

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

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

Important!

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

1

Make sure that the machine is in cutting mode.

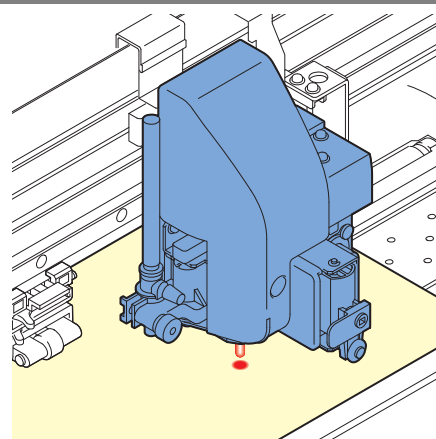
- If the machine is in printer mode, press the **MODE CHANGE** key to switch the mode to cutting mode.

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

2

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

- If the mark sensor is not located just above a plain area, correct the location by pressing **▲▼◀▶**.



3

Press the **FUNCTION key.**

FUNCTION
SETUP <ENT>

4

Press **▼▲ to select [MAINTENANCE].**

FUNCTION
MAINTENANCE <ENT>

5

Press the **ENTER key twice.**

MARK SENSOR
SENSOR CHECK <ent>

6

Select [LEVEL ADJUST] by pressing **▼▲.**

MARK SENSOR
LEVEL ADJUST <ent>

7

Press the **ENTER key.**

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

8

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

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

Important!

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



4

Extended Functions – Cutting –

Setting Automatic Cutting

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

1

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

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

2

Press the **FUNCTION** key.

FUNCTION
SETUP **C** <ENT>

3

Press the **ENTER** key.

SETUP
SELECT : CUT1

4

Press **▼** **▲** to select one from the tool conditions (CUT1 to CUT3, PEN, and HALF) and press the **ENTER** key.

5

Press **▼** **▲** to select [AUTO CUT].

[CUT1]
AUTO CUT <ent>

6

Press the **ENTER** key.

[CUT1] AUTO CUT
SETUP : OFF

7

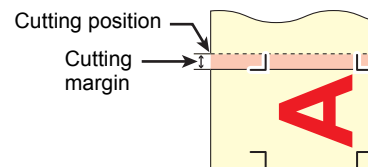
Press **▼** **▲** to select "ON" and press the **ENTER** key.

[CUT1] AUTO CUT
CUT MARGIN : 00mm

• When you do not want to set AUTO CUT, select "OFF" and proceed to Step 10.

8

Press **▼** **▲** to select a margin length (0 to 30 mm) and press the **ENTER** key.



9

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

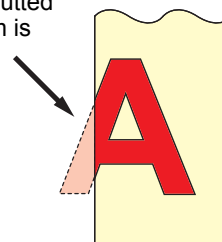


- The setting configured here is not reflected in the automatic cutting during printing. When you set automatic cutting during printing, see "AUTO CUT" (P.3-27) in Extended Functions - Printer.
- The "AUTO CUT" is not performed when "1" or higher value is set to the take-up timing (P.4-37). (Take up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

Dividing and Cutting

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

The part that has jutted out from a medium is divided and cut.



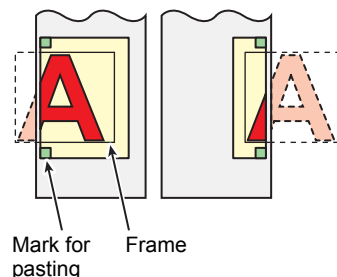
- The following convenient functions can be used with the dividing and cutting function.

Cutting a frame:

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

Attaching marks for pasting:

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



Setting the Dividing and Cutting Function

1

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

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

2

Press the **(FUNCTION)** key.

FUNCTION
SETUP <ENT>

3

Press the **(ENTER)** key.

SETUP
SELECT : CUT1

4

Press **(▼)** **(▲)** to select one from the tool conditions (CUT1 to CUT3, PEN, and HALF) and press the **(ENTER)** key.

5

Press **(▼)** **(▲)** to select [DIVISION CUT].

[CUT1]
DIVISION CUT <ent>

6

Press the **(ENTER)** key.

[CUT1]DIVISION CUT
SETUP : OFF

7

Press **(▼)** **(▲)** to select "ON" and press the **(ENTER)** key.

[CUT1]DIVISION CUT
FRAME CUT : ON

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



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Extended Functions – Cutting –

8

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

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

[CUT1]DIVISION CUT	
FRAME CUT	:OFF

9

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

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

[CUT1]DIVISION CUT	
MARK CUT	:ON

10

Press the  key several times to return to LOCAL.

Important!

- The set values are recorded even when the power has been turned OFF.
- Because a mark for pasting is 1 cm long, the width of an effective cut area needs to be 1 cm or more.
- During the operation of dividing and cutting, data sent from the host computer is ignored.
- Dividing and Cutting cannot be performed in any of the following cases:
 - When the data size is larger than the reception buffer capacity
 - When an origin change command is contained in the cut data
 - When register mark detection is performed
 - When the width of an effective cut area is 1 cm or less
 - When the test data stored in this machine has been cut

Cancelling the Setting of Dividing and Cutting

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

Press   to select "OFF".

Press .

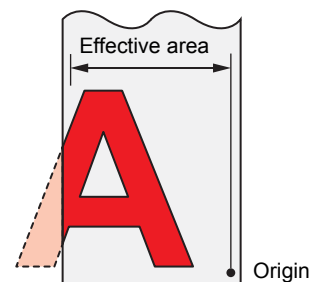
Press  key several times.

Cutting Data by Using the Dividing and Cutting Function

1

Data is received from the computer.

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



```
*REMOTE .C* < 100KB>
** OFF SCALE **
```

2

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

```
** DIVISION **
```

3

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

```
<LOCAL .C> [ #01 ]
** DIVISION **
```

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

4

Set a new origin.

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

5

Press the **REMOTE** key to go to the remote mode.

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

Important!

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

6

Repeat the operations in Steps 4 and 5.

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

- Repeat the operations until there is no data that exceeds the width of the medium.
- When the operations have been completed, tool conditions are displayed and the screen returns to LOCAL.

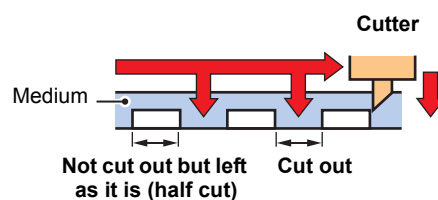


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Extended Functions – Cutting –

Cutting with a Dotted Line

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



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

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

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


- Set value: 5 to 150mm

[CUT1] HALF CUT	
CUT LENGTH	= 50mm

12 Press the  key.

13 Press the  key several times to return to LOCAL.

Important!

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

Reference Value

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

Cutting condition		Condition for cutting with a dotted line	
PRESSURE	100 ~ 150 g	HALF CUT PRES.	30 g
OFFSET	0.30 mm	HALF LENGTH	0.5 mm
		CUT LENGTH	10 mm

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

Cutting condition		Condition for cutting with a dotted line	
SPEED	40 cm/s	HALF CUT PRES.	0 g
PRESSURE	40 g	HALF LENGTH	0.5 mm
OFFSET	0.30 mm	CUT LENGTH	10 mm



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



Changing the Order of Cutting

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

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

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

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

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

When cutting data by sorting

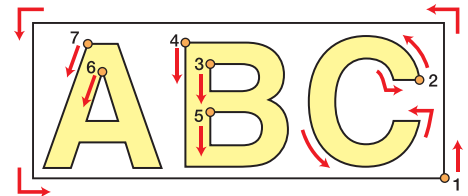
In sorting, data is cut as blocks. A block means movement from a down stroke with a pen to an up stroke with a pen. After one block has been cut, a block whose starting point is closest to the already cut block is cut.

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

Circle : Starting point of data = Starting point of cutting

Arrow : Data direction = Cutting direction

Numbers : Order of block cutting



With the sorting function, you can do the following:

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

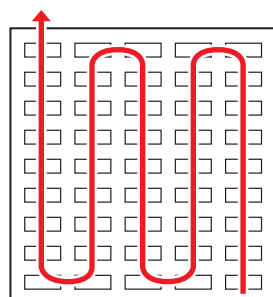
Auto-feeding function:

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

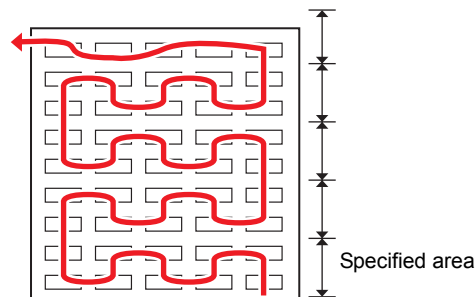
Area control function:

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

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



With no area specified



With an area specified

Setting the SORTING

1

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

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

2

Press the **FUNCTION** key.

FUNCTION
SETUP **C** <ENT>

3

Press the **ENTER** key.

SETUP
SELECT : CUT1

4

Press **▼** **▲** to select one from the tool conditions (CUT1 to CUT3, PEN, and HALF) and press the **ENTER** key.

5

Press **▼** **▲** to select [SORTING].

[CUT1]
SORTING <ent>

6

Press the **ENTER** key.

[CUT1] SORTING
SETUP : OFF

7

Press **▼** to select "ON".

[CUT1] SORTING
SETUP : ON

8

Press the **ENTER** key.

[CUT1] SORTING
AUTO FEED : OFF

9

Press **▲** **▼** to select [AUTO FEED].

• When performing AUTO FEED, select "ON".

10

Press the **ENTER** key.

[CUT1] SORTING
AREA : OFF



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Extended Functions – Cutting –

11

Press   to select a set value of [AREA].

• Set value: OFF or 10 to 5,100 cm (by units of 10 cm)

[CUT1] SORTING

AREA

: 500

12

Press the  key.

13



Press the  key several times to return to LOCAL.

Important!

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

Cancelling the Setting of the SORTING

Perform the operations in Steps 1 to 6 in "Setting the Sorting Function".

Press   to select "OFF".

Press .

Press  several times.

Procedure for SORTING

1

Transmit data.

```
* REMOTE . C * < 100KB>
* * SORTING * *
```

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

2

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

```
* REMOTE . C * < 100%>
* * PLOT * * 09 s
```

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

3

Perform auto-feeding.

```
* REMOTE . C * < 1%>
* * SORTING * *
```

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

4

Start cutting.

```
* REMOTE . C * < 100%>
* * SORTING * *
```

- The already cut data is displayed in percentage.

5

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

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



- When sorting is [ON], after receiving the data to be cut, the cutting operation will not start until it completes the operation of the data receiving and the sorting process.
However, in the following situation, perform sorting and cutting without waiting.
When the sorting buffer is full of data (about 540,000 line segments)
When cutting conditions, such as Tool number, SPEED, PRESSURE, have been changed
When a feed command or origin change command has been executed



4

Extended Functions – Cutting –

Cutting out Data without Register Marks

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

Important!

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

The P/C Adjust has the following items.

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

Example of the P/C Adjust

This can be set for the conditions of each tool separately. Set it according to the purpose of use.


When using the tool condition [CUT1] to cut the data with the register mark detection.	P/C Adjust is not needed.
When using the tool condition [CUT2] to print & cut the data without register marks.	Perform P/C Adjust.
When using the tool condition [CUT3] only to cut the color medium or the like.	P/C Adjust is not needed.
When using the tool condition [PEN] only to draw with a pen.	P/C Adjust is not needed.

Setting the P/C ORIGIN OFFSET

Adjust the misalignment between the print origin and the cutting origin.

According to the scanning speed in the Y direction, 540dpi and 720dpi has the different ink drop positions while printing. Adjust with the resolution you want to print.

Important!

- This machine stores an adjustment value of either 540dpi or 720dpi. Select the resolution of the printing to be performed after adjustment.
- You can set the P/C origin offset for each tool condition.
- When you cut by using two and more tool conditions ([CUT1] and [HALF] etc.) within the same data, set the same adjusting value for each tool condition. If you cut by tool condition with different adjusting value, misalignment may occur.
- When you set the same setting for two and more tool conditions, it is not required to print & cut the adjusting pattern in the second tool condition setting. After performing the Step 8, press  key to enter the P/C origin offset value.

1

Set a PVC medium (P.2-15), and attach the eccentric cutter for cutting (P.2-10).

2

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

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

3

Press the **FUNCTION** key.

FUNCTION
SETUP <ENT>

4 Press the **ENTER** key.

SETUP
SELECT : CUT1

5 Press **▼****▲** to select one from the tool conditions (CUT1 to CUT3, PEN, and HALF) and press the **ENTER** key.

6 Press **▼****▲** to select [P/C ADJUST] .

[CUT1]
P/C ADJUST <ent>

7 Press the **ENTER** key twice.

P/C ORIGIN OFS.
540dpi <ent>

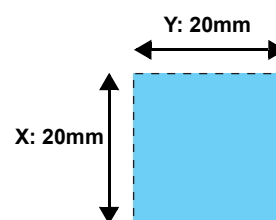
8 Press **▲****▼** to select 540dpi or 720dpi, and press the **ENTER** key.

P/C ORIGIN OFS.
PRINT START :ent

- Select one depending on the resolution you want to print with after adjustment.
- Press **▲****▼****◀** to change the print start position (print origin).
- Press **▶** to go to Step 10.

9 Press the **ENTER** key to print & cut the adjustment pattern.

- The adjustment pattern shown on the right is printed & cut.
- A blue part shows the pattern, and a dotted line part shows the cutting line.



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Extended Functions – Cutting –


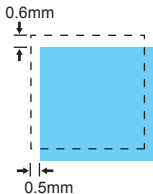
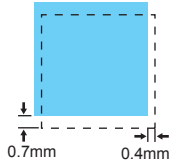
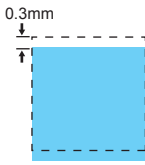
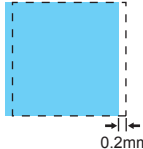
10 Remove the cut pattern, and adjust the misalignment.

- Press **▲****▼****◀****▶** to enter an offset value of the cutting line. (approximately 0.05mm per 1 step)

Select X/Y direction : Press **◀****▶**.

Enter an offset value : Press **▲****▼**.

P/C ORIGIN OFS.
X = 2 Y = 3

The cutting line fits the pattern.	The cutting line is misaligned 0.5mm leftward, and 0.6mm upward.	The cutting line is misaligned 0.4mm rightward, and 0.7mm downward.	The cutting line is misaligned 0.3mm upward.	The cutting line is misaligned 0.2mm rightward.
				
Y=0, X=0	Y=-10 (0.05x10) X=-12 (0.05x12)	Y=+ 8 (0.05x8) X=+14 (0.05x14)	Y= 0 (0.05x0) X=-6 (0.05x6)	Y=+4 (0.05x4) X= 0 (0.05x0)

11 Press the **ENTER** key.

- Perform the steps from Step 9 again, and repeat until they align.

P/C ORIGIN OFS.
PRINT START :ent

12

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



- Even if you adjust with the P/C origin offset, misalignment may occur when you print & cut data actually in some cases. In such a case, you can adjust again by the procedures below:

- (1) Press the **MODE CHANGE** key to select the cutting mode.
- (2) Press the **REMOTE** key to switch to the remote status.
- (3) Press the **FUNCTION** key.
- (4) Adjust by pressing **▲** **▼** **◀** **▶**.
 - Change the direction of X/Y with **◀** **▶**, and enter the offset value with **▲** **▼**.

P/C ORIGIN OFS.	
X = 0	Y = 0

- (5) Press the **ENTER** key to save the adjusting value.
 - When you save the adjusting value, the value registered with the P/C origin offset is updated.
 - If you do not wish to save the adjusting value, press the **END** key or the **FUNCTION** key.

Setting the P/C SCALE ADJUST

Adjust the scale to apply cutting to the expansion or contraction of the print caused by the media-feeding correction.

Important!

- When a medium used or the feeding correction value is changed, readjust it as needed. (When starting to print the pattern, the former setting is initialized.)
- This setting fits the cutting position to the printing position. Please note that the value adjusted here is also applied to cut only or to draw with a pen by PEN tool.
- If you do not want to apply this setting for cutting only, perform the followings.
 - Select "Clear" on Step 9.
 - Cut with a tool condition without the P/C scale correction.

1

Set a PVC medium (P.2-15), and attach the eccentric cutter for cutting (P.2-10).

2

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

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

3

Press the **FUNCTION** key.

FUNCTION	C
SETUP	<ENT>

4

Press the **ENTER** key.

SETUP	
SELECT	: CUT1

5

Press **▼** **▲** to select one from the tool conditions (CUT1 to CUT3, PEN, and HALF) and press the **ENTER** key.

6

Press **▼** **▲** to select [P/C ADJUST] .

[CUT1]	
P/C ADJUST	<ent>

7 Press the **ENTER** key.

[CUT1]P/C ADJUST
P/C ORIGIN OFS.<ent>

8 Press **▼** **▲** to select [P/C SCALE ADJ.] .

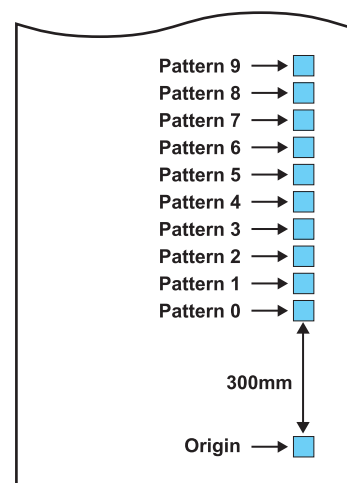
[CUT1]P/C ADJUST
P/C SCALE ADJ. <ent>

9 Press the **ENTER** key.

P/C SCALE ADJ.
CLEAR < > PRINT

10 Press **▶** to print all the pattern and cut the pattern 0.

- The pattern shown on the right is printed.
- To clear the adjustment value, press **◀** and go to Step 16.
- The origin is approximately 300mm away from the pattern 0.

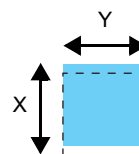


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Extended Functions – Cutting –

11 Remove the pattern 0, and check the misaligned direction.

- Some are misaligned in the Y direction, but it has no effect on this adjustment.



If the cutting line is
misaligned downward,
select + direction.



If the cutting line is
misaligned upward,
select - direction.

12 Press **▼** **▲** to set + / - .

P/C SCALE ADJ.
DIRECTION = +

13 Press the **ENTER** key.

- The machine cuts from the pattern 1 to 9.

14 Remove the pattern from 1, and select one that fits the cutting line and the pattern.

15 Enter the number of the fit pattern, and press the **ENTER** KEY.

P/C SCALE ADJ.
ADJ. VALUE = 5

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

Other Settings

Change the settings according to the types of use.

1

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

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

2

Press the **FUNCTION** key.

FUNCTION
SETUP <ENT>**C**

3

Press the **ENTER** key.

SETUP
SELECT : CUT1

4

Press **▼** **▲** to select one from the tool conditions (CUT1 to CUT3, PEN, and HALF) and press the **ENTER** key.

5

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

• See "List of Settings" to select one.

6

Press the **ENTER** key.

7

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

• See "List of Settings" to select one.

8

Press the **ENTER** key.

9




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

Important!


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


List of Settings

The setting is as follows when purchasing:

Function Name	Overview	Set Value
PINCH ROLLER	Setting the pinch roller pressure and the pinch roller numbers according to the medium to be used.	See P.4-2.
MARK DETECT	See P.4-5.	
CUT MODE ( P.4-38)	Normal cutting mode	STD.
	Cutting in a short time (not suitable for heavy media)	FAST
	Cutting mode that prioritizes cutting quality	FINE
AUTO CUT	After cutting has been completed, a medium is cut off automatically.	See P.4-22.
DIVISION CUT	The function of dividing and cutting is set.	See P.4-23.
HALF CUT	The function of cutting with a dotted line is set.	See P.4-26.
UP SPEED	The movement speed of a medium and a carriage when a tool is up is set.	AUTO/5/10/20/30
DUMMY CUT ( P.4-38)	The operation of dummy cutting is set.	OFF/ON
MEDIA TYPE *1	The weight of a medium to be mounted is set.	STANDARD / HEAVY
SORTING	The sorting function is set.	See P.4-28.
ADJ-PRS OFFSET ( P.4-38)	When there is part of a medium left uncut at the starting and ending points, the value is increased.	0 ~ <u>3</u> ~ 7
TAKEUP TIMMING *2	Set the timing of take-up the medium when the cutting several sheet of data with a register mark or when setting the Multiple Cuttings function.	OFF / 1 to 99 (for one line)
OVER CUT	Set when there is a part remaining uncut because of thick medium etc.	OFF / 0.1mm ~ 1.0mm
VACUUM	The ability to adsorb a medium is set.	STRONG/ STANDARD / LittleWEAK / WEAK / OFF

*1. When setting the medium setting to "HEAVY", the cutting speed is limited to 20cm/s.

*2. - When take-up timing is set, the setting of AUTO CUT ( P.4-22) will be invalid.

- When take-up timing is set to "1" or higher, the setting of the switch of take-up device is required. ( P.2-29)



4

Extended Functions – Cutting –

About the Cutting Mode

Select "FINE" in any of the following cases:

- When characters of which the size is 10 mm or less are cut.
- When pictures or characters that have many sharp corners are cut.
- When minute cutting is required.

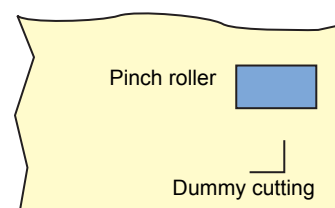
However, the edges of a finished pattern may become jagged when the data transmitted from the host computer is too complicated. In such a case, select "FAST" for a smooth finish.

- The cutting speed is limited to 20cm/s for "FINE".

About Dummy Cutting

This is performed after detecting the medium or when changing the tool type in front of the pinch roller which is near the both ends from the position of the cutter unit is placed presently.

Set the dummy cutting function to OFF when you do not want to damage the medium in cutting cut-out characters.



Important!

- When "PEN" is selected for the tool condition, the dummy cutting cannot be set.
- The default of the dummy cutting function is ON.

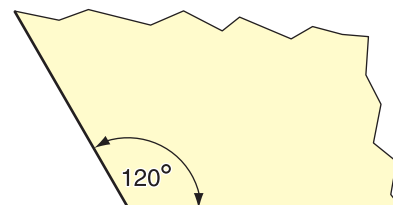
When you have set the dummy cutting function to OFF, perform test cutting (☞ P.2-43) to adjust the cutter blade orientation before cutting.

About Cutter Blade Corrected Pressure Offset

Some part of a medium is left uncut because the pressure applied when the cutter blade touches the medium is weak.

When an optional eccentric blade is used, some part of a medium to be cut with the blade's angle being 120 degrees or less may be left uncut.

This is because the corners are cut with a low pressure (about 5 g) automatically applied so that the medium does not turn up. Some part of a medium may be left uncut because the blade edge does not rotate smoothly in its moving direction with the cutting pressure being low. In such a case, configure the setting for the pressure to be increased when the corners are cut.

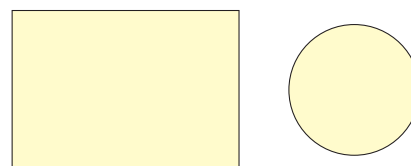


About Over Cutting

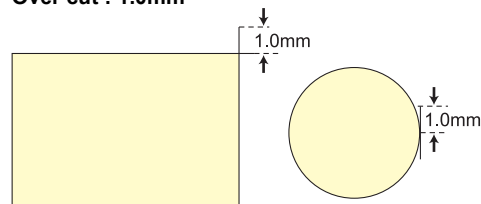
Specify whether the over cutting function is enable or unable and the length of the over cutting.

If the length of the over cutting is set, cutting is performed with extra cutting space at the front by the specified amount of length at the start of cutting and tool up is performed at the end going too far.

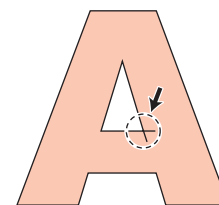
Over cut : OFF



Over cut : 1.0mm



- With setting the over cutting properly, you can reduce the part remaining uncut at the start/end of the cutting, especially for the medium easy to bend. However, too much amount of over cutting causes to scratches on the medium.



4

Extended Functions – Cutting –

Copying the Setting Contents

The setting contents can be copied to other tool conditions.

1

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

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

2

Press the **FUNCTION** key.

FUNCTION
SETUP **C**
<ENT>

3

Press the **ENTER** key.

SETUP
SELECT : CUT1

4

Press **▼** **▲** to select one from the tool conditions (CUT1 to CUT3, PEN, and HALF) and press the **ENTER** key.

5

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

[CUT1]
SETUP COPY <ent>

6

Press the **ENTER** key.

[CUT1] SETUP COPY
CUT1 -> **C**UT2

7

Press **▼** **▲** to select the tool condition to copy (CUT1 to CUT3, PEN, HALF or ALL).

[CUT1] SETUP COPY
CUT1 -> **C**UT3

• If "ALL" is selected, the set contents of all tool conditions are same.

8

Press the **ENTER** key.

COPY : **e**nt
CUT1 -> CUT3

9

Press the **ENTER** key.

10

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

Important!

• You cannot copy the setting performing with the **USER TYPE/TOOL** key (speed, cutting pressure, offset value).

Initializing the Settings

1

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

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

2

Press the **FUNCTION** key.

FUNCTION
SETUP **C** <ENT>

3

Press the **ENTER** key.

SETUP
SELECT : CUT1

4

Press **▼** **▲** to select one from the tool conditions (CUT1 to CUT3, PEN, and HALF) and press the **ENTER** key.

5

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

[CUT1]
SETUP RESET <ent>

6

Press the **ENTER** key.

[CUT1] SETUP RESET
RESET : ent

7

Press the **ENTER** key.

- The set items and parameters are initialized.

8

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

Important!

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



4

Extended Functions – Cutting –

Cutting Samples

In such a case as when data cannot be cut normally, a sample stored in this machine is cut to check the cause of the abnormality.

Sample of "Cut"

Cut

Sample of "Logo"

Mimaki

Important!

- When sample cutting has been performed, data stored in the reception buffer is deleted.
- When detecting the medium and the mode is in print mode, if you perform the sample cut as it is, the following screen will be displayed by pressing the **ENTER** key in Step 10. In this case, press the **ENTER** key to switch the setting of the pinch roller pressure to the cut mode and then perform the sample cut.
- If the **END** key is pressed, switching operation will not be performed.

! PR PRESSURE : PRINT!
SWITCH : ent

1

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

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

2

Press the **FUNCTION** key.

FUNCTION
SETUP <ENT> **C**

3

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

FUNCTION
MAINTENANCE <ENT> **C**

4

Press the **ENTER** key.

MAINTENANCE
MARK SENSOR <ent>

5

Press **▼** **▲** to select [SAMPLE CUT].

MAINTENANCE
SAMPLE CUT <ent>

6

Press the **ENTER** key.

SAMPLE CUT
SELECT : **CUT**

7

Press **▼** **▲** to select sample data to be cut.

- Two samples are available: "CUT" and "LOGO". When having selected "CUT", proceed to Step 10.

SAMPLE CUT
SELECT : **LOGO**

8

Press the **ENTER** key.

SAMPLE CUT
LOGO : 10 **0**%

9

When cutting LOGO, press **◀** **▶** to select magnification (1 to 999%).

SAMPLE CUT
LOGO : 20 **0**%

10Press the **ENTER** key.

SAMPLE CUT	
CUT START	:ent

11Press the **ENTER** key to start cutting.

About the Result of Sample Cutting

When sample data can be cut normally, but other data cannot be cut normally

⇒ The host computer has an abnormality.

When both sample data and other data cannot be cut normally

⇒ Increase the set value in [ADJ-PRS OFFSET] (☞ P.4-37) and increase the pressure when the cutter comes down.

**4**

Extended Functions – Cutting –

Cutting a Medium into Multiple Pieces with a Certain Length

You can cut a medium into multiple pieces with a specified length. (Automatic media-cutting function)

Settings	Set Value	Overview
Cutting interval	10 to 10,000 mm	Distance between the leading and terminal ends of a cut medium is set.
Leading end adjustment cutting	0 to 500 mm	The length of a medium's leading end to be cut is set before automatic media cutting starts. Even when the leading end of a medium has been cut obliquely or the cut surface is not smooth, leading end adjustment cutting enables you to cut a medium into a specified number of pieces with the same length.
Number of times a medium is cut	1 to 9,999	The number of times a medium is cut (number of pieces produced by cutting a medium) is set.

1

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

<LOCAL . **C**> [#01]

2

Press the **FUNCTION** key.

FUNCTION
SETUP <ENT> **C**

3

Press **▼** **▲** to select [MAINTENANCE] and press the **ENTER** key.

MAINTENANCE
MARK SENSOR <ent>

4

Press **▼** **▲** to select [MEDIA CUT].

MAINTENANCE
MEDIA CUT <ent>

5

Press the **ENTER** key.

MEDIA CUT
INTERVAL = 10mm

6

Press **▼** **▲** to select a cutting interval.

• Set value: 10 to 10,000 mm

MEDIA CUT
INTERVAL = 500mm

7

Press the **ENTER** key.

MEDIA CUT
FRONT CUT OFF = 10mm

8

Press **▼** **▲** to select a length for the leading end adjustment cutting.

• Set value: 0 to 500 mm

MEDIA CUT
FRONT CUT OFF = 50mm

9

Press the **ENTER** key.

MEDIA CUT
COUNT = 1

10

Press **▼** **▲** to select the number of times a medium is cut (number of pieces produced by cutting a medium).

• Set value: 1 to 9,999

MEDIA CUT
COUNT = 10

11

Press the **ENTER** key.

- Cut is performed for the specified number of times.
- Pressing the **END** key suspends the operation.

12

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

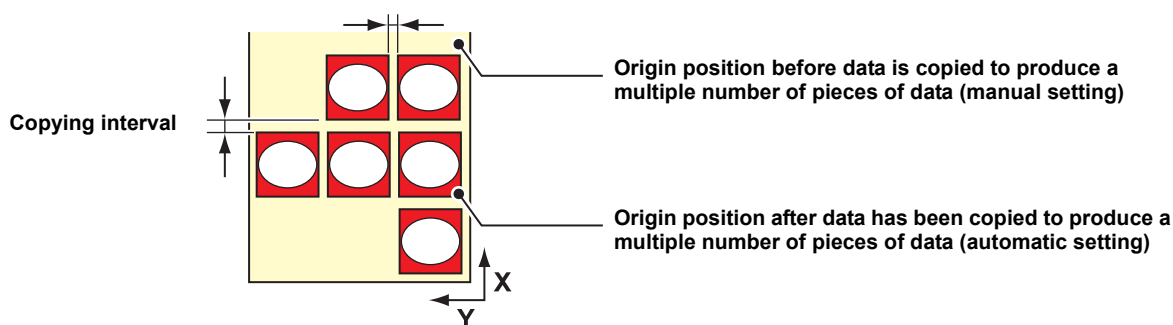


4

Extended Functions – Cutting –

Perform Multiple Cuttings

Already received data can be copied (plotted with a pen) to produce a multiple number of pieces of data. (Up to 999 pieces)



- Copying of data to produce a multiple number of pieces of data is performed with the data stored in the machine's reception buffer being specified.
- Only one piece of data can be stored in the reception buffer.
- When new data is received, it is overwritten on the data that has been stored in the buffer.
(The previously received data cannot be specified for it to be copied to produce a multiple number of pieces of data.)

