Roland

LEC-300 / LEC-300A
LEC-330 / LEC-540
LEJ-640 / LEF-12

Supplemental Manual

Read This First

Due to the additions of new ink types to those that can be used by the machine and due to changes to the test pattern used to correct printing, there are a number of items that have been changed in the supplied instruction manuals. This document explains these changes. Be sure to read this document before using the machine.

Changes to the “Setup Guide” (“First Step Guide” for the LEF-12)

Model	Change
LEC-300/300A/330/540, LEJ-640	Installing the Ink Cartridges
LEF-12	STEP 5: Switch On/Make the initial settings STEP 6: Installing the Ink Cartridges

Changes to the “User’s Manual” (“Master Guide” for the LEF-12)

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Firmware versions covered by this document

- The machine comes with the following firmware version when it is purchased as a new product.
- If you are already using the machine, check the firmware version.
- For the method to follow in checking the firmware version, see the "User's Manual" (the "Master Guide" for the LEF-12).

Model	Firmware version	Roland VersaWorks version
LEC-300/300A/330/540	Ver. 6.30 or later	Ver. 5.22 or later
LEJ-640	Ver. 2.10 or later	
LEF-12	Ver. 2.10 or later	

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1. Changes to the Setup Guide

(First Step Guide for the LEF-12)

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Installing the Ink Cartridges

Models : LEC-300/300A/330/540, LEJ-640

Articles in the Setup Guide * Pages in the First Step Guide for the LEF-12

Replace the information on the following articles of the table of contents with the information found in this document.

LEC-300	"Installing the Ink Cartridges"
LEC-300A	
LEC-330	
LEC-540	
LEJ-640	
LEF-12	"STEP 5: Switch On/Make the initial settings" "STEP 6: Installing the Ink Cartridges"

Selecting the Ink Mode

When you use the printer for the first time, you need to select a proper combination (ink mode) according to the usage.
In the case of LEF-12, this operation is not required. Go on to "Installing the Ink Cartridges" (p. 8).

Ink mode	Ink cartridges	Ink cartridge type
Gloss mode	1 cartridge each of cyan, magenta, yellow, and black 2 cartridges of gloss	The EUV ink or EUV3 ink
White mode	1 cartridge each of cyan, magenta, yellow, and black 2 cartridges of white	
Gloss/White mode	1 cartridge each of cyan, magenta, yellow, black, gloss, and white	
EUVS ink mode	1 cartridge each of cyan, magenta, yellow, and black 2 cartridges of white	The EUVS ink

Procedure

1. **Close the front cover.**
2. **If the main power switch is on, then switch it off.**
3. **Select the ink mode with the procedure given below.**

<Gloss mode>

3-1. Hold down ▼ and MENU, switch on the main power switch.

3-2. When the message shown below appears on the display screen, release the operation-panel buttons.

```
SET INK MODE
GLOSS INK          ↵
```

<White mode>

3-1. Hold down ▲ and MENU, switch on the main power switch.

3-2. When the message shown below appears on the display screen, release the operation-panel buttons.

```
SET INK MODE
WHITE INK              ↵
```

<Gloss/White mode>

3-1. Hold down ▲ ▼ and MENU, switch on the main power switch.

3-2. When the message shown below appears on the display screen, release the operation-panel buttons.

```
SET INK MODE
CMYKGIW                ↵
```

