

Wide Format Solvent Inkjet Printer

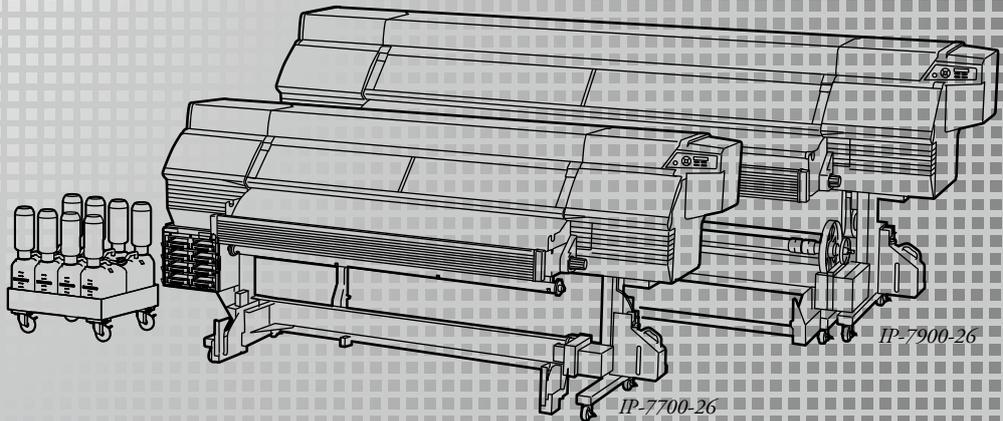
IP-7900-26 IP-7700-26

Advanced Operation Guide

Read this User's Guide carefully before use of this printer and handle it properly.
After reading, keep it for later use.

U00128132803

ColorPainter™ H2P-104s/H2P-74s



Document number

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In each directive, the scope of directive to be applied to equipment is explicitly defined. Our company's product IP-7700 and IP-7900 conform to the EMC directive, low voltage directive and RoHS Directive.

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Introduction

IP-7900-26/IP-7700-26 Wide Format Solvent Inkjet Printer (hereafter simply called the Printer below.) is equipped with built-in USB interface that adopts solvent ink and supports media of up to 104-inch width (IP-7700: 74-inch width).

The IP-7900-26/IP-7700-26 Wide Format Solvent Inkjet Printer Advanced Operation Guide describes:

- Function setting operation
- Adjustment procedures

For the information below required to start operating the Printer, refer to the **“Basic Operation Guide”**.

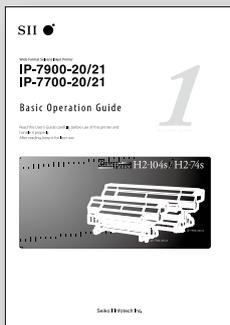
- Basic information required for the operation
- Basic operations to turn the Printer on and off and to handle the media and ink system

To operate the Printer safely and properly, before starting the operation be sure to read the following of the **“Basic Operation Guide.”**

- **Safety precautions**
- **Components delivered with the Printer**
- **Manual legend (notation rules)**

Keep these Guides near the Printer so that you can quickly access it at any time.

How do the two Guides work?



Basic Operation Guide

Read the Basic Operation Guide before your first Printer operation. This guide describes the basic handling and daily operation of media, printing, and maintenance.

To perform your first printing

 **page 28**

To print on other media

 **page 57**

To perform double-sided printing

 **page 64**

To perform the Printer's maintenance

 **page 68**

To supply ink

 **page 118**

To replace the Printer's waste ink bottle

 **page 116**

To recover error messages

 **page 108**

To clear media jams

 **page 107**



Advanced Operation Guide

Read the Advanced Operation Guide so that you can operate the Printer effectively.

This Guide describes the Printer's fine setting and adjustment to maximize the Printer's performance.

To operate the Printer with fine settings

 **page 82**

To create a new media preset

 **page 32**

To clear banding, white lines, and bleeding

 **page 62**

To turn the Printer off

 **page 8**

To print on cut-sheet media

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To change heater temperature while printing

 **page 77**

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Manual legend (Notational rules)

The notational rules such as marks, keys, LCD, and LEDs used for explanation in this guide are as follows:

Marks

WARNING

- Boxes marked with a "WARNING" describe points of caution for avoiding serious personal injury.

CAUTION

- Boxes marked with a "CAUTION" describe points of caution for avoiding injury to yourself or damage to the Printer.



TIP:

- This mark offers you the information to facilitate the Printer operation.

Reference mark

This mark is followed by a reference section or page number.

Turn the Printer off

Always set the Printer power to on to perform the fill cap operation.



Fillcap is...?

- To remove nozzle clogging from nozzle surface, use fillcap option. This option fills the cap with ink to soak the print head (nozzle surface) in the ink for a minimum of 1 to 2 hours. If possible, leave the Printer overnight.
Use this option also when nozzles cannot be fixed by cleaning repeatedly.

The Printer has an internal clock which allows it to automatically wash the print heads, flushing some ink through the print heads, which keeps the print heads in good condition. The Printer automatically washes the print heads 72 hours after the last printing, and then regularly washes every 3 days.

If the Printer is turned off for a long period, this process above does not happen. If the ink does not flow through the print heads regularly, the ink will dry inside the nozzle, reaching a point where they cannot be recovered and the print heads will fail. This will mean a print head replacement.

So, if the Printer must be turned off, follow the guide below.



Power-off

For a short period

For a several days

For two weeks or more

For one month or more

Service cleaning page 11)

Clean the print head and the ink flow path with the storage liquid, and leave the printer with storage liquid filled.

Prepare the storage liquid set (IP7-137).

When leaving the Printer for more than one month, contact your service representative beforehand.



Power-on

Head wash page 17)

Clean the print head and the ink flow path with the cleaning liquid.

Prepare the cleaning liquid set (IP7-136).

Charging ink after head wash page 22)

After the head wash, Insert ink trays and charge the ink system.

The service call error is displayed regardless of whether service cleaning has been performed or not. Contact your service representative.

Daily maintenance

(Basic Operation Guide  page 66)

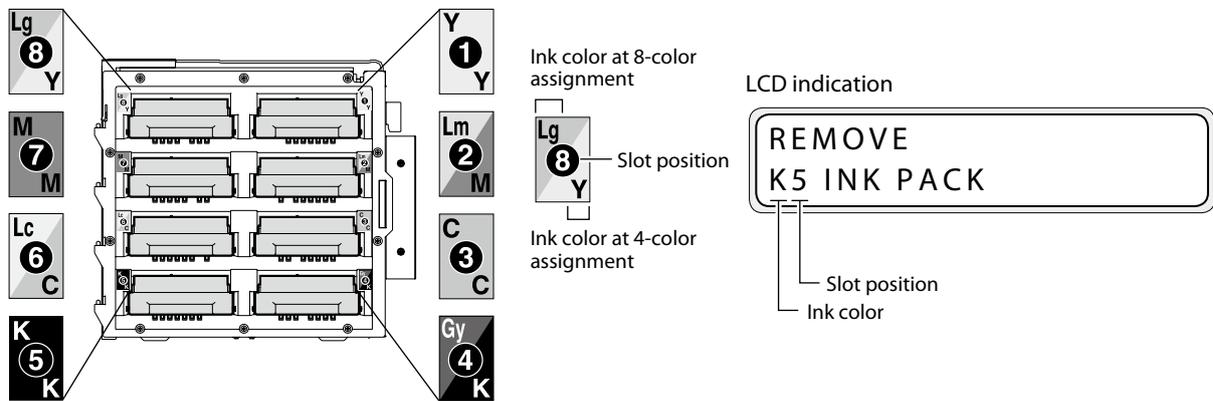
Perform the daily maintenance.

CAUTION

- To protect the print head, do not leave your Printer for more than one month with no ink charged.
- During the service cleaning or head wash, do not open or close the front cover or the lever. Otherwise, the Printer may restart its initial operation from the beginning, while wasting the ink and cleaning liquid.

Install and replace an ink pack

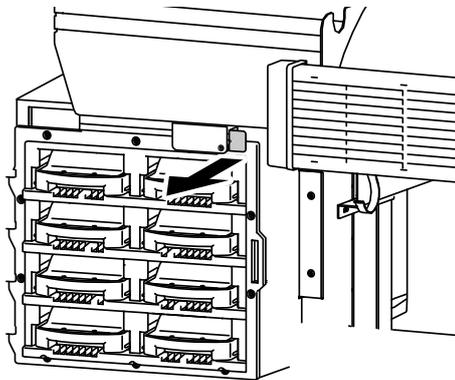
At installing ink trays, be sure to insert each tray into its correct slot position of the ink box. Note that ink tray position is decided depending on its ink color.



CAUTION

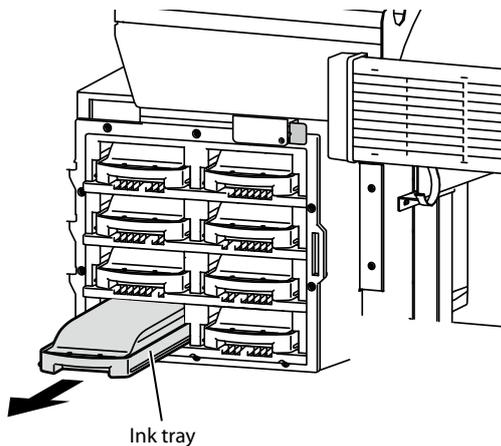
- Do not remove ink tray in the following cases. Otherwise, ink may spill in the Printer depending on the Printer state, which may damage the Printer.
 - The Printer is not powered on because the power was interrupted or because the circuit breaker turned off the Printer.
 - An error other than ink end has occurred.
- Do not touch the contact point in the ink pack's plate.

1

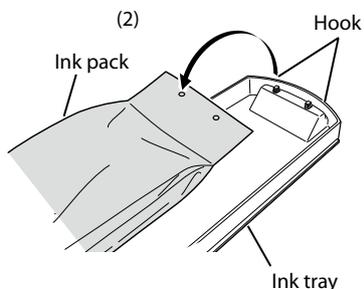
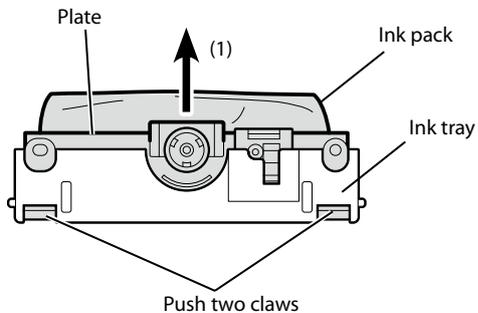


Pull the sensor lever.

2



Confirm the color of the ink pack to be replaced, and pull its ink tray out of the Printer.

3

If no ink pack is installed on the ink tray, go to the step **4**.

Take the empty ink pack out of the ink tray.

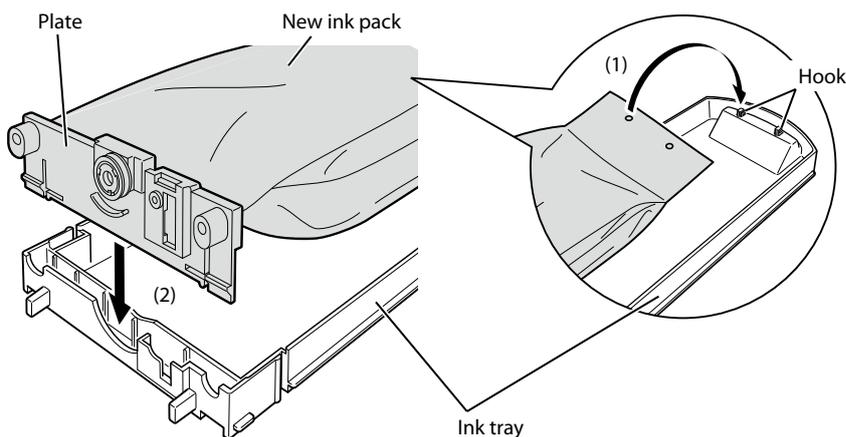
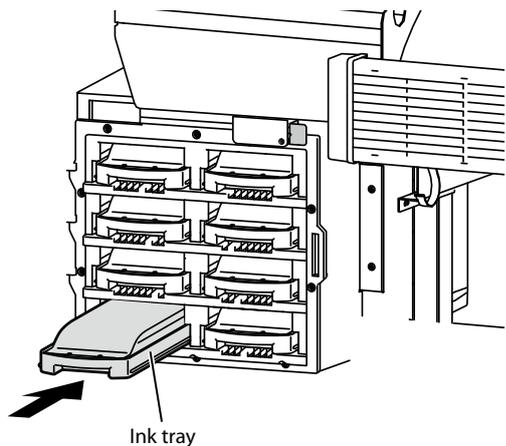
(1) Push the two claws at the lower part of the ink pack's plate, and pull up the plate.

(2) Remove the ink pack from the hook of the ink tray.

4

Take a new ink pack out of the box and set it on the ink tray.

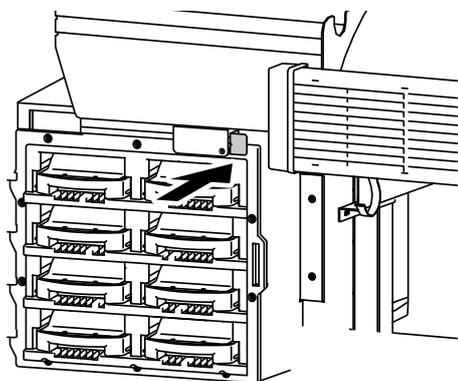
Hook the two holes (1) at the ink pack's end on the ink tray's two protrusion. Then insert the ink pack's plate part into the ink tray until you hear a click (2).

**5**

Insert the ink tray into the slot of the Printer.

Insert the ink tray as far as it will go.

6



Push the sensor lever.

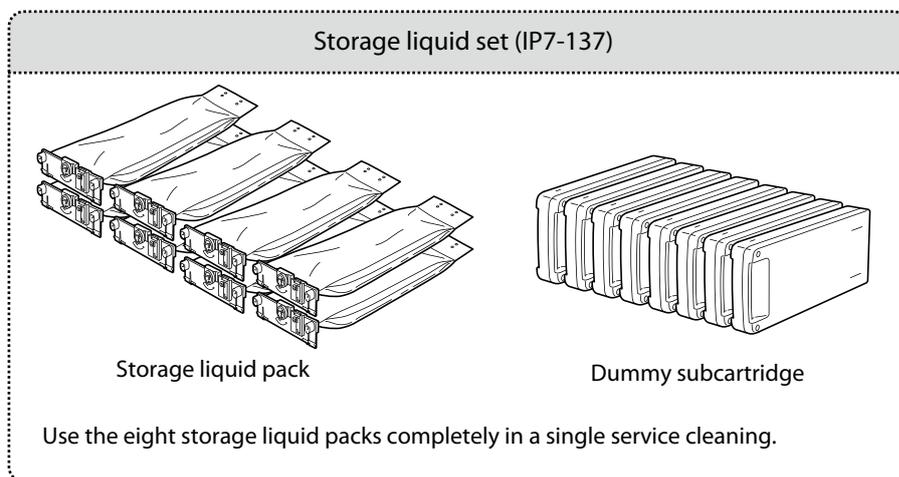
7

Confirm that the ink pack replacement was completed.

- When the replacement is successfully completed, the Printer returns to the online or offline state.
- If the replacement is not completed, an error message appears. Retry the replacement procedure beginning with step 7.
- The print operation is performed even during the ink pack replacement, as far as the ink is remaining in the subcartridge.

Service cleaning

Required items Before the operation check that the items below are prepared.



NOTE

On the LCD, ink box cover is indicated as INK COVER.



INK COVER is displayed to indicate an ink box cover.



To facilitate this work, set the storage liquid packs to the optional ink trays in advance.

1

Install an empty waste ink bottle.

2



Set the Printer to offline state and press the

M E N U key.

3 ↑REWIND FORM FEED↓
←PH.REC PH.MAIN→



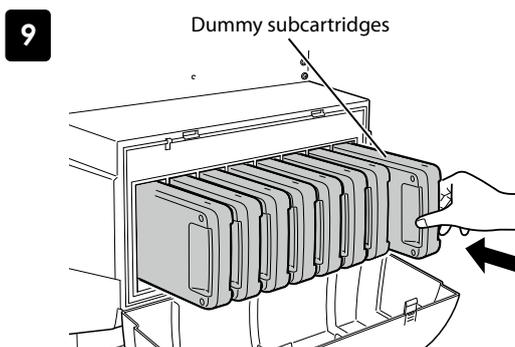
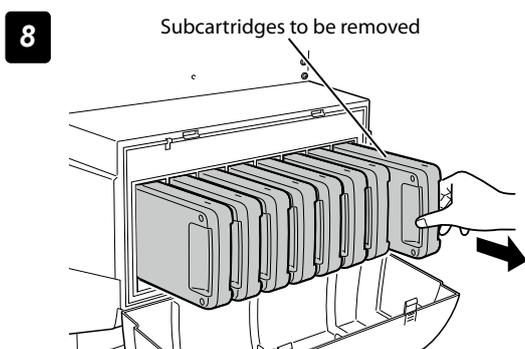
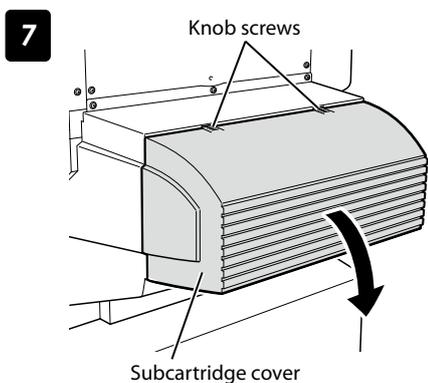
4 #CAP CLEANING
>



5 #INK SYSTEM OPT
>STORE INK SYS



6 #INK SYSTEM OPT
*STORE INK SYS



Press the key.

With the key scroll to **[#INK SYSTEM OPT]**.

Press the key.

Press the key.

Open the subcartridge cover.

Loosen the two knob screws on the subcartridge cover and open the subcartridge cover.

OPEN
SUBCARTRIDGE COVER

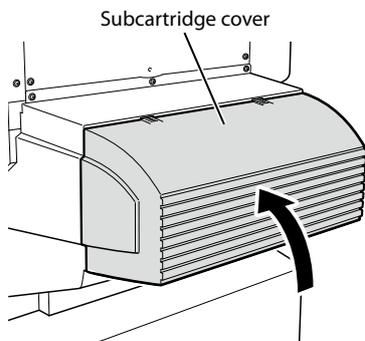
Remove the eight subcartridges.

REMOVE
Y1 SUBCARTRIDGE

Set the dummy subcartridges of the storage liquid set.

LOAD
Y1 DUMMY SUBCART

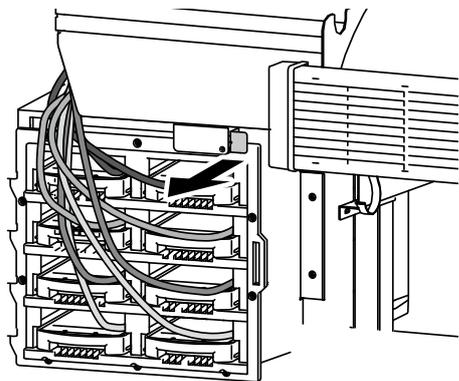
10



Close the subcartridge cover and tighten the two knob screws.

CLOSE
SUBCARTRIDGE COVER

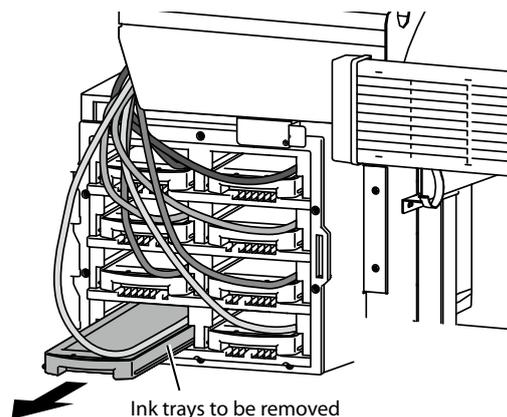
11



Pull the sensor lever.

OPEN
INK COVER

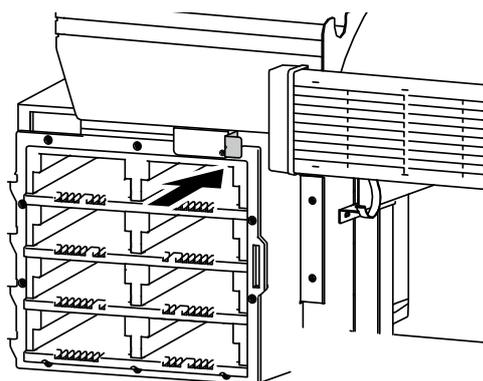
12



Remove the eight ink trays.

REMOVE
Y1 INK PACK

13



Push the sensor lever.

CLOSE
INK COVER

14

START PURGING
*BOTTLE OK?

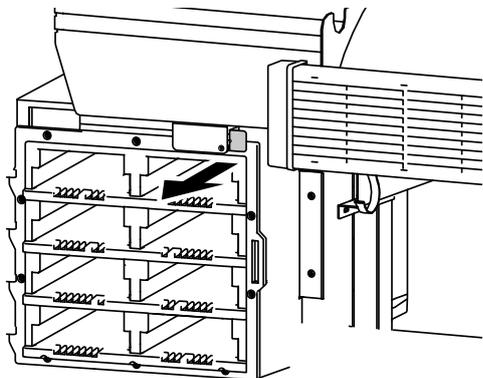


PURGING
PLEASE WAIT 12

Press the **OK** key.

Ink is purged from the ink system.

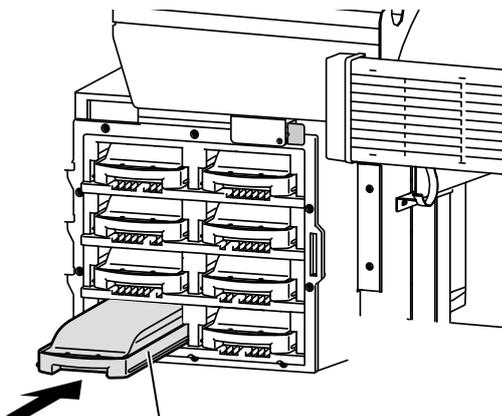
15



Pull the sensor lever.

OPEN
INK COVER

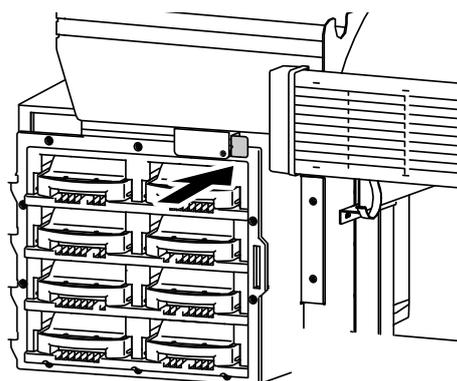
16



Insert the ink trays with storage liquid packs into the slots of the ink box.

LOAD
Y1 SL PACK

17



Push the sensor lever.

CLOSE
INK COVER

18

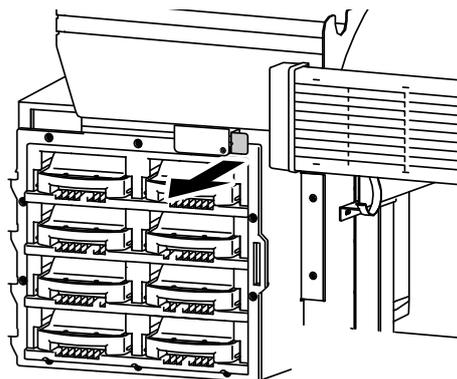
START SL CHARGING
*BOTTLE OK?



CHARGING SL
PLEASE WAIT 12

Press the **OK** key.

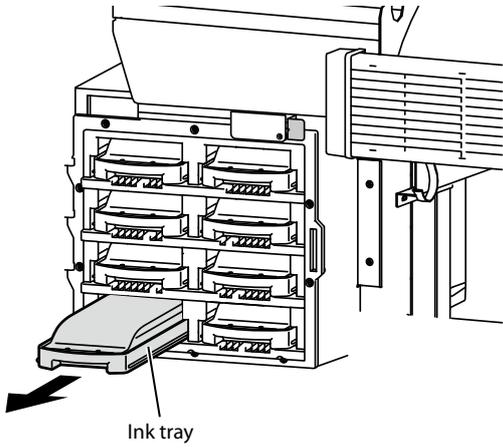
19



Pull the sensor lever.

OPEN
INK COVER

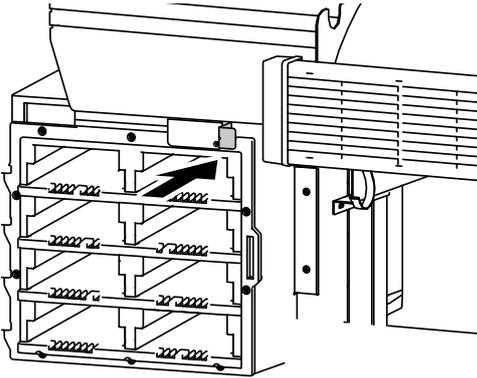
20



Remove the ink trays with cleaning liquid packs.

REMOVE
Y1 SL PACK

21



Push the sensor lever.

CLOSE
INK COVER

22

START PURGING
*BOTTLE OK?

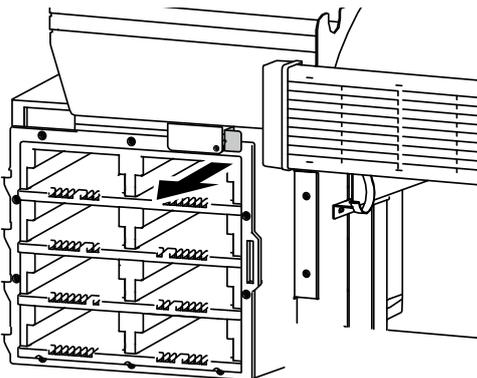


PURGING
PLEASE WAIT 12

Press the **OK** key.

Ink is purged from the ink system.