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

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

2 Set an origin.

- Set the origin referring to P.2-33.

3 Press the **FUNCTION** key.

FUNCTION
SETUP <ENT> **C**

4 Press to select [No. COPIES].

FUNCTION
No. COPIES <ENT> **C**

5 Press the **ENTER** key.

No. COPIES
COPIES = **1**

6 Press to set the number of pieces of data (1 to 999) produced by copying data.

No. COPIES
COPIES = **10**

7 Press the **ENTER** key.

No. COPIES
INTERVAL = 0mm

8 Press to select an interval (0 to 30 mm) between figures to be copied.

No. COPIES
INTERVAL = **10**mm

9 Press the **ENTER** key.

- The mode enters to REMOTE automatically, and then the data will be cut.

Important!

- When copying data to produce a multiple number of pieces of data, make sure to set an origin again. When, immediately after data is copied to produce a multiple number of pieces, a piece of data is cut according to a specified number without setting an origin, data is cut (plotted with a pen) with themselves being overlapped.
- While data is being cut into pieces according to a specified number, data from the host computer cannot be received.
- There must be an interval of 10 seconds or more between the preceding data and the succeeding one transmitted from the host computer. When the succeeding data is transmitted within 10 seconds, both two data are cut into pieces according to a specified number.
- Data to be divided and cut is not divided, but cut into pieces according to a specified number. When an error is displayed, see "Error Messages" (☞ P.7-10).



4

Setting the Step Size

For some application software (especially old ones), data output may possible only by different unit from the limit of resolution. In such a case, change this setting value and make the cutting performed in correct size.

1

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

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

2

Press the **FUNCTION** key.

FUNCTION
SETUP <ENT>**C**

3

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

FUNCTION
MAINTENANCE <ENT>**C**

4

Press the **ENTER** key.

MAINTENANCE
MARK SENSOR <ent>

5

Press **▼** **▲** to select [STEP SIZE].

MAINTENANCE
STEP SIZE <ent>

6

Press the **ENTER** key.

STEP SIZE
SIZE = **0**.025

7

Press **▼** **▲** to select the setting value.
• Setting value : 0.01 or 0.025

STEP SIZE
SIZE = **0**.01

8

Press the **ENTER** key.

9

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



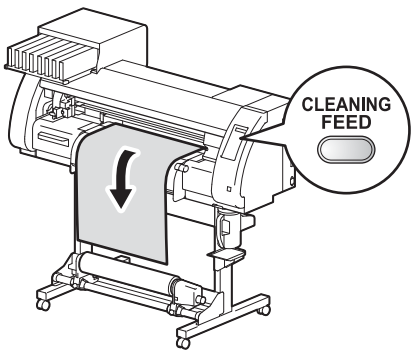
Other Convenient Functions

Medium Feeding

Before you start cutting or printing with a pen, feed a certain length of the medium to allow a margin.
By feeding the sheet beforehand, you can check for a skew of the medium or prevent a skew while cutting the long data (or printing the long data with a pen).

Important!

- If you start high-speed cutting without feeding a certain length of the roll medium beforehand, the medium may not be fed properly, causing an error in the machine.
- The **FEED** key does not work until the medium is detected.



1

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

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

2

Press the **CLEANING/FEED** key.

MEDIA FEED : 0.1m

3

Press **▲** **▼** to input the feed amount.
• Set value: 0.1 m to 51.0 m (by the unit of 0.1 m)

MEDIA FEED : 1.5m

4

Press the **ENTER** key.
• The medium will be fed by the input length.

** MEDIA FEED **
: *.**m



- Press the **END** key to stop the medium feeding.



4

Extended Functions – Cutting –

How to turn the heater OFF in the cutting mode

Press the **HEATER/CUTTER** key in the cutting mode to turn the heater OFF.

1

Press the **HEATER/CUTTER key twice in the cutting mode.**

- Pressing the **HEATER/CUTTER** key switches "HEATER Power-off" and "CUT HEAD RETRACT".

HEATER Power - off
<ENT>

HEATER Power - off
<ENT>

↓ ↑ **Press the **HEATER/CUTTER** to switch.**

CUT HEAD RETRACT
<ENT>

2

Press the **ENTER key.**

- The machine works depending on the setting selected on the step 1.



- Setting above keeps the heater OFF in the cutting mode.
- If switched from the cutting mode to the printing mode, press the **HEATER/CUTTER** key. The machine restarts the control by the heater temperature set in the printing mode.



Chapter 5

Extended Functions – Common Settings –



This chapter

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

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Setting the Expand Function	5-6
Setting Margins	5-8
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Setting Units	5-11
Setting the MACHINE NAME	5-12
Setting a KEY BUZZER	5-13
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Displaying the Information	5-14
Printing the List of Settings	5-16

Common Settings

Common settings are functions for using this machine easily.
The items set here are common to both the printing and cutting modes.

The common settings are as follows:

Item		Set Value*1	Meaning
PR SETUP ☞ P.5-3		<u>ON</u> / PWR ON ONLY/ PR No.ONLY/ OFF	Sets the setting of a pinch roller when detecting the medium.
CUT METHOD ☞ P.5-4		<u>2 STEP</u> / 3 STEP	The method of cutting a medium with automatic cutting used is set.
CONFIRM. FEED ☞ P.5-5		<u>OFF</u> / 10 ~ 500 mm	A feeding method for confirming the result of test printing can be set. When this is turned ON, the screen changes to "BACK FEED" for returning a medium to the original position by pressing FUNCTION .
EXPANDS ☞ P.5-6		ON / <u>OFF</u>	A printed area or cut area (area plotted with a pen) can be expanded.
MARGIN ☞ P.5-8	LEFT	0 to 85mm (by the unit of 1 mm)	Used to set margins on the right and left edges of a medium.
	RIGHT	0 to 85mm (by the unit of 1 mm)	
RECEIVED DATA ☞ P.5-9		<u>AUTO</u> / MANUAL	This setting can be changed for printing/cutting using an application other than those that come standard with this machine (RasterLinkPro4 or later/FineCut7 or later *2).
TIME SET ☞ P.5-10			The present date and time are set.
UNIT SETUP ☞ P.5-11	TEMP.	<u>°C</u> / °F	A unit for displaying temperature is set.
	LENGTH	<u>mm</u> / inch	A unit for displaying length and area is set.
MACHINE NAME ☞ P.5-12		<u>01</u> to 99	The names of machines (machine No.) are set for recognizing them when they are connected to one another with a USB 2.0 interface used.
KEY BUZZER ☞ P.5-13		<u>ON</u> / OFF	A buzzer sound when keys are pressed is set.
INFORMATION ☞ P.5-14		_____	Various types of information for confirming the condition of this machine can be checked.

*1. The underlined has been set as default.

*2. When **RL** has not been displayed at the lower left of the dialog of FineCut7 (or later), configure this setting.



Setting the Pinch Rollers

This is the setting methods of a pinch roller when detecting the medium.

Set Value	Overview
ON	The pinch roller number and the pinch roller pressure need to be set each time the medium is set, according to the width of the medium.
PWR ON ONLY	The pinch roller number and the pinch roller pressure need to be set when the medium is set for the first time after the power is turned ON, according to the width of the medium.
PR No. ONLY	The pinch roller number needs to be set each time the medium is set, according to the width of the medium.
OFF	The pinch roller setting is not needed when the medium is set. (The values set with Function are used.)

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP <ENT>

2

Press **▲** **▼** to select [COMMON SETUP].

FUNCTION
COMMON SETUP <ENT>

3

Press the **ENTER** key twice.

PR SETUP
: **ON**

4

Press **▲** **▼** to select a set value.
• Set value: ON, PWR ON ONLY, PR No. ONLY, OFF

PR SETUP
: **PWR ON ONLY**

5

Press the **ENTER** key.

COMMON SETUP
PR SETUP <ent>

6

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



5

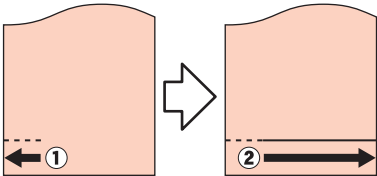
Extended Functions – Common Settings –

Setting a Cut Method

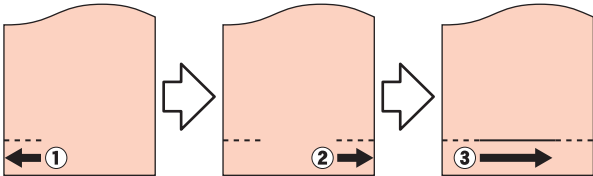
Set the cutting method to cut the medium.

Set Value	Overview
2 STEP	The medium is cut in two steps.
3 STEP	The medium is cut in three steps.

2 STEP



3 STEP



1 Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP <ENT>

2 Press **▲** **▼** to select [COMMON SETUP].

FUNCTION
COMMON SETUP <ENT>

3 Press the **ENTER** key.

COMMON SETUP
PR SETUP <ent>

4 Press **▲** **▼** to select [CUT METHOD].

COMMON SETUP
CUT METHOD <ent>

5 Press the **ENTER** key.

CUT METHOD
SETUP **2** STEP

6 Press **▲** **▼** to select a set value.
• Set value : 2 STEP, 3 STEP

CUT METHOD
SETUP **3** STEP

7 Press the **ENTER** key.

COMMON SETUP
CUT METHOD <ent>

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

Setting CONFIRM. FEED

Set whether or not to feed the medium for checking when test printing is finished.

Set Value	Overview
OFF	The medium will not be fed after test printing/cutting.
10 to 500mm	Sets the length to be fed after test printing/cutting. If the length is set, the setting can be set to take up the fed medium a little. (from Step 7)

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP <ENT>

2

Press **▲** **▼** to select [COMMON SETUP].

FUNCTION
COMMON SETUP <ENT>

3

Press the **ENTER** key.

COMMON SETUP
PR SETUP <ent>

4

Press **▲** **▼** to select [CONFIRM FEED].

COMMON SETUP
CONFIRM. FEED <ent>

5

Press the **ENTER** key.

6

Press **▲** **▼** to select the length to be fed (10 to 500mm).

CONFIRM. FEED
FEED : 100mm

• When having selected [OFF], proceed to Step 9.

7

Press the **FUNCTION** key to set [BACK FEED].

CONFIRM. FEED
BACK FEED : ON

8

Press **▲** **▼** to select ON/OFF.

- ON : To slightly take-up the medium fed by the confirmation feeding function.
- OFF: Not to take-up the medium.

9

Press the **ENTER** key.

COMMON SETUP
CONFIRM. FEED <ent>

10

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

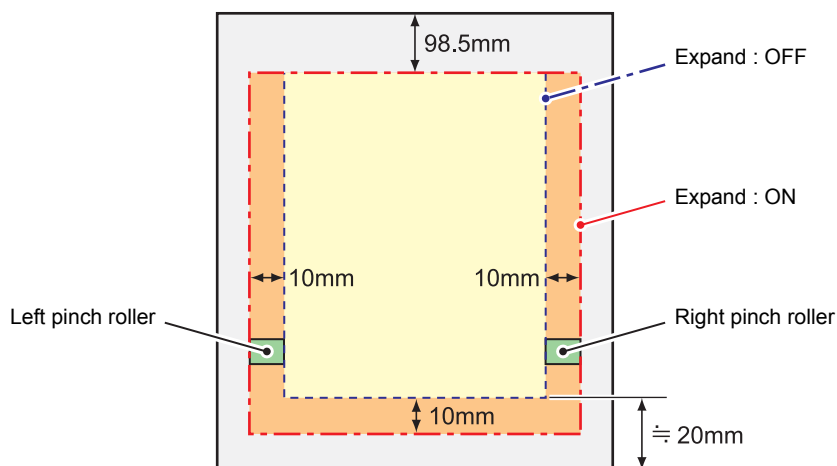


5

Setting the Expand Function

You can reduce the dead space to thereby expand a printed area or cut area (area plotted with a pen). (Expand function)

The dead space is reduced by 10 mm on the right and left as well as on the side nearest you.



Turning the Expand Function "ON"

Expand function will be enabled after setting of the expand and the medium is detected.

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP <ENT>

2

Press **▲** **▼** to select [COMMON SETUP].

FUNCTION
COMMON SETUP <ENT>

3

Press the **ENTER** key.

COMMON SETUP
PR SETUP <ent>

4

Press **▼** **▲** to select [EXPAND].

COMMON SETUP
EXPAND <ent>

5

Press the **ENTER** key.

EXPAND
SETUP : OFF

6

Press **▼** **▲** to select "ON".

EXPAND
SETUP : ON

7

Press the **ENTER** key.

8

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

9

Detect the medium.

- If the clamp lever is released and then reset, medium detection operation starts. Refer to the item 13 and the following procedures of P.2-25.



- Note that, when you use a media holder and turn the Expand function "ON", printing may start on the media holder.
- When you turn the expand function "OFF", perform media detection after selecting "OFF" on Step 6.



- When you turn the Expand function "ON", a paper jam may occur if excessive pressure is applied to the medium.
- When axis correction has not been performed, the cutter blade can come out of the medium and may cause a paper jam. In addition, a cutter blade having come out of the medium may damage itself or the machine.
- When the cut area is fed by pinch rollers, the cutting quality will deteriorate.
- When pinch rollers move on the register marks during detection, the register marks may not be detected properly.
- If setting expand after detecting the medium, detect the media again. Otherwise, the expand function will not be enabled.



5

Setting Margins

The left and right margins of a medium to be printed or cut are set.

Set Item	Set Value	Overview
LEFT	0 to 85 mm	The left margin of a medium to be printed or cut is set.
RIGHT	0 to 85 mm	The right margin of a medium to be printed or cut is set.

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

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

- 2 Press the **FUNCTION** key.

FUNCTION
COMMON SETUP <ENT>

- 3 Press the **ENTER** key.

COMMON SETUP
PR SETUP <ent>

- 4 Press **▲** **▼** to select [MARGIN].

COMMON SETUP
MARGIN <ent>

- 5 Press the **ENTER** key.

LEFT : RIGHT
0mm : 0mm

- 6 Press **▲** **▼** **◀** **▶** to set the left and right margins.

Item selection : Select the left or right margin with **◀** **▶**.
Margin setting : Set the width of the margin with **▲** **▼**.

Left margin: 0 to 85 mm (by the unit of 1 mm) Right margin: 0 to 85 mm (by the unit of 1 mm)

LEFT : RIGHT
0mm : 0mm

- 7 Press the **ENTER** key.


COMMON SETUP
MARGIN <ent>

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

Setting the RECEIVED DATA

The setting can be changed for printing/cutting using an application other than those that come standard with this machine.

Set Value	Overview
AUTO	When the standard application included with the machine is used, printing/cutting will be executed automatically according to the type of the received data.
MANUAL	Set this parameter when executing printing/cutting with the application other than those that come with the machine (RasterLinkPro4 or later/FineCut7 or later *1). In this case, this machine operates as follows. If the machine receives different data, an error occurs. While in PRINT mode : The machine can only receive the print data. If the received data is not the print data, an error occurs. While in CUT mode : The machine can only receive the cut data. If the received data is not the cut data, an error occurs.

*1. When  has not been displayed at the lower left of the dialog of FineCut7 (or later), configure this setting.

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP <ENT>

2

Press   to select [COMMON SETUP].

FUNCTION
COMMON SETUP <ENT>

3

Press the **ENTER** key.

COMMON SETUP
PR SETUP <ent>

4

Press   to select [RECEIVED DATA].

COMMON SETUP
RECEIVED DATA <ent>

5

Press the **ENTER** key.

RECEIVED DATA
SETUP :  AUTO

6

Press   to select a set value.

• Set value: AUTO, MANUAL

7

Press the **ENTER** key.

COMMON SETUP
RECEIVED DATA <ent>

8

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



5

Setting Time

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP <ENT>

2

Press **▲** **▼** to select [COMMON SETUP].

FUNCTION
COMMON SETUP <ENT>

3

Press the **ENTER** key.

COMMON SETUP
PR SETUP <ent>

4

Press **▲** **▼** to select [TIME SET].

COMMON SETUP
TIME SET <ent>

5

Press the **ENTER** key twice.

TIME SET
2012.09.10 15:30:00

6

Press **▲** **▼** **◀** **▶** to enter time.

Select date (year/month/day/hour/minute): Select with **◀** **▶**.
Enter date (year/month/day/hour/minute) : Enter with **▲** **▼**.

7

Press the **ENTER** key.

• The entered date is displayed.

TIME SET
2012.09.10 15:30:00

8

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

Important!

- The time set in the past can be changed until only eight hours before the present displayed time.
- When a future time after the present one has been set by mistake, performing the following operations in Step 7 enables the already set future time to be restored to the previously set time.
 - (1) Press the **FUNCTION** key in Step 7. (The entered time and the previously set time are displayed.)
 - (2) Press the **ENTER** key.
 If you have made several changes in time setting, only the last time to be set can be restored to the previously set time. In addition, the time before change is ahead by the time that has elapsed.

Setting Units

Units used by this machine are set.

- 1** Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP <ENT>
- 2** Press **▲** **▼** to select [COMMON SETUP].

FUNCTION
COMMON SETUP <ENT>
- 3** Press the **ENTER** key.

COMMON SETUP
PR SETUP <ent>
- 4** Press **▲** **▼** to select [UNIT SETUP].

COMMON SETUP
UNIT SETUP <ent>
- 5** Press the **ENTER** key.

TEMP. : LENGTH
°C : mm
- 6** Press **▲** **▼** **◀** **▶** to select a unit.
 Item selection : Select one with **◀** **▶**.
 Unit setting : Enter with **▲** **▼**.

COMMON SETUP
UNIT SETUP <ent>
- 7** Press the **ENTER** key.

COMMON SETUP
UNIT SETUP <ent>
- 8** Press the **END** key several times to end the setting.


5

Setting the MACHINE NAME

The names of machines (machine No.) are set for recognizing them when they are connected to one another with a USB 2.0 interface used.

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP <ENT>

2

Press **▲** **▼** to select [COMMON SETUP].

FUNCTION
COMMON SETUP <ENT>

3

Press the **ENTER** key.

COMMON SETUP
PR SETUP <ent>

4

Press **▲** **▼** to select [MACHINE NAME].

COMMON SETUP
MACHINE NAME <ent>

5

Press the **ENTER** key.

MACHINE NAME
CJV30 - 0**1**

6

Press **▲** **▼** to select a machine name (01 to 99).

MACHINE NAME
CJV30 - 1**0**

7

Press the **ENTER** key.

COMMON SETUP
MACHINE NAME <ent>

8

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

P

C

Setting a KEY BUZZER

A buzzer sound when keys are pressed is set.

1

Press the **FUNCTION** key in LOCAL.

FUNCTION
SETUP <ENT>

2

Press **▲** **▼** to select [COMMON SETUP].

FUNCTION
COMMON SETUP <ENT>

3

Press the **ENTER** key.

COMMON SETUP
PR SETUP <ent>

4

Press **▲** **▼** to select [KEY BUZZER].

COMMON SETUP
KEY BUZZER <ent>

5

Press the **ENTER** key.

KEY BUZZER
SETUP : ON

6

Press **▲** **▼** to select ON/OFF.

KEY BUZZER
SETUP : OFF

7

Press the **ENTER** key.

COMMON SETUP
KEY BUZZER <ent>

8

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







- When the key buzzer is set to "OFF", the buzzer sound for errors, warnings, operation completion, etc. cannot be shut off.



5


Confirming Machine Information



The information of this machine can be confirmed. The following items can be confirmed as machine information.

Item	Overview
Error history	This displays the history of errors and warnings to date. When you press   , the date of occurrence (year/month/day/hour/minute) and the error/warning information are displayed alternately in the order of occurrence.
Maintenance history	This displays the date and time when the maintenance function was used. The maintenance history mainly describes the manual and automatic (regular or sleep mode) cleaning functions.
Printing mode history	This displays the information of online printing (printing conditions) that has been performed to date since the machine's power-on. (Up to 50 pieces of information) When you press   , the information is displayed in the order of printing.
List	This allows you to print the settings of the machine. You can print the settings according to four categories. (P.5-16)
Ink REPL. Report ^{*1}	Prints history of ink used on the machine.
Version	This displays the version information of the machine.
Serial and Dealer No.	This displays serial and dealer numbers.



*1. This function is available for the firmware Ver. 2.40 and later.


Displaying the Information



- Press the  key in LOCAL.**








 - When you want to print the list of settings of this machine, set a medium. (P.2-15)

FUNCTION
SETUP <ENT>
- Press   to select [COMMON SETUP].**

FUNCTION
COMMON SETUP <ENT>
- Press the  key.**

COMMON SETUP
PR SETUP <ent>
- Press   to select [INFORMATION].**

COMMON SETUP
INFORMATION <ent>
- Press the  key.**

INFORMATION
ERROR HISTORY <ent>
- Press   to select a type of information.**
- Press the  key.**
 - The Information you need is displayed.
 - When [List] or [Ink REPL. Report] is selected, the machine information is printed.

About Displayed Information

This section describes how to read displayed information.

<p>Error history</p> <p>The date of occurrence (year/month/day) is displayed.</p> <div>ERROR HISTORY 0001 12.10.10 12:15</div> <p>The details of an error is displayed.</p> <div>◀ ▶</div> <div>***** ERROR 09 ***** HDC ERROR (- - -)</div>	<p>Maintenance history</p> <p>The details of maintenance is displayed.</p> <div>0001 12.10.10 12:15 >> CARRIAGE OUT</div> <p>Version</p> <p>Version information, such as F/W, is displayed.</p> <div>CJV30-60 V3.00 MRL-III V1.00</div>
<p>Printing mode history</p> <p>Resolution, length of a printed medium, etc. are displayed.</p> <div>[01] 720x1080 .12 Bd.Vd.x1.1L: 12.34m</div> <p>The date (year/month/day) of printing is displayed.</p> <div>◀ ▶</div> <div>PRINTmodeHIST. [01] 12.10.10 12:15</div>	<p>Serial and Dealer No.</p> <p>Serial and dealer numbers are displayed.</p> <div>S/N = ***** D/N = *****</div>



Printing the List of Settings

You can print the settings of this machine by selecting one from the following four types.

List Type	Overview
Printing mode	The settings in the printing mode are printed.
Cutting mode	The settings in the cutting mode are printed.
Running meter	A running meter is printed.
All	All lists are printed.

Important!

- When detecting the medium and the mode is in cut mode, if you perform printing in the list as it is, the following screen will be displayed by pressing the **ENTER** key in Step 7. In this case, press the **ENTER** key to switch the setting of the pinch roller pressure to the print mode and then perform printing.
- If the **END** key is pressed, switching operation will not be performed.

! PR PRESSURE : CUT !
SWITCH : ent

1

Press the **FUNCTION** key in LOCAL.

- When you want to print the list of settings of this machine, set a medium. (P.2-15)

FUNCTION
SETUP <ENT>

2

Press **▲** **▼** to select [COMMON SETUP].

FUNCTION
COMMON SETUP <ENT>

3

Press the **ENTER** key.

COMMON SETUP
PR SETUP <ent>

4

Press **▲** **▼** to select [INFORMATION].

COMMON SETUP
INFORMATION <ent>

5

Press the **ENTER** key.

INFORMATION
ERROR HISTORY <ent>

6

Press **▲** **▼** to select [LIST].

INFORMATION
LIST <ent>

7

Press the **ENTER** key.

8

Press **▲** **▼** to select a list to print.

LIST
SELECT : PRINT MODE

9

Press the **ENTER** key.

- Printing starts.

Chapter 6

Maintenance



This chapter

describes the items required to use this machine more comfortably, which are the methods for the daily care, the maintenance of the ink unit etc.







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Maintenance

Maintain the machine regularly or as necessary so that its accuracy will be maintained and it can continue to be used for a long time.

Precautions for Maintenance

Pay attention to the following items when maintaining this machine.

	<ul style="list-style-type: none">When using cleaning solution for maintenance, be sure to wear the supplied protective glasses.
	<ul style="list-style-type: none">The ink contains organic solvent. When cleaning the machine, be sure to wear gloves so that no ink will make direct contact with your skin.
	<ul style="list-style-type: none">Never disassemble the machine. Disassembling it can result in electric shock hazards or damage to the machine. Before maintenance, be sure to turn off the power switch and unplug the power cable; otherwise, an unexpected accident may occur.
	<ul style="list-style-type: none">Prevent moisture from entering the machine. Moisture inside the machine can cause electric shock hazards or damage to the machine.
	<ul style="list-style-type: none">To ensure stable ink jetting, it is necessary for the machine to eject a small amount of ink (flushing) regularly when a printing (outputting) operation has not been performed for a long time.When the machine is not to be used for a long time, turn off only the power switch on the front side, leave the main power switch at the rear turned ON (in the position of), and leave the power cable connected.
	<ul style="list-style-type: none">If organic solvent ink is mixed with water or alcohol, coagulation is generated. Do not wipe the nozzle face of the heads, wiper, caps, etc. with water or alcohol. Doing so can cause nozzle clogging or machine failure.
	<ul style="list-style-type: none">Do not use benzene, thinner, or any chemical agent containing an abrasive. Such materials can deteriorate or deform the surface of the cover.
	<ul style="list-style-type: none">Do not apply a lubricant, etc. to any parts inside the machine. Doing so can cause damage to the plotter mechanism.Be careful that the cleaning solution, ink, etc. not to stick to the cover because this may cause the surface of the cover to deteriorate or deform.

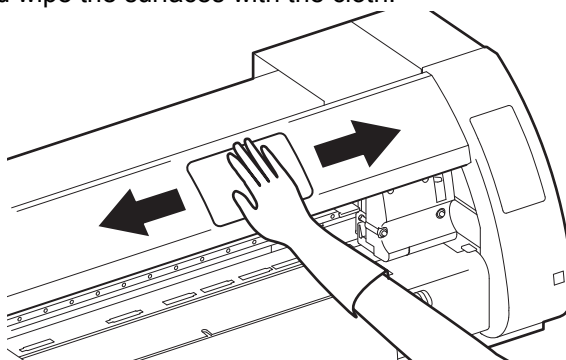
About Cleaning Solution

Use cleaning solution for maintenance that can be applied to the ink you use.

Ink type	Applicable cleaning solution for maintenance
SS21 solvent ink	Cleaning solution MS2/ES3/HS kit (SPC-0369) MILD SOLVENT WASHING LIQUID (SPC-0294) [Sold separately]
ES3 solvent ink	
Eco-PA1 ink	Cleaning Liquid Bottle Kit A29 (SPC-0137) [Sold separately] Washing liquid (SPC-0259) [Sold separately]

Cleaning the Exterior Surfaces

When the exterior surfaces of the machine are stained, dampen a soft cloth with water or a neutral detergent diluted with water, squeeze it, and wipe the surfaces with the cloth.

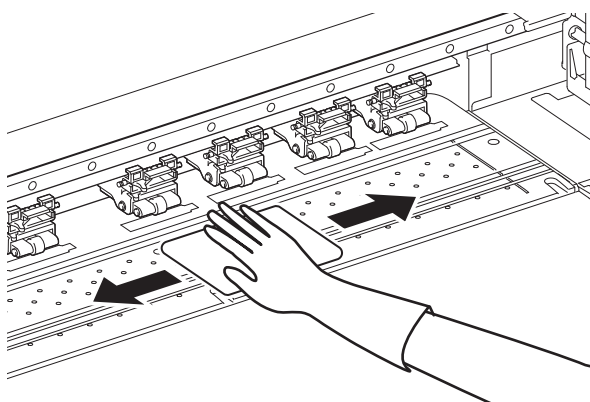


Cleaning the Platen

The platen easily gets dirty with lint, paper dust, etc. generated when a medium is cut. Wipe off conspicuous stains with a soft-hair brush, a dry cloth, a paper towel, etc.



- When the platen is stained with ink, wipe it off with a paper towel containing a small amount of cleaning solution for maintenance.



Important!

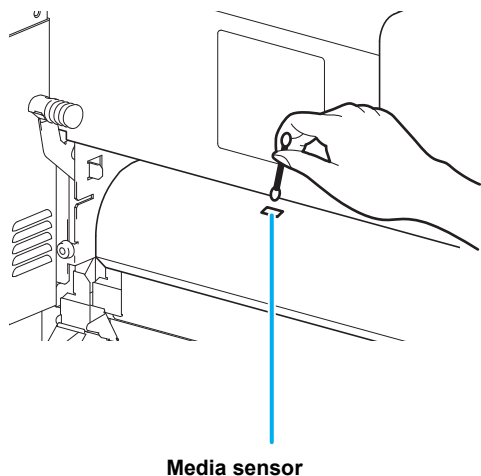
- Before cleaning the platen, make sure that the platen has cooled adequately.
- Because dust and dirt are easily accumulated in the slots for holding a medium and cutting paper (cutter line), be sure to clean these parts carefully.

Cleaning the Media Sensor and Register Mark Sensor

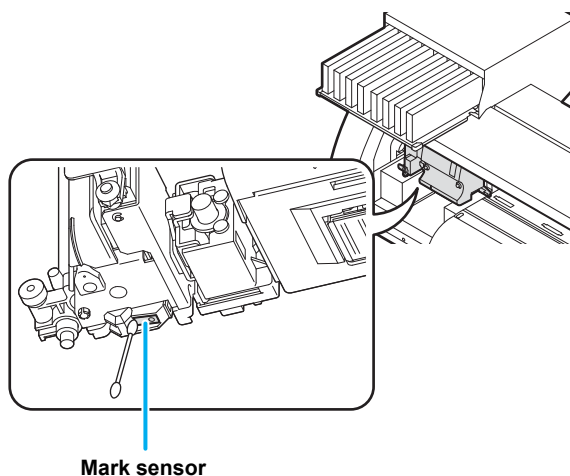
When the sensor is covered with dust, etc., it may cause false detection of media or register marks. Using a cotton swab, remove the dust, etc. accumulated on the surface of the sensor.

When cleaning the sensor on the undersurface of the cutter unit, perform the operations on P. 6-16 "Cleaning the Ink Head and the Area around It" Steps 1 and 2 and move the carriage to the left end.

