OKI

Wide Format Solvent Inkjet Printer

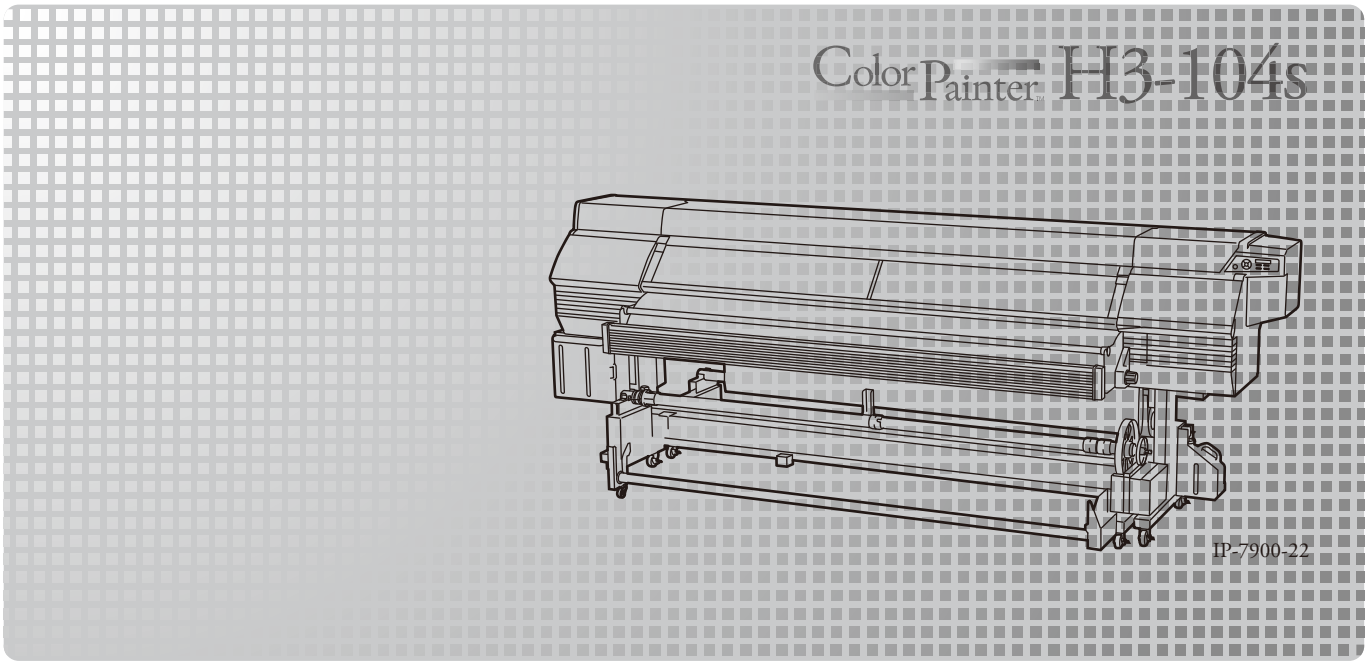
IP-7900-22/23

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.

2

Document number



IP-7900-22/23 Wide Format Solvent Inkjet Printer Advanced Operation Guide

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This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE

The CE mark, that shows that the products sold in the EU are conformed to the requirements of EC directive, is statutorily obliged to be affixed to the products.
In each directive, the scope of directive to be applied to equipment is explicitly defined. Our company's product IP-7900 conforms to the EMC directive, low voltage directive and RoHS Directive.

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Introduction

IP-7900-22/23 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.

The IP-7900-22-23 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*.**

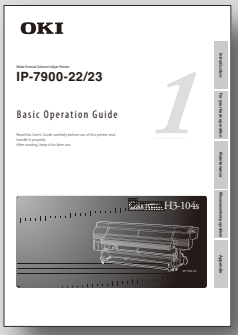
- Basic information required for the operation
- Basic operations to turn the Printer on and off and to handle the media and ink system

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 24

To print on other media — page 50

To perform double-sided printing — page 56

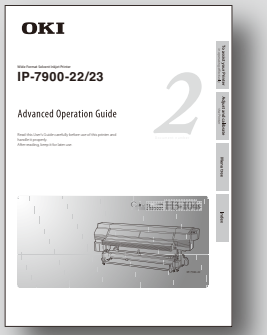
To perform the Printer's maintenance — page 60

To replace the Printer's ink cartridge — page 129

To replace the Printer's waste ink bottle — page 127

To recover error messages — page 116

To clear media jams — page 115



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 74**

To create a new media preset **page 26**

To clear banding, white lines, and bleeding **page 55**

To turn the Printer off for a long time **page 8**

To print on cut-sheet media **page 42**

To change heater temperature while printing **page 69**

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Manual legend (Notational rules)

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

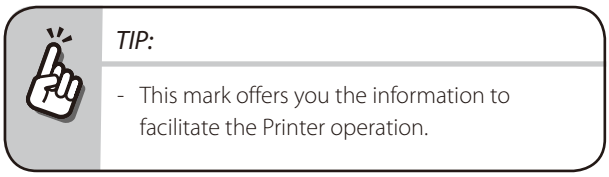
Marks

⚠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.



📖 Reference mark

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

When you do not use the Printer for 2 weeks or longer

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 has been left turned on and has not been used for 2 weeks or longer, it is necessary to wash the print heads, charge the ink system, and perform daily maintenance using the procedure below.
If you have to keep the Printer turned off for a long without using it, first perform a service cleaning using the procedure below, and then turn the Printer off.

Power-off

For a short period | **For a several days** | **For two weeks or more** | **For one month or more**

Service cleaning (*page 9*)
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. A service call error is displayed when the Printer is turned on. Contact your dealer or a service representative.

Power-on

Head wash (*page 14*)
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 19*)
After the head wash, Insert ink trays and charge the ink system.

Daily maintenance
(***Basic Operation Guide*** *page 60*)
Perform the daily maintenance.

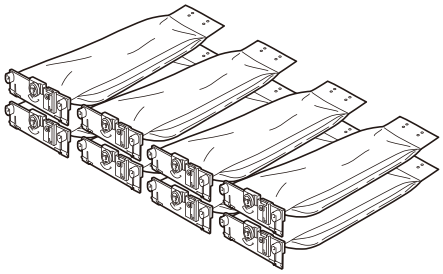
⚠CAUTION

- 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.

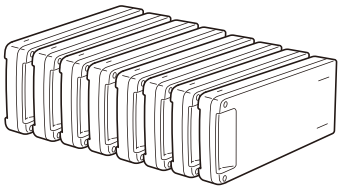
Service cleaning

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

Storage liquid set A (IP7-237)



Storage liquid cartridge



Dummy subcartridge

Use the eight storage liquid cartridges completely in a single service cleaning.

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 cartridges to the optional ink trays in advance.

1 Install an empty waste ink bottle.

2

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

3

Press the **Right** button.

4

With the **Down** button scroll to **#INK SYSTEM OPT**.

5

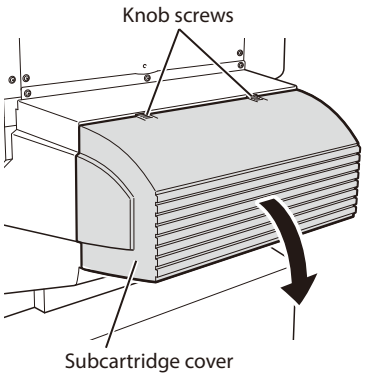
Press the **OK** button.

6

#INK SYSTEM OPT
*STORE INK SYS

Press the **OK** button.

7

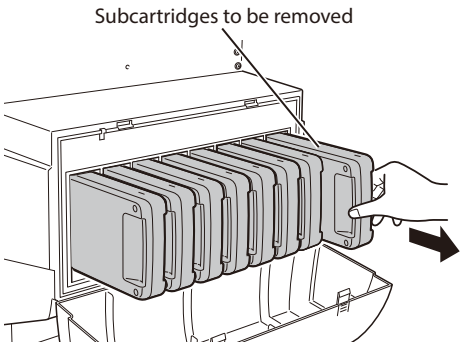


Open the subcartridge cover.

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

OPEN
SUBCARTRIDGE COVER

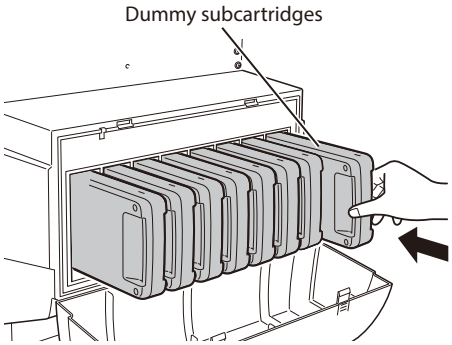
8



Remove the eight subcartridges.

REMOVE
Y1 SUBCARTRIDGE

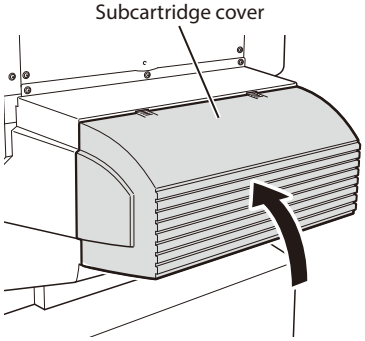
9



Set the dummy subcartridges of the storage liquid set A.

LOAD
Y1 DUMMY SUBCART

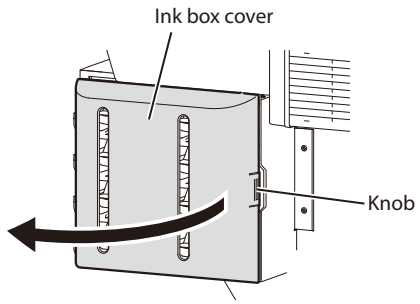
10



Close the subcartridge cover and tighten the two knob screws.

CLOSE
SUBCARTRIDGE COVER

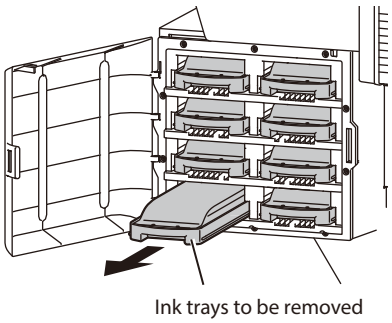
11



Open the ink box cover.

```
OPEN
INK COVER
```

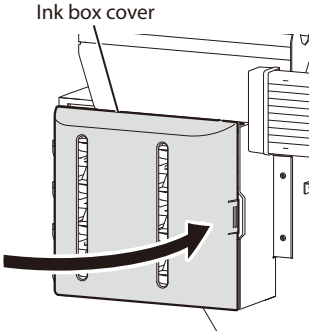
12



Remove the eight ink trays.

```
REMOVE
Y1  INK PACK
```

13



Close the ink box cover.

```
CLOSE
INK COVER
```

14

```
START PURGING
*BOTTLE OK?
```

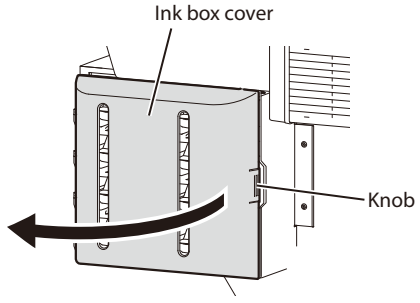
OK

```
PURGING
PLEASE WAIT          12
```

Press the **OK** button.

Ink is purged from the ink system.

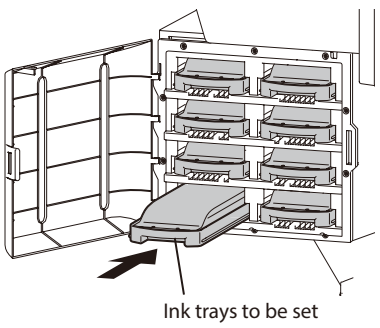
15



Open the ink box cover.

```
OPEN
INK COVER
```

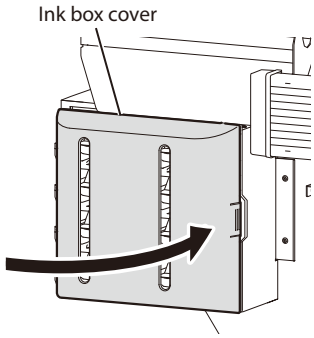
16



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

```
LOAD
Y1  SL PACK
```

17



Close the ink box cover.

```
CLOSE
INK COVER
```

18

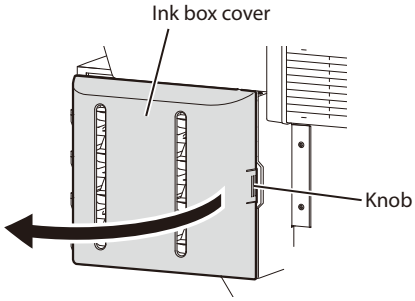
```
START SL CHARGING
*BOTTLE OK?
```

OK

```
CHARGING SL
PLEASE WAIT          12
```

Press the **OK** button.

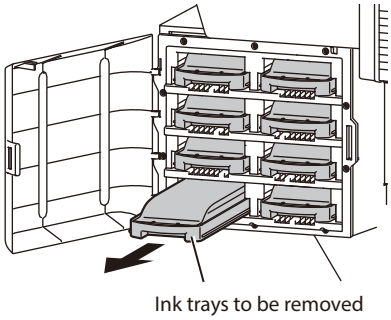
19



Open the ink box cover.

```
OPEN
INK COVER
```

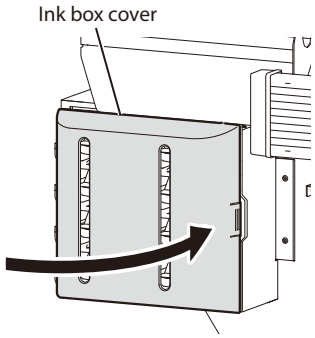
20



Remove the ink trays with cleaning liquid cartridges.

```
REMOVE
Y1 SL PACK
```

21



Close the ink box cover.

```
CLOSE
INK COVER
```

22

START PURGING
*BOTTLE OK?

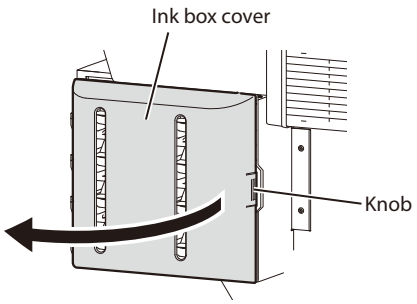
OK

PURGING
PLEASE WAIT 12

Press the **OK** button.

Ink is purged from the ink system.

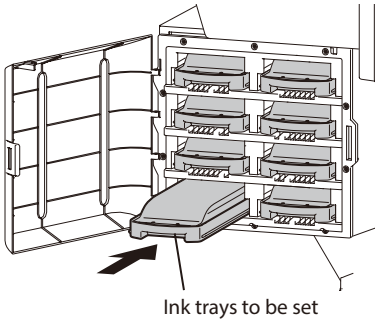
23



Open the ink box cover.

OPEN
INK COVER

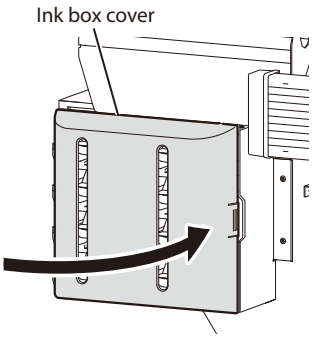
24



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

LOAD
Y1 SL PACK

25



Close the ink box cover.

CLOSE
INK COVER

26

START SL CHARGING
*BOTTLE OK?

OK

CHARGING SL
PLEASE WAIT 12

OK

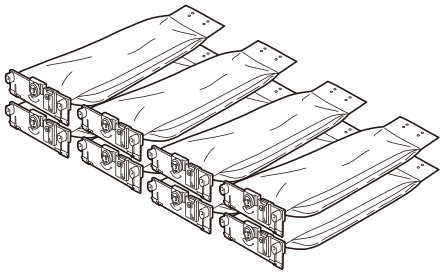
#INK SYSTEM OPT
>STORE INK SYS

Press the **OK** button.

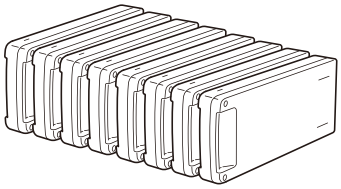
Head wash

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

Cleaning liquid set A (IP7-236)



Cleaning liquid cartridge



Dummy subcartridge

Use the eight cleaning liquid cartridges completely in a single head wash.

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 cartridges to the optional ink trays in advance.

1 Install an empty waste ink bottle.

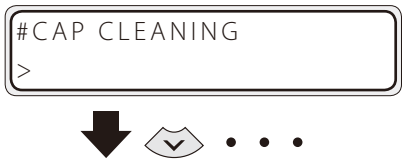
2

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

3

Press the **Right** button.

4



With the **Down** button scroll to **#INK SYSTEM OPT**.

5

Press the **OK** button.

6

```
#INK SYSTEM OPT
*STORE INK SYS
```

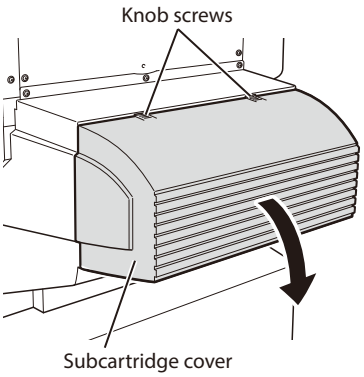
With the **Down** button scroll to ***CLEAN INK SYS**.

7

```
#INK SYSTEM OPT
*CLEAN INK SYS
```

Press the **OK** button.

8

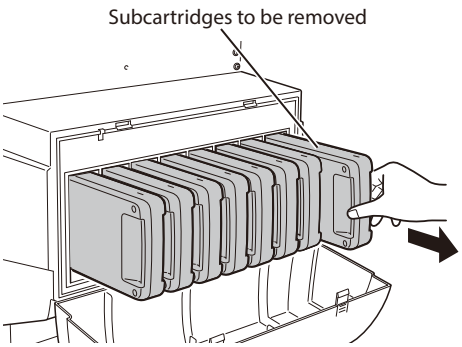


Open the subcartridge cover.

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

```
OPEN
SUBCARTRIDGE COVER
```

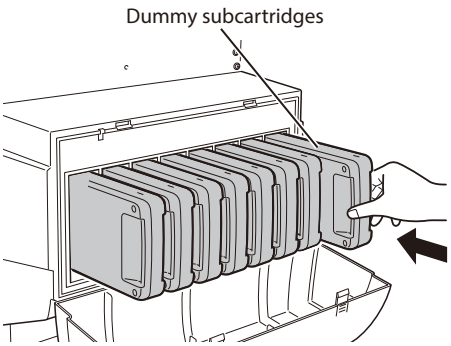
9



Remove the eight subcartridges.

```
REMOVE
Y1 SUBCARTRIDGE
```

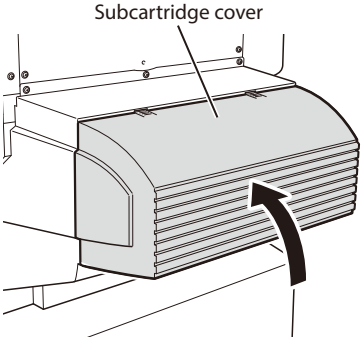
10



Set the dummy subcartridges of the cleaning liquid set.

```
LOAD
Y1 DUMMY SUBCART
```

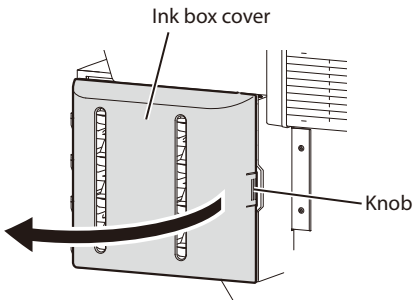
11



Close the subcartridge cover and tighten the two knob screws.

```
CLOSE
SUBCARTRIDGE COVER
```

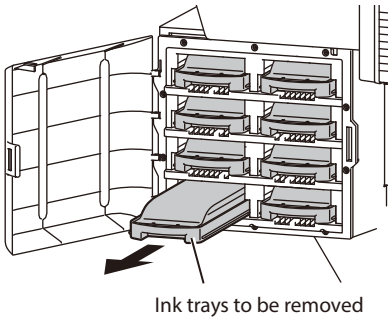
12



Open the ink box cover.

```
OPEN
INK COVER
```

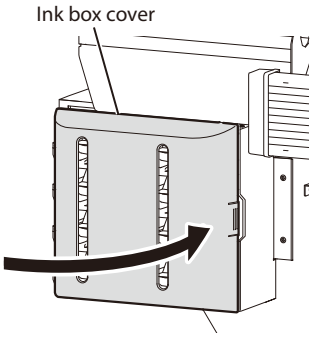
13



Remove the eight ink trays.

```
REMOVE
Y1 SL PACK
```

14



Close the ink box cover.

```
CLOSE
INK COVER
```

15

```
START PURGING
*BOTTLE OK?
```

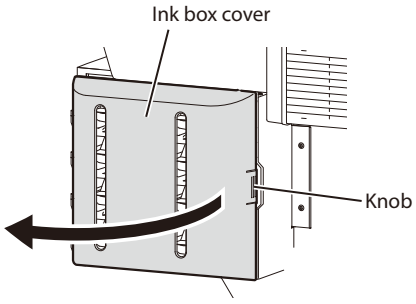
OK

```
PURGING
PLEASE WAIT          12
```

Press the **OK** button.

