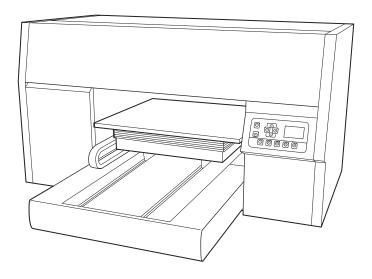


# VersaSTUDIO BF-16

# **Setup Guide**



Thank you very much for purchasing this product.

- To ensure correct and safe usage with a full understanding of this product's performance, please be sure to read through this manual completely.
- Unauthorized copying or transferal, in whole or in part, of this manual is prohibited.
- The specifications of this product and the contents of this operation manual are subject to change without notice.
- The operation manual and the product have been prepared and tested as much as possible. If you find any
  misprints or errors, please inform us.
- Roland DG Corporation assumes no responsibility for any direct or indirect loss or damage that may occur
  through use of this product, regardless of any failure to perform on the part of this product.
- Roland DG Corporation assumes no responsibility for any direct or indirect loss or damage that may occur
  with respect to any article made using this product.

Company names and product names are trademarks or registered trademarks of their respective holders.

R3-250509

# Contents

Introduction	2
About the Documentation for This Machine	3
Checks before Installation	
Packaging diagram	4
Checking the Included Items	<i>6</i>
Installation Space and Height	7
Installation Stand	8
Emplacement and Installation	9
Temperature and Humidity	11
Modern Corne	40
Machine Setup	
Computer Preparations	13
System Requirements	13
Initial Settings and Ink Filling	14
Removing the Retainers	
Attaching the Print Head Protector	
Connecting the Cables	
Downloading and Installing Roland DG BF-16 Driver	
Downloading and Installing VersaWorks	
Registering Printers in VersaWorks	
Filling with Ink	
Appendix	38
Location of the Power Rating and Serial Number Label	

# Introduction

About the Documentation for This Machine	3
Checks before Installation	
Packaging diagram	4
Checking the Included Items	6
Installation Space and Height	7
Installation Stand	8
Emplacement and Installation	9
Temperature and Humidity	11

# **About the Documentation for This Machine**

The following documentation is included with the machine.

#### Paper Manuals

· Safety Precautions

This manual contains points that must be observed.

# **Electronic-format Manuals**

• Setup Guide (this document)

This manual contains details on how to install the machine and how to configure its initial settings.

• User's Manual

This manual contains details such as how to use and maintain the machine as well as an FAQ (a set of frequently asked questions).

You can view and download the electronic-format manuals from the following URL.

https://downloadcenter.rolanddg.com/BF-16

<sup>\*</sup> You can also view and download the paper manuals.

<sup>\*</sup> You can also view this website from a smartphone.

# **Checks before Installation**

# Packaging diagram

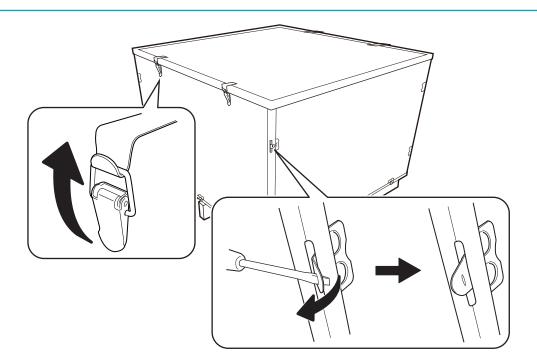
# **IMPORTANT**

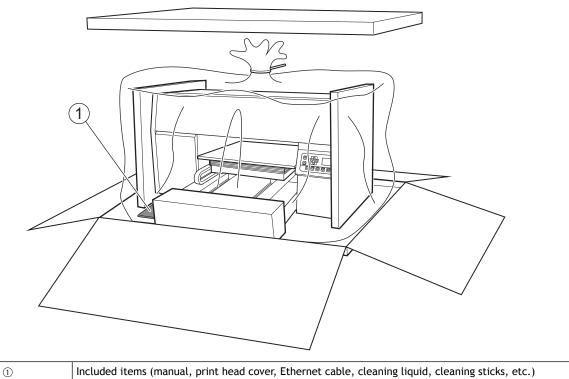
An indicator (1) is affixed to the packing box. This indicator detects packing box tilting that may damage the machine while it is being transported. If this indicator is red, contact your authorized dealer.



# **IMPORTANT**

Put on gloves before unpacking.
Pieces of wood or metal may cause injury.

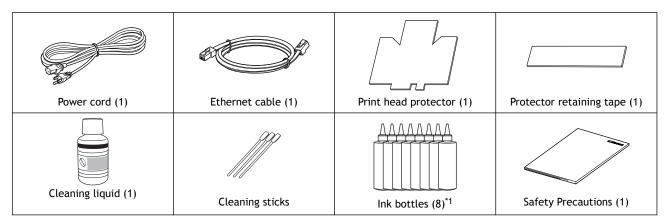




Included items (manual, print head cover, Ethernet cable, cleaning liquid, cleaning sticks, etc.)