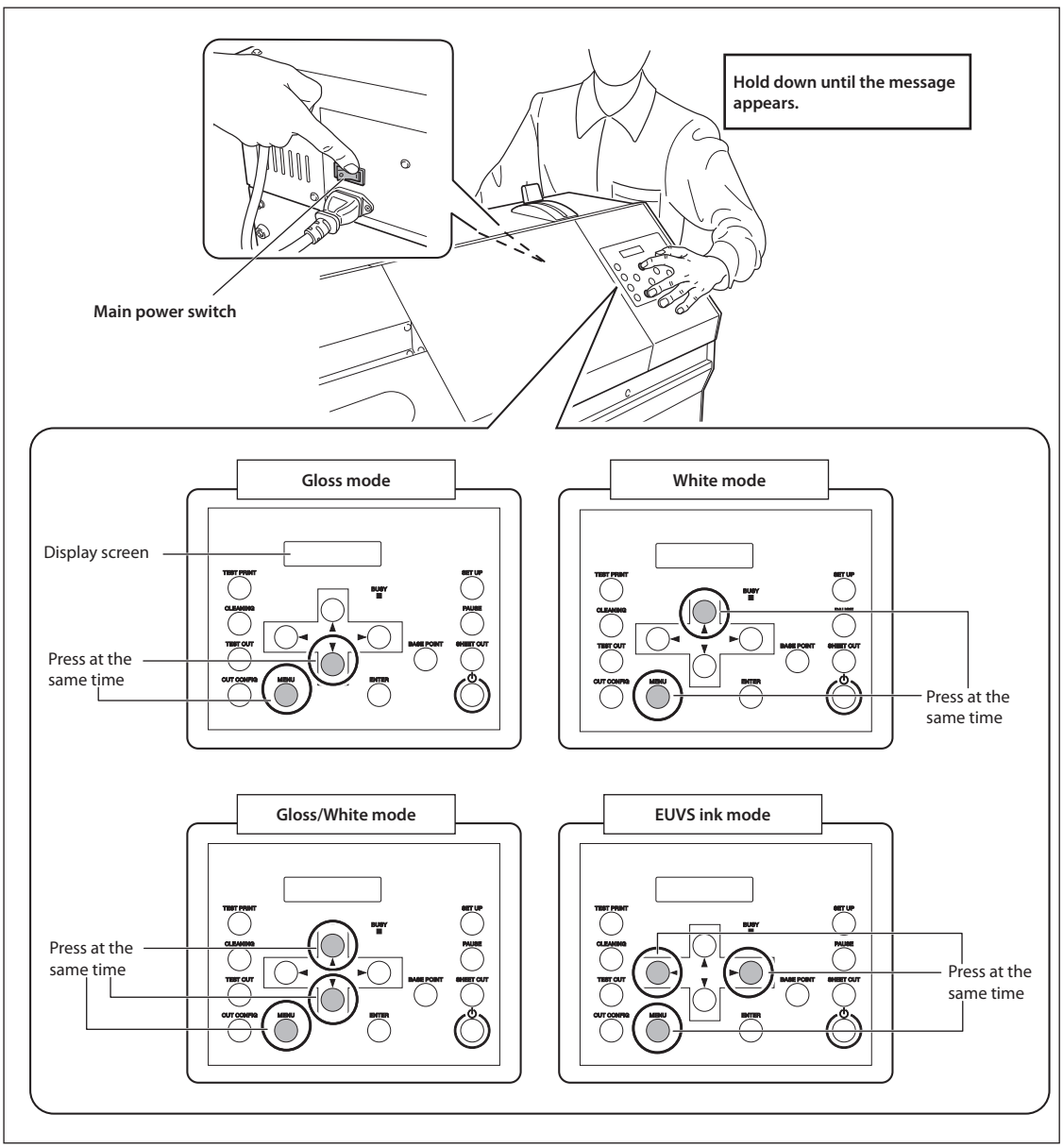
Continued on the next page

<EUVS ink mode>

3-1. Hold down ◄ ► and MENU, switch on the main power switch.

3-2. When the message shown below appears on the display screen, release the operation-panel buttons.

```
SET INK MODE
ECO-UVS WW              ↵
```



4. **Press** ENTER.

The sub power switches off automatically.

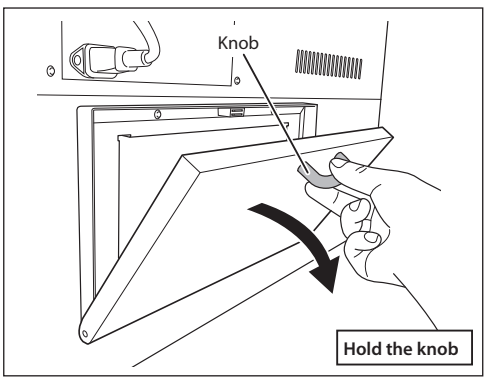
This completes selection of the ink mode. Go on to the next step, "Affixing the Cartridge-slot Labels" (p. 7) .

Affixing the Cartridge-slot Labels

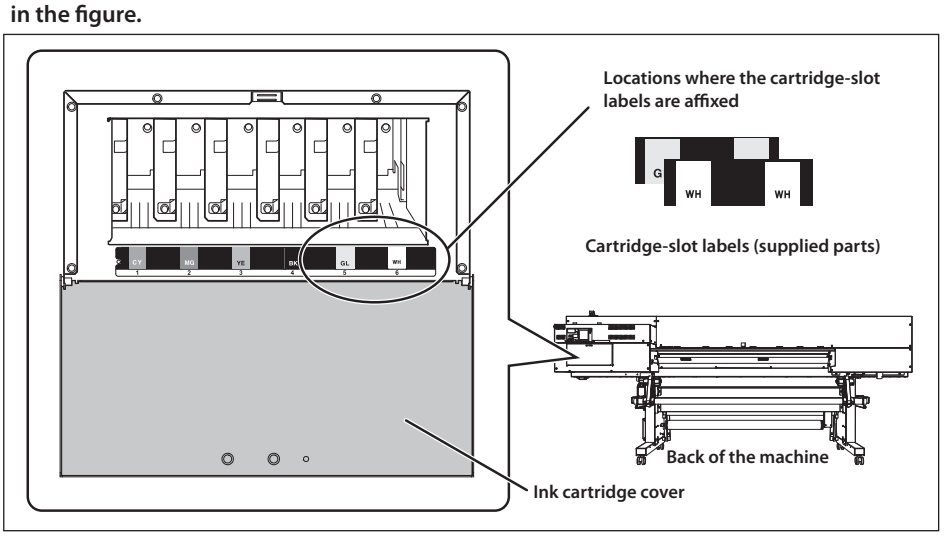
* In the case of LEF-12, this operation is not required. Go on to "Installing the Ink Cartridges" (p. 8)