Ink is purged from the ink system.

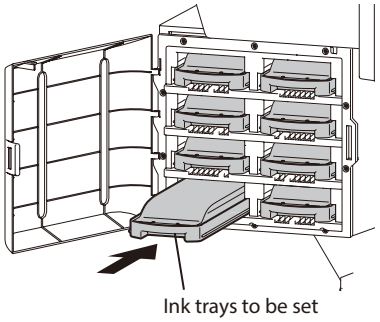
16



Open the ink box cover.

```
OPEN
INK COVER
```

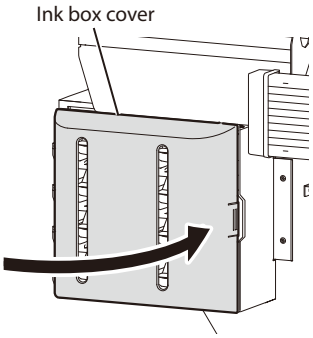
17



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

```
LOAD
Y1 CL PACK
```

18



Close the ink box cover.

```
CLOSE
INK COVER
```

19

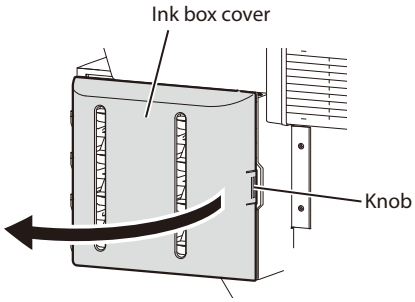
```
START CL CHARGING
*BOTTLE OK?
```

OK

```
CHARGING CL
PLEASE WAIT          12
```

Press the **OK** button.

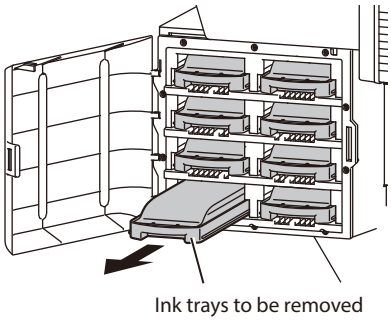
20



Close the ink box cover.

```
OPEN
INK COVER
```

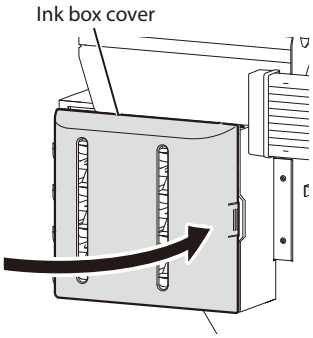
21



Remove the ink trays with cleaning liquid cartridges.

```
REMOVE
Y1 CL PACK
```

22



Close the ink box cover.

```
CLOSE
INK COVER
```

23

```
START PURGING
*BOTTLE OK?
```

OK

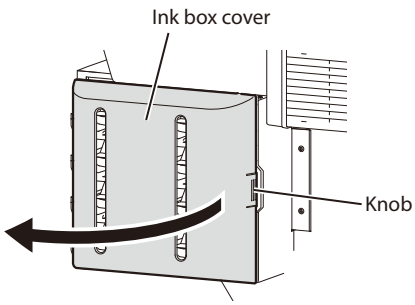
```
PURGING
PLEASE WAIT          12
```

Press the **OK** button.

Ink is purged from the ink system.

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

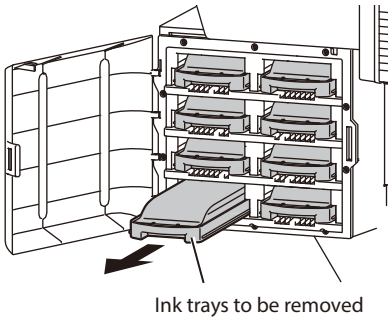
25



Open the ink box cover.

```
OPEN
INK COVER
```

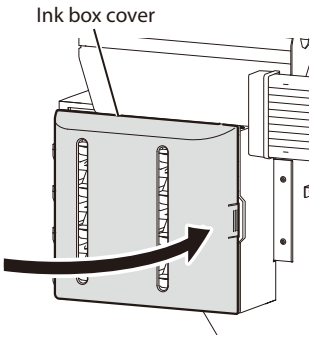
26



Remove the ink trays with cleaning liquid cartridges.

```
REMOVE
Y1 CL PACK
```

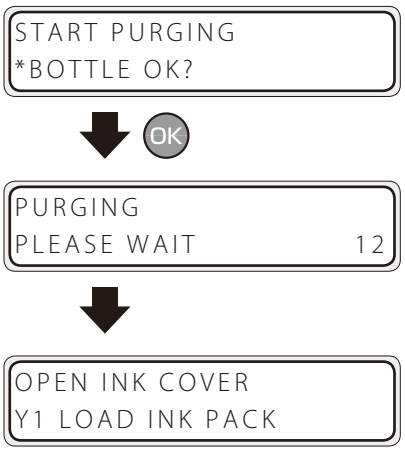
27



Close the ink box cover.

```
CLOSE
INK COVER
```

28



Press the **OK** button.

Charging the ink system after head wash

1 Clear out the waste ink bottle.

2

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

3

Press the **Right** button.

4

With the **Down** button scroll to **#INK SYSTEM OPT**.

5

Press the **OK** button.

6

With the **Down** button scroll to ***CHARGE(INKPACK)**.

7

Press the **OK** button.

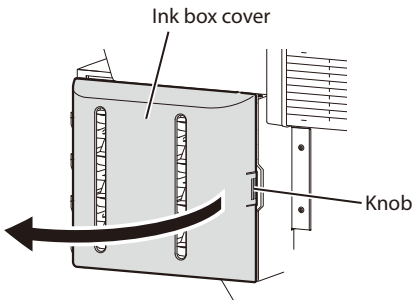
8

#INK SYSTEM OPT
*BOTTLE OK?

OK

Check that the waste ink bottle is empty, and press the **OK** button.

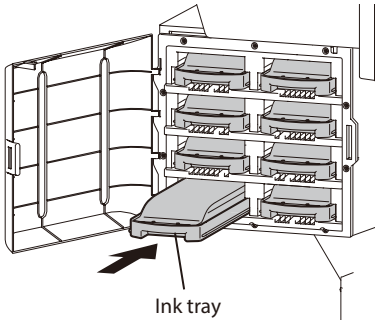
9



Open the ink box cover.

OPEN
INK COVER

10

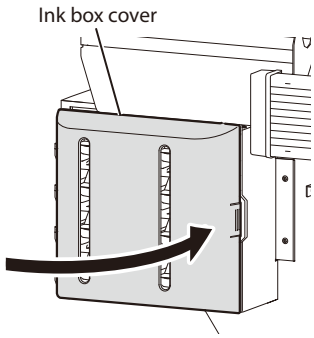


Insert the eight ink trays.

LOAD
Y1 INK PACK

Ink tray	
Lg8	Y 1
M 7	Lm2
Lc6	C 3
K 5	Gy4

11



Close the ink box cover.

CLOSE
INK COVER

12

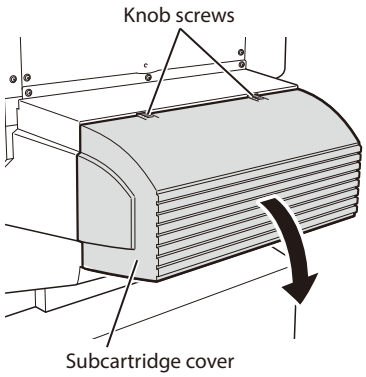
START INK CHARGING
*BOTTLE OK?

OK

CHARGING INK
PLEASE WAIT 12

Press the **OK** button.

13

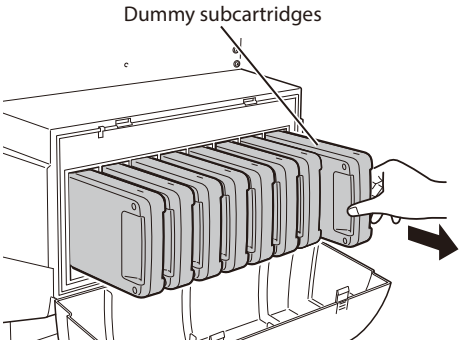


Open the subcartridge cover.

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

OPEN
SUBCARTRIDGE COVER

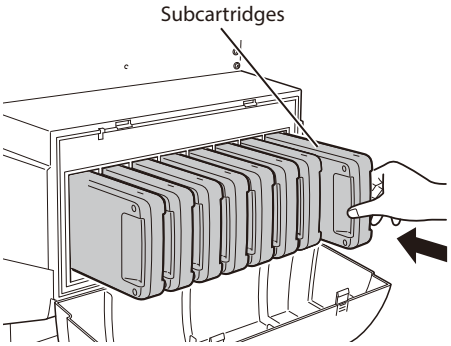
14



Remove the eight dummy subcartridges of the cleaning liquid set A.

```
REMOVE
Y1 DUMMY SUBCART
```

15

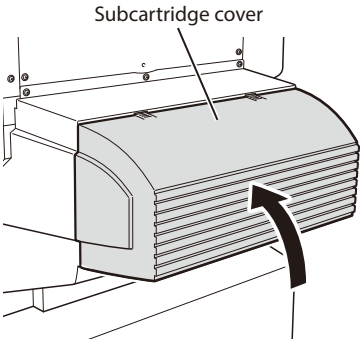


Set the eight subcartridges.

```
LOAD
SUBCARTRIDGE
```

Subcartridge							
Y 1	Lm 2	C 3	Gy 4	K 5	Lc 6	M 7	Lg 8

16



Close the subcartridge cover and tighten the two knob screws.

```
CLOSE
SUBCARTRIDGE COVER
```

17

```
CLEANING
*BOTTLE OK?
```

OK

```
CLEANING
PLEASE WAIT          12
```

OK

```
#INK SYSTEM OPT
*CHARGE(INKPACK)
```

Press the **OK** button.

A normal cleaning is performed.

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

Check the Printer status

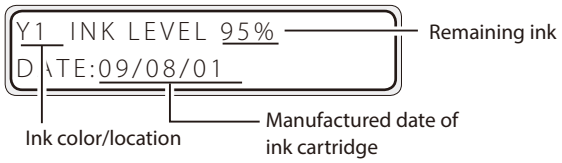
Check the remaining ink level

■ Check in offline

1

Set the Printer to offline state and press the **Up** button.

2



Press the **MENU** button to switch from one ink data to the other ink data.

Displayed at intervals of 3 seconds.

When the **CANCEL** or **Left** button is pressed, the display returns to offline state (menu mode) display.

To move to online state (idle mode) display, press the **ONLINE** button.

MENU or 3 seconds later

MENU or 3 seconds later

MENU or 3 seconds later

When ink is running out...

- The message below is displayed.

■ Check at printing in online

1

MENU x2

Press the **MENU** button twice.

2

MENU

MENU

Press the **MENU** button to switch from one ink data to the other ink data.

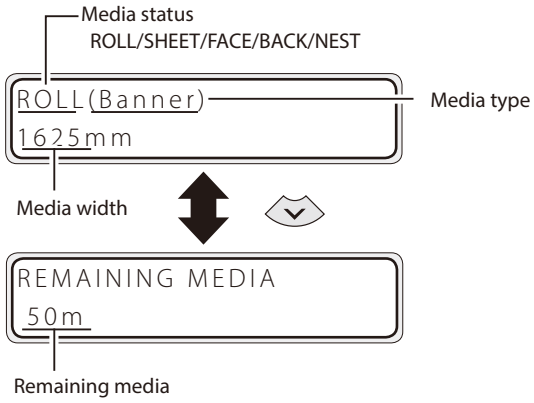
Check remaining media length

■ Check in offline

1

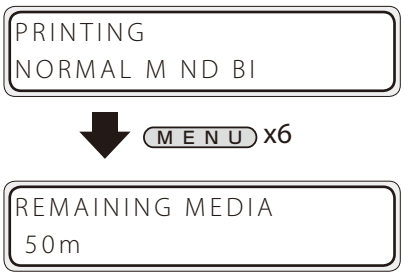
Set the Printer to offline state and press the **Left** button.

2



■ Check at printing in online

1



Press the **MENU** button six times.

Print reports on the Printer status.

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

1

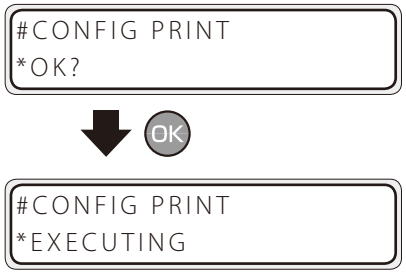
Set the Printer to offline state and press the **MENU** button twice.

2

Press the **Up** button.

3

Press the **OK** button.



Press the **OK** button.

The Printer prints the reports on the Printer status.

Check the USB connection status

1

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

2

Press the **Down** button.

3

With the **Down** button scroll to **#USB ADDRESS**.

4

The LCD displays the USB address,

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

Press the **Down** button.

The LCD displays the USB speed.

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

Check the firmware version on your Printer

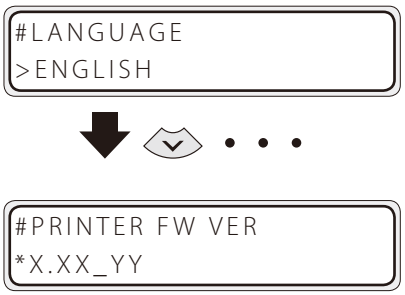
1

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

2

Press the **Down** button.

3



With the **Down** button scroll to **#PRITER FW VER**.

The LCD displays your Printer's firmware version.

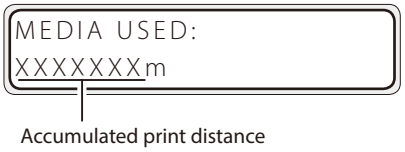
Check the total print distance

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

1

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

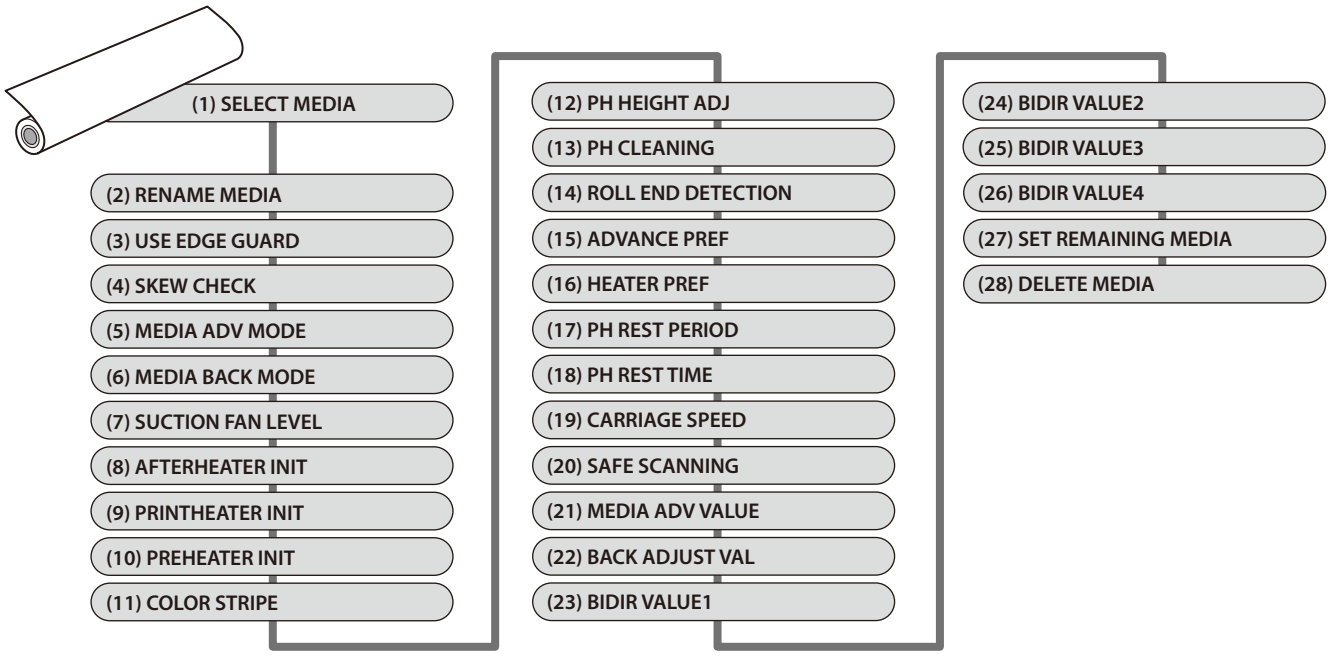
2



Handle the media

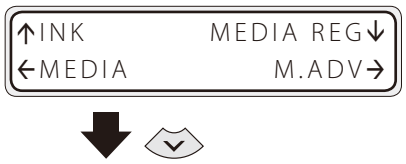
Create a new media preset

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



Set the Printer to offline state and press the **Down** button.

2

Press the **OK** button.

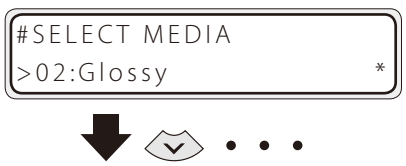
3

Press the **Down** button.

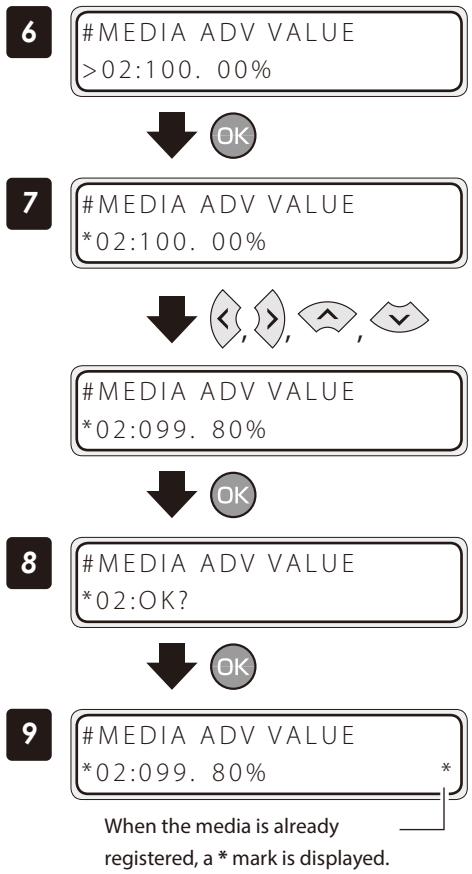
4

Press the **OK** button.

5



With the **Down** button scroll to **#MEDIA ADV VALUE**.



6

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

Press the **OK** button.

7

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

Enter the media advance adjsutment value and press the **OK** button.

Align the digit with the **Right** or **Left** button and set the value with the **Up** or **Down** button.

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

8

```
#MEDIA ADV VALUE
*02:OK?
```

Press the **OK** button.

9

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

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

■ Preset media defult values

Up to 20 types (media No. 01 to 20) of media can be registered. Registered media can also be deleted or changed. However, the information of the preset media No. 01 to No. 05 below initially set in the Printer cannot be deleted.

For the preset media 01-05, the initial values are listed below.

