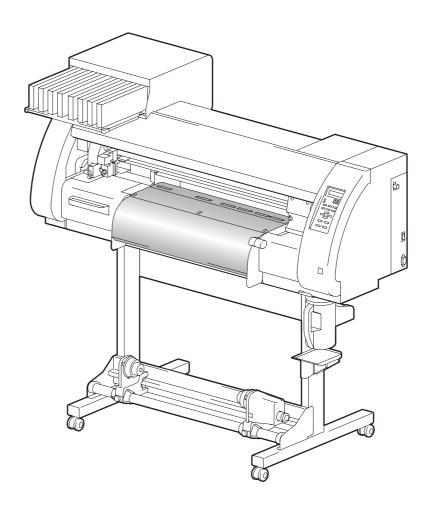


Printer Cutter



OPERATION MANUAL



MIMAKI ENGINEERING CO., LTD.

URL: http://www.mimaki.co.jp/

Contents

(Caution	vii
	Caution	vii
	Requests	
	FCC Statement (USA)	
	Interference to televisions and radios	
F	Foreword	
-	About This Operation manual	
	Safety Precautions	
•		
	About Symbols	
r	How to Read this Manual	XIV
Chapt	er 1 Before Use	
N	Moving This Machine	1-2
	Where to Install This Machine	1-2
	Working Environmental Temperature	1-2
	Moving This Machine	1-3
1	Names of Parts and Functions	1-4
	Front Side of the Machine	1-4
	Rear/Sides	
	Operation Panel	
	Heater	
	Media Sensor	
	Carriage	
	Capping Station	
	Pinch Rollers and Grid Rollers	
	Pen-line Rubber	1-10
N	Media	1-11
	Usable Sizes of Media	1-11
	Caution in Handling of Media	1-11
(Connecting Cables	
	Connecting USB2.0 Interface Cable	
	Connecting the Power Cable	
1	nserting Ink Cartridges	
•	Caution in Handling of Ink Cartridges	
	Note on Silver and White ink of ES3 ink	
ı	Menu Mode	. 1-10
Chapte	er 2 Basic Operations	
•	·	. -
ι	Jser Type for Printing	
	Settings That Can Be Registered in User Types	
	Using the Registered User Types	
Į.	About Tool Conditions during Cutting	2-3
	Tool Condition Types and Their Selection Method	2-3
	Registering a Tool Condition	

Improving Cutting Quality	2-6
Operation Flow	2-7
Turning the Power ON/OFF	2-8
Turning the Power ON	2-8
Turning the Power OFF	
Installing Tools	. 2-10
When a Cutter Is Used	2-10
Exchanging Tool	
How to Attach a Ballpoint pen	2-14
Setting a Medium	. 2-15
Adjusting the Head Height	2-15
Adjusting the Position of the Pinch Roller According	
to the State of a Medium	2-17
Roll Stopper	
Maximum Print Area/Cut Area	
Notes When Using Medium Holder	
Setting a Roll Medium	
Take-up Device	
Setting a Leaf Medium	
When Changing the Origin	
Test Printing	
Perform test printing with the normal test pattern	2-36
Perform test printing with the test pattern for	
checking white ink	2-37
Check warning of white nozzle status	0.00
(Only when using SS21 white ink)	
Head Cleaning	
About head cleaning	2-39
Perform head cleaning depending on the test	0.40
printing result Perform spot color maintenance	
•	
Test Cutting	
Preparing for the Heaters	
Changing the Temperature Settings for the Heaters	
Checking the Heater Temperature	
Printing Data	
Starting a Printing Operation	
Stopping a Printing Operation	
Deleting Received Data (Data Clear)	
Data Cutting	
Starting a Cutting Operation	
Stopping Cutting in a While	
Restarting a Cutting Operation	
Stopping a Cutting Operation (Data Clear)	
Removing the Cutter Unit Temporarily	
Cutting a Medium	. ∠-5U

Chapter 3 Extended Functions – Printer –	
About User Types	3-2
Registering All Printing Conditions Together	
(Type Registration)	3-2
How to Register User Types	3-2
Setting the Pinch Rollers	3-5
Recommended Setting for the Pinch Roller Pres	
Quantity of Pinch Rollers	
Setting for the Pinch Rollers	
Setting Media Correction	
Setting Media Correction	
If the Positions of Dots Shift	
Changing the Set Values of the Heaters	
Changing the Temperature Settings for the Hea	
Adjustment to an Appropriate Temperature	
When the Heater Temperature Does Not Reach	
the Preset One	
Setting the Printing Method	
Setting of Printing Quality	
Setting a Scanning DirectionSetting Logical Seek	
Setting for White-laying Printing	
Setting Drying Time	
Setting Priority Order	
Setting Automatic Cleaning	
Setting Cleaning during Printing	
Other Settings	
Copying the Set Contents	
Initializing the Settings	
Machine Settings	
Setting the DEODORIZE FAN	
Setting the DRYNESS FEED	
Stamp Setting Setting the Test Print Arrange	
Change the operation condition of the ambient	3-34
temperature	3-35
Extension of Ink Expiry Month	
Switch Setting of Ink Supply Path	

Chapter 4 Extended Functions – Cutting –	
Setting the Pinch Rollers	4-2
Recommended Setting for the Pinch Roller Pres	
and Number of Pinch Rollers	
Quantity of Pinch Rollers	4-2
Setting for the Pinch Rollers	4-3
Cutting out Data with Register Marks	4-5
Flow of Cutting Data with Register Marks	4-5
Entering Register Mark Detection Mode	4-5
Notes on Inputting Data with Register Marks	
Setting Register Mark Detection	
Method of Detecting Register Marks	
When Cutting Failed	
Setting Automatic Cutting	
Dividing and Cutting	
Setting the Dividing and Cutting Function	4-23
Cutting Data by Using the Dividing and Cutting	
Function	
Cutting with a Dotted Line	
Changing the Order of Cutting	4-28
Setting the SORTING	
Procedure for SORTING	
Cutting out Data without Register Marks	
Setting the P/C ORIGIN OFFSET	
Setting the P/C SCALE ADJUST	
Other Settings	
Copying the Setting Contents	
Initializing the Settings	4-41
Cutting Samples	4-42
Cutting a Medium into Multiple Pieces with a	
Certain Length	4-44
Perform Multiple Cuttings	4-46
Setting the Step Size	
Other Convenient Functions	
Medium Feeding	
How to turn the heater OFF in the cutting mode	
now to turn the neater of 1 in the outling mode	
Chapter 5 Extended Functions – Common Se	ttings –
Common Settings	5-2
Setting the Pinch Rollers	
Setting a Cut Method	
Setting CONFIRM. FEED	
Setting the Expand Function	
Setting Margins	

Setting the RECEIVED DATA	5-9
Setting Time	5-10
Setting Units	5-11
Setting the MACHINE NAME	5-12
Setting a KEY BUZZER	5-13
Confirming Machine Information	5-14
Displaying the Information	5-14
Printing the List of Settings	
Chapter 6 Maintenance	
Maintenance	6-2
Precautions for Maintenance	6-2
About Cleaning Solution	6-2
Cleaning the Exterior Surfaces	6-3
Cleaning the Platen	6-3
Cleaning the Media Sensor and Register	
Mark Sensor	6-4
Cleaning the Medium Holder	
Maintaining the Capping Station	
Cleaning the Wiper and Cap	
Replacing the Wiper	
Before Washing the Ink Discharge Passage Cleaning the Head Nozzles	
Washing the Ink Discharge Passage	0-11
(PUMP Tube Washing)	6-13
When the Machine Is Not Used for a Long Time	0-13
(CUSTODY WASH)	6-14
Cleaning the lnk Head and the Area around It	
When Nozzle Clogging Cannot Be Solved	
FILL UP INK	
DISCHARGE & WASH	
Supplying the Machine with Ink Anew	6-21
Preventing Nozzle Clogging When the	
Power Is OFF	6-23
Setting the Refreshing Interval in the Sleep Mode	6-24
Setting the Tube Washing Interval in the Sleep	
Mode	6-25
Setting the Cleaning Interval in the Sleep Mode	6-26
Setting Regular Operations	6-27
Setting the Regular Wiping Operation during a	
Printing Operation	6-28
Setting the Refreshing Interval in the Standby	
Mode	6-30
Setting the Interval between Each PUMP Tube	0.04
Washing Operation in the Standby ModeSetting the Cleaning Interval in the Standby Mode	

Other	Maintenance Functions	. 6-33
	hanging the Time When a Warning about Wiper	
	eplacement Is Issued	
	etting the Display of Media Residual	
	hite Ink Maintenance Function	
	a Waste Ink Tank Confirmation Message Appears	
	hanging the ink	
-	cing the Cutter Blade	
-	cing the Pinch Rollers	. 6-45
Replac	cing a Cutter Blade Not Included in the	
Acces	sories	. 6-46
Chapter 7	Troubleshooting	
Troub	leshooting	7-2
In	nage Quality Is Poor	7-4
N	ozzle Is Clogged	7-4
In	k Cartridge Warning Appears	7-5
Warni	ng/Error Messages	7-7
W	arning Messages	7-7
E	rror Messages	7-10
Chapter 8	Appendix	
Main E	Body Specifications	8-2
	rinter Section Specifications	
	utter Section Specifications	
	ommon Specifications	
	ecifications	
Warnii	ng Labels	8-6
	y Sheet	
Functi	on Flowchart	8-9

Caution

Caution

DISCLAIMER OF WARRANTY: THIS LIMITED WARRANTY OF MIMAKI SHALL BE THE SOLE AND EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS, AND MIMAKI NEITHER ASSUMES NOR AUTHORIZES DEALER TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY OR MAKE ANY OTHER WARRANTY OR MAKE ANY OTHER WARRANTY IN CONNECTION WITH ANY PRODUCT WITHOUT MIMAKI'S PRIOR WRITTEN CONSENT.

IN NO EVENT SHALL MIMAKI BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR LOSS OF PROFITS OF DEALER OR CUSTOMERS OF ANY PRODUCT.

Requests

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

FCC Statement (USA)

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

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

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

To prevent this, use of MIMAKI-recommended cable is essential for the connection of this printer.

Interference to televisions and radios

The product described in this manual generates high frequency when operating.

The product can interfere with radios and televisions if set up or commissioned under improper conditions.

The product is not guaranteed against any damage to specific-purpose radio and televisions.

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

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

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

Foreword

Thank you very much for your purchase of the MIMAKI Printer Cutter "CJV30-60/100/130/160".

The CJV30-60/100/130/160 is a Printer Cutter for high-quality printing enabled by solvent ink (4 or 6 colors) with a cutting function installed on it.

• 4-colors version : 2 each of Cyan, Magenta, Yellow and Black color ink cartridge are usable.

• 6-colors version : 1 each of Cyan, Magenta, Yellow, Black, Light cyan and Light magenta

color ink cartridge (2 each of Cyan and Magenta only) are usable.

• 6-colors + White version : 1 each of Cyan, Magenta, Yellow, Black, Light cyan, Light magenta and

White color ink cartridge (2 each of White only) are usable.

• 7-colors version : 1 each of Cyan, Magenta, Yellow, Black, Light cyan, Light magenta and

Light black color ink cartridge (2 each of Light black only) are usable.

• 8-colors version : 1 each of Cyan, Magenta, Yellow, Black, Light cyan, Light magenta, White

and Silver color ink cartridge are usable (available for the firmware V2.40

and later).

About This Operation manual

- This Operation manual describes the operation and maintenance of "CJV30-60/100/130/160" (hereafter referred to as "this machine").
- Please read and fully understand this Operation manual before putting the machine into service. It is also necessary to keep this Operation manual on hand.
- Make arrangements so that this manual is certainly delivered to the person in charge of the operation of this machine.
- This Operation manual has been carefully prepared for your easy understanding. However, please do not hesitate to contact a distributor in your district or our office if you have any inquiry.
- Description contained in this Operation manual are subject to change without notice for improvement.
- In the case where this Operation manual should be illegible due to destruction or lost by fire or breakage, purchase another copy of the Operation manual from our office.
- You can also download the latest manual from our website.

Safety Precautions

About Symbols

Symbols are used in this Operation manual for safe operation and for prevention of damage to the machine. One symbol is used for one caution. Please understand the meaning of each symbol and use this machine safely.

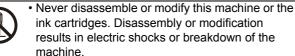
Symbols and Their Meanings

	Meaning				
Warning	Failure to observe the instructions given with this symbol can result in death or serious injuries to personnel. Be sure to read and observe the instructions for proper operation.				
Caution	Failure to observe the instructions given with this symbol can result in injuries to personnel or damage to property.				
(Important!)	Important notes in use of this machine are given with this symbol. Understand the notes thoroughly to operate the machine properly.				
掌	Useful information is given with this symbol. Refer to the information to operate the machine properly.				
(F)	Indicates the reference page for related contents.				
<u> </u>	The \(\sum_{\text{symbol}}\) symbol indicates that the instructions must be observed as strictly as the CAUTION instructions (including DANGER and WARNING instructions). A sign representing a precaution (the sign shown at left warns of an electric shock hazard) is shown in the triangle.				
	The Symbol indicates that the action shown is prohibited. A sign representing a prohibited action (the sign shown at left prohibits disassembly) is shown in or around the circle.				
8-6-	The symbol indicates that the action shown must be taken without fail or the instructions must be observed without fail. A sign representing a particular instruction (the sign shown at left shows the necessity to unplug the cable from the wall outlet) is shown in the circle.				

Warning and Caution for Use

Warning

Prohibition of Disassembly or Modification



Prohibition of Use in a Poorly Ventilated Room Do not use the machine in a poorly ventilated



room or a closed room. Be sure to use the optional Drying ventilation unit

Prohibition of Use in a Damp Environment



· Avoid locating the machine in a damp environment. Do not splash water onto the machine. Use in such an environment can give rise to fire, electric shocks or breakdown of the machine.

when the machine is used in a poorly ventilated room or a closed room.

Occurrence of an Abnormality



 Use of the machine under an abnormal condition where it produces smoke or strange smell can result in fire or electric shocks. If such an abnormality is found, be sure to turn off the power switch immediately and unplug the cable from the wall outlet. Check first that the machine no longer produces smoke, and then contact your distributor or a sales office of MIMAKI for repair. Never repair your machine by yourself since it is very dangerous for you to do so.

How to Handle a Power Cable



- · Use the attached power cable.
- · Take care not to damage, break or work upon the power cable. If a heavy material is placed on the power cable, or if it is heated or pulled, the power cable can break, thus resulting in fire or electric shocks.

About the Platen



· Take care that no dust or dirt sticks to platen heaters. Dust and dirt sticking heaters can cause fire.

About the Moving Parts



· Do not allow your fingers or any part of your body to come close to the dangerous moving parts.

How to Handle Ink



• The ink used for this machine contains organic solvent. Since the ink is flammable, never use flame in or around the place where this machine is used.

Precautions for Use



Caution

About Power Supply

About the Heaters



 Do not turn off the main power switch on the right side of this machine.

• Do not spill liquid on the platen as this may cause

Do not touch platen heaters with bare hand while

it is hot; otherwise, you can get burned.

failure of the heater or firing.

Prohibition of Use in a Poorly Ventilated Room



- If you get ink in your eyes, immediately wash your eyes with a lot of clean water for at least 15 minutes. In doing so, also wash eyes to rinse ink away completely. Then, consult a doctor as soon as possible.
- If anyone drinks ink by mistake, keep him or her quiet and see a doctor immediately Do not allow him or her to swallow the vomit. After that. contact the Poison Control Center.
- If you inhale a lot of vapor and feel bad, immediately move to a location of fresh air and then keep yourself warm and quiet. Then, consult a doctor as soon as possible.



 When the machine is to be moved, wait until the heater temperature drops adequately. As a criterion, wait at least 30 minutes after you turn off the power to the heater. Moving the machine must be limited to on the same floor where there is no steps. When the machine is to be moved to any place other than on the same step-free floor, contact your distributor or a sales office of MIMAKI.



• The ink contains organic solvent. If ink has stuck to your skin or clothes, immediately wash it off with detergent and water.



How to Handle Ink



· When cleaning the ink-station or the heads, make sure to wear the attached gloves. Further, when the solvent ink is used, it is necessary to wear the attached goggles.

Caution about the Moving Parts



- Do not touch the rolling grid roller; otherwise, you may hurt your fingers or tear off your finger nails.
- Keep your head and hands away from any moving parts during a printing or cutting operation; otherwise, you may get your hair caught in the machine or get injured.
- Wear proper clothes. (Do not wear loose-fit clothes or accessories.) Also, bind a long hair.
- · Each unit is automatically switched to in concert with the movement of printing or cutting. Do not make your face or hands near above the platen. Also, do not place a small object or a tool.

About Media



· Straighten the sheet of media, if significantly curled, before using it for printing. Heavily curled sheet affects the printing or cutting result.

About the Cutter



- Do not touch the cutter blade, which is very
- · Do not shake or swing the cutter holder; otherwise, the blade may come off.

Cautions and Requests

Warning

How to Handle Ink Cartridges

- Use the CJV30 genuine ink. Remember that the user shall be responsible for repairing any damage resulting from the use of ink other than the genuine one.
- When any ink other than the CJV30 genuine ink is used, the machine will not operate for its own protection.
- Do not use the CJV30 genuine ink for other printers because doing so may cause the printers to break down.
- Never refill the ink cartridge with ink. Refilled 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 machine. If it is opened and left for an extended period of time, normal printing performance of the machine may not be ensured.
- · Make sure to store ink cartridges in a cool and dark place.
- Store ink cartridges and the 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, as doing so can cause leakage of ink.
- Do not touch or stain the contacts of the ink cartridge, as doing so may cause damage to the print circuit board.
- Waste ink is equivalent to waste oil of industrial waste.
 Request an industrial waste disposal company for disposal of waste ink.

About the Clamp Lever

 Never open the front cover or raise the lever during printing. Opening the cover or raising the lever will abort printing.

How to Handle Media

- Use media recommended by MIMAKI to ensure reliable, high-quality printing.
- Set the heater temperature to meet the characteristics of the media.

Set the temperature of the Pre-heater, Print heater and Post-heater according to the type and characteristics of the media used. Automatic temperature setting can be made on the operation panel by setting the profile on the dedicated RIP. For setting on the RIP, refer to the instruction manual for your RIP.

 Pay attention to the expansion and contraction of the media.

Do not use media immediately after unpacking. The media can be affected by the room temperature and humidity, and thus it may expand and contract. The media have to be left in the atmosphere in which they are to be used for 30 minutes or more after unpacked.

· Do not use curled media.

The use of curled media can not only cause a media jam but also affect print quality.

Straighten the sheet of media, if significantly curled, before using it for printing. If a regular-sized coated sheet of media is rolled and stored, the coated side has to face outside.

About Media and Dust

- Store media in a bag. Wiping off dust accumulated on media will adversely affect the media due to static electricity.
- When leaving the workshop after the working hours, do not leave any media on the roll hanger. If any media is left on the roll hanger, it can get dusty.

Caution about Maintenance

- It is strongly recommended to use the machine in a room that is not dusty. Set the Refresh level 2 or 3 when the machine is to be used in an unfavorable environment. (Refreshing of Refreshing)
- Dust in the heads can also cause drops of ink to fall suddenly down on the media during printing. In such a case, be sure to clean up the heads. ((2) P.3-28 "Setting Auto cleaning")
- When cleaning the ink-station or the heads, make sure to wear the attached gloves. Further, when the solvent ink is used, it is necessary to wear the attached goggles.
- · Perform wiping (removal of dust and paper powder) of the capping station and wiper frequently.

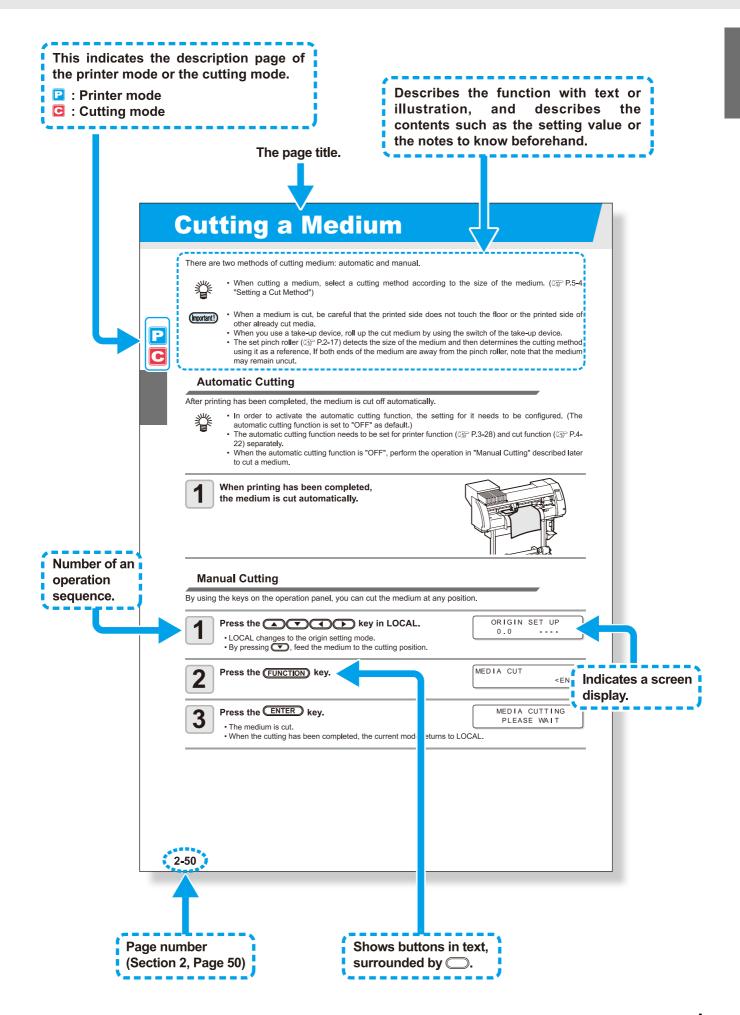
Periodic Replacement Parts

• Some parts of this machine must be replaced with new ones periodically by service personnel. Be sure to make a contract with your distributor or dealer for after sale service to ensure the long life of your machine.

Cautions about Installation

<u> </u>					
A place exposed to direct sunlight	On an inclined surface	A place where the temperature or humidity changes significantly			
		Use the machine under the following environmental conditions: Operating environment: 20 to 35°C 35 to 65% (Rh)			
A place that vibrates	A place exposed to direct air flow from an air conditioner, etc.	Around a place where fire is used			

How to Read this Manual



Chapter 1 Before Use



This chapter

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

Moving This Machine	1-2
Where to Install This Machine	1-2
Working Environmental Temperature	1-2
Moving This Machine	1-3
Names of Parts and Functions	1-4
Front Side of the Machine	1-4
Rear/Sides	1-5
Operation Panel	1-6
Heater	
Media Sensor	1-7
Carriage	1-8
Capping Station	1-9
Pinch Rollers and Grid Rollers	
Pen-line Rubber	1-10

Media	1-11
Usable Sizes of Media	.1-11
Caution in Handling of Media	.1-11
Connecting Cables	1-12
Connecting USB2.0 Interface Cable	. 1-12
Connecting the Power Cable	
Inserting Ink Cartridges	1-14
Caution in Handling of Ink Cartridges	. 1-15
Note on Silver and White ink of ES3 ink	. 1-15
Menu Mode	1-16

Moving This Machine

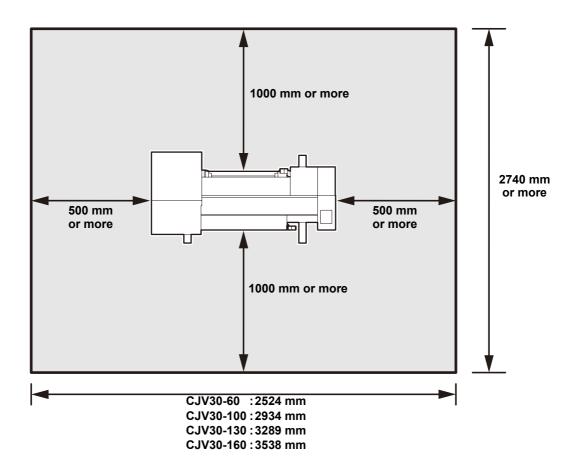


Where to Install This Machine

Secure a suitable installation space before assembling this machine.

The place of installation must have enough space for not only this machine itself, but also for the printing and cutting operation.

Model	Width	Depth	Height	Gross weight
CJV30-60	1,524 mm	739 mm	1,424 mm	110 kg
CJV30-100	1,934 mm	739 mm	1,424 mm	130 kg
CJV30-130	2,289 mm	739 mm	1,424 mm	145 kg
CJV30-160	2,538 mm	739 mm	1,424 mm	160 kg



Working Environmental Temperature

Use this machine in an environment of 20 to 35°C to ensure reliable printing.

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

Moving This Machine

Move this machine according to the following steps when this machine needs to be moved on the same step-free floor.





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

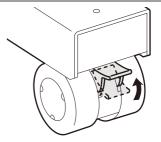
Be sure to request your distributor or our service office to move this machine.



- · When moving this machine, take care that it does not receive a significant impact.
- Be sure to lock the casters after moving of this machine.



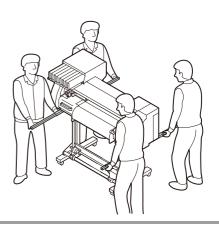
Unlock the casters.





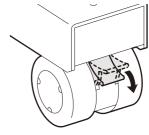
Move this machine as shown in the figure.

- For safety, be sure to operate it with 4 people or more.
- Do not push the cover to move this machine since the cover may be broken.





Lock the casters.



Names of Parts and Functions



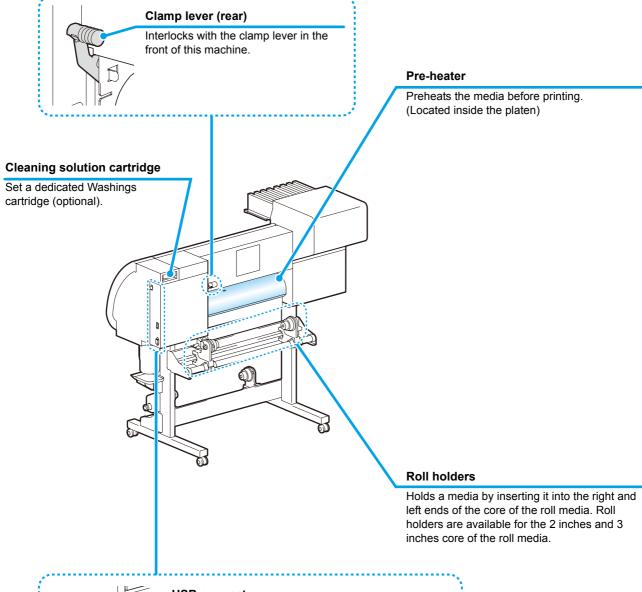
C

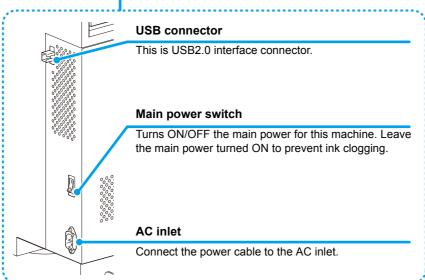
Front Side of the Machine

Maintenance cover Open the cover when carrying out maintenance. Even Ink cartridge when the power switch is OFF, keep the cover closed. The cartridge contains ink for each color. Cartridge protection cover This cover prevents an injury to the operator or the breakage of the machine caused by the protrusion of the 440-cc cartridge. Carriage (cutter unit) (It is located under the ink cartridge.) Moves the cutter head unit from side to side. Clamp lever (front) Moves the pinch rollers up and down to hold or release the media. Carriage (printer unit) Moves the print head unit from side to side. Operation panel This panel has operation keys for configuring the settings needed for this machine and a display for showing the items to operate. Power switch*1 Turns ON/OFF the power to the machine. **Tool tray** Waste ink tank Waste ink gathers in this tank. A tool tray is provided so that you can put the small tools such as cutter knives, pens, etc. on it. Stand Supports the main body of the machine. It is provided with casters that are used to move this machine. Platen The printed media is printed out, sliding on the platen. Three heaters are installed inside the platen. Take-up device Print heater/Post-heater Automatically winds up the roll media printed. Fixes and dries the ink on the currently produced print. (Located inside the platen)

^{*1 :} The power switch under the operation panel lights up in green when the power is turned ON, and blinks when the power switch is turned OFF. The ink clogging prevention function is regularly performed even when the power switch is turned OFF with the main power switch (P.1-5) kept ON. (Sleep function P.6-23)

Rear/Sides







Operation Panel

Display

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

(MODE CHANGE) key

Use this key to switch the modes between print mode (PRINT MODE lamp is ON) and cut mode (CUT MODE lamp is ON).

USER TYPE/TOOL key

Use this key to select a user type in print mode or to select a tool condition in cut mode.

CLEANING/FEED key

Use this key to execute head cleaning when ink clogging occurs in print mode, or to feed the media in cut mode.

DATA CLEAR key

Deletes the data that has been received.

CONSTANT lamp

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

HEAT lamp

Lights up in orange during heating up of the heater.

TEST PRINT/TEST CUT key

Use this key to check the prints for errors in print mode and cut mode.

HEATER/CUTTER key

Use this key to set the temperatures for the Pre-heater, Print heater and Postheater or check the current temperature of the platen.

Jog key () A ()

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

FUNCTION key

Use this key to display the function setting menu.

(END) key

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

REMOTE key

CONSTANT
O O O
PRE PRINT POST

 ∇

Mir iciki

REMOTE

ENTER

O CUT MODE

MODE CHANGE

FUNCTION

END

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

ENTER key

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

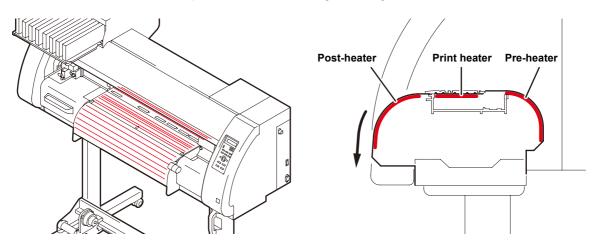
Heater

Pre-heater/Print heater/Post-heater are equipped on the platen.

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



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



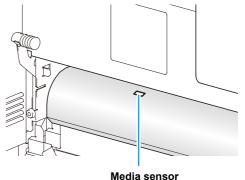
Media Sensor

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

This machine has a media sensor on the platen (in the rear).



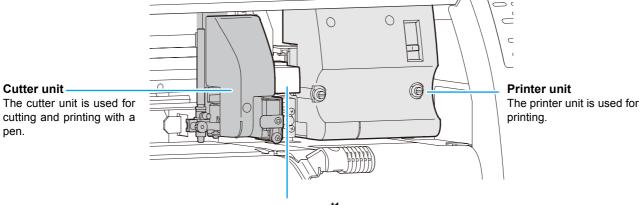
Set the media so that the media sensor located in the rear
of the platen is covered with the media without fail. The
media cannot be detected unless it is placed over the
sensor.





Carriage

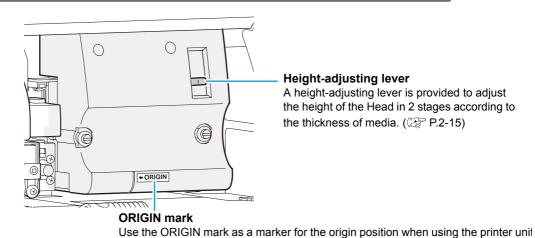
The carriage consists of the printer unit and the cutter unit.



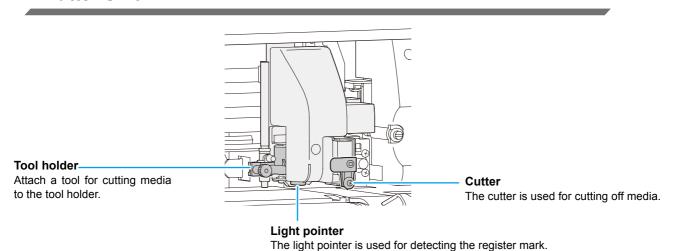
Conjunct unit *1

In concert with the data sent from a computer or the movement of the main body, switching is performed between printer unit and cutter unit.

Printer Unit



Cutter Unit



^{*1} When switching the conjunct unit to the printer unit with the cutter unit placed on the platen, the movement speed of the first 20cm becomes slow to avoid injury from the cutter unit.

Capping Station



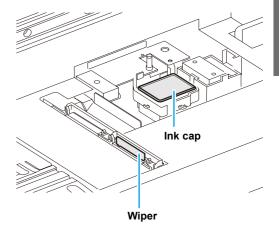
 Be sure to wear the attached goggles in cleaning within the capping station to protect your eyes against ink.



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

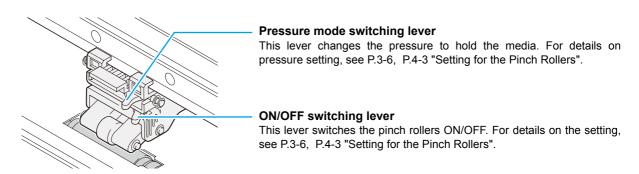
The ink caps prevent the nozzles in the ink heads from drying up. The wiper cleans the nozzles in the heads.

The wiper is consumable. If the wiper is deformed or the media is stained, replace the wiper with a new one. ($\mbox{\em P.6-8}$)



Pinch Rollers and Grid Rollers

This machine retains the media with the pinch rollers and the grid rollers.





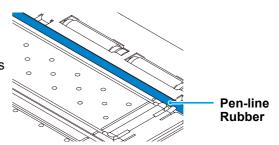
• Do not switch manually the pressure mode switching lever and ON/OFF switching lever. Doing so may cause malfunctions to occur.

Pen-line Rubber



Cutting and printing with a pen are performed on the pen line rubber.

If you want to perform dotted line cutting, follow the steps below.

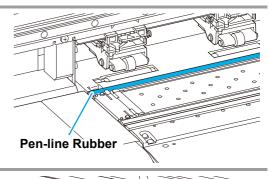


When performing dotted line cutting:



Remove the pen-line rubber.

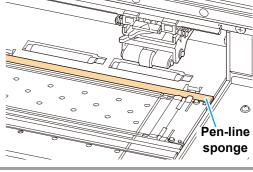
- (1) Insert a flathead screwdriver or equivalent tool into the gap between the left end of the pen-line rubber and the platen.
- (2) Raise the pen-line rubber.



2

Install the pen-line sponge.

- (1) Align the right end of the pen-line sponge with the right end of the platen.
- (2) Install the pen-line sponge.





Be careful of the following when installing the pen-line rubber.

- When installing the pen-line rubber, make sure to push it into the slot softly and avoid stretching it forcibly.
- If pen line rubber is stretched forcibly, the edge of the pen line comes off and may decline the cutting quality.
- Store the replaced pen line.



• The pen-line sponge and pen-line sponge are consumable. Replace it with a new one if necessary.

Usable media sizes and notes for handling are described.

Usable Sizes of Media

Model		CJV30-60	CJV30-100	CJV30-130	CJV30-160	
Type of printing recommended media When		When printing	Tarpaulin / FF(Flexible Face) / Polyvinyl chloride film / MS Chloroethene / MS Tarpaulin			
		When cutting	MS Chloroethene / Chloroethene sheet / Fluorescent sheet / Reflection sheet			
М	aximum width		620 mm	1,030 mm	1,371 mm	1,620 mm
М	Minimum width 100 mm 100 mm 100 mm				100 mm	
Maximum printing / cut width		610 mm	1,020 mm	1,361 mm	1,610 mm	
	Thickness		1.0 mm or less			
_	Roll outside diame	utside diameter ϕ 180 mm or less				
media	Roll weight 25 kg or less					
	Roll inside diameter		2 or 3 inches			
Roll	Print side		Side facing outward			
	Roll end treatment		The roll end is ger	ntly fixed to the core for easy		tape or weak glue

Caution in Handling of Media

Pay attention to the followings for handling of media.



- Use media recommended by MIMAKI.
 Such media ensures reliable and high-quality printing.
- Set the heater temperature to meet the characteristics of the media.

 Set the temperature of the Pre-heater and Print heater according to the type and characteristics of the media used. Automatic temperature setting can be executed on the operation panel by setting the profile on the dedicated RIP. For the setting on the RIP, see the instruction manual for your RIP.
- Pay attention to the expansion and contraction of the media.
 Do not use media immediately after unpacking them. The media can be affected by the room temperature and humidity, and thus it may expand and contract. The media have to be left for 30 minutes or more in the open air in the environment in which they are to be used after being unpacked.
- Do not use curled media.
 The use of curled media can cause a media jam. If a regular-sized coated sheet of media is rolled and stored, the coated side has to face outside.

Connecting Cables

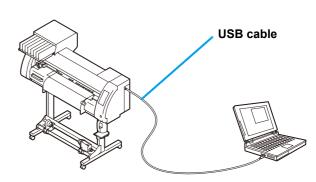


Connecting USB2.0 Interface Cable

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



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



Notes on USB 2.0 Interface



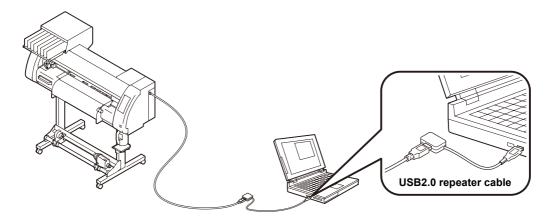
• Your application must be compatible with USB 2.0.

• When two or more CJV30 machines are connected to one personal computer

Set the different "MACHINE NAME" for each connected CJV30. (P.5-12)

When two or more CJV30 machines are connected to one personal computer, the personal computer may not recognize all the CJV30 machines normally.

Reconnect the unrecognized CJV30 machine to another USB port, if available, and check to see if it is recognized. If the CJV30 machine is not recognized by the newly connected USB port, use USB 2.0 repeater cables available on the market.



Notes on peripheral devices in USB high speed mode

When a peripheral device (USB memory or USB HDD) to be operated in USB high speed mode is connected to the same personal computer that a CJV30 machine is connected to, the USB device may not be recognized. When CJV30 is connected to the personal computer to which an external HDD is connected via USB, the speed of data output to CJV30 may drop. That can cause the head unit to stop temporarily at the right or left end during printing.

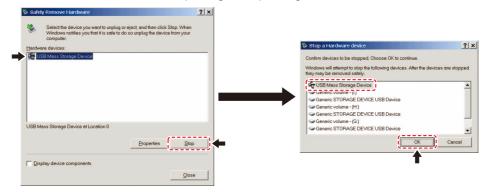
Removing USB memory

If a USB memory module is inserted in the personal computer to which a CJV30 machine is connected, click "Stop" in the "Safely Remove Hardware" window by following the instructions given there first and then remove the module.



Leaving a USB memory module inserted can cause [ERROR 10 COMMAND ERROR].

Copy the data onto the hard disk before outputting it for printing.



Connecting the Power Cable

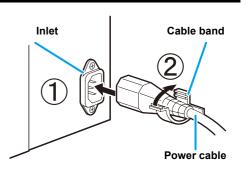


Insert the power cable into an inlet of the machine.

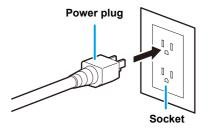


Secure a cable band.

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



Insert the power plug into a plug socket.





• Do not use any power cables other than the attached power cable.



- · Be sure to connect the power cable to the outlet near this machine, and make sure that the power cable can be easily removed.
- Connect the power cable to the grounded outlet. Otherwise, it may result in fire or an electric shock.

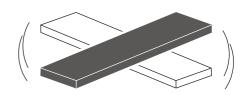
Inserting Ink Cartridges

Insert ink cartridges.





Shake the ink cartridge as shown on the right.

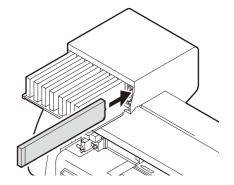




Insert the ink cartridge.

- Insert the ink cartridge lengthwise with the surface having IC chips pointing to the left side.
- Colors are displayed on the display as follows.

Black: K, Cyan: C, Magenta: M, Yellow: Y, Light cyan: c, Light magenta: m, White: W, Silver: S, Light black: k



Changing an Ink Cartridge

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

When [INK END] is displayed

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

When [NEAR END] is displayed

There is a little ink left. Though printing can be continued even if it is displayed, it is recommended to replace the ink cartridge as soon as possible to avoid running out of ink during printing.

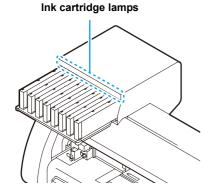


• While [NEAR END] is displayed, the setting for cleaning during printing is disabled. ((P.3-26)

Condition of Lamp

For Ink Cartridge Lamps

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



Condition of Lamp		Explanation		
	OFF	No error		
Upper row Red lamp	Blinking	One of the following errors occurs. Almost no ink No ink Expiration of a term of ink validity (one month)		
	ON	One of the following errors occurs. No ink left No ink cartridge inserted Other ink errors (P.7-5)		
Lower row Green lamp	OFF	No error		
	ON	When used with 4-color ink set, the machine supplies ink from the ink cartridge with lower ink. In this case, the cartridge being used lights in green.		

Evalenation

Caution in Handling of Ink Cartridges



- The solvent ink contains organic solvent. If ink has stuck to your skin or clothes, immediately wash it off with detergent and water. If you have gotten ink in your eyes, immediately wash your eyes with a lot of clean water for at least 15 minutes. In doing so, also wash the back of the eyelids to rinse the ink away completely. Then, consult a doctor as soon as possible.
- completely. Then, consult a doctor as soon as possible.
 Use genuine ink cartridges for this machine. This machine functions by recognizing the genuine ink cartridges. In case of trouble caused by modified ink cartridges or the like, it shall be out of the warranty even within the warranty period.
- When the ink cartridge has been moved from a cold place to a warm one, leave it at room temperature for three hours or more before using it.
- Be sure to thoroughly use up the ink in the ink cartridge within three months of it being opened. If an extended period of time has passed after opening the cartridge, printing quality will deteriorate.
- Make sure to store ink cartridges in a cool and dark place.
- Store ink cartridges in a place that is out of the reach of children.
- Request an industrial waste disposal company to dispose of an empty ink cartridge.



- Do not shake ink cartridges violently. This may result in ink leakage from the ink cartridges.
- Never refill the ink cartridge with ink. A refilled ink cartridge can cause trouble. Remember that MIMAKI assumes no responsibility for any damage caused by the use of an ink cartridge refilled with ink.
- Do not touch or stain the contacts of the ink cartridge because doing so can cause damage to the print circuit board.



· Do not disassemble the ink cartridges.

Note on Silver and White ink of ES3 ink

Be sure to read below before using silver and white ink of ES3 ink.



- Silver and white ink of ES3 ink are usable for the firmware V2.40 and later.
- Pigments of silver ink and white ink will settle down with time.

Pigments of silver and white ink of ES3 ink have nature of settling down when they are left for a long time. If you print with ink whose pigments settle down as it is, it may cause color heterogeneity etc.

• If you have not use ink for a long time, be sure to perform "spot color maintenance" before printing.

When you print with silver ink or white ink that has set on the machine and has not been used for a long time, first perform "spot color maintenance" to prevent color heterogeneity due to settling down of pigments. (P.2-40 "Perform spot color maintenance")

 If you have left ink for a long time, the warning message is displayed when you turn on the power supply.

If you have left ink for a long time, the warning message that informs you that it is required to perform maintenance is displayed when you turn on the power supply.

By referring to P.2-42 "About warning message display of performing spot color maintenance", perform maintenance.



• Do not turn off the main power supply of this machine after you filled silver ink or white ink of ES3 ink. (If you do not use the printer, turn off the power supply with the switch on the front surface of the machine.)

Menu Mode

This machine has 4 modes. Each menu mode is described below.



This is the mode in which the medium has not been detected yet.

• The keys other than the REMOTE / TEST PRINT/TEST CUT key are effective.

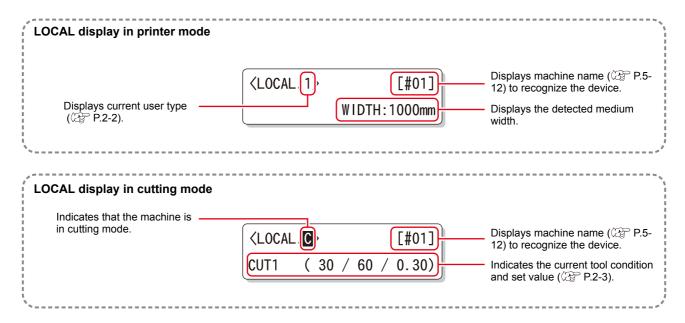
LOCAL

Not-ready

LOCAL is the mode for the preparation state.

There are two LOCAL modes: [Printer mode] and [Cutting mode].

- Press the MODE CHANGE key to switch to the printer mode and the cutting mode.
- · All the keys are effective.
- The machine can receive data from the computer. However, it does not perform printing or cutting.



Function

To set Function mode, press the Function key when this machine is in Local mode. In this mode, printing conditions can be set.

REMOTE

The received data is printed or cut.

Printing or cutting can be interrupted by pressing the REMOTE key.

Chapter 2 Basic Operations



This chapter

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

User Type for Printing 2-2	Test Printing	2-35
Settings That Can Be Registered in	Perform test printing with the normal	
User Types2-2	•	2-36
Using the Registered User Types 2-2	Perform test printing with the test pattern	
About Tool Conditions during Cutting 2-3	for checking white ink	2-37
Tool Condition Types and Their Selection	Check warning of white nozzle status	
Method2-3	(Only when using SS21 white ink)	2-38
Registering a Tool Condition2-4	Head Cleaning	2-39
Improving Cutting Quality2-6	About head cleaning	2-39
Operation Flow 2-7	Perform head cleaning depending on	
Turning the Power ON/OFF 2-8	the test printing result	2-40
Turning the Power ON2-8	Perform spot color maintenance	2-40
Turning the Power OFF2-9	Test Cutting	
Installing Tools 2-10	Preparing for the Heaters	2-44
When a Cutter Is Used2-10	Changing the Temperature Settings for	
Exchanging Tool2-13	the Heaters	2-44
How to Attach a Ballpoint pen 2-14	Checking the Heater Temperature	2-45
Setting a Medium 2-15	Printing Data	
Adjusting the Head Height2-15	Starting a Printing Operation	2-46
Adjusting the Position of the Pinch Roller	Stopping a Printing Operation	2-47
According to the State of a Medium 2-17	Deleting Received Data (Data Clear)	
Roll Stopper2-22	Data Cutting	
Maximum Print Area/Cut Area 2-23	Starting a Cutting Operation	2-48
Notes When Using Medium Holder 2-24	Stopping Cutting in a While	
Setting a Roll Medium2-25	Restarting a Cutting Operation	2-48
Take-up Device2-29	Stopping a Cutting Operation (Data Clear)	2-49
Setting a Leaf Medium2-31	Removing the Cutter Unit Temporarily	2-49
When Changing the Origin2-33	Cutting a Medium	2-50

User Type for Printing

Register a printing condition according to each of the media that you use in a user type beforehand. When you replace one medium with another, you can set the optimum printing condition only by changing one user type to another.

Settings That Can Be Registered in User Types

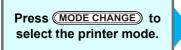
For the method of registering settings in user types (1 to 4), see P.3-2.

Settings	Reference Page	Settings	Reference Page
PINCH ROLLER	P.3-5	PRE-FEED	
MEDIA COMP.	P.3-8	COLOR PATTERN	
DROP. POS CORRECT	P.3-10	REFRESH	P.3-27
HEATER	P.3-12	VACUUM	
PRINT MODE	P.3-16	FEED SPEED LEVEL	
INK LAYERS	P.3-27	PRIORITY	P.3-22
DRYING TIME	P.3-21	AUTO CLEANING	P.3-24
AUTO CUT	P.3-27	PRINT. CLEANING	P.3-26

Using the Registered User Types <LOCAL.1> Press the MODE CHANGE key in LOCAL to select the WIDTH: * * * * mm printing mode. Press the USER TYPE/TOOL key. Press (**) to select USER TYPE CHANGE TYPE (1)-> one of the user types (1 to 4). • You can also select one by pressing the USER TYPE/TOOL key. <LOCAL.2 Press the ENTER key. 4 WIDTH: * * * * mm Number of the selected user type

For Selecting a User Type without Using USER TYPE/TOOL

You can select a user type by using the Function key in the printer mode without pressing the USER TYPE/TOOL key.



Press FUNCTION to check [SETUP] and press ENTER.

Press to select one of the user types (1 to 4).

Press ENTER.