Media sensor: On the platen at the rear

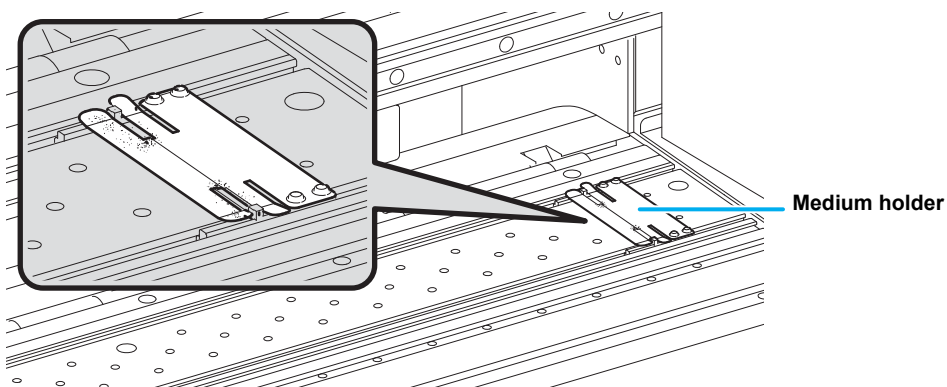


Register mark sensor: On the undersurface of the cutter unit



Cleaning the Medium Holder

When the medium holder is covered with lint, dust, etc., a medium cannot be fed normally during printing or dust sticks to the nozzles, which may result in abnormal printing. Clean the medium holder regularly.



Maintaining the Capping Station


Maintain the ink cap, wiper, etc. located in the capping station. (ST.MAINTENANCE)

The ink cap and wiper function as follows.

- **Wiper** : It wipes off ink sticking to the head nozzles.
- **Ink cap** : It prevents the head nozzles from clogging due to dryness.

As the machine is used repeatedly, the wiper and ink cap gradually become dirty with ink, dust, etc.
If nozzle missing cannot be corrected even after head cleaning (☞ P.2-39) has been performed, use a cleaning kit and clean stick.

Tools required for maintenance	• Kit of cleaning solution for maintenance Cleaning solution MS2/ES3/HS kit (SPC-0369)		
	• Clean stick (SPC-0527)	• Gloves	• Goggles

	<ul style="list-style-type: none">• Be sure to wear the supplied goggles and gloves when maintaining the capping station. Otherwise, you may get ink in your eyes.• Do not move the carriage out of the capping station by hand. When you want to move the carriage, perform the operations on P.6-6 Steps 1 and 4.
---	--

Cleaning the Wiper and Cap

It is recommended that the wiper and cap be cleaned frequently in order to maintain the high image quality of the machine and keep the machine itself in good working order.

Important!

- When SS21 ink is used, the ink easily sticks around the wiper. Clean the wiper and the area around it about twice a week (it varies, depending on frequency in the use of the machine).
- Replace the wiper with a new one when it is extremely dirty or bent. (P.6-8)
- When cleaning the wiper, be careful that lint from the clean stick does not get left on the wiper. Remaining lint may cause image quality to deteriorate.

1

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

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

2

Select **[ST. MAINTENANCE]** of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select **[MAINTENANCE]** and press the **ENTER** key.

3

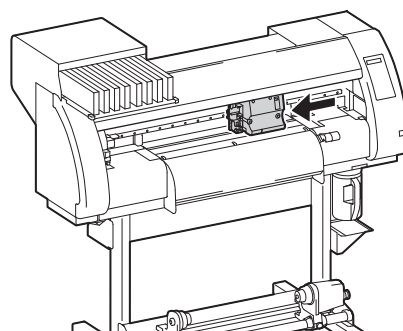
Press the **ENTER** key.

ST . MAINTENANCE
CARRIAGE OUT <ent>

4

Press the **ENTER** key.

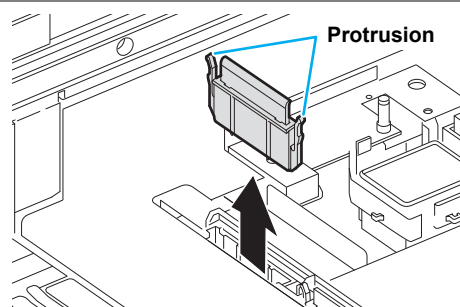
- The carriage moves onto the platen.



5

Remove the wiper.

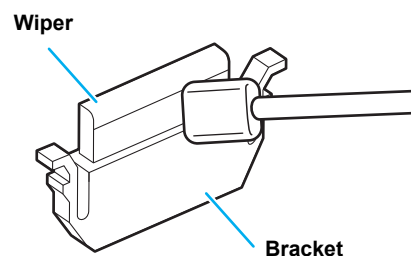
- Pull out the wiper by holding the protrusions at its both ends.



6

Clean the wiper and bracket.

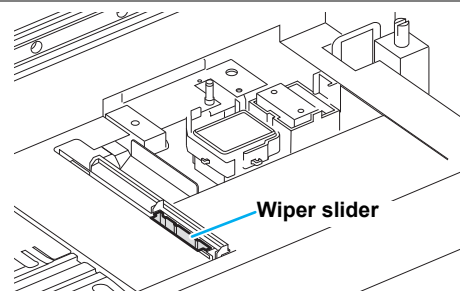
- Wipe off the ink sticking to the wiper and bracket with a clean stick dipped in cleaning solution for maintenance.



7

Clean the wiper slider.

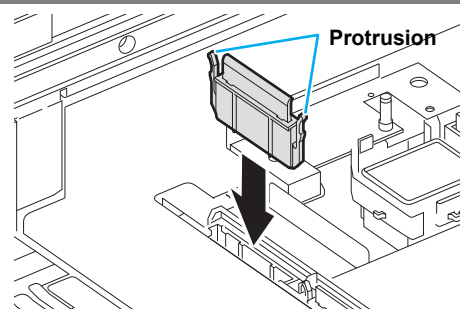
- Wipe off the ink sticking to the wiper slider with a clean stick dipped in cleaning solution for maintenance.



8

Return the wiper to its original position.

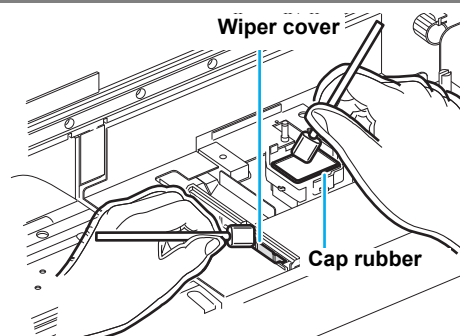
- Insert the wiper by holding its both ends.



9

Clean the cap rubber and wiper cover.

- Wipe off the ink sticking to the cap rubber and wiper cover with a clean stick dipped in cleaning solution for maintenance.



10

Press the **ENTER** key.

- After its initial operation, the machine returns to LOCAL.

Being Initialized
PLEASE WAIT



6

Maintenance

Replacing the Wiper

The wiper is consumable. When the message shown on the right appears, replace the wiper immediately.
In addition, wipe off the ink sticking to the undersurface of the slider.

<LOCAL . 1> [#01]
Replac e a WIPER<MNT>

Important!

- A cleaning wiper is an option. Buy one through the dealer in your region or at our service office.
- Do not select [WIPER REPLACE] at any time other than when the wiper is replaced. Once it is selected, the counter that counts the number of times the wiper is used is reset.

1

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

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

2

Select [ST. MAINTENANCE] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.

3

Press the **ENTER** key.

ST . MAINTENANCE
CARRIAGE OUT <ent>

4

Press **▲** **▼** to select [WIPER REPLACE].

ST . MAINTENANCE
WIPER REPLACE <ent>

5

Press the **ENTER** key.

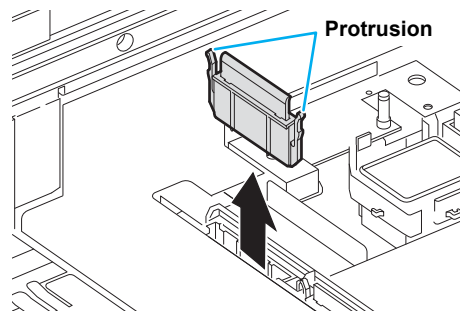
- The carriage moves onto the platen.

ST . MAINTENANCE
COMPLETED :ent

6

Remove the wiper.

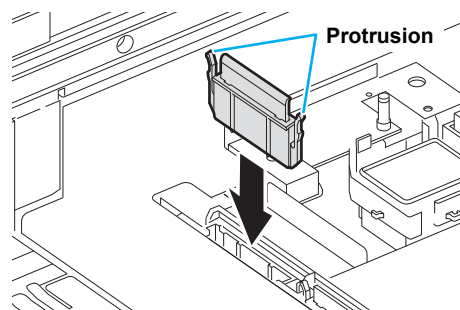
- Pull out the wiper by holding the protrusions at its both ends.



7

Insert a new wiper.

- Insert a new wiper by holding its both ends.



8

Press the **ENTER** key.

- After its initial operation, the machine returns to LOCAL.

Being Initialized
PLEASE WAIT



Before Washing the Ink Discharge Passage

Before the ink discharge passage (PUMP tube) is washed, it needs to be filled with cleaning solution for maintenance.



- When the following messages are displayed, check the waste ink tank and perform the operations described on P.6-38 "If a Waste Ink Tank Confirmation Message Appears" as necessary.

Confirm a wastetank
Continue< >Exchange

Confirm a wastetank
Exchange :ent

Filling the Pump Tube with Cleaning Solution for Maintenance

1

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

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

2

Select [HD. MAINTENANCE] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [HD. MAINTENANCE].
- (4) Press the **ENTER** key.

3

Press **▲** **▼** to select [Maint WashLiquid].

HD . MAINTENANCE
MaintWashLiquid<ent>

4

Press the **ENTER** key.

MaintWashLiquid
FILLING UP <ent>

5

Press the **ENTER** key.

- When a normal cartridge has been set, proceed to Step 7.

MaintWashLiquid
CARTRIDGE : none

When "END" is displayed:

There is no cleaning solution in the cartridge. Set a new cleaning solution cartridge.

When "Abnormal" is displayed:

The set cartridge does not contain cleaning solution.

6

Set a cartridge.

MaintWashLiquid
FILLING UP START :ent

7

Press the **ENTER** key.

- The cartridge starts to be filled with cleaning solution.

Discharging Cleaning Solution for Maintenance

Perform the following operations to discharge the cleaning solution in the tube.

1

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

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

2

Select **[HD. MAINTENANCE]** of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select **[MAINTENANCE]** and press the **ENTER** key.
- (3) Press **▲** **▼** to select **[HD. MAINTENANCE]**.
- (4) Press the **ENTER** key.

3

Press **▲** **▼** to select **[Maint WashLiquid]**.

HD . MAINTENANCE
Ma int Wa sh Li qu id <ent>

4

Press the **ENTER** key.

Ma int Wa sh Li qu id
FILLING UP <ent>

5

Press **▲** **▼** to select **[DISCHARGE]**.

Ma int Wa sh Li qu id
DISCHARGE <ent>

6

Press the **ENTER** key.

- When the cartridge has been disengaged, proceed to Step 8.

Ma int Wa sh Li qu id
There is a CARTRIDGE

7

Remove the cartridge.

Ma int Wa sh Li qu id
DISCHARGE START :ent

8

Press the **ENTER** key.

- The cleaning solution starts to be discharged.



Cleaning the Head Nozzles

The head nozzles need to be washed to prevent them from being clogged with coagulated ink.

Check the items
on the right
beforehand.

Is [NEAR END] or [INK END] displayed?

- The cleaning solution or ink is absorbed when the nozzles are washed. At this time, if the state of "no ink" or "almost no ink" is detected, the nozzle washing operation cannot start.
- Replace the cartridge with another from which the state of "almost no ink" or "no ink" is not detected.

1

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

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

2

Select [ST. MAINTENANCE] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.

3

Press the **ENTER** key.

ST . MAINTENANCE
CARRIAGE OUT <ent>

4

Press **▲** **▼** to select [NOZZLE WASH].

ST . MAINTENANCE
NOZZLE WASH <ent>

5

Press the **ENTER** key.

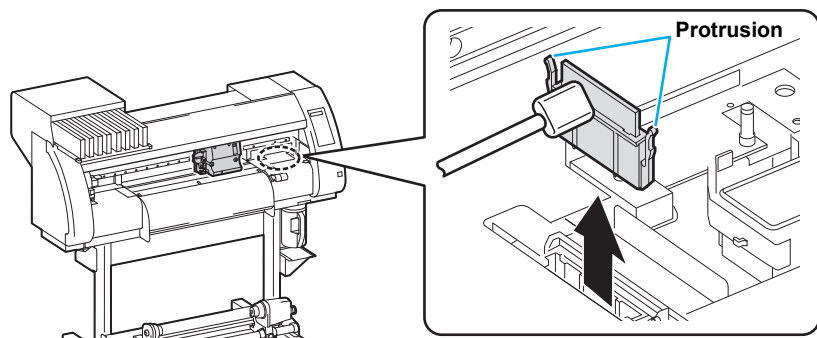
- The carriage moves onto the platen.

WIPER CLEANING
COMPLETED (NEXT) : ent

6

Clean the wiper and bracket.

- (1) Pull out the wiper by holding the protrusions at its both ends.
- (2) Clean the wiper and bracket with a clean stick dipped in cleaning solution for maintenance (SPC-0369).
- (3) Insert the wiper into the original position by holding the protrusions at its both ends.



7

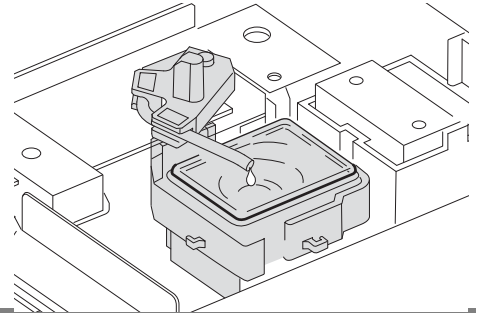
Press the **ENTER** key.

Fill the liquid
COMPLETED (NEXT) : ent

8

Press the **FUNCTION** key and fill up the cap with cleaning solution for maintenance.

- When you press the **FUNCTION** key, cleaning solution drips into the cap.
- When you press the **FUNCTION** key again, the solution stops dripping.
- Repeat the drops several times to fill the cap with the cleaning solution just before the solution overflows from the cap.



9

Press the **ENTER** key.

ST.MAINTENANCE
LEAVING TIME : 1min

10

Press **▲** **▼** to set the time for the cleaning solution to be left as it is.

- Set value: 1 to 99 min (by the unit of 1 min)

ST.MAINTENANCE
LEAVING TIME : 2min

11

Press the **ENTER** key.

- The cleaning solution in the cap is absorbed.
- The screen on the right is displayed for the time set in Step 10.
- When the set time has elapsed, the screen returns to LOCAL.

Being Initialized
PLEASE WAIT



<LOCAL . 1> [#01]

Important!

- When nozzle missing is not corrected even after this cleaning has been performed several times, perform "When Nozzle Clogging Cannot Be Solved" (P.6-18) and "DISCHARGE & WASH" (P.6-19). When the problem is not solved even after the operation above, contact the distributor in your region or our service office.
- When this machine is not filled with cleaning solution for maintenance, do the following:
 - (1) Perform the operations in Steps 1 to 5.
 - (2) Fill up the cap with cleaning solution for maintenance, using a syringe.
 - (3) Perform the operations in Step 9 and later.
- The waste ink discharged by head nozzle cleaning is not counted as the waste ink automatically accumulated in this device (P.6-38). Check the status of the waste ink tank without fail before/after the cleaning.



Washing the Ink Discharge Passage (PUMP Tube Washing)

Wash the ink discharge passage regularly to prevent the head nozzles from clogging due to ink coagulation inside the passage.



- When the following messages are displayed, check the waste ink tank and perform the operations described on P.6-38 "If a Waste Ink Tank Confirmation Message Appears" as necessary.

Confirm a wastetank
Continue< >Exchange

Confirm a wastetank
Exchange :ent

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

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

- Select **[ST. MAINTENANCE]** of the maintenance menu.

- Press the **FUNCTION** key.
- Press **▲** **▼** to select **[MAINTENANCE]** and press the **ENTER** key.

- Press the **ENTER** key.

ST . MAINTENANCE
CARRIAGE OUT <ent>

- Press **▲** **▼** to select **[PUMP TUBE WASH]**.

ST . MAINTENANCE
PUMP TUBE WASH <ent>

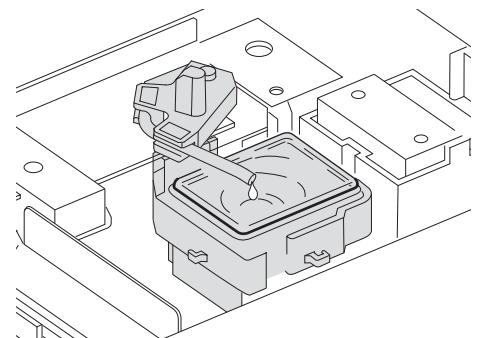
- Press the **ENTER** key.

ST . MAINTENANCE
COMPLETED :ent

- The carriage moves onto the platen.
- Repeat the idle absorbing operation (Absorption for 5 seconds and interruption for 10 seconds) until the washing operation is completed.

- Press the **FUNCTION** key and fill up the cap with cleaning solution for maintenance.

- When you press the **FUNCTION** key, cleaning solution drips into the cap.
- When you press the **FUNCTION** key again, the solution stops dripping.
- During the idle absorbing is interrupted, repeat the drops several times to fill the cap with the cleaning solution just before the solution overflows from the cap.



- Press the **ENTER** key.

Being Initialized
PLEASE WAIT

- After the idle absorbing operation has been performed for 30 seconds, the screen returns to LOCAL.

<LOCAL . 1> [#01]



- When this machine is not filled with cleaning solution for maintenance, do the following:
 - Perform the operations in Steps 1 to 5.
 - Fill up the cap with cleaning solution for maintenance, using a syringe.
 - Perform the operation in Step 7.

When the Machine Is Not Used for a Long Time (CUSTODY WASH)

When the machine is not going to be used for a week or more, use the cleaning function for custody to clean the head nozzles and ink discharge passage. After this, keep the machine in custody.

Check the items
on the right
beforehand.

Is [NEAR END] or [INK END] displayed?

- The cleaning solution or ink is absorbed when the nozzles are washed. At this time, if the state of "no ink" or "almost no ink" is detected, the nozzle washing operation cannot start.
- Replace the cartridge with another from which the state of "almost no ink" or "no ink" is not detected.



- When the following messages are displayed, check the waste ink tank and perform the operations described on P.6-38 "If a Waste Ink Tank Confirmation Message Appears" as necessary.

Confirm a wastetank
Continue< >Exchange

Confirm a wastetank
Exchange :ent

1

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

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

2

Select **[ST. MAINTENANCE]** of the maintenance menu.

- (1) Press the **[FUNCTION]** key.
- (2) Press **[▲]** **[▼]** to select **[MAINTENANCE]** and press the **[ENTER]** key.

3

Press the **[ENTER]** key.

ST. MAINTENANCE
CARRIAGE OUT <ent>

4

Press **[▲]** **[▼]** to select **[CUSTODY WASH]**.

ST. MAINTENANCE
CUSTODY WASH <ent>

5

Press the **[ENTER]** key.

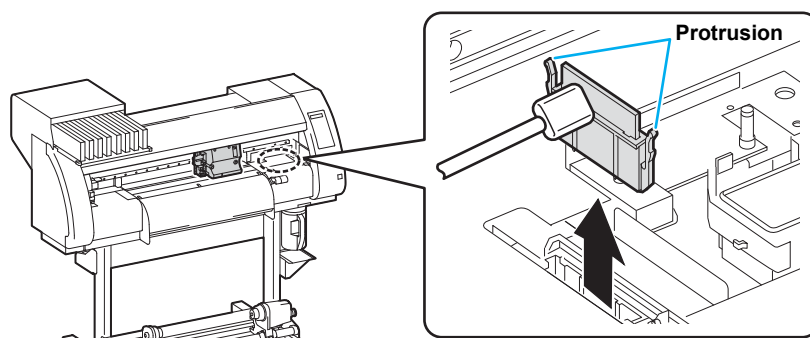
- The carriage moves onto the platen.

WIPER CLEANING
COMPLETED(NEXT) :ent

6

Clean the wiper and bracket.

- (1) Pull out the wiper by holding the protrusions at its both ends.
- (2) Clean the wiper and bracket with a clean stick dipped in cleaning solution for maintenance (SPC-0369).
- (3) Insert the wiper into the original position by holding the protrusions at its both ends.

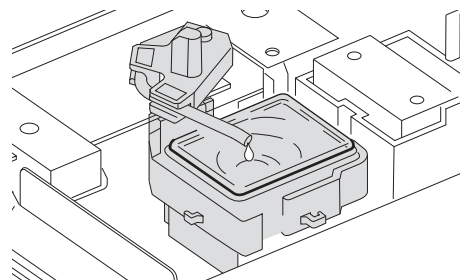


7 Press the **ENTER** key.

Fill the liquid.
COMPLETED(NEXT) :ent

8 Press the **FUNCTION** key and fill up the cap with cleaning solution for maintenance.

- When you press the **FUNCTION** key, cleaning solution drips into the cap.
- When you press the **FUNCTION** key again, the solution stops dripping.
- Repeat the drops several times to fill the cap with the cleaning solution just before the solution overflows from the cap.



9 Press the **ENTER** key.

ST.MAINTENANCE
LEAVING TIME : 1min

10 Press **▲** **▼** to set the time for the cleaning solution to be left as it is.

- Set value: 1 to 99 min (by the unit of 1 min)

ST.MAINTENANCE
LEAVING TIME : 2min

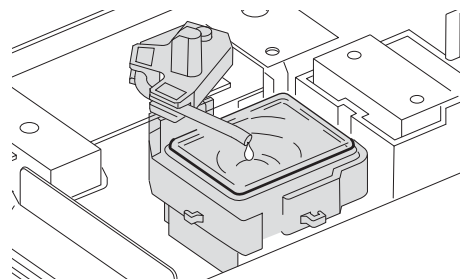
11 Press the **ENTER** key.

- The nozzles are washed.
- When the nozzles have been completely washed, the head moves onto the platen.

Being Initialized
PLEASE WAIT

12 Press the **FUNCTION** key and fill up the cap with cleaning solution for maintenance.

- When you press the **FUNCTION** key, cleaning solution drips into the cap.
- When you press the **FUNCTION** key again, the solution stops dripping.
- During the idle absorbing is interrupted, repeat the drops several times to fill the cap with the cleaning solution just before the solution overflows from the cap.



13 Press the **ENTER** key.

- After its initial operation, the machine returns to LOCAL.

Being Initialized
PLEASE WAIT



6

Maintenance

Cleaning the Ink Head and the Area around It

Because the ink head employs a very precise mechanism, due care needs to be taken when it is cleaned. Using a clean stick, etc., rub off gelatinous ink or dust that may stick to the lower part of the slider and the area around the ink head. In doing so, never rub the nozzles of the head.

Tools needed for cleaning

• Clean stick

• Gloves

• Goggles



- Be sure to wear the attached goggles and gloves when cleaning the area around the ink head. Otherwise, you may get ink in your eyes.
- The ink contains organic solvent. If you get the ink on your skin or in your eyes, wash it away with plenty of water immediately.

1

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

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

2

Select [**CR.MAINTENANCE**] of the maintenance menu.

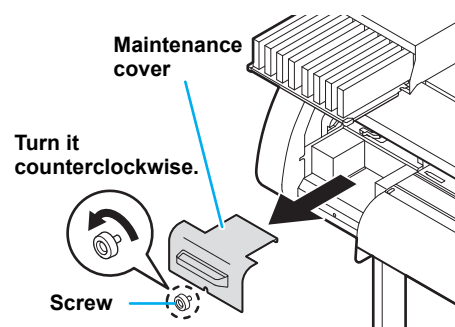
- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [**MAINTENANCE**] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [**CR.MAINTENANCE**] and press the **ENTER** key.

CR . MAINTENANCE
Remove the cover : **e n t**

3

Remove the maintenance cover.

- (1) Turn the two screws that fix the maintenance cover counterclockwise to remove them.
- (2) Remove the maintenance cover.



4

Press the **ENTER** key.

CR . MAINTENANCE
CARRIAGE OUT : **e n t**

5

Press the **ENTER** key.

- Carriage will move to the left end of this device.



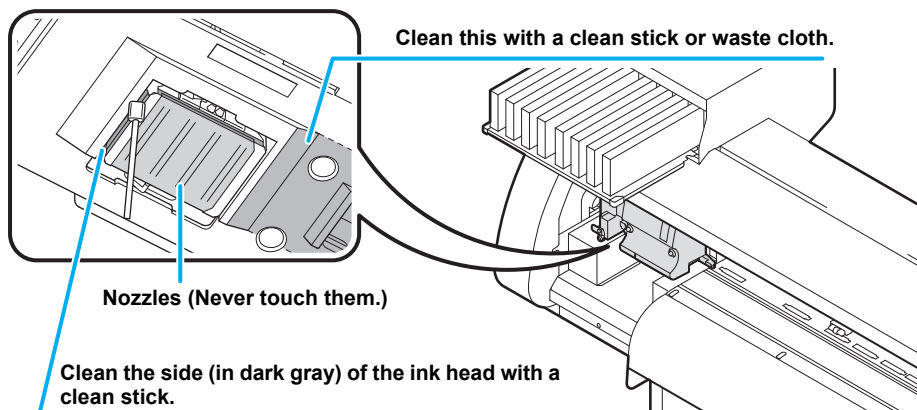
- You can move the carriage manually, however, if you connect the connection unit to the cutter unit, you cannot move it manually because it is locked. If you try to move forcibly, it may cause injury.



6

Wipe off the ink sticking to the side of the ink head with a clean stick.

- Never rub the nozzles.



7

When the cleaning has been completed, press the **ENTER key.**

- After its initial operation, the machine returns to LOCAL.

* Being Initialized *
PLEASE WAIT

Important!

- Because of its property, SS21W-2 ink easily sticks to the area around the ink head. Clean the area around the ink head about twice a week (it varies, depending on the frequency the machine is used).

When Nozzle Clogging Cannot Be Solved

When nozzle clogging cannot be solved even after the ink head cleaning (🔧 P.2-39) or head nozzle washing (🔧 P.6-11) has been done, perform the following two functions:

FILL UP INK	• Ink is supplied to solve nozzle clogging.
DISCHARGE & WASH	• The head, tube, and damper are washed with dedicated cleaning solution (optional). (🔧 P.6-19)

FILL UP INK

1

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

<LOCAL . 1>

[# 0 1]

WIDTH : * * * * mm

2

Select [HD. MAINTENANCE] of the maintenance menu.

(1) Press the **FUNCTION** key.

(2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.

(3) Press **▲** **▼** to select [HD. MAINTENANCE].

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

3

Press the **ENTER** key.

- Ink is supplied automatically.
- When ink has been supplied completely, the screen returns to the shown on the right.

FILLING UP

00 : 00

↓

HD . MAINTENANCE

FILL UP INK < e n t >

4

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



DISCHARGE & WASH

Ink is discharged from the head, damper, and tube for them to be cleaned.

Important!

- To use this function, the dedicated cleaning solution (☞ P.6-2 "About Cleaning Solution") is required. In addition, before performing the work, check whether ink to be filled again remains or not.
- When the following messages are displayed, check the waste ink tank and perform the operations described on P.6-38 "If a Waste Ink Tank Confirmation Message Appears" as necessary.

Confirm a wastetank
Continue< >Exchange

Confirm a wastetank
Exchange :ent

1

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

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

2

Select [HD. MAINTENANCE] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [HD. MAINTENANCE].
- (4) Press the **ENTER** key.

3

Press **▲** **▼** to select [DISCHARGE & WASH].

MAINTENANCE
DISCHARGE&WASH <ent>

4

Press the **ENTER** key.

Remove : InkCartridge
MMCCYYKK

5

Remove the ink cartridge.

- Ink remaining in the head or tube is discharged into the waste ink tank.
- When ink has been discharged completely, the screen on the right appears.

* DISCHARGE *
00 : 00



Set : WashingCartridge
12345678

6

Mount a cleaning solution cartridge on the ink station.

- The cleaning solution starts to be absorbed.
- When the cleaning solution has been absorbed completely, the screen on the right appears.

* ABSORPTION *
00 : 00



Remove : Cartridges
12345678

7

Remove the cleaning solution cartridge.

- The cleaning solution remaining in the head or tube is discharged into the waste ink tank.
- When the cleaning solution has been discharged completely, the screen on the right appears.

* DISCHARGE *
00 : 00



Set : WashingCartridge
12345678

P

6

Maintenance

8**Mount a cleaning solution cartridge on the ink station.**


- The cleaning solution starts to be absorbed.
- When the cleaning solution has been absorbed completely, the screen on the right appears.

* ABSORPTION *
00:00



Remove: Cartridges
1 2 3 4 5 6 7 8

9**Remove the cleaning solution cartridge.**

- The cleaning solution remaining in the head or tube is discharged into the waste ink tank.
- When the cleaning solution has been discharged completely, the screen on the right appears.
- Check the state of the waste ink tank and select whether to stop or resume cleaning.
- When you resume cleaning, press  to return to Step 6.

* DISCHARGE *
00:00



Maint. Wash Liquid
END< >DISCHARGE

10

Press .

11

Press the  key several times to end the operation.

Supplying the Machine with Ink Anew

After you have performed [DISCHARGE & WASH], supply the machine with ink anew with the following operations.

1

Turn on the power of the machine.

- When the power is turned on, the firmware version is displayed following [BOOT].



BOOT


CJV30-60

V*.*

Please Wait

2



Press   to select the type of ink to supply to the machine.

- To check the state of the cartridge, press the  key. (P.7-5)

INK TYPE

SS21 Sol

3

Press   to select an ink set (set of colors) to supply to the machine.

- You cannot change the current ink set to another by yourself.
- If you want to change the ink set, contact our service office.

SS21 INK SET

4-Color (MMCCYYKK)

4

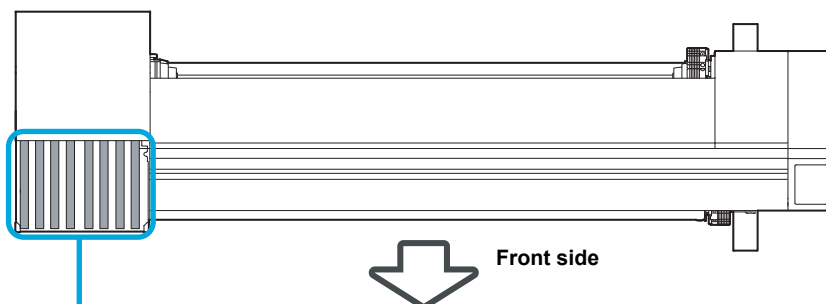
Press the  key.

Set:SS21-4color Ink

5**Mount an ink cartridge on the ink station.**
 Set : SS21-4 color Ink
 -- C - Y - K K

 FILLING UP NOW.
 00 : 00

- When an ink cartridge has been set, the machine is supplied with ink automatically.
- The ink station has an insertion slot allocated to each ink color. Set the ink cartridge according to the cartridge label under the ink station.



