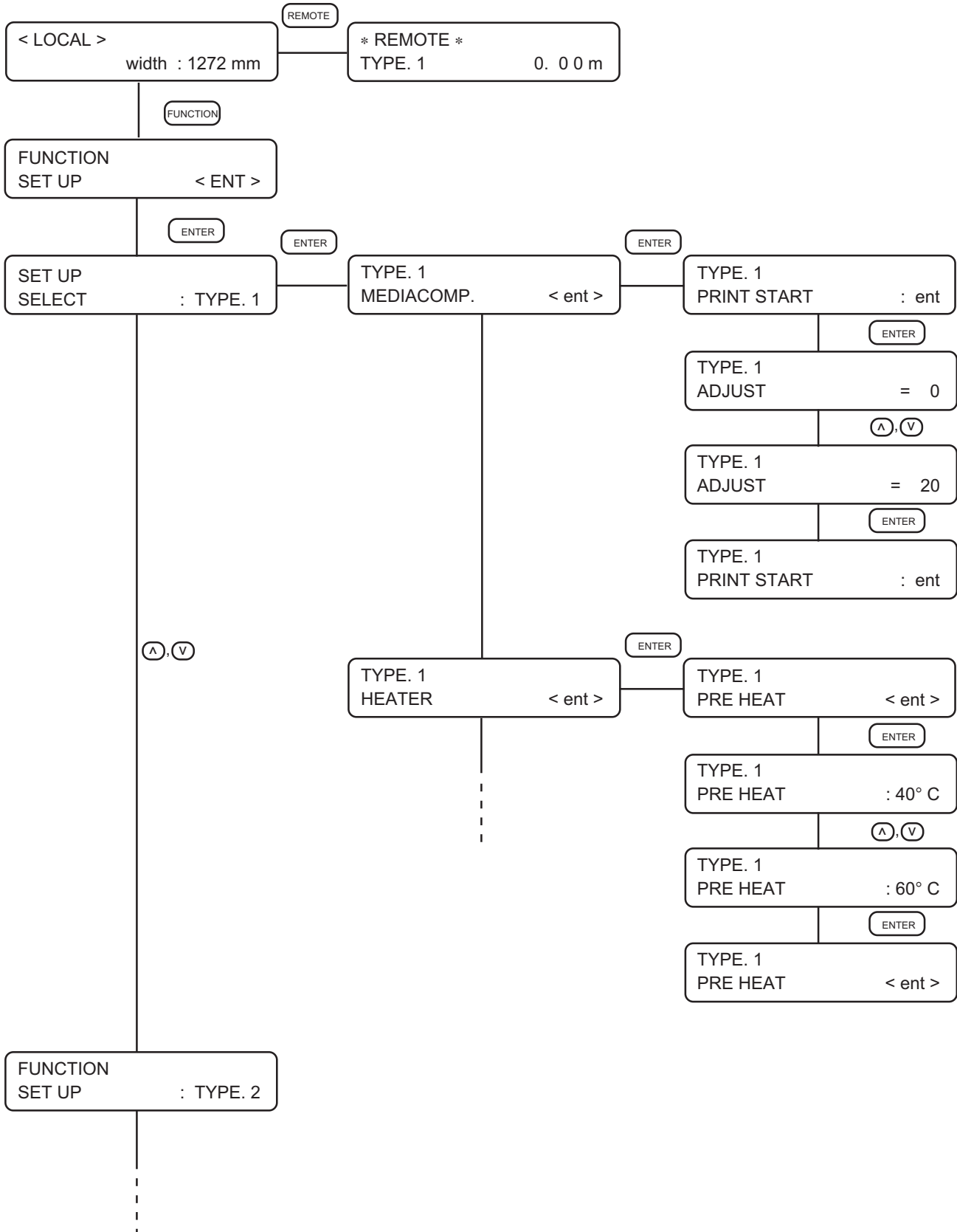
Basic operations of menus	4.2
Function mode	4.4
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Basic operations of menus

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.



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 media type used.

4. Select the Function.

Press the Jog keys [▲] or [▼] to select the function.

5. Enter the Function selected.

Press the [ENTER] key.

6. Select a parameter.

Press the Jog keys [▲] or [▼] 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 18 items.

The 18 items can be registered for each of the following four types.

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

Example) Type1 : For Tarpaulin 1
Type2 : For Tarpaulin 2
Type3 : FF
Type4 : PVC

Registering a type

1. Make sure that the mode is LOCAL mode.

< LOCAL >
Width : 1272 mm

2. Press the [FUNCTION] key.

FUNCTION
FUNCTION
SET UP < ENT >

3. Press the [ENTER] key.


ENTER
SET UP
SELECT : TYPE . 1

4. Press the Jog key [▲] or [▼] to select any of Types 1 through 4.

▲
▼
SET UP
SELECT : TYPE . 2

5. Press the [ENTER] key.

Setting Plotting conditions.

 page 4.5

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. Press 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, A.6
HEATER	Set the printer heater condition	P.4-6, A.6
PRINT MODE	Set the plot quality, plot direction, and logical seek	P.4-7, A.6
INK LAYERS	Set the number of over writing	P.4-8, A.6
DRYING TIMES	Set an ink drying time	P.4-8, A.6
AUTO CUT	Cut off the media automatically at the end of plotting	P.4-8, A.6
PRIORITY	Specifies the value set (host /panel)	P.4-8, A.6
PRE-FEED	Feeding the media to back and forth before execute plotting	P.4-9, A.6
MARGIN	Set a margin both left and right side of the media	P.4-9, A.6
COLOR PTN.	Plot a color pattern for Nozzle clogging check	P.4-9, A.7
REFRESH	Refreshing the head during plotting	P.4-9, A.7
MEDIA SET	Set the method of the media ditectio	P.4-10, A.7
VACUUM	Set the absorbability of the media.	P.4-10, A.7
MM / INCH	Set a unit of set values.	P.4-10, A.7
STAMP	Print the date of output and plotting condition	P.4-10, A.7
AUTO CLEANING	Head cleaning automatically per plotting	P.4-10, A.7
SETUP RESET	Reset the current plotting conditions	P.4-10, A.7

MEDIACOMP. **P. 2.24, A.6**

When the media type or heater temperature is changed, be sure to correct the amount of feed according to the media thickness.

(-255-255)

HEATER **P. 2.19, 4.11, A.6**

Sets the printer heater and preheater built in the platen.

PRE HEAT :

Sets the temperature of the preheater.

(OFF, 20- 60 °C / 68- 140 °F)

PRINT HEAT :

Sets the temperature of the printhead.

(OFF, 20- 60 °C / 68- 140 °F)

°C / °F :

Selects the unit of temperature.

(°C / °F)

STANDBY :

Sets the time interval since when plotting is completed till when the heater temperature begins to drop to the preheat temperature. The preheat temperature is preset and cannot be changed. When plotting is started when the temperature has dropped, it rises up to the set temperature automatically.

When [NONE] is selected, the temperature does not drop to the preheat temperature.

(NONE, 10- 90 min /10min step)

OFF TIME :

The heater is turned off in the following cases:

- If the device does not plot for the setup time or longer in the standby mode.
- With STANDBY-[NONE] selected, when plotting is started with the heater off if the device does not plot for the setup time or longer after the end of plotting, the temperature rises up to the set temperature automatically.

With [NONE] selected, the heater is not turned off.

(NONE, 30, 60, 90 min.)

PRINT MODE  **P. A.6**

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

QUALITY :

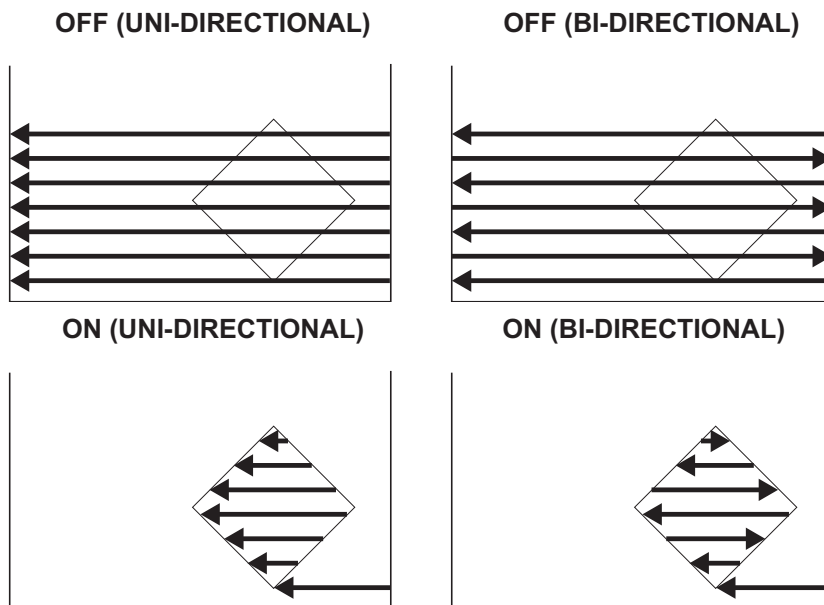
Select the quality image from three items.
(STANDARD, FINE, FAST)

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 media 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.



INK LAYERS **P. A.6**

Sets the number of overwriting if ink color appearance is dull.
(1-9 times)

DRYING TIME **P. A.6**

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 media plotted is cut off.

Specify the time to be established in accordance with the printing resolution on a drawing and the type of media 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 media cutting.

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

AUTO CUT **P. A.6**

This function cuts off the media 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 media.

(ON, OFF)

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

 page 2.29

PRIORITY **P. A.6**

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.
- HEATER
- PRINT MODE
- INK LAYERS
- DRYING TIME
- AUTO CUT
- REFRESH
- VACUUM

PRE-FEED P. A.6

Media that require high heater temperature for plotting, or other types of media that have a soft surface causes following problem. Media may stick to the platen if left on the platen. Media rise from the platen and causes media jam.

In this case, set PRE-FEED to ON. Prefeed function works automatically to prevent the media from sticking to the platen by feeding the media to back and forth before start plotting.

(ON, OFF)

MARGIN P. A.6

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

The function is used to increase the margin for binding.

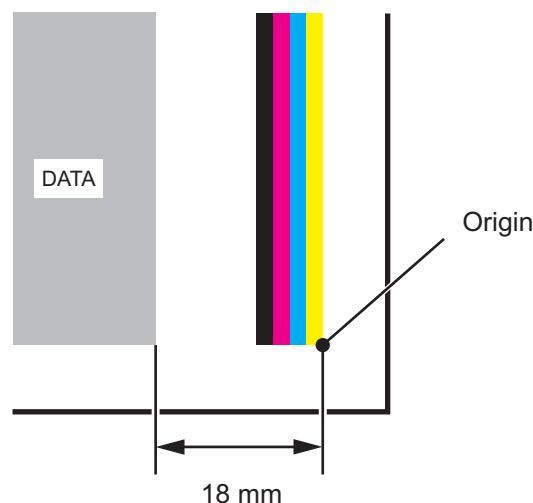
You can set a dead space for each of the right and left margins of the media.

(-10-85 mm)

COLOR PATTERN P. A.7

Plots a color pattern at the right end of the media. Nozzle clogging can be checked during plotting.

When color pattern is ON, plotting start position glides 18mm from the origin to the scan direction. The plotting working width becomes smaller. Therefore, when plotting is made all the way to both ends of the media, turn this function off.



REFRESH P. A.7

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 **P. A.7**

This function sets the method of media detection.

SELECT :

During the initial operation, the device displays a menu for selection of “roll media” or “cut sheet media”.

When “roll media” is selected, only the width of the media is detected. When “cut sheet media” is selected, both the width and length of the media are detected.

WIDTH :

Select this method when a roll media is used.

Only the width of a media will be detected.

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

VACUUM **P. A.7**

Sets the vacuum force of the media. If the media tends to stick to the platen, select LOW.

(STANDARD, LOW, OFF)

MM / INCH **P. A.7**

Set a unit of set values displayed.

(MM, INCH)

STAMP **P. A.7**

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 **P. A.7**

The head is cleaned automatically.

Perform cleaning for each plot to prevent plotting failures.

(ON, OFF)

SETUP RESET **P. A.7**

This function resets the current plotting conditions to the factory default setting.

Execute this function for each of the types of set plotting conditions.