Setting \ Media No	01	02	03	04	05
RENAME MEDIA	PAPER	Glossy	Matte	Banner	BLT_B
USE EDGE GUARD	YES	YES	YES	YES	YES
SKEW CHECK	ON	ON	ON	ON	ON
MEDIA ADV MODE	FWD ONLY	FWD ONLY	FWD ONLY	BACK & FWD1	BACK & FWD1
MEDIA BACK MODE	BACK & FWD	BACK & FWD	BACK & FWD	BACK & FWD	BACK & FWD
SUCTION FAN LEVEL	NORMAL	NORMAL	NORMAL	LOW	LOW
AFTERHEATER INIT	**°C	50°C	50°C	50°C	50°C
PRINTHEATER INIT	**°C	40°C	40°C	40°C	40°C
PREHEATER INIT	**°C	45°C	45°C	45°C	45°C
COLOR STRIPE	OFF	OFF	OFF	OFF	OFF
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	DETECT ONLY	DETECT ONLY	DETECT ONLY	DETECT ONLY
ADVANCE PREF	SOFTWARE	SOFTWARE	SOFTWARE	SOFTWARE	SOFTWARE
HEATER PREF	SOFTWARE	SOFTWARE	SOFTWARE	SOFTWARE	SOFTWARE
PH REST PERIOD	0000 CYCLES (not provided)	0000 CYCLES (not provided)	0000 CYCLES (not provided)	0000 CYCLES (not provided)	0000 CYCLES (not provided)
PH REST TIME	1 second	1 second	1 second	1 second	1 second
CARRIAGE SPEED	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SAFE SCANNING	STOP PRINTING	STOP PRINTING	STOP PRINTING	STOP PRINTING	STOP PRINTING
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

1

Set the Printer to offline state and press the **Down** button.

2

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

Press the **OK** button.

3

Press the **Down** button.

Select your preferred preset media.

4

Press the **OK** button.

Minimize the right and left margins

■ Deactivate the media edge guards

1

Set the Printer to offline state and press the **Down** button.

2

With the **Down** button scroll to **#USE EDGE GUARD**.

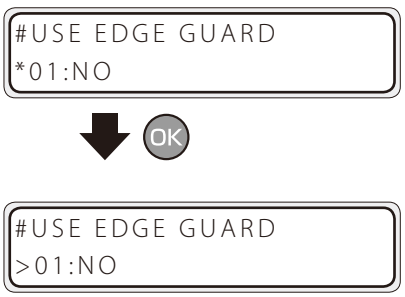
3

Press the **OK** button.

4

```
#USE EDGE GUARD
*01:YES
```

Press the **Down** button.



5

```
#USE EDGE GUARD
*01:NO
```

Press the **OK** button.

```
#USE EDGE GUARD
>01:NO
```

■ Activate the color stripe bar

1

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

Set the Printer to offline state and press the **Down** button.

2

```
#SELECT MEDIA
>01:PAPER                *
```

With the **Down** button scroll to **#COLOR STRIPE**.

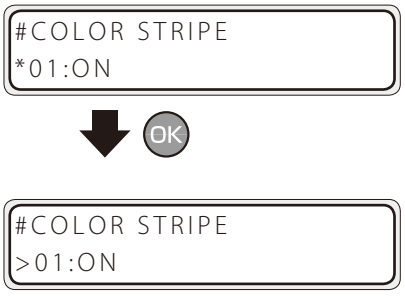
3

```
#COLOR STRIPE
>01:OFF
```

Press the **OK** button.

4

```
#COLOR STRIPE
*01:OFF
```



Press the **Down** button.

5

```
#COLOR STRIPE
*01:ON
```

Press the **OK** button.

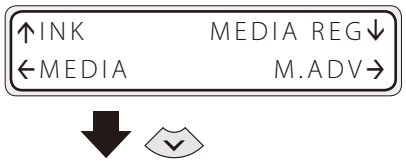
```
#COLOR STRIPE
>01:ON
```

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



Set the Printer to offline state and press the **Down** button.

2

With the **Down** button scroll to **#SUCTION FAN LEVEL**

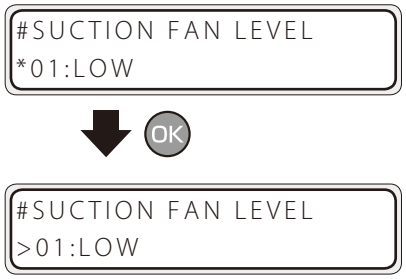
3

Press the **OK** button.

4

Press the **Down** button twice.

5



Press the **OK** button.

■ Change the media advance mode

Select the media advance mode according to the media used.

1

Set the Printer to offline state and press the **Down** button.

2

With the **Down** button scroll to **#MEDIA ADV MODE**

3

Press the **OK** button.

4

Press the **Down** button.

5

Press the **OK** button.

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

Set the Printer to offline state and press the **Down** button.

2

With the **Down** button scroll to **#SUCTION FAN LEVEL**

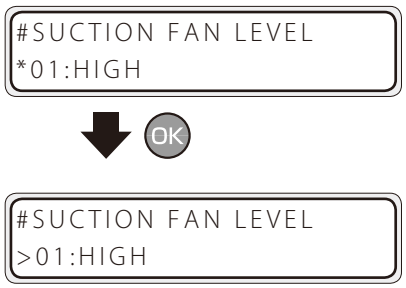
3

Press the **OK** button.

4

Press the **Down** button twice.

5



Press the **OK** button.

Print on a thick media

■ Change the print head height

The Printer automatically adjusts 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.

1

Set the Printer to offline state and press the **Down** button.

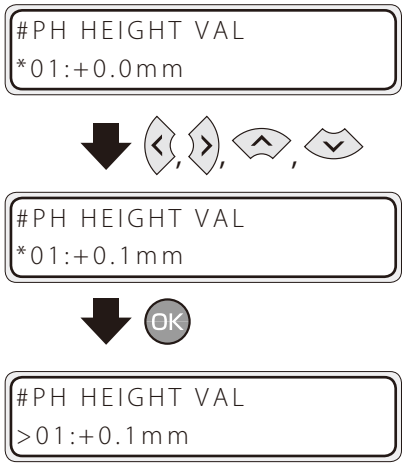
2

With the **Down** button, scroll to **#PH HEIGHT VAL**.

3

Press the **OK** button.

4



Enter the print head height adjustment value, and press the **OK** button.

Align the digit with the **Right** or **Left** button and set the value with the **Up** or **Down** button.

The adjustment value range is: +0.0 to +1.0 mm.

Suspend printing when media wrinkles are detected

To prevent the printouts to be soiled due to the print heads touching the media, this function can suspend printing when contact between the print heads and the media is detected. Select the mode according to the characteristics of the media used.

STOP PRINTING (default setting)	Printing is stopped immediately if a contact between the print heads and the media is detected. The printing interruption is notified by a warning sound and a message displayed on the panel. Printing cannot be resumed after it has been stopped, so it is required to perform printing again after reloading the media.
SUSPEND PRINTING	Printing is suspended temporarily and the print heads are capped if a contact between the print heads and the media is detected. The printing temporary suspension is notified by a warning sound and a message displayed on the panel. Printing can be resumed after checking the media conditions and removing the wrinkles, if any.
SUSPEND&WARNING	Printing is suspended temporarily and the print heads are capped if five contacts between the media and the print heads are detected consecutively. Any contact detected between the media and the print heads is notified by a warning sound and a message displayed on the panel. Printing suspension is also notified by a warning sound and a message displayed on the panel. Printing can be resumed after checking the media conditions and removing the wrinkles, if any.
WARNING ONLY	Printing continues even when contacts between the media and the print heads are detected. However, any contact detected between the media and the print heads is notified by a warning sound and a message displayed on the panel. The warning sound stops and the panel message disappears when contact is not detected anymore. Printing can be suspended manually and resumed after all wrinkles have been removed.

⚠CAUTION

Pay attention to the following when Safe Scanning is set to **STOP PRINTING**.
- When the printing has been stopped, load the media again without delay to prevent the print heads from drying.

Pay attention to the following when Safe Scanning is set to **WARNING ONLY**.
- The print heads may be damaged if printing is performed during a long time while the warning indicating that the print heads contact the media is emitted.

Pay attention to the following when Safe Scanning is set to **SUSPEND PRINTING** or **SUSPEND&WARNING**.
- Make sure that all the wrinkles have been removed when resuming the printing after it has been suspended.
- If missing dots appear on the printout after resuming the printing, pause printing and perform PH Recovery.

The procedure to change the Safe Scanning setting is explained below, taking the procedure to change **STOP PRINTING** to **SUSPEND&WARNING** for the preset media 1 as an example.

1 ↑INK MEDIA REG↓ / ←MEDIA M.ADV→

Set the Printer to offline state and press the **Down** button.

2 #SELECT MEDIA / >01:PAPER *

With the **Down** button, scroll to **#SAFE SCANNING**.

3 #SAFE SCANNING / >01:STOP PRINTING

Press the **OK** button.

4 #SAFE SCANNING
*01:STOP PRINTING

Press the **Down** button.

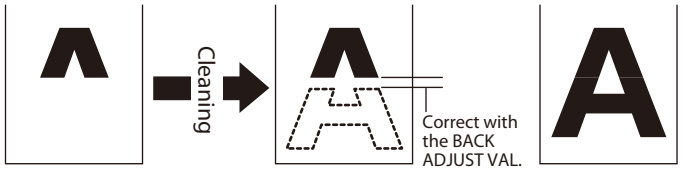
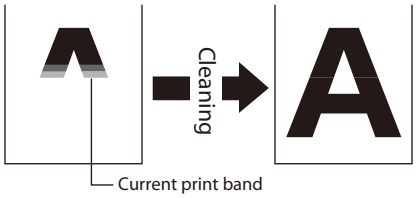
5 #SAFE SCANNING
*01:SUSPEND&WARNING

Press the **OK** button.

#SAFE SCANNING
>01:SUSPEND&WARNING

Change the automatic cleaning timing

To ensure that the print heads are in the best condition, the Printer performs automatic cleaning. The cleaning mode can be specified for each preset media. Select the cleaning mode 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 PRINT1	Based on the past print operation history, the cleaning is performed when printing starts or during printing. In this mode, the Printer completes the print band in process before the cleaning starts. This mode is recommended when printing on the media subject to the heater temperature, for example, on Vinyl. After the cleaning, the Printer starts the rest of the interrupted print job. 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. 
DURING PRINT2	Based on the past print operation history, the cleaning is performed when printing starts or during printing. In this mode, the Printer completes the print band in process before the cleaning starts. This mode is recommended when printing on the media less subjected to the heater temperature, for example, on Banner. After the cleaning, the Printer starts the rest of the interrupted print job. This mode shows less misalignment at the linkage than the DURING PRINT1. However, the hue after the cleaning may be different from the one before the cleaning. 
OFF	Automatic cleaning is not performed. Set this mode in the following case. - When printing continuously several data files on media with which differences between printouts will be noticeable if automatic cleaning is performed between two files. If automatic cleaning is set to OFF, determine suitable timing to execute cleaning manually.
INK SAVE	Based on the past print operation history, the Printer performs the automatic cleaning when the printing starts or finishes. * With INK SAVE, the interval between automatic cleaning operations is longer than with START & END.

⚠CAUTION

- Pay attention to the following points when automatic cleaning is set to **OFF** or **INK SAVE**.
  - Missing dots may appear if the cleaning operation has not been performed for a long time.
  - Manually perform cleaning when the **PERFORM PH RECOVERY NOW** message is displayed on the panel to prevent the missing dots problem.

The procedure to change the automatic cleaning timing is explained as follows, taking the procedure to select the automatic cleaning **DURING PRINT1** for the preset media 1 as example.

1

Set the Printer to offline state and press the **Down** button.

2

With the **Down** button, scroll to **#PH CLEANING**.

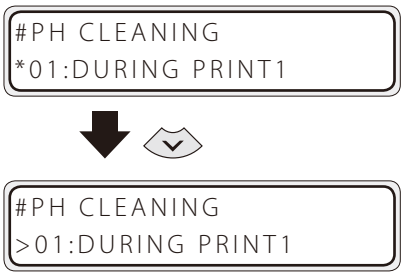
3

Press the **OK** button.

4

Press the **Down** button.

5



Press the **OK** button.

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.

1

Set the Printer to offline state and press the **Down** button.

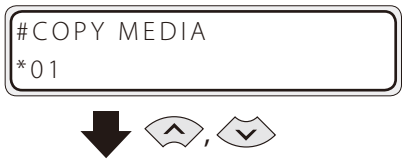
2

With the **Down** button scroll to **#COPY MEDIA**.

3

Press the **OK** button.

4



Select a copy source with the **Up** or **Down** button.

Only numbers for media types that already exist are displayed.

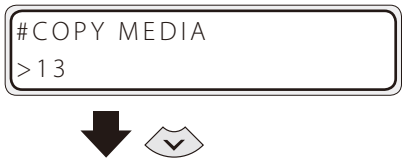
By pressing the **CANCEL** button the operation returns to the step **3**.

5

Press the **OK** button.

By pressing the **CANCEL** button the operation returns to the step **3**.

6

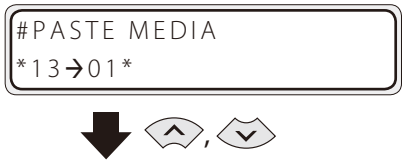


Press the **Down** button.

7

Press the **OK** button.

8



Select a copy destination with the the **Up** or **Down** button.

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.

9

Press the **OK** button.

10

Press the **OK** button.

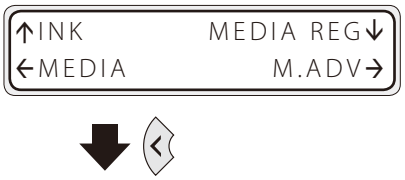
11

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



Set the Printer to offline state and press the **Left** button.

2

With the **Down** button scroll to **#SELECT MEDIA**.

3

Press the **OK** button.

4

Press the **Down** button several times to select the desired media.

5

Press the **OK** button.

6

Feed or rewind media

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

1

Press and hold the or button.

Press and hold the **Up** or **Down** button.

To feed media, press the **Down** button.

To rewind media, press the **Up** button.

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

2 The ⌄ button is pressed.

The ⌃ button is pressed.

Release the ⌄ or ⌃ button.

Release the **Up** or **Down** button.

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

■ Feed or rewind media in offline state

1

MENU

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

2

Press and hold the ⌄ or ⌃ button.

Press and hold the **Up** or **Down** button.

To feed media, press the **Down** button.

To rewind media, press the **Up** button.

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

3 The ⌄ button is pressed.

The ⌃ button is pressed.

Release the ⌄ or ⌃ button.

Release the **Up** or **Down** button.

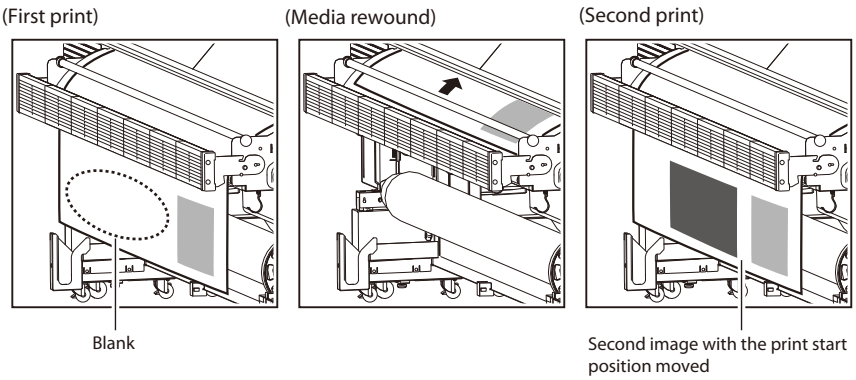
The Printer stops feeding or rewinding media, and the display returns to offline state (menu mode).

⚠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 37***.

⚠CAUTION

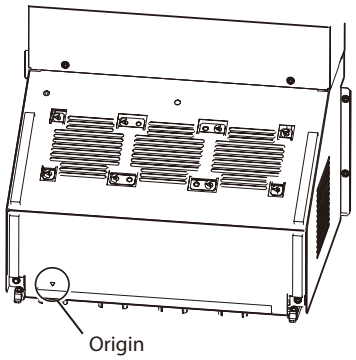
- Rewind the media after the printed image completely dries. If the media is rewound while the image is not sufficiently dry, the image may be damaged.

2 PRINT READY
ROLL:1625/PAPER

Press and hold the **Left** button for 1.5 seconds.

Press and hold the button for 1.5 seconds.

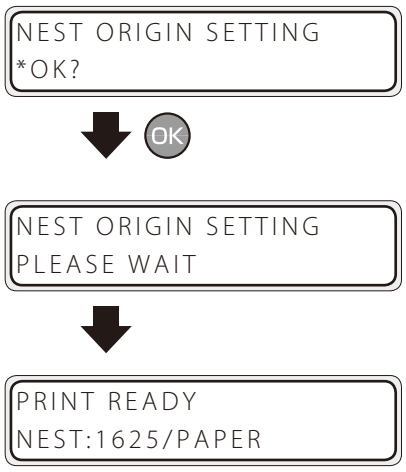
The carriage moves and the nest function is activated.
Align the ▽ mark at the lower left of the carriage cover's front panel with the origin of the next print image.



3 NEST ORIGIN SETTING
CARRIAGE MOVING

Move the carriage with the **Right** or **Left** button to the position to be set as an origin.

4



Press the **OK** button 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 **Right** button 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.

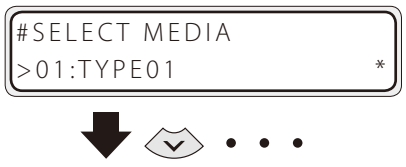
Set roll end detection to **Action Selection** beforehand.

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.

1

Set the Printer to offline state and press the **Down** button.

2



With the **Down** button scroll to **#SELECT MEDIA**.

3

Press the **OK** button.

4 #ROLL END DETECTION
*01:DETECT ONLY *

Press the **Down** button.

5 #ROLL END DETECTION
*02:ACTION SELECT. *

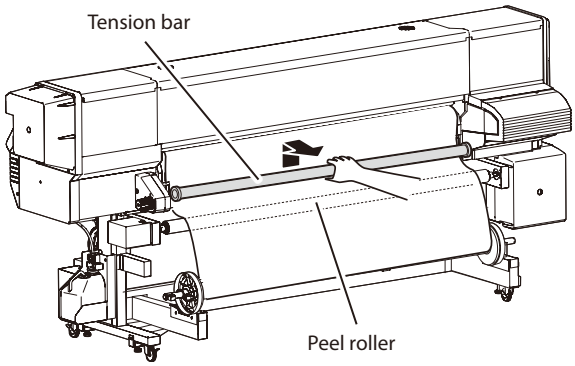
Press the **OK** button.

6 #ROLL END DETECTION
>02:ACTION SELECT. *

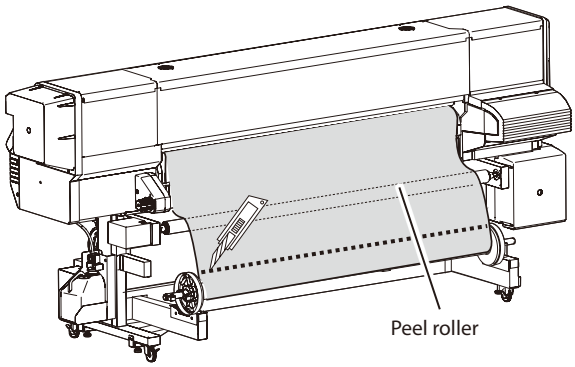
When roll end is detected during printing (online mode), printing stops temporarily and the following screen is displayed.

ROLL END DETECTED
PRINT/CANCEL

<Procedure to continue printing>



1. Remove the tension bar.



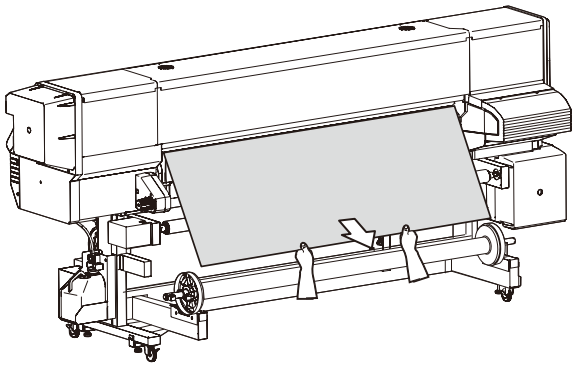
2. Detach the media end from the paper tube using the cutter.

ROLL END DETECTED
PRINT/CANCEL

Press the **OK** button.