About Tool Conditions during Cutting

Register a cutting condition according to each of the media that you use in a tool condition beforehand. When you replace one medium with another, you can set the optimum cutting condition only by changing a tool condition to another.

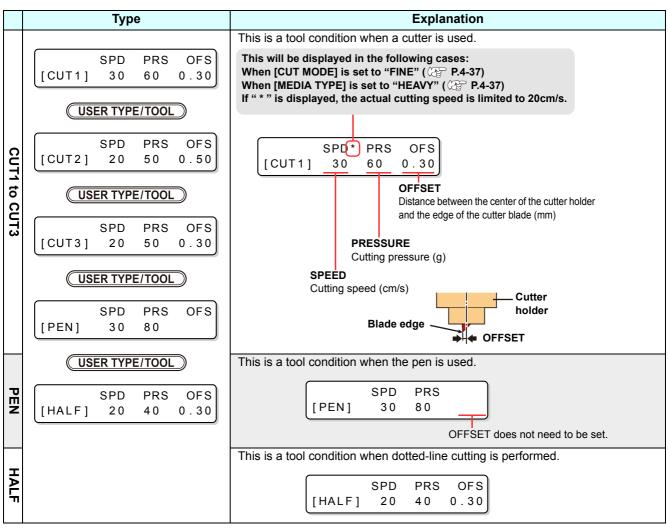
Tool Condition Types and Their Selection Method

A tool condition consists of a cutting condition and a printing-with-a-pen condition.

You can select one tool condition by pressing the USERTYPE/TOOL key and determine it by pressing the ENTER key.

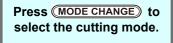
For the method of registering tool conditions, see P.2-4.





For Selecting a Tool Condition without Using USER TYPE/TOOL

You can select a tool condition by using the FUNCTION key in the cutting mode without pressing the USER TYPE/TOOL key.



Press FUNCTION to check [SETUP] and press ENTER.





Registering a Tool Condition

1

Press the MODE CHANGE key in LOCAL to select the cutting mode.

<LOCAL. C> [#01] CUT1 (30/60/0.30)



Press the USER TYPE/TOOL key.

SPD PRS OFS [CUT1] 30 60 0.30



Press the USER TYPE/TOOL key to select a tool condition to be set.

SPD PRS OFS [CUT2] 20 50 0.50

• A tool condition consists of cutting conditions (CUT1 to CUT3), printing-with-a-pen condition (PEN), and cutting condition (HALF).



Press to set a speed.

SPD PRS OFS [CUT2] 20 50 0.50

• Set value: 1 to 10 cm/s (The value can be set by the unit of 1 cm/s.)

15 to 30 cm/s (The value can be set by the unit of 5 cm/s.)

• When the value is made larger, the speed becomes faster. When the value is made smaller, the speed becomes slower.

(Normally, the value is set at 20 to 30 cm/s.)



Press () to select PRS (PRESSURE).

SPD PRS OFS [CUT2] 20 50 0.50

- The cursor moves to PRS.
- To return to the previous setting item, press the jog key .



Press ▲ volue.

SPD PRS OFS [CUT2] 20 60 0.50

- Set value: 10 to 20 g (The value can be set by the unit of 2 g.)
 20 to 100 g (The value can be set by the unit of 5 g.)
 100 to 350 g (The value can be set by the unit of 10 g.)
- When selecting "PEN" for the tool condition, the maximum value is 150g.



Press (to select OFS (OFFSET).

SPD PRS OFS [CUT2] 20 60 0.50

- The cursor moves to OFS.
- To return to the previous setting item, press the jog key <a>.

8

Press to set an OFS value.

SPD PRS OFS [CUT2] 20 60 0.3



Press the ENTER key.

• Set value: 0.0 to 2.5 mm

• The set value is registered.

SPD PRS OFS [CUT2] 20 60 0.30



- When the printing-with-a-pen condition (PEN) has been selected in Step 3, SPEED: 30 cm/s and PRESSURE: 60 to 80g should be handled as reference values.
- It is recommended to check whether the condition set by performing test cutting is proper after registering the tool condition. (P.2-43)



- When a cutting condition (CUT 1 to 3 or HALF) has been set, the cutting and throwing-away (blade edge direction alignment) operation (P.4-38) is performed.
- When the PRESSURE value is set at less than 20 g in Step 7, the speed value in Step 5 needs to be set at 10 cm/s or less. Otherwise, the tool floats, and this causes letters to be blurred and cutting remainders to be generated.
- With PRESSURE (cutting pressure) being set at a large value, do not make the cutting adjustment only with the length of the blade edge drawn out.
 - When cutting is performed with the length of the blade edge drawn out being short and with PRESSURE being set at a large value, a strange sound may be made during cutting. In addition, the bottom surface of the cutter may rub against the sheet, causing the sheet surface to be damaged or the cutting quality to deteriorate.



Improving Cutting Quality

Cutting quality can be improved by reducing the level of acceleration speed for cutting.



• If you set the speed reduction level, cutting speed will become slower. (Minimum operation acceleration speed: 0.1G)



Press the MODE CHANGE key in LOCAL to select the cutting mode.



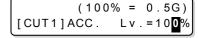
2

Press the USER TYPE/TOOL key.



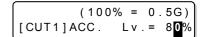
3

Press the REMOTE key.





Press to set the speed reduction level.



- Setting value: 10 to 100% (10% step)
- The acceleration speed when the speed reduction level is set to 100% is displayed in the upper part of the display. Even if the speed reduction level is set to lower, the acceleration speed displayed in the upper part of the display will not be renewed.



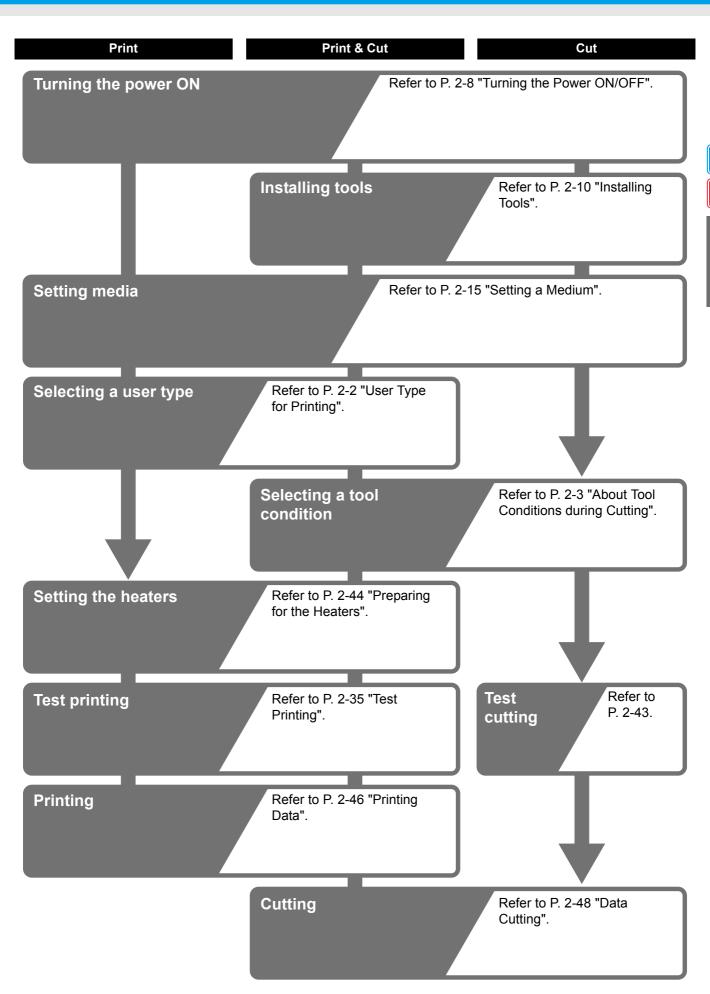
Press the **ENTER** key.

• The set value will be registered.

Relationships between cutting speed and acceleration speed

Item		CUT MODE		
		FINE	STANDARD	FAST
Speed [cm/s]	1 ~ 5	0.4 [G]	0.6 [G]	0.8 [G]
	6 ~ 15	0.5 [G]	0.7 [G]	0.9 [G]
	20 ~ 30	0.6 [G]	0.8 [G]	1.0 [G]

 When pen pressure (PRS) is set to 150g or higher, the acceleration speed will be 0.2G lower than the value indicated in the table shown on the left.



Turning the Power ON/OFF

Turning the Power ON

This machine is provided with the following two power switches:

Main power switch: It is located on the side of this machine. Keep this switch ON all the time.

Power switch

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

The power switch lights in green when the power is ON and blinks in green when it is

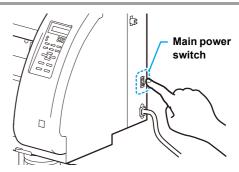
OFF.

The nozzle clogging prevention function periodically operates even with the power switch turned OFF when the main power switch is turned ON (the power switch blinks in

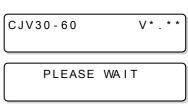


Turn the main power switch ON.

• Set the main power switch located on the side of this machine to the "I" side.



- The firmware version is displayed when the power is turned ON.
- The machine performs its initial operation.
- When the main power switch is turned on, the printer unit will go and return once on the platen.



The machine enters LOCAL.

<LOCAL.1> [#01]



Turn ON the power of the connected PC.



• The head nozzle may result in nozzle clogging if the main power switch is left OFF for a long time.

Turning the Power OFF

When having ended the operation of the machine, turn the power OFF by pressing the power switch located on the front side.

Check the following items when turning the power OFF.

- If the machine is receiving data from the PC or if there is any data that has not been output yet
- · If the head has returned to the capping station
- If any error has occurred (P.7-10 "Error Messages")



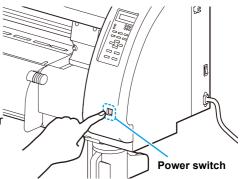


Turn OFF the power of the connected PC.



Press the power switch to turn the power OFF.

- The power switch blinks in green.
- Do not turn OFF the main power switch located on the side of the machine.
- To use this machine again, light the green lamp by pressing the power switch.
- When the conjunct unit is connected to the cutter unit, after being connected to the printer unit, the power turns OFF.



Cautions about Turning the Power OFF

Do not turn the main power switch OFF.

When the main power switch is ON, the power periodically turns ON and the nozzle clogging prevention function (flushing function) operates.

When the main power switch has been turned OFF, the sleep functions, such as flushing, do not operate, and this may cause nozzle clogging.

Turn the power OFF after having checked the position of the print unit.

If the power is turned OFF in a state where the print unit has not returned to the capping station, the ink head dries, which may cause nozzle clogging.

In this case, turn the power ON again and check that the print unit has returned to the capping station, and then turn the power OFF.

• Do not turn the power OFF during printing or cutting.

The head may not return to the capping station.

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

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

Installing Tools

This machine allows you to use the following tools:

Cutter

: This tool is selected when an image printed on a medium is cut or when

letters are cut with a cutting medium.

Pen (water-based ballpoint pen) : This tool is used to perform "test printing" for checking how images or letters are cut actually.

When a Cutter Is Used





- · Do not touch the cutter with your fingers.
 - The sharp blade edge of the cutter may cause you to get injured.
- Do not shake the tool after having set the cutter.
- Otherwise, the blade edge may pop out, causing you to get injured.
- Store the cutter blade in a place that is out of the reach of children. In addition, dispose of used cutter blades according to regional laws and regulations.

Mounting a Cutter Blade



Remove the cutter holder.

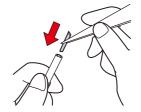
Loosen the locknut and remove the adjustment knob from the holder.





Insert a cutter blade in the hole of the adjustment knob.

• Pick up the cutter blade with tweezers.





Tighten the locknut.



Adjusting the Blade Edge

The blade edge needs to be adjusted according to the type of cutter and medium you use.

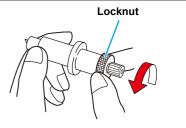
After having adjusted the blade edge, set cutting conditions and conduct test cutting to check how the cutter cuts.



• Be careful that the length of the blade edge is not too long. When the blade edge is too long, the cutter may cut the backing paper through and damage the machine.

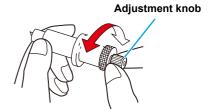


Remove the cutter holder and loosen the locknut.



2

Rotate the adjustment knob and adjust the length of the blade edge drawn out.



3

Tighten the locknut.

• Tighten the adjustment knob until it does not rotate any further.



(Important!

For the blade edge adjustment of cutters other than ones supplied with this machine, see the Appendix.
 (P. 6-46)

Adjust the length of the blade edge

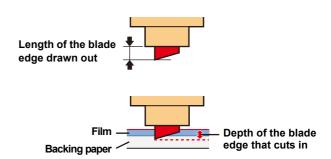
Depth of the blade edge that cuts in =
(Film thickness + Backing paper thickness)

2

 However, when film thickness is less than backing paper thickness:

Reference:

Length of the blade edge drawn out = 0.3 to 0.5 mm (When the blade edge cuts badly, replace the blade with another.)





- Adjust the pressure so that the backing paper has a little cutting streak.
- When the backing paper thickness is less than the film thickness and, therefore, accurate cutting quality cannot be obtained, changing the length of the blade edge may produce a good result.

Installing the Cutter Holder

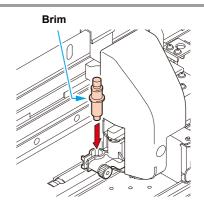


• Insert the cutter holder firmly so that there is no space under the holder.



Insert the cutter holder into the tool holder.

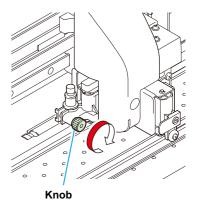
• Press the cutter brim on the tool holder.





Fix the cutter holder.

• Rotate the knob of the tool holder clockwise and fix the tool firmly.





• Fix the cutter holder firmly. When the cutter holder has been fixed loosely, no accurate cutting (printing-with-a-pen) quality can be expected.

Exchanging Tool

Press the MODE CHANGE key in LOCAL to select cutting mode.

<LOCAL. C> [#01] CUT1 ($\frac{3}{9}$ 0 / 60 / 0.30)

Press the (FUNCTION) key.

<ENT> **FUNCTION SETUP**



FUNCTION <ENT> MAINTENANCE

4

Press the ENTER key.

MAINTENANCE MARK SENSOR <ent>

Press v to select [TOOL REPLACE].

MAINTENANCE TOOL REPLACE <ent>

Press the ENTER key. 6

TOOL REPLACE : en t ACTION



Press the ENTER key.

- The cutter unit moves to the left end of the machine.
- · Now the cutter unit can be moved manually. Move the cutter unit to the position where you can assure easy access, and then replace the blade edge.

(Important!)

· Do not touch until the cutter unit stops.



See P.2-12 "Installing the Cutter Holder" to replace the cutter holder.

- When exchanging the cutter blade, refer to P.2-10 "Mounting a Cutter Blade".
- Adjust the length of the blade edge as required. (P. 2-11)



When replacement is finished, press the **ENTER** key.

Pen

Pen adaptor

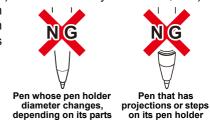
Fixing screw

Cap

How to Attach a Ballpoint pen



- When you use a ballpoint pen sold on the market, use one with a diameter of 8 to 9 mm. Image quality may change, depending on the pens to be used.
 (Recommended ballpoint pen: K105-A and K105-GA (product No.) manufactured by Pentel Co., Ltd.)
- Ballpoint pens shown right may lean over and make contact with the cover when they are held by the pen adaptor. (Pen whose pen holder's diameter changes, depending on its parts/Pen that has projections or steps on its pen holder)







Put the cap on the pen adaptor.

• The cap is used to adjust the height of the pen.



Insert a pen into the pen adaptor.

• Insert the pen until the point of the pen touches the cap.



Fix the point of the pen.

- Tighten the fixing screw clockwise.
- Be careful not to turn the fixing screw of the pen adaptor too tight.
 Otherwise, the ballpoint pen may break.



Remove the cap.



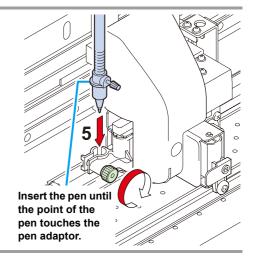
Insert the pen adaptor to which the pen has been attached into the tool holder.

- Press the brim of the pen adaptor on the tool holder.
- Set the pen adaptor so that the fixing screw does not touch anything.



Fix the tool.

 Turn the knob of the tool holder clockwise and fix the tool firmly.





Setting a Medium

This machine can be used with a roll medium and leaf medium. For usable media, refer to P.1-11 "Usable Sizes of Media".

Adjusting the Head Height

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



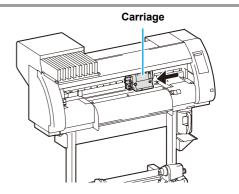
- Adjust the head height prior to setting the medium. If the head height is adjusted after the medium is set, this may cause a medium jamming, deterioration of the print quality or head damage.
- If the drawing quality is set to "Bi-D" (P.3-18), perform "Dot position correction" of the maintenance function after the head height is adjusted. (P.3-10).





Move the carriage to the platen.

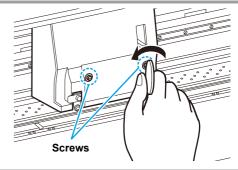
- When the device is turned ON:
 Execute [ST.MAINTENANCE CARRIAGE OUT] of the
 Maintenance functions.
 (P.6-6 Steps 1 and 2)
- When the device is turned OFF: Move the carriage by hand.





Loosen the two screws located at the front.

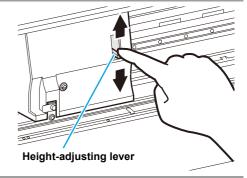
 Loosen the screws, rotating each by one turn of a screwdriver.





Adjust the height-adjusting lever according to the medium.

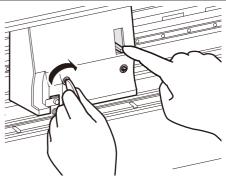
- Adjust the position of the lever, referring to "For the Adjusting Lever and the Range".
- Set the height-adjusting lever to the highest stage or the lowest stage. Setting it to the intermediate height, a printing fault can result.





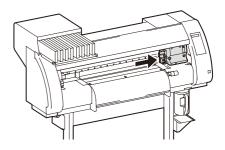
While keeping the height-adjusting lever held at the aforementioned position, tighten the two screws.

- Be sure to fasten the screws, pressing the height-adjusting lever, otherwise the head cannot be secured at the correct position.
- Fasten the screws securely.





Return the carriage to the station position.





For the Adjusting Lever and the Range

Height-adjusting lever	Head height	Switching area
Thin	2 mm (The set position before shipping)	Switch by user
Thick	3 mm	



- Set the lever to "Thick" when a thicker medium such as tarpaulin or FF is used.
- Set the lever to "Thick" when the medium is prone to gather dust in the head or is often stained with ink traces

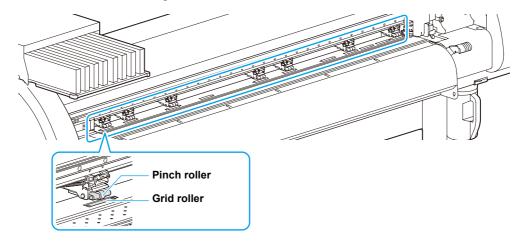


• When using a medium of 1 mm thickness or below and SS21 ink, be sure to set the head height to "Thin".

If used with the head height "Thick", the head gap (between the medium and the height of head nozzle surface) can be too large and ink drops may be splashed, and so the image quality cannot be assured.

Adjusting the Position of the Pinch Roller According to the State of a Medium

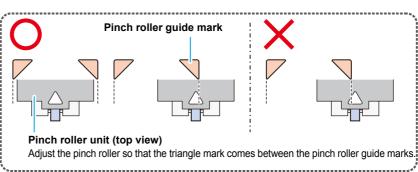
Adjust the position of the pinch roller according to the width of the medium to be set. This machine feeds the medium with a pinch roller and grid roller for printing or cutting. The pinch roller should be above the grid roller.



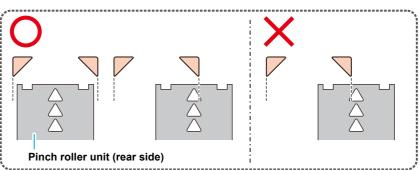
How to Adjust the Pinch Roller

Move the pinch roller unit to adjust the position of the pinch roller. Use the pinch roller guide mark for positioning.

To adjust the pinch roller from the front side:



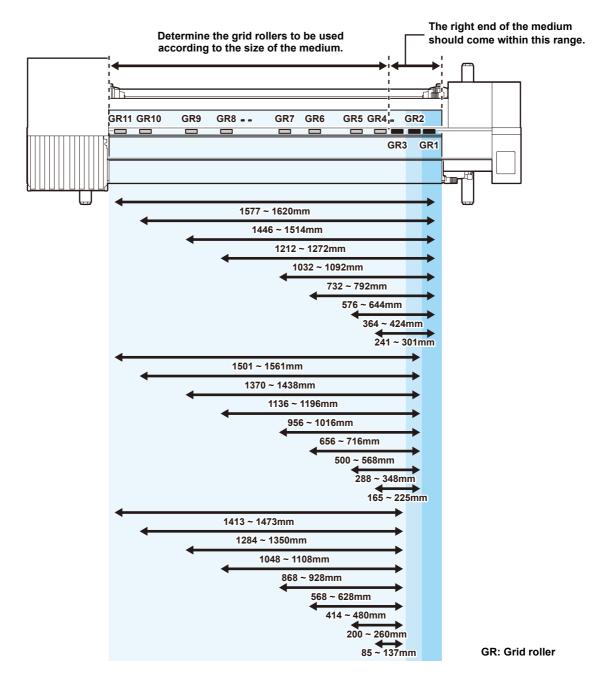
To adjust the pinch roller from the rear side:



Medium Size and the Grid Roller (CJV30-160)



- To feed the medium smoothly, select the grid roller positions so that the medium can be held at equally spaced intervals.
- When the grid rollers to be used are determined, adjust the pinch roller unit referring to "How to Adjust the Pinch Roller" of P. 2-17.
- You can use any number of pinch roller units from 2 to 7.
- Adjust the pinch roller of both ends so that they are within the range of 10cm from medium left end and 2cm from medium right end. If adjusting them to the further position, it will remain uncut when cutting the medium.





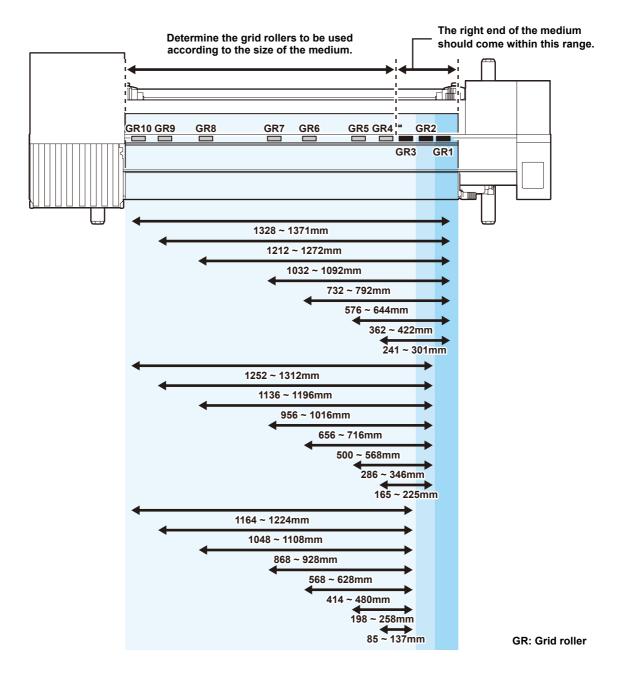


Medium Size and the Grid Roller (CJV30-130)



- To feed the medium smoothly, select the grid roller positions so that the medium can be held at equally spaced intervals.
- When the grid rollers to be used are determined, adjust the pinch roller unit referring to "How to Adjust the Pinch Roller" of P. 2-17.
- You can use any number of pinch roller units from 2 to 6.
- Adjust the pinch roller of both ends so that they are within the range of 10cm from medium left end and 2cm from medium right end. If adjusting them to the further position, it will remain uncut when cutting the medium.

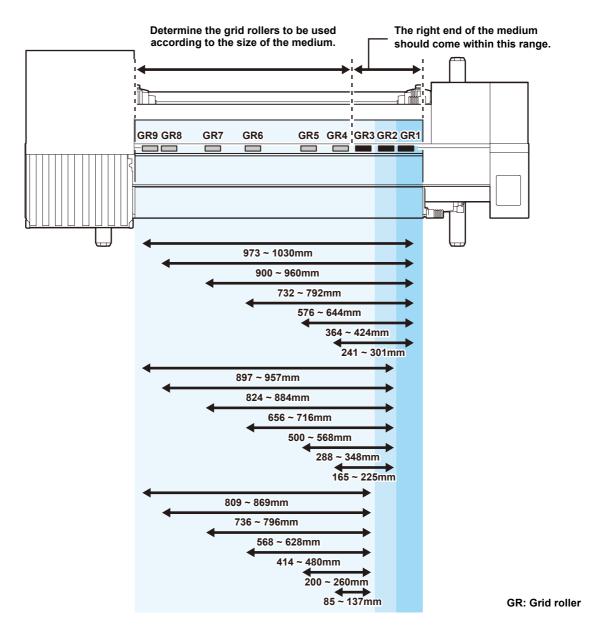




Medium Size and the Grid Roller (CJV30-100)



- To feed the medium smoothly, select the grid roller positions so that the medium can be held at equally spaced intervals.
- When the grid rollers to be used are determined, adjust the pinch roller unit referring to "How to Adjust the Pinch Roller" of P. 2-17.
- You can use any number of pinch roller units from 2 to 4.
- Adjust the pinch roller of both ends so that they are within the range of 10cm from medium left end and 2cm from medium right end. If adjusting them to the further position, it will remain uncut when cutting the medium.





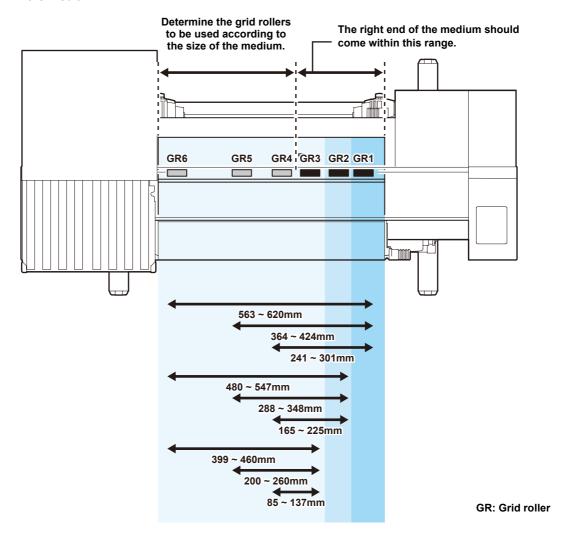


Medium Size and the Grid Roller (CJV30-60)



- To feed the medium smoothly, select the grid roller positions so that the medium can be held at equally spaced intervals.
- When the grid rollers to be used are determined, adjust the pinch roller unit referring to "How to Adjust the Pinch Roller" of P. 2-17.
- Be sure to prepare two or more pinch roller units.
- Adjust the pinch roller of both ends so that they are within the range of 10cm from medium left end and 2cm from medium right end. If adjusting them to the further position, it will remain uncut when cutting the medium.



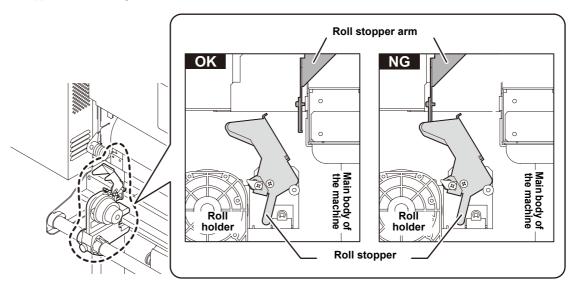


Roll Stopper

When the medium is set and a certain amount is pulled out, the roll stopper function is activated to stop the roll holder temporarily. This function is provided to prevent unnecessary pull-out of the medium.



The roll stopper works with the clamp lever. Do not push the clamp lever down while the roll stopper is
caught between the roll stopper arm and the this machine. The roll stopper arm might be broken and the
roll stopper function might be disabled.

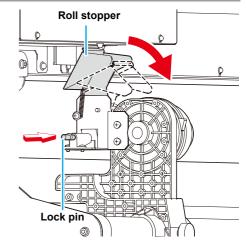


Locking the roll stopper manually

Depending on the roll holder set location, the roll stopper arm may not be able to lock the roll stopper. In this case, follow the steps below to lock the roll stopper.



Pull the roll stopper in the direction shown right.



2

Press the lock pin to hold the roll stopper.

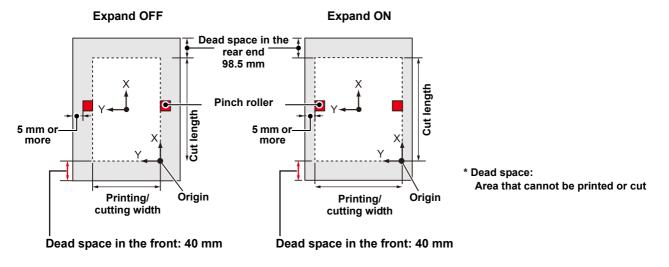
Maximum Print Area/Cut Area

The maximum printed area/cut area varies, depending on the position of the pinch roller(P.2-18 to P.2-21) and the origin position (P.2-33). The white area shown in the following figure represents the maximum print/cut area.

The area other than that is the dead space that cannot be printed/cut.

	CJV30-60	CJV30-100	CJV30-130	CJV30-160
Maximum printing/cut width	610 mm	1,020 mm	1,361 mm	1,610 mm

● Expand the maximum printed/cut area with the Expand function of the Common settings



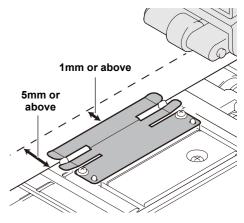


The recommended dead space in the front end is 40 mm or more. (Turn the expand function "OFF" P.5-6) If the dead space in the front end is too small, the media may become loose. This affects print or cut quality.

Notes While Expand Function Is ON



- While the expand function is ON, keep the end of the medium holder from coming in contact with the pinch holder. It will cause the stain on the medium when printing.
- Make a clearance of 1 mm or above between the end of the medium holder and the pinch holder.



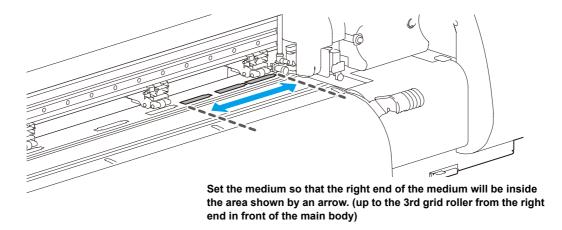
Notes When Using Medium Holder

Setting Position of the Medium

Set the medium so that the right end of the medium will be inside the area shown below.



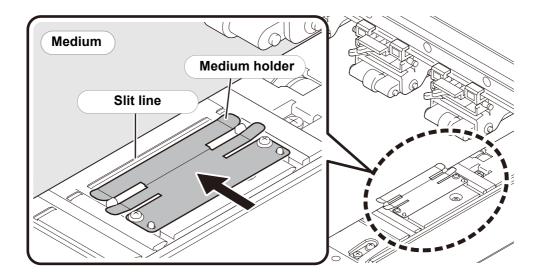




The End of the Medium Should Not Exceed the Slit Line on the Platen



• If the medium is set with its end exceeding the slit line on the platen, the medium may be lifted when it is fed obliquely. This may cause damage to the head.



Setting a Roll Medium

Set a roll medium to the roll media hanger located on the back of this machine.



· Take care not to drop the medium on your foot when setting the medium. It may cause an injury due to the medium.





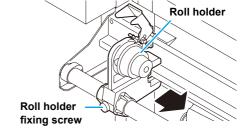
• If the cutter unit is on the platen, press the (HEATER/CUTTER) key to evacuate the cutter unit. (@P.2-49)





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

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





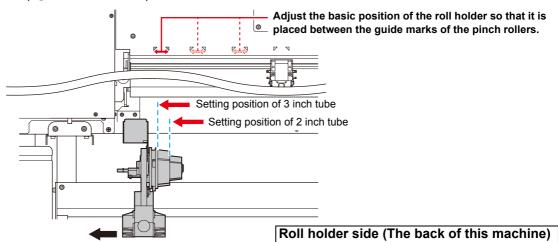
Check that the clamp lever is lowered.





Move the roll holder to the roll setting position.

· Check the medium size and the position to set the medium, referring to the section applicable to your machine (P.2-18 to P.2-21).



- Check that the roll stopper is not caught between the roll stopper arm and this machine. • If the roll stopper arm and the roll stopper are interlocked and they don't move, enable the roll stopper
- function manually. (P.2-22)



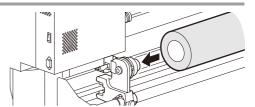
Tighten the roll holder fixing screw.

• Check the Steps 2 to 3 again.



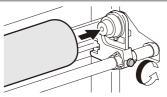
Set the left end of the core of the roll medium on the left roll holder.

• Push the roll medium onto the roll holder until the roll core is all the way seated.





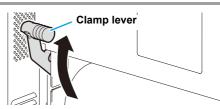
Loosen the screw of the right side roll holder, then insert the holder into the core of the roll medium.





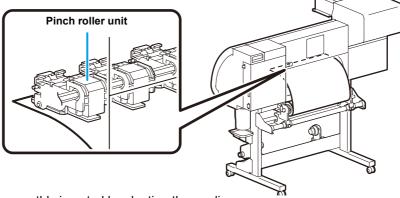
Raise the clamp lever in the rear side of this machine.

• When the setting of the pinch roller pressure is "OFF" (P.3-6, P.4-3), raising the clamp lever will change the setting from "OFF" to "LOW". (Because the medium will be surely held when changing the medium size.)



8

Insert the roll medium in this machine.



- The roll medium can be smoothly inserted by slanting the medium.
- (1) Pull the medium out of the roll to the head of the platen.
- (2) Insert the medium between the platen and the pinch roller units.
 - Pull the medium out of the roll so that the medium can be grasped from the front of the machine.
- (3) Push down the clamp lever from the back of this machine.
 - The medium is held.

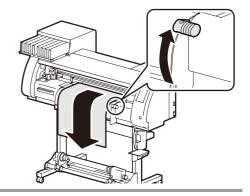


- Set the pinch roller units so that the medium can be held at equally spaced intervals. If the pinch rollers cannot be set at equally spaced intervals, start over from Step 3.
- Ensure there is a dead space of 5 mm or above at each end of the medium.



Pull out the roll medium out.

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

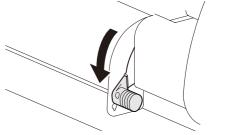






Make the roll medium even, then lower the clamp lever.

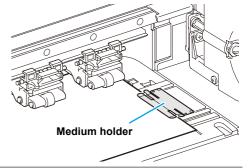
 Pulling several positions of the medium lightly, lower the clamp lever after confirming that the amount of the roll medium pulled out is almost even.





For printing, clip lightly the medium with the medium holder.

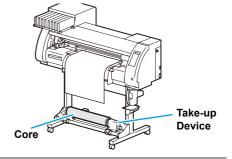
- When using a thick medium, remove the medium holder from the medium before printing.
- When setting the medium holder, refer to P.2-24.
- You do not need to use the medium holder for cutting.





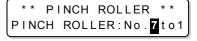
Prepare the take-up device.

• Set an empty core of the roll medium on the take-up device.



13

Press to set the number of the pinch roller at the left end of the medium.



- Set the number of the pinch roller at the left end of the set medium.
- Press to skip the pinch roller pressure setting from Step 14 to Step 17.



Press the **ENTER** key.

Current mode and pinch roller pressure is indicated with [>].

>PRINT	[MMMMMM]
CUT	[HH]





Check the current pinch roller pressure.

- To change the set pinch roller pressure temporarily, follow the steps below.
- (1) Press to select a pinch roller to set.
- (2) Press to set the pressure.



Press the ENTER key.



Press the key to select "ROLL".

MEDIA SELECT ROLL<

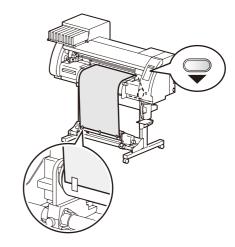
- · Detects the medium width.
- When "Remaining amount of a medium to display" of the maintenance function is "ON" (P.6-34), the screen for entering medium remaining amount is displayed after detecting the medium width. (P.2-29)

18

Secure the medium on the take-up device.

((Z) P.2-29)

- (1) Feed the medium up to the core of the roll medium of the take-up device by pressing the vector key.
- (2) Fix the middle of the medium with adhesive tape.
- (3) In the same manner, fix the left side and right side of the medium.
 - Make sure that there is no slack or wrinkle on the medium by pulling it to the right and left evenly, and then fix it with a piece of tape.





- Once a printing condition or a cutting condition appropriate to the media is registered when setting the type and the tool condition, setting the pinch roller on Step 13 to 15 is not needed.
- When performing the settings for the first time, the values displayed in step 14 display the values configured by the type registration and tool conditions.
- The value set in Steps 13 to 16 will be held until the power is tuned OFF or until the function "Setting for the pinch rollers" (P.3-5 and P.4-2) is changed.
- The value set here will be displayed next time when the medium is set.
- The setting for the pinch roller can be canceled when the medium is set, using the common settings "Setting for the pinch rollers" (P.5-3).

Entering the Medium Remaining Amount

When "Remaining amount of a medium to display" of the maintenance function is "ON" (P.6-34), the screen for entering medium remaining amount is displayed after detecting the medium width.



• The medium remaining amount can be entered only when a medium or a roll is detected in the printer mode.



Display the screen for entering medium remaining amount.

Input of MediaLength MEDIA LENGTH = * * * . * m



2

Press keys to enter the medium remaining amount.

Input of MediaLength MEDIA LENGTH = 50.0m



Press the **ENTER** key.

Take-up Device

Adjusting the switch

The take-up direction of the medium is selectable by using the switch of the take-up device.

Lever in top position (REVERSE):

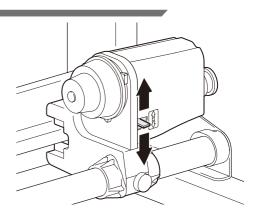
The take-up device winds the medium with the printed side facing in.

Lever in middle position (OFF):

The take-up device does not wind the medium.

Lever in bottom position (FORWARD):

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



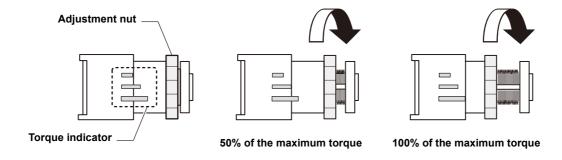
Setting the Torque Limiter

The take-up device is provided with a torque limiter. The take-up torque can be adjusted with the torque limiter. (The torque limiter is set at the maximum value when shipped from the factory.) In the following cases, make the adjustment:

- (1) when the tension is too strong in using thin medium
- (2) when performing combined operation of print & cut

A clockwise turn
 Increases torque (a heavy and thicker medium such as tarpaulin or the like)

• A counterclockwise turn: Decreases torque (for light medium)





- When the torque limiter is adjusted too weak: The medium cannot be taken up firmly.
 - When the torque limiter is adjusted too strong:

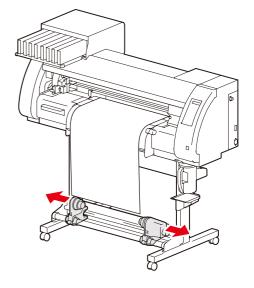
 Slack may occur depending on the medium and have an influence on the image quality.

 In addition, when performing combined operation of print & cut and when making the medium return to the cutting start position, it may not return to the origin of the resister mark after printing is completed.

When Not Using Taking-up Device



 When performing printing or cutting of 700 mm or more without using the taking-up device, evacuate the takingup device to right and left. The quality of the print and cut may become low because of the impact when the front end of the medium touches the taking-up device. (Same as when fixing the optional dry evacuation unit)



Setting a Leaf Medium

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

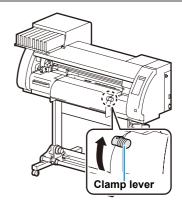


• If the cutter unit is on the platen, press the HEATER/CUTTER key to evacuate the cutter unit. (P.2-49)



Raise the clamp lever.

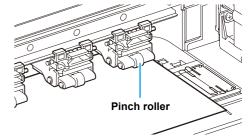
• When the setting of the pinch roller pressure is "OFF" (P.3-6, P.4-3), raising the clamp lever will change the setting from "OFF" to "LOW". (Because the medium will be surely held when changing the medium size.)





Insert the leaf medium between the platen and the pinch rollers.

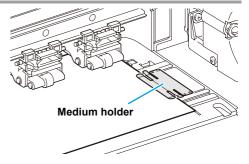
• Check the medium size and the position to set the medium, referring to the section applicable to your machine (P.2-18 to P.2-21).





For printing, clip lightly the medium with the medium holder.

- When using a thick medium, remove the medium holder from the medium before printing.
- When setting the medium holder, refer to P.2-24.
- You do not need to use the medium holder for cutting.



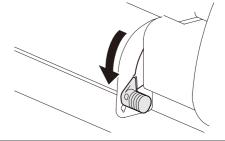


- Set the pinch roller so that the medium is held at equally spaced intervals. If the pinch rollers cannot be set at equally spaced intervals, start over from Step 2.
- Ensure there is a dead space of 5 mm or above at each end of the medium.



Push down the clamp lever.

• Set the medium straight.





Press to set the number of the pinch roller at the left end of the medium.

** PINCH ROLLER **
PINCH ROLLER:No.7to1

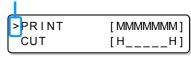
- Set the number of the pinch roller at the left end of the set medium.
- Press to skip the pinch roller pressure setting from Step 6 to Step 9.





Press the **ENTER** key.

Current mode and pinch roller pressure is indicated with [>].





Check the current pinch roller pressure.

- To change the set pinch roller pressure temporarily, follow the steps below.
- (1) Press to select a pinch roller to set.
- (2) Press to set the pressure.



Press the ENTER key.



Press the key to select "LEAF".

MEDIA SELECT ROLL< >LEAF



The medium detection is started.

DETECTING MEDIA NOW PLEASE WAIT

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



- Once a printing condition or a cutting condition appropriate to the media is registered when setting the type and the tool condition, setting the pinch roller on Step 5 to 7 is not needed.
- When performing the settings for the first time, the values displayed in step 6 display the values configured by the type registration and tool conditions.
- The value set in Steps 5 to 8 will be held until the power is turned OFF or until the function "Setting for the pinch rollers" (P.3-5 and P.4-2) is changed.
- The value set here will be displayed next time when the medium is set.
- The setting for the pinch roller can be canceled when the medium is set, using the common settings "Setting for the pinch rollers" ((2) P.5-3).

When Changing the Origin

The position of the print origin can be changed.

Move the print origin to the intended position and determine the origin position.



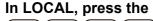
- When changing the origin position in the printer unit, use the [ORIGIN] seal put on the printer unit as a reference.
- When changing the origin position in the cutter unit, use the tool holder (pen point) of the cutter unit as a reference.





- To print with the cross direction (Y direction) aligned with the previous printing position while printing & cutting the data with the register mark, do not change the origin.
- After cutting the data with the register mark (P.4-5), the position in the cross direction (Y direction) of the tool holder (pen point) is on the corner line of the TP1 register mark. If the origin is set with this position, the succeeding printing starts from this position, and may be misaligned with the previous printing.





▲ ▼ ◆ ▶ keys.

ORIGIN SET UP

· LOCAL changes to the origin setting mode.

2

Pressing the to set origin to the intended position.

• Select the carriage and medium, moving the point with the

ORIGIN SET UP

0.0

0.0

Origin
(Length) (Width)

3

After determining the origin, press the ENTER key.

The origin is changed.

ORIGIN SET UP
** ORIGIN **

Reference for Setting Position of the Origin

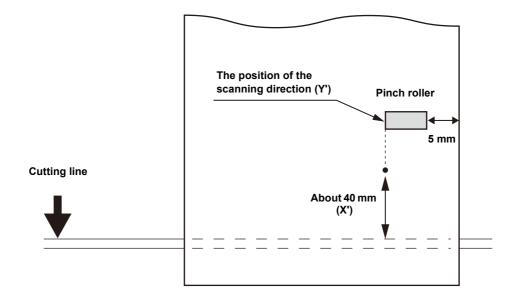
The print origin in the depth direction (X') is positioned at about 40 mm rearward from the cutting line.

The scanning direction (Y') is positioned at the left end of the first pinch roller (the right end pinch roller seen from the front of the main body).

The value in the scanning direction (Y') can be changed using "Margin" (P.5-8) in Function mode. This can be changed by using the jog key.



• Put a 5mm or more space between the right edge of the first pinch roller and the right of the media.







Test Printing

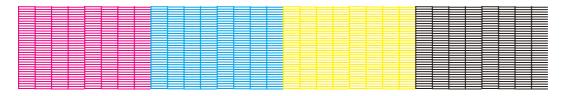
Print a test pattern to check that there are no discharging defects such as nozzle clogging (slight touching of ink or nozzle missing).

About test patterns

This machine provides you two test patterns.

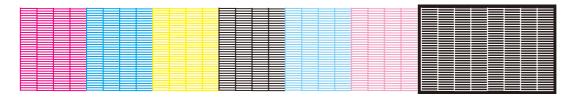
Normal test pattern (when using ink other than white ink)

When you use ink that you can check by printing a test pattern on a white media, print this test pattern.



Test pattern for checking white ink

When you use a white media and wish to check discharging status of white ink, print this test pattern.



Note on test printing



- When using a leaf medium, set one that is larger than an A4-size medium in the longitudinal direction.
- When using a roll medium, rewind the medium by hand before printing so that it is not loose. When the roll medium has not been rewound tightly, it may cause image quality to deteriorate.
- When detecting the medium and the mode is in cut mode, if you perform test printing as it is, the following screen will be displayed by pressing the TEST PRINT/TEST CUT key in Step 2. In this case, press the ENTER key to switch the setting of pinch roller pressure to the print mode and then perform the test printing.
- If the <u>END</u> key is pressed, switching operation will not be performed.

! PR PRESSURE:CUT ! SWITCH :ent

Perform test printing with the normal test pattern

Check before • If a medium has been set 😭 P.2-15		If the origin position has been set	
test printing.	• If the head gap has been adjusted P.2-15		



Press the $\begin{tabular}{ll} MODE CHANGE \end{tabular}$ key in LOCAL to select the printing mode.

<LOCAL . 1> [#01] WIDTH: * * * *mm

2

Press the TEST PRINT/TEST CUT key.

TEST PRINT (FEED DIR.) <ENT>

- Press to change the test pattern orientation. The orientation changed here returns to the orientation set in P.3-34 after the test printing has been complete.
- When performing test printing after having changed the orientation from "SCAN DIR." to "FEED DIR.", the line is fed to the position of the first test printing.
- For the details on the orientation of test printing, see P.3-34.

3

Press the ENTER key.

· Test printing starts.

ress the <u>ENTER</u> Rey.

• When printing has ended, the screen returns to LOCAL.

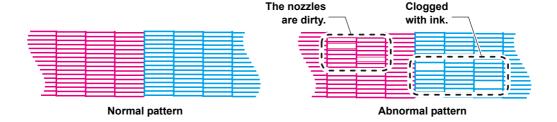
** TEST PRINT **

<LOCAL.1> [#01] WIDTH:***mm



Check the result of the test printing.

- When the result is normal, end the operation.
- When the result is abnormal, perform head cleaning. (P.2-40)



Perform test printing with the test pattern for checking white ink

Check before test printing.

• If a medium has been set P.2-15
• If the origin position has been set
• If the head gap has been adjusted P.2-15



Press the MODE CHANGE key in LOCAL to select the printing mode.





2

Press the TEST PRINT/TEST CUT key.

TEST PRINT (FEED DIR.) <ENT>

3

Press the key to select the "(WHITE CHK.)".

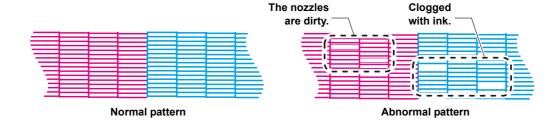
TEST PRINT (WHITE CHK.) <ENT>



Press the **ENTER** key.

** TEST PRINT ** 01:00

- Print a test pattern in the following orders.
- In the second line of the screen, remaining time from the start of printing is displayed.
- (1) Print the pattern daubed with black.
- (2) Dry the pattern for thirty seconds.
- (3) Return the media automatically and print the test pattern.



