VersaUV

Roland

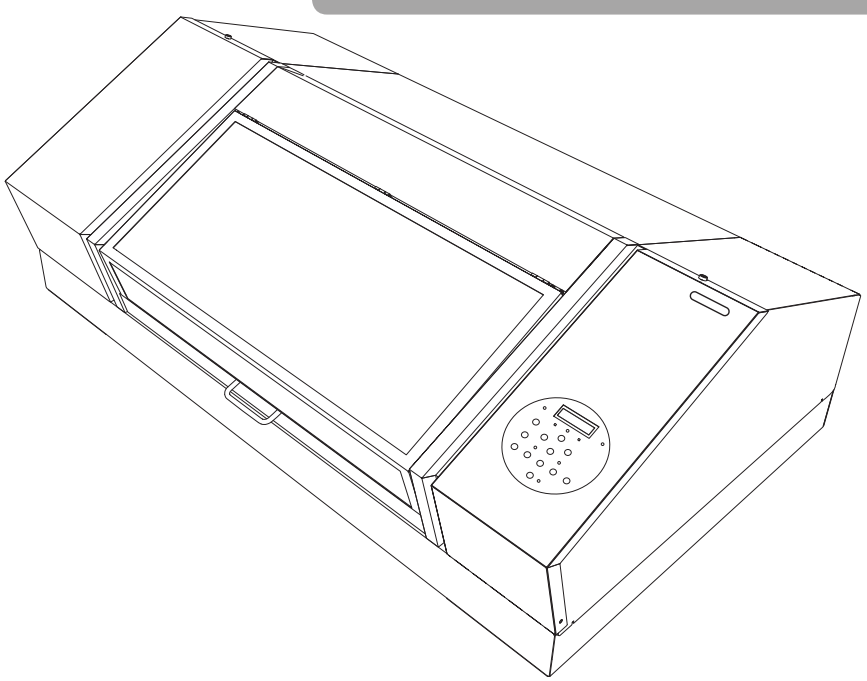
LEF-300

Master Guide

Chapter 1
Fully Utilizing the Machine.....3

Chapter 2
Maintenance.....41

Chapter 3
Appendix.....73



Roland DG Corporation

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- To ensure correct and safe usage with a full understanding of this product's performance, please be sure to read through this manual completely and store it in a safe location.
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- The contents of this manual and the specifications of this product are subject to change without notice.
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This system (including the housing and safety device) is a Class 1 laser product.

Complies with IEC 60825-1 Edition 2.0 (2007-03).

Complies with FDA performance standards for laser products except for deviations pursuant to Laser notice No.50 dated June 24, 2007.

Caution - Use of controls or adjustments or performance of procedures other than those specified herein may result in radiation exposure.

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Contents

Contents 1

Chapter 1 Fully Utilizing the Machine 3

Important Points to Check before Printing 4
- Three Important Points (Measures for UV Reflected Light and Ink Mist) 4

Saving Frequently Used Media Sizes (Preset Function) 6
- Saving the Current Media Setup with a Different Name 6
- Load a Preset and Print 7
- Make Fine Adjustments of Preset Settings and Print 8

Performing Advanced Setup of the Media 9
- Media Suction Function Setting 9
- Setting the Height of the Media Manually 9
- Expanding the Distance between the Media and the Print Heads 11
- Setting the Print Area for Each Setup of Media 12
- Changing the Print Area 13
- Setting the Print Area Using the Lower Right of the Media as the Base Position 14
- Check the Print Area 19

Optimizing the Printing Quality 20
- Correcting for Misalignment in Bidirectional Printing (Simple) 20
- Correcting for Misalignment in Bidirectional Printing More Precisely (Detailed) 21
- Preventing Soiling and Dot Drop-Out by Cleaning during Printing 24
- Reducing Print Quality Degradation from Ink Mist (Ink Spatter) 25
- Re-Curing Ink 26
- Primer Cleaning 26

Fully Utilizing Convenient Functions 28
- Continuing Printing Even If Media Comes into Contact with the Head Gap Sensor 28
- Determining the Maximum Value (Threshold) for Automatic Height Adjustment 29
- Continuously Outputting Print Data 30
- Reducing Output Time 32

Configuring the Machine's Settings 33
- Setting the Menu Language and the Units of Measurement 33
- Sounding a Buzzer to Notify the User of the End of Printing 34
- Setting the Activation Interval for Sleep Mode (Power-saving Feature) 35
- Deactivating the Sleep Mode (Power-saving Feature) 36
- Returning All Settings to Their Factory Default Values 37
- Determining What Happens When Ink Runs Out 38
- Viewing Information about the System of This Machine 39
- Turning Off the Status Light 40

Connecting External Devices 41
- Connecting the Signal Tower 41
- Using Expansion Terminal B to Connect an External Device 42

Chapter 2 Maintenance 45

About Maintenance 46
- Instructions for Maintenance 46
- Automatic Maintenance Function and Notes 46
- Alarm Function 46

Maintenance Required before and after Printing 47
- Maintenance Required before Printing 47
- Maintenance Required after Printing 47

Periodic Maintenance 48
- Cleaning 48
- Disposing of Discharged Fluid 50

When Normal Cleaning Is Not Effective 53
- Medium and Powerful Cleaning 53

Maintenance That Must Be Performed Once a Month or More 56
- Manual Cleaning 56

Checking for Remaining Ink and Replacing Ink Cartridges 61
- Checking for Remaining Ink 61
- How to Replace Ink Cartridges 62

When the White Ink Concentration Is Low 64
- Restoring the White Ink Concentration 64

When Dot Drop-Out Cannot Be Cleared Up for White Ink, Gloss Ink, or Primer 65
- Cleaning All Print Heads 67

Replacing Consumable Parts 70

Replacing the Wipers 70
Replacing the Filter 73

When Moving the Unit 77
Procedure from Preparing to Move to Reinstallation. 77

Chapter 3 Appendix 79

Menu List 80
Main Menu 80
Function Menu 83
Language and Unit Menu 83

Read This Section Whenever You Face a Problem (FAQ) 84
Printer Does Not Run 84
Attractive Printing Is Impossible. 86
The Print Heads Do Not Move 88

Handling Messages and Error Messages. 89
A Message Appears. 89
An Error Message Appears 91

Main Specifications 93
Dimensional Drawings. 93
Locations of the Power Rating and Serial Number Label 94
Specifications and Diagrams for the External Expansion Terminal 94
Specification Table 97

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Chapter 1
Fully Utilizing the Machine

Important Points to Check before Printing 4

Three Important Points (Measures for UV Reflected Light and Ink Mist) 4

Saving Frequently Used Media Sizes (Preset Function) 6

Saving the Current Media Setup with a Different Name 6

Load a Preset and Print 7

Make Fine Adjustments of Preset Settings and Print 8

Performing Advanced Setup of the Media 9

Media Suction Function Setting 9

Setting the Height of the Media Manually 9

Expanding the Distance between the Media and the Print Heads 11

Setting the Print Area for Each Setup of Media 12

Changing the Print Area 13

Setting the Print Area Using the Lower Right of the Media as the Base Position 14

Check the Print Area 19

Optimizing the Printing Quality 20

Correcting for Misalignment in Bidirectional Printing (Simple) 20

Correcting for Misalignment in Bidirectional Printing More Precisely (Detailed) 21

Preventing Soiling and Dot Drop-Out by Cleaning during Printing 24

Reducing Print Quality Degradation from Ink Mist (Ink Spatter) 25

Re-Curing Ink 26

Primer Cleaning 26

Fully Utilizing Convenient Functions 28

Continuing Printing Even If Media Comes into Contact with the Head Gap Sensor 28

Determining the Maximum Value (Threshold) for Automatic Height Adjustment 29

Continuously Outputting Print Data 30

Reducing Output Time 32

Configuring the Machine's Settings 33

Setting the Menu Language and the Units of Measurement 33

Sounding a Buzzer to Notify the User of the End of Printing 34

Setting the Activation Interval for Sleep Mode (Power-saving Feature) 35

Deactivating the Sleep Mode (Power-saving Feature) 36

Returning All Settings to Their Factory Default Values 37

Determining What Happens When Ink Runs Out 38

Viewing Information about the System of This Machine 39

Turning Off the Status Light 40

Connecting External Devices 41

Connecting the Signal Tower 41

Using Expansion Terminal B to Connect an External Device 42

Important Points to Check before Printing

Three Important Points (Measures for UV Reflected Light and Ink Mist)

On this machine, ink affixed on the surface of the print heads might be cured by the reflection of the UV-LED lamp light and by ink mist (ink splashing during printing). If ink affixed on the surface of the print heads is cured, dot drop-outs may occur. Continued use of the product in this state may cause a failure that requires the replacement of the print heads.

While daily cleaning is important to prevent dot drop-outs, there are also three important points to check before printing. Be sure to check the three points given below.

1. You cannot use an object that easily reflects light as the object to be printed on (the media).

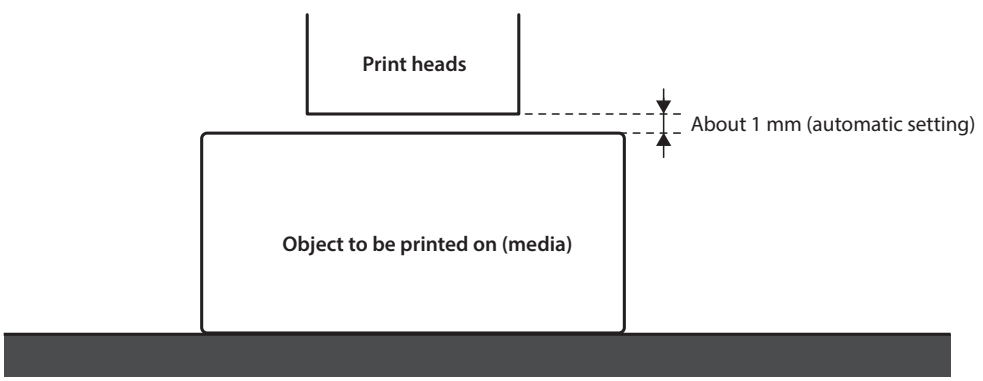
Materials that are likely to reflect the UV-LED lamp light, such as mirrors and stainless steel, promote the curing of the surface of the print heads and therefore cannot be used as the object to be printed on (the media).

2. Make the distance between the surface of the object to be printed on (the media) and the print heads as short as possible.

As the distance between the surface of the object to be printed on (the media) and the print heads increases, the likelihood of ink mist increases. When setting the height of the media manually, make the distance as short as possible. When the height is automatically set, the distance is about 1 mm (39.4 mil).

☞ "2. Setting the Height of the Media Automatically" (First Step Guide)

☞ “Setting the Height of the Media Manually” (p. 9)



3. A jig might be required depending on the size and shape of the object to be printed on (the media).

Depending on the size and shape of the object to be printed on (the media), the distance between the object to be printed on (the media) and the print heads may increase, which will increase the likelihood of ink mist occurring. In the direction of print heads movement, the object to be printed on (the media) or a jig must be present in the area 40 mm (1.6 in.) to both the right and left of the portion (width) of the data to be printed. In this situation, the difference in height between the surfaces of the object to be printed on (the media) and the jig must be less than 2 mm (78.7 mil).

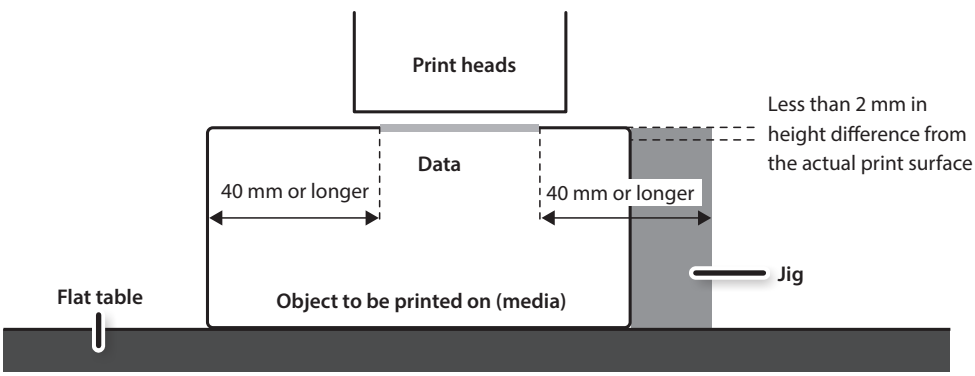
☞ "2. Setting the Height of the Media Automatically" (First Step Guide)

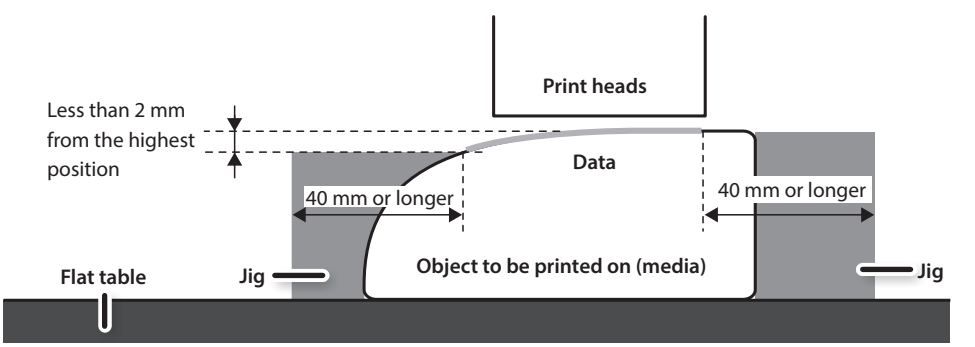
☞ "Setting the Height of the Media Manually" (p. 9)

☞ "Height Settings When the Print Surface is Uneven" (p. 10)

When a jig is required:

- The object to be printed on (the media) is not large enough to spread over the area 40 mm to both the right and left of the portion (width) of the data to be printed.
- The variation in height of the surface of the object to be printed on (the media) is 2 mm or more.





There are conditions for the height settings when the surface of the object to be printed on (the media) has a height difference. For more information, refer to "Height Settings When the Print Surface is Uneven" (p. 10).

Saving Frequently Used Media Sizes (Preset Function)

You can save media settings in presets. If you save the settings of frequently used media, you can load them instantly and shorten the time required for configuring settings.

Saving the Current Media Setup with a Different Name

The following settings configured in the media setup can be saved as a preset. You can save up to 40 different presets.

- Height position of the media
- Print area (including the print-start location)

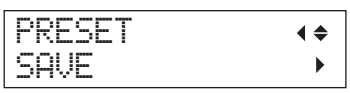
You can assign a name to each preset. Using media names for these presets may aid recognition.

Procedure

1. **Set up the media (height position, print area), and then check that [SETUP] is lit.**

2. **Press [MENU].**

3. **Press [►], then [▼].**



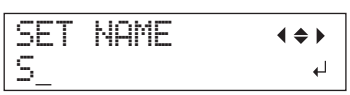
4. **Press [►].**

5. **Press [▲] or [▼] to select one option from NAME1 to NAME40.**

6. **Press [ENTER].**

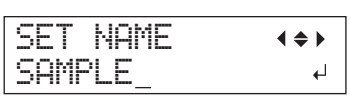
The current "height position of the media" and "print area" settings are saved.

7. **Press [▲] or [▼] to enter a character.**



8. **When you have selected the character you want to enter, press [►].**

The characters you can enter are "A" through "Z," "0" through "9," and the "-" character. You can enter up to 15 characters, including spaces.



9. **Press [◄] or [►] to enter the next character.**

Enter the following characters in the same way.

10. **When you have finished entering text, press [ENTER].**

11. **Press [MENU], then [◄] to go back to the original screen.**

Load a Preset and Print

Load the settings saved in a preset and perform printing.

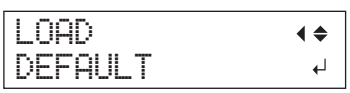
NOTE

Be sure to hold the handle of the front cover and open and close it gently.

Procedure

1. **Press [MENU].**

2. **Press [►] twice.**



3. **Press [▲] or [▼] to select the name of the preset (settings) you want to load.**

Select one of the 40 types of presets (when no names have been assigned, select from NAME1 to NAME40) or DEFAULT (DEFAULT is the factory defaults for each setting).

4. **Press [ENTER].**

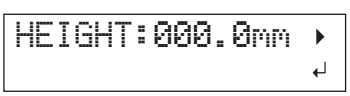
Media setup is canceled ([SETUP] turns off).

5. **Open the front cover, and then secure the media in place.**

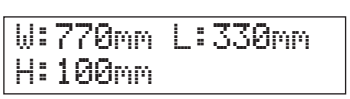
☞ "1. Loading Media (Media Setup)" (First Step Guide)

6. **Press [SETUP].**

The loaded preset settings are displayed.



7. **Press [ENTER].**



MEMO

Every time you set up the media, you can set the print area (base position and range). For details, refer to “Setting the Print Area for Each Setup of Media” (p. 12).

8. **Start printing.**

Printing is performed with the loaded preset settings.

Make Fine Adjustments of Preset Settings and Print

You can change part of a preset and then perform printing.

For instance, you can change the print area only without changing the media height setting.

Procedure

1. **Load a preset and fix the position of the media by following steps 1 to 7 of “Load a Preset and Print” (p. 7).**

2. **If you want to change the height setting of the media, set the height of the media.**

☞ Steps 2 to 5 of "2. Setting the Height of the Media Automatically" (First Step Guide)

☞ Steps 4 and 5 of “Setting the Height of the Media Manually” (p. 9)

3. **If you want to change the print area, set the print area.**

☞ “Changing the Print Area” (p. 13)

4. **Start printing.**

Performing Advanced Setup of the Media

Media Suction Function Setting

The flat table suctions the media to make it hard to move and easy to load.

Procedure

1. **Press [PAUSE/VACUUM].**

The suction function turns on (or off).

The Suction Function Cannot Be Changed In the Following Situations

- During setup processing
- When the MENU/FUNCTION menu is displayed
- During printing (when printing is paused or is being canceled)
- When an error is displayed

CAUTION!

The suction function cannot be used to hold in place curled or thick media. Secure the media in place using a substance such as commercially available tape affixed directly to the flat table.

Setting the Height of the Media Manually

Manually set the height of the media for printing.

Although the manual setting takes a little longer than the automatic setting because you need to visually set the height, it is suitable when you do not want the head gap sensor to come in contact with the media and when you want to set the distance between the heads and the media.

* If the print surface is uneven, there is a limit to the area of unevenness.

☞ “Height Settings When the Print Surface is Uneven” (p. 10)

NOTE

Be sure to hold the handle of the front cover and open and close it gently.

Procedure

1. **Secure the media in place on the flat table.**

☞ "1. Loading Media (Media Setup)" (First Step Guide)

2. **Close the front cover.**

3. **Press [SETUP].**

[SETUP] starts to flash.

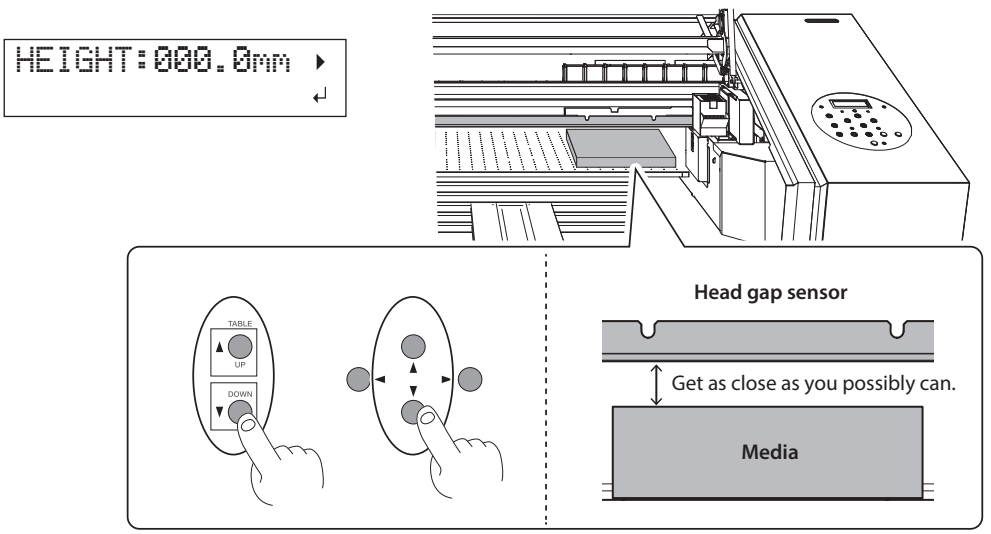
4. **Press [▲], [▼], [UP], or [DOWN] to move the flat table.**

Move the head gap sensor as close as possible to the print surface.

This step can be performed with the front cover open.

NOTE

Set the height of the table in a way that the highest position of the media (print surface) will not come into contact with the head gap sensor.



When the screen shown in the figure appears

Press [ENTER] on this screen to start the automatic detection of the height. During automatic detection, the head gap sensor comes into contact with the media.

If you do not want to perform automatic detection, press [◄] to return to the original screen.

5. **If the front cover is open, close it.**

6. **When the location is set, press [ENTER].**

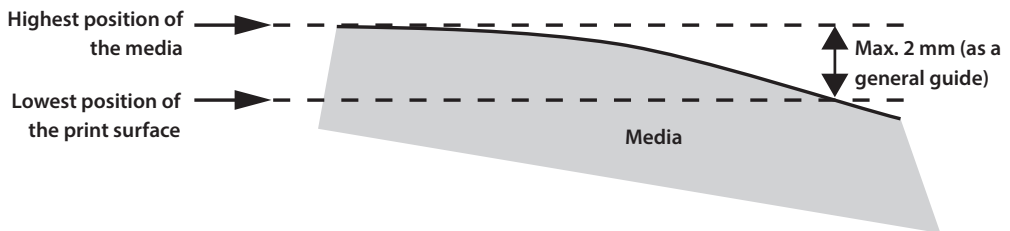
7. **Perform the procedure in "Correcting for Misalignment in Bidirectional Printing (Simple)" (p. 20).**

Height Settings When the Print Surface is Uneven

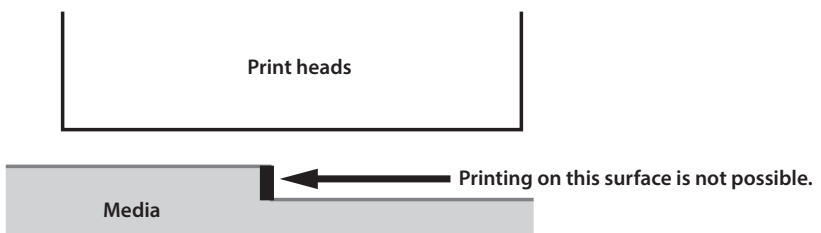
This machine can also print on uneven surfaces. However, note the following points regarding the height setting.

The gap between the "highest position of the media" and the "lowest position of the print surface" should be 2 mm (78.7 mil) or less (as a general guide).

The print quality at the lower position degrades as the height gap widens.



Printing on a surface that is perpendicular to the print heads is not possible.