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>

ROLL END DETECTED
PRINT/CANCEL

CANCEL

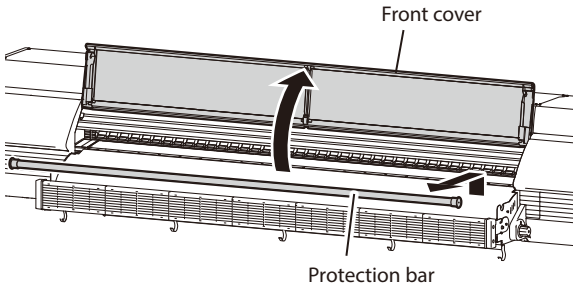
Press the **CANCEL** button.

NO MEDIA LOADED
LOAD MEDIA

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

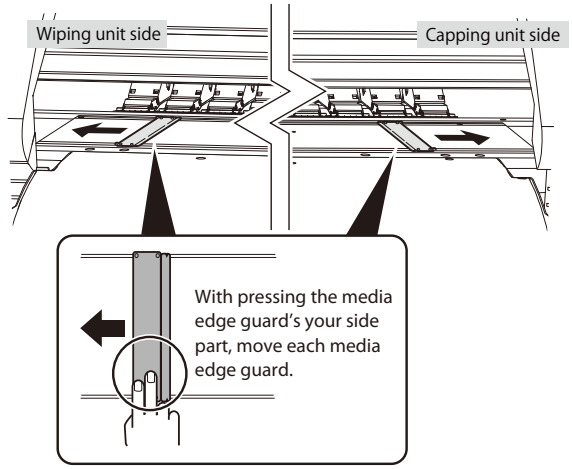
Print on a cut-sheet media

1



Remove the protection bar, and open the front cover.

2



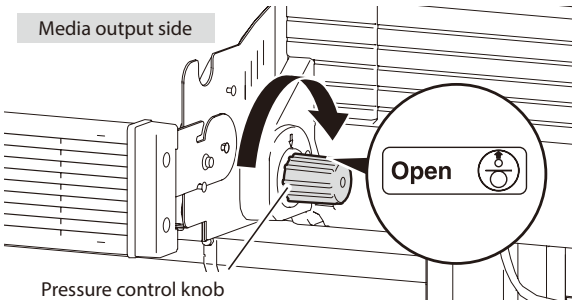
Move the media edge guards to each side.

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

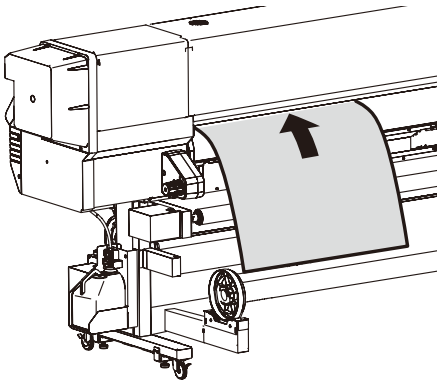
- Be sure to press the media edge guard on your side when moving the media edge guards. You may get injured if your finger slips while strongly pressing the plate's edge.

3



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

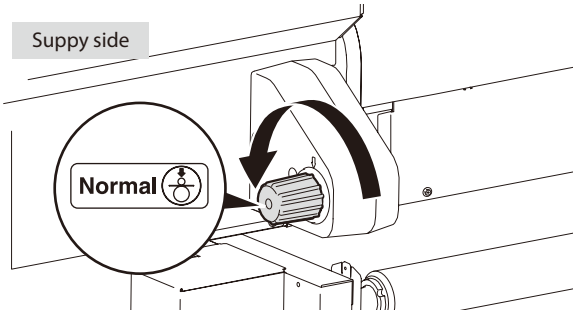
4



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

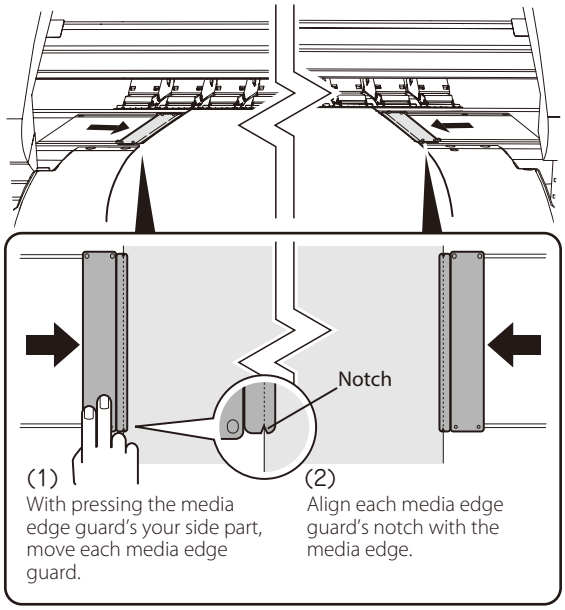


Set the pressure to **Normal** by rotating the pressure control knob.

Point to be checked again

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

6



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.

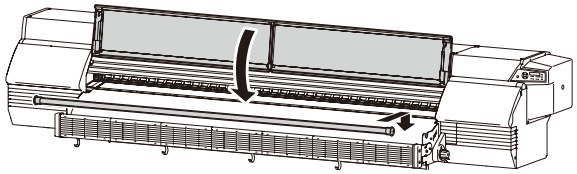
Check that:

- 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.

7

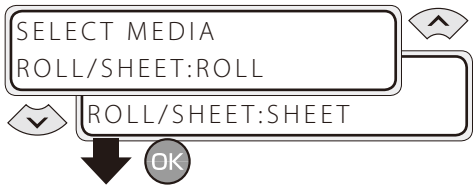


Close the front cover, and then install the protection bar.

8

Press the **OK** button.

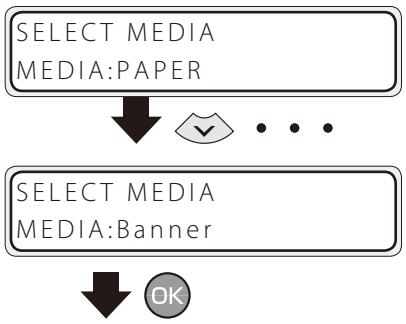
9



Select **SHEET** and press the **OK** button.

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

10

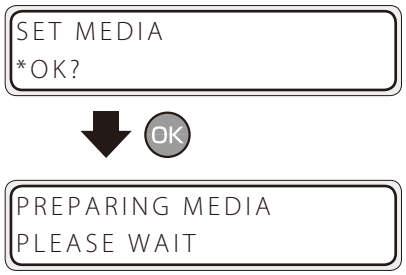


Select the type of media, and then press the **OK** button.

Select a preset media with the **Up** or **Down** button.

Here explains the procedure taking banner for example.

11



Press the **OK** button.

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.

This function cannot be used for the current job once printing (or scan) has started.

1

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

2 PRINTER PAUSED
ROLL:1626/PAPER

The Printer enters pause mode. Keep the **Down** button pressed.

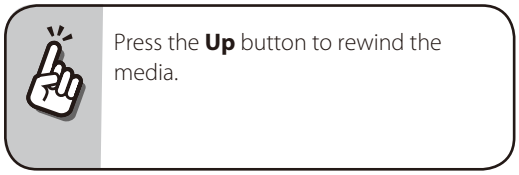
3 FEEDING MEDIA

Release the **Down** button to stop feeding the media.

4 PRINTER PAUSED
ROLL:1626/PAPER

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

5 PREHEATING
MAX-QUA M ND UNI



Reinstall the edge guards during printing

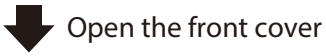
If the edge guards are accidentally removed or particles adhere to the media advance path during printing, put the Printer into pause mode to be able to open and close the front cover.

1 PRINTING
MAX-QUA M ND UNI

Press the **ONLINE** button during printing.

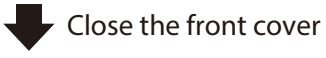
2 PRINTER PAUSED
ROLL:1626/PAPER

The Printer enters pause mode. Open the front cover.



3 CLOSE
COVER

Close the cover to return to the Printer pause display.



4 PRINTER PAUSED
ROLL:1626/PAPER

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

5 PRINTING
MAX-QUA M ND UNI

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-QUA M ND UNI

↓ ONLINE

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

2 PRINTER PAUSED
ROLL:1626/PAPER

↓ Release the grip

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.

3 HOLD MEDIA

↓ Set the grip

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

4 PRINTER PAUSED
ROLL:1626/PAPER

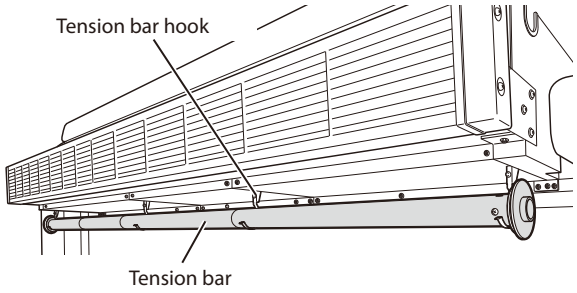
↓ ONLINE

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

5 PRINTING
MAX-QUA M ND UNI

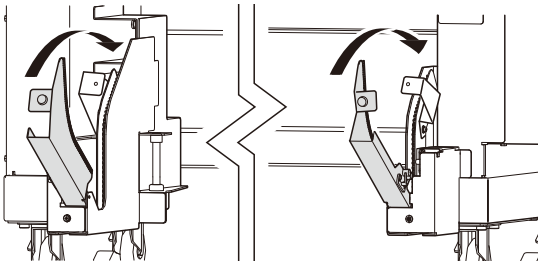
Solve skew in LOOSE winding mode

1



Hook the tension bar to the tension bar hook beforehand.

2



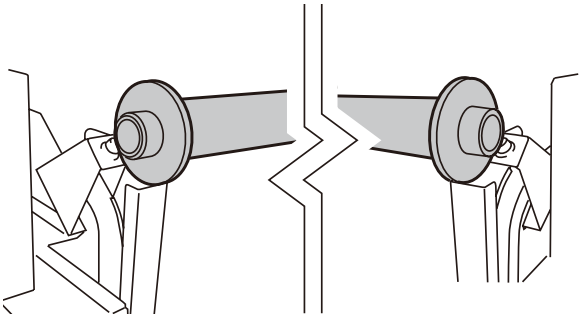
Close the tension bar guide's cover.

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

3 Load the media on the Printer.

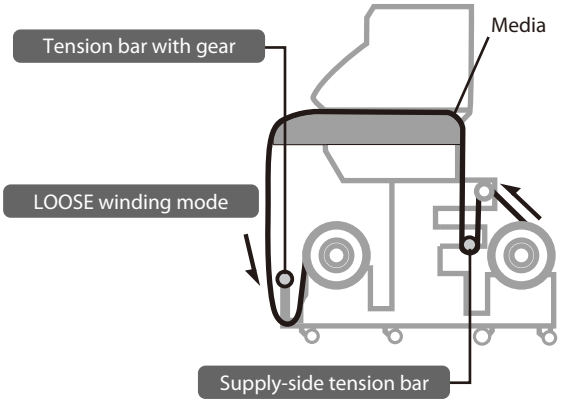
For the procedure, see the ***Basic Operation Guide,*** **To take up media in LOOSE winding mode** .

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

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

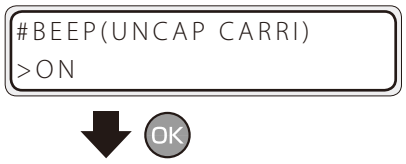
2

Press the **Down** button.

3

With the **Down** button scroll to **#BEEP(UNCAP CARRI)**.

4

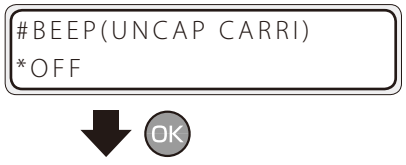


Press the **OK** button.

5

Press the **Down** button.

6



Press the **OK** button.

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

When a specific length of media has been printed since the last cleaning operation, print heads cannot be selected and cleaned individually.

1

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

2

Press the **Left** button.

3

Press the **OK** button.

4

With the **Up** or **Down** button scroll to ***STRONG**.

5

Press the **OK** button.

6

Select your preferred print head for cleaning.

With the **Right** or **Left** button, select the print head number. Then with the **Up** or **Down** button, display or delete the number. Display it to clean the print head, or delete it not to clean the print head.

The ink colors and print head numbers correspondence is shown in the table below.

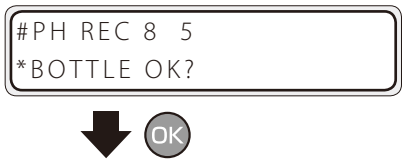
Lg	M	Lc	K	Gy	C	Lm	Y
8	7	6	5	7	3	2	1

7

Press the **OK** button.

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

8



Press the **OK** button.

Check visually that the waste ink bottle is not full.

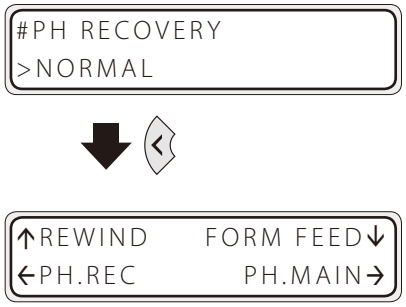
This value is counted down every 10 seconds.

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.

9



Press the **Left** button.

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

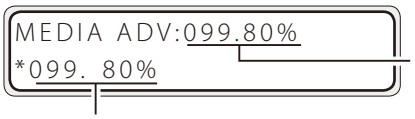
Manage the media advance adjustment value

Change media advance adjustment value

1

Press the **Up** or **Down** button while **PRINTING** is displayed.

2



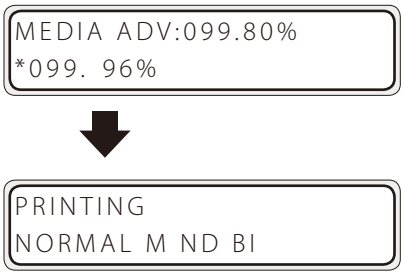
The value is incremented or decremented by 0.01% with the ^ or v button.
(Settable range: 97.00% to 106.00%)

With the **Up** or **Down** button, 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 changeuntil the printing is completed. However, when the cleaning mode is set to **DURING PRINT**, the value displayed changes after the cleaning is completed.

3



The changed value is registered and retained.

When no button 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
- 2 smart pass settings

in addition to

- 2 density settings.
- 2 carriage speeds

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

Generally, we recommend printing with **NORMAL** print mode, **NORMAL** density, and **NORMAL** carriage speed settings.
Use other modes and settings to emphasize productivity or print quality.

After changing the print mode
Adjust the media advance adjustment value again (📖 ***page 77***).

Settings for the print mode, smart pass, and density can be configured only from the RIP software.

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. The smart pass setting can be configured.
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. Adjust the enhancing effect by setting the correction level to low or to medium for further effect.

Smart pass	Explanation
LOW	The productivity is emphasized rather than the quality. Since the enhancing effect is low, unevenness, banding, spots, or other print defects may appear. Smart pass can be set to **LOW** only in **MAX SPEED** print mode.
MEDIUM	The enhancing effect is fully used. Smart pass setting is fixed to **MEDIUM** in print modes other than **MAX SPEED**.

⚠CAUTION

- Print speed with **LOW** setting is approximately 50% faster than with **MEDIUM** setting.

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	2.0
NORMAL	1.0	1.9
HIGH QUALITY	1.0	2.0
MAX QUALITY	1.0	1.9

*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.

- The print speed depends on the combination of the three following settings.
  - Print mode
  - Smart pass
  - Carriage speed

  Approximate speed values are shown in the tables below.
- The indicated print speeds can be reduced by print conditions such as the media width.

Print speed (*1)

Print mode	CARRIAGE SPEED			
	NORMAL		SLOW	
	Smart pass		Smart pass	
	LOW	MEDIUM	LOW	MEDIUM
MAX SPEED	56.6 m^2/h	37.7 m^2/h	35.4 m^2/h	23.6 m^2/h
HIGH SPEED	Cannot be set	25.1 m^2/h	Cannot be set	15.7 m^2/h
NORMAL	Cannot be set	17.6 m^2/h	Cannot be set	10.5 m^2/h
HIGH QUALITY	Cannot be set	9.8 m^2/h	Cannot be set	5.9 m^2/h
MAX QUALITY	Cannot be set	6.0 m^2/h	Cannot be set	3.8 m^2/h

*1 Print speed values are for full width print on a media of 2642 mm width (104 inches). The values in the upper rows are for 8-color mode, and the values for the lower rows are for the 4-color mode.

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 53***)
● 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. (***Basic Operation Guide*** 🕮 ***page 50***)

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. (***Basic Operation Guide*** 🕮 ***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. (***Basic Operation Guide*** 🕮 ***page 74***)

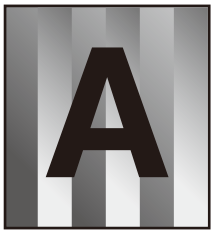
The media is curled or wrinkled.

Cause	Solution
● Outside the operating temperature/humidity range	(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. (2) Use the proven media.
● The media storage conditions are not the same as the printer operation conditions.	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.
● The media was poorly installed.	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.
● The heater temperature wrinkled the media.	(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. (2) Change the heater temperature. Increase or decrease the all three heaters by 5°C.[*1] (3) Use the proven media.
● The media is curled.	(1) Do not use the media curled in the x direction, that is, the vertical direction of the media. (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 (3) Use the proven media.

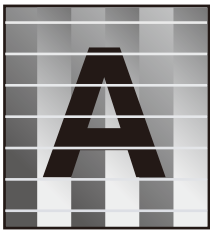
[*1] When the heaters temperatures are changed, adjust the media advance adjustment value again.

White stripes appear on the print.

Basic image



Symptom A



[Cause]
The media advance adjustment value is not proper.

[Check]
White stripes appear in all colors when a color stripe bar is printed.

Symptom B

[Cause]
The print head nozzles are clogged.

[Check]
White stripes appear in some colors when a color stripe bar is printed.

Symptom C

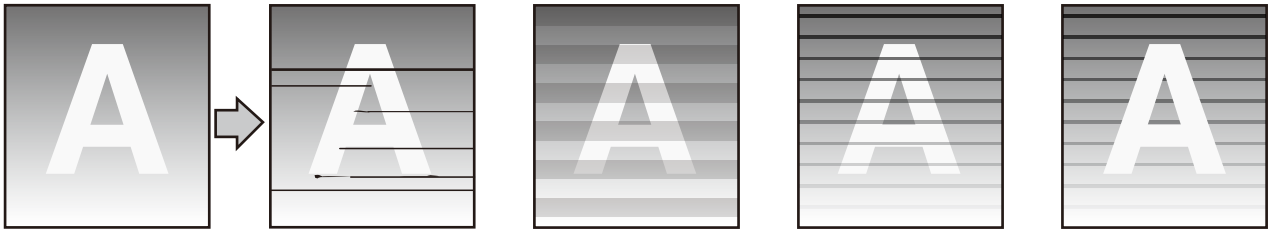
[Cause]
The ink does not match well with the media.

Cause	Solution
[Symptom A] ● The media advance adjustment value is not proper.	Adjust the media advance adjustment value. * The media advance adjustment value differs depending on the winding mode, loose or tension.
[Symptom A] ● The media advance accuracy is poor, or is not stable.	(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) Adjust the pressure on the media with the pressure control knob.[*1] (3) Set smart pass to a higher setting.[*1*2*3] (4) Change the print mode to be slower.[*1*2]
[Symptom B] ● Print head nozzles are clogged.	(1) Perform a nozzle print, and set nozzle map for the clogged nozzles. (***Basic Operation Guide*** 🕮 ***page 101***) (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. * Do not forget to clean the head guard and edge guards. * Be sure to perform the print head cleaning. (6) With the print sheet mount cleaning (***Basic Operation Guide*** 🕮 ***page 105***), clean the print head surface. - Printing with a color stripe bar is effective to prevent missing dots. (🕮 ***page 29***)

[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] (3) Change the print mode to be slower.[*1*2] (4) Use the proven media.

[*1] Adjust the media advance adjustment value again.
[*2] Note that the print speed differs depending on the mode selected.
[*3] The smart pass setting can be changed only when the print mode is set to **MAX SPEED**.

Black stripes appear on the print.



[Cause]
The print head periphery is smeared.

[Cause]
At bidirectional printing, the ejected ink's color order in rightward print is different from in leftward print.

* Black stripes appear over the print.
[Cause]
The media advance adjustment value is not proper.