Check warning of white nozzle status (Only when using SS21 white ink)

As SS21 white ink is easier to cause nozzle clogging compared to other ink, you must keep the nozzle status normal even when you do not discharge it.

In order to keep the nozzle status normal, this machine displays the warning message in the right once a fortnight*1.

Check the "W"nozlle condition. <ENT>



- The warning message will be displayed after the media detection is performed.
- When the warning message is displayed, perform the following:



When the warning message is displayed, press the ENTER key.

TEST PRINT (WHITE CHK.) <ENT>

• The machine enters into the waiting for test printing status.



Press the key to select the type of the test printing.



Press the ENTER key.

· Print the test pattern.



- After the warning message is displayed, when you perform "Perform test printing with the test pattern for checking white ink"(the previous page) or "White Ink Maintenance Function" (P.6-36), the warning will be released.
- When the warning message is displayed, you can cancel it by pressing the **END** key. However, after the next media detection is performed, the warning message will be displayed again.
- The warning message is displayed only when performing media detection in the printing mode.

^{*1.} A fortnight after clearance of the warning message or maintenance of the white ink.

Head Cleaning

About head cleaning

There are two types of head cleaning.

• Depending on the test printing result, perform to solve nozzle clogging.

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

NORMAL: When any line is missing

SOFT: When only head wiping is needed (when lines are bent)

HARD: When poor image quality cannot be improved even by NORMAL or SOFT cleaning

Perform when using silver ink or white ink of ES3 ink.
 (available for the firmware Ver.2.40 and later)

Pigments of silver ink and white ink of ES3 ink have nature of settling down when they are left for a long time without being used, and it may cause color heterogeneity.

By performing "spot" of head cleaning to discharge ink settling down, you can improve color heterogeneity (spot color maintenance function).

spot: By discharging special ink whose pigment remains settling down in the head, the damper or the tube of this machine, improve color heterogeneity.



 Spot color maintenance is selectable only when silver ink or white ink of ES3 ink has been filled for the firmware Ver.2.40 and later.

Be sure to perform after head cleaning

◆ After having performed head cleaning, configure the settings for media correction (♥ P.3-8) and dot position correction (♥ P.3-10).

Perform head cleaning depending on the test printing result

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

1

Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL.1> [#01] WIDTH:****mm



Press the CLEANING/FEED key.

CLEANING
TYPE : NORMAL

3

Press to select a type of cleaning.

CLEANING

TYPE : HARD

NORMAL: When any line is missing

SOFT: When only head wiping is needed (when lines are bent)

HARD : When poor image quality cannot be improved even by NORMAL or SOFT cleaning

4

Press the ENTER key.

CLEANING ACTIVE 00:00

 The remaining cleaning time is indicated in the lower part of the display.

· When cleaning has ended, the screen returns to LOCAL.



Perform test printing again to check the result.

• Repeat the cleaning and test printing until the result becomes normal.



When image quality is not improved even though head cleaning is repeated:

- Clean the wiper and ink cap. (P.6-6)
- Wash the nozzle head. (P.6-11)
- See "When Nozzle Clogging Cannot Be Solved" to improve poor image quality. (P.6-18)

Perform spot color maintenance

Perform this to solve color heterogeneity due to settling down of pigment when using silver ink or white ink of ES3 ink

Spot color maintenance is selectable only when silver ink or white ink of ES3 ink has been filled for the firmware Ver.2.40 and later.

1

Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL.1> [#01]
 WIDTH:***mm

2

Press the **CLEANING/FEED** key.

CLEANING
TYPE : NORMAL

3

Press to select [spot].

CLEANING TYPE : spot 4

Press the **ENTER** key.

SPOT COLOR SELECT COLOR :SILVER

5

By pressing , select the color on which you wish to perform maintenance.

SPOT COLOR SELECT COLOR : WHITE

Silver : Perform maintenance only for silver ink.
White : Perform maintenance only for white ink.

Silver & white : Perform maintenance for silver ink and white ink at the same time.





Press the **ENTER** key.

REMOVE: INK CARTRIDGE



Remove the ink cartridge of the selected color.

- The lamp located above the cartridge lights to inform you of the ink cartridge to be removed.
- After the ink cartridge is removed, ink discharging starts.

* DISCHARGE * 03:00

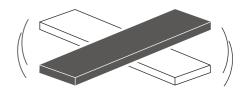


• When discharging is completed, the screen on the right is displayed.





Shake the removed cartridge fifth or sixth times as the figure.



9

Press the ENTER key.

SET:INK CARTRIDGE



Set the cartridge.

- After the cartridge is set, filling starts.
- When filling is completed, the screen returns to LOCAL.

FILLING UP 03:00



<LOCAL.1>

[#01]

About warning message display of performing spot color maintenance

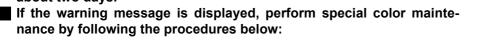
When silver ink or white ink of ES3 ink is used and when ink has been left for two days and more without being used, to prevent color heterogeneity due to settling down of pigment, the message on the right is displayed on the screen.

PERFORM SPOT COLOR MAINTENANCE? <ENT>

The warning message is displayed when you turn on the power supply after two days has passed from the silver ink had been used last time.



Silver ink and white ink change their colors if they have been left for about two days.





If the warning message is displayed, press the ENTER key.

• If you do not wish to perform spot color maintenance, press the <a>END key to cancel the operation.

2

Press the ENTER key.

REMOVE: INK CARTRIDGE
_S_W___

3

Remove the ink cartridge of the displayed color on the screen.

- The lamp located above the cartridge lights to inform you of the ink cartridge to be removed.
- After the ink cartridge is removed, ink discharging starts.

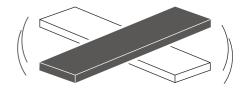
* DISCHARGE * 03:00

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





Shake the removed cartridge fifth or sixth times as the figure.



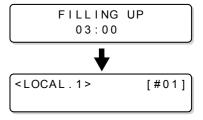
5

Press the **ENTER** key.



Set the cartridge.

- After the cartridge is set, filling starts.
- When filling is completed, the screen returns to LOCAL.





Test Cutting

Test cutting is performed to check whether the settings for tool conditions are appropriate. In test cutting, two squares shown right are cut.





- When the cutter cuts badly because of the wear of the blade, the value of PRESSURE can be increased temporarily to deal with the problem.
 - (This should be done only temporarily. It is recommended that the blade of the cutter be replaced with a new one to maintain cutting quality.)
- Test cutting performs the operation at the current cutter position. (When there is not a cutter unit on the medium, test cutting is performed at the drawing origin.)
- When cutting the data after test cutting, the origin must be moved in advance. If you cut without moving the origin, there is a possibility of overlapping on the test cutting.
- When detecting the medium and the mode is in print mode, if you perform test cutting as it is, the following screen will be displayed by pressing the <u>TEST PRINT/TEST CUT</u> key in Step 2. In this case, press the <u>ENTER</u> key to switch the setting of pinch roller pressure to the cut mode and then perform the test cutting.
- If the <u>END</u> key is pressed, switching operation will not be performed.

! PR PRESSURE:PRINT! SWITCH :ent



• When the settings for tool conditions are appropriate, the result of the test cutting is as follows: The two squares have been cut out completely.

The backing paper has not been cut.

The corners of the squares are not round.

The corners of the squares are not turned up.

1

Press the MODE CHANGE key in LOCAL to select the cutting mode.

<LOCAL.G> [#01]
CUT1 (30/ 60/ 0.30)

2

Press the (TEST PRINT/TEST CUT) key.

TEST CUT <ENT>

3

Press the **ENTER** key.

• Test cutting is performed.

** TEST CUT **

According to the result of the test cutting, configure the settings for the cutting condition again.

Symptom	Cause	Countermeasure
Some parts have not been	The cutting speed is too high, the blade	Reduce the speed. (P.2-4)
cut.	edge is lifted.	Tighten the knob of the tool holder further. (P.2-12)
The backing paper of the	The cutting pressure is too high.	Reduce the pressure. (P.2-4)
medium is cut.	The length of the blade edge drawn out is too long.	Adjust the length of the blade edge drawn out. (P.2-11)
The corners of the square are round.	The OFFSET value is not appropriate.	Adjust the OFFSET value according to the state of the cutter you use. (P.2-4)
The corners of the square are turned up.	The length of the blade edge drawn out is too long.	Adjust the length of the blade edge drawn out. (P.2-11)
	The cutting pressure is high. [ADJ-PRS OFFSET] is large. Two or more of the above apply.	Adjust the cutting pressure. (P.2-4)
		Adjust the ADJ-PRS OFFSETvalue. ((P.4-37)

Preparing for the Heaters

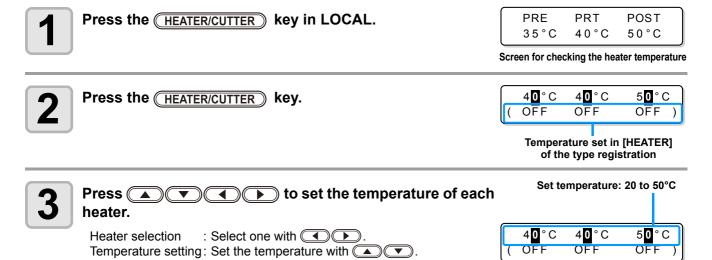
Changing the Temperature Settings for the Heaters

The temperature settings for the heaters can be changed and stored in P.3-12 "Changing the Temperature Settings for the Heaters".

Described here is how to change the already set temperature.

Set the heater temperature according to the characteristics of the media you use.

- The temperature of the heaters has been set to "OFF" as default.
- · Appropriate temperature adjustment can be made because the temperature can be adjusted even during printing.
- It may take several minutes to tens of minutes for the set temperature to be reached, depending on the ambient temperature.





The heating of the heater stops.

• When the heater temperature reaches the set temperature, the [HEAT] lamp goes off and the [CONSTANT] lamp lights in green.



Press the **ENTER** key to stop heating.

• The heater starts to get hot. (The [HEAT] lamp lights in orange.)

• The screen returns to Local.



- You can register the temperature of the heaters beforehand according to the types of media you use.
 P.3-2 "Registering All Printing Conditions Together (Type Registration)"
- The temperature set by the operation above is not reflected in the set values of the heaters whose types have been registered. The currently set temperature is not changed until the power is turned OFF or a new temperature is set on the following conditions:
- (1) Change the type of the heater.
- (2) Change the heater temperature according to P.3-12 "Changing the Temperature Settings for the Heaters".
- (3) Specify the heater temperature from the PC.
- When the RIP you use has the function of controlling the heater temperature, the temperature can be controlled on the RIP side. (For how to control the temperature, see the instruction manual for the RIP you use.)



 Use this machine at a temperature between 20 to 35°C. The temperature may not reach the set value, depending on the ambient temperature.

Basic Operations

Reference for Temperature Setting

Ink type	ES3 ink			SS21 ink
Media type	Glossy chloroethylene	All media		
Pre-heater setting	40°C	40°C	40°C	35°C
Print heater setting	40°C	40°C	40°C	35°C
Post-heater setting	50°C	50°C	50°C	50°C



• Adjust the temperature appropriately according the state of the medium you use.

P

Checking the Heater Temperature



Press HEATER/CUTTER on the operation panel.

• The current heater temperature is displayed.

PRE PRT POST 35°C 40°C 50°C



Press END to end the checking.

• The screen returns to LOCAL.



• When switching the mode to the print mode after cutting data in the cut mode and pressing the HEATER/CUTTER key, "OFF" is displayed on each heater temperature. When pressing the HEATER/CUTTER key again, the temperature will go up to the set temperature.

Printing Data

Starting a Printing Operation

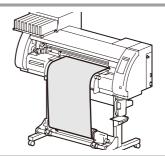


- When using a roll medium, rewind the medium by hand before printing so that it is not loose. When the roll medium has not been rewound tightly, it may cause the image quality to deteriorate.
- When switching the mode to the print mode after cutting data in the cut mode, "OFF" is displayed on each heater temperature. Press the (HEATER/CUTTER) key twice, and then raise the heater temperature up to the set temperature and perform printing.





Set a medium. (P.2-15)





Check the heater temperature.

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





Press the REMOTE key in LOCAL.

 The screen changes to REMOTE, and data can be received from the PC. TEMPERATURE CONTROL!
PLEASE WAIT



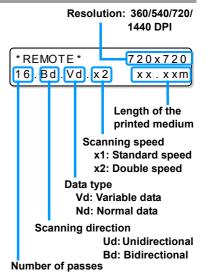
Transmit data to be printed from the PC.

- The pressure is switched automatically in concert with the pinch roller pressure set in P. 3-6 "Setting for the Pinch Rollers".
- The ACTIVE lamp blinks and the printing conditions are displayed.
- For the method of data transmission, see the instruction manual for the output software.



Start printing.

• The printing speed may change, depending on the width of the set medium or the position of the print origin even when the same data is printed. This is because of a difference in resolution.



Stopping a Printing Operation

Perform the following operation when stopping a printing operation halfway.



Press the **REMOTE** key during printing.

<LOCAL.1> [#01]
 WIDTH:****mm

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



Deleting Received Data (Data Clear)

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



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

DATA CLEAR

<ENT>

2

Press the **ENTER** key.

** DATA CLEAR **

- The ACTIVE lamp goes off.
- The received data is deleted, and the present mode returns to LOCAL.

Starting a Cutting Operation

Also when printing data with a pen, follow the procedure below.



When the machine is in a REMOTE state, the PC transmits data to be cut.

- The pressure is switched automatically in concert with the pinch roller pressure set in P. 4-3 "Setting for the Pinch Rollers".
- When the machine has received the data, the data starts the cutting automatically.
- When the cutting has been completed, the display appears as the one shown right.



Stopping Cutting in a While

If you stop cutting or pen plotting in a while, perform the following operation.



Press the **REMOTE** key while the machine is operating.

- The operation of the machine stops in a while and it enters a local state.
- The time it takes for the operation of the machine to stop is different, depending on the data being processed.

When a circle is processed: After the circle has been processed, the operation stops.

Other line segments

: After they have been processed by the unit of vector, the operation stops.

Restarting a Cutting Operation



Press the **REMOTE** key to restart a cutting operation.

• The machine enters a REMOTE state, and a cutting operation is restarted.

Functions That Can Be Set after a Cutting Operation Has Been Stopped

Changing the tool condition

(28" "About Tool Conditions during Cutting" of P.2-3

Stopping a cutting operation of the received data

⟨⟨⟨¬⟩ "Stopping a Cutting Operation (Data Clear)" of P.2-49



Basic Operations

Stopping a Cutting Operation (Data Clear)

If you want to stop a cutting operation of the received data, clear the data.

- When clearing the data, the process will not restart even if you press the (REMOTE) key.
- · After clearing the data, switching to the remote mode and receiving another data, new data will be cut.



Press the DATA CLEAR key in LOCAL.

DATA CLEAR <ENT>

DATA CLEAR **





Press the ENTER key.

- The ACTIVE lamp goes out.
- The reception buffer is cleared, and the present mode returns to LOCAL.



- Do not perform the data clearance during the data transmitting.
- · Even after performing the data clearance, the received data is stored in the reception buffer. You can specify the data performed data clearance and perform Multiple Cuttings. (P. 4-46)

Removing the Cutter Unit Temporarily

When cutting or printing-with-a-pen job is finished, the cutter unit is on the platen.

To check the result of cutting (printing-with-a-pen) or to set a new medium, follow the steps below to remove the cutter unit from the platen temporarily.



Press the (HEATER/CUTTER) key in LOCAL.

CUT HEAD RETRACT <ENT>

Press the ENTER key.

• The cutter unit moves from on the platen to the left end of the machine.

PLEASE WAIT

Cutting a Medium

There are two methods of cutting medium: automatic and manual.



• When cutting a medium, select a cutting method according to the size of the medium. (P.5-4 "Setting a Cut Method")



- When a medium is cut, be careful that the printed side does not touch the floor or the printed side of other already cut media.
- When you use a take-up device, roll up the cut medium by using the switch of the take-up device.
- The set pinch roller (P.2-17) detects the size of the medium and then determines the cutting method using it as a reference. If both ends of the medium are away from the pinch roller, note that the medium may remain uncut.

Automatic Cutting

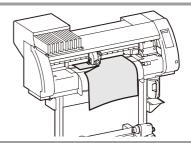
After printing has been completed, the medium is cut off automatically.



- In order to activate the automatic cutting function, the setting for it needs to be configured. (The automatic cutting function is set to "OFF" as default.)
- The automatic cutting function needs to be set for printer function (P.3-28) and cut function (P.4-22) separately.
- When the automatic cutting function is "OFF", perform the operation in "Manual Cutting" described later to cut a medium.



When printing has been completed, the medium is cut automatically.



Manual Cutting

By using the keys on the operation panel, you can cut the medium at any position.



Press the key in LOCAL.

ORIGIN SET UP

- LOCAL changes to the origin setting mode.
- By pressing , feed the medium to the cutting position.

2

Press the FUNCTION key.

MEDIA CUT

<ENT>

3

Press the ENTER kev.

MEDIA CUTTING PLEASE WAIT

- The medium is cut.
- When the cutting has been completed, the current mode returns to LOCAL.

Chapter 3

Extended Functions - Printer -



This chapter

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

About User Types	3-2
Registering All Printing Conditions Together	•
(Type Registration)	3-2
How to Register User Types	3-2
Setting the Pinch Rollers	3-5
Recommended Setting for the Pinch	
Roller Pressure	3-5
Quantity of Pinch Rollers	. 3-5
Setting for the Pinch Rollers	3-6
Setting Media Correction	3-8
Setting Media Correction	. 3-8
If the Positions of Dots Shift	
Changing the Set Values of the Heaters. 3	3-12
Changing the Temperature Settings for	
the Heaters	3-12
Adjustment to an Appropriate	
Temperature	3-14
When the Heater Temperature Does	
Not Reach the Preset One	3-15

.	
Setting the Printing Method	3-16
Setting of Printing Quality	.3-16
Setting a Scanning Direction	
Setting Logical Seek	
Setting for White-laying Printing	
Setting Drying Time	3-21
Setting Priority Order	3-22
Setting Automatic Cleaning	
Setting Cleaning during Printing	
Other Settings	
Copying the Set Contents	
Initializing the Settings	3-30
Machine Settings	3-31
Setting the DEODORIZE FAN	.3-31
Setting the DRYNESS FEED	
Stamp Setting	.3-33
Setting the Test Print Arrange	
Change the operation condition of the	
ambient temperature	.3-35
Extension of Ink Expiry Month	
Switch Setting of Ink Supply Path	

About User Types

Registering All Printing Conditions Together (Type Registration)

This machine allows you to register printing conditions in each of the user types (1 to 4).

Register a printing condition according to each media that you use in a user type beforehand. When you replace one medium to another, you can set the optimum printing condition only by changing one user type to another.

Example of Type Registration

Type 1	For Tarpaulin1	Type 3	For FF (Flexible Face)
Type 2	For Tarpaulin2	Type 4	Polyvinyl chloride mat



How to Register User Types

Press the <u>MODE CHANGE</u> key in LOCAL to select the printing mode.

<LOCAL.1> [#01] WIDTH:***mm

Press the FUNCTION key.

FUNCTION SETUP <ENT>

Press the ENTER key.

SETUP SELECT : TYPE.1

4

Press to select one of the types (1 to 4) and press the key.



Select and set each item of "List of Functions to Be Set".

• For details on how to set each function, see the reference page contained in "List of Functions to Be Set in User Types".

List of Functions to Be Set in User Types

This section describes the overview of each function to be set and set values that can be registered in user types. The underlined has been set as default.

Function Name		Set Value	Overview		
PINCH			HIGH/MIDDLE/LOW	Used to set the pinch roller pressure.	
ROLLER	INNER		HIGH/MIDDLE/LOW/OFF		
(Æ P.3-5)		2 to 7	Used to set the number of the pinch roller at the left end of the medium.		
MEDIA COMP	P. ((@P P.3-8)		-255 to <u>0</u> to 255	Used to print a pattern for correcting a media- feeding rate and correct it.	
DROP. POS (CORRECT (頌	[⊃] P.3-10)	-40.0 to <u>0</u> to 40.0	Used to adjust the dot position in go and return printing.	
HEATER (Æ P.3-12)	SET TEMP.	PRE HEATER	OFF/ 20 to 50°C (OFF/ 68 to 122°F)	Used to set heater conditions.	
		PRINT HEATER	OFF/20 to 50°C (OFF/68 to 122°F)		
		POST HEATER	OFF/20 to 50°C (OFF/68 to 122°F)		
	SET TIME	STANDBY	(<u>NONE</u> /0 to 90 min by the unit of 10 min)		
		OFF TIME	(<u>NONE</u> /0 to 90 min by the unit of 10 min)		
PRINT	DRAFT QUALITY		STD/ FAST / FINE	Used to set printing quality and a printing	
MODE	FINE QUALI	TY	STD/ FAST / FINE	direction.	
(Æ P.3-16)	SCAN DIRECTION		Bi-D / <u>Uni-D</u>		
	LOGICAL SEEK		<u>ON</u> /OFF		
	WHITE LAY	PRINT	OFF/ON (LEVEL1 to 3)		
INK LAYER (æ P.3-27)		<u>1</u> to 9	Used to set the number of layers to which ink is applied.	
DRYING	SCAN		0.0 to 19.9 sec	Used to set the time for ink to dry.	
TIME ((P.3-21)	PRINT END		<u>0</u> to 999 sec		
AUTO CUT (C	æ P.3-27)		ON/ <u>OFF</u>	Used to cut the media automatically after printing.	
PRE-FEED(ੴ P.3-27)		ON/ <u>OFF</u>	Used to feed a medium back and forth before printing. When a sticky medium is used, select ON.		
COLOR PATTERN ((2) P.3-27)		ON/ <u>OFF</u>	Used to print a color pattern on the right edge of a medium.		
REFRESH (@P P.3-27)		LEVEL <u>0 (Long interval for refreshing)</u> to 3 (Short interval for refreshing)	Used to refresh the print heads during printing.		
VACUUM (@P.3-27)		OFF / <u>STANDARD</u> / WEAK / LittleWEAK / STRONG	Used to set the ability to adsorb a medium.		
FEED SPEED LEVEL (@P.3-27)		10 to 100 to 200% 10%6 mm/sec 100%60 mm/sec 200%120 mm/sec	Used to change the media-feeding speed during printing, etc.		

Function Name		Set Value	Overview	
PRIORITY (@	P.3-22)		INDIVIDUALLY / <u>ALL HOST</u> / ALL PANEL	Used to set the priority order of settings (by host/panel). Used to set the following items individually when the individual setting is selected. • Media correction • Heater • Printing method • Ink-laying printing • Drying time • Automatic Cutting • Pre-feed • Color pattern • Refreshing • VACUUM • Feeding speed level
AUTO	ON	INTERVAL	10 to <u>1,000</u> to 10,000 mm	Used to set the automatic cleaning of the
CLEANING (Capp P.3-24)		TYPE	NORMAL / SOFT / HARD	printing heads performed for each printing operation.
(48 1.5-24)	<u>OFF</u>			operation.
PRINT.	ON	INTERVAL	10 to <u>1,000</u> to 10,000 mm	Used to set the automatic cleaning of the
CLEANING		TYPE	NORMAL / SOFT / HARD	printing heads performed during printing.
(ﷺ P.3-26)	OFF	•		1



Setting the Pinch Rollers

Set the pinch roller pressure and the pinch roller numbers according to the medium to be used.

Settings	Set Value	Overview	
HIGH		Sat the procesure for the pinch rollers at both ands of the modium according to the	
ENDS	MIDDLE	Set the pressure for the pinch rollers at both ends of the medium according to the medium to be used.	
	LOW	modium to be deed.	
	HIGH		
INNER	MIDDLE	Set the pressure for the pinch rollers other than those at both ends of the medium	
ININEIX	LOW	according to usage.	
	OFF		
No.	2 to 7 *1	Set the number of the leftmost pinch roller according to the size of the medium to be used.	

^{*1.} The number of pinch rollers varies according to the machine type.



Recommended Setting for the Pinch Roller Pressure

The table below shows the recommended pinch roller pressure for printing:

Set pressure	Usage
ENDS : Middle INNER: Middle	For standard operation
ENDS : High INNER: Low	Use this combination of settings when you want to minimize the traces of pinch rollers on the medium. • This setting may cause misalignment of the medium depending on the medium type, feeding rate, or medium width.



- When you use the machine under conditions other than the above, the medium may slip out of place during printing.
- Adjust the pinch roller pressure according to the situation.

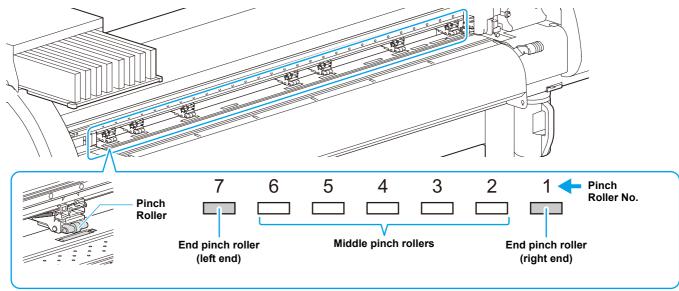
Quantity of Pinch Rollers

The following table shows the quantity of the pinch rollers for each model. Check the pinch rollers on your machine for quantity.

Model	Quantity
CJV30-160	7 pieces
CJV30-130	6 pieces
CJV30-100	4 pieces
CJV30-60	3 pieces

Setting for the Pinch Rollers

This section describes the setting procedure for CJV30-160. For CJV30-130/100/60, the number of pinch rollers set in Step 10 varies.



• The figure above shows CJV30-160.



Press the FUNCTION key.

FUNCTION SETUP <ENT>

Press the ENTER key.

SETUP SELECT : TYPE . 1

Press to select one of the types (1 to 4) and press the ENTER key.

Press the ENTER key.

ENDS : HIGH [H____H]
INNER: OFF No.7-1

Press to set the pressure for the pinch rollers at both ends of the medium.

ENDS : MID. [H____H]

• Set value: HIGH/MID./LOW

Press to move the cursor to the middle pinch roller setting.

ENDS : MID. [H____H] INNER: OFF No.7-1

ENDS : MID. INNER: MID.

Press to set the pressure for the middle pinch rollers.	ENDS : MID. INNER: MID.	[HH] No . 7 - 1
• Set value: HIGH/MID./LOW/OFF		
Press to move the cursor to the pinch roller number setting.	ENDS : MID. INNER: MID.	[HH] No . 7 - 1
Press to set the number of the pinch roller at the left end of the medium. • Set value: 2 to 7	ENDS : MID. INNER: MID.	[HH] No . <mark>4</mark> - 1
Press the ENTER key.		
Press the END key several times to end the setting.		
• Pinch roller pressure set here is reflected to the medium in the forwhere when print/cut remotely	ollowing conditio	
 When detecting the medium next If you wish to reflect the set value to the medium currently set, detect clamp lever up and down. When printing in the local mode such as the dot position correction or steps from Step 1 and set the pinch roller pressure again. Advanced Setting for the Middle Pinch Rollers	_	
 When detecting the medium next If you wish to reflect the set value to the medium currently set, detect clamp lever up and down. When printing in the local mode such as the dot position correction or steps from Step 1 and set the pinch roller pressure again. 	medium correctio	
 When detecting the medium next If you wish to reflect the set value to the medium currently set, detect clamp lever up and down. When printing in the local mode such as the dot position correction or steps from Step 1 and set the pinch roller pressure again. Advanced Setting for the Middle Pinch Rollers	medium correction	n, perform the
 When detecting the medium next If you wish to reflect the set value to the medium currently set, detect clamp lever up and down. When printing in the local mode such as the dot position correction or steps from Step 1 and set the pinch roller pressure again. Advanced Setting for the Middle Pinch Rollers Advanced setting is available for the middle pinch rollers according to the median	medium correction	n, perform the
 When detecting the medium next If you wish to reflect the set value to the medium currently set, detect clamp lever up and down. When printing in the local mode such as the dot position correction or steps from Step 1 and set the pinch roller pressure again. Advanced Setting for the Middle Pinch Rollers Advanced setting is available for the middle pinch rollers according to the median Perform the operations in Steps 1 to 10 in P.3-6 "Setting for the median of the pinch rollers according to the median of the pinch rollers according to the median of the pinch rollers."	um to be used. The Pinch Ro	ollers".
When detecting the medium next If you wish to reflect the set value to the medium currently set, detect clamp lever up and down. When printing in the local mode such as the dot position correction or steps from Step 1 and set the pinch roller pressure again. Advanced Setting for the Middle Pinch Rollers Advanced setting is available for the middle pinch rollers according to the medical Perform the operations in Steps 1 to 10 in P.3-6 "Setting for the Function key. Press the Function key. Press the Function key.	um to be used. or the Pinch Ro ENDS : MID. INNER: MID.	ollers". [HH] [HH]
When detecting the medium next If you wish to reflect the set value to the medium currently set, detect clamp lever up and down. When printing in the local mode such as the dot position correction or steps from Step 1 and set the pinch roller pressure again. Advanced Setting for the Middle Pinch Rollers Advanced setting is available for the middle pinch rollers according to the medical Perform the operations in Steps 1 to 10 in P.3-6 "Setting for the set of the set	um to be used. or the Pinch Ro ENDS : MID. INNER: MID.	ollers". [HH] [HH]

Setting Media Correction

In the following cases, be sure to set medium correction and correct the amount of the medium feeding.

- when replacing the kind of the medium (P.2-15)
- when changing the heater temperature (P.2-44)
- when changing the pinch roller pressure in the pinch roller setting (P.3-6)

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



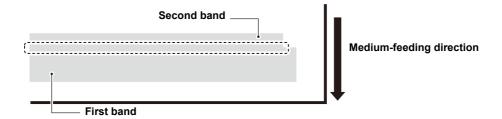
- When you have changed the temperature of the heaters, make sure that the [CONSTANT] lamp lights up and that the preset temperature is reached, and then start the correction.
- When printing with a take-up device, set the medium first and then perform media correction.

Setting Media Correction

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



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





- When detecting the medium and when the mode is in cut mode, if you correct the medium as it is, the
 following screen will be displayed by pressing the <u>ENTER</u> key in Step 7. In this case, press the
 <u>ENTER</u> key to switch the setting of pinch roller pressure to the print mode and then print the
 correction pattern.
- If the <u>END</u> key is pressed, switching operation will not be performed.

! PR PRESSURE:CUT ! SWITCH :ent



Set a medium. (**P.2-15**)

Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL . 1> [#01] WIDTH: * * * *mm

3

Press the **FUNCTION** key.

FUNCTION SETUP <ENT>

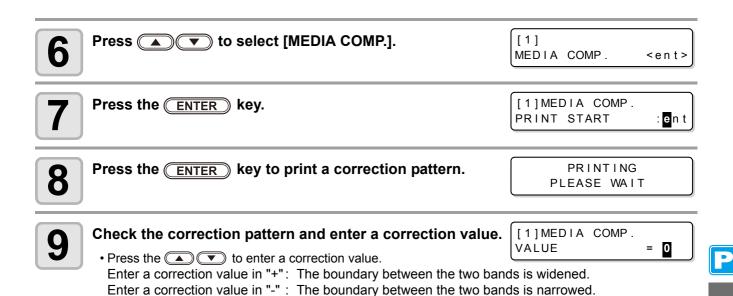
4

Press the **ENTER** key.

SETUP SELECT : TYPE . 1



Press to select one of the types (1 to 4) and press the ENTER key.



• When you change the correction value by "10", the width of the boundary changes by about 0.1 mm.

Press the Print a c

Press the ENTER key twice.

• Print a correction pattern again and check it.

 When media correction is needed, perform the operation in Step 9 to make correction.

• Press the END key several times to end correction.

[1]MEDIA COMP. PRINT START :@nt

Correcting Media-feeding during Printing

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

1

Press the (FUNCTION) key in the remote mode.

FEED COMPENSATION. 0

2

Press the ENTER key.

FEED COMPENSATION.
0 > 1

3

Press to enter a corrected feeding rate.

- Corrected feeding rate: -500 to 500
- The value entered here is reflected in the corrected feeding rate soon.

4

Press the **ENTER** key.

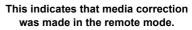
• When you press the **END** key instead of the **ENTER** key, the value entered here will be invalid.

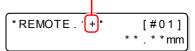
FEED COMPENSATION. SAVE :ent

5

Press the ENTER key.

- The changed value is registered.
- When you press the END key instead of the ENTER key, the value entered here will be valid temporarily. (When you perform media detection again or turn the power OFF, the correction value is cleared.)





If the Positions of Dots Shift...

When the condition for printing (medium thickness/head height/setting of pinch roller pressure/ink type/etc.) has been changed, perform the following operation to correct the ink drop position for bidirectional (Bi) printing and obtain the proper printing result.

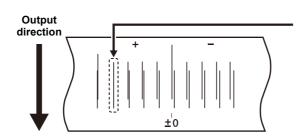


- When detecting the medium and when the mode is in cut mode, if you correct the dot position as it is, the following screen will be displayed by pressing the ENTER key in Step 7. In this case, press the ENTER key to switch the setting of pinch roller pressure to the print mode and then print the pattern.
- If the <u>END</u> key is pressed, switching operation will not be performed.

! PR PRESSURE:CUT ! SWITCH :ent

Example of a Printed Pattern





The fourth in the + direction from the 0 position is indicated as a straight line.
In this case, the dot position correction value is 4.0.

Set a medium on the machine and set a printing origin. (P. 2-15, P. 2-33)

• In order to print a pattern, a medium that is 500 mm wide and at least 400 mm long is necessary.

Press the MODE CHANGE key in LOCAL to select the printing mode.

Press the FUNCTION key.

FUNCTION SETUP <ENT>

Press the ENTER key.

SETUP SELECT : TYPE . 1

Press to select one of the types (1 to 4) and press the ENTER key.

6 Press to select [DROP.POScorrect].

[1] DROP.POScorrect<ent>

7 Press the ENTER key.

[1]DROP.POScorrect PRINT START :ent

Press the ENTER key to start pattern printing.

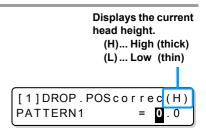
PRINTING PLEASE WAIT

• Multiple test patterns are printed. (The printed patterns are called Pattern 1, Pattern 2, Pattern 3... in the order of printing.)



Press to correct the dot position of Pattern 1.

- Correction value: -40 to 40
- Check the test patterns. The position where an outward feeding line and a return feeding line become one straight line is the correction value.
- When the correction value in not between -40 and 40, adjust the height of the printing heads and then perform the operations in Step 2 and later.
- 2 types of the correction value is available depending on the head height.



10

Press the **ENTER** key.



In the same way as in Step 9, correct the dot position in Pattern 2 and subsequent patterns and press the **ENTER** key.



Press the END key several times to end the correction.



Changing the Set Values of the Heaters

Reference for Temperature Setting

Ink type		SS21 ink		
Media type	Glossy chloroethylene	All media		
Pre-heater setting	40°C	40°C	40°C	35°C
Print heater setting	40°C	40°C	40°C	35°C
Post-heater setting	50°C	50°C	50°C	50°C



• Adjust the temperature appropriately according to the state of the medium you use.

Changing the Temperature Settings for the Heaters

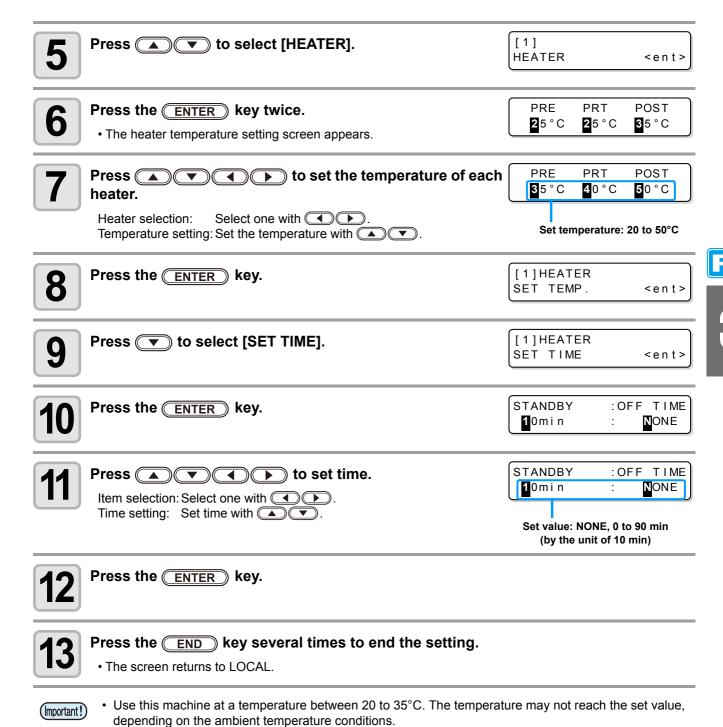


Here, each item of "SET TEMP." and "SET TIME" is set.

Temperature setting (SET TEMP.)		Used to change the set temperature of the pre-heater, print heater, and post-heater inside the platen.	
	STANDBY	Used to set the time it takes until the temperature of the heaters reach the preheat temperature after printing has been complete. Set value:NONE, 0 to 90 min (by the unit of 10 min) The preheat temperature has been preset and cannot be changed. If the machine receives data with the preheat temperature reached, the heaters automatically raise their temperature up to the set temperature then the machine starts printing. When the set value has been set to "NONE", the heaters do not lowe temperature to the preheat one.	
Time setting *1 (SET TIME)	OFF TIME	 The heaters are turned off in the following cases: When printing is not performed longer than the preset time in the standby mode When printing is not performed longer than the preset time after printing has been completed with "NONE" being selected for the set value of "STANDBY" Set value:NONE, 0 to 90 min (by the unit of 10 min) If the machine receives data with the heaters turned off, the heaters are automatically turned on to raise their temperatures up to the preset levels and then the machine starts printing. When "NONE" is selected for the set value, the heaters are not turned off. When "0 min" is set for the set value, the heaters are turned off after printing has been complete. 	

^{*1.} The time set here is valid only when the printing is completed. The value when print & cut operation or cutting operation is completed is deferent depending on the application software (RasterLinkPro4 or later, FineCut7 or later) you use.

Press the MODE CHANGE key in LOCAL to select the printing mode.	<local.1> [#01] WIDTH:***mm</local.1>
Press the FUNCTION key.	FUNCTION SETUP <ent></ent>
3 Press the ENTER key.	SETUP SELECT : TYPE . 1
Press (1 to 4) and pr	ress the FINTED key

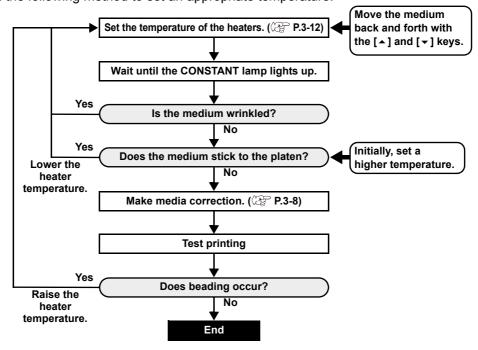


Adjustment to an Appropriate Temperature

This section describes how to adjust the temperature of the heaters to an appropriate one.

Because the heater temperature should be different, depending on the types of media, ambient temperature, etc., set an appropriate temperature for each medium. For non-coated media or media on which ink is slow to dry, increase the heater temperature so that the ink fixing and drying characteristics can be improved.

Check the items in the following method to set an appropriate temperature.





Extended Functions - Printer -

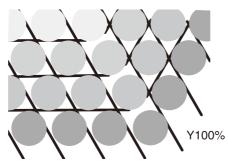
When the Heater Temperature Does Not Reach the Preset One

When the heater temperature is too low or the ink capacity (ink limit) is too small, printing failures, such as beading and banding, may occur.

Beading is a phenomenon that adjacent dots attract and stick to one another. Beading causes speckled patterns or stripes along printing passes (banding).

Example of Beading

The area in the vicinity of 100% magenta looks fine. Generally, the area in the vicinity of 70-100% single color is easily affected by the unevenness of a media feeding rate. The print shown here, free from unevenness of color in the vicinity of 100% magenta area, shows that media-feeding has been adjusted appropriately.

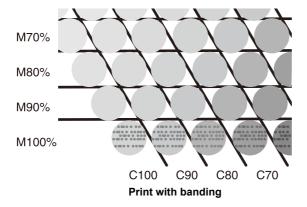


Fine looking print

In the blue area (100% magenta + 100% cyan), however, speckled patterns and banding have occurred. This banding is a result of beading. When the heater temperature is low or the ink capacity (ink limit) of a medium is small, the first dot does not solidify before the second dot lands on the medium. As a result, dots stick to one another and unevenness or banding occurs.

In order to prevent beading, it is recommended to raise the heater temperature to increase the ink capacity (ink limit) of the medium, to adjust the ink volume per dot for the medium, to increase the number of printing passes and decrease the ink amount for one shot, and/or to gain time by scan wait.

Change the medium if none of the above-mentioned measures works to prevent beading.



Setting the Printing Method

In the printing method setting, the following items are set:

• Printing quality (DRAFT): Printing quality in the DRAFT mode (resolution in the scanning direction: 540 dpi) is set.

• Printing quality (FINE) : Printing quality in the FINE mode (resolution in the scanning direction: 720 dpi) is set.

• Scanning direction : A printing direction is set.

• Logical seek : ON/OFF of Logical seek is set.

• White-laying printing : When using white ink (SS21W-2), the printing method for other colors after white ink

printing is set.

Setting of Printing Quality

Set Item	Set Value	Overview
DRAFT QUALITY	STD. / FAST / FINE	
FINE QUALITY	STD. / FAST / FINE	Used to select an image quality for printing.

Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL.1> [#01]
 WIDTH:***mm

Press the FUNCTION key.

FUNCTION SETUP <ENT>

3 Press the ENTER key.

SETUP SELECT : TYPE.1

4

Press to select one of the types (1 to 4) and press the ENTER key.

5

Press to select [PRINT MODE].

[1] PRINT MODE <ent>

6 Press the ENTER key.

[1]PRINT MODE DRAFT QUALITY <ent>

7

Select items to set.

- (1) Press to select [DRAFT QUALITY] or [FINE QUALITY]. ([DRAFT QUALITY] is selected here.)
- (2) Press ENTER.

8

Press to select a printing quality.

[1]PRINT MODE
DRAFTquality: STD.

- Set value: STD./ FAST/ FINE
- When ending the setting here, press the **ENTER** key to proceed to Step 11.



When changing the details of printing quality in each resolution, press (FUNCTION) to select a resolution.

[1]DRAFT QUALITY 540x720

- (1) Press to select a resolution.
- (2) Press ENTER.
- Set value: 540 x 720, 540 x 900, 540 x 1,080 dpi (when DRAFT is selected) 720 x 540, 720 x 720, 720 x 1,080, 720 x 1,440 dpi (when FINE is selected)



Select the number of passes and a printing speed.

- [1]DRAFT QUALITY PASS=8 : SCAN=H i SPEED (1) Select the number of passes with and press .
- (2) Select a printing speed (Fast or Standard) with .
- (3) Press ENTER.
- The set value for the number of passes is different, depending on the content of ink setting or the resolution selected in Step 8. See "Combination of Factors That Can Be Set" to select the number of passes.





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

Combination of Factors That Can Be Set

When changing the details of printing quality in Steps 9 and 10 of "Setting of Printing Quality", see the table below to set printing quality.

DRAFT quality

Resolution	4	colors	6 colors	
(dpi)	Pass	Speed	Pass	Speed
540 x 720	4	Fast/Standard	8	Fast/Standard
dpi	8		16	
	16		32	
540 x 900	10	Fast/Standard	10	Fast/Standard
dpi	20		20	
	40		40	
540 x 1,080	6	Fast/Standard	12	Fast/Standard
dpi	12		24	
	24		48	

FINE quality

Resolution	4	colors	6	colors
(dpi)	Pass	Speed	Pass	Speed
720 x 540	6	Fast/Standard	6	Fast/Standard
	12		12	
	24		24	
720 x 720	4	Fast/Standard	8	Fast/Standard
	8		16	
	16		32	
720 x 1,080	6	Fast/Standard	12	Fast/Standard
	12		24	
	24		48	
720 x 1,440	8	Fast/Standard	16	Fast/Standard
	16		32	
	32		64	

Setting a Scanning Direction

Set Value	Overview
Bi-D	Printing is performed in both outward and return directions of the printer unit. Select this when you want to print in a shorter period of time.
Uni-D	Printing is performed only in the outward direction of the printer unit. Select this when you want to print finer.

Perform the operations in P.3-16 Steps 1 to 6.	[1]PRINT MODE DRAFT QUALITY <ent></ent>
Press to select [SCAN DIRECTION].	[1]PRINT MODE SCAN DIRECTION <ent></ent>
3 Press the ENTER key.	[1]PRINT MODE ScanDIRECTION: Bi-D
Press to select a scanning direction. • Set value : Bi-D, Uni-D	[1]PRINT MODE ScanDIRECTION: Uni-D
5 Press the ENTER key.	[1]PRINT MODE SCAN DIRECTION <ent></ent>
6 Press the END key several times to end the setting.	

Setting Logical Seek

Set Value	Overview
ON	The printer unit moves according to the size of the data during printing. Select this when you want to print in a shorter period of time.
OFF	The printer unit moves from the right edge to the left edge of a medium, regardless of the size of the data. When you use a medium on which ink is hard to dry, you can have a longer drying time.



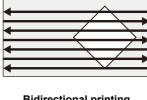


Bidirectional printing

Movement of the heads when Logical seek is OFF







Bidirectional printing



Movement of the heads when Logical seek is ON



Perform the operations in P.3-16 Steps 1 to 6.

[1]PRINT MODE DRAFT QUALITY <ent>

Press to select [LOGICAL SEEK].

[1]PRINT MODE LOGICAL SEEK <ent>

Press the ENTER key.

[1]PRINT MODE LOGICAL SEEK

ΟN

4

Press (**) to select ON/OFF.

[1]PRINT MODE LOGICAL SEEK : **O**FF

Press the **ENTER** key.

[1]PRINT MODE LOGICAL SEEK <ent>

6

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

Setting for White-laying Printing

When using SS21W-2 (SPC-0504W-2) white ink, you can print with other colors after printing with white ink. This section describes the method of printing with white ink and other color inks.

Set Value	Overview
OFF	White ink and other color inks are printed at the same time.
ON (LEVEL1 to 3 ^{*1})	Color inks are printed on the white ink a while after the white ink has been printed. If a larger number is set for LEVEL1 to 3, the time between printing white ink and printing color inks becomes longer. If a large number is set for LEVEL, the drying property of white ink improves, but printing time becomes longer.

^{*1.} With this machine, you cannot set the order of synthesis.



(Important!)

- This function can be set only when SS21W-2 ink (6 colors + white) has been filled.
- Printing time is at least two times longer than that of normal printing.
- When printing is performed under the following conditions, the printing speed decreases because the number of nozzles to be used is limited.

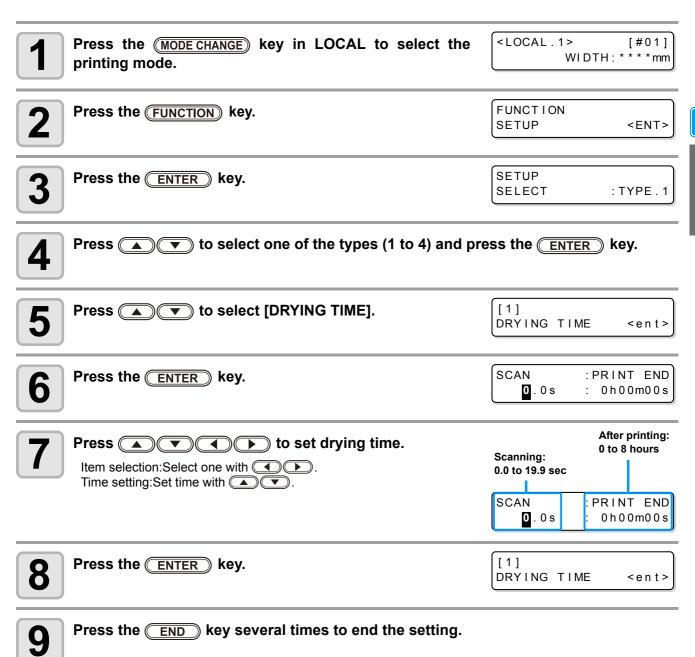
Setting of Printing Quality	Resolution	Printing Width
DRAFT	540 x 1,080 dpi	1,541 mm or more
	720 x 1,080 dpi	1,155 mm or more
FINE	720 x 1,440 dpi	1,133 min of more
	1,440 x 1,440 dpi	1,155 mm or more (577 mm for Vd data)

Perform the operations in P.3-16 Steps 1 to 6.	[1]PRINT MODE DRAFT QUALITY <ent></ent>
Press to select [WhiteLayPrt.].	[1]PRINT MODE WhiteLayPrt. <ent></ent>
Press the ENTER key.	[1]PRINT MODE SETUP : OFF
Press to select the printing method. • Set value: OFF, ON (LEVEL 1 to 3)	[1]PRINT MODE SETUP : ON(LEVEL1)
5 Press the ENTER key.	[1]PRINT MODE WhiteLayPrt. <ent></ent>

Setting Drying Time

The following items for ink drying time are set.