# Checking the Included Items

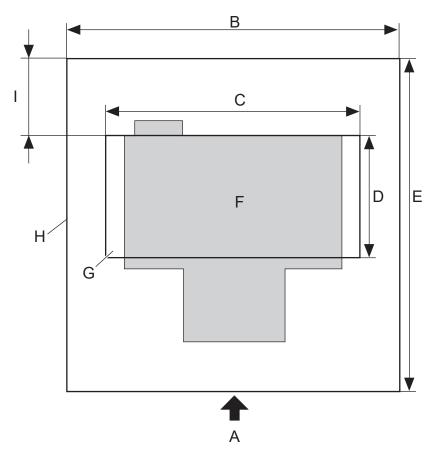
The following items are included with the machine. Make sure they are all present and accounted for.



<sup>\*1</sup> An activation code is affixed to each ink bottle. If an ink bottle becomes so dirty that you cannot identify the activation code, you will not be able to perform the ink activation after pouring ink into the machine. It is useful to make a note or take a picture of the activation code in advance.

# Installation Space and Height

The space shown in the figure is required in order to use this machine.



Α	Front of machine
В	1,300 mm (51.19 in.)
С	1,000 mm (39.37 in.)
D	550 mm (21.65 in.)
E	1,300 mm (51.19 in.)
F	Unit
G	Recommended table size
Н	Work space
ı	350 mm (13.78 in.)

# **IMPORTANT**

Install the machine so that it is at least 0.6 m (23.6 in.) above the work floor. This machine is designed to be installed on a desktop. Install the machine in a location that allows easy access to areas such as the power switch and other controls during operation.

# **Installation Stand**

Use a stand specified by Roland DG Corporation or an installation stand that meets the following conditions.

- Material: Not resin (Examples: metal and wood)
- Size: Width: 1,000 mm (39.38 in.) or more, depth: 550 mm (21.66 in.) or more, height: 600 mm (23.63 in.)
- Supported load weight: 110 kg (242.6 lb.) or more

# **Emplacement and Installation**

Install the machine in a level, stable location offering good operating conditions. An unsuitable location can cause accidents, fire, faulty operation, or breakdown.

# **⚠** CAUTION

Install in a level and stable location.

Failure to do so may result in falling of the machine, leading to injury.

#### Environments or locations where installation is not possible

- Locations subject to large fluctuations in temperature or humidity
- · Locations subject to shaking or vibration
- · Locations where the floor is tilted, not level, or unstable
- Dusty locations
- · Locations exposed to direct sunlight
- Locations near air-conditioning or heating equipment
- Locations exposed to water or moving air
- Locations exposed to considerable electrical or magnetic noise or other forms of electromagnetic energy

### **⚠** CAUTION

Unloading and emplacement are operations that must be performed by 4 persons or more.

Tasks that require undue effort when performed by a small number of persons may result in physical injury. Also, if dropped, such items may cause injury.

#### **⚠** WARNING

Install the machine in a location that is level, stable, and able to bear the weight of the machine.

The total weight of the machine may reach 100 kg (220.5 lb.) or more. Installation in an unsuitable location may cause a major accident, including tip over, fall, or collapse.

### **⚠ WARNING**

Never install this machine outside or in any location where exposure to water or high humidity may occur.

Current leakage may cause electrical shock or fire.

### **MARNING**

Never install the machine close to any flammable object or in a gas-filled location.

Combustion or explosion could occur.

# **MARNING**

Position the machine so that the power plug is within immediate reach at all times.

This is to enable quick disconnection of the power plug in the event of an emergency. Install the machine next to an electrical outlet. Also, provide enough empty space to allow immediate access to the electrical outlet.

# **⚠** CAUTION

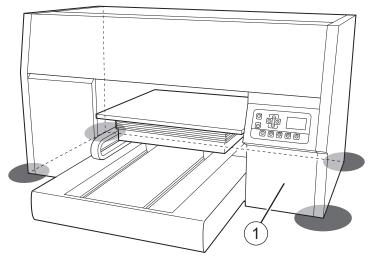
# Ensure adequate ventilation for the work area.

Failing to perform ventilation may result in a health hazard or danger of combustion due to ink fumes.

# **⚠** CAUTION

When lifting the machine, hold the locations shown in the figure.

Hold the circled locations when lifting the machine.



Holding the circled locations, place the machine on the table.

# **IMPORTANT**

Do not lift the machine by holding the cover on the front of the machine (1). Doing so may result in faulty operation or breakdown.

# Temperature and Humidity

Maintain the specified temperature and humidity even when the machine is not in use. Failure to do so may result in malfunction.