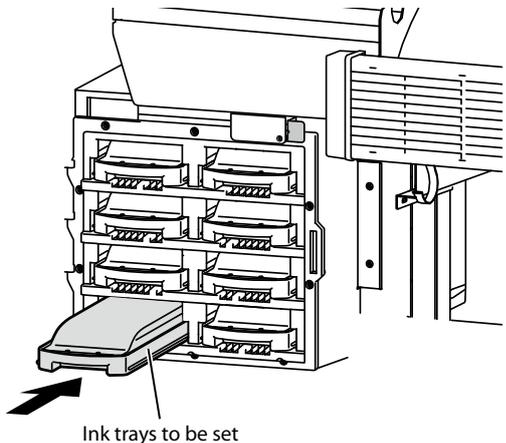
23



Pull the sensor lever.

OPEN
INK COVER

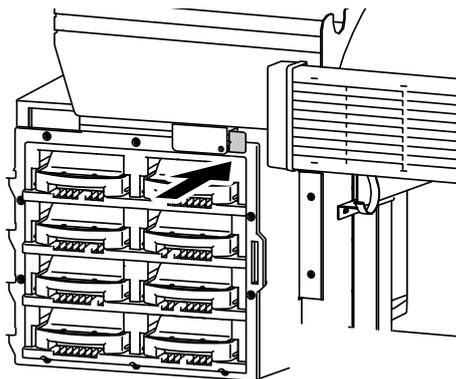
24



Insert the ink trays with storage liquid packs into the slots of the ink box.

LOAD
Y1 SL PACK

25



Push the sensor lever.

CLOSE
INK COVER

26

START SL CHARGING
*BOTTLE OK?



CHARGING SL
PLEASE WAIT 12

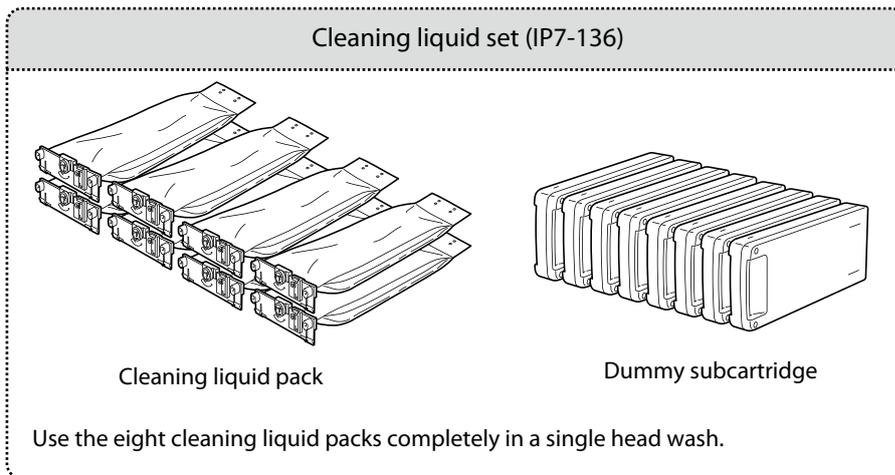


#INK SYSTEM OPT
>STORE INK SYS

Press the **OK** key.

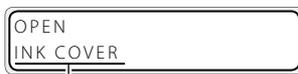
Head wash

Required items Before the operation check that the items below are prepared.



NOTE

On the LCD, ink box cover is indicated as INK COVER.



INK COVER is displayed to indicate an ink box cover.



To facilitate this work, set the cleaning liquid packs to the optional ink trays in advance.

1 Install an empty waste ink bottle.



Set the Printer to offline state and press the key.



Press the key.



With the key scroll to [**#INK SYSTEM OPT**].

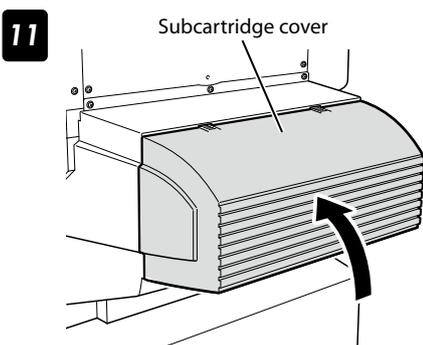
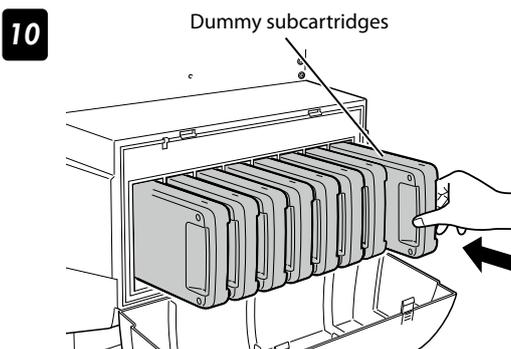
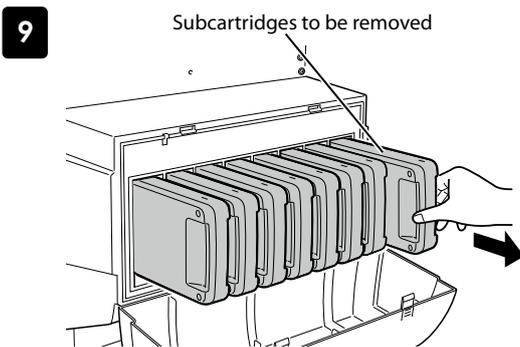
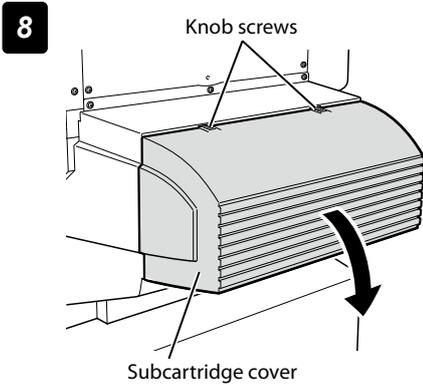


Press the key.

6 #INK SYSTEM OPT
*STORE INK SYS



7 #INK SYSTEM OPT
*CLEAN INK SYS



With the  key scroll to [***CLEAN INK SYS**].

Press the  key.

Open the subcartridge cover.

Loosen the two knob screws on the subcartridge cover and open the subcartridge cover.

OPEN
SUBCARTRIDGE COVER

Remove the eight subcartridges.

REMOVE
Y1 SUBCARTRIDGE

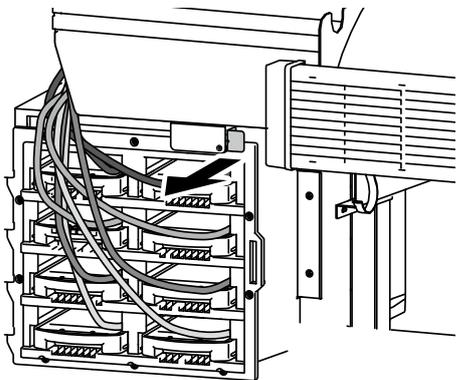
Set the dummy subcartridges of the cleaning liquid set.

LOAD
Y1 DUMMY SUBCART

Close the subcartridge cover and tighten the two knob screws.

CLOSE
SUBCARTRIDGE COVER

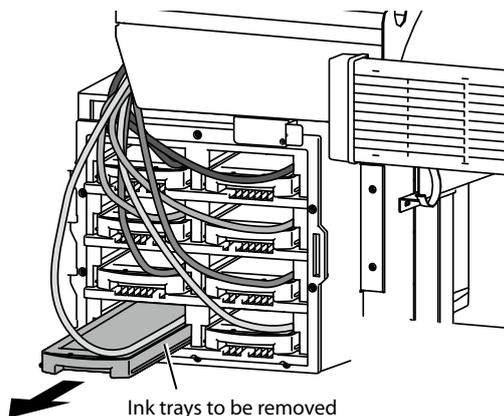
12



Pull the sensor lever.

OPEN
INK COVER

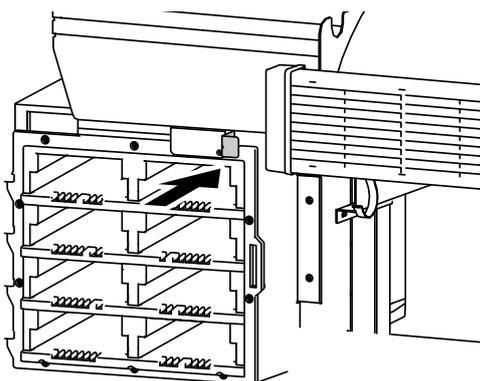
13



Remove the eight ink trays.

REMOVE
Y1 SL PACK

14



Push the sensor lever.

CLOSE
INK COVER

15

START PURGING
*BOTTLE OK?

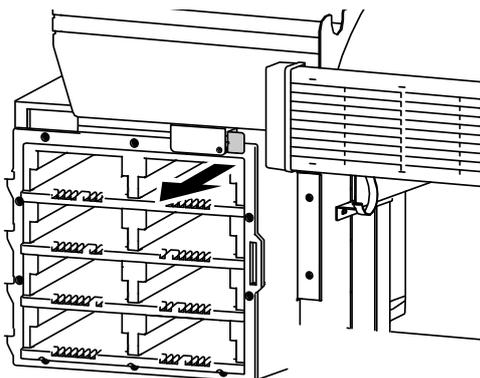


PURGING
PLEASE WAIT 12

Press the **OK** key.

Ink is purged from the ink system.

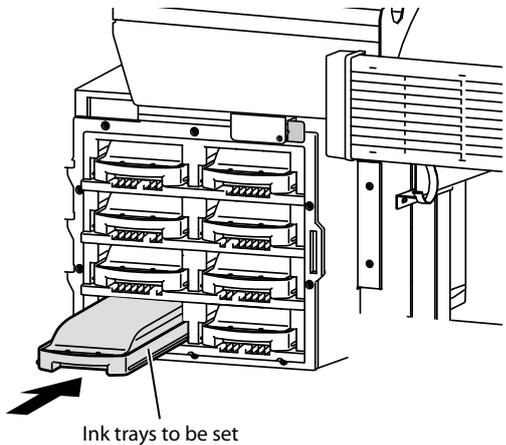
16



Pull the sensor lever.

OPEN
INK COVER

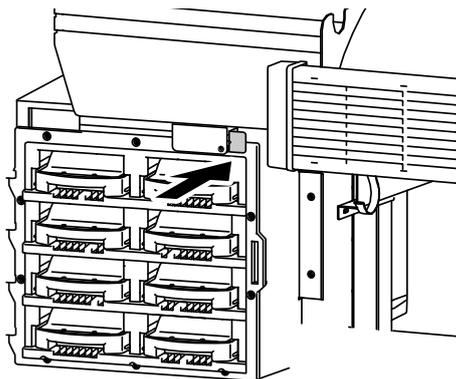
17



Insert the ink trays with cleaning liquid packs into the slots of the ink box.

LOAD
Y1 CL PACK

18



Push the sensor lever.

CLOSE
INK COVER

19

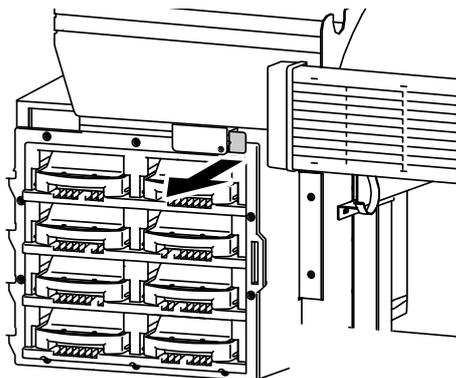
START CL CHARGING
*BOTTLE OK?



CHARGING CL
PLEASE WAIT 12

Press the **OK** key.

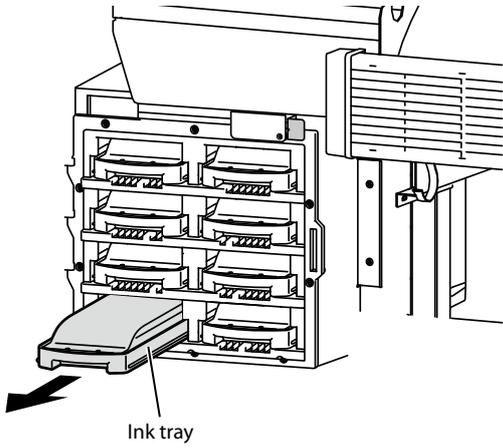
20



Pull the sensor lever.

OPEN
INK COVER

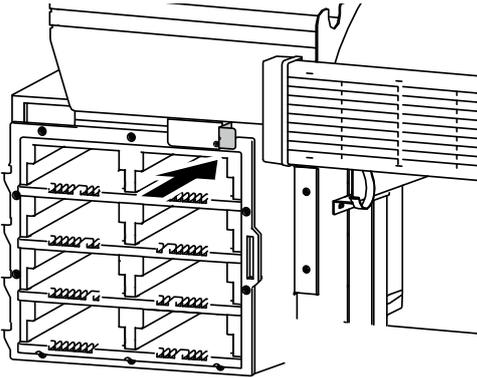
21



Remove the ink trays with cleaning liquid packs.

REMOVE
Y1 CL PACK

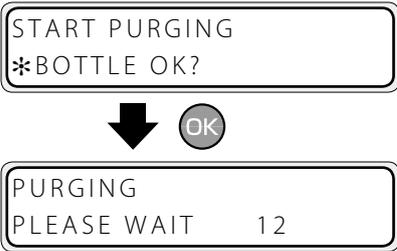
22



Push the sensor lever.

CLOSE
INK COVER

23

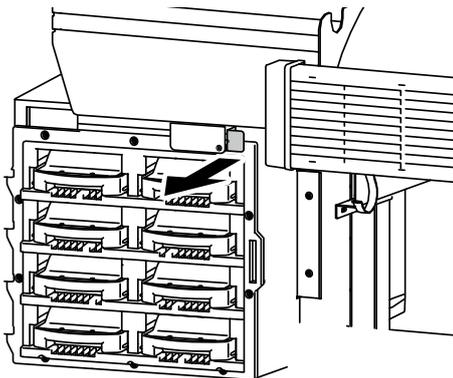


Press the **OK** key.

Ink is purged from the ink system.

24 Repeat the steps 16 to 19 to perform the cleaning again.

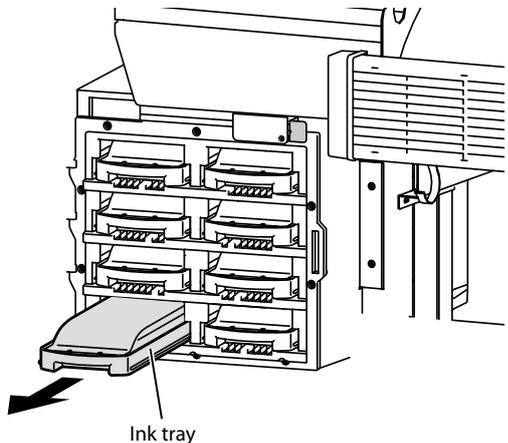
25



Pull the sensor lever.

OPEN
INK COVER

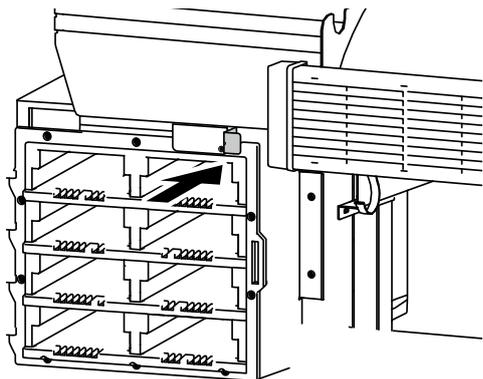
26



Remove the ink trays with cleaning liquid packs.

REMOVE
Y1 CL PACK

27



Push the sensor lever.

CLOSE
INK COVER

28

START PURGING
*BOTTLE OK?



PURGING
PLEASE WAIT 12



OPEN INK COVER
Y1 LOAD INK PACK

Press the **OK** key.

Charging the ink system after head wash

1

Clear out the waste ink bottle.

2

↑INK MEDIA REG↓
←MEDIA M.ADV→



3

↑REWIND FORM FEED↓
←PH.REC PH.MAIN→



Set the Printer to offline state and press the **MENU** key.

Press **▶** the key.

4 #CAP CLEANING
>



5 #INK SYSTEM OPT
>STORE INK SYS



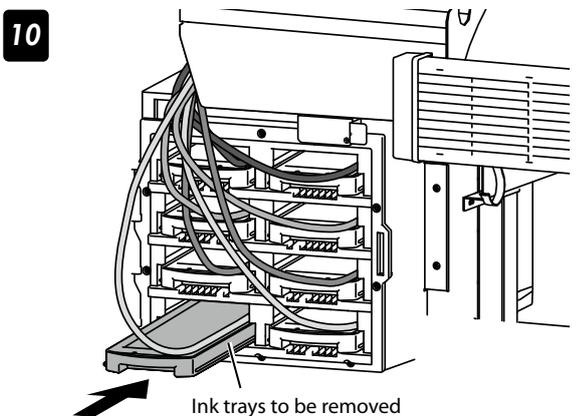
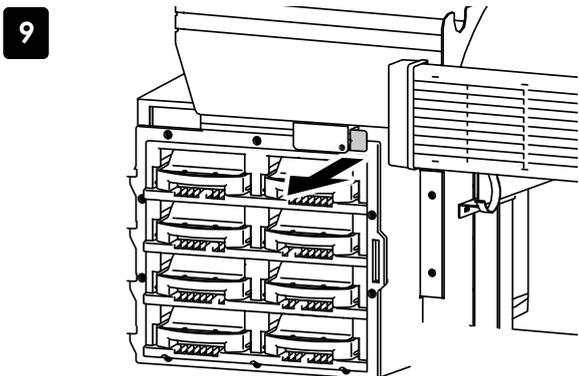
6 #INK SYSTEM OPT
*STORE INK SYS



7 #INK SYSTEM OPT
*CHARGE(INKPACK)



8 #INK SYSTEM OPT
*BOTTLE OK?



With the key scroll to [#INK SYSTEM OPT].

Press the key.

With the key scroll to [*CHARGE(INKPACK)].

Press the key.

Check that the waste ink bottle is empty, and press the key.

Pull the sensor lever.

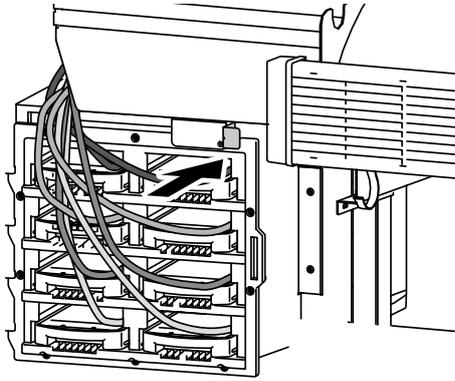
OPEN
INK COVER

Insert the eight ink trays.

LOAD
Y1 INK PACK

| Ink tray | |
|----------|----|
| Y8 | Y1 |
| M7 | M2 |
| C6 | C3 |
| K5 | K4 |

11



Push the sensor lever.

CLOSE
INK COVER

12

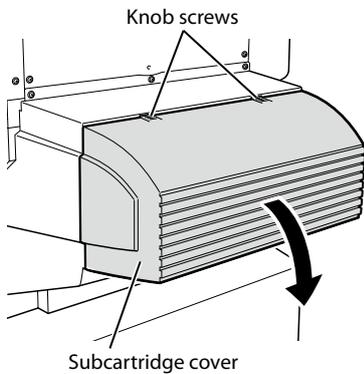
START INK CHARGING
*BOTTLE OK?



CHARGING INK
PLEASE WAIT 12

Press the **OK** key.

13

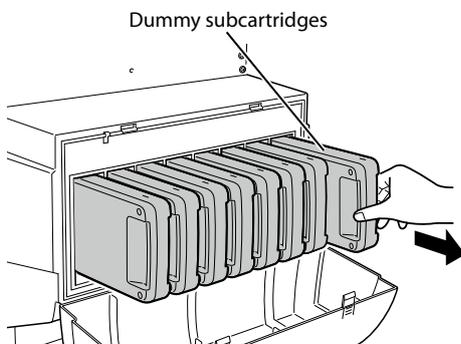


Open the subcartridge cover.

Loosen the two knob screws on the subcartridge cover and open the subcartridge cover.

OPEN
SUBCARTRIDGE COVER

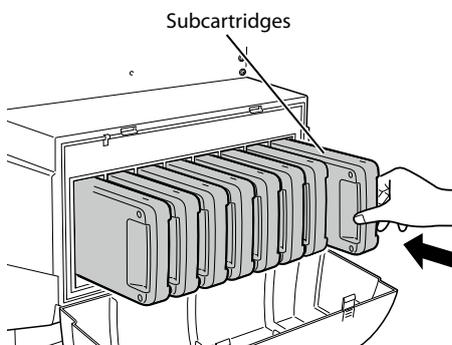
14



Remove the eight dummy subcartridges of the cleaning liquid set.

REMOVE
Y1 DUMMY SUBCART

15

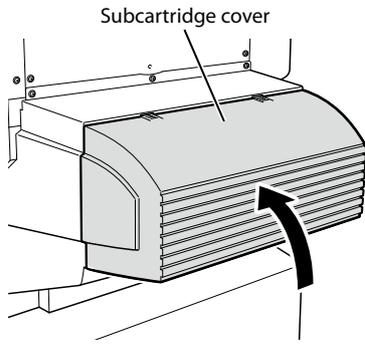


Set the eight subcartridges.

LOAD
SUBCARTRIDGE

| Subcartridge | | | | | | | |
|--------------|---|---|---|---|---|---|---|
| Y | M | C | K | K | C | M | Y |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

16



Close the subcartridge cover and tighten the two knob screws.

CLOSE
SUBCARTRIDGE COVER

17

CLEANING
*BOTTLE OK?



CLEANING
PLEASE WAIT 12



#INK SYSTEM OPT
*CHARGE(INKPACK)

Press the **OK** key.

A normal cleaning is performed.

When the normal cleaning is completed, the LCD displays message at the step 7.

Check the Printer status

Check the remaining ink level

■ Check in offline

- 1 
↓ 
- 2 
↓ 
- 3 
- 4

Set the Printer to offline state and press the  key.

Press the  key.

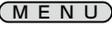
CCC: Ink color/location
XXXX: Ink current usage amount

Select the ink color.

Select the ink color with the  or  key.

Press the  key to return the Printer to offline state.

■ Check at printing in online

- 1 
↓ 
- 2 
↓ 
- 3 
••• 

Press the  key twice.

Press the  key to switch between ink colors.

The ink colors switch every 3 seconds.

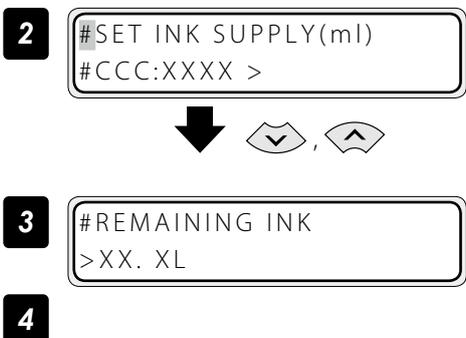
XXX: Ink current usage amount

Check the ink amount

■ Check in offline

- 1 
↓ 

Set the Printer to offline state and press the  key.

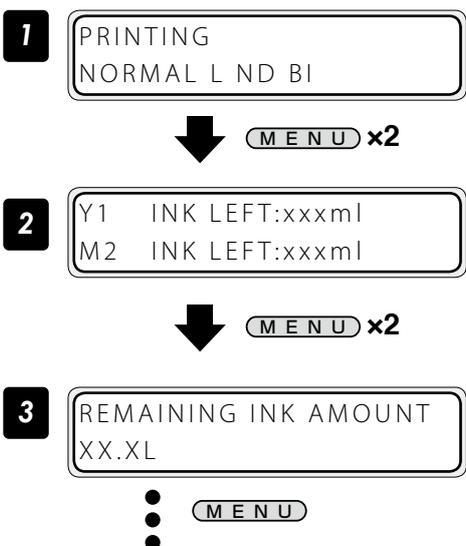


Select [**#REMAINING INK**] with the and keys.

XX.XL: Amount of ink that can be used.

Press the key to return the Printer to offline state.

■ Check at printing in online



Press the **MENU** key twice.

Press the **MENU** key to switch between ink colors.

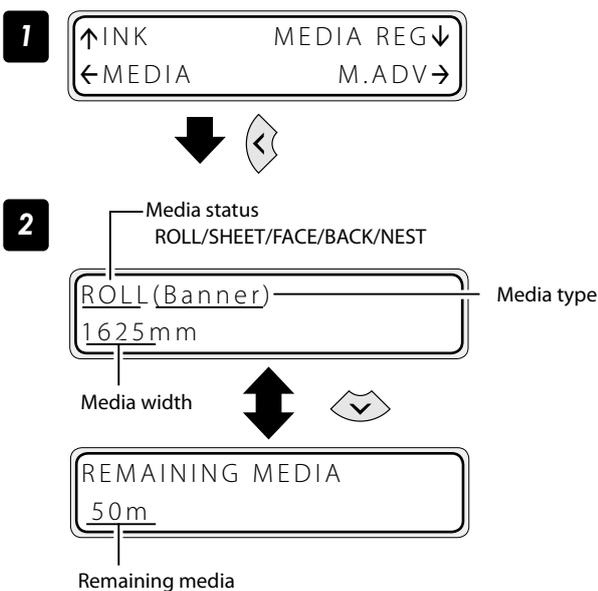
The ink colors switch every 3 seconds.

XXX: Ink current usage amount

XX.XL: Amount of ink that can be used.

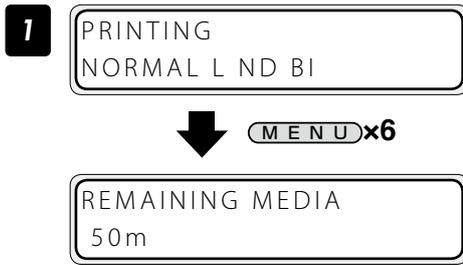
Check remaining media length

■ Check in offline



Set the Printer to offline state and press the key.

