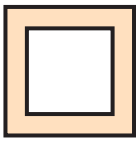
Test Cutting

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



Important!

- 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 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 cut mode and then perform the test cutting.
- If the END 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.C>       [#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.

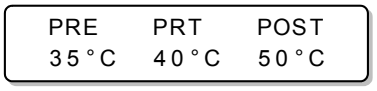
Symptom	Cause	Countermeasure
Some parts have not been cut.	The cutting speed is too high, the blade edge is lifted.	Reduce the speed. (☞ P.2-4)
		Tighten the knob of the tool holder further. (☞ P.2-12)
The backing paper of the medium is cut.	The cutting pressure is too high.	Reduce the pressure. (☞ P.2-4)
	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. The cutting pressure is high. [ADJ-PRS OFFSET] is large. Two or more of the above apply.	Adjust the length of the blade edge drawn out. (☞ P.2-11)
		Adjust the cutting pressure. (☞ P.2-4)
		Adjust the ADJ-PRS OFFSETvalue. (☞ P.4-37)

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.

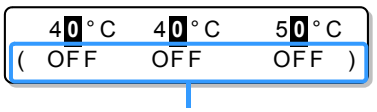
- The temperature of the heaters has been set to "OFF" as default.
- Appropriate temperature adjustment can be made because the temperature can be adjusted even during printing.
- It may take several minutes to tens of minutes for the set temperature to be reached, depending on the ambient temperature.

1 **Press the HEATER/CUTTER key in LOCAL.**



Screen for checking the heater temperature

2 **Press the HEATER/CUTTER key.**



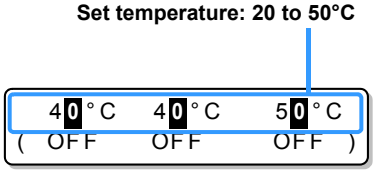
Temperature set in [HEATER] of the type registration

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

Heater selection : Select one with ◀ ▶.
Temperature setting : Set the temperature with ▲ ▼.

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

Set temperature: 20 to 50°C



4 **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.

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

- 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.)

Important!

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

Reference for Temperature Setting

Ink type	ES3 ink			SS21 ink
Media type	Glossy chloroethylene	Tarpaulin	FF	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

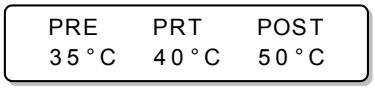
Important!

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

Checking the Heater Temperature

1 **Press HEATER/CUTTER on the operation panel.**

- The current heater temperature is displayed.



2 **Press END to end the checking.**

- The screen returns to LOCAL.

Important!

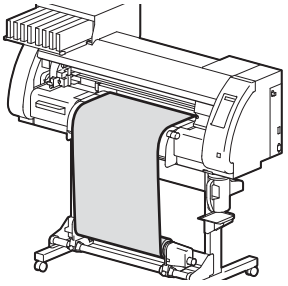
- When switching the mode to the print mode after cutting data in the cut mode and pressing the HEATER/CUTTER key, “OFF” is displayed on each heater temperature. When pressing the HEATER/CUTTER key again, the temperature will go up to the set temperature.

Starting a Printing Operation

Important!

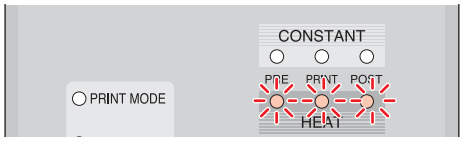
- When using a roll medium, rewind the medium by hand before printing so that it is not loose. When the roll medium has not been rewound tightly, it may cause the image quality to deteriorate.
- When switching the mode to the print mode after cutting data in the cut mode, “OFF” is displayed on each heater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

1 Set a medium. (☞ P.2-15)



2 Check the heater temperature.

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

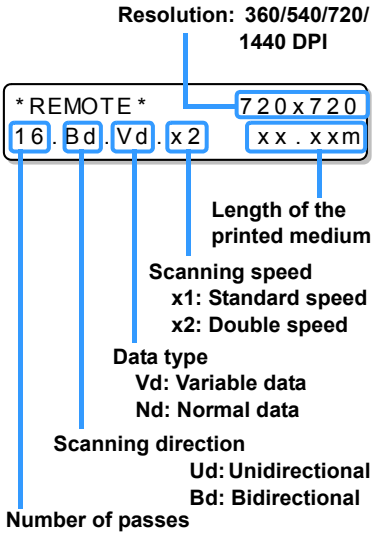


3 Press the REMOTE key in LOCAL.

- The screen changes to REMOTE, and data can be received from the PC.

4 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.



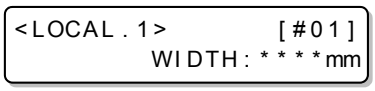
5 Start printing.

- 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.

1 **Press the REMOTE key during printing.**



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

Deleting Received Data (Data Clear)

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

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

2 **Press the ENTER key.**

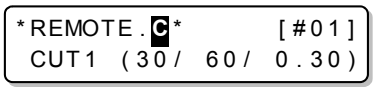
- The ACTIVE lamp goes off.
- The received data is deleted, and the present mode returns to LOCAL.

Starting a Cutting Operation

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

1 **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.

1 **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

1 **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**

☞ "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

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.

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

```
DATA CLEAR
                <ENT>
```

2 **Press the ENTER key.**

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

```
** DATA CLEAR **
```

- 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.

1 **Press the HEATER/CUTTER key in LOCAL.**

```
CUT HEAD RETRACT
                <ENT>
```

2 **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")

Important!

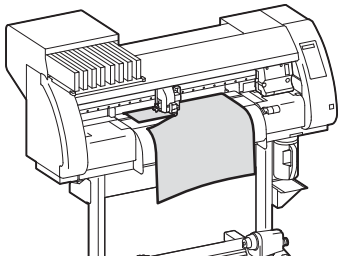
- When a medium is cut, be careful that the printed side does not touch the floor or the printed side of other already cut media.
- When you use a take-up device, roll up the cut medium by using the switch of the take-up device.
- The set pinch roller (☞ P.2-17) detects the size of the medium and then 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.

1 **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.

1 **Press the ▲ ▼ ◀ ▶ key in LOCAL.**

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

```
ORIGIN SET UP
0.0        ----
```

2 **Press the FUNCTION key.**

```
MEDIA CUT
                <ENT>
```

3 **Press the ENTER key.**

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

```
MEDIA CUTTING
PLEASE WAIT
```

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

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

P

How to Register User Types

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

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

2 **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 **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 ROLLER (☞ P.3-5)	ENDS		HIGH/MIDDLE/LOW	Used to set the pinch roller pressure.
	INNER		HIGH/MIDDLE/LOW/OFF	
	No.		2 to 7	Used to set the number of the pinch roller at the left end of the medium.
MEDIA COMP. (☞ P.3-8)			-255 to 0 to 255	Used to print a pattern for correcting a media-feeding rate and correct it.
DROP. POS CORRECT (☞ P.3-10)			-40.0 to 0 to 40.0	Used to adjust the dot position in go and return printing.
HEATER (☞ 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	(NONE/0 to 90 min by the unit of 10 min)	
		OFF TIME	(NONE/0 to 90 min by the unit of 10 min)	
PRINT MODE (☞ P.3-16)	DRAFT QUALITY		STD/ FAST / FINE	Used to set printing quality and a printing direction.
	FINE QUALITY		STD/ FAST / FINE	
	SCAN DIRECTION		Bi-D / Uni-D	
	LOGICAL SEEK		ON/OFF	
	WHITE LAY PRINT		OFF/ON (LEVEL1 to 3)	
INK LAYER (☞ P.3-27)			1 to 9	Used to set the number of layers to which ink is applied.
DRYING TIME (☞ P.3-21)	SCAN		0.0 to 19.9 sec	Used to set the time for ink to dry.
	PRINT END		0 to 999 sec	
AUTO CUT (☞ P.3-27)			ON/OFF	Used to cut the media automatically after printing.
PRE-FEED(☞ P.3-27)			ON/OFF	Used to feed a medium back and forth before printing. When a sticky medium is used, select ON.
COLOR PATTERN (☞ P.3-27)			ON/OFF	Used to print a color pattern on the right edge of a medium.
REFRESH (☞ P.3-27)			LEVEL 0 (Long interval for refreshing) to 3 (Short interval for refreshing)	Used to refresh the print heads during printing.
VACUUM (☞ P.3-27)			OFF / STANDARD / 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 CLEANING (☞ P.3-24)	ON	INTERVAL	10 to <u>1,000</u> to 10,000 mm	Used to set the automatic cleaning of the printing heads performed for each printing operation.
		TYPE	<u>NORMAL</u> / SOFT / HARD	
	<u>OFF</u>			
PRINT. CLEANING (☞ P.3-26)	ON	INTERVAL	10 to <u>1,000</u> to 10,000 mm	Used to set the automatic cleaning of the printing heads performed during printing.
		TYPE	<u>NORMAL</u> / SOFT / HARD	
	<u>OFF</u>			

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
ENDS	HIGH	Set the pressure for the pinch rollers at both ends of the medium according to the medium to be used.
	MIDDLE	
	LOW	
INNER	HIGH	Set the pressure for the pinch rollers other than those at both ends of the medium according to usage.
	MIDDLE	
	LOW	
	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.