# **Temperature**

22 to 33°C (71.6 to 91.4°F)



# Humidity

30~65 %RH

\* No condensation

# **Machine Setup**

Computer Preparations	13
System Requirements	
Initial Settings and Ink Filling	14
Removing the Retainers	14
Attaching the Print Head Protector	
Connecting the Cables	19
Downloading and Installing Roland DG BF-16 Driver	21
Downloading and Installing VersaWorks	22
Registering Printers in VersaWorks	23
Filling with Ink	

# **Computer Preparations**

# **System Requirements**

Prepare a computer that matches the requirements.

Operating system (OS)	Windows 11, Windows 10 (64-bit edition)
CPU	Intel i5 4670 or higher recommended
Memory	8 GB or more
Video card, monitor	1,280 × 1,024 pixels or above (recommended)
Free hard-disk space required for work	128 GB or more
Other	Internet connectivity

For the latest information, visit the Roland DG Corporation website (https://www.rolanddg.com/).

# **Initial Settings and Ink Filling**

This machine must be installed by suitably qualified workers.

#### **IMPORTANT**

Failing to make correct adjustments and settings may damage the machine. Leave this work to suitably qualified workers.

# Removing the Retainers

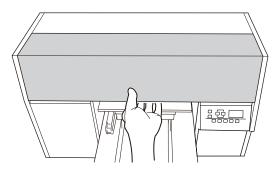
Retainers are attached to the machine to protect it from vibration during transportation. When installation is complete, remove these.

# **IMPORTANT**

- Make sure to remove all the retainers. Any that remain may cause faulty operation or breakdown when the power is switched on.
- Store the retainers because they are needed again when transporting the machine.

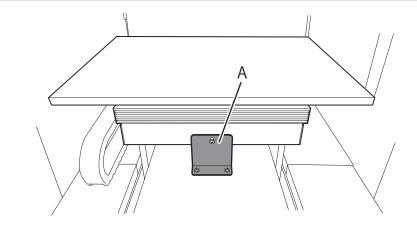
# **IMPORTANT**

Be gentle when opening and closing the front cover and right cover. Opening and closing the covers with force or removing your hand while opening or closing the cover may break the cover or cause injury. When opening or closing the front cover, hold the cover in the center.

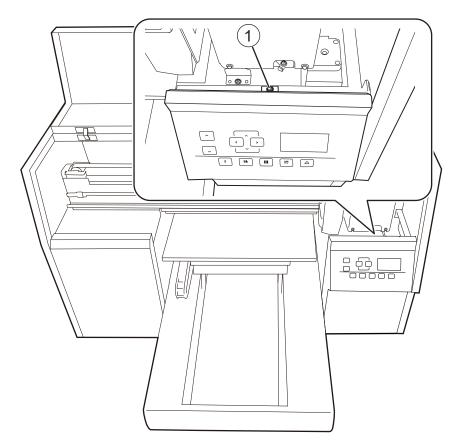


# **Procedure**

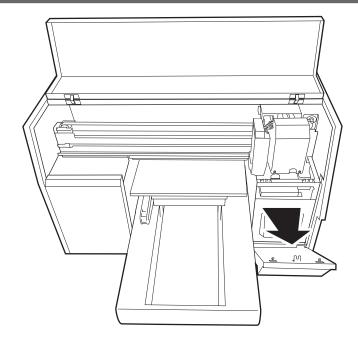
- Open the front cover.
- 2. Remove the screws with a Phillips screwdriver, and then remove the retainer A.



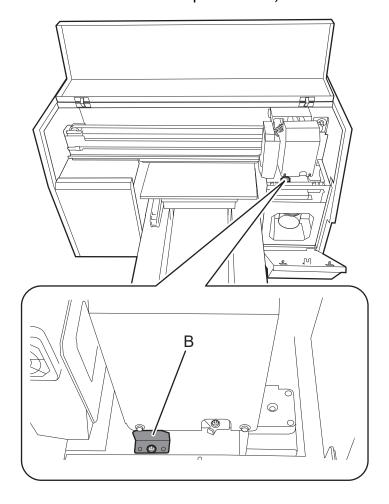
3. Remove the right cover retaining screw (  $\mathbin{\textcircled{\scriptsize 1}}$  ) using a Phillips screwdriver.



4. Open the right cover.



5. Remove the screws with a Phillips screwdriver, and then remove the retainer B.



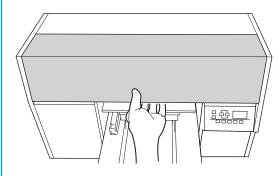
- Close the right cover.
- Close the front cover.

# **Attaching the Print Head Protector**

The protector prevents the print head from being exposed to the air. Attach the print head protector if the printer's installation location temperature could fall below  $22^{\circ}C$  (71.6°F).