Expanding the Distance between the Media and the Print Heads

When you set the height of the media automatically (First Step Guide), the distance between the media and the print heads is set to 1.0 mm (39.4 mil) with which optimum printing is performed. However, if the height (thickness) of the media on which printing is performed varies or when the media is lifted or warped during printing, the media might come into contact with the print heads.

You can expand the distance in advance considering the change of the height (thickness) of the media.

NOTE

- If the distance is expanded too much, the print quality may be deteriorated and the nozzles of the print heads may be clogged. Configure the settings so that the distance between the highest position of the media and the lowest position of the print surface is 2 mm or less (p. 11).
- This setting is enabled when the height of the media is set automatically.

☞ "2. Setting the Height of the Media Automatically" (First Step Guide)

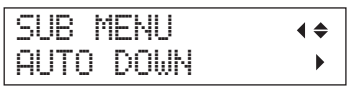
Procedure

1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**

3. **Press [►].**

4. **Press [▼] several times to display the screen shown below.**



5. **Press [►].**

6. **Press [▲] or [▼] to set the distance between the media and the print heads.**

You can adjust the distance in increments of 0.1 mm (3.9 mil).

AUTO DOWN	Distance between the media and the print heads
0.0 mm (Default settings) to 2.0 mm (0.0 to 78.7 mil)	1.0 mm to 3.0 mm (39.4 to 118.1 mil)

7. **Press [ENTER].**

8. **Press [MENU], then [◄] to go back to the original screen.**

9. **Perform the procedure in "Correcting for Misalignment in Bidirectional Printing (Simple)" (p. 20).**

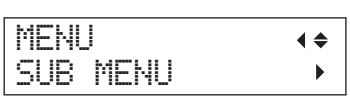
Setting the Print Area for Each Setup of Media

Usually, when you set up the media, the print area and the base position from the previous setup are set. You can change them every time you set up the media.

Procedure

1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**



3. **Press [►] twice.**

4. **Press [▲] or [▼] to select a value.**

SET AT SETUP	Explanation
DISABLE **(Default setting)**	Setup is performed using the print area of the previous setup. The factory default print area is the full area (770 × 330 mm [30.3 × 13 in.]). This setting is suitable when you always perform printing on media of a fixed size.
ENABLE	Set the print area (base position, width, and length of the print area) every time you set up the media. Select this value when the media shape changes for each printing operation.

5. **Press [ENTER].**

6. **Press [MENU], then [◄] to go back to the original screen.**

Changing the Print Area

In the factory defaults, the base position (home position) of the print area is at the right front of the flat table and the print area is the full area (770 × 330 mm [30.3 × 13 in.]).

The base position of the print area should be changed according to the shape of the media.

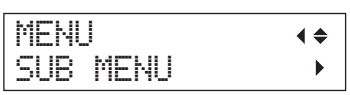
You can reduce the print time if you narrow (limit) the print area.

Determining the Base Position of the Print Area (Home Position)

Determine the home position used as the base to set the print area.

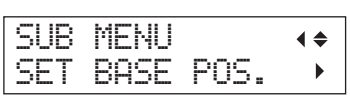
1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**



3. **Press [►].**

4. **Press [▼] to display the screen shown below.**



5. **Press [►].**

6. **Press [▲] or [▼] to select the base position.**

SET BASE POS.	Print Object
LOWER R	Set the base position (home position) at the front right of the print area. This method is appropriate when the print site is level and you can clearly specify the print area. "Setting the Print Area Using the Lower Right of the Media as the Base Position" (p. 14)
CENTER	Set the base position at the center of the media. This method is appropriate when clear specification of the print area is difficult or when the print site is curved or uneven. "Setting the Print Area Using the Center of the Media as the Base Position" (p. 16)

7. **Press [ENTER].**

MEMO

Every time you set up the media, you can set the print area (base position and range). For details, refer to "Setting the Print Area for Each Setup of Media" (p. 12).

8. **Press [MENU], then [◄] to go back to the original screen.**

Setting the Print Area Using the Lower Right of the Media as the Base Position

This is the print area setting method when the print site is level and you can clearly specify the print area.

MEMO

Print area setup can be performed with the front cover open. However, if the front cover is left open for approximately 40 seconds, the print heads automatically return to the home position. The previous menu is displayed, so repeat the operations.

NOTE

Be sure to hold the handle of the front cover and open and close it gently.

Procedure

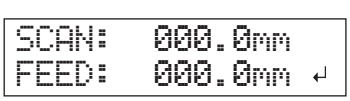
1. **Set "SET AT SETUP" (p. 13) to "ENABLE."**

2. **Set "SET BASE POS." (p. 14) to "LOWER R."**

3. **Set up the media.**

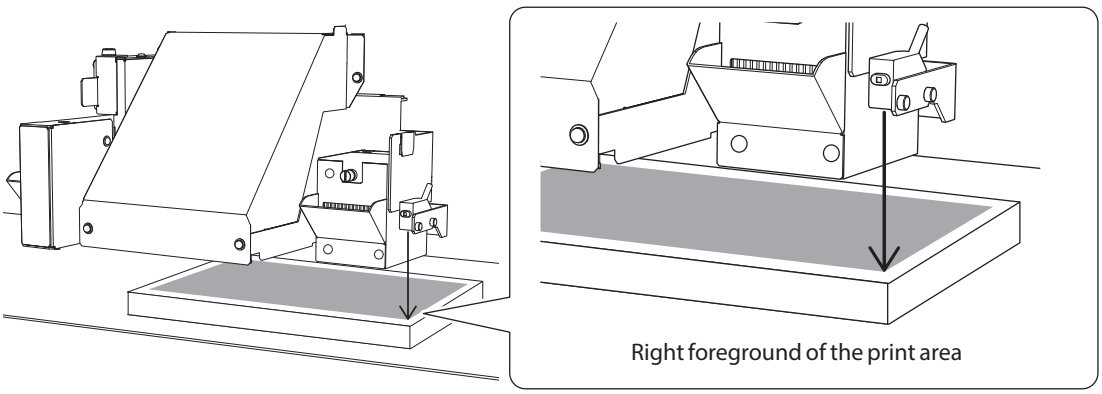
☞ "STEP 2: Loading Media and Setting the Height" (First Step Guide)

4. **Press [▲], [▼], [◄], or [►] when the following screen appears.**



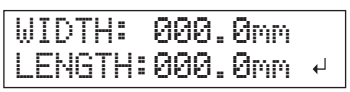
The flat table moves to the rear, the print heads move to above the flat table, and the laser pointer turns on.

5. **Press [▲], [▼], [◄], or [►] to move the laser pointer until it points to a position to the right foreground of the print area.**



6. **Press [ENTER].**

The print heads return to the home position.



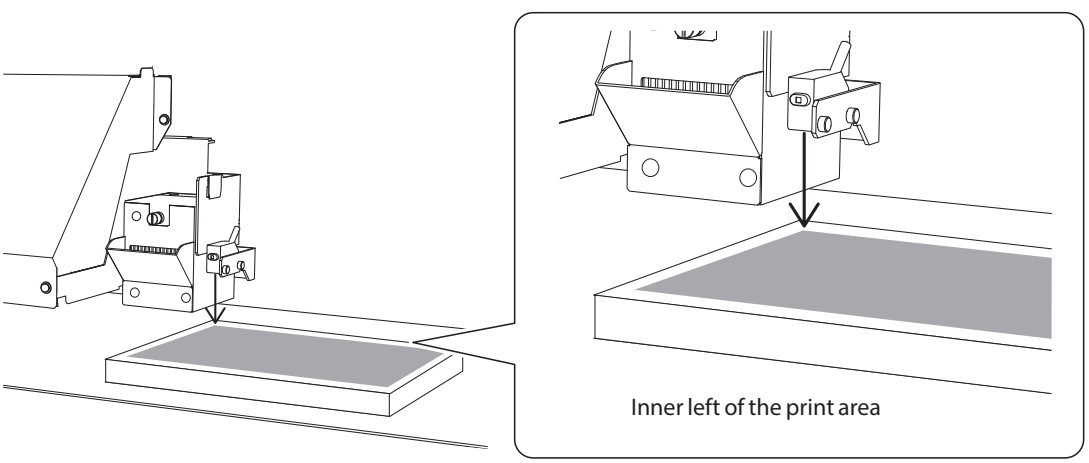
MEMO

When the media comes into contact with the head gap sensor, the screen shown below appears and the setup is canceled. Perform operations again from "2. Setting the Height of the Media Automatically" (First Step Guide) or “Media Suction Function Setting” (p. 9).

7. **Press [▲], [▼], [◄], or [►].**

The flat table moves to the front and the print heads move to the left side of the flat table.

8. **Press [▲], [▼], [◄], or [►] to move the laser pointer until it points to a position to the inner left of the print area.**



MEMO

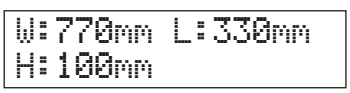
For a test print, set "WIDTH" to 80 mm (3.2 in.) or more and "LENGTH" to 70 mm (2.8 in.) or more. An error will occur and test prints cannot be performed if the area is smaller than this.

9. **Press [ENTER].**

10. **If the front cover is open, close it.**

The print area is specified. The print heads return to the home position.

Make sure the "W" (width), "L" (length), and "H" (height) values on the menu screen are as intended.



MEMO

If you want to use the print area specified here for the next printing operation, switch "SET AT SETUP" (p. 13) to "DISABLE." With this setting, you can set up the media without setting the print area and base position.

Setting the Print Area Using the Center of the Media as the Base Position

This is the print area setting method that is appropriate when printing on media for which it is difficult to clearly specify the print area or when the print site is curved or uneven.

MEMO

Print area setup can be performed with the front cover open. However, if the front cover is left open for approximately 40 seconds, the print heads automatically return to the home position. The previous menu is displayed, so repeat the operations.

NOTE

Be sure to hold the handle of the front cover and open and close it gently.

Procedure

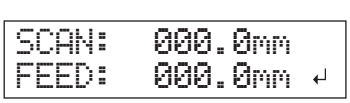
1. **Set "SET AT SETUP" (p. 13) to "ENABLE."**

2. **Set "SET BASE POS." (p. 14) to "CENTER."**

3. **Set up the media.**

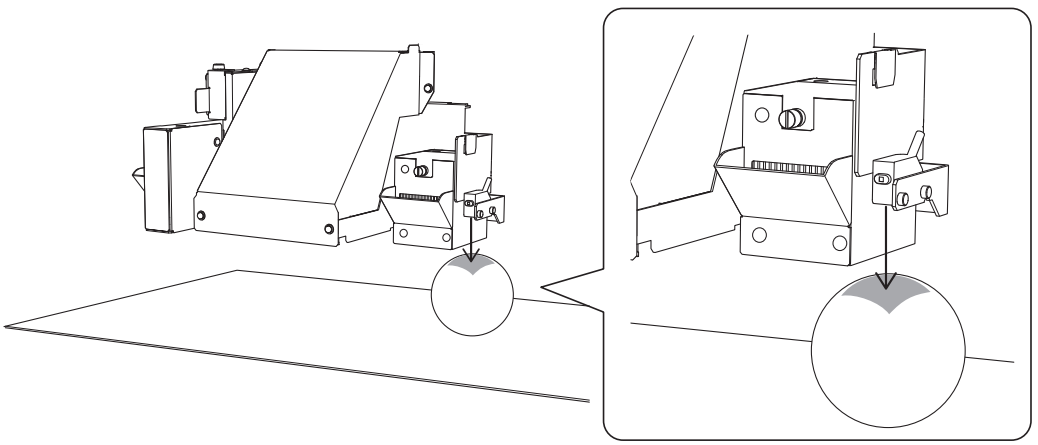
☞ "STEP 2: Loading Media and Setting the Height" (First Step Guide)

4. **Press [▲], [▼], [◄], or [►] when the following screen appears.**



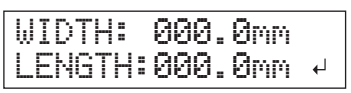
The flat table moves to the rear, the print heads move to above the flat table, and the laser pointer turns on.

5. **Press [▲], [▼], [◄], or [►] to move the laser pointer until it points to the center position of the area you want to print.**



6. **Press [ENTER].**

The print heads return to the home position.



MEMO

When the media comes into contact with the head gap sensor, the screen shown in the figure appears and the setup is canceled. Perform operations again from "2. Setting the Height of the Media Automatically" (First Step Guide) or "Media Suction Function Setting" (p. 9).

7. **Press [▲] or [▼] to enter the length of the area you want to print.**

8. **Press [◄] or [►] to enter the width of the area you want to print.**

MEMO

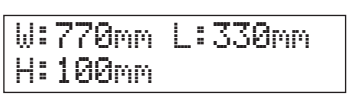
For a test print, set "WIDTH" to 80 mm (3.2 in.) or more and "LENGTH" to 70 mm (2.8 in.) or more. An error will occur and test prints cannot be performed if the area is smaller than this.

9. **If the front cover is open, close it.**

10. **Press [ENTER].**

The print area is specified. The print heads return to the home position.

Make sure the "W" (width), "L" (length), and "H" (height) values on the menu screen are as intended.



MEMO

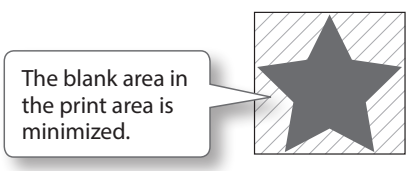
If you want to use the print area specified here for the next printing operation, switch “SET AT SETUP” (p. 13) to "DISABLE." With this setting, you can set up the media without setting the print area and base position.

Specifying the minimum print area enables print time reductions

Set "FULL WIDTH S" to "PRTAREA" to narrow the width in which the print heads move, which reduces the print time.

☞ “Reducing Output Time” (p. 32)

Example of good settings



Example of bad settings

This function is effective when the print area or output data has a small width.

When the laser pointer is difficult to see

Depending on the material used on the media, such as transparent media and high-gloss media with dark color used on the print surface, the laser pointer may be difficult to see. In such cases, the laser pointer may become more visible by placing masking tape on the print surface or on the back.

Check the Print Area

After you change the print area, you can check whether the print area has been set as intended.

Procedure

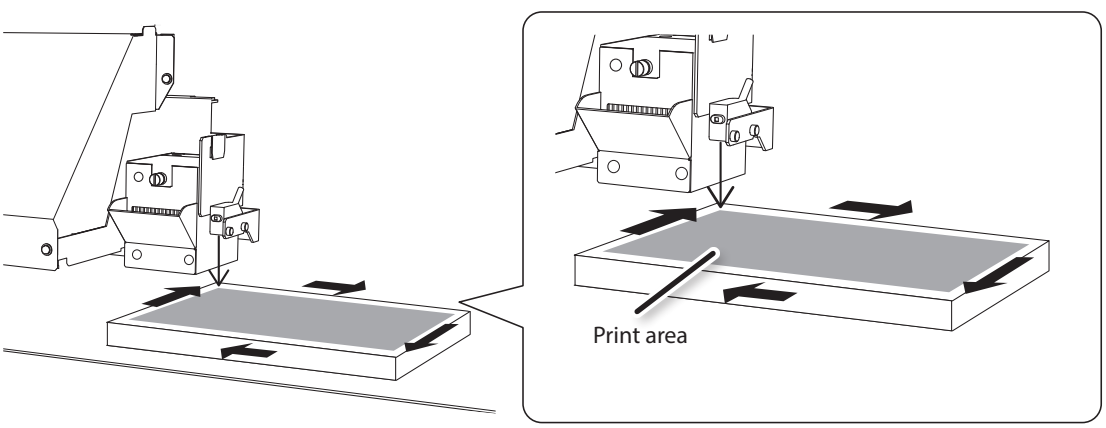
1. **Press [FUNCTION].**

2. **Press [▼] to display the screen shown below.**

3. **Press [►].**

4. **Press [ENTER].**

The laser pointer displays the print area that has been set.



5. **Press [FUNCTION].**

The display returns to the original screen.

Optimizing the Printing Quality

Correcting for Misalignment in Bidirectional Printing (Simple)

This adjustment is necessary in the following situations. When printing a test pattern, use the actual media that will be printed on. **The size of the media required to print a (simple) test pattern is 300 × 50 mm (11.8 × 2 in.).**

- When manually setting the height of the media
- When configuring the settings so that the distance between the media and the print heads is expanded automatically
- When changing from manual setup to automatic setup

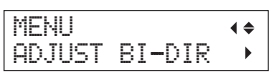
When the Media You Want to Print On Is Smaller Than the Size of the Test Pattern

- Separate media whose size is correct for printing the test pattern is required.
- Match the media height for the test pattern to the height of the media that will actually be printed on.

Procedure

1. **Press [MENU].**

2. **Press [▼] to display the screen shown below.**



3. **Press [►].**

4. **Press [ENTER].**

A test pattern is printed.

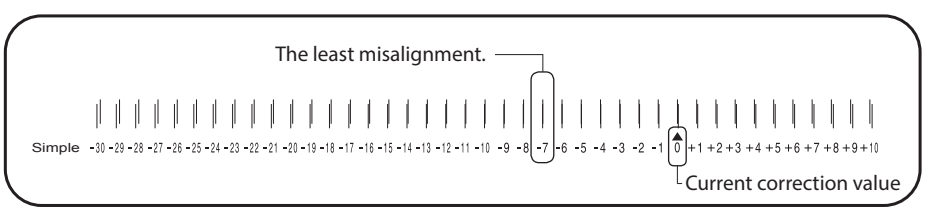
5. **When printing ends, press [▼], then [►].**

6. **Press [▲] or [▼] to select the correction value.**

7. **Press [ENTER] to confirm your entry.**

To decide a correction value

Choose the value that produces the least misalignment of the 2 lines.



8. **Press [MENU], then [◄] to go back to the original screen.**

Description

This machine prints by the bidirectional mode (in which the heads perform printing during both their outbound pass and return pass). This printing method is called "Bidirectional Printing." This method offers the advantage of being able to shorten output times, but subtle misalignment occurs during the outbound and return passes. The procedure to correct this and eliminate misalignment is "Bidirectional Correction." This misalignment varies according to the print heads height and the thickness of the media, so we recommend performing correction to match the media you are using.

Correcting for Misalignment in Bidirectional Printing More Precisely (Detailed)

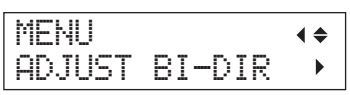
This adjustment is necessary in the following situations.

- When using this machine for the first time
- When changing the media to use
- When manually setting the height of the media
- When the printing quality is not improved by performing the simple correction for bidirectional printing in ("Correcting for Misalignment in Bidirectional Printing (Simple)" (p. 20))

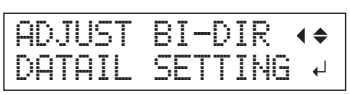
1. Output a Test Pattern

1. **Press [MENU].**

2. **Press [▼] to display the screen shown below.**

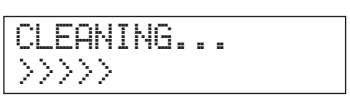


3. **Press [►], then [▲] to display the screen shown below.**



4. **Press [►].**

5. **Press [ENTER].**



```
PERFORMING
      TEST PRINT
```

A test pattern is output.

When printing ends, press [MENU], then [◄].

If it is difficult to check the contents of the output test pattern, open the front cover and check the test pattern.

6. **Repeat steps 1. to 4. to display the screen shown below.**

```
ADJUST BI-DIR ◄▲▼
TEST PRINT      ↵
```

7. **Press [▼].**

```
DETAIL SETTING◄▲▼
SETTING NO.1    ►
```

8. **Press [►].**

2. Enter the Correction Values

1. **Press [◄] or [►] to select H1 to H4, and then press [▲] or [▼] to select the correction value.**

```
H1   H2   H3  ◄▲►
 0    0    0   ↵
```

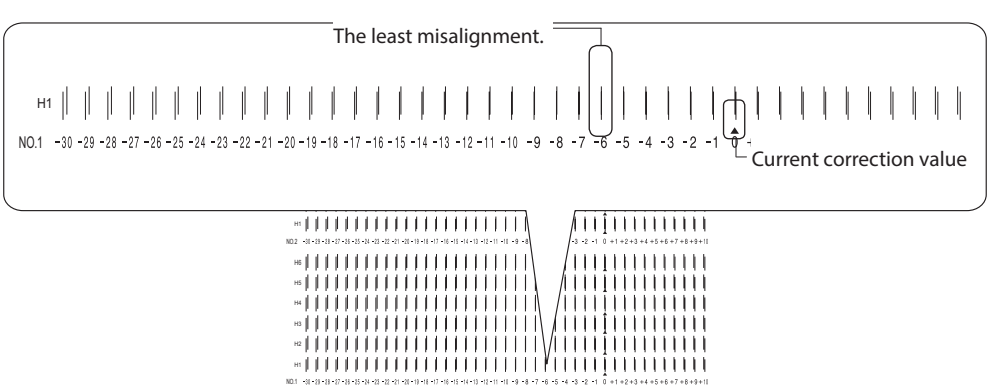
◄ ►

```
H4             ◄▲►
 0              ↵
```

Press [ENTER] to compete the configuration of [SETTING NO.1].

To decide a correction value

Choose the values that produce the least misalignment of the 2 lines.



If the printing-test results are difficult to interpret

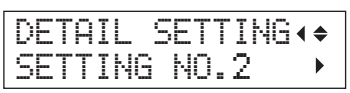
Examine the results from different angles in a well-lit location. Take advantage of reflected light to enable visual checking. Alternatively, change the media and perform the printing again.

If you cannot see "H3" and "H4" (such as for white media with no luster)

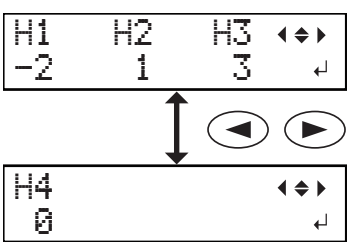
You may not be able to see "H3" or "H4" when using certain media, such as white media with no luster. In this situation, set "H3" and "H4" to the "H2" value.

2. **Press [▼].**

3. **In the same manner as performed for [SETTING NO.1], set the correction values for [SETTING NO.2] to [SETTING NO.4].**

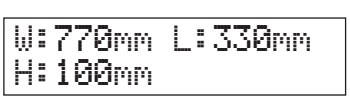


4. **When you have finished setting the correction values, press [ENTER].**



5. **Close the front cover.**

6. **Press [MENU], then [◄] to go back to the original screen.**



Preventing Soiling and Dot Drop-Out by Cleaning during Printing

In the following cases, ink tends to collect on the surface of the print heads. Under some conditions, this ink may be transferred to the media or cause dot drop-out.

- When you use media prone to static electricity buildup.
- When the ambient temperature is low.
- When the variation in the unevenness on the print surface is high (there is a limit to the unevenness of the print surface).

☞ "Height Settings When the Print Surface is Uneven" (p. 10)

Use of the periodic cleaning function enables you to perform printing by performing cleaning prior to printing and removing the ink buildup when the set time elapses.