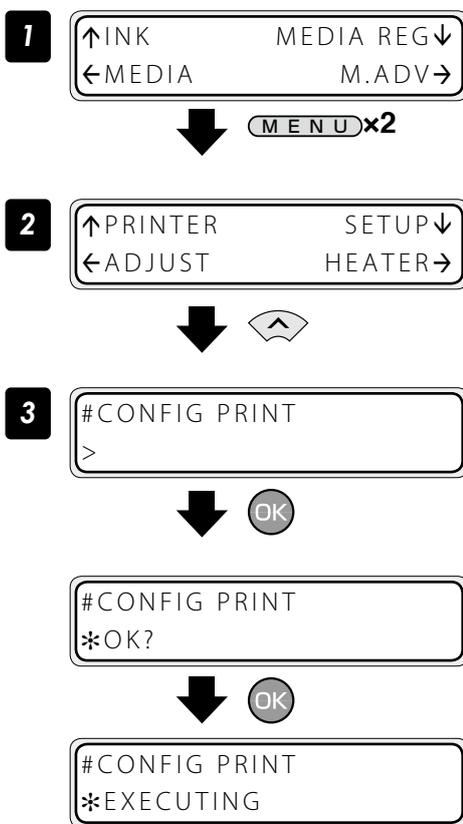
■ Check at printing in online



Press the **MENU** key six times.

Print reports on the Printer status.

Perform the operation below to print reports on the Printer status and panel settings.



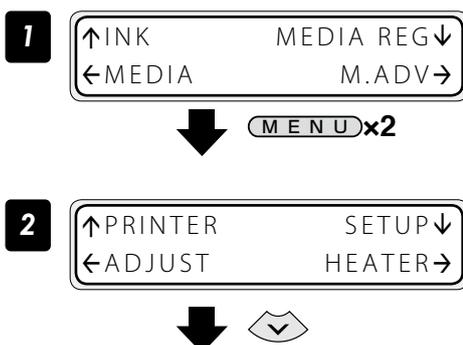
Set the Printer to offline state and press the **MENU** key twice.

Press the key.

Press the key.

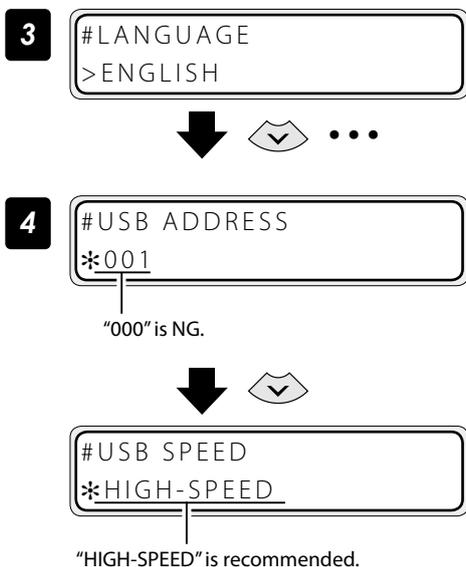
Press the key.
 The Printer prints the reports on the Printer status.

Check the USB connection status



Set the Printer to offline state and press the **MENU** key twice.

Press the key.



With the key scroll to [#USB ADDRESS].

The LCD displays the USB address,

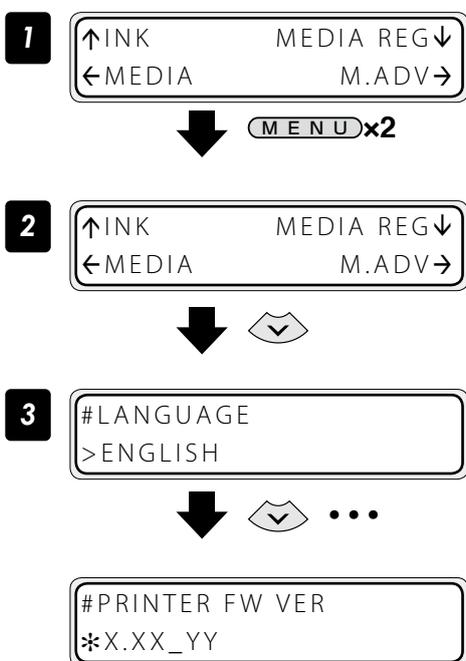
If the LCD displays the USB address as "000", start the USB cable connection over again.

Press the key.

The LCD displays the USB speed.

If the LCD displays "FULL-SPEED", print speed is reduced.

Check the firmware version on your Printer



Set the Printer to offline state and press the **MENU** key twice.

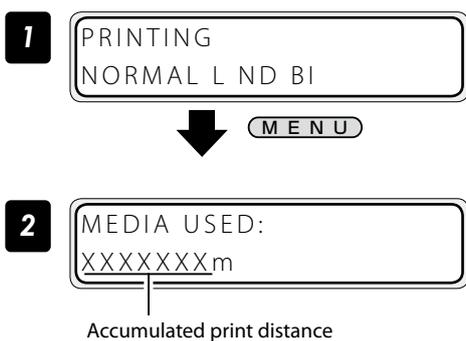
Press the key.

With the key scroll to [#PRINTER FW VER].

The LCD displays your Printer's firmware version.

Check the total print distance

The Printer's accumulated print distance is checked with the operation below.



Press the **MENU** key in online state.

Check the ink extension chip information

If you do not know whether an ink extension chip has been used or not, check the chip information with the following procedure.

1

Press the **ONLINE** key to set the Printer to offline state.

2

```

↑INK      MEDIA REG↓
←MEDIA    M.ADV→
    
```

CAUTION

- Reset only the colors displayed on the second line of the control panel.

Press the  key to enter the INK menu.



3

```

#SET INK SUPPLY(ml)
#CCC:XXXX >
    
```

Select **[#READ EXTENSION CHIP]** with the  and  keys.



4

```

#READ EXTENSION CHIP
>
    
```

Press the **OK** key.

5

```

SET INK EXTENSION
CHIP TO CHIP READER
    
```

Insert the ink extension chip into the chip reader.

Press the **CANCEL** key if the chip is not read.

6

```

PROCESSING...
    
```

Wait for a while.

7

If the chip has not been used

```

<CHIP-TYPE>
INK EXTENSION CHIP
    
```

Press the **OK** key to display the information.
Press the **CANCEL** key when you have finished.



```

<DATE USED>
UNUSED CHIP
    
```



```

<USED FOR>
UNUSED CHIP
    
```



```

<CHIP-TYPE>
INK EXTENSION CHIP
    
```

If the chip has been used

<CHIP-TYPE>
INK EXTENSION CHIP



<DATE USED>
2012/06/21



<USED FOR>
THIS PRINTER

or

<USED FOR>
XXXXXXXXXX



<CHIP-TYPE>
INK EXTENSION CHIP

If the chip is not recognized

<CHIP-TYPE>
UNKNOWN CHIP



<DATE USED>
—



<USED FOR>
—



<CHIP-TYPE>
INK EXTENSION CHIP

8 REMOVE
INK EXTENSION CHIP

9 SET INK EXTENSION
CHIP TO CHIP READER

10 #READ EXTENSION CHIP
>

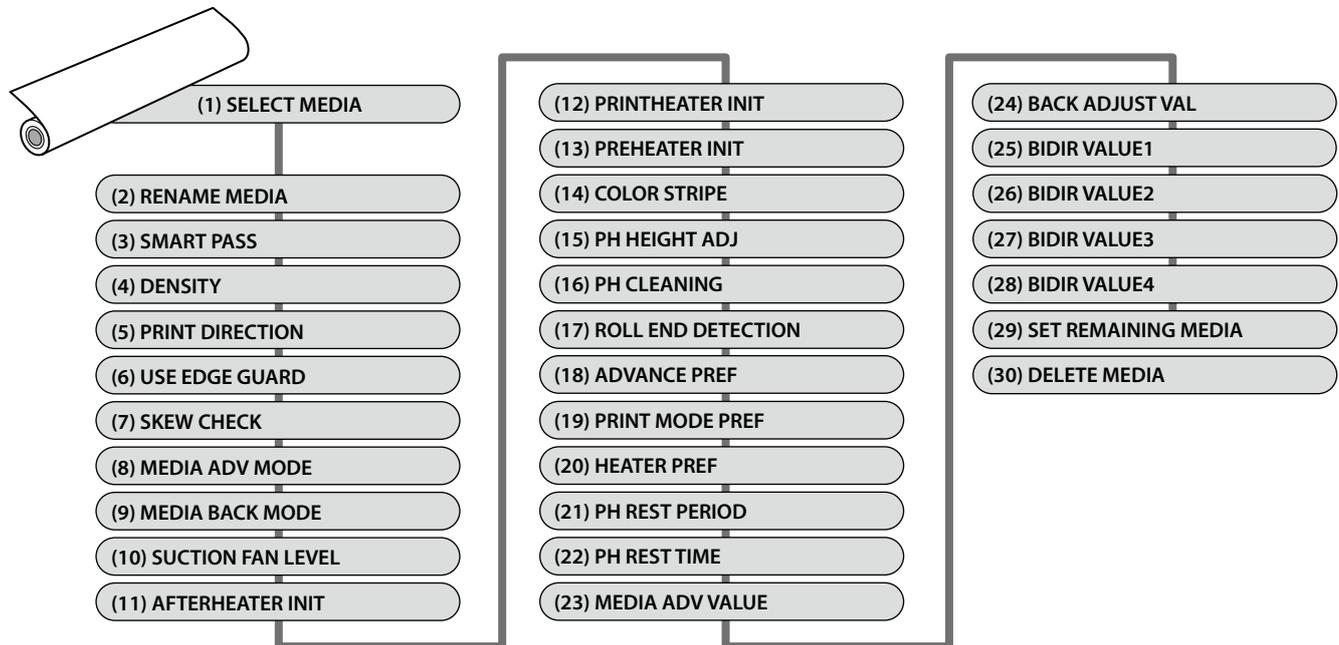
Remove the ink extension chip from the chip reader.

Ink extension chips can be read successively. Press the **CANCEL** key if you have finished reading chips.

Handle the media

Create a new media preset

As preset media, up to 20 types of media with the information below are registered.



The parameter setting procedure is described below using an example of setting the media advance adjustment value in media number [02].

1 ↑INK MEDIA REG↓
←MEDIA M.ADV→

Set the Printer to offline state and press the key.



2 #SELECT MEDIA
>01:PAPER *

Press the key.



3 #SELECT MEDIA
*01:PAPER *

Press the key.



4 #SELECT MEDIA
*02:Glossy *

Press the key.



5 #SELECT MEDIA
>02:Glossy *

With the key scroll to [#MEDIA ADV VALUE].



6 #MEDIA ADV VALUE
>02:100. 00%



7 #MEDIA ADV VALUE
*02:100. 00%



#MEDIA ADV VALUE
*02:099. 80%



8 #MEDIA ADV VALUE
*02:OK?



9 #MEDIA ADV VALUE
*02:099. 80%

When the media is already registered, a " * " mark is displayed.

Press the **OK** key.

Enter the media advance adjustment value and press the **OK** key.

Align the digit with the **<** or **>** key and set the value with the **↕** or **↗** key.

Press the **OK** key.

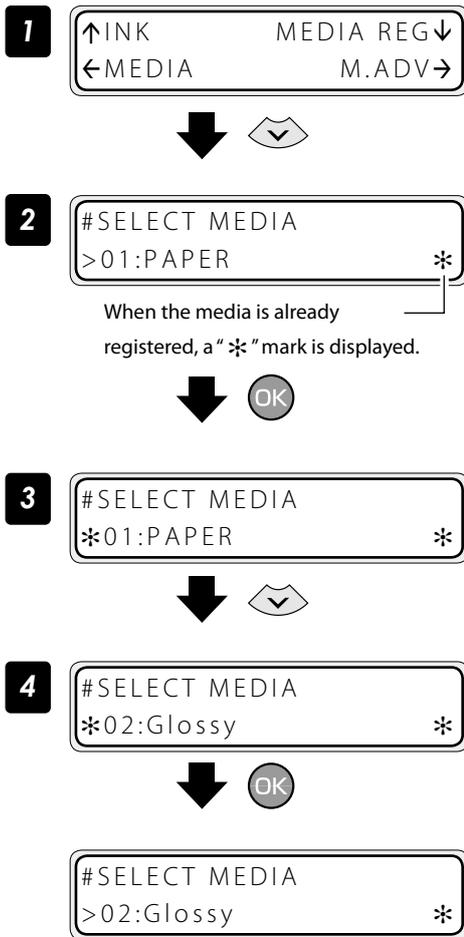
■ Preset media default values

Up to 20 types (media No. 01 to 20) of media can be registered. Registered media can also be deleted or changed. However, media No. 01 (PAPER) and the media initially set in the Printer cannot be deleted. For the preset media 01-05, the initial values are listed below.

| Media No | 01 | 02 | 03 | 04 | 05 |
|--------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| RENAME MEDIA | PAPER | Glossy | Matte | Banner | BLT_B |
| SMART PASS | MIDIUM | MIDIUM | MIDIUM | MIDIUM | MIDIUM |
| DENSITY | NORMAL | NORMAL | NORMAL | NORMAL | NORMAL |
| PRINT DIRECTION | BIDIR | BIDIR | BIDIR | BIDIR | BIDIR |
| USE EDGE GUARD | YES | YES | YES | YES | YES |
| SKEW CHECK | ON | ON | ON | ON | ON |
| MEDIA ADV MODE | FWD ONLY |
| MEDIA BACK MODE | BACK & FWD |
| SUCTION FAN LEVEL | NORMAL | NORMAL | NORMAL | LOW | LOW |
| AFTERHEATER INIT | **°C | 45°C | 45°C | 45°C | 45°C |
| PRINTEATER INIT | **°C | 40°C | 40°C | 40°C | 40°C |
| PREHEATER INIT | **°C | 45°C | 45°C | 45°C | 45°C |
| COLOR STRIPE | ON | ON | ON | ON | ON |
| PH HEIGHT ADJ | +0.00mm | +0.00mm | +0.00mm | +0.00mm | +0.00mm |
| PH CLEANING | START&END | START&END | START&END | START&END | START&END |
| ROLL END DETECTION | DETECT ONLY |
| ADVANCE PREF | SOFTWARE | SOFTWARE | SOFTWARE | SOFTWARE | SOFTWARE |
| PRINT MODE PREF | SOFTWARE | SOFTWARE | SOFTWARE | SOFTWARE | SOFTWARE |
| HEATER PREF | SOFTWARE | SOFTWARE | SOFTWARE | SOFTWARE | SOFTWARE |
| PH REST PERIOD | 0000 CYCLES (not provided) |
| PH REST TIME | 1 second |
| MEDIA ADV VALUE | 100.00% | * | 100.00% | 100.00% | 100.00% |
| BACK ADJUST VAL | +0000PULSE | +0000PULSE | +0000PULSE | +0000PULSE | +0000PULSE |
| BIDIR VALUE1 | +00 | +00 | +00 | +00 | +00 |
| BIDIR VALUE2 | +00 | +00 | +00 | +00 | +00 |
| BIDIR VALUE3 | +00 | +00 | +00 | +00 | +00 |
| BIDIR VALUE4 | +00 | +00 | +00 | +00 | +00 |

* The default values are adjusted at the factory shipment.

Select a preset media



Set the Printer to offline state and press the  key.

Press the  key.

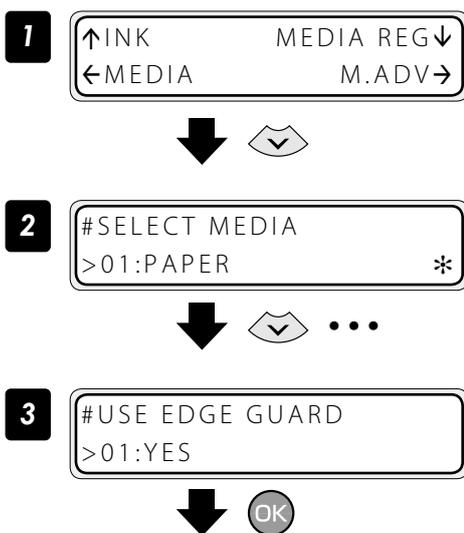
Press  the key.

Select your preferred preset media.

Press the  key.

Minimize the right and left margins

■ Deactivate the media edge guards



Set the Printer to offline state and press the  key.

With the  key scroll to **[#USE EDGE GUARD]**.

Press the  key.

4 #USE EDGE GUARD
*01:YES



5 #USE EDGE GUARD
*01:NO



#USE EDGE GUARD
>01:NO

Press the key.

Press the key.

■ Deactivate the color stripe bar

1 ↑INK MEDIA REG↓
←MEDIA M.ADV→



2 #SELECT MEDIA
>01:PAPER *



3 #COLOR STRIPE
>01:ON



4 #COLOR STRIPE
*01:ON



5 #COLOR STRIPE
*01:OFF



#COLOR STRIPE
>01:OFF

Set the Printer to offline state and press the key.

With the key scroll to [**#COLOR STRIPE**].

Press the key.

Press the key.

Press the key.

Prevent the media from sticking and wrinkling

■ Decrease the platen suction fan level

The vacuum pressure applied to the media in the printing zone helps to hold the media down on the platen, which keeps the distance from media to print heads constant.

When the media sticks to the platen, set the vacuum pressure to LOW. The LOW vacuum pressure is also effective when your media is so flexible and easily wrinkled.

1



2



3



4



5



Set the Printer to offline state and press the key.

With the key scroll to [**#SUCTION FAN LEVEL**]

Press the key.

Press the key twice.

Press the key.

■ Change the media advance mode

Select the media advance mode according to the media used.

1



2



Set the Printer to offline state and press the key.

With the key scroll to [**#MEDIA ADV MODE**]

| | |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FWD ONLY | Media is fed in the normal advance sequence. |
| BACK&FWD1 | Media is fed in the media adhesion prevention sequence. At the beginning of printing, media peeling is performed during feeding when the pause mode is cancelled. |
| BACK&FWD2 | Media is fed in the media adhesion prevention sequence. Media peeling is performed during feeding at each scan. |
| FWD WRINKLEFREE | Advance sequence to prevent wrinkles on solvent printing coated paper. If five minutes have elapsed after the end of the last printing, the Printer feeds 30 cm of media before starting to print. |

Solve media lifting up problem

The vacuum pressure applied to the media in the printing zone helps to hold the media down on the platen, which keeps the distance from media to print heads constant.

When the media lifts up off the platen, set the vacuum pressure to HIGH.

1 ↑INK MEDIA REG↓
←MEDIA M.ADV→



Set the Printer to offline state and press the key.

2 #SELECT MEDIA
>01:PAPER *



With the key scroll to **[#SUCTION FAN LEVEL]**

3 #SUCTION FAN LEVEL
>01:LOW



Press the key.

4 #SUCTION FAN LEVEL
*01:LOW



Press the key twice.

5 #SUCTION FAN LEVEL
*01:HIGH



Press the key.

#SUCTION FAN LEVEL
>01:HIGH

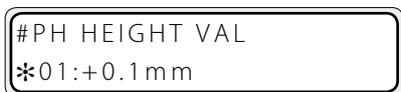
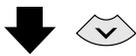
Change the print head height

The Printer automatically sets the print head height to the best position when the Printer is turned on or when a media is loaded on the Printer. However, you may need to adjust the position finely as the media rigidity and temperature response are relevant.

To adjust the print head height depending on the loaded media, select MEDIA REG MENU on the operation panel and adjust the print head height.

CAUTION

- Adjust the print head height carefully to avoid the print head touching the media. The print head scratched by media causes the poor ink ejection and degrades the print quality. On the other hand, a too high print head position also degrades the print quality. You are recommended to operate the Printer with the print head height automatically set by the Printer.



Set the Printer to offline state and press the key.

With the key, scroll to **[#PH HEIGHT VAL]**.

Press the key.

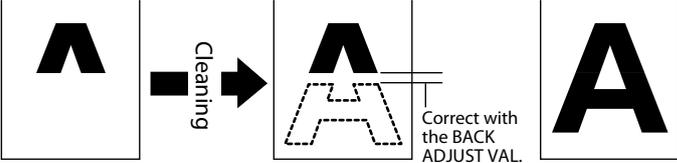
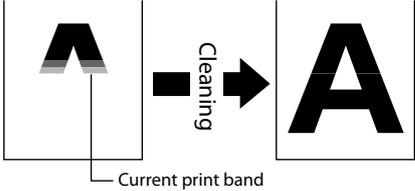
Enter the print head height adjustment value, and press the key.

Align the digit with the or key and set the value with the or key.

The adjustment value range is: - 0.3 to +1.0 mm.

Change the automatic cleaning timing

To ensure the print heads' proper condition, the Printer performs the automatic cleaning. The cleaning mode can be specified depending on the preset media. Select the DURING PRINT or DURING PRINT2 depending on the media characteristics.

| | |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| START & END | Based on the past print operation history, the Printer performs the automatic cleaning on starting and completing the print operation. |
| DURING PRINT | <p>The cleaning is performed even while the Printer is printing. In this mode, before the cleaning the Printer completes the print band in process.</p> <p>This mode is recommended when printing on the media subject to the heater temperature, for example, on Vinyl.</p> <p>After the cleaning, the Printer starts the rest of the interrupted print job.</p> <p>Some media shows misalignment at the linkage of the prints before and after the cleaning. In such a case, START & END or DURING PRINT2 is recommended.</p>  |
| DURING PRINT2 | <p>The cleaning is performed even while the Printer is printing. In this mode, the cleaning may start with the current print band interrupted.</p> <p>This mode is recommended when printing on the media less subjected to the heater temperature, for example, on Banner.</p> <p>After the cleaning, the Printer starts the rest of the interrupted print job.</p> <p>This mode shows less misalignment at the linkage than the DURING PRINT. However, the hue after the cleaning may be different from the one before the cleaning.</p>  |
| OFF | Automatic cleaning is not performed. We recommend using this mode when printing continuously several data files on media with which differences between printouts will be noticeable if automatic cleaning is performed between two data files. However, since cleaning is not performed automatically, determine suitable times to execute cleaning manually. Missing print will happen more frequently if cleaning is not performed for a long time. |

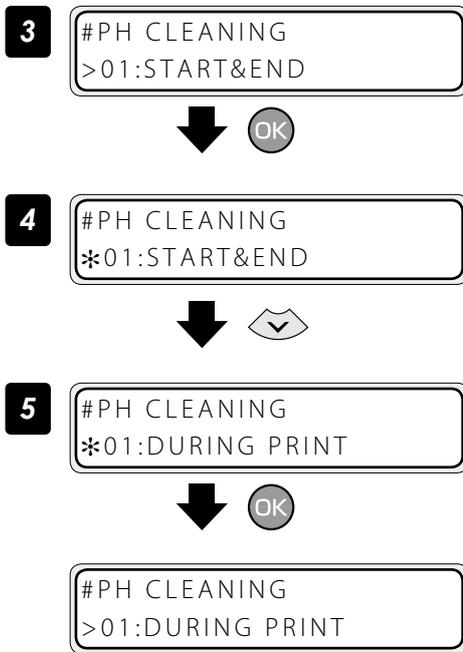
The procedure to change the automatic cleaning timing is explained as follows, taking the procedure to select the automatic cleaning DURING PRINT for the preset media 1 as example.

1 

Set the Printer to offline state and press the  key.

2 

With the  key, scroll to [**#PH CLEANING**].



Press the key.

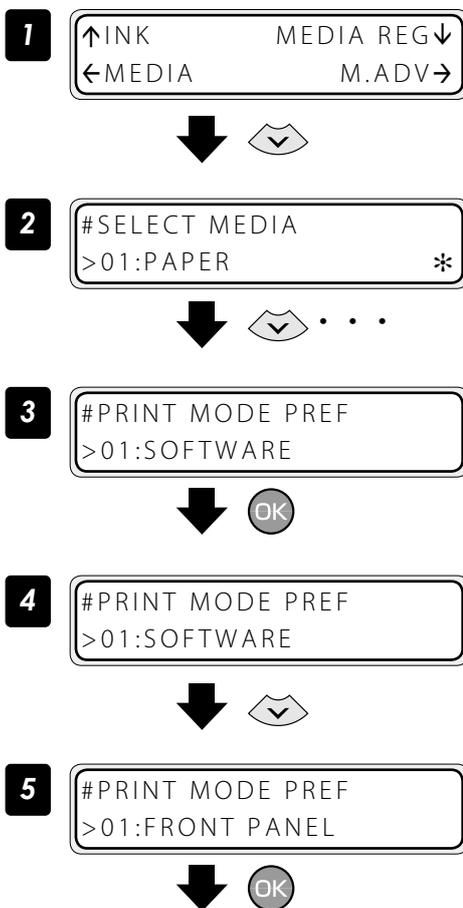
Press the key.

Press the key.

Set smart pass, density and print direction on the Printer's side.

The following describes the procedure to print with smart pass, density and print direction settings made on the Printer's side instead of the RIP settings.

■ Set print mode preference to front panel



Set the Printer to offline state and press the key.

With the key, scroll to [**#PRINT MODE PREF**].

Press the key.

Press the key.

Press the key.

6 #PRINT MODE PUF
>01:FRONT PANEL

■ Example of setting smart pass to high

1 ↑INK MEDIA REG↓
←MEDIA M.ADV→



2 #SELECT MEDIA
>01:PAPER *



3 #SMART PASS
>01:MIDIUM



4 #SMART PASS
>01:MIDIUM



5 #SMART PASS
>01:HIGH



6 #SMART PASS
>01:HIGH

Set the Printer to offline state and press the key.

With the key, scroll to [#SMART PASS].

Press the key.

Press the key twice.

Press the key.

Example of setting density to high density

1 ↑INK MEDIA REG↓
←MEDIA M.ADV→



2 #SELECT MEDIA
>01:PAPER *



3 #DENSITY
>01:NORMAL



Set the Printer to offline state and press the key.

With the key, scroll to [#DENSITY].

Press the key.

4 #DENSITY
>01:NORMAL



5 #DENSITY
>01:HIGH DENSITY



6 #DENSITY
>01:HIGH DENSITY

Press the key.

Press the key.

