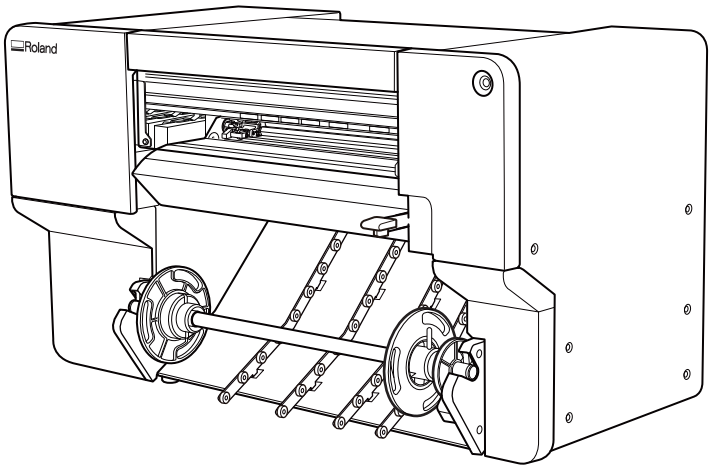
BY-20

Installation and Initial Settings



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.
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R6-260901

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Roland DG Corporation

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Introduction

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About the Documentation for This Machine

The following instruction manuals are included to ensure proper use of the machine.

- **Safety Precautions**

  This manual contains important precautions for using the machine.
- **Quick Access Guide**

  This guide contains the setup flow for this machine as well as links to procedures.
- **Regular Maintenance Guidelines**

  These guidelines include links to maintenance items listed in the manual. Scan the QR code to open the maintenance instructions directly.
- **Machine Installation**

  This guide contains details on how to install the machine.
- **Installing the Software and Configuring Its Initial Settings**

  This guide contains information on how to configure the initial settings of the machine.
- **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).
- **Roland DG Connect Designer User's Manual**

  This guide contains basic operating instructions for the design and output software.
- **Videos**

  These are the support videos for the manuals. The videos help guide users through explanations that are not easily understood through text and illustrations only.

MEMO

View the manuals and videos from the following URL.
https://downloadcenter.rolanddg.com/BY-20

The illustrations and Utility screens in the manual are for the BN2-20, so long as the operations and procedures are not affected, while Windows screens are used for Utility.

System Requirements/Overview

System Requirements

Prepare a computer that matches the requirements.

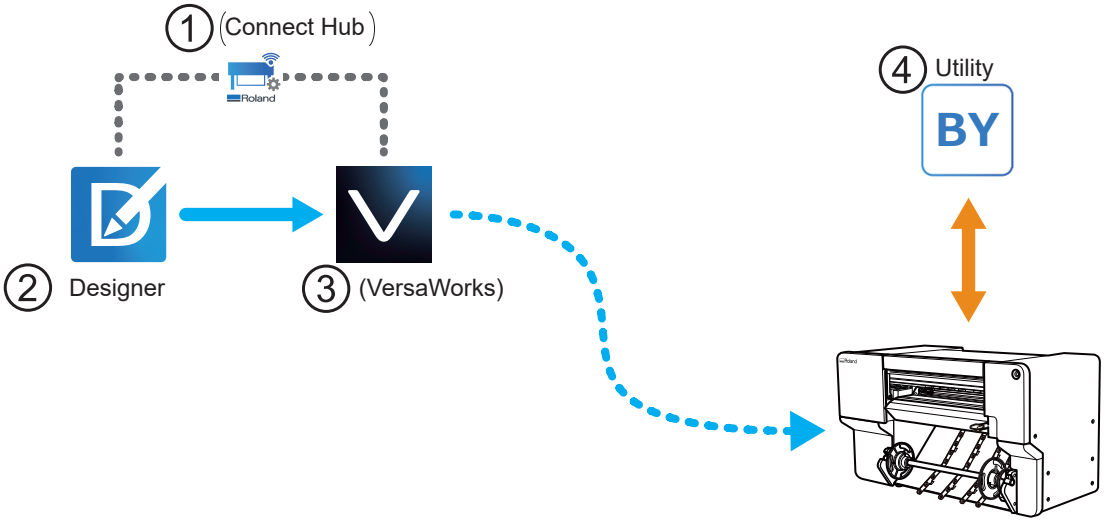
	Windows	Mac
Operating system (OS)	Windows 11	macOS 26, 15, 14
CPU	Intel Core i5 4670 or higher	Apple Silicon
Memory	16 GB or more	8 GB or more
Video card, monitor	Full HD (1,920 × 1,080 pixels, 24-bit color)	1,280 × 1,024 pixels or above
Solid state drive	256 GB or more free space	128 GB or more
Hard disk	500 GB or more free space	
Others	Internet connectivity, web browser, and Ethernet port	

Software to Be Used

The software to be used is listed below.