Procedure

1. **Open the ink cartridge cover.**



2. **Affix the cartridge-slot labels (supplied parts) appropriate for the selected ink mode to the location shown in the figure.**



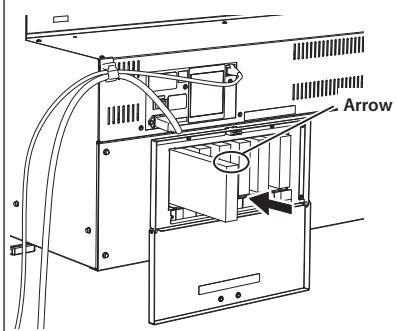
Ink mode	Cartridge-slot label
Gloss mode	
White mode EUVS ink mode	
Gloss/White mode	* When the gloss/white mode is selected, there is no need to affix the cartridge-slot labels.

Installing the Ink Cartridges

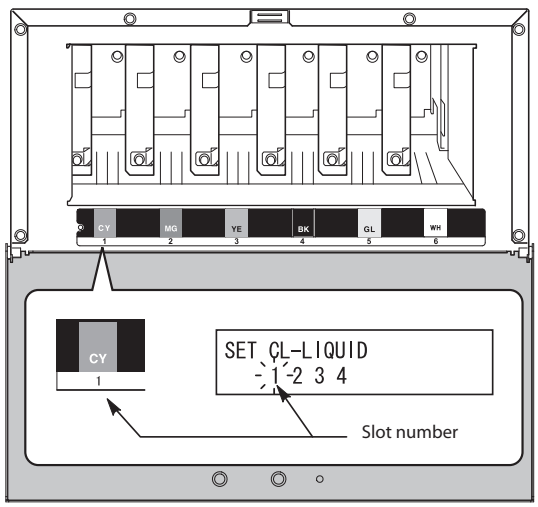
When installing ink cartridges for the first time, clean the print heads with the cleaning solution, and then fill with ink of each color. This operation requires four SOL INK cleaning cartridges (two cartridges for LEF-12).

* Be sure to use fresh SOL INK cleaning cartridges and ink cartridges.
* Never under any circumstances use anything other than the specified type of ink or cleaning fluid.

Be sure to follow the on-screen instructions for insertion and removal.



- Insert and remove slowly, one at a time.
- Insert firmly, as far as it will go.
- Insert firmly until you hear a beep.



* This figure indicates LEC-330.

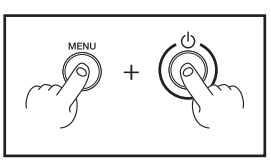
During cleaning, you need to insert and remove cartridges several times. The on-screen messages tell you when or which cartridge to be inserted or removed. The SOL INK cleaning cartridges are not differentiated by color.

Important

Insert each color ink cartridge into the slot labeled with the matching color. If you insert the wrong cartridges, the color inks may be mixed. Be careful not to insert the wrong cartridges. Contact your authorized Roland DG Corp. dealer or us, if you inserted the wrong cartridges and the color inks were mixed.

1. Make the initial settings

1. Hold down (MENU) and press the sub power switch.



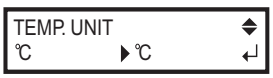
2. Use (▼) to select the language you want.

3. Press ENTER.

4. Use ▲ ▼ to select the unit of measurement you want (for length).

5. Press ENTER.

6. Use ▲ ▼ to select the unit of measurement you want (for temperature).



7. Press ENTER.

2. Clean the print heads using the SOL INK cleaning cartridge (LEC- 330/540,LEJ-640)

* In the case of LEF-12, go on to "2.Clean the print heads using the SOL INK cleaning cartridge (LEF-12)" (p. 11)

1. Check the selected ink mode.

Ink mode	Ink mode display
Gloss mode	ECO-UV CMYKGIGI ECO-UV3 CMYKGG
White mode	ECO-UV CMYKWW ECO-UV3 CMYKWW
Gloss/White mode	ECO-UV CMYKGIW ECO-UV3 CMYKGIW
EUVS ink mode	ECO-UVS CMYKWW

MEMO

When an incorrect ink mode is selected, switch off the sub power once.
Again carry out the procedure "Selecting the Ink Mode" (p. 4).

2. Press ▲ ▼ to select the ink type.

Ink type	Display screen
EUV ink	
EUV3 ink	

MEMO

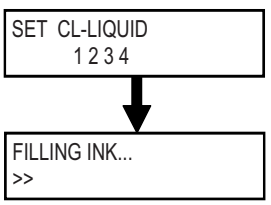
When the EUVS ink mode is selected, the ink type is fixed to "ECO-UVS." (It cannot be changed.)