Important!

- 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.

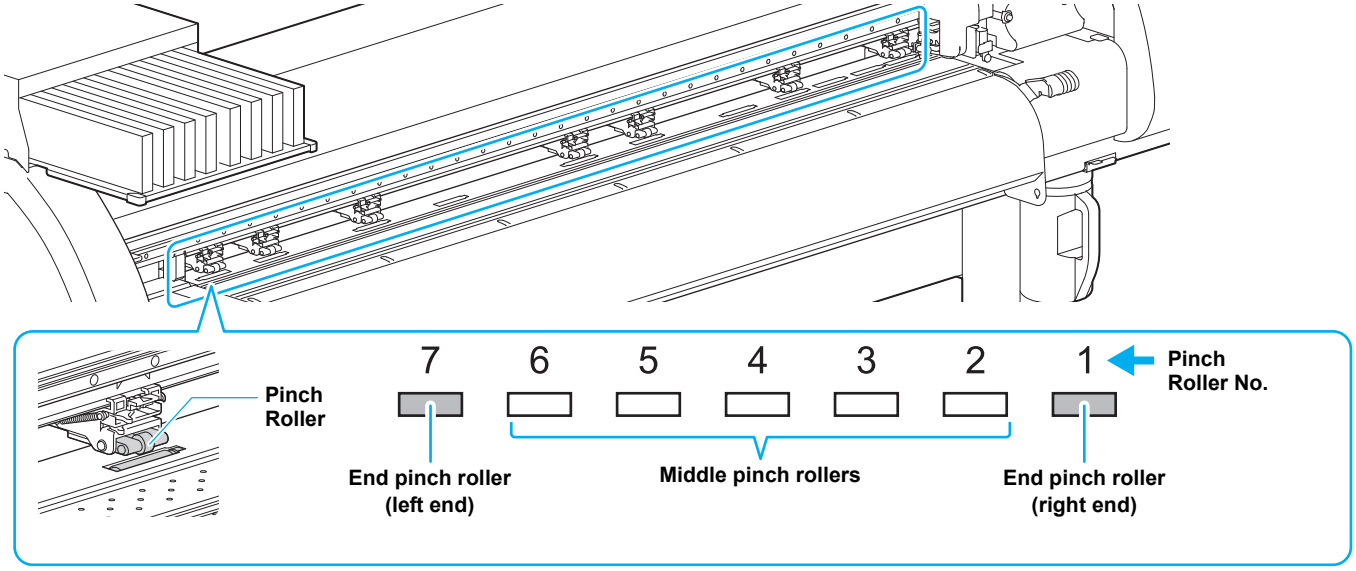
Quantity of Pinch Rollers

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.

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

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

2 **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 the ENTER key.**

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

6 **Press ▲ ▼ to set the pressure for the pinch rollers at both ends of the medium.**

• **Set value**: HIGH/MID./LOW

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

7 **Press ▶ to move the cursor to the middle pinch roller setting.**

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

8 **Press ▲ ▼ to set the pressure for the middle pinch rollers.**

- **Set value**: HIGH/MID./LOW/OFF

```
ENDS :MID. [H_____H]
INNER:MID.  No.7-1
```

9 **Press ▶ to move the cursor to the pinch roller number setting.**

```
ENDS :MID. [H_____H]
INNER:MID.  No.7-1
```

10 **Press ▲ ▼ to set the number of the pinch roller at the left end of the medium.**

- **Set value**: 2 to 7

```
ENDS :MID. [___H__H]
INNER:MID.  No.4-1
```

11 **Press the ENTER key.**

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

Important!

- **Pinch roller pressure set here is reflected to the medium in the following condition:**
  When print/cut remotely
  When detecting the medium next
- If you wish to reflect the set value to the medium currently set, detect the medium again by moving the clamp lever up and down.
- When printing in the local mode such as the dot position correction or medium correction, perform the 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 medium to be used.

1 **Perform the operations in Steps 1 to 10 in P.3-6 "Setting for the Pinch Rollers".**

2 **Press the FUNCTION key.**

```
ENDS :MID. [H_____H]
INNER:MID.  No.7-1
```

3 **Press ◀ ▶ to select a pinch roller to set, and press ▲ ▼ to set the advanced setting.**

```
ENDS :MID. [H___L_H]
INNER:MID.  No.7-1
```

4 **Press the ENTER key.**

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

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.

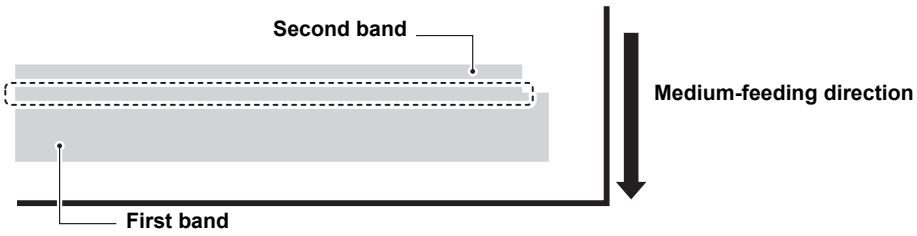
Important!

- 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.



Important!

- 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 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 correction pattern.
- If the END key is pressed, switching operation will not be performed.

```
 ! PR PRESSURE:CUT !
SWITCH              :ent
```

1 **Set a medium. (☞ P.2-15)**

2 **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
```

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

6 **Press ▲ ▼ to select [MEDIA COMP.].**

```
[1]
MEDIA COMP.      <ent>
```

7 **Press the ENTER key.**

```
[1]MEDIA COMP.
PRINT START      :ent
```

8 **Press the ENTER key to print a correction pattern.**

```
PRINTING
PLEASE WAIT
```

9 **Check the correction pattern and enter a correction value.**

```
[1]MEDIA COMP.
VALUE            = 0
```

- Press the ▲ ▼ to enter a correction value.
  Enter a correction value in "+": The boundary between the two bands is widened.
  Enter a correction value in "-" : The boundary between the two bands is narrowed.
- When you change the correction value by "10", the width of the boundary changes by about 0.1 mm.

10 **Press the ENTER key twice.**

```
[1]MEDIA COMP.
PRINT START      :ent
```

- 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.

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.**

```
FEED COMPENSATION.
SAVE             :ent
```

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

5 **Press the ENTER key.**

This indicates that media correction was made in the remote mode.

```
*REMOTE.  +*      [#01]
                  **.**mm
```

- 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...

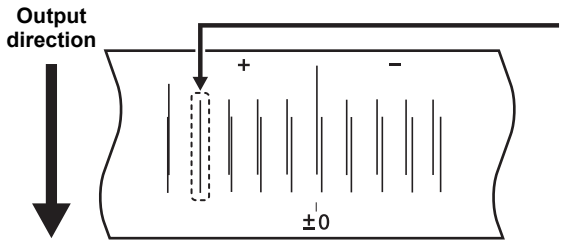
When the condition for printing (medium thickness/head height/setting of pinch roller pressure/ink type/etc.) has been changed, perform the following operation to correct the ink drop position for bidirectional (Bi) printing and obtain the proper printing result.

Important!

- 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 END 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.

1 **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.

2 **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
```

5 **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
```

8 **Press the ENTER key to start pattern printing.**

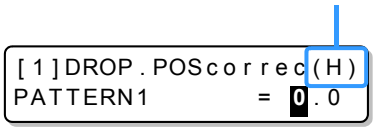
- Multiple test patterns are printed. (The printed patterns are called Pattern 1, Pattern 2, Pattern 3... in the order of printing.)