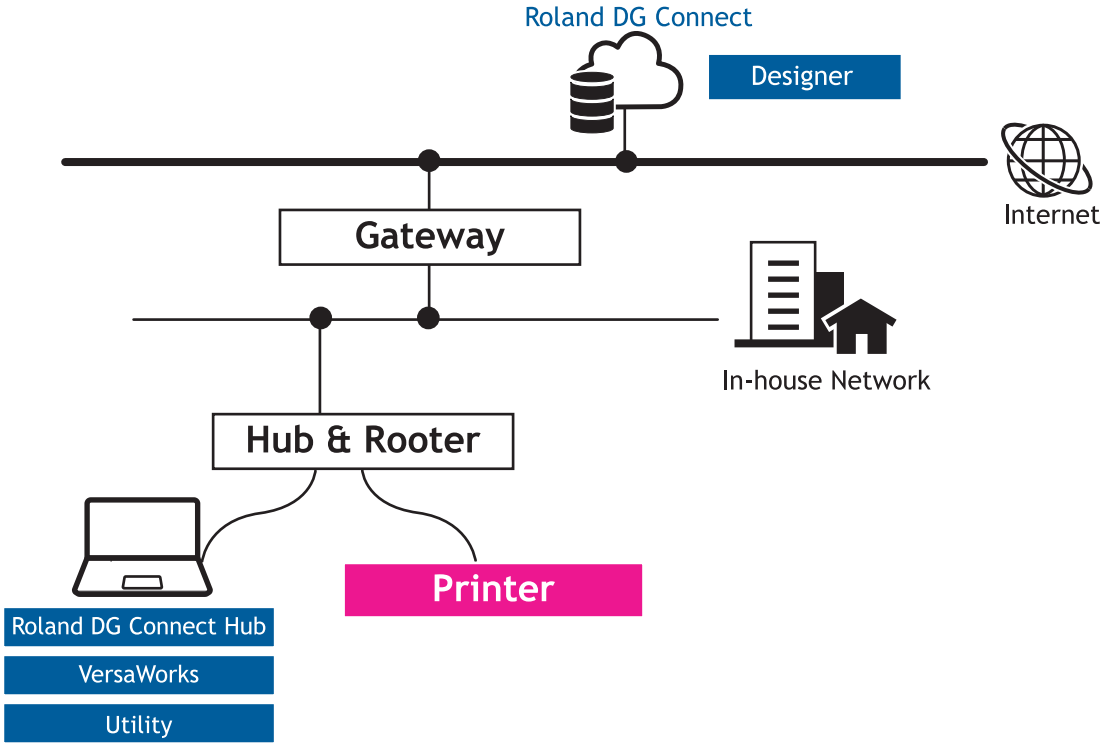
In this manual, "Roland DG Connect Hub" is written as "Connect Hub," "Roland DG Connect Designer" as "Designer," "VersaWorks 7" as "VersaWorks," and “BY Utility" as "Utility."

①	Connect Hub	System hub software. The major functions are shown below. • Starting Designer, VersaWorks, and Utility • Transferring data between Designer and VersaWorks • Transferring printer status and operating information required for the Roland DG Connect service
②	Designer	Design software used on Roland DG Connect. The software makes it easy to create print data, set print settings such as media and quality, and output via VersaWorks.
③	VersaWorks 7	Software RIP (Raster Image Processor). For more information on the functions, see the VersaWorks 7 manuals.
④	Utility	Software that is needed to operate the machine. The major functions are shown below. • Settings and adjustments • Management of ink remaining amount • Maintenance • Display of messages and error messages



When using commercially available design software such as Adobe Illustrator or CorelDRAW, the created data (.pdf, .ai, etc.) can be imported into Designer for editing. The data can also be directly imported into VersaWorks and output after configuring the print properties.

Network Configuration Diagram



Network Settings

Setting the Computer's Network

IMPORTANT

The machine and computer are connected using an IP address that is automatically assigned via DHCP.

Windows

This manual contains operation explanations for the following versions. Operations and names may vary depending on the version and build of the OS.