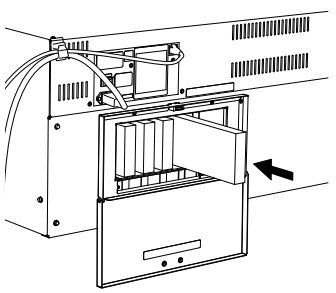
3. **Press** ENTER **.**

4. **Make sure the drain bottle is installed.**

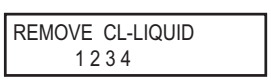
5. **Press** ENTER **.**

6. **Insert the SOL INK cleaning cartridges into slots 1, 2, 3, and 4.**

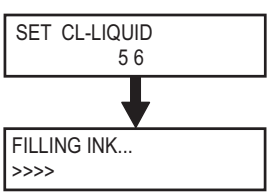


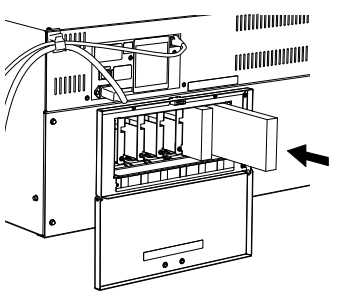


7. **When this screen appears, pull out the SOL INK cleaning cartridges.**

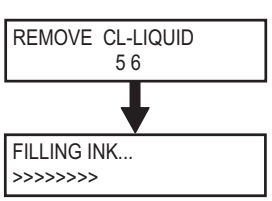


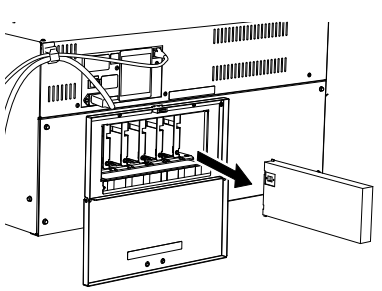
8. **Insert the SOL INK cleaning cartridges you pulled out into slots 5 and 6.**





9. **When this screen appears, pull out the SOL INK cleaning cartridges.**





10. **When this screen appears, make sure the drain bottle is installed, and press (ENTER).**

```
CHECK
      DRAIN BOTTLE ↵
```

Cleaning is finished.

Go on to "3. Insert the ink cartridges for the respective colors." (p. 12)

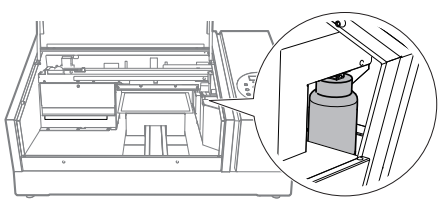
2.Clean the print heads using the SOL INK cleaning cartridge (LEF-12)

1. **Press (▲) (▼) to select the ink type.**

Ink type	Display screen
EUV ink	SELECT INK TYPE ECO-UV CM KGIW ↵
EUV3 ink	SELECT INK TYPE ECO-UV3 CM KGIW ↵

2. **Make sure the drain bottle is installed, and press (ENTER).**

```
INSTALL
      DRAIN BOTTLE ↵
```



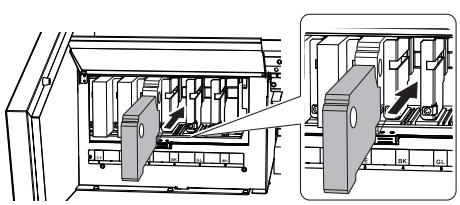
3. **Insert cleaning cartridges into displayed slots numbers.**

```
SET CL-LIQUID
      1 2
```

4. **Insert dummy cartridges into displayed slots numbers, and press (ENTER).**

```
SET DUMMY CRT.
    SLOT: 3,4 ↵
```

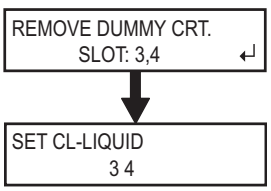
```
FILLING INK...
>>
```



5. **When this screen appears, pull out the cleaning cartridges.**

```
REMOVE CL-LIQUID
      1 2
```

6. **When this screen appears, pull out the dummy cartridges, and press (ENTER).**



7. **When a new slot number is displayed, repeat the procedure from Steps 3to 6 using the cleaning cartridge you just pulled out.**

Repeat until the following menu is displayed.

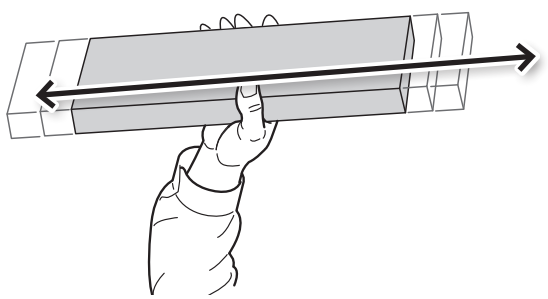
8. **Make sure the drain bottle is installed, and press (ENTER).**

Cleaning is finished.

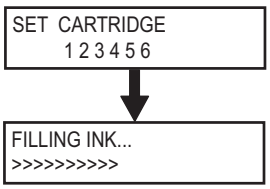
3. Insert the ink cartridges for the respective colors.