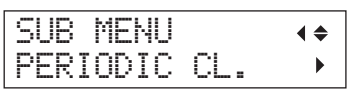
Procedure

1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**

3. **Press [►].**

4. **Press [▼] several times to display the screen shown below.**



5. **Press [►].**

6. **Press [▲] or [▼] to select a value.**

PERIODIC CL.	Explanation
PAGE	Automatic cleaning is performed every time before printing starts.
5min to 990min	Automatic cleaning is performed each time prior to the start of printing. Cleaning is performed during printing when the cumulative printing time reaches the value you set here. The color may become uneven because the printing is paused.
NONE (Default setting)	Cleaning during printing is not performed.

MEMO

Using "PAGE" or a value from "5min" to "990min" results in longer printing times.

7. **Press [ENTER].**

8. **Press [MENU], then [◄] to go back to the original screen.**

Reducing Print Quality Degradation from Ink Mist (Ink Spatter)

Under some conditions (such as low temperature or when a static charge is likely), a greater amount of ink mist (ink spatter during printing) may be produced and adversely affect the print quality. In these cases, you may be able to alleviate the symptom by lowering the rotation of the carriage fan.

Procedure

1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**

3. **Press [►].**

4. **Press [▼] several times to display the screen shown below.**

5. **Press [►].**

6. **Press [▲] or [▼] to select a value.**

MIST CATCHER	Explanation
HIGH (Default setting)	Rotates the carriage fan at high speed.
MIDDLE/LOW	Rotates the carriage fan at middle/low speed.
OFF	Stops the carriage fan.

7. **Press [ENTER].**

8. **Press [MENU], then [◄] to go back to the original screen.**

Description

Whether the symptom can be alleviated depends on the temperature and media type. Be sure to check the print status as you adjust the setting. However, the purpose of the carriage fan is to prevent ink buildup on the print heads. Lowering its rotation will lead to more dot drop-outs. This means, if you specify "MIDDLE," "LOW," or "OFF," you should perform normal cleaning more frequently. The “PERIODIC CL.” (p. 24) setting is also effective against dot drop-outs.

☞ "STEP 3: Printing Tests and Normal Cleaning" (First Step Guide)

☞ “Preventing Soiling and Dot Drop-Out by Cleaning during Printing” (p. 24)

Re-Curing Ink

When the ink is not completely cured after printing is complete, cure the ink by illuminating it once again with the UV-LED lamp.

A characteristic of UV ink is that it cures quickly when exposed to light from the UV-LED lamp, but curing may be difficult for materials that absorb ink like cloth. This function may alleviate this symptom.

MEMO

- This function cannot be used if media setup has been canceled ([SETUP] is off).
- The UV-LED lamp illuminates the print area configured in media setup.
- The effect depends on the media material.

Procedure

1. **Press [FUNCTION].**

2. **Press [▼] several times to display the screen shown below.**

3. **Press [ENTER].**

The print heads move, and the print area is illuminated by the UV-LED lamp.

MEMO

You can stop the operation by pressing [ENTER] while operation is in progress.

Primer Cleaning

* This cleaning function can only be used when you are using primer (the ink type is ECO-UV CMYKPrGlWW or ECO-UV4 CMYKPrGlWW).

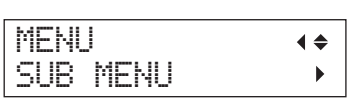
This cleaning prevents dot drop-out for printers equipped with primer.

When print data that includes primer, white, or gloss is output, cleaning is performed if the time that has elapsed since the last cleaning operation exceeds the set time.

Procedure

1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**



3. **Press [►].**

4. **Press [▼] several times to display the screen shown below.**

5. **Press [►].**

6. **Press [▲] or [▼] to select a value.**

PRIMER CL.	Explanation
PAGE	With this setting, cleaning is performed each time prior to the start of printing.
10min to 360min (Default setting: 30min)	If the time that has elapsed since the last cleaning operation exceeds the set time, cleaning will be performed before printing starts. You can set the value in units of 10 minutes from 10 minutes to 360 minutes.
NONE	With this setting, automatic cleaning is not performed.

7. **Press [ENTER].**

8. **Press [MENU], then [◄] to go back to the original screen.**

Fully Utilizing Convenient Functions

Continuing Printing Even If Media Comes into Contact with the Head Gap Sensor

This setting allows the height to be readjusted automatically to continue printing even when the media moves out of position or lifts up and comes into contact with the head gap sensor during printing.(*)

This function is effective when using media that cannot be reprinted on.

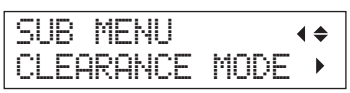
Procedure

1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**

3. **Press [►].**

4. **Press [▼] several times to display the screen shown below.**



5. **Press [►].**

6. **Press [▲] or [▼] to select "RE-ADJ."**

CLEARANCE MODE	Explanation
RE-ADJ.	The height is readjusted and printing continues even when the media comes into contact with the head gap sensor during printing.
CANCEL (Default setting)	Printing and setup will be canceled when the media comes into contact with the head gap sensor during printing.(**)

7. **Press [ENTER].**

8. **Press [MENU], then [◄] to go back to the original screen.**

Description

When the height is readjusted automatically and printing continues, the height setting is changed. Therefore, the print quality may be changed. Hence, proper printing requires that the media be secured properly before printing to keep it from moving out of position or lifting up.

☞ "1. Loading Media (Media Setup)" (First Step Guide)

☞ "2. Setting the Height of the Media Automatically" (First Step Guide)

☞ "Media Suction Function Setting" (p. 9)

At the time when the height is readjusted automatically, the head gap sensor comes into contact with the media.

Even if "RE-ADJ." is selected, printing and setup will be canceled in the following cases.(**)

- When the flat table descends 10 mm (0.4 in.) or more during automatic readjustment
- When the media comes into contact with the head gap sensor during automatic readjustment, even if the flat table has moved to the bottom

(*) For more information on operation after printing is finished, refer to "READJUST TABLE HEIGHT" (p. 90).

(*) The maximum value (threshold) for readjustment can be set. Refer to "Determining the Maximum Value (Threshold) for Automatic Height Adjustment" (p. 29).

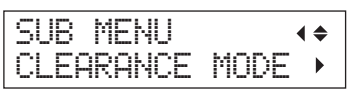
(**) For more information on operation after printing is canceled, refer to "CANCELED FOR TABLE HEIGHT" (p. 91) and "CHECK TABLE HEIGHT" (p. 91).

Determining the Maximum Value (Threshold) for Automatic Height Adjustment

Procedure

1. **Press [MENU].**
2. **Press [▼] twice to display the screen shown below.**

3. **Press [►].**
4. **Press [▼] several times to display the screen shown below.**



5. **Press [►], [▼], then [►] to display the screen shown below.**

6. **Press [▲] or [▼] to select the maximum value (threshold) for automatic height adjustment.**

   You can adjust the value in increments of 0.1 mm (3.9 mil).

7. **Press [ENTER].**
8. **Press [MENU], then [◄] to go back to the original screen.**

Description

You can set the maximum value (the threshold) to use when automatically adjusting the height of the table during printing.

This setting is only enabled when "CLEARANCE MODE" is set to "RE-ADJ."

☞ “Continuing Printing Even If Media Comes into Contact with the Head Gap Sensor” (p. 28)

The greater the distance between the print surface and the print head, the greater the trend for the printing image quality to drop. Therefore, it is beneficial to minimize the adjustment width.

Keep the following points in mind when determining the setting value.

- Consider the effect on the printing image quality in order to obtain satisfactory image quality.
- The variation in height across the entire print surface (not the print target area but including parts that will not be printed)

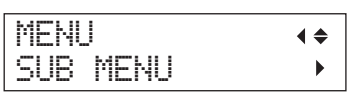
Continuously Outputting Print Data

When multiple print data entries are sent at a time from the computer, the print data entries can be output in a row.

Procedure

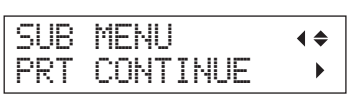
1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**



3. **Press [►].**

4. **Press [▼] several times to display the screen shown below.**



5. **Press [►].**

6. **Press [▲] or [▼] to select "ENABLE."**

PRT CONTINUE	Explanation
ENABLE	Select this setting when you want to output multiple data entries in a row without replacing the media. This function is useful when you want to overlay multiple images on a single piece of media.
DISABLE (Default setting)	Even when multiple data entries are sent at a time from the computer, they are not output in a row and the screen shown below appears when one data entry is output. FINISHED PRINT ↵ If you want to replace the media for each print data entry, select "DISABLE."

7. **Press [ENTER].**

8. **Press [MENU], then [◄] to go back to the original screen.**

Description

When "DISABLE" is selected and this screen is displayed, no data is accepted from the computer.

FINISHED PRINT ↵

Press [ENTER] to return to the screen shown below, at which point it will be possible to once more accept data from the computer.

W:770mm L:330mm
H:100mm

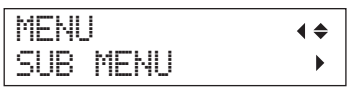
Reducing Output Time

The output time is reduced by restricting the operating range of the print heads. This function is effective when the print area or output data has a small width.

Procedure

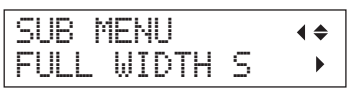
1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**



3. **Press [►].**

4. **Press [▼] several times to display the screen shown below.**



5. **Press [►].**

6. **Press [▲] or [▼] to select "PRTAREA" or "OFF."**

FULL WIDTHS	Explanation
PRTAREA	"PRTAREA" adjusts the operating range of the print heads to the preset print area.
OFF	"OFF" matches the range of print heads movement to the output data. Movement is limited to the minimum amount necessary, and this can be expected to yield the fastest output. When this function is used, the time needed for the ink to cure is not constant, and an uneven color may result.
FULL (Default setting)	"FULL" makes the speed of media movement constant at all times and produces the most stable output result.

MEMO

For output data whose width gradually narrows (e.g., an inverted triangle), even if "FULL WIDTH S" is set to "OFF," the movement of the print heads may not match the output data. This is to prevent ink-curing failures caused by the print position and is not a malfunction.

7. **Press [ENTER].**

8. **Press [MENU], then [◄] to go back to the original screen.**

Configuring the Machine's Settings

Setting the Menu Language and the Units of Measurement

This sets the language and units of measurement displayed on the operation panel screen.

Procedure

1. **Hold down [MENU] and switch on the sub power.**

2. **Press [▲] or [▼] to select the display (menu) language.**

MENU LANGUAGE	Explanation
ENGLISH (Default setting)	English
JAPANESE	Japanese

3. **Press [ENTER].**

4. **Press [▲] or [▼] to select the measurement unit for length.**

LENGTH UNIT	Explanation
mm (Default setting)	In millimeters (mm)
INCH	In inches (in.)

5. **Press [ENTER].**

6. **Press [▲] or [▼] to select the measurement unit for temperature.**

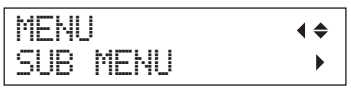
TEMP. UNIT	Explanation
°C (Default setting)	In Celsius
°F	In Fahrenheit

7. **Press [ENTER].**

Sounding a Buzzer to Notify the User of the End of Printing

Procedure

1. Press [MENU].
2. Press [▼] twice to display the screen shown below.



3. Press [►].
4. Press [▲] several times to display the screen shown below.

5. Press [►].

6. Press [▲] or [▼] to select "ON" or "OFF."

PRINT-END BEEP	Explanation
ON	A buzzer will sound at the end of printing.
OFF (Default setting)	No buzzer will sound at the end of printing.

7. Press [ENTER].
8. Press [MENU], then [◄] to go back to the original screen.

Description

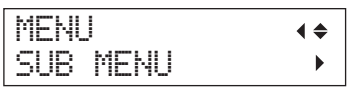
You can configure the settings so that a buzzer sounds at the end of printing.

Setting the Activation Interval for Sleep Mode (Power-saving Feature)

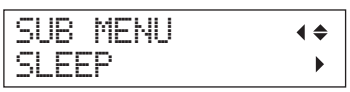
This feature sets the time that must elapse with no operations performed in order to activate the sleep mode when the sleep mode SETTING (p. 36) has been set to "ENABLE."

Procedure

1. **Press [MENU].**
2. **Press [▼] twice to display the screen shown below.**



3. **Press [►].**
4. **Press [▲] several times to display the screen shown below.**



5. **Press [►] twice.**

6. **Press [▲] or [▼] to select the appropriate time.**

INTERVAL	Explanation
15min, 30min (Default settings), 45min, 60min, 75min, 90min, 105min, 120min	The time that must elapse with no operations performed in order to activate the sleep mode.

7. **Press [ENTER].**
8. **Press [MENU], then [◄] to go back to the original screen.**

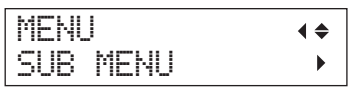
Deactivating the Sleep Mode (Power-saving Feature)

The machine switches to sleep mode when no operations are performed for a certain period of time. You can disable the sleep mode.

Procedure

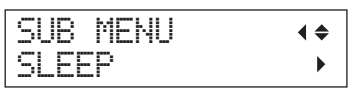
1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**



3. **Press [►].**

4. **Press [▲] several times to display the screen shown below.**



5. **Press [►], then [▼].**

6. **Press [►].**

7. **Press [▲] or [▼] to select "DISABLE."**

SETTING	Explanation
ENABLE (Default setting)	The sleep mode is activated after a certain period of time.
DISABLE	The sleep mode is not activated.

8. **Press [ENTER].**

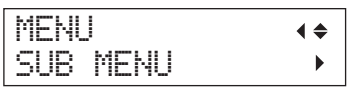
9. **Press [MENU], then [◄] to go back to the original screen.**

Returning All Settings to Their Factory Default Values

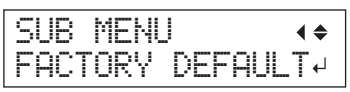
This menu returns all settings to their factory default values. However, the settings for "MENU LANGUAGE," "LENGTH UNIT," and "TEMP. UNIT" are not returned to their factory default values.

Procedure

1. **Press [MENU].**
2. **Press [▼] twice to display the screen shown below.**



3. **Press [►].**
4. **Press [▼] several times to display the screen shown below.**



5. **Press [ENTER].**

Determining What Happens When Ink Runs Out

This menu lets you select the operation that takes place when an ink cartridge becomes empty during printing.

Procedure

1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**

3. **Press [►].**

4. **Press [▲] twice.**

5. **Press [►] twice.**

6. **Press [▲] or [▼] to select a value.**

EMPTY MODE	Explanation
STOP (Default setting)	Printing is paused immediately when an ink cartridge becomes empty.
CONT.	A warning beep goes off when an ink cartridge becomes empty. Printing continues until all the print data that this machine has received is output. In this case, you can pause printing by pressing [PAUSE / VACUUM].

7. **Press [ENTER].**

8. **Press [MENU], then [◄] to go back to the original screen.**

Description

When "STOP" is selected, printing pauses, so colors may be uneven. To prevent uneven colors, ensure that a sufficient amount of ink remains before you begin printing.

When "CONT." is selected, printing does not stop even if ink runs out completely. To replace the cartridge, wait until printing ends or press [PAUSE / VACUUM] to pause printing.

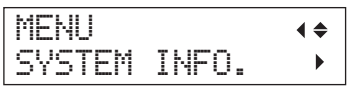
Viewing Information about the System of This Machine

For information on how to set up a network, refer to "STEP 8: Network Settings" (First Step Guide).

Procedure

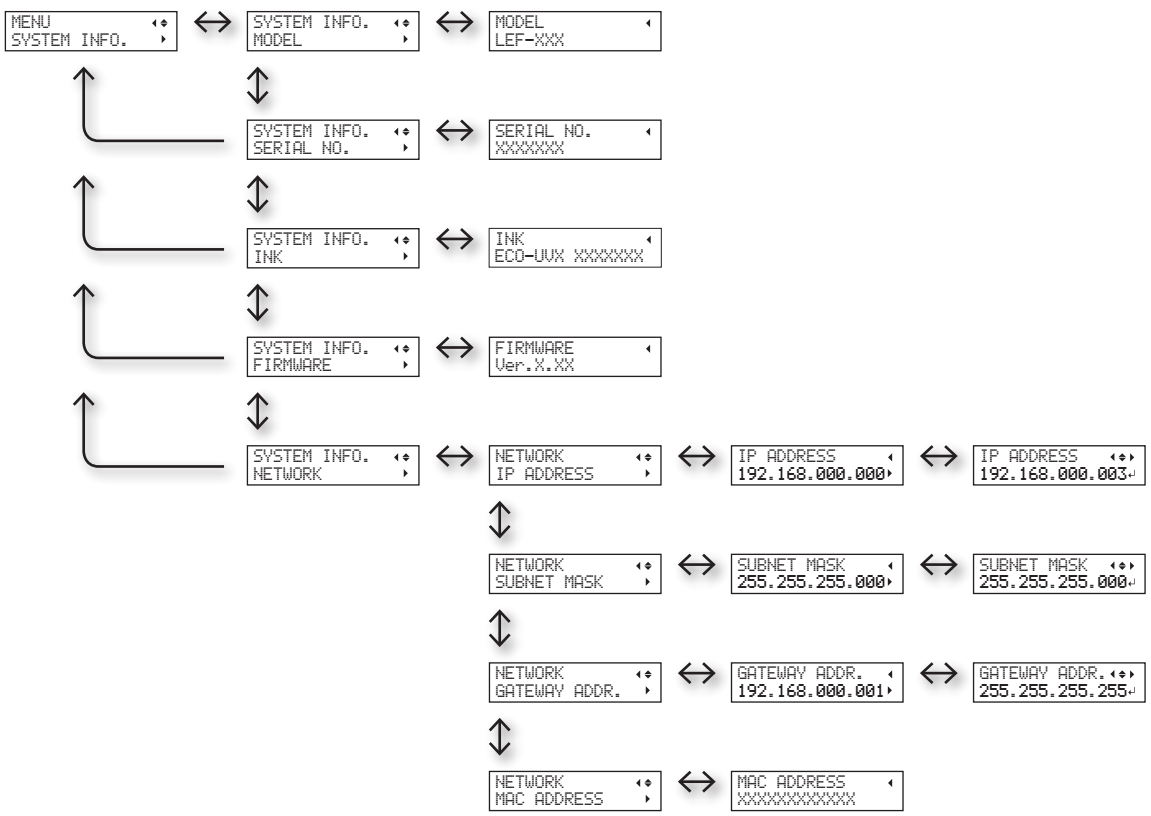
1. **Press [MENU].**

2. **Press [▲] several times to display the screen shown below.**



You can check the following information:

Parameter	Explanation
MODEL	Model name
SERIAL NO.	Serial number
INK	Ink type
FIRMWARE	Firmware version
Network	Network settings such as the IP address

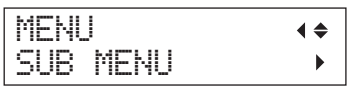


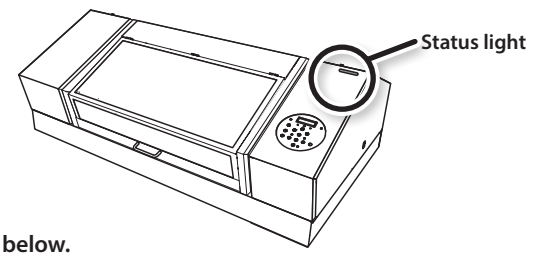
Turning Off the Status Light

Procedure

1. Press [MENU].

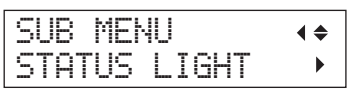
2. Press [▼] twice to display the screen shown below.





3. Press [►].

4. Press [▲] several times to display the screen shown below.



5. Press [►].

6. Press [▲] or [▼] to select a value.

STATUS LIGHT	Explanation
ON (Default setting)	Turns the status light on.
OFF	Turns the status light off.

7. Press [ENTER].

8. Press [MENU], then [◄] to go back to the original screen.

Connecting External Devices

Connecting the Signal Tower

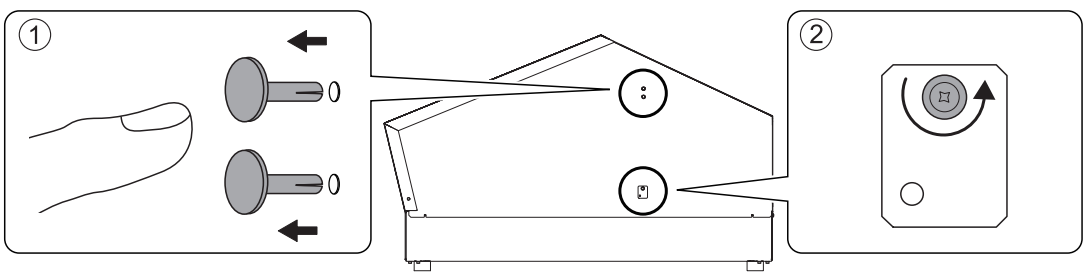
You can connect the signal tower to this machine. The signal tower must be prepared by the user separately.

⚠ **WARNING** Perform this work with all power switches left switched off.
Failure to observe this instruction may cause the machine to move suddenly, resulting in injury.

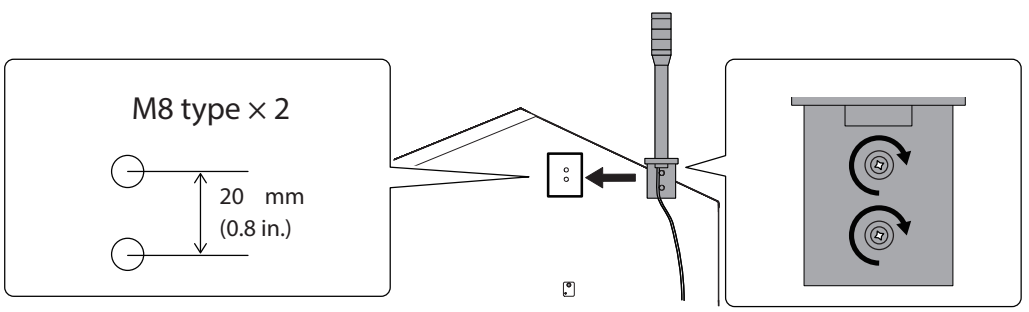
Procedure

1. **Check that the machine's main power and sub power switches are off.**

2. **Remove the two caps (1) and the one screw (2) shown in the following figure.**

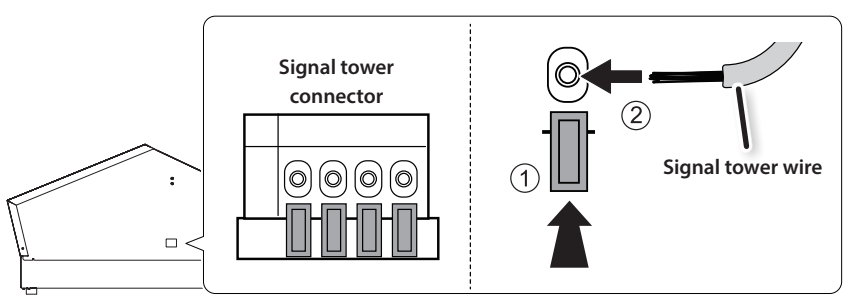


3. **Attach the signal tower to the position shown in the figure.**

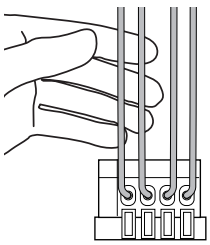


4. **Connect the signal tower wires to the signal tower connectors.**

While pressing (1) with the included tweezers, insert the signal tower wire. For details on the output specifications, refer to "Signal Tower Connector" (p. 96).