■ Example of setting print direction to unidirectional

1 ↑INK MEDIA REG↓
←MEDIA M.ADV→



2 #SELECT MEDIA
>01:PAPER *



3 #PRINT DIRECTION
>01:BDIR



4 #PRINT DIRECTION
>01:BDIR



5 #PRINT DIRECTION
>01:UNIDIR



6 #PRINT DIRECTION
>01:UNIDIR

Set the Printer to offline state and press the key.

With the key, scroll to [**#PRINT DIRECTION**].

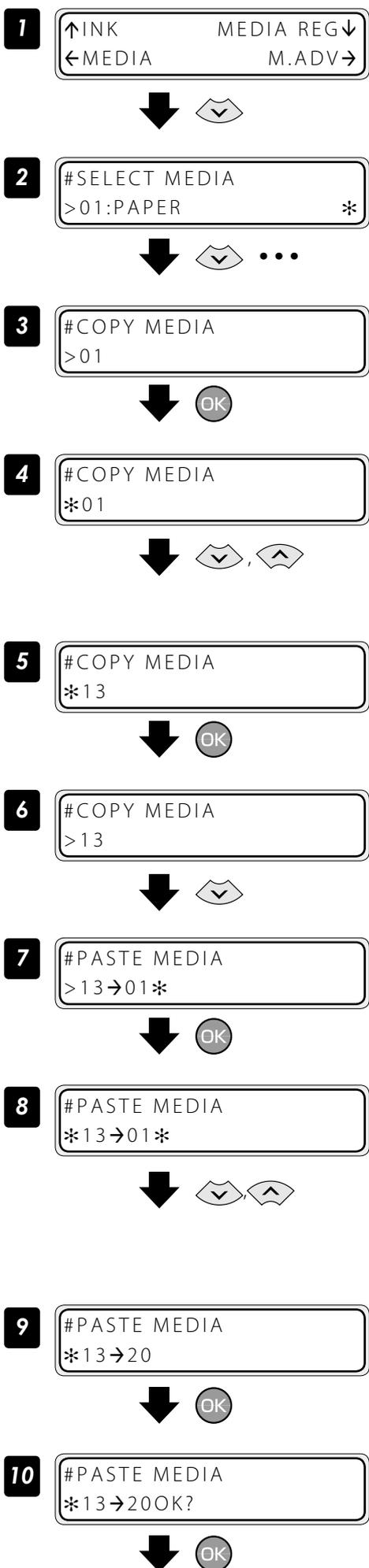
Press the key.

Press the key twice.

Press the key.

Copy a preset media type to create a new one

The following describes the procedure to copy the parameter registered in media No. 13 to media No. 20.



Set the Printer to offline state and press the key.

With the key scroll to [#COPY MEDIA].

Press the key.

Select a copy source with the or key.

Only numbers for media types that already exist are displayed.

By pressing the key the operation returns to the step **3**.

Press the key.

By pressing the key the operation returns to the step **3**.

Press the key.

Press the key.

Select a copy destination with the the or key.

Copy destination numbers 01 to 20 are displayed.

If the number on the right is followed by an asterisk (*), the number displayed already contains media type information.

Press the key.

Press the key.

11

```
#PASTE MEDIA
*13→20*
```

The operation was completed.

Change the type of the preset media without reloading the media



The settings of the preset media are also changed.

1

```
↑INK      MEDIA REG↓
←MEDIA    M.ADV→
```

Set the Printer to offline state and press the key.

**2**

```
ROLL(XXXXXX)
YYYYmm
```

With the key scroll to [#SELECT MEDIA].

**3**

```
#SELECT MEDIA
>01:TYPE01
```

Press the key.

**4**

```
#SELECT MEDIA
*01:TYPE01
```

Press the key several times to select the desired media.

**5**

```
#SELECT MEDIA
*04:Banner
```

Press the key.

**6**

```
#SELECT MEDIA
>04:Banner
```

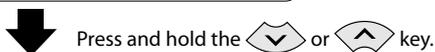
Feed or rewind media

■ Feed or rewind media in online state (idle mode)

1

```
PRINT READY
ROLL:1625/PAPER
```

Press and hold the or key.



To feed media, press the key.

To rewind media, press the key.

(A cut-sheet media, if installed into the Printer, is discharged from the Printer.)

2 The  key is pressed.

FEEDING MEDIA

The  key is pressed.

REWINDING MEDIA

↓ Release the  key or  key.

PRINT READY
ROLL:1625/PAPER

Release the  or  key.

The Printer stops feeding or rewinding media, and the display returns to online state (idle mode).

■ Feed or rewind media in offline state

1

| | |
|--------|------------|
| ↑INK | MEDIA REG↓ |
| ←MEDIA | M.ADV→ |

↓ **MENU**

2

| | |
|---------|------------|
| ↑REWIND | FORM FEED↓ |
| ←PH.REC | PH.MAIN→ |

↓ Press and hold the  or  key.

3 The  key is pressed.

FEEDING MEDIA

The  key is pressed.

REWINDING MEDIA

↓ Release the  key or  key.

| | |
|---------|------------|
| ↑REWIND | FORM FEED↓ |
| ←PH.REC | PH.MAIN→ |

Set the Printer to offline state and press the **MENU** key.

Press and hold the  or  key.

To feed media, press the  key.

To rewind media, press the  key.

(A cut-sheet media, if installed into the Printer, is discharged from the Printer.)

Release the  or  key.

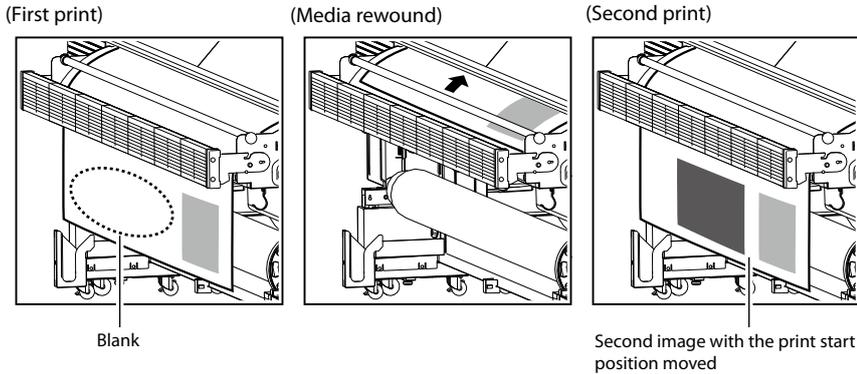
The Printer stops feeding or rewinding media, and the display returns to offline state (menu mode).

CAUTION

- Apply the roll feed unit to backfeed media only for a short distance. For a long distance, carefully apply it and lower the slack position gradually so that the media slack would not reach the floor.
- Besides note that the take-up reel unit does not perform the backfeed operation.
- Do not backfeed media with the take-up reel unit applied.

Move a print start position (nest function)

By moving a print start position, the image is printed on your preferred position.
After printing, rewind the roll, and with this function you can print an image in the blank area.

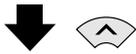


! CAUTION

- Complete this operation as immediately as possible. Otherwise the print heads dry, which may cause ink ejection failure. In such a case perform a cleaning.

1

REWINDING MEDIA



Rewind the media.

See "Feed or rewind media" on the page 44.

! CAUTION

- Rewind the media after the printed image completely dries. If the media is rewind while the image is not sufficiently dry, the image may be damaged.

2

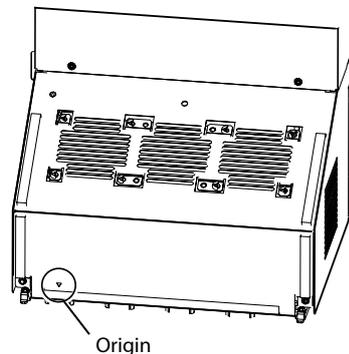
PRINT READY
ROLL:1625/PAPER



Press and hold the key for 1.5 seconds.

Press and hold the key for 1.5 seconds.

The carriage moves and the nest function is activated. Align the mark at the lower left of the carriage cover's front panel with the origin of the next print image.

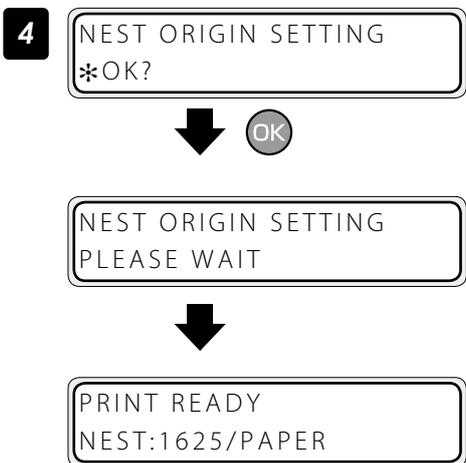


3

NEST ORIGIN SETTING
CARRIAGE MOVING



Move the carriage with the or key to the position to be set as an origin.



Press the **OK** key to fix the origin setting.

The carriage returns, and the Printer enters online state (idle mode) and becomes ready to print.

To cancel the origin above, press and hold the key for 1.5 seconds in the idle mode or raise the pressure control knob. When the origin is cancelled, the display returns from **[NEST]** to **[ROLL]**.

<Display when the origin is cancelled>



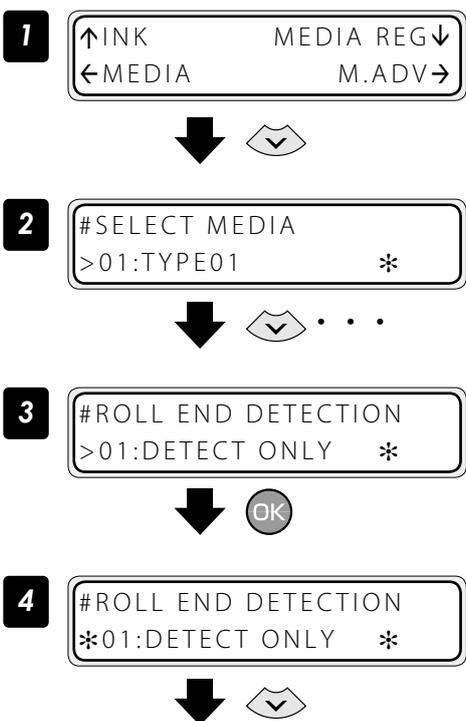
Use the media until the very end

Even when the media end is detected during printing (online mode), a margin remains at the media bottom end. This remaining margin can also be used for printing.

Print quality may be affected when printing near the media bottom end. Use this function only if you can afford this loss in print quality. The tension bar on the supply side must be removed to print near the media bottom end. The media advance adjustment value may not be adequate anymore after the tension bar has been removed, which may affect the print quality.

Set roll end detection to **Action Selection** beforehand.

| | |
|------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Detect Only | Printing stops when media end is detected. |
| Action Selection | Printing stops temporarily when media end error is detected. Select Print or Cancel with the operation panel. |



Set the Printer to offline state and press the key.

With the key scroll to **[#SELECT MEDIA]**.

Press the **OK** key.

Press the key.

5

#ROLL END DETECTION
02:ACTION SELECT.



Press the **OK** key.

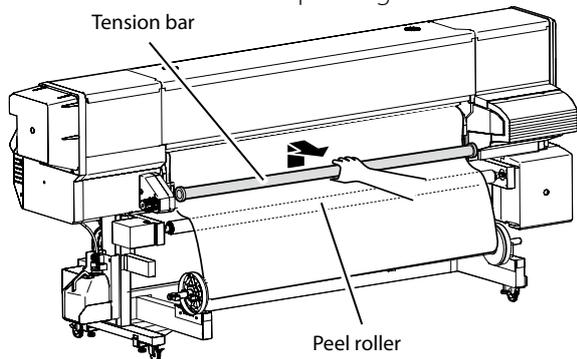
6

#ROLL END DETECTION
>02:ACTION SELECT.*

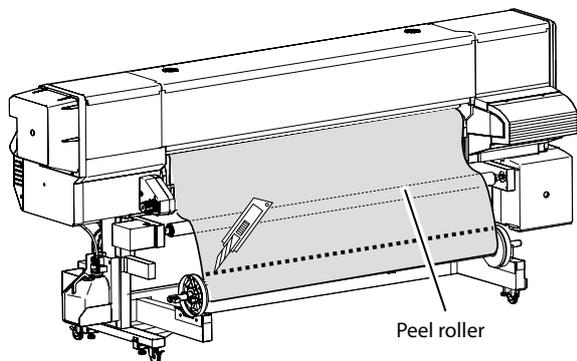
When roll end is detected during printing (online mode), printing stops temporarily and the following screen is displayed.

ROLL END DETECTED
PRINT/CANCEL

<Procedure to continue printing>



1. Remove the tension bar.



2. Detach the media end from the paper tube using the cutter.

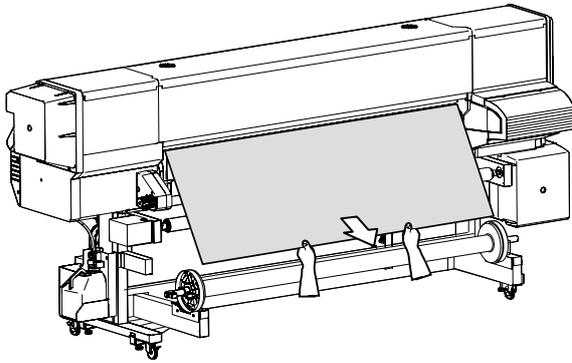
ROLL END DETECTED
PRINT/CANCEL



Press the **OK** key.

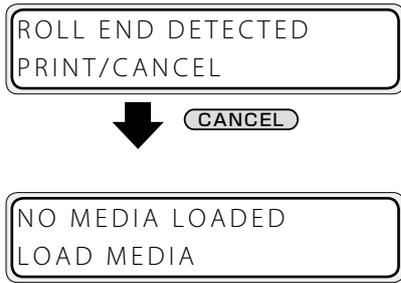
PREHEATING
ROLL:1626/PAPER

The printing resumes.



 The loss in print quality can be compensated by pulling the media by hand to keep it stretched during printing.

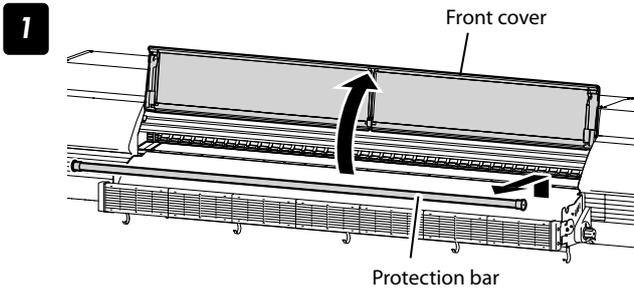
<Procedure to suspend or stop printing>



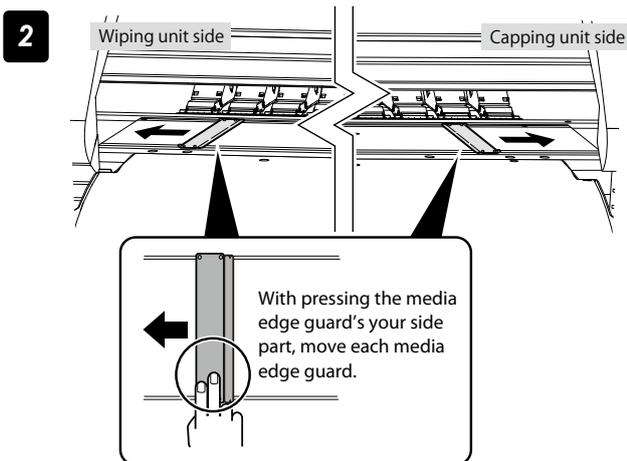
Press the **CANCEL** key.

The printing is suspended and the following message is displayed. Load the new media.

Print on a cut-sheet media



Remove the protection bar, and open the front cover.



Move the media edge guards to each side.

Move the media edge guards to each side so that they are not under the media.

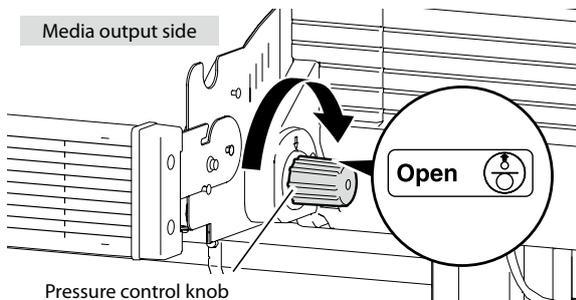
With pressing the media edge guard's your side part, move each media edge guard.

CAUTION

- Be sure to press the media edge guard on your side when moving the media edge guards. You may get injured if your finger slips while strongly pressing the plate's edge.

3

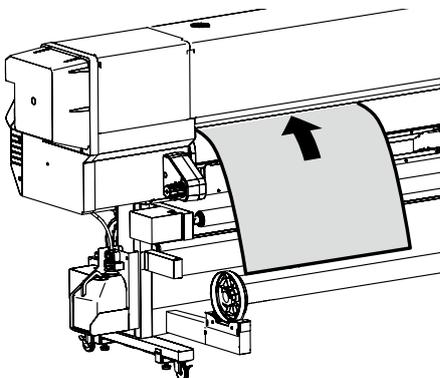
Media output side



Pressure control knob

Set the pressure to "Open" by rotating the pressure control knob.

4

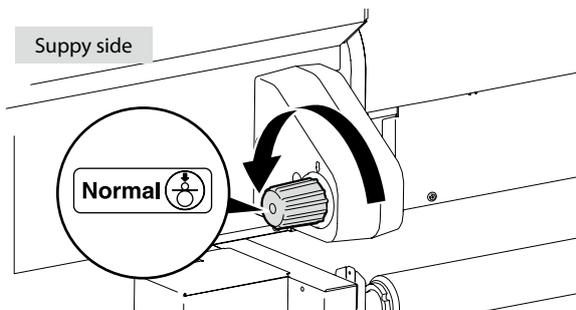


Insert a cut-sheet media into the paper feeder slot.

Insert the cut-sheet media so that the media feed sensor is covered with the media.

5

Supply side



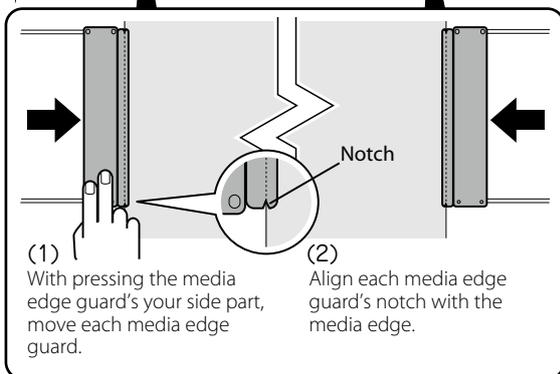
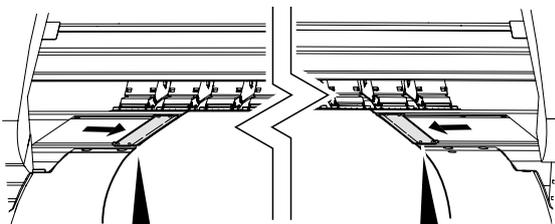
Set the pressure to "Normal" by rotating the pressure control knob.



Point to be checked again

- Check that the media on the platen is not lifted up or wrinkled.

6



(1) With pressing the media edge guard's your side part, move each media edge guard.

(2) Align each media edge guard's notch with the media edge.

Set the media edge guards.

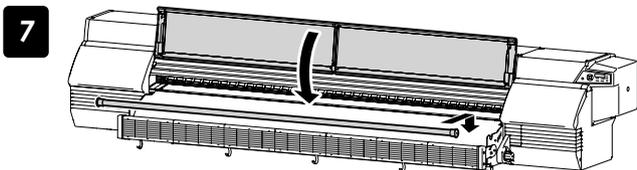
- (1) With pressing the media edge guard's your side part, move each media edge guard to the media edge.
- (2) Align each media edge guard's notch with the media edge.

Check that:

- The media edge guards are not under the media.
- The thick media, being inserted forcibly, is not jammed under the media edge guards.

CAUTION

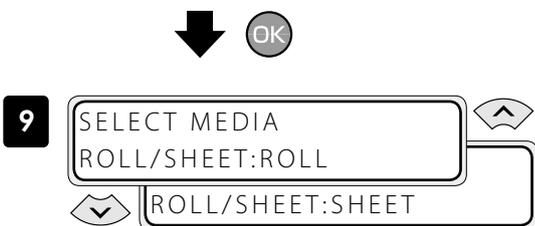
- To prevent a media jam, be sure to apply the media edge guards to prevent a media jam.
- Be sure to press the media edge guard on your side when moving the media edge guards. You may get injured if your finger slips while strongly pressing the plate's edge.



Close the front cover, and then install the protection bar.

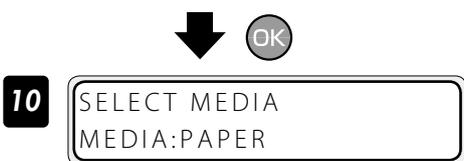


Press the **OK** key.

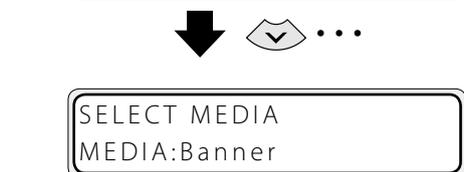


Select **[SHEET]** and press the **OK** key.

(To return to the media selection, press the **CANCEL** key.)



Select the type of media, and then press **OK** the key.



Select a preset media with the or key. Here explains the procedure taking banner for example.



Press the **OK** key.



Adjust the head margin before printing

Advance or rewind the media during the preheating time before printing to adjust the margin to the previous printout.

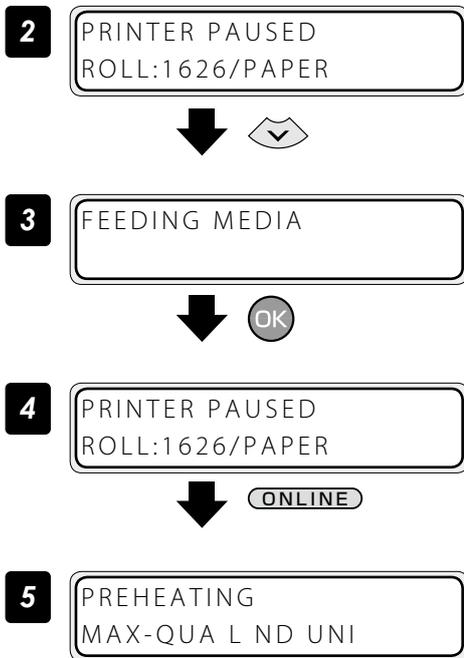


Once printing (scan) has started, this function cannot be used for the current job.



Press the **ONLINE** key during the preheating time before printing.





The Printer enters pause mode. Keep the  key pressed.

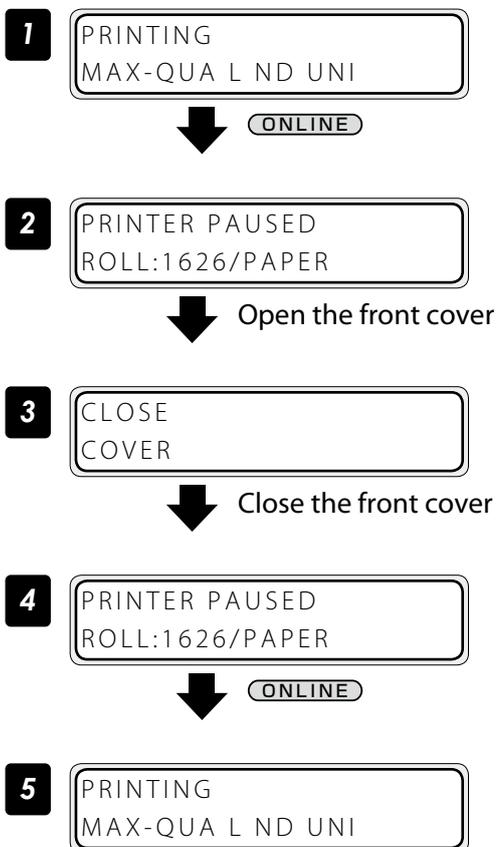
Release the  key to stop feeding the media.

Press the  key to resume printing.

 key to rewind the media.'" data-bbox="504 295 828 371"/>

Reinstall the edge guards during printing

If the edge guards are accidentally removed or particles adhere to the media advance path during printing, put the Printer into pause mode to be able to open and close the front cover.



Press the  key during printing.

The Printer enters pause mode. Open the front cover.

Close the cover to return to the Printer pause display.

Press the  key to resume printing.

Remove some media wrinkles during printing

If the media wrinkles during printing (online mode), put the Printer into pause mode to be able to release the grip.



Media wrinkles can be partially removed by releasing the grip. However, in that case the media may skew and the print quality may decrease.

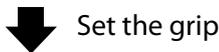
1 PRINTING
MAX-QUAL ND UNI



2 PRINTER PAUSED
ROLL:1626/PAPER



3 HOLD MEDIA



4 PRINTER PAUSED
ROLL:1626/PAPER



5 PRINTING
MAX-QUAL ND UNI

Press the **ONLINE** key during the preheating time before printing.

The Printer enters pause mode. Release the grip.

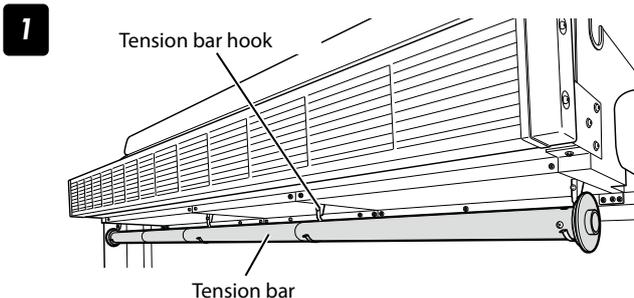
CAUTION

- When the grip is released, hold the media in your hands to prevent it from skewing.

Set the grip back to return to the Printer pause display.