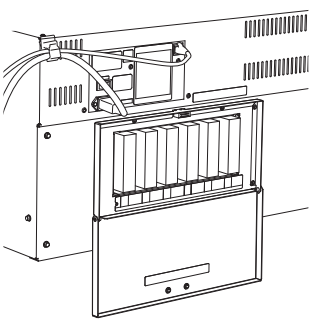
1. **Before inserting ink cartridges, shake each of them 50 times (about 15 seconds).**

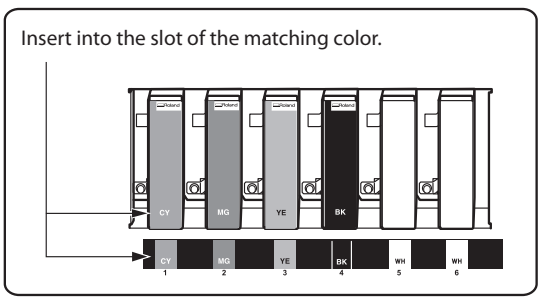
The precipitation of the ingredients in the ink disables printing in normal color. To allow the ingredients to be mixed well, shake each ink cartridge horizontally from side to side by 5 cm (2 inches) from each end of the ink cartridge.



2. Insert the ink cartridge for each color.







* This figure indicates LEC-330.

LEC-330/540,LEJ-640

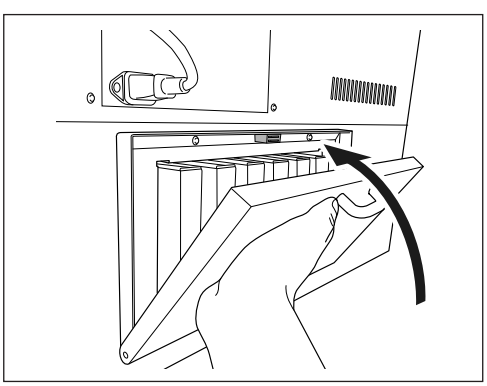
Ink mode	Ink cartridges
Gloss mode	1 cartridge each of cyan, magenta, yellow, and black 2 cartridges of gloss
White mode	1 cartridge each of cyan, magenta, yellow, and black 2 cartridges of white
EUVS ink mode	
Gloss/White mode	1 cartridge each of cyan, magenta, yellow, black, gloss, and white

LEF-12

- 1 cartridge each of cyan, magenta, yellow, black, gloss, and white

* Selection in ink mode cannot be performed.

3. Close the ink cartridge cover.



4. **Make sure the drain bottle is installed, and press** (ENTER) **.**

When this screen appears, filling with ink is finished.

Be Sure to Keep the Ink Cartridge Cover Closed at All Times.

The ink cartridge cover prevents the ink cartridges from being exposed to direct sunlight or strong illumination. If the ink cartridges are exposed to them, the ink inside the cartridges will become hardened, and it may cause the printer to malfunction. Make sure that the ink cartridge cover is always closed except when absolutely necessary, such as when you are replacing ink cartridges.

2. Changes to the User's Manual

(Master Guide for the LEF-12)

Correcting for Misalignment in Bidirectional Printing 16

Performing the Initial Adjustment (Correcting for Misalignment in Bidirectional Printing More Precisely) **16**

Corrections Performed from the [MEDIA SETTING] Menu **19**

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Method for Switching the Ink Type **23**

Correcting for Misalignment in Bidirectional Printing

Performing the Initial Adjustment (Correcting for Misalignment in Bidirectional Printing More Precisely)

Models : LEC-300/300A/330/540, LEJ-640

Articles in the User's Manual

* Replace the information on the following articles of the table of contents with the information found in this document.

LEC-300	"Correcting for Misalignment in Bidirectional Printing More Precisely"
LEC-300A LEC-330	
LEC-540	"Performing the Initial Adjustment (Correcting for Misalignment in Bidirectional Printing More Precisely)"
LEJ-640	

Perform the initial adjustment of this machine. This adjustment is necessary in the following cases.

- When using this machine for the first time
- When changing the media to use
- When further correction is required to improve printing, such as when simple correction is performed for misalignment in bidirectional printing ("Correcting for Misalignment in Bidirectional Printing" (p. 20)).

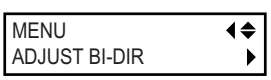
If you will change the print head height, do so before performing this adjustment.

☞ Included User's Manual "Adjusting Head Height to Match Media Thickness"

1. Output a test pattern.

1. **Press (MENU).**

2. **Press (▼) several times to display the figure on the below.**



3. **Press (►) and then (▲) to display the figure on the below.**

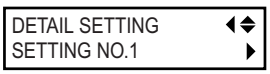
4. **Press (►) to display the figure on the below.**

5. **Press (ENTER).**

A test pattern is output.

LEC-300/300A/330/540

6. **When printing ends, press ▼ to display the figure on the below.**



7. **Press ►.**

Go to "2. Enter the adjustment value."