```
      PRINTING
   PLEASE WAIT
```

9 **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.

Displays the current head height.
(H)... High (thick)
(L)... Low (thin)



10 **Press the ENTER key.**

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

12 **Press the END key several times to end the correction.**

Changing the Set Values of the Heaters

Reference for Temperature Setting

Ink type	ES3 ink			SS21 ink
Media type	Glossy chloroethylene	Tarpaulin	FF	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

Important!

- 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.
Time setting *1 (SET TIME)	**STANDBY**	Used to set the time it takes until the temperature of the heaters falls to 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, and then the machine starts printing. • When the set value has been set to "NONE", the heaters do not lower their temperature to the preheat one.
	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.

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

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

2 **Press the FUNCTION key.**

FUNCTION
SETUP <ENT>

3 **Press the ENTER key.**

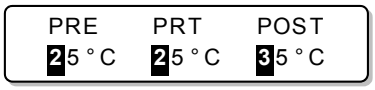
SETUP
SELECT : TYPE . 1

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

5 **Press ▲ ▼ to select [HEATER].**

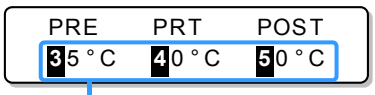
6 **Press the ENTER key twice.**

• The heater temperature setting screen appears.



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

Heater selection: Select one with ◀ ▶.
Temperature setting: Set the temperature with ▲ ▼.

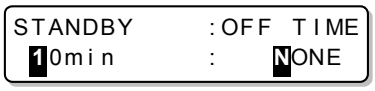


Set temperature: 20 to 50°C

8 **Press the ENTER key.**

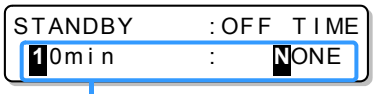
9 **Press ▼ to select [SET TIME].**

10 **Press the ENTER key.**



11 **Press ▲ ▼ ◀ ▶ to set time.**

Item selection: Select one with ◀ ▶.
Time setting: Set time with ▲ ▼.



Set value: NONE, 0 to 90 min (by the unit of 10 min)

12 **Press the ENTER key.**

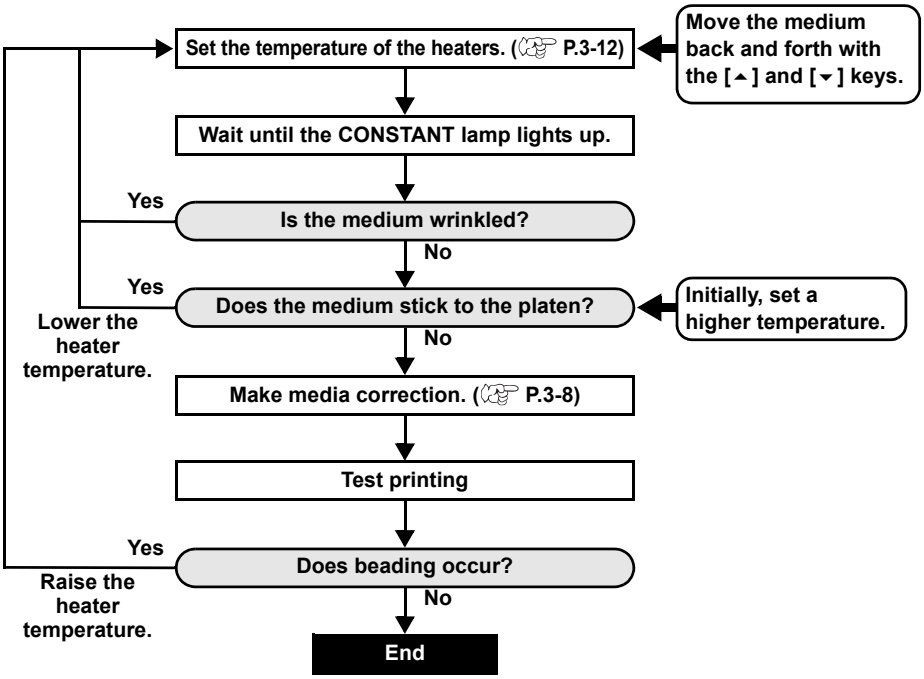
13 **Press the END key several times to end the setting.**

• The screen returns to LOCAL.

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

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.



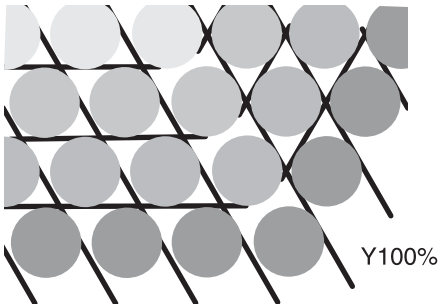
When the Heater Temperature Does Not Reach the Preset One

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).

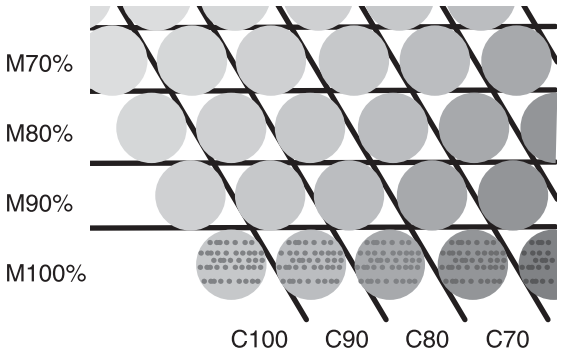
Example of Beading

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.



Print with banding

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	Used to select an image quality for printing.
FINE QUALITY		

1 **Press the (MODE CHANGE) key in LOCAL to select the printing mode.**

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

2 **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.**

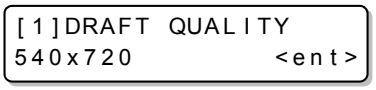
(1) Press (▲)(▼) to select [DRAFT QUALITY] or [FINE QUALITY].
([DRAFT QUALITY] is selected here.)
(2) Press (ENTER).

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.

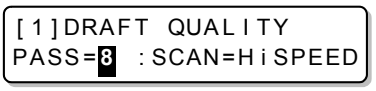
9 When changing the details of printing quality in each resolution, press FUNCTION to select a resolution.



(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)

10 Select the number of passes and a printing 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.

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

FINE quality

Resolution (dpi)	4 colors		6 colors	
	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.

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

```
[1]PRINT MODE
DRAFT QUALITY   <ent>
```

2 **Press ▲ ▼ to select [SCAN DIRECTION].**

```
[1]PRINT MODE
SCAN DIRECTION <ent>
```

3 **Press the ENTER key.**

```
[1]PRINT MODE
ScanDIRECTION:Bi-D
```

4 **Press ▲ ▼ to select a scanning direction.**

- **Set value** : Bi-D, Uni-D

```
[1]PRINT MODE
ScanDIRECTION:Uni-D
```

5 **Press the ENTER key.**

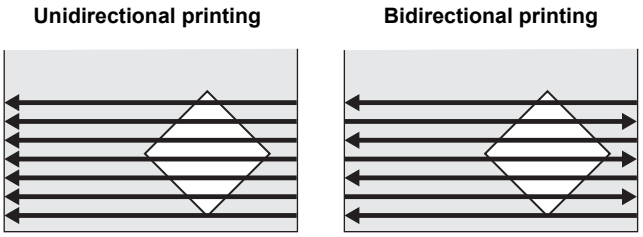
```
[1]PRINT MODE
SCAN DIRECTION <ent>
```

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

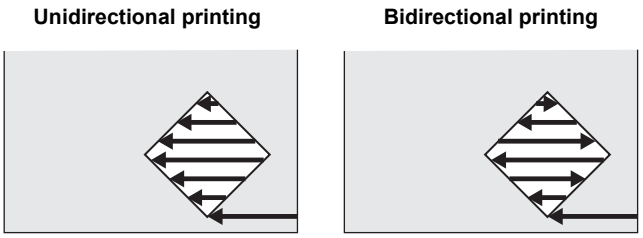
Setting Logical Seek

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.

Movement of the heads when Logical seek is OFF



Movement of the heads when Logical seek is ON



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

```
[1]PRINT MODE
DRAFT QUALITY   <ent>
```

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