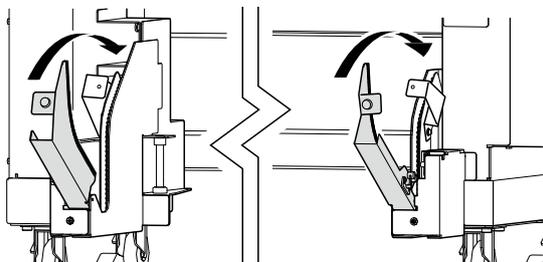
Press the **ONLINE** key to resume printing.

Solve skew in LOOSE winding mode



Hook the tension bar to the tension bar hook beforehand.

2



Close the tension bar guide's cover.

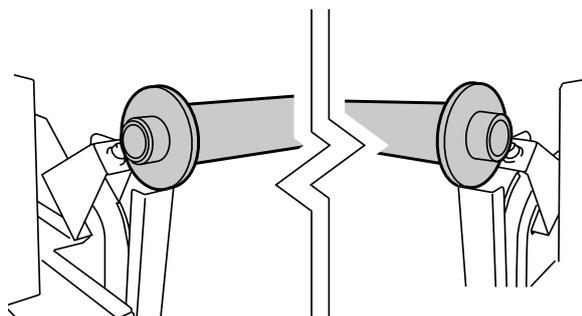
Close the cover, and fix the cover by fastening the knob screw.

3

Load the media on the Printer.

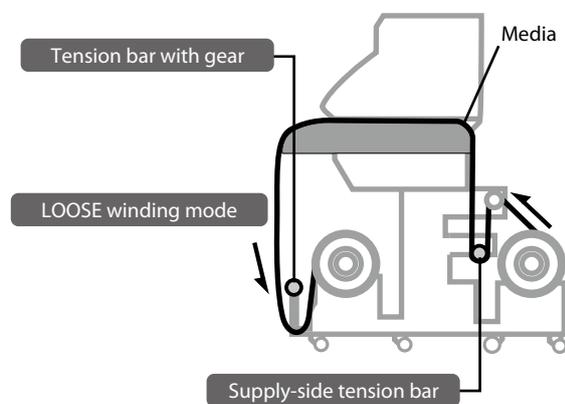
For the procedure, see the *Basic Operation Guide "To take up media in LOOSE winding mode."*

4



Place the tension bar with gear on the closed tension bar guide.

Place the tension bar carefully to prevent the tension bar with gear from being dropped.



5

Input the data in the software RIP.

To change the Printer's basic settings

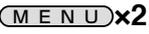
Turn the audio warning beep off

The default beep is set to on. So the Printer issues the audio warning beep when:

- The print heads are not capped during the daily maintenance or print head height adjustment.
- The print heads cannot be capped because of a media jam during the print operation.

With the procedure below the audio warning beep is turned off.

1 

↓  x2

2 

↓ 

3 

↓  ...

4 

↓ 

5 

↓ 

6 

↓ 



Set the Printer to offline state and press the  key twice.

Press the  key.

With the  key scroll to [**#BEEP(UNCAP CARRI)**].

Press the  key.

Press the  key.

Press the  key.

Update the system firmware

To improve the Printer's performance, you are recommended to update the system firmware.

For the procedure, refer to the documents attached to the system firmware.

Cleaning options

Perform cleaning only for the specified print head



Set the Printer to offline state and press the **MENU** key.



Press the **←** key.



Press the **OK** key.



With the **↑** or **↓** key scroll to [***STRONG**].



Press the **OK** key.



Select your preferred print head for cleaning.

With the **←** and **→** keys, select the print head number. Then with the **↑** or **↓** key, display or delete the number. Display it to clean the print head, or delete it not to clean the print head.

| | |
|----|----|
| Y8 | Y1 |
| M7 | M2 |
| C6 | C3 |
| K5 | K4 |



Press the **OK** key.

The left LCD display shows that the Printer performs the cleaning only for the print heads 5 and 8.

8 #PH REC 8 5
*BOTTLE OK?



#PH REC 8 5
*EXECUTING 12

This value is counted down every 10 seconds.

9 #PH RECOVERY
>NORMAL



↑REWIND FORM FEED↓
←PH.REC PH.MAIN→

Press the key.

Check visually that the waste ink bottle is not full.

Cleaning is started.

Print head cleaning takes several minutes.

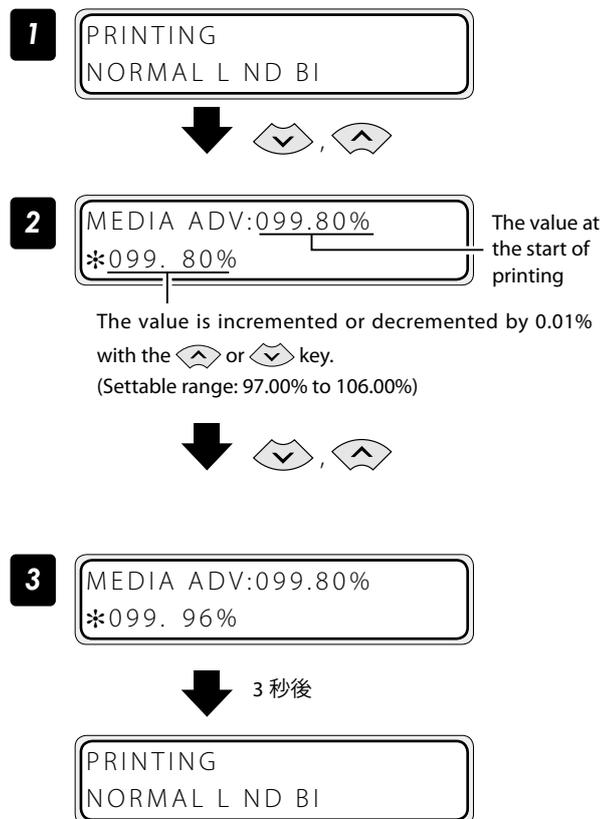
When the cleaning starts, the required time is displayed and the time is counted down every 10 seconds.

Press the key.

The Printer returns to offline state, that is, menu mode.

Manage the media advance compensation

Change media advance compensation



Press the  or  key while **[PRINTING]** is displayed.

With the  or  key, change the media advance compensation.

When the value is changed, it is reflected in printing immediately.

The value displayed at the start of printing does not change until the printing is completed. However, when the cleaning mode is set to "DURING PRINT", the value displayed changes after the cleaning is completed.

The changed value is registered and retained.

When no key is operated for three seconds, the display returns to the original one.

Print conditions

On the Printer, print conditions can be configured with the following interrelated settings

- 5 print mode settings
- 3 smart pass settings

in addition to

- 2 density settings.

Configure the print conditions according to the media type, productivity and print quality.

Generally, we recommend printing with **NORMAL** print mode, **MEDIUM** smart pass, and **NORMAL** density settings.

Use other modes and settings to emphasize productivity or print quality.

After changing the print mode

Adjust the media advance compensation again (📖 **page 83**).

Set PRINT MODE

Set the print resolution.

Reduce the resolution to maximize productivity.

Increase the resolution for high definition printout with no visible grains.

| Print mode | Resolution | Explanation |
|--------------|-----------------------|-------------------------------------------------------------------|
| MAX SPEED | 360dpi x 360dpi x DDP | This is the fastest print mode. Use it to emphasize productivity. |
| HIGH SPEED | 360dpi x 540dpi x DDP | This print mode is balanced between print speed and quality. |
| NORMAL | 540dpi x 540dpi x DDP | This is the normal print mode. Usually, use this print mode. |
| HIGH QUALITY | 720dpi x 720dpi | The quality is emphasized rather than print speed. |
| MAX QUALITY | 900dpi x 900dpi | This print mode has the highest resolution. |

CAUTION

- The **NORMAL** print mode is recommended. Use the other modes according to your needs regarding productivity and quality.

Set SMART PASS

Set the auto correction level to enhance image quality by correcting unevenness or other print defects. Increase the enhancing effect by setting the correction level to medium or high for the maximum effect.

| Smart pass | Explanation |
|------------|-----------------------------------------------------------------------------------------------------------------|
| MEDIUM | Normally, use this setting for a good balance between speed and image quality. |
| HIGH | Use this setting when print defects are not corrected with "MEDIUM" to obtain a higher image correction effect. |

CAUTION

- The **MEDIUM** smart pass setting is recommended. Use the other settings according to your needs regarding productivity and quality.
- When **LOW** is set in the host computer, the Printer prints with the **MEDIUM** smart pass setting.
- Print speed with **HIGH** setting is approximately 25% slower than with **MEDIUM** setting.
- High density printing was performed with smart pass always set to **HIGH**.
- High density printing is always performed with smart pass set to **HIGH**.

Set DENSITY

The print density can be set to **NORMAL** and **HIGH DENSITY**.

The following shows the relationship between the density level for **HIGH DENSITY** and each print mode, when the density for **NORMAL** is assumed to be 1.0.

| Print mode | Density | |
|--------------|---------|--------------|
| | NORMAL | HIGH DENSITY |
| MAX SPEED | 1.0 | 1.0 (*1) |
| HIGH SPEED | 1.0 | 1.3 |
| NORMAL | 1.0 | 1.5 |
| HIGH QUALITY | 1.0 | 2.0 |
| MAX QUALITY | 1.0 | 2.0 |

*1 With **MAX SPEED** print mode, the density does not change even when **HIGH DENSITY** is set.

CAUTION

- The print speed does not change between **NORMAL** and **HIGH DENSITY** printing.
- Since a large quantity of ink is used with **HIGH DENSITY**, printing with this setting may generate ink bleeding or drying unevenness. In this case, select a slower print speed.



- Print speed depends on the print mode and smart pass setting. Approximate values are shown in the tables below.
- The indicated print speeds can be reduced by print conditions such as the media width.

IP-7900 print speed (*1)

| Print mode | | |
|--------------|------------------------|------------------------|
| | MEDIUM | HIGH |
| MAX SPEED | 79.5 m ² /h | 59.4 m ² /h |
| HIGH SPEED | 52.7 m ² /h | 39.3 m ² /h |
| NORMAL | 37.1 m ² /h | 27.6 m ² /h |
| HIGH QUALITY | 20.6 m ² /h | 15.2 m ² /h |
| MAX QUALITY | 13.0 m ² /h | 9.4 m ² /h |

IP-7700 print speed (*2)

| Print mode | | |
|--------------|------------------------|------------------------|
| | MEDIUM | HIGH |
| MAX SPEED | 70.9 m ² /h | 53.0 m ² /h |
| HIGH SPEED | 46.9 m ² /h | 35.0 m ² /h |
| NORMAL | 34.2 m ² /h | 25.4 m ² /h |
| HIGH QUALITY | 18.6 m ² /h | 13.7 m ² /h |
| MAX QUALITY | 11.9 m ² /h | 8.6 m ² /h |

*1 Print speed values are for full width print on a media of 2642 mm width (104 inches).

*2 Print speed values are for full width print on a media of 1900 mm width (74 inches).

*3 High density printing was performed with smart pass always set to **HIGH**.

Troubleshoot print quality issues

This section describes the hint for you for one symptom, to get good image quality with the Printer. Take appropriate actions according to the printout's symptom. When several actions are described, they are arranged in the order of effectiveness. Therefore, you are recommended to take actions from the top and confirm the effect on the improvement. (Note that all the described actions are not always necessary to solve the problem.)

The print is light.

| Cause | Solution |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| ● The density setting does not match. | Set density to HIGH DENSITY if high density printing is required, such as when using backlit banner media. (📖 page 41) |
| ● The operating environment is outside the specification of the Printer. | Raise the ambient temperature to 15°C or more (20 to 25°C recommended) to warm the Printer adequately |
| ● Media is not selected properly. | Check the media selection. (<i>Basic Operation Guide</i> 📖 page 54) |

Missing dots are found at the beginning of printing.

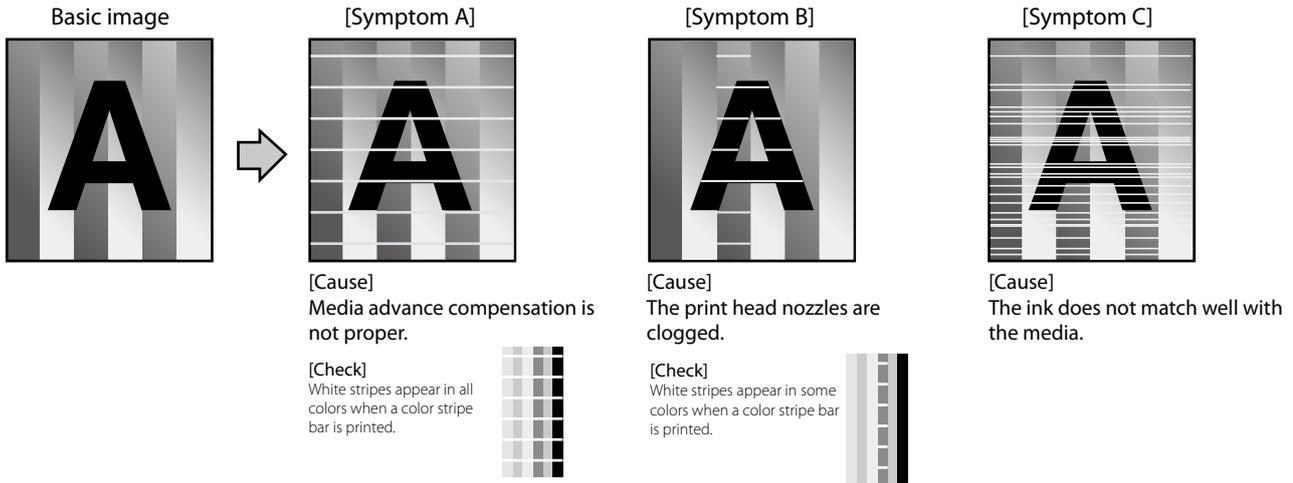
| Cause | Solution |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ● Outside the operating temperature/humidity range | Use the Printer within the operating temperature/humidity range. (<i>Basic Operation Guide</i> 📖 page 17) |
| ● Obstructions in the nozzle surface path | Check the obstructions in the nozzle surface path, with the order of on: platen, media edge guards, spittoon case, capping unit, and wiper blade, and remove the obstruction and stains. Lint or paper fibers caused by a ragged media may touch the print head, which may cause missing dots. Replace the media with a media with no lint or paper fiber. Check that the exhaust fan filter is not encrusted with dust. If it is, replace the filter. (<i>Basic Operation Guide</i> 📖 page 77) |

The media is curled or wrinkled.

| Cause | Solution |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ● Outside the operating temperature/humidity range | <p>(1) Use the Printer within the operating temperature/humidity range. * Note that some media may be wrinkled even within the operating temperature and humidity range.</p> <p>(2) Use the proven media.</p> |
| <ul style="list-style-type: none"> ● The media storage conditions are not the same as the printer operation conditions. | <p>The difference between the media storage conditions and the printer operation conditions may cause the media curled or wrinkled. To prevent it, when carrying the media in storage to the operation area, before printing leave the media for a proper time. *The time depends on the media type and the storage conditions.</p> |
| <ul style="list-style-type: none"> ● The media was poorly installed. | <p>Check that the media was installed properly with the conditions below.</p> <ul style="list-style-type: none"> - The installed media is properly parallel to the Printer and the flange. - The operation panel shows the media type correctly. - The supply-side tension bar length is proper and it is placed on the center of the media. - The media winding mode is optimal to the installed media. |
| <ul style="list-style-type: none"> ● The heater temperature wrinkled the media. | <p>(1) If the media is wrinkled while the Printer is warmed by the heaters, install the media only after the Printer is warmed up by the heaters.</p> <p>(2) Change the heater temperature. Increase or decrease the all three heaters by 5°C.*¹</p> <p>(3) Use the proven media.</p> |
| <ul style="list-style-type: none"> ● The media is curled. | <p>(1) Do not use the media curled in the x direction, that is, the vertical direction of the media.</p> <p>(2) Do not use the media curled in the y direction, that is, on the right and left edges of the media. The curl is so excessive that the media edge guards and the suction fan cannot flat the media</p> <p>(3) Use the proven media.</p> |

*¹ When the heaters temperature is changed, again adjust the media advance compensation.

White stripes appear on the print.



| Cause | Solution |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>[Symptom A]</p> <ul style="list-style-type: none"> Media feed is not adjusted properly. | <p>Adjust the media advance compensation.</p> <ul style="list-style-type: none"> * The media advance compensation differs depending on the winding mode, LOOSE or TENSION. |
| <p>[Symptom A]</p> <ul style="list-style-type: none"> The media advance accuracy is poor, or is not stable. | <ol style="list-style-type: none"> Check that the media was installed properly with the conditions below. <ul style="list-style-type: none"> The installed media is properly parallel to the Printer and the flange. The operation panel shows the media type correctly. The supply-side tension bar length is proper and it is placed on the center of the media. The media winding mode is optimal to the installed media. If the media is curled or wrinkled, see the description on the problem, "The media is curled or wrinkled." Adjust the pressure on the media with the pressure control knob.^{*1} Set smart pass to a higher setting.^{*1*2} Change the print mode to be slower.^{*1*2} |
| <p>[Symptom B]</p> <ul style="list-style-type: none"> Print head nozzles are clogged. | <ol style="list-style-type: none"> Perform a nozzle print, and set nozzle map for the clogged nozzles. (Basic Operation Guide page 92) Check the obstructions such as media lint or ink clot in the nozzle surface path including the platen surface, and remove them. If the ink is accumulated or the net tears on the spittoon case surface, replace them. If the media is curled or wrinkled, solve the problem by referring to the description on the problem, "The media is curled or wrinkled." Perform the daily maintenance. <ul style="list-style-type: none"> * Do not forget to clean the head guard and edge guards. * Be sure to perform the print head cleaning. Perform the CHARGE CAP CL. With the print sheet mount cleaning (Basic Operation Guide page 96), clean the print head surface. <p>- Printing with a color stripe bar is effective to prevent missing dots. (page 35)</p> |

[Symptom C]

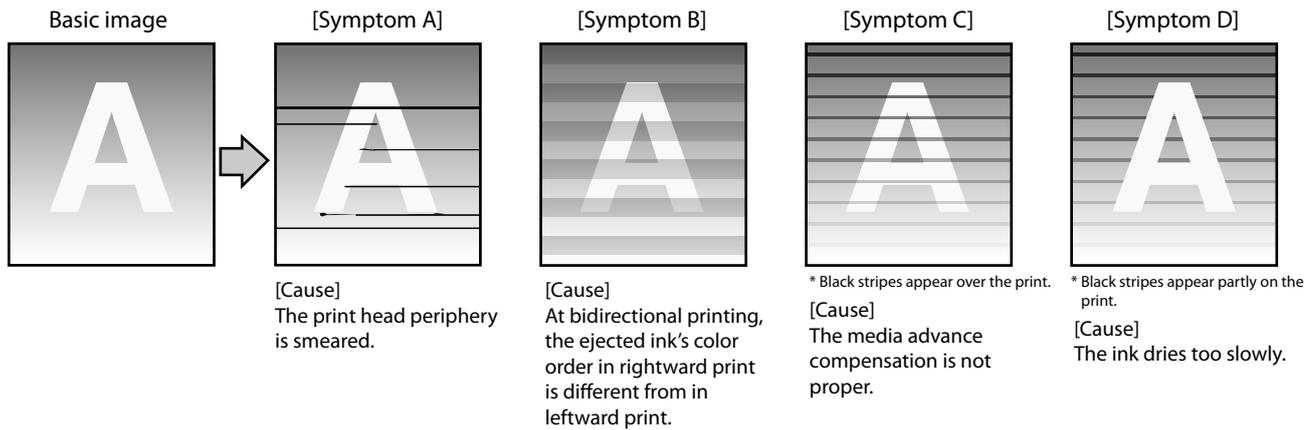
- The ink does not match well with the media.
(Media with low dot spread rate)

- (1) Decrease the all three heaters by 5°C.^{*1}
 - * Before starting the print, ensure that the heater temperature was decreased to the target temperature.
 - * With some media, the heater temperature increased would be effective.
 - (2) Set smart pass to a higher setting.^{*1*2}
 - (3) Change the print mode to be slower.^{*1*2}
 - (4) Use the proven media.
-

^{*1} Adjust the media advance compensation again.

^{*2} Note that the print speed differs depending on the mode selected.

Black stripes appear on the print.



| Cause | Solution |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>[Symptom A]</p> <ul style="list-style-type: none"> The print head periphery is smeared. | <ol style="list-style-type: none"> Check the obstructions such as media lint or ink clot in the nozzle surface path including the platen surface, and remove them. If the ink is accumulated or the net tears on the spittoon case surface, replace them. If the media is curled or wrinkled, solve the problem by referring to the description on the problem, "The media is curled or wrinkled." Perform the daily maintenance. <ul style="list-style-type: none"> * Do not forget to clean the head guard and edge guards. * Be sure to perform the print head cleaning. Perform the CHARGE CAP CL. With the print sheet mount cleaning (Basic Operation Guide page 96), clean the print head surface. |
| <p>[Symptom B]</p> <ul style="list-style-type: none"> At bidirectional printing, the ejected ink's color order in rightward print is different from in leftward print. | <ol style="list-style-type: none"> Set smart pass to a higher setting. ^{*1*2} Change the print mode to be slower. ^{*1*2} Print in unidirectional mode. Use the proven media. |
| <p>[Symptom C]</p> <ul style="list-style-type: none"> The media advance compensation is not proper. | <p>Adjust the media advance compensation.</p> <p>* The media advance compensation differs depending on the winding mode, LOOSE or TENSION.</p> |
| <p>[Symptom C]</p> <ul style="list-style-type: none"> The media advance accuracy is poor, or is not stable. | <ol style="list-style-type: none"> Check that the media was installed properly with the conditions below. <ul style="list-style-type: none"> The installed media is properly parallel to the Printer and the flange. The operation panel shows the media type correctly. The supply-side tension bar length is proper and it is placed on the center of the media. The media winding mode is optimal to the installed media. If the media is curled or wrinkled, see the description on the problem, "The media is curled or wrinkled." Adjust the pressure on the media with the pressure control knob. ^{*1} Set smart pass to a higher setting. ^{*1*2} Change the print mode to be slower. ^{*1*2} |

[Symptom D]

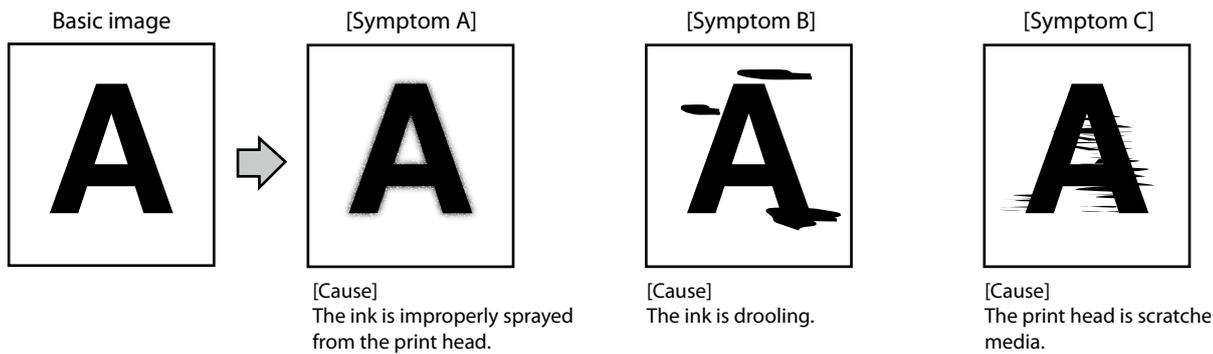
- The ink dries too slowly.
(Mottling or bleeding is found.)

- (1) Increase the all three heaters by 5°C.*¹
 - * Before starting the print, ensure that the heater temperature was decreased to the target temperature.
- (2) Set smart pass to a higher setting.*^{1*2}
- (3) Change the print mode to be slower.*^{1*2}
- (4) Print in unidirectional mode.
- (5) Use the proven media.
- (6) With the RIP software, apply the profile with the low ink amount ejected.
 - * Note that the hue may change by decreasing the ejected ink amount.

*¹ Adjust the media advance compensation again.

*² Note that the print speed differs depending on the mode selected.