Setting suitable heater temperature

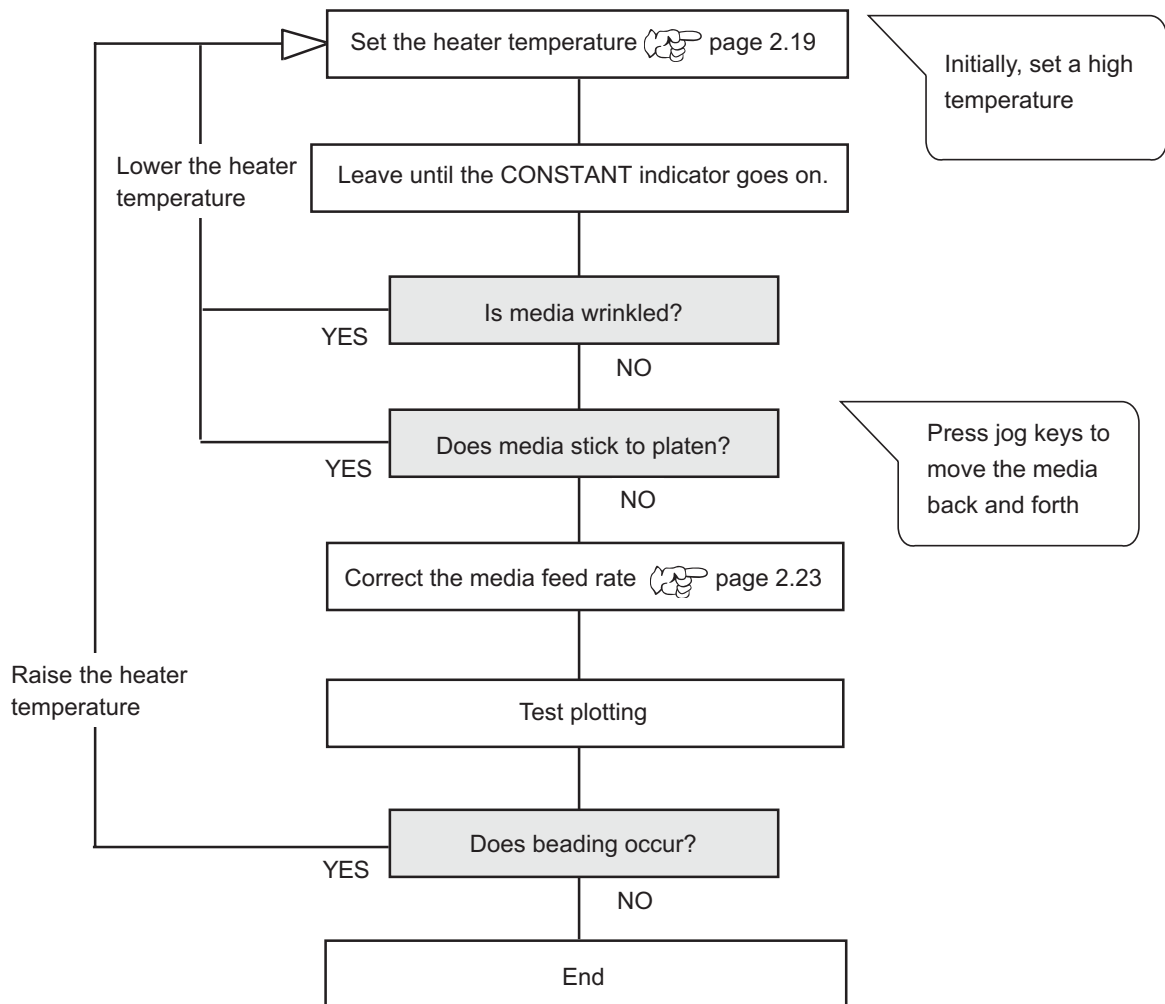
The following describes the procedure for setting the suitable heater temperature at the time of heater temperature depends on the media type and ambient temperature.

 page 2.19

Set a temperature which is suitable for each media. Non-coated media and media with a long ink drying time improve the ink fixing and drying characteristics.

Set a suitable heater temperature with the following procedure.

(NOTE!) • When using SS2 ink, set the heater temperature (both Pre/Print) at 35°C.



Setting exhaust fan and drier fan (Option)

The following sets up the rotational operation of the exhaust fan which lets out the order of ink and the drier fan which used to provide cool air for drying the media after plotting.

STOP TIME

Stops rotation of the exhaust fan and the drier fan at the specified period of time interval after plotting.

CONT. :

Rotates the fan at a HIGH speed.

0- 240 min :

Set up the period of time after plotting when the fan is to be stopped. When the plotter starts operation, the fan starts rotation accordingly. (During plotting, the fan is rotating at a high speed.)

RENEW

Selects the current status of the exhaust fan and the drier fan.
(HIGH, LOW, OFF)

STEPS:

1. Make sure that the mode is LOCAL mode.

< LOCAL >
width : 1272 mm

2. Press the [FUNCTION] key.

FUNCTION
FUNCTION
SET UP < ENT >

3. Press the Jog key [▲] or [▼] to select the [DRYING FAN].

▲
▼
FUNCTION
deodoriz FAN < ENT >

4. Press the [ENTER] key.

ENTER
deodoriz FAN
STOP TIME < ent >

5. Press the Jog key [▲] or [▼] to select the [STOP TIME] or [RENEW] and then set the value.

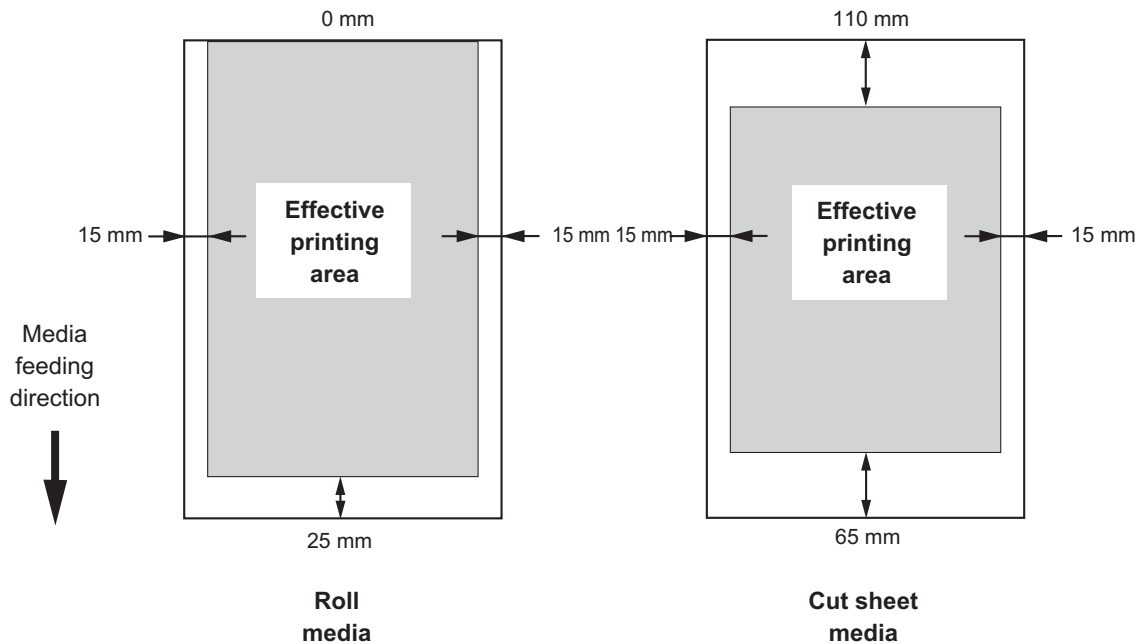
▲
▼
deodoriz FAN
STOP TIME < ent >
deodoriz FAN
RENEW < ent >

6. Press the [ENTER] key.

ENTER
FUNCTION
deodoriz FAN < ENT >

Effective Plotting Area

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



- NOTE!**
- In the case of high speed scanning , the maximum drawing range would be 1321 mm.



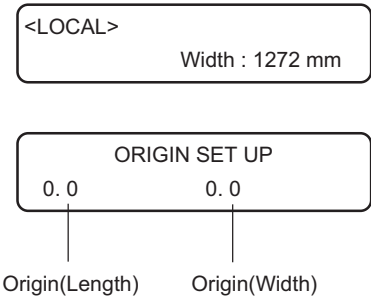
- **Changing the effective printing area...**
Initial value of dead space for right and left of media is 15 mm each.
The effective plotting area can be changed by changing the dead space.
Dead space is set with [MARGIN] in FUNCTION mode. page4.9

Establishing An Origin

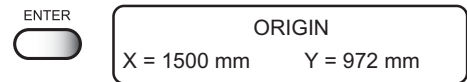
Establish an origin in terms of data on media loaded on the device.
In the case of printing with the unspecified origin, set the origin again.

STEPS:

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



2. After deciding the origin, press the [ENTER] key.




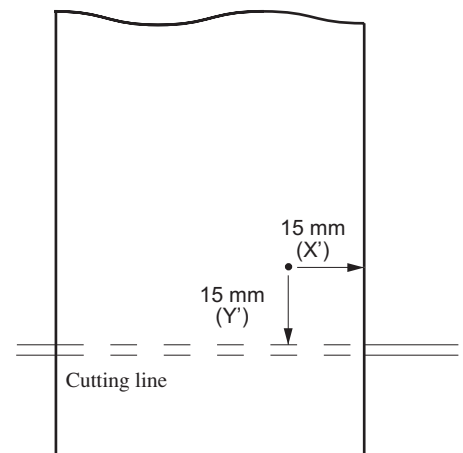
The effective plotting area is displayed on the LCD, and the device enters the LOCAL mode.
(When the roll media is used, X is not detected.)

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

Standard of printing origin


The printing origin is set like right chart when shipping.

The value of scanning direction (X') can be changed with [MARGIN] in FUNCTION mode.  P.4-9



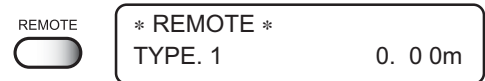
Correcting the media feed rate during operation

In the "MEDIA COMP.", operations are in a LOCAL mode.

The following describes the procedures altering the media feed rate during operation or in the REMOTE mode. ([MEDIA COMP.]  page 2.23).

STEPS:

1. Press the [REMOTE] key.



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.



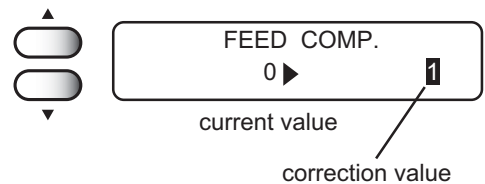
3. Press the [ENTER] key.

Available to alter the media feed rate.




4. Press the Jog key [▲] or [▼] as needed to set the amount of correction.

The value is incremental/ decremental to the correction value of the current media type.



- A new value takes effect in real time. The best effect can be obtained while checking the result.



- The unit of the correction value is the same as in "MEDIA COMP." in the LOCAL mode. ( page 2.23)

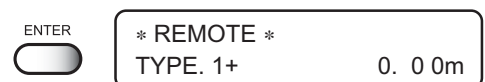
5. Press the [ENTER] key.

Confirm the media feed rate before saving it.
Press the [END] key to return to the REMOTE display.
The altered value ceases to be in effect, and returns to the previous value.



6. Press the [ENTER] key to return to the REMOTE display.

Save the altered media feed rate. The saved feed rate is effective in the next power on. In case altering the setting on the main unit, it displays "+" after the TYPE. Number.



Press the [END] key to save the value contemporary. Make sure the value ceases to be in effect performing media detection and invalid in the next power on.

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.

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Using further remaining ink in the ink cartridge	5.28

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.

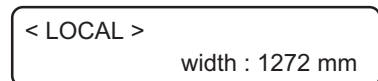
Invoking a maintenance function

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.

STEPS:

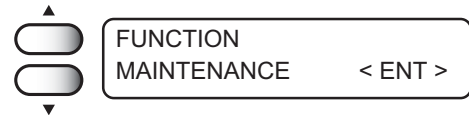
1. Make sure that the mode is LOCAL mode.



2. Press the [FUNCTION] key.




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



4. Press the [ENTER] key.




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, ink discharge way and replace the wiper. (CARRIAGEout, WIPER EXCHANG, NOZZLE WASH, Disway WASH, CUSTODYwash)	page 5.4 through 5.10
PRINT ADJUST	Adjust the dot position according to the head height, thin/thick.	page 5.12
INT.WIPING	Wipe off the condensed ink.	page 5.14
ROUTINE CLN	Perform head cleaning and flushing operation at intervals while main unit is turned on and waiting operation.	page 5.16
SLEEP clean	Perform head cleaning and flushing operation to prevent from nozzle-out phenomenon.	page 5.17
FILL UP INK	Perform this function if nozzle clogging is resolved after head cleaning.	page 5.18
HEAD WASH	Perform this function if nozzle clogging is resolved after head cleaning.	page 5.18
SCAN WIDTH	This is not normally used.	page 5.20
LIST	Plotting the set condition of the device.	page 5.21
DATA DUMP	Plotting data commands received from the computer, in HEX code.	page 5.22
WIPE LEVEL	Makes setting to move up the wiper replacement warning depending on the operating environment.	page 5.23
TIME SET	Sets the date and time of the built-in calender of the device.	page 5.24
INFORMATION	Displays the firmware version, serial number, and dealer number of the device.	page 5.25





Cleaning the station interior [STATION]-[CARRIAGEout]

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




- Do not move the carriage out of the capping station by hand. Select the [STATION]-[CARRIAGEout] to move the carriage.

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

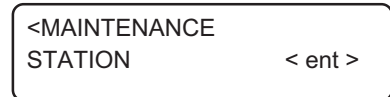
- CARRIAGEout : Move the carriage for maintenance of the station interior.
- WIPER EXCHANGE : When the message [REPLACE WIPER] is displayed, replace the wiper.  page 5.5.
- NOZZLE WASH : Clean the nozzle using the cleaning kit.  page 3.8
- Disway WASH : Wash the ink discharge way.  page 5.7
- CUSTODY wash : Wash the head nozzle and ink discharge way to store the printer.  page 5.9

STEPS:

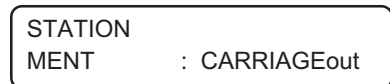
- Select the [STATION].

 page 5.2.





- Press the [ENTER] key.



- Select [CARRIAGEout], and then carriage moves out.



- 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 3.4.
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 5.26

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.



- Do not press 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.

STEPS:

1. Select the [STATION].

 page 5.2.

< MAINTENANCE
STATION < ent >

2. Press the [ENTER] key.



STATION
MENT : CARRIAGEout

3. Select the [WIPER EXCHG].

The carriage will come out of the capping station.

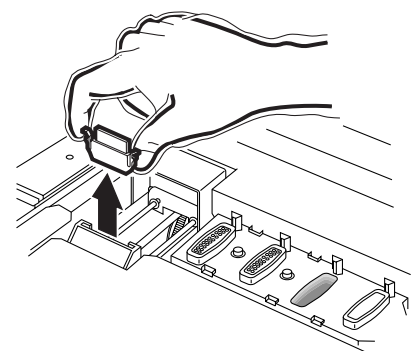


STATION
MENT : WIPER EXCHG

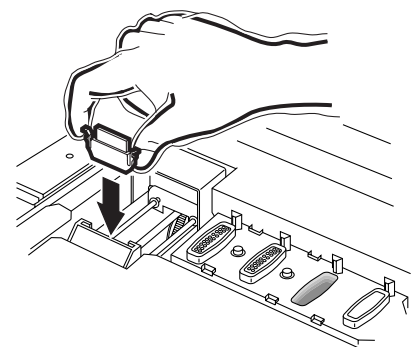
4. Open the front cover, then change the wiper.