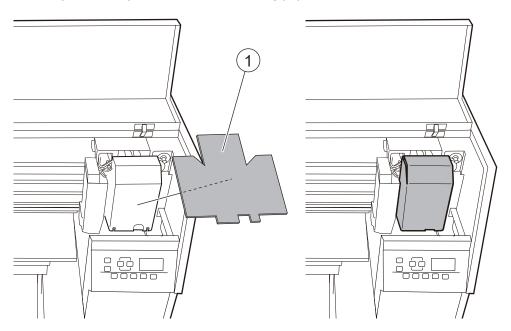
# **IMPORTANT**

Be gentle when opening and closing the front cover and right cover. Opening and closing the covers with force or removing your hand while opening or closing the cover may break the cover or cause injury. When opening or closing the front cover, hold the cover in the center.

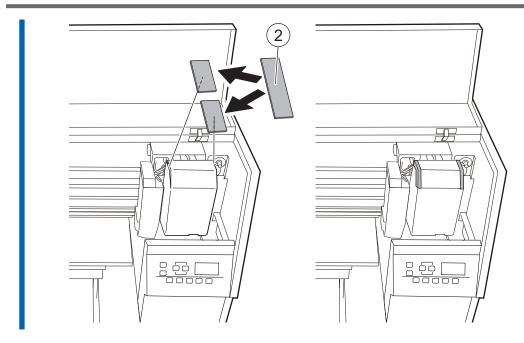


#### **Procedure**

- 1. Open the front cover.
- Attach the print head protector (①) to the print head.
   Peel the print head protector off the backing paper to attach.



**3.** Attach the protector retaining tape (②) as shown in the following figure. Peel the protector retaining tape off the backing paper to attach.



4. Close the front cover.

# Connecting the Cables

#### **⚠** WARNING

Perform this task with all power switches left switched off.

Otherwise sudden movement of the machine may cause injury.

# **⚠ WARNING**

Connect to an electrical outlet that complies with this machine's ratings (for voltage, frequency, and current).

Incorrect voltage or insufficient current may cause fire or electrical shock.

### **MARNING**

Handle the power cord, plug, and electrical outlet correctly and with care. Never use any article that is damaged.

Using a damaged article may result in fire or electrical shock.

# **⚠ WARNING**

When using an extension cord or power strip, use one that adequately satisfies the machine's ratings (for voltage, frequency, and current).

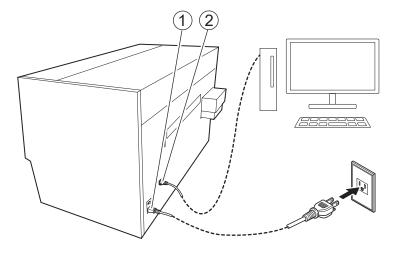
Use of multiple electrical loads on a single electrical outlet or of a lengthy extension cord may cause fire.

#### **IMPORTANT**

Be sure to connect the printer directly to the computer with an Ethernet cable. Do not connect the printer to a network through a hub.

#### **Procedure**

1. Connect both the power cord (①) and the Ethernet cable (included) (②) to the printer.



2. Connect the Ethernet cable to the computer.

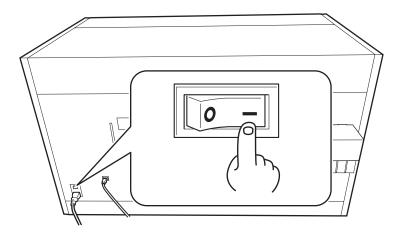
3. Connect the power cord to an electrical outlet.

# **⚠ WARNING**

Connect this machine to an electrical outlet. Never connect this machine directly to a power distribution panel or other such fixed wiring equipment.

Doing so increases the risk of fire or electrical shock.

4. Turn on the printer.



The printer will perform initial operations.

# Downloading and Installing Roland DG BF-16 Driver

# **IMPORTANT**

A connection to the Internet is required to download the software.

#### **Procedure**

- 1. Access the following website on the computer where the software will be downloaded. https://downloadcenter.rolanddg.com/BF-16/#software
- 2. Click [Roland DG BF-16 Driver].
- 3. Download the [Roland DG BF-16 Driver Installer / Updater [20\*\*-\*\*-, Ver.\*.\*\*]] to any location.
- 4. Extract the downloaded .zip file.
  - Double-click .exe file in the extracted folder.
     Follow the installer instructions to install Roland DG BF-16 Driver.

# Downloading and Installing VersaWorks

#### MEMO

A connection to the Internet is required to download the software.

# **IMPORTANT**

VersaWorks should be installed on the same computer that Roland DG BF-16 Driver is installed on. If VersaWorks is installed on a computer that does not have the Roland DG BF-16 Driver installed, selecting the BF-16 will not be possible in VersaWorks.

#### Procedure

1. Start Windows and log on as the [Administrator] or an "Administrators" account. Shut down all other programs.

# **IMPORTANT**

Only the [Administrator] user account that installed this software can use it.

- Access the download website (https://downloadcenter.rolanddg.com/BF-16/#software).
- 3. Click [VersaWorks 7].
- Click the Windows-version [Installer / Updater [202\*-\*\*-, Ver.\*.\*\*.\*]].
   Configure [Select a model] and [Select language], then click [Next].
- 5. Download the software according to the instructions in the window.