The print is smeared.



| Cause | Solution |
|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>[Symptom A]</p> <ul style="list-style-type: none"> ● The ink is improperly sprayed from the print head. | <ol style="list-style-type: none"> (1) Use the Printer within the operating temperature/humidity range. (2) Check the "#PH HEIGHT VAL" value. If the value is more than 0, set the value to 0.^{*3} (3) Perform the daily maintenance. <ul style="list-style-type: none"> * Be sure to clean the head guard, edge guards, carriage's bottom face, and the right and left sides of the print head top. (4) Perform print head cleaning (STRONG). (5) Change the print mode to be slower.^{*1*2} (6) Perform the CHARGE CAP CL. (7) With the print sheet mount cleaning (Basic Operation Guide  page 96), clean the print head surface. (8) By decreasing the "#PH HEIGHT VAL" value, lower the print head height.^{*3} <ul style="list-style-type: none"> * Do not decrease the value excessively, as the lowered print head may cause media jams more frequently. |
| <p>[Symptom B]</p> <ul style="list-style-type: none"> ● The ink is drooling. | <ol style="list-style-type: none"> (1) Use the Printer within the operating temperature/humidity range. (2) Check the obstructions such as media lint or ink clot in the nozzle surface path including the platen surface, and remove them. (3) If the ink is accumulated or the net tears on the spittoon case surface, replace them. (4) If the media is curled or wrinkled, solve the problem by referring to the description on the problem, "The media is curled or wrinkled." (5) Perform the daily maintenance. <ul style="list-style-type: none"> * Do not forget to clean the head guard and edge guards. * Be sure to perform print head cleaning. (6) Perform the CHARGE CAP CL. (7) With the print sheet mount cleaning (Basic Operation Guide  page 96), clean the print head surface. (8) Note that some media are staticky, on which by static electricity the ink droplets on the nozzle surface may cause the ink drooling. Use the proven media. (9) With some banner media, feathery media edge scratches the print head, which may cause the ink drooling. |

[Symptom C]**● The print head is scratched by media.**

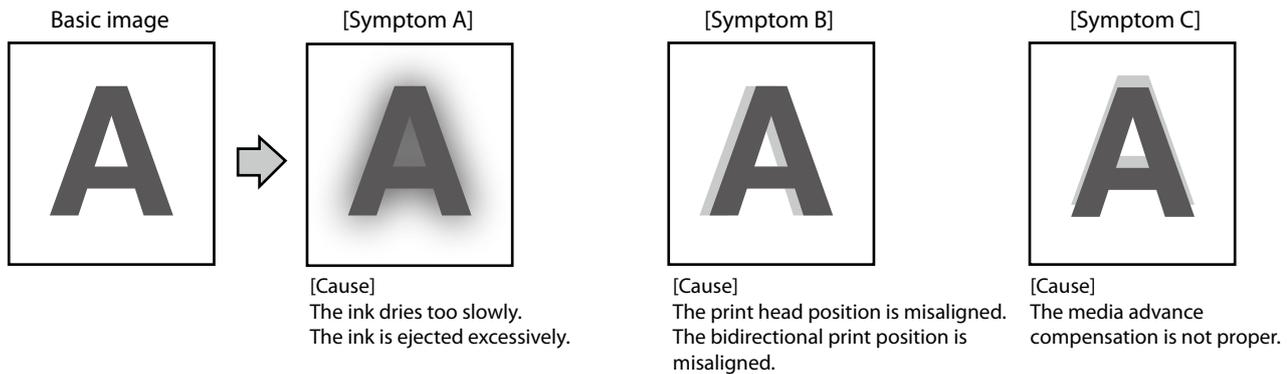
- (1) Check that the media was installed properly with the conditions below.
 - The installed media is properly parallel to the Printer and the flange.
 - The operation panel shows the media type correctly.
 - The supply-side tension bar length is proper and it is placed on the center of the media.
 - The media winding mode is optimal to the installed media.
 - If the media is curled or wrinkled, see the description on the problem, "The media is curled or wrinkled."
- (2) Check the obstructions such as media lint or ink clot in the nozzle surface path including the platen surface, and remove them.
- (3) If the ink is accumulated or the net tears on the spittoon case surface, replace them.
- (4) Perform the daily maintenance.
 - * Do not forget to clean the head guard and edge guards.
 - * Be sure to perform print head cleaning.
- (5) Perform the CHARGE CAP CL.
- (6) With the print sheet mount cleaning (**Basic Operation Guide**  **page 96**), clean the print head surface.

^{*1} Adjust the media advance compensation again.

^{*2} Note that the print speed differs depending on the mode selected.

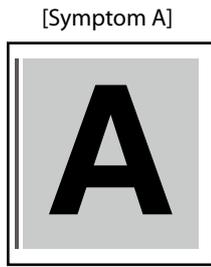
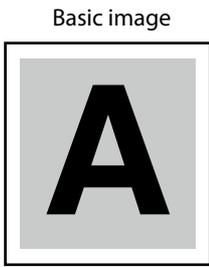
^{*3} Adjust the bidirectional print positions.

Edges of objects are blurred.

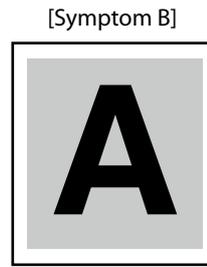


| Cause | Solution |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>[Symptom A]</p> <ul style="list-style-type: none"> ● The ink dries too slowly. ● The ink is ejected excessively. | <p>(1) Decrease the all three heaters by 5°C.*¹</p> <p>* Before starting the print, ensure that the heater temperature was decreased to the target temperature.</p> <p>(2) Set smart pass to a higher setting. ^{*1*2}</p> <p>(3) Change the print mode to be slower. ^{*1*2}</p> <p>(4) Print in unidirectional mode.</p> <p>(4) If density is set to "HIGH DENSITY", change it to NORMAL. (📖 page 41)</p> <p>(5) Use the proven media.</p> <p>(6) With the RIP software, apply the profile with the low ink amount ejected.</p> <p>* Note that the hue may change by decreasing the ejected ink amount.</p> |
| <p>[Symptom B]</p> <ul style="list-style-type: none"> ● The print head position is misaligned. ● The bidirectional print position is misaligned. | <p>(1) Adjust the print head position. (📖 page 94)</p> <p>(2) Adjust the bidirectional print positions. (📖 page 86)</p> |
| <p>[Symptom C]</p> <ul style="list-style-type: none"> ● The media advance compensation is not proper. | <p>Adjust the media advance compensation.</p> <p>* The media advance compensation differs depending on the winding mode, LOOSE or TENSION.</p> |
| <p>[Symptom C]</p> <ul style="list-style-type: none"> ● The media advance accuracy is poor, or is not stable. | <p>(1) Check that the media was installed properly with the conditions below.</p> <ul style="list-style-type: none"> - The installed media is properly parallel to the Printer and the flange. - The operation panel shows the media type correctly. - The supply-side tension bar length is proper and it is placed on the center of the media. - The media winding mode is optimal to the installed media. - If the media is curled or wrinkled, see the description on the problem, "The media is curled or wrinkled." <p>(2) Adjust the pressure on the media with the pressure control knob. ^{*1}</p> <p>(3) Set smart pass to a higher setting. ^{*1*2}</p> <p>(4) Change the print mode to be slower. ^{*1*2}</p> |

A vertical banding appears at the print's edge.



[Cause]
On the platen, the contacting point of the media left edge and the media edge guard is near the platen's vacuum hole.



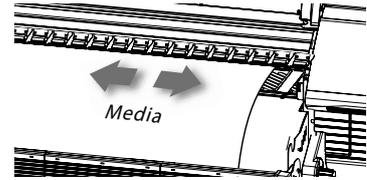
[Cause]
On the platen, the contacting point of the media right edge and the media edge guard is near the platen's vacuum hole.

| Cause | Solution |
|-------|----------|
|-------|----------|

[Symptom A] [Symptom B]

- When, on the platen, the contacting point of a media edge and the media edge guard is near the platen's vacuum hole, the Printer may suck the ejected ink partially between the media and the media edge guard. As a result, a vertical banding may appear.

(1) Shift the media so that the contacting point of the media edge and the media edge guard on the platen does not come close to the vacuum hole.

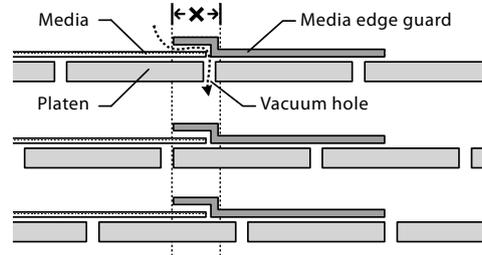


* Avoid the platen's vacuum hole for this area.

An example of media position when a vertical banding appear

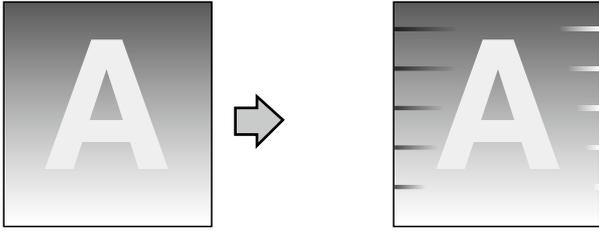
Example (1) of shifting the media position when a vertical banding appear

Example (2) of shifting the media position when a vertical banding appear



Different bandings appear on the print's right and left.

Basic image

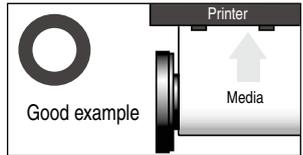
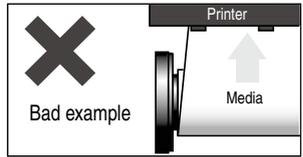
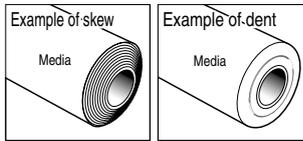


[Cause]
The media is skewed.

Cause

Solution

● The skewed media is fed.



- (1) Check that the media condition is good. If the media roll is dent or wound telescopically, replace the roll with a good one.
- (2) Check that the media was installed properly with the conditions below.
 - The installed media is properly parallel to the Printer and the flange.
 - The operation panel shows the media type correctly.
 - The supply-side tension bar length is proper and it is placed on the center of the media.
 - The media winding mode is optimal to the installed media.
 - If the media is curled or wrinkled, see the description on the problem, "The media is curled or wrinkled."
- (3) Check that the takeup-side media shows no irregular winding. If an irregular winding is found, re-install the media on the Printer and onto the take-up reel unit.
- (4) Adjust the pressure on the media with the pressure control knob.^{*1}
- (5) Change the tension bar length.^{*1}
- (6) Use the proven media.

^{*1} Adjust the media advance compensation again.

Clear missing dots (nozzle clogging)

If the missing dots persist after the daily maintenance and after setting NOZZLE MAP, perform the operation below.

Strong cleaning

Perform the strong cleaning when the missing dots persist after the normal cleaning.



Fill the cap with ink

To clear the nozzle clogging, fill the cap with ink and moisten the print head nozzle surface with ink. After this operation, hold the Printer for 1 to 2 hours.



Fill the cap with wiper cleaning liquid

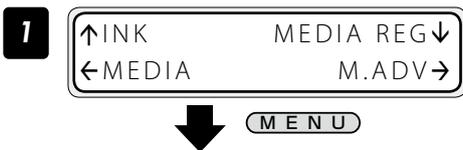
To clear the nozzle clogging, fill the cap with wiper cleaning liquid. After this operation, hold the Printer for 12 to 18 hours.



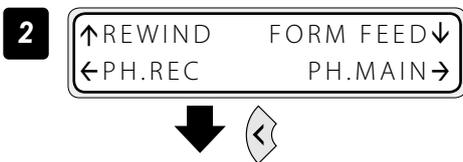
Perform sheet mount cleaning

Clean the print heads surfaces with sheet mount cleaning ([Basic Operation Guide page 96](#)).
(Generally perform sheet mount clean approximately once per month.)

Strong cleaning



Set the Printer to offline state and press the **MENU** key.



Press the **←** key.



Press the **OK** key.



Press the **✓** key.

5 #PH RECOVERY
*STRONG



6 #PH RECOVERY
*STRONG:87654321



7 #PH REC 87654321
*BOTTLE OK?



#PH REC 87654321
*EXECUTING 12

This value is counted down every 10 seconds.

8 #PH RECOVERY
>NORMAL



↑REWIND FORM FEED↓
←PH.REC PH.MAIN→

Press the **OK** key.

Press the **OK** key.

Press the **OK** key.

Check visually that the waste ink bottle is not full.

Cleaning is started.

Print head cleaning takes several minutes.

When the cleaning starts, the required time is displayed and the time is counted down every 10 seconds.

Press the **←** key.

The display returns offline state (menu mode).

Fill the cap with ink

1 ↑INK MEDIA REG↓
←MEDIA M.ADV→



2 ↑REWIND FORM FEED↓
←PH.REC PH.MAIN→



3 #CAP CLEANING
>



4 #WASH PRINTHEADS
>

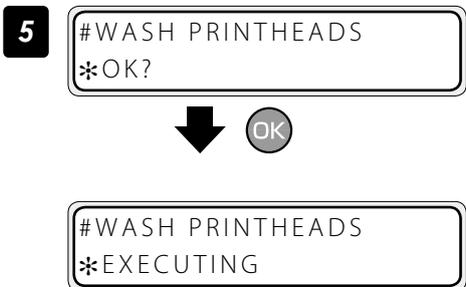


Set the Printer to offline state and press the **MENU** key.

Press the **→** key.

With the **✓** key scroll to **[#WASH PRINTHEADS]**.

Press the **OK** key.

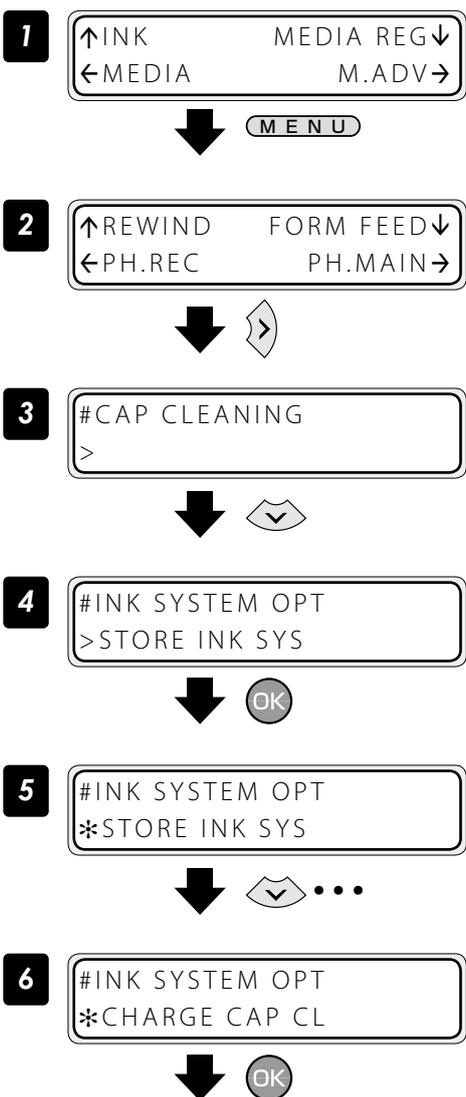


Press the  key.

Hold the Printer for 1 to 2 hours.

After the Printer was held for 1 to 2 hours, perform the normal cleaning.

Fill the cap with wiper cleaning liquid



Set the Printer to offline state and press the  key.

Press the  key.

Press the  key.

Press the  key.

With the  key scroll to [***CHARGE CAP CL**].

Press the  key.

7 #INK SYSTEM OPT
*BOTTLE OK?

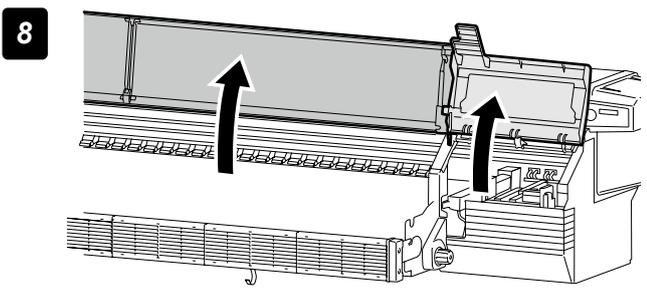


CARRIAGE MOVING
PLEASE WAIT

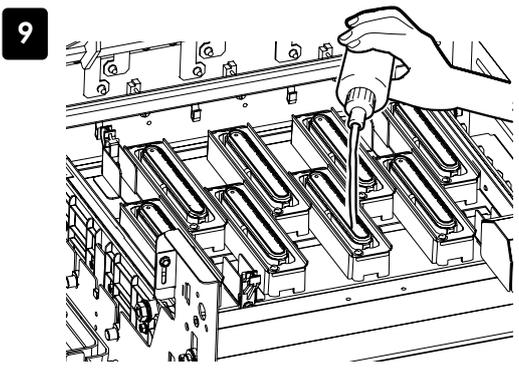


OPEN COVER AND
POUR CL

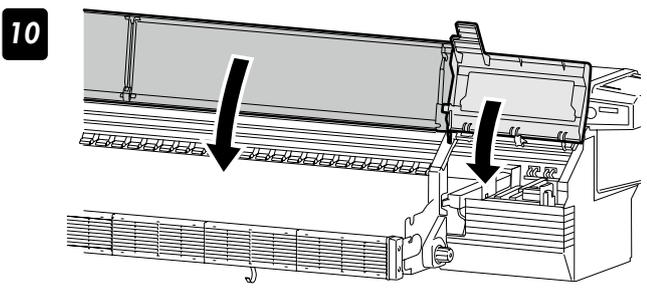
Press the  key.



Open the front cover, and then open the cap cover.



Add the wiper cleaning liquid to the cap.



Close the capping cover and the front cover.
The carriage returns automatically to the home position.

11 Hold the Printer for 12 to 18 hours.

After the Printer was held for 12 to 18 hours, before printing perform the normal cleaning.

Adjust the heaters' temperature

The each heater's initial value is set with MEDIA REG MENU, and the value is automatically set for the heater's temperature.

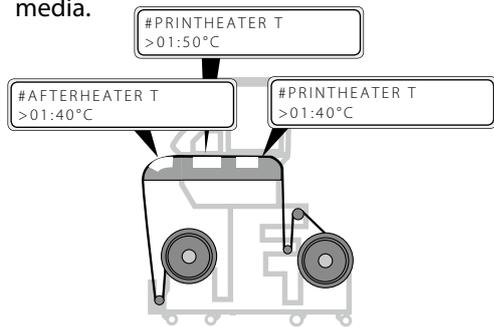
Therefore, normally the heater control menu is not required.

The heater control menu is used to:

- Complete the temperature's fine adjustment during the print operation; or
- Confirm the current heater temperature

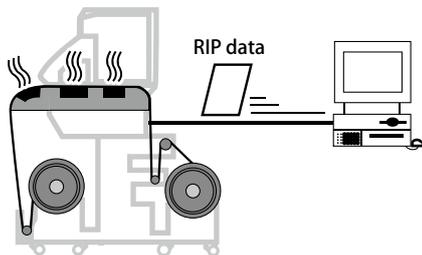
Procedure to set the heater temperature

- (1) The heaters are standby with the initial temperature registered with the applied media.



When a media type is selected at installing media, initial temperature values of each heater for the selected media type are displayed on the menu.

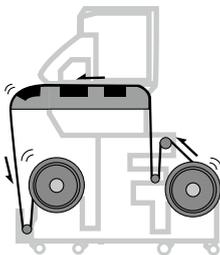
- (2) With receiving the RIP data, heating is started.



When the heater temperature is set with the RIP's print data and job, the heater control menu's temperature is overwritten by the RIP's temperature.

 - To use the initial temperature values set on the operation panel rather than the temperature set with the RIP, set HEATER PREF in the MEDIA REG MENU to HEATER PANEL.

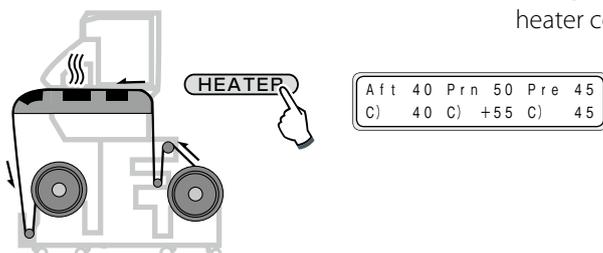
- (3) When the heater temperature increased almost to the setup temperature, the print operation is started.



When the current temperature of the afterheater, printheater, and preheater reaches the temperature that is 1°C lower than the set temperature, the printer starts printing.

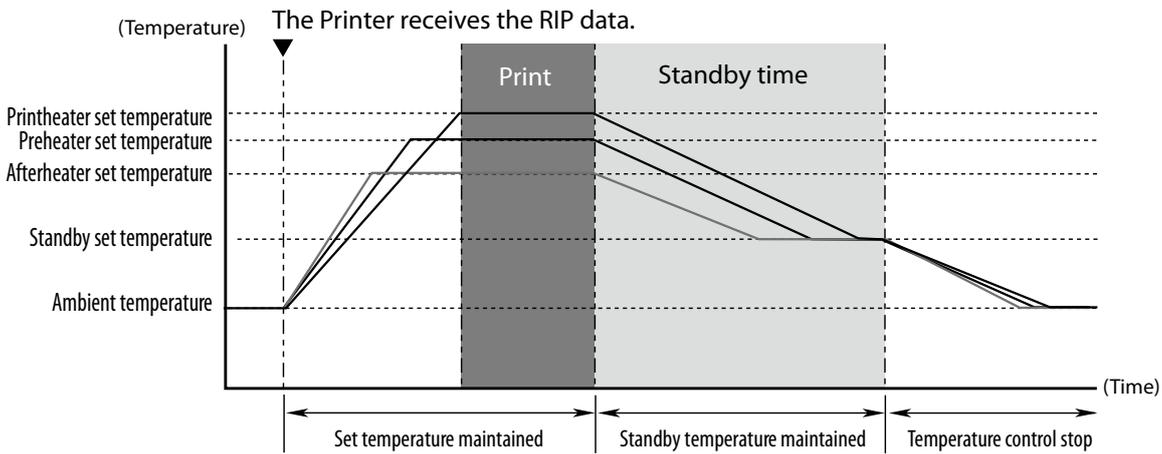
 - The heaters' maximum setup temperature is as follows. Afterheater: 70°C, Printheater: 55°C, Preheater: 55°C
- Even after the print is completed, the temperature changed at this procedure remains as the heaters' setup temperature, until the media is installed again or the Printer is turned off.
Note that the heaters' initial values set with MEDIA REG MENU are not changed with this procedure.

- (4) The heaters' temperature is changed during the print operation.



During the print operation the heaters' temperature is changed by specifying the setup temperature with the heater control menu.

■ The heater temperature control system for printing



- The heaters become standby at the temperature below.
 Preheater: 45 °C
 Printhead: 45 °C
 Afterheater: 60 °C
 However, the temperature above is lowered to the setup temperature if the setup temperature is lower than the standby temperature above.

Display the heater control menu.

Press the **HEATER** key to display the heater control menu.

Key operation in the heater control menu

| | |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| and keys | Select the heater whose temperature is to be set. |
| and keys | Set the heater temperature. |
| M E N U key | Turns the heater ON or OFF. |
| | When this key is pressed for 1.5 seconds while the heater control menu is displayed, all the heaters are forcibly turned on even without print operation. (The heating control starts.) |
| CANCEL key | Pressing this key for 1.5 seconds with the heater control menu displayed cancels the heater-on state forcibly specified by the key. (The heating control stops.) |

Finish displaying the heater control menu

Press the **HEATER** key while the heater control menu is displayed.

■ When the heater control menu display finishes automatically



If no key is input for 30 seconds while the heater control menu is displayed, a message "HEATER DISPLAY END" appears automatically for two seconds and then the heater control menu display finishes. While this message is displayed, no key input is effective.

■ Heater preset temperature by medium

The heater preset temperature for each media type is listed below. Preset the heater temperature according to the media you use.

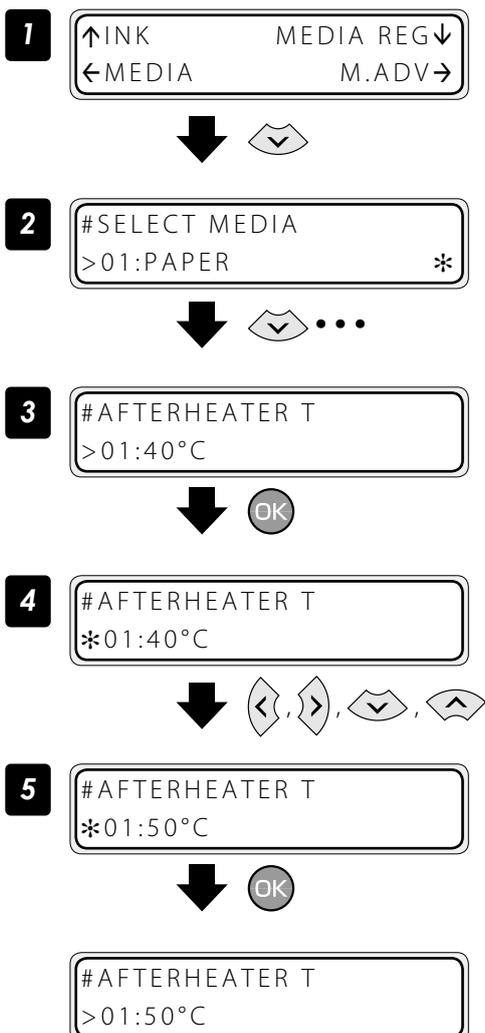
| Medium | Media type | Recommended heater temperature setting | | | Print mode |
|--------------|------------|----------------------------------------|-------------|-----------|------------------------|
| | | Afterheater | Printheater | Preheater | |
| Glossy vinyl | Glossy | 45°C | 40°C | 45°C | NORMAL1, bidirectional |
| Matte vinyl | Matte | 45°C | 40°C | 45°C | NORMAL1, bidirectional |
| Banner | Banner | 45°C | 40°C | 45°C | NORMAL1, bidirectional |

We recommend that the preheater, the printheater, and the afterheater be set to lower than 50°C, 45°C, and 50°C respectively.

NOTE

- When the printheater temperature is set too high, the ink fusion on the media is improved, however media wrinkle or mat print may be caused. Adjust heater temperature according to the media type and environmental temperature.
- When the printheater temperature is set to high, the printer may print at low speed to ensure stable print quality.
- Set the preheater/afterheater temperatures 5°C higher than the printheater temperature. Bad temperature balance between preheater/afterheater and printheater may cause the media to wrinkle.
- Setting the printheater temperature to high may cause missing dots.

Set the heater preset temperature



Set the Printer to offline state and press the key.

With the key scroll to **[#AFTERHEATER T]**.

Press the key.

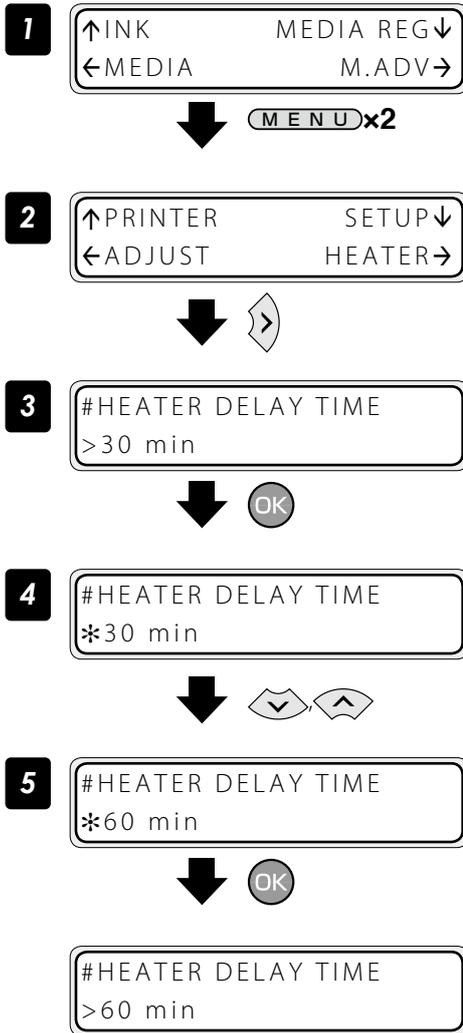
Enter the heater preset temperature.