Set Item	Set Value	Overview
SCAN	0.0 to 19.9 sec	Ink drying time for each scanning is set. (During bidirectional printing, the machine stops for a certain period of time specified for each of the outward and return scanning.)
PRINT END	0 to 8 hours	Ink drying time after printing has been complete is set. (The next printing is not performed until the set drying time passes.)

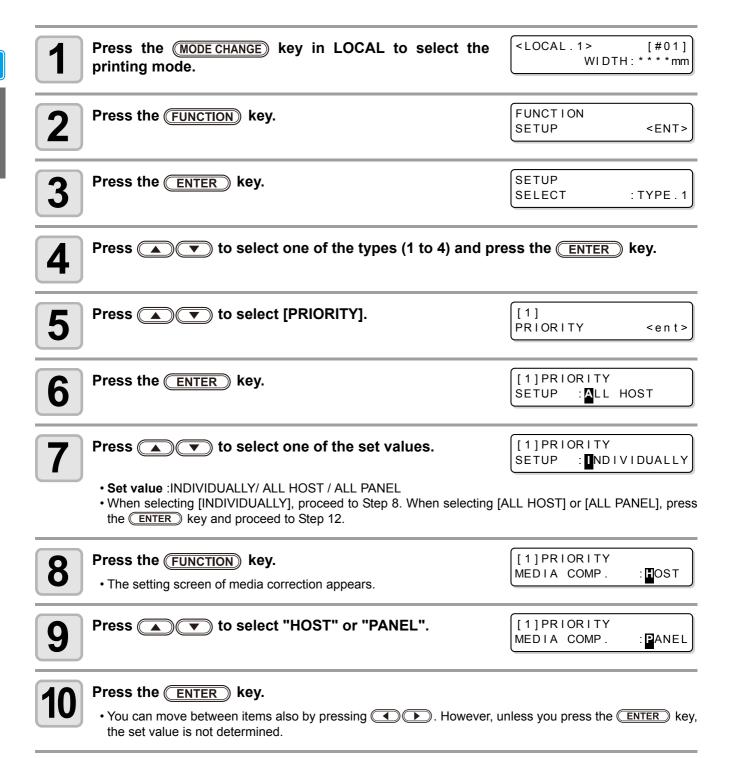


Setting Priority Order

It is determined which is prioritized for printing, the setting by the machine (panel) or the setting by the PC (host).

Set Value	Overview		
INDIVIDUALLY	It is determined which is prioritized for the items below this table, the setting by this machine (panel) or the setting by the PC (host).		
ALL HOST	HOST The setting by the PC (host) for the items below this table is prioritized.		
ALL PANEL	ALL PANEL The setting by this machine (panel) for the items below this table is prioritized.		

Items to be selected: Media correction / Heater / Printing method / Ink-laying printing / Drying time /
Automatic cutting / Pre-feed / Color pattern / Refreshing / Adsorption / Feeding speed level





Perform the same operations as in Steps 9 and 10 to set other items.



Press the END key several times to end the setting.



• Even with the setting by the host being prioritized, the items set by the panel become effective if they have not been specified by the host.



35

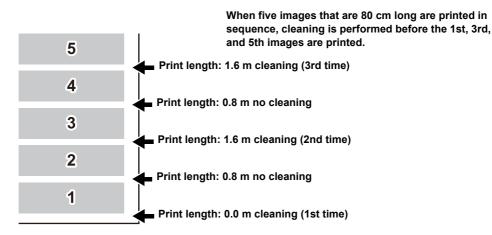
Setting Automatic Cleaning

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

When printing has been completed, the machine measures the length of a medium printed after the previous head cleaning and performs the cleaning automatically if necessary.

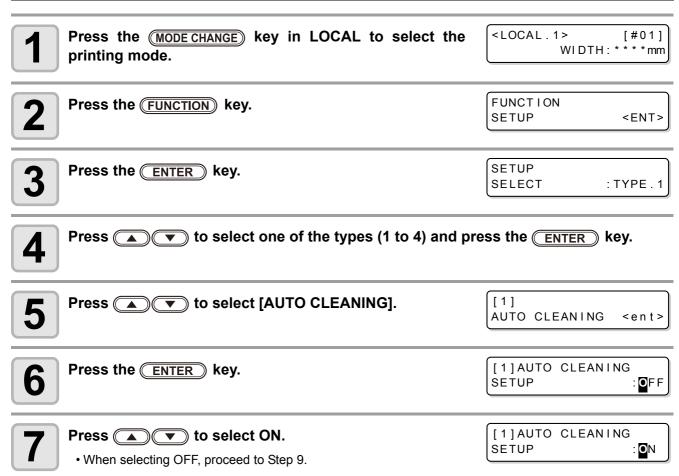
The machine can perform a stable printing operation with its heads always kept clean.

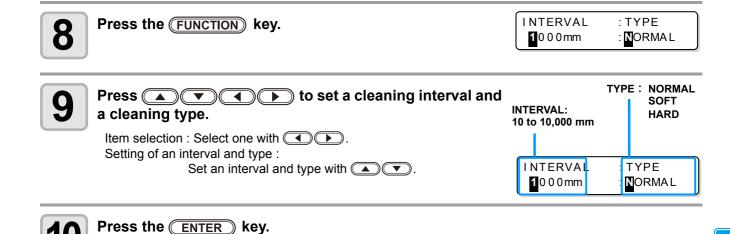
Cleaning is performed before the first printing after the machine has started. Then subsequent cleaning is performed according to the length (by the unit of meter) of a printed medium.



When the operation interval is 1,000 mm (example)

Set Item	Set Value	Overview
INTERVAL	10 to 1,000 mm	Interval between each automatic cleaning operation (print length)
TYPE	NORMAL / SOFT /HARD	A cleaning type is selected.





11



Press the END key several times to end the setting.



- This function does not operate when ink near-end occurs. See P.1-14 "Changing an Ink Cartridge" to solve ink near-end.
- Depending on the state of the heads, etc., the image quality deterioration may not be improved even with this function performed. In this case, contact our service office or the distributor in your region.

Setting Cleaning during Printing

It is set whether head cleaning is performed automatically during printing.

In cleaning during printing, a cleaning interval is set according to the length of a printed medium.

Printing is interrupted each time a medium is printed for the set length, and head cleaning is performed automatically during the interval.

Set Item	Set Value	Overview
INTERVAL	10 to 1,000 mm	Interval between each cleaning operation (print length)
TYPE	NORMAL / SOFT /HARD	A cleaning type is selected.

[#01] <LOCAL.1> Press the MODE CHANGE key in LOCAL to select the WIDTH: * * * * mm printing mode. **FUNCTION** Press the (FUNCTION) key. SETUP <ENT> SETUP Press the ENTER key. **SELECT** :TYPE.1) to select one of the types (1 to 4) and press the ENTER key. 4 Press (to select [Print. CLEANING]. Print. CLEANING<ent> [1]Print. CLEANING Press the ENTER key. 6 **SETUP** [1]Print. CLEANING Press ▲ v to select ON. SETUP • When selecting OFF, proceed to Step 10. INTERVAL : TYPE Press the FUNCTION key. 1000mm NORMAL TYPE: NORMAL Press (**) to set a cleaning interval and 9 **SOFT** INTERVAL: HARD a cleaning type. 10 to 10,000 mm Item selection : Select one with . Setting of an interval and type:

10

Press the ENTER key.

Press the END key several times to end the setting.

Set an interval and type with .

(Important!)

• This function does not operate when ink near-end occurs. See P.1-14 "Changing an Ink Cartridge" to solve the ink near-end.

INTERVA

1000mm

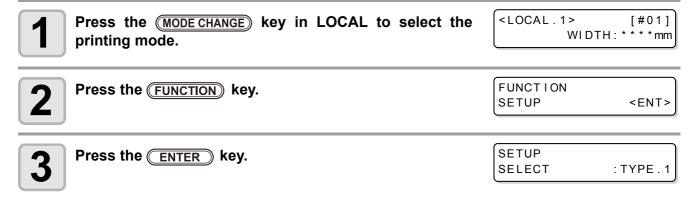
TYPE

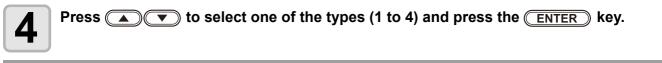
NORMAL

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

Other Settings

Change the settings according to the types of use.















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

List of Settings

The underlined has been set as default.

Function Name Overview		Set Value	
PINCH ROLLER	Setting the pinch roller pressure and the pinch roller numbers according to the medium to be used.	See P.3-5.	
MEDIA COMP.	A medium-feeding rate is corrected.	See P.3-8.	
DROP. POS CORRECT	Setting used when the thickness of the medium, head height, or ink type is changed.	See P.3-10.	
	The heater temperature is set.		
HEATER	The standby time and OFF time of the heaters are set.	See P.3-12.	
	Printing quality is set.		
PRINT MODE	A scanning direction is set.	See P.3-16.	
PRINT MODE	Logical seek is set.	3ee F.3-10.	
	White-laying printing is set.		
INK LAYER	The number of ink layers is set.	Once to nine times	
	Ink drying time for each scanning is set.		
DRYING TIME	Ink drying time after printing has been complete is set.	See P.3-21.	
AUTO CUT	Whether a medium is automatically cut after printing is set.	ON/ <u>OFF</u>	
PRE-FEED	Whether a medium is fed back and forth before printing is set.	ON/ <u>OFF</u>	
COLOR PATTERN	It is set whether a color pattern is printed on the right edge of a medium.*1	ON/ <u>OFF</u>	
REFRESH	The refreshing level of the heads is set.	<u>0</u> to 3	
VACUUM	The ability to adsorb a medium is set.	STORONG / <u>STANDARD</u> / LittleWEAK / WEAK /OFF	
FEED SPEED	The speed at which a medium is fed during printing, etc. is set.	10 to <u>100</u> to 200%	
PRIORITY	The prioritized setting (by the host or the panel) is determined.	INDIVIDUALLY / <u>ALL HOST</u> / ALL PANEL	
AUTO CLEANING	AUTO CLEANING Automatic head cleaning conducted for each printing operation is set. See P.3-24.		
PRINT. CLEANING	Automatic head cleaning conducted during printing is set.	See P.3-26.	

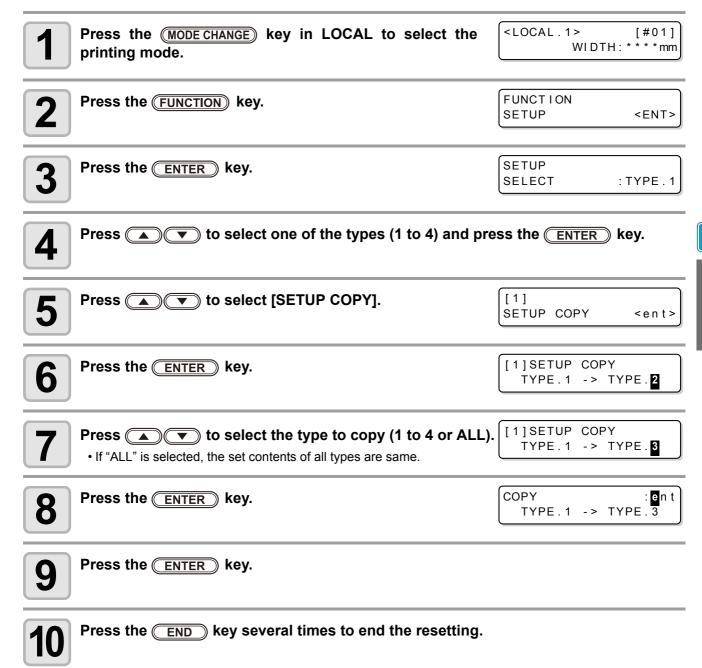
^{*1.} When ON is set, maximum printing width becomes 18mm narrower.

When cutting only with RasterLinkPro4SG or later, maximum cutting width also becomes 18mm narrower. If it affects the data layout, set to OFF.



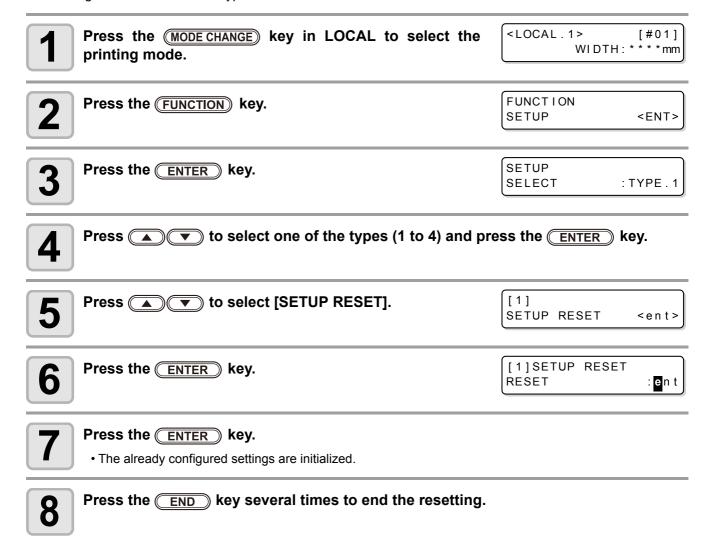
Copying the Set Contents

The contents you set can be copied to other type.



Initializing the Settings

The already configured settings are initialized. (Resetting) The setting items of the selected type are reset.



Machine Settings

Common settings are functions for using this machine easily.

The following items can be set in Machine settings.

Item		Set Value*1	Overview	
DEODRIZE SETUP ^{*2}	STOP TIME	OFF / 10 to <u>120</u> to 240 min/ CONTINUE	The time until the rotation of the exhaust fan stops after printing has been completed is set. (P. 3-31)	
SETOF	RENEW	ON/ <u>OFF</u>	The present operating state of the exhaust fan is switched. (P. 3-31)	
DRYNESS FEE	D	ON/ <u>OFF</u>	It is set whether a medium is fed for it to be dried after printing has been completed. ((2) P. 3-32)	
STAMP SETUP		ON/ <u>OFF</u>	The setting for the output date and printing conditions to be outpafter printing has been completed is configured. (P. 3-33)	
Waste Ink Warning		ON/ <u>OFF</u>	It is set whether the confirmation message of the waste ink tank is displayed. (P. 6-40)	
Test PRT. Arrange		FEED DIR./ SCAN DIR.	The orientation of test patterns when test printing has been repeated is set. ((2) P. 3-34)	
CART.PRIORITY *3		INK LEVEL EXP. DATE	Setting a cartridge to be used first for double cartridge automatic change function.	
ENV. TEMP.		Not wait ARR. Wait arrival	Sets the operation when an error indicating that the ambient temperature is out of the usable temperature range occurs. (P. 3-35)	

- *1. The underlined has been set as default.
- *2. The exhaust fan is optional.
- *3. This function is valid only when the 4-color ink set is used.

Setting the DEODORIZE FAN

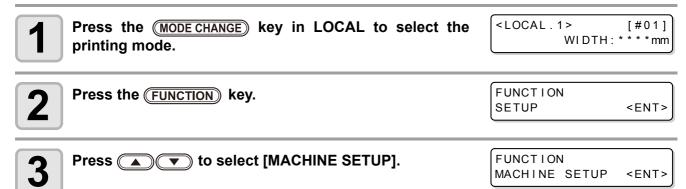
The exhaust fan operates during printing. After printing has been complete, it operates according to the setting of "Stop timer".

The following two items can be set for the exhaust fan.

- STOP TIME : The time until the exhaust fan stops after printing has been completed is set.
- **RENEW** : When this is set to "ON", the exhaust fan can operate while printing is not performed.



- The exhaust fan is an option contained in the drying exhaust unit.
- When this machine is equipped with a drying fan, the fan operates in cooperation with the settings configured here.

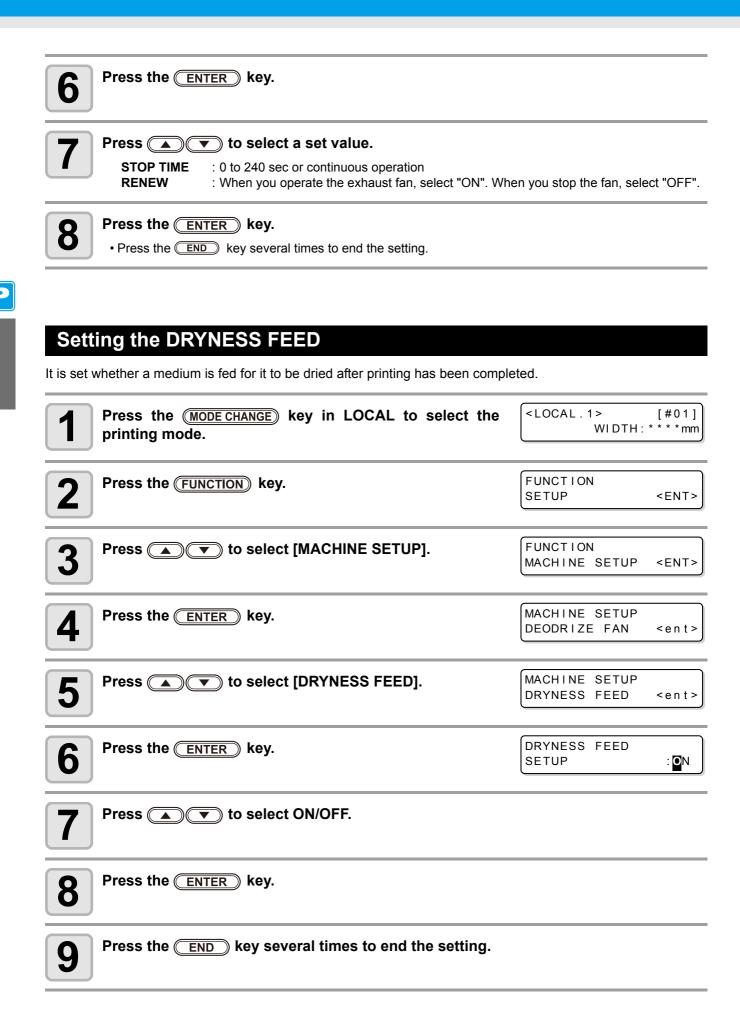




Press to select an item to set.

STOP TIME: The time until the exhaust fan stops after printing has been completed is set.

RENEW: Select this when you want to operate the exhaust fan.



: **O**FF

Stamp Setting

It is set whether information, such as printing conditions and a printing date, is output after printing has been completed.

Press the MODE CHANGE key in LOCAL to select the printing mode.

Press the FUNCTION key.

FUNCTION SETUP <ENT>

Press to select [MACHINE SETUP].

FUNCTION
MACHINE SETUP <ENT>

Press the ENTER key.

MACHINE SETUP DEODRIZE FAN <ent>

5 Press to select [STAMP SETUP].

MACHINE SETUP STAMP SETUP <ent>

Press the ENTER key.

STAMP SETUP STAMP

7

Press to select ON/OFF.

Press the ENTER key.

• Press the END key seve

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

Output Example

CJV30-100 Ver1.00

PRINT MODE : 540×1080 6PASS Uni-D Hi 1LAYER

MEDIA COMP. : 100(-100,0,200)

HEAD GAP : Thin

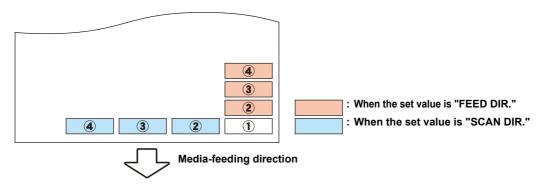
INK : ES3INK 4color

HEATER TEMP.: PRE :35°C PRINT:35°C POST :45°C

DATE : 08.05.05 17:24:29

Setting the Test Print Arrange

The orientation of test patterns that are printed when test printing is repeated can be set.





Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL.1> [#01]
 WIDTH:***mm

Press the FUNCTION key.

FUNCTION SETUP <ENT>

Press to select [MACHINE SETUP].

FUNCTION
MACHINE SETUP <ENT>

Press the ENTER key.

MACHINE SETUP DEODRIZE FAN <ent>

Press to select [TestPRT.Arrange].

MACHINE SETUP TestPRT.Arrange<ent>

6 Press the ENTER key.

TestPrintArrange SETUP: **E**EED DIR.

7

Press to select a set value.

FEED DIR. : Oriented in the media-feeding direction (rear) (default setting)

SCAN DIR. : Oriented in the media-scanning direction (lateral)

8

Press the ENTER key.

Press the END key several times to end the setting.

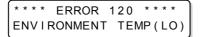
Change the operation condition of the ambient temperature

If you print in the status that the temperature of the place in which the machine has installed (ambient temperature) is out of the usable temperature range, ink discharging defect or changing color may occur, and it adversely affects the printing quality.

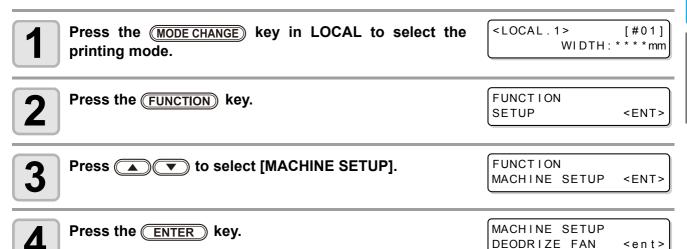
Here, select the operation if the ambient temperature is out of the usable temperature range when printing.



- For the details of the usable temperature range, refer to P. 8-4 "Allowable temperature".
- If the ambient temperature is out of the usable temperature range at the start of printing, the error message below is displayed to inform you of it.











Press to select a set value.

Not wait ARR. : The error message is displayed for a moment, and printing starts.

Wait arrival : After the error message is displayed, wait until the ambient temperature reaches the proper value. Then, printing starts.

Press the ENTER key.

• Press the END key severa

Press the END key several times to end the setting.

Extension of Ink Expiry Month

Ink expiry month can be extended for six months from the expired month. When used without extension, ink becomes unusable after two months of the expiry month.

Extension of Ink Expiry Month

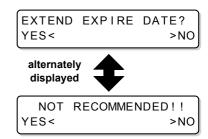
The following setting or confirmation screen appears when the power of this machine is turned on, or when expired ink cartridge is set.



- An ink cartridge that is once set [YES] for extension cannot be changed the setting.
- To extend multiple inks' expiry month at a time, set the expired ink cartridges, and then set the
 extension.
- Extension of ink expiry month may lower the print image quality or print quality such as color difference or banding. Please understand them when extending ink expiry month.
- When initial filling, the ink expired more than two months ago cannot be used.



When a screen shown on the right appears, go to the next step.





Press the to select [YES].

When the ink expiry month is not extended, select [NO]. In this
case, the ink will be disabled after two months of the expiry
month.

EXPIRE DATE EXTENDED PRESS[ENT]



Press the **ENTER** key.

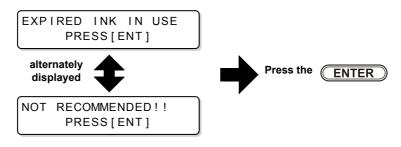
· Ink expiry month is extended.



- When extended six months (six months from the ink expired month) have passed, a message "COMPLETELY EXPIRED" appears and the ink becomes unusable. Immediately replace the ink cartridge with a new one.
- If ink expiry month is extended, the cartridge LED blinks in green while supplying ink from the extended cartridge.

When a cartridge extended the expiry month is set

When a cartridge extended the expiry month is set and the power is turned on, or when a cartridge extended the expiry month is set to this machine, the following screen appears.



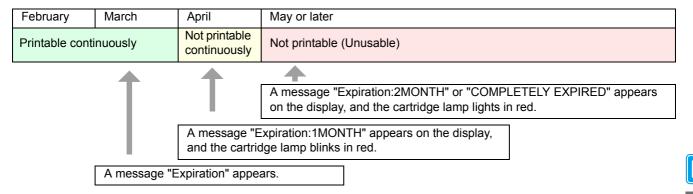


• To check expired ink, press the Function key while displaying the screens above alternately.

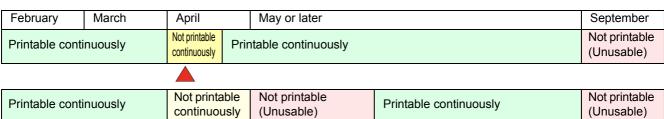
When an ink expiry month is extended

Example: If expiry month of your ink cartridge is February 2009.

· When the expiry month is not extended



• When the expiry month is extended (When extended at the time of \triangle)



A message "COMPLETELY EXPIRED" appears.

Even if extended at any time from April to August, it is extended for six months from the expiry month

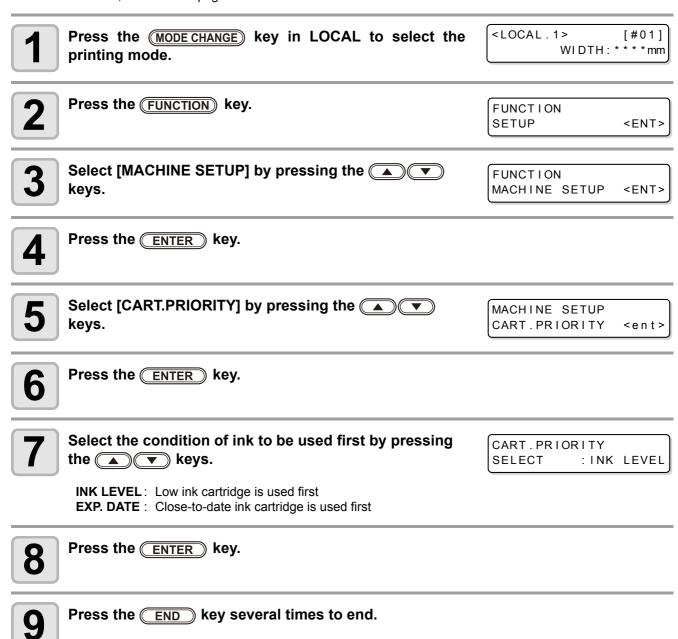
Switch Setting of Ink Supply Path

For the ink supply, condition of the ink cartridge to be used first by the double-cartridge automatic switching function can be selected.

This setting is only available for 4-color set.



- · When expired ink cartridge is set, the expired cartridge is used first regardless of the setting below.
- When the optional bulk ink system (MBIS1) is used and the MBIS1 is set in both slots, the setting below is effective.
- When both an ink cartridge and the bulk ink system (MBIS1) are set in the supply paths of the same color, see the next page.



When both ink cartridge and MBIS1 are used

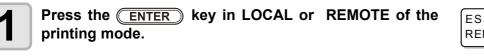
When both an ink cartridge and the optional bulk ink system (MBIS1) are set in the supply paths of the same color for 4-color ink set, you can select the ink to be used first.



• Usually, when both an ink cartridge and the bulk ink system (MBIS1) are set in the supply path of the same color, the ink in the bulk ink system (MBIS1) is used first.



- · This setting is only available for 4-color set.
- If supply path does not have both ink cartridge and the bulk ink system (MBIS1), this function cannot be set.
- Pull out the ink cartridge selected on this function or turn the power on again to disable the setting.



ES3-INK MMCCYYKK REMAIN 34567899

P

Press the REMOTE key.



Displays the currently supplying ink. B: Bulk ink system (MBIS1)

- C: Ink cartridge
- : Only one type is set
- Press the key to set the supply path and the ink to be used first.

Select the supply path : Press the key. Select the ink to be used first : Press the key.





Press the ENTER key.

• It enters in the LOCAL or the REMOTE mode.



Chapter 4

Extended Functions - Cutting -



This chapter

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

Setting the Pinch Rollers 4-2	Changing the Order of Cutting	4-28
Recommended Setting for the Pinch Roller	Setting the SORTING	.4-29
Pressure and Number of Pinch Rollers 4-2	Procedure for SORTING	.4-31
Quantity of Pinch Rollers 4-2	Cutting out Data without Register Marks	4-32
Setting for the Pinch Rollers 4-3	Setting the P/C ORIGIN OFFSET	.4-32
Cutting out Data with Register Marks 4-5	Setting the P/C SCALE ADJUST	.4-34
Flow of Cutting Data with Register Marks 4-5	Other Settings	4-36
Entering Register Mark Detection Mode 4-5	Copying the Setting Contents	
Notes on Inputting Data with Register	Initializing the Settings	
Marks 4-6	Cutting Samples	
Setting Register Mark Detection 4-11	Cutting a Medium into Multiple Pieces	
Method of Detecting Register Marks 4-15	with a Certain Length	4-44
When Cutting Failed4-17	Perform Multiple Cuttings	
Setting Automatic Cutting 4-22	Setting the Step Size	
Dividing and Cutting 4-23	-	
Setting the Dividing and Cutting Function . 4-23	Other Convenient Functions	4-49
Cutting Data by Using the Dividing and	Medium Feeding	.4-49
Cutting Function 4-25	How to turn the heater OFF in the	
Cutting with a Dotted Line 4-26	cutting mode	.4-50

Setting the Pinch Rollers

Set the pinch roller pressure and the pinch roller numbers according to the medium to be used.

Settings	Set Value	Overview		
	HIGH	Cat the masseum for the minels wellow at both and of the modition according to the		
ENDS	MIDDLE	Set the pressure for the pinch rollers at both ends of the medium according to the medium to be used.		
	LOW	modiani to bo dood.		
	HIGH			
INNER	MIDDLE	Set the pressure for the pinch rollers other than those at both ends of the medium		
INVEX	LOW	according to usage.		
	OFF			
No.	2 to 7 *1	Set the number of the leftmost pinch roller according to the size of the medium to be used.		

^{*1.} The number of pinch rollers varies according to the machine type.

Recommended Setting for the Pinch Roller Pressure and Number of Pinch Rollers



The table below shows the recommended pinch roller pressure for cutting:

Set pressure	Usage			
ENDS: High INNER: High	For standard operation			
ENDS: High INNER: Low	Use this combination of settings when you want the streaks made by the pinch rollers on the medium to be unnoticeable. • This setting may cause misalignment of the medium depending on the medium type, feeding rate, or medium width.			

Medium width	Required pinch rollers		
Less than 600 mm	Both ends only		
600 to 1,300 mm	Both ends + 1 middle pinch roller		
1,300 mm or more	Both ends + 2 middle pinch rollers		



- When you use the machine under conditions other than the above, the medium may slip out of place during cutting.
- · Adjust the pinch roller pressure according to the situation.

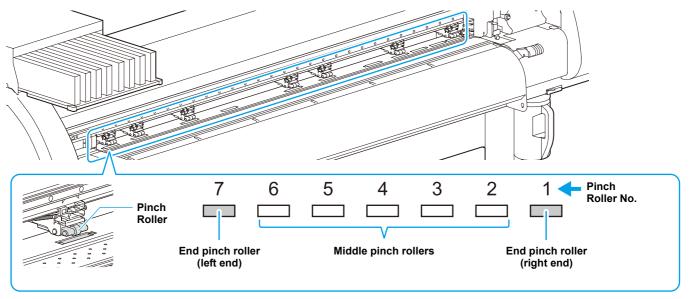
Quantity of Pinch Rollers

The following table shows the quantity of pinch rollers for each model. Check the pinch rollers on your machine for quantity.

Model	Quantity
CJV30-160	7 pieces
CJV30-130	6 pieces
CJV30-100	4 pieces
CJV30-60	3 pieces

Setting for the Pinch Rollers

This section describes the setting procedure for CJV30-160. For CJV30-130/100/60, the number of pinch rollers set in Step 10 varies.



• The figure above shows CJV30-160.



<LOCAL.C> [#01]
CUT1 (30/ 60/ 0.30)

Press the FUNCTION key.

FUNCTION SETUP <ENT>

3 Press the ENTER key.

SETUP SELECT : CUT1

4

Press to select a tool condition (CUT1 to CUT3, HALF, PEN) and press the ENTER key.

5 Press the ENTER key twice.

ENDS : IGH [H____H]
INNER: OFF No.7-1

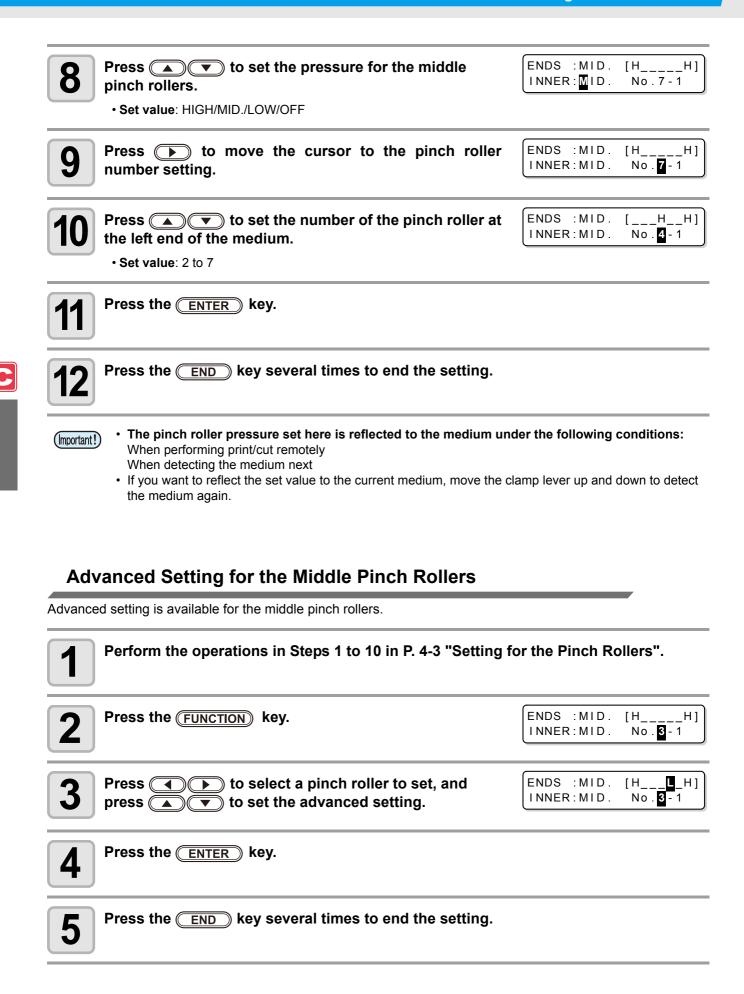
Press to set the pressure for the pinch rollers at both ends of the medium.

ENDS : MID. [H____H] INNER: OFF No.7-1

• Set value: HIGH/MID./LOW

Press to move the cursor to the middle pinch roller setting.

ENDS : MID. [H____H]
INNER: OFF No.7-1



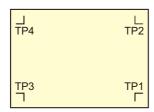
Cutting out Data with Register Marks

If you create register marks on an output image, the cutter unit detects these marks and cuts the image out automatically following these marks. This helps you to make stickers, etc.

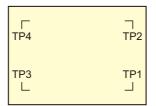
This section describes how to cut the printed medium.

Refer to P.4-10 for the combined operation of print & cut.

There are following two types of register marks.



Register mark: Type 1

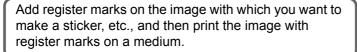


Register mark: Type 2



• Use the TP4 when performing trapezium correction to correct the uneven medium-feeding rate caused by the difference in the diameter between the right and left grid rollers. If the trapezium correction is to be omitted, there is no need to set the TP4. In that case, however, cutting distortion will increase.

Flow of Cutting Data with Register Marks



Set the printed medium in CJV30.

There are some conditions for creating the register marks.

See pages P.4-6 through P.4-10.

Set it referring to P.2-15.

Send the cut-target image from the computer for cutting.

In case it is not successfully cut,

- •Confirm the response of the register mark sensor. (P.4-17)
- •Confirm the position of the Light Pointer. (P.4-20)
- •Adjust the sensitivity of the register mark sensor. (P.4-21)

Entering Register Mark Detection Mode



Press the END key in LOCAL.

• The machine enters the register mark detection mode.



- When the registration detection is set to OFF, the machine doesn't enter registration mode. (P.4-11)
- If this key is pressed while various settings are being configured, the input value may be canceled or the
 active set item may be returned to the previous set item.



Notes on Inputting Data with Register Marks

There are some limitations on preparing data with register marks.

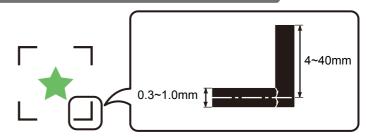
In order to make full use of this function, read the following instructions carefully and prepare data with register marks properly.



• The register mark described here is intended to detect the medium skew and the lengths along the X and Y axis. It is not a mark for trimming.

Size of the Register Marks

Refer to "The Size of a Register Mark Suited for the Distance between the Marks" (P.4-8) for the relationship between the data and the length of one side of a register mark.

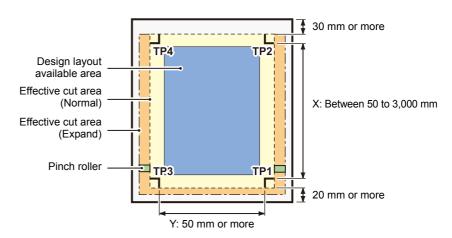


C

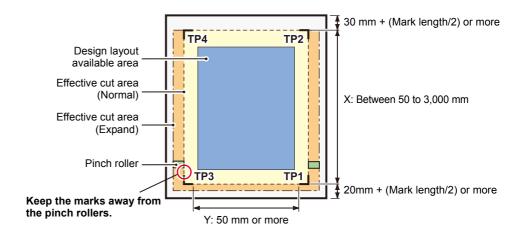
The Area Where Register Marks and Designs Can Be Arranged

- The TP1 starting position must be at least 20 mm away from the front end of the medium.
- The TP2 end position must be at least 30 mm away from the rear end of the medium.

Register mark: Type 1



Register mark: Type 2



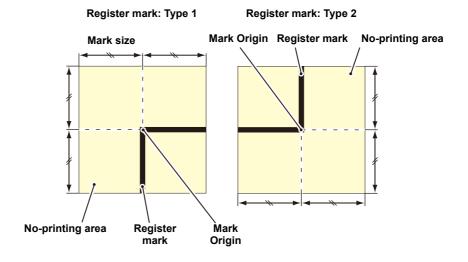
No-printing Area around the Register Marks

An area around a register mark (from the mark origin to the mark size area) is a non-printing area. There must be no data printed or stain in this area.

Otherwise, a wrong origin may be detected or a mark read error can occur.

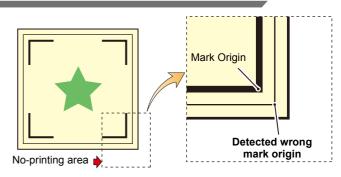
(Important!)

• If a wrong mark origin is detected, the cutting will be performed in the wrong area.



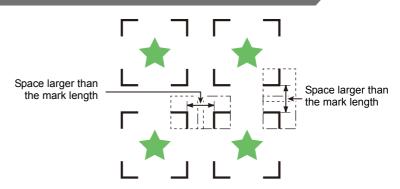
Example of Cause of Wrong Detection 1

There is a line outside the register marks



Example of Cause of Wrong Detection 2

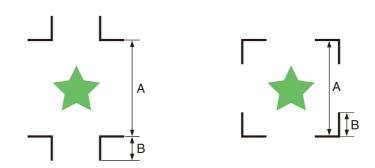
The distance between register marks (TP2 and TP1 or TP4 and TP2) is smaller than the mark length (for Type 2)





The Size of a Register Mark Suited for the Distance between the Marks

The size (B) of a register mark suited for the distance (A) between the marks is as shown below. If the mark size (B) is too small relative to the distance (A), the marks may not be detected correctly. Be sure to prepare the register marks with an appropriate size.

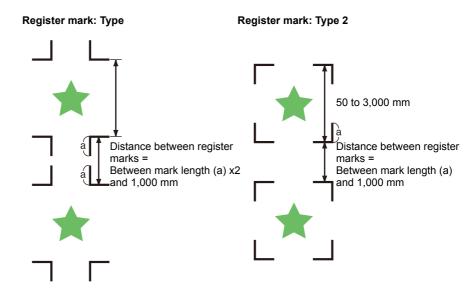


Α	200 or less	500	1000	2000	3,000 or more
В	4 ~	8 ~	15 ~	25 ~	35 ~

(mm)

Distance between Register Marks for Copied Designs

For Type 1 register marks, the distance between the marks must be not shorter than two times the mark length and not longer than 1,000 mm. For Type 2 register marks, the distance between the marks must be not shorter than the mark length and not longer than 1,000 mm.

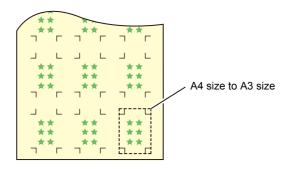


Extended Functions – Cutting

The Recommended Size of the Area Defined with a Set of Four Register Marks

It is recommended that the size of the area defined with a set of four register marks is in the range of A4 size (210 mm x 297 mm) to A3 size (297 mm x 420 mm).

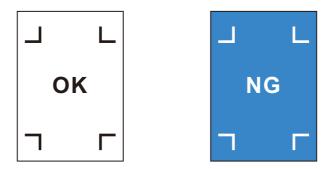
If you follow this recommendation, you can minimize wasteful spaces and arrange the designs efficiently.



Color of Mark

The mark must be printed in black against the white background.

The register mark will not be detected correctly if the background is not white or the mark is not black.



Mark Blurred

If the mark is blurred, a wrong mark origin can be detected, thus resulting in deviated cutting.



Notes on Register Mark Detection

Observe the following precautions on register mark detection.

- When you retry medium detection, medium skew correction, scale correction between register marks, and the position of the origin are cleared.
- Once the cutter unit detects marks, it will set the origin at the location of TP1.
 If you change the position of the origin to a different location using the jog keys, the origin at the new location will supersede the origin at TP1.
- Locate register marks so that the line connecting the corners of the four marks forms a rectangle. Register marks arranged unevenly can result in deviated cutting.

Notes for the combined operation of print & cut

When performing combined operation of print & cut with Raster Link Pro 4 SG or later, be careful to the following items:

- (1) When performing combined operation of print & cut with the attached application software to this device (Rasater Link Pro 4 SG or later / FineCut 7.0 or later /), the following set contents will follow the instruction of software side. Note that the contents set in this device will be invalid.
 - · Register mark size
 - · Register mark shape
 - · The number of sheets
- (2) The combined operation of print & cut without a register mark is not performed under the following conditions:
 - · Print & cut using the take-up device
 - Print & cut when "COLOR PATTERN (P.3-28) " of the setting mode is set to "ON"



• Other than the above conditions, there is a possibility of the cutting line being misaligned depending on the printing data size. Therefore, it is also recommended to perform the operation with the data which has register marks for combined operation of print & cut.



Extended Functions - Cutting

Setting Register Mark Detection

When you want to cut the data with register marks, set the following without fail.

Press the MODE CHANGE key in LOCAL to select cutting mode.

<LOCAL.C> [#01]
CUT1 (30/ 60/ 0.30)

Press the FUNCTION key.

FUNCTION SETUP <ENT>

Press the ENTER key.

SETUP SELECT : CUT1

Press to select a tool condition (CUT1 to CUT3, HALF, PEN) and press the ENTER key.

Press to select [MARK DETECT].

[CUT1] MARK DETECT <ent>

6 Press the ENTER key.

[CUT1]MARK DETECT DETECT :OFF

Press to select number of detected register marks.

• Set values: OFF, 1pt , 2ptX , 2ptY , 3pt , 4pt

Press the ENTER key.

• In case you selected "OFF" in Step 7, proceed to Step 12.

- Press to select the following items, and then press the ENTER key.
 - The following items are provided for the register mark detection setting.

 Mark detect, Register mark size, offset Y, offset X, form of register mark, number of continuous cutting in direction Y, number of continuous cutting in direction X, high speed limi, and skew check
 - See pages P.4-12 through P.4-14 for details of each set item.
- n Press to select a set value.
 - See pages P.4-12 through P.4-14 for set values for each set item.
- Press the ENTER key to enter the value.
- Press the END key several times to return to LOCAL.

MARK DETECT

The higher the number of detected points, the higher the cutting accuracy. Select "1pt" when using Raster Link Pro4 SG (or later) or FineCut.

Set Value	Description		
OFF	Select this setting for cutting a normal medium, not for cutting the outline.		
1pt	Detects the TP1. Sets only the origin.		
2pt X	Detects the two register marks TP1 and TP2 (Feeding direction). Performs the skew correction and the scale correction in the medium feeding direction.		
2pt Y Detects the two register marks TP1 and TP3 (Width direction). Performs the skew correction scale correction in the width direction.			
3pt	Detects the three register marks TP1, TP2 and TP3. Performs the skew correction and the scale correction in the medium feeding and the width direction.		
4pt	Detects the four register marks TP1, TP2, TP3 and TP4. Performs the skew correction, the scale correction in both directions, and the trapezium correction.		



MARK SIZE

Set Value	Description	
4 to 40 mm	Set the length of one side of the register mark. When the horizontal and vertical lengths of the printed mark differ from each other, set the same value as the shorter length.	Length of one side

OFFSET Y / OFFSET X

Set Value	Description					
± 40.00 mm	Generally the origin will be set at the position shown below. However, the position information of the origin may differ depending on the application software. In this case, the location of the origin can be corrected.					
	Register mark: Type 1 Register mark: Type 2					
	Plus X direction Origin Plus Y direction Plus Y direction					
	If the origin is located out of the available cutting area, "ERR37 MARK ORG" will be displayed. In this case, write the register marks in the area closer to the center of the sheet.					

MARK TYPE

Set Value	Description					
TYPE1 ¦├	Select either one of the following types of register marks.					
TYPE2[]	MARK: TYPE 1 MARK: TYPE 2					
		_J TP4	TP2	TP4	TP2	
		TP3	TP1	TP3	TP1	

COPIES (X) / COPIES (Y)

Set Value	Description				
1 to 9999 (COPIES X)	Effective when the same pattern is multi-printed at regular intervals. Cuts automatically the preset number of sheets while detecting register marks consecutively based on the first data.				
1 to 99 (COPIES Y)	For leaf sheets (cut sheets), the value of [COPIES Y] is used as the number of copies. When the number of copies can be set on the application software, like on the supplied FineCut, set the value to [1].				

SPEED LIMIT

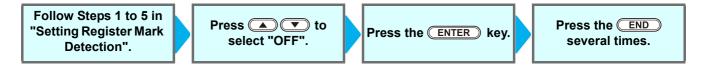
Set Value	Description
0 to 30 cm/s	Set a speed limit for rapid moving in continuous copying. During rapid moving, mark detection may not be performed correctly if a slippery medium is used. In such a case, set a speed limit.
	If no speed limit is required, set the value to "0".

Set Value	Description				
0 to 99 mm	This will set the allowable value of sheet declination when copying continuously. When copying continuously for roll sheet, the printing position may be misaligned gradually because of the sheet declination etc. In such a case, the operation can be continued by detecting register marks again with the following procedures:				
	If the coordinate value of B axis of the Register mark 1 is misaligned exceeding the setting value, cutting operation suspends. When pressing the ENTER key, the device enters the register mark detection waiting mode. To restart the register mark detection, move the light spot of the light pointer to the position described in the figure below with the jog key and press the ENTER key. At this time, do not correct the medium by raising the clamp lever. The operation cannot be continued. If check is not performed, set "0".				
	MARK: TYPE 1 Reference mark 2 (TP1) Position of starting register mark detection				

Resetting the Setting of Register Mark Detection

In case the cutter unit detects a medium that has no printing of register marks and displays [SEARCH START POS.], set the register mark detection to "OFF".

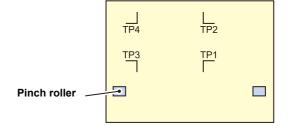
Then, the register mark detection is disabled.



Method of Detecting Register Marks



If the medium is curled, straighten it.
 When using a cutting software having no mark
function, use a medium which has neither stains nor
images in the area (A) located between TP1 and
TP2 and in the area (B) located between TP1 and
TP3.



Setting the Origin of the Register Mark Right after Setting of a Medium

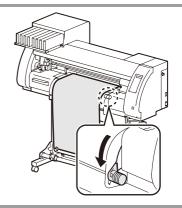


• Set the setting of the register mark detection to [1pt] or more in advance. (P.4-11)



Load the medium and lower the clamp lever.