# MEMO

Save the 4 downloaded files into the same folder.

- 6. Double-click the downloaded [VersaWorks7.part1.exe] file.
- 7. Follow the installer instructions to install VersaWorks 7.

# Registering Printers in VersaWorks

#### **IMPORTANT**

Roland DG BF-16 Driver and VersaWorks are required to print with this machine.

• VersaWorks:

VersaWorks is an app for configuring various print settings such as layout and quality. After configuring the necessary settings, click to save the print data in the folder specified for saving print data.

• Roland DG BF-16 Driver:

Roland DG BF-16 Driver is an app for opening and printing print data created in VersaWorks. Printing is possible after configuring the necessary settings.

#### **Procedure**

- 1. Start VersaWorks.
  - Windows 11

Click [Start]>[All apps]>[VersaWorks 7]>[VersaWorks 7].

Windows 10
 Click [Start]>[VersaWorks 7]>[VersaWorks 7].

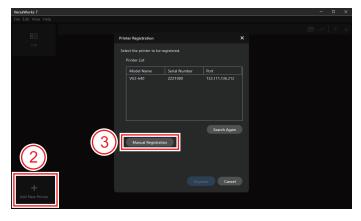
# MEMO

When VersaWorks is first started after installation, the [Printer Registration] window appears. Proceed to Step 3.

2. Click [Add a printer].

The [Printer Registration] window appears.

3. Click [Manual Registration].



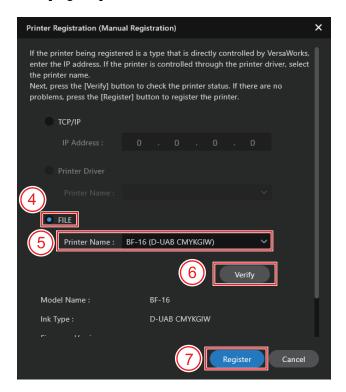
4. Click [FILE].

[Printer Name:] is now selectable.

- Under [Printer Name:], select [BF-16 (D-UAB CMYKGIW)].Select from the pull-down menu.
- 6. Click [Verify].

The model name and other information of the printer to connect appears.

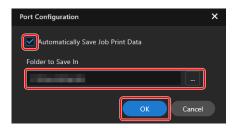
### 7. Click [Register].



# 8. Click 🔯.



- 9. Click [Port Configuration].
- 10. Specify where to save print data created with VersaWorks.
  - (1) Select the [Automatically Save Job Print Data] check box.
  - (2) Specify where to save print data PRT files created with VersaWorks.
  - (3) Click [OK].



# **MEMO**

License authentication is required before VersaWorks can be used.

If you will use VersaWorks with this machine, carry out an offline authentication. To do so, click [Help]>[License Authentication]>[Offline Authentication].

This completes the registration procedure.

# Filling with Ink

#### **IMPORTANT**

Wear protective eyewear and protective gloves when filling the machine with ink.

# Step 1: Filling the Ink Tank with Ink

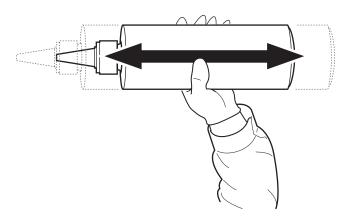
#### **IMPORTANT**

If ink contacts your hand or if you spill it on something, wipe it off immediately.

#### **Procedure**

1. Shake the ink bottle 50 times (about 20 seconds).

So that the ink mixes well, shake the ink bottle horizontally with a stroke length of around 5 cm (1.97 in.) from each end of the ink cartridge.



- 2. Prepare for ink filling.
  - (1) Remove the cap from the ink bottle.
  - (2) Remove the ink leakage prevention seal (  $\mathbin{\textcircled{\scriptsize 1}}$  ) from the ink bottle.

Use a cutting tool to remove the ink leakage prevention seal.

#### **IMPORTANT**

Be careful to prevent the intrusion of cutting scraps and garbage into the ink bottle.

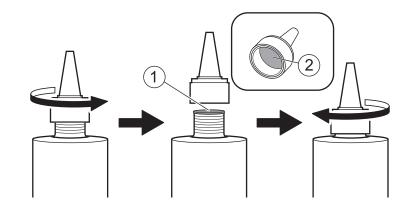
(3) Remove the seal (2) attached to the inside of the cap.

#### **IMPORTANT**

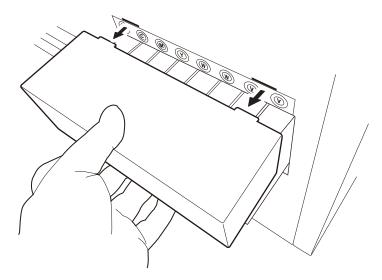
If you fill the machine with the cap attached and without removing the seals, ink may leak out from the gap between the cap and the bottle. Be sure to remove the seal from the inside of the cap.