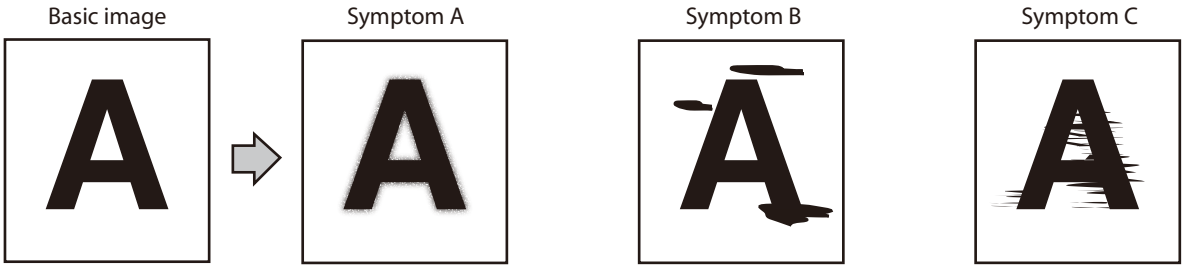
* Black stripes appear partly on the print.
[Cause]
The ink dries too slowly.

Cause	Solution
[Symptom A] ● The print head periphery is smeared.	(1) Check the obstructions such as media lint or ink clot in the nozzle surface path including the platen surface, and remove them. (2) If the ink is accumulated or the net tears on the spittoon case surface, replace them. (3) If the media is curled or wrinkled, solve the problem by referring to the description on the problem, **The media is curled or wrinkled.** (4) Perform the daily maintenance. * Do not forget to clean the head guard and edge guards. * Be sure to perform the print head cleaning. (5) With the print sheet mount cleaning (***Basic Operation Guide*** 🕮 ***page 105***), clean the print head surface.
[Symptom B] ● At bidirectional printing, the ejected ink's color order in rightward print is different from in leftward print.	(1) Set smart pass to a higher setting. *1*2*3 (2) Change the print mode to be slower. *1*2 (3) Print in unidirectional mode. (4) Use the proven media.
[Symptom C] ● The media advance adjustment value is incorrect.	Adjust the media advance adjustment value. * The media advance adjustment value differs depending on the winding mode, loose or tension.
[Symptom C] ● The media advance accuracy is poor, or is not stable.	(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) Adjust the pressure on the media with the pressure control knob. *1 (3) Set smart pass to a higher setting. *1*2*3 (4) 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] (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 adjustment value again.
[*2] Note that the print speed differs depending on the mode selected.
[*3] The smart pass setting can be changed only when the print mode is set to **MAX SPEED**.

The print is smeared.

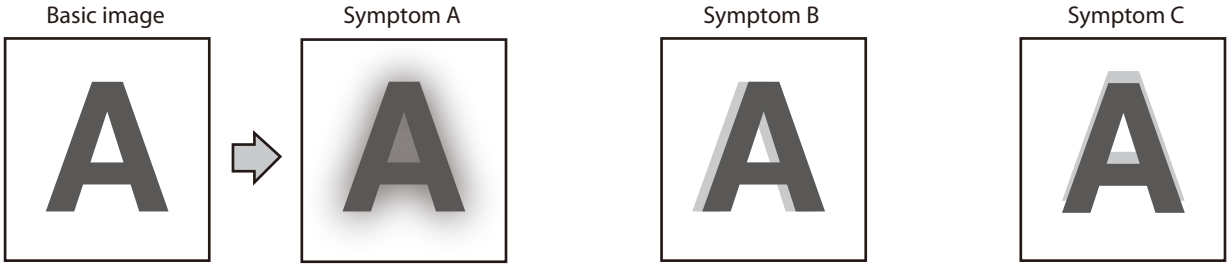


Cause	Solution
[Symptom A] ● The ink is improperly sprayed from the print head.	(1) Use the Printer within the operating temperature/humidity range. (2) Check the **#PH HEIGHT VAL** value. If the value is more than 0, set the value to 0.[*3] (3) Perform the daily maintenance. * Do not forget to clean the head guard and media edge guards. (4) Perform print head cleaning (STRONG). (5) Change the print mode to be slower.[*1*2] (6) With the print sheet mount cleaning (***Basic Operation Guide*** 🕮 ***page 105***), clean the print head surface. (7) Set the carriage speed to **SLOW**.[*2*3]
[Symptom B] ● The ink is drooling.	(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. * Do not forget to clean the head guard and media edge guards. * Be sure to perform print head cleaning. (6) With the print sheet mount cleaning (***Basic Operation Guide*** 🕮 ***page 105***), 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. (8) 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 media edge guards. * Be sure to perform print head cleaning. (5) With the print sheet mount cleaning (***Basic Operation Guide*** 🕮 ***page 105***), clean the print head surface.

*1 Adjust the media advance adjustment value 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]
The ink dries too slowly.
The ink is ejected excessively.

[Cause]
The print head position is misaligned.
The bidirectional print position is misaligned.

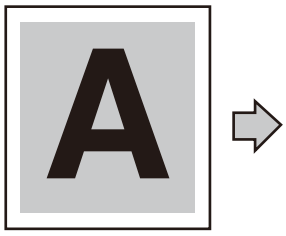
[Cause]
The media advance adjustment value is not proper.

Cause	Solution
[Symptom A] ● The ink dries too slowly. ● The ink is ejected excessively.	(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. (2) Set smart pass to a higher setting. [*1*2*3] (3) Change the print mode to be slower.[*1*2] (4) Print in unidirectional mode. (4) If density is set to **HIGH DENSITY**, change it to **NORMAL**. (📖 ***page 53***) (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.
[Symptom B] ● The print head position is misaligned. ● The bidirectional print position is misaligned.	(1) Adjust the print head position. (📖 ***page 89***) (2) Adjust the bidirectional print positions. (📖 ***page 82***)
[Symptom C] ● The media advance adjustment value is incorrect.	Adjust the media advance adjustment value. * The media advance adjustment value differs depending on the winding mode, loose or tension.
[Symptom C] ● The media advance accuracy is poor, or is not stable.	(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) Adjust the pressure on the media with the pressure control knob.[*1] (3) Set smart pass to a higher setting. [*1*2*3] (4) Change the print mode to be slower.[*1*2]

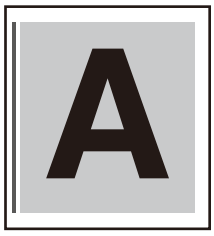
[*1] Adjust the media advance adjustment value again.
[*2] Note that the print speed differs depending on the mode selected.
[*3] The smart pass setting can be changed only when the print mode is set to **MAX SPEED**.

A vertical barding appears at the print's edge.

Basic image

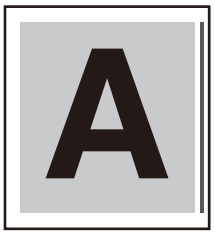


Symptom A



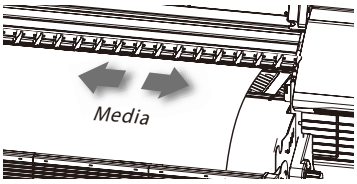
[Cause]
On the platen, the contacting point of the media left edge and the media edge guard is near the platen's vacuum hole.

Symptom B



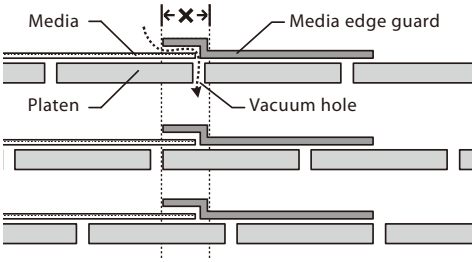
[Cause]
On the platen, the contacting point of the media right edge and the media edge guard is near the platen's vacuum hole.

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

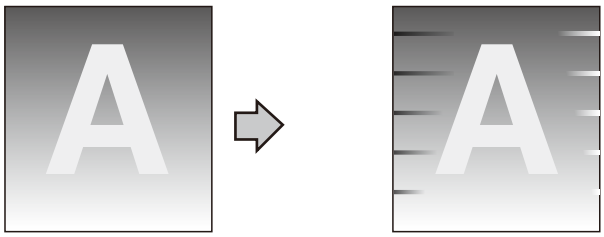


Example (1) of shifting the media position when a vertical banding appear

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

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

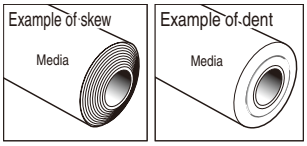
Basic image

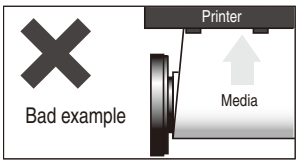


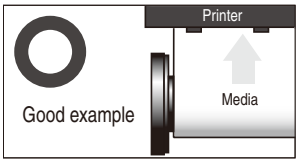
[Cause]
The media is skewed.

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

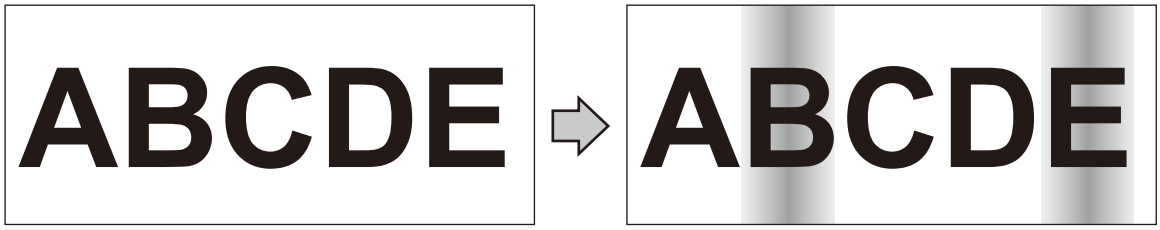
(5) Change the tension bar length.*1

(6) Use the proven media.

*1 Adjust the media advance adjustment value again.

Vertical bands appear on the printout.

Basic image



[Cause]
- The media advance adjustment value is not appropriate for the media used.
- The media is curled or wrinkled.

Cause	Solution
● The media advance adjustment value is not appropriate for the media used.	(1) Fine adjust the media advance adjustment value in the ± 0.3% range. * If the action in (1) did not solve the problem, execute the following. (2) Change the print mode. *1*2
● The media is curled or wrinkled.	If the media is curled or wrinkled, refer to The media is curled or wrinkled and execute the appropriate actions.

*1 Adjust the media advance adjustment value again.
*2 Note that the print speed differs depending on the mode selected.

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.
▼ *Perform the **NOZZLE PRINT***	
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.
▼ *Perform the **NOZZLE PRINT***	
Perform sheet mount cleaning	Clean the print heads surfaces with sheet mount cleaning (📖 ***Basic Operation Guide page 105***). (Generally perform sheet mount clean approximately once per month.)

Strong cleaning

1

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

2

Press the **Left** button.

3

Press the **OK** button.

4

Press the **Down** button.

5

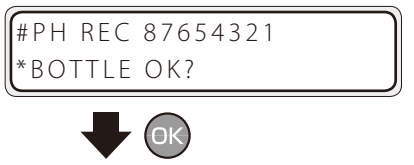
Press the **OK** button.

6

Press the **OK** button.

- When a specific length of media has been printed since the last cleaning operation, print heads cannot be selected and cleaned individually.

7



Press the **OK** button.

Check visually that the waste ink bottle is not full.

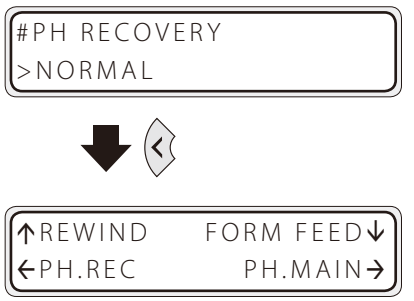
This value is counted down every 10 seconds.

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.

8



Press the **Left** button.

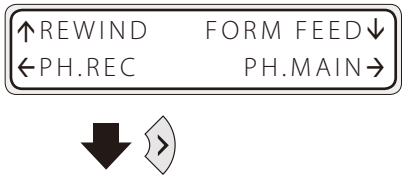
The display returns offline state (menu mode).

Fill the cap with ink

1

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

2



Press the **Right** button.

3

With the **Down** button scroll to **#WASH PRINTHEADS**.

4

Press the **OK** button.

5

Press the **OK** button.

Hold the Printer for 1 to 2 hours.

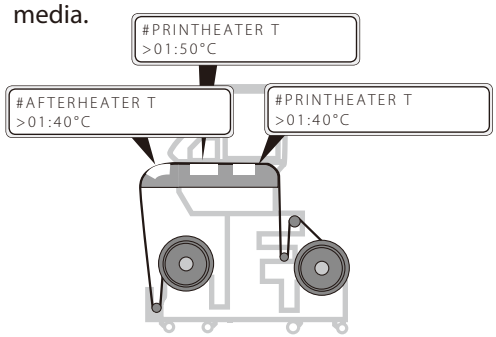
After the Printer was held for 1 to 2 hours, perform the normal cleaning.

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

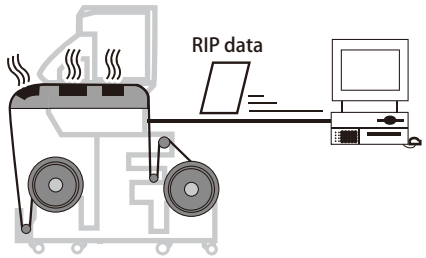
Procedure to set the heater temperature

(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.

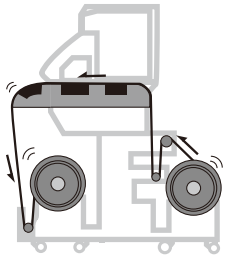
(2) **With receiving the RIP data, heating is started.**



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.

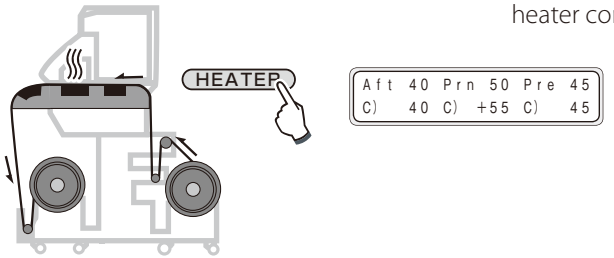
(3) **When the heater temperature increased almost to the setup temperature, the print operation is started.**



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.

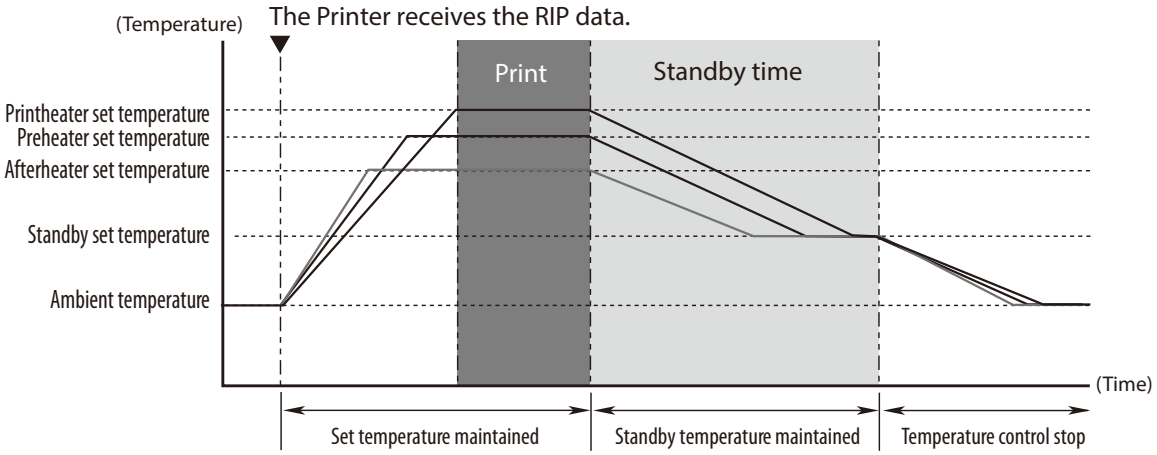
> - The heaters' maximum setup temperature is as follows.
> Afterheater: 70°C, Printheater: 55°C, Preheater: 55°C
> - Even after the print is completed, the temperature changed at this procedure remains as the heaters' setup temperature, until the media is installed again or the Printer is turned off.
> 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 ºC
  Printheater: 45 ºC
  Afterheater: 60 ºC
  However, the temperature above is lowered to the setup temperarure if the setup temperature is lower than the standby temperature above.

Display the heater control menu.

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

Button operation in the heater control menu

Right and **Left** buttons	Select the heater whose temperature is to be set.
Up and **Down** buttons	Set the heater temperature.
MENU button	Turns the heater ON or OFF.
OK button	When this button 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 button	Pressing this button for 1.5 seconds with the heater control menu displayed cancels the heater-on state forcibly specified by the **OK** button. (The heating control stops.)

Finish displaying the heater control menu

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

■ When the heater control menu display finishes automatically

HEATER DISPLAY END

If no button 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 button 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	50ºC	40ºC	45ºC	NORMAL, bidirectional
Matte vinyl	Matte	50ºC	40ºC	45ºC	NORMAL, bidirectional
Banner	Banner	50ºC	40ºC	45ºC	NORMAL, bidirectional

We recommend that the preheater, the printheater, and the afterheater be set to lower than 50ºC, 45ºC, and 60ºC respectively.

NOTE

- When the printheater temperature is set too high, the ink fusion on the media is improved, however media wrinkle or mat print mahy 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:
  preheater temperature 5°C higher, and
  afterheater temperature 5 to 10°C higher

than the printheater temperature, respectively.Bad temperature balance between the preheater/afterheater and the printheater may cause the media to wrinkle.

- Setting the printheater temperature to high may cause missing dots.

Set the heater preset temperature

1 ↑INK MEDIA REG↓ / ←MEDIA M.ADV→

Set the Printer to offline state and press the **Down** button.

2 #SELECT MEDIA / >01:PAPER *

With the **Down** button scroll to **#AFTERHEATER T**.

3 #AFTERHEATER T / >01:40°C

Press the **OK** button.

4 #AFTERHEATER T / *01:40°C

Enter the heater preset temperature.

Align the digit with the **Right** and **Left** buttons and set the value with the **Up** and **Down** buttons.

5 #AFTERHEATER T / *01:50°C

Press the **OK** button.

#AFTERHEATER T / >01:50°C

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.

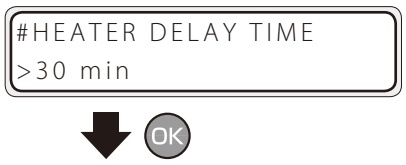
1

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

2

Press the **Right** button.

3



Press the **OK** button.

4

With the **Up** or **Down** button, select the time to maintain the heater's standby setup temperature.

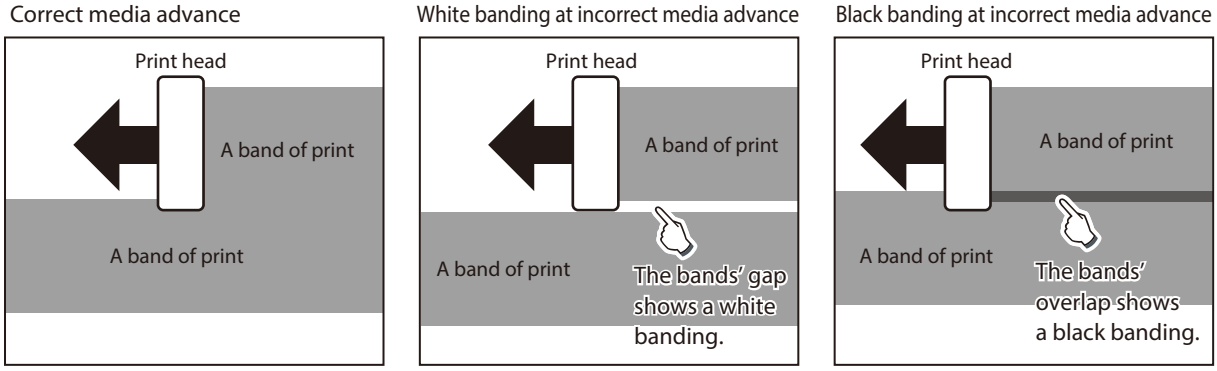
5

Press the **OK** button.