- The pinch rollers retain the sheet.
- Set the medium referring to the procedures from P.2-25.



2

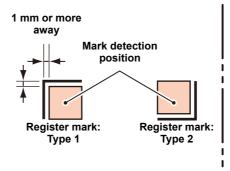
Detecting the medium

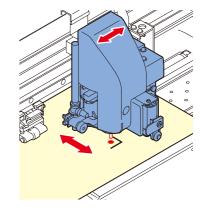
- Detect the medium referring to P.2-25 "Setting a Roll Medium".
- Once the sheet is detected, the display indicates that the cutter unit is waiting for the register mark detection operation.

SEARCH START POS. 0.0 0.0

3

Move the Light Pointer into the area shown below by pressing \square







Press the **ENTER** key after completing the settings.

- The plotter will start detecting the register marks according to the settings of [MARK DETECT].
- See "MARK DETECT" (P.4-12) for the number of register marks.
- In case the cutter unit cannot detect any register marks, it displays "ERROR36 MARK DETECT" on the display. Set the medium again.



Set the origin.

• The display will show the available cutting area and then return to LOCAL.

C

Setting the Origin of the Register Mark after Test Cutting

(Important!)

• Set the setting of the register mark detection to [1pt] or more in advance. (P.4-11)



Confirm the cutting mode is local, press END key.



- · Light pointer will be lit.
- If the mode is printer mode, press the MODE CHANGE key to switch.



Set the origin by performing the procedure 3 of P.4-15 "Setting the Origin of the Register Mark Right after Setting of a Medium".

Extended Functions - Cutting

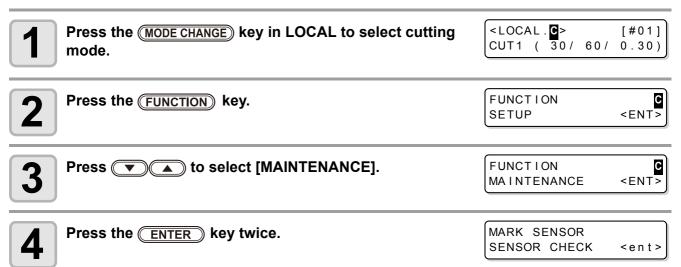
= 10 mm

When Cutting Failed

Checking the Sensor for the Register Mark Detection



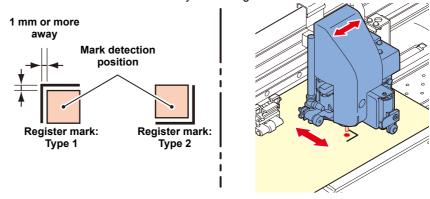
- · You cannot check the response correctly by moving the head or medium manually. Be sure to follow the steps below to check the response.
- · For conditions of an already printed register mark, refer to "Notes on Inputting Data with Register Marks" (P.4-6).
- The setting values are kept in memory even when the power is turned OFF.
- · The settings performed here for type and length of the register mark are reflected in the settings of "Setting Register Mark Detection" (P.4-11).
- The detection speed selected here will be used in the register mark detection operations thereafter.
- The pointer offset value and sensor gain setting value selected by this operation are not initialized by "Initializing the Settings" (P.4-41).





to move the light pointer to the register mark detection Press (h position.

The register mark detection position should be at least 1 mm away from a register mark.



(Important!)

 The origin set here is registered as the origin for normal printing/cutting. If changing the origin after completion of confirming the register mark sensor, perform the operation in P.2-33 "When Changing the Origin".



Press the **ENTER** key.

MARK SENSOR SIZE = 10mm



Press to set the size of the register mark, and then press the ENTER key.

MARK SENSOR FORM : TYPE1 #

- Set value: 4 to 40 mm
- The value entered here is reflected in the "MARK DETECT".



Press to select the type of the register mark, and then press the key.

MARK SENSOR SPEED = 10cm/s

- Set value: TYPE 1(非), TYPE 2([])
- The value entered here is reflected in the "MARK DETECT".



Press to set the register mark reading speed, and then press the key.

- Set value: 10 to 20 cm/s
- The value entered here is reflected in the "MARK DETECT".



Press to execute the register mark detection. (see the next page)

Detect Operation



Scan in the X direction (plus direction) to confirm that the line can be detected.

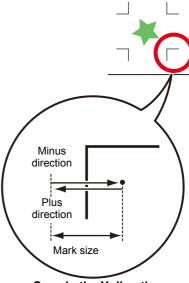
- The buzzer sounds when the line is detected. If the line is not detected, the buzzer does not sound.
- 2 Scan in the X direction (minus direction) to confirm that the line can be detected.
- Scan in the Y direction (plus direction) to confirm that the line can be detected.
- 4

Scan in the Y direction (minus direction) to confirm that the line can be detected.

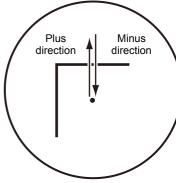


Confirm that the buzzer sounds 4 times upon completion of Steps 1 to 4.

- When the detection behavior completes successfully, the buzzer sounds 4 times.
- If the cutter unit failed to detect the line, perform "Adjust the Sensitivity (Light Intensity) of the Mark Sensor LED (Automatically)" (P.4-21).
- If the cutter unit cannot detect the line successfully even after you adjusted the sensitivity, verify the registration conditions and contact our service office.



Scan in the Y direction



Scan in the X direction

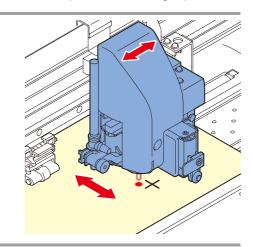
Correcting the Light Pointer Position

If the cutter unit fails to recognize any register mark properly, the possible cause is an error in the positional relationship between the mark sensor and the light pointer. In this case, correct the position of the light pointer.



Install a water-based ballpoint pen in the tool holder.

 When making an adjustment, use a special pen for the cutter unit to reduce the fudge factor. Any pen color works for the adjustment. You can order the special pen from the distributor in your region.





Make sure that the machine is in cutting mode.

• If the machine is in printer mode, press the MODE CHANGE key to switch the mode to cutting mode.

3

Press the (FUNCTION) key.

FUNCTION SETUP <ENT>



Press to select [MAINTENANCE].

FUNCTION
MAINTENANCE <ENT>

5

Press the ENTER key twice.

MARK SENSOR SENSOR CHECK <ent>

6

Press (*) (*) to select [POINTER OFFSET].

MARK SENSOR POINTER OFFSET <ent>

7

Press the **ENTER** key.

- A 10 mm by 10 mm cross pattern will be plotted with a pen.
- The light pointer turns on and moves to the center of the cross pattern.

8

Press to adjust the light pointer position so that the center of the light pointer is in alignment with the center of the cross pattern.



Press the ENTER key.

 The machine will return the screen in Step 1 after registering the correction value. POINTER OFFSET Y = 0.3 X = 0.5



 The value registered in the [POINTER OFFSET] is not initialized even by executing P.4-41 "Initializing the Settings".

Adjust the Sensitivity (Light Intensity) of the Mark Sensor LED (Automatically)

If an error occurs frequently in register mark detection, a possible cause is an improper sensitivity of the mark sensor LED. In this case, adjust the sensitivity (light intensity) of the mark sensor LED.



• Make sure that the medium is clean and white, and locate the medium directly under the sensor.



Make sure that the machine is in cutting mode.

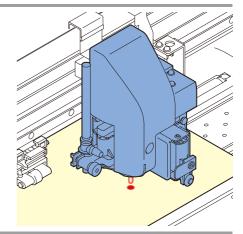
• If the machine is in printer mode, press the MODE CHANGE key to switch the mode to cutting mode.

<loca< th=""><th>[#01]</th></loca<>	[#01]			
CUT1	(30/	60/	0.30)



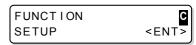
Confirm that the mark sensor is located just above a plain area (non-printed area) of the medium.

• If the mark sensor is not located just above a plain area, correct the location by pressing ().



3

Press the **FUNCTION** key.



4

Press to select [MAINTENANCE].



5

Press the ENTER key twice.

MARK SENSOR SENSOR CHECK <ent>



Select [LEVEL ADJUST] by pressing (▼



MARK SENSOR LEVEL ADJUST <ent>



Press the **ENTER** key.

LEVEL ADJUST OUT: **** IN: ****



Press the **ENTER** key after the number displayed on the screen is stabilized.

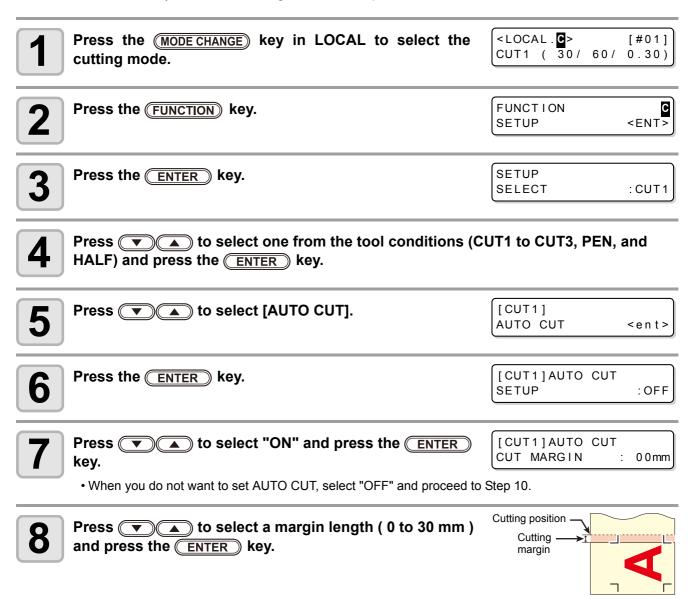
- If all digits of the number cannot be stabilized, press the **ENTER** key when the leftmost digit of the number is fixed.
- The adjusted value is registered and the machine returns to LOCAL.
- Pressing the Function key enables you to move the cutter unit manually.



• The value registered in [LEVEL ADJUST] will not be initialized even if the procedure described in P.4-41 "Initializing the Settings" is performed.

Setting Automatic Cutting

A medium is automatically cut off after cutting has been complete.





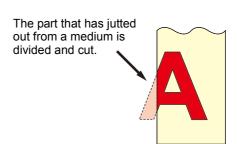
Press the END key several times to return to LOCAL.



- The setting configured here is not reflected in the automatic cutting during printing. When you set automatic cutting during printing, see "AUTO CUT" (P.3-27) in Extended Functions Printer.
- The "AUTO CUT" is not performed when "1" or higher value is set to the take-up timing (P.4-37). (Take up has priority.)

Dividing and Cutting

When the function of dividing and cutting has been set, data that is larger than the width of a medium can be divided and cut. (Dividing and cutting function)





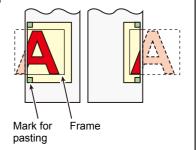
· The following convenient functions can be used with the dividing and cutting function.

Cutting a frame:

Along with the cut data, a frame that fits the size of the cut data is automatically cut.

Attaching marks for pasting:

You can attach marks for pasting two media produced by dividing and cutting a medium.





Setting the Dividing and Cutting Function

Press the MODE CHANGE key in LOCAL to select the cutting mode.

<LOCAL. C> [#01] CUT1 ($\overline{3}0/60/$ 0.30)

Press the **FUNCTION** key.

FUNCTION SETUP <ENT>

Press the ENTER key.

SETUP SELECT : CUT 1

4

Press (CUT1 to CUT3, PEN, and HALF) and press the ENTER key.

5

Press (to select [DIVISION CUT].

[CUT1] DIVISION CUT <ent>

6

Press the ENTER key.

[CUT1]DIVISION CUT SETUP :OFF

Press v to select "ON" and press the ENTER key.

[CUT1]DIVISION CUT FRAME CUT : ON

• When having selected "OFF", proceed to Step 11.



Press to select [FRAME CUT] and press the key.

[CUT1]DIVISION CUT FRAME CUT :OFI

• When you want to cut a frame, select "ON".



Press to select [MARK CUT] and press the ENTER key.

[CUT1]DIVISION CUT MARK CUT :ON

• When you want to attach marks for pasting, select "ON".



Press the END key several times to return to LOCAL.



- The set values are recorded even when the power has been turned OFF.
- Because a mark for pasting is 1 cm long, the width of an effective cut area needs to be 1 cm or more.
- During the operation of dividing and cutting, data sent from the host computer is ignored.
- Dividing and Cutting cannot be performed in any of the following cases:

When the data size is larger than the reception buffer capacity

When an origin change command is contained in the cut data

When register mark detection is performed

When the width of an effective cut area is 1 cm or less

When the test data stored in this machine has been cut

Cancelling the Setting of Dividing and Cutting

Perform the operations in Steps 1 to 6 in "Setting the Dividing and Cutting Function".

Press (A) (V) to select "OFF".

Press ENTER.

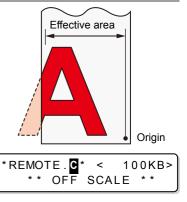
Press END key several times.

Cutting Data by Using the Dividing and Cutting Function



Data is received from the computer.

 When data has jutted out from the cut area, a screen shown right appears.



2

When cutting has been complete, the frame and marks for pasting are automatically cut.

** DIVISION **

3

When the frame has been cut, the screen returns to LOCAL.



• Do not replace a medium when this screen does not appear.



Set a new origin.

- Move the carriage using the jog keys and set an origin.
- When there is no space to be cut, replace the medium.



Press the REMOTE key to go to the remote mode.

- The medium is fed by the maximum medium length of the cut data and cut.
- When the medium is not fed or the length of the medium is short, replace the medium with a larger one in Step 4.



• Cut does not start if new origin was not set in Step 4.



Repeat the operations in Steps 4 and 5.

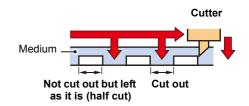
 Repeat the operations until there is no data that exceeds the width of the medium

<local.< th=""><th>C></th><th></th><th>[#01]</th></local.<>	C >		[#01]
[CUT1]	30	60	0.30

• When the operations have been completed, tool conditions are displayed and the screen returns to LOCAL.

Cutting with a Dotted Line

Data to be cut is not cut out completely but is cut with a dotted line. To perform cutting with a dotted line, you must set the tool condition to "HALF".



CUT LENGTH

 $5\,mm$

- For cutting a medium with a dotted line, use the sold separately cutter (Model number: SPB-0001, a set of three ultra hard blades).
- Install a pen-line sponge before cutting a medium with a dotted line. (P.1-10)

Press the MODE CHANGE key in LOCAL to select the cutting mode.	<pre><local.C> [#01]</local.</pre>
Press the FUNCTION key.	FUNCTION SETUP <ent></ent>
Press the ENTER key.	SETUP SELECT : CUT1
Press to select the tool condition (HALF) and press the ENTER key.	SETUP SELECT : HALF
5 Press to select [HALF CUT].	[CUT1] HALF CUT <ent></ent>
6 Press the ENTER key.	[CUT1]HALF CUT SETUP :OFF
Press to select a cutting pressure for Half cutting. • Set value: 0 to 300 g	[CUT1]HALF CUT HALF CUT PRES. = 50g
8 Press the ENTER key.	[CUT1]HALF CUT HALF LENGTH = 0.1mm
Press to select the length of Half cutting. • Set value: 0.1 to 6.0 mm	[CUT1]HALF CUT HALF LENGTH = 0.1mm
Press the ENTER key.	[CUT1]HALF CUT



Press to select the length of the part cut out from the medium.

[CUT1]HALF CUT CUT LENGTH = 50mm

• Set value: 5 to 150mm

12

Press the ENTER key.



Press the END key several times to return to LOCAL.



- When a tool condition other than "HALF" has been selected in Step 4, cutting with a dotted line cannot be set.
- The set values are recorded even when the power has been turned OFF.
- When a medium is cut with a dotted line, the medium is cut along with the backing sheet. Therefore, the life of a cutter blade is shorter than in normal cutting.
- The cutting pressure applied when a medium is cut through can be set by cutting conditions (P.2-3).



Reference Value

The followings are the cutting condition and dotted line cutting condition when cutting the cutting sheet or the polyvinyl chloride media.

Cutting condition	
PRESSURE	100 ~ 150 g
OFFSET	0.30 mm

	Condition for cutting with a dotted line	
ĺ	HALF CUT PRES.	30 g
ĺ	HALF LENGTH	0.5 mm
ĺ	CUT LENGTH	10 mm

The followings are the cutting condition and dotted line cutting condition when cutting 65 kB (kilogram base) media.

Cutting condition	
SPEED	40 cm/s
PRESSURE	40 g
OFFSET	0.30 mm

Condition for cutting with a dotted line	
HALF CUT PRES.	0 g
HALF LENGTH	0.5 mm
CUT LENGTH	10 mm



• "CUT LENGTH" needs to be set shorter for characters with many strokes and small characters.

Changing the Order of Cutting

By changing the order of pieces of data for cutting transmitted from the host computer, you can change the order of cutting them. (Sorting function)

When data to be cut with a single stroke cannot be cut with a single stroke because of the order of pieces of data transmitted from a software application, you can cut the data with a single stroke by changing the order of cutting them.

In the following case, data cannot be cut with a single stroke.

Some application software transmit data to this machine in the order of creating and editing data.

· For example, when data read by a scanner has been revised, the data cannot be cut with a single stroke because the part revised is cut later.

When cutting data by sorting

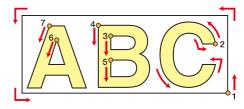
In sorting, data is cut as blocks. A block means movement from a down stroke with a pen to an up stroke with a pen. After one block has been cut, a block whose starting point is closest to the already cut block is cut.

The starting point and cutting direction of host data are not changed.

Circle : Starting point of data = Starting point of cutting

: Data direction = Cutting direction

Numbers: Order of block cutting



With the sorting function, you can do the following:

When you turn the sorting function "ON", the following functions are activated:

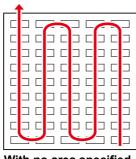
Auto-feeding function:

This function is used to detect the length of data to be cut and to draw out a medium whose length is the same as that of the data beforehand.

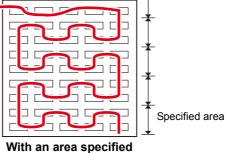
Area control function:

This function is used to specify an area beforehand and to preferentially cut blocks of data that fit into the

When there is no block of data that fits into the area, the area is enlarged so that the data is cut gradually in the medium-feeding direction.

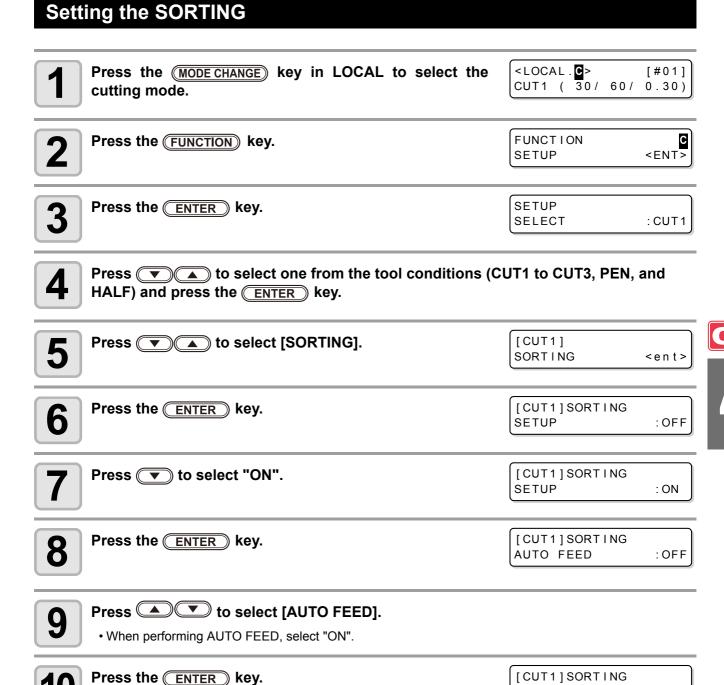




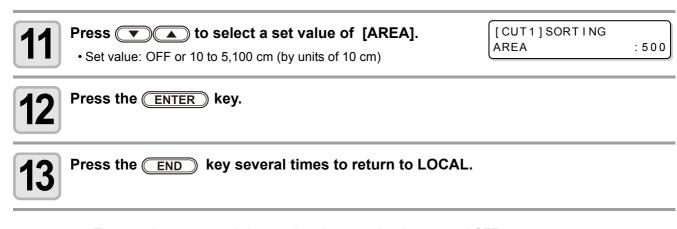


With no area specified

AREA



:OFF





- The set values are recorded even when the power has been turned OFF.
- When the set value has been changed, the data in the reception buffer is cleared.
- When the sorting function is set to ON, the reception buffer capacity decreases to about 20 MB.



Cancelling the Setting of the SORTING



Procedure for SORTING



Transmit data.



- The size of the data that has not been processed yet in the reception buffer is displayed. Cutting (plotting with a pen) is not performed. The processed line segments are stored in the sorting buffer.
- 2

When data transmission has been complete, the waiting time until cutting starts is displayed.



- The remaining time is displayed in units of seconds.
- When no data is received while waiting for the start of cutting, the counter counts down.

3

Perform auto-feeding.



- If [AUTO FEED:ON] was selected in Step 9 of Setting the SORTING(P.4-29), AUTO FEED will be performed.
- Before starting of the cutting operation, feed the medium by the amount for the cutting. If the amount of the cutting of the medium is not fed, [ERROR 15-C AUTO FEED] is displayed.
- After replacing the medium with a longer one, perform data transmission or cut the data into pieces according to the specified number (P.4-46).



Start cutting.

• The already cut data is displayed in percentage.





When the cutting has been completed, the screen goes to the remote mode.

REMOTE. C [#01] CUT1 (30/ 60/ 0.30)



When sorting is [ON], after receiving the data to be cut, the cutting operation will not start until it
completes the operation of the data receiving and the sorting process.

However, in the following situation, perform sorting and cutting without waiting.

When the sorting buffer is full of data (about 540,000 line segments)

When cutting conditions, such as Tool number, SPEED, PRESSURE, have been changed When a feed command or origin change command has been executed

Cutting out Data without Register Marks

To print & cut the data without register marks, adjust the misalignment between a printed image and the cutting line (P/C Adjust).



- Before adjusting, set a PVC medium and attach the provided eccentric cutter for cutting.
- Before setting in this section, perform "Setting Media Correction" (P.3-8) in print mode.
- Even if adjusting in this section, some data may be slightly misaligned depending on the print mode, medium features, the pinch roller setting or the other causes. If so, adjust again.
- This function is valid when the firmware Ver.2.10 or later is installed.

The P/C Adjust has the following items.

Set item	Overview
P/C ORIGIN OFFSET	Adjusts the misalignment between the print origin and the cutting origin.
P/C SCALE ADJUST	Adjusts the scale to apply cutting to the correction value of the media-feeding set on the media correction (P.3-8).

Example of the P/C Adjust

This can be set for the conditions of each tool separately. Set it according to the purpose of use.

When using the tool condition [CUT1] to cut the data with the register mark detection.	P/C Adjust is not needed.
When using the tool condition [CUT2] to print & cut the data without register marks.	Perform P/C Adjust.
When using the tool condition [CUT3] only to cut the color medium or the like.	P/C Adjust is not needed.
When using the tool condition [PEN] only to draw with a pen.	P/C Adjust is not needed.

Setting the P/C ORIGIN OFFSET

Adjust the misalignment between the print origin and the cutting origin.

According to the scanning speed in the Y direction, 540dpi and 720dpi has the different ink drop positions while printing. Adjust with the resolution you want to print.



- This machine stores an adjustment value of either 540dpi or 720dpi. Select the resolution of the printing to be performed after adjustment.
- You can set the P/C origin offset for each tool condition.
- When you cut by using two and more tool conditions ([CUT1] and [HALF] etc.) within the same data, set
 the same adjusting value for each tool condition. If you cut by tool condition with different adjusting
 value, misalignment may occur.
- When you set the same setting for two and more tool conditions, it is not required to print & cut the adjusting pattern in the second tool condition setting. After performing the Step 8, press key to enter the P/C origin offset value.



Set a PVC medium (P.2-15), and attach the eccentric cutter for cutting (P.2-10).

Press the MODE CHANGE key in LOCAL to select the cutting CUT1 (30 / 60 / 0.30)

Press the FUNCTION key.

FUNCTION SETUP <ENT>



4

Press the **ENTER** key.

SETUP SELECT : CUT1

5

Press (T) to select one from the tool conditions (CUT1 to CUT3, PEN, and HALF) and press the (ENTER) key.

6

Press (*) (**) to select [P/C ADJUST] .

[CUT1] P/C ADJUST <ent>

7

Press the ENTER key twice.

P/C ORIGIN OFS. 540dpi <ent>

8

Press to select 540dpi or 720dpi, and press the ENTER key.

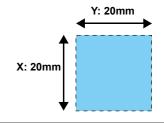
P/C ORIGIN OFS.
PRINT START : ent

- Select one depending on the resolution you want to print with after adjustment.
- Press to change the print start position (print origin).
- Press to go to Step 10.



Press the **ENTER** key to print & cut the adjustment pattern.

- The adjustment pattern shown on the right is printed & cut.
- A blue part shows the pattern, and a dotted line part shows the cutting line.





Remove the cut pattern, and adjust the misalignment.

• Press to enter an offset value of the cutting line. (approximately 0.05mm per 1 step)

Select X/Y direction: Press
Enter an offset value: Press
V

The cutting line fits the pattern.	The cutting line is misaligned 0.5mm leftward, and 0.6mm upward.	The cutting line is misaligned 0.4mm rightward, and 0.7mm downward.	The cutting line is misaligned 0.3mm upward.	The cutting line is misaligned 0.2mm rightward.
	0.6mm	±	0.3mm	→ ← 0.2mm
Y=0, X=0	Y=-10 (0.05x 10) X=-12 (0.05x 12)	Y=+ 8 (0.05x 8) X=+14 (0.05x 14)	Y= 0 (0.05x 0) X=-6 (0.05x 6)	Y=+4 (0.05x 4) X= 0 (0.05x 0)



Press the **ENTER** key.

• Perform the steps from Step 9 again, and repeat until they align.

P/C ORIGIN OFS.
PRINT START :ent

Press the END key several times to return to LOCAL.



- Even if you adjust with the P/C origin offset, misalignment may occur when you print & cut data actually in some cases. In such a case, you can adjust again by the procedures below:
- (1) Press the MODE CHANGE key to select the cutting mode.
- (2) Press the REMOTE key to switch to the remote status.
- (3) Press the FUNCTION
- (4) Adjust by pressing .
 - Change the direction of X/Y with , and enter the offset value with .
- P/C ORIGIN OFS. X = 0 Y = 0
- (5) Press the **ENTER** key to save the adjusting value.
 - When you save the adjusting value, the value registered with the P/C origin offset is updated.
 - If you do not wish to save the adjusting value, press the **END** key or the **FUNCTION** key.

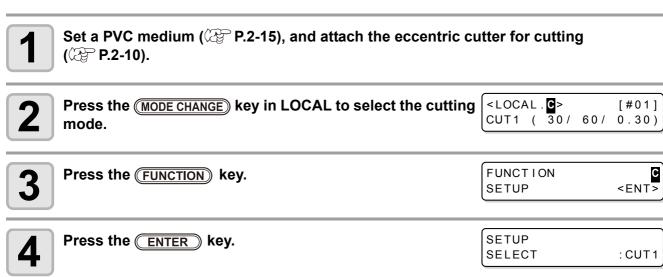


Setting the P/C SCALE ADJUST

Adjust the scale to apply cutting to the expansion or contraction of the print caused by the media-feeding correction.



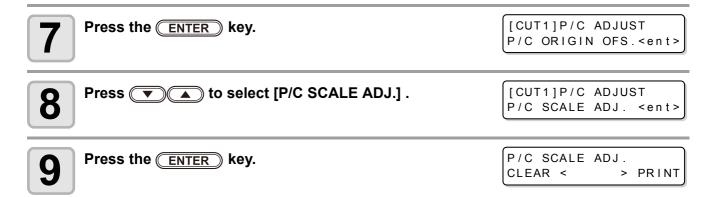
- When a medium used or the feeding correction value is changed, readjust it as needed. (When starting to print the pattern, the former setting is initialized.)
- This setting fits the cutting position to the printing position. Please note that the value adjusted here is also applied to cut only or to draw with a pen by PEN tool.
- If you do not want to apply this setting for cutting only, perform the followings.
 - →Select "Clear" on Step 9.
 - →Cut with a tool condition without the P/C scale correction.



Press (to select one from the tool conditions (CUT1 to CUT3, PEN, and HALF) and press the (ENTER) key.

Press to select [P/C ADJUST].

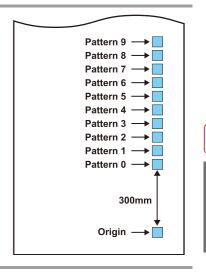
[CUT1]
P/C ADJUST <ent>



10

Press to print all the pattern and cut the pattern 0.

- The pattern shown on the right is printed.
- To clear the adjustment value, press and go to Step 16.
- The origin is approximately 300mm away from the pattern 0.

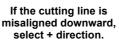


11

Remove the pattern 0, and check the misaligned direction.

• Some are misaligned in the Y direction, but it has no effect on this adjustment.







If the cutting line is misaligned upward, select - direction.

12

Press value to set + / - .

P/C SCALE ADJ. DIRECTION = +

13

Press the ENTER key.

• The machine cuts from the pattern 1 to 9.

14

Remove the pattern from 1, and select one that fits the cutting line and the pattern.

15

Enter the number of the fit pattern, and press the ENTER KEY.

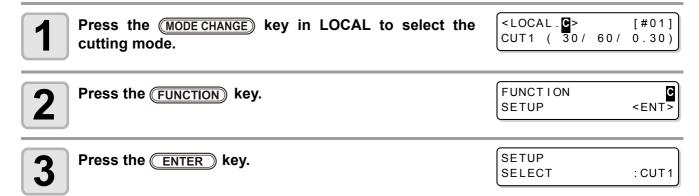
P/C SCALE ADJ. ADJ.VALUE =5

16

Press the END key several times to return to LOCAL.

Other Settings

Change the settings according to the types of use.



Press to select one from the tool conditions (CUT1 to CUT3, PEN, and HALF) and press the ENTER key.

Press to select an item to set.

• See "List of Settings" to select one.

Press the ENTER key.

Press to select a set value.

• See "List of Settings" to select one.

Press the ENTER key.

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

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

List of Settings

The setting is as follows when purchasing:

Function Name	Overview	Set Value
PINCH ROLLER	Setting the pinch roller pressure and the pinch roller numbers according to the medium to be used.	See P.4-2.
MARK DETECT	See P.4-5.	
	Normal cutting mode	STD.
CUT MODE (P.4-38)	Cutting in a short time (not suitable for heavy media)	FAST
	Cutting mode that prioritizes cutting quality	FINE
AUTO CUT	After cutting has been completed, a medium is cut off automatically.	See P.4-22.
DIVISION CUT	The function of dividing and cutting is set.	See P.4-23.
HALF CUT	The function of cutting with a dotted line is set.	See P.4-26.
UP SPEED	The movement speed of a medium and a carriage when a tool is up is set.	<u>AUTO</u> /5/10/20/30
DUMMY CUT (P.4-38)	The operation of dummy cutting is set.	OFF/ON
MEDIA TYPE *1	The weight of a medium to be mounted is set.	STANDARD / HEAVY
SORTING	The sorting function is set.	See P.4-28.
ADJ-PRS OFFSET (P.4-38)	When there is part of a medium left uncut at the starting and ending points, the value is increased.	0 ~ <u>3</u> ~ 7
TAKEUP TIMMING *2 Set the timing of take-up the medium when the cutting several sheet of data with a register mark or when setting the Multiple Cuttings function.		OFF / 1 to 99 (for one line)
OVER CUT	Set when there is a part remaining uncut because of thick medium etc.	<u>OFF</u> / 0.1mm ~ 1.0mm
VACUUM	The ability to adsorb a medium is set.	STRONG/ STANDARD / LittleWEAK / WEAK / OFF

- *1. When setting the medium setting to "HEAVY", the cutting speed is limited to 20cm/s.
- *2. When take-up timing is set, the setting of AUTO CUT (P.4-22) will be invalid.
 - When take-up timing is set to "1" or higher, the setting of the switch of take-up device is required. ($\ensuremath{\text{CPP}}$ P.2-29)

About the Cutting Mode

Select "FINE" in any of the following cases:

- When characters of which the size is 10 mm or less are cut.
- When pictures or characters that have many sharp corners are cut.

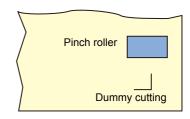
is too complicated. In such a case, select "FAST" for a smooth finish.

- When minute cutting is required.
 However, the edges of a finished pattern may become jagged when the data transmitted from the host computer
- The cutting speed is limited to 20cm/s for "FINE".

About Dummy Cutting

This is performed after detecting the medium or when changing the tool type in front of the pinch roller which is near the both ends from the position of the cutter unit is placed presently.

Set the dummy cutting function to OFF when you do not want to damage the medium in cutting cut-out characters.





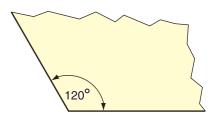
- When "PEN" is selected for the tool condition, the dummy cutting cannot be set.
- The default of the dummy cutting function is ON.
 When you have set the dummy cutting function to OFF, perform test cutting (P.2-43) to adjust the cutter blade orientation before cutting.

About Cutter Blade Corrected Pressure Offset

Some part of a medium is left uncut because the pressure applied when the cutter blade touches the medium is weak.

When an optional eccentric blade is used, some part of a medium to be cut with the blade's angle being 120 degrees or less may be left uncut.

This is because the corners are cut with a low pressure (about 5 g) automatically applied so that the medium does not turn up. Some part of a medium may be left uncut because the blade edge does not rotate smoothly in its moving direction with the cutting pressure being low. In such a case, configure the setting for the pressure to be increased when the corners are cut.

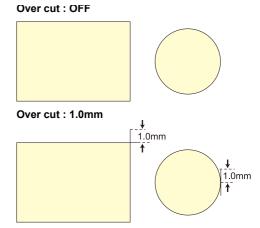




About Over Cutting

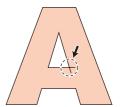
Specify whether the over cutting function is enable or unable and the length of the over cutting.

If the length of the over cutting is set, cutting is performed with extra cutting space at the front by the specified amount of length at the start of cutting and tool up is performed at the end going too far.





 With setting the over cutting properly, you can reduce the part remaining uncut at the start/end of the cutting, especially for the medium easy to bend. However, too much amount of over cutting causes to scratches on the medium.





Copying the Setting Contents

The setting contents can be copied to other tool conditions.

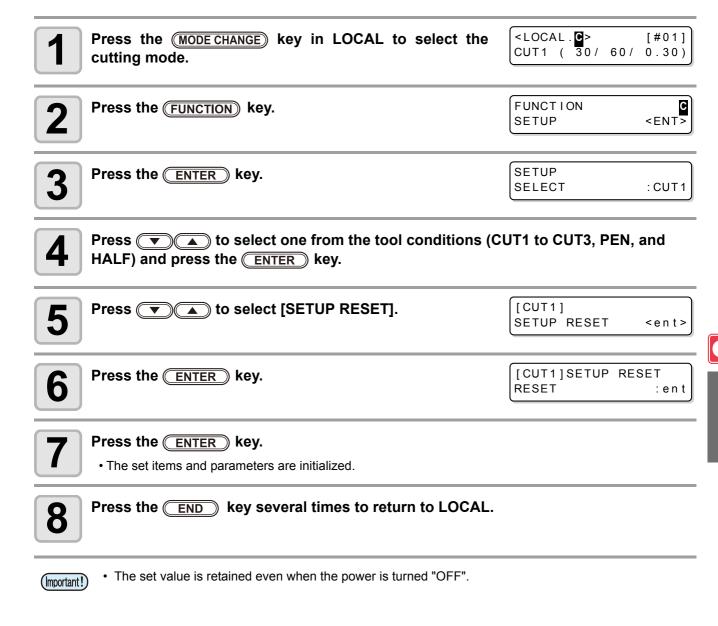
Press the MODE CHANGE key in LOCAL to select the cutting mode.	<local .="" <b="">C> CUT1 (30/</local>	[#01] 60/ 0.30)
Press the FUNCTION key.	FUNCTION SETUP	<ent></ent>
3 Press the ENTER key.	SETUP SELECT	: CUT1
Press (A) to select one from the tool conditions (C HALF) and press the (ENTER) key.	UT1 to CUT3, P	EN, and
Press to select [SETUP COPY].	[CUT1] SETUP COPY	< e n t >
6 Press the ENTER key.	[CUT1]SETUP CUT1 ->	
Press to select the tool condition to copy (CUT1 to CUT3, PEN, HALF or ALL). • If "ALL" is selected, the set contents of all tool conditions are same.	[CUT1]SETUP CUT1 ->	
8 Press the ENTER key.	COPY CUT1 ->	: en t
9 Press the ENTER key.		

• You cannot copy the setting performing with the USER TYPE/TOOL key (speed, cutting pressure, offset

Press the END key several times to return to LOCAL.

(Important!)

Initializing the Settings



Cutting Samples

In such a case as when data cannot be cut normally, a sample stored in this machine is cut to check the cause of the abnormality.

Sample of "Cut"







- · When sample cutting has been performed, data stored in the reception buffer is deleted.
- When detecting the medium and the mode is in print mode, if you perform the sample cut as it is, the following screen will be displayed by pressing the **ENTER** key in Step 10. In this case, press the ENTER key to switch the setting of the pinch roller pressure to the cut mode and then perform the sample cut.
- If the END key is pressed, switching operation will not be performed.

! PR PRESSURE: PRINT! **SWITCH** : ent



[#01] <LOCAL.C> Press the MODE CHANGE key in LOCAL to select the CUT1 ($\overline{3}0/60/$ 0.30) cutting mode. **FUNCTION** <ENT> Press the (FUNCTION) key. SETUP FUNCTION MAINTENANCE <ENT> MAINTENANCE Press the **ENTER** key. 4 MARK SENSOR <ent> MAINTENANCE Press (*) (*) to select [SAMPLE CUT]. SAMPLE CUT <ent> SAMPLE CUT Press the ENTER key. 6 SELECT : CUT

Press **▼ (▲**) to select sample data to be cut.

• Two samples are available: "CUT" and "LOGO". When having selected "CUT", proceed to Step 10.

SAMPLE CUT SELECT LOGO

8

Press the ENTER key.

SAMPLE CUT LOGO : 100%

When cutting LOGO, press () to select magnification (1 to 999%).



SAMPLE CUT LOGO : 200%

: en t



Press the **ENTER** key.

SAMPLE CUT CUT START



Press the **ENTER** key to start cutting.

About the Result of Sample Cutting

When sample data can be cut normally, but other data cannot be cut normally

⇒ The host computer has an abnormality.

When both sample data and other data cannot be cut normally

➡ Increase the set value in [ADJ-PRS OFFSET] (② P.4-37) and increase the pressure when the cutter comes down.





Cutting a Medium into Multiple Pieces with a Certain Length

You can cut a medium into multiple pieces with a specified length. (Automatic media-cutting function)

Settings	Set Value	Overview
Cutting interval	10 to 10,000 mm	Distance between the leading and terminal ends of a cut medium is set.
Leading end adjustment cutting	0 to 500 mm	The length of a medium's leading end to be cut is set before automatic media cutting starts. Even when the leading end of a medium has been cut obliquely or the cut surface is not smooth, leading end adjustment cutting enables you to cut a medium into a specified number of pieces with the same length.
Number of times a medium is cut	1 to 9,999	The number of times a medium is cut (number of pieces produced by cutting a medium) is set.

	<u> </u>	
Press the MOD cutting mode.	DE CHANGE) key in LOCAL to select	the <pre><local.c> [#01]</local.c></pre>
Press the FUNC	CTION key.	FUNCTION SETUP <ent></ent>
Press Press the ENTI	to select [MAINTENANCE] and ER key.	MAINTENANCE MARK SENSOR <ent></ent>
4 Press VA	to select [MEDIA CUT].	MAINTENANCE MEDIA CUT <ent></ent>
5 Press the ENT	ER key.	MEDIA CUT INTERVAL = 10mm
6 Press • Set value: 10 to	to select a cutting interval.	MEDIA CUT INTERVAL = 500mm
7 Press the ENT	ER key.	MEDIA CUT FRONT CUT OFF= 10mm
Press Adjustment cutters of the Set value: 0 to 50		MEDIA CUT FRONT CUT OFF= 50mm
9 Press the ENT	ER key.	MEDIA CUT COUNT = 1
10 Press	to select the number of times	a MEDIA CUT

10

• Set value: 1 to 9,999

medium).

medium is cut (number of pieces produced by cutting a



Press the **ENTER** key.

- Cut is performed for the specified number of times.
- Pressing the **END** key suspends the operation.



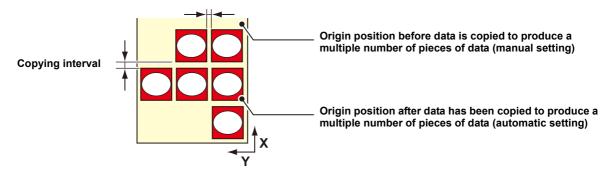
Press the END key several times to return to LOCAL.



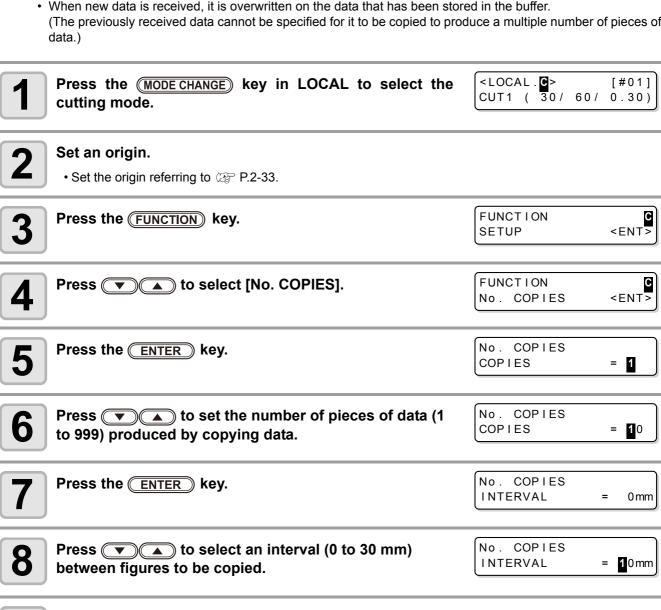


Perform Multiple Cuttings

Already received data can be copied (plotted with a pen) to produce a multiple number of pieces of data. (Up to 999 pieces)



- · Copying of data to produce a multiple number of pieces of data is performed with the data stored in the machine's reception buffer being specified.
- Only one piece of data can be stored in the reception buffer.
- When new data is received, it is overwritten on the data that has been stored in the buffer. (The previously received data cannot be specified for it to be copied to produce a multiple number of pieces of



Press the ENTER key. 9

• The mode enters to REMOTE automatically, and then the data will be cut.

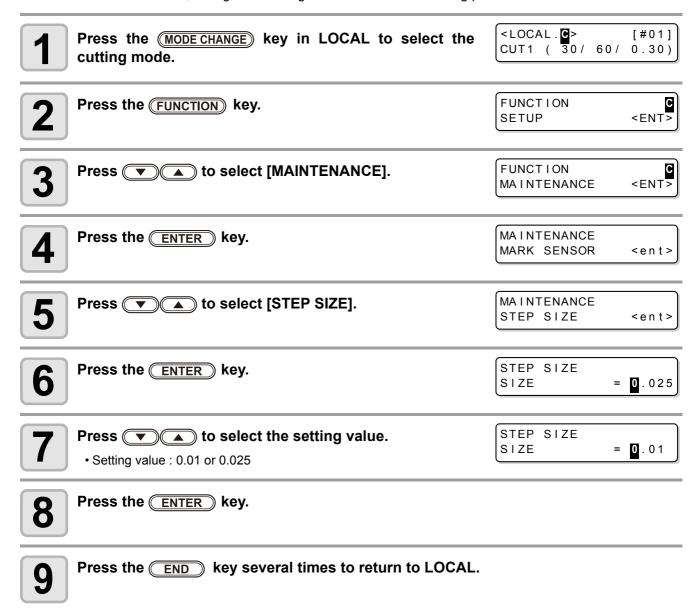
- When copying data to produce a multiple number of pieces of data, make sure to set an origin again. When, immediately after data is copied to produce a multiple number of pieces, a piece of data is cut according to a specified number without setting an origin, data is cut (plotted with a pen) with themselves being overlapped.
- While data is being cut into pieces according to a specified number, data from the host computer cannot be received.
- There must be an interval of 10 seconds or more between the preceding data and the succeeding one transmitted from the host computer. When the succeeding data is transmitted within 10 seconds, both two data are cut into pieces according to a specified number.
- · Data to be divided and cut is not divided, but cut into pieces according to a specified number. When an error is displayed, see "Error Messages" (P.7-10).





Setting the Step Size

For some application software (especially old ones), data output may possible only by different unit from the limit of resolution. In such a case, change this setting value and make the cutting performed in correct size.



Other Convenient Functions

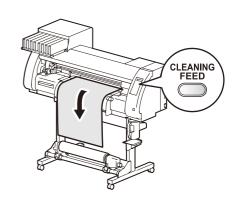
Medium Feeding

Before you start cutting or printing with a pen, feed a certain length of the medium to allow a margin.

By feeding the sheet beforehand, you can check for a skew of the medium or prevent a skew while cutting the long data (or printing the long data with a pen).

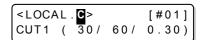


- If you start high-speed cutting without feeding a certain length of the roll medium beforehand, the medium may not be fed properly, causing an error in the machine.
- The <u>FEED</u> key does not work until the medium is detected.



1

Press the MODE CHANGE key in LOCAL to select the cutting mode.



2

Press the **CLEANING/FEED** key.



C

3

Press to input the feed amount.

• Set value: 0.1 m to 51.0 m (by the unit of 0.1 m)





Press the **ENTER** key.

• The medium will be fed by the input length.





Press the END key to stop the medium feeding.

How to turn the heater OFF in the cutting mode

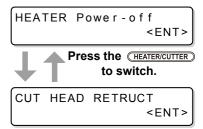
Press the HEATER/CUTTER key in the cutting mode to turn the heater OFF.



Press the HEATER/CUTTER key twice in the cutting mode.

HEATER Power-off <ENT>

• Pressing the <u>HEATER/CUTTER</u> key switches "HEATER Power-off" and "CUT HEAD RETRUCT".





Press the **ENTER** key.

• The machine works depending on the setting selected on the step 1.



- Setting above keeps the heater OFF in the cutting mode.
- If switched from the cutting mode to the printing mode, press the HEATER/CUTTER key. The machine restarts the control by the heater temperature set in the printing mode.

Chapter 5

Extended Functions - Common Settings -



This chapter

describes the operation procedures for using both the printing and cutting function more conveniently and each setting procedure.

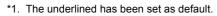
Common Settings	5-2
Setting the Pinch Rollers	
Setting a Cut Method	5-4
Setting CONFIRM. FEED	5-5
Setting the Expand Function	
Setting Margins	5-8
Setting the RECEIVED DATA	5-9
Setting Time	5-10
Setting Units	
Setting the MACHINE NAME	
Setting a KEY BUZZER	5-13
Confirming Machine Information	
Displaying the Information	5-14
Printing the List of Settings	

Common Settings

Common settings are functions for using this machine easily. The items set here are common to both the printing and cutting modes.

The common settings are as follows:

Item		Set Value*1	Meaning	
PR SETUP		ON/ PWR ON ONLY/ PR No.ONLY/ OFF	Sets the setting of a pinch roller when detecting the medium.	
CUT METHOD P.5-4		2 STEP/ 3 STEP	The method of cutting a medium with automatic cutting used is set.	
CONFIRM. FEED P.5-5		OFF / 10 ~ 500 mm	A feeding method for confirming the result of test printing can be set. When this is turned ON, the screen changes to "BACK FEED" for returning a medium to the original position by pressing FUNCTION.	
EXPANDS P.5-6		ON / OFF	A printed area or cut area (area plotted with a pen) can be expanded.	
MARGIN P.5-8	LEFT	0 to 85mm (by the unit of 1 mm)		
	RIGHT	0 to 85mm (by the unit of 1 mm)	Used to set margins on the right and left edges of a medium.	
RECEIVED DAT	Ā	<u>AUTO</u> / MANUAL	This setting can be changed for printing/cutting using an application other than those that come standard with this machine (RasterLinkPro4 or later/FineCut7 or later *2).	
TIME SET			The present date and time are set.	
UNIT SETUP	TEMP.	<u>°C</u> / °F	A unit for displaying temperature is set.	
從₹ P.5-11	LENGTH	mm / inch	A unit for displaying length and area is set.	
MACHINE NAME		<u>01</u> to 99	The names of machines (machine No.) are set for recognizing them when they are connected to one another with a USB 2.0 interface used.	
KEY BUZZER		ON / OFF	A buzzer sound when keys are pressed is set.	
INFORMATION			Various types of information for confirming the condition of this machine can be checked.	