- Windows 11

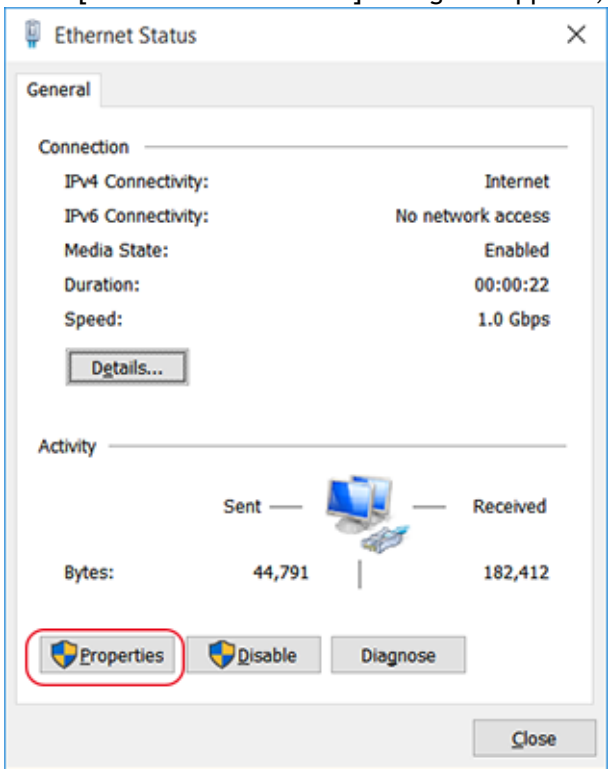
  Version: 24H2

Procedure

1. **Log on to Windows as the [Administrator] or a member of the [Administrators] group.**
2. **Open Control Panel.**

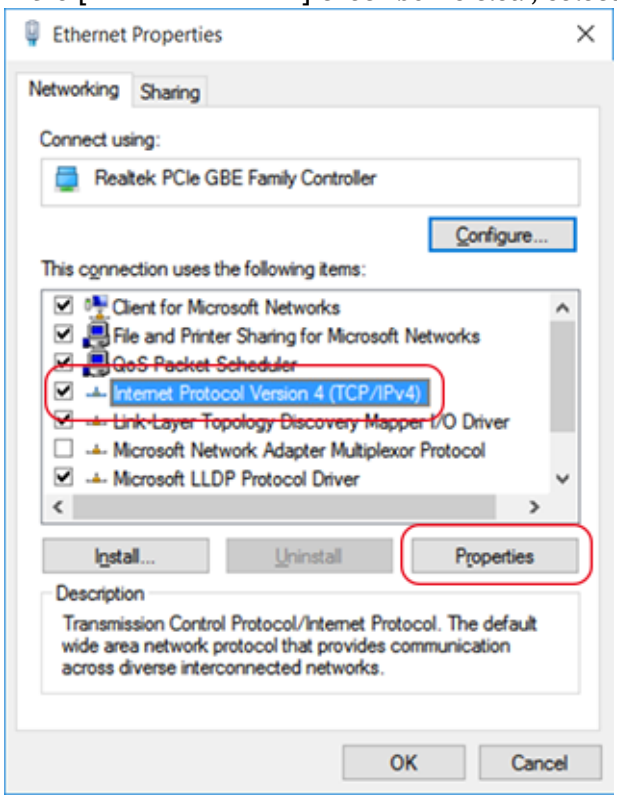
   Search for "Control Panel" from the taskbar.
3. **Click [Network and Sharing Center].**
4. **Click [Ethernet] or [Wi-Fi].**
5. **Click [Properties].**

   If the [**User Account Control**] dialog box appears, click [**Continue**].