```
[1]PRINT MODE
LOGICAL SEEK    <ent>
```

3 **Press the ENTER key.**

```
[1]PRINT MODE
LOGICAL SEEK    :ON
```

4 **Press ▲ ▼ to select ON/OFF.**

```
[1]PRINT MODE
LOGICAL SEEK    :OFF
```

5 **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!

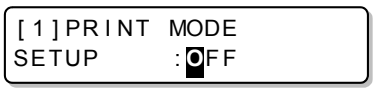
- This function can be set only when SS21W-2 ink (6 colors + white) has been filled.
- Printing time is at least two times longer than that of normal printing.
- When printing is performed under the following conditions, the printing speed decreases because the number of nozzles to be used is limited.

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

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

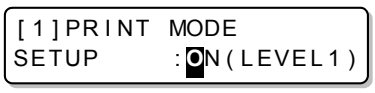
2 **Press ▲ ▼ to select [WhiteLayPrt.].**

3 **Press the ENTER key.**



4 **Press ▲ ▼ to select the printing method.**

- **Set value**: OFF, ON (LEVEL 1 to 3)



5 **Press the ENTER key.**

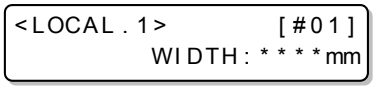
6 **Press the END key several times to end the setting.**

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.)

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



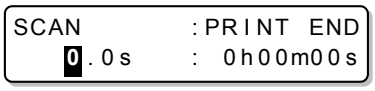
2 **Press the FUNCTION key.**

3 **Press the ENTER key.**

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

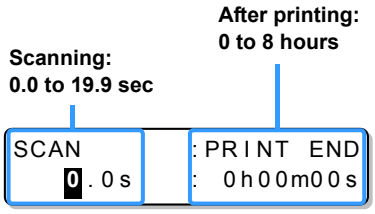
5 **Press ▲ ▼ to select [DRYING TIME].**

6 **Press the ENTER key.**



7 **Press ▲ ▼ ◀ ▶ to set drying time.**

Item selection:Select one with ◀ ▶.
Time setting:Set time with ▲ ▼.



8 **Press the ENTER key.**

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

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	The setting by the PC (host) for the items below this table is prioritized.
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

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

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

2 **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 [PRIORITY].**

[1]
PRIORITY <ent>

6 **Press the ENTER key.**

[1]PRIORITY
SETUP :ALL HOST

7 **Press ▲▼ to select one of the set values.**

[1]PRIORITY
SETUP :INDIVIDUALLY

- **Set value** :INDIVIDUALLY/ ALL HOST / ALL PANEL
- When selecting [INDIVIDUALLY], proceed to Step 8. When selecting [ALL HOST] or [ALL PANEL], press the ENTER key and proceed to Step 12.

8 **Press the FUNCTION key.**

[1]PRIORITY
MEDIA COMP. :HOST

- The setting screen of media correction appears.

9 **Press ▲▼ to select "HOST" or "PANEL".**

[1]PRIORITY
MEDIA COMP. :PANEL

10 **Press the ENTER key.**

- You can move between items also by pressing ◀▶. However, unless you press the ENTER key, the set value is not determined.

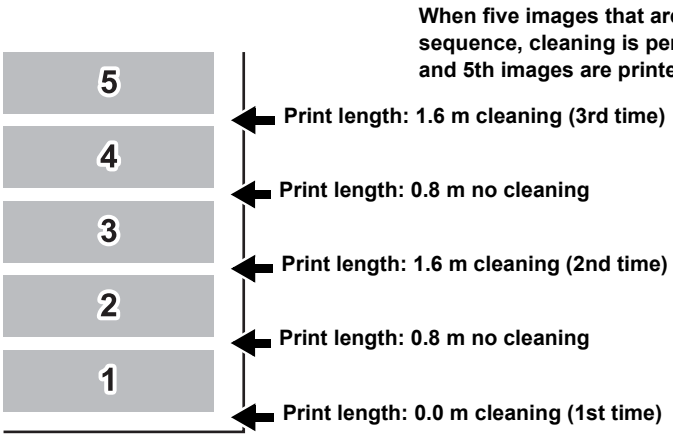
11 **Perform the same operations as in Steps 9 and 10 to set other items.**

12 **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.

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.

1 **Press the (MODE CHANGE) key in LOCAL to select the printing mode.**

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

2 **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 [AUTO CLEANING].**

[1]
AUTO CLEANING <ent>

6 **Press the (ENTER) key.**

[1]AUTO CLEANING
SETUP :OFF

7 **Press (▲)(▼) to select ON.**

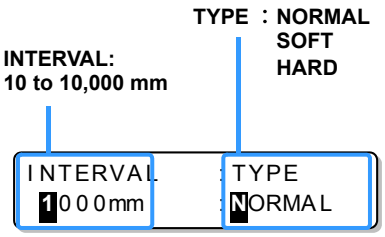
- When selecting OFF, proceed to Step 9.

[1]AUTO CLEANING
SETUP :ON

8 **Press the FUNCTION key.**

9 **Press ▲ ▼ ◀ ▶ to set a cleaning interval and a cleaning type.**

Item selection : Select one with ◀ ▶.
Setting of an interval and type :
Set an interval and type with ▲ ▼.



10 **Press the ENTER key.**

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

Important!

- 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.

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

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

2 **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. CLEANING].**

[1]
Print. CLEANING<ent>

6 **Press the ENTER key.**

[1]Print. CLEANING
SETUP :OFF

7 **Press ▲▼ to select ON.**

- When selecting OFF, proceed to Step 10.

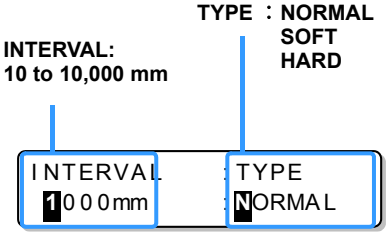
[1]Print. CLEANING
SETUP :ON

8 **Press the FUNCTION key.**

INTERVAL :TYPE
1000mm :NORMAL

9 **Press ▲▼◀▶ to set a cleaning interval and a cleaning type.**

Item selection : Select one with ◀▶.
Setting of an interval and type:
Set an interval and type with ▲▼.



10 **Press the ENTER key.**

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

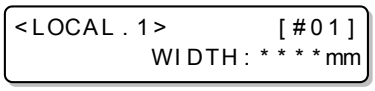
Important!

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

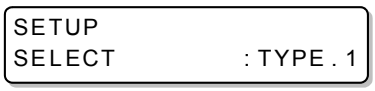
Change the settings according to the types of use.

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



2 **Press the FUNCTION key.**

3 **Press the ENTER key.**



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

5 **Press ▲▼ to select an item to set.**

• See "List of Settings". (P.3-28)

6 **Press the ENTER key.**

7 **Press ▲▼ to select a set value.**

• See "List of Settings". (P.3-28)

8 **Press the ENTER key.**

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

Important!

- The set value is retained even when the power is turned “OFF”.

List of Settings

The underlined has been set as default.

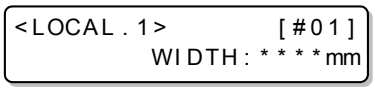
Function Name	Overview	Set Value
PINCH ROLLER	Setting the pinch roller pressure and the pinch roller numbers according to the medium to be used.	See P.3-5.
MEDIA COMP.	A medium-feeding rate is corrected.	See P.3-8.
DROP. POS CORRECT	Setting used when the thickness of the medium, head height, or ink type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

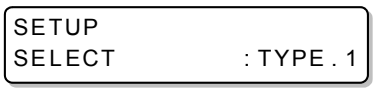
The contents you set can be copied to other type.

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



2 **Press the FUNCTION key.**

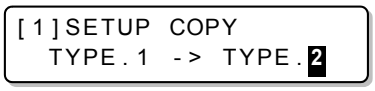
3 **Press the ENTER key.**



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

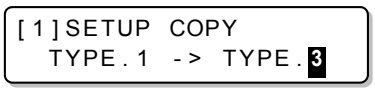
5 **Press ▲▼ to select [SETUP COPY].**

6 **Press the ENTER key.**

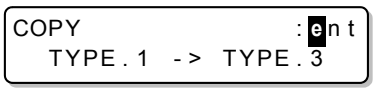


7 **Press ▲▼ to select the type to copy (1 to 4 or ALL).**

• If “ALL” is selected, the set contents of all types are same.



8 **Press the ENTER key.**



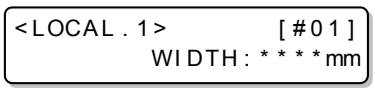
9 **Press the ENTER key.**

10 **Press the END key several times to end the resetting.**

Initializing the Settings

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

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



2 **Press the FUNCTION key.**

3 **Press the ENTER key.**

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

5 **Press ▲ ▼ to select [SETUP RESET].**

6 **Press the ENTER key.**

7 **Press the ENTER key.**

- The already configured settings are initialized.

8 **Press the END key several times to end the resetting.**

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 120 to 240 min/ CONTINUE	The time until the rotation of the exhaust fan stops after printing has been completed is set. (☞ P. 3-31)
	RENEW	ON/OFF	The present operating state of the exhaust fan is switched. (☞ P. 3-31)
DRYNESS FEED		ON/OFF	It is set whether a medium is fed for it to be dried after printing has been completed. (☞ P. 3-32)
STAMP SETUP		ON/OFF	The setting for the output date and printing conditions to be output after printing has been completed is configured. (☞ P. 3-33)
Waste Ink Warning		ON/OFF	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. (☞ P. 3-34)
CART.PRIORITY *3		INK LEVEL EXP. DATE	Setting a cartridge to be used first for double cartridge automatic change function.
ROOM. TEMP. *4		Not wait ARR. Wait arrival	Sets the operation when an error indicating that the room 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.
*4. This function is available for the firmware Ver.2.30 and later.

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.

Important!

- 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.

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

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

2 **Press the FUNCTION key.**

FUNCTION
SETUP <ENT>

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

FUNCTION
MACHINE SETUP <ENT>

4 **Press the ENTER key twice.**

DEODRIZE FAN
STOP TIME <ent>

5 **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.

6 **Press the ENTER key.**

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

STOP TIME : 0 to 240 sec or continuous operation
RENEW : When you operate the exhaust fan, select "ON". When you stop the fan, select "OFF".

8 **Press the ENTER key.**

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

P

Setting the DRYNESS FEED

It is set whether a medium is fed for it to be dried after printing has been completed.

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

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

2 **Press the FUNCTION key.**

FUNCTION
SETUP <ENT>

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

FUNCTION
MACHINE SETUP <ENT>

4 **Press the ENTER key.**

MACHINE SETUP
DEODRIZE FAN <ent>

5 **Press ▲ ▼ to select [DRYNESS FEED].**

MACHINE SETUP
DRYNESS FEED <ent>

6 **Press the ENTER key.**

DRYNESS FEED
SETUP :ON

7 **Press ▲ ▼ to select ON/OFF.**

8 **Press the ENTER key.**

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

Stamp Setting

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

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

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

2 **Press the FUNCTION key.**

FUNCTION
SETUP <ENT>

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

FUNCTION
MACHINE SETUP <ENT>

4 **Press the ENTER key.**

MACHINE SETUP
DEODRIZE FAN <ent>

5 **Press ▲▼ to select [STAMP SETUP].**

MACHINE SETUP
STAMP SETUP <ent>

6 **Press the ENTER key.**

STAMP SETUP
STAMP :OFF

7 **Press ▲▼ to select ON/OFF.**

8 **Press the ENTER key.**

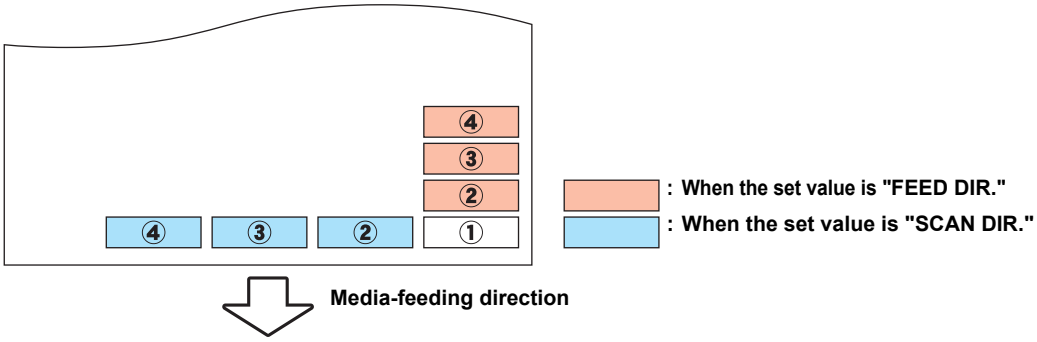
- Press the END key several times to end the setting.

Output Example