LEJ-640

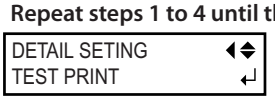
6. **When printing ends, press MENU and then ◄.**

7. **Remove the front cover 2.**

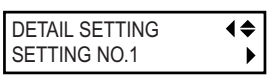
8. **Press ▼ and feed the media forward to a position where you can clearly see the condition of the test print.**

This operation is not necessary when using roll media or sheet media. Proceed to step 9.

9. **Repeat steps 1 to 4 until the screen shown on the left appears.**



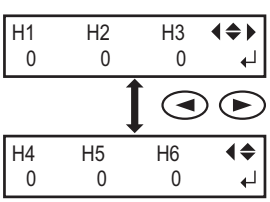
10. **Press ▼ to display the figure on the below.**



11. **Press ►.**

2. Enter the adjustment value.

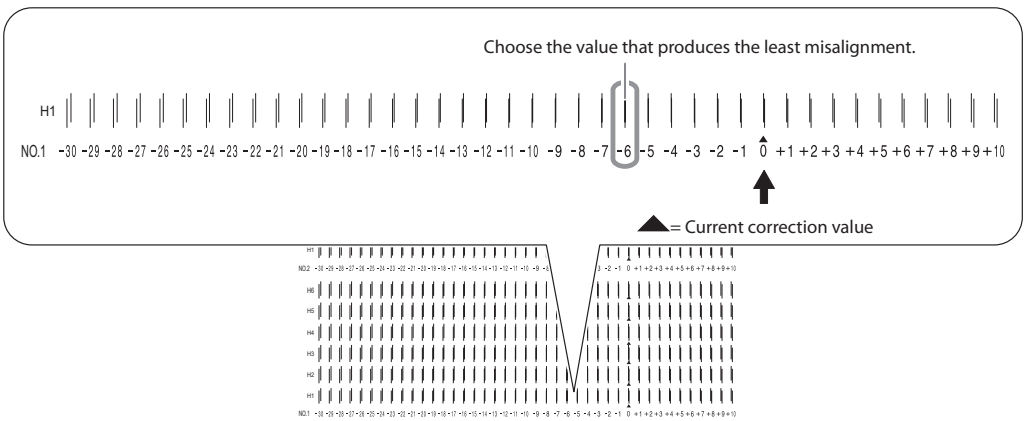
1. **Press ◄ ► to select one from H1 to H6 (from H1 to H3 for the LEC-300/300A)**



2. Press ▲ ▼ to decide a correction value for the selected item from H1 to H6 (from H1 to H3 for the LEC-300/300A).

To decide a Correction Value

Choose the value that produces the least misalignment of 2 lines. When wavering between two numbers, select half value.



If the Printing-test Results Are Difficult to Interpret

Examine the results from different angles in a well-lighted location. Take advantage of reflected light to enable visual checking.

If you cannot see "H5" or "H6" ("H3") (such as when using white media with no shine)

You may not be able to see "H5" or "H6" ("H3" for the LEC-300/300A) when using certain media, such as white media with no luster. In this case, set "H5" and "H6" ("H3" for the LEC-300/300A) to the same value as "H4" ("H2" for the LEC-300/300A).

3. Press ENTER.

This completes the configuration of [SETTING NO.1].

4. Press ▼.

5. In the same manner as performed for [SETTING NO.1], repeat steps 1 to 4 to set the correction values for [SETTING NO.2] to [SETTING NO.8].

LEJ-640

After you have configured up to [SETTING NO.8], attach front cover 2. If you are using rigid media, press ▲ and pull back the media to the appropriate position.

6. Press MENU ◄ in this order to go back to the original screen.

Corrections Performed from the [MEDIA SETTING] Menu

Models : LEC-540, LEJ-640

Articles in the User's Manual

* This section only discusses the procedure for setting [ADJUST BI-DIR] on the [MEDIA SETTING] menu. For other setting items, follow the instructions in the User's Manual.

LEC-540	Procedure 4. "Performing the correction for misalignment in bidirectional printing" in "Setup of Media ([MEDIA SETTING] menu)"
LEJ-640	Procedure 3. "Performing the correction for misalignment in bidirectional printing" in "Setup of Media ([MEDIA SETTING] menu)"

Performing the correction for misalignment in bidirectional printing

POINT!

This machine prints by the bidirectional mode (in which the print 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."

❶

Press ◄ to select [SET].
Press ENTER to enable the setting.
The test pattern of bidirectional correction is output.