5. 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.

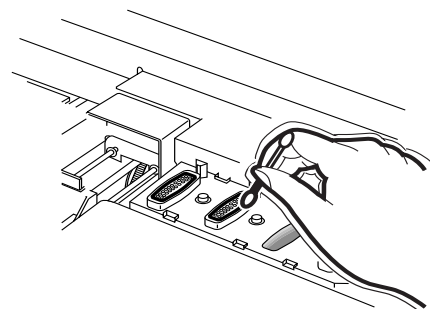


6. Holding the projections at both ends, insert a new wiper into place.



7. Clean the wiper guide shaft using a cotton bud or cloth.

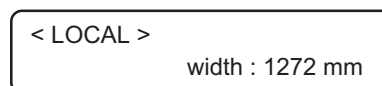
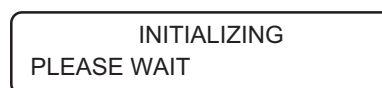
If dirt is hard to remove, use a cotton bud or cloth dampened with water.



8. Close the front cover.

9. Press the [ENTER] key.

The menu returns to the LOCAL mode.



Ink discharge way cleaning [STATION]-[Disway WASH]

The ink discharge way may become clogged by coagulated ink. It must be cleaned at regular intervals to avoid clogging.

Ink discharge way: Tubing between the cap and the waste ink tank



- When cleaning the ink station and head, be sure to wear the supplied goggle and gloves since you may get ink in your eyes.



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

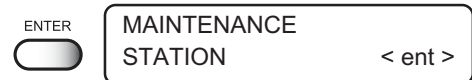
Cleaning tools

- Cleaning fluid RS for maintenance (SPC-0336)
- Pipette
- Glove

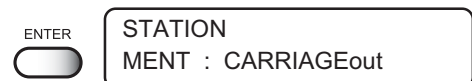
STEPS:

1. Select the [STATION].

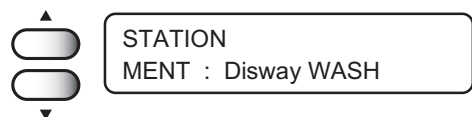
 page 5.2.



2. Press the [ENTER] key.



3. Select the [Disway WASH].



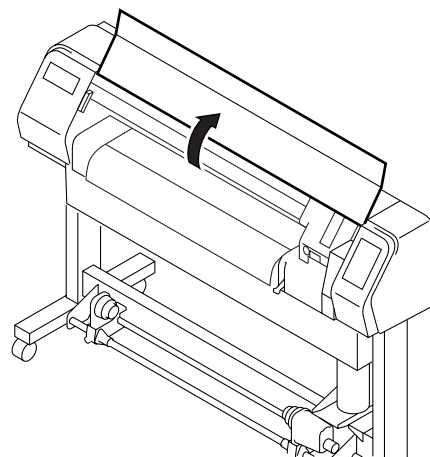
4. Press the [ENTER] key.

The carriage moves to the platen.

Dry suction starts in cycles consisting of 5 seconds of suction followed by 10 seconds of pause.

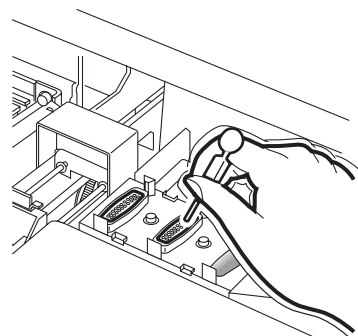


5. Open the front cover.



6. Remove cleaning fluid RS with a dropper.
During the suction pause period, drop cleaning fluid RS until just before it overflows from the cap.

Repeat at all other caps.



7. Close the front cover.

8. Press the [ENTER] key.

Dry suction continues for 30 seconds, and then the menu returns to the LOCAL mode.



STATION
COMPLETED : ent

INITIALIZING
PLEASE WAIT

< LOCAL >

When not in use the plotter over the long term [STATION]-[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.

Cleaning tools

- Cleaning Solution RS (SPC-0336), Pipette
- Glove, Goggle

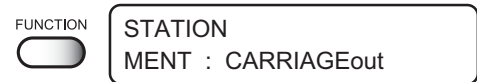
STEPS:

1. Select the [STATION].

 page 5.2.



2. Press the [ENTER] key.

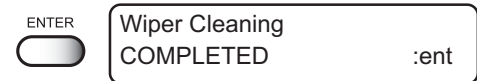


3. Press the Jog key [▲] or [▼] to select the [CUSTODYwash].

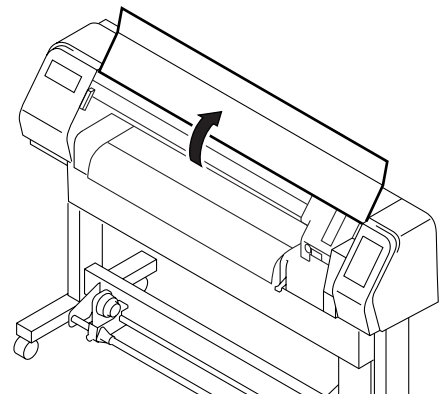


4. Press the [ENTER] key.

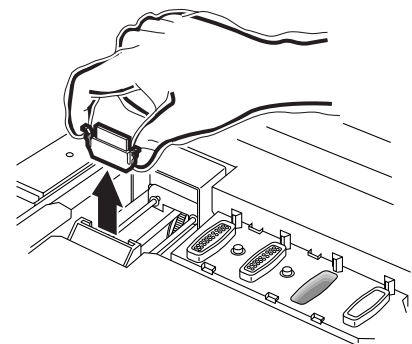
The carriage moves to the platen.



5. Open the front cover.




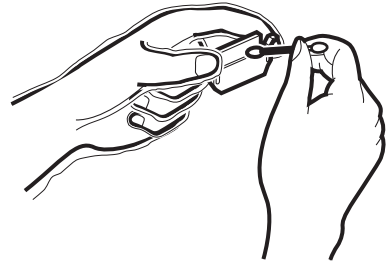
6. Holding the projections at both ends, draw out the wiper.



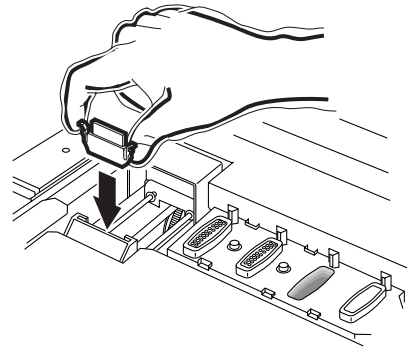
7. Remove the ink at the wiper and the bracket using a swab dampened with cleaning fluid RS.



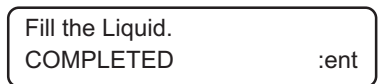
- If dirt of curl is serious, replace the wiper with a new one. At the time of replacement, be sure to terminate the plotter operation and follow the wiper replacement procedure.  page 5.5



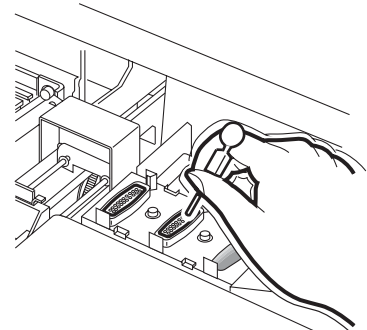
8. Holding the projections at both ends, insert the wiper which has cleaned into place.



9. Press the [ENTER] key.



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



11. Close the front cover.

12. Press the [ENTER] key.



13. Press the [▲] and [▼] key to select the time to leave. (1-99 mins: 1 min unit)

Normally set 1 min.



14. Press the [ENTER] key.

Perform the nozzle cleaning.

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



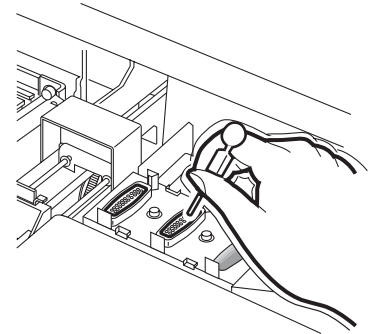
INITIALIZING
PLEASE WAIT

STATION
COMPLETED : ent

15. Open the front cover.

16. Fill the cap with the cleaning fluid using a pipette.

Repeat the performance several times to clean the ink discharge way for the air aspiration is performed fitfully. Perform the operation for the each cap.



17. Close the front cover.

18. Press the [ENTER] key.

Carriage returns to the station and the menu returns to the LOCAL mode.



INITIALIZING
PLEASE WAIT

< LOCAL >

When media thickness is changed [PRINT ADJUST]


When the media thickness, head height, ink type is changed, the dot position is subtly different. This function corrects the dot positions to ensure that the accurate plotting result is obtained.

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

- (NOTE!)** • When in use of the roll media, the back side of roll media will loosen after executing print adjust, for the media returns to the plot original point.

STEPS:

1. Select the [PRINT ADJUST].

 page 5.2.

```

MAINTENANCE
PRINTadjust      < ent >
  
```

2. Press the [ENTER] key.



```

MAINTENANCE
PRINT START      : ent
  
```

3. Press 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.



4. Press 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].



```

MAINTENANCE
PATTERN 1        = 0.0
  
```

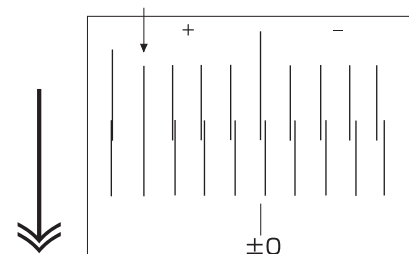
Select the correct dot positions on [PATTERN 1] using the JOG keys [▲] and [▼].

Select the dot positions that make a straight line on the test pattern in the two plotting directions.

Select the dot positions 4.0 that make a straight line on the test pattern in two plotting direction.

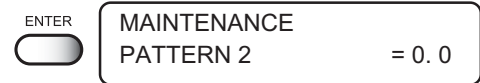


- If the pattern correction value for straight lines is not within -40 through +40, adjust the head height and then correct it again with [PRINTADJUST].



Out put direction

5. Press the [ENTER] key.



MAINTENANCE
PATTERN 2 = 0.0

6. Repeat Steps 4 and 5 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 3 = 0.0

MAINTENANCE
PATTERN 4 = 0.0

MAINTENANCE
PATTERN 5 = 0.0

MAINTENANCE
PATTERN 6 = 0.0

MAINTENANCE
PATTERN 7 = 0.0

7. Press the [END] key twice.

The menu returns to the LOCAL mode.



< LOCAL >
width : 1272 mm

Regular wiping function [INT.WIPING]


In case of setting for heaters at high temperature, or setting too much amount of ink per unit (high concentration, render set, etc.) on the plotter, “spray”, “mass of ink”, or “nozzle-out” phenomena may happen due to evaporation of the solvent media that may condense on a print-head surface resulting inferior image quality.

When the heater setting temperature and the out side temperature differs greatly, ink easily get to condense.

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

STEPS:

1. **Select the [INT. WIPING].**

 page 5.2.

MAINTENANCE
INT.WIPING < ent >

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

[SCAN COUNT] is displayed.

ENTER
INT.WIPING
SCAN COUNT < ent >

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

ENTER
INT.WIPING
SCAN COUNT = 0

4. **Press the Jog keys [▲] or [▼] to select the number of the scanning for the regular wiping.**

(0-9990 scan : 10 scan unit)

▲
▼
INT.WIPING
SCAN COUNT = 30



- The initial value of the SCAN COUNT is 0 (no wipe). Alter the setting value according to the status of use.
Set the scan number around 30 - 50 scans in case setting the heater temperature at 50 degrees Celsius and above, much amount of ink to be coated.

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

[SCAN COUNT] is displayed.

ENTER
INT.WIPING
SCAN COUNT < ent >

6. **Press the Jog key [▲] or [▼] to select the [TEMP.DIFF.].**

▲
▼
INT.WIPING
TEMP.DIFF. < ent >

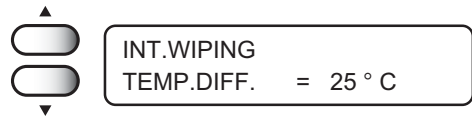
7. Press the [ENTER] key.



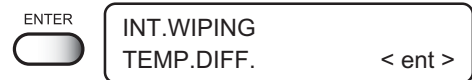
8. Press the jog key [▲] or [▼] to select the number of the scanning for the regular wiping.



- INT.WIPING function is effective in case the outside temperature is lower than the print heater temperature setting, and the temperature difference exceeds the value of "TEMP.DIFF."



9. Press the [ENTER] key.

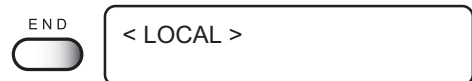


10. Press the [END] key.



11. Press the [END] key twice.

The menu returns to the LOCAL mode.



TWICE

Routine cleaning [ROUTINE CLN]

To prevent clogging while not plotting, ink is ejected from the head at regular intervals. The head itself must be cleaned also at regular intervals which are set as shown below.

- (NOTE!)**
- This function is not performed when the error message relating to ink is displayed on LCD.
 - This function performs only when the plotter is left with displaying the followings:


* REMOTE *
0.00 m

< LOCAL >
width : 1272 mm

- Key operation is not available while this function performs because it is the same performance as cleaning.