```
                CJV30-100 Ver1.00
PRINT MODE   : 540x1080 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         : 12.05.05 17:24:29
```

Setting the Test Print Arrange

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



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

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

2 **Press the FUNCTION key.**

```
FUNCTION
SETUP              <ENT>
```

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

```
FUNCTION
MACHINE SETUP      <ENT>
```

4 **Press the ENTER key.**

```
MACHINE SETUP
DEODRIZE FAN       <ent>
```

5 **Press ▲ ▼ to select [TestPRT.Arrange].**

```
MACHINE SETUP
TestPRT.Arrange<ent>
```

6 **Press the ENTER key.**

```
TestPrintArrange
SETUP          :FEED 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 room temperature

If you print in the status that the temperature of the place in which the machine has installed (room 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 room 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 room temperature is out of the usable temperature range at the start of printing, the error message below is displayed to inform you of it.

**** ERROR 120 ****	**** ERROR 121 ****
ROOM TEMP LOW (XX°C)	ROOM TEMP HIGH(XX°C)

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

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

2 **Press the FUNCTION key.**

FUNCTION
SETUP <ENT>

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

FUNCTION
MACHINE SETUP <ENT>

4 **Press the ENTER key.**

MACHINE SETUP
DEODRIZE FAN <ent>

5 **Press ▲▼ to select [ROOM TEMP.].**

MACHINE SETUP
ROOM TEMP. <ent>

6 **Press the ENTER key.**

ROOM TEMP.
SEL :Not wait ARR.

7 **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 room temperature reaches the proper value. Then, printing starts.

8 **Press the ENTER key.**

- 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.

Important!

- 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.

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

```
EXTEND EXPIRE DATE?
YES<                >NO
```

alternately displayed

```
  NOT RECOMMENDED!!
YES<                >NO
```

2 **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]
```

3 **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.

```
EXPIRED INK IN USE
    PRESS[ENT]
```

alternately displayed

```
NOT RECOMMENDED!!
    PRESS[ENT]
```

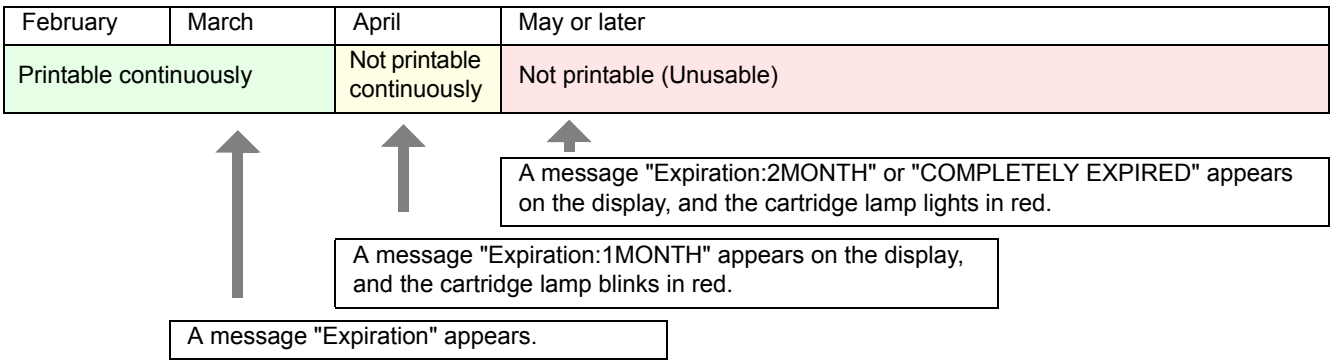
Press the ENTER

- To check expired ink, press the FUNCTION key while displaying the screens above alternately.

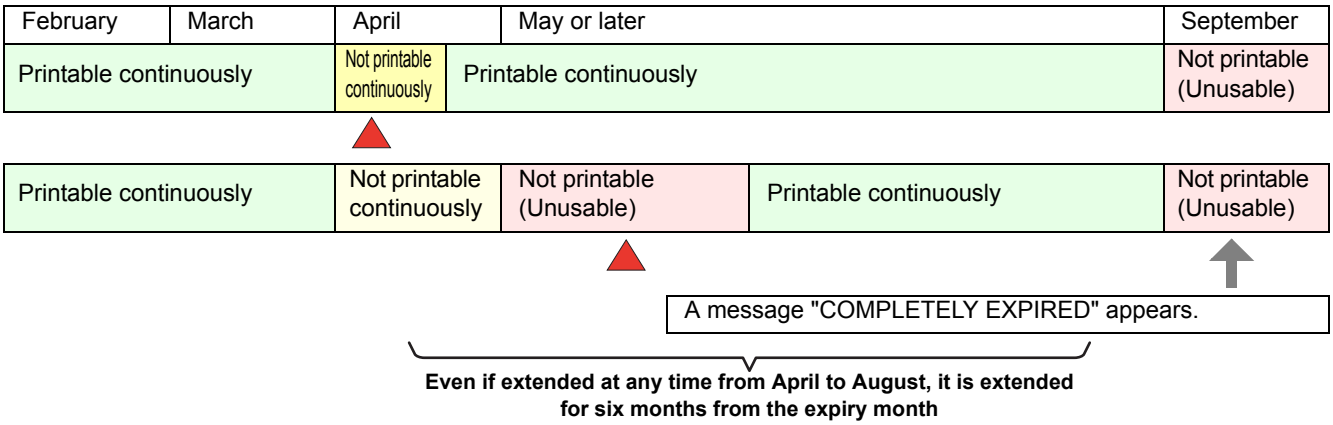
When an ink expiry month is extended

Example: If expiry month of your ink cartridge is February 2014.

• When the expiry month is not extended



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



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.

Important!

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

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

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

2 **Press the FUNCTION key.**

FUNCTION
SETUP <ENT>

3 **Select [MACHINE SETUP] by pressing the ▲▼ keys.**

FUNCTION
MACHINE SETUP <ENT>

4 **Press the ENTER key.**

5 **Select [CART.PRIORITY] by pressing the ▲▼ keys.**

MACHINE SETUP
CART.PRIORITY <ent>

6 **Press the ENTER key.**

7 **Select the condition of ink to be used first by pressing the ▲▼ keys.**

CART.PRIORITY
SELECT :INK LEVEL

INK LEVEL : Low ink cartridge is used first
EXP. DATE : Close-to-date ink cartridge is used first

8 **Press the ENTER key.**

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

When both ink cartridge and MBIS are used

When both an ink cartridge and the optional bulk ink system (MBIS) 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 (MBIS) are set in the supply path of the same color, the ink in the bulk ink system (MBIS) is used first.

Important!

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

1 **Press the ENTER key in LOCAL or REMOTE of the printing mode.**