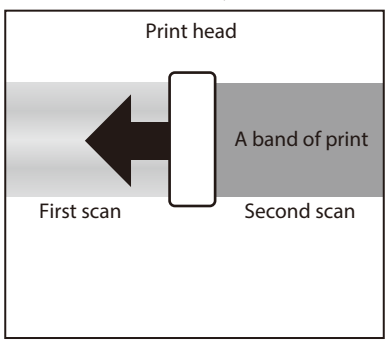
The operation was completed.

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.



The Smart Pass Technology is the function used to reduce this banding problem.
The smart pass setting can be selected and set from the RIP software only in **MAX SPEED** print mode.
In the other print modes, the smart pass setting is always set to **MEDIUM**.
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's unique algorithm so that the bands are not noticeable.



The Printer features two overlapping intensities (LOW, MEDIUM).
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.*

⚠CAUTION

- Always make print adjustment after installing a new media or changing the print mode.

Two types of adjustment are available: **Media advance adjustment** and **bidirectional print position adjustment**.
You can select **automatic print adjustment** and **manual print adjustment** for each type.

	Automatic print adjustment	Manual print adjustment
Media advance adjustment Adjust the media feeding	page 77	page 79
Bidirectional print position adjustment Adjust the ink output position during bidirectional printing	page 82	page 84

Two modes are available for print adjustment: **automatic print adjustment** and **manual print adjustment**.
With automatic print adjustment, the printer prints an adjustment pattern, checks the result with sensors, and sets an media advance adjustment value automatically.
With manual print adjustment, the printer prints an adjustment pattern, then the user selects visually an media advance adjustment value and sets the value on the printer.

How to differentiate between automatic and manual print adjustment

Automatic print adjustment is recommended for the following users.
- *Users who do not have much experience with the printer*
- *Users who find manual print adjustment difficult*
- *Users who want finish adjustment quickly*

* *Automatic print adjustment may not be available depending on the media type. If automatic print adjustment does not improve the print quality, use manual print adjustment.*

Manual print adjustment is recommended for the following users.
- *Users who needs the best print quality*

Cautions regarding automatic print adjustment

NOTE

- The printer cannot set a correct adjustment value through automatic print adjustment in the following cases. In such cases, improve the conditions or perform manual print adjustment.
  The automatic print adjustment determines mechanically the adjustment value, so absolute precision of the setting cannot be guaranteed.
  - The media used makes the check via sensors impossible.
    (Some types of generally used media may also not be compatible with automatic print adjustment.)
    <Examples>
    - Transparent or colored media
    - Media with a rough surface
    - Media with an extremely high or low degree of reflection
    - Media on which the pattern cannot be printed properly, such as when the ink tends to bleed
    - Media on which density differences between adjustment patterns are not visible
  - The media surface is soiled with dust, ink, finger marks, etc.
  - A gap tends to form between the platen and the media.
  - Lots of nozzles are clogged.
  - The media heater temperatures are not suitable.
  - The environmental luminosity is too strong.
- With automatic print adjustment, the adjustment value is determined through reading of printed patterns. However, the print results of the patterns may vary depending also on the media deterioration due to aging or the media lot.
  Therefore, it may not be possible to set a correct adjustment value even when using the same media, leading to a decrease in actual print quality.
  In such cases, use manual print adjustment.

Automatic print adjustment cannot be performed

Automatic adjustment is not possible if one of the following messages appears when automatic print adjustment is performed.
In such a case, perform manual adjustment or check the items and perform the measures described below.

MANUALLY ADJUST 1 ADV VAL/PRINT POS

Meaning	The amount of light received by the sensors did not reach the reference level.

Items to be checked	Corrective measures
Check that the sensors for automatic print adjustment are not covered with ink mist.	Clean the sensors for automatic print adjustment. (See **Clean the surface of the sensors for automatic print adjustment** on 📖 ***page 92*** of the ***Basic Operation Guide***.)
Check that the media is clean.	Feed the media until you reach a clean section.
Check that the media is not wrinkled.	Reinstall the media or feed the media until you reach a section without wrinkles.
Check that you are not using a media type with a light reflection rate too low.	Automatic print adjustment may not be possible with some media types. In such a case, use manual print adjustment.

MANUALLY ADJUST 2
ADV VAL/PRINT POS

Meaning	The amount of light received by the sensors exceeds the reference level.

Items to be checked	Corrective measures
Check that the media is not wrinkled.	Reinstall the media or feed the media until you reach a section without wrinkles.
Check that no external light reaches the sensors.	Block the external light or change the printer installation location.
Check that you are not using a media type with a light reflection rate too high.	Automatic print adjustment may not be possible with some media types. In such a case, use manual print adjustment.

MANUALLY ADJUST 3
ADV VAL/PRINT POS

Meaning	The adjustment values cannot be determined correctly.

Items to be checked	Corrective measures
Check that the media is not wrinkled.	Reinstall the media or feed the media until you reach a section without wrinkles.
Check that no nozzles are clogged.	Perform a print head cleaning.
Check that the media heater temperature is correct.	Change the media heater temperature so that the ink does not spread too much.
Check that you are not using a media type on which the pattern does not form correctly and from which the pattern cannot be read properly.	Automatic print adjustment may not be possible with some media types. In such a case, use manual print adjustment.

Procedures

Adjusting media feeding: Media advance adjustment

The media feeding operation can be adjusted depending on media characteristics, such as thickness, rigidness, and smoothness of the surface.
To maintain a high print quality, perform media advance adjustment and set the most suitable media advance adjustment value.

What is the timing to perform media advance adjustment?

When one of the following parameters has changed.
- *Change the print mode*
- *Change the pressure with the pressure control know.*
- *Print with/without the take-up reel unit*
- *Change the media type*
- *Change the media advance path*

When the media advance adjustment value is incorrect.
- *When the media advance adjustment value is incorrect, banding (horizontal bands) appears periodically on the printout.*

⚠CAUTION

- If the media advance mode is set to **BACK & FWD1**, set both automatic print adjustment and manual print adjustment to **FWD ONLY** before making the adjustment.
  (It may be impossible to obtain correct adjustment values if the adjustment is performed without changing these settings.)
  When the adjustment is complete, return the media advance mode to the previous settings.

Automatic print adjustment

See Cautions regarding automatic print adjustment (📖 ***page 75***)

<Workflow>

Step1 Select the print mode ▶ **Step2** Execute automatic print adjustment ▶ **Completed**

↓ If the print quality has not been improved

Perform manual print adjustment (📖 *page 79*)

1 Set more than 4 m of media.

Load the media.

Load the media in the same conditions as normal printing.

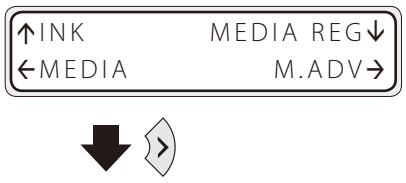
2

```
PRINTER READY
ROLL:1625/PAPER
```

ONLINE

Set the printer to the offline state.
(Press the **ONLINE** button.)

3



Press the **Right** button to enter the **M.ADV** menu.

4

Select **#MEDIA ADVANCE AUTO** with **Up** or **Down** button.

5

Press the **OK** button.

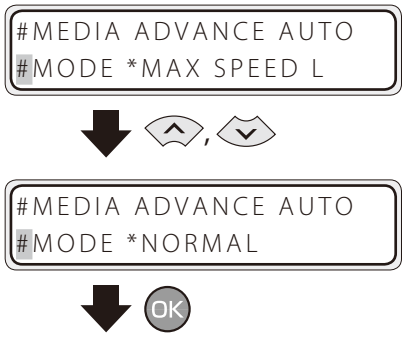
6

Select **MODE** with **Up** or **Down** button.

7

Press the **OK** button.

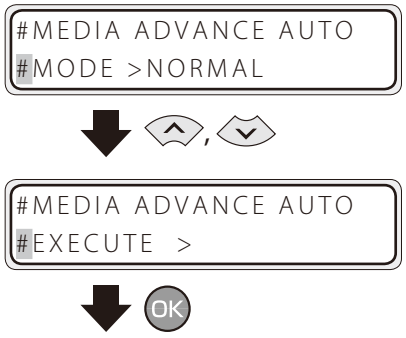
8



Select the print mode you want to adjust with the **Up** or **Down** button, and press the **OK** button.

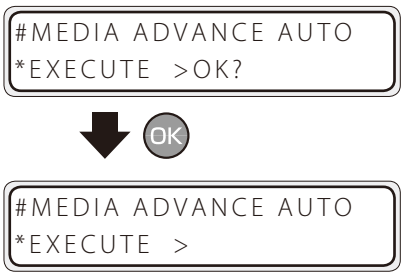
Print mode
MAX SPEED L
MAX SPEED M
H SPEED
NORMAL
HIGH QLTY
MAX QLTY

9



Select **EXECUTE** with the **Up** or **Down** button, and press the **OK** button.

10



Press the **OK** button to execute media advance value adjustment.

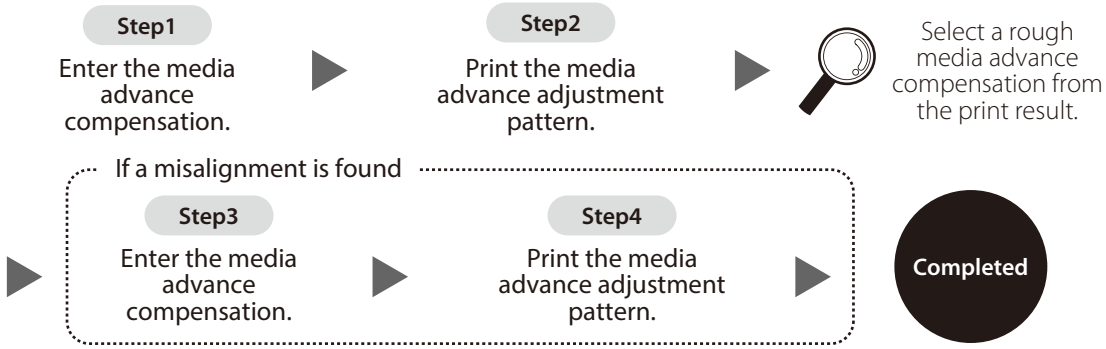
11

The Printer prints the media advance value adjustment pattern and then the pattern is read by the sensors.
To perform finer adjustment, execute **SING. ADV** or **MULTI ADV**.
See 🕮 ***page 80*** for details about how to execute **SING. ADV** and **MULTI ADV** adjustment.

Manual print adjustment

With manual print adjustment, the media advance adjustment value 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>



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 **Right** button.

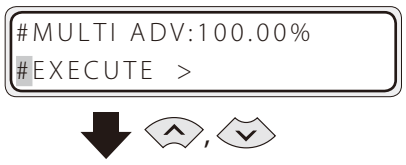
3

Display the **MULTI ADV** adjustment pattern with the **Up** or **Down** button.

4

With the **Right** button, select **#MULTI ADV** print pattern.

5



Select the print mode with the **Up**, **Down**, and **OK** buttons.

Select the print mode you normally use with the media for which you want to adjust the media advance compensation value.

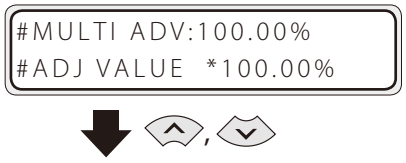
6

Select **EXECUTE** with the **Up** or **Down** button.

7

Press the **OK** button.

8



Set the media advance compensation with the **Up** or **Down** button when the value is displayed.

9

Press the **OK** button.

10

```
#MULTI ADV:100.20%
#ADJ VALUE  >OK?
```

OK

Confirm the media advance compensation value and press the **OK** button.

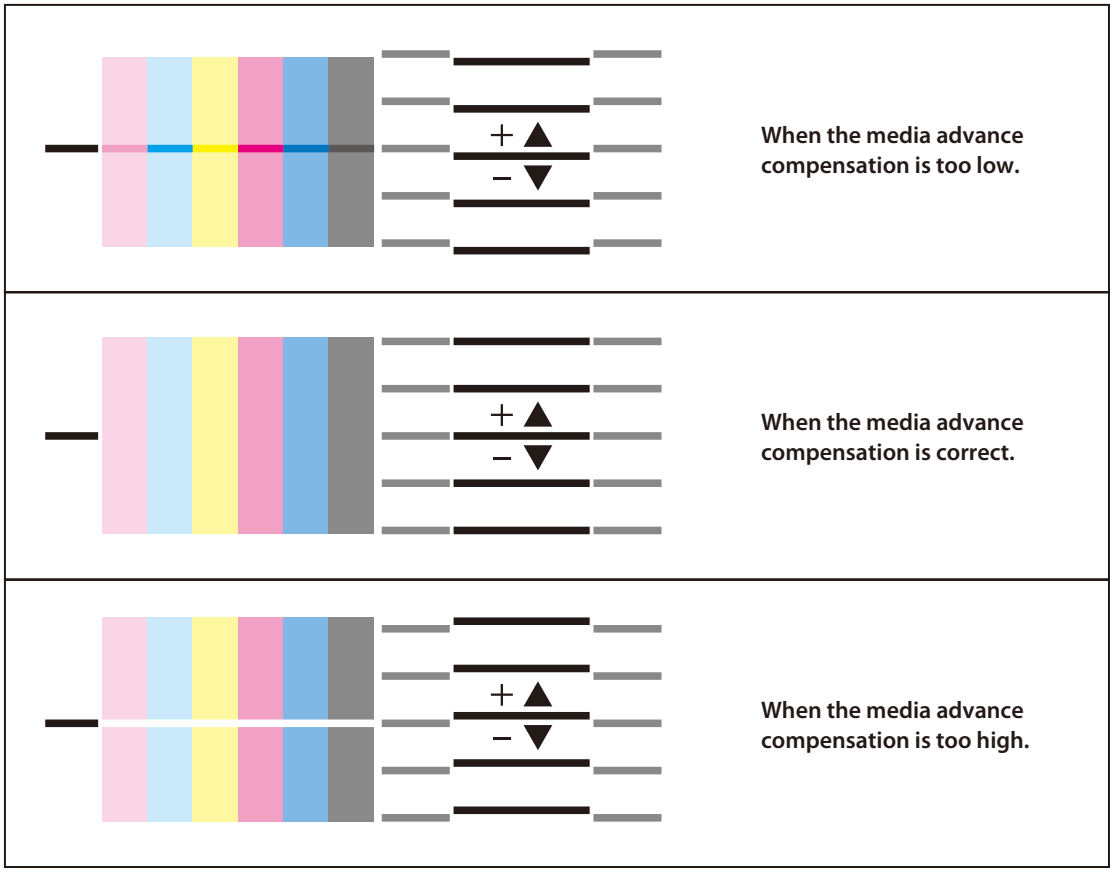
11

```
#MULTI ADV:100.20%
*EXECUTING
```

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 cause by a skewed media. Check that the media is not skewed.

Correcting ink output position: Bidirectional print position adjustment

During bidirectional printing, a slight difference may appear in the ink output position between the first scanning direction and the second scanning direction.
To maintain a high print quality, perform bidirectional print position adjustment and set the most suitable bidirectional print position adjustment value.

What is the timing to perform bidirectional print position adjustment?

When one of the following parameters has changed.
- *The media has been changed*
- *The print mode has been changed*
- *The carriage speed (normal, slow) has been changed*
- *The height of the print heads has been changed*

When the bidirectional print position adjustment value is incorrect.
- *When the bidirectional print position adjustment value is incorrect, grains may appear on the printout or the printout may be blurred.*

Automatic print adjustment

See Cautions regarding automatic print adjustment (📖 ***page 75***)

<Workflow>

Step1 Select a bidirectional print position adjustment pattern suitable for the print mode ▶ **Step2** Execute automatic print adjustment ▶ **Completed**

↓ If the print quality has not been improved

Perform manual print adjustment (📖 *page 84*)

1 Set more than 4 m of media.

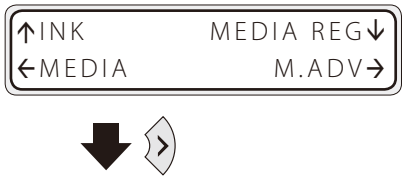
Load the media.

Load the media in the same conditions as normal printing.

2

Set the printer to the offline state.
(Press the **ONLINE** button.)

3



Press the **Right** button to enter the **M.ADV** menu.

4

Select **#AUTO BIDIR ADJUST** with **Up** or **Down** button.

5

Press the **OK** button.

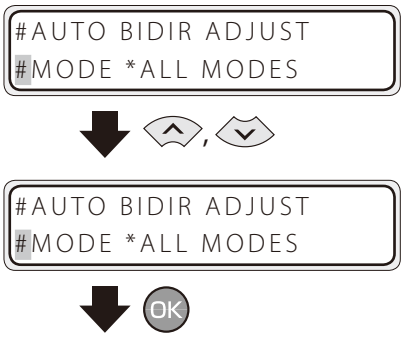
6

Select **MODE** with **Up** or **Down** button.

7

Press the **OK** button.

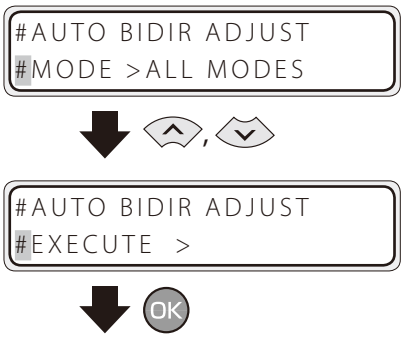
8



Select the print mode you want to adjust with the **Up** or **Down** button, and press the **OK** button.

Bidirectional print position adjustment pattern	Print mode with adjustment
ALL MODES	All print modes
1:MAX/H SPD	MAX SPEED, HIGH SPEED
2:NORMAL	NORMAL
3:HIGH QLTY	HIGH QUALITY
4:MAX QLTY	MAX QUALITY

9



Select **EXECUTE** with the **Up** or **Down** button, and press the **OK** button.

10

Press the **OK** button to execute bidirectional print position adjustment.

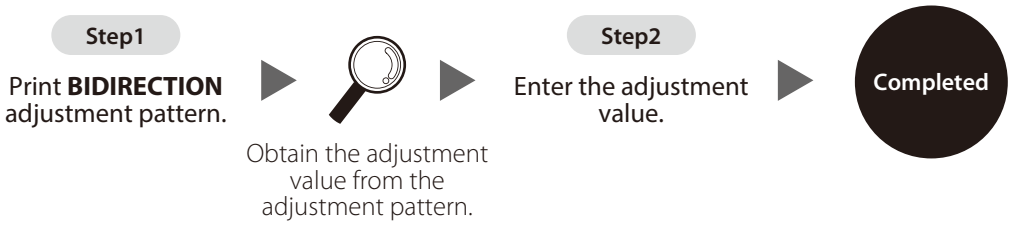
11

The printer prints the bidirectional print position adjustment pattern and then the pattern is read by the sensors.
To perform finer adjustment, select **MANUAL BIDIR ADJUST**. See *page 84* for details about how to execute **MANUAL BIDIR ADJUST** adjustment.

Manual print adjustment

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

<Workflow>



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

<Procedure>

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

1

Select **M.ADV** with the **Right** button.

2

Select **#MANUAL BIDIR ADJUST** with the **Up** or **Down** button.

3

Press the **Right** button.

4

Select **MODE** with the **Up** or **Down** button.

5

Press **OK** button to change the print pattern.

6

```
#MANUAL BIDIR ADJUST
#MODE *1:MAX/H SPD
```

Select the print pattern with the **Up** or **Down** button. Press the **OK** button to confirm.

Bidirectional print position adjustment pattern <print mode>

Mode	Print mode
1:MAX/H SPD	MAX SPEED, HIGH SPEED
2:NORMAL	NORMAL
3:HIGH QLTY	HIGH QUALITY
4:MAX QLTY	MAX QUALITY

7

```
#MANUAL BIDIR ADJUST
#MODE >2:NORMAL
```

Select **#EXECUTE** with the **Up** or **Down** button.

8

```
#MANUAL BIDIR ADJUST
#EXECUTE  >
```

Press the **OK** button.