Align the digit with the and keys and set the value with the and keys.

Press the key.

Select the standby time

Select the time to maintain the standby set temperature of the heater (including the time for transition to the standby set temperature) after printing.



Set the Printer to offline state and press the **MENU** key twice.

Press the key.

Press the key.

With the or key, select the time to maintain the heater's standby setup temperature.

Press the key.

The operation was completed.

Smart pass technology

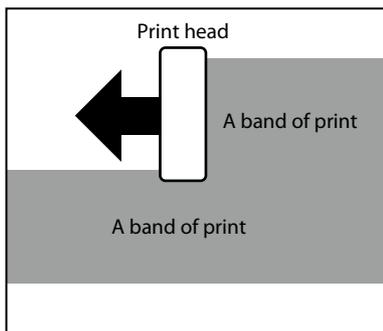
With inkjet printers, a horizontal banding may appear between the bands, which are the areas printed by one scan. This symptom is called as banding.

The banding is caused mainly by setting the media advance compensation improperly. With the proper compensation, the bands are linked without gap. However, with the larger compensation the bands are linked with gaps, showing white lines, while with the smaller one the bands overlap, showing black lines.

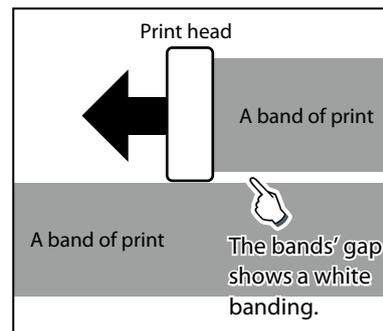
The banding is also caused in the following cases.

- The ink dries so slowly.
- The media advance changes considerably depending on the print head scan.

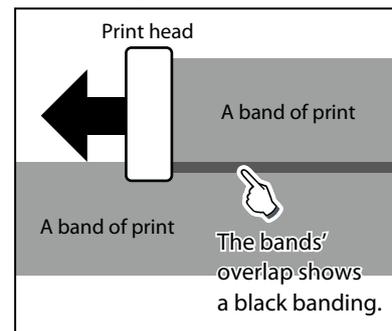
Correct media advance



White banding at incorrect media advance



Black banding at incorrect media advance



The Smart Pass Technology is the function used to reduce this banding problem.

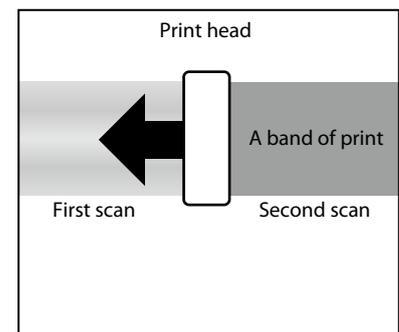
With the Printer's operation menu, "#SMART PASS" in MEDIA REG MENU can be set to MEDIUM and HIGH. Setting can also be made with RIP data.

With Smart Pass Technology, the bands are printed overlapping even when the media advance compensation is proper. The overlapping part is processed with the OKI Data Infotech's unique algorithm so that the bands are not noticeable.

The Printer features two overlapping intensities (MEDIUM, HIGH).

Increasing the process intensity in the overlapping parts makes the banding less noticeable, but decreases the print speed.

Increase the overlapping intensity to prioritize quality, and decrease the intensity to prioritize print speed.



Adjust and calibrate the Printer

Before adjustment and calibration

Before adjustment and calibration, perform the operation below.

(1) Forcedly set the media heater to ON to warm up the Printer for 30 minutes or more.

Start the adjustment only after confirming that the Printer is warmed up sufficiently. The adjustment may not be performed correctly when the Printer is not warmed up sufficiently.

(2) Rotate the control pressure knob to "OPEN" and reinstall the media to adjust the print head height.

Procedures

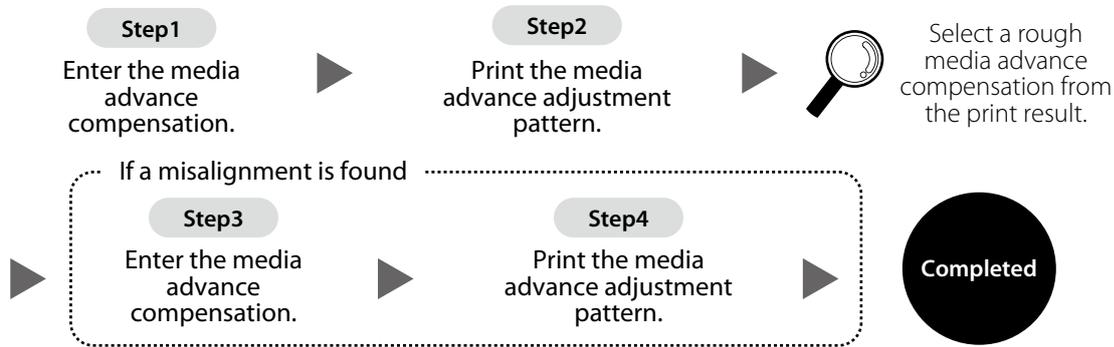
Adjusting media advance compensation

The media advance compensation can be determined by printing either of the **[SINGLE]** and **[MULTI]** media advance adjustment patterns.

Select **[SING. ADV]** to print one pattern with the current **[MEDIA ADV VALUE]**.

Select **[MULTI ADV]** to print three patterns, one with the current **[MEDIA ADV VALUE]** -0.2%, one with the current **[MEDIA ADV VALUE]**, and one with the current **[MEDIA ADV VALUE]** +0.2%.

Workflow



The factors that change the media advance compensations are as follows.

- Change the print mode
- Change smart pass setting
- Change the pressure with the pressure control knob.
- Print with/without the take-up reel unit
- Change the media type
- Change the media advance path

Print [MULTI ADV] adjustment pattern

1 Set more than 4 m of media.

Set the media on the same conditions as when actually printing.

2

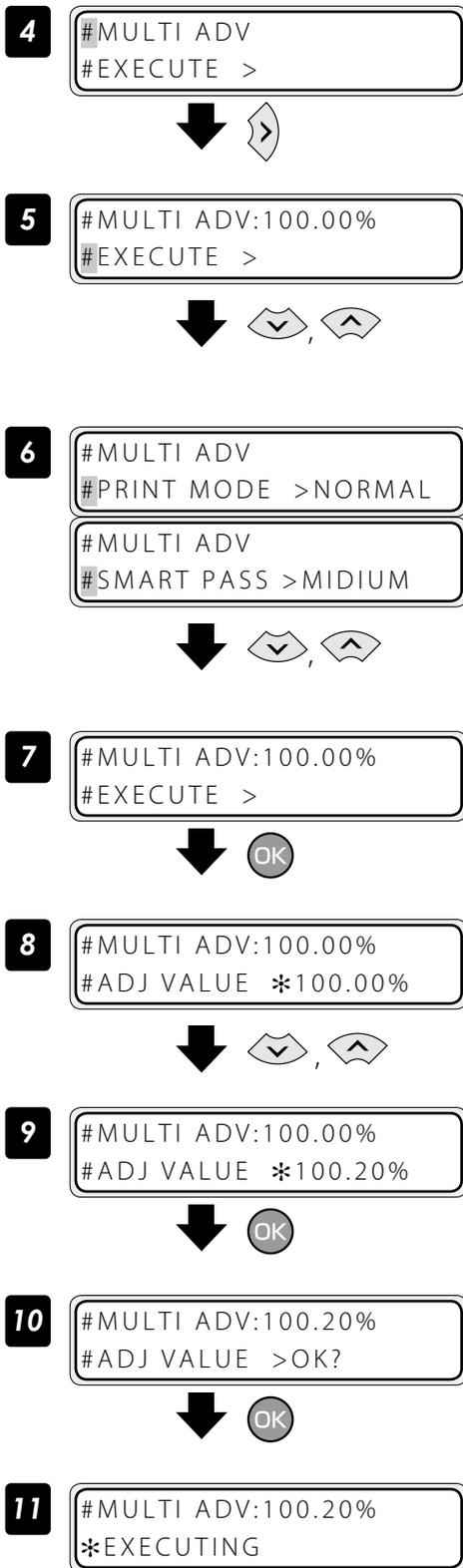
Set the Printer to offline state and press the



3

Display the **[MULTI ADV]** adjustment pattern with the , key.





With the key, select [**MULTI ADV**] print pattern.

Select the print mode and smart pass with the , , keys.

Select the print mode and smart pass used normally with the media to set the media advance compensation.

Select [**EXECUTE**] with the , key.

Press the key.

Set the media advance compensation with the , key when the value is displayed.

Press the key.

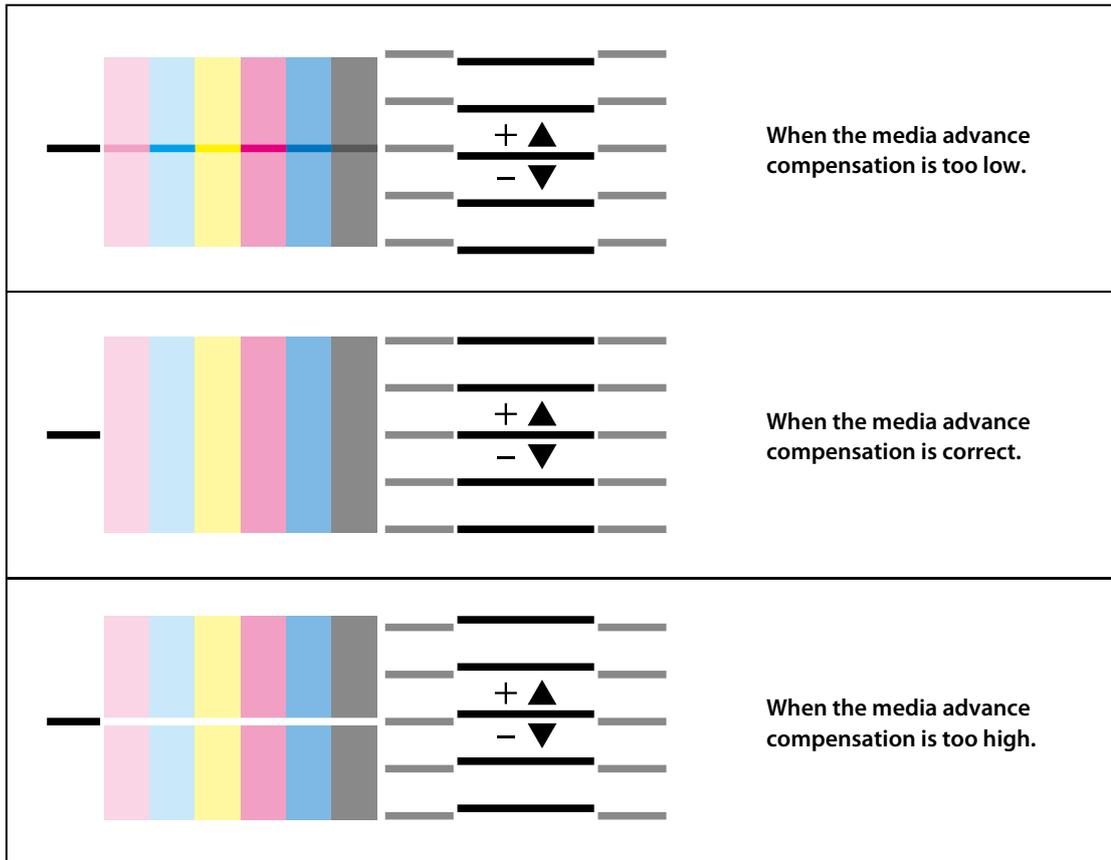
Confirm the media advance compensation value and press the key.

The adjustment pattern is printed.

Check the print results. If the media advance compensation appears to be incorrect, perform steps 7 to 11 again to determine the correct value.



Check the media advance adjustment pattern



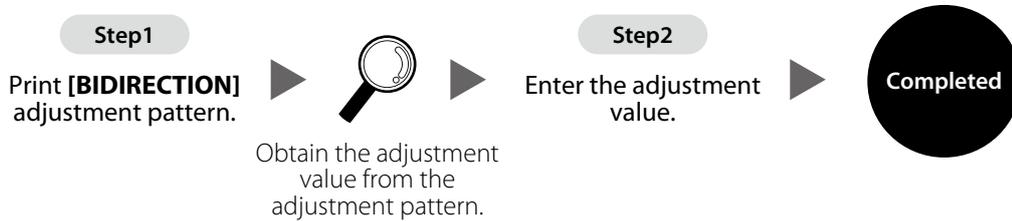
CAUTION

- If the correct media advance compensation differs with each print head (each color), set the average value. However, if a color is predominant in the printed image, set the compensation for this color.
- If the correct media advance compensation differs between the media right and left sides, set the average value.
- If the correct media advance compensation differs between the media right and left sides, it may be caused by skewed media. Check that the media is not skewed.

Adjust bidirectional print positions

This function adjusts each print head's bidirectional print position.

■ Workflow



■ Procedure

(When bidirectional adjustment pattern is set to auto)

This function adjusts each print head's bidirectional print position. Enter the adjustment value based on print results of [AUTO BIDIR ADJUST].

STEP 1 Print [AUTO BIDIR] adjustment pattern.

1

↓ x2

Set the Printer to offline state and press the key twice.

2

↓

Select [AUTO BIDIR ADJUST] with the , key.

3

↓

Press the key.

4

↓

Press the key.

5

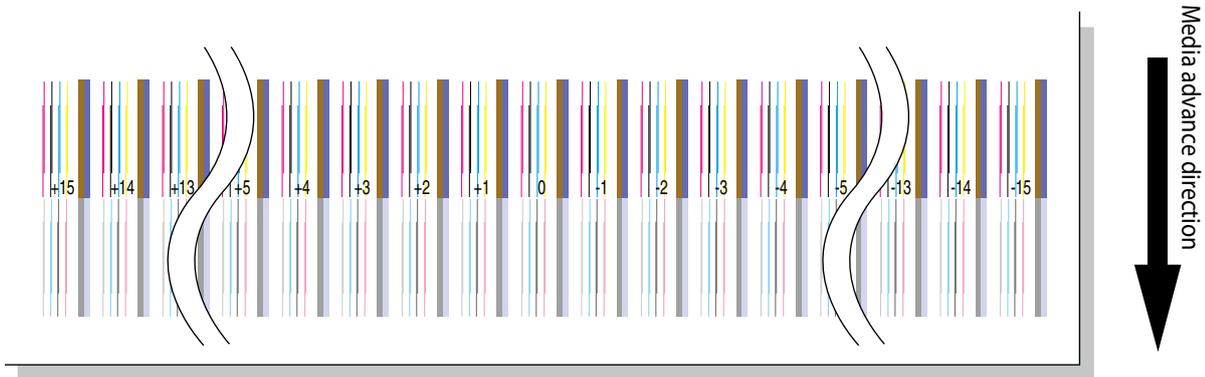
↓

Press the key.

6

The adjustment pattern is printed.

Print sample



STEP 2 Enter the adjustment value.

1 #AUTO BIDIR ADJUST
#EXECUTE >



Select ADJ L or ADJ R with the or key.

2 #AUTO BIDIR ADJUST
#ADJ M7 >+00



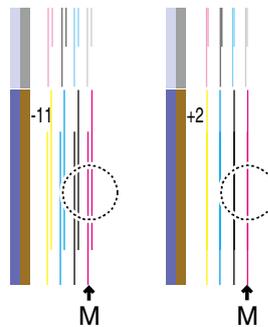
Select the print head to adjust with the key.

Here, the left side of M7 print head is adjusted as an example.

3 #AUTO BIDIR ADJUST
#ADJ M7 >+00

Select the digit with the or key, and set the value with the or key.

Enter the value of the adjustment pattern where each print head's two lines overlap with the least misalignment.
For example, on the right adjustment patterns for M7 print head, the two lines misalign at -11 while they overlap to be one line at +2. So enter +2 for the adjustment value.



4 #AUTO BIDIR ADJUST
#ADJ M7 >+02



Press the key.

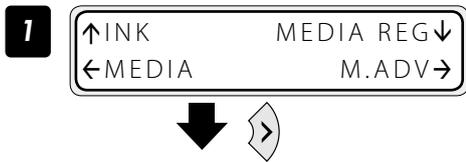
5 #AUTO BIDIR ADJUST
#ADJ M7 >+02

Adjust the ADJ R value and the values for the other print heads with the same procedure.

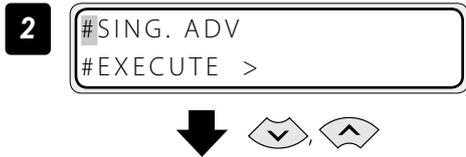
(When bidirectional adjustment pattern is set to manual)

This function adjusts each print head's bidirectional print position. Enter the adjustment value based on print results of **[MANUAL BIDIR ADJUST]**.

STEP 1 Print **[MANUAL BIDIR]** adjustment pattern.



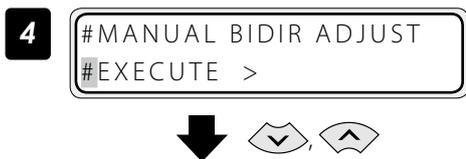
Select **[M.ADV]** with the key.



Select **[MANUAL BIDIR ADJUST]** with the , key.



Press the key.



Select **[PATTERN]** with the , key.



Press to change the print pattern.



Select the print pattern with the , key.
Press the key to confirm.

Bidirectional adjustment pattern <print mode>

| Adjustment pattern | Print mode |
|--------------------|-----------------------|
| BIDIRECTION DEF 1 | MAX SPEED, HIGH SPEED |
| BIDIRECTION DEF 2 | NORMAL |
| BIDIRECTION DEF 3 | HIGH QUALITY |
| BIDIRECTION DEF 4 | MAX QUALITY |



Select **[EXECUTE]** with the , key.

8 #MANUAL BIDIR ADJUST
#EXECUTE >



Press the **OK** key.

9 #MANUAL BIDIR ADJUST
#EXECUTE >OK?

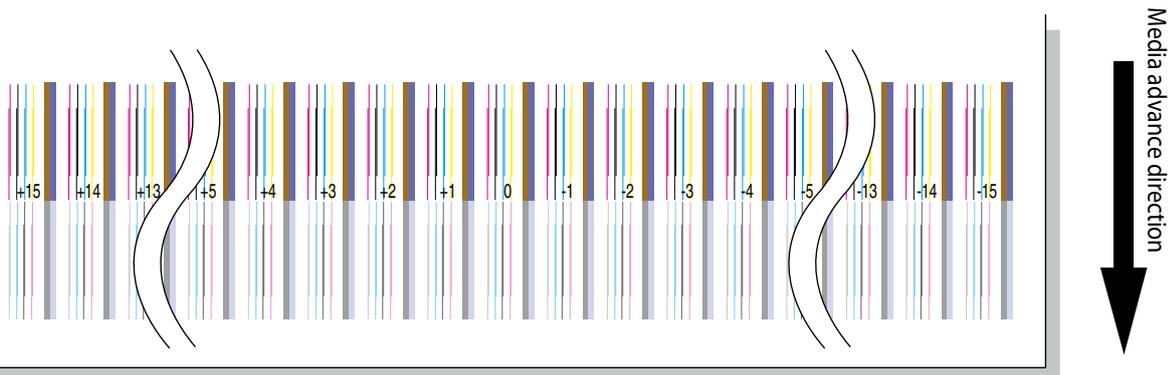


Press the **OK** key.

10 #MANUAL BIDIR ADJUST
#EXECUTING

The adjustment pattern is printed.

Print sample



STEP 2 Enter the adjustment value.

1 #MANUAL BIDIR ADJUST
#EXECUTE >



Select ADJ L or ADJ R with the key.

2 #MANUAL BIDIR ADJUST
#ADJ2 L M7 >+00

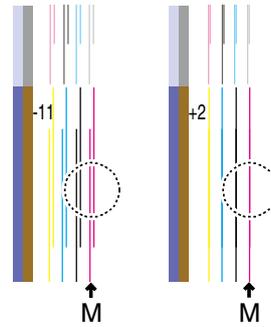


Select the print head to adjust with the **OK** key.
Here, BIDIR ADJ2 L for M7 print head is adjusted as an example.

3 #MANUAL BIDIR ADJUST
#ADJ2 L M7 *+00

Select the digit with the or key, and set the value with the or key.

Enter the value of the adjustment pattern where each print head's two lines overlap with the least misalignment.
For example, on the right adjustment patterns for M7 print head, the two lines misalign at -11 while they overlap to be one line at +2. So enter +2 for the adjustment value.



4 #MANUAL BIDIR ADJUST
#ADJ2 L M7 *+02

Press the key.



5 #MANUAL BIDIR ADJUST
#ADJ2 L M7 >+02

Adjust the ADJ2 R value and the values for the other print heads with the same procedure.

Adjust the print linkage before or after automatic cleaning

In the DURING PRINT, automatic cleaning is performed even while the Printer is printing. In such a case, after the cleaning, adjust the position of the linkage for the prints before and after the cleaning.
Enter the adjustment value based on the media back feed adjustment pattern.
Before this adjustment, set the cleaning mode to the DURING PRINT at MEDIA REG MENU.

■ Procedure

STEP 1 Print [BACK ADJ PRINT] adjustment pattern.

1 ↑INK MEDIA REG↓
←MEDIA M.ADV→

Set the Printer to offline state and press the key.



2 #SING. ADV
#EXECUTE >

Select [BACK ADJ PRINT] with the and key.



3 #BACK ADJ PRINT
#EXECUTE >

Press the key.



4 #BACK ADJ PRINT
#EXECUTE >



5 #BACK ADJ PRINT
#PRINT MODE >NORMAL



6 #BACK ADJ PRINT
#PRINT MODE *MAX SPEED



7 #BACK ADJ PRINT
#PRINT MODE >MAX SPEED



8 #BACK ADJ PRINT
#EXECUTE >



9 #BACK ADJ PRINT
#EXECUTE >OK?



10 #BACK ADJ PRINT
#EXECUTING

Select the print mode with the , key.

Press the key.

Select the print pattern with the , key.
Press the key to confirm.

Set smart pass with the same procedure.

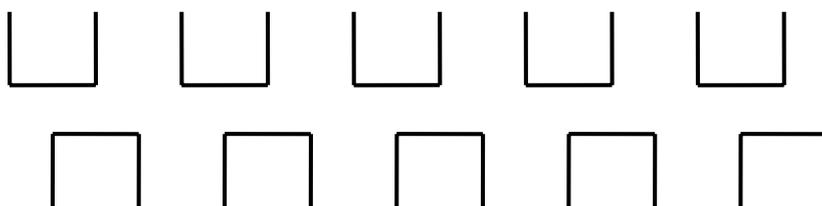
Select [**EXECUTE**] with the , key.

Press the key.

Press the key.

The adjustment pattern is printed.

Print sample



STEP 2 Enter the adjustment value.

1 #BACK ADJ PRINT
#EXECUTE >



Select [**ADJ VALUE**] with the ,  key.

2 #BACK ADJ PRINT
#ADJ VALUE >+0000P



Press the  key.

3 #BACK ADJ PRINT
#ADJ VALUE > *+0000P

Select the digit with the ,  key, set the value with the ,  key, and press the  key.

4 #BACK ADJ PRINT
#ADJ VALUE > *+0400P



Press the  key.

5 #BACK ADJ PRINT
#ADJ VALUE >+0400P

The procedure is complete.

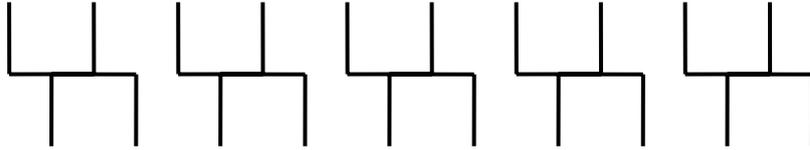
STEP 3 Print [BACK ADJ PRINT] again to check that the horizontal lines overlap on the print pattern.

1 Perform STEP 1 and STEP 2 until the horizontal lines on the print pattern overlap.

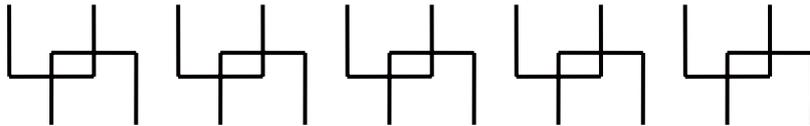


Validate the media back feed adjustment pattern

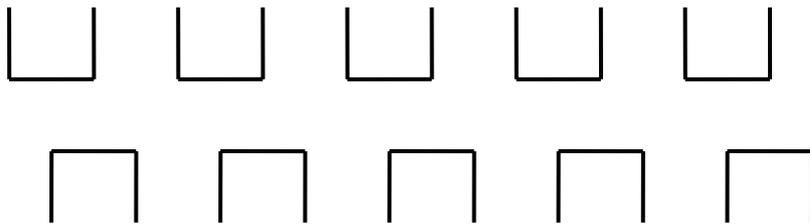
Determine the adjustment value so that the pattern's horizontal lines overlap.



If the value is larger, the upper and lower patterns overlap at the center.



If the value is smaller, the upper and lower patterns show a gap.



Adjust the print head position and the nozzle positions at the print head's right and left

This function adjusts each print head's position in the scanning direction, media right to left direction, based on the K5 print head position. Input the correction value based on the **[PRINT HEAD ADJUST]** print result.

■ Procedure

STEP 1 Print **[PRINT HEAD ADJUST]** adjustment pattern

1

| | |
|--------|------------|
| ↑INK | MEDIA REG↓ |
| ←MEDIA | M.ADV→ |



Set the Printer to offline state and press the key twice to display ADJUST MENU.

2

| | |
|----------|---------|
| ↑PRINTER | SETUP↓ |
| ←ADJUST | HEATER→ |



Press the key.