```
ES3-INK      MMCCYYKK
REMAIN       34567899
```

2 **Press the REMOTE key.**

```
BULK/CART SELECT
    - B B B
```

Displays the currently supplying ink.
B : Bulk ink system (MBIS)
C : Ink cartridge
- : Only one type is set

3 **Press the ▲ ▼ ◀ ▶ key to set the supply path and the ink to be used first.**

```
BULK/CART SELECT
    - C B B
```

Select the supply path : Press the ◀ ▶ key.
Select the ink to be used first : Press the ▲ ▼ key.

4 **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

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

Settings	Set Value	Overview
ENDS	HIGH	Set the pressure for the pinch rollers at both ends of the medium according to the medium to be used.
	MIDDLE	
	LOW	
INNER	HIGH	Set the pressure for the pinch rollers other than those at both ends of the medium according to usage.
	MIDDLE	
	LOW	
	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

Important!

- 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.

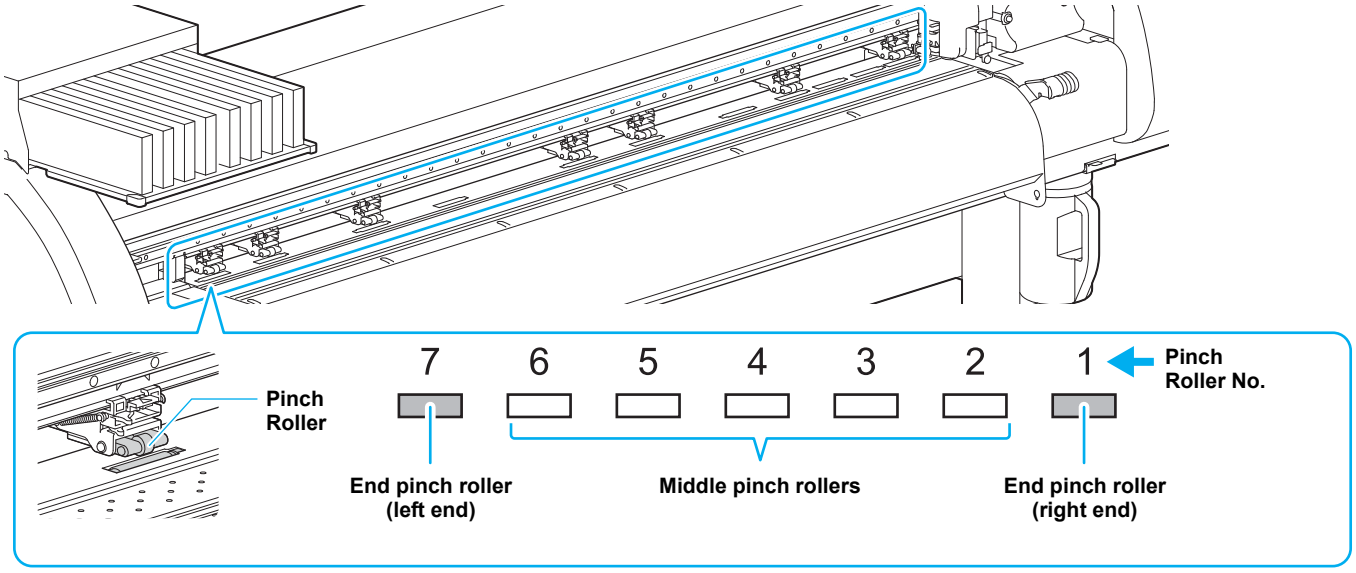
Quantity of Pinch Rollers

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.

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

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

2 **Press the FUNCTION key.**

```
FUNCTION                C
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  :HIGH  [H_____H]
INNER:OFF     No.7-1
```

6 **Press ▲ ▼ to set the pressure for the pinch rollers at both ends of the medium.**

• **Set value**: HIGH/MID./LOW

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

7 **Press ▶ to move the cursor to the middle pinch roller setting.**

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

8 **Press ▲ ▼ to set the pressure for the middle pinch rollers.**

- **Set value**: HIGH/MID./LOW/OFF

```
ENDS  :MID.  [H_____H]
INNER:MID.   No.7-1
```

9 **Press ▶ to move the cursor to the pinch roller number setting.**

```
ENDS  :MID.  [H_____H]
INNER:MID.   No.7-1
```

10 **Press ▲ ▼ to set the number of the pinch roller at the left end of the medium.**

- **Set value**: 2 to 7

```
ENDS  :MID.  [___H__H]
INNER:MID.   No.4-1
```

11 **Press the ENTER key.**

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

Important!

- **The pinch roller pressure set here is reflected to the medium under the following conditions:**
  When performing print/cut remotely
  When detecting the medium next
- If you want to reflect the set value to the current medium, move the clamp lever up and down to detect the medium again.

Advanced Setting for the Middle Pinch Rollers

Advanced setting is available for the middle pinch rollers.

1 **Perform the operations in Steps 1 to 10 in P. 4-3 "Setting for the Pinch Rollers".**

2 **Press the FUNCTION key.**

```
ENDS  :MID.  [H_____H]
INNER:MID.   No.3-1
```

3 **Press ◀ ▶ to select a pinch roller to set, and press ▲ ▼ to set the advanced setting.**