9

```
#MANUAL BIDIR ADJUST
#EXECUTE  >OK?
```

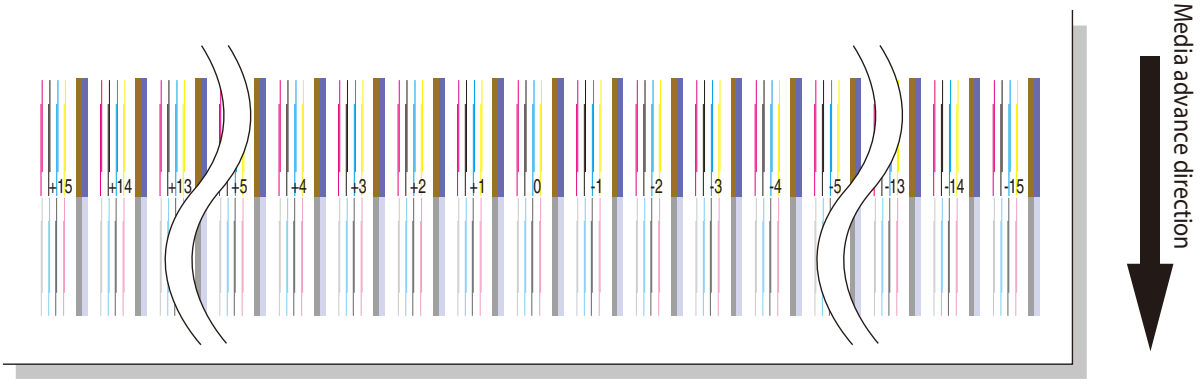
Press the **OK** button.

10

```
#MANUAL BIDIR ADJUST
*EXECUTING
```

The adjustment pattern is printed.

Print sample



STEP 2 Enter the adjustment value.

1

Select **ADJ L** or **ADJ R** with the **Up** or **Down** button.

2

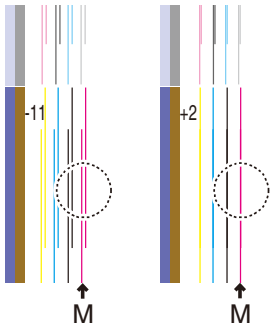
Select the print head to adjust with the **OK** button.

Here, **BIDIR ADJ2 L** for **M7** print head is adjusted as an example.

3

Select the digit with the **Right** or **Left** button, and set the value with the **Up** or **Down** button.

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

Press the **OK** button.

5

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 **DURING PRINT1**, 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 **DURING PRINT1** at **MEDIA REG** menu.

<Procedure>

STEP 1 Print **BACK ADJ PRINT** adjustment pattern.

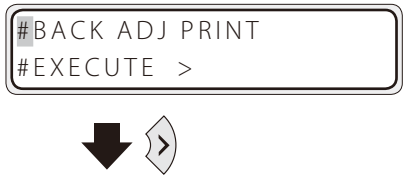
1

Set the Printer to offline state and press the **Right** button.

2

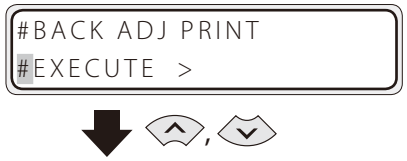
Select **BACK ADJ PRINT** with the **Up** or **Down** button.

3



Press the **Right** button.

4

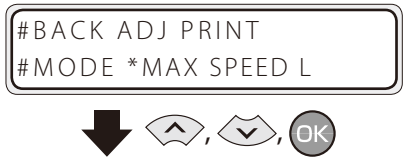


Select the **MODE** with the **Up** or **Down** button.

5

Press the **OK** button.

6



Select the print mode with the **Up** or **Down** button. Press the **OK** button to confirm.

7

Select **EXECUTE** with the **Up** or **Down** button.

8 #BACK ADJ PRINT
#EXECUTE >

OK

Press the **OK** button.

9 #BACK ADJ PRINT
#EXECUTE >OK?

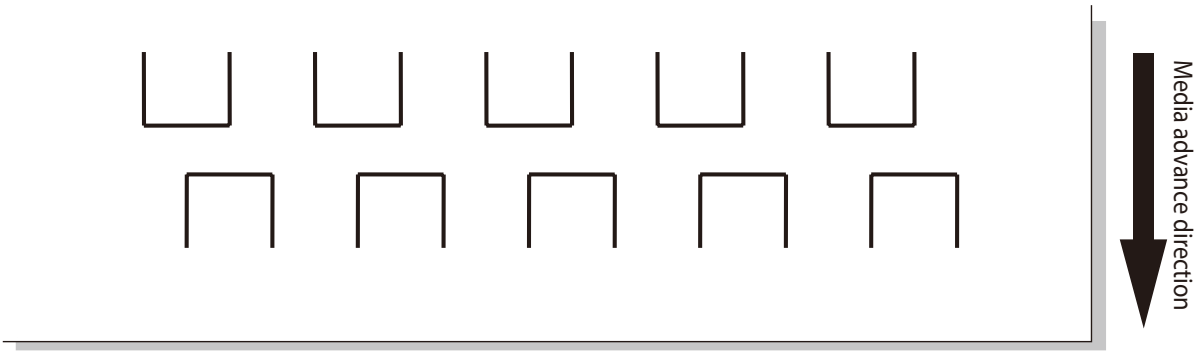
OK

Press the **OK** button.

10 #BACK ADJ PRINT
*EXECUTING

The adjustment pattern is printed.

Print sample



STEP 2 Enter the adjustment value.

1 #BACK ADJ PRINT
#EXECUTE >

Select **ADJ VALUE** with the **Up** or **Down** button.

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

OK

Press the **OK** button.

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

Select the digit with the **Right** or **Left** button, set the value with the **Up** or **Down** button, and press the **OK** button.

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

OK

Press the **OK** button.

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

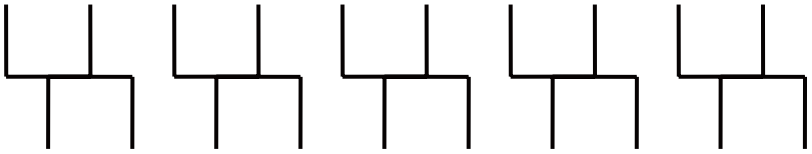
The procedure is complete.

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

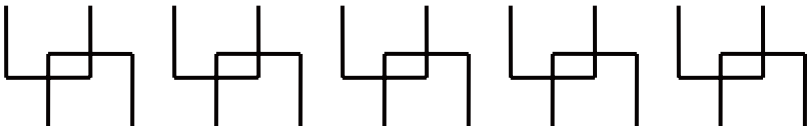
1 Perform STEP 1 and STEP 2 until the horizontal lines on the print pattern overlap.

Validate the media back feed adjustment pattern

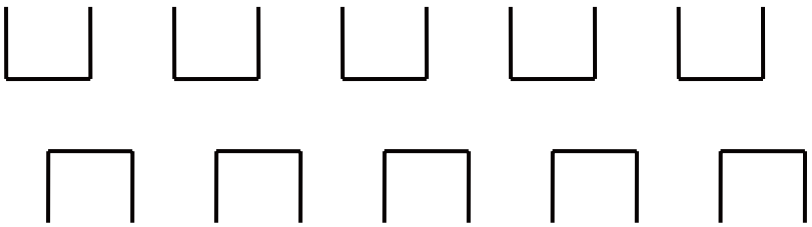
Determine the adjustment value so that the pattern's horizontal lines overlap.



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

Set the Printer to offline state and press the **MENU** button twice to display **ADJUST** menu.

2

Press the **Left** button.

3 #NOZZLE PRINT
#EXECUTE>

Select **#PRINT HEAD ADJUST** with the **Up** or **Down** button.

4 #PRINT HEAD ADJUST
#EXECUTE >

Press the **Right** button.

5 #PRINT HEAD ADJUST
#EXECUTE >

Press the **OK** button.

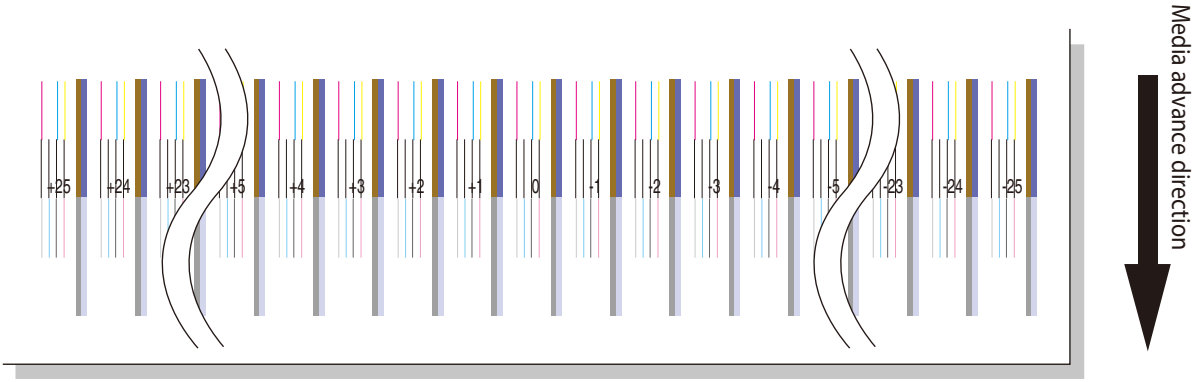
6 #PRINT HEAD ADJUST
#EXECUTE >OK?

Press the **OK** button.

7 #PRINT HEAD ADJUST
*EXECUTING

The print head position adjustment pattern is printed.

Print sample



STEP 2 Enter the adjustment value.

Enter the head position adjustment value.

1 #PRINT HEAD ADJUST
#EXECUTE >

Select the head color with the **Up** or **Down** button.

2 #PRINT HEAD ADJUST
#POS ADJ Lc6>+00

Select the print head to adjust with the **OK** button.

Here, the Lc6 print head is adjusted as an example.

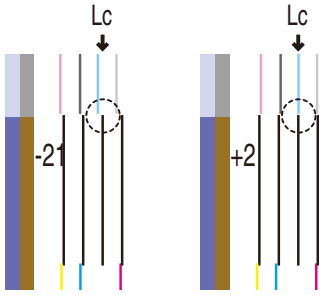
3

```
#PRINT HEAD ADJUST
#POS ADJ Lc6 *+00
```

Select the digit with the **Right** or **Left** button, and set the value with the **Up** or **Down** button.

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 Lc6 print head, the two lines misalign at -21 while they overlap at +2. So enter +2 for the adjustment value.

```
#PH TO PH VAL
#Lc6      *+02
```



4

```
#PRINT HEAD ADJUST
#POS ADJ Lc6 *+02
```

OK

Press the **OK** button.