5. **Pull on the signal tower wires to check that they have been securely connected to the machine.**



6. **Turn on the machine's main power and sub power.**

7. **Press [SETUP] and check that the signal tower turns on.**

Removing the signal tower

1. **Turn off the machine's main power and sub power.**

2. **Remove the signal tower wires.**

Using Expansion Terminal B to Connect an External Device

In order to connect a device to expansion terminal B, you have to set the expansion terminal to "ENABLE."

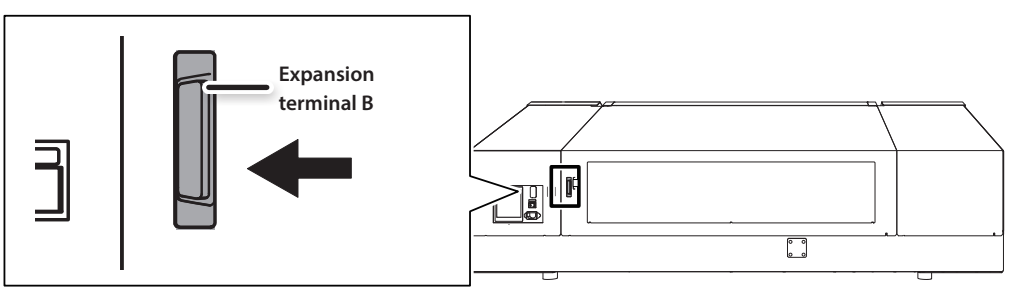
⚠ **WARNING** Perform this work with all power switches left switched off.
Failure to observe this instruction may cause the machine to move suddenly, resulting in injury.

Procedure

1. **Check that the machine's main power and sub power switches are off.**

2. **Attach to expansion terminal B the terminal to which you want to connect an external device.**

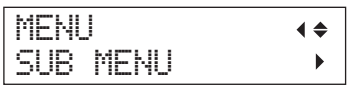
☞ "Specifications and Diagrams for the External Expansion Terminal" (p. 94)



3. **Turn on the machine's main power and sub power.**

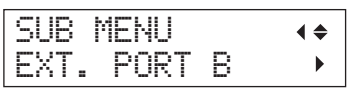
4. **Press [MENU].**

5. **Press [▼] twice to display the screen shown below.**



6. **Press [►].**

7. **Press [▲] several times to display the screen shown below.**



8. **Press [►].**

9. **Press [▲] or [▼] to select [ENABLE].**

EXTRA I/O PORT	Explanation
DISABLE (Default setting)	Disables the connection to expansion terminal B.
ENABLE	Enables the connection to expansion terminal B.

10. **Press [ENTER].**

11. **Press [MENU], then [◄] to go back to the original screen.**

Disconnecting an External Device (EXT. PORT B)

1. **On the menu, set "EXT. PORT B" to "DISABLE."**

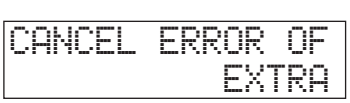
Perform steps 4 to 8 of “Using Expansion Terminal B to Connect an External Device” (p. 42).

2. **Turn off the machine's main power and sub power.**

3. **Disconnect the external device.**

When the Expansion Terminal Setting is Set to "ENABLE" with no External Device Connected

If you perform operations while the expansion terminal setting is set to "ENABLE" by mistake with no external device connected, the following error will be displayed. Press [MENU] to switch the expansion terminal setting to "DISABLE" and clear the error.



Chapter 2
Maintenance

About Maintenance 46
Instructions for Maintenance 46
Automatic Maintenance Function and Notes 46
Alarm Function 46

Maintenance Required before and after Printing 47
Maintenance Required before Printing 47
Maintenance Required after Printing 47

Periodic Maintenance 48
Cleaning 48
Disposing of Discharged Fluid 50

When Normal Cleaning Is Not Effective. 53
Medium and Powerful Cleaning. 53

Maintenance That Must Be Performed Once a Month or More 56
Manual Cleaning 56

Checking for Remaining Ink and Replacing Ink Cartridges 61
Checking for Remaining Ink. 61
How to Replace Ink Cartridges 62

When the White Ink Concentration Is Low 64
Restoring the White Ink Concentration 64

When Dot Drop-Out Cannot Be Cleared Up for White Ink, Gloss Ink, or Primer 65
Cleaning All Print Heads 67

Replacing Consumable Parts 70
Replacing the Wipers 70
Replacing the Filter 73

When Moving the Unit 77
Procedure from Preparing to Move to Reinstallation. 77

About Maintenance

Instructions for Maintenance

Switch the power on once every two weeks

Switch the sub power on once every two weeks. When you turn on the power, the machine performs operations to keep the print heads from drying out. Leaving the machine unused for a prolonged period may damage the print heads, so be sure to switch on the power to perform these automatic operations.

Keep the machine at a constant temperature and relative humidity

Even when the machine is not in use, keep it at a temperature of 5 to 40°C (41 to 104°F) and a relative humidity of 20 to 80%RH (with no condensation). Not doing so may cause the machine to break down.

Automatic Maintenance Function and Notes

This machine has a function that automatically performs maintenance periodically. This function performs operations for preventing the print heads from drying out, so:

- Always keep the main power switched on.
- Do not leave the front cover open for a long time.
- Return to the top menu after specifying settings in the menus.

Alarm Function

This function reminds you to switch on the sub power once a month. When the machine remains unused for about a month, this screen appears and a warning buzzer sounds. If this screen appears, switch on the sub power. When maintenance operations finish, switch off the sub power.

This function operates when the printer's main power is turned on. Leave the main power switched on at all times even when the printer is to remain out of use for a prolonged period.

Maintenance Required before and after Printing

Maintenance Required before Printing

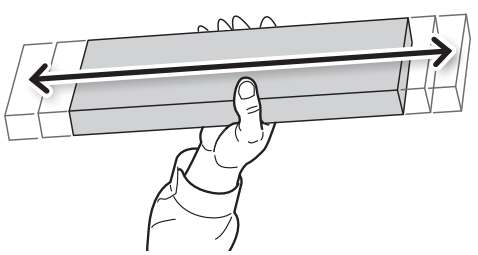
Ink Cartridge Maintenance

The components in the ink have a tendency to precipitate. The deposits may harden and cause problems including printer malfunctions if left alone for an extended period of time, and this is especially true for the white ink.

- Shake new ink cartridges 50 times (about 15 seconds) before installing them.

☞ "3. Insert the Ink Cartridges for the Respective Colors" (First Step Guide)

- Every day before starting work, remove the white ink cartridges, shake them 50 times (about 15 seconds), and then reinsert them.



Maintenance Required after Printing

Printing Tests and Normal Cleaning

Check for dot drop-out by performing printing tests before and after daily operations. If dot drop-out occurs, perform cleaning of the print heads (normal cleaning). Leaving the dot drop-out untreated may damage the print heads, so be sure to check for this condition each day after operation.

Periodic Maintenance

Cleaning

⚠ **WARNING** **Never use gasoline, alcohol, thinner, or any other flammable material.**
Doing so may cause a fire.

About Care and Maintenance of the Machine

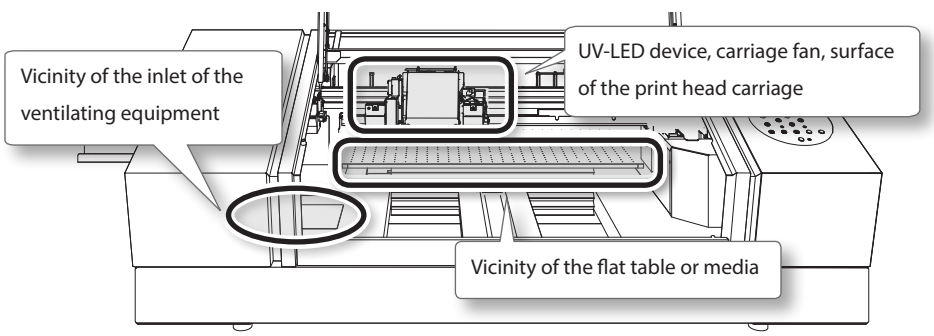
As part of daily cleaning, wipe away any buildup of ink or grime that has adhered to the machine. In particular, the flat table is likely to have a buildup of grime. Clean by wiping with a cloth moistened with neutral detergent diluted with water then wrung dry.

IMPORTANT

- This machine is a precision device and is sensitive to dust and dirt. Perform cleaning on a daily basis.
- Never attempt to oil or lubricate the machine.

About Care and Maintenance of the Inside of the Machine

Frequently clean the inside of the machine using a vacuum cleaner or by wiping with a cloth moistened with water then wrung dry. If dust and dirt accumulate in the machine, they are likely to affix to printed materials.

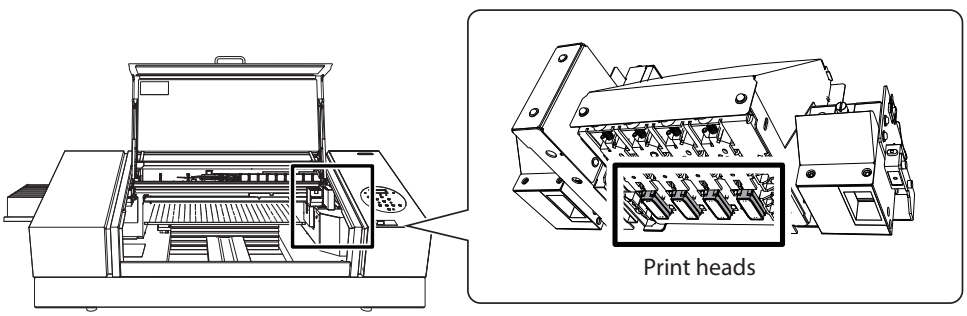


About Care and Maintenance of the Print Heads

Be sure to perform a printing test and normal cleaning before and after daily operations so that you can perform optimum printing at any time. Also perform care and maintenance during daily operations if necessary.

☞ "STEP 3: Printing Tests and Normal Cleaning" (First Step Guide)

The print heads are components that wear out. Periodic replacement is required, with the frequency of replacement depending on use. Contact your authorized Roland DG Corp. dealer.



Disposing of Discharged Fluid

⚠WARNING **Never place discharged fluid and ink near open flame.**

Doing so may cause a fire.

⚠CAUTION **Before you detach the drain bottle, be sure to wait for the screen to display [EMPTY DRAIN BOTTLE].**

Failing to follow this procedure may cause discharged fluid to flow out of the machine and spill, soiling your hands or the floor.

⚠CAUTION **To store discharged fluid temporarily, place it in the included drain bottle or in a durable sealed container such as a metal can or plastic tank, and cap the container tightly.**

Any spillage or vapor leakage may cause a fire, odor, or physical distress.

Do not store discharged fluid in a location where it is exposed to direct sunlight.

When temporarily storing discharged fluid in the included drain bottle, do not store it in a location that is exposed to direct sunlight. The discharged fluid may harden, making the drain bottle unusable.

Dispose of discharged fluid properly, in accordance with the laws in effect in your locale.

Discharged fluid is flammable and contains toxic ingredients. Never attempt to incinerate discharged fluid or discard it with ordinary trash. Also, do not dispose of it in sewer systems, rivers, or streams. Doing so may have an adverse impact on the environment.

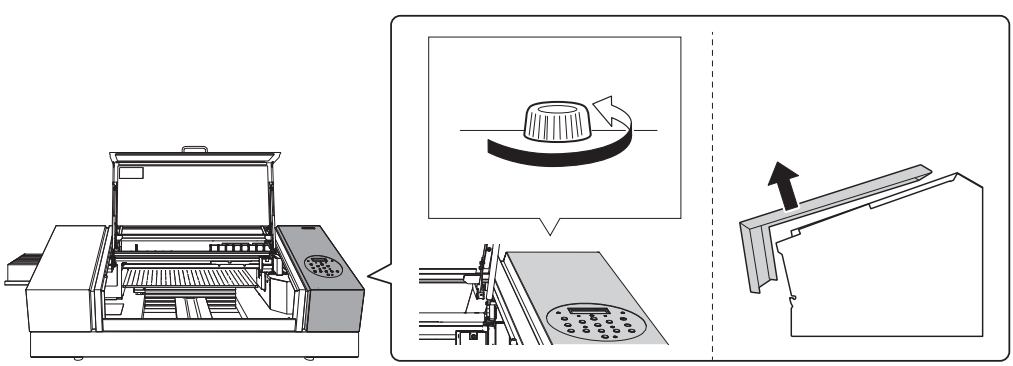
When "EMPTY DRAIN BOTTLE" Is Displayed

The message shown in the figure appears when a certain amount of discharged fluid has collected in the bottle.

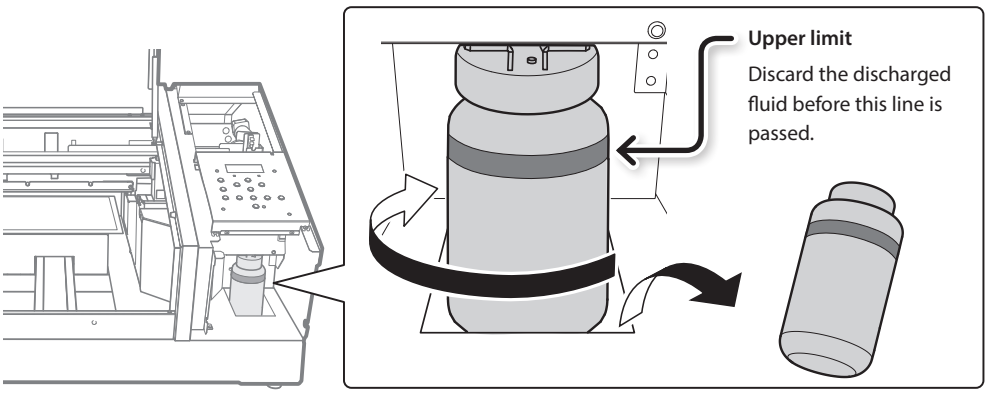
Follow the procedure below to discard the discharged fluid.

1. **Open the panel cover.**

Remove the screw on the top of the panel cover, and then pull out the panel cover in the direction indicated by the arrow.

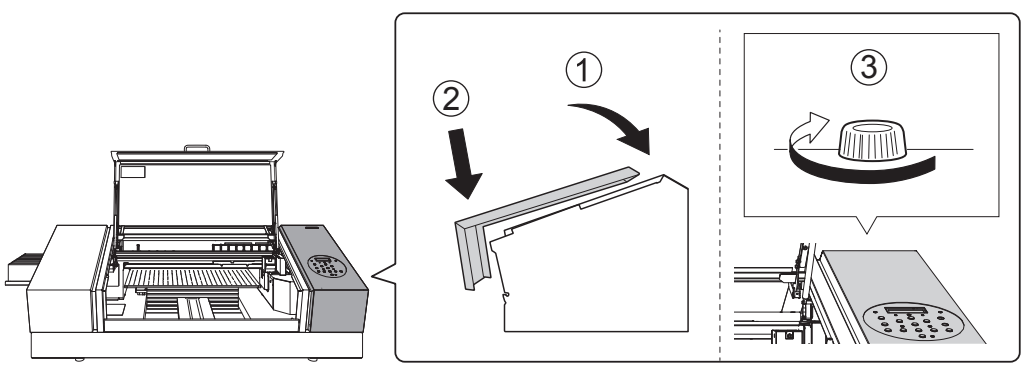


2. **Remove the drain bottle and empty it to discard the discharged ink.**

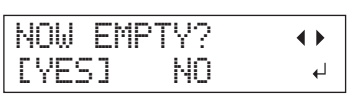


3. **Attach the emptied drain bottle to the machine once more.**

4. **Close the panel cover.**



5. **Press [ENTER].**



6. **Press [◄] or [►] to select "YES."**

7. **Press [ENTER].**

NOTE

The "EMPTY DRAIN BOTTLE" message also disappears when you select "NO" and press [ENTER] without discarding the discharged fluid.

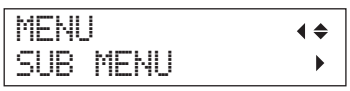
If "EMPTY DRAIN BOTTLE" appears again, you should discard the discharged fluid, if you can. Repeatedly selecting "NO" without discarding the discharged fluid may cause it to spill out of the drain bottle, soiling your hands or the floor.

Discarding the Discharged Fluid before the Message Appears

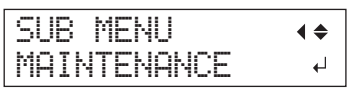
To discard the discharged fluid when "EMPTY DRAIN BOTTLE" has not been displayed yet, follow the procedure given below.

1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**



3. **Press [►], then [▲].**



4. **Press [►], then [▲].**

5. **Press [ENTER].**

6. **Open the panel cover (p. 50).**

7. **Remove the drain bottle and empty it to discard the discharged ink (p. 51).**

8. **Attach the emptied drain bottle to the machine once more.**

9. **Press [ENTER].**

10. **Press [ENTER].**

11. **Close the panel cover (p. 51).**

12. **Press [MENU], then [◄] to go back to the original screen.**

When Normal Cleaning Is Not Effective

Medium and Powerful Cleaning

When problems such as dot drop-out are not resolved by normal cleaning ("STEP 3: Printing Tests and Normal Cleaning" [First Step Guide]), perform the more forceful "medium cleaning" two or three times. If this still does not resolve the problem, try the even more forceful "powerful cleaning."

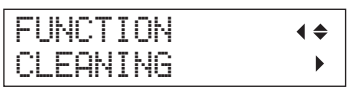
NOTE

Normal cleaning consumes the smallest amount of ink, followed by medium cleaning and then powerful cleaning.

Also, frequent cleaning may damage the print heads. Avoid using these cleaning methods more than necessary.

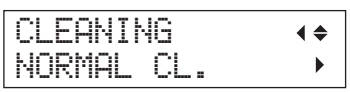
Procedure

1. **Press [FUNCTION].**



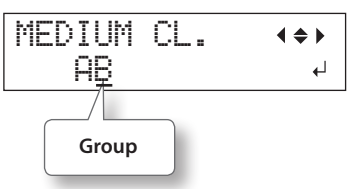
2. **Press [►], then [▼].**

3. **Press [▲] or [▼] to select the type of cleaning.**

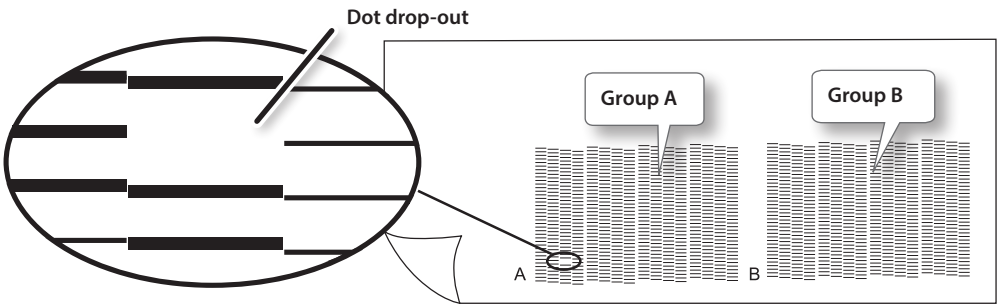


CLEANING	Explanation
NORMAL CL.	Cleaning of the print heads is performed.
MEDIUM CL.	Select this cleaning method when you cannot fix dot drop-out with NORMAL CL.
POWERFUL CL.	Select this cleaning method when you cannot fix dot drop-out with MEDIUM CL.
TEST PRINT	A printing test is performed. ☞ "STEP 3: Printing Tests and Normal Cleaning" (First Step Guide)

4. **Press [►].**



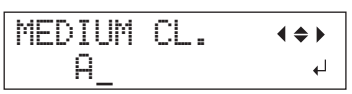
5. **Press [◄] or [►] to select the group of print heads that is not to be cleaned.**



MEMO

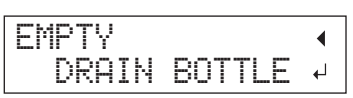
If the printing-test results are difficult to interpret, examine the results from different angles in a well-lit location. Take advantage of reflected light to enable visual checking. Alternatively, change the media and perform the printing again.

6. **Press [▲] or [▼] to get rid of the group display.**



7. **Press [ENTER].**

When the screen the below is displayed, discard the discharged fluid.



When you attach the empty drain bottle to the machine again and press [ENTER] , the machine performs the procedure below.

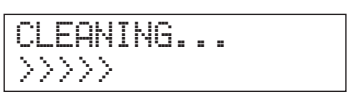
⚠CAUTION **The discharged fluid must be discarded at this stage.**

If you do not discard it at this stage, discharged fluid will overflow from the drain bottle during the procedure that follows.

⚠CAUTION **Before you detach the drain bottle, be sure to wait for the screen to display "EMPTY DRAIN BOTTLE."**

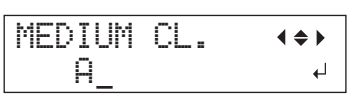
Failing to follow this procedure may cause discharged fluid to flow out of the tube and spill, soiling your hands or the floor.

The screen shown below appears, and then cleaning starts.



When finished, the screen shown in the figure appears again.

* The screen shown below appears when you select medium cleaning.



8. **Press [FUNCTION] to go back to the original screen.**

When powerful cleaning is not effective

If problems such as dot drop-out persist even after you have performed powerful cleaning several times, perform "manual cleaning." Such cleaning can be effective when carried out periodically, according to the frequency of use.

☞ “Maintenance That Must Be Performed Once a Month or More” (p. 56)

Manual Cleaning

When manual cleaning becomes necessary

When there is a lot of scattered ink mist and the inside of the machine is soiled

Perform this cleaning every day when frequently printing with the print heads at a distance from the print surface or when ink is emitted to locations that protrude from the print surface. If the scattered ink mist is allowed to harden, it may cause malfunctions.