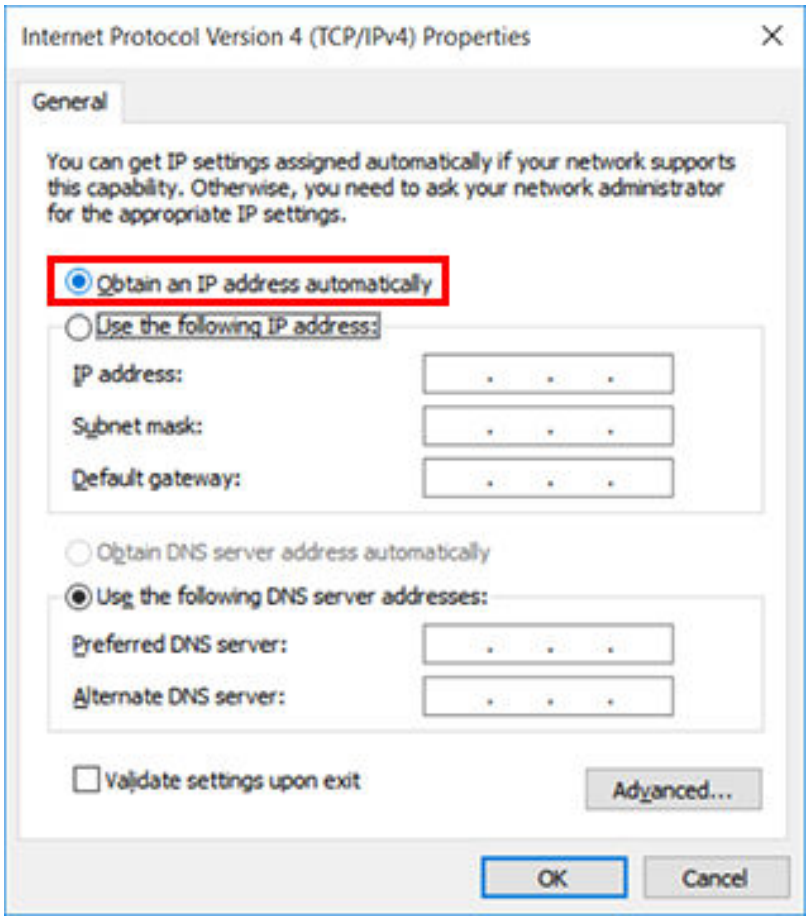


   The [**Ethernet Properties**] or [**Wi-Fi Properties**] dialog box appears.

6. **Select [Internet Protocol Version 4 (TCP/IPv4)], and then click [Properties].**
   If the [**Internet Protocol**] check box is clear, select it.



7. **Select [Obtain an IP address automatically] and click [OK].**



8. **Click the following buttons to return to the original state.**
   a. [**Close**] in the [**Ethernet Properties**] or [**Wi-Fi Properties**] dialog box
   b. [**Close**] in the [**Ethernet Status**] or [**Wi-Fi Status**] dialog box

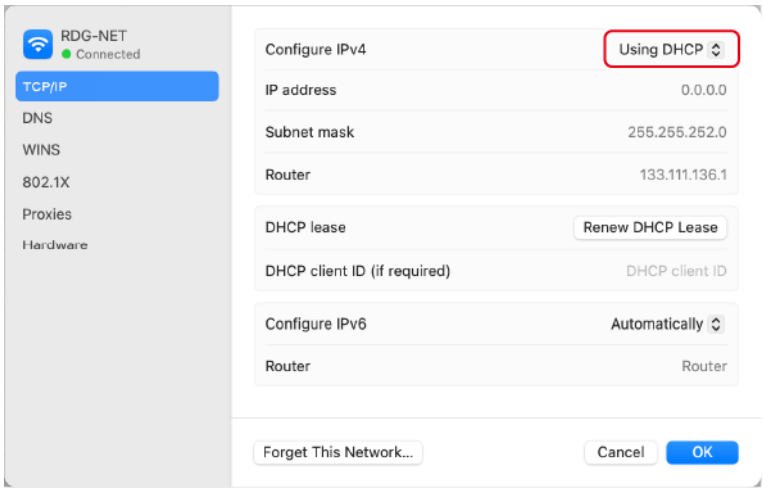
Mac

This manual contains operation explanations for the following versions. Operations and names may vary depending on the version and build of the OS.

- Mac
  macOS: 15.2

Procedure

1. **Log on to the Mac as the "Administrator."**
2. **From the Apple menu, click [System Settings...].**
3. **Click [Network]>[Wi-Fi] or the network name (when using Ethernet).**
4. **Click [Details...].**
5. **Click [TCP/IP].**
6. **Select [Using DHCP] for [Configure IPv4].**


RDG-NET
Connected
TCP/IP
DNS
WINS
802.1X
Proxies
Hardware
Configure IPv4
Using DHCP
IP address
0.0.0.0
Subnet mask
255.255.252.0
Router
133.111.136.1
DHCP lease
Renew DHCP Lease
DHCP client ID (if required)
DHCP client ID
Configure IPv6
Automatically
Router
Router
Forget This Network...
Cancel
OK

7. Click [OK].

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Software Setup

IMPORTANT

A connection to the Internet is required to set up the software.

Step 1: Creating a Roland DG Connect Account

If you already have a Roland DG Connect ID, you do not need to create an account. Proceed to Step 2: Downloading and Installing Roland DG Connect Hub(P. 13).