STEPS:

1. Select the [ROUTINE CLN].

 page 5.2

MAINTENANCE
ROUTINE CLN < ent >

2. Press the [ENTER] key.

ENTER
ROUTINE CLN
INTERVAL = OFF

3. Press the JOG key [▲] or [▼] to select the interval.

▲
▼
SLEEPclean
INTERVAL = 1 h

4. Press the [ENTER] key.

[ROUTINE CLN] is displayed.

ENTER
MAINTENANCE
ROUTINE CLN < ent >

5. Press the [END] key twice.

The menu returns to the LOCAL mode.

END
TWICE
< LOCAL >
width : 1272 mm


Sleep cleaning [SLEEP clean]

To prevent clogging while the power switch has been turned off, ink is ejected from the head at regular intervals.

The head itself must be cleaned also at regular intervals which are set as shown below.

STEPS:

1. **Select the [SLEEPclean].**

 page 5.2.

MAINTENANCE
SLEEPclean < ent >

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



SLEEPclean
INTERVAL = 8h

3. **Press the Jog key [▲] or [▼] as needed to select the interval.**

4h, 8h, 12h, 24h, OFF



SLEEPclean
INTERVAL = 12h

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

[SLEEPclean] is displayed.



MAINTENANCE
SLEEPclean < ent >

5. **Press the [END] key twice.**

The menu return to the LOCAL mode.



< LOCAL >

If nozzles are clogged even after the cleaning function is executed

If nozzle clogging is resolved after HEAD CLEANING (👉 page 2.23) and NOZZLE WASH (👉 page 3.8) perform the following functions.

FILL UP INK : The device is charges ink.

HEAD WASH : Cleans the head, tube, and damper with the dedicated cleaning fluid (option).

[FILL UP INK]

STEPS:

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

👉 page 5.2.

MAINTENANCE
FILL UP INK < ent >

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

Filling of ink is started automatically.



FILL UP
* * * * * - - - - -

When filling of ink is completed, the menu returns.

MAINTENANCE
FILL UP INK < ent >

3. **Press the [END] key twice.**

The menu returns to the LOCAL mode.



< LOCAL >
width : 2475 mm

[HEAD WASH]



- The washing liquid is separately available from your local distributor.

STEPS:

1. **Select the [HEAD WASH].**

👉 page 5.2.

MAINTENANCE
HEAD WASH < ent >

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



WASH
REMOVE CARTRIDGE

3. **Remove the ink cartridges.**

Ink is discharged to the waste ink tank.

4. **When the display shown on the right appears, set the cleaning cartridge.**

Cleaning fluid is suctioned up.

WASH
SET CLEAN TOOL

5. **When the display shown on the right appears, remove the cleaning cartridge.**

Suck in air.

WASH
REMOVE TOOL

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

Cleaning fluid is suctioned up.

WASH
SET CLEAN TOOL

7. **When the display shown on the right appears, remove the cleaning cartridge.**


Cleaning fluid is discharged to the waste ink tank.

WASH
REMOVE TOOL

When one step have been completed, the display shown on the right appears.

If you want to wash the head again, press the [▶] key to go to the step 4.

If you want to end the washing procedures, press the [◀] key to go to the step 8.

 HEAD WASH
E N D < > W A S H

8. **When all steps have been completed, the display is shown on the right.**

MAINTENANCE
HEAD WASH < ent >

9. **Press the [END] key twice, and return the menu to the FILL UP INK mode.**


TWICE Ink Set SS2 Sol

Reduce printing time of narrow image [SCAN WIDTH]

This function allows you to reduce the printing time by set to OFF.
However nozzle out may occurs. Therefore it is recommended set to ON.
When it is set to ON, scan operation is performed 60cm/23.6 inch in width (selectable)
regardless of data or media width. This function is valid when using SS2 ink.

STEPS:

1. Select the [SCAN WIDTH].

 page 5.2.

MAINTENANCE SCAN WIDTH	< ent >
---------------------------	---------

2. Press the [ENTER] key.

Current status is displayed.
(Initial setting is ON.)

ENTER	SCAN WIDTH RENEW	: ON
-------	---------------------	------

3. Press the Jog key [▲] or [▼] to select the [ON/OFF].

ON: Scan with input width. (Able to select the value. Go to step7)

OFF: Scan with LOGICAL SEEK setting (Go to step9)

LOGICAL SEEK ON: Data width (Image width)

LOGICAL SEEK OFF: Media width

▲	SCAN WIDTH RENEW	: OFF
---	---------------------	-------

(NOTE!) • **Setting is OFF, nozzle out may occur and image quality decline.**

4. Press the [ENTER] key.

ENTER	SCAN WIDTH WIDTH	: 400 mm
-------	---------------------	----------

5. Press the Jog key [▲] or [▼] to input the width of scan.

If nozzle out is not recovered, change the input value to larger number.

▲	SCAN WIDTH WIDTH	: 500 mm
---	---------------------	----------

6. Press the [ENTER] key.

ENTER	MAINTENANCE SCAN WIDTH	< ent >
-------	---------------------------	---------

7. Press the [END] key twice.

The menu returns to the LOCAL mode.

END TWICE	< LOCAL >
--------------	-----------

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 Ver7.00) (I/F Ver1.51) S/N : D1406001
(1) SET UP < TYPE1 >
MEDIA COMP. 0 :HOST 0 TYPE2 :HOST 0 TYPE3 :HOST 0 TYPE4 :HOST
HEATER PRE OFF :HOST OFF :HOST OFF :HOST OFF :HOST
PRINT OFF :HOST OFF :HOST OFF :HOST OFF :HOST
    °C/°F °C
STANDBYOFF OFF :HOST OFF :HOST OFF :HOST OFF :HOST
OFF OFF :HOST OFF :HOST OFF :HOST OFF :HOST
PRINT MODE STD :HOST STD :HOST STD :HOST STD :HOST
DIRECTION UNI-D :HOST UNI-D :HOST UNI-D :HOST UNI-D :HOST
LOGICALseekON ON :HOST ON :HOST ON :HOST ON :HOST
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 OFF :HOST
PRE-FEED OFF :HOST OFF :HOST OFF :HOST OFF :HOST OFF :HOST
MARGIN RIG 0mm 0mm 0mm 0mm 0mm
LEFT 0mm 0mm 0mm 0mm
COLOR PTN. OFF :HOST OFF :HOST OFF :HOST OFF :HOST
REFRESH LEVEL3 :HOST LEVEL3 :HOST LEVEL3 :HOST LEVEL3 :HOST
MEDIA SET SELECT :HOST SELECT :HOST SELECT :HOST SELECT :HOST
VACUUM STANDARD:HOST STANDARD:HOST STANDARD:HOST STANDARD:HOST
MM/INCH MM MM MM MM
STAMP MODE OFF :HOST OFF :HOST OFF :HOST OFF :HOST
TIME OFF :HOST OFF :HOST OFF :HOST OFF :HOST
AUTO CLEAN OFF :HOST OFF :HOST OFF :HOST OFF :HOST
(2) HeadHeight Thin
(3) WIPE LEVEL 10/10
(4) deodorizFAN 120min
(5) DISPLAY English
(6) INT.WIPING
SCAN COUNT 0
TEMP.DIFF. 12°C
(7) SCAN WIDTH OFF/ 0mm
(8) ROUTINE CLN OFF
(9) SLEEPclean 8h
(10)PRINTadjust
THIN PATTERN1 PATTERN2 PATTERN3 PATTERN4
0.0 0.0 0.0 0.0
PATTERN5 PATTERN6 PATTERN7
0.0 0.0 0.0
THICK PATTERN1 PATTERN2 PATTERN3 PATTERN4
0.0 0.0 0.0 0.0
PATTERN5 PATTERN6 PATTERN7
0.0 0.0 0.0
(11)REPLACE CNT
CARTRIDGE 1: 0 2: 0 3: 0 4: 0
REMAIN 1: 102% 2: 102% 3: 102% 4: 102%
SHOT COUN 1: 17 2: 5 3: 5 4: 5
SCAN COUNT 0 (x1000)
DRAW LENGT 0m 0ft
DRAW AREA 0m2 0sq.ft.
USE TIME 0h
SLEEP REF. 0 0h0m
Date : 05.12.13 00:15

```

STEPS:

1. **Select the [LIST].**

 page 5.2.

MAINTENANCE
LIST <ent>

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

Plotting starts automatically.

ENTER



* REMOTE *
** LIST **



MAINTENANCE
LIST <ent>

3. **Press the [END] key twice.**

The menu returns to the LOCAL mode.

END

TWICE

< LOCAL >
width : 1272 mm

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 - tenth of the standard number of wiping is reached.

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

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

STEPS:

1. Select the [WIPE LEVEL].

 page 5.2.

MAINTENANCE
WIPE LEVEL <ent>

2. Press the [ENTER] key.



MAINTENANCE
WIPE LEVEL 10 / 10

3. Press the [▲] and [▼] key to select the level for warning.

(10/10 - 1/10)



MAINTENANCE
WIPE LEVEL 2 / 10

4. Press the [ENTER] key.



MAINTENANCE
WIPE LEVEL <ent>

5. Press the [END] key twice.


The menu returns to the LOCAL mode.

t



LOCAL >
i

Setting time [TIME SET]

The device incorporates a calendar. [TIME STAMP] function of the FUNCTION mode displays the date and time depending on this setting.  page 4.10

STEPS:

1. Select the [TIME SET].

 page 5.2.

MAINTENANCE
TIME SET < ent >

2. Press the [ENTER] key.



MAINTENANCE
DATE = 2002.10.02

3. Set the date.

Press the Jog key [◀] or [▶] to select the digit.

Press the Jog key [▲] or [▼] to change the value.

(NOTE!) • Not available to set the past date.

4. Press the Jog key [▲] or [▼] to select the [TIME].



MAINTENANCE
TIME = 16:20:07

5. Set the time.

Press the Jog key [◀] or [▶] to select the digit.

Press the Jog key [▲] or [▼] to change the value.

6. Press the [ENTER] key.



MAINTENANCE
DATE = 2002.10.02

7. Displays the set date.

Press the Jog key [▲] or [▼] to display the time setting.

8. Press the [END] key twice.

The menu returns to the LOCAL mode.



TWICE

< LOCAL >
width : 1272 mm

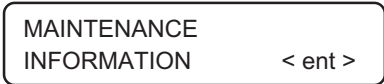
Displaying device information [INFORMATION]

Displays the firmware version, serial number, and dealer number of the device.
 If trouble occurs, please inform the dealer of the contents of the trouble as well as this information. This can make solution quicker.

STEPS:

- 1. Select the [INFORMATION].

 page 5.2.



- 2. Press the [ENTER] key.

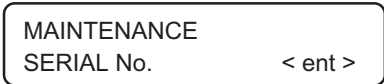


- 3. Press the [ENTER] key.

The firmware version is displayed.



- 4. Press the Jog key [▲] or [▼] to select the [SERIAL No.].



- 5. Press the [ENTER] key.

The serial number is displayed.



- 6. Press the [▲] and [▼] key to select the [DEALER No.].



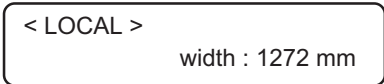
- 7. Press the [ENTER] key.

The dealer number is displayed..



- 8. Press the [END] key twice.

The menu returns to the LOCAL mode.



Replace the cutter blade

Cutter blades are consumables. When the cutter blade has become blunt, replace the cutter blade with a new one (SPA-0107).




- The blade tip is sharp. Be careful for 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.

STEPS:

1. Execute [CARRIAGE out].

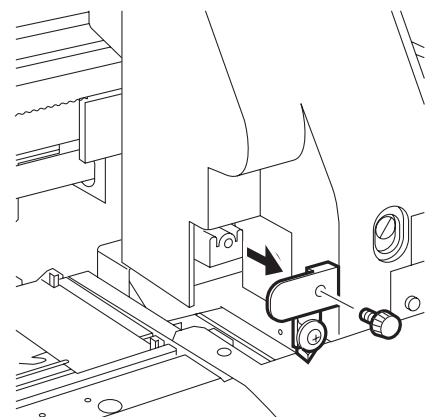
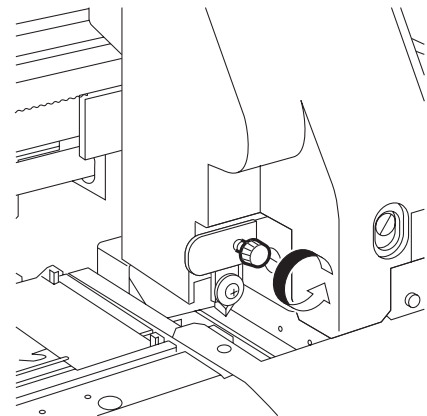
 page 5.4

STATION
MENT : CARRIAGE out

2. Open the front cover.

3. Replace the cutter unit that is located alongside the carriage.

1. Loosen the screws that fix the cutter unit.
2. Remove the cutter unit.
3. Put a new cutter unit in place.
4. Tighten the screws to fix the new cutter unit.



4. Close the front cover.

5. Press the [ENTER] key.

The menu returns to the LOCAL mode.

Using the small amount of remaining ink in the 440cc ink cartridge

For the 440cc ink cartridge, when [NEAR END] or [INK END] is displayed some ink may remain in the ink cartridge. At this time it is possible to use remaining ink by selecting the amount.

NOTE!

- This function only supports 440cc ink cartridge which detecting [NEAR END] or [INK END]. 220cc ink cartridge or [NEAR END] undetecting ink cartridge are not supported.
- Even though this function is performed, [NEAR END] is not cleared therefore can not perform ink cleaning.
- Be careful that if additional amount of remaining ink exceed the actual remaining amount, printing continues even ink ended. Furthermore air enter the ink tube which cause abnormal printing.

A guide of ink amount to add

Ink cartridge weight	Ink amount able to add
434g or below	Do not add
435g - 444g	+ 10cc
445g - 454g	+ 20cc
Above 455g	+ 30cc

NOTE!

- To prevent missing some color or vertical white line, weigh ink cartridge correctly.
- This guide table is only a guide. Be careful not to add too much ink.

STEPS:

1. **When the ink level becomes low, [NEAR END] is displayed.**

(When ink ends, [INK END] is displayed)

```
< LOCAL >
NEAR END           - M - -
```

2. **Remove the ink cartridge and confirm the weight of remaining amount of ink.**

*Refer to the above table

```
< LOCAL >
CARTRIDGE         - M - -
```

3. **To use the remaining ink, reinsert the ink cartridge.**

```
ADD REMAIN ?
- M - -
```



Displayed alternately

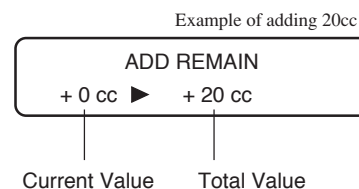
4. **Press the[ENTER] key.**

If press the [END]key, it cancel the operation and return to the LOCAL mode.