3

| |
|---------------|
| #NOZZLE PRINT |
| #EXECUTE> |



Select **[#PRINT HEAD ADJUST]** with the , key.

4

| |
|--------------------|
| #PRINT HEAD ADJUST |
| #EXECUTE > |



Press the key.

5

| |
|--------------------|
| #PRINT HEAD ADJUST |
| #EXECUTE > |



Press the key.

6

| |
|--------------------|
| #PRINT HEAD ADJUST |
| #EXECUTE >OK? |

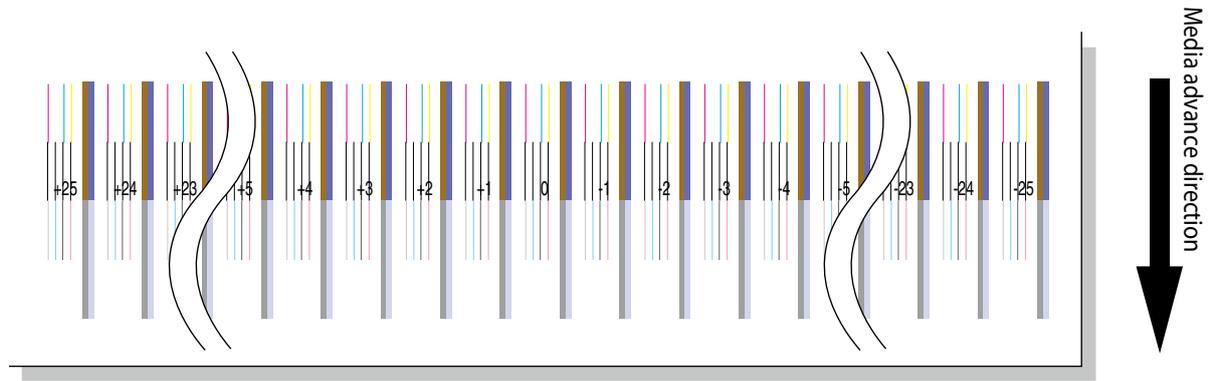


Press the key.

7

| |
|--------------------|
| #PRINT HEAD ADJUST |
| #EXECUTING |

The print head position adjustment pattern is printed.



STEP 2 Enter the adjustment value.

Enter the head position adjustment value.

1 #PRINT HEAD ADJUST
#EXECUTE >



Select the head color with the key.

2 #PRINT HEAD ADJUST
#POS ADJ C6>+00



Select the print head to adjust with the key.
Here, the C6 print head is adjusted as an example.

3 #PRINT HEAD ADJUST
#POS ADJ C6*+00

Select the digit with the or key, and set the value with the or key.

Enter the value of the adjustment pattern where the K5 print head's line and the determined print head's line overlap with the least misalignment. For example, on the right adjustment patterns for C6 print head, the two lines misalign at -21 while they overlap at +2. So enter +2 for the adjustment value.

#PH TO PH VAL
#C6 *+02



4 #PRINT HEAD ADJUST
#POS ADJ C6*+02



Press the key.

5 #PRINT HEAD ADJUST
#POS ADJ C6>+02

Adjust values for the other color with the same procedure.

Next, enter the head right to left adjustment value.

6 #PRINT HEAD ADJUST
#R/L ADJ M7>+00

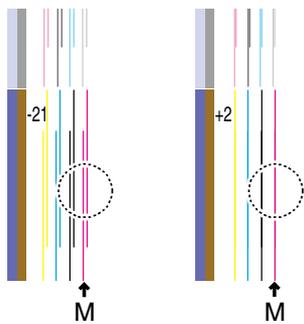
↓ OK

Select the print head to adjust with the **OK** key.
Here, the M7 print head is adjusted as an example.

7 #PRINT HEAD ADJUST
#R/L ADJ M7 *+00

Select the digit with the **<** or **>** key, and set the value with the **∨** or **∧** key.

Input the value of the test pattern where each print head's two lines overlap with the least misalignment.
For example, on the right test patterns for M7 print head, the two lines misalign at -21 while they overlap to be one line at +2. So input +2 for the correction value.



8 #PRINT HEAD ADJUST
#R/L ADJ M7 *+02

↓ OK

Press the **OK** key.

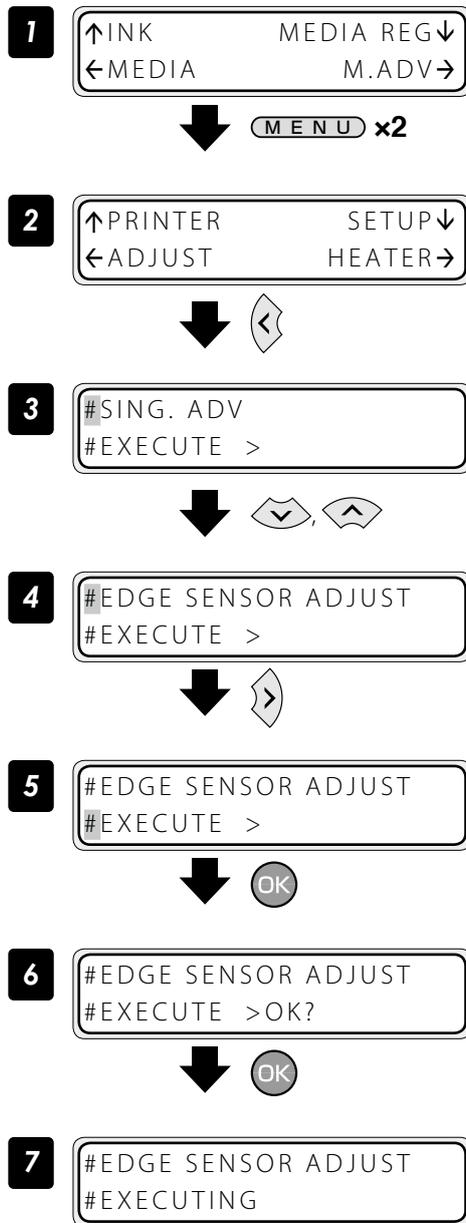
9 #PRINT HEAD ADJUST
#R/L ADJ M7 >+02

↓ OK

Adjust values for the other print heads with the same procedure.

Adjust the edge sensor position

Print the edge sensor adjustment pattern, and adjust the edge sensor position.
After printing, measure the distance and specify the parameter.



Set the Printer to offline state and press the **MENU** key twice.

Press the **<** key.

Select **[EDGE SENSOR ADJUST]** with the **>**, **<** key.

Press the **>** key.

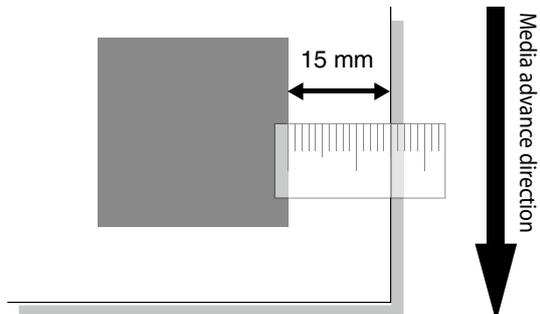
Press the **OK** key.

Press the **OK** key.

Edge sensor adjustment pattern is printed.

8

Print sample



Judge the print results.

Measure the margin of the printing result with a ruler, and obtain a difference between the measured margin and the value (15 mm) shown in the specifications.

If the difference is 0 mm, complete this procedure.

If not, follow the procedure below to adjust the value.



To obtain the correction value:

Obtain the adjustment value by measuring the margin setting the reference value to 15 mm.

<Example>

The margin is **14 mm**: The adjustment value is **-1.0 mm**.

The margin is **16 mm**: The adjustment value is **+1.0 mm**.

9

```
#EDGE SENSOR ADJUST
#EXECUTE >
```



Select [POS ADJ] with the key.

10

```
#EDGE SENSOR ADJUST
#POS ADJ >+0.0mm
```



Press the key.

11

```
#EDGE SENSOR ADJUST
#POS ADJ *+0.0mm
```



Select the digit with the key, set the value with the key, and press the key.

12

```
#EDGE SENSOR ADJUST
#POS ADJ *+0.5mm
```



Press the key.

13

```
#EDGE SENSOR ADJUST
#POS ADJ >+0.5mm
```

The adjustment is complete.

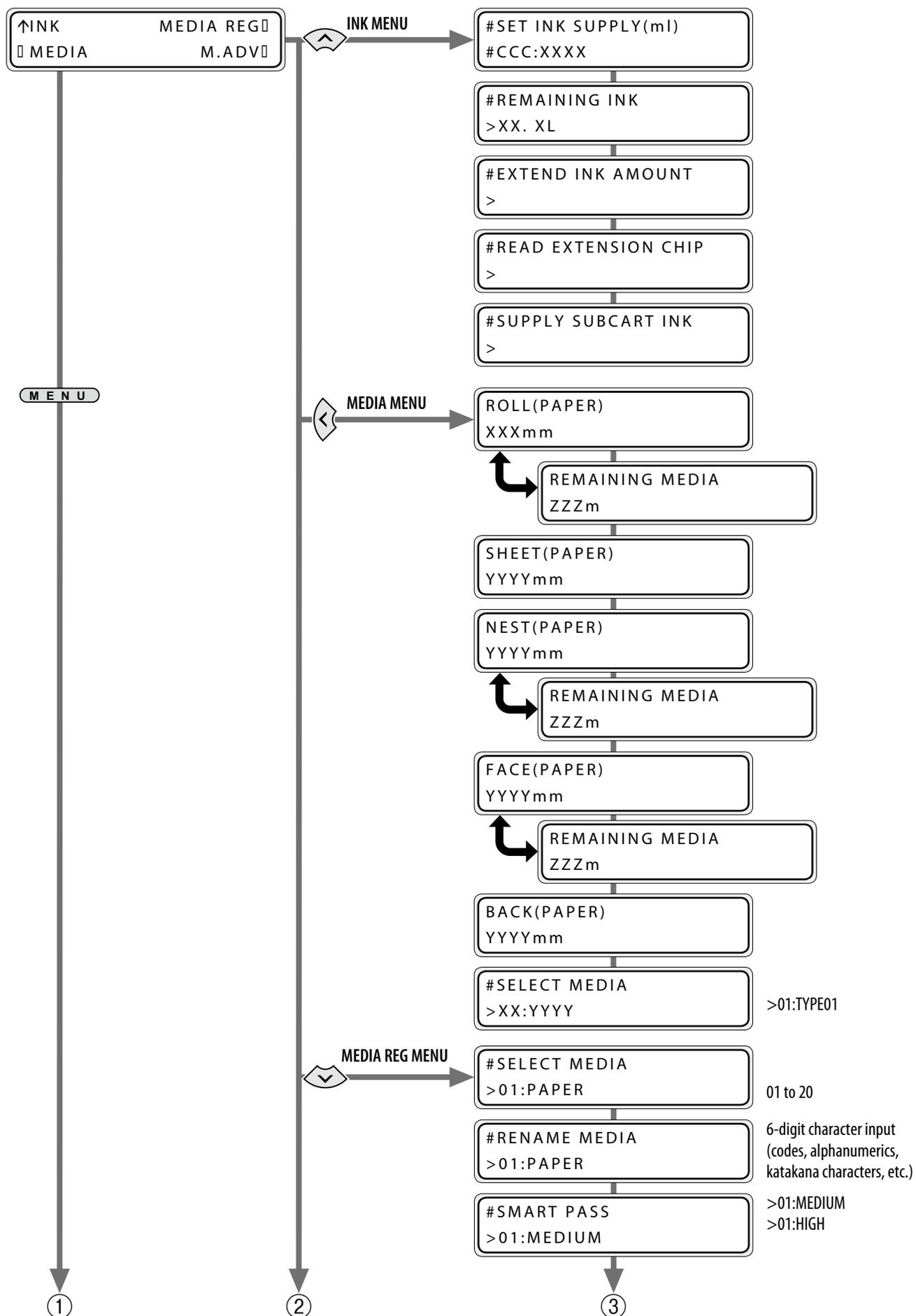
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| #DENSITY >01:NORMAL | >01:NORMAL >01:HIG DENSITY |
| #PRINT DIRECTION >01:BDIR | >01:BDIR >01:UNIDIR |
| #USE EDGE GUARD >01:YES | >01:YES >01:NO |
| #SKEW CHECK >01:ON | >01:ON >01:OFF |
| #MEDIA ADV MODE >01:FWD ONLY | >01:FWD ONLY >01:BACK & FWD1 >01:BACK & FWD2 >01:FWD WRINKLEFREE |
| #MEDIA BACK MODE >01:BACK & FWD | >01:BACK & FWD >01:FWD ONLY |
| #SUCTION FAN LEVEL >01:NORMAL | >01:HIGH >01:NORMAL >01:LOW >01:OFF |
| #AFTERHEATER T >01:**°C | 15°C to 70°C 59°F to 158°F |
| #PRINTHEATER T >01:**°C | 15°C to 55°C 59°F to 131°F |
| #PREHEATER T >01:**°C | 15°C to 55°C 59°F to 131°F |
| #COLOR STRIPE >01:ON | >01:ON >01:OFF |
| #PH HEIGHT VAL >01:+0.0mm | -0.3 to +1.0 (Unit: 0.1 mm) |
| #PH CLEANING >01:START & END | >01:START & END >01:DURING PRINT >01:DURING PRINT2 >01:OFF |
| #ROLL END DETECTION >01:DETECT ONLY | >01:DETECT ONLY >02:ACTION SELECT. |
| #ADVANCE PEF >01:SOFTWARE | >01:SOFTWARE >01:FRONT PANEL |

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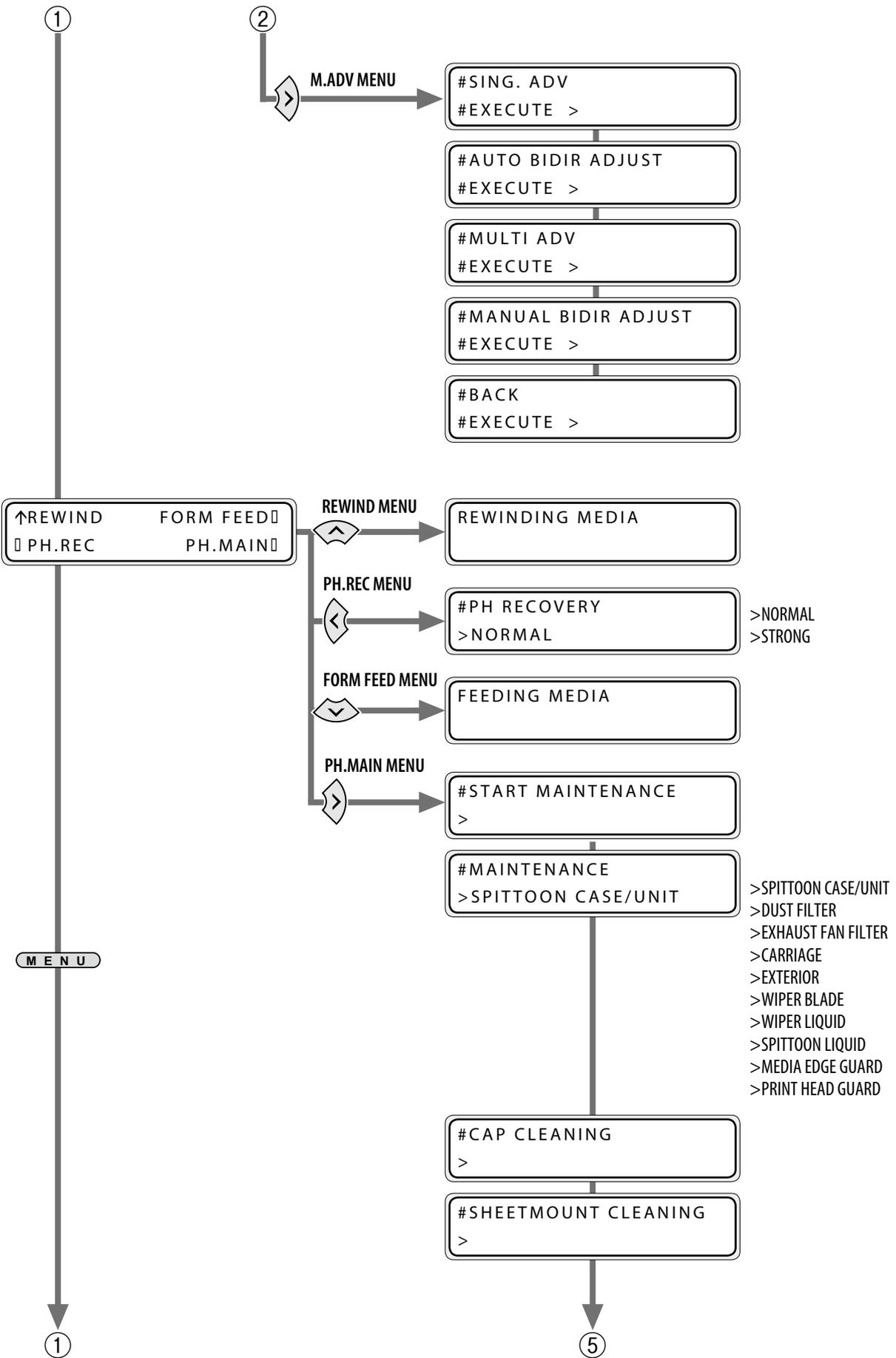
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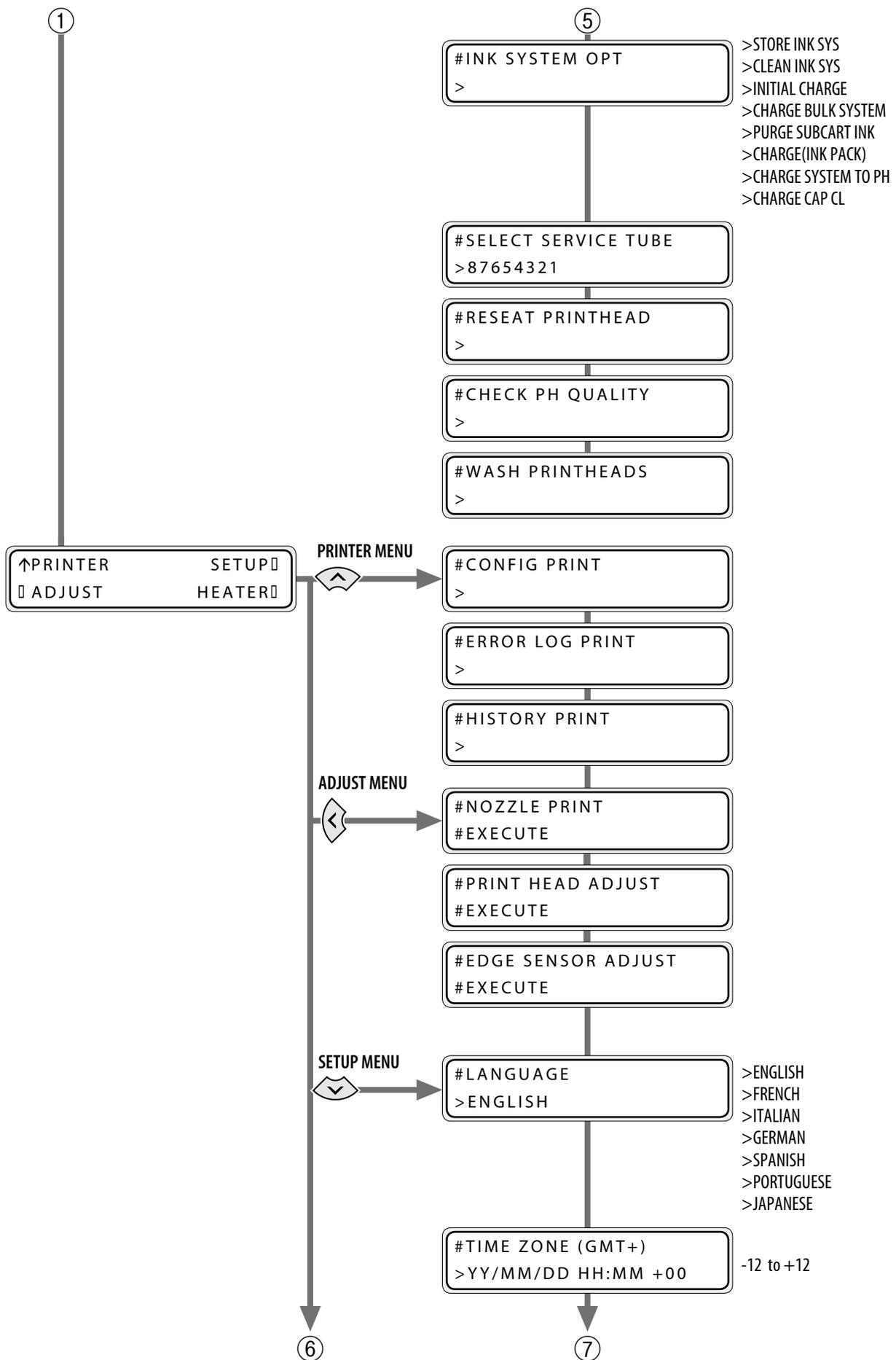
| | |
|------------------------------------|----------------------------------------|
| #PRINT MODE PREF >01:SOFTWARE | >01:SOFTWARE >01:FRONT PANEL |
| #HEATER PREF >01:SOFTWARE | >01:SOFTWARE >01:FRONT PANEL |
| #PH REST PERIOD >01:0000CYCLES | 0000 to 9999 |
| #PH REST TIME >01:10sec | 1 to 99 |
| #MEDIA ADV VALUE >01:100.00% | 097.00 to 106.00% |
| #BACK ADJUST VAL >01:+0000PULSE | ±2000 pulses (Unit: Approx. 2.5 μm) |
| #BIDIR ADJ1 L PAPER >01:+00 | ±, -15 to +15 |
| #BIDIR ADJ1 R PAPER >01:+00 | ±, -15 to +15 |
| #BIDIR ADJ2 L PAPER >01:+00 | ±, -15 to +15 |
| #BIDIR ADJ2 R PAPER >01:+00 | ±, -15 to +15 |
| #BIDIR ADJ3 L PAPER >01:+00 | ±, -15 to +15 |
| #BIDIR ADJ3 R PAPER >01:+00 | ±, -15 to +15 |
| #BIDIR ADJ4 L PAPER >01:+00 | ±, -15 to +15 |
| #BIDIR ADJ4 R PAPER >01:+00 | ±, -15 to +15 |
| #REMAINING MEDIA >01:YYYm | 0 to 999m 0 to 3278ft |
| #DELETE MEDIA >02:TYPE02 OK? | |
| #COPY MEDIA >01 | 01 to 20 |
| #PASTE MEDIA >01->02* | 01 to 20 |

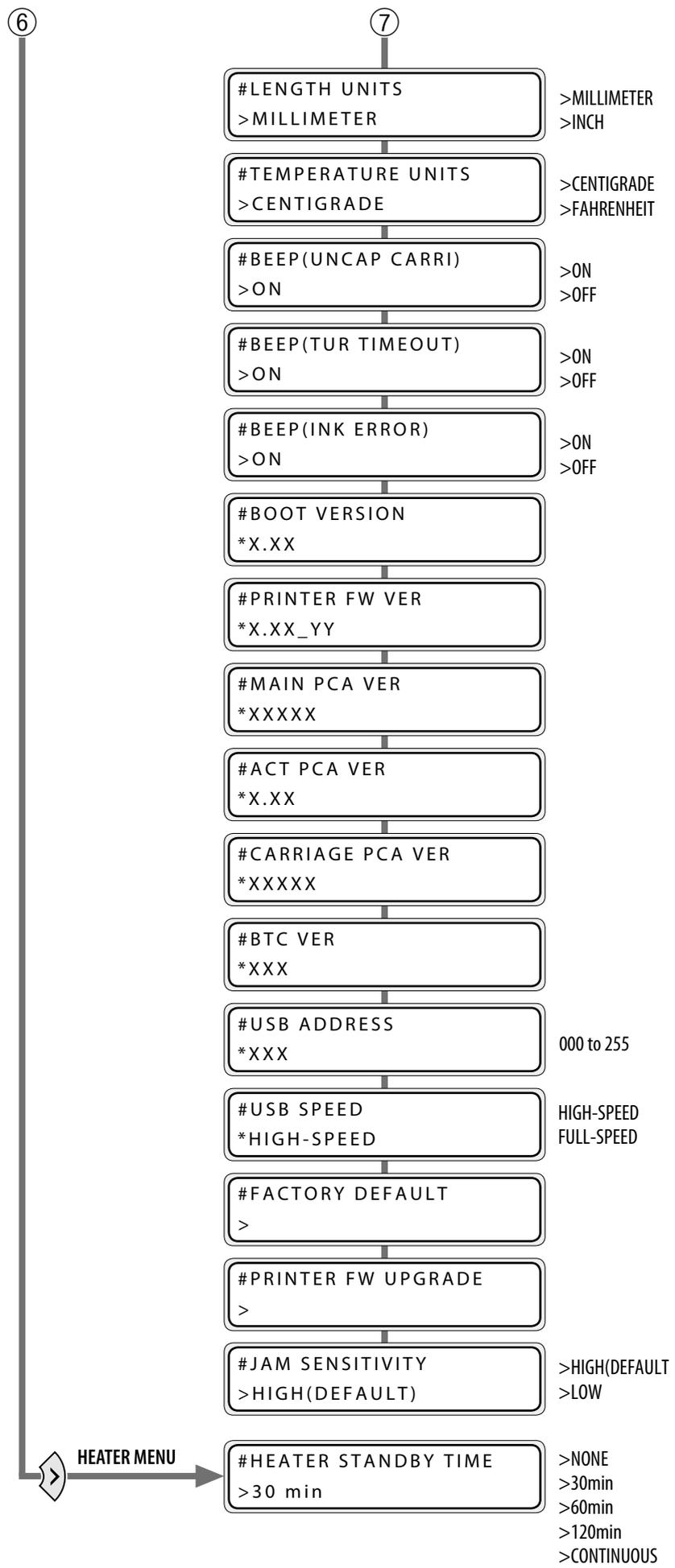
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