(4) Install the cap onto the ink bottle.

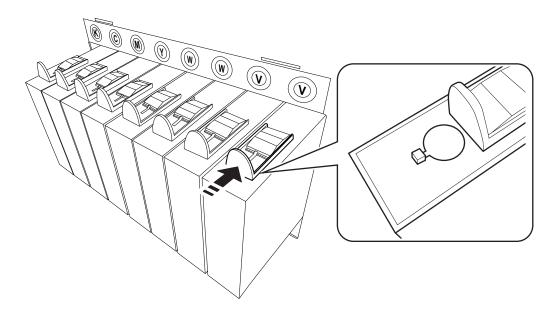
Tighten the cap securely so that ink does not leak when filling with ink.



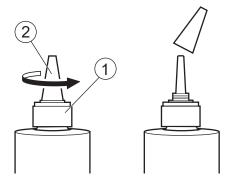
3. Remove the ink tank cover on the back of the machine.



**4.** Slide the ink tank knob to the machine side. The ink filling port becomes visible.



**5.** Fasten the ink bottle cap (1) with a hand, and remove the cap cover (2).

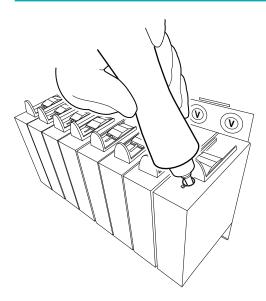


6. Insert the end of the ink bottle cap into the ink filling port on the ink tank, and slowly fill the tank with ink.

The ink level is affixed to the top of the ink tank. Take care to avoid filling with the wrong color of ink.

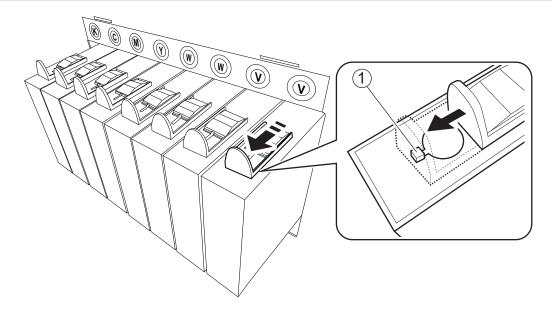
# **IMPORTANT**

- Use all of the ink in the ink bottle for one refill.
- If ink drips or is spilled, wipe it off immediately with paper towels or similar material.



7. Slide the ink tank knob toward you.

Slide the knob toward you until the protrusion (1) is hidden and the knob clicks into place.

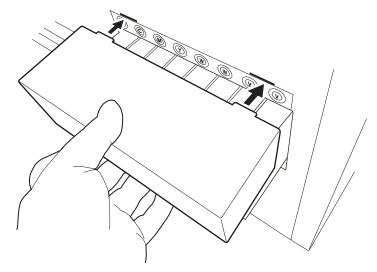


8. Repeat steps 1 to 7 and fill all ink tanks with ink.

# **IMPORTANT**

The ink bottle should be labeled with an Ink ID. Do not dispose of the ink bottle until ink activation has been completed.

9. Install the ink tank cover on the back of the machine.



# Step 2: Activating the Ink

After ink filling has been completed, activate the ink using the Ink ID on the ink bottle label.

#### **Procedure**

1. Access http://124.71.46.129:8089/user/#/home.

The INK AUTHORIZATION window appears.

#### MEMO

To change the display language, select from the pull-down menu at the top right of the window.



- 2. Obtain the [Ink authorization number].
  - (1) Enter the [Board number].

The [Board number] can be checked by starting Roland DG BF-16 Driver.

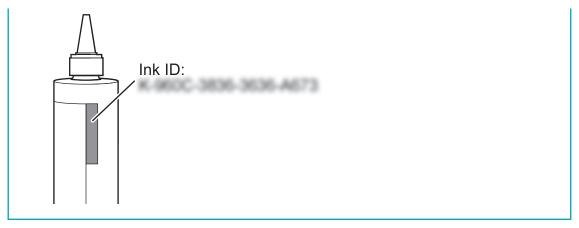
Click [Advanced]>[Version], and then make a note of the [Motherboard Serial Number].



- (2) Enter the [Motherboard Serial Number] in the [Board number] field in the INK AUTHORIZATION window.
- (3) Enter the ink bottle lnk ID in the [lnk number] field.

# MEMO

The first alphabet letter of the Ink ID indicates the ink color.



(4) Click [Get authorization number].

The [Ink authorization number] is acquired.



- 3. Enter the [Ink authorization number] into Roland DG BF-16 Driver.
  - (1) Start Roland DG BF-16 Driver.
  - (2) Click [Advanced]>[Advanced Settings]>[Ink Encryption]. The [Ink Encryption] window appears.