5

```
#PRINT HEAD ADJUST
#POS ADJ Lc6>+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** button.

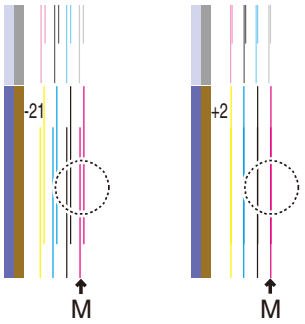
Here, the M7 print head is adjusted as an example.

7

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

Select the digit with the **Right** or **Left** button, and set the value with the **Up** or **Down** button.

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

Press the **OK** button.

9

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

Asjust 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.

1

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

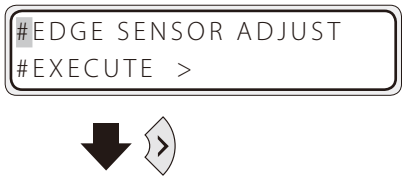
2

Press the **Left** button.

3

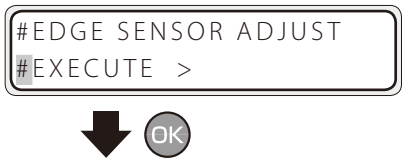
Select **EDGE SENSOR ADJUST** with the **Up** or **Down** button.

4



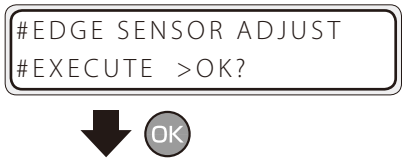
Press the **Right** button.

5



Press the **OK** button.

6

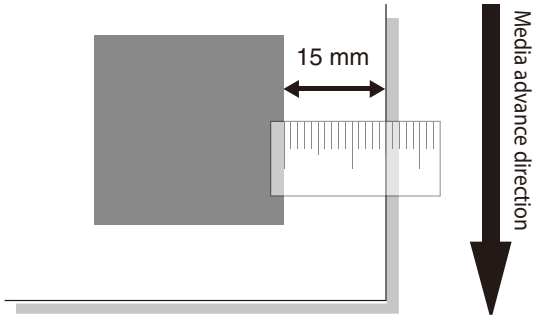


Press the **OK** button.

7

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 an difference between the measured margin and the value (15 mm) shown in the specifications.

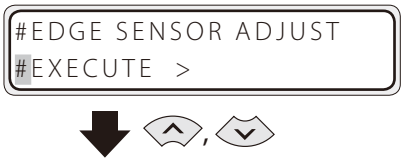
If the difference is 0 mm, complate this procedure.

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

To obtain the correction value:

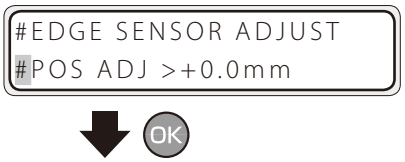
Obtain the adjustment value by measuring the margin setting the reference value to 15 mm.
<Example>
The margin is **14 mm**: The adjustment value is **-1.0 mm**.
The margin is **16 mm**: The adjustment value is **+1.0 mm**.

9



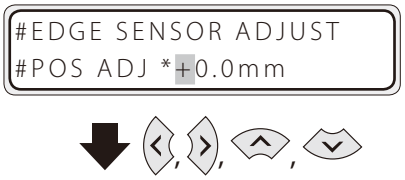
Select **POS ADJ** with the **Up** or **Down** button.

10



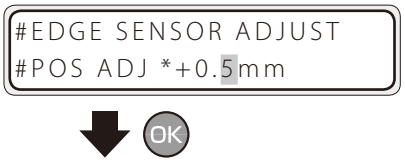
Press the **OK** button.

11



Select the digit with the **Right** or **Left** button, set the value with the **Up** or **Down** button, and press the **OK** button.

12

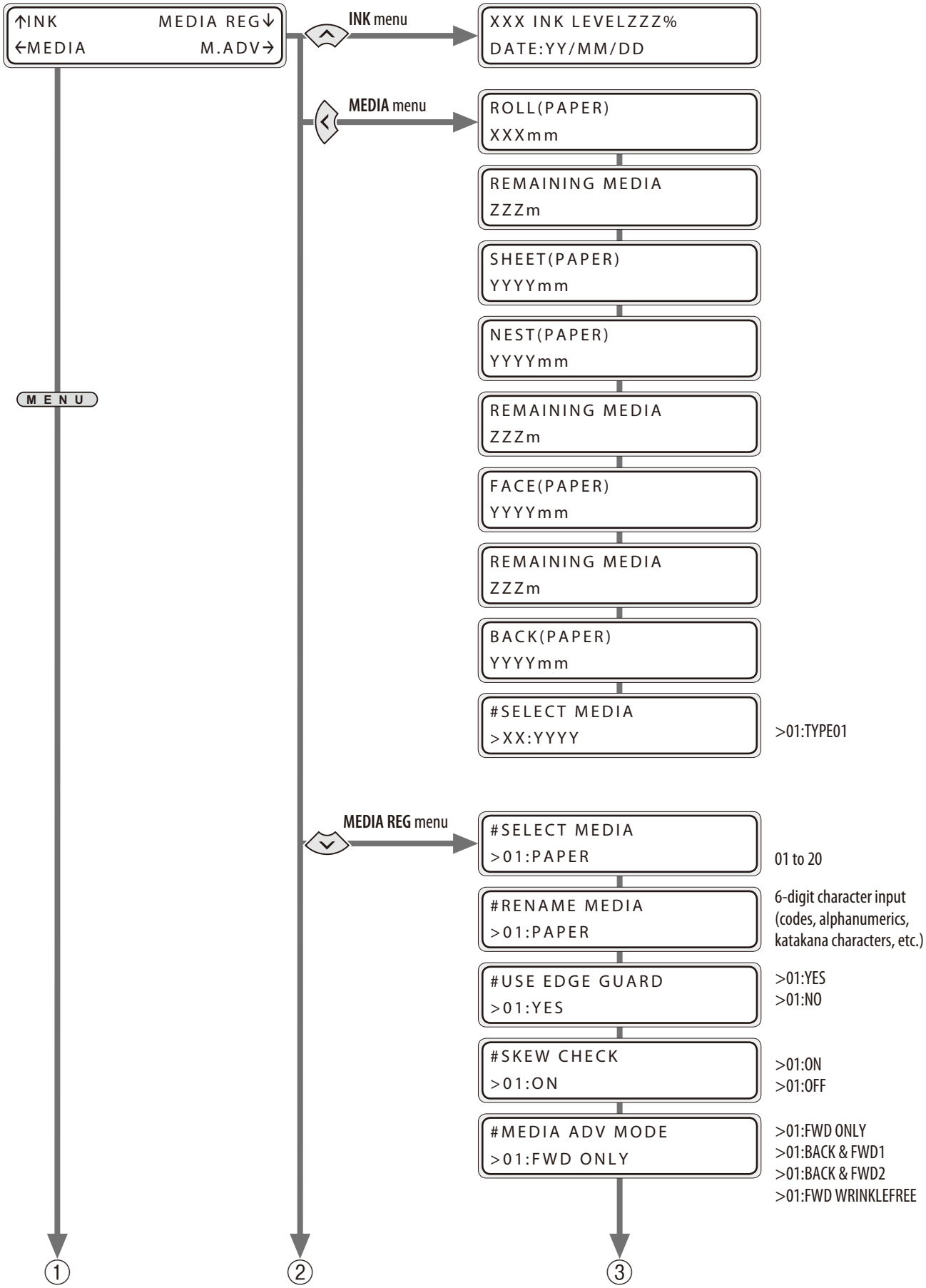


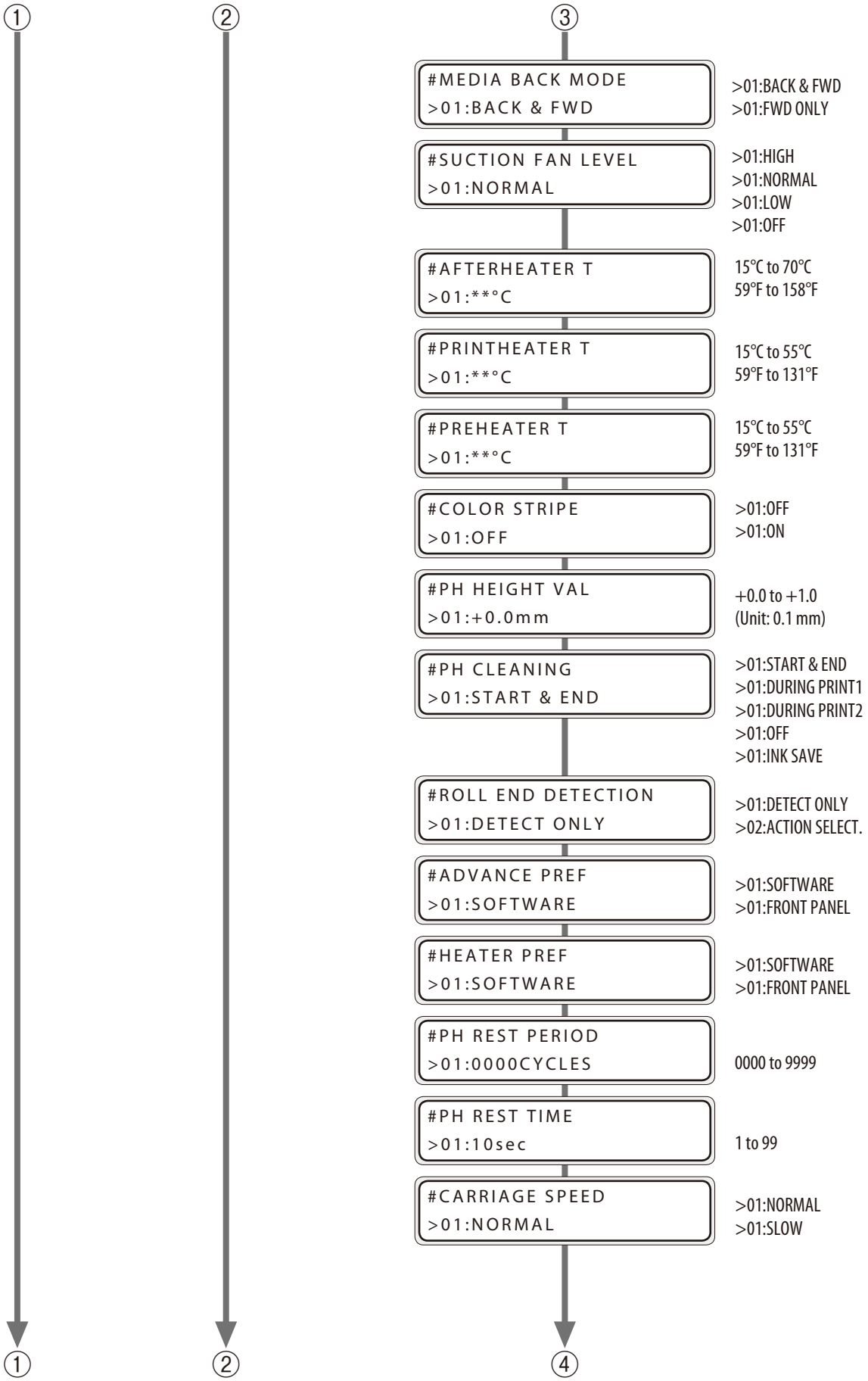
Press the **OK** button.

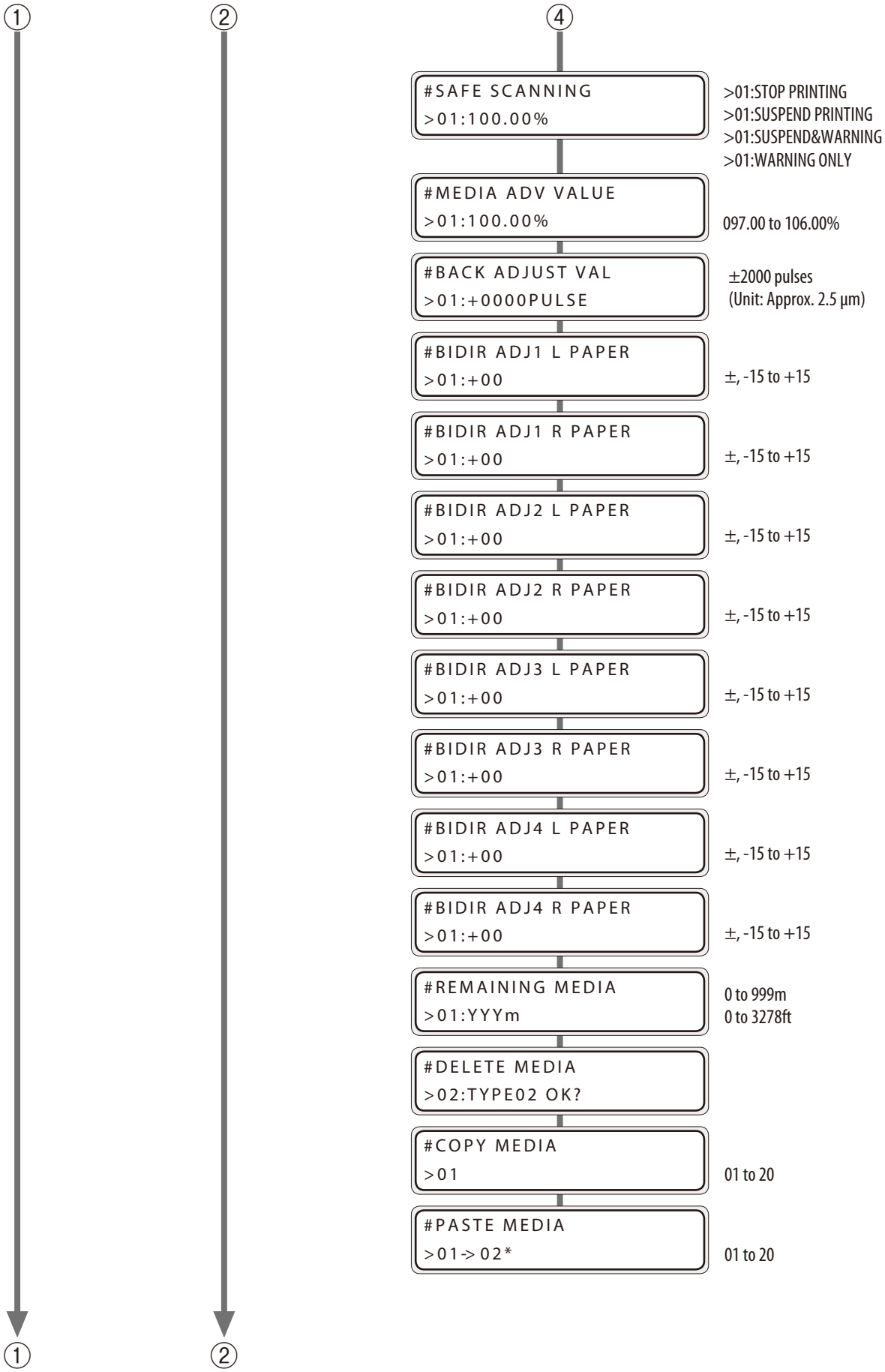
13

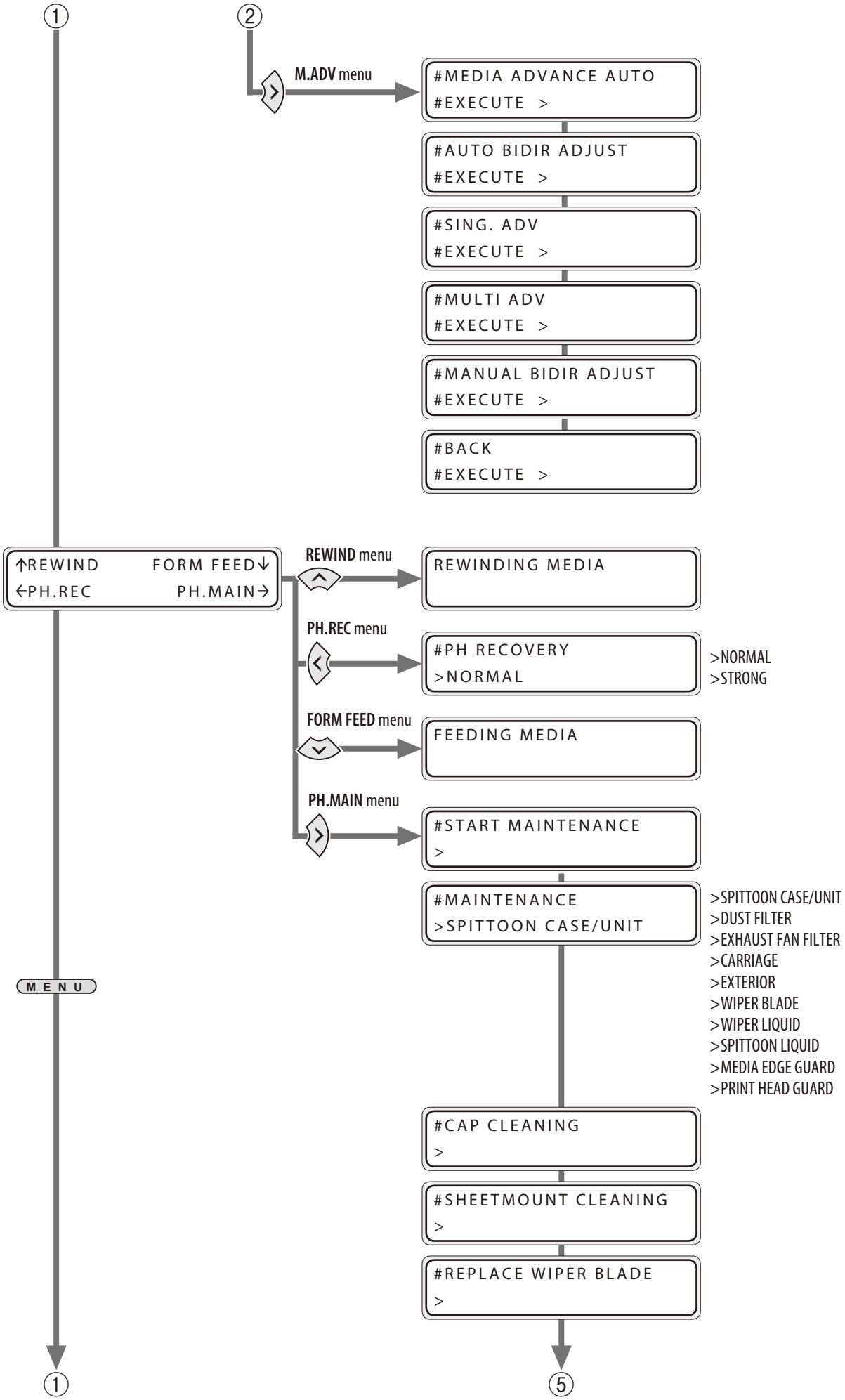
The adjustment is complete.

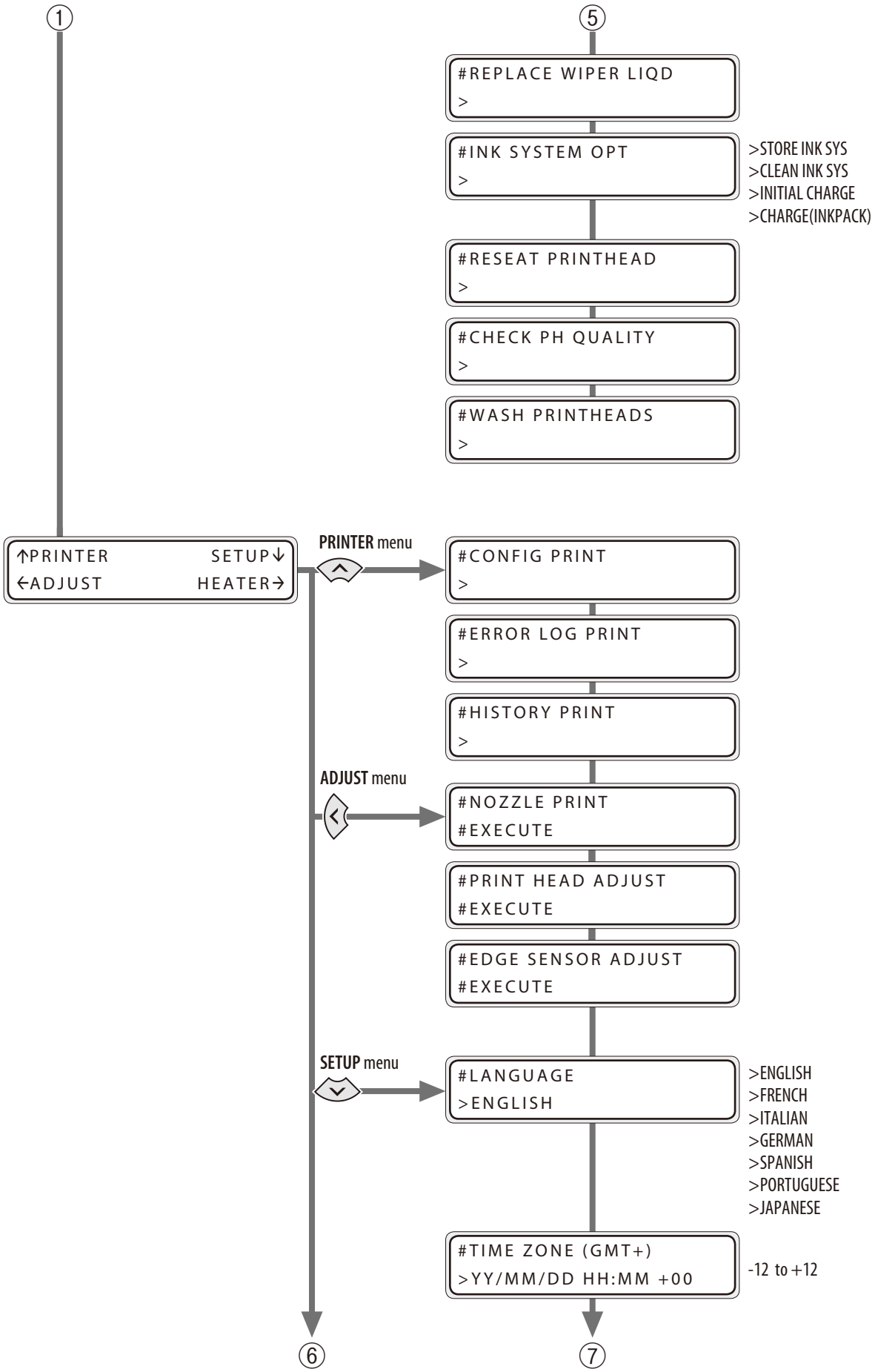
Menu tree

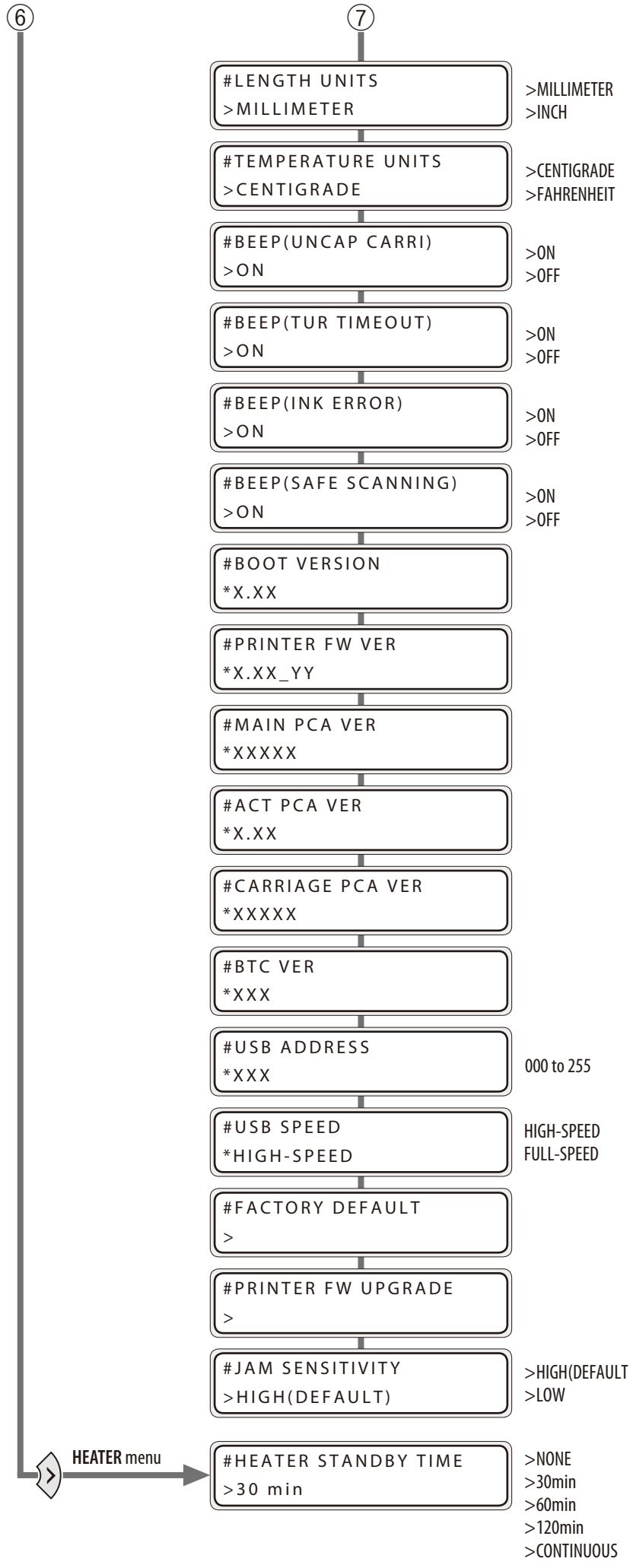

↑INK MEDIA REG↓
←MEDIA M.ADV→
MENU
INK menu
XXX INK LEVELZZZ%
DATE:YY/MM/DD
MEDIA menu
ROLL(PAPER)
XXXmm
REMAINING MEDIA
ZZZm
SHEET(PAPER)
YYYYmm
NEST(PAPER)
YYYYmm
REMAINING MEDIA
ZZZm
FACE(PAPER)
YYYYmm
REMAINING MEDIA
ZZZm
BACK(PAPER)
YYYYmm
#SELECT MEDIA
>XX:YYYY
>01:TYPE01
MEDIA REG menu
#SELECT MEDIA
>01:PAPER
01 to 20
#RENAME MEDIA
>01:PAPER
6-digit character input
(codes, alphanumerics,
katakana characters, etc.)
#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
①
②
③


①
②
③
#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:OFF
>01:OFF
>01:ON
#PH HEIGHT VAL
>01:+0.0mm
+0.0 to +1.0
(Unit: 0.1 mm)
#PH CLEANING
>01:START & END
>01:START & END
>01:DURING PRINT1
>01:DURING PRINT2
>01:OFF
>01:INK SAVE
#ROLL END DETECTION
>01:DETECT ONLY
>01:DETECT ONLY
>02:ACTION SELECT.
#ADVANCE 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
#CARRIAGE SPEED
>01:NORMAL
>01:NORMAL
>01:SLOW
①
②
④


①
②
④
#SAFE SCANNING
>01:100.00%
>01:STOP PRINTING
>01:SUSPEND PRINTING
>01:SUSPEND&WARNING
>01:WARNING ONLY
#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
①
②


①
②
M.ADV menu
#MEDIA ADVANCE AUTO
#EXECUTE >
#AUTO BIDIR ADJUST
#EXECUTE >
#SING. ADV
#EXECUTE >
#MULTI ADV
#EXECUTE >
#MANUAL BIDIR ADJUST
#EXECUTE >
#BACK
#EXECUTE >
↑REWIND FORM FEED↓
←PH.REC PH.MAIN→
REWIND menu
REWINDING MEDIA
PH.REC menu
#PH RECOVERY
>NORMAL
>NORMAL
>STRONG
FORM FEED menu
FEEDING MEDIA
PH.MAIN menu
#START MAINTENANCE
>
#MAINTENANCE
>SPITTOON CASE/UNIT
>SPITTOON CASE/UNIT
>DUST FILTER
>EXHAUST FAN FILTER
>CARRIAGE
>EXTERIOR
>WIPER BLADE
>WIPER LIQUID
>SPITTOON LIQUID
>MEDIA EDGE GUARD
>PRINT HEAD GUARD
MENU
#CAP CLEANING
>
#SHEETMOUNT CLEANING
>
#REPLACE WIPER BLADE
>
①
⑤


①
⑤
#REPLACE WIPER LIQD
>
#INK SYSTEM OPT
>
>STORE INK SYS
>CLEAN INK SYS
>INITIAL CHARGE
>CHARGE(INKPACK)
#RESEAT PRINTHEAD
>
#CHECK PH QUALITY
>
#WASH PRINTHEADS
>
↑PRINTER SETUP↓
←ADJUST HEATER→
PRINTER menu
#CONFIG PRINT
>
#ERROR LOG PRINT
>
#HISTORY PRINT
>
ADJUST menu
#NOZZLE PRINT
#EXECUTE
#PRINT HEAD ADJUST
#EXECUTE
#EDGE SENSOR ADJUST
#EXECUTE
SETUP menu
#LANGUAGE
>ENGLISH
>ENGLISH
>FRENCH
>ITALIAN
>GERMAN
>SPANISH
>PORTUGUESE
>JAPANESE
#TIME ZONE (GMT+)
>YY/MM/DD HH:MM +00
-12 to +12
⑥
⑦


⑥
⑦
#LENGTH UNITS
>MILLIMETER
>MILLIMETER
>INCH
#TEMPERATURE UNITS
>CENTIGRADE
>CENTIGRADE
>FAHRENHEIT
#BEEP(UNCAP CARRI)
>ON
>ON
>OFF
#BEEP(TUR TIMEOUT)
>ON
>ON
>OFF
#BEEP(INK ERROR)
>ON
>ON
>OFF
#BEEP(SAFE SCANNING)
>ON
>ON
>OFF
#BOOT VERSION
*X.XX
#PRINTER FW VER
*X.XX_YY
#MAIN PCA VER
*XXXXX
#ACT PCA VER
*X.XX
#CARRIAGE PCA VER
*XXXXX
#BTC VER
*XXX
#USB ADDRESS
*XXX
000 to 255
#USB SPEED
*HIGH-SPEED
HIGH-SPEED
FULL-SPEED
#FACTORY DEFAULT
>
#PRINTER FW UPGRADE
>
#JAM SENSITIVITY
>HIGH(DEFAULT)
>HIGH(DEFAULT
>LOW
HEATER menu
#HEATER STANDBY TIME
>30 min
>NONE
>30min
>60min
>120min
>CONTINUOUS

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