```
ENDS  :MID.  [H___L_H]
INNER:MID.   No.3-1
```

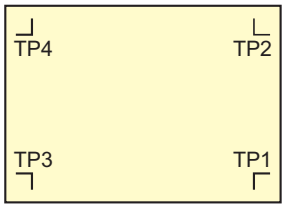
4 **Press the ENTER key.**

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

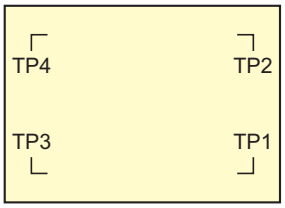
Cutting out Data with Register Marks

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

Add register marks on the image with which you want to make a sticker, etc., and then print the image with register marks on a medium.

There are some conditions for creating the register marks.
See pages P.4-6 through P.4-10.

Set the printed medium in CJV30.

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

1 **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

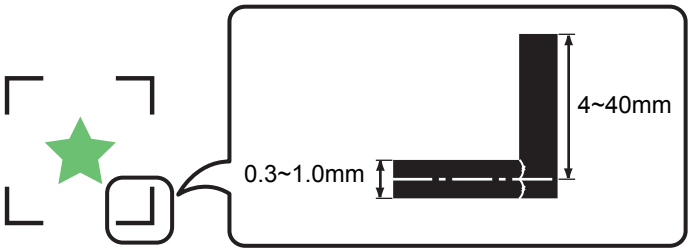
There are some limitations on preparing data with register marks.
In order to make full use of this function, read the following instructions carefully and prepare data with register marks properly.

Important!

- 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

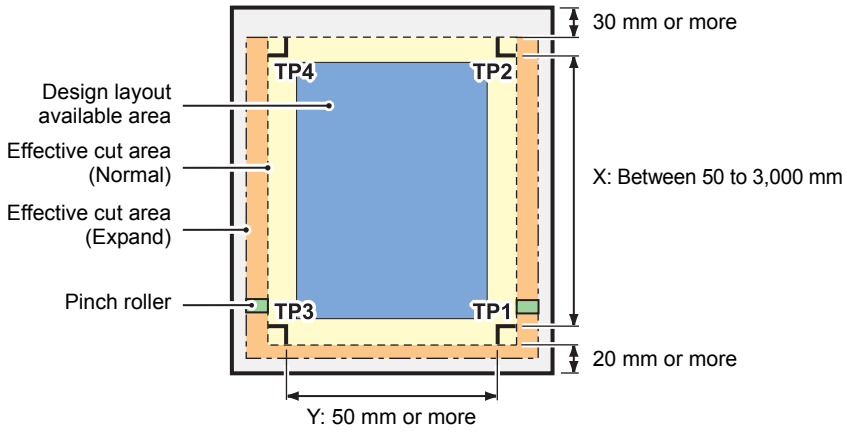
Refer to "The Size of a Register Mark Suited for the Distance between the Marks" (☞ P.4-8) for the relationship between the data and the length of one side of a register mark.



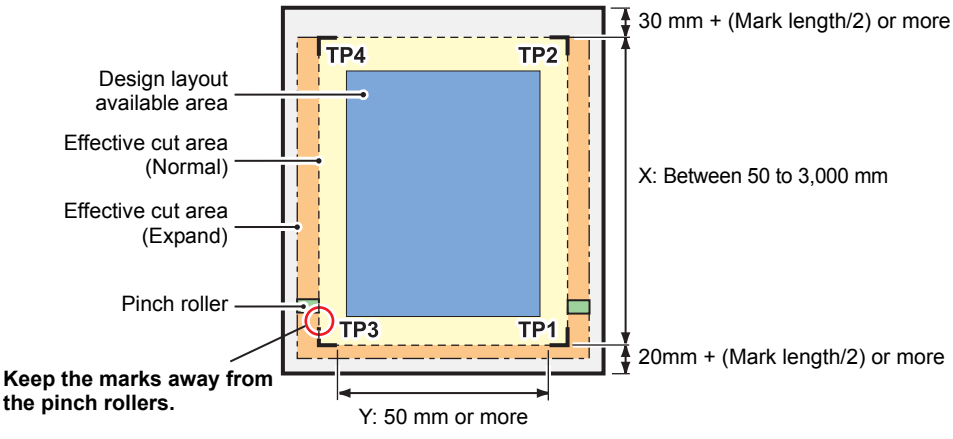
The Area Where Register Marks and Designs Can Be Arranged

- 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

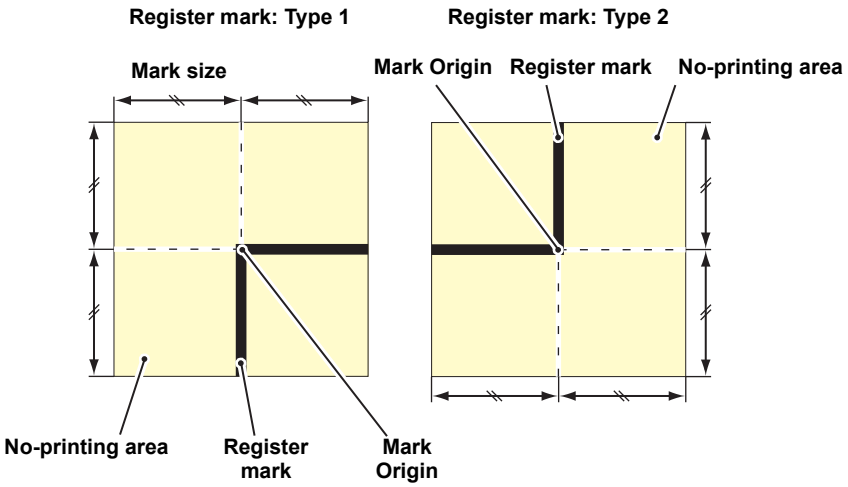


No-printing Area around the Register Marks

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.

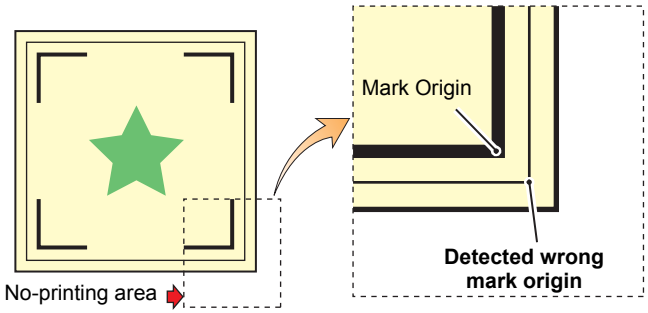
Important!

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



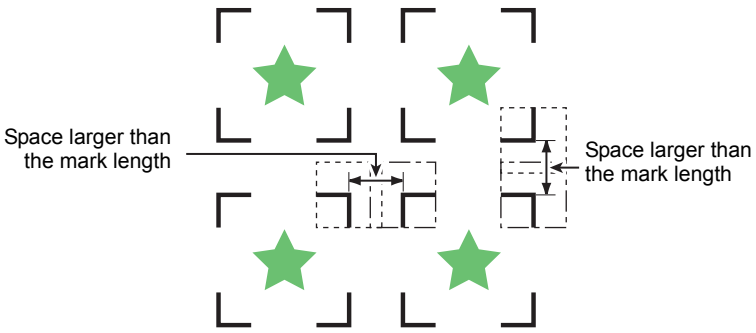
Example of Cause of Wrong Detection 1

There is a line outside the register marks



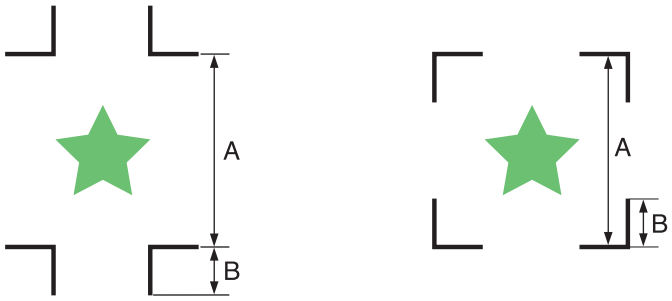
Example of Cause of Wrong Detection 2

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.



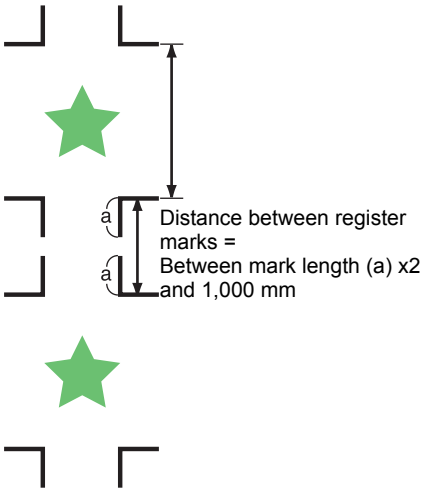
A	200 or less	500	1000	2000	3,000 or more
B	4 ~	8 ~	15 ~	25 ~	35 ~

(mm)

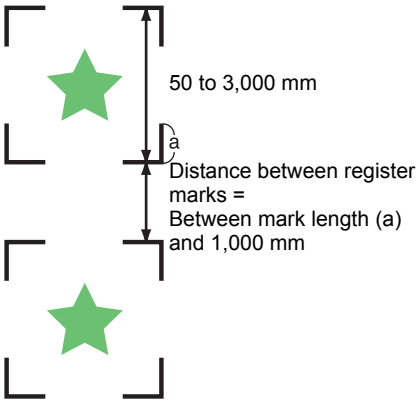
Distance between Register Marks for Copied Designs

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.

Register mark: Type

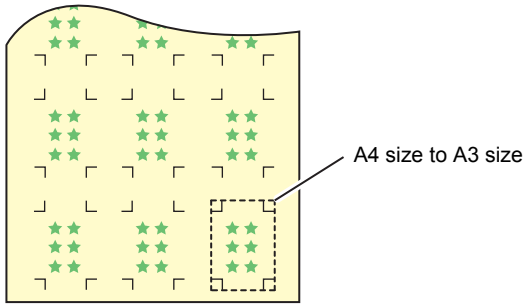


Register mark: Type 2



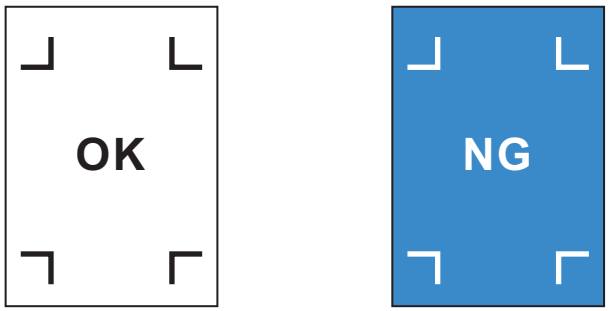
The Recommended Size of the Area Defined with a Set of Four Register Marks

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:

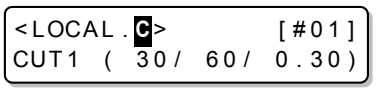
- Print & cut using the take-up device
- Print & cut when “COLOR PATTERN (☞ P.3-28) “ of the setting mode is set to “ON”

- 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.

Setting Register Mark Detection

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

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



2 **Press the FUNCTION key.**

3 **Press the ENTER key.**

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

5 **Press ▼ ▲ to select [MARK DETECT].**

6 **Press the ENTER key.**

7 **Press ▼ ▲ to select number of detected register marks.**

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

8 **Press the ENTER key.**

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

9 **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.

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

- See pages P.4-12 through P.4-14 for set values for each set item.

11 **Press the ENTER key to enter the value.**

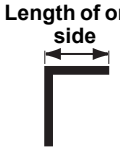
12 **Press the END key several times to return to LOCAL.**

MARK DETECT

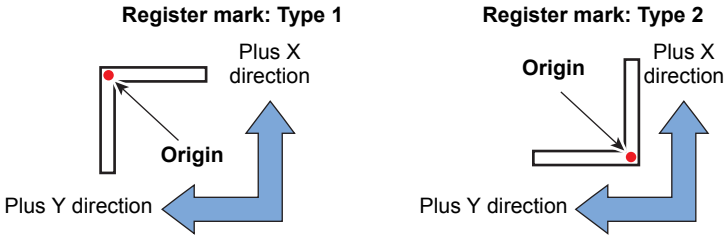
The higher the number of detected points, the higher the cutting accuracy.
Select "1pt" when using Raster Link Pro4 SG (or later) or FineCut.

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 and the 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.

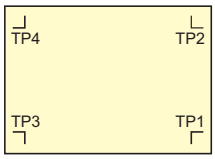
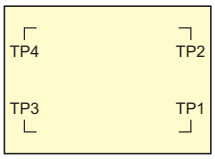
MARK SIZE

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. 

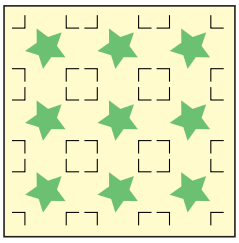
OFFSET Y / OFFSET X

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.  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  **TYPE2** 	Select either one of the following types of register marks. **MARK : TYPE 1**  **MARK : TYPE 2** 

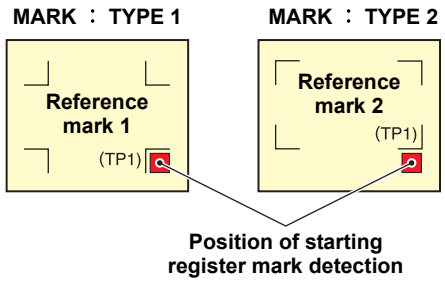
COPIES (X) / COPIES (Y)

Set Value	Description
1 to 9999 (COPIES X) **1 to 99 (COPIES Y)**	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.  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".

Setting of skew check

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”. 

Resetting the Setting of Register Mark Detection

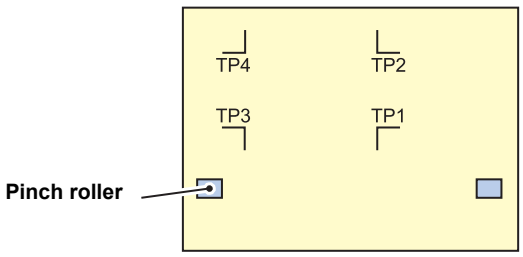
In case the cutter unit detects a medium that has no printing of register marks and displays [SEARCH START POS.], set the register mark detection to "OFF".
Then, the register mark detection is disabled.

Follow Steps 1 to 5 in "Setting Register Mark Detection". → **Press ▲ ▼ to select "OFF".** → **Press the ENTER key.** → **Press the END several times.**

Method of Detecting Register Marks

Important!

- 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.



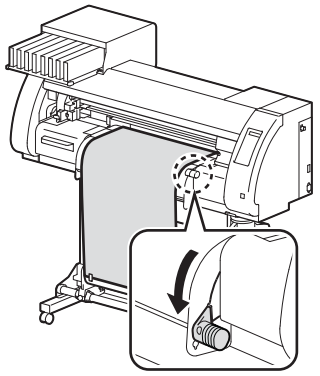
Setting the Origin of the Register Mark Right after Setting of a Medium

Important!

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

1 Load the medium and lower the clamp lever.

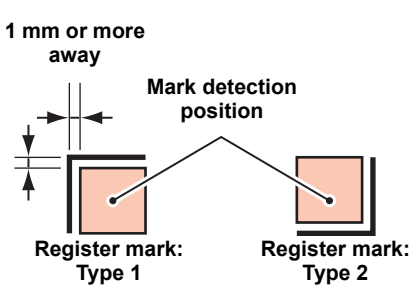
- The pinch rollers retain the sheet.
- Set the medium referring to the procedures from P.2-25.

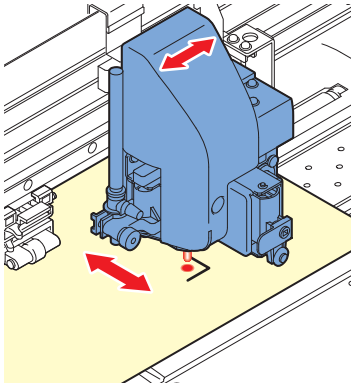


2 Detecting the medium

- 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.

3 Move the Light Pointer into the area shown below by pressing ▼ ▲ ◀ ▶.





4 **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.

5 **Set the origin.**

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

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)

1 **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.

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

2 **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".**

When Cutting Failed

Checking the Sensor for the Register Mark Detection

Important!

- **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).

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

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

2 **Press the FUNCTION key.**

FUNCTION C
SETUP <ENT>

3 **Press ▼ ▲ to select [MAINTENANCE].**

FUNCTION C
MAINTENANCE <ENT>

4 **Press the ENTER key twice.**

MARK SENSOR
SENSOR CHECK <ent>

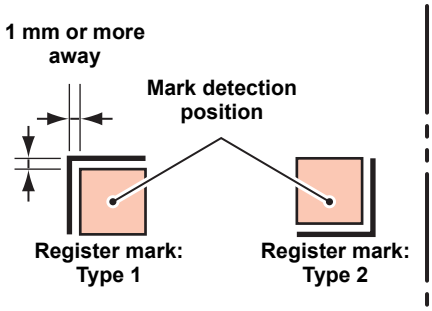
5 **Press the ENTER key.**

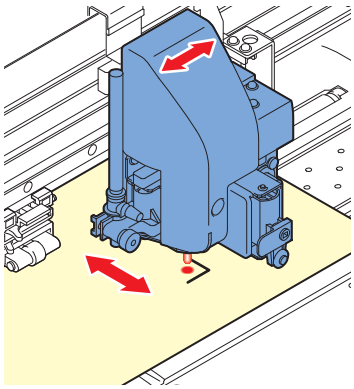
- Light pointer will be lit.

MARK SENSOR
SIZE = 10mm

6 **Press ▼ ▲ ◀ ▶ to move the light pointer to the register mark detection 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".

7 **Press the ENTER key.**