4-color model:	M	M	C	C	Y	Y	K	K
6-color model:	M	Lm	C	M	Lc	C	K	Y
6 colors + white model (SS21W-2):	M	W	C	W	Y	Lm	K	Lc
7 colors model (Eco-PA1):	M	Lk	C	Lk	Y	Lm	K	Lc
8 colors model (ES3): for the firmware V. and later	M	S	C	W	Y	Lm	K	Lc

6**When ink has been supplied to the machine completely, the screen returns to LOCAL.**
 <LOCAL . 1> [# 0 1]
 WIDTH : * * * * mm


- If blurring or missing of characters is found in printing after the machine has been supplied with ink anew, see "Perform head cleaning depending on the test printing result" (P.2-39) or "FILL UP INK" (P.6-18).

When the Machine Cannot Be Supplied with Ink in Step 5

When various ink errors including "Almost no ink" and "No ink" occur, ink does not start to be supplied to the machine.

When ink does not start to be supplied to the machine in Step 5:

- (1) Press the **END** key to return to the screen in Step 2.
- (2) Press the **REMOTE** key to check the state of the ink cartridge.
- (3) Correct ink errors (P.7-5) and repeat the operations from Step 2.

Preventing Nozzle Clogging When the Power Is OFF

Even when the power switch is off, the machine starts regularly and performs various operations to prevent nozzle clogging (Sleep mode). In the sleep mode, the following items can be set:

Set Item	Set Value ^{*1}	Overview
REFRESH	OFF/1 to 168 hours	The interval between each refreshing operation is set.
PUMP TUBE WASH		The interval between each PUMP tube washing operation is set.
CLEANING		The interval between each cleaning operation is set.

*1. The default setting differs, depending on the type of ink you use. The default setting for each ink is as follows:

● Default value for each ink

Ink Type	Refreshing	PUMP Tube Washing	Cleaning
SS21	4 hours	48 hours	OFF
ES3	48 hours	168 hours	OFF
Eco-PA1	48 hours	OFF	OFF

Important!

- When the message on the right is displayed, the operations set in the sleep mode are not performed. Perform the operations described on P.6-38 as necessary.
- When you turn off the power switch on the front side of the machine, check the state of the waste ink tank.

```
<LOCAL . 1>          [ # 0 1 ]
Check waste ink<MNT>
```



6

Maintenance

Setting the Refreshing Interval in the Sleep Mode

The interval between each operation of ejecting a small amount of ink from the nozzles to prevent nozzle clogging is set.

1

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

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

2

Select [SLEEP SETUP] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [SLEEP SETUP].

3

Press the **ENTER** key.

SLEEP SETUP
REFRESH <ent>

4

Press the **ENTER** key.

SLEEP SETUP
REFRESHinterval = 1h

5

Press **▲** **▼** to set the refreshing interval.

• Set value: OFF or 1 to 168 hours

SLEEP SETUP
REFRESHinterval = 10h

6

Press the **ENTER** key.

SLEEP SETUP
REFRESH <ent>

7

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



Setting the Tube Washing Interval in the Sleep Mode

The interval between each operation of washing the cap and PUMP tube with cleaning solution for maintenance in the sleep mode is set.

1

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

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

2

Select [SLEEP SETUP] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [SLEEP SETUP].
- (4) Press the **ENTER** key.

3

Press **▲** **▼** to select [PUMP TUBE WASH].

SLEEP SETUP
PUMP TUBE WASH <ent>

4

Press the **ENTER** key.

SLEEP SETUP
WASH INTERVAL = 1h

5

Press **▲** **▼** to set the interval between each tube washing operation.

SLEEP SETUP
WASH INTERVAL = 4h

- Set value: OFF or 1 to 168 hours

6

Press the **ENTER** key.

SLEEP SETUP
PUMP TUBE WASH <ent>

7

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



- When the machine has not been filled with cleaning solution, the screen on the right appears in Step 5. Fill the machine with cleaning solution (☞ P.6-10) and perform the operations in Step 1 and later.
- If the cleaning solution is not set, it does not work.* Set the cleaning solution.

*For [!Wash Liquid END], it works to use up the cleaning solution, however, replace early.

** Washing Liquid **

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

or

<LOCAL . 1> [#01]
!WashLiquidCart . NONE



6

Maintenance

Setting the Cleaning Interval in the Sleep Mode

This is a function operated instead of the pump tube washing when the cleaning solution for maintenance has been used up.

The cleaning type and the interval between each cleaning operation in the sleep mode are set.

1

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

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

2

Select [SLEEP SETUP] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [SLEEP SETUP].
- (4) Press the **ENTER** key.

3

Press **▲** **▼** to select [CLEANING].

SLEEP SETUP
CLEANING <ent>

4

Press the **ENTER** key.

SLEEP SETUP
CLEAN . INTERVAL = 1h

5

Press **▲** **▼** to set the interval between each cleaning operation.

SLEEP SETUP
CLEAN . INTERVAL = 4h

- Set value: OFF or 1 to 168 hours

6

Press the **FUNCTION** key.

- The cleaning type selection screen appears.

SLEEP SETUP
CLEAN . TYPE : NORMAL

7

Press **▲** **▼** to select a cleaning type.

- Set value: NORMAL, SOFT, HARD

SLEEP SETUP
CLEAN . TYPE : SOFT

8

Press the **ENTER** key.

SLEEP SETUP
CLEAN . INTERVAL = 4h

9

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



Setting Regular Operations

Various regular operations are performed with the power ON to prevent problems, such as ink coagulation, from occurring (Regular settings). For the regular settings, the following items can be set:

Set Item		Set Value	Overview
ROUTINE WIPING	SCAN COUNT	0 to 9,990 times	When the set number of times scanning is performed has been reached during a printing operation, the nozzle face is wiped and dew condensation is removed.
	TEMP. Difference	0 ~ 60°C	When the difference between the set temperature of the print heater and the ambient temperature has exceeded a specified temperature during a printing operation, the nozzle face is wiped and dew condensation is removed.
REFRESH		OFF/1 to 168*1 hours	The interval between each refreshing operation is set.
PUMP TUBE WASH			The interval between each PUMP tube washing operation is set.
CLEANING			The interval between each cleaning operation is set.

*1. The default setting differs, depending on the type of ink you use. The default setting for each ink is as follows:

● Default value for each ink

Ink Type	Refreshing	PUMP Tube Washing	Cleaning
SS21	4 hours	48 hours	OFF
ES3	48 hours	168 hours	OFF
Eco-PA1	48 hours	OFF	OFF

Important!

- When the message on the right is displayed, the operations other than [ROUTINE WIPING] in the regular settings are not performed. Perform the operations described on P.6-38 as necessary.
- When you turn off the power switch on the front side of the machine, check the state of the waste ink tank.
- Even if [!RTN] is displayed, the connection unit automatically switches to the printer unit and starts the regular operation when the machine is left unused for a certain period of time.

<LOCAL . 1> [# 0 1]
Check waste ink <MNT>

<LOCAL . **G**> !RTN [# 0 1]
CUT1 (30 / 60 / 0 . 30)



6

Maintenance

Setting the Regular Wiping Operation during a Printing Operation

When the set number of times scanning is performed has been reached during a printing operation, a wiping operation is performed automatically to prevent ink dew condensation on the nozzle face.

In the following cases, ink splashing, ink dripping or nozzle missing may occur during a printing operation. It is recommended that the regular wiping operation be set to always maintain a good printing state.

- When the print heater has been set at a high temperature
- When a relatively large value (high density, two coats of ink, etc.) has been set to the amount of ejected ink

The cause of the ink splashing, ink dripping or nozzle missing is that the ink printed immediately after ink ejection is heated by the print heater, which causes evaporated solvent to condense on the nozzle face.

In addition, the larger the difference between the set temperature of the print heater and the ambient temperature is, the more easily the evaporated solvent can condense.

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

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

2 Select [ROUTINE SETUP] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [ROUTINE SETUP].

3 Press the **ENTER** key.

ROUTINE SETUP
ROUTINE WIPING <ent>

4 Press the **ENTER** key.

ROUTINE WIPING
SCAN COUNT <ent>

5 Press the **ENTER** key.

ROUTINE WIPING
SCAN COUNT = 50

6 Press **▲** **▼** to set the number of times scanning is performed.

ROUTINE WIPING
SCAN COUNT = 40

- Set value: 0 to 9,990 times
- The set value should be 30 to 50 times when the heater temperature has been set at a high one (around 50°C) or when the amount of ejected ink is large, for example, due to two coats of ink.

7 Press the **ENTER** key.

ROUTINE WIPING
SCAN COUNT <ent>

8 Press **▲** **▼**.

- The temperature difference setting screen appears.

ROUTINE WIPING
TEMP . difference <ent>

9 Press the **ENTER** key.

ROUTINE WIPING
TEMP . Difference = 20 °C

10 Press   to set temperature difference (0 to 60°C).

ROUTINE WIPING
TEMP.Difference=20°C

- When the set temperature of the print heater is higher than the ambient temperature and the difference between the two exceeds a specified temperature, the regular wiping function is activated.

11 Press the  key.

ROUTINE WIPING
TEMP.difference<ent>

12 Press the  key several times to end the setting.

Setting the Refreshing Interval in the Standby Mode

The interval between each refreshing operation is set.

1

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

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

2

Select [ROUTINE SETUP] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [ROUTINE SETUP].
- (4) Press the **ENTER** key.

3

Press **▲** **▼** to select [REFRESH].

ROUTINE SETUP
REFRESH <ent>

4

Press the **ENTER** key.

ROUTINE SETUP
REFRESHinterval= 1h

5

Press **▲** **▼** to set the interval between each refreshing operation.

• Set value: OFF or 1 to 168 hours

ROUTINE SETUP
REFRESHinterval= 10h

6

Press the **ENTER** key.

ROUTINE SETUP
REFRESH <ent>

7

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



Setting the Interval between Each PUMP Tube Washing Operation in the Standby Mode

The PUMP tube is washed regularly to prevent nozzle clogging caused by ink coagulation in the tube.



- This function can be performed only when the states shown by the screens below are maintained.

<LOCAL . 1> [# 0 1]

LOCAL

* REMOTE . 1 * [# 0 1]
0 . 0 0 m

REMOTE

1

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

<LOCAL . 1> [# 0 1]
WIDTH : * * * * mm

2

Select [ROUTINE SETUP] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [ROUTINE SETUP].
- (4) Press the **ENTER** key.

3

Press **▲** **▼** to select [PUMP TUBE WASH].

ROUTINE SETUP
PUMP TUBE WASH <ent>

4

Press the **ENTER** key.

ROUTINE SETUP
WASH INTERVAL = 1h

5

Press **▲** **▼** to set the interval between each PUMP tube washing operation.

- Set value: OFF or 1 to 168 hours

ROUTINE SETUP
WASH INTERVAL = 4h

6

Press the **ENTER** key.

ROUTINE SETUP
PUMP TUBE WASH <ent>

7

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



- When the machine has not been filled with cleaning solution, the screen on the right appears in Step 5. Fill the machine with cleaning solution (P.6-10) and perform the operations in Step 1 and later.
- If the cleaning solution is not set, it does not work.* Set the cleaning solution.

*For [!Wash Liquid END], it works to use up the cleaning solution, however, replace early.

WashLiquid UN-FILL

<LOCAL . 9> !WSH [# 0 1]
CUT1 (30 / 60 / 0 . 30)

or

<LOCAL . 1> [# 0 1]
!WashLiquidCart . NONE



6

Maintenance

Setting the Cleaning Interval in the Standby Mode

This is a function operated instead of the PUMP tube washing when the cleaning solution for maintenance has been used up.

The cleaning type and the interval between each cleaning operation in the standby mode are set.

Important!

- This function is not performed when ink-related errors, such as "NEAR END" and "INK END", have been occurring.
- While this function is performed, the screen shows the progress that is the same as that of Head cleaning and no key operation can be performed. (☞ P.2-39 "Perform head cleaning depending on the test printing result")
- This function can be performed only when the states shown by the screens below are maintained.

<LOCAL . 1> [# 0 1]
LOCAL

*REMOTE . 1 * [# 0 1]
0 . 0 0 m
REMOTE

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

<LOCAL . 1> [# 0 1]
WIDTH : * * * * mm

- 2 Select [ROUTINE SETUP] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [ROUTINE SETUP].
- (4) Press the **ENTER** key.

- 3 Press **▲** **▼** to select [CLEANING].

ROUTINE SETUP
CLEANING <ent>

- 4 Press the **ENTER** key.

ROUTINE SETUP
CLEAN . INTERVAL = 1h

- 5 Press **▲** **▼** to set the interval between each cleaning operation.

- Set value: OFF or 1 to 168 hours

ROUTINE SETUP
CLEAN . INTERVAL = 4h

- 6 Press the **FUNCTION** key.

- The cleaning type selection screen appears.

ROUTINE SETUP
CLEAN . TYPE : NORMAL

- 7 Press **▲** **▼** to select a cleaning type.

- Set value: NORMAL, SOFT, HARD

ROUTINE SETUP
CLEAN . TYPE : SOFT

- 8 Press the **ENTER** key.

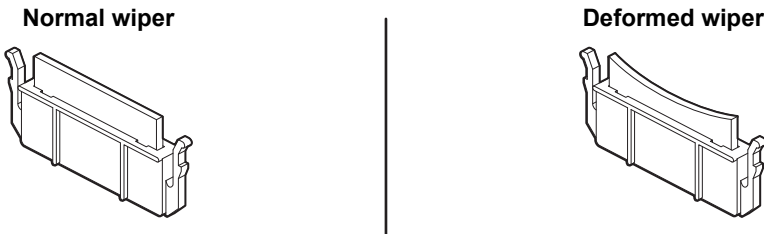
ROUTINE SETUP
CLEAN . INTERVAL = 4h

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

Other Maintenance Functions

Changing the Time When a Warning about Wiper Replacement Is Issued

The wiper is consumable. The head can easily become dirty in a dusty environment. In addition, the head cannot be cleaned adequately with a bent or worn wiper used. Wiper levels can be set so that a warning about wiper replacement is issued earlier than the standard according to the operating environment.



Set Value	Overview
1/10 ~ 10/10	The time when a warning about wiper replacement is issued is set. As the value becomes smaller, a warning about wiper replacement is displayed earlier.

1

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

<LOCAL . 1>

[# 0 1]

WIDTH : * * * * mm

2

Select [WIPER LEVEL] of the maintenance menu.
(1) Press the **FUNCTION** key.
(2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
(3) Press **▲** **▼** to select [WIPER LEVEL].

3

Press the **ENTER** key.

WIPER LEVEL

LEVEL

: 10 / 10

4

Press **▲** **▼** to set a wiper level.
• Set value: 1/10 to 10/10

WIPER LEVEL

LEVEL

: 9 / 10

5

Press the **ENTER** key.

MAINTENANCE

WIPER LEVEL

<ent>

6

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



6

Maintenance

Setting the Display of Media Residual

Whether the screen displays the remaining amount of a medium is set.

When "Remaining amount of a medium to display" is set to ON,	the remaining amount of a medium is displayed in the remote mode. (However, when a leaf medium is used, the length of the medium to be printed is displayed.)
When "Remaining amount of a medium to display" is set to OFF,	the remaining amount of a medium is not displayed in the remote mode.



- The amount of a medium that has been fed by the printing and jog keys is reflected in the remaining amount of a medium.
- The length of a medium (initial value of the remaining amount) is entered when a roll medium is detected. (P.2-29)
- The setting configured here does not become effective unless media detection is performed after the setting has been complete.

1

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

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

2

Select [MEDIA RESIDUAL] of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MAINTENANCE] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [MEDIA RESIDUAL].

3

Press the **ENTER** key.

MEDIA RESIDUAL
SETUP : **ON**

4

Press **▲** **▼** to select ON/OFF.

MEDIA RESIDUAL
SETUP : **OFF**

5

Press the **ENTER** key.

MAINTENANCE
MEDIA RESIDUAL <ent>

6

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






Printing the Remaining Amount of a Medium

The present remaining amount of a medium can be printed.



- Set "Remaining amount of a medium to display" to "ON".
- When you replace the medium you use now with another, it is recommended that you print the remaining amount of the medium on it. With the remaining amount of a medium having been printed beforehand, when you use the replaced medium again, you can enter an accurate value in the screen for entering the remaining amount of a medium (P.2-29) that appears after media detection.

1





In LOCAL, Press    .










- LOCAL changes to the origin setting mode.

ORIGIN SETUP

0.0 - - - -

2

Press     **to set the origin to a desired position.**

- Move the carriage and medium with     and set the origin.
- When you do not change the origin, do not press     and proceed to Step 3.
- When you press the  key here, the origin is changed, and the screen returns to LOCAL.

ORIGIN SETUP


0.0






- - - -

Origin position (length)

Origin position (width)

3


Press the  **key.**

- When you press    , the screen returns to Step 2.
- When you press the  key, the screen returns to LOCAL.

MEDIA RESIDUAL PRINT

<ENT>

4

Press the  **key.**

- The remaining amount of a medium starts to be printed.
- When the printing has been completed, the screen returns to LOCAL.

Important!

- When the remaining amount of a medium has been printed with the origin changed, the origin set here is effective even when subsequent data are printed.



White Ink Maintenance Function

If SS21 white ink is left unused for a while, the color may become uneven by clogging of the nozzle or settling of pigment.

If the color does not improved by the head cleaning (☞ P.2-39), use this maintenance function. (This function is valid when the firmware Ver.2.10 or later is installed and SS21 white ink is filled.)

White ink maintenance function has three levels of maintenance.
Select the maintenance level depending on the condition.

LEVEL1	Performs maintenance in the following order: (1)Performs the automatic nozzle cleaning function. *1 (2)Performs cleaning. *2
LEVEL2	Performs maintenance in the following order: (1)Performs the automatic nozzle cleaning function. *1 (2)Fills the white ink. (3)Performs cleaning. *2
LEVEL3	Performs maintenance in the following order: (1)Performs the automatic nozzle cleaning function. *1 (2)Discharges the white ink remaining in the head or in the tube. (3)Fills the white ink. (4)Performs cleaning. *2

*1. The operation is the same as the CUSTODY WASH of ST. MAINTENANCE. (Leaving time: three minutes)

*2. The operation equivalent of "Hard cleaning" of the head cleaning is performed on each color.(☞ P.2-39).

Important!

- According to the level changing from 1 to 3, the amount of consumption becomes more. Use Level 2 and 3 when the status is not improved even if you perform Level 1 maintenance.
- When the machine is left unused for a long time, it is recommended to perform LEVEL1 of this function about every other week.
- The other cautions of this function or the white ink are included in the pack of the cartridge. Read it carefully before use.

1

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

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

2

Select **[WHITE MAINT.]** of the maintenance menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲ ▼** to select **[MAINTENANCE]** and press the **ENTER** key.
- (3) Press **▲ ▼** to select **[WHITE MAINT.]**.

3

Press the **ENTER** key.

WHITE MAINT.
SELECT : LEVEL **1**

4

Select the maintenance level by pressing the **▲ ▼**.

- **Set value** : LEVEL1 to LEVEL3
- This describes the operation when LEVEL3 is set.

WHITE MAINT.
SELECT : LEVEL **3**

5

Press the **ENTER** key.

SHAKE WHITE INK
CARTRIDGES : **ent**

6

Slowly shake the removed white ink cartridge more than twenty times right and left.

- To prevent ink from leaking when you shake the cartridge, wear gloves and firmly cover the A part of the upper surface of the cartridge and the B part of the bottom surface of the cartridge with paper towels. Then, shake it more than twenty times right and left so that ink flows inside the cartridge.



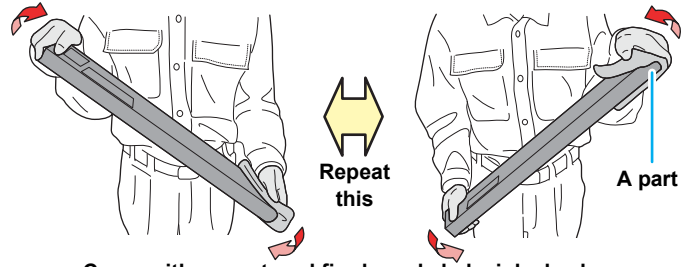
- If you shake it too strong, the pack inside may be damaged and it may cause ink leakage. Therefore, perform this carefully.
- If the remaining amount of ink is less, ink in the cartridge cannot be beaten enough. Tilt the cartridge until it becomes vertical.



A part
(the place to stick a needle)



B part
(the slot on the bottom)



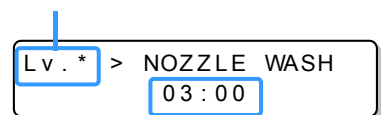
Cover with paper towel firmly and shake ink slowly

7

Set the white ink cartridge, and press the **ENTER key.**

- Nozzle cleaning starts.
- The operation after nozzle cleaning varies depending on the LEVEL set on the Step 4.
- LEVEL1 : Go to the Step 11.
- LEVEL2 : Go to the Step 10.
- LEVEL3 : Go to the Step 8.

The selected maintenance level

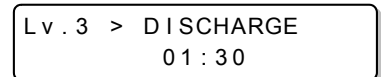


The remaining time

8

Remove the white ink cartridge.

- When the white ink cartridge is removed, the white ink remaining in the machine is discharged.
- After discharging, the screen shown on the right appears.



9

Set the white ink cartridge.

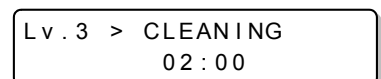
10

White ink filling starts.

- Filling time of LEVEL2 is different from LEVEL3.
(When LEVEL2 is selected, filling time becomes shorter.)



11

Perform cleaning.

If a Waste Ink Tank Confirmation Message Appears

Ink used in head cleaning, etc. is stored in the waste ink tank on the lower right side of the machine. This machine counts the accumulated amount of discharged ink. When that reaches a specified amount, the machine displays a confirmation message. **(When this message is displayed, consider the replacement of the waste ink tank.)**

If a Message Is Displayed, for Example, When the Machine Is Supplied with Ink

When functions that use the waste ink tank, such as ink-supplying, head cleaning, and PUMP tube washing, are performed, a message that requests you to confirm the state of the waste ink tank may be displayed, depending on the state of the tank.

● When the waste ink tank is almost full:

The message on the right is displayed.

* Check waste ink *
Continue< >Exchange

1

Check the state of the waste ink tank.

When the waste ink tank is almost full:

- (1) Replace the waste ink tank with another. (☞ P.6-40)
- (2) Press the **ENTER** key to select "Exchange". (The amount of discharged ink is reset.)

When the waste ink tank still has a capacity for waste ink:

- (1) Press **◀** to select "Continue". (The amount of discharged ink is not reset.)
 - In this case, returning to LOCAL will display the message of P. 6-38 "Confirmation Message in LOCAL".

● When the waste ink tank is completely full:

The message on the right is displayed.

* Check waste ink *
Exchange :ent

1

Replace the waste ink tank with another (☞ P.6-40) and press the **ENTER** key.

- The amount of discharged ink is reset.

Important!

- When you have selected "Exchange" for "almost full" or "completely full" in the above operation, make sure to replace the waste ink tank. (☞ P.6-40) When you use the machine without replacing the waste ink tank, waste ink may overflow from the tank before a confirmation message is displayed.
- This machine does not count the accumulated amount of waste ink discharged when the ST.MAINTENANCE (NOZZLE WASH, PUMP TUBE WASH, and COSTODY WASH) are performed. Before performing these functions, make sure to check the state of the waste ink tank.

Confirmation Message in LOCAL

The message on the right is displayed.

<LOCAL.1> [#01]
Check waste ink<MNT>

1

Check the state of the waste ink tank and replace it with another as necessary. (☞ P.6-40)

When You Do Not Want the Confirmation Message of the Waste Ink Tank to Be Displayed

You can configure the setting so that the confirmation message of the waste ink tank is not displayed.

1

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

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

2

Select [Waste Ink Warning] of the machine setting menu.

- (1) Press the **FUNCTION** key.
- (2) Press **▲** **▼** to select [MACHINE SETUP] and press the **ENTER** key.
- (3) Press **▲** **▼** to select [Waste Ink Warning].
- (4) Press the **ENTER** key.

3

Press **▲** **▼** to select OFF.

WasteInkWarning
SETUP : **OFF**

4

Press the **ENTER** key.

MACHINE SETUP
WasteInkWarning<ent>

5

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

Important!

- When you set Waste ink warning to "OFF", the confirmation message is not displayed. Make sure to visually check the amount of ink remaining in the waste ink tank.

Replacing the Waste Ink Tank with Another

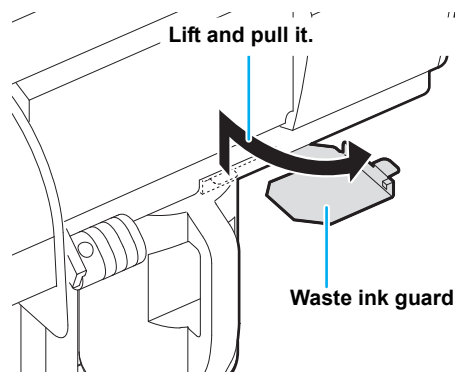
When the message on the right has been displayed, check the state of the waste ink tank immediately and replace the tank as necessary.

<LOCAL . 1> [#01]
Check waste ink<MNT>

1

Remove the waste ink tank guard.

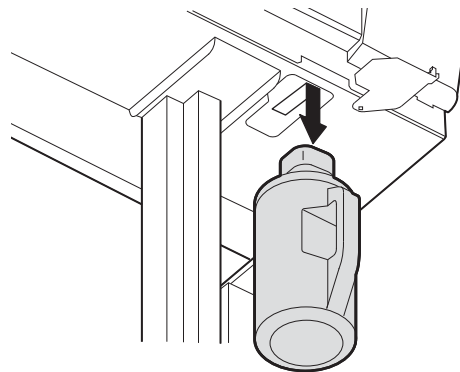
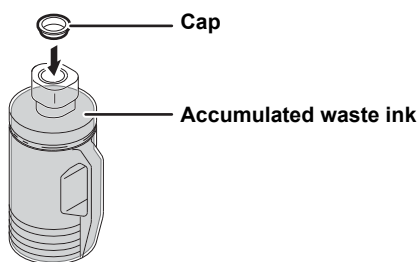
- (1) Lift the waste ink tank guard and unlock it.
- (2) Open the waste ink tank guard to your side.



2

Hold the grip of the waste ink tank and remove the tank by pulling it to your side.

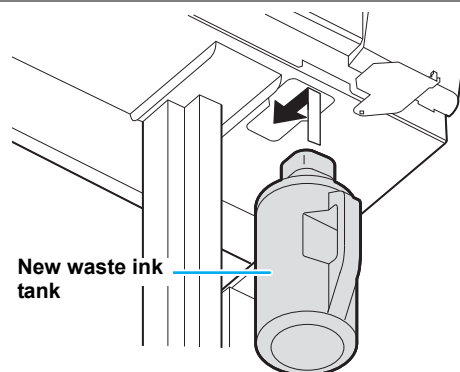
- Attach the cap to the removed waste ink tank.



3

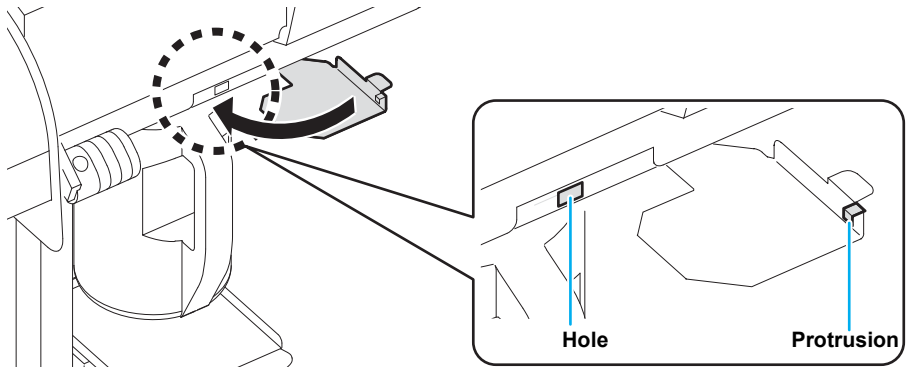
Replace the waste ink tank with another.

- (1) Prepare a new waste ink tank (SPC-0117).
- (2) Hold the grip of the waste ink tank and insert the tank.



4**Close the waste ink tank guard.**

- Align the protrusion of the waste ink tank guard with the hole of the main body and lock the tank.

**5****Press the **[MODE CHANGE]** key in LOCAL to select the printing mode.**

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

6**Select [Ink Tank Replace] of the maintenance menu.**

- (1) Press the **[FUNCTION]** key.
- (2) Press **[▲]** **[▼]** to select [MAINTENANCE] and press the **[ENTER]** key.
- (3) Press **[▲]** **[▼]** to select [Ink Tank Replace].

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

InkTankReplac
EXCHANGE : e n t

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

- The amount of discharged ink controlled by this machine is reset, and the confirmation message is canceled.

9**Press the **[END]** key several times to end the setting.****P****6**

Maintenance

Changing the ink

Ink type or the color used can be changed.



- To change the ink set such as changing from “4-color model” to “6-color model” or “6-color model”, the machine must be worked by our service engineer. Contact our service office or the distributor in your region.

Change the ink type

To change the ink type used such as changing from ES3 ink to SS21 ink, work as follows.

Change the ink color

To change the ink color used such as changing from “6-colors” to “6-colors + white” of SS21 ink, work as follows.

“Discharge” the remaining ink in the machine, and “Wash” the head or the tube.

See P.6-19 “DISCHARGE & WASH”.

Fill ink.

See P.6-18 “FILL UP INK”.



• Note for changing ink type

Changeable ink type is limited by the type of ink used. See the table on the right.

		Ink type to be changed	
		Eco-PA1	SS21/ES3
Ink type used	Eco-PA1	Changeable	Contact our service office or the distributor in your region.
	SS21 ES3	Not changeable	Changeable (However, when you wish to change to silver ink or white ink of ES3, the work by our service staff is required.)

• When washing, use eight special cleaning solution cartridges (sold separately).

Wash with the proper cleaning solution cartridge for the used ink type.

Ink Type	Cleaning Solution Type
Solvent ink (SS21/ES3)	MILD SOLVENT Cleaning Solution Cartridge (SPC-0294)
Aqueous pigment ink (Eco-PA1)	Aqueous cleaning solution cartridge (SPC-0259)

Replacing the Cutter Blade

The medium cutter blade is consumable. When the cutter blade gets dull, replace it with a new one (SPA-0107).



- The blade is sharp. Be careful not to hurt yourself or anyone else.
- Store the cutter blade in a place that is out of the reach of children. In addition, dispose of used cutter blades according to regional laws and regulations.



- When replacing the cutter blade, it is recommended to place a sheet of paper under the cutter blade. This will help pick up the cutter blade if it drops.