Procedure

1. **Start the computer.**
2. **Access the following website.**
   https://connect.rolanddg.com/
3. **Click [Sign Up], and then create a Roland DG Connect account.**
   Create an account according to the information in the Master Initial Setting Guide.
   https://support.rolanddg.com/hc/articles/43642210630297

   MEMO

   You can also use the ID that you have created with [**Sign Up**] in Roland DG Connect with [**Sign In**] in Roland DG Connect Hub.

Step 2: Downloading and Installing Roland DG Connect Hub

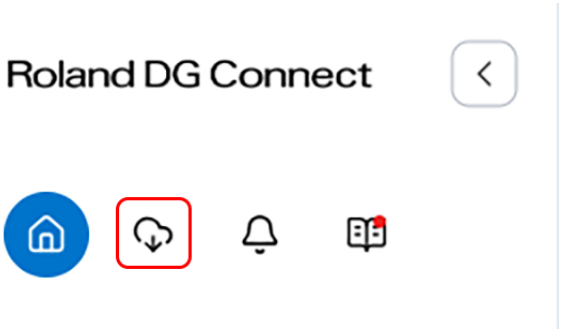
Procedure

1. **Log in to Roland DG Connect.**
   https://connect.rolanddg.com/

   MEMO

   If you have not closed the page displayed after you created a Roland DG Connect account, you do not need to log in again. Proceed to Step 2.

2. **Click** .



3. **Download Roland DG Connect Hub.**
   Roland DG Connect Hub is available for Windows and Mac. Download the version for your OS.

4. **Install Roland DG Connect Hub from the downloaded file.**
   Follow the on-screen instructions to install Roland DG Connect Hub.

Step 3: Signing in to Roland DG Connect Hub

Start Roland DG Connect Hub and sign in.

If you select the [**Launch Roland DG Connect Hub**] checkbox in the Roland DG Connect Hub setup wizard, Roland DG Connect Hub will start automatically after setup finishes.

To sign in, use the Roland DG Connect ID that you created in Step 1: Creating a Roland DG Connect Account(P. 12).

Step 4: Registering the Machine to Roland DG Connect Hub

Refer to the procedure below to register the printer to Connect Hub.
https://support.rolanddg.com/hc/articles/44190367491481

Step 5: Installing VersaWorks from Roland DG Connect Hub

Use Roland DG Connect Hub to install VersaWorks.

Procedure

1. **Start [Roland DG Connect Hub].**
   - Windows
     Click the [**Roland DG Connect Hub**] icon in the notification area.
   - Mac
     Click the [**Roland DG Connect Hub**] icon on the Dock.

   IMPORTANT

   When using Windows, if you have cleared the [**Launch Roland DG Connect Hub**] checkbox in the Roland DG Connect Hub setup wizard, start the software from the [**Start**] menu after setup finishes.

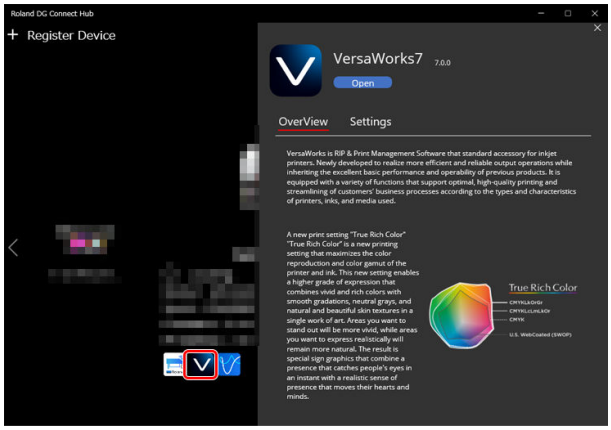
2. **In the main window, select the machine to use.**

   MEMO

   If the printer to register cannot be found, see the "Roland DG Connect Help."
   https://support.rolanddg.com/hc/en-us/categories/6469527154585-Roland-DG-Connect

3. **Click** .

   The sidebar is displayed on the right side of the window.



4. **Click [Install].**

   After installation completes, click to start VersaWorks.

Step 6: Configuring VersaWorks Settings

For information on how to connect the printer after installing VersaWorks, see the VersaWorks Installation Guide.

Actions to Take When Machine Information Is Not Displayed in Roland DG Connect Hub

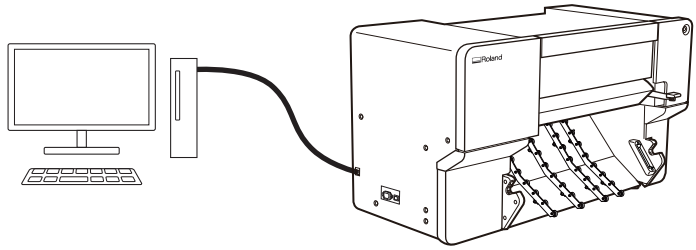
- If machine information is not displayed in Roland DG Connect Hub, refer to the following and bring the computer and this machine into the same subnet mask.