Perform manual cleaning once a month or more

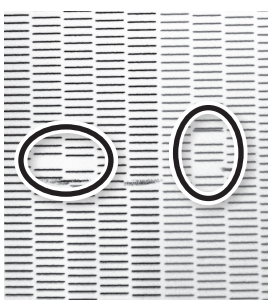
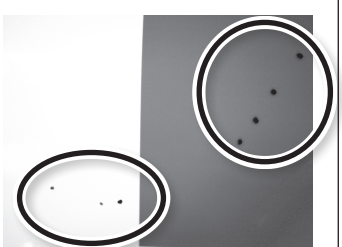
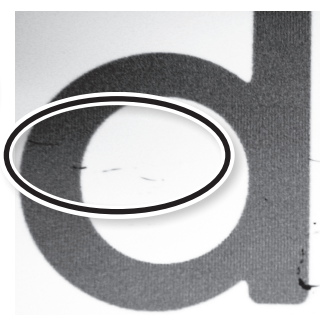
To keep the stable printing condition at all times, perform manual cleaning once a month or more.

Manual cleaning is recommended when the following symptoms occur

If symptoms such as those shown below persist even after you have performed cleaning such as normal cleaning, perform manual cleaning.

Replacing the wipers is also an effective means of improving the symptoms.

☞ "Replacing the Wipers" (p. 70)

Dot drop-out	Ink drips	Dragging dirt
		
Dust or other foreign matter adheres to the print heads and impedes correct ink discharge.	Ink accumulates on dirty areas around the print heads and drips onto the media.	Dirt accumulates on the area around the print heads and touches the media.

- The frequency with which manual cleaning should be performed depends on the machine's use. For information about the frequency of cleaning needed for your conditions of use, contact your authorized Roland DG Corp. dealer.
- If you use up the cleaning sticks and cleaning liquid used for manual cleaning, contact your authorized Roland DG Corp. dealer.
- The print heads are components that wear out. Periodic replacement is required, with the frequency of replacement depending on use. Contact your authorized Roland DG Corp. dealer.

Important notes on this procedure

- Cleaning requires the cleaning liquid and cleaning sticks included with the printer, so have these items ready.
- Before performing this operation, remove any media.
- To prevent the print heads from drying out, finish this procedure in 10 minutes or less. A warning beep sounds after 10 minutes.
- Never use any implement other than the included cleaning stick. Cotton swabs or other lint producing items may damage the print heads. If you use up the cleaning stick, purchase a new one from your authorized Roland DG Corp. dealer.
- Use one cleaning stick per cleaning session. Reusing cleaning sticks may reduce print quality.
- Do not put a cleaning stick that has been used for cleaning into the cleaning liquid. It may deteriorate the fluid.
- Never rub the nozzle surface of the print heads.
- Stroke the sponges very gently, applying as little pressure as possible. Never rub, scrape, or crush them.

When a warning beep sounds during cleaning

A warning beep sounds 10 minutes after operation begins. Stop work, close the front cover, and then press [ENTER] to end the manual cleaning mode. After that, restart the procedure from the beginning.

⚠CAUTION **Be sure to perform operations as specified by the instructions above, and never touch any area not specified in the instructions.**

Failure to observe this instruction may cause the machine to move suddenly, resulting in injury.

1. Change to the print-head manual-cleaning mode

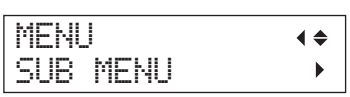
NOTE

Be sure to hold the handle of the front cover and open and close it gently.

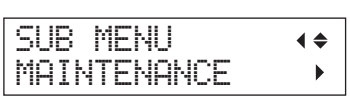
1. **Remove any media. Close the front cover.**

2. **Press [MENU].**

3. **Press [▼] twice to display the screen shown below.**



4. **Press [►], then [▲].**



5. **Press [►].**

```
MAINTENANCE    ◄▲▼
CLEANING         ↵
```

6. **Press [ENTER].**

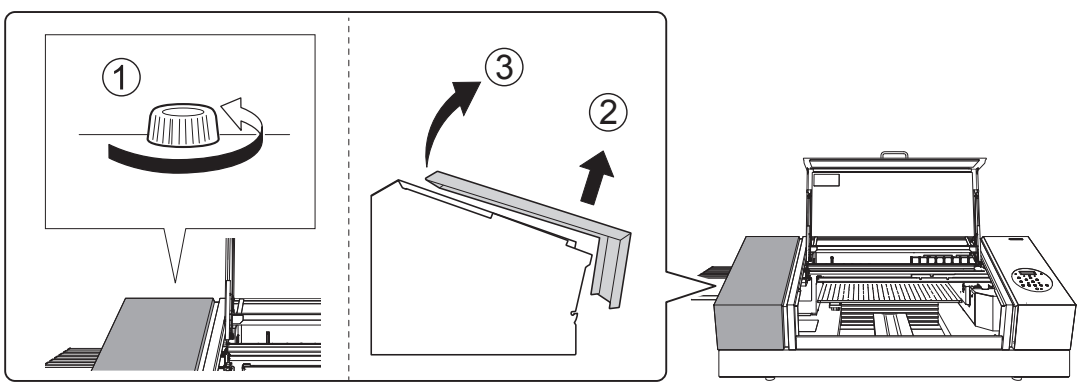
```
NOW PROCESSING..
```

The print-head carriage moves, and then the following screen appears.

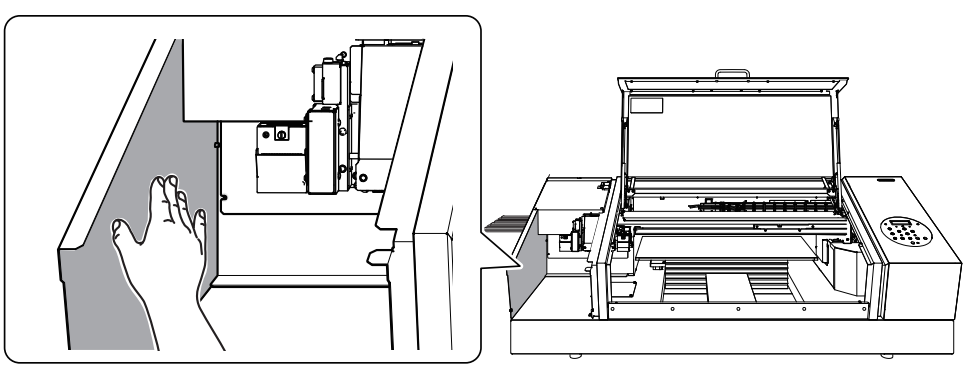
```
OPEN MAINTENANCE
        COVER
```

7. **Open the front cover.**

8. **Open the maintenance cover.**



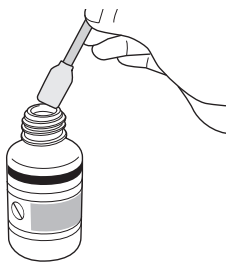
9. **Touch the location shown in the figure to discharge any static electricity.**



2. Clean Using a Cleaning Stick

1. **Moisten the cleaning stick with the cleaning liquid.**

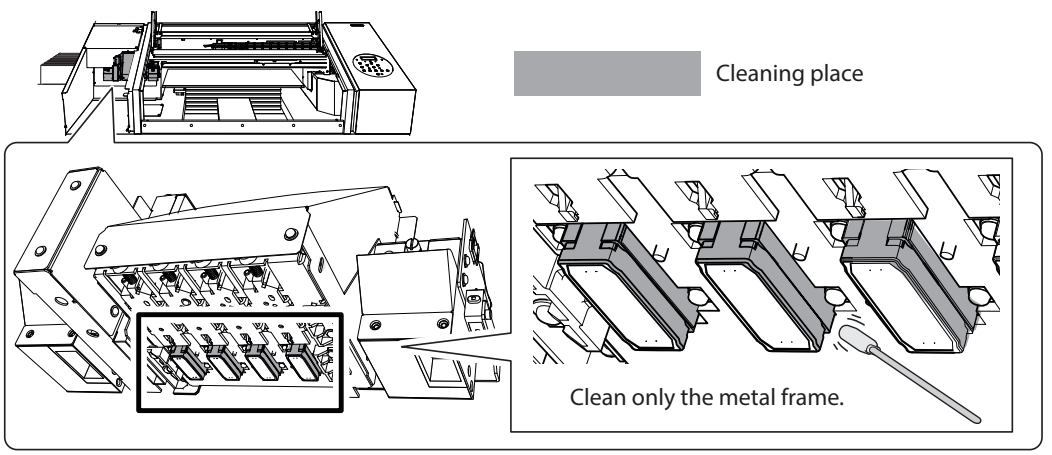
Be sure to use one of the included cleaning sticks.



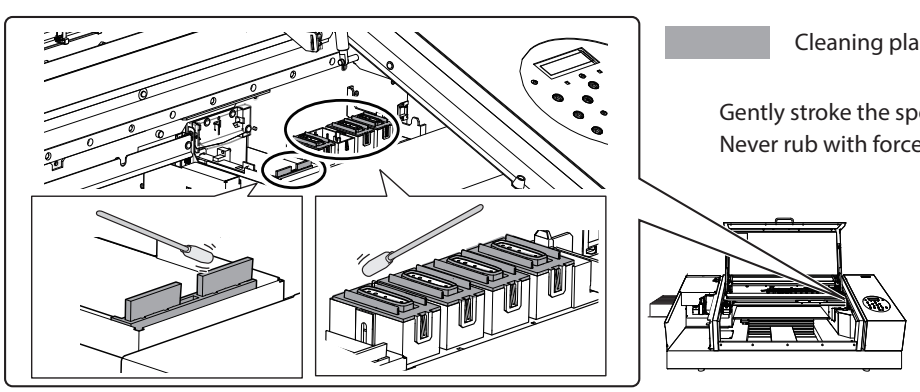
2. **Clean the locations indicated in the figure.**

Be especially careful to clean away any fibrous dust (lint).

During this work, be careful not to touch the print head surfaces (nozzle surfaces) directly with the cleaning stick.



3. **Clean the locations indicated in the figure.**



3. Exit the Manual Cleaning Mode

1. **Attach the maintenance cover.**

☞ Perform the steps in the reverse order as shown in "8. Open the maintenance cover." (p. 58)

2. **Close the front cover.**

NOTE

Be sure to hold the handle of the front cover and open and close it gently.

3. **Press [ENTER].**

The print-head carriage moves to the right side of the machine. After exiting the manual cleaning mode, the original screen is displayed again.

4. Perform a Printing Test to Check the Results of Cleaning

1. **Perform a printing test to check the results.**

Perform cleaning using the machine's cleaning functions several times when necessary.

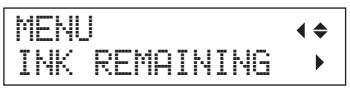
☞ "STEP 3: Printing Tests and Normal Cleaning" (First Step Guide)

Checking for Remaining Ink

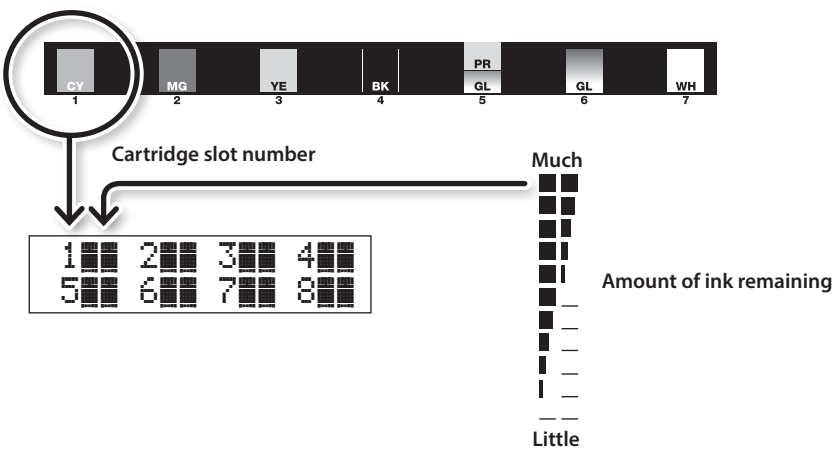
Procedure

1. **Press [MENU].**

2. **Press [▲] several times to display the screen shown below.**



3. **Press [►].**



■ indicates the amount of ink remaining. The more ■ there are, the more ink there is remaining.

* The display shows approximately how much ink remains. It may differ somewhat from the actual amount remaining.

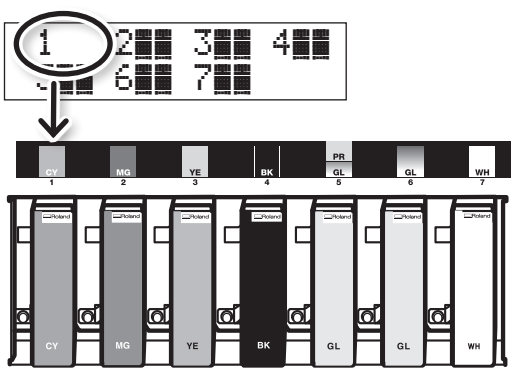
4. **Press [MENU], then [◄] to go back to the original screen.**

How to Replace Ink Cartridges

When ink runs out, a warning beep sounds and printing pauses (unless the factory default settings have been changed). Pull out the empty cartridge and insert a new one.

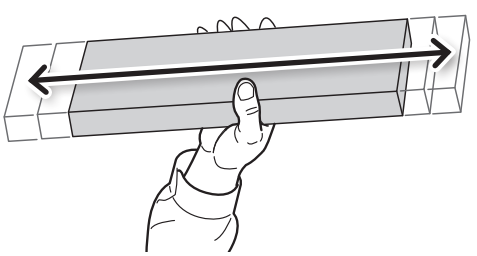
Procedure

1. Check the number flashing on the screen.



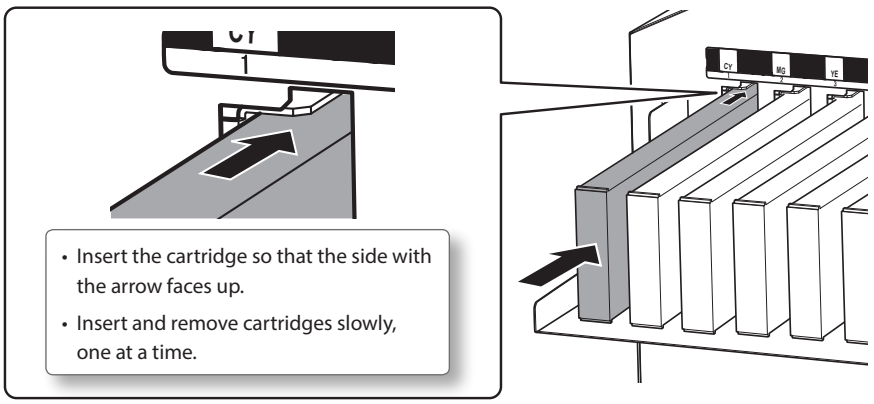
The ink at the flashing cartridge slot number is running out.

2. Shake a new ink cartridge of the same type and color 50 times (about 15 seconds).



If ink components precipitate, it will not be possible to print with correct colors. So that the ink mixes well, shake each ink cartridge horizontally with a stroke length of around 5 cm (2 in.) from each end of the ink cartridge.

3. **Pull out the empty ink cartridge and immediately insert the new one.**



4. **Close the front cover.**

Important notes on replacing ink cartridges

- Be sure to replace each cartridge with an item of identical type.
- Never mix items of different types.
- Never leave the machine with an ink cartridge removed. The print heads may become clogged.
- Never insert or remove a partially used ink cartridge with undue force.
- Never remove an ink cartridge suddenly while the printer is in operation.

⚠**WARNING** **Never store ink, cleaning liquid, or discharged fluid in any of the following locations.**

- Any location exposed to open flame
- Any location where high temperature may occur
- Near bleach or any other such oxidizing agent or explosive material
- Any location within the reach of children

Fire may be a danger. Accidental ingestion by children may pose a health hazard.

When the White Ink Concentration Is Low

Restoring the White Ink Concentration

Prolonged use of this machine may cause the concentration of the white ink to decrease. This is because the components in the white ink easily precipitate. The "CIRCULATE INK" function circulates the ink to eliminate white ink precipitation, which restores the white ink concentration.

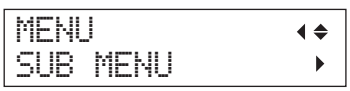
MEMO

This procedure requires some ink to be discharged, so we do not recommend that you perform this procedure frequently.

Procedure

1. **Press [MENU].**

2. **Press [▼] twice to display the screen shown below.**



3. **Press [►].**

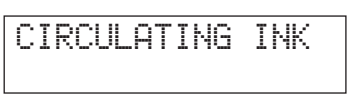
4. **Press [▲] several times to display the screen shown below.**

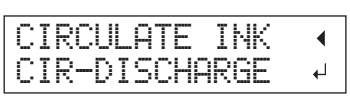
5. **Press [►], then [▲].**

6. **Press [►].**

7. **Press [ENTER].**

Ink circulation starts.





8. **Press [MENU], then [◄] to go back to the original screen.**

When Dot Drop-Out Cannot Be Cleared Up for White Ink, Gloss Ink, or Primer

In this operation, all white ink, gloss ink and primer within the printer is discharged and the interior is cleaned. The white ink, gloss ink, and primer are refilled after cleaning. This operation requires three SOL INK cleaning cartridges. For information about purchasing SOL INK cleaning cartridges, contact your authorized Roland DG Corp. dealer.

☞ If you want to perform maintenance on ink other than white ink, gloss ink and primer, see "Cleaning All Print Heads" (p. 67).

MEMO

White ink tends to settle and may harden if left alone for a lengthy time. Therefore, abnormal ink emission including dot drop-out tends to occur more frequently than with other inks, even when using the cleaning function (normal, medium, or powerful) or manual cleaning.

Important notes on this procedure

- A large amount of ink will be discharged during this operation. Perform this operation only when ink emission failures (such as dot drop-out) cannot be improved even after performing "normal," "medium,"powerful," and "manual" cleaning.

☞ "Periodic Maintenance" (p. 48)

☞ "Medium and Powerful Cleaning" (p. 53)

☞ "Maintenance That Must Be Performed Once a Month or More" (p. 56)

- Be sure to use SOL INK cleaning cartridges. Using any other cleaning cartridges may result in breakdown.
- Follow the procedure and fill the machine with ink as soon as possible. Leaving the machine alone without ink may damage the print heads.

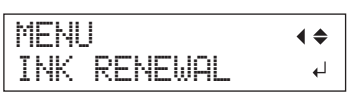
Procedure

Prepare

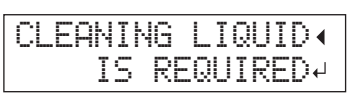
SOL INK cleaning cartridges (3)

1. **Press [MENU].**

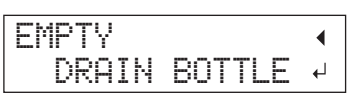
2. **Press [▲] to display the screen shown below.**



3. **Press [ENTER].**



4. **Press [ENTER].**

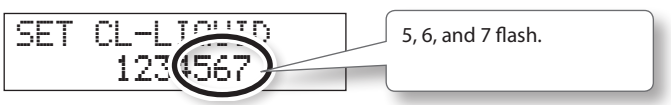


5. Discard the discharged fluid, and then reattach the drain bottle (p. 50).

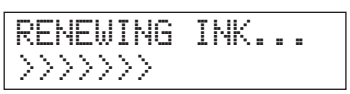
6. Press [ENTER].

7. Open the front cover.

8. Remove the ink cartridges from slots 5, 6, and 7.

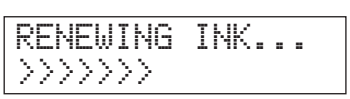


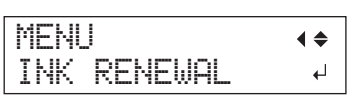
9. Insert SOL INK cleaning cartridges into slots 5, 6, and 7.



10. When the screen shown below appears, remove the SOL INK cleaning cartridges from slots 5, 6, and 7.

11. When the screen shown below appears, insert ink cartridges into slots 5, 6, and 7.





12. Close the front cover.

13. Press [MENU], then [◄] to go back to the original screen.

Cleaning All Print Heads

In this operation, all ink within the printer is discharged and the interior is cleaned. Ink is refilled after cleaning.

This operation requires seven unused SOL INK cleaning cartridges and two unused dummy cartridges. Have these on hand before you start. Have these on hand before you start. For information about purchasing SOL INK cleaning cartridges, contact your authorized Roland DG Corp. dealer.

* The effect on white ink, gloss ink and primer is the same as "When Dot Drop-Out Cannot Be Cleared Up for White Ink, Gloss Ink, or Primer" (p. 65). If you want to perform maintenance only on white ink, gloss ink and primer, see p. 65.

Important notes on this procedure

- All ink is discharged in this operation. Perform this operation only when ink emission failures (such as dot drop-out) cannot be improved even after performing "normal," "medium,"powerful," and "manual" cleaning.

☞ "Periodic Maintenance" (p. 48)

☞ "Medium and Powerful Cleaning" (p. 53)

☞ "Maintenance That Must Be Performed Once a Month or More" (p. 56)

- Be sure to use SOL INK cleaning cartridges. Using any other cleaning cartridges may result in breakdown.
- Fill the machine with ink as soon as possible after cleaning is finished. Leaving the machine alone without ink may damage the print heads.

Procedure

Prepare

SOL INK cleaning cartridges (7),Dummy cartridges (2)

1. **Press [MENU].**

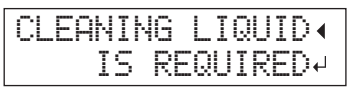
2. **Press [▼] twice to display the screen shown below.**

3. **Press [►].**

4. **Press [▲] several times to display the screen shown below.**

5. **Press [►], [▼], then [▼].**

6. **Press [ENTER].**



7. **Make sure the cleaning liquid is ready.**

8. **Press [ENTER].**

9. **Discard the discharged fluid.**

Be sure to discard the discharged fluid according to "Disposing of Discharged Fluid" (p. 50).

NOTE

The following operations will discharge large amounts of fluid. If you do not empty the drain bottle, the discharged fluid may overflow.

10. **Press [ENTER].**

11. **Next, follow the on-screen instructions to carry out the operations.**

After cleaning has finished, the sub power switches off.

12. **Start filling the machine with ink.**

See "STEP 7: Filling with Ink for the First Time" (First Step Guide) and promptly fill the machine with ink. When filling the machine with ink, use (two) SOL INK cleaning cartridges again.

Cleaning of the print heads surface as an emergency measure

When problems such as dot drop-out are not improved even if cleaning is performed several times, you can clean the print heads surface as an emergency measure. Since the print heads surface (nozzle surface) is an extremely delicate mechanism, make sure to perform the operations carefully and deliberately.

Note that this operation is an emergency measure. Depending on how operations are performed, normal areas may be damaged and symptoms may be worsened. If you have any questions, contact your authorized Roland DG Corp. dealer.