```
ADD REMAIN
Yes : ent           No : end
```

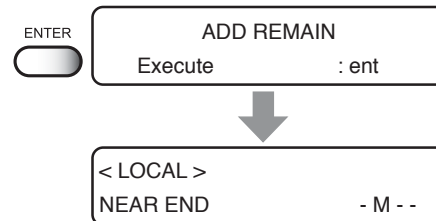
5. Press the Jog key [▲] or [▼] to select the amount of ink you want to use (in 10cc increments).

* Maximum ink amount can be used for this function is 30cc.



6. Press the [ENTER] key.

If press the [END] key, it cancel the operation and return to the LOCAL mode.



7. Press the [ENTER] key.

The menu returns to the LOCAL mode.

If multiple ink cartridges are small amount, repeat this procedure for each cartridges.

Using further remaining ink in the ink cartridge

After conduct the above procedure and printing, some ink may still remain in the ink cartridge.

At this time it is possible to use remaining ink by selecting the amount of ink again.

NOTE!

- Be careful that if additional amount of remaining ink exceed the actual remaining amount, printing continues even ink ended. Furthermore air enter the ink tube which cause abnormal printing.
- It is not able to select more than 30cc. If 30cc had been already added , can not add anymore.

At here it is explained by taking an example of adding further 10cc after added 20cc and printed.

STEPS:

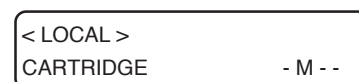
1. When the ink level becomes low, [NEAR END] is displayed.

(When ink ends, [INK END] is displayed)



2. Remove the ink cartridge and confirm the weight of remaining amount of ink.

*Refer to the above table



3. To use the remaining ink, reinsert the ink cartridge.

4. Press the [ENTER] key.

If press the [END] key, it cancel the operation and return to the LOCAL mode.

5. Select the amount of ink you want to use by pressing the [▲] or [▼] keys. (in 10cc increments).

* The right display shows an example of adding further 10cc to previous 20cc. In order to add 10cc press the [▲] key one time. The number in the left shows the current value, and the number in the right shows the total value.

6. Press the [ENTER] key.

If press the [END] key, it cancel the operation and return to the LOCAL mode.

7. Press the [ENTER] key.

It returns to the LOCAL mode.

ADD REMAIN ?
- M - -



ADD REMAIN
Yes : ent No : end

Example of adding further 10cc

ADD REMAIN
+ 20 cc ▶ + 30 cc

Current Value Total Value

ADD REMAIN
Execute : ent



< LOCAL >
NEAR END - M - -

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.

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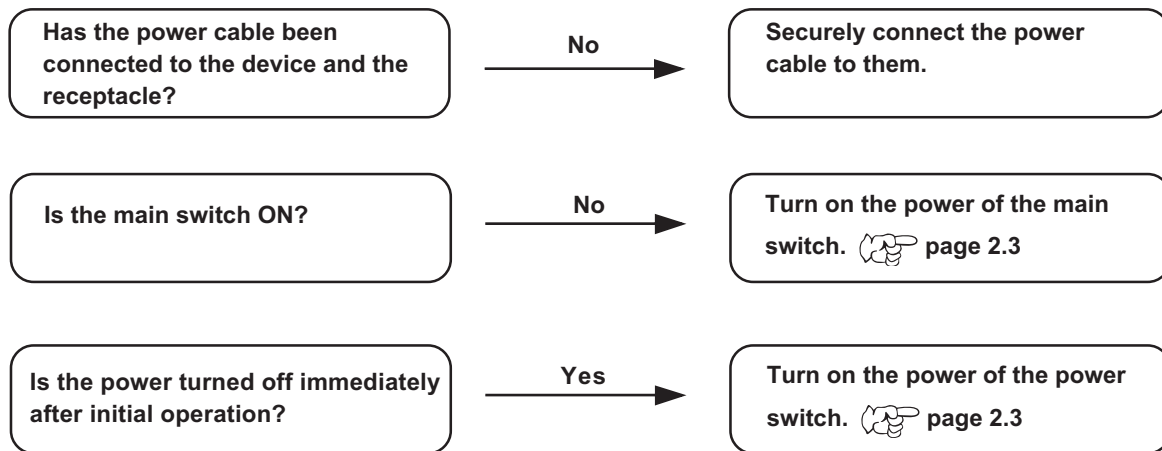
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Before taking a phenomenon as a sign of failure

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.

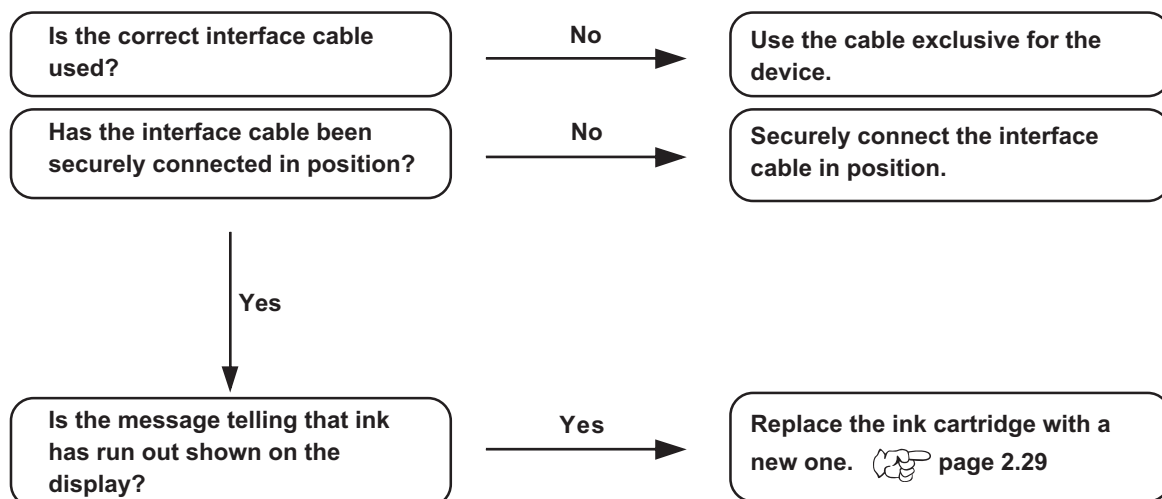
The device cannot be energized

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.



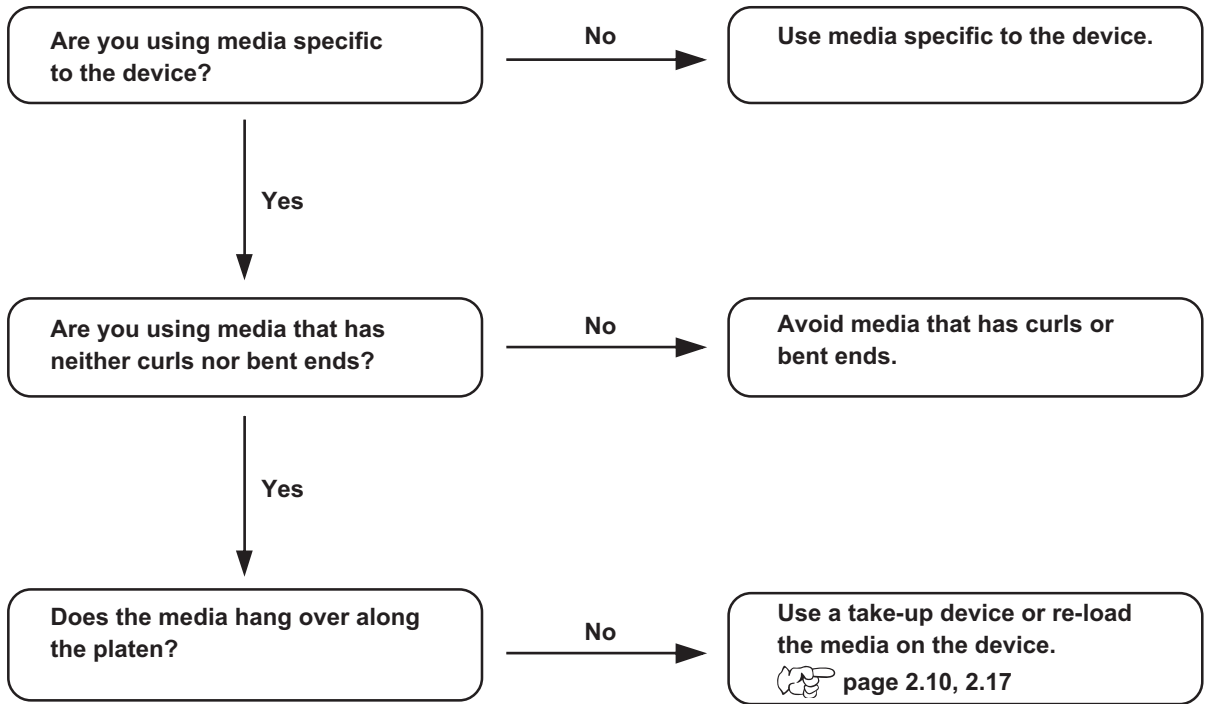
The device cannot perform printing

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 media has been set improperly.



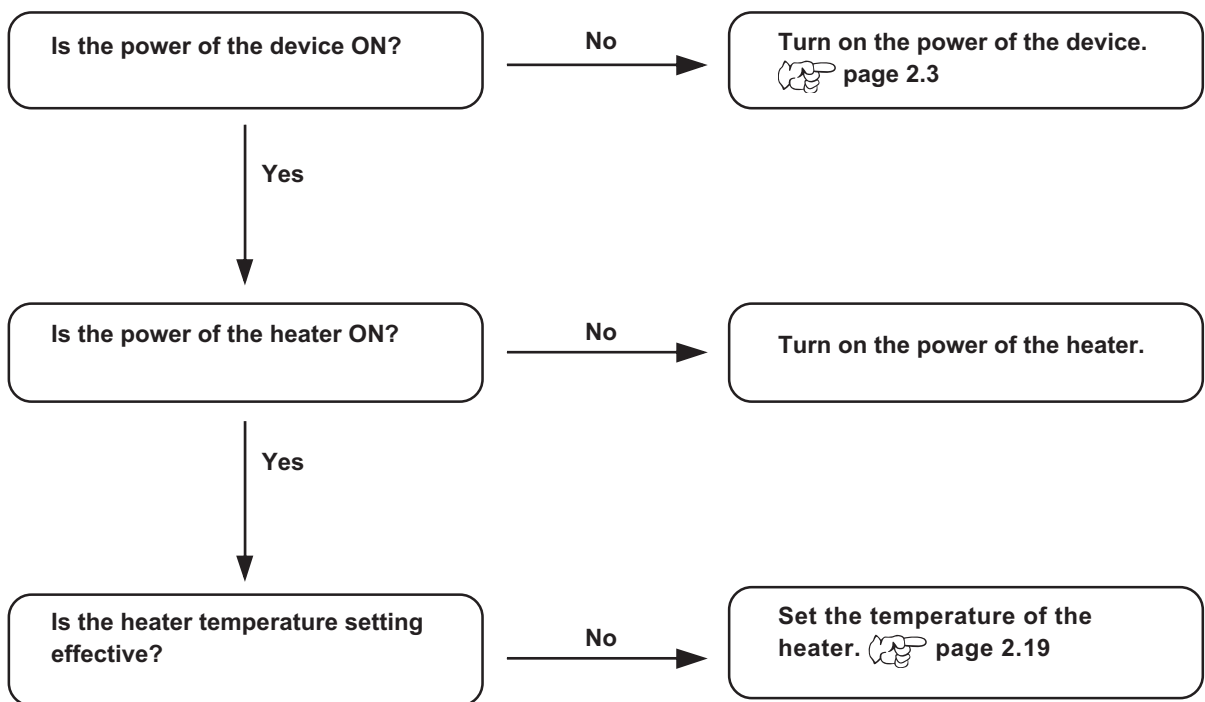
Paper jamming arises/media is soiled

A jam of the media or a stained media is considered to occur when an unsuitable media is used or the media is set improperly.



The [HEAT] or [CONSTANT] indicator does not go on

Check the basic operation.






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 2.22
- Corrective measure : Clean the interior of the station.
 page 3.4 through 3.9, 5.4
- Corrective measure : Conduct the [MEDIA COMP.] function.  page 2.24
- 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 2.23




Displacement is observed between outward and inward printing

- Corrective measure : Adjust “Y (outward and inward)” in [PRINT ADJUST] function.
 page 5.12