❷

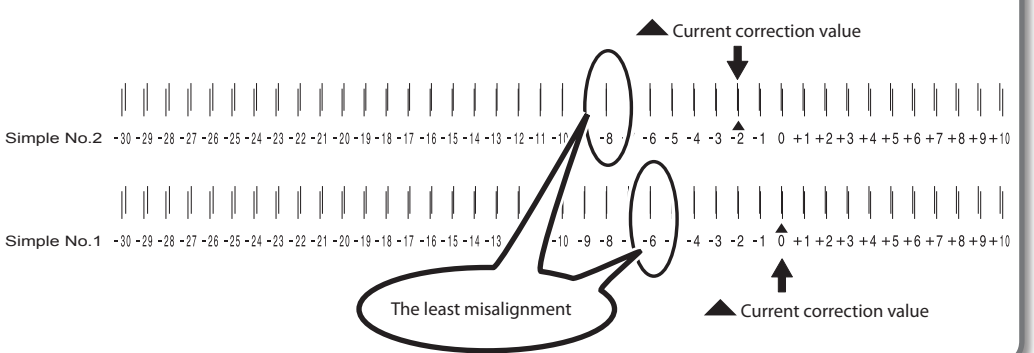
When the left figure is displayed, press ENTER.

❸

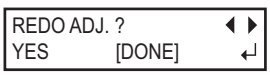
Press ◄ ► to select [1] or [2].
Use ▲ ▼ to set the correction value.
Select a correction value for "Simple No.1" in 1 and a correction value for "Simple No.2" in 2.
Press ENTER to enable the setting.

To decide a Correction Value

Choose the value that produces the least misalignment of 2 lines.
When wavering between two numbers, select half value.



❹



[To confirm again / adjust again]
Press ◄ to select [YES].
Press ENTER to enable the setting.
The test pattern of bidirectional correction is output again. Go back to the procedure ❸ and set again.

[To go to the next after correction is completed]
Press ► to select [DONE].
Press ENTER to enable the setting.

Correcting for Misalignment in Bidirectional Printing

Models : LEC-300/300A/330/540, LEJ-640

Articles in the User's Manual

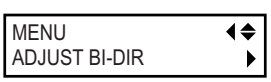
* Replace the information on the following articles of the table of contents with the information found in this document.

LEC-300	"Correcting for Misalignment in Bidirectional Printing"
LEC-300A LEC-330	
LEC-540	
LEJ-640	

Procedure

1. **Press MENU.**

2. **Press ▼ several times to display the figure on the below.**

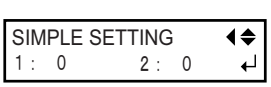


3. **Press ►.**

4. **Press ENTER.**
A test pattern is printed.

5. **When printing is completed, press ▼ ► in this order.**

6. **Press ◄ ► to select 1 or 2.**

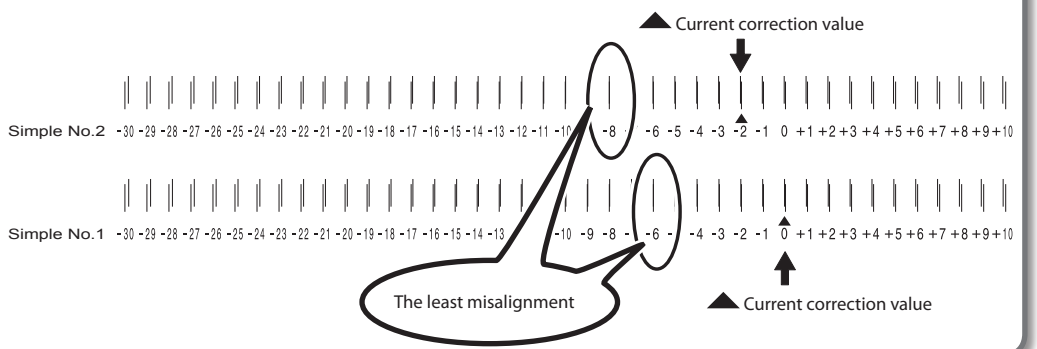


7. **Press ▲ ▼ to select a correction value.**

Select a correction value for "Simple No.1" in 1 and a correction value for "Simple No.2" in 2.

To decide a Correction Value

Choose the value that produces the least misalignment of 2 lines.
When wavering between two numbers, select half value.



8. **Press ENTER to enable the setting.**

9. **Press MENU ◄ in this order to go back to the original screen.**

Description

This machine prints by the bidirectional mode (in which the print 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-head height and the thickness of the media, so we recommend performing correction to match the media you're using.

LEC-300/300A/330/540

This settings also serves to correct for misalignment of the printing and cutting positions. In such cases, check or adjust this setting.

☞ "Correcting Misalignment of the Printing and Cutting Positions," and "Correcting Misalignment for Printing and Cutting When Using Crop Marks" on included User's Manul.

Switching the Ink Type

Models : LEC-300/300A/330/540, LEJ-640

Articles in the User's Manual * Master Guide for the LEF-12

* Replace the information on the following articles of the table of contents with the information found in this document.

LEC-300 (No corresponding page; new information added)	"(5-14) Switching the Ink Type"
LEC-300A **LEC-330**	
LEC-540	
LEJ-640	
LEF-12 (No corresponding page; new information added)	

The ink types can be switched between EUV ink and EUV3 ink on this machine.

To switch the ink type, open the [PUMP UP] menu and change the ink type setting (p. 24).