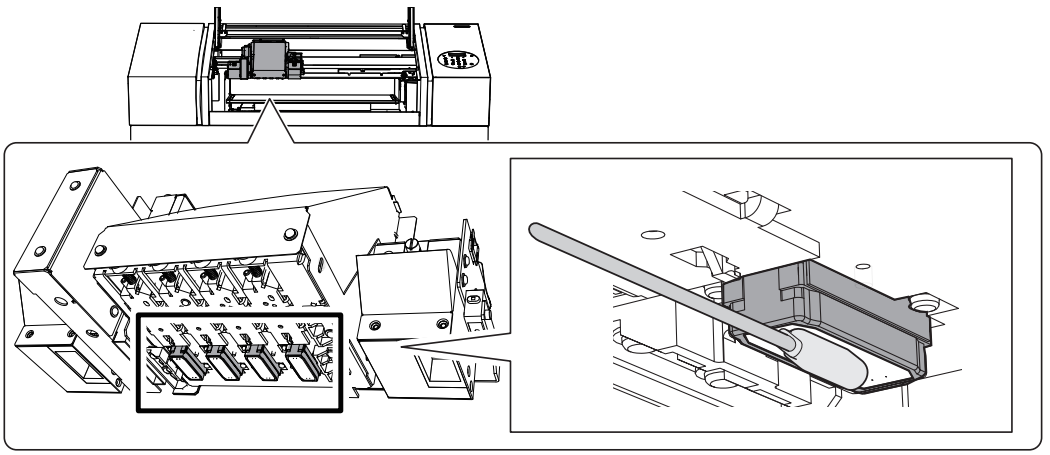
Procedure

1. **Perform "1. Change to the print-head manual-cleaning mode" (p. 57) for "manual cleaning."**

2. **Apply a large amount of cleaning liquid to the cleaning stick.**

3. **Very gently touch the cleaning stick against the head surface (nozzle surface).**

Very softly press the cleaning stick against the print heads so that cleaning liquid soaks into the head nozzle. Never rub the stick or press it forcefully against the head surface.



4. **Exit manual cleaning mode.**

☞ "3. Exit the Manual Cleaning Mode" (p. 60)

5. **Perform a printing test.**

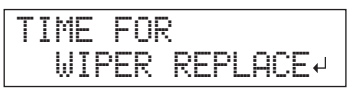
☞ Perform "4. Perform a Printing Test to Check the Results of Cleaning" (p. 60)

Replacing Consumable Parts

Replacing the Wipers

The wipers are components that are used when cleaning the print heads. When the screen displays a message like the one shown below, it is time to replace the items. Replace them with new items.

For information about purchasing wipers, contact your authorized Roland DG Corp. dealer.



When a warning beep sounds during wiper replacement

A warning beep sounds 10 minutes after operation begins. Stop work and close the front cover. Press [ENTER] to exit the wiper replacement menu. After that, restart the procedure from the beginning.

⚠CAUTION **Be sure to perform operations as specified by the instructions above, and never touch any area not specified in the instructions.**

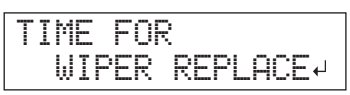
Failure to observe this instruction may cause the machine to move suddenly, resulting in injury.

1. Enter the REPLACE WIPER Mode

NOTE

Be sure to hold the handle of the front cover and open and close it gently.

1. **When the message shown in the figure appears, press [ENTER].**

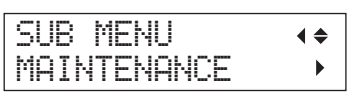


2. **Remove any media.**

3. **Press [MENU].**

4. **Press [▼] twice to display the screen shown below.**

5. **Press [►], then [▲].**



6. **Press [►], then [▼].**

```
MAINTENANCE    ◆▲
REPLACE WIPER  ↵
```

7. **Press [ENTER].**

The print-head carriage moves, and then the screen shown in the figure appears.

```
NOW PROCESSING..
```

```
OPEN FRONT
          COVER
```

8. **Open the front cover.**

```
FINISHED?
                ↵
```

9. **Open the maintenance cover.**

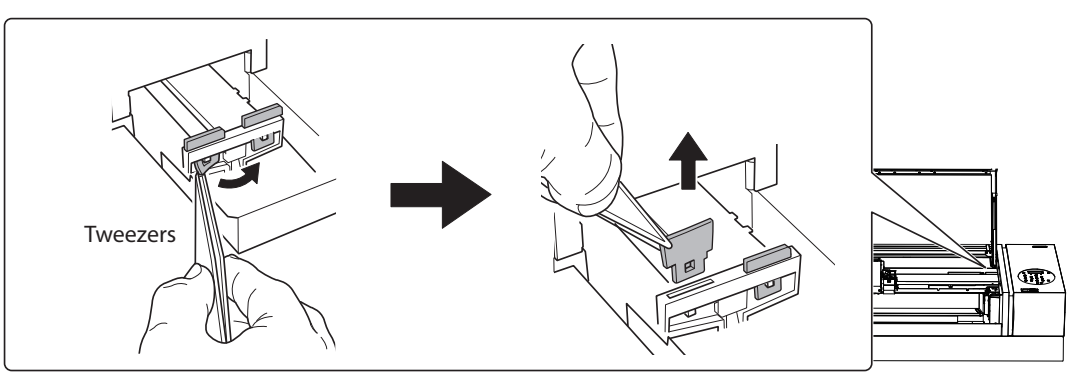
☞ "8. Open the maintenance cover." (p. 58)

10. **Touch the location shown in the figure to discharge any static electricity.**

☞ "9. Touch the location shown in the figure to discharge any static electricity." (p. 58)

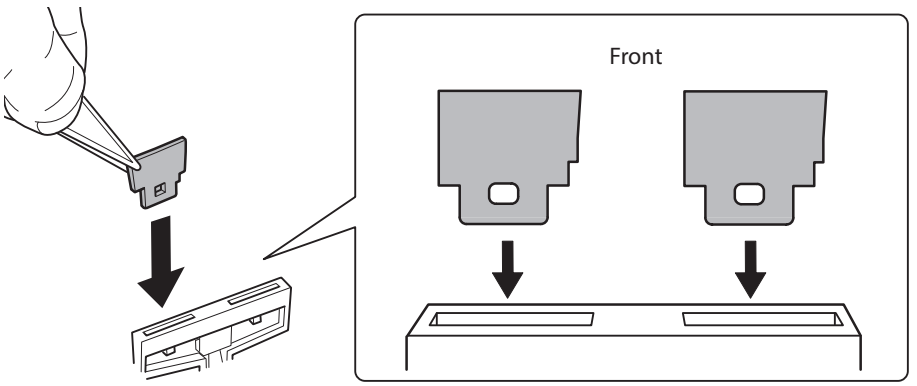
2. Replace the Wipers

1. **Disconnect the old wipers from the hooks, and then pull the wipers up and out.**

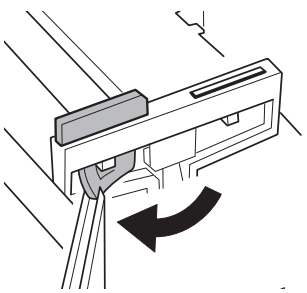


2. **Insert the new wipers.**

Insert the wipers with the orientation shown in the figure.



3. **Attach the wipers to the hooks.**



MEMO

Replace the two wipers at the same time.

3. Exit the REPLACE WIPER Mode

NOTE

Be sure to hold the handle of the front cover and open and close it gently.

1. **Close the front cover.**

```
FINISHED?
                    ↵
```

2. **Press [ENTER].**

```
CLEANING...
>>>>>
```

After exiting the REPLACE WIPER mode, the original screen appears again.

Replacing the Filter

This section explains how to replace the filter used for the mist fan that adjusts the scattering of ink mist. When the screen displays a message like the one shown below, it is time to replace the item. Replace it with a new item.

For information about purchasing filters, contact your authorized Roland DG Corp. dealer.

When a warning beep sounds during filter replacement

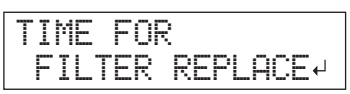
A warning beep sounds 10 minutes after operation begins. Stop work and close the front cover. Press [ENTER] to exit the filter replacement menu. After that, restart the procedure from the beginning.

⚠CAUTION **Be sure to perform operations as specified by the instructions above, and never touch any area not specified in the instructions.**

Failure to observe this instruction may cause the machine to move suddenly, resulting in injury.

1. Enter the REPLACE FILTER Mode

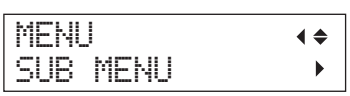
1. **When the message shown in the figure appears, press [ENTER].**



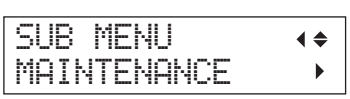
2. **Remove any media.**

3. **Press [MENU].**

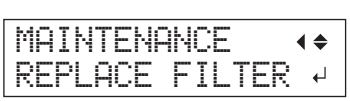
4. **Press [▼] twice to display the screen shown below.**



5. **Press [►], then [▲].**



6. **Press [►], [▼], then [▼].**



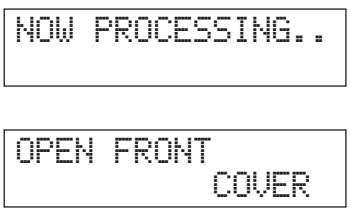
2. Replace the Filter

NOTE

Be sure to hold the handle of the front cover and open and close it gently.

1. **Press [ENTER].**

The print-head carriage moves, and then the screen shown in the figure appears.



2. **Open the front cover.**

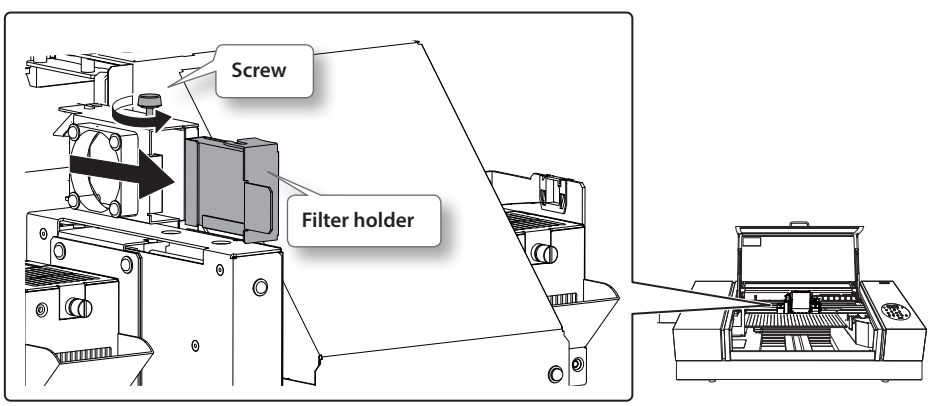
3. **Open the maintenance cover.**

☞ "8. Open the maintenance cover." (p. 58)

4. **Touch the location shown in the figure to discharge any static electricity.**

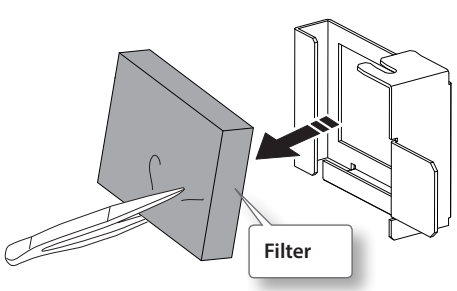
☞ "9. Touch the location shown in the figure to discharge any static electricity." (p. 58)

5. **Loosen the screw and pull out the filter holder of the carriage mist fan.**

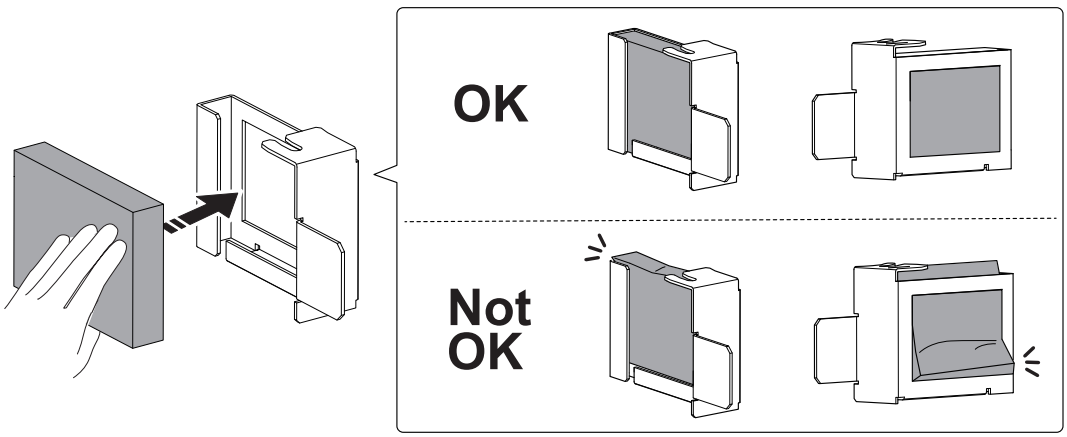


6. **Remove the old filter.**

Use a pair of tweezers to remove the old filter. Wipe away any buildup of ink around the fan module with a cloth.

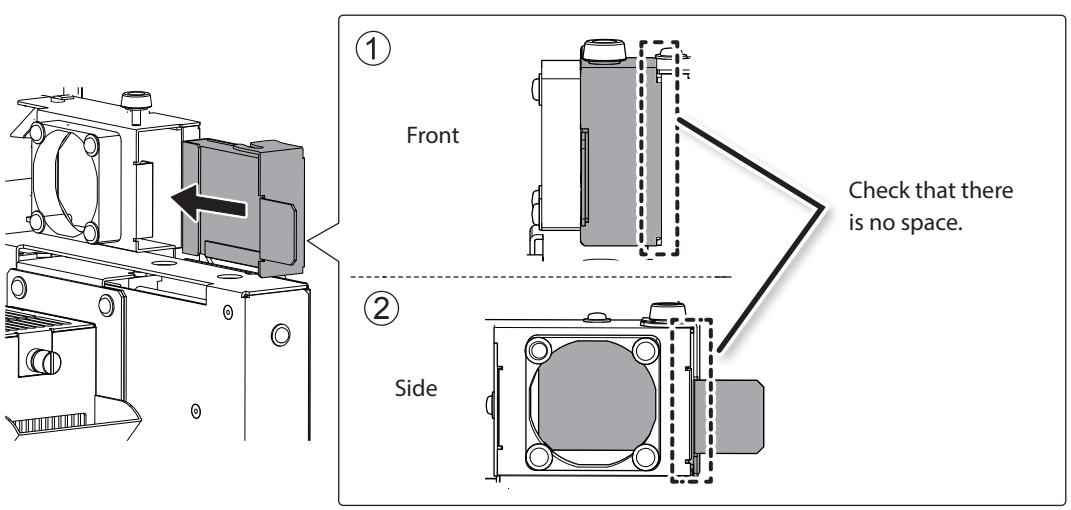


7. **Insert a new filter.**



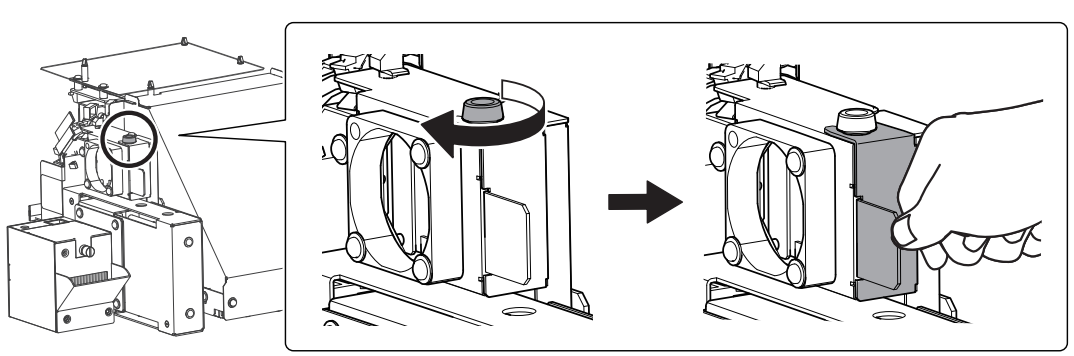
8. **Insert the filter holder of the carriage mist fan.**

Insert the holder firmly so that there is no space in the positions indicated by (1) and (2).



9. **Tighten the screw.**

Pull the filter holder to check that it has been securely inserted.



10. **Attach the maintenance cover.**

☞ Perform the steps in the reverse order as shown in "8. Open the maintenance cover." (p. 58)

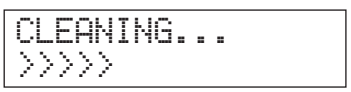
3. Exit the REPLACE FILTER Mode

NOTE

Be sure to hold the handle of the front cover and open and close it gently.

1. **Close the front cover.**

2. **Press [ENTER].**



After exiting the REPLACE FILTER mode, the original screen appears again.

When Moving the Unit

Procedure from Preparing to Move to Reinstallation

To move the machine, you must completely drain all ink inside the machine and secure the print heads in place with packing materials to protect them. Attempting to move the machine without first doing this may result in damage to internal components due to leaking ink or damage to the print heads.

This operation requires seven unused SOL INK cleaning cartridges. Have these on hand before you start.

Important notes on moving

- Be sure to use SOL INK cleaning cartridges. Using any other cleaning cartridges may result in breakdown.
- Once the preparations for moving are complete, move the machine and fill it with ink with as little delay as possible. Leaving the machine alone without ink may damage the print heads.
- When moving the machine, keep it at a temperature from 5 to 40˚C (41 to 104˚F) and at a humidity from 20 to 80%RH (with no condensation). Failure to do so may result in breakdown.
- Handle the machine with care when moving it, keeping it level (not tilted at an angle) and preventing it from striking other objects.
- For transportation of this machine, contact your authorized Roland DG Corp. dealer.

Procedure

Prepare

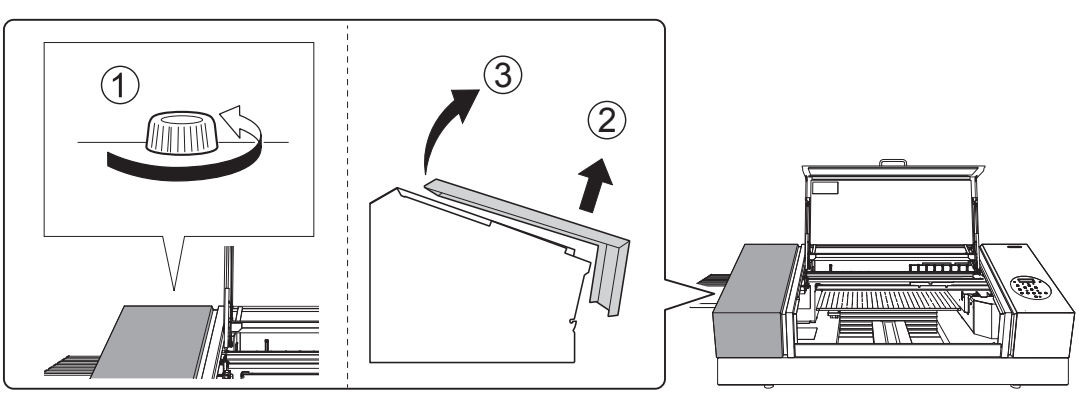
SOL INK cleaning cartridges (7)

1. Clean the print heads.

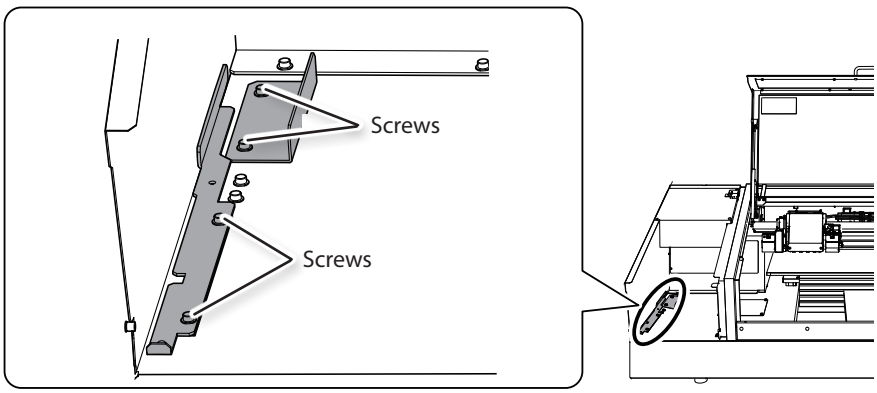
☞ "Cleaning All Print Heads" (p. 67)

2. If the drain bottle and the panel cover have been removed, attach them.

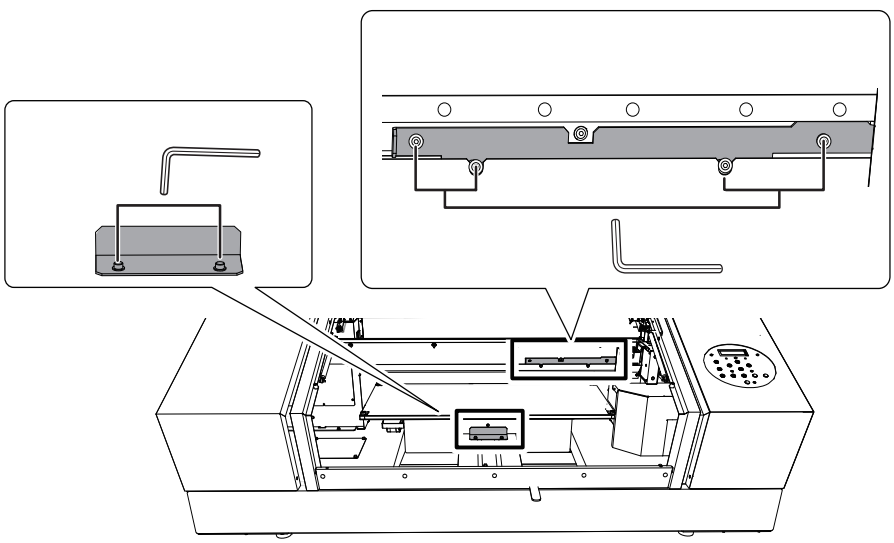
3. Open the maintenance cover.



4. **Remove the stored retainers.**



5. **Secure the print heads and the flat table in place.**



The machine is now ready to be moved.

6. **Attach the maintenance cover.**

☞ Perform the steps in the reverse order as shown in "8. Open the maintenance cover." (p. 58)

7. **Move the machine as soon as possible.**

⚠WARNING **Unloading and placement are operations that must be performed by 6 persons or more.**

Tasks that require undue effort when performed by a small number of persons may result in physical injury. Dropping this machine may result in injury.

8. **After moving the machine, immediately reinstall it and fill it with ink.**

See "STEP 7: Filling with Ink for the First Time" (First Step Guide) and promptly fill the machine with ink. When filling the machine with ink, use (two) SOL INK cleaning cartridges again.