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

- Corrective measure : Conduct the [PRINT ADJUST] function.  page 5.12

Large ink drop on media

- 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 2.22

Ink cartridge trouble

When an ink cartridge trouble is detected, a warning message appears and plotting, cleaning and all other activities that use ink are deactivated. When this is the case, replace the ink cartridge in question immediately.

(NOTE!)

- Do not leave the ink cartridge unreplaced for a long time as this will cause malfunction of the clogged nozzle prevention function and the plotter must be repaired by a service engineer.

Learning the detail of ink cartridge trouble

The cause of the cartridge trouble can be checked as written below.

< LOCAL >
CARTRIDGE K M C Y
(4-color model)

1. Press the [ENTER] key while in the LOCAL mode.

ENTER
SS2-INK K M C Y
REMAIN 9 8 7 5

2. Press the [ENTER] key again.

If two or more cartridges have a problem, press the [ENTER] key again to display the second cartridge.

When all problem cartridges are displayed, the menu returns to the LOCAL mode automatically.

ENTER
NON -ORIGINAL INK
K M C Y

WRONG INK IC
K M C Y

Kind of INK
K M C Y

Color of INK
K M C Y

WRONG CARTRIDGE
K M C Y

Expiration
K M C Y

NO CARTRIDGE
K M C Y

The menu will return to the LOCAL mode automatically when no trouble exists.

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 KMCY	The mounted ink cartridge is defective.	Press the [ENTER] key to display the details of the error. Check the error.
< LOCAL > NEAR END KMCY	The amount of ink remaining in the ink cartridge is insufficient.	Printing can be continued in file-by-file basis by pressing the [REMOTE] key. However, it is recommended to replace the ink cartridge of which color is shown on the LCD with a new one.
< LOCAL > INK END KMCY	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 > timeLIMIT KMCY	The ink cartridge will expire soon or has expired.	Printing can be continued in file-by-file basis by pressing the [REMOTE] key. However, it is recommended to 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 pressing 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.

Warning message	Cause	Corrective measure
<div style="border: 1px solid black; border-radius: 5px; padding: 5px; width: fit-content;"> <p>< LOCAL > DO TEST DRAW</p> </div>	<p>The nozzle recovery cannot be expected because the device is left for a prolonged period of time.</p>	<p>Make test plotting. If nozzle missing is serious, execute [STATION] - [WASH] for maintenance.</p>
<div style="border: 1px solid black; border-radius: 5px; padding: 5px; width: fit-content;"> <p>NON-ORIGINAL INK KMCY</p> </div>	<p>The loaded ink cartridge is not MIMAKI genuine.</p>	<p>Use the ink specified by MIMAKI.</p>
<div style="border: 1px solid black; border-radius: 5px; padding: 5px; width: fit-content;"> <p>WRONG INK IC KKMMCCYY</p> </div>	<p>The IC chip of the ink cartridge cannot be read normally.</p>	<p>Attach the ink cartridge(s) corresponding with the color shown on the display. If the same error message appears again on the LCD, contact your local distributor to call for service.</p>
<div style="border: 1px solid black; border-radius: 5px; padding: 5px; width: fit-content;"> <p>KIND OF INK KMCY</p> </div>	<p>The type of the loaded ink cartridge is different from the previous one.</p>	<p>Check the type of the loaded ink cartridge.</p>
<div style="border: 1px solid black; border-radius: 5px; padding: 5px; width: fit-content;"> <p>INK COLOR KMCY</p> </div>	<p>The color of the loaded ink cartridge is different from the previous one.</p>	<p>Check the color of the loaded ink cartridge.</p>