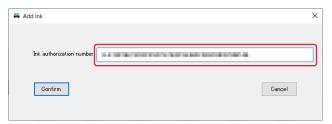


(3) Click [Add>>].

MEMO

Click [Add>>] for the ink tank color just filled.

(4) Enter the [Ink authorization number] that was acquired in Step 2 in the [Add Ink] window.



- (5) Click [Confirm].
  - The [Add ink confirm] window appears.
- (6) Click [Confirm].
- (7) When the [Added successfully! Reset ink successfully] window appears, click [Confirm]. When the [Ink licensing success] window is displayed, ink activation is complete.
- 4. Repeat Steps 2 and 3 to activate all other inks.

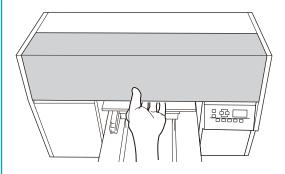
# MEMO

Ink activation must be performed for each ink tank.

# Step 3: Filling the Ink Path with Ink

# **IMPORTANT**

Be gentle when opening and closing the front cover and right cover. If you open and close them forcefully or release the cover when it is partly open, not only may it malfunction, but you may also be injured. When opening or closing the front cover, hold the cover in the center.



### **Procedure**

1. Make sure the home screen is displayed.

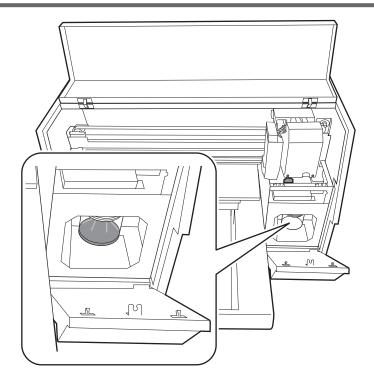
If the home screen is not displayed, press the [EXIT] button several times to display the home screen.

- 2. Prepare to fill the ink path with ink.
  - (1) Press the [ENTER] button.
  - (2) Press the [FRONT] or [BACK] button to select "Maintenance".
  - (3) Press the [ENTER] button.
  - (4) Press the [FRONT] or [BACK] button to select "Manual Pump".
- Open the front cover.
- 4. Press the [ENTER] button.
  - **5.** Open the right cover.

Ink suction starts, and the suctioned ink is discharged into the drain bottle.

# MEMO

If the operation ends without ink being discharged, press the [ENTER] button again to suction ink.



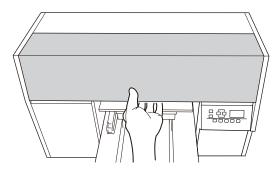
- 6. After the suctioned ink is discharged into the drain bottle, close the right cover.
- Press the [EXIT] button.Ink suctioning will stop.
- **8.** Press the [EXIT] button multiple times. You are returned to the home screen.
- Press the [CLEAN] button.Normal cleaning starts.
- **10.** When normal cleaning finishes, press the [CLEAN] button again. Normal cleaning is performed for a second time.
- 11. Close the front cover.

# Step 4: Attach the Object to Be Printed on for the Printing Test

Attach the object to be printed on for the printing test. Use paper for printing tests (width 160 mm (6.30 in.) × length 110 mm (4.34 in.) or more), not the object that will actually be printed on.

#### **IMPORTANT**

Be gentle when opening and closing the front cover and right cover. If you open and close them forcefully or release the cover when it is partly open, not only may it malfunction, but you may also be injured. When opening or closing the front cover, hold the cover in the center.



#### **Procedure**

- 1. Open the front cover.
- Press the [FRONT] button to move the flat table toward you to where the paper for the printing test can be loaded.

#### MEMO

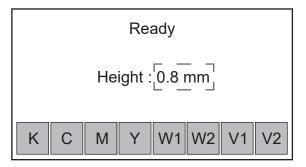
Pressing and holding the [FRONT] button for 3 or more seconds will cause the flat table to continue moving even if the button is released. To stop movement, press the [FRONT] button again or press the [BACK] button.

3. Press the [UP] or [DOWN] button to adjust the flat table height.

Press the [UP] or [DOWN] button to change the thickness value ("Height") on the screen for the paper for the printing test.

#### **MEMO**

If the paper for the printing test is less than 0.1 mm (3.93 mil) thick, set the "Height" value to 0.



4. Load the paper for the printing test onto the flat table.

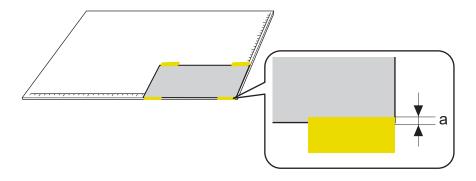
Load the paper by aligning it with the lower-right corner of the flat table.

### 5. Press the [SUC] button.

The suction fan will activate to suction the object to be printed on.