  P. 6 Network Configuration Diagram
- If the computer and this machine cannot be brought into the same subnet mask, refer to Directly Connecting to the Computer(P. 18) and connect them directly, and then configure the network settings for the computer and printer.

Directly Connecting to the Computer

This section explains the setting procedure for connecting one computer and one machine directly, not over a network.

IP addresses that start with "192.168." can be used freely by anyone. Use one of these addresses when connecting one computer and one machine in an environment separate from other networks.



1. Make the Network Settings on the Printer

Procedure

1. **On the Utility home screen, click ☰.**

2. **Click [System Information], and then clear the [Obtain IP Address Automatically] check box under [Network].**

3. **Enter the [IP Address] and [Subnet Mask].**

(1) **Enter the [IP Address].**

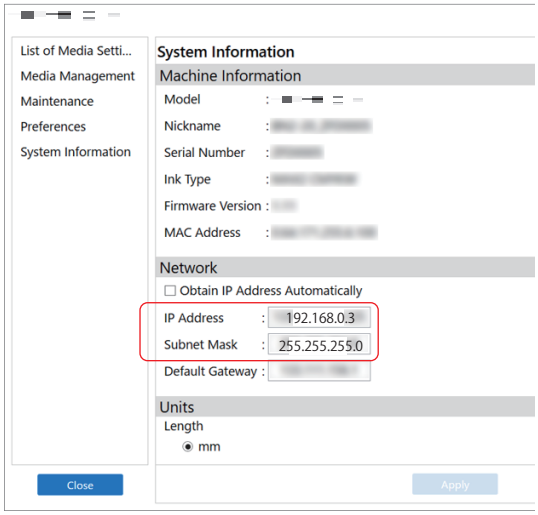
Item	Address to enter
IP address	192.168.0.XXX
Subnet mask	255.255.255.0

Note: Here, "XXX" may be any number you want from 1 to 254.

Here, "192.168.0.3" is entered by way of example.

(2) **Enter the [Subnet Mask].**

Enter the same subnet mask as the one used by the computer.



4. Click [Apply].

2. A: Setting the Computer's Network (Windows)

MEMO

Operation methods may vary depending on the version and build of the OS.

Procedure

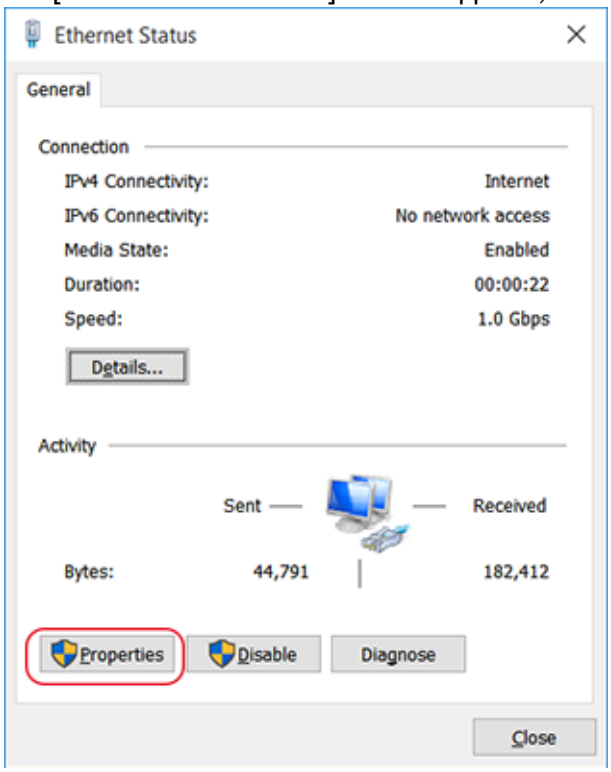
1. **Log on to Windows as the [Administrator] or a member of the [Administrators] group.**

2. **Open Control Panel.**
   Search for "Control Panel" from the taskbar.