Chapter 3
Appendix

Menu List 80
Main Menu 80
Function Menu 83
Language and Unit Menu 83

Read This Section Whenever You Face a Problem (FAQ) 84
Printer Does Not Run 84
Attractive Printing Is Impossible 86
The Print Heads Do Not Move 88

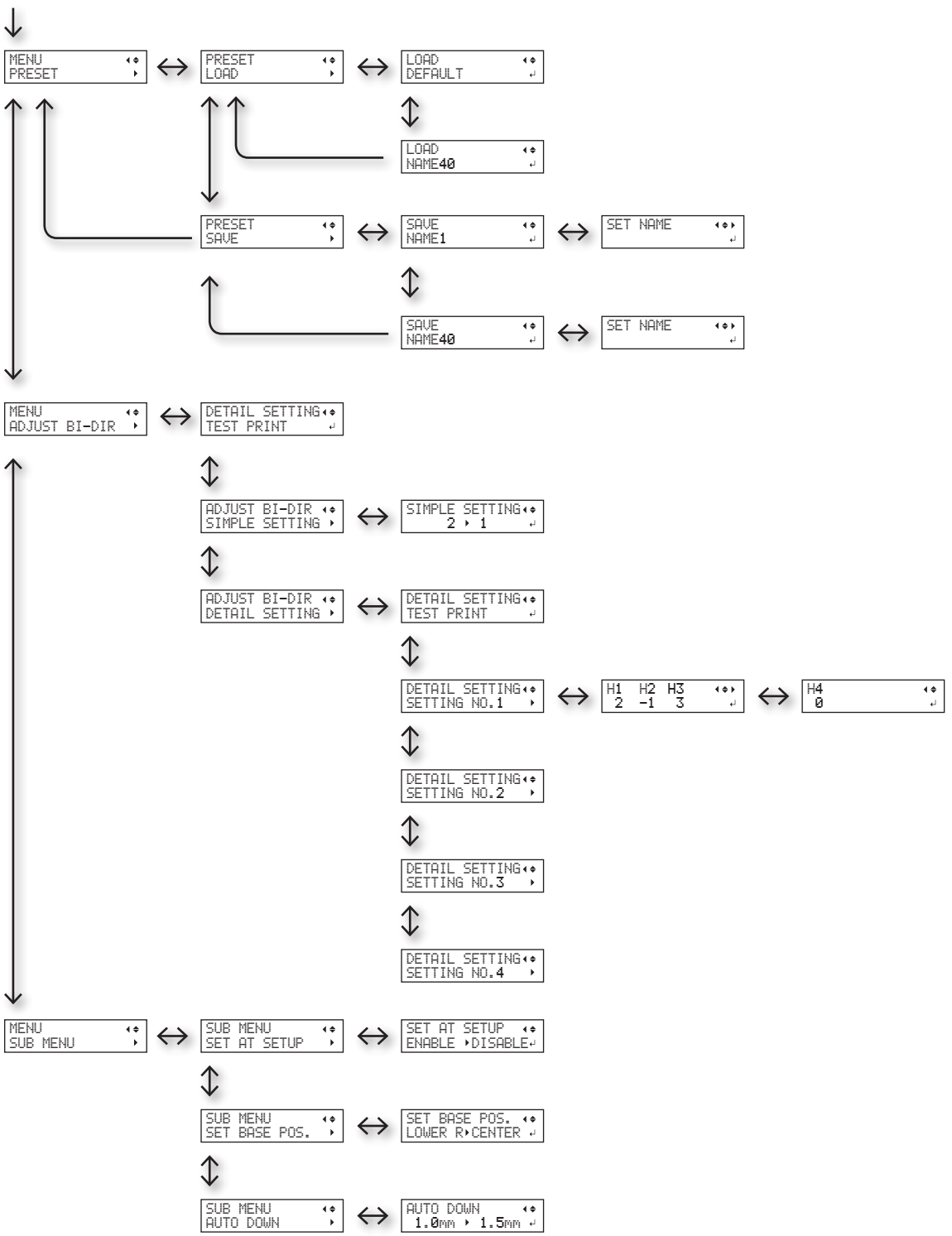
Handling Messages and Error Messages 89
A Message Appears 89
An Error Message Appears 91

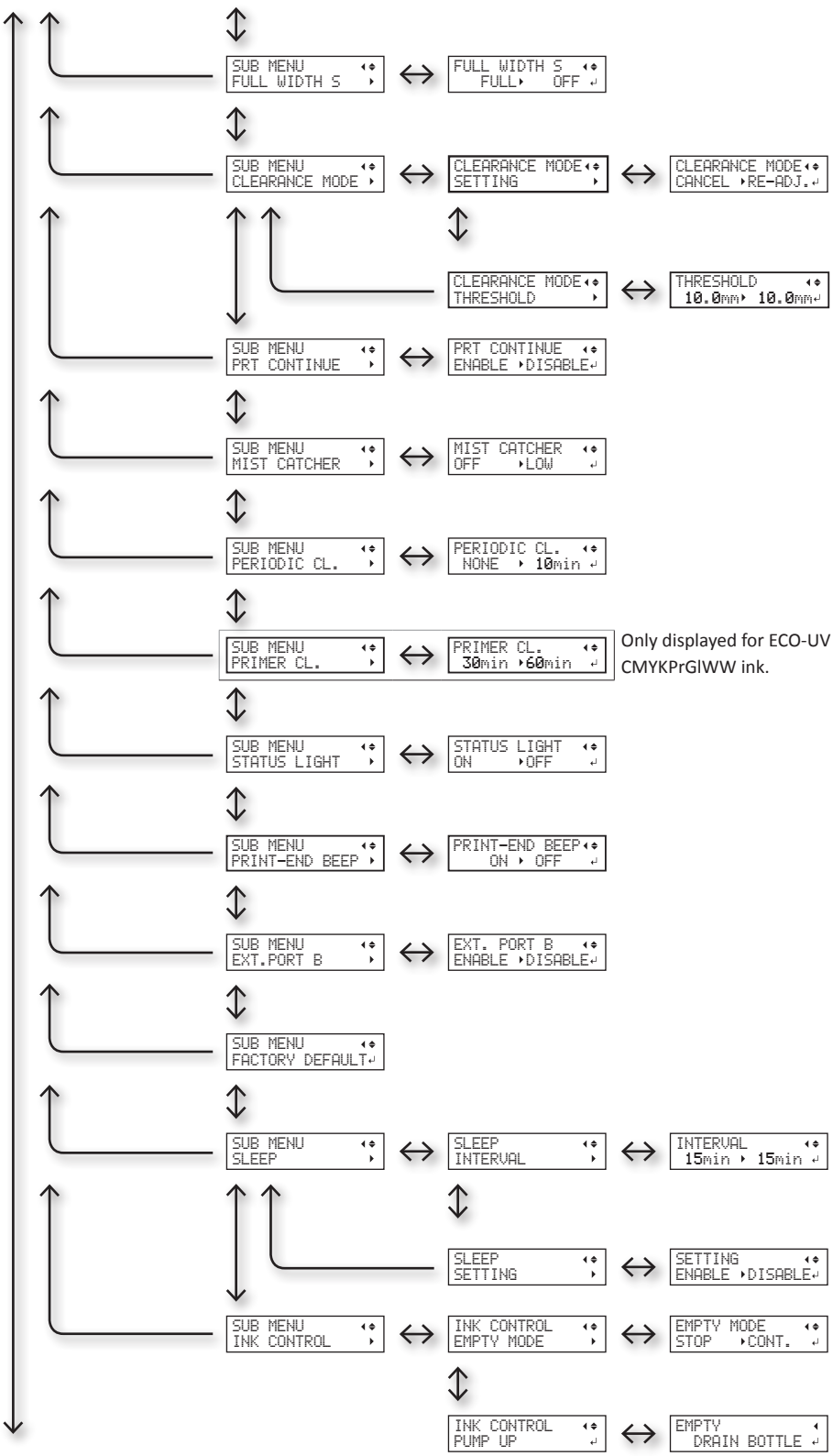
Main Specifications 93
Dimensional Drawings 93
Locations of the Power Rating and Serial Number Label 94
Specifications and Diagrams for the External Expansion Terminal 94
Specification Table 97

Menu List

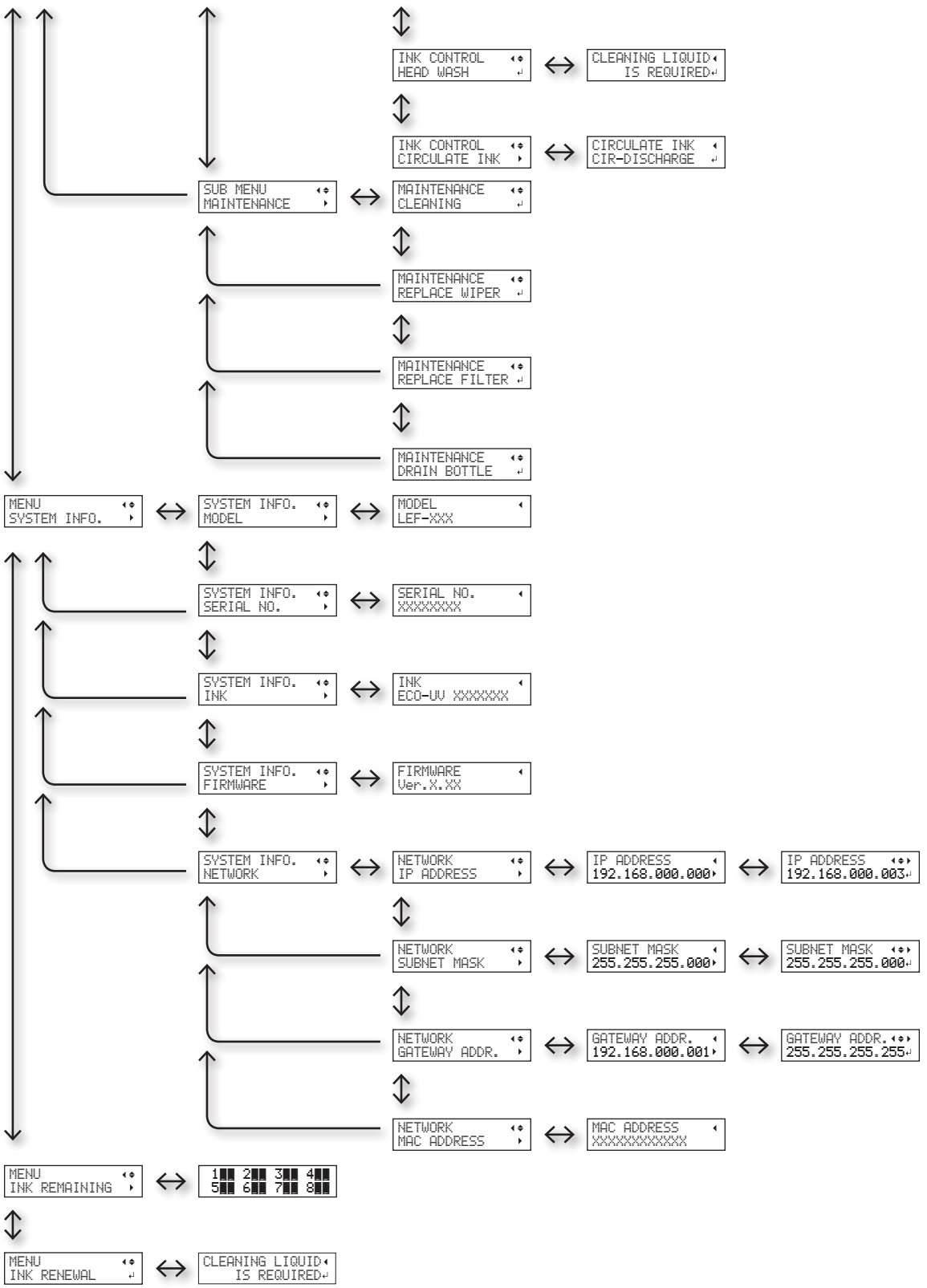
Main Menu

Press [MENU].



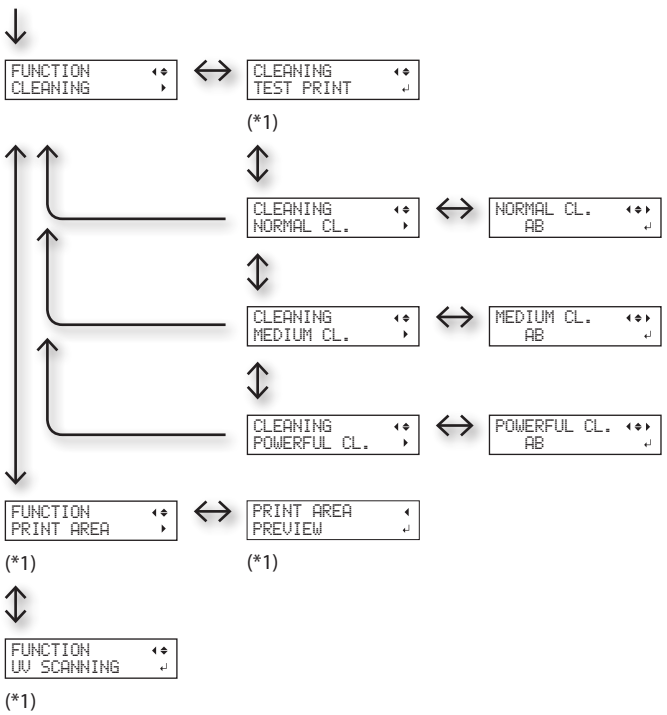


Only displayed for ECO-UV CMYKPrGlWW or ECO-UV4 CMYKPrGlWW ink.


INK CONTROL
HEAD WASH
CLEANING LIQUID
IS REQUIRED
INK CONTROL
CIRCULATE INK
CIRCULATE INK
CIR-DISCHARGE
SUB MENU
MAINTENANCE
MAINTENANCE
CLEANING
MAINTENANCE
REPLACE WIPER
MAINTENANCE
REPLACE FILTER
MAINTENANCE
DRAIN BOTTLE
MENU
SYSTEM INFO.
SYSTEM INFO.
MODEL
MODEL
LEF-XXX
SYSTEM INFO.
SERIAL NO.
SERIAL NO.
XXXXXXXX
SYSTEM INFO.
INK
INK
ECO-UV XXXXXXX
SYSTEM INFO.
FIRMWARE
FIRMWARE
Ver.X.XX
SYSTEM INFO.
NETWORK
NETWORK
IP ADDRESS
IP ADDRESS
192.168.000.000
IP ADDRESS
192.168.000.003
NETWORK
SUBNET MASK
SUBNET MASK
255.255.255.000
SUBNET MASK
255.255.255.000
NETWORK
GATEWAY ADDR.
GATEWAY ADDR.
192.168.000.001
GATEWAY ADDR.
255.255.255.255
NETWORK
MAC ADDRESS
MAC ADDRESS
XXXXXXXXXXXX
MENU
INK REMAINING
1 2 3 4
5 6 7 8
MENU
INK RENEWAL
CLEANING LIQUID
IS REQUIRED

Function Menu

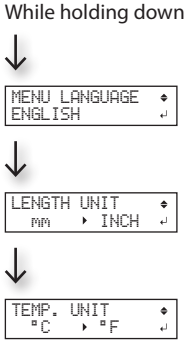
Press [FUNCTION].



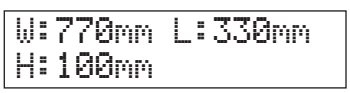
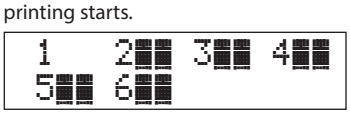
(*1) Not displayed if the setup of media is not completed (when [SETUP] is off or flashing).

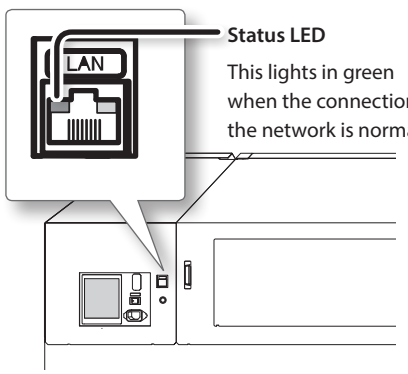
Language and Unit Menu

While holding down [MENU] , switch on the sub power.



Printer Does Not Run

Problem	Items to check	Action	Page
The printer unit does not run	Is the power switched on?	Switch on the printer's main power, and then press the sub power switch and make sure the sub power switch lights.	• "STEP 1: Turning the Power On" (First Step Guide)
	Is [SETUP] lit?	If [SETUP] is not lit, the printer cannot print. Configure the settings all the way to the setting of the print area, close the front cover, and then press [SETUP].	• "1. Loading Media (Media Setup)" (First Step Guide)
	Are any covers open?	Close the front cover, panel cover, and maintenance cover.	—
	Is the top menu displayed?	If the top menu is not displayed, printing will not start even when data is sent from the computer. To go to the top menu, press [MENU], and then press [◄]. 	—
	Is [PAUSE] lit?	When [PAUSE / VACUUM] is lit, operation is paused. To resume, press [PAUSE / VACUUM]. [PAUSE/ VACUUM] turns off and printing resumes.	• "Pausing or Canceling Printing" (First Step Guide)
	Has ink run out?	When data is sent while the screen shown in the figure is displayed, a message appears and a warning beep sounds. At the same time, operation pauses. When the ink cartridge is replaced with a new one, printing starts. 	• "How to Replace Ink Cartridges" (p. 62)
	Is a message displayed on the screen?	• "A Message Appears" (p. 89) • "An Error Message Appears" (p. 91)	
	Are the cables connected?	Connect the cables securely.	• "STEP 5: Connecting the Cables" (First Step Guide)

Problem	Items to check	Action	Page
The printer unit does not run	Is the Status LED lit?	If the Status LED for the Ethernet connector is not lit, the network connection has not been made correctly. Check whether the network routing is appropriate. Try connecting the computer and the machine to the same hub, or connecting them directly using a crossover cable. If this makes it possible to perform printing, it means the problem is in the network itself.  **Status LED** This lights in green when the connection to the network is normal.	—
	Are the network settings correct?	If printing is not possible even though the Status LED is lit, make sure the IP address and other settings are appropriate. The settings on both the machine and the computer must be appropriate. Redo the settings, checking to ensure that the IP address does not conflict with the IP address for another device on the network, that the port setting for the software RIP specifies the IP address set on the machine, that the settings have no typing errors, and for other such problems.	• "STEP 8: Network Settings" (First Step Guide) • "Viewing Information about the System of This Machine" (p. 39)
	Did the software RIP exit abnormally?	Make sure the software RIP is running correctly, and then switch the sub power switch off and back on.	• "Roland VersaWorks Dual Installation Guide"
	Is the temperature of the room too low?	Use the machine in an environment with an ambient temperature of 20 to 32°C (68 to 90°F).	—
The flat table does not move	Is something stuck in one of the movable axes (X, Y, or Z)?	Check whether something has become caught and is interfering with operation.	—
	Are any covers open?	Close the front cover, panel cover, and maintenance cover during startup and printing. In the interest of safety, the flat table does not move if any cover is open during startup or printing.	—
The head gap sensor does not detect the media	Is something covering the head gap sensor or has it attracted dust?	Check whether something is interfering with the head gap sensor's detection.	—

Attractive Printing Is Impossible

Problem	Items to check	Action	Page
Printed results are coarse or contain horizontal stripes	Do the print heads show dot drop-out?	Carry out a printing test and make sure no dot drop-out occurs. If dot drop-out is present, perform cleaning of the print heads.	• "STEP 3: Printing Tests and Normal Cleaning" (First Step Guide) • "Medium and Powerful Cleaning" (p. 53) • "When Dot Drop-Out Cannot Be Cleared Up for White Ink, Gloss Ink, or Primer" (p. 65) • "Cleaning All Print Heads" (p. 67)
	Is the print mode suitable?	Try an appropriate print mode. Specific combinations of media and print mode may cause the colors to be uneven, and results may also vary greatly depending on the settings of your software RIP (such as the color-profile selection). Select settings appropriate for the media you are using.	—
	Is the printer installed in a level and stable location?	Never install the machine in a location where it is tilted or where it may wobble or experience vibration. These factors may lead to dot drop-out or reduced printing quality.	—
	Is the printer installed in a location that is not exposed to direct sunlight?	Never install the machine in a location that is exposed to direct sunlight. Doing so may result in dot drop-out or reduced printing quality and may even result in malfunctions.	—
	Is the media loaded and set up correctly?	If the media is not loaded correctly, printing may be adversely affected. Make sure the media is loaded and set up correctly.	• "1. Loading Media (Media Setup)" (First Step Guide) • "2. Setting the Height of the Media Automatically" (First Step Guide) • "Setting the Height of the Media Manually" (p. 9) • "Changing the Print Area" (p. 13)

Problem	Items to check	Action	Page
Colors are unstable or uneven	Did you shake the ink cartridges before installing them?	Shake new ink cartridges 50 times (about 15 seconds) before you install them.	• "3. Insert the Ink Cartridges for the Respective Colors" (First Step Guide)
	Has the printer been used for a long time?	If, during use, the white ink concentration becomes low, use the [CIRCULATE INK] function.	• "Restoring the White Ink Concentration" (p. 64)
	Was printing paused partway through?	When printing is paused, the coloring at the seam may be altered when printing resumes. Avoid pausing printing. With the factory default settings, printing pauses when an ink cartridge becomes empty. Printing may also pause when data is not sent from the computer quickly enough. We recommend not performing any other tasks with the computer while printing is in progress.	—
	Is the printer installed in a level and stable location?	Never install the machine in a location where it is tilted or where it may wobble or experience vibration. These factors may lead to dot drop-out or reduced printing quality.	—
	Are the operating parameters set to appropriate values?	Depending on the setting of the [PERIODIC CL.] menu, uneven colors may occur. If the setting has been changed, try restoring it to its default value.	• "Preventing Soiling and Dot Drop-Out by Cleaning during Printing" (p. 24)
	Is the printer being used in a location subject to severe changes in the operating environment?	Large fluctuations in temperature or humidity while printing is in progress may cause the colors to change partway through printing. When printing, use the machine in a location where the temperature and humidity are stable.	—
	Are the settings for the [PRESET] menu item appropriate?	If the settings selected with the [PRESET] menu item are not suitable for the type of media, printing may be adversely affected. Choose settings optimized to the media you are using.	• "Saving Frequently Used Media Sizes (Preset Function)" (p. 6)
The media becomes soiled when printed	Are the print heads dirty?	The following may cause ink to drip on the media during printing. • Buildup of fibrous dust (lint) around the print heads • Ink transferred to the print heads due to rubbing against the media If this happens, perform manual cleaning. We recommend carrying out periodic cleaning of the heads.	• "Manual Cleaning" (p. 56)
	Is the humidity too low?	Use the machine in an environment with a humidity of 35 to 80%RH (no condensation).	—

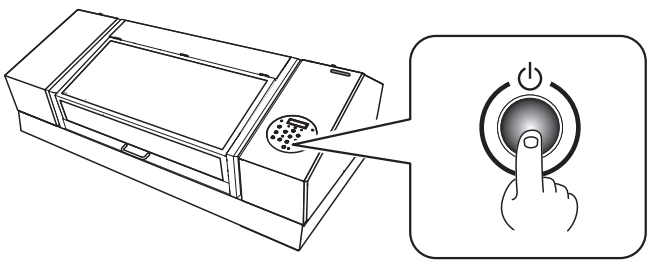
The Print Heads Do Not Move

If the print-head carriage stops anywhere other than the home position (the right side of the main unit), take action immediately to prevent the heads from drying out.