<div style="border: 1px solid black; border-radius: 5px; padding: 5px; width: fit-content;"> <p>WRONG CARTRIDGE KMCY</p> </div>	<p>The loaded ink cartridge is defective.</p>	<p>Check the loaded ink cartridge.</p>
<div style="border: 1px solid black; border-radius: 5px; padding: 5px; width: fit-content;"> <p>NO CARTRIDGE KMCY</p> </div>	<p>The ink cartridge is not attached to the ink station.</p>	<p>Attach the ink cartridge(s) corresponding with the color shown on the display.</p>
<div style="border: 1px solid black; border-radius: 5px; padding: 5px; width: fit-content; margin-bottom: 5px;"> <p>Lower than print guarantee TEMP.</p> </div> <div style="border: 1px solid black; border-radius: 5px; padding: 5px; width: fit-content;"> <p>Higher than Print guarantee TEMP.</p> </div>	<p>The plotter is going to plot at temperature which is out of guarantee.</p>	<p>Change the temperature of the installing environment. When plotting without change, press the [ENTER] key.</p>

Warning message	Cause	Corrective measure
<div data-bbox="212 241 568 315" style="border: 1px solid black; border-radius: 5px; padding: 5px;"> <LOCAL>  HEATER width: xxxxx mm </div> <div data-bbox="212 338 568 412" style="border: 1px solid black; border-radius: 5px; padding: 5px;"> * REMOTE *  HEATER TYPE. 1 0.0 0 m </div>	The preheater or print heater has failed.	Press the [HEATER] key to display the details of the error. Check the error.
<div data-bbox="212 465 568 539" style="border: 1px solid black; border-radius: 5px; padding: 5px;"> Heater Power OFF </div>	The power of the heater is off.	Turn on the power of the heater. If the same error message appears again on the LCD, contact your local distributor to call for service.
<div data-bbox="212 719 568 792" style="border: 1px solid black; border-radius: 5px; padding: 5px;"> Pre 40° ► 45° C Print BREAKAGE </div>	The print heater is disconnected.	Contact your local distributor to call for service.
<div data-bbox="212 831 568 904" style="border: 1px solid black; border-radius: 5px; padding: 5px;"> Pre BREAKAGE Print 43° C (4 7) </div>	The preheater is disconnected.	
<div data-bbox="212 965 568 1039" style="border: 1px solid black; border-radius: 5px; padding: 5px;"> Pre THERMISTOR Print 50 ► 40 °C </div>	The thermistor of the preheater is defective.	
<div data-bbox="212 1099 568 1173" style="border: 1px solid black; border-radius: 5px; padding: 5px;"> Pre 55 °C (40) Print THERMISTOR </div>	The thermistor of the print heater is defective.	


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 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 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 media set position or media 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 HIGHT SENS.	Head height could not be detected.	

APPENDIX

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

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Basic specifications	A.2
Specification for ink	A.4
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Basic specifications

Item		JV3-130SL
Printing head	Method	Piezo-electric drop-on demand
	Specification	2-heads Inlines
	Nozzle	180 nozzles for each color
	Resolution	360, 540, 720, 1440 dpi
Drawing mode		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
Usable inks		4 color solvent inks (Black, Cyan, Magenta, Yellow), 1 each 1 cartridge per color
Capacity of ink cartridge		each color (220 cc \pm 5 cc per cartridge) x 1 About 200 cc for each cartridge variable
Media type		Tarpaulin, FF, PVC
Max. printing width	360 x 360 dpi	VD/ND: 1361mm (1321mm)