3. **Click [Network and Sharing Center].**

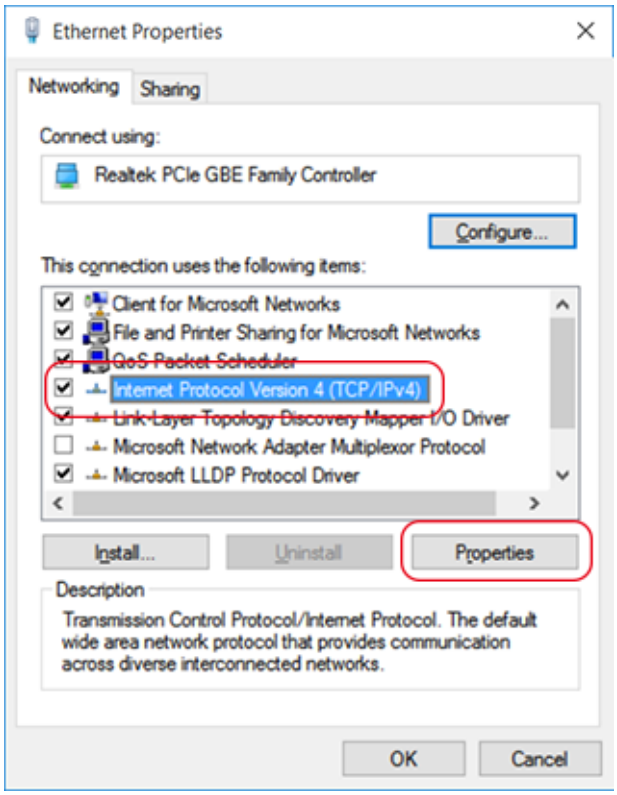
4. **Click [Ethernet].**

5. **Click [Properties].**
   If a [**User Account Control**] window appears, click [**Continue**].



   The [**Ethernet Properties**] screen appears.

6. **Select [Internet Protocol Version 4 (TCP/IPv4) Properties], and then click [Properties].**
   If the [**Internet Protocol**] check box is clear, select it.



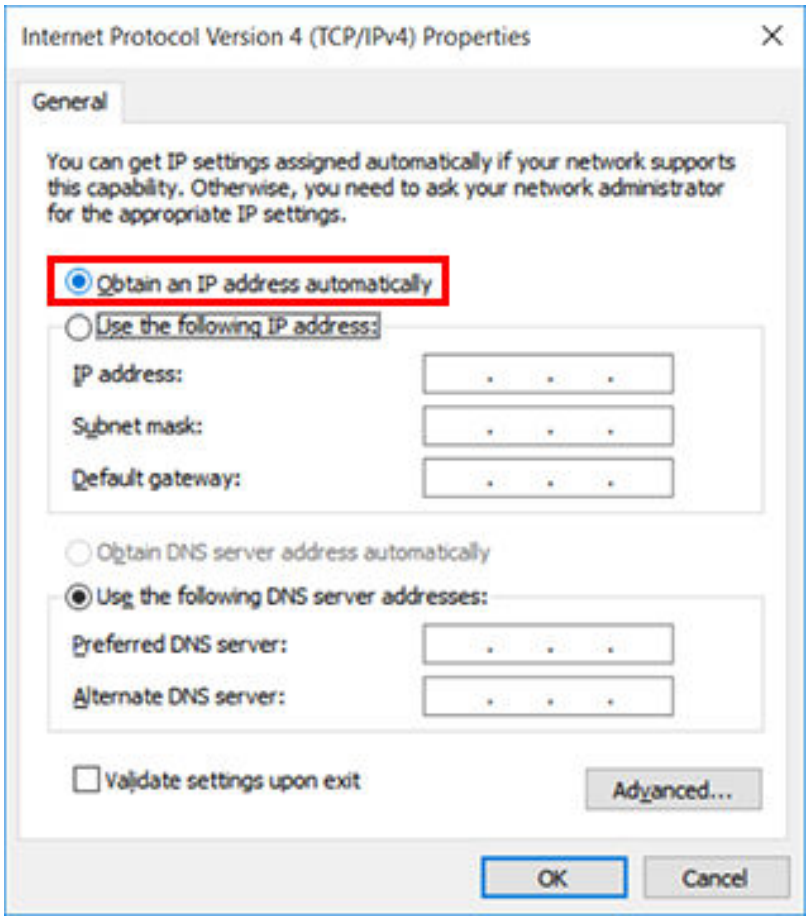
7. **Select [Use the following IP address], enter the IP address and subnet mask, and click [OK].**

MEMO

The addresses in the following table are examples used for the explanations in this manual. Enter the desired IP address and subnet mask.

Item	Address to enter
IP address	192.168.0.XXX
Subnet mask	255.255.255.0

"XXX" represents a number from 1 to 254. However, do not use the same number as set in "Make the Network Settings on the Printer."