What to Do First

Switch the sub power off, then back on again.

If the print-head carriage moves to the home position (the right side of the main unit), the operation has ended successfully.



If the Heads Still Do Not Move

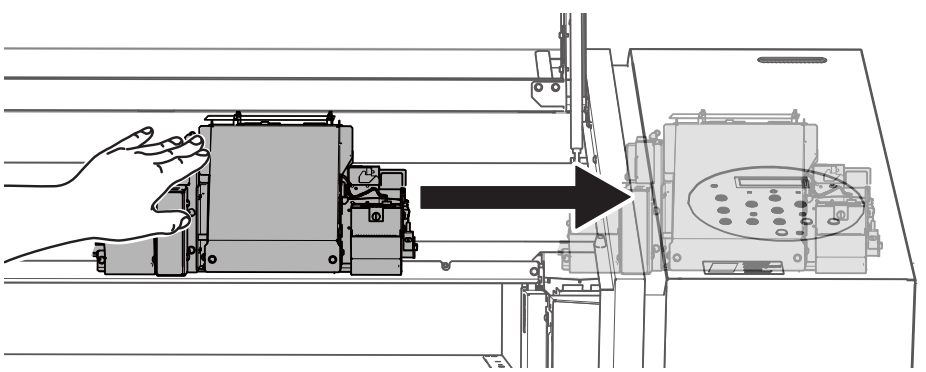
Try switching off the main power, then switching on the main power again, followed by the sub power.

If the heads still do not move, carry out the following emergency response measure, and then contact your authorized Roland DG Corp. dealer.

Procedure

1. **Turn off the main power switch.**
2. **Open the front cover.**
3. **Gently move the print-head carriage to the home position by hand.**

   Stop when you hear the print-head carriage click into place.



4. **Close the front cover.**

Handling Messages and Error Messages

A Message Appears

These are the main messages that appear on the machine's display to prompt correct operation. They do not indicate any errors. Follow the prompts and take action accordingly.

Message	Explanation	Action	Page
1 2 ■3 ■ 4 ■ 5 ■ 6 ■ 7 ■	Only a small amount of ink remains.	Replace the ink cartridge indicated by the flashing number with a new cartridge.	—
PRESS THE POWER KEY TO CLEAN	This message appears when the machine has not been used for approximately a month.	Turn on the sub power once a month.	• "About Maintenance" (p. 46)
CIRCULATING INK	White ink is being circulated inside the machine. This action is automatically performed to clear the white ink precipitation.	Wait until the displayed message changes.	—
FINISHED PRINT	Printing is finished.	Press [ENTER].	• "Continuously Outputting Print Data" (p. 30)
SET CARTRIDGE	These messages appear during ink cartridge replacement and in similar situations.	Insert the ink cartridge indicated by the flashing number.	—
REMOVE CARTRIDGE		Remove the ink cartridge indicated by the flashing number.	—
CLOSE THE COVER DRY-UP MAY DAMAGE THE HEAD	The front cover, panel cover, or maintenance cover is open.	Close the front cover, panel cover, and maintenance cover. If the message is left displayed, the print heads may dry out, resulting in malfunction.	—
CLOSE THE FRONT COVER DRY-UP MAY DAMAGE THE HEAD	The front cover is open.		—
CLOSE THE PANEL COVER DRY-UP MAY DAMAGE THE HEAD	The panel cover is open.		—
CLOSE THE MAINTENANCE COVER DRY-UP MAY DAMAGE THE HEAD	The maintenance cover is open.		—
SET CL-LIQUID	These messages appear at times such as during head cleaning.	Insert the SOL INK cleaning cartridge into the slot indicated by the flashing number.	—
REMOVE CL-LIQUID		Remove the SOL INK cleaning cartridge indicated by the flashing number.	—

Message	Explanation	Action	Page
READJUST TABLE HEIGHT	During printing, the media came into contact with the gap sensor, but [CLEARANCE MODE] is set to [RE-ADJ.], so the media height was reset automatically and printing was performed to completion.	After verifying the message, press [ENTER].	• "Setting the Height of the Media Manually" (p. 9) • "Changing the Print Area" (p. 13) • "Continuing Printing Even If Media Comes into Contact with the Head Gap Sensor" (p. 28)
		If this error message is repeatedly displayed, consider changing the threshold value in clearance mode.	• "Determining the Maximum Value (Threshold) for Automatic Height Adjustment" (p. 29)
INSTALL DRAIN BOTTLE	Check whether the drain bottle is installed.	Install the drain bottle, and then press [ENTER].	—
EMPTY DRAIN BOTTLE	This appears when a certain amount of discharged fluid collects in the drain bottle.	When this message is displayed, discard the discharged fluid.	• "Disposing of Discharged Fluid" (p. 50)
SETUP MEDIA	This message appears when an attempt to perform a printing test was made while no media was loaded.	Reload the media and press [SETUP].	—
TIME FOR FILTER REPLACE	It is time to replace the filter.	After verifying the message, press [ENTER].	• "Replacing the Filter" (p. 73)
TIME FOR MAINTENANCE	It is time to perform manual cleaning.		• "Manual Cleaning" (p. 56)
TIME FOR WIPER REPLACE	It is time to replace the wipers.		• "Replacing the Wipers" (p. 70)

An Error Message Appears

This section describes the error messages that may appear on the machine's display and how to take action to remedy the problem. If the action described here does not correct the problem or if an error message not described here appears, contact your authorized Roland DG Corp. dealer.

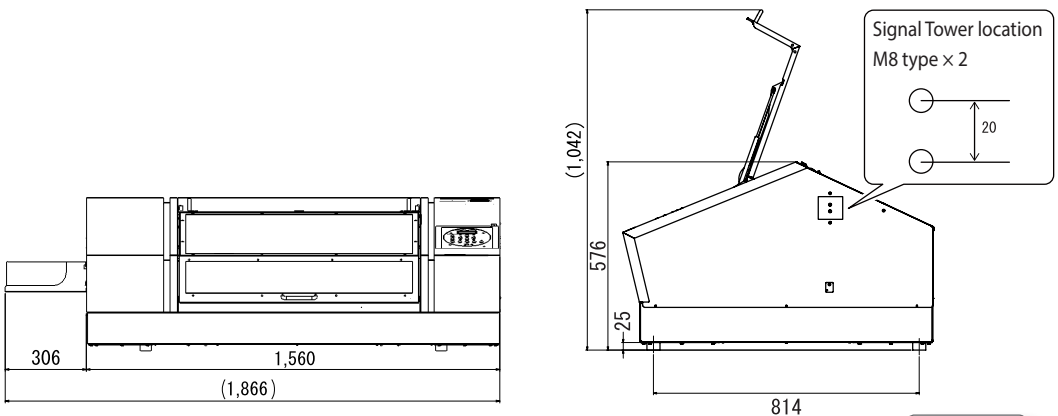
Message	Explanation	Action
AREA TOO SMALL CONTINUE?	The size of the data is larger than the print area of the loaded media	To continue printing without correcting this, press [ENTER]. The portion extending beyond the print area will not be printed. To stop printing, stop sending data from the computer and hold down [SETUP] for one second or longer. Make the print area wider by replacing the media with a larger piece of media or by changing the position of the media, and then send the data again.
PRINT AREA TOO SMALL	The size of the test print is larger than the print area of the loaded media.	Press any key on the operation panel to go back to the main menu. Make the print area wider by replacing the media with a larger piece of media or by changing the position of the media, and then send the data again.
CANCELED FOR TABLE HEIGHT	The media was detected in a position (at a height) at which it hits the print heads.	Press any key (except the sub power switch) on the operation panel to make the message disappear. If the setup of the media has been completed, the setup is canceled. Redo the setup. ☞ "1. Loading Media (Media Setup)" (First Step Guide) ☞ "2. Setting the Height of the Media Automatically" (First Step Guide) ☞ "Setting the Height of the Media Manually" (p. 9) ☞ "Changing the Print Area" (p. 13) ☞ "Continuing Printing Even If Media Comes into Contact with the Head Gap Sensor" (p. 28)
CHECK TABLE HEIGHT		Remove the media (remove the cause of the failure) or change its position. After verifying the message, press [ENTER]. ☞ "1. Loading Media (Media Setup)" (First Step Guide) ☞ "2. Setting the Height of the Media Automatically" (First Step Guide) ☞ "Setting the Height of the Media Manually" (p. 9) ☞ "Changing the Print Area" (p. 13) ☞ "Continuing Printing Even If Media Comes into Contact with the Head Gap Sensor" (p. 28)
TEMPERATURE IS TOO HIGH *°C**	The temperature of the location where the machine is installed has risen above the ambient temperature at which the machine can operate.	Operation cannot be continued. Turn off the sub power. The displayed temperature is the current ambient temperature of the installation location. Bring the installed location to a temperature at which operation is possible (20 to 32°C [68 to 90°F]), and then turn on the power.

Message	Explanation	Action
SERVICE CALL ****	An unrecoverable error occurred or part replacement that must be performed by a service technician is required.	Note the number displayed on the display screen, and then switch off the sub power. After you switch off the power, inform your authorized Roland DG Corp. dealer of the number that appeared on the display screen.
TEMPERATURE IS TOO LOW **°C	The temperature of the location where the machine is installed has fallen below the ambient temperature at which the machine can operate.	Operation cannot be continued. Turn off the sub power. The displayed temperature is the current ambient temperature of the installation location. Bring the installed location to a temperature at which operation is possible (20 to 32°C [68 to 90°F]), and then turn on the power.
DATA ERROR CANCELING...	Printing was stopped because a problem was found in the received data.	Operation cannot be continued. Check whether there is an error in the data. Check for a problem with the connector cable or the computer, and then redo the operations starting from the setup of the media.
WRONG CARTRIDGE	A cartridge that cannot be used was installed.	Remove the ink cartridge to clear the error. Use an ink cartridge of the specified type.
WRONG HEAD IS INSTALLED	An unusable print heads has been installed.	Turn off the sub power. After turning the power off, contact your authorized Roland DG Corp. dealer.
CLEAR EXTERNAL DEVICE ERROR	An error occurred on an external device connected to the machine.	Clear the error on the external device. If the message is left displayed, the print heads may dry out, resulting in malfunction.
AVOIDING DRY-UP TURN POWER OFF	The print heads were forced to the home position to prevent them from drying out.	Operation cannot be continued. Switch the sub power off, then back on. Opening the front cover while printing is in progress causes an emergency stop. Never allow the print heads to remain in this state. If no external device is connected to expansion terminal B, set "EXT. PORT B" to "DISABLE."
MOTOR ERROR TURN POWER OFF	A motor error occurred.	Operation cannot be continued. Turn off the sub power. Next, eliminate the cause of the error, and then immediately switch on the sub power. If the machine is left with the error uncorrected, the print heads may dry out and become damaged. This error may be caused by the media being set incorrectly.
CANCELED FOR MOTOR PROTECTION	An attempt was made to perform one of the following operations (menu items) immediately after performing another one. • PUMP UP • HEAD WASH • INK RENEWAL • POWERFUL CL. • Filling with ink	Press any key other than the sub power switch to clear the error message. When performing these menu items sequentially, this error message may appear in order to prevent malfunctions due to the overheating of the pump motor. In this case, leave the machine alone for approximately 10 minutes before resuming operation.

Main Specifications

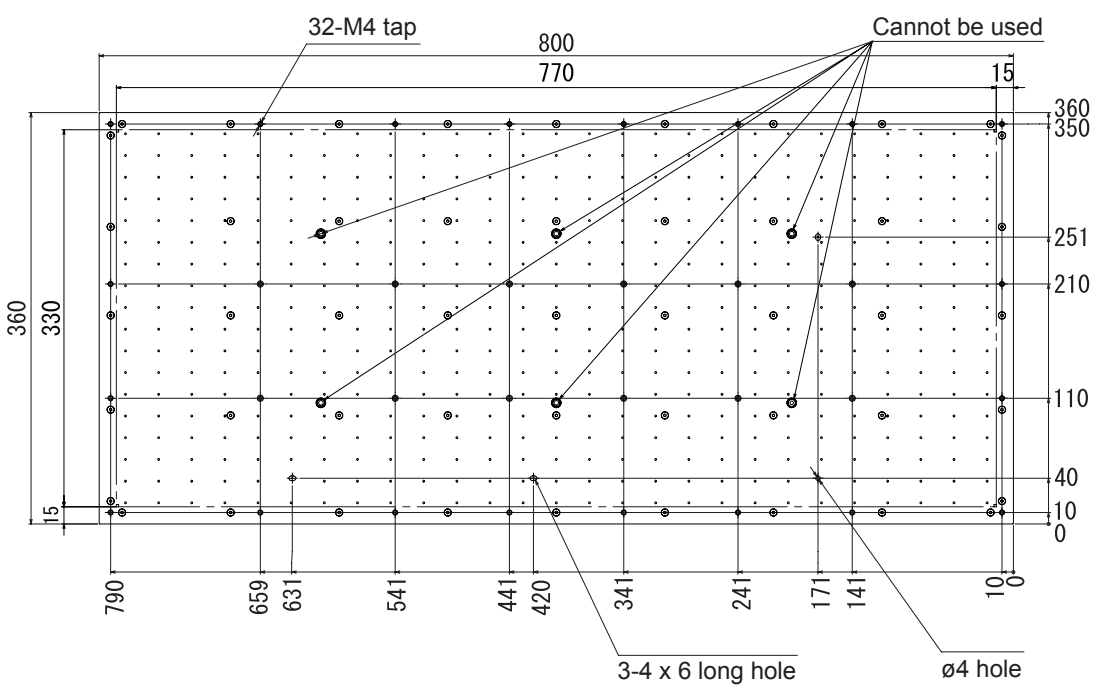
Dimensional Drawings

Dimensions



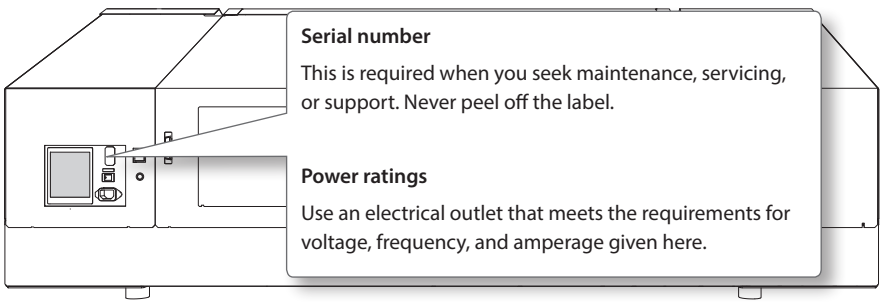
Unit: mm

Flat Table Dimensions



Unit: mm

Locations of the Power Rating and Serial Number Label



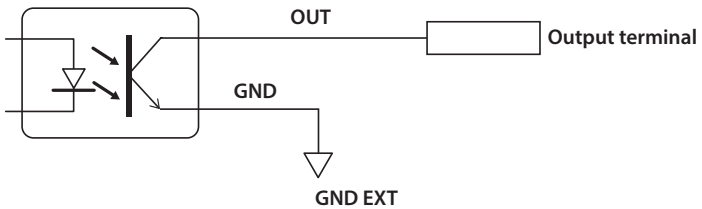
Specifications and Diagrams for the External Expansion Terminal

External Controller Connector

- General-purpose I/O interface
- Connector: 25-pin D-SUB connector
- Pin assignment

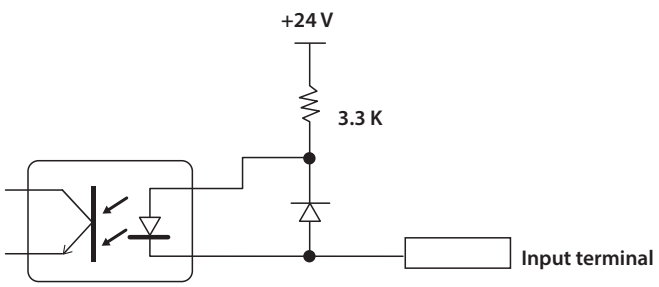
Pin number	IN/OUT	Signal name	Overview/function
1	OUT	READY	Setup is complete and printing is possible.
2	OUT	BUSY	Printing.
3	OUT	PAUSE	Printing is paused.
4	OUT	FINISH	Output when switching between the READY and BUSY signals.
5	OUT	ERROR	MotorError, ProtectMotorError, or temperature error.
6	OUT	Reserve1	Not used.
8	IN	ERROR	Informs the printer of the error status of the external device. An emergency stop occurs when the printer receives the ERROR signal.
9	IN	ENTER	The printer receives the input of the [ENTER] key from an external source.
10	IN	Reserve1	Not used.
11	IN	Reserve2	Not used.
7, 12, 24	IN	N.C	Not used.
13, 25	—	+24V EXT	External power supply input. Supply +24 V.
14-23	IN	GND EXT	External power supply ground.

Output specifications



Output: Open collector
Output capacity: 10 mA max.

Input specifications

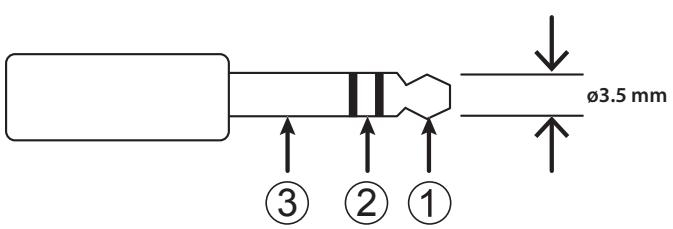


Power supply voltage: 24 V ± 10%
Input current: 10 mA or less

Connector for an External Deodorizer

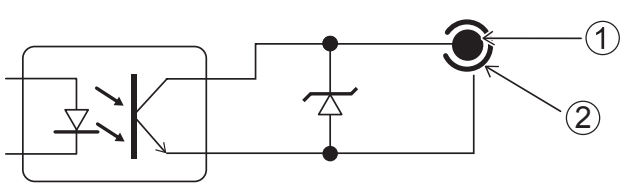
Compliant plug

Only use three-contact type plugs of the size shown below.



Output specifications

Connect to (1) and (2) of the compliant plug described above. Ensure that the current capacity is 10 mA or less. The output turns on during printing and turns off when printing finishes.



Output: Open collector
Output capacity: 10 mA max.

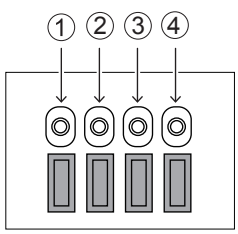
Signal Tower Connector

Pin assignment

CN	Signal name	Description
(1)	+24 V	Power supply for the light, 50 mA max.
(2)	ERROR	MotorError, ProtectMotorError, or temperature error.
(3)	READY	Setup is complete and printing can start. When flashing, printing is paused.
(4)	BUSY	Printing.

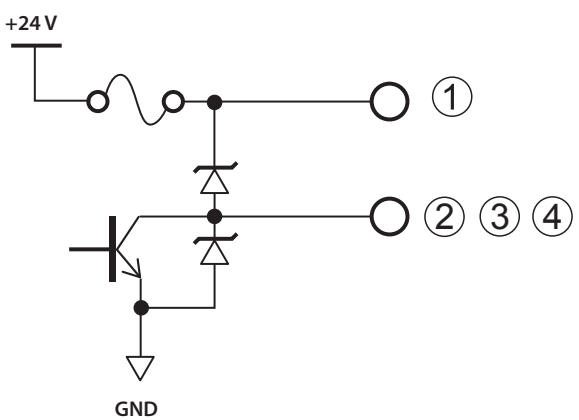
* Off: This indicates the standby status, warning status, or a similar status. The machine cannot start printing when it is in this status.

Connector assignment



Output specifications

Connect the lamp between the 24 V power supply (1) and (2), (3), and (4).



Power supply: +24 V (150 mA)
Output: Open collector
Output capacity: 50 mA max.

Specification Table

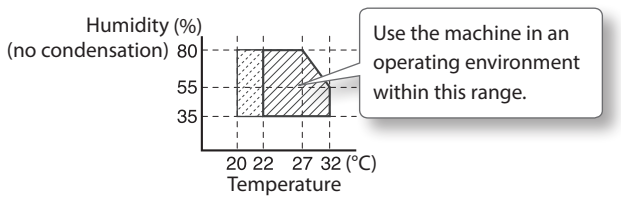
		LEF-300
Printing technology		Piezoelectric inkjet
Acceptable media	**Width**	Max. 800 mm (31.5 in.)
	Length	Max. 360 mm (14.2 in.)
	Thickness	Max. 100 mm (3.94 in.)
	Weight	Max. 8 kg (18 lb.)
Maximum printing width/printing length		Max. 770 (width) × 330 (L) mm (30.3 × 13 in.)
Ink cartridges	**Type**	ECO-UV (EUV and EUV4) 220 cc cartridge ECO-UV (EUV and EUV4) 500 cc cartridge (White ink and primer are not available in 500 cc cartridges.)
	Colors	Six colors (cyan, magenta, yellow, black, white, and gloss × 2) Six colors (cyan, magenta, yellow, black, white, and gloss) and primer
Ink-curing unit		Built-in UV-LED lamp
Print resolution (dpi)		Max. 1,440 dpi
Distance accuracy (*1)		±0.3 mm (±11.8 mil) or ±0.3% of the specified distance, whichever is greater (*1)
Position reproducibility (*2)		±0.2 mm (±7.9 mil) or ±0.1% of the specified distance, whichever is greater (*2)
Connectivity		Ethernet (10BASE-T/100BASE-TX, automatic switching)
Power-saving function		Automatic sleep feature
Power requirements		AC 100 to 240 V ± 10%, 2.1 A, 50/60 Hz
Power consumption	**During operation**	Approx. 178 W
	Sleep mode	Approx. 18 W
Acoustic noise level	**During operation**	60 dB (A) or less
	During standby	49 dB (A) or less
Outer dimensions		1,560 (width) × 955 (depth) × 576 (height) mm (61.4 × 37.6 × 22.7 in.)
Outer dimensions (when the ink-cartridge tray is attached)		1,866 (width) × 955 (depth) × 576 (height) mm (73.5 × 37.6 × 22.7 in.)
Weight		144 kg (317.5 lb.)
Environment	**During operation (*3)**	Temperature: 20 to 32°C (68 to 90°F) (22°C [72°F] or higher recommended), humidity: 35 to 80%RH (no condensation)
	Not operating	Temperature: 5 to 40°C (41 to 104°F), humidity: 20 to 80%RH (no condensation)
Included items		Power cord, RIP & PRINT MANAGEMENT SOFTWARE, user documentation, pad trays, etc.

*1 ,*2

- Media type: Media specified by Roland DG Corp.
- Temperature: 23°C (73°F), humidity: 50%
- Media must be loaded correctly.
- Excluding expansion/contraction of the media
- Assumes all correction and adjustment functions of the machine have been used properly.

*3

• Operating environment



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