```
MARK  SENSOR
SIZE              =  10mm
```

8 **Press ▼▲ to set the size of the register mark, and then press the ENTER key.**

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

```
MARK  SENSOR
FORM              : TYPE1 ⌗
```

9 **Press ▼▲ to select the type of the register mark, and then press the ENTER key.**

- **Set value**: TYPE 1(⌗), TYPE 2(⛶)
- The value entered here is reflected in the "MARK DETECT".

```
MARK  SENSOR
SPEED             =  10cm/s
```

10 **Press ▼▲ to set the register mark reading speed, and then press the ENTER key.**

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

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

Detect Operation

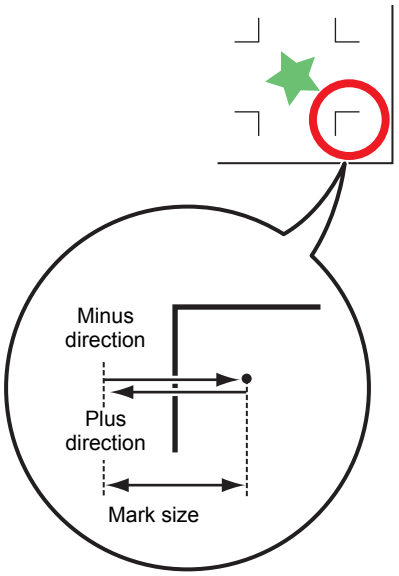
1 **Scan in the X direction (plus direction) to confirm that the line can be detected.**

- 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.**

3 **Scan in the Y direction (plus direction) to confirm that the line can be detected.**

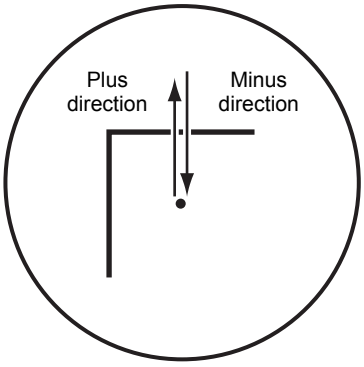
4 **Scan in the Y direction (minus direction) to confirm that the line can be detected.**



Scan in the Y direction

5 **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.



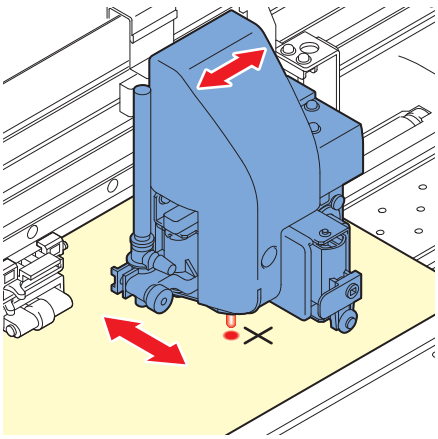
Scan in the X direction

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.

1 **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.



2 **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.

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

3 **Press the FUNCTION key.**

```
FUNCTION              C
SETUP              <ENT>
```

4 **Press ▼ ▲ to select [MAINTENANCE].**

```
FUNCTION              C
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.**

9 **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
```

Important! • The value registered in the [POINTER OFFSET] is not initialized even by executing P.4-41 “Initializing the Settings”.