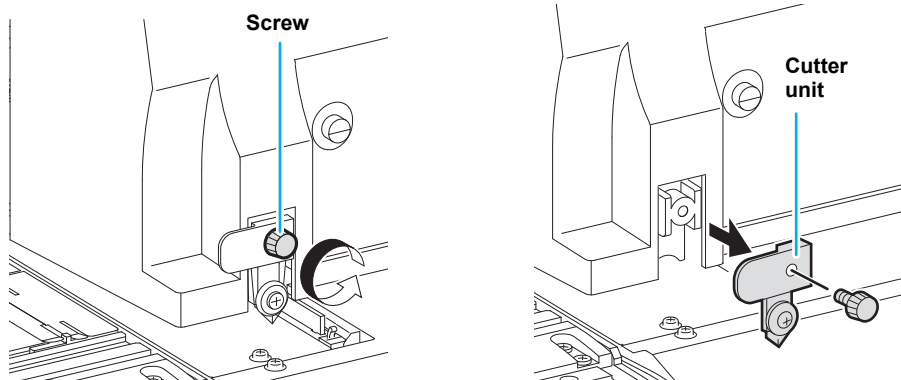
1	Press the (MODE CHANGE) key in LOCAL to select cutting mode.	<LOCAL . C > [#01] CUT1 (30 / 60 / 0.30)
2	Press the (FUNCTION) key.	FUNCTION SETUP C <ENT>
3	Press (DOWN) (UP) to select [MAINTENANCE].	FUNCTION MAINTENANCE C <ENT>
4	Press the (ENTER) key.	MAINTENANCE MARK SENSOR <ent>
5	Press (DOWN) (UP) to select [TOOL REPLACE].	MAINTENANCE TOOL REPLACE <ent>
6	Press the (ENTER) key.	TOOL REPLACE ACTION : e nt
7	Press the (ENTER) key. • The cutter unit moves to the left end of the machine.	



8**Replace the cutter unit by the carriage.**

- Now the cutter unit can be moved manually. Move the cutter unit to the position where you can assure easy access, and then replace the blade edge.

- (1) Loosen the screw of the cutter unit.
- (2) Remove the cutter unit.
- (3) Mount a new cutter unit.
- (4) Fasten the screw of the cutter unit to secure the cutter unit.

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

- The screen returns to LOCAL.

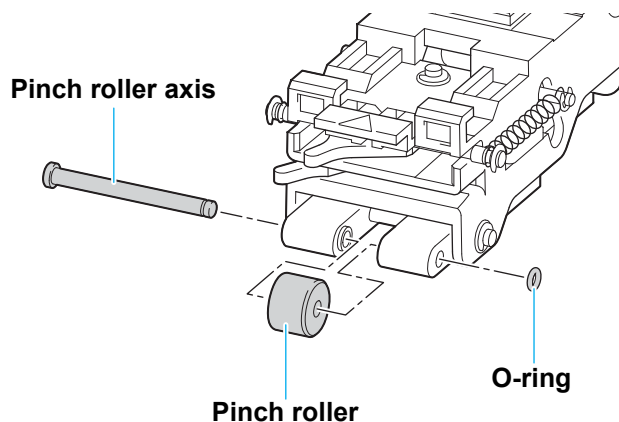
Replacing the Pinch Rollers

Replace the pinch roller when it is worn or dirty.

(SPA-0166: Set of four pinch rollers / SPA-0167: Set of three pinch rollers)

1

Remove the O-ring, pinch roller axis, and pinch roller.



2

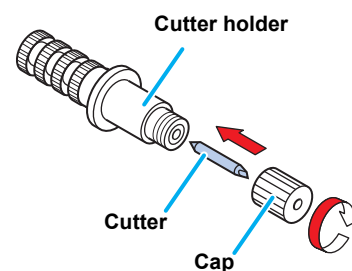
Attach a new pinch roller, and reattach the pinch roller axis and O-ring to their original positions.

Replacing a Cutter Blade Not Included in the Accessories

This section describes how to replace the cutter holder (Swivel cutter holder : SPA-0090) and the cutter (Swivel blade : SPB-0030) that are sold separately.

1

Rotate the cap from which a blade comes out and remove the cutter.



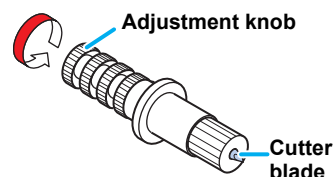
2

Replace the cutter with a new one, using tweezers.

3

Adjust the length of the cutter blade that comes out from the cap.

- When you rotate the adjustment knob in the direction of an arrow, a cutter blade emerges. (0.5 mm per rotation)



Chapter 7

Troubleshooting



This chapter

describes the corrective measures to be taken for a phenomenon suspected to be trouble and the procedures to clear the error number displayed on the LCD.

Troubleshooting	7-2
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Nozzle Is Clogged	7-4
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Warning/Error Messages	7-7
Warning Messages	7-7
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Troubleshooting

Take the appropriate actions as described below before taking the trouble as a failure. If the problem is still not solved after troubleshooting, contact your distributor or our service office.

Failure phenomenon	Cause	Solution
Power does not turn ON.	The power cable of the machine is not connected securely.	Securely connect the power cable of the machine to the outlet.
	The main switch is not ON.	Turn ON the main switch.
	The power switch located on the front of machine is not ON.	Turn ON the power switch on the front of the machine.
Printing/cutting (printing with a pen) does not start.	The interface cable is not connected securely.	Securely connect the interface cable.
	The interface cable is not correct.	Use a USB2.0 Hi-Speed-compliant cable.
	The message indicating that the ink has run out is displayed.	Replace the ink cartridge with a new one.
	The host computer setting (machine model, etc.) is wrong.	Check the host computer setting.
	The USB driver is not installed.	Install the USB driver included with the machine.
Medium gets jammed. Medium is soiled.	A medium other than those recommended by MIMAKI is used.	Use the recommended medium.
	Medium is curled.	Avoid using a medium with curls.
	The end of the medium is bent.	Avoid using any medium with bent ends.
	The medium is hanging down along the platen.	Use a take-up device or re-load the medium on the machine.
[HEAT] or [CONSTANT] LED does not light up.	The power to the machine is not ON.	Turn ON the power to the machine.
	The heater temperature setting is not effective.	Set the heater temperature higher than room temperature.
An error occurs in the machine when the host computer sends data to the machine.	Command settings are wrong.	Use the application included with the machine.
	Machine model setting is wrong.	Correct the machine model setting to [CJV30] on the application software.
Cutting produces a perforation rather than a clean cut.	Screw for the tool holder is loose.	Tighten up the screw.
	The cutter blade protrudes excessively.	Adjust the protrusion of the blade properly.
	The tool condition is set to [HALF].	Set the tool condition to [CUT1] to [CUT3].
	The blade is chipped or worn out.	Replace the blade with a new one.
	The blade does not rotate smoothly.	Replace the holder with a new one.
Slippage of medium arises in cutting.	The pinch rollers and grid rollers fail to securely retain the medium in position.	Check the position of the pinch rollers and grid roller and adjust them so that they securely retain the medium in position.
		Increase the number of pinch rollers.
	The pinch roller pressure is not properly selected.	Select the proper pinch roller pressure. (P.4-2)
	There is a slack in the roll medium so the medium fed meanders or skews.	Remove the slack in the roll medium and straighten the right and left end faces of the roll when loading the roll medium on the machine. Then, start feeding the medium.












Failure phenomenon	Cause	Solution
Slippage of medium arises in cutting.	The medium was bent and came off the backing paper and thus there are air bubbles between the medium and the backing paper.	When a long leaf medium is to be cut, take care not to bend the medium while feeding or cutting it and do not put any extra load on the medium. When a long leaf medium is to be cut, provide a sufficient space for working in the direction of medium feeding. Front: 1.5 m or more Rear: 1.5 m or more
	The setting direction of the medium and the direction specified on the data do not agree with each other.	Correct the medium setting or data setting.
	The medium comes in contact with the floor surface.	Decrease the cutting speed (SPEED) to reduce the load on the medium when it comes in contact with the floor surface.
	The side margins of the medium beside the pinch rollers are not enough.	Provide a side margin of 20 mm or more on each side of the medium beside the pinch rollers.
	The setting of offset X and offset Y of "Setting Register Mark Detection" is not correct.	Correct the offset value in concert with misalignment. (P.4-11)
The tool is dragged during operation. An unexpected cutter imprint remains on the medium.	The medium is warped.	Load the medium on the machine so that the medium is not warped.
	The tool does not move up/down successfully.	Turn the power OFF and try to lift/lower the tool holder by hand. If the tool holder does not move up but remains in the lower position, contact your distributor or our service office.
	An extremely thick medium is used.	Use a medium meeting the specifications.
Some parts remain uncut.	Low pressure on the cutter blade.	Increase the value of "ADJ-PRS OFFSET". (P.4-36)
		Increase the cutter pressure and perform test cutting again. (P.2-43)
		Set the over cutting. (P.4-36)
Register mark cannot be detected.	The position of the register mark sensor and the light pointer is not the same.	Adjust the position of the light pointer. (P.4-20)
	The sensitivity of the register mark sensor is low.	Adjust the sensitivity of the register mark sensor. (P.4-21)
There is a part remaining uncut when cutting medium.	Both ends of the medium stays away from the position of pinch rollers located at both ends.	Set the pinch roller of both ends so that they are within the range of 10cm from medium left end and 2cm from medium right end. (P.2-17)



Image Quality Is Poor

This section describes the corrective actions to be taken in case the image quality is not satisfactory. Take appropriate measures to remedy the problems with image quality. If the remedy does not work, contact your distributor or our service office.

Failure phenomenon	Solution
White lines/blur/dark stripes (in the direction the heads travel)	<ol style="list-style-type: none"> (1) Execute head cleaning.  P.2-39 (2) Perform maintenance of the inside of the station.  P.6-5 (3) Execute the [Media correction] function.  P.3-8 (4) If any pieces of paper or dust is attached on the medium holder or other paths of the head, remove it.
Characters are double or triple printed in the media feed direction.	<ol style="list-style-type: none"> (1) Execute the [Media correction] function.  P.3-8
Disagreement in print positions between outward trip and homeward trip.	<ol style="list-style-type: none"> (1) Execute the [Dot position correction] function.  P.3-10
Ink drops falling on the medium during printing.	<ol style="list-style-type: none"> (1) Execute the wiper cleaning.  P.6-6 (2) Execute the ink cap cleaning.  P.6-6 (3) Execute the head cleaning [Normal].  P.2-39 (4) When the phenomenon is not improved, set the regular wiping operation.  P.6-28

Nozzle Is Clogged

When nozzle clogging is not dissolved even after cleaning the head referring to P.2-39, make sure of the following operations.

- Fill ink by executing the operations of P.6-18.
- Following the procedures described in P.6-19, perform DISCHARGE & WASH.



Ink Cartridge Warning Appears

If trouble with an ink cartridge is detected, a warning message appears. Printing, cleaning, and all the other operations that use ink become disabled if warning occurs. In this case, replace the ink cartridge immediately.

Important!

- Once cartridge trouble is displayed, do not leave the ink cartridge for a long time without replacing it; otherwise, the machine will lose the nozzle clogging prevention function. If nozzles are clogged, the machine must be repaired by our service engineer.

Displaying the Description of Ink Cartridge Trouble

You can check the details of the cartridge error with the following operations. (☞ P.7-6)

1

Press the **ENTER** key in **LOCAL**.

SS21 mr1	MMCCYYKK
REMA IN	34567899

2

Press the **FUNCTION** key.

NON-ORIGINAL INK
---C---

Indicates that the cartridge of cyan (C) has some abnormality.

- When two or more cartridge troubles occur, warnings can be displayed in turn by pressing **▲** **▼**.
- Press **FUNCTION** or **END** to return to the display of the remaining amount of ink.

Messages and Solutions

Message	Cause	Solution
INK NEAR END MMCC - - - -	The ink of the ink cartridge has been nearly used up.	Replace the cartridge generating the warning with a new one.
INK END - - - - YYKK	The ink of the ink cartridge has been completely used up.	Replace the cartridge generating the warning with a new one.
NON-ORIGINAL INK - - - - YYKK	The ink cartridge is not our genuine product.	Replace the cartridge generating the warning with our genuine product.
WRONG INK IC - - - - YYKK	The IC chip of the ink cartridge cannot be read normally.	Remove the cartridge generating the warning once and install it again. If the same warning message still appears, contact our service office or the distributor in your region.
Kind of INK - - - - - - - -	The ink of the ink cartridge is different in type from the ink currently supplied.	Check the ink type of the cartridge generating the warning.
Color of INK - - - - - - - -	The ink of the ink cartridge is different in color from the ink currently supplied.	Check the ink color of the cartridge generating the warning.
WRONG CARTRIDGE - - - - - - - -	There is trouble with an installed ink cartridge.	Check the cartridge generating the warning.
NO CARTRIDGE - - - - - - - -	An ink cartridge has not been installed in the slot.	Install an appropriate cartridge in the slot generating the warning.
Expiration - - - - - - - -	The specified expiration date of an ink cartridge has passed.	Replace the cartridge generating the warning with a new one. The cartridge may be used until one month after the specified expiration date.
Expiration:1MONTH - - - - - - - -	The expiration date of an ink cartridge has elapsed (one month has passed after the specified expiration date).	The red LED blinks. Replace the cartridge generating the warning with a new one. The cartridge may be used until two months after the specified expiration date.
Expiration:2MONTH - - - - - - - -	The expiration date of an ink cartridge has elapsed (two months have passed after the specified expiration date).	Replace the cartridge generating the warning with a new one.
INK REMAIN ZERO - - - - - - - -	The remaining amount of the ink in an ink cartridge is zero.	Replace the cartridge generating the warning with a new one.
Check the "W"nozzle condition. <ENT>	When SS 21 white ink is used, the message of prompting you to perform test printing is displayed for keeping the nozzle status be normal.	Perform "WHITE CHK." of test printing. (P.2-37)
PERFORM SPOT COLOR MAINTENANCE? <ENT>	When silver and white ink of ES3 ink are used, the message of prompting you to perform special color maintenance for preventing color heterogeneity due to settling down of pigment is displayed.	Perform spot color maintenance.

Warning/Error Messages

If some trouble occurs, the buzzer sounds and the display shows a corresponding error message. Take appropriate measures to remedy the displayed error.

Warning Messages

Message	Cause	Solution
** NO MEDIA **	Medium is not set.	Set the medium.
! EXCHANGE BATTERY	The end of the life of the internal clock battery is detected.	Contact our service office or the distributor in your region.
<LOCAL.1> [#01] Replace a WIPER<MNT>	Time to replace the wiper in the capping station with a new one has come. (The wiping count has reached the specified value.)	Replace the wiper with a new one. (☎ P.6-8)
<LOCAL.1> [#01] ! Do TEST PRINT	When the power supply has been kept turning OFF for 72 hours or longer, sleep refresh or cleaning was not performed.	Perform the test printing and check the nozzle status. If the power supply has been kept turning OFF for a long time, the sleep operation must be performed. (☎ P.6-23)
PRE PRT POST BREAK ***°C ***°C	A heater is disconnected. (This example shows that the preheater is disconnected.)	Contact our service office or the distributor in your region.
PRE PRT POST THERM ***°C ***°C	The thermistor of a heater is defective. (This example shows that the thermistor of pre-heater is defective.)	
<LOCAL.1> [#01] NEAR END MMCC----	Ink for one supply path has been nearly used up.	Replace the cartridge for the supply path corresponding to the indicated color. You can print without replacing the cartridge (until "No ink" is displayed). However, the machine returns to LOCAL each time when the printing of one file is completed.
REMOTE.1 [#01] NEAR END MMCC----		
<LOCAL.1> [#01] INK END ----YYKK	Ink for one supply path has been completely used up.	Replace the cartridge for the supply path corresponding to the indicated color.
REMOTE.1 [#01] INK END ----YYKK		
<LOCAL.1> [#01] ! CARTRIDGE ----YYKK	Ink for one supply path is not set. Or improper ink is set.	Replace or set the cartridge for the supply path corresponding to the indicated color. Refer to P. 7-5 "Ink Cartridge Warning Appears" to check the details of the failure, and then fix the problem following the applicable procedure.
REMOTE.1 [#01] ! CARTRIDGE ----YYKK		
<LOCAL.1> [#01] REINSERT CARTRIDGE	Ink near end was detected right after the cartridge with much remaining amount of ink has been inserted.	Pull out the inserted cartridge and insert it again. If the message will be displayed again, contact a distributor in your district or our office to call for service.
<LOCAL.1>!CAR [#01]	There is a problem with the installed ink cartridges.	Check the warning details in the guidance function. (☎ P.7-5)
REMOTE.1!CAR [#01]		



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Troubleshooting

Message	Cause	Solution
<LOCAL.1>!WSH [#01]	There are the following problems with the cleaning solution: The cleaning solution is not set. Something other than the cleaning solution is set. The cleaning solution is ended.	Replace the cleaning solution.
REMOTE.1!WSH [#01]		
<LOCAL.1>!RTN [#01]	As the connection unit is not connected to the print head, regular operations cannot be executed.	Start the origin setting in the print mode, and switch the connection unit, or execute the appropriate regular operations manually.
REMOTE.1!RTN [#01]		
<LOCAL.1>!TNK [#01]	The waste ink tank is nearly full.	Replace the waste ink tank, and then execute [MAINTENANCE]-[Ink Tank Replace]. (P.6-40)
REMOTE.1!TNK [#01]		
<LOCAL.1> [#01] Check waste ink<MNT>		
<LOCAL.1> [#01] !Wash Liquid END	The cleaning liquid cartridge is empty.	Replace the cleaning solution cartridge with a new one.
<LOCAL.1> [#01] !washLiquidCart.NON	The cleaning liquid cartridge has not been installed.	Install the cleaning solution cartridge.
<LOCAL.1> [#01] !WRONG WASH CART.	There is trouble with the cleaning liquid cartridge.	Install the cleaning solution cartridge.
** Washing liquid **	Cleaning solution has not been supplied.	Supply the cleaning solution. Execute [MAINTENANCE]-[HD.MAINTENANCE]-[FILL UP INK]. (P.6-18)
** OFFSCALE **	The cutting data exceeds the effective cutting area. Or the machine has stopped after cutting the medium up to its end normally.	Use a larger medium, decrease the amount of data, or execute the divided cutting function. This warning may occur depending on the set value of the P/C origin offset (P.4-32).
** END COPY **	The plotter has terminated copying after completion of one sheet copying, since the data received contains the origin updating command.	The plural sheets cutting function is disabled. To perform plural sheets cutting, change the setting back to enable the function on the host computer.
** DIVISION ** 5s	The machine has finished the cutting corresponding to a division of the data that exceeds the medium width, using the division cut function, and is now waiting for the receipt of the next data.	If the machine does not receive any data from the host computer within ten seconds, it will recognize that the data has ended. Then, the machine will perform the frame cutting and mark cutting and enter LOCAL.
** END DIVISION **	This message appears in any of the following cases: The medium width is 1 cm or less. The sample cutting data exceeds the medium width. The two-point axis alignment is set to ON. Register marks have already been detected.	Division cut is disabled.



Message	Cause	Solution
COPY SKIP	A register mark cannot be detected during continuous copying. (One pattern is skipped.)	There is no problem if the marks are successfully detected after skipping one pattern. If marks cannot be detected continuously by five patterns or more, [ERROR 36-C MARK DETECT] (P.7-12) is displayed.
MEDIA SKEW <ENT>	Sheet misalignment exceeds the setting length of skew check (P.4-14).	Set the sheet again and press the ENTER key.
PAUSE REM/END	The plotter is holding the register mark detecting operation, since the REMOTE key has been pressed during the detection process.	Press the REMOTE key to resume the mark detection. Or press the END key to end the operation.
MEDIA EXCHANGE	The machine is waiting for the medium to be replaced during continuous copying in the leaf media mode.	Replace the leaf sheet (cut sheet) with a new one, and resume continuous copying.
MEDIA END REM/END	End of the medium is detected while detecting a register mark or cutting roll medium.	Cutting cannot be continued, since roll medium has ended. Press the END key and replace it with new medium.
	The medium is lifted.	Fix the lifting of the sheet and press the REMOTE key to resume cutting.
	The back of the machine is exposed to intense light.	Turn the machine around so as not to exposed it to the light, and press the REMOTE key to resume cutting.

Error Messages

When an error message is displayed, eliminate the error according to the chart below.
If the same error message appears again, contact your distributor or our service office.

Error messages	Cause	Solution
***** ERROR 01 ***** MAIN ROM	An error occurred in the circuit board system. (ROM)	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region.
***** ERROR 02 ***** MAIN RAM	An error occurred in the circuit board system. (RAM)	
***** ERROR 03 ***** POWER +5V	An error occurred in the circuit board system. (Power supply voltage +5 V)	
***** ERROR 03 ***** POWER +24V	An error occurred in the circuit board system. (Power supply voltage +24 V)	
***** ERROR 03 ***** POWER +42V	An error occurred in the circuit board system. (Power supply voltage +42 V)	
***** ERROR 04 ***** F - ROM	An error occurred in the circuit board system. (Parameter ROM)	
***** ERROR 06 ***** SD - RAM	An error occurred in the circuit board system. (SDRAM)	
***** ERROR 07 ***** HEAD (- - -)	A connection error in the heads was detected. (Abnormal temperature was detected.)	
***** ERROR 07 ***** VOLTAGE (- - -)	A connection error in the heads was detected. (Abnormal voltage was detected.)	
***** ERROR 08 ***** Linear ENCODER: SENSOR	An error occurred in detecting the linear encoder. (Unable to count)	
***** ERROR 08 ***** Linear ENCODER: DIR.	An error occurred in detecting the linear encoder. (Error in the mounting direction)	
***** ERROR 08 ***** Linear ENCODER: COUNT	An error occurred in detecting the linear encoder. (Read-out count error)	
***** ERROR 09 ***** FPGA ERROR	An error occurred in the circuit board system. (FPGA PDC)	
***** ERROR 09 ***** HDC ERROR (- - -)	An error occurred in the circuit board system. (FPGA HDC)	
***** ERROR 10 ***** COMMAND ERROR	The machine received some data other than command data.	According to the application, switch the settings for COMMON SETUP>RECEIVED DATA. (P.5-2)
***** ERROR 10-C ***** COMMAND ERROR		Securely connect the interface cable in position. Use an interface cable conforming to the specifications.
***** ERROR 11 ***** PARAMETER ERROR	Any parameter outside the range of acceptable numeric values was received.	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region.
***** ERROR 11-C ***** PARAMETER ERROR		

Error messages	Cause	Solution
***** ERROR 12 ***** MAINTENANCE COMMAND	Data other than command data has been received.	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region.
***** ERROR 12-C ***** DEVICE	An improper device control command is issued.	Change the control command to the machine, and then send the data again. Or, turn the power OFF, turn it back ON, and then send the data again. If the same error message appears again, contact our service office or the distributor in your region.
***** ERROR 13-C ***** PM OVER	The receiver buffer exceeds the limit.	Divide the polygonal data and send the divided data.
***** ERROR 15-C ***** AUTO FEED	The machine failed to feed the medium by the length specified by the data.	Load the longer medium, and then try again.
***** ERROR 16 ***** MRL COMMAND	The received data does not follow the command system set with the machine.	Transmit data that is compatible with the command system using the application supported by this machine.
***** ERROR 25 ***** FULL-SPEED	An error occurred in communication between the host computer and this machine due to the USB2.0 connection. (Full-Speed mode connection)	Check that the host PC supports the USB2.0 interface. (Communication can be resumed without changing any setting. However, it is recommended to use the connection in High-speed mode.)
***** ERROR 25 ***** PACKET SIZE OVER	An error occurred in communication between the host computer and this machine due to the USB2.0 connection.	Check that the cable is securely connected. Also, check to see if any error has occurred in the host computer.
***** ERROR 25 ***** USB PROTOCOL		
***** ERROR 25 ***** USB ENVIRONMENT		
***** ERROR 25 ***** USB DATA		
***** ERROR 30 ***** CAN'T OPERATE	Improper operation was conducted on the operation panel.	The bottom row of the display shows the reason by which the operation is disabled. Eliminate the cause of the error, and then continue the operation.
***** ERROR 31-C ***** NO DATA	Multiple cutting cannot be executed because the receiver buffer is empty.	Send the cutting data before executing the No.COPIES.
***** ERROR 32-C ***** DATA TOO BIG	Multiple cutting cannot be executed because the received data is too large.	Refer to the No.COPIES function.
***** ERROR 33-C ***** MEDIA SIZE	The medium length in the medium-feeding direction is too short.	Use a longer medium.
***** ERROR 34 ***** PRINT DATA REMAIN	The function setting has been changed or an unavailable function has been commanded while an unfinished printing job remains in the queue.	Finish printing all the data that has been received by the machine or clear the remaining data, and then try again.
***** ERROR 34-C ***** CUT DATA REMAIN	Improper operation was conducted while cutting is suspended by REMOTE.	Continue cutting until cutting data is completed, or clear the data.



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Error messages	Cause	Solution
<div>***** ERROR 35-C *****</div> <div>CUTTING WIND</div>	To execute takeup, media cannot be automatically cut.	When TAKEUP TIMING is set on roll media detection, autocut is not executed. If putting priority on autocut, set TAKEUP TIMING "OFF". (P.4-37)
<div>***** ERROR 36-C *****</div> <div>MARK DETECT</div>	A register mark cannot be detected. (During the mark detection process after detecting the medium)	<p>Confirm the following items:</p> <ul style="list-style-type: none"> Medium is not curled. The register mark detection start point is set correctly. (P.4-15) The register marks are printed in black against a white background. There is no unnecessary patterns, dust, or dirt between the register marks. Various settings regarding the register mark are configured appropriately. (P.4-11) <p>If all the above items are OK, contact our service office or the distributor in your region.</p>
<div>***** ERROR 36-C *****</div> <div>JOG & <ENT> or <END></div> <div>***** ERROR 38-C *****</div> <div>MARK SCALE</div>	<p>A register mark cannot be detected. (During copy cut of the mark)</p> <ul style="list-style-type: none"> "MARK DETECT" and "JOG & <ENT> or <END>" are displayed alternately. "MARK SCALE" and "JOG & <ENT> or <END>" are displayed alternately. 	<p>Confirm the following items:</p> <ul style="list-style-type: none"> When this error occurs, the light pointer stops at the detection starting point. If the position is found improper, move the light pointer to the appropriate position using the JOG keys. Press the ENTER key to make the machine perform detection again. When using a soft medium or a large medium of which the width exceeds 800 mm, increase the pinch rollers (middle). When using a soft medium, set the length of each side of the register mark to 8 mm or above. Also, place the mark copies making a clearance of 8 mm between each mark. Confirm that the register marks are printed in black against a white background. Confirm that there is no unnecessary patterns, dust, or dirt between the register marks. Confirm that the various settings regarding the register mark are configured appropriately. P** When the media press is used, the medium may be lifted. In this case, remove the media press and try again. <p>If all the above items are OK, contact our service office or the distributor in your region.</p>
<div>***** ERROR 37-C *****</div> <div>MARK ORIGIN</div>	The origin is detected in the area outside of the available printing area by the register mark detecting process.	Place the register mark within the available printing area.
<div>***** ERROR 40 *****</div> <div>MOTOR ALARM X</div>	An excessive load was applied to the X motor.	<p>Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region.</p>
<div>***** ERROR 41 *****</div> <div>MOTOR ALARM Y</div>	An excessive load was applied to the Y motor.	
<div>***** ERROR 42 *****</div> <div>X OVER CURRENT</div>	An error due to an excessive current of the X motor was detected.	
<div>***** ERROR 43 *****</div> <div>Y OVER CURRENT</div>	An error due to an excessive current of the Y motor was detected.	
<div>***** ERROR 45 *****</div> <div>CAPPING:PARAMETER</div>	An error occurred in the capping control. (Improper parameter adjustment value)	
<div>***** ERROR 46 *****</div> <div>WIPER</div>	An error occurred in the wiper control.	

Error messages	Cause	Solution
***** ERROR 50 ***** MEDIA WIDTH SENSOR	Paper could not be detected.	Confirm the position of the medium setting and the pinch roller and then perform the medium detection again. (☞ P.2-25)
***** ERROR 51 ***** Y-ORIGIN	Y-origin could not be detected.	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region.
**** ERROR 120 **** ROOM TEMP LOW (XX°C)	The room temperature is out of the usable temperature range (too low).	Adjust the room temperature of the installation place. (☞ P.3-35)
**** ERROR 121 **** ROOM TEMP HIGH (XX°C)	The room temperature is out of the usable temperature range (too high).	
**** ERROR 144 **** CARTRIDGE SET!	There is a slot where no cartridge has been inserted.	The empty slot may be dried to the degree that it cannot use ink. To avoid this trouble, set a cartridge in the empty slot.
**** ERROR 170 **** CUTTER LOCK	Since the cutter head could not be fixed at the waiting position, the coupler switching was disabled.	Turn OFF the power supply and wait for a while. Then turn ON the power. If this message is displayed again, contact our service office or selling office.
**** ERROR 170 **** PRINT HEAD LOCK	Since the print head could not be fixed at the waiting position, the coupler switching was disabled.	
**** ERROR 180 **** CUTTER JOINT	The cutter unit and the coupler are disconnected during operation.	
**** ERROR 181 **** PR POSITION	Paper could not be detected. The pinch roller positions are not appropriate.	Set the pinch rollers in the correct positions. If the same error message appears again, contact your distributor or our service office.
**** ERROR 200 **** HEAD MEMORY (----)	An error occurred on the head unit memory.	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region.
**** ERROR 202 **** DVEICE CONSTRUCTION	The head is not connected. An error occurred on the head slider board. The head is not MIMAKI genuine.	
**** ERROR 203 **** SDRAM SIZE	An SD-RAM of the size required for the machine has not been equipped.	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region. (When a usable SD-RAM is available, the machine can be started as is. However, the printing speed may be slow depending on the resolution.)
**** ERROR 205 **** 42V HEAD Voltage	An abnormal voltage of head was detected.	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region.
**** ERROR 206 **** MAIN PCB	An error occurred on the main PCB.	
**** ERROR 208 **** CHECK MAIN PCB ID XX	Model ID of main PCB is different. (XX is ID code.)	
**** ERROR 207 **** XXXXXXXXXX	An error is detected on the waveform printed on the lower line of the display.	
**** ERROR 211 **** Heater TEMP (---/---/---)	An abnormal temperature of the media heater was detected.	



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Troubleshooting

Error messages	Cause	Solution
<div> <div>***** ERROR 211 *****</div> <div>HeadWARM.TEMP.(- - - -)</div> </div>	An abnormal temperature of the head heater was detected.	Turn OFF the power to the machine and turn it ON again after a while. If the same error message appears again, contact our service office or the distributor in your region.
<div> <div>***** ERROR 250 *****</div> <div>Y COORDINATES</div> </div>	An error was detected during scanning operation.	
<div> <div>***** ERROR 251 *****</div> <div>SYSTEM ERROR</div> </div>	A system error occurred.	