	360 x 540 dpi	VD/ND: 1361mm (1321mm)
	360 x 720 dpi	VD/ND: 1361mm (1321mm)
	720 x 720 dpi	VD/ND: 1361mm (1321mm)
	720 x 1440 dpi	VD/ND: 1361mm (1321mm)
	1440 x 1440 dpi	VD: 1000mm / ND: 1361mm
Roll Media size	Maximum	1371 mm
	Minimum	210 mm
	Thickness	1.0 mm or less
	Roll outside diameter *1	\varnothing 180 mm or less
	Roll weight *2	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 media size	Maximum	1371 mm
	Minimum	210 mm
Margin	Leaf media	Left end and right end : 15 mm
		Front : 65 mm
		Rear : 110 mm
	Roll media	Left end and right end : 15 mm
		Front : 25 mm
		Rear : 0 mm
Distance accuracy	Absolute accuracy	Whichever the larger one of \pm 0.3 mm or \pm 0.3 % of the designated
	Reoroducibility	Whichever the larger one of \pm 0.2 mm or \pm 0.1 % of the designated
Perpendicularity		\pm 0.5 mm / 1000 mm
Media skew		5 mm or less / 10 m variable
Head height adjustment		2.0 mm / 3 mm variable from the platen surface
Cutting of media		Cutting of Y direction by the head cutter, Cutting accuracy(steps) : 0.5mm or less.
Media delivery		Take-up device as standard (inside winding / outside winding selectable)

Item		JV3-130SL
Waste ink tank		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		VCCI-Class A
Power		AC 100 — 120 V \pm 10%, AC 200 — 240 V \pm 10%, 50/60 Hz \pm 1 Hz
Power consumption*3		1.5 KVA 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	\pm 10 °C / h or less
	Dust	Equivalent to normal office level
Weight	Main unit	165 kg
Outside dimensions	Width	2390 mm
	Depth	750 mm
	Height	1240 mm

*1 When the roll holder is setted at the top position, the roll outside diameter is \varnothing 140 mm or less.

*2 Without slack on the roll when it is retained at both ends.

*3 Main unit and heater

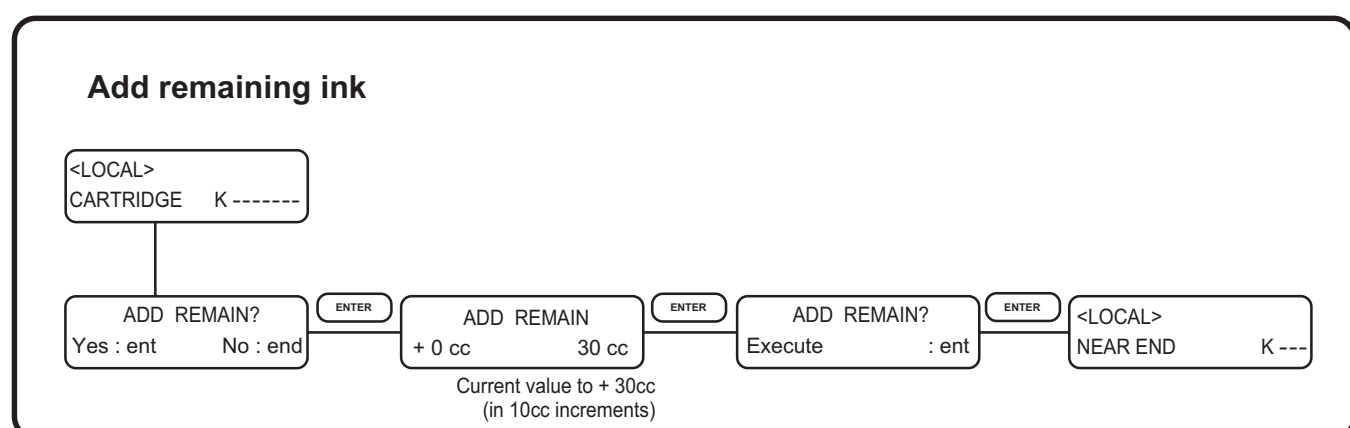
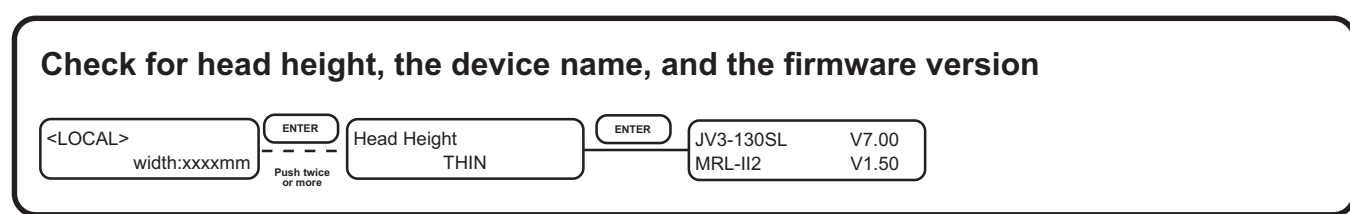
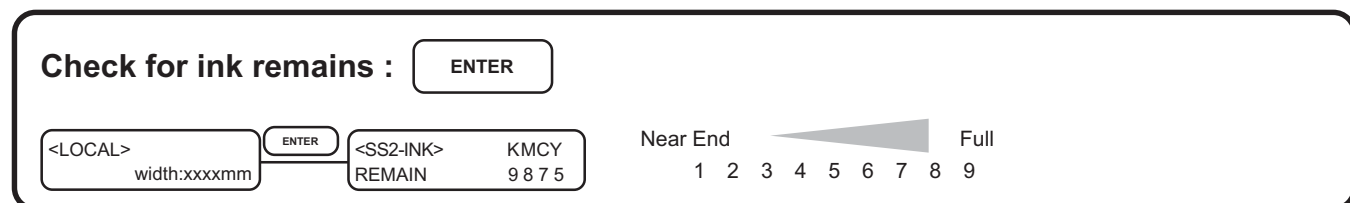
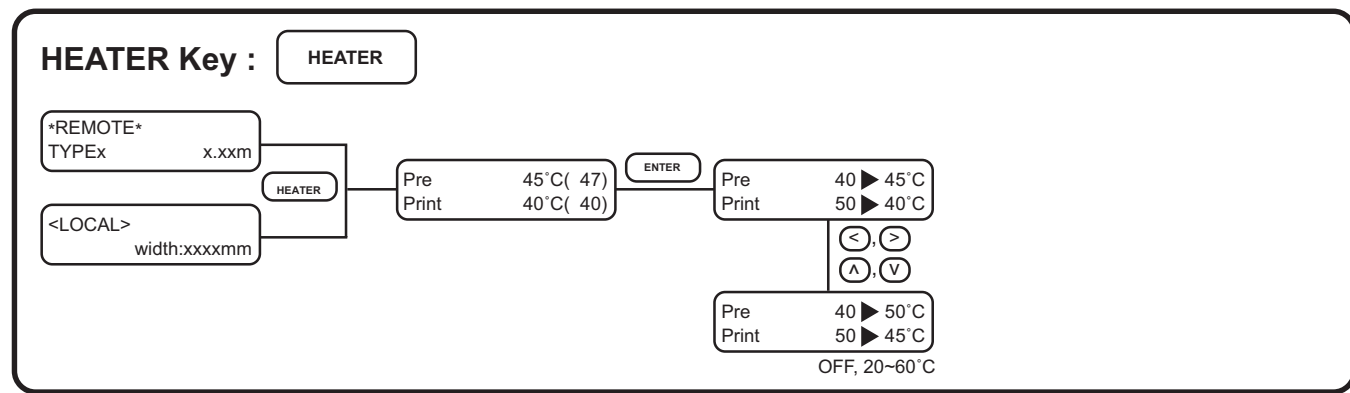
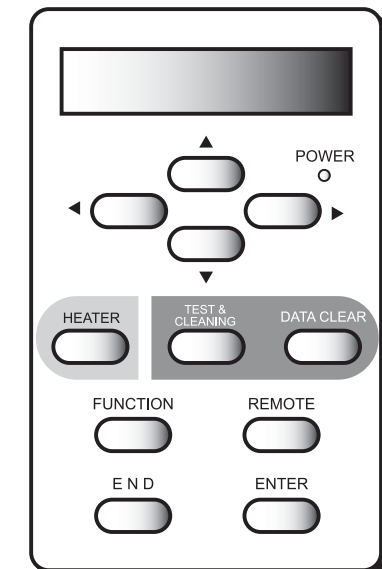
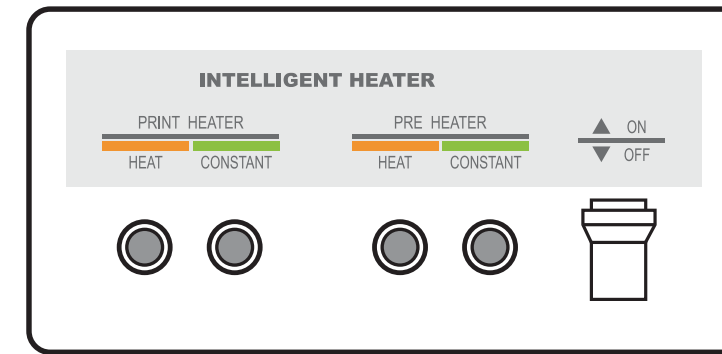
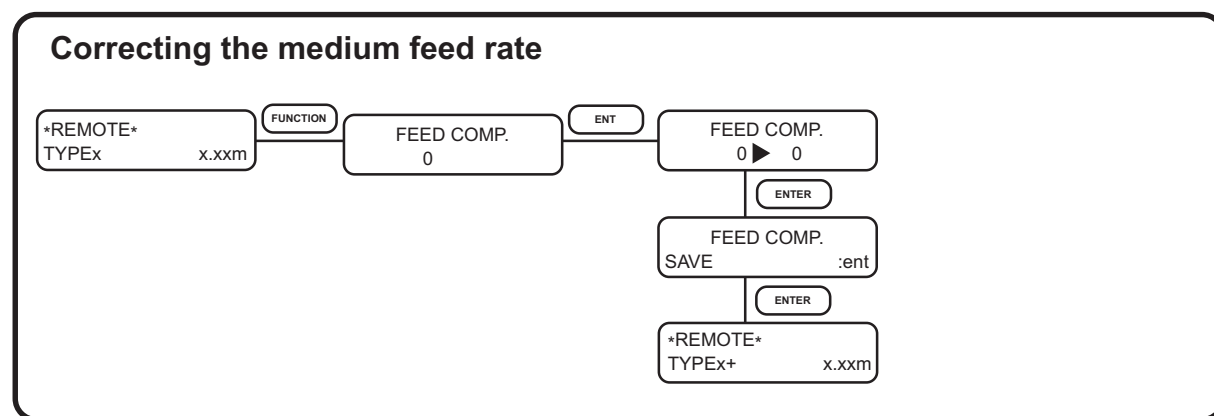
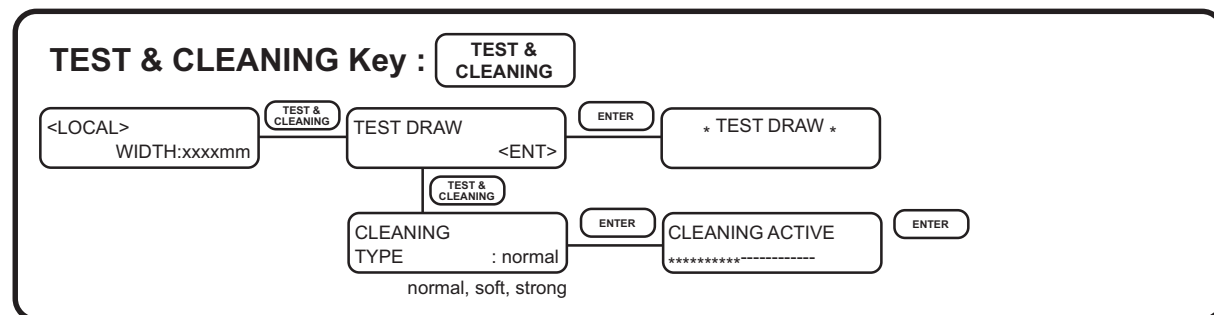
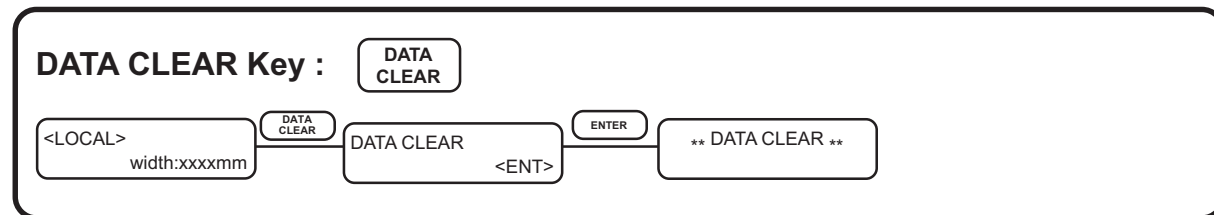
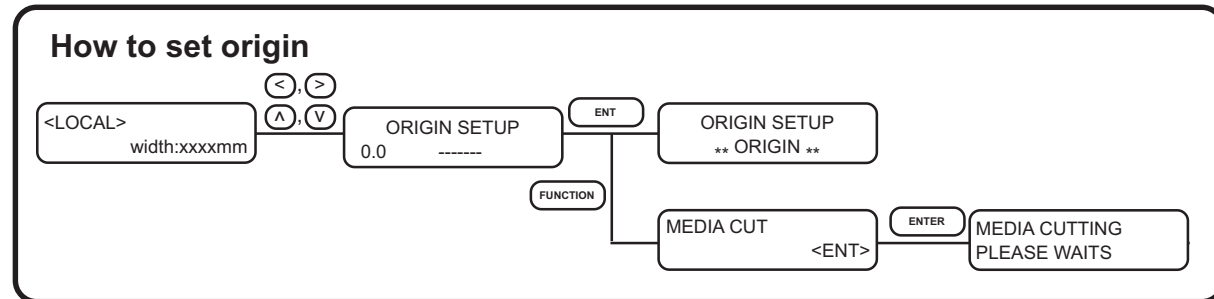
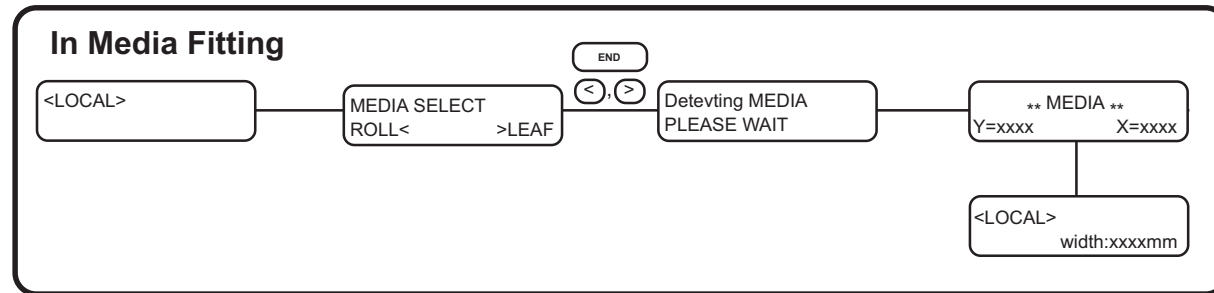
Specification for ink

Item	Specifications
Color	Black ink cartridge
	Cyan ink cartridge
	Magenta ink cartridge
	Yellow ink cartridge
Contents of ink	220 cc / 440 cc per cartridge
Shelf life	One year from the date of manufacture (at room temperature) Within three months after opening the package
Storage temperature	During storage : 1 to 40°C (Storage at temperature of 40°C is permitted within a month.) During : 1 to 60°C (Storage at temperature of 60°C is only permitted within 120 hours, and at temperature of 40°C is permitted within a month.)

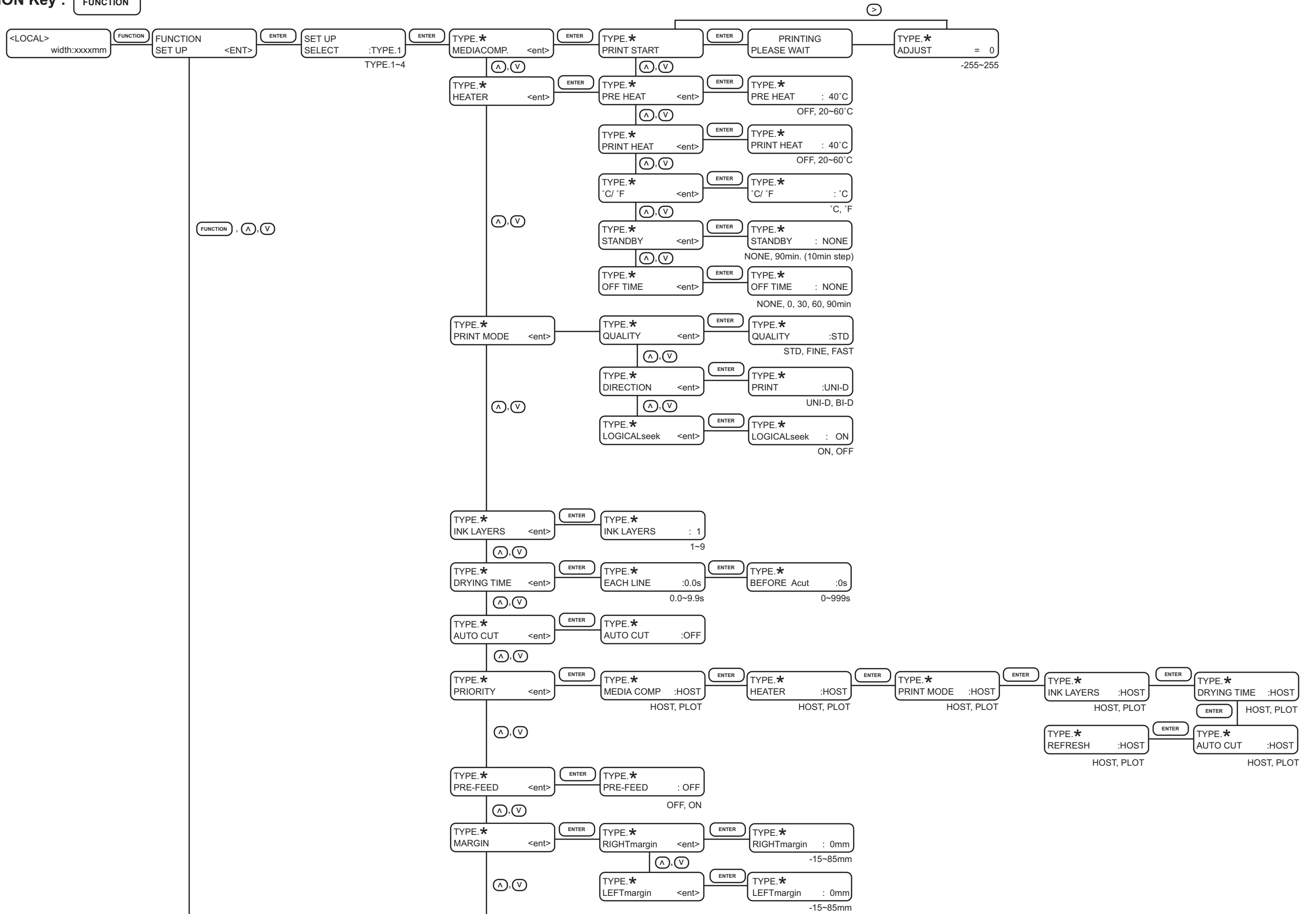
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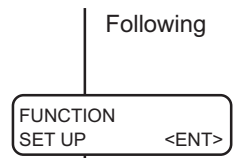
- The ink will freeze when it is left for a long time. Should it freeze, leave the ink cartridge at room temperature (at 25°C) for three hours or more to allow the ink to melt.
- Disassembling the ink cartridge or refilling the ink shall be avoided.

Function Flowchart

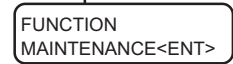


FUNCTION Key : FUNCTION



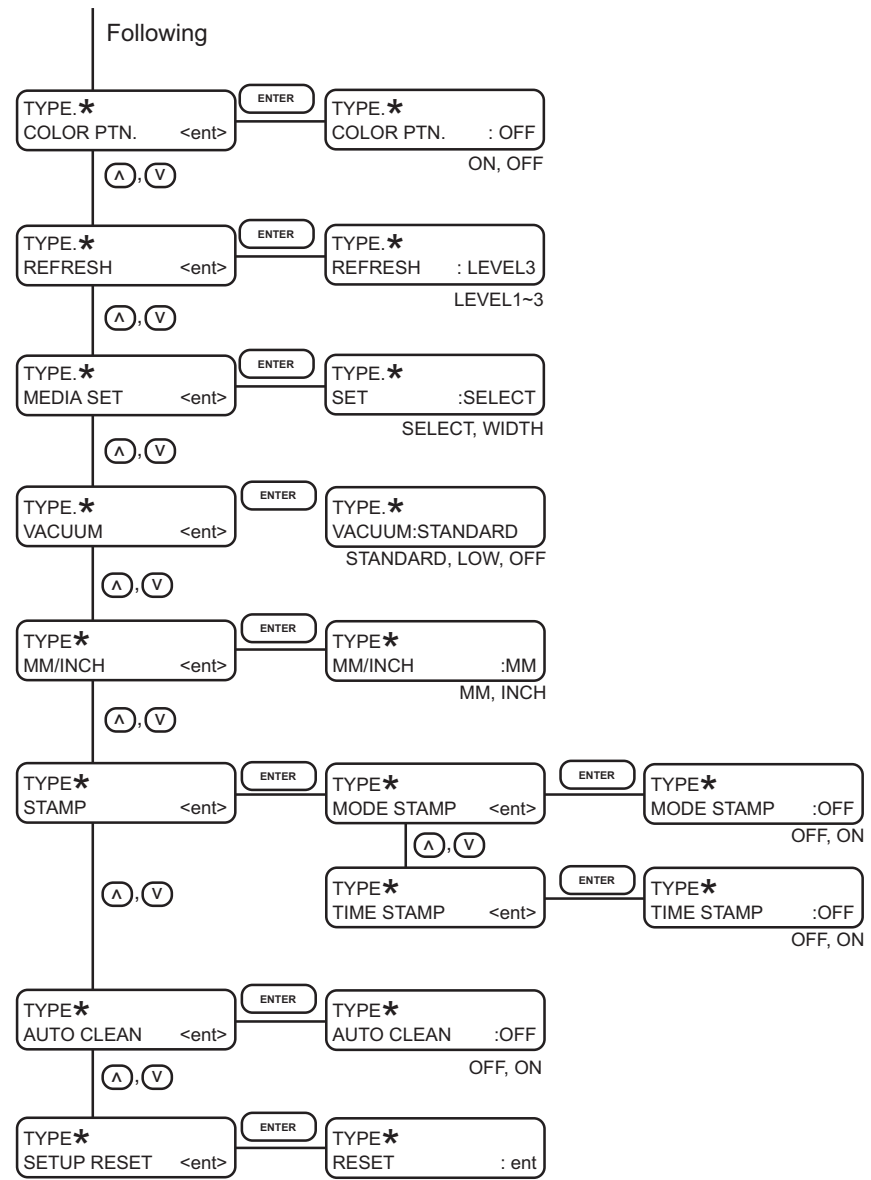


FUNCTION, (A), (V)



FUNCTION, (A), (V)

To be followed

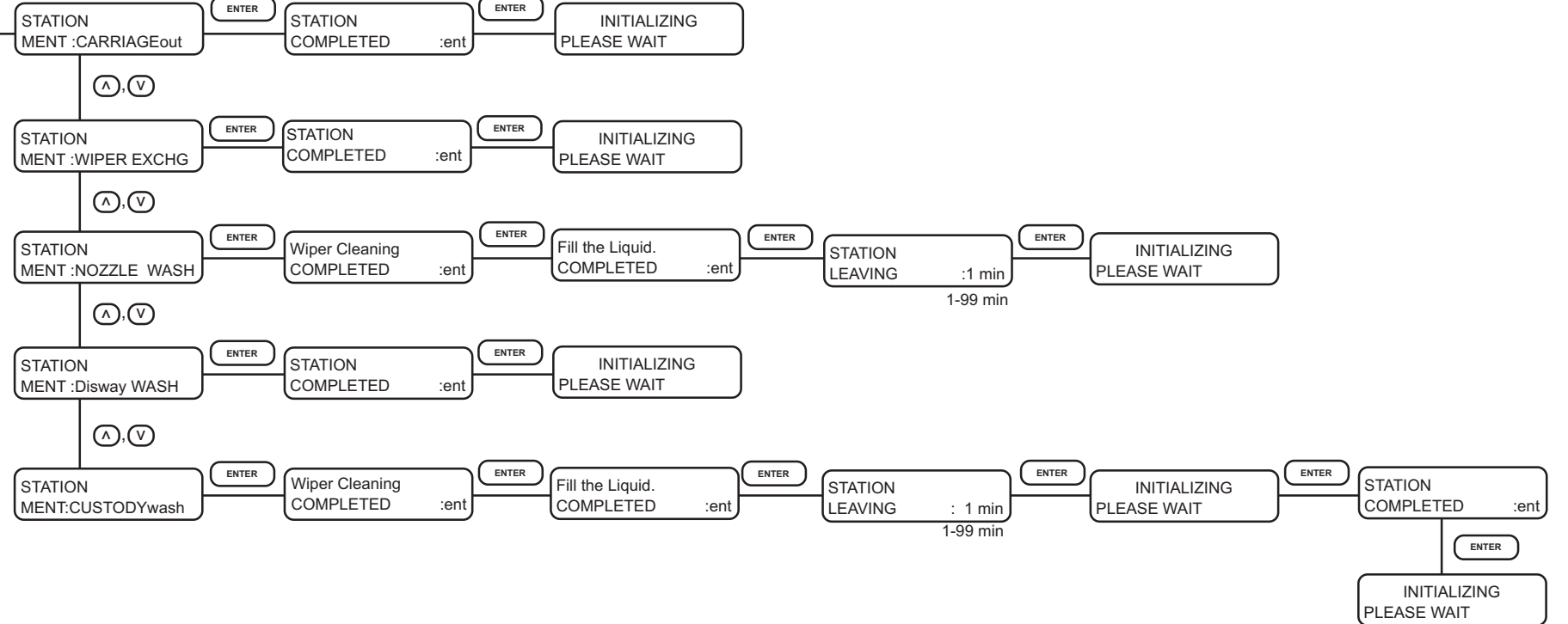


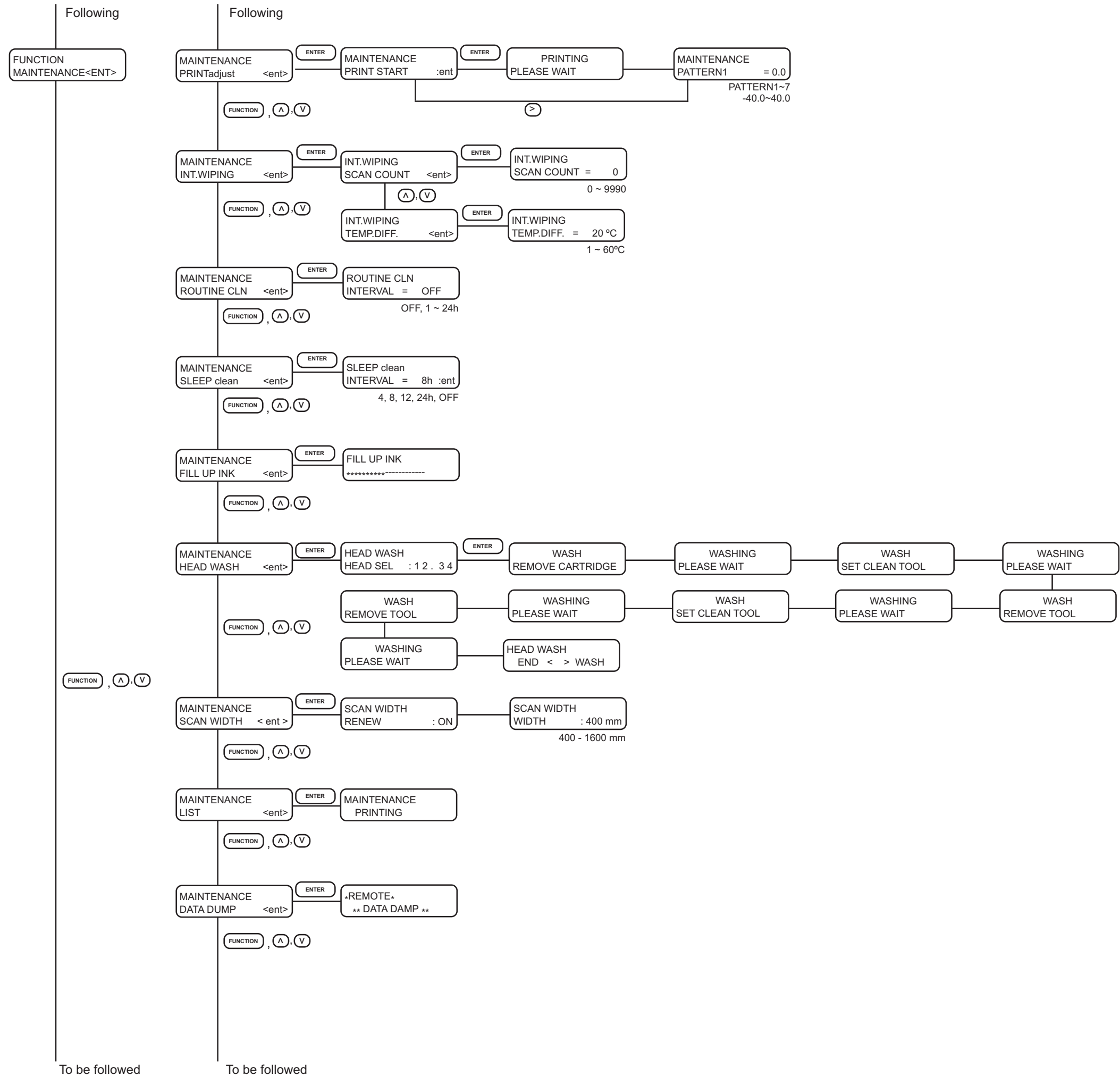
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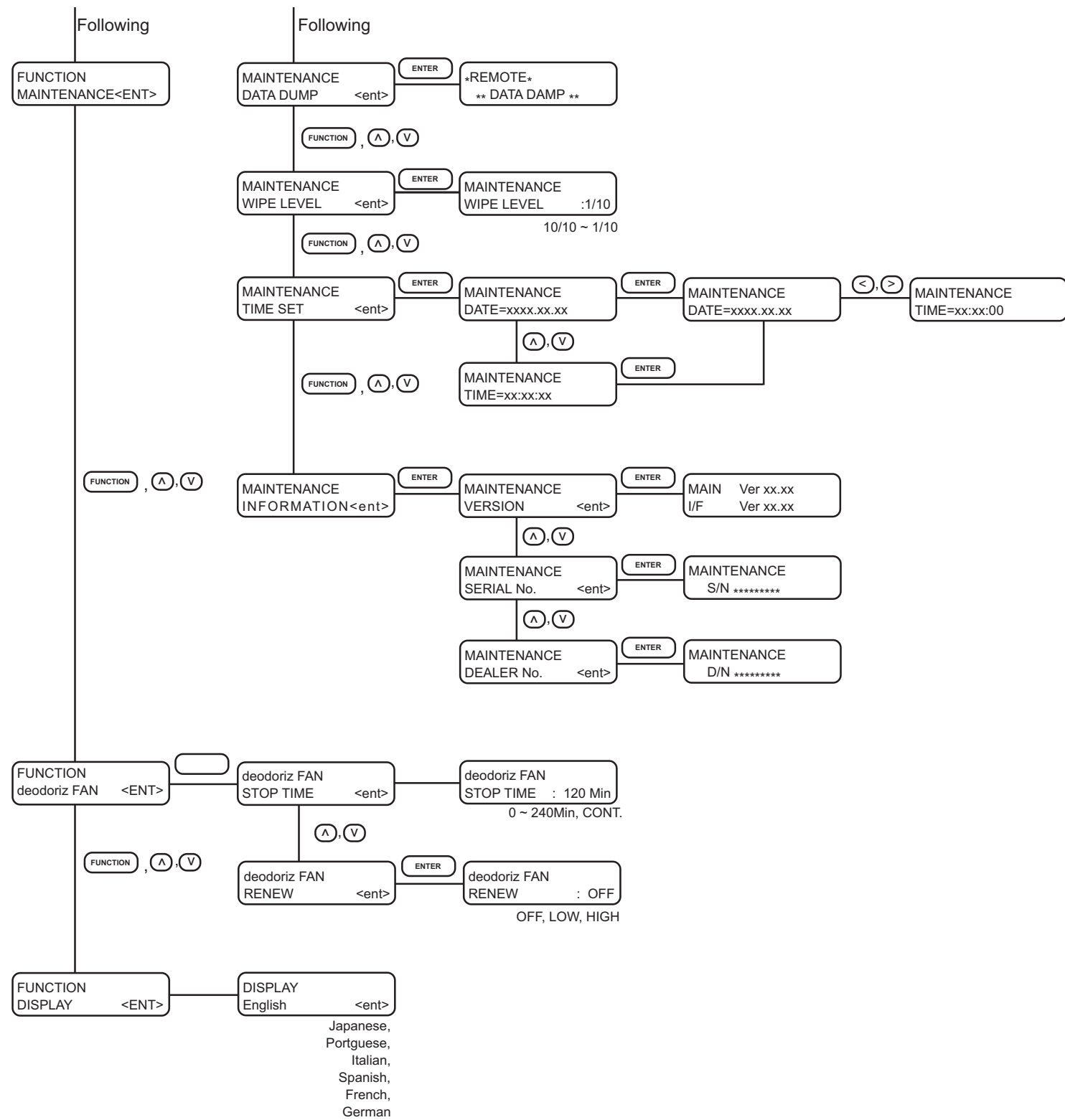


FUNCTION, (A), (V)

To be followed







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