#### **MEMO**

It may not be possible to secure the media in place if the ends of the object to be printed on are rolled up, if the object to be printed on is thick, or in similar situations. For objects to be printed on whose ends are rolled up, secure the object with tape so that Dimension "a" is 5 mm (0.19 in.) or smaller, and then use the suction function. If the area applied with tape is more than 5 mm (0.19 in.), the test pattern may be printed on the tape.

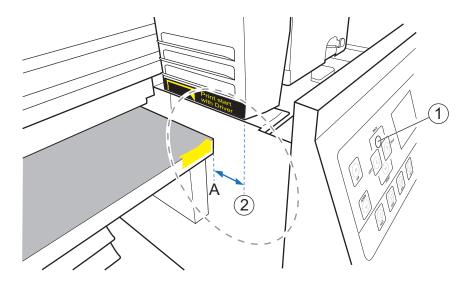


#### 6. Move the table to the printing test start position.

Press the [BACK] button (①) to move the flat table to the printing test start position. The print head nozzle surface is located 30 mm (1.18 in.) behind the UV-LED device (②). Place the edge of the flat table at position A, 25 mm (0.98 in.) behind the front of the UV-LED device.

#### **MEMO**

Pressing and holding the [BACK] button for 3 or more seconds will cause the flat table to continue moving even if the button is released. To stop movement, press the [BACK] button again or press the [FRONT] button.



#### 7. Close the front cover.

# Step 5: Performing a Printing Test

# **IMPORTANT**

Wear protective eyewear when performing a printing test.

#### **Procedure**

1. Press the [TEST] button.

The printing test will start.

#### **MEMO**

Pressing the [TEST] button immediately starts the printing test.

Be sure to load the paper for the printing test and move the flat table to the proper location, then press the [TEST] button.

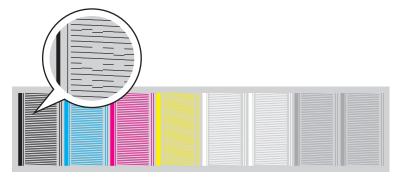
2. Press the [FRONT] button to move the flat table toward you to a location where the printing test results can be checked.

# MEMO

Pressing and holding the [FRONT] button for 3 or more seconds will cause the flat table to continue moving even if the button is released. To stop movement, press the [FRONT] button again or press the [BACK] button.

3. Check whether there is dot drop-out or dot displacement in the test pattern.

Missing blocks indicate dot drop-out. Collapsed or inclined blocks indicate dot displacement. If dot drop-out or dot displacement is still present, perform normal cleaning.



If any of the colors are not emitted, repeat the procedure under Step 3: Filling the Ink Path with Ink(P. 32).

If dot drop-out or dot displacement is present, perform Step 6: Performing Normal Cleaning(P. 37).

If no dot drop-out or dot displacement occurs, this operation is finished. Press the [EXIT] button to go back to the original screen.

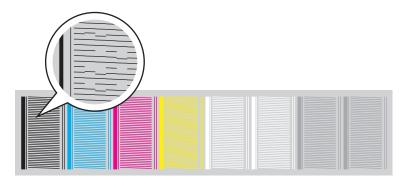
# Step 6: Performing Normal Cleaning

If, after viewing the results of the printing test, dot drop-out or dot displacement is still present, perform normal cleaning.

#### **Procedure**

- Press the [CLEAN] button.
   Normal cleaning starts.
- 2. Load the paper for the printing test onto the flat table.

  Step 4: Attach the Object to Be Printed on for the Printing Test(P. 34)
- Performing a Printing Test.
   Step 5: Performing a Printing Test(P. 36)
- 4. Check to make sure the dot drop-out or dot displacement has been corrected.



If the problem persists, try performing normal cleaning again. If the printer has been used for a long period, dot drop-outs may not be fixed even after performing normal cleaning two or three times. If this is the case, clean using a different method.

#### **IMPORTANT**

UV ink will harden. It may adhere to the print head and solidify. If left alone, ink may clog the print heads and cause problems including printer malfunctions. Clean the head manually when printing frequently with the print head at a distance from the print surface. This is called manual cleaning. To prevent clogging of the print heads, you may have to perform manual cleaning each time you print.

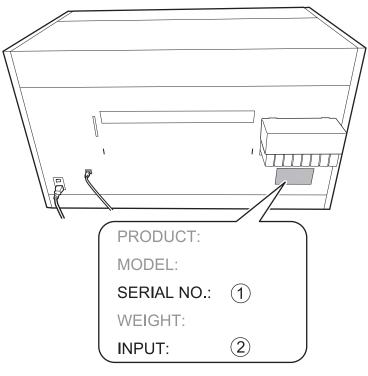
# RELATED LINKS

- · Preparing the Print Head Nozzle Surface
- When Normal Cleaning Is Not Effective (User's Manual)

# **Appendix**

# Location of the Power Rating and Serial Number Label

# Rear



1)	Serial number This number is required when you seek maintenance, servicing, or support. Never peel off the label.
2	Power Rating Use an electrical outlet that meets the requirements for voltage, frequency, and amperage given here.