Chapter 8

Appendix



This chapter

contains the lists of the specifications and functions of this machine.

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Main Body Specifications

Printer Section Specifications

Item		CJV30-60	CJV30-100	CJV30-130	CJV30-160
Printing head	Method	Drop-on-demand piezoelectric print heads			
	Specification	One head			
Printing mode (scanning x feeding)		720 x 540 dpi / 540 or 720 or 1440 x 720 dpi / 540 x 900 dpi / 540 or 720 x 1,080 dpi / 720 x 1,440 dpi / 1440 x 1,440 dpi			
Usable inks	Dedicated solvent ink.	Either ES3 ink or SS21 ink			
	Dedicated aqueous ink.	Eco-PA1 ink: 4 colors (Y,M,C,K) 6 colors (Y,M,C,K,Lc,Lm) 7 colors (Y,M,C,K,Lc,Lm,Lk)			
Ink supply		Supplied from ink cartridges through tubes Ink cartridge replacement method: Only when four colors are used: Supplied by toggle switchover with two cartridges per color			
Amount of supplied ink		When eight colors are used: White and silver One 220-cc cartridge for each color Other colors One 440-cc cartridge for each color When six colors are used: One 440-cc cartridge for each color, 440 cc per color (two cartridges (880 cc in total) only for each of magenta and cyan) When six colors + white color are used: WhiteTwo 220-cc cartridges, 440 cc per color Other colorsOne 440-cc cartridge for each color, 440 cc per color When four colors are used: Two 440-cc cartridges for each color, 880 cc per color			
Usable media		Tarpaulin / FF(Flexible Face) / Polyvinyl chloride film / MS Chloroethene / MS Tarpaulin			
Dead space	Leaf medium	Left and right: Inside the pinch roller detection position (default value) / Front: 40.0 mm / Rear: 98.5 mm			
	Roll medium	Left and right: Inside the pinch roller detection position (default value) / Front: 40.0 mm / Rear: 0.0 mm			
Head height adjustment		2.0 mm / 3.0 mm (from the platen surface) 2-step adjustment			
Waste ink tank		Bottle type (2,000 cc)			
Image memory		SD-RAM 128 MB			
Command		MRL-III (MIMAKI original command)			

Cutter Section Specifications

Item		CJV30-60	CJV30-100	CJV30-130	CJV30-160
Maximum speed ^{*1}		30 cm/s			
Maximum acceleration		1 G			
Cutting pressure		10 to 350 g			
Usable tools		Eccentric cutter / water-based ballpoint pen / oil-based ballpoint pen / Ballpoint pen for handwriting (sold on the market) ^{*2}			
Number of times the cutter responds to a medium		10 times/sec			
Usable media		Polyvinyl chloride sheet (Thickness of 0.25mm or less with laminate ^{*3}) / fluorescent sheet ^{*4} / reflecting sheet ^{*4} (excluding high-intensity reflecting sheets)			
Dead space	Leaf medium	Left and right: Inside the pinch roller detection position (default value) / Front: 40.0 mm / Rear: 98.5 mm			
	Roll medium	Left and right: Inside the pinch roller detection position (default value) / Front: 40.0 mm / Rear: 0.0 mm			
Repetition accuracy ^{*5}		± 0.2 mm (excluding the expansion and contraction due to the temperature of the film)			
Reception buffer memory		SD-RAM 30 MB (20 MB when the sorting function is effective.)			

Item	CJV30-60	CJV30-100	CJV30-130	CJV30-160
Command	MGL- II c2			
Program step	25 μ m / 10 μ m			

- *1. The maximum speed may be limited, depending on the size of a used medium. In addition, the cutting section does not operate with both speed and acceleration being at the maximum.
- *2. Use one with a diameter of 8 to 9 ϕ whose clamped part has no protrusion or taper. In addition, because the position of the pen point changes, depending on the types of pens, no good image quality can be ensured.
- *3. This conforms with our specified sheet.
- *4. When a blade dedicated for fluorescent sheets (SPB-0007) or a blade dedicated for reflecting sheets (SPB-0006) is used
- *5. For repetition accuracy, see the lower part of this page.

Repetition Accuracy Conditions

State of the Plotter

- Clamping pressure: Strong

State of How a Medium Should Be Set

- The left and right margins of the medium must be 20 mm wide or more.
- The medium on the front side must not be warped or lifted.
- The medium and the backing sheet must not be separated (no air bubbles between them) because of the bend of the medium.
- The medium must be set properly by the medium feeding function.
- When the medium is a roll medium, it must not be wound up loosely. (The surface of both ends of the medium must have no steps.)

Cutting Speed

- 30 cm/s or less (when the attached cutter is used)

Data to Be Cut

- Test pattern for maintenance (ten continuous reciprocating motions in the longitudinal direction)
- The medium and the backing sheet must not be separated (no air bubbles between them) because of the extreme bend of the medium caused while it is cut.



Common Specifications

Item		CJV30-60	CJV30-100	CJV30-130	CJV30-160
Maximum printing/cut width		610 mm	1,020 mm	1,361 mm	1,610 mm
Size of a roll medium	Maximum width	620 mm	1,030 mm	1,371 mm	1,620 mm
	Minimum width	100 mm			
	Thickness	1.0 mm or less			
	Roll outside diameter	φ180 mm or less			
	Roll weight ^{*1}	25 kg or less			
	Roll inside diameter	2 or 3 inches			
	Print side	Roll exterior surface			
	Rolling-up processing	The end of a medium is attached to a paper tube with adhesive tape or weak adhesion.			
Size of a leaf medium	Maximum width	620 mm	1,030 mm	1,371 mm	1,620 mm
	Minimum width	100 mm			
Distance accuracy	Absolute accuracy	The larger of the two: ± 0.3 mm or ± 0.3% of a specified distance			
	Reproducibility	The larger of the two: ± 0.2 mm or ± 0.1% of a specified distance			
Rectangular accuracy		± 0.5 mm / 1,000 mm			
Medium skew		5 mm or less every 10 m			
Medium cutting		Cutting in the Y direction by the blade installed on the cutter head (Cutting accuracy (difference between steps): 0.5 mm or less)			
Paper ejection		Roll take-up device supplied as a standard accessory (Switchover is possible between winding up a roll with its printed surface facing inward and outward.)			
Interface		USB 2.0			
Noise	During standby	58 dB or less (FAST-A: 1 m from the front, rear, left, and right sides, and adsorption fan: low)			
	Continuous operation noise	70 dB or less			
Safety standards to be met		VCCI-Class A, FCC-Class A, UL 60950, CE Marking (EMC Directive, Low Voltage Directive), CB Report, and RoHS Directive			
Power specifications		AC100 to AC120 ± 10%, AC220 to AC240 ± 10%, 50/60 Hz ± 1 Hz, 15A or less			
Power consumption ^{*2}		1,380 W or less			
Installation environment	Allowable temperature	20°C to 35°C			
	Relative humidity	35 to 65% Rh (with no dew condensation)			
	Accuracy-ensuring temperature	20°C to 25°C			
	Temperature gradient	± 10°C/h or less			
	Dust	Equivalent to the normal office level			
Weight		110kg	130kg	145kg	160kg
Outside dimensions	Width	1,524 mm	1,934 mm	2,289 mm	2,538 mm
	Depth	739 mm			
	Height	1,424 mm			

*1. The roll must not sag when its both ends are held.

*2. The main body and the heaters are included.

Ink Specifications

Item		When solvent ink is used	When aqueous-color ink is used
Form		Dedicated ink cartridge	
Color		Black ink cartridge Cyan ink cartridge Magenta ink cartridge Yellow ink cartridge Light cyan ink cartridge Light magenta ink cartridge White ink cartridge ^{*1} Silver ink cartridge ^{*2}	Black ink cartridge Cyan ink cartridge Magenta ink cartridge Yellow ink cartridge Light cyan ink cartridge Light magenta ink cartridge Light black ink cartridge ^{*3}
Amount of supplied ink		220-cc or 440-cc cartridge	
Shelf life		The period is printed on the ink cartridge. Within three months after opening the package even in the available period.	
Storage temperature	During storage	0 to 25°C (average temperature of a day) • Be sure to keep the ink container in an airtight condition.	10 to 35°C (Average daily temperature) • Be sure to keep a vessel in the airtight condition. • Be sure to keep a vessel in a dry, well-ventilated, cool and dark location.
	During transportation	-20 to 60°C • Avoid a place where the temperature becomes lower than -20°C or higher than 60°C.	0 to 40°C • Avoid the condition lower than -0 °C and higher than 40 °C.

*1. When SS21W-2 (SPC-0504-W) ink cartridge is used.

When ES3 white ink (SPC-0433-W) ink cartridge is used.

*2. When ES3 silver ink (SPC-0433-Si) ink cartridge is used.

*3. When Eco-PA1 ink cartridge is used.

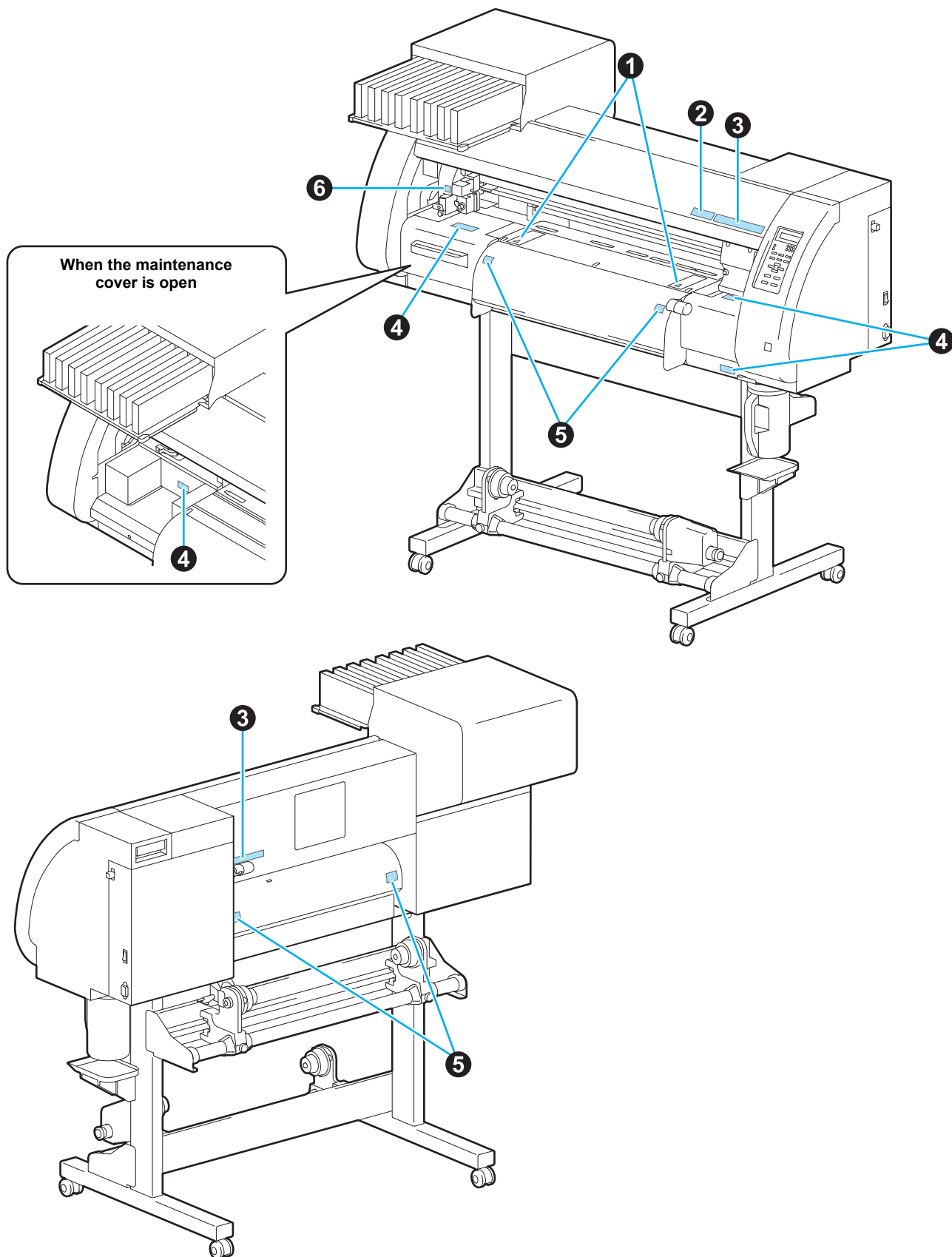



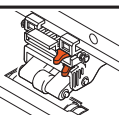


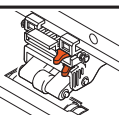


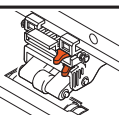























- Do not disassemble the ink cartridges or refill them with ink.
- Ink may freeze if left in a cold place for a long time.
- If ink has frozen, thaw it at room temperature (25°C) for more than three hours before use.



Warning Labels

Warning labels are attached to this machine. Be sure to fully understand the warnings given on the labels. If a warning label is illegible due to stains or has come off, purchase a new one from a distributor or our service office.



No.	Order No.	Label											
1	M904810												
2	M905935	<table border="1"><tr><td rowspan="2"></td><td> CAUTION</td><td> 注意</td></tr><tr><td>Do not move 2 levers of the pinch roller with hands. Or malfunctions may occur.</td><td>ピンチローラーの2つのレバーは、手で動かさないこと。 誤作動の原因になる。</td></tr></table>		 CAUTION	 注意	Do not move 2 levers of the pinch roller with hands. Or malfunctions may occur.	ピンチローラーの2つのレバーは、手で動かさないこと。 誤作動の原因になる。						
	 CAUTION	 注意											
	Do not move 2 levers of the pinch roller with hands. Or malfunctions may occur.	ピンチローラーの2つのレバーは、手で動かさないこと。 誤作動の原因になる。											
3	M905811	<table border="1"><tr><td rowspan="2"></td><td> 警告</td><td> 警告</td><td> WARNING</td><td> WAARSCHUWING</td><td> AVERTISSEMENT</td></tr><tr><td>手指和身体请勿靠近运转部位，以免造成危险</td><td>危険な稼働部 指や体を近づけないように</td><td>-HAZARDOUS MOVING PARTS- Keep fingers and other body parts away.</td><td>GEFÄHRLICHE BEWEGLICHE TEILE Finger und andere Körperteile fernhalten.</td><td>PIECES MOBILES DANGEREUSES Doigts et autres parties du corps sont hors de portée.</td></tr></table>		 警告	 警告	 WARNING	 WAARSCHUWING	 AVERTISSEMENT	手指和身体请勿靠近运转部位，以免造成危险	危険な稼働部 指や体を近づけないように	-HAZARDOUS MOVING PARTS- Keep fingers and other body parts away.	GEFÄHRLICHE BEWEGLICHE TEILE Finger und andere Körperteile fernhalten.	PIECES MOBILES DANGEREUSES Doigts et autres parties du corps sont hors de portée.
	 警告	 警告		 WARNING	 WAARSCHUWING	 AVERTISSEMENT							
	手指和身体请勿靠近运转部位，以免造成危险	危険な稼働部 指や体を近づけないように	-HAZARDOUS MOVING PARTS- Keep fingers and other body parts away.	GEFÄHRLICHE BEWEGLICHE TEILE Finger und andere Körperteile fernhalten.	PIECES MOBILES DANGEREUSES Doigts et autres parties du corps sont hors de portée.								
4	M903330												
5	M903239												
6	M903405												

Inquiry Sheet

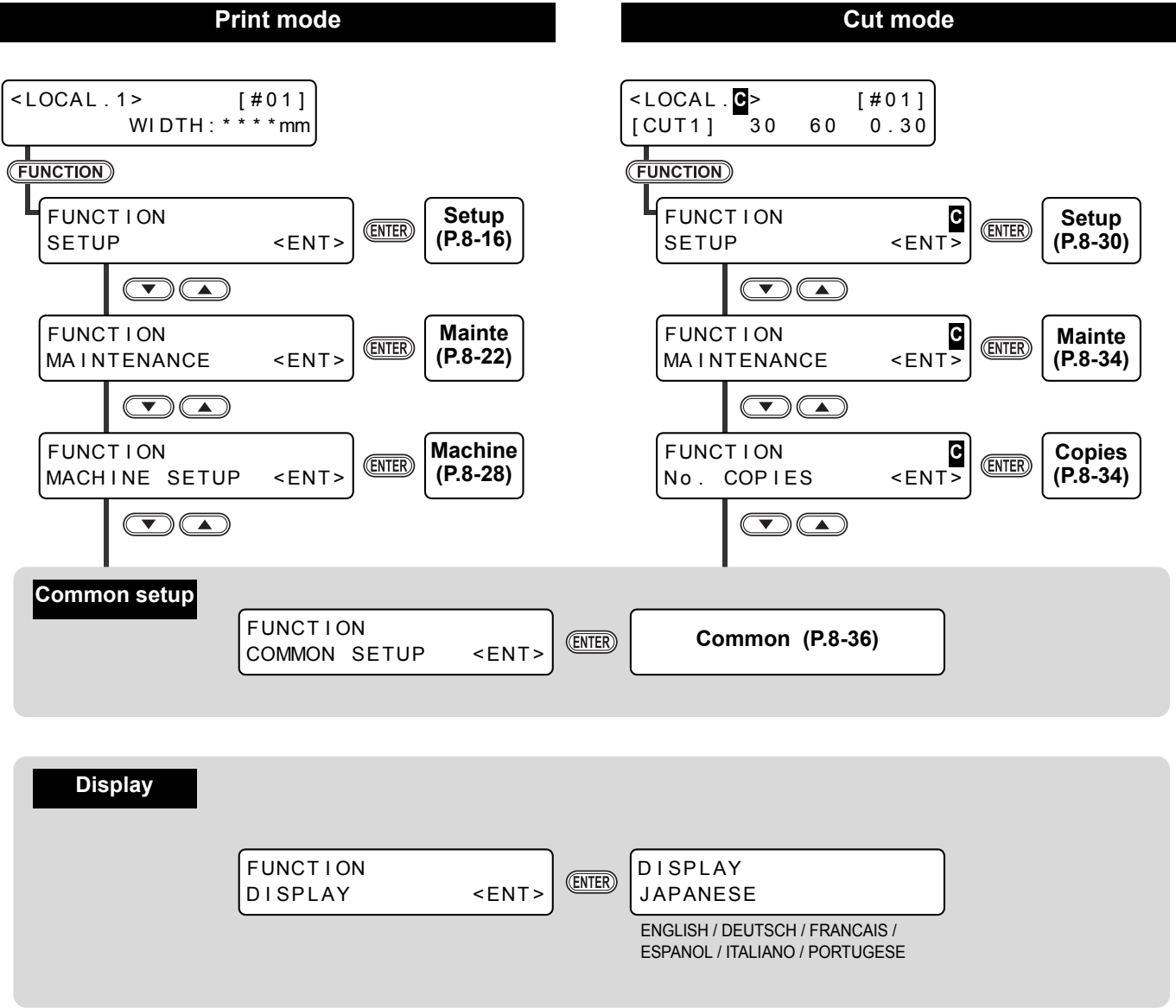
Use this sheet for troubles and abnormal functioning of the machine.
Fill in the following necessary items and fax the sheet to our service office.

Company name	
Person in charge	
Phone number	
Machine model	
Used OS	
Machine information^{*1}	
Error message	
Inquiry details	

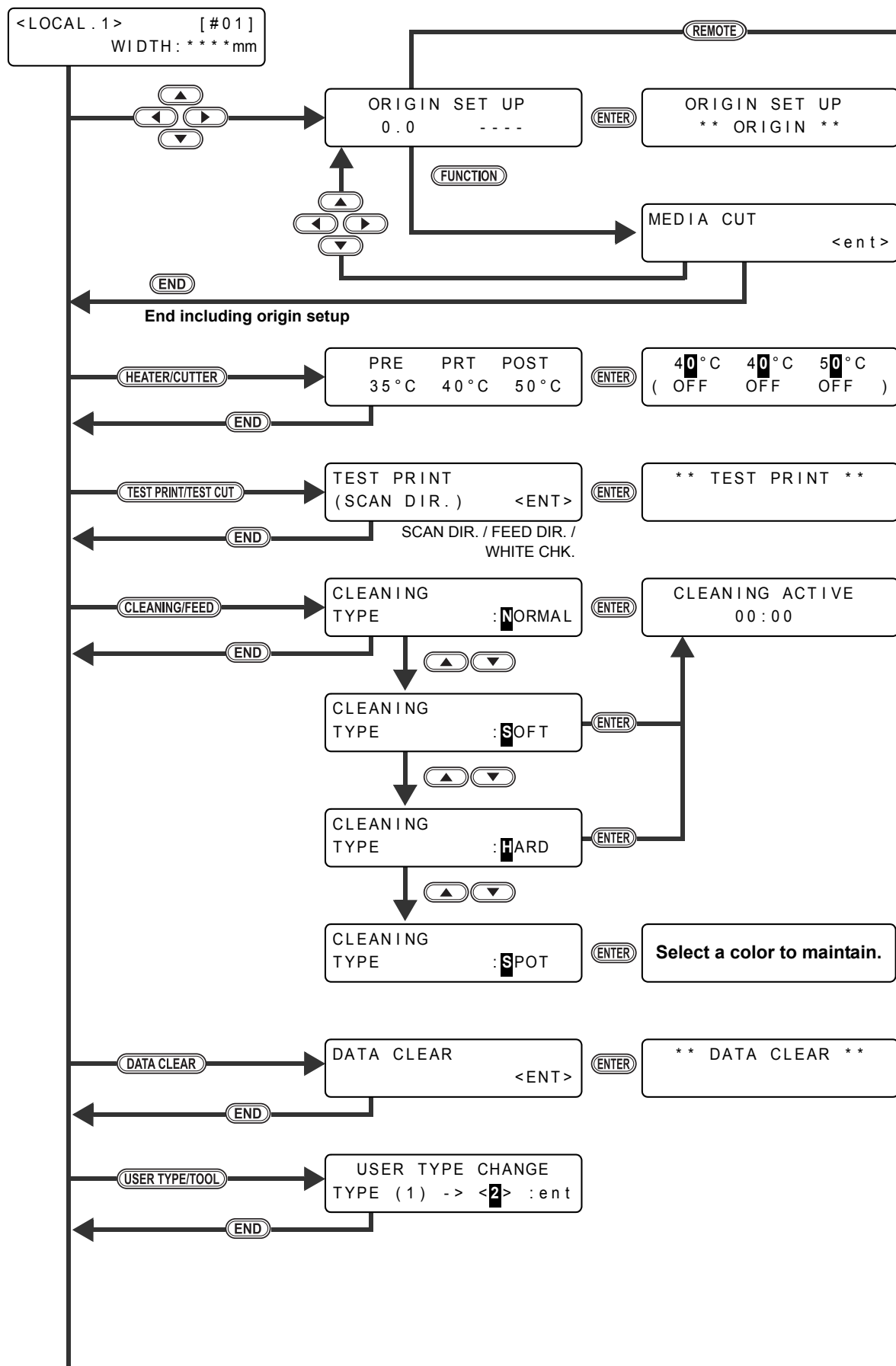
*1. See "Confirming Machine Information" (P.5-14) of "Chapter 5 Extended Functions - Common Settings -" and fill in the sheet.



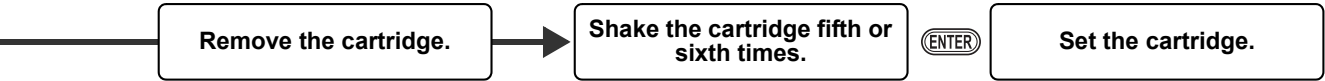
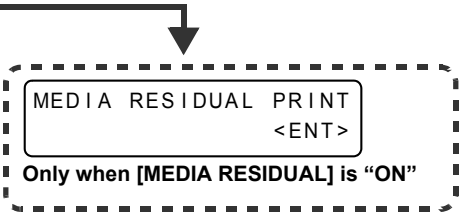
Function Flowchart