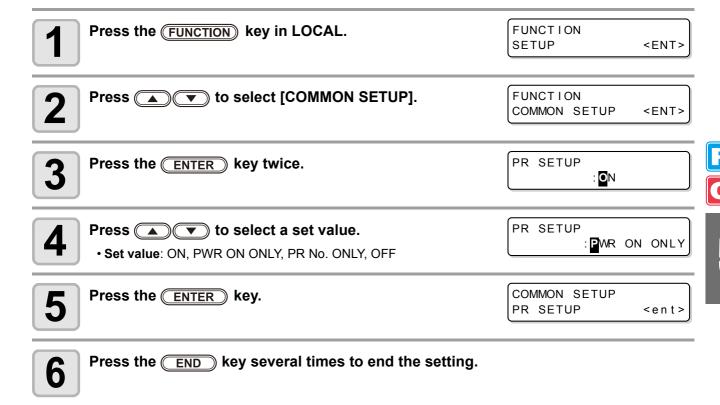
^{*2.} When [1] has not been displayed at the lower left of the dialog of FineCut7 (or later), configure this setting.



Setting the Pinch Rollers

This is the setting methods of a pinch roller when detecting the medium.

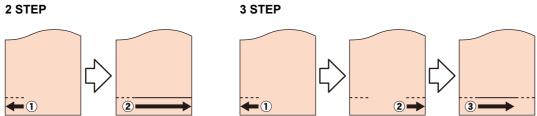
Set Value	Overview	
ON	The pinch roller number and the pinch roller pressure need to be set each time the medium is set, according to the width of the medium.	
PWR ON ONLY	The pinch roller number and the pinch roller pressure need to be set when the medium is set for the first time after the power is turned ON, according to the width of the medium.	
PR No. ONLY	The pinch roller number needs to be set each time the medium is set, according to the width of the medium.	
OFF	The pinch roller setting is not needed when the medium is set. (The values set with Function are used.)	

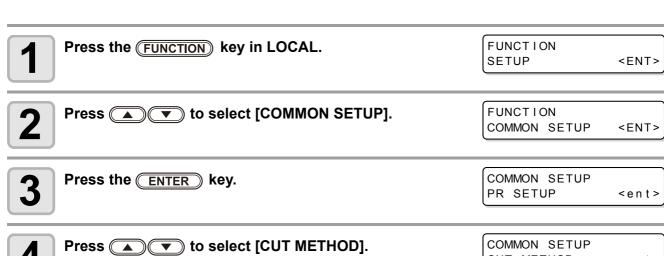


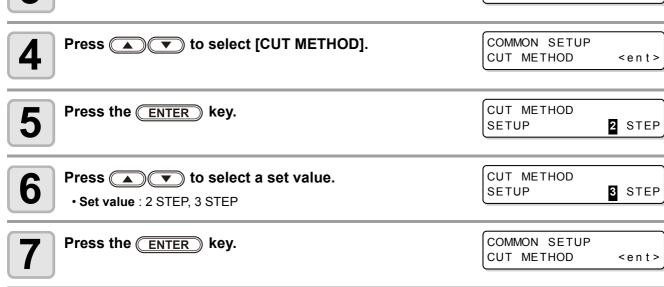
Setting a Cut Method

Set the cutting method to cut the medium.

Set Value	Overview
2 STEP	The medium is cut in two steps.
3 STEP	The medium is cut in three steps.





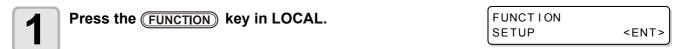


Press the END key several times to end the setting.

Setting CONFIRM. FEED

Set whether or not to feed the medium for checking when test printing is finished.

Set Value	Overview
OFF	The medium will not be fed after test printing/cutting.
10 to 500mm	Sets the length to be fed after test printing/cutting. If the length is set, the setting can be set to take up the fed medium a little. (from Step 7)













• When having selected [OFF], proceed to Step 9.





- \bullet ON $\,$: To slightly take-up the medium fed by the confirmation feeding function.
- OFF: Not to take-up the medium.

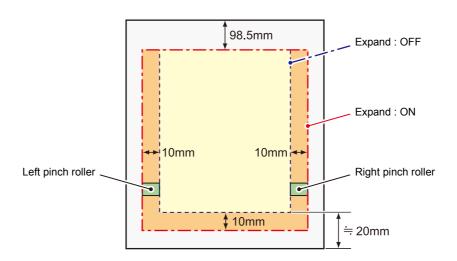




Setting the Expand Function

You can reduce the dead space to thereby expand a printed area or cut area (area plotted with a pen). (Expand function)

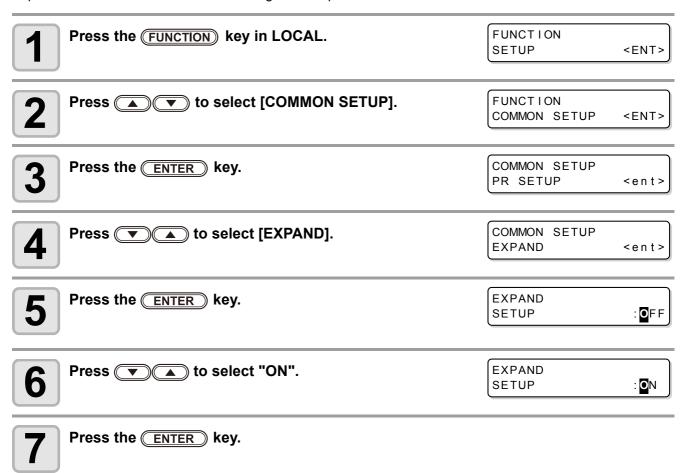
The dead space is reduced by 10 mm on the right and left as well as on the side nearest you.





Turning the Expand Function "ON"

Expand function will be enabled after setting of the expand and the medium is detected.





Press the END key several times to return to LOCAL.



Detect the medium.

• If the clamp lever is released and then reset, medium detection operation starts. Refer to the item 13 and the following procedures of P.2-25.



- · Note that, when you use a media holder and turn the Expand function "ON", printing may start on the
- When you turn the expand function "OFF", perform media detection after selecting "OFF" on Step 6.



- When you turn the Expand function "ON", a paper jam may occur if excessive pressure is applied to the
- When axis correction has not been performed, the cutter blade can come out of the medium and may cause a paper jam. In addition, a cutter blade having come out of the medium may damage itself or the
- When the cut area is fed by pinch rollers, the cutting quality will deteriorate.
- · When pinch rollers move on the register marks during detection, the register marks may not be detected properly.
- · If setting expand after detecting the medium, detect the media again. Otherwise, the expand function will not be enabled.





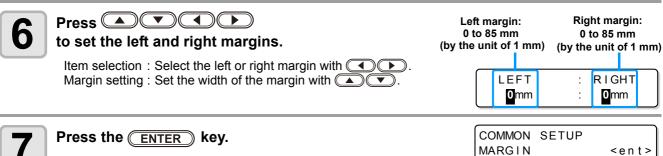
Setting Margins

The left and right margins of a medium to be printed or cut are set.

Set Item	Set Value	Overview
LEFT	0 to 85 mm	The left margin of a medium to be printed or cut is set.
RIGHT	0 to 85 mm	The right margin of a medium to be printed or cut is set.

<LOCAL.1> Press the MODE CHANGE key in LOCAL to select the [#01] WIDTH: * * * * mm printing mode. **FUNCTION** Press the FUNCTION key. COMMON SETUP <ENT> COMMON SETUP Press the ENTER key. PR SETUP <ent> COMMON SETUP Press to select [MARGIN]. 1 MARGIN <ent>





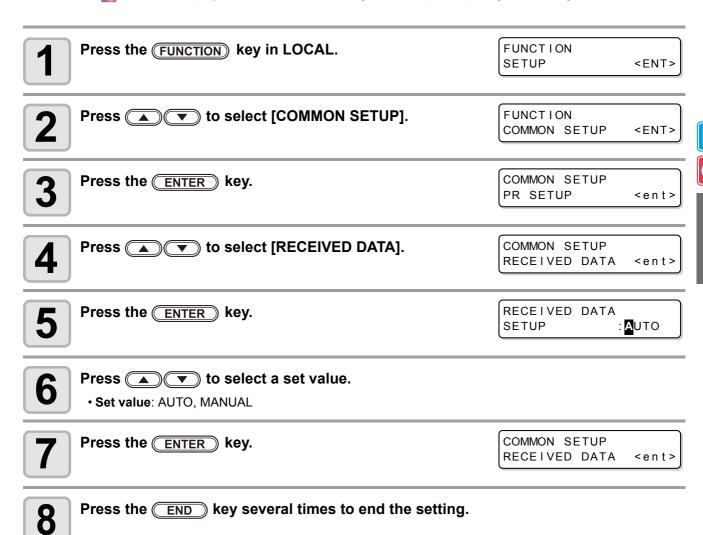
8 Press the END key several times to end the setting.

Setting the RECEIVED DATA

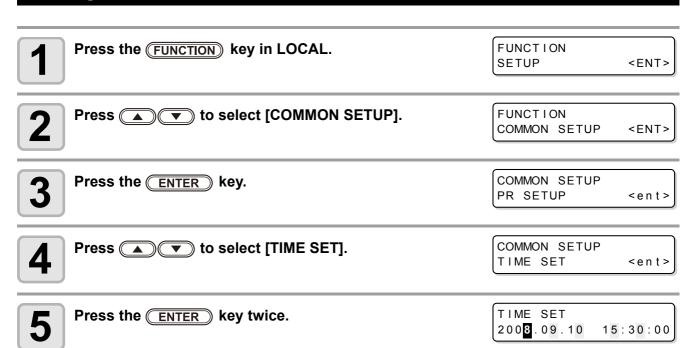
The setting can be changed for printing/cutting using an application other than those that come standard with this machine.

Set Value	Overview		
AUTO	When the standard application included with the machine is used, printing/cutting will be executed automatically according to the type of the received data.		
MANUAL	Set this parameter when executing printing/cutting with the application other than those that come wit the machine (RasterLinkPro4 or later/FineCut7 or later *1). In this case, this machine operates as follows. If the machine receives different data, an error occurs. While in PRINT mode: The machine can only receive the print data. If the received data is not the print data, an error occurs. While in CUT mode: The machine can only receive the cut data. If the received data is not the cut data, an error occurs.		

*1. When 🔃 has not been displayed at the lower left of the dialog of FineCut7 (or later), configure this setting.



Setting Time







Press to enter time.

Select date (year/month/day/hour/minute): Select with ... Enter date (year/month/day/hour/minute): Enter with ...



Press the ENTER key.

The entered date is displayed.

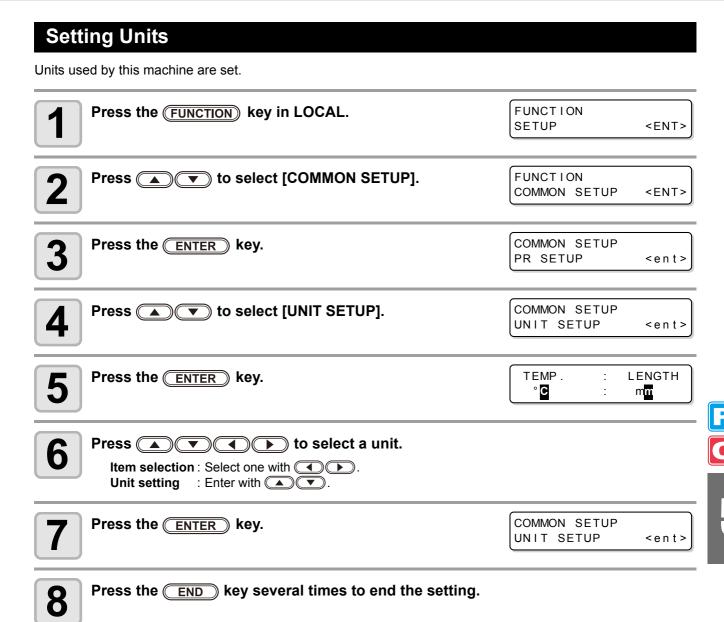
TIME SET 2008.09.10 15:30:00



Press the END key several times to end the setting.

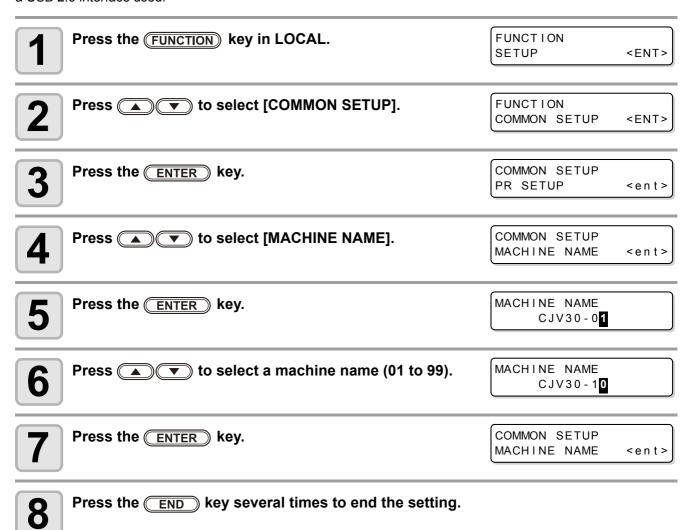


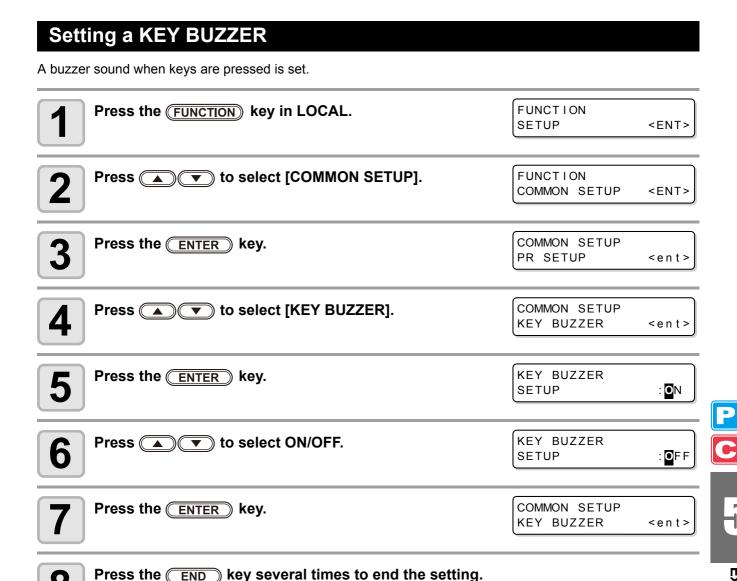
- The time set in the past can be changed until only eight hours before the present displayed time.
- When a future time after the present one has been set by mistake, performing the following operations in Step 7 enables the already set future time to be restored to the previously set time.
 - (1) Press the FUNCTION key in Step 7. (The entered time and the previously set time are displayed.)
 (2) Press the ENTER key.
 - If you have made several changes in time setting, only the last time to be set can be restored to the previously set time. In addition, the time before change is ahead by the time that has elapsed.



Setting the MACHINE NAME

The names of machines (machine No.) are set for recognizing them when they are connected to one another with a USB 2.0 interface used.







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

Confirming Machine Information

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

Item	Overview
Error history	This displays the history of errors and warnings to date. When you press , the date of occurrence (year/month/day/hour/minute) and the error/warning information are displayed alternately in the order of occurrence.
Maintenance history This displays the date and time when the maintenance function was used. The maintenance history mainly describes the manual and automatic (mode) cleaning functions.	
Printing mode history	This displays the information of online printing (printing conditions) that has been performed to date since the machine's power-on. (Up to 50 pieces of information) When you press , the information is displayed in the order of printing.
List	This allows you to print the settings of the machine. You can print the settings according to four categories. (P.5-16)
Ink REPL. Report *1	Prints history of ink used on the machine.
Version	This displays the version information of the machine.
Serial and Dealer No.	This displays serial and dealer numbers.

^{*1.} This function is available for the firmware Ver.2.40 and later.

Displaying the Information



Press the (FUNCTION) key in LOCAL.

FUNCTION SETUP <ENT>

• When you want to print the list of settings of this machine, set a medium. (P.2-15)

2

Press to select [COMMON SETUP].

FUNCTION
COMMON SETUP <ENT>

Press the ENTER key.

COMMON SETUP PR SETUP <ent>

4 Press to select [INFORMATION].

COMMON SETUP INFORMATION <ent>

5 Press the ENTER key.

INFORMATION ERROR HISTORY <ent>

6

Press to select a type of information.

7

Press the **ENTER** key.

- · The Information you need is displayed.
- When [List] or [Ink REPL. Report] is selected, the machine information is printed.

About Displayed Information

This section describes how to read displayed information.

Error history		Maintenance history	
The date of occurrence (year/month/day) is displayed.	ERROR HISTORY 0001 08.10.10 12:15	The details of maintenance is displayed.	0001 08.10.10 12:15 >> CARRIAGE OUT
The details of an error is displayed.	***** ERROR 09 ***** HDC ERROR ()	Version Version information, such as F/W, is displayed.	CJV30-60 V1.00 MRL-III V1.00
Printing mode history			
Resolution, length of a printed medium, etc. are displayed.	[01] 720x1080 .12 Bd.Vd.x1.1L: 12.34m	Serial and Dealer No.	
The date (year/month/day) of printing is displayed.		Serial and dealer numbers are displayed.	S/N = ******* D/N = ******
	PRINTmodeHIST. [01] 08.10.10 12:15		





Printing the List of Settings

You can print the settings of this machine by selecting one from the following four types.

List Type	Overview		
Printing mode	The settings in the printing mode are printed.		
Cutting mode	The settings in the cutting mode are printed.		
Running meter	A running meter is printed.		
All	All lists are printed.		



- When detecting the medium and the mode is in cut mode, if you perform printing in the list as it is, the
 following screen will be displayed by pressing the <u>ENTER</u> key in Step 7. In this case, press the
 <u>ENTER</u> key to switch the setting of the pinch roller pressure to the print mode and then perform
 printing.
- If the <u>END</u> key is pressed, switching operation will not be performed.

! PR PRESSURE:CUT ! SWITCH :ent



Press the FUNCTION key in LOCAL.

FUNCTION SETUP <ENT>

• When you want to print the list of settings of this machine, set a medium. (P.2-15)



Press to select [COMMON SETUP].

FUNCTION COMMON SETUP <ENT>

3 Press the ENTER key.

COMMON SETUP
PR SETUP <ent>

4 Press to select [INFORMATION].

COMMON SETUP INFORMATION <ent>

Press the ENTER key.

INFORMATION ERROR HISTORY <ent>

6 Press to select [LIST].

INFORMATION LIST <ent>

7 Press the ENTER key.

Press to select a list to print.

LIST SELECT: PRINT MODE

Press the ENTER key.
• Printing starts.

Chapter 6 Maintenance



This chapter

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

Maintenance	
Precautions for Maintenance	6-2
About Cleaning Solution	6-2
Cleaning the Exterior Surfaces	6-3
Cleaning the Platen	6-3
Cleaning the Media Sensor and Register	
Mark Sensor	6-4
Cleaning the Medium Holder	6-4
Maintaining the Capping Station	
Cleaning the Wiper and Cap	
Replacing the Wiper	6-8
Before Washing the Ink Discharge	
Passage	
Cleaning the Head Nozzles	. 6-11
Washing the Ink Discharge Passage	
(PUMP Tube Washing)	. 6-13
When the Machine Is Not Used for a	
Long Time (CUSTODY WASH)	. 6-14
Cleaning the lnk Head and the Area	
around It	6-16
When Nozzle Clogging Cannot Be	
Solved	
FILL UP INK	
DISCHARGE & WASH	
Supplying the Machine with Ink Anew	6-21

Preventing Nozzle Clogging When the	
Power Is OFF	6-23
Setting the Refreshing Interval in the	
Sleep Mode	.6-24
Setting the Tube Washing Interval in the	
Sleep Mode	.6-25
Setting the Cleaning Interval in the	
Sleep Mode	.6-26
Setting Regular Operations	
Setting the Regular Wiping Operation	-
during a Printing Operation	.6-28
Setting the Refreshing Interval in the	
Standby Mode	.6-30
Setting the Interval between Each PUMP 1	
Washing Operation in the Standby Mode .	
Setting the Cleaning Interval in the	
Standby Mode	6-32
Other Maintenance Functions	
Changing the Time When a Warning about	
Wiper Replacement Is Issued	
Setting the Display of Media Residual	
White Ink Maintenance Function	
If a Waste Ink Tank Confirmation Message	
Appears	
Changing the ink	
Replacing the Cutter Blade	
Replacing the Pinch Rollers	6-45
Replacing a Cutter Blade Not Included	
in the Accessories	6-46

Maintenance

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

Precautions for Maintenance

Pay attention to the following items when maintaining this machine.



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



• The ink contains organic solvent. When cleaning the machine, be sure to wear gloves so that no ink will make direct contact with your skin.



• Never disassemble the machine. Disassembling it can result in electric shock hazards or damage to the machine.

Before maintenance, be sure to turn off the power switch and unplug the power cable; otherwise, an unexpected accident may occur.



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



- To ensure stable ink jetting, it is necessary for the machine to eject a small amount of ink (flushing) regularly when a printing (outputting) operation has not been performed for a long time.
- When the machine is not to be used for a long time, turn off only the power switch on the front side, leave the main power switch at the rear turned ON (in the position of |), and leave the power cable connected.
- If organic solvent ink is mixed with water or alcohol, coagulation is generated.
 Do not wipe the nozzle face of the heads, wiper, caps, etc. with water or alcohol. Doing so can cause nozzle clogging or machine failure.



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



Use cleaning solution for maintenance that can be applied to the ink you use.

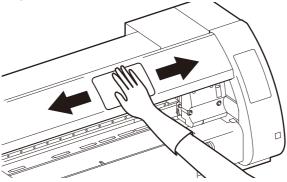
Ink type	Applicable cleaning solution for maintenance
SS21 solvent ink Cleaning solution MS2/ES3/HS kit (SPC-0369)	
ES3 solvent ink	MILD SOLVENT WASHING LIQUID (SPC-0294) [Sold separately]
Eco-PA1 ink	Cleaning Liquid Bottle Kit A29 (SPC-0137) [Sold separately] Washing liquid (SPC-0259) [Sold separately]





Cleaning the Exterior Surfaces

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

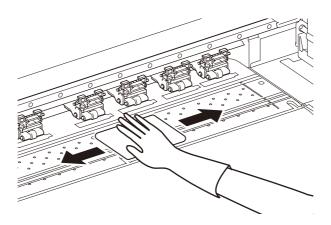


Cleaning the Platen

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



• When the platen is stained with ink, wipe it off with a paper towel containing a small amount of cleaning solution for maintenance.



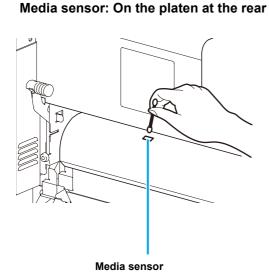


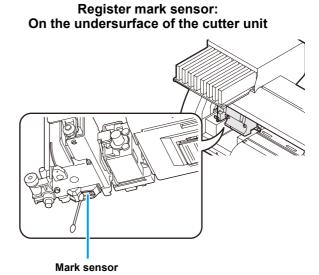
- · Before cleaning the platen, make sure that the platen has cooled adequately.
- Because dust and dirt are easily accumulated in the slots for holding a medium and cutting paper (cutter line), be sure to clean these parts carefully.

Cleaning the Media Sensor and Register Mark Sensor

When the sensor is covered with dust, etc., it may cause false detection of media or register marks. Using a cotton swab, remove the dust, etc. accumulated on the surface of the sensor.

When cleaning the sensor on the undersurface of the cutter unit, perform the operations on P. 6-16 "Cleaning the Ink Head and the Area around It" Steps 1 and 2 and move the carriage to the left end.



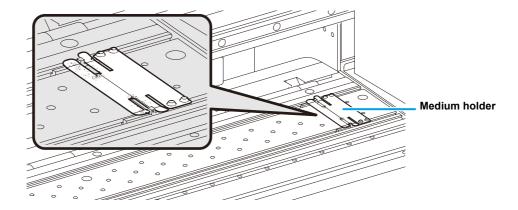






Cleaning the Medium Holder

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



Maintaining the Capping Station

Maintain the ink cap, wiper, etc. located in the capping station. (ST.MAINTENANCE)

The ink cap and wiper function as follows.

• Wiper : It wipes off ink sticking to the head nozzles.

• Ink cap : It prevents the head nozzles from clogging due to dryness.

As the machine is used repeatedly, the wiper and ink cap gradually become dirty with ink, dust, etc. If nozzle missing cannot be corrected even after head cleaning (P.2-40) has been performed, use a cleaning kit and clean stick.

Tools required for maintenance	Kit of cleaning solution for maintenance Cleaning solution MS2/ES3/HS kit (SPC-0369)		
	Clean stick (SPC-0527)	• Gloves	Goggles



- Be sure to wear the supplied goggles and gloves when maintaining the capping station. Otherwise, you
 may get ink in your eyes.
- Do not move the carriage out of the capping station by hand. When you want to move the carriage, perform the operations on P.6-6 Steps 1 and 4.



Cleaning the Wiper and Cap

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



- When SS21 ink is used, the ink easily sticks around the wiper. Clean the wiper and the area around it about twice a week (it varies, depending on frequency in the use of the machine).
- Replace the wiper with a new one when it is extremely dirty or bent. (P.6-8)
- When cleaning the wiper, be careful that lint from the clean stick does not get left on the wiper. Remaining lint may cause image quality to deteriorate.



Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL.1> [#01]
 WIDTH:***mm



Select [ST. MAINTENANCE] of the maintenance menu.

- (1) Press the FUNCTION key.
- (2) Press to select [MAINTENANCE] and press the ENTER key.
- 3

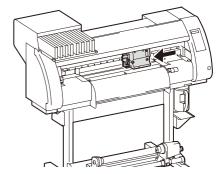
Press the ENTER key.

ST.MAINTENANCE CARRIAGE OUT <ent>



Press the **ENTER** key.

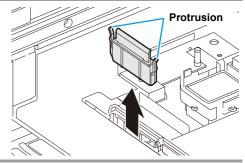
• The carriage moves onto the platen.





Remove the wiper.

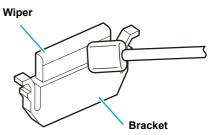
• Pull out the wiper by holding the protrusions at its both ends.





Clean the wiper and bracket.

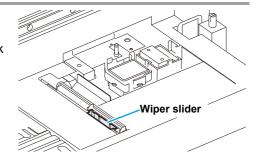
• Wipe off the ink sticking to the wiper and bracket with a clean stick dipped in cleaning solution for maintenance.





Clean the wiper slider.

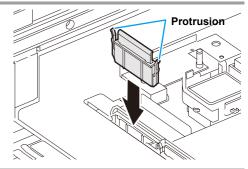
• Wipe off the ink sticking to the wiper slider with a clean stick dipped in cleaning solution for maintenance.





Return the wiper to its original position.

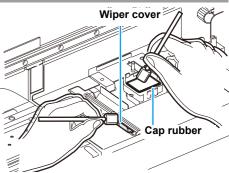
• Insert the wiper by holding its both ends.





Clean the cap rubber and wiper cover.

• Wipe off the ink sticking to the cap rubber and wiper cover with a clean stick dipped in cleaning solution for maintenance.





Press the **ENTER** key.

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

Being Initialized PLEASE WAIT



Replacing the Wiper

The wiper is consumable. When the message shown on the right appears, replace the wiper immediately.

In addition, wipe off the ink sticking to the undersurface of the slider.

<LOCAL.1> [#01] !Replace a WIPER



- A cleaning wiper is an option. Buy one through the dealer in your region or at our service office.
- Do not select [WIPER REPLACE] at any time other than when the wiper is replaced. Once it is selected, the counter that counts the number of times the wiper is used is reset.



Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL.1> [#01]
 WIDTH:***mm

2

Select [ST. MAINTENANCE] of the maintenance menu.

- (1) Press the (FUNCTION) key.
- (2) Press (a) to select [MAINTENANCE] and press the (ENTER) key.
- 3

Press the ENTER key.

ST.MAINTENANCE CARRIAGE OUT <ent>

4

Press (A) (V) to select [WIPER REPLACE].

ST.MAINTENANCE WIPER REPLACE <ent>

5

Press the **ENTER** key.

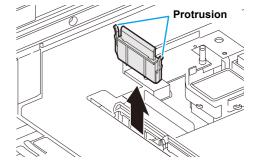
• The carriage moves onto the platen.

ST.MAINTENANCE COMPLETED : ent



Remove the wiper.

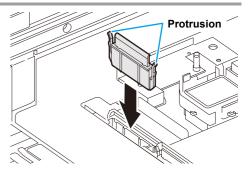
• Pull out the wiper by holding the protrusions at its both ends.





Insert a new wiper.

• Insert a new wiper by holding its both ends.





Press the **ENTER** key.

After its initial operation, the machine returns to LOCAL.

Being Initialized
PLEASE WAIT

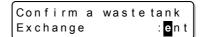
Before Washing the Ink Discharge Passage

Before the ink discharge passage (PUMP tube) is washed, it needs to be filled with cleaning solution for maintenance.



• When the following messages are displayed, check the waste ink tank and perform the operations described on P.6-38 "If a Waste Ink Tank Confirmation Message Appears" as necessary.

Confirm a waste tank Continue< >Exchange



Filling the Pump Tube with Cleaning Solution for Maintenance

Press the <u>MODE CHANGE</u> key in LOCAL to select the printing mode.

2

Select [HD. MAINTENANCE] of the maintenance menu.

- (1) Press the (FUNCTION) key.
- (2) Press (a) to select [MAINTENANCE] and press the (ENTER) key.
- (3) Press (A) To select [HD. MAINTENANCE].
- (4) Press the ENTER key.

Press to select [Maint WashLiquid].

HD.MAINTENANCE MaintWashLiquid<ent>

4

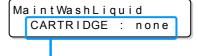
Press the **ENTER** key.

MaintWashLiquid
FILLING UP <ent>



Press the **ENTER** key.

 When a normal cartridge has been set, proceed to Step 7.



When "END" is displayed:

There is no cleaning solution in the cartridge. Set a new cleaning solution cartridge.

When "Abnormal" is displayed:

The set cartridge does not contain cleaning solution.



Set a cartridge.

MaintWashLiquid FILLING UP START: ent



Press the **ENTER** key.

• The cartridge starts to be filled with cleaning solution.

Discharging Cleaning Solution for Maintenance

Perform the following operations to discharge the cleaning solution in the tube.



Press the MODE CHANGE key in LOCAL to select the printing mode.

[#01] <LOCAL.1> WIDTH: * * * * mm



Select [HD. MAINTENANCE] of the maintenance menu.

- (1) Press the FUNCTION key.
- (2) Press to select [MAINTENANCE] and press the ENTER key.
 (3) Press to select [HD. MAINTENANCE].
- (4) Press the ENTER key.



Press (to select [Maint WashLiquid].

HD. MAINTENANCE MaintWashLiquid<ent>



Press the **ENTER** key.

MaintWashLiquid FILLING UP <ent>



Press (to select [DISCHARGE].

MaintWashLiquid DISCHARGE <ent>



Press the ENTER key.

• When the cartridge has been disengaged, proceed to Step 8.

MaintWashLiquid There is a CARTRIDGE



Remove the cartridge.

MaintWashLiquid DISCHARGE START : ent



Press the ENTER key.

• The cleaning solution starts to be discharged.

Cleaning the Head Nozzles

The head nozzles need to be washed to prevent them from being clogged with coagulated ink.

Check the items on the right beforehand.

Is [NEAR END] or [INK END] displayed?

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



Press the MODE CHANGE key in LOCAL to select the printing mode.

2

Select [ST. MAINTENANCE] of the maintenance menu.

- (1) Press the FUNCTION key.
- (2) Press to select [MAINTENANCE] and press the ENTER key.
- 3

Press the ENTER key.

ST.MAINTENANCE CARRIAGE OUT <ent>

4

Press (NOZZLE WASH).

ST.MAINTENANCE NOZZLE WASH <ent>

5

Press the **ENTER** key.

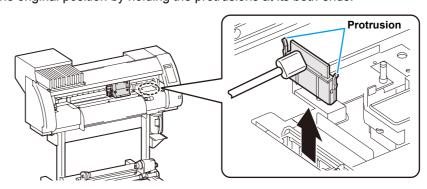
• The carriage moves onto the platen.

WIPER CLEANING COMPLETED(NEXT) :ent



Clean the wiper and bracket.

- (1) Pull out the wiper by holding the protrusions at its both ends.
- (2) Clean the wiper and bracket with a clean stick dipped in cleaning solution for maintenance (SPC-0369).
- (3) Insert the wiper into the original position by holding the protrusions at its both ends.





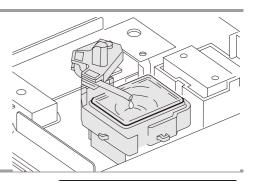
Press the ENTER key.

Fill the liquid COMPLETED(NEXT) :ent



Press the FUNCTION key and fill up the cap with cleaning solution for maintenance.

- When you press the FUNCTION key, cleaning solution drips into the cap.
- When you press the **FUNCTION** key again, the solution stops dripping.
- Repeat the drops several times to fill the cap with the cleaning solution just before the solution overflows from the cap.





Press the **ENTER** key.

ST.MAINTENANCE LEAVING TIME : Imin



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

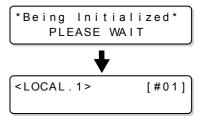
• Set value: 1 to 99 min (by the unit of 1 min)

ST.MAINTENANCE LEAVING TIME : **2**min

11

Press the **ENTER** key.

- The cleaning solution in the cap is absorbed.
- The screen on the right is displayed for the time set in Step 10.
- When the set time has elapsed, the screen returns to LOCAL.





- When nozzle missing is not corrected even after this cleaning has been performed several times, perform "When Nozzle Clogging Cannot Be Solved" (P.6-18) and "DISCHARGE & WASH" (P.6-19). When the problem is not solved even after the operation above, contact the distributor in your region or our service office.
- · When this machine is not filled with cleaning solution for maintenance, do the following:
 - (1) Perform the operations in Steps 1 to 5.
 - (2) Fill up the cap with cleaning solution for maintenance, using a syringe.
- (3) Perform the operations in Step 9 and later.
- The waste ink discharged by head nozzle cleaning is not counted as the waste ink automatically accumulated in this device (P.6-38). Check the status of the waste ink tank without fail before/after the cleaning.



Washing the Ink Discharge Passage (PUMP Tube Washing)

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



• When the following messages are displayed, check the waste ink tank and perform the operations described on P.6-38 "If a Waste Ink Tank Confirmation Message Appears" as necessary.

• Repeat the idle absorbing operation (Absorption for 5 seconds and interruption for 10 seconds) until the

Confirm a waste tank Continue< >Exchange Confirm a waste tank Exchange : ent



Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL . 1> [#01] WIDTH: * * * * mm



Select [ST. MAINTENANCE] of the maintenance menu.

- (1) Press the Function key.
- (2) Press (A) To select [MAINTENANCE] and press the (ENTER) key.

3

Press the **ENTER** key.

ST.MAINTENANCE CARRIAGE OUT <ent>



Press 🔳 🔻 to select [PUMP TUBE WASH].

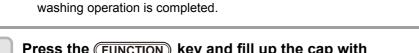
ST.MAINTENANCE PUMP TUBE WASH <ent>



Press the ENTER key.

• The carriage moves onto the platen.

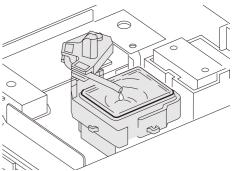
ST.MAINTENANCE COMPLETED : ent





Press the FUNCTION key and fill up the cap with cleaning solution for maintenance.

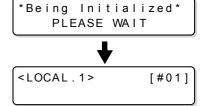
- When you press the FUNCTION key, cleaning solution drips into the cap.
- When you press the FUNCTION key again, the solution stops dripping.
- During the idle absorbing is interrupted, repeat the drops several times to fill the cap with the cleaning solution just before the solution overflows from the cap.





Press the ENTER key.

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





- When this machine is not filled with cleaning solution for maintenance, do the following:
- (1) Perform the operations in Steps 1 to 5.
- (2) Fill up the cap with cleaning solution for maintenance, using a syringe.
- (3) Perform the operation in Step 7.

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

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

Check the items on the right beforehand.

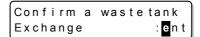
Is [NEAR END] or [INK END] displayed?

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



• When the following messages are displayed, check the waste ink tank and perform the operations described on P.6-38 "If a Waste Ink Tank Confirmation Message Appears" as necessary.

Confirm a wastetank Continue< >Exchange





Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL.1> [#01]
 WIDTH:****mm

2

Select [ST. MAINTENANCE] of the maintenance menu.

- (1) Press the FUNCTION key.
- (2) Press to select [MAINTENANCE] and press the enter key.

3

Press the **ENTER** key.

ST.MAINTENANCE CARRIAGE OUT <ent>



Press (A) (V) to select [COSTODY WASH].

ST.MAINTENANCE COSTODY WASH <ent>

5

Press the ENTER key.

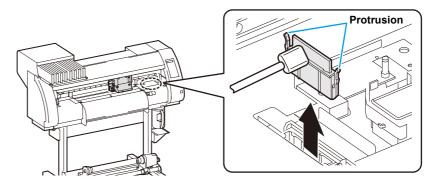
• The carriage moves onto the platen.

WIPER CLEANING COMPLETED(NEXT) :ent



Clean the wiper and bracket.

- (1) Pull out the wiper by holding the protrusions at its both ends.
- (2) Clean the wiper and bracket with a clean stick dipped in cleaning solution for maintenance (SPC-0369).
- (3) Insert the wiper into the original position by holding the protrusions at its both ends.



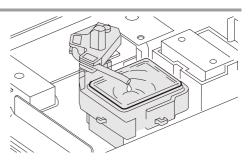


Press the ENTER key.

Fill the liquid. COMPLETED(NEXT) : ent

Press the FUNCTION key and fill up the cap with cleaning solution for maintenance.

- When you press the **FUNCTION** key, cleaning solution drips into the cap.
- When you press the FUNCTION key again, the solution stops dripping.
- Repeat the drops several times to fill the cap with the cleaning solution just before the solution overflows from the cap.





Press the ENTER key.

ST. MAINTENANCE LEAVING TIME **1**min

Press (a) v to set the time for the cleaning solution to be left as it is.

ST. MAINTENANCE LEAVING TIME

2min

• Set value: 1 to 99 min (by the unit of 1 min)

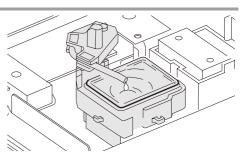
Press the ENTER key.

- · The nozzles are washed.
- · When the nozzles have been completely washed, the head moves onto the platen.

Being Initialized PLEASE WAIT

Press the FUNCTION key and fill up the cap with cleaning solution for maintenance.

- When you press the FUNCTION key, cleaning solution drips into the cap.
- When you press the **FUNCTION** key again, the solution stops dripping.
- During the idle absorbing is interrupted, repeat the drops several times to fill the cap with the cleaning solution just before the solution overflows from the cap.



Press the ENTER key.

After its initial operation, the machine returns to LOCAL.

Being Initialized PLEASE WAIT

Cleaning the Ink Head and the Area around It

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

Tools needed for cleaning • Clean stick • Gloves • Goggles



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



Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL.1> [#01]
 WIDTH:***mm



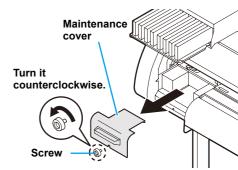
Select [CR.MAINTENANCE] of the maintenance menu.

- (1)Press the FUNCTION key.
- (2)Press to select [MAINTENANCE] and press the ENTER key.
- (3)Press to select [CR.MAINTENANCE] and press the CR.MAINTENANCE Remove the cover: ant



Remove the maintenance cover.

- (1)Turn the two screws that fix the maintenance cover counterclockwise to remove them.
- (2) Remove the maintenance cover.







CR.MAINTENANCE CARRIAGE OUT : en t



Press the ENTER key.

· Carriage will move to the left end of this device.

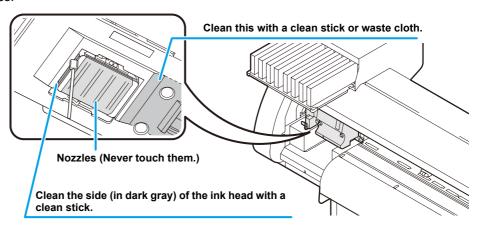


 You can move the carriage manually, however, if you connect the connection unit to the cutter unit, you cannot move it manually because it is locked. If you try to move forcibly, it may cause injury.



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

• Never rub the nozzles.





When the cleaning has been completed, press the ENTER key.

Being Initialized
PLEASE WAIT

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



• Because of its property, SS21W-2 ink easily sticks to the area around the ink head. Clean the area around the ink head about twice a week (it varies, depending on the frequency the machine is used).



6

When Nozzle Clogging Cannot Be Solved

When nozzle clogging cannot be solved even after the ink head cleaning (P.2-40) or head nozzle washing (P.6-11) has been done, perform the following two functions:

FILL UP INK • Ink is supplied to solve nozzle clogging.		
DISCHARGE & WASH	• The head, tube, and damper are washed with dedicated cleaning solution (optional). (P.6-19)	

FILL UP INK



Press the MODE CHANGE key in LOCAL to select the printing mode.





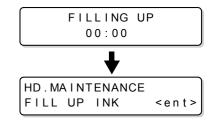
Select [HD. MAINTENANCE] of the maintenance menu.

- (1)Press the **FUNCTION** key.
- (2)Press to select [MAINTENANCE] and press the ENTER key.
- (3)Press to select [HD. MAINTENANCE].
- (4)Press the ENTER key.



Press the ENTER key.

- · Ink is supplied automatically.
- When ink has been supplied completely, the screen returns to the shown on the right.







Press the END key several times to end the setting.

Maintenance

DISCHARGE & WASH

Ink is discharged from the head, damper, and tube for them to be cleaned.



- To use this function, the dedicated cleaning solution (P.6-2"About Cleaning Solution") is required. In addition, before performing the work, check whether ink to be filled again remains or not.
- When the following messages are displayed, check the waste ink tank and perform the operations described on P.6-38 "If a Waste Ink Tank Confirmation Message Appears" as necessary.

Confirm a wastetank Continue< >Exchange Confirm a wastetank Exchange en t



Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL.1> [#01] WIDTH: * * * * mm



Select [HD. MAINTENANCE] of the maintenance menu.

(1)Press the FUNCTION key.

(2)Press to select [MAINTENANCE] and press the ENTER key.
(3)Press to select [HD. MAINTENANCE].

(4)Press the ENTER key.

Press ▲ v to select [DISCHARGE & WASH].

MAINTENANCE DISCHARGE&WASH <ent>



Press the ENTER key.

Remove: InkCartridge MMCCYYKK



Remove the ink cartridge.

- · Ink remaining in the head or tube is discharged into the waste ink
- · When ink has been discharged completely, the screen on the right appears.

DISCHARGE * 00:00



Set: Washing Cartridge 12345678



Mount a cleaning solution cartridge on the ink station.

- The cleaning solution starts to be absorbed.
- · When the cleaning solution has been absorbed completely, the screen on the right appears.

ABSORPTION * 00:00



Remove: Cartridges 12345678



Remove the cleaning solution cartridge.

- The cleaning solution remaining in the head or tube is discharged into the waste ink tank.
- · When the cleaning solution has been discharged completely, the screen on the right appears.

DISCHARGE * 00:00



Set: Washing Cartridge 12345678



Mount a cleaning solution cartridge on the ink station.

- The cleaning solution starts to be absorbed.
- When the cleaning solution has been absorbed completely, the screen on the right appears.

* ABSORPTION * 00:00



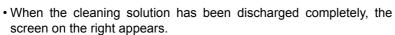
Remove: Cartridges 12345678



Remove the cleaning solution cartridge.

• The cleaning solution remaining in the head or tube is discharged into the waste ink tank.





 Check the state of the waste ink tank and select whether to stop or resume cleaning. Maint.WashLiquid END< >DISCHARGE

• When you resume cleaning, press to return to Step 6.



Press (1).



Press the END key several times to end the operation.



Supplying the Machine with Ink Anew

After you have performed [DISCHARGE & WASH], supply the machine with ink anew with the following operations.



Turn on the power of the machine.

• When the power is turned on, the firmware version is displayed following [BOOT].

ВООТ

CJV30-60 V*. **

Please Wait

2

Press to select the type of ink to supply to the machine.

INK TYPE SS21 Sol

• To check the state of the cartridge, press the REMOTE key. (P.7-5)

3

Press (a) to select an ink set (set of colors) to supply to the machine.

• You cannot change the current ink set to another by yourself.

• If you want to change the ink set, contact our service office.

SS21 INK SET 4-Color(MMCCYYKK)

4

Press the ENTER key.

Set:SS21-4color Ink





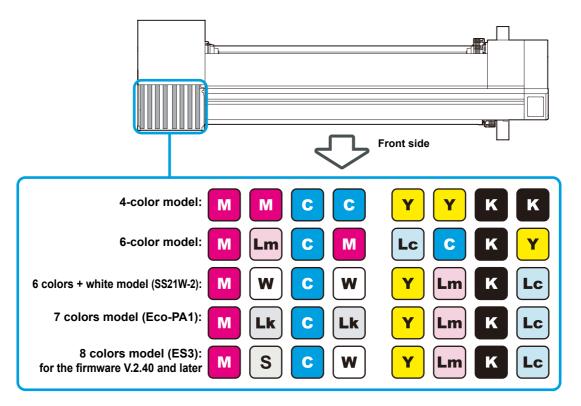
Mount an ink cartridge on the ink station.

Set:SS21-4color Ink --C-Y-KK

 When an ink cartridge has been set, the machine is supplied with ink automatically.

FILLING UP NOW.

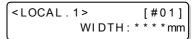
• The ink station has an insertion slot allocated to each ink color. Set the ink cartridge according to the cartridge label under the ink station.







When ink has been supplied to the machine completely, the screen returns to LOCAL.





• If blurring or missing of characters is found in printing after the machine has been supplied with ink anew, see "Perform head cleaning depending on the test printing result" (P.2-40) or "FILL UP INK" (P.6-18).

When the Machine Cannot Be Supplied with Ink in Step 5

When various ink errors including "Almost no ink" and "No ink" occur, ink does not start to be supplied to the machine.

When ink does not start to be supplied to the machine in Step 5:

- (1) Press the END key to return to the screen in Step 2.
- (2) Press the REMOTE key to check the state of the ink cartridge.
- (3) Correct ink errors (P.7-5) and repeat the operations from Step 2.

Preventing Nozzle Clogging When the Power Is OFF

Even when the power switch is off, the machine starts regularly and performs various operations to prevent nozzle clogging (Sleep mode). In the sleep mode, the following items can be set:

Set Item	Set Value *1	Overview
REFRESH		The interval between each refreshing operation is set.
PUMP TUBE WASH	OFF/1 to 168 hours	The interval between each PUMP tube washing operation is set.
CLEANING		The interval between each cleaning operation is set.

^{*1.} The default setting differs, depending on the type of ink you use. The default setting for each ink is as follows:

Default value for each ink

Ink Type	Refreshing	PUMP Tube Washing	Cleaning
SS21	4 hours	48 hours	OFF
ES3	48 hours	168 hours	OFF
Eco-PA1	48 hours	OFF	OFF



 When the message on the right is displayed, the operations set in the sleep mode are not performed. Perform the operations described on P.6-38 as necessary.