Restrictions on Switching Ink Type

The available ink types are shown below.

Available ink types	Switching the ink type	Switching the ink mode (p. 4)
EUV←→EUV3	OK	**The ink type cannot be switched.**
EUV←→EUVS	**The ink type cannot be switched.**	
EUV3←→EUVS	**The ink type cannot be switched.**	

However, there are the restrictions given below:

- Once ink is filled, the ink mode cannot be changed (**p. 4**). Therefore, the color combination cannot be changed either.
- If the machine which supports the EUVS ink comes to support the EUV3 ink by upgrading the firmware, switching of the ink type between the EUV ink and EUVS ink, which was available before the upgrade, becomes unavailable. Replace "Restrictions on Switching Ink Type" in User's Manual, which was supplied with the machine, with those given in this page.

Method for Switching the Ink Type

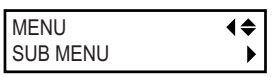
1. Draining Ink Remaining Inside the Unit

Important

Insert each color ink cartridge into the slot labeled with the matching color. If you insert the wrong cartridges, the color inks may be mixed. Be careful not to insert the wrong cartridges. Contact your authorized Roland DG Corp. dealer or us, if you inserted the wrong cartridges and the color inks were mixed.

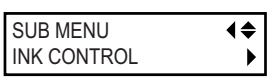
1. **Press** (MENU).

2. **Press** (▼) **several times until the screen shown below appears.**



3. **Press** (►).

4. **Press** (▲) **several times until the screen shown below appears.**



5. **Press** (►) (▲) **in this order until the screen shown below appears.**

6. **Press** (ENTER).

7. **Thereafter, follow the on-screen instructions to carry out the operations.**

After cleaning has finished, the sub power is automatically switched off.

memo

The error message "CANCELED FOR MOTOR PROTECTION" may display to prevent damage to the machine due to the overheating of pump motor.

In this case, allow the machine to stand for approximately 10 minutes before resuming operation.

Press any key other than the sub power switch to cancel the error message.

2. Fill with ink

1. **Press the sub power button.**

2. **Select the ink type.**

<When switching to EUV ink>

2-1. Press ▲ ▼ to select "ECO-UV."

2-2. Press ENTER.

<When switching to EUV3 ink>

2-1. Press ▲ ▼ to select "ECO-UV3".

2-2. Press ENTER.

3. **Thereafter, follow the on-screen instructions to carry out the operations.**

After finishing the operation, close the ink cartridge cover.

⚠ WARNING

Never place discharged fluid and ink near open flame.

Doing so may cause fire.

⚠ CAUTION

To store discharged fluid temporarily, keep it in the provided drain bottle or in a durable container such as a metal can or polyethylene tank, and close the cap tightly.

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

Store discharged fluid in a location not exposed to direct sunlight.

When temporarily storing discharged fluid in the included drain bottle, keep the drain bottle out of direct sunlight. Otherwise 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.

Important When you use VersaWorks

Be sure to perform the following operation after filling with ink. Otherwise, you cannot use VersaWorks.

Procedure

1. **From the [Start] menu, click [All programs (or Programs)] - [Roland VersaWorks] - [Initialize Application].**
2. **Click [Yes] when a confirmation message for initialization of the application appears.**
3. **Click [OK] when a completion message for initialization of the application appears.**
4. **Start VersaWorks.**

   The [Printer Settings] window is displayed. This is because the connection with the printer is initialized by performing Initialize Application.
5. **Make the settings of the printer.**
   - "Printer Connection and Settings" in "Roland VersaWorks Quick Start Guide"
   - "Making the Settings for Roland@NET" in "Roland VersaWorks Quick Start Guide"

   MEMO
   - When you initialize the application, the settings of Roland@NET are initialized as well. Please make the settings again.

3. Supplemental

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To Customers Who Upgraded the Firmware of the Machine

Precautions Regarding Saved Settings

Model	Firmware version
LEC-300/300A/330/540	Ver. 6.30 or later
LEJ-640	Ver. 2.10 or later
LEF-12	Ver. 2.10 or later

If you upgrade the firmware of your machine to the above versions or higher, the bidirectional printing adjustment specifications will be changed.

Therefore, you have to exercise caution when using the [MEDIA SETTING] and [PRESET] menus, which can be used to save settings related to bidirectional printing as preset patterns. If you continue to use a preset pattern that was set prior to the version upgrade, defects such as print position misalignment may occur.

We ask that you reconfigure the settings in the following menus and save a new preset pattern before printing.

Menu	Setting item
[MEDIA SETTING]	"ADJUST BI-DIR"
[PRESET]	"ADJUST BI-DIR SIMPLE SETTING" "ADJUST BI-DIR DETAIL SETTING"

* If you have purchased a new machine, ignore this section.

About Handling of EUVS/EUV3 Ink

Handling of the EUVS ink and EUV3 ink are the same as that of the EUV ink. Please read "Setup Guide" and "User's Manual."

Roland