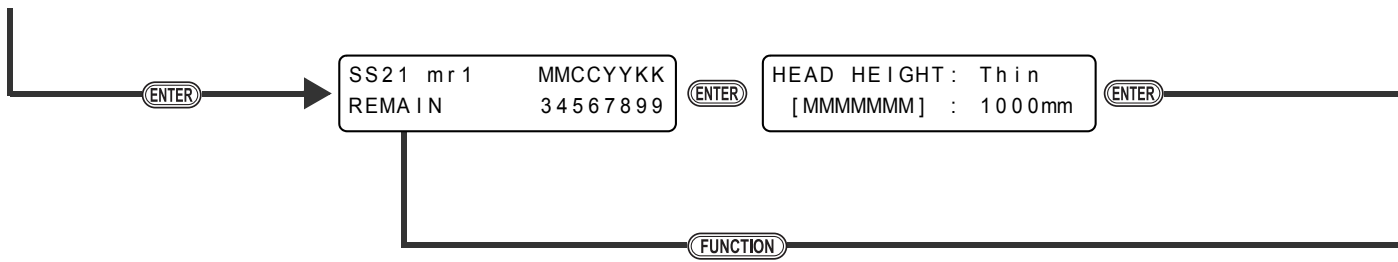
LOCAL Menu on the Printer Mode

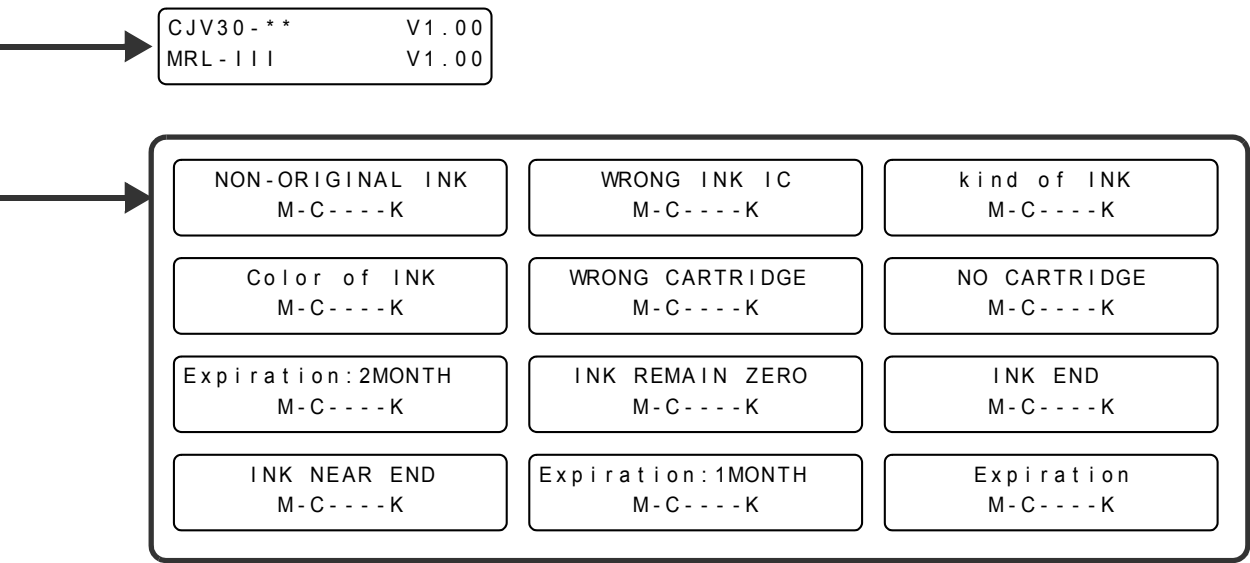


To P8-12

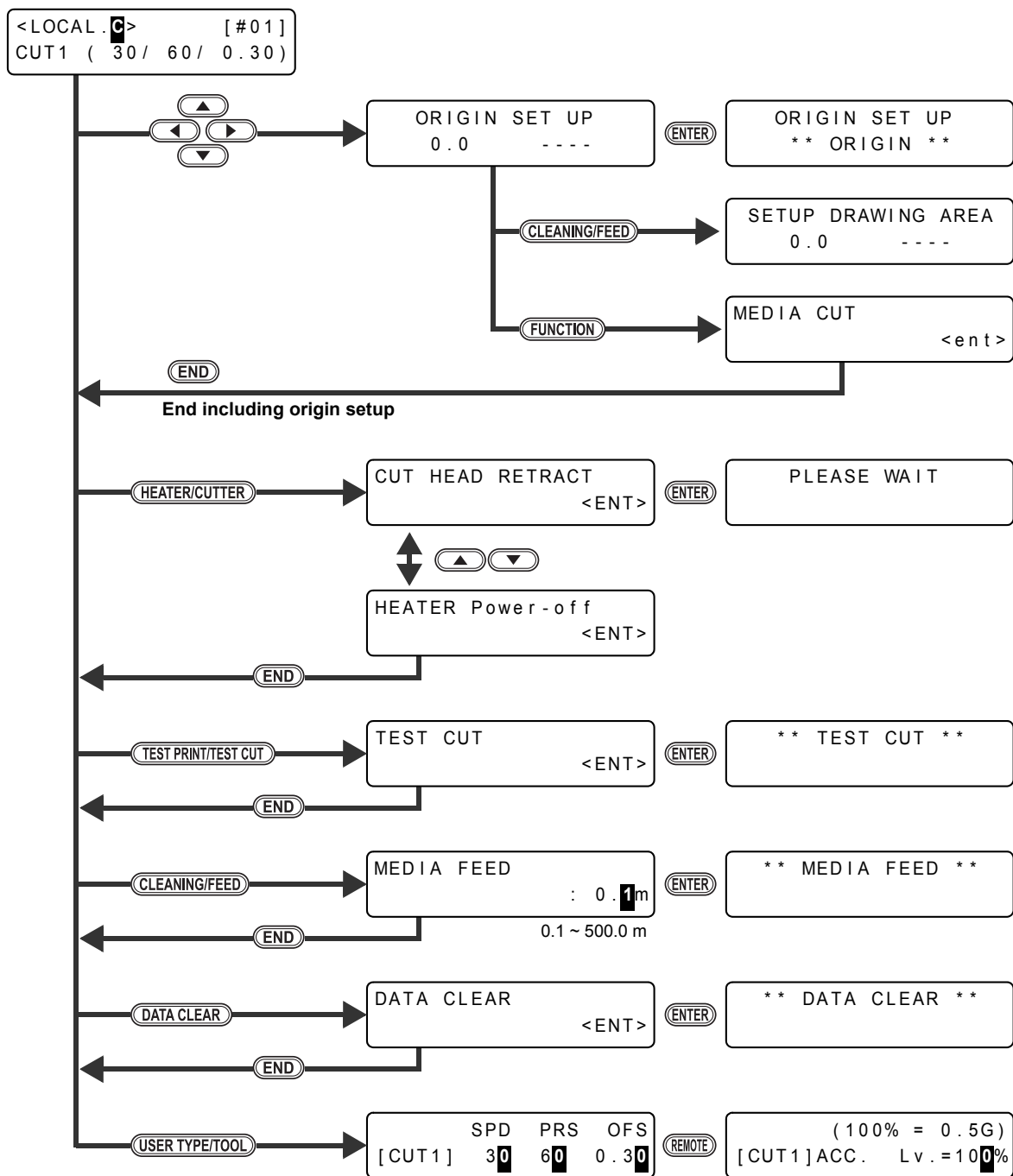


From P8-10

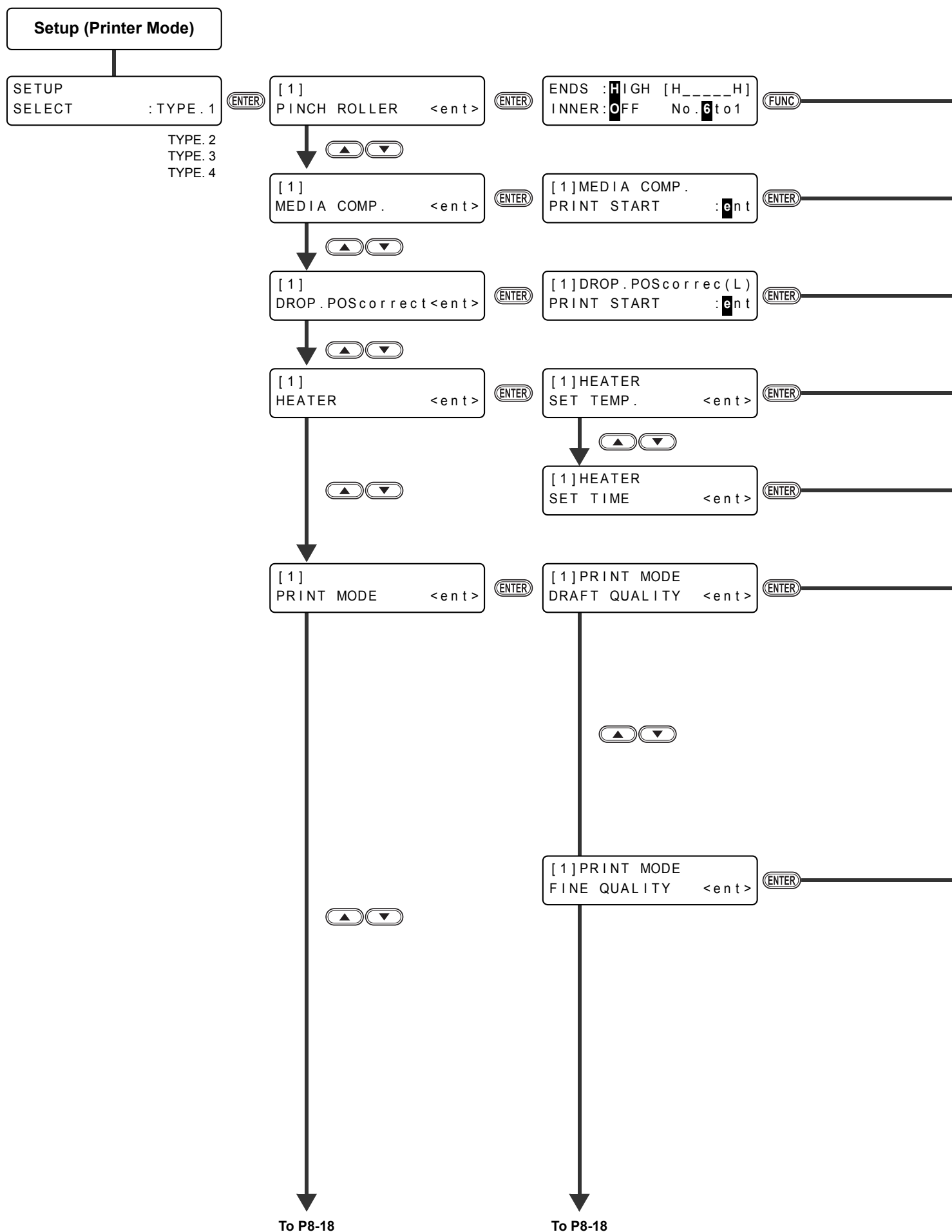


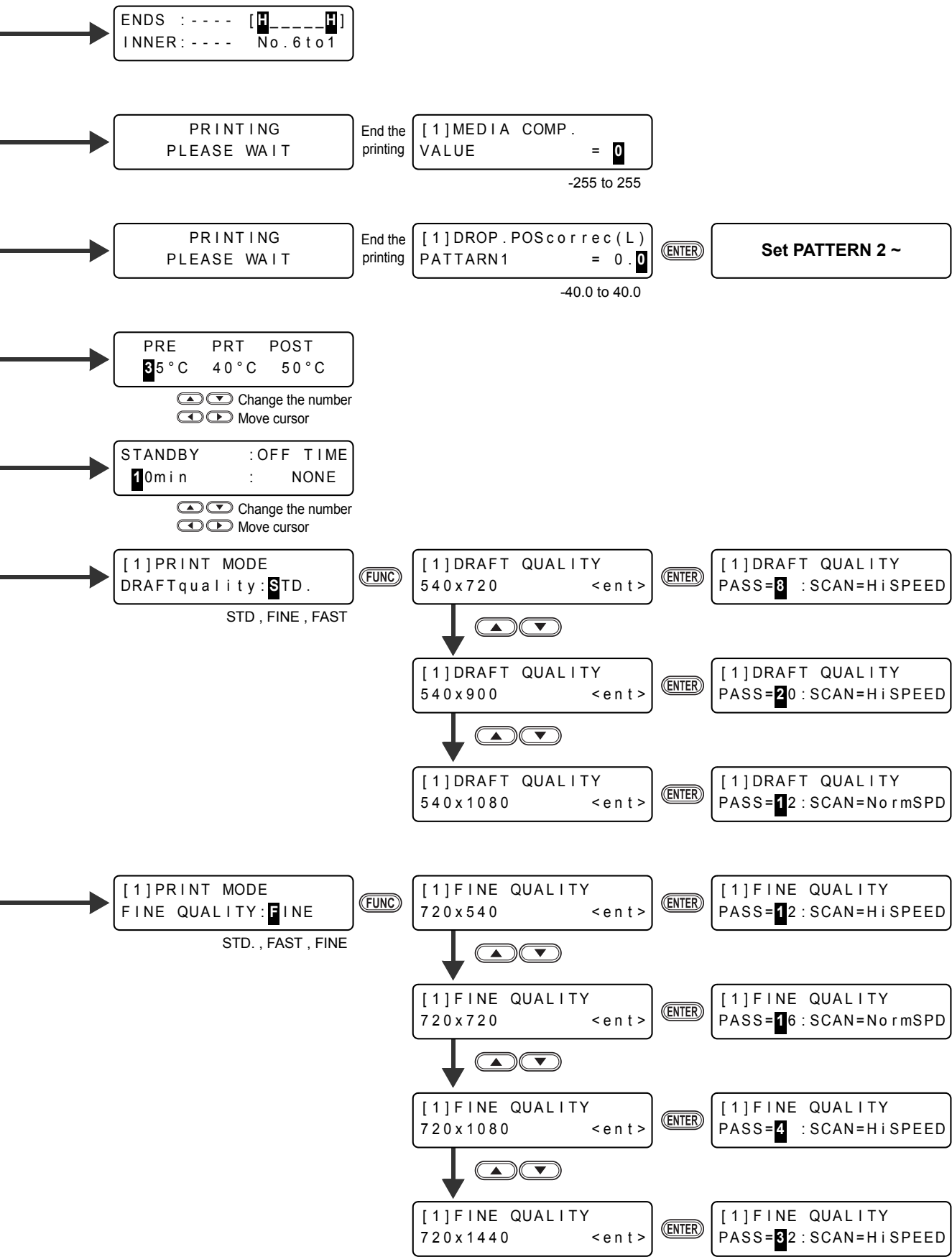


LOCAL Menu on the Cut Mode



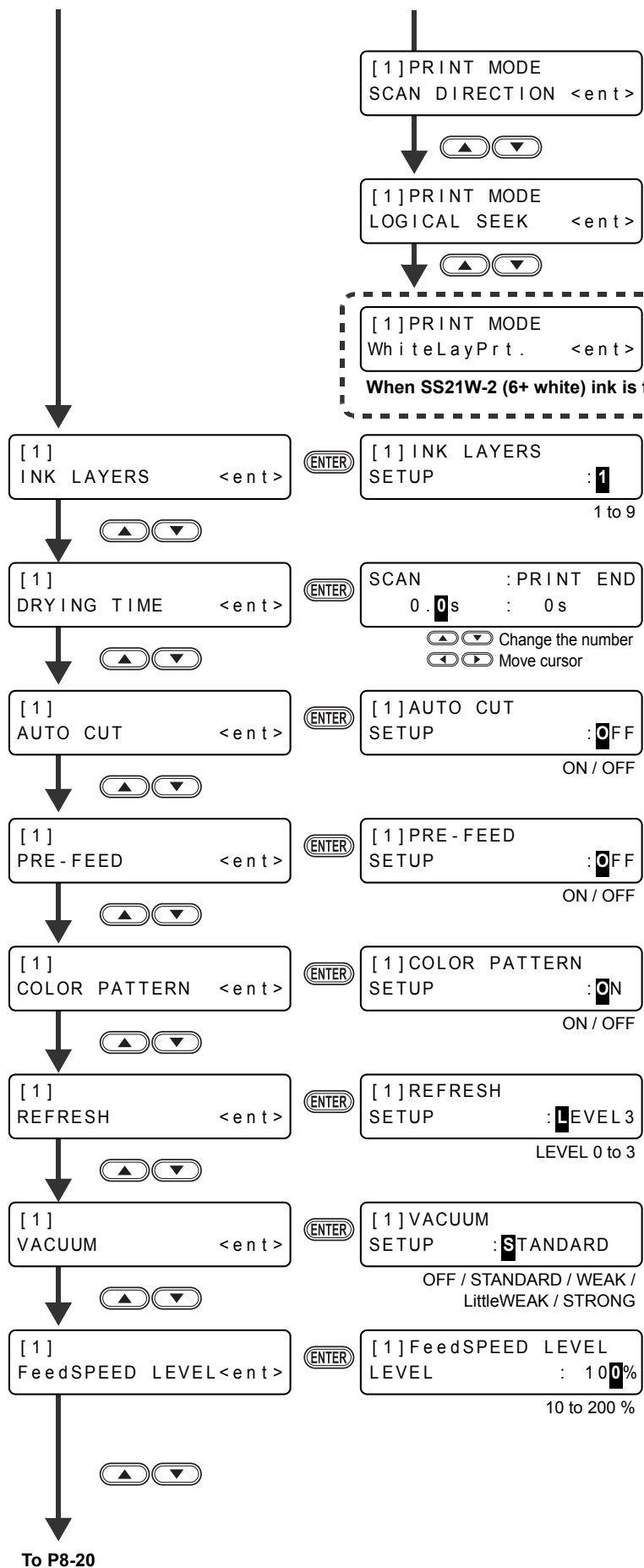


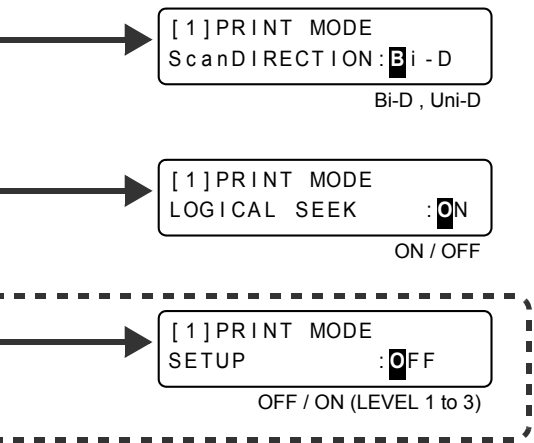




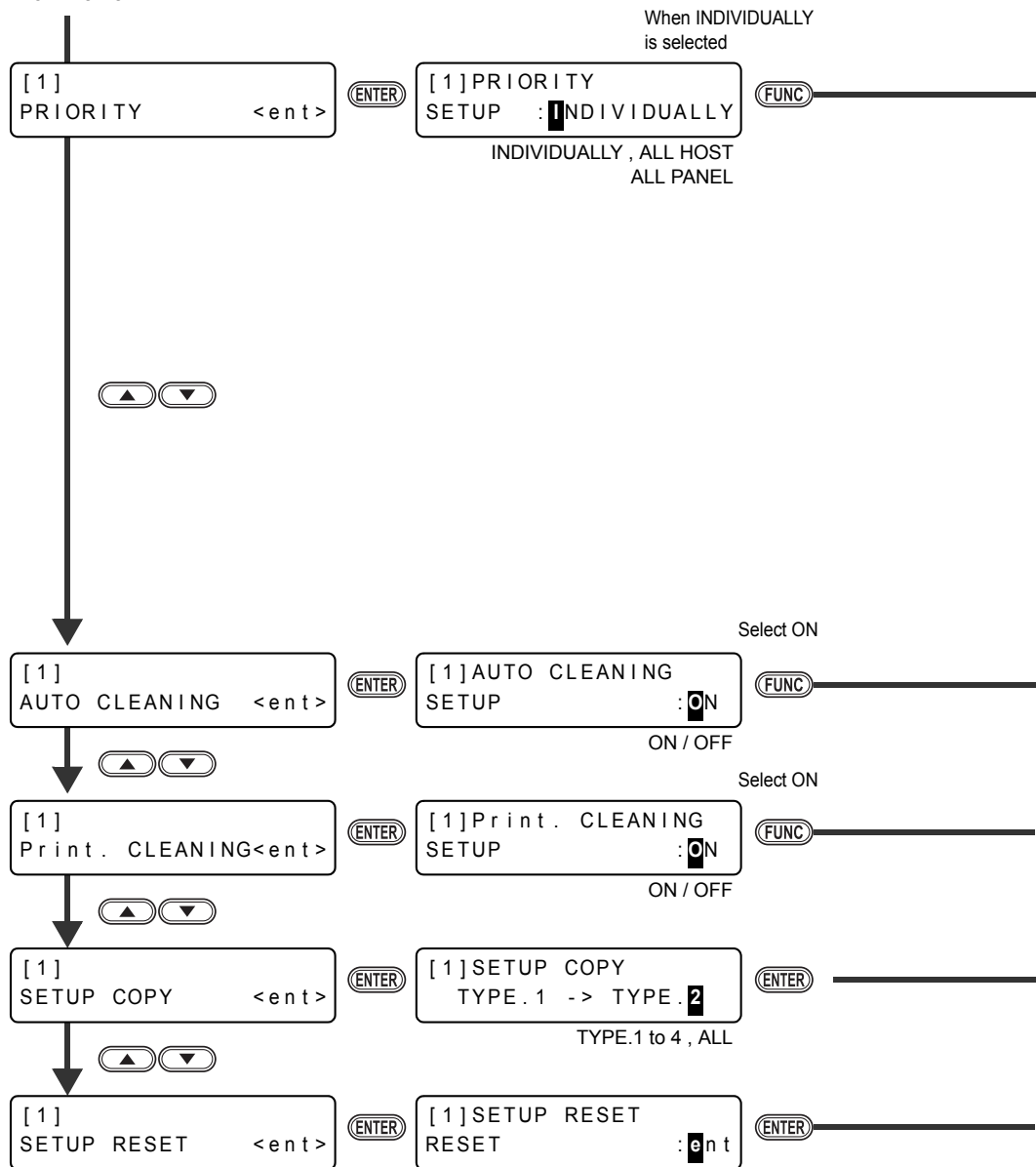
From P8-16

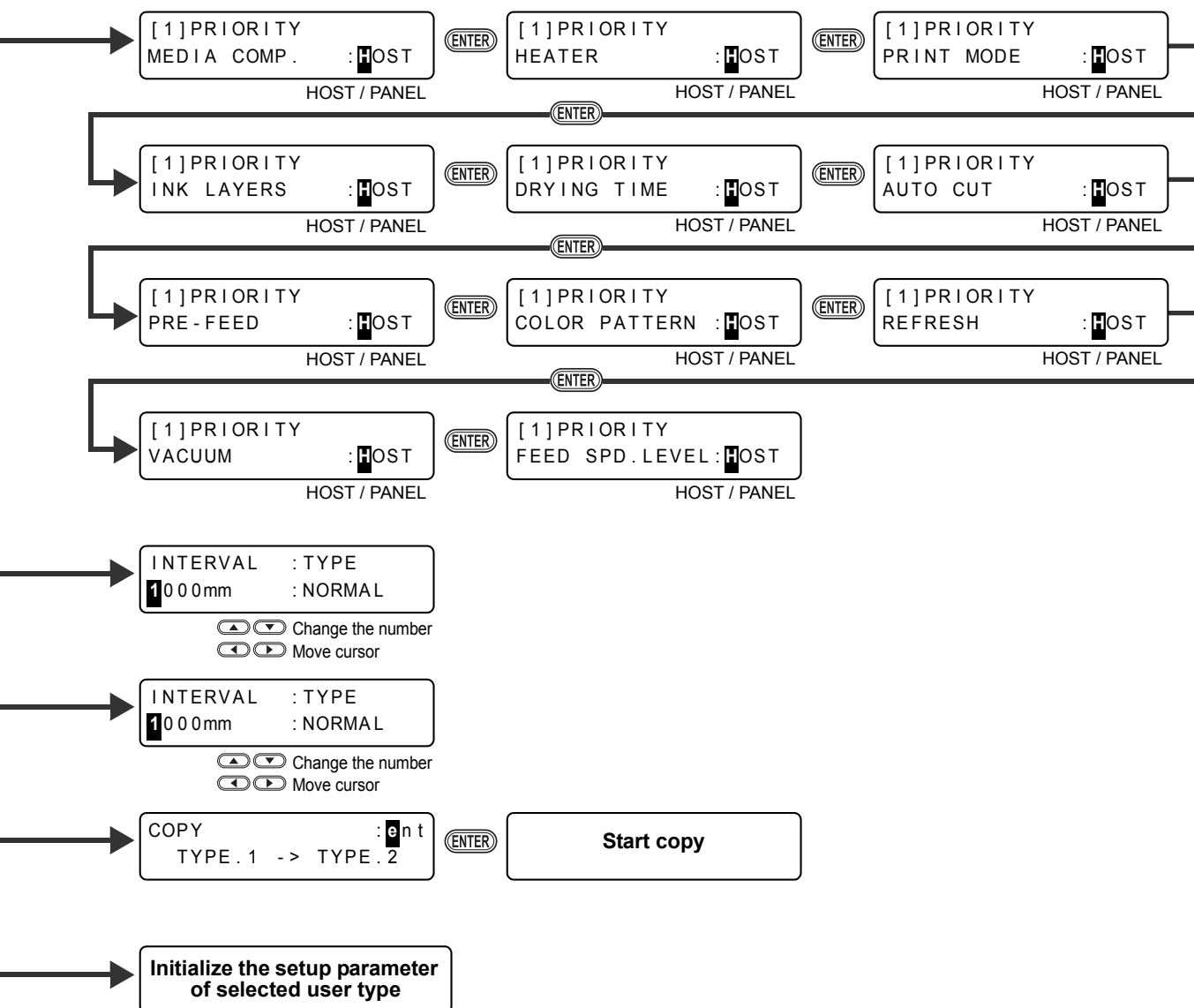
From P8-16





From P8-18





Mainte (Printer Mode)

MAINTENANCE
ST.MAINTENANCE <ent>

ENTER

ST.MAINTENANCE
CARIAGE OUT <ent>

ENTER

ST.MAINTENANCE
COMPLETED :ent

ENTER

ST.MAINTENANCE
WIPER REPLACE <ent>

ENTER

ST.MAINTENANCE
COMPLETED :ent

ENTER

ST.MAINTENANCE
NOZZLE WASH <ent>

ENTER

WIPER CLEANING
COMPLETED(NEXT) :ent

ENTER

ST.MAINTENANCE
PUMP TUBE WASH <ent>

ENTER

ST.MAINTENANCE
COMPLETED :ent

ENTER

ST.MAINTENANCE
COSTODY WASH <ent>

ENTER

WIPER CLEANING
COMPLETED(NEXT) :ent

ENTER

MAINTENANCE
CR.MAINTENANCE <ent>

ENTER

CR.MAINTENANCE
Remove the cover:ent

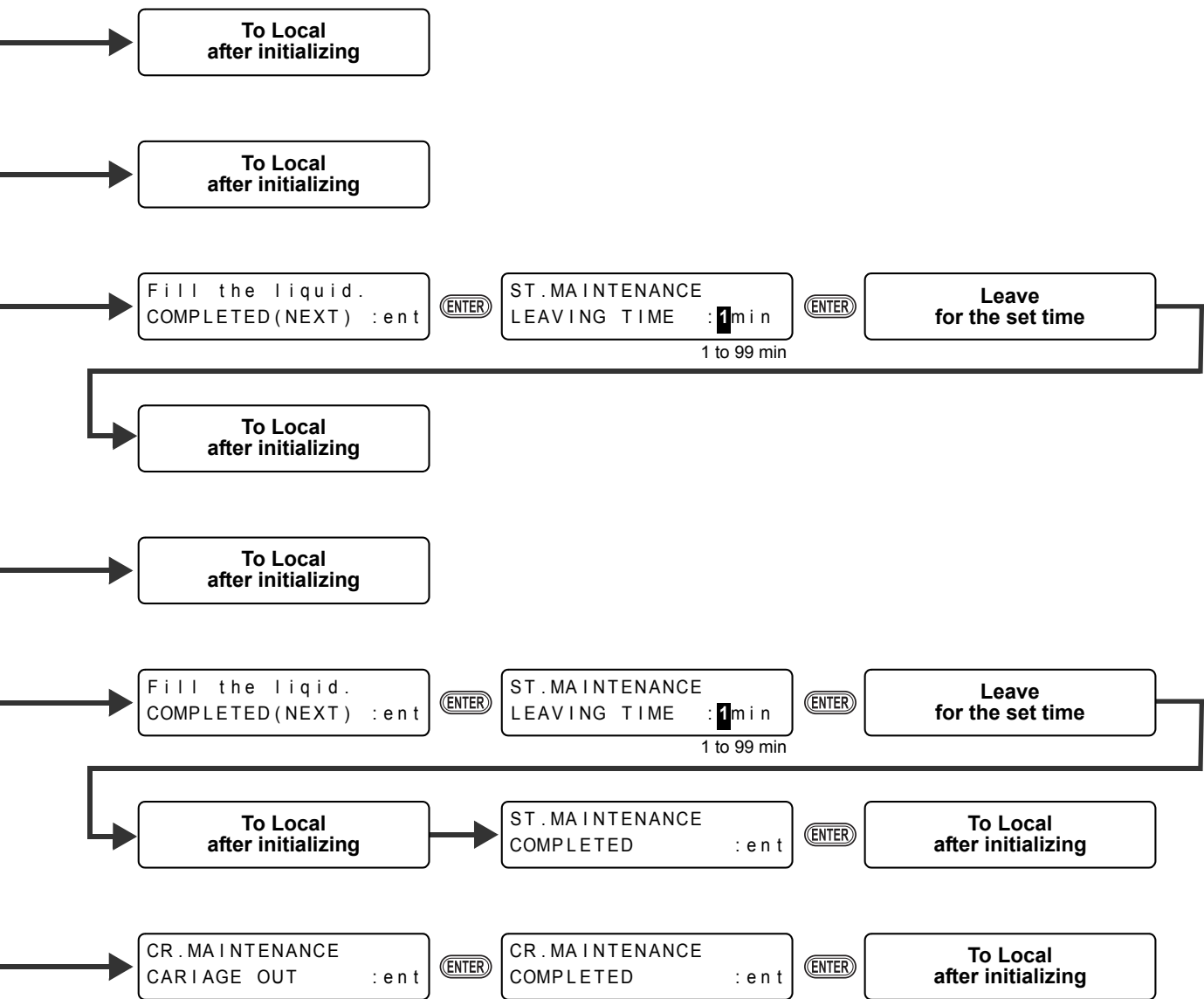
ENTER

**Remove
maintenance cover**

ENTER

To P8-24





From P8-22

MAINTENANCE
HD.MAINTENANCE <ent>

ENTER

HD.MAINTENANCE
FILL UP INK <ent>

ENTER

FILLING UP
00:00



HD.MAINTENANCE
DISCHARGE&WASH <ent>

ENTER

Remove: InkCartridges
MMCCYYKK

ENTER



HD.MAINTENANCE
MaintWashLiquid<ent>

ENTER

MaintWashLiquid
FILLING UP <ent>

ENTER



MaintWashLiquid
DISCHARGE <ent>

ENTER

MAINTENANCE
SLEEP SETUP <ent>

ENTER

SLEEP SETUP
REFRESH <ent>

ENTER

SLEEP SETUP
REFRESHinterval = 4h
OFF/1 to 168h



SLEEP SETUP
PUMP TUBE WASH <ent>

ENTER

SLEEP SETUP
WASH INTERVAL = 4h
OFF/1 to 168h



SLEEP SETUP
CLEANING <ent>

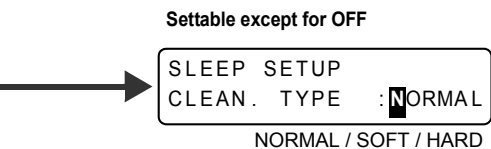
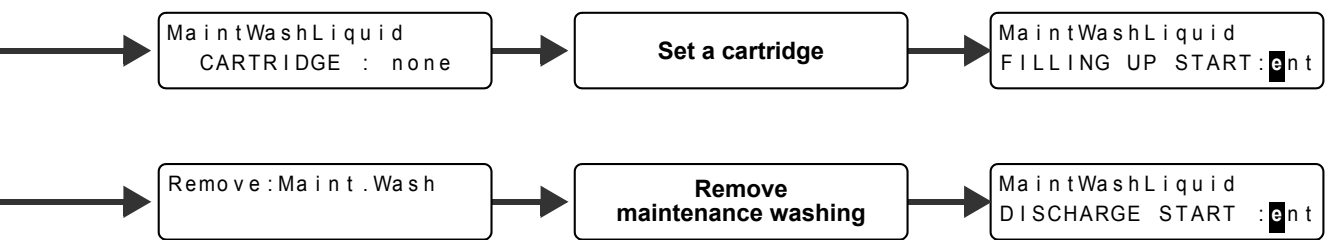
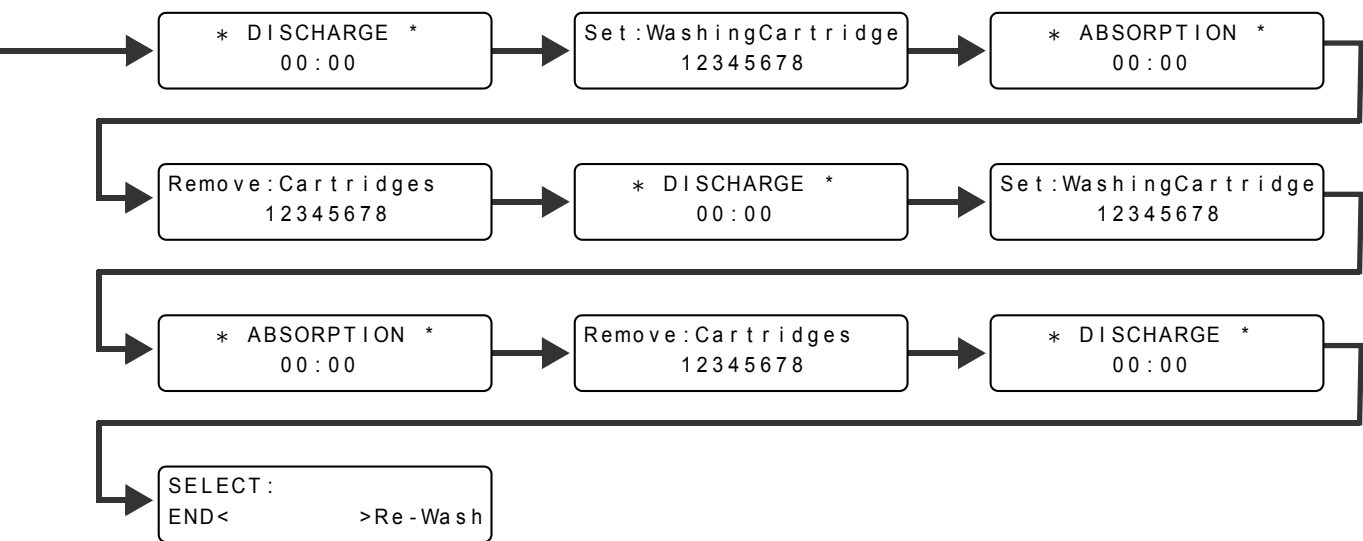
ENTER