<LOCAL.1> [#01] !WASTE TANK

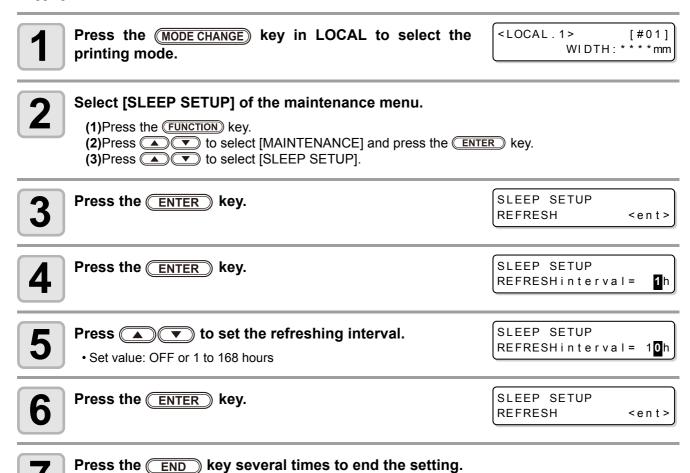
 When you turn off the power switch on the front side of the machine, check the state of the waste ink tank.





Setting the Refreshing Interval in the Sleep Mode

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





Setting the Tube Washing Interval in the Sleep Mode

The interval between each operation of washing the cap and PUMP tube with cleaning solution for maintenance in the sleep mode is set.



Press the MODE CHANGE key in LOCAL to select the printing mode.



Select [SLEEP SETUP] of the maintenance menu.

- (1)Press the FUNCTION key.
- (2)Press to select [MAINTENANCE] and press the ENTER key.
- (3)Press to select [SLEEP SETUP].
- (4)Press the ENTER key.



Press (to select [PUMP TUBE WASH].

SLEEP SETUP PUMP TUBE WASH <ent>



Press the ENTER key.

SLEEP SETUP WASH INTERVAL = 1h



Press to set the interval between each tube washing operation.

SLEEP SETUP WASH INTERVAL = 4h

• Set value: OFF or 1 to 168 hours



Press the ENTER key.

SLEEP SETUP PUMP TUBE WASH <ent>





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



- When the machine has not been filled with cleaning solution, the screen on the right appears in Step 5. Fill the machine with cleaning solution (P.6-10) and perform the operations in Step 1 and later.
- If the cleaning solution is not set, it does not work.* Set the cleaning solution.
 - *For [!Wash Liquid END], it works to use up the cleaning solution, however, replace early.

** Washing Liquid **

<LOCAL. 2>!WSH [#01] CUT1 (30/60/0.30)

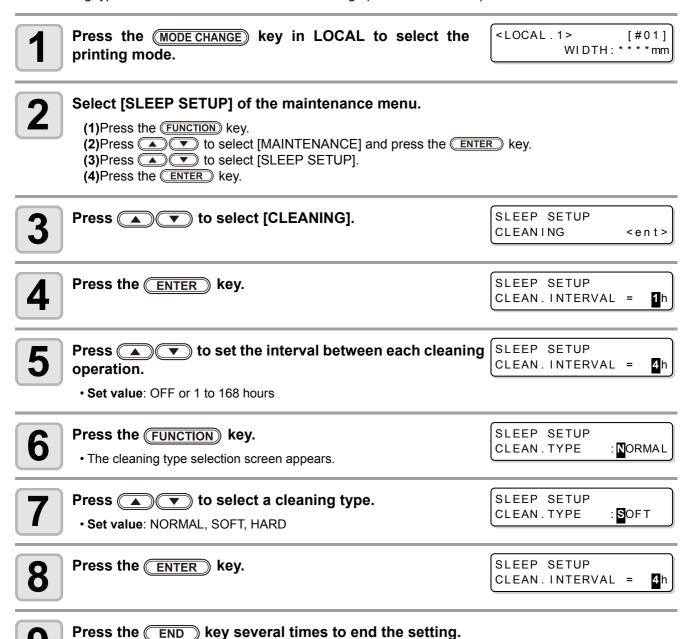
or

<LOCAL.1> [#01]
!WashLiquidCart.NONE

Setting the Cleaning Interval in the Sleep Mode

This is a function operated instead of the pump tube washing when the cleaning solution for maintenance has been used up.

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



9

Various regular operations are performed with the power ON to prevent problems, such as ink coagulation, from occurring (Regular settings). For the regular settings, the following items can be set:

Set Item		Set Value	Overview
	SCAN COUNT	0 to 9,990 times	When the set number of times scanning is performed has been reached during a printing operation, the nozzle face is wiped and dew condensation is removed.
ROUTINE WIPING	TEMP. Difference	0 ~ 60°C	When the difference between the set temperature of the print heater and the ambient temperature has exceeded a specified temperature during a printing operation, the nozzle face is wiped and dew condensation is removed.
REFRESH			The interval between each refreshing operation is set.
PUMP TUBE WASH		OFF/1 to 168*1 hours	The interval between each PUMP tube washing operation is set.
CLEANING			The interval between each cleaning operation is set.

^{*1.} The default setting differs, depending on the type of ink you use. The default setting for each ink is as follows:

Default value for each ink

Ink Type	Refreshing	PUMP Tube Washing	Cleaning
SS21	4 hours	48 hours	OFF
ES3	48 hours	168 hours	OFF
Eco-PA1	48 hours	OFF	OFF



- When the message on the right is displayed, the operations other than [ROUTINE WIPING] in the regular settings are not performed. Perform the operations described on P.6-38 as necessary.
- When you turn off the power switch on the front side of the machine, check the state of the waste ink tank.
- Even if [!RTN] is displayed, the connection unit automatically switches to the printer unit and starts the regular operation when the machine is left unused for a certain period of time.

<local.1></local.1>	[#01]
!WASTE TANK	





Setting the Regular Wiping Operation during a Printing Operation

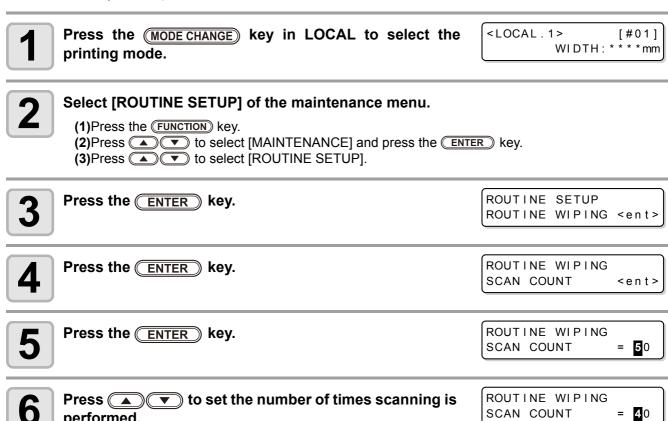
When the set number of times scanning is performed has been reached during a printing operation, a wiping operation is performed automatically to prevent ink dew condensation on the nozzle face.

In the following cases, ink splashing, ink dripping or nozzle missing may occur during a printing operation. It is recommended that the regular wiping operation be set to always maintain a good printing state.

- When the print heater has been set at a high temperature
- · When a relatively large value (high density, two coats of ink, etc.) has been set to the amount of ejected ink

The cause of the ink splashing, ink dripping or nozzle missing is that the ink printed immediately after ink ejection is heated by the print heater, which causes evaporated solvent to condense on the nozzle face.

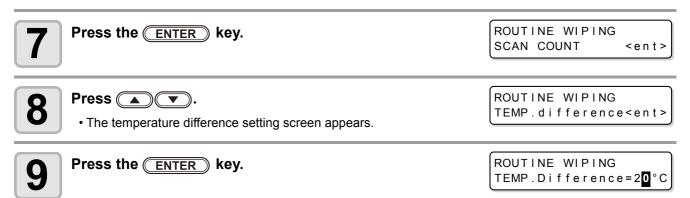
In addition, the larger the difference between the set temperature of the print heater and the ambient temperature is, the more easily the evaporated solvent can condense.



• Set value: 0 to 9,990 times

performed.

• The set value should be 30 to 50 times when the heater temperature has been set at a high one (around 50°C) or when the amount of ejected ink is large, for example, due to two coats of ink.



Press to set temperature difference (0 to 60°C).

ROUTINE WIPING TEMP.Difference=20°C

• When the set temperature of the print heater is higher than the ambient temperature and the difference between the two exceeds a specified temperature, the regular wiping function is activated.

11

Press the **ENTER** key.

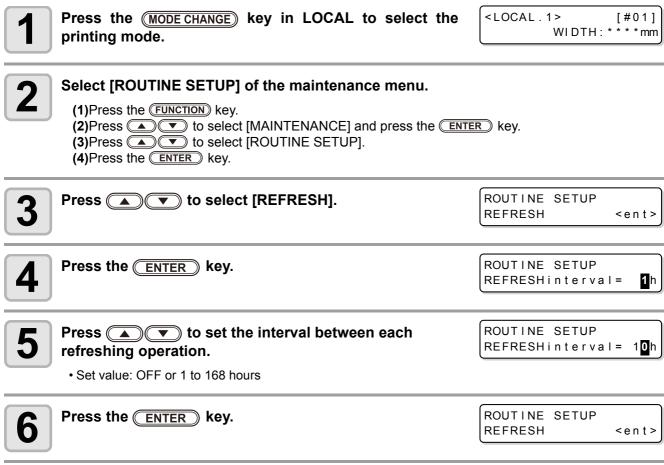
ROUTINE WIPING TEMP.difference<ent>

12

Press the END key several times to end the setting.

Setting the Refreshing Interval in the Standby Mode

The interval between each refreshing operation is set.





Press the END key several times to end the setting.

Setting the Interval between Each PUMP Tube Washing Operation in the Standby Mode

The PUMP tube is washed regularly to prevent nozzle clogging caused by ink coagulation in the tube.

(Important!)

This function can be performed only when the states shown by the screens below are maintained.



Press the MODE CHANGE key in LOCAL to select the printing mode.

<LOCAL.1> [#01] WIDTH: * * * * mm

[#01] 0.00m

Select [ROUTINE SETUP] of the maintenance menu.

- (1)Press the FUNCTION key.
- (2)Press to select [MAINTENANCE] and press the ENTER key. (3)Press to select [ROUTINE SETUP].
- (4)Press the ENTER key.

Press ▲ v to select [PUMP TUBE WASH].

ROUTINE SETUP PUMP TUBE WASH <ent>

1

Press the ENTER key.

ROUTINE SETUP WASH INTERVAL **1** h

Press (▲) (▼) to set the interval between each PUMP tube washing operation.

ROUTINE SETUP **4** h WASH INTERVAL

· Set value: OFF or 1 to 168 hours

6

Press the ENTER key.

ROUTINE SETUP PUMP TUBE WASH <ent>

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



- · When the machine has not been filled with cleaning solution, the screen on the right appears in Step 5. Fill the machine with cleaning solution (P.6-10) and perform the operations in Step 1 and later.
- If the cleaning solution is not set, it does not work.* Set the cleaning solution.
 - *For [!Wash Liquid END], it works to use up the cleaning solution, however, replace early.

WashLiquid UN-FILL

<LOCAL. C>!WSH [#01] CUT1 (0.30) 30/ 60/

<LOCAL.1> [#01] !WashLiquidCart.NONE

CLEAN.INTERVAL =

4 h

[#01]

Setting the Cleaning Interval in the Standby Mode

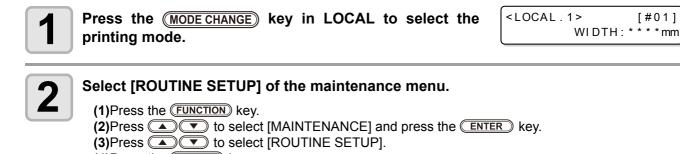
This is a function operated instead of the PUMP tube washing when the cleaning solution for maintenance has been used up.

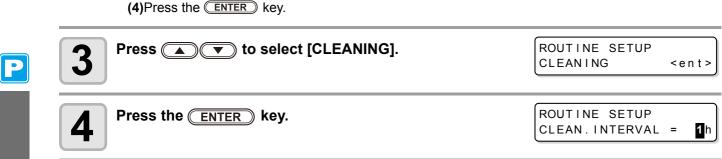
The cleaning type and the interval between each cleaning operation in the standby mode are set.



- · This function is not performed when ink-related errors, such as "NEAR END" and "INK END", have been occurring.
- · While this function is performed, the screen shows the progress that is the same as that of Head cleaning and no key operation can be performed. (P.2-40 "Perform head cleaning depending on the test printing result")
- This function can be performed only when the states shown by the screens below are maintained.

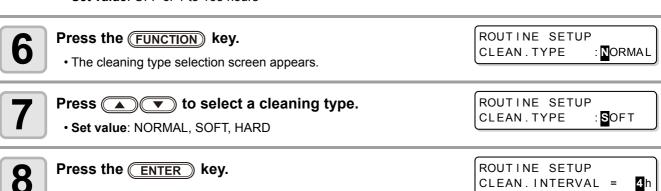


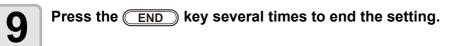






• Set value: OFF or 1 to 168 hours







In addition, the head cannot be cleaned adequately with a bent or worn wiper used. Wiper levels can be set so that a warning about wiper replacement is issued earlier than the standard according to the operating environment.





Set Value	Overview
1/10 ~ 10/10	The time when a warning about wiper replacement is issued is set. As the value becomes smaller, a warning about wiper replacement is displayed earlier.

Press the MODE CHANGE key in LOCAL to select the printing mode.



2 Sele

Select [WIPER LEVEL] of the maintenance menu.

- (1)Press the FUNCTION key.
- (2)Press (A) To select [MAINTENANCE] and press the (ENTER) key.
- (3)Press to select [WIPER LEVEL].

Press the ENTER key.

WI PER LEVEL

WIPER LEVEL
LEVEL :10/10



WIPER LEVEL LEVEL : 9/10



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

Setting the Display of Media Residual

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

When "Remaining amount of a medium to display" is set to ON,	the remaining amount of a medium is displayed in the remote mode. (However, when a leaf medium is used, the length of the medium to be printed is displayed.)
When "Remaining amount of a medium to display" is set to OFF,	the remaining amount of a medium is not displayed in the remote mode.



- The amount of a medium that has been fed by the printing and jog keys is reflected in the remaining amount of a medium.
- The length of a medium (initial value of the remaining amount) is entered when a roll medium is detected. (P.2-29)
- The setting configured here does not become effective unless media detection is performed after the setting has been complete.



<LOCAL.1> [#01] WIDTH:****mm

2 Se

Select [MEDIA RESIDUAL] of the maintenance menu.

- (1)Press the FUNCTION key.
- (2)Press to select [MAINTENANCE] and press the ENTER key.
- (3)Press (A) To select [MEDIA RESIDUAL].

Press the ENTER key.

MEDIA RESIDUAL SETUP

4 Press

Press to select ON/OFF.

MEDIA RESIDUAL SETUP : OFF

OΝ

5 Press the ENTER key.

MAINTENANCE MEDIA RESIDUAL <ent>

6

Press the END key several times to end the setting.

Printing the Remaining Amount of a Medium

The present remaining amount of a medium can be printed.



- · Set "Remaining amount of a medium to display" to "ON".
- When you replace the medium you use now with another, it is recommended that you print the remaining amount of the medium on it. With the remaining amount of a medium having been printed beforehand, when you use the replaced medium again, you can enter an accurate value in the screen for entering the remaining amount of a medium (P.2-29) that appears after media detection.



In LOCAL, Press (*)

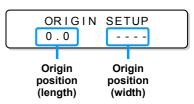
· LOCAL changes to the origin setting mode.





Press to set the origin to a desired position.

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



MEDIA RESIDUAL PRINT

<ENT>



Press the **REMOTE** key.

- When you press the screen returns to Step 2.
- When you press the END key, the screen returns to LOCAL.



Press the **ENTER** key.

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



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



White Ink Maintenance Function

If SS21 white ink is left unused for a while, the color may become uneven by clogging of the nozzle or settling of pigment.

If the color does not improved by the head cleaning (P.2-40), use this maintenance function. (This function is valid when the firmware Ver.2.10 or later is installed and SS21 white ink is filled.)

White ink maintenance function has three levels of maintenance.

Select the maintenance level depending on the condition.

LEVEL1	Performs maintenance in the following order: (1)Performs the automatic nozzle cleaning function. *1 (2)Performs cleaning. *2
LEVEL2	Performs maintenance in the following order: (1)Performs the automatic nozzle cleaning function. *1 (2)Fills the white ink. (3)Performs cleaning. *2
LEVEL3	Performs maintenance in the following order: (1)Performs the automatic nozzle cleaning function.*1 (2)Discharges the white ink remaining in the head or in the tube. (3)Fills the white ink. (4)Performs cleaning.*2

- *1. The operation is the same as the CUSTODY WASH of ST. MAINTENANCE. (Leaving time: three minutes)
- *2. The operation equivalent of "Hard cleaning" of the head cleaning is performed on each color.(
 P.2-40).



- According to the level changing from 1 to 3, the amount of consumption becomes more. Use Level 2 and 3 when the status is not improved even if you perform Level 1 maintenance.
- When the machine is left unused for a long time, it is recommended to perform LEVEL1 of this function about every other week.
- The other cautions of this function or the white ink are included in the pack of the cartridge. Read it carefully before use.



Press the MODE CHANGE key in LOCAL to select the printing mode.





Select [WHITE MAINTE.] of the maintenance menu.

- (1)Press the FUNCTION key.
- (2)Press to select [MAINTENANCE] and press the enter key.
- (3)Press to select [WHITE MAINTE.].

Press the ENTER key.

WHITE MAINTE. SELECT : LEVEL 1



Select the maintenance level by pressing the



WHITE MAINTE. SELECT :LEVEL3



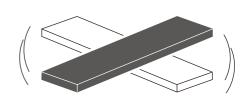
• Set value : LEVEL1 to LEVEL3

• This describes the operation when LEVEL3 is set.



Press the ENTER key.

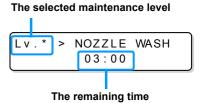
SHAKE WHITE INK CARTRIDGES en t Remove the white ink cartridge, and shake it 5 or 6 times as shown on the right.





Set the white ink cartridge, and press the ENTER key.

- · Nozzle cleaning starts.
- The operation after nozzle cleaning varies depending on the LEVEL set on the Step 4.
- LEVEL1 : Go to the Step 11. LEVEL2 : Go to the Step 10. LEVEL3 : Go to the Step 8.





Remove the white ink cartridge.

- When the white ink cartridge is removed, the white ink remaining in the machine is discharged.
- After discharging, the screen shown on the right appears.

Lv.3 > DISCHARGE 01:30

SET:INK CARTRIDGE _W_W____



Set the white ink cartridge.



White ink filling starts.

• Filling time of LEVEL2 is different from LEVEL3. (When LEVEL2 is selected, filling time becomes shorter.)

Lv.3 > FILLING UP 00:30



Perform cleaning.

Lv.3 > CLEANING 02:00

Maintenance

If a Waste Ink Tank Confirmation Message Appears

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

If a Message Is Displayed, for Example, When the Machine Is Supplied with Ink

When functions that use the waste ink tank, such as ink-supplying, head cleaning, and PUMP tube washing, are performed, a message that requests you to confirm the state of the waste ink tank may be displayed, depending on the state of the tank.

• When the waste ink tank is almost full:

The message on the right is displayed.

Confirm a wastetank Continue< >Exchange



Check the state of the waste ink tank.

When the waste ink tank is almost full:

(1)Replace the waste ink tank with another. (P.6-40)

(2)Press the ENTER key to select "Exchange". (The amount of discharged ink is reset.)

When the waste ink tank still has a capacity for waste ink:

(1)Press to select "Continue". (The amount of discharged ink is not reset.)

- In this case, returning to LOCAL will display the message of P. 6-38 "Confirmation Message in LOCAL".
- When the waste ink tank is completely full:

The message on the right is displayed.

Confirm a wastetank Exchange : ent



Replace the waste ink tank with another (P.6-40) and press the ENTER key.

• The amount of discharged ink is reset.



- When you have selected "Exchange" for "almost full" or "completely full" in the above operation, make sure to replace the waste ink tank. (P.6-40) When you use the machine without replacing the waste ink tank, waste ink may overflow from the tank before a confirmation message is displayed.
- This machine does not count the accumulated amount of waste ink discharged when the ST.MAINTENANCE (NOZZLE WASH, PUMP TUBE WASH, and COSTODY WASH) are performed. Before performing these functions, make sure to check the state of the waste ink tank.

Confirmation Message in LOCAL

The message on the right is displayed.

<LOCAL.1> [#01]
!WASTE TANK



Check the state of the waste ink tank and replace it with another as necessary. (\nearrow P.6-40)

When You Do Not Want the Confirmation Message of the Waste Ink Tank to Be Displayed

You can configure the setting so that the confirmation message of the waste ink tank is not displayed.



Press the MODE CHANGE key in LOCAL to select the printing mode.



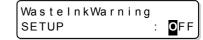


Select [Waste Ink Warning] of the machine setting menu.

- (1)Press the FUNCTION key.
- (2)Press to select [MACHINE SETUP] and press the ENTER key.
 (3)Press to select [Waste Ink Warning].
- (4)Press the ENTER key.



Press to select OFF.





Press the ENTER key.

MACHINE SETUP WasteInkWarning<ent>



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



• When you set Waste ink warning to "OFF", the confirmation message is not displayed. Make sure to visually check the amount of ink remaining in the waste ink tank.





Replacing the Waste Ink Tank with Another

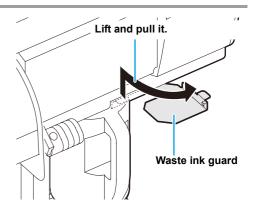
When the message on the right has been displayed, check the state of the waste ink tank immediately and replace the tank as necessary.

<LOCAL.1> [#01] !WASTE TANK



Remove the waste ink tank guard.

(1)Lift the waste ink tank guard and unlock it. (2)Open the waste ink tank guard to your side.

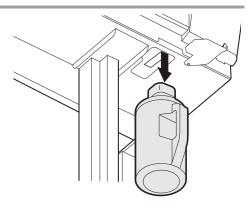


2

Hold the grip of the waste ink tank and remove the tank by pulling it to your side.

• Attach the cap to the removed waste ink tank.



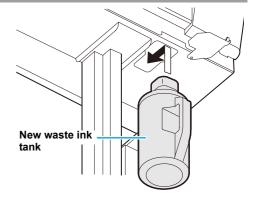




Replace the waste ink tank with another.

(1)Prepare a new waste ink tank (SPC-0117).

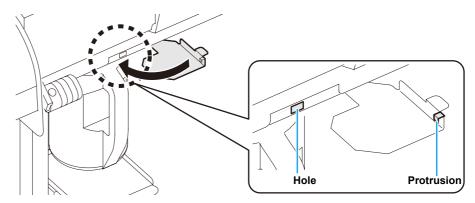
(2)Hold the grip of the waste ink tank and insert the tank.





Close the waste ink tank guard.

• Align the protrusion of the waste ink tank guard with the hole of the main body and lock the tank.



5

Press the MODE CHANGE key in LOCAL to select the printing mode.





Select [Ink Tank Replace] of the maintenance menu.

- (1)Press the FUNCTION key.
- (2)Press to select [MAINTENANCE] and press the ENTER key.
- (3)Press to select [Ink Tank Replace].



Press the **ENTER** key.





Press the **ENTER** key.

• The amount of discharged ink controlled by this machine is reset, and the confirmation message is canceled.



Press the END key several times to end the setting.



Changing the ink

Ink type or the color used can be changed.



• To change the ink set such as changing from "4-color model" to "6-color model" or "6-color model", the machine must be worked by our service engineer. Contact our service office or the distributor in your region.

Change the ink type

Change the ink color

To change the ink type used such as changing from ES3 ink to SS21 ink, work as follows.

To change the ink color used such as changing from "6-colors" to "6-colors + white" of SS21 ink, work as follows.

"Discharge" the remaining ink in the machine, and "Wash" the head or the tube.

See P.6-19 "DISCHARGE & WASH".

Fill ink.

See P.6-18 "FILL UP INK".



Note for changing ink type
 Changeable ink type is limited by the type of ink used. See the table on the right.

			Ink type to be changed	
			Eco-PA1	SS21/ES3
Ink	lnk	Eco- PA1	Changeable	Contact our service office or the distributor in your region.
	Ink type used	SS21 ES3	Not changeable	Changeable (However, when you wish to change to silver ink or white ink of ES3, the work by our service staff is required.)



Ink Type	Cleaning Solution Type
Solvent ink (SS21/ES3)	MILD SOLVENT Cleaning Solution Cartridge (SPC-0294)
Aqueous pigment ink (Eco-PA1)	Aqueous cleaning solution cartridge (SPC-0259)



Replacing the Cutter Blade

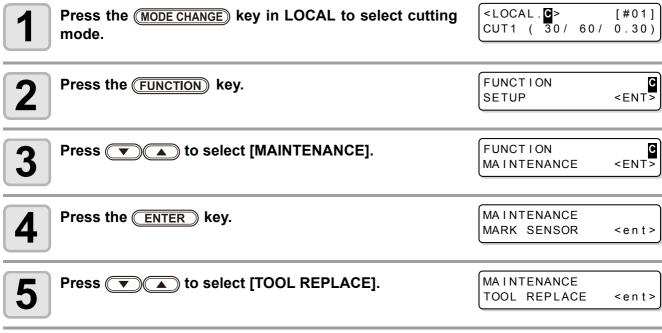
The medium cutter blade is consumable. When the cutter blade gets dull, replace it with a new one (SPA-0107).



- The blade is sharp. Be careful not to hurt yourself or anyone else.
- Store the cutter blade in a place that is out of the reach of children. In addition, dispose of used cutter blades according to regional laws and regulations.



• When replacing the cutter blade, it is recommended to place a sheet of paper under the cutter blade. This will help pick up the cutter blade if it drops.









TOOL REPLACE

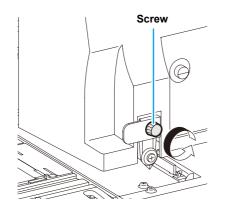
ACTION

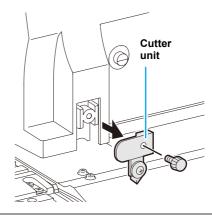
• The cutter unit moves to the left end of the machine.



Replace the cutter unit by the carriage.

- Now the cutter unit can be moved manually. Move the cutter unit to the position where you can assure easy access, and then replace the blade edge.
- (1)Loosen the screw of the cutter unit.
- (2)Remove the cutter unit.
- (3) Mount a new cutter unit.
- (4) Fasten the screw of the cutter unit to secure the cutter unit.







When replacement is finished, press the **ENTER** key.

• The screen returns to LOCAL.



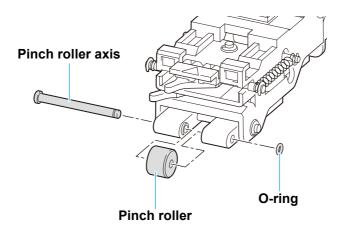


Replacing the Pinch Rollers

Replace the pinch roller when it is worn or dirty. (SPA-0166: Set of four pinch rollers / SPA-0167: Set of three pinch rollers)



Remove the O-ring, pinch roller axis, and pinch roller.



2

Attach a new pinch roller, and reattach the pinch roller axis and O-ring to their original positions.



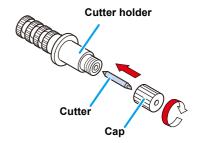


Replacing a Cutter Blade Not Included in the Accessories

This section describes how to replace the cutter holder (Swivel cutter holder: SPA-0090) and the cutter (Swivel blade: SPB-0030) that are sold separately.



Rotate the cap from which a blade comes out and remove the cutter.

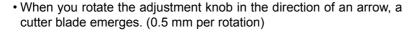


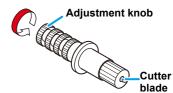
2

Replace the cutter with a new one, using tweezers.



Adjust the length of the cutter blade that comes out from the cap.







Chapter 7 Troubleshooting



This chapter

describes the corrective measures to be taken for a phenomenon suspected to be trouble and the procedures to clear the error number displayed on the LCD.

Troubleshooting	7-2
Image Quality Is Poor	
Nozzle Is Clogged	
Ink Cartridge Warning Appears	
Warning/Error Messages	
Warning Messages	
	7-10

Troubleshooting

Take the appropriate actions as described below before taking the trouble as a failure. If the problem is still not solved after troubleshooting, contact your distributor or our service office.

Failure phenomenon	Cause	Solution
Power does not turn ON.	The power cable of the machine is not connected securely.	Securely connect the power cable of the machine to the outlet.
	The main switch is not ON.	Turn ON the main switch.
	The power switch located on the front of machine is not ON.	Turn ON the power switch on the front of the machine.
Printing/cutting (printing with a pen) does not start.	The interface cable is not connected securely.	Securely connect the interface cable.
	The interface cable is not correct.	Use a USB2.0 Hi-Speed-compliant cable.
	The message indicating that the ink has run out is displayed.	Replace the ink cartridge with a new one.
	The host computer setting (machine model, etc.) is wrong.	Check the host computer setting.
	The USB driver is not installed.	Install the USB driver included with the machine.
Medium gets jammed. Medium is soiled.	A medium other than those recommended by MIMAKI is used.	Use the recommended medium.
	Medium is curled.	Avoid using a medium with curls.
	The end of the medium is bent.	Avoid using any medium with bent ends.
	The medium is hanging down along the platen.	Use a take-up device or re-load the medium on the machine.
[HEAT] or [CONSTANT] LED	The power to the machine is not ON.	Turn ON the power to the machine.
does not light up.	The heater temperature setting is not effective.	Set the heater temperature higher than room temperature.
An error occurs in the machine when the host computer sends	Command settings are wrong.	Use the application included with the machine.
data to the machine.	Machine model setting is wrong.	Correct the machine model setting to [CJV30] on the application software.
Cutting produces a perforation	Screw for the tool holder is loose.	Tighten up the screw.
rather than a clean cut.	The cutter blade protrudes excessively.	Adjust the protrusion of the blade properly.
	The tool condition is set to [HALF].	Set the tool condition to [CUT1] to [CUT3].
	The blade is chipped or worn out.	Replace the blade with a new one.
	The blade does not rotate smoothly.	Replace the holder with a new one.
Slippage of medium arises in cutting.	The pinch rollers and grid rollers fail to securely retain the medium in position.	Check the position of the pinch rollers and grid roller and adjust them so that they securely retain the medium in position.
		Increase the number of pinch rollers.
	The pinch roller pressure is not properly selected.	Select the proper pinch roller pressure. (P.4-2)
	There is a slack in the roll medium so the medium fed meanders or skews.	Remove the slack in the roll medium and straighten the right and left end faces of the roll when loading the roll medium on the machine. Then, start feeding the medium.



Failure phenomenon	Cause	Solution
Slippage of medium arises in cutting.	The medium was bent and came off the backing paper and thus there are air bubbles between the medium and the backing paper.	When a long leaf medium is to be cut, take care not to bend the medium while feeding or cutting it and do not put any extra load on the medium.
		When a long leaf medium is to be cut, provide a sufficient space for working in the direction of medium feeding. Front: 1.5 m or more Rear: 1.5 m or more
	The setting direction of the medium and the direction specified on the data do not agree with each other.	Correct the medium setting or data setting.
	The medium comes in contact with the floor surface.	Decrease the cutting speed (SPEED) to reduce the load on the medium when it comes in contact with the floor surface.
	The side margins of the medium beside the pinch rollers are not enough.	Provide a side margin of 20 mm or more on each side of the medium beside the pinch rollers.
	The setting of offset X and offset Y of "Setting Register Mark Detection" is not correct.	Correct the offset value in concert with misalignment. (P.4-11)
The tool is dragged during operation.	The medium is warped.	Load the medium on the machine so that the medium is not warped.
An unexpected cutter imprint remains on the medium.	The tool does not move up/down successfully.	Turn the power OFF and try to lift/lower the tool holder by hand. If the tool holder does not move up but remains in the lower position, contact your distributor or our service office.
	An extremely thick medium is used.	Use a medium meeting the specifications.
Some parts remain uncut.	Low pressure on the cutter blade.	Increase the value of "ADJ-PRS OFFSET". (P.4-36)
		Increase the cutter pressure and perform test cutting again. (P.2-43)
		Set the over cutting. (P.4-36)
Register mark cannot be detected.	The position of the register mark sensor and the light pointer is not the same.	Adjust the position of the light pointer. (P.4-20)
	The sensitivity of the register mark sensor is low.	Adjust the sensitivity of the register mark sensor. (P.4-21)
There is a part remaining uncut when cutting medium.	Both ends of the medium stays away from the position of pinch rollers located at both ends.	Set the pinch roller of both ends so that they are within the range of 10cm from medium left end and 2cm from medium right end. (P.2-17)





Image Quality Is Poor

This section describes the corrective actions to be taken in case the image quality is not satisfactory. Take appropriate measures to remedy the problems with image quality. If the remedy does not work, contact your distributor or our service office.

Failure phenomenon	Solution	
White lines/blur/dark stripes (in the direction the heads travel)	 (1) Execute head cleaning. P.2-40 (2) Perform maintenance of the inside of the station. P.6-5 (3) Execute the [Media correction] function. P.3-8 (4) If any pieces of paper or dust is attached on the medium holder or other paths of the head, remove it. 	
Characters are double or triple printed in the media feed direction.	(1) Execute the [Media correction] function. (2) P.3-8	
Disagreement in print positions between outward trip and homeward trip.	(1) Execute the [Dot position correction] function. P.3-10	
Ink drops falling on the medium during printing.	 (1) Execute the wiper cleaning. P.6-6 (2) Execute the ink cap cleaning. P.6-6 (3) Execute the head cleaning [Normal]. P.2-40 (4) When the phenomenon is not improved, set the regular wiping operation. P.6-28 	

Nozzle Is Clogged

When nozzle clogging is not dissolved even after cleaning the head referring to P.2-40, make sure of the following operations.

- Fill ink by executing the operations of P.6-18.
- Following the procedures described in P.6-19, perform DISCHARGE & WASH.



Ink Cartridge Warning Appears

If trouble with an ink cartridge is detected, a warning message appears.

Printing, cleaning, and all the other operations that use ink become disabled if warning occurs.

In this case, replace the ink cartridge immediately.



 Once cartridge trouble is displayed, do not leave the ink cartridge for a long time without replacing it; otherwise, the machine will lose the nozzle clogging prevention function.
 If nozzles are clogged, the machine must be repaired by our service engineer.

Displaying the Description of Ink Cartridge Trouble

You can check the details of the cartridge error with the following operations. (P.7-6)

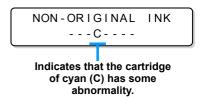


Press the ENTER key in LOCAL.

SS21INK MMCCYYKK REMAIN 34567899

2

Press the FUNCTION key.



- Press FUNCTION or END to return to the display of the remaining amount of ink.



7

Messages and Solutions

Message	Cause	Solution
INK NEAR END MMCC	The ink of the ink cartridge has been nearly used up.	Replace the cartridge generating the warning with a new one.
INK END	The ink of the ink cartridge has been completely used up.	Replace the cartridge generating the warning with a new one.
NON-ORIGINAL INK	The ink cartridge is not our genuine product.	Replace the cartridge generating the warning with our genuine product.
WRONG INK IC	The IC chip of the ink cartridge cannot be read normally.	Remove the cartridge generating the warning once and install it again. If the same warning message still appears, contact our service office or the distributor in your region.
Kind of INK	The ink of the ink cartridge is different in type from the ink currently supplied.	Check the ink type of the cartridge generating the warning.
Color of INK	The ink of the ink cartridge is different in color from the ink currently supplied.	Check the ink color of the cartridge generating the warning.
WRONG CARTRIDGE	There is trouble with an installed ink cartridge.	Check the cartridge generating the warning.
NO CARTRIDGE	An ink cartridge has not been installed in the slot.	Install an appropriate cartridge in the slot generating the warning.
Expiration	The specified expiration date of an ink cartridge has passed.	Replace the cartridge generating the warning with a new one. The cartridge may be used until one month after the specified expiration date.
Expiration: 1MONTH	The expiration date of an ink cartridge has elapsed (one month has passed after the specified expiration date).	The red LED blinks. Replace the cartridge generating the warning with a new one. The cartridge may be used until two months after the specified expiration date.
Expiration: 2MONTH	The expiration date of an ink cartridge has elapsed (two months have passed after the specified expiration date).	Replace the cartridge generating the warning with a new one.
INK REMAIN ZERO	The remaining amount of the ink in an ink cartridge is zero.	Replace the cartridge generating the warning with a new one.
Check the "W"nozzle condition. <ent></ent>	When SS 21 white ink is used, the message of prompting you to perform test printing is displayed for keeping the nozzle status be normal.	Perform "WHITE CHK." of test printing.
PERFORM SPOT COLOR MAINTENANCE? <ent></ent>	When silver and white ink of ES3 ink are used, the message of prompting you to perform special color maintenance for preventing color heterogeneity due to settling down of pigment is displayed.	Perform spot color maintenance.



Warning/Error Messages

If some trouble occurs, the buzzer sounds and the display shows a corresponding error message. Take appropriate measures to remedy the displayed error.

Warning Messages

Message	Cause	Solution
** NO MEDIA **	Medium is not set.	Set the medium.
EXCHANGE BATTERY	The end of the life of the internal clock battery is detected.	Contact our service office or the distributor in your region.
<pre><local.1> [#01] !Replace a WIPER</local.1></pre>	Time to replace the wiper in the capping station with a new one has come. (The wiping count has reached the specified value.)	Replace the wiper with a new one. (CF P.6-8)
<pre><local.1> [#01] !Do TEST PRINT</local.1></pre>	When the power supply has been kept turning OFF for 72 hours or longer, sleep refresh or cleaning was not performed.	Perform the test printing and check the nozzle status. If the power supply has been kept turning OFF for a long time, the sleep operation must be performed. (P.6-23)
PRE PRT POST BREAK **°C **°C	A heater is disconnected. (This example shows that the preheater is disconnected.)	Contact our service office or the distributor in
PRE PRT POST THERM **°C **°C	The thermistor of a heater is defective. (This example shows that the thermistor of preheater is defective.)	your region.
REMOTE.1 [#01] NEAR END MMCC	Ink for one supply path has been nearly used up.	Replace the cartridge for the supply path corresponding to the indicated color. You can print without replacing the cartridge (until "No ink" is displayed). However, the machine returns to LOCAL each time when the printing of one file is completed.
<local.1> [#01] INK END YYKK *REMOTE.1* [#01] INK END YYKK</local.1>	Ink for one supply path has been completely used up.	Replace the cartridge for the supply path corresponding to the indicated color.
<pre>CLOCAL.1></pre>	Ink for one supply path is not set. Or improper ink is set.	Replace or set the cartridge for the supply path corresponding to the indicated color. Refer to P. 7-5 "Ink Cartridge Warning Appears" to check the details of the failure, and then fix the problem following the applicable procedure.
<pre><local.1> [#01] REINSERT CARTRIDGE</local.1></pre>	Ink near end was detected right after the cartridge with much remaining amount of ink has been inserted.	Pull out the inserted cartridge and insert it again. If the message will be displayed again, contact a distributor in your district or our office to call for service.
REMOTE.1!CAR [#01]	There is a problem with the installed ink cartridges.	Check the warning details in the guidance function. (@P P.7-5)









Message	Cause	Solution
COPY SKIP	A register mark cannot be detected during continuous copying. (One pattern is skipped.)	There is no problem if the marks are successfully detected after skipping one pattern. If marks cannot be detected continuously by five patterns or more, [ERROR 36-C MARK DETECT] (P.7-12) is displayed.
MEDIA SKEW <ent></ent>	Sheet misalignment exceeds the setting length of skew check (P.4-14).	Set the sheet again and press the ENTER key.
PAUSE REM/END	The plotter is holding the register mark detecting operation, since the REMOTE key has been pressed during the detection process.	Press the REMOTE key to resume the mark detection. Or press the END key to end the operation.
MEDIA EXCHANGE	The machine is waiting for the medium to be replaced during continuous copying in the leaf media mode.	Replace the leaf sheet (cut sheet) with a new one, and resume continuous copying.
	End of the medium is detected while detecting a register mark or cutting roll medium.	Cutting cannot be continued, since roll medium has ended. Press the END key and replace it with new medium.
MEDIA END REM/END	The medium is lifted.	Fix the lifting of the sheet and press the REMOTE key to resume cutting.
	The back of the machine is exposed to intense light.	Turn the machine around so as not to exposed it to the light, and press the REMOTE key to resume cutting.





Error Messages

When an error message is displayed, eliminate the error according to the chart below. If the same error message appears again, contact your distributor or our service office.

Error messages	Cause	Solution	
***** ERROR 01 ***** MAIN ROM	An error occurred in the circuit board system. (ROM)		
***** ERROR 02 ***** MAIN RAM	An error occurred in the circuit board system. (RAM)		
***** ERROR 03 ***** POWER +5V	An error occurred in the circuit board system. (Power supply voltage +5 V)		
***** ERROR 03 ***** POWER +24V	An error occurred in the circuit board system. (Power supply voltage +24 V)		
* * * * * ERROR 03 * * * * * * POWER + 42 V	An error occurred in the circuit board system. (Power supply voltage +42 V)		
***** ERROR 04 ***** F-ROM	An error occurred in the circuit board system. (Parameter ROM)		
***** ERROR 06 ***** SD-RAM	An error occurred in the circuit board system. (SDRAM)	Turn OFF the power to the machine and turn it ON again after a while.	
***** ERROR 07 ***** HEAD ()	A connection error in the heads was detected. (Abnormal temperature was detected.)	If the same error message appears again, contact our service office or the distributor in your region.	
**** ERROR 07 ***** VOLTAGE ()	A connection error in the heads was detected. (Abnormal voltage was detected.)		
* * * * * ERROR 08 * * * * * * LinearENCODER: SENSOR	An error occurred in detecting the linear encoder. (Unable to count)		
***** ERROR 08 ***** LinearENCODER:DIR.	An error occurred in detecting the linear encoder. (Error in the mounting direction)		
***** ERROR 08 ***** LinearENCODER: COUNT	An error occurred in detecting the linear encoder. (Read-out count error)		
FPGA ERROR	An error occurred in the circuit board system. (FPGA PDC)		
***** ERROR 09 ***** HDC ERROR ()	An error occurred in the circuit board system. (FPGA HDC)		
***** ERROR 10 ***** COMMAND ERROR	The machine received some data other than	According to the application, switch the settings for COMMON SETUP>RECEIVED DATA. (P.5-2)	
**** ERROR 10-C ****	command data.	Securely connect the interface cable in position.	
COMMAND ERROR		Use an interface cable conforming to the specifications.	
***** ERROR 11 ***** PARAMETER ERROR	Any parameter outside the range of acceptable	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again,	
**** ERROR 11-C **** PARAMETER ERROR	numeric values was received.	contact our service office or the distributor in your region.	



Error messages	Cause	Solution	
***** ERROR 12 ***** MAINTENANCE COMMAND	Data other than command data has been received.	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region.	
**** ERROR 12-C **** DEVICE	An improper device control command is issued.	Change the control command to the machine, and then send the data again. Or, turn the power OFF, turn it back ON, and then send the data again. If the same error message appears again, contact our service office or the distributor in your region.	
**** ERROR 13-C **** PM OVER	The receiver buffer exceeds the limit.	Divide the polygonal data and send the divided data.	
**** ERROR 15-C **** AUTO FEED	The machine failed to feed the medium by the length specified by the data.	Load the longer medium, and then try again.	
***** ERROR 16 ***** MRL COMMAND	The received data does not follow the command system set with the machine.	Transmit data that is compatible with the command system using the application supported by this machine.	
***** ERROR 25 ***** FULL-SPEED	An error occurred in communication between the host computer and this machine due to the USB2.0 connection. (Full-Speed mode connection)	Check that the host PC supports the USB2.0 interface. (Communication can be resumed without changing any setting. However, it is recommended to use the connection in Highspeed mode.)	
**** ERROR 25 ***** PACKET SIZE OVER **** ERROR 25 ***** USB PROTOCOL **** ERROR 25 ***** USB ENVIRONMENT **** ERROR 25 ***** USB DATA	An error occurred in communication between the host computer and this machine due to the USB2.0 connection.	Check that the cable is securely connected. Also, check to see if any error has occurred in the host computer.	
***** ERROR 30 ***** OPERATION ERROR	Improper operation was conducted on the operation panel.	The bottom row of the display shows the reason by which the operation is disabled. Eliminate the cause of the error, and then continue the operation.	
**** ERROR 31-C **** NO DATA	Multiple cutting cannot be executed because the receiver buffer is empty.	Send the cutting data before executing the No.COPIES.	
**** ERROR 32-C **** DATA TOO BIG	Multiple cutting cannot be executed because the received data is too large.	Refer to the No.COPIES function.	
**** ERROR 33-C **** MEDIA SIZE	The medium length in the medium-feeding direction is too short.	Use a longer medium.	
***** ERROR 34 ***** PRINT DATA REMAIN	The function setting has been changed or an unavailable function has been commanded while an unfinished printing job remains in the queue.	Finish printing all the data that has been received by the machine or clear the remaining data, and then try again.	
**** ERROR 34-C **** CUT DATA REMAIN	Improper operation was conducted while cutting is suspended by REMOTE.	Continue cutting until cutting data is completed, or clear the data.	







Error messages	Cause	Solution		
***** ERROR 50 ***** MEDIA DETECT	Paper could not be detected.	Confirm the position of the medium setting and the pinch roller and then perform the medium detection again. (P.2-25)		
***** ERROR 51 ***** Y-ORIGIN	Y-origin could not be detected.	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region.		
**** ERROR 120 **** ENVIRONMENT TEMP(LO)	The ambient temperature is out of the usable temperature range (too low).	Adjust the ambient temperature of the installation		
**** ERROR 121 **** ENVIRONMENT TEMP(HI)	The ambient temperature is out of the usable temperature range (too high).	place. (ੴ P.3-35)		
**** ERROR 144 **** CARTRIDGE SET!	There is a slot where no cartridge has been inserted.	The empty slot may be dried to the degree that it cannot use ink. To avoid this trouble, set a cartridge in the empty slot.		
**** ERROR 170 **** CUTTER LOCK	Since the cutter head could not be fixed at the waiting position, the coupler switching was disabled.			
**** ERROR 170 **** PRINT HEAD LOCK	Since the print head could not be fixed at the waiting position, the coupler switching was disabled.	Turn OFF the power supply and wait for a while. Then turn ON the power. If this message is displayed again, contact our service office or selling office.		
CUTTER JOINT	The cutter unit and the coupler are disconnected during operation.			
**** ERROR 181 **** PR POSITION	Paper could not be detected. The pinch roller positions are not appropriate.	Set the pinch rollers in the correct positions. If the same error message appears again, contact your distributor or our service office.		
**** ERROR 200 **** HEAD MEMORY ()	An error occurred on the head unit memory.	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again,		
T*** ERROR 202 **** DVEICE CONSTRUCTION	The head is not connected. An error occurred on the head slider board. The head is not MIMAKI genuine.	contact our service office or the distributor in your region.		
**** ERROR 203 **** SDRAM SIZE	An SD-RAM of the size required for the machine has not been equipped.	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region. (When a usable SD-RAM is available, the machine can be started as is. However, the printing speed may be slow depending on the resolution.)		
**** ERROR 206 **** MAIN PCB	An error occurred on the main PCB.			
**** ERROR 207 **** XXXXXXXXXX	An error is detected on the waveform printed on the lower line of the display.	Turn OFF the power to the machine and turn it		
* * * * ERROR 211 * * * * HeaterTEMP(//)	An abnormal temperature of the media heater was detected.	ON again after a while. If the same error message appears again, contact our service office or the distributor in your		
* * * * ERROR 211 * * * * HeadWARM.TEMP.()	An abnormal temperature of the head heater was detected.	region.		
* * * * ERROR 211 * * * * HeadWARM.BREAK()	The head heater is disconnected.			





Error messages	Cause	Solution	
* * * * ERROR 211 * * * * HeadWARM.THERM()	Trouble has occurred with the thermistor of the head heater.	Turn OFF the power to the machine and turn it	
Y COORDINATES	An error was detected during scanning operation.	ON again after a while. If the same error message appears again, contact our service office or the distributor in your	
**** ERROR 251 **** SYSTEM ERROR	A system error occurred.	region.	



Chapter 8 Appendix



This chapter

contains the lists of the specifications and functions of this machine.

Main Body Specifications	8-2
Printer Section Specifications	8-2
Cutter Section Specifications	
Common Specifications	
nk Specifications	
Warning Labels	8-6
nquiry Sheet	8-8
Function Flowchart	

Main Body Specifications

Printer Section Specifications

ltem		CJV30-60	CJV30-100	CJV30-130	CJV30-160
Printing hood Method		Drop-on-demand piezoelectric print heads			
Printing head	Specification	One head			
			720 x 540 dpi / 540 or 720 or 1440 x 720 dpi / 540 x 900 dpi / 540 or 720 x 1,080 dpi / 720 x 1,440 dpi / 1440 x 1,440 dpi		
	Dedicated solvent ink.	Either ES3 ink or SS2	Either ES3 ink or SS21 ink		
Usable inks	Dedicated aqueos ink.	Eco-PA1 ink: 4 colors (Y,M,C,K) 6 colors (Y,M,C,K,Lc,Lm) 7 colors (Y,M,C,K,Lc,Lm,Lk)			
Ink supply	Supplied from ink cartridges through tubes Ink cartridge replacement method: Only when four colors are used: Supplied by toggle switchover with two cartridges		two cartridges per color		
Amount of supplied ink		Other colors Or When six colors are u One 440-cc cartridg for each of magenta When six colors + whi WhiteTwo 220-cc ca Other colorsOne 44 When four colors are	ne 220-cc cartridge for ne 440-cc cartridge for sed: e for each color, 440 c and cyan) te color are used: artridges, 440 cc per cc 0-cc cartridge for each	each color c per color (two cartridg olor color, 440 cc per color	es (880 cc in total) only
Usable media		Tarpaulin / FF(Flexible	e Face) / Polyvinyl chlo	ride film / MS Chloroeth	ene / MS Tarpaulin
Dead space	Leaf medium	Left and right: Inside the pinch roller detection position (default value) / Front: 40.0 mm / Rear: 98.5 mm		e) /	
Dead space	Roll medium	Left and right: Inside the pinch roller detection position (default value) / Front: 40.0 mm / Rear: 0.0 mm		e) /	
Head height adjustment		2.0 mm / 3.0 mm (from the platen surface) 2-step adjustment			
Waste ink tank		Bottle type (2,000 cc)			
Image memory SD-RAM 128 MB					
Command MRL-III (MIMAKI o		MRL-III (MIMAKI origi	nal command)		_

Cutter Section Specifications



It	em	CJV30-60	CJV30-100	CJV30-130	CJV30-160
Maximum speed	*1	30 cm/s			
Maximum accele	ration	1 G			
Cutting pressure		10 to 350 g			
Usable tools		Eccentric cutter / water-based ballpoint pen / oil-based ballpoint pen / Ballpoint pen for handwriting (sold on the market) *2			
Number of times to a medium	the cutter responds	10 times/sec			
Usable media		Polyvinyl chloride sheet (Thickness of 0.25mm or less with laminate*3) / fluorescent sheet / reflecting sheet *4(excluding high-intensity reflecting sheets)) / fluorescent sheet *4	
Dead space Leaf medium Roll medium		Left and right: Inside t Front: 40.0 mm / Rea	•	n position (default value)	1
		Left and right: Inside the pinch roller detection position (default value) / Front: 40.0 mm / Rear: 0.0 mm			
Repetition accura	acy *5	± 0.2 mm (excluding the expansion and contraction due to the temperature of the film)			
Reception buffer	memory	SD-RAM 30 MB (20 MB when the sorting function is effective.)			

Item	CJV30-60	CJV30-100	CJV30-130	CJV30-160
Command	MGL- II c2			
Program step	25 μm / 10 μm			

- *1. The maximum speed may be limited, depending on the size of a used medium. In addition, the cutting section does not operate with both speed and acceleration being at the maximum.
- *2. Use one with a diameter of 8 to 9 ϕ whose clamped part has no protrusion or taper. In addition, because the position of the pen point changes, depending on the types of pens, no good image quality can be ensured.
- *3. This conforms with our specified sheet.
- *4. When a blade dedicated for fluorescent sheets (SPB-0007) or a blade dedicated for reflecting sheets (SPB-0006) is used
- *5. For repetition accuracy, see the lower part of this page.

Repetition Accuracy Conditions

State of the Plotter

· Clamping pressure: Strong

State of How a Medium Should Be Set

- The left and right margins of the medium must be 20 mm wide or more.
- The medium on the front side must not be warped or lifted.
- The medium and the backing sheet must not be separated (no air bubbles between them) because of the bend of the medium.
- The medium must be set properly by the medium feeding function.
- When the medium is a roll medium, it must not be wound up loosely. (The surface of both ends of the medium must have no steps.)

Cutting Speed

• 30 cm/s or less (when the attached cutter is used)

Data to Be Cut

- Test pattern for maintenance (ten continuous reciprocating motions in the longitudinal direction)
- The medium and the backing sheet must not be separated (no air bubbles between them) because of the extreme bend of the medium caused while it is cut.

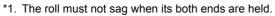






Common Specifications

	ltem	CJV30-60	CJV30-100	CJV30-130	CJV30-160	
Maximum printir		610 mm	1,020 mm	1,361 mm	1,610 mm	
•	Maximum width	620 mm	1,030 mm	1,371 mm	1,620 mm	
	Minimum width	100 mm				
	Thickness	1.0 mm or less				
0: ("	Roll outside diameter	φ180 mm or less				
Size of a roll medium	Roll weight *1	25 kg or less				
medium	Roll inside diameter	2 or 3 inches				
	Print side	Roll exterior surface				
	Rolling-up processing	The end of a medium is attached to a paper tube with adhesive tape or weak adhesion.				
Size of a leaf	Maximum width	620 mm	1,030 mm	1,371 mm	1,620 mm	
medium	Minimum width	100 mm				
Distance	Absolute accuracy	The larger of the two:	± 0.3 mm or ± 0.3% o	f a specified distance		
accuracy	Reproducibility	The larger of the two:	± 0.2 mm or ± 0.1% o	f a specified distance		
Rectangular acc	curacy	± 0.5 mm / 1,000 mm				
Medium skew		5 mm or less every 10				
Medium cutting		Cutting in the Y direction by the blade installed on the cutter head (Cutting accuracy (difference between steps): 0.5 mm or less)				
Paper ejection		Roll take-up device supplied as a standard accessory (Switchover is possible between winding up a roll with its printed surface facing inward and outward.)			•	
Interface		USB 2.0				
Noise	During standby	58 dB or less (FAST-A: 1 m from the front, rear, left, and right sides, and adsorption fan: low)				
Noise	Continuous operation noise	70 dB or less				
Safety standards	s to be met	VCCI-Class A, FCC-C Directive), CB Report		Marking (EMC Directiv	e, Low Voltage	
Power specificat	tions	AC100 to AC120 ± 10 15A or less	0%, AC220 to AC240 ±	± 10%, 50/60 Hz ± 1 Hz,		
Power consump	tion ^{*2}	1,380 W or less				
	Allowable temperature	20°C to 35°C				
	Relative humidity	35 to 65% Rh (with no	o dew condensation)			
Installation environment	Accuracy-ensuring temperature	20°C to 25°C				
	Temperature gradient	± 10°C/h or less				
	Dust	Equivalent to the normal office level				
Weight	•	110kg	130kg	145kg	160kg	
Outoido	Width	1,524 mm	1,934 mm	2,289 mm	2,538 mm	
Outside dimensions	Depth	739 mm				
GITTOTOTOTO	Height	1,424 mm				



^{*2.} The main body and the heaters are included.



Ink Specifications

Item		When solvent ink is used	When aqueos-color ink is used	
Form		Dedicated ink cartridge		
Color		Black ink cartridge Cyan ink cartridge Magenta ink cartridge Yellow ink cartridge Light cyan ink cartridge Light magenta ink cartridge White ink cartridge *1 Silver ink cartridge *2	Black ink cartridge Cyan ink cartridge Magenta ink cartridge Yellow ink cartridge Light cyan ink cartridge Light magenta ink cartridge Light black ink cartridge	
Amount of supplied ink		220-cc or 440-cc cartridge		
Shelf life		The period is printed on the ink cartridge. Within three months after opening the package even in the available period.		
Storage temperature	During storage	to 25°C (average temperature of a day) Be sure to keep the ink container in an airtight condition.	10 to 35°C (Average daily temperature) • Be sure to keep a vessel in the airtight condition. • Be sure to keep a vessel in a dry, well-ventilated, cool and dark location.	
	During transport ation	-20 to 60°CAvoid a place where the temperature becomes lower than -20°C or higher than 60°C.	0 to 40°C • Avoid the condition lower than -0 °C and higher than 40 °C.	

- *1. When SS21W-2 (SPC-0504-W) ink cartridge is used. When ES3 white ink (SPC-0433-W) ink cartridge is used.
- *2. When ES3 silver ink (SPC-0433-Si) ink cartridge is used.
- *3. When Eco-PA1 ink cartridge is used.



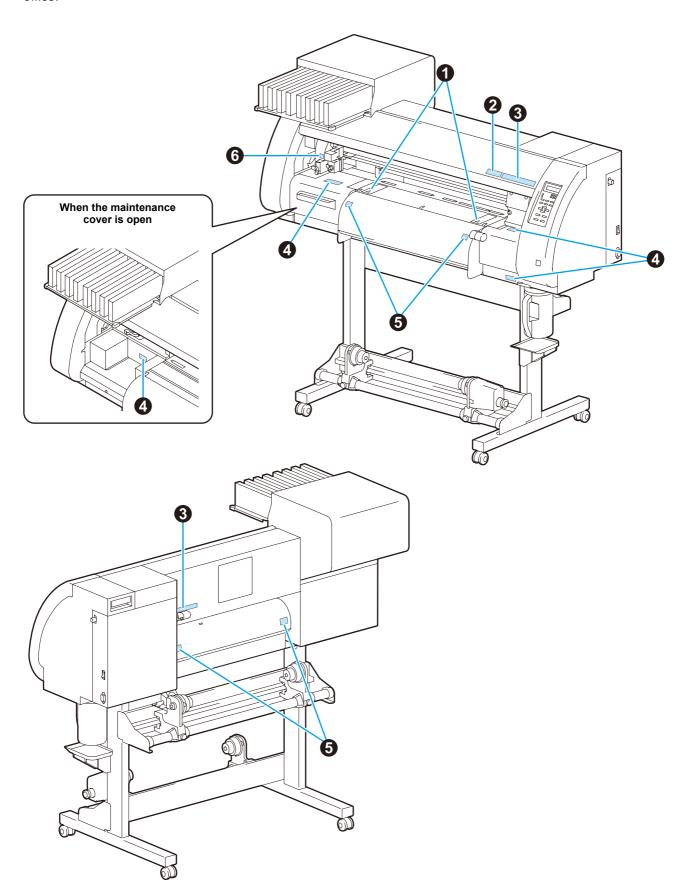
- Do not disassemble the ink cartridges or refill them with ink.
 Ink may freeze if left in a cold place for a long time.
- If ink has frozen, thaw it at room temperature (25°C) for more than three hours before use.





Warning Labels

Warning labels are attached to this machine. Be sure to fully understand the warnings given on the labels. If a warning label is illegible due to stains or has come off, purchase a new one from a distributor or our service office.





No.	Order No.	Label	
1	M904810		
2	M905935	A CAUTION 注意 Do not move 2 levers of the pinch roller with hands. Or malfunctions may occuur.	
3	M905811	本警告	
4	M903330		
5	M903239		
6	M903405		





Inquiry Sheet

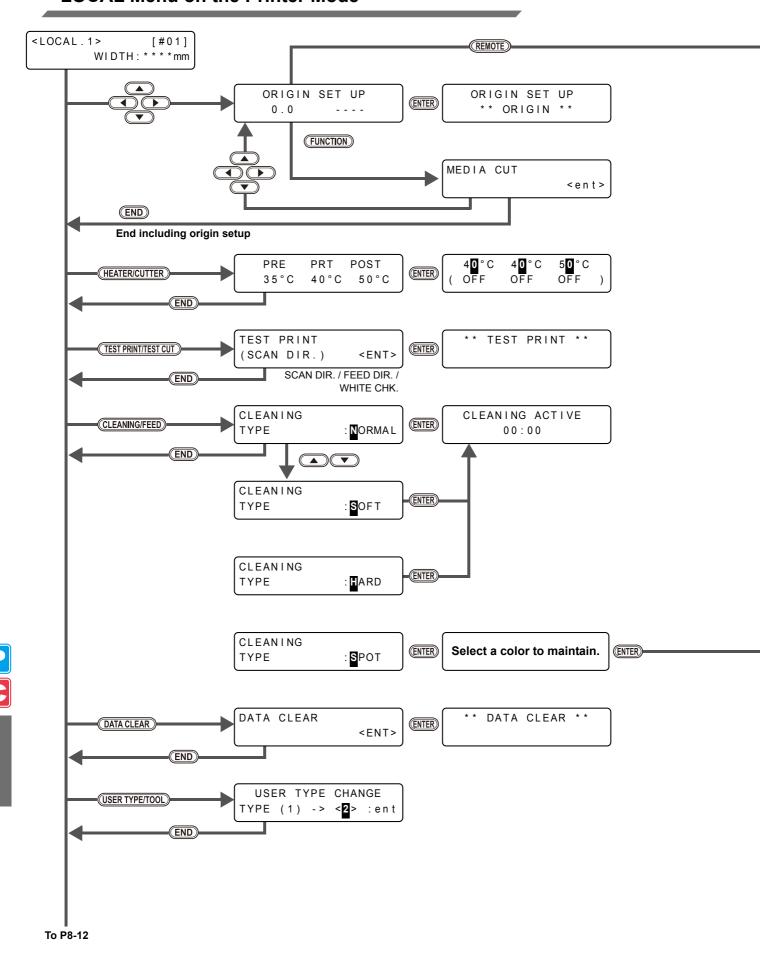
Use this sheet for troubles and abnormal functioning of the machine. Fill in the following necessary items and fax the sheet to our service office.

^{*1.} See "Confirming Machine Information" ((P.5-14) of "Chapter 5 Extended Functions - Common Settings -" and fill in the sheet.

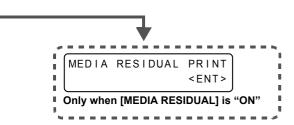




LOCAL Menu on the Printer Mode





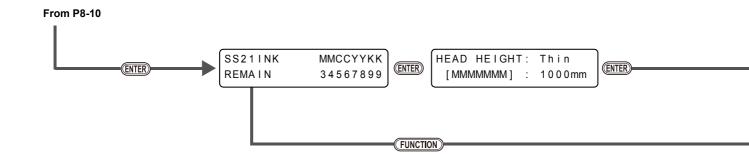


Remove the cartridge.

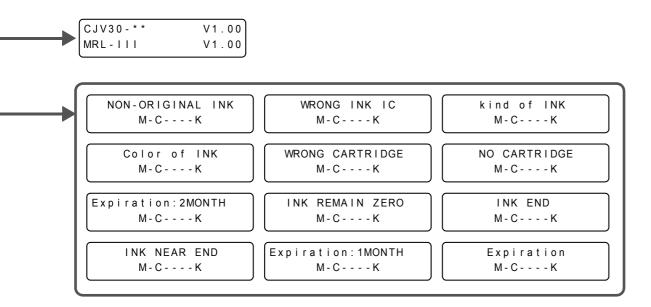
Shake the cartridge fifth or sixth times.

Set the cartridge.





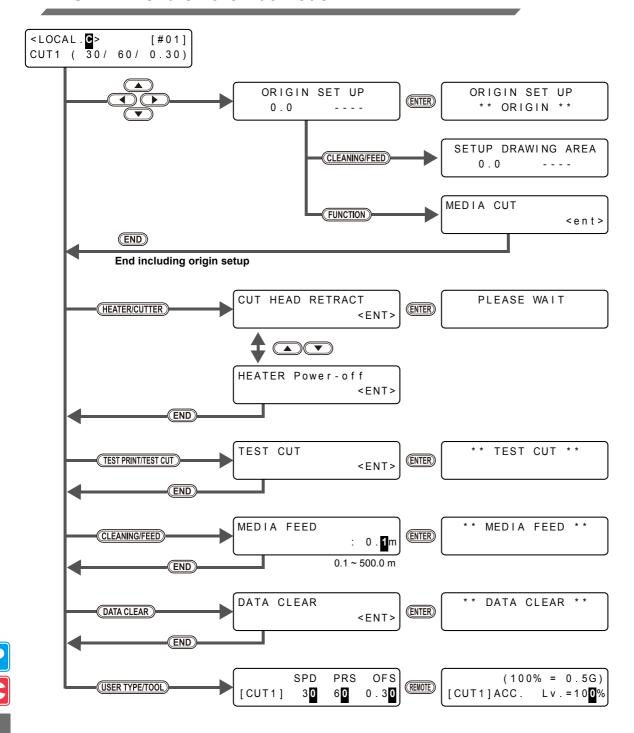




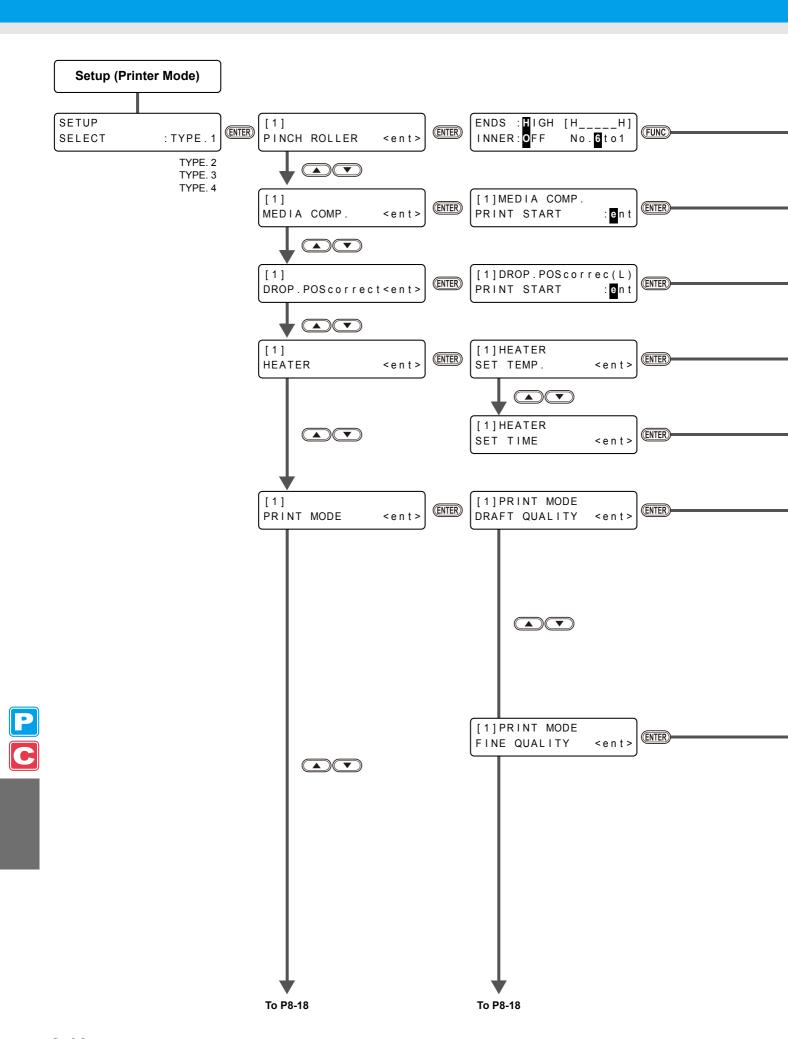


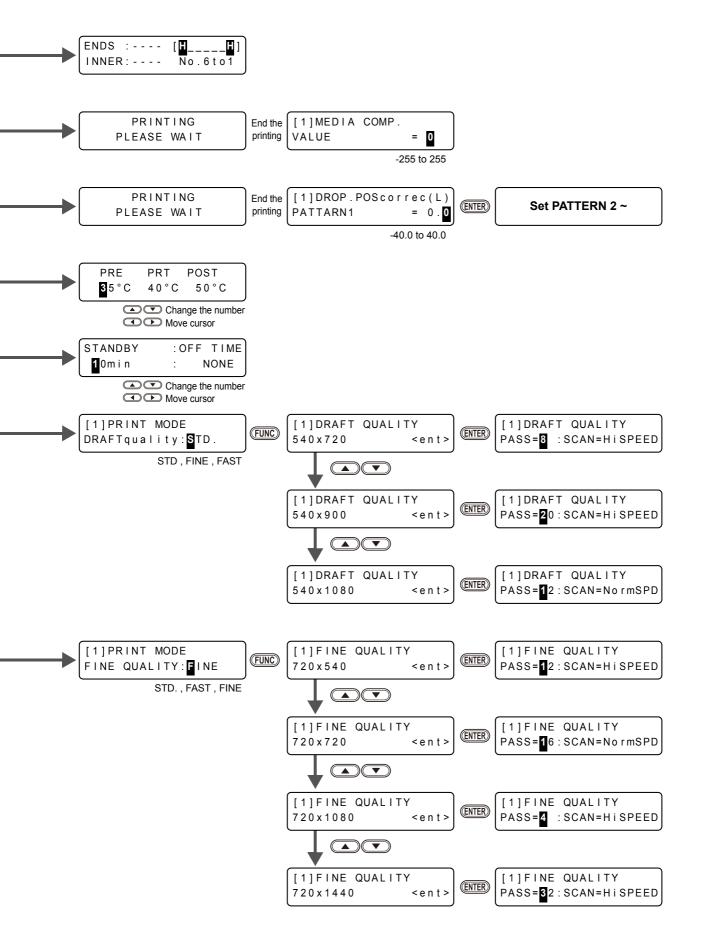


LOCAL Menu on the Cut Mode

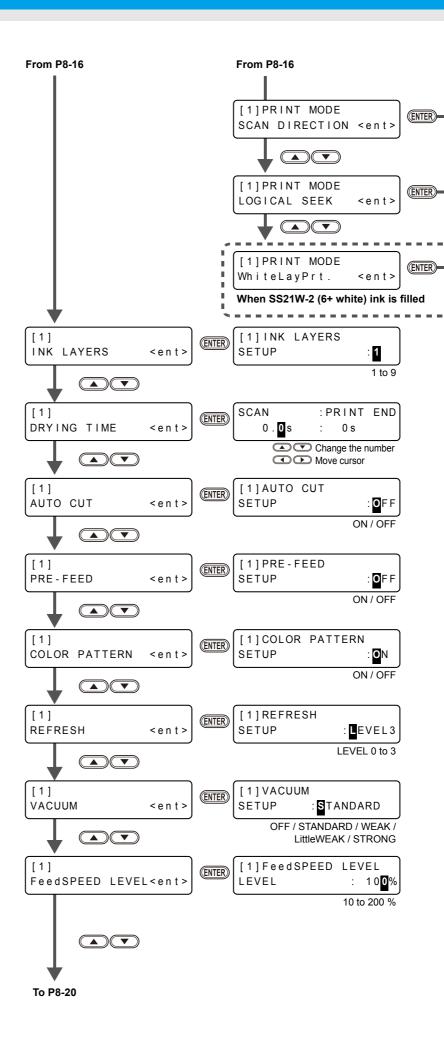






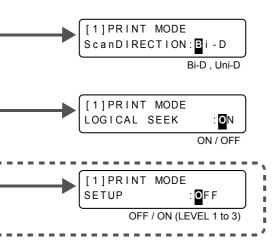




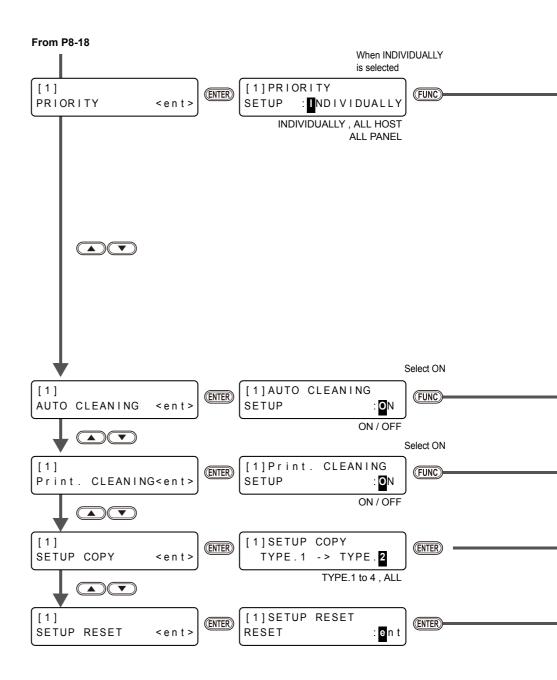




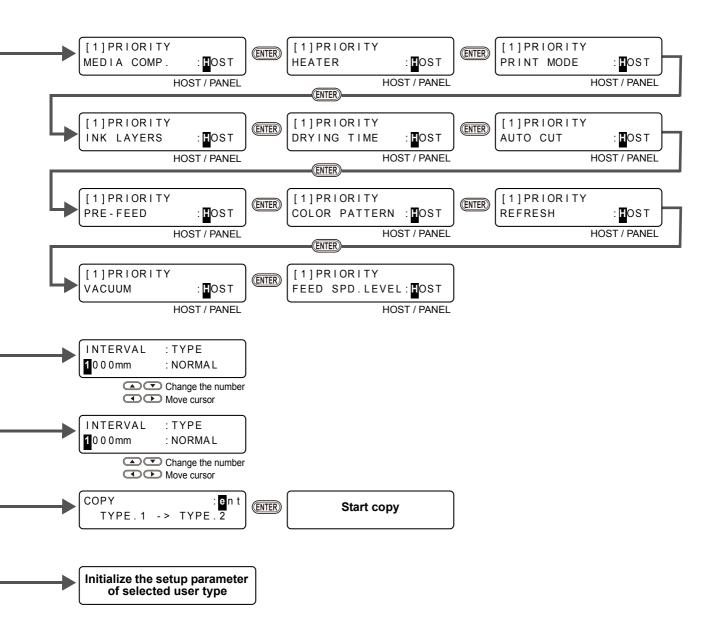






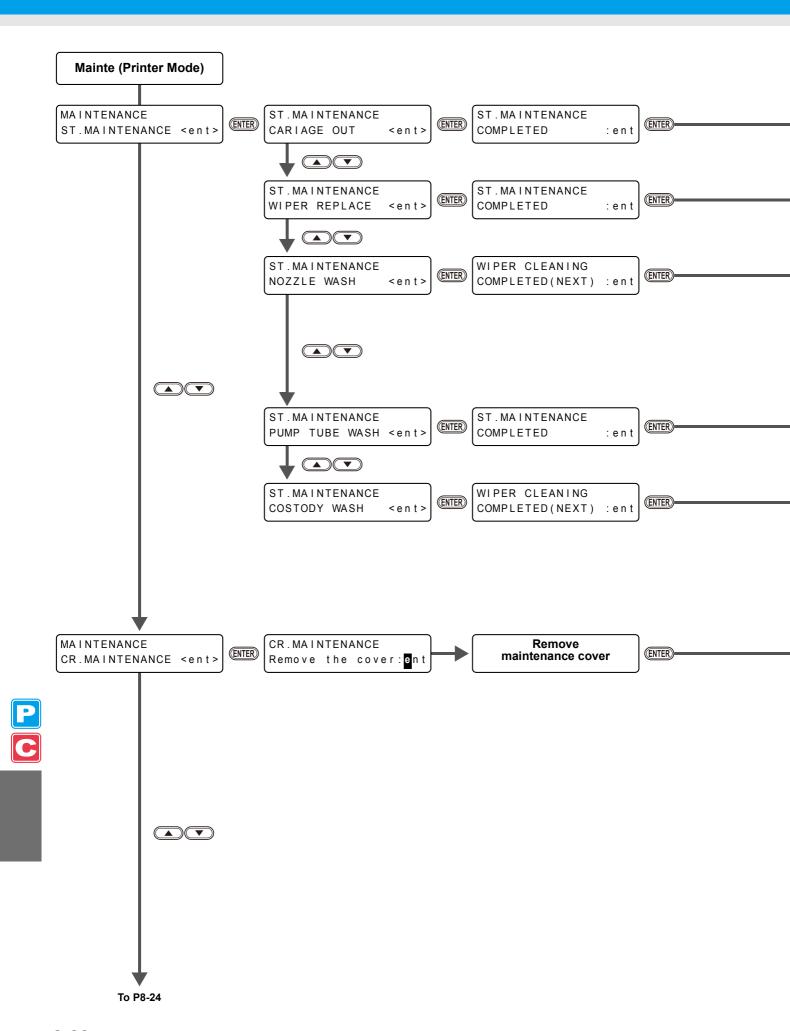


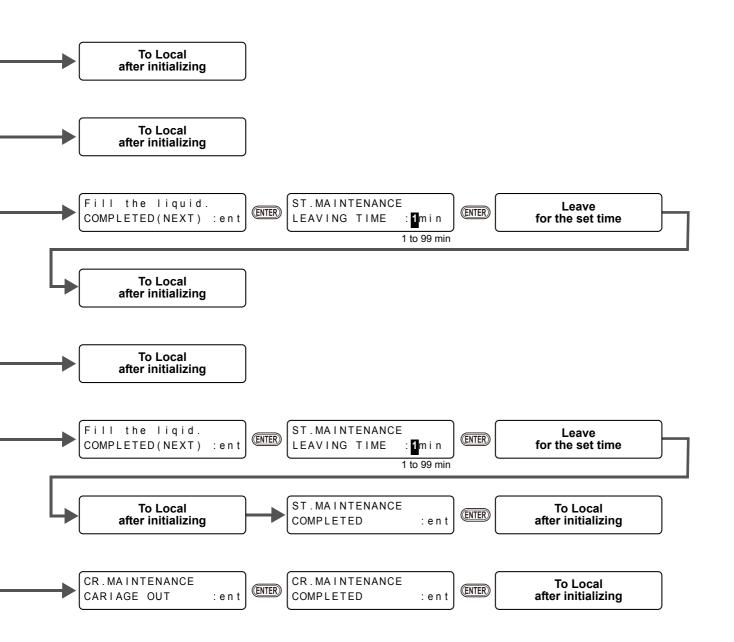




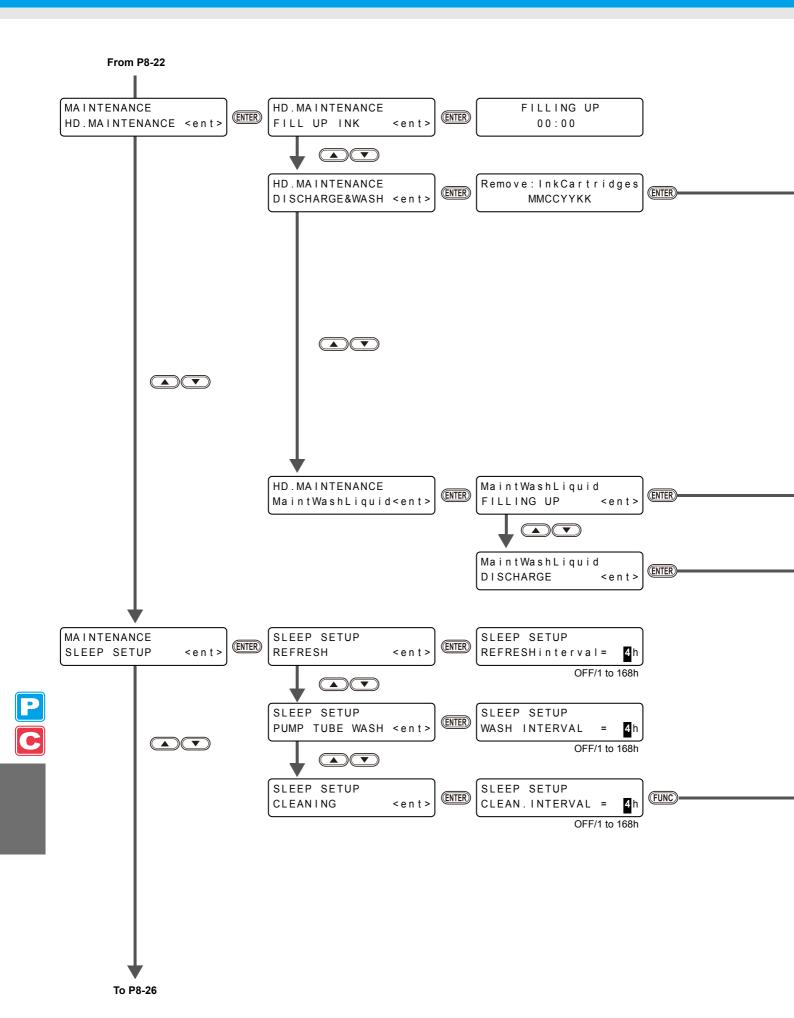


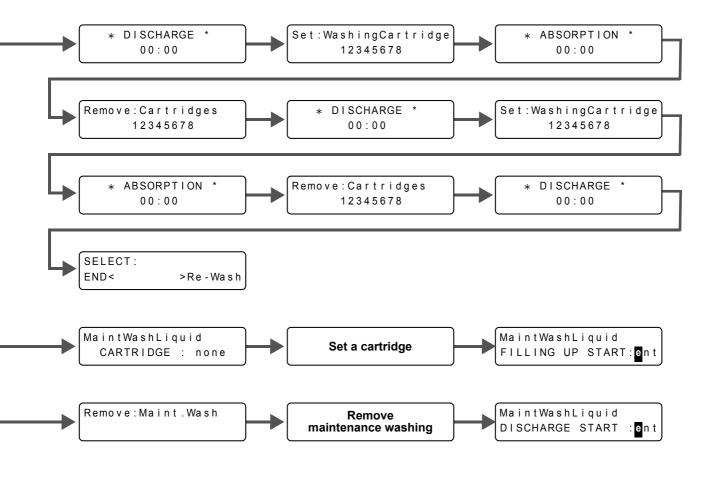












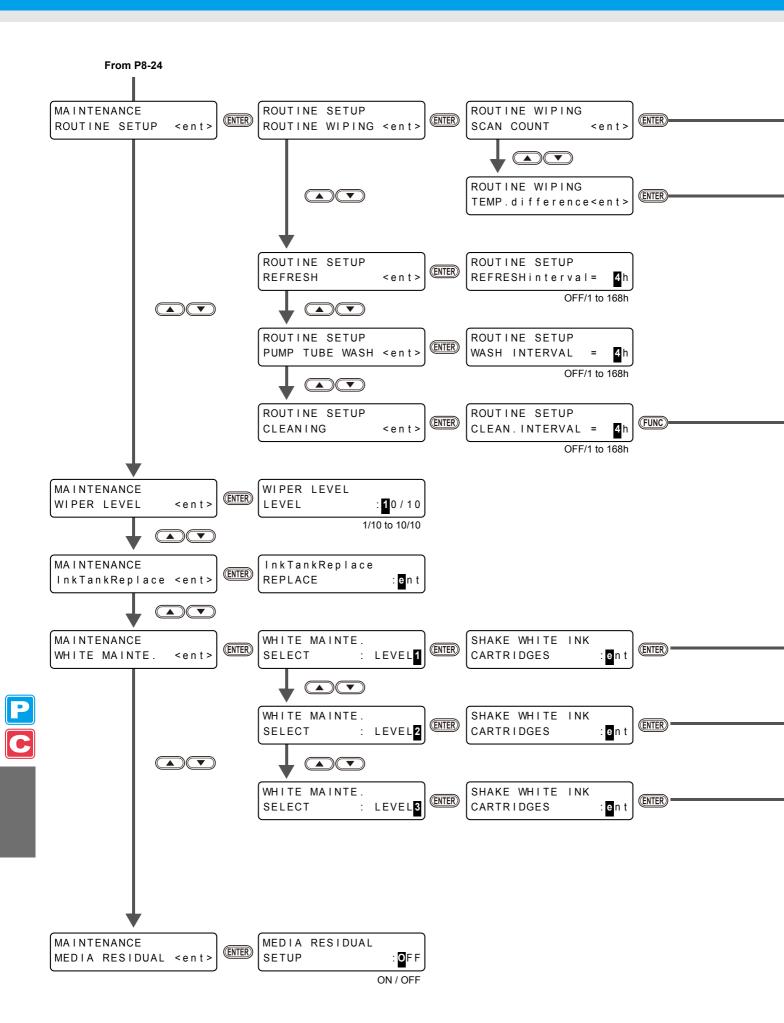


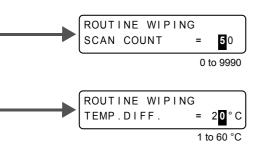


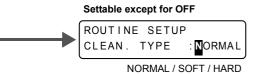
CLEAN. TYPE

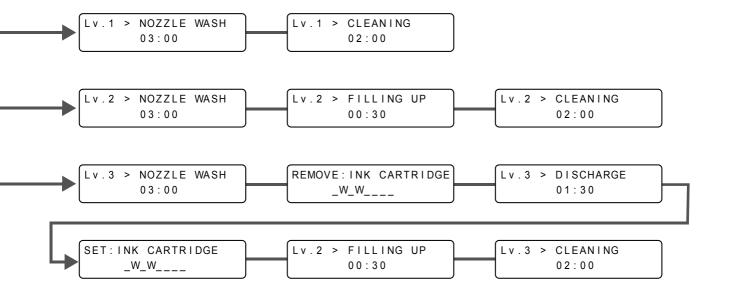
NORMAL / SOFT / HARD

: NORMAL

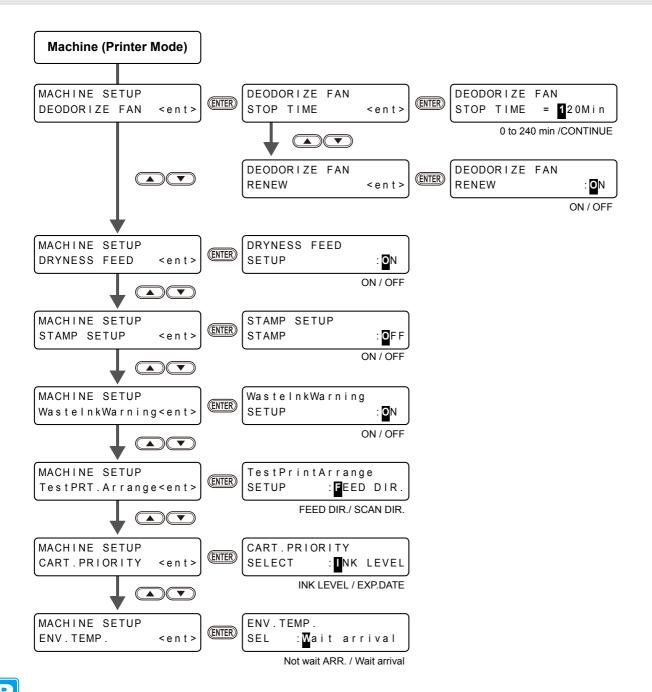






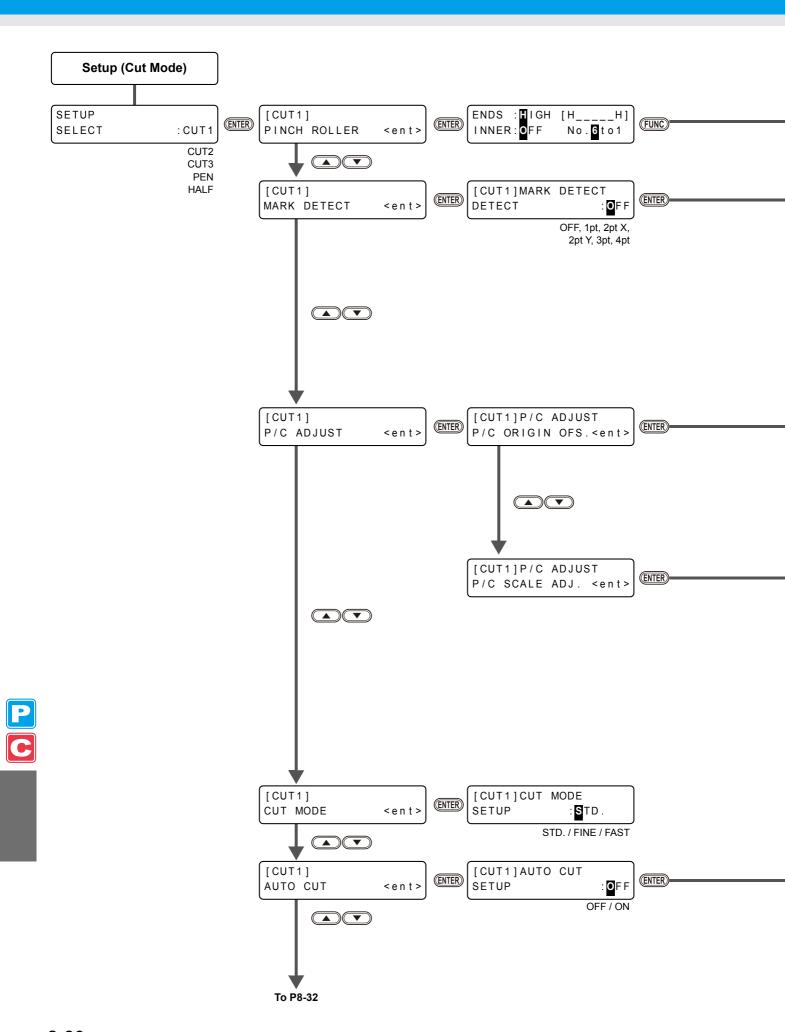


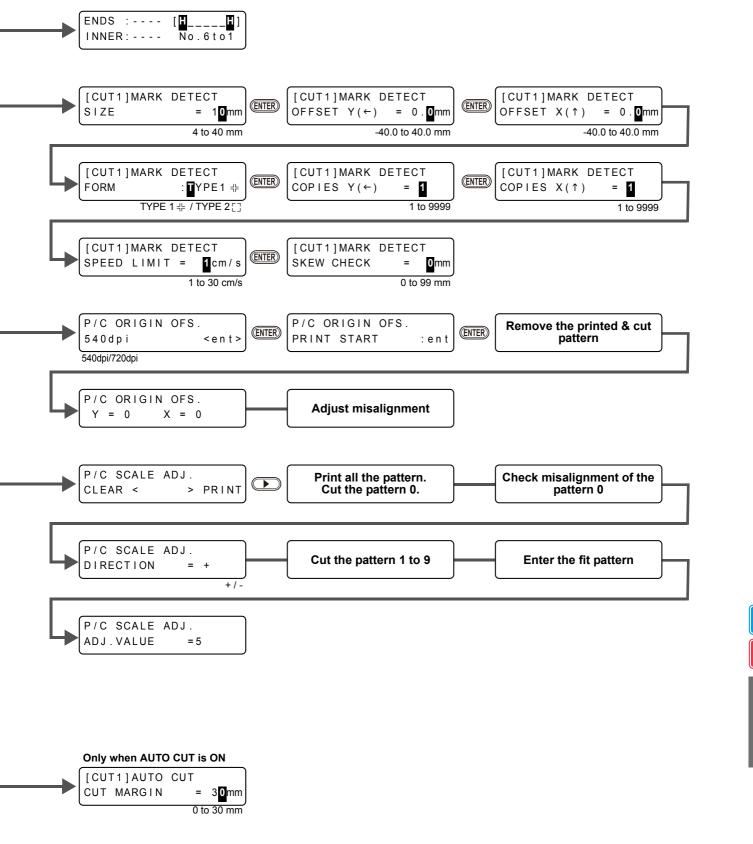


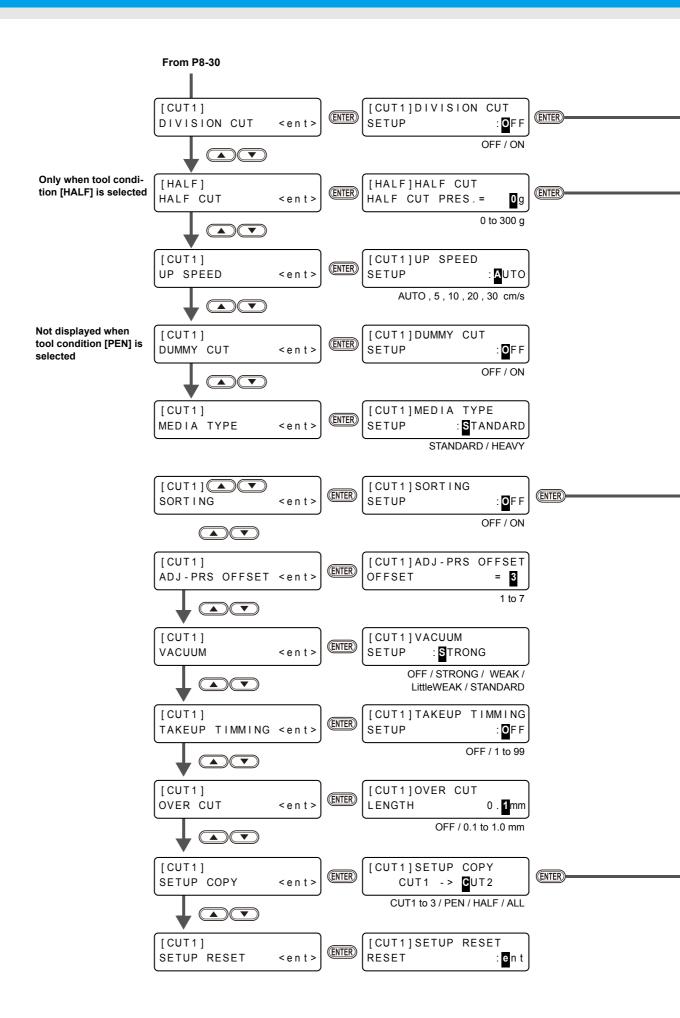




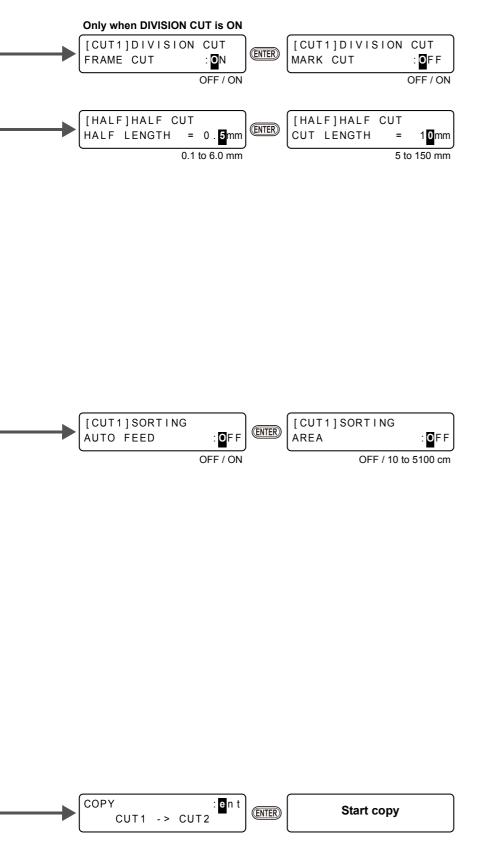


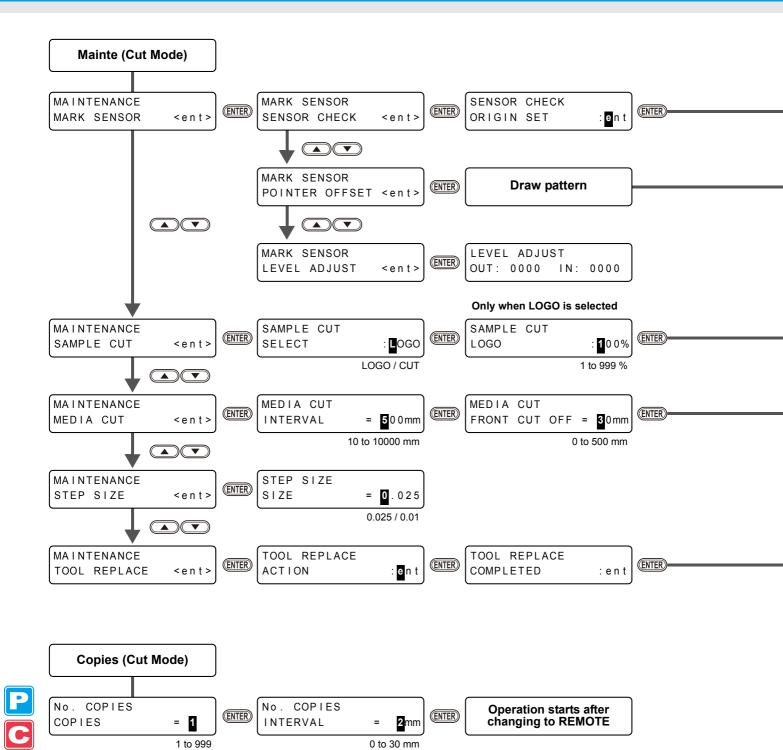












= 10 cm/s 5 to 10 cm/s

SENSOR CHECK

SPEED

ENTER

: TYPE1 非

SENSOR CHECK

FORM

ENTER

= 10mm

SENSOR CHECK

SIZE