SLEEP SETUP
CLEAN.INTERVAL = 4h
OFF/1 to 168h

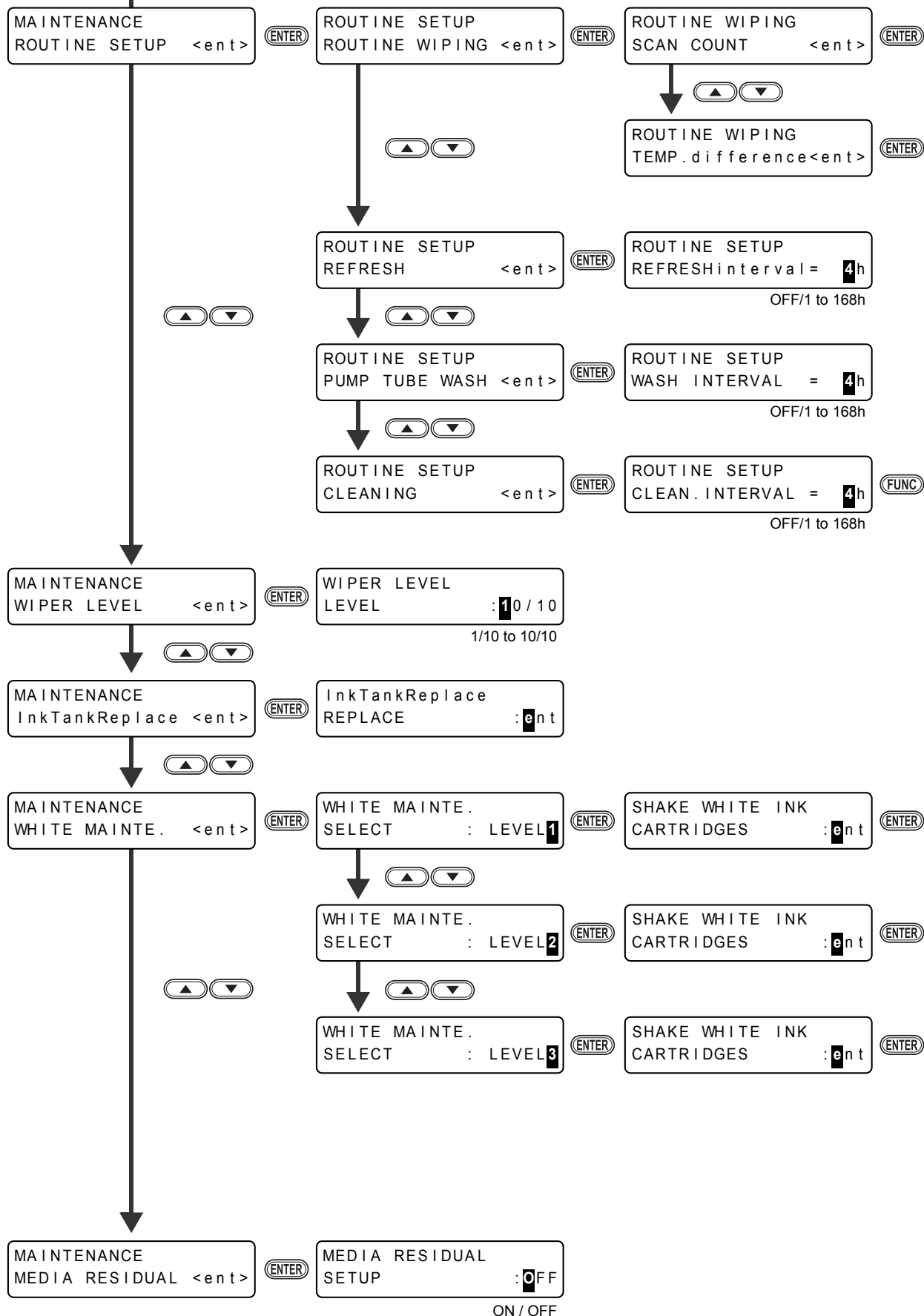
FUNC

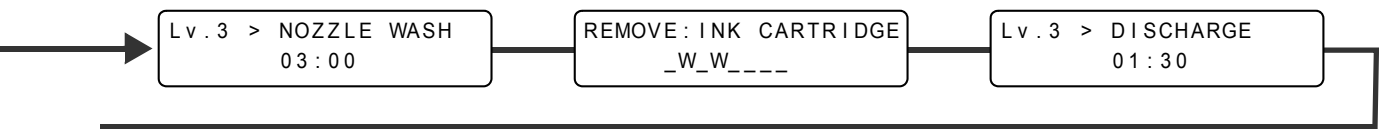
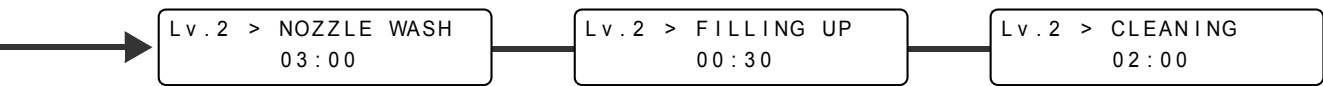
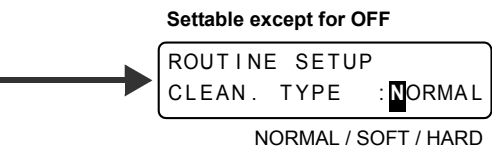
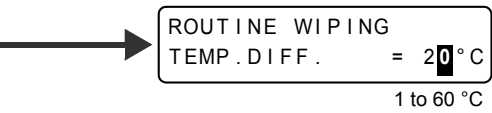
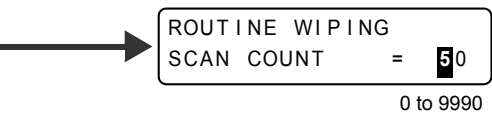
To P8-26

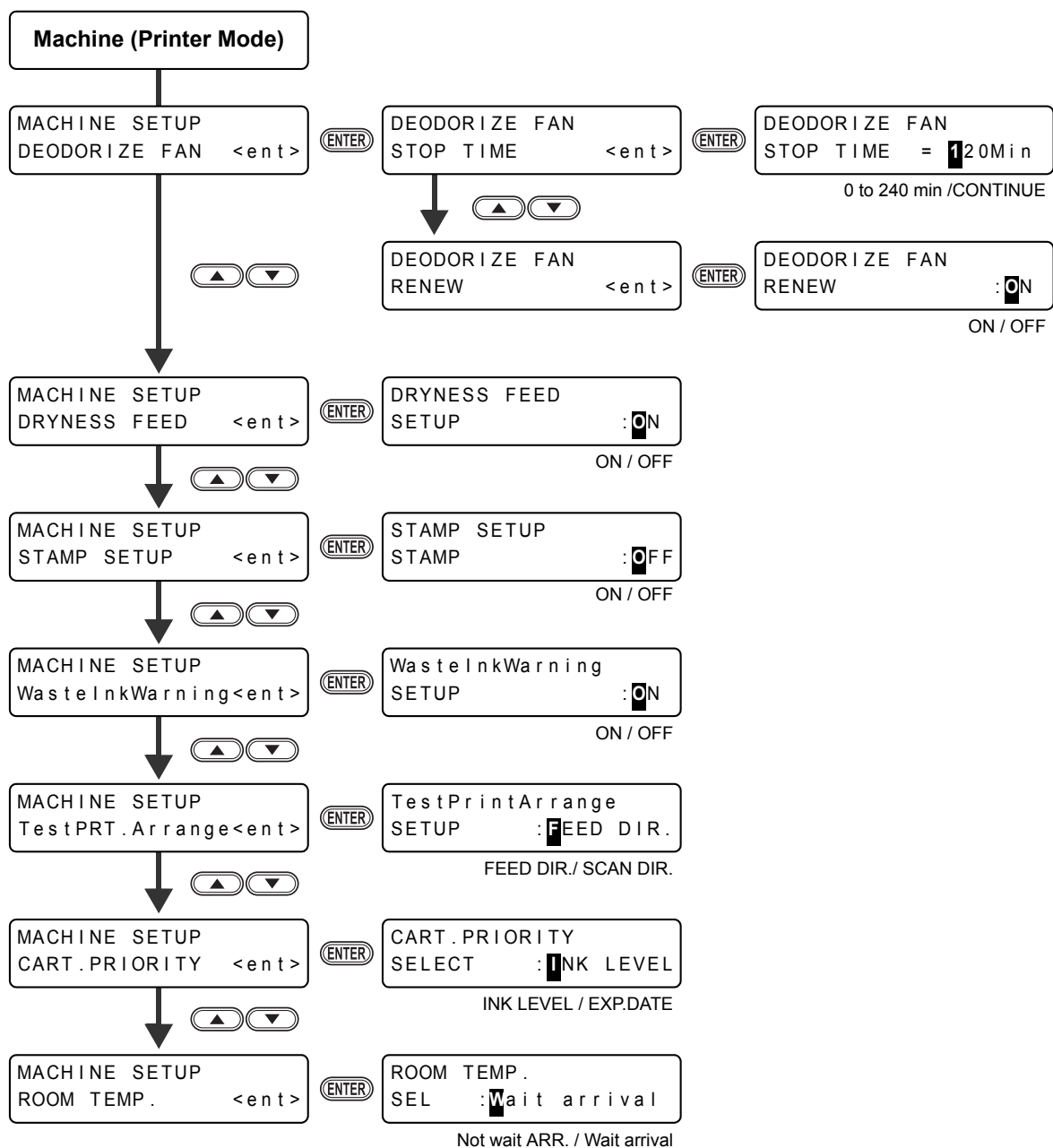




From P8-24









Setup (Cut Mode)

SETUP
SELECT : CUT1

CUT2
CUT3
PEN
HALF

[CUT1]
PINCH ROLLER <ent>

ENDS : HIGH [H____H]
INNER: OFF No. 6 to 1

[CUT1]
MARK DETECT <ent>

[CUT1] MARK DETECT
DETECT : OFF

OFF, 1pt, 2pt X,
2pt Y, 3pt, 4pt

[CUT1]
P/C ADJUST <ent>

[CUT1] P/C ADJUST
P/C ORIGIN OFS. <ent>

[CUT1] P/C ADJUST
P/C SCALE ADJ. <ent>

[CUT1]
CUT MODE <ent>

[CUT1] CUT MODE
SETUP : STD.

STD. / FINE / FAST

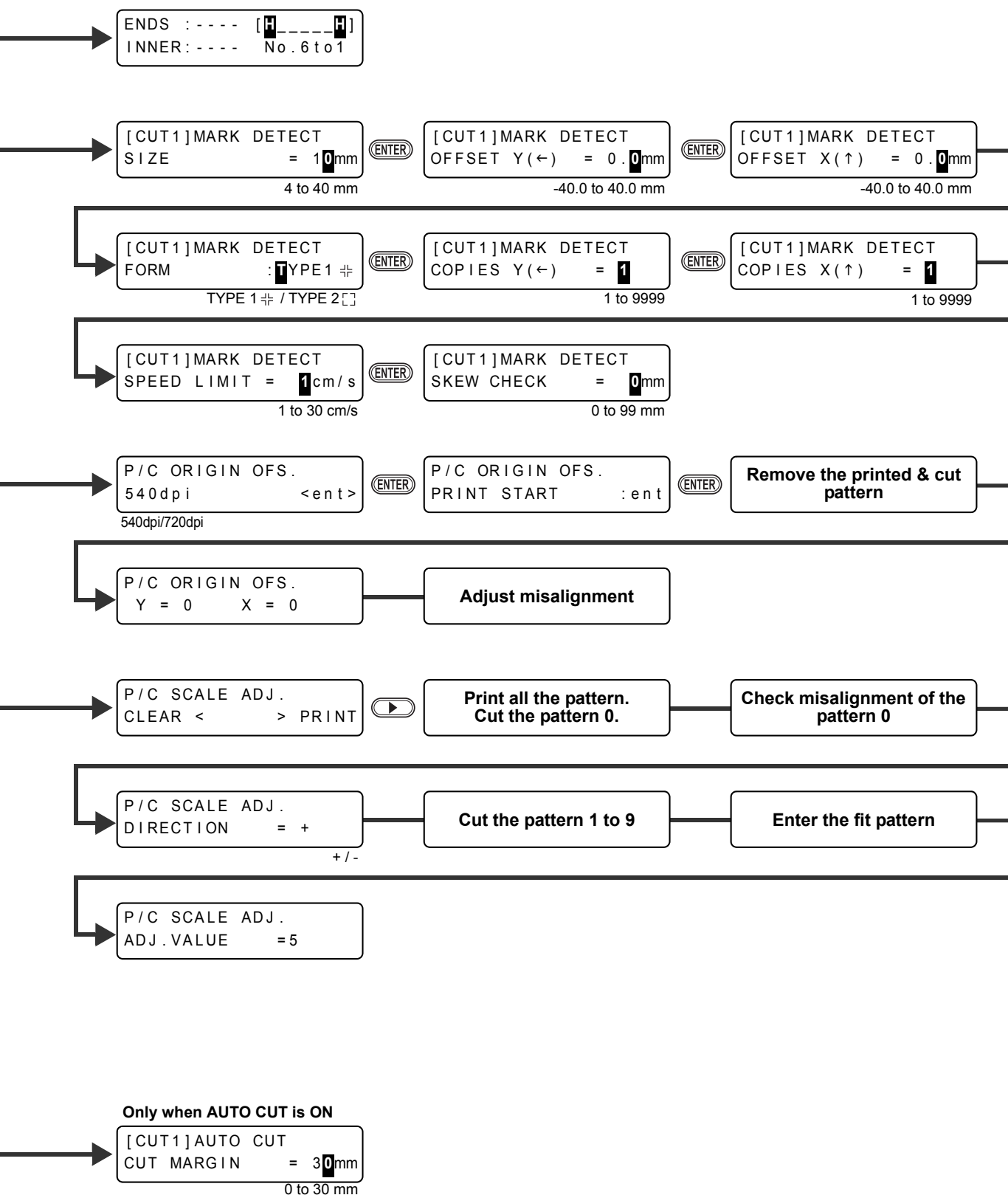
[CUT1]
AUTO CUT <ent>

[CUT1] AUTO CUT
SETUP : OFF

OFF / ON

To P8-32

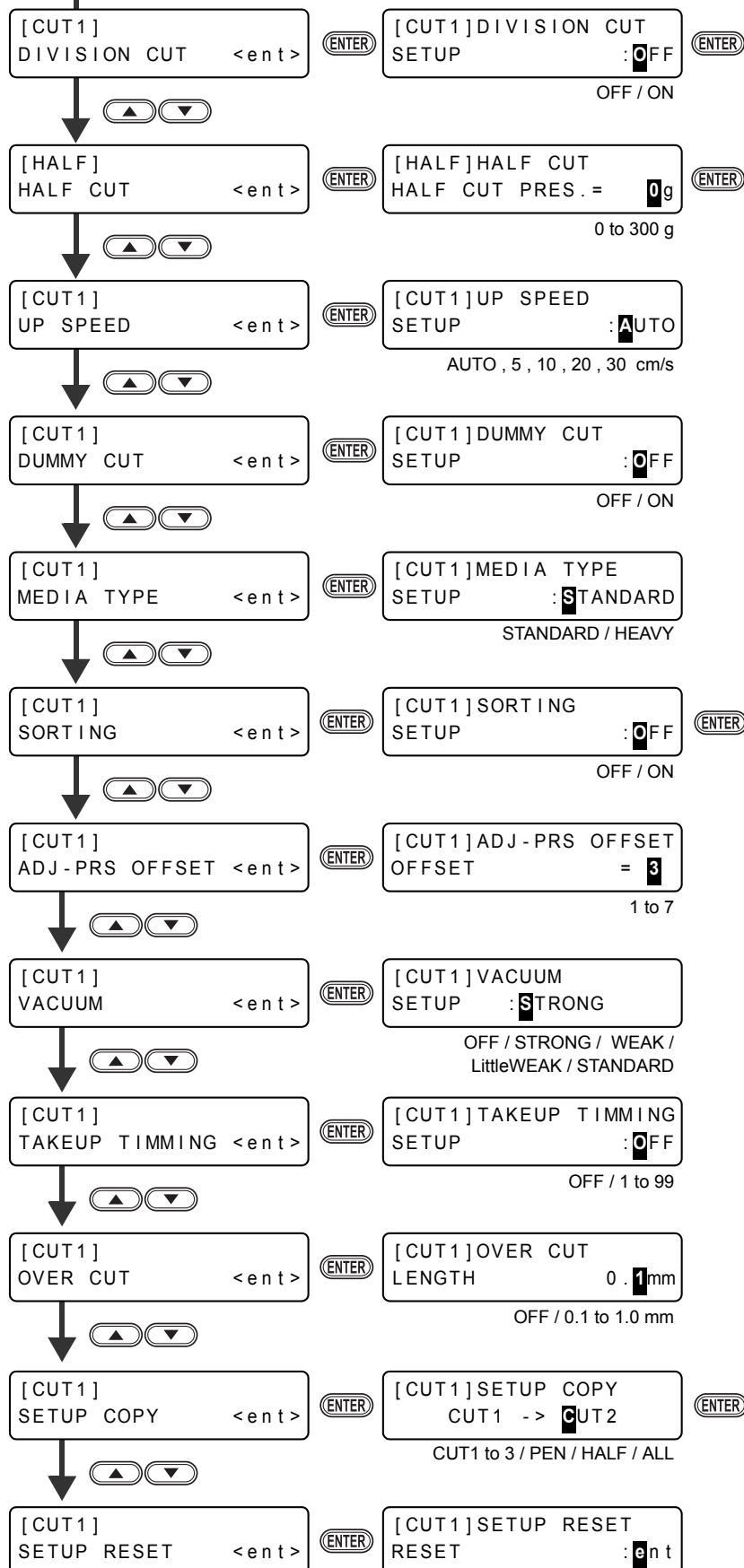


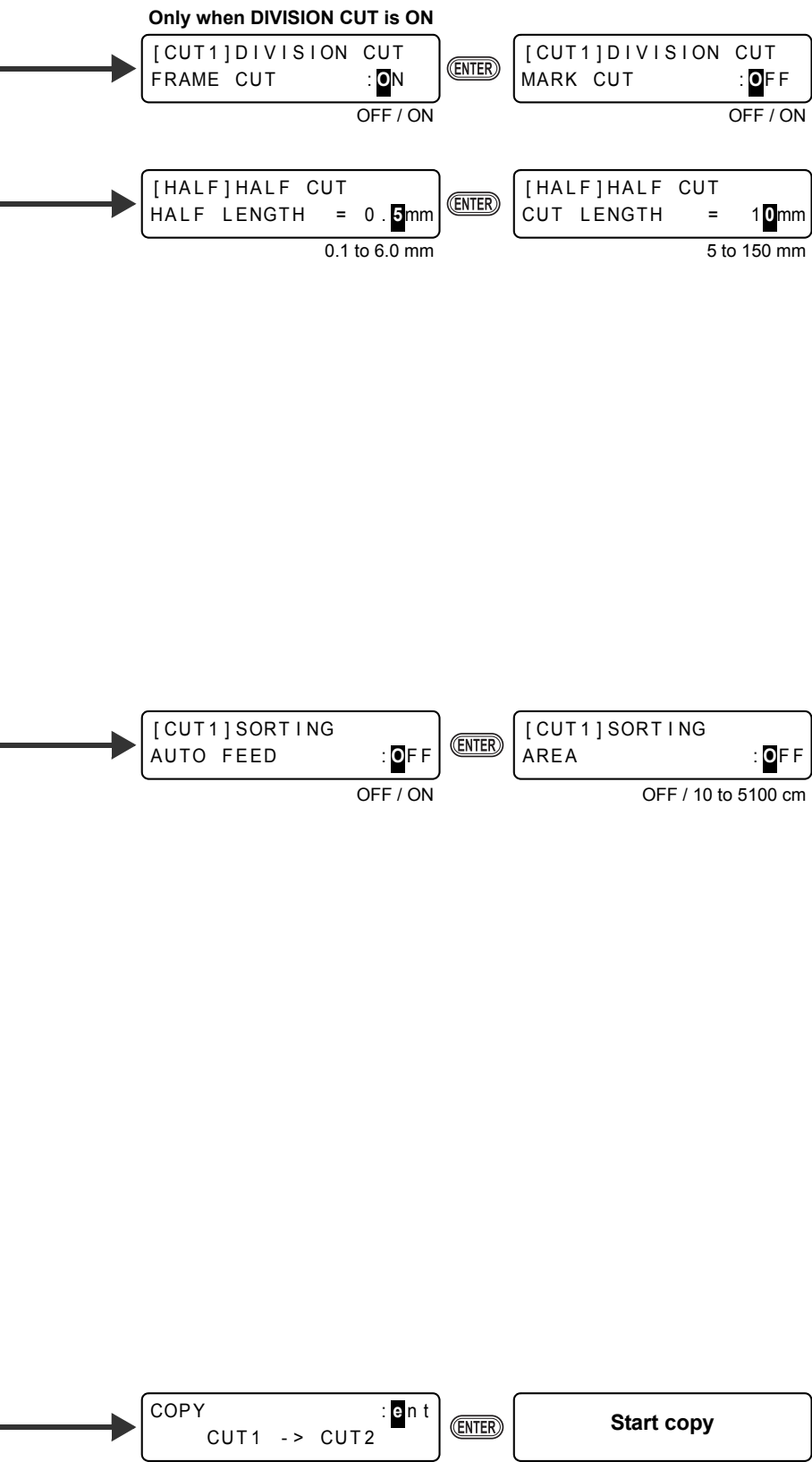


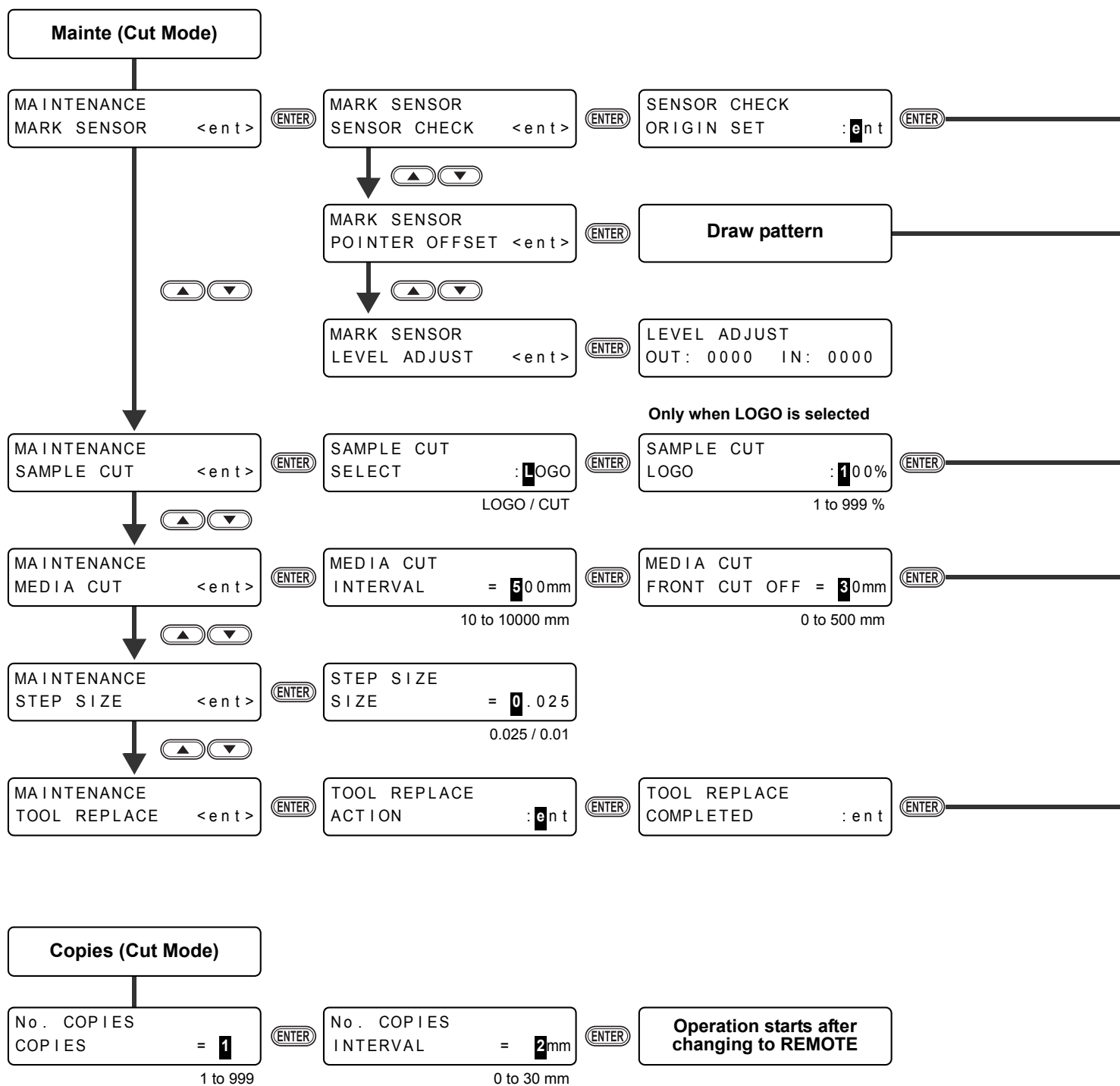
From P8-30

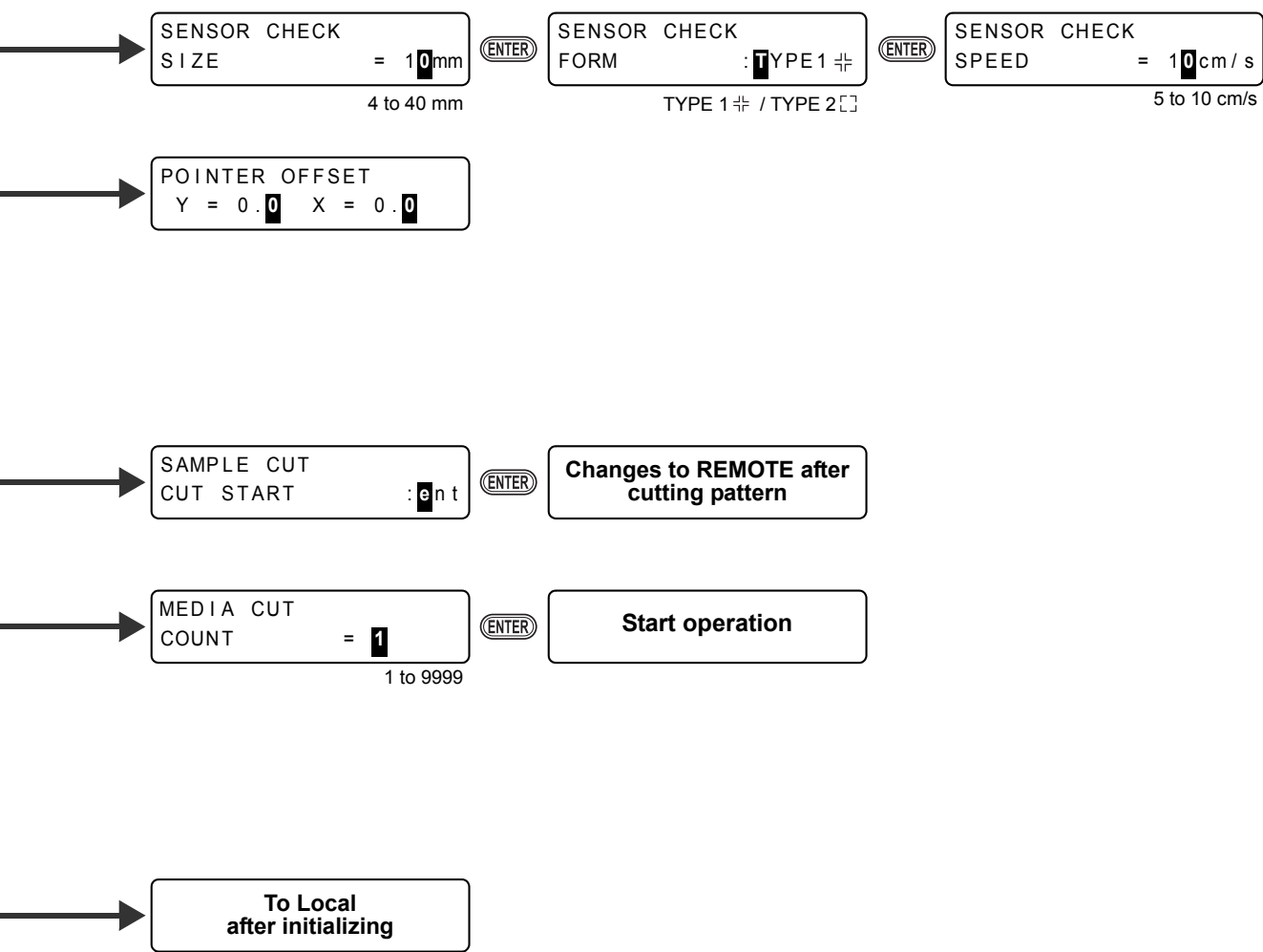
Only when tool condition [HALF] is selected

Not displayed when tool condition [PEN] is selected

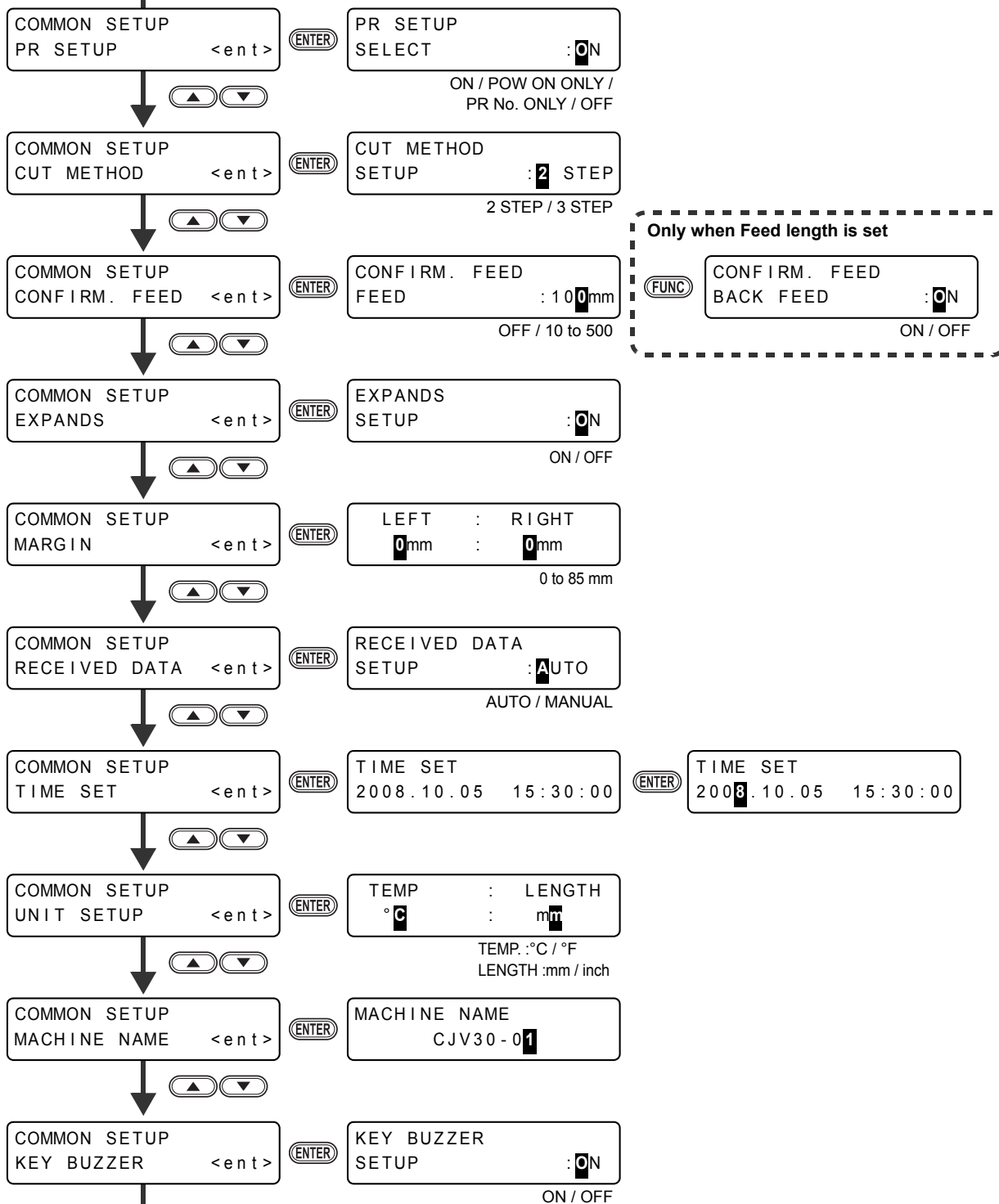








Common Setup



To P8-38



From P8-36