8. **Click the following buttons to return to the original state.**
   a. [**Cancel**] in the [**Ethernet Properties**] window
   b. [**Cancel**] in the [**Ethernet Status**] window

2. B: Setting the Computer's Network (Mac)

MEMO

The following operation procedure uses macOS 15.1. Operation methods may vary depending on the version of Mac OS or the build of the OS.

Procedure

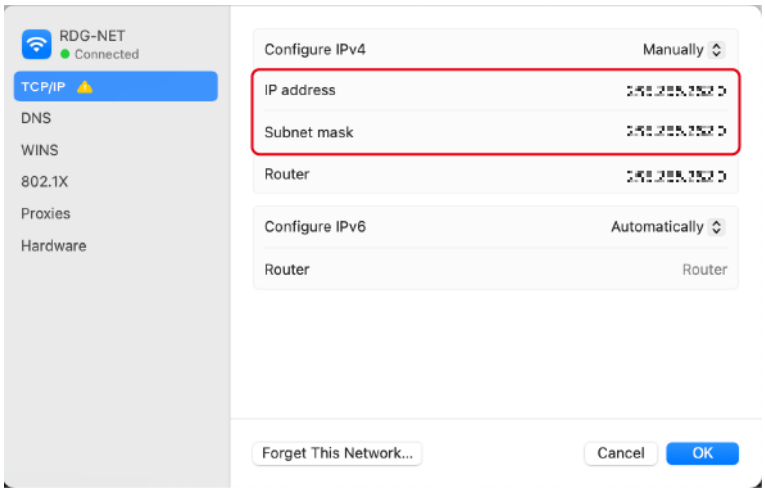
1. **Log on to the Mac as the "Administrator."**
2. **From the Apple menu, click [System Settings...].**
3. **Click [Network]>[Wi-Fi] or the network name (when using Ethernet).**
4. **Click [Details...].**
5. **Click [TCP/IP].**
6. **Select [Manually] for [Configure IPv4].**
7. **Enter the [IP address] and [Subnet mask].**

   MEMO

   The addresses in the following table are examples used for the explanations in this manual. Enter the desired IP address and subnet mask.

Item	Address to enter
IP address	192.168.0.XXX
Subnet mask	255.255.255.0

   Here, "XXX" can be any number from 1 to 254. Ensure that it is different from the numbers of other equipment.

8. **Click [OK].**

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- Loading Roll Media 28

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Adjusting the Amount of Blade Extension 54

Fixing Dot Drop-out and Dot Displacement 55
- Normal Cleaning 55
- Medium Cleaning 56
- Powerful Cleaning 57
- Start-up cleaning 58

Installing the Cutting Tool

This operation is unnecessary if you will not use the cutting tool. Tighten the print-head carriage screw lightly when no cutting tool is installed. Keeping the screw firmly tightened causes the cutting tool insertion hole to become gradually smaller, making installation difficult.

⚠ WARNING

Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.
Sudden movement of the machine may cause injury.

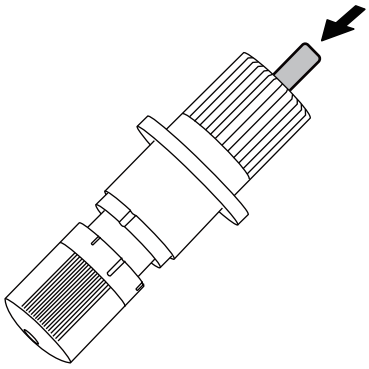
⚠ CAUTION

Never touch the tip of the knife.
Doing so may result in injury. The cutting performance of the blade will also be impaired.

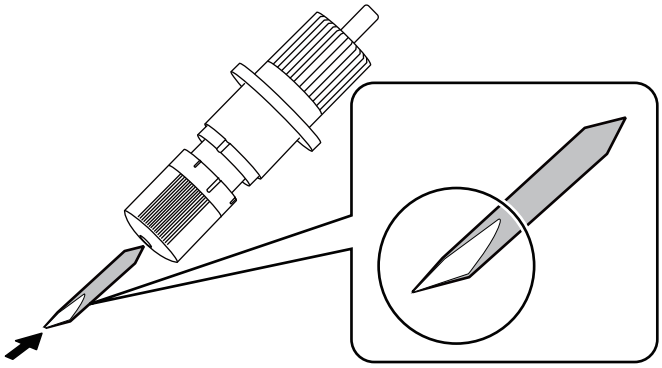
Step 1: Assembling the Cutting Tool

Procedure

1. **Insert the pin into the blade holder.**
   Insert the pin until the tip protrudes about 3 to 5 mm (0.12 to 0.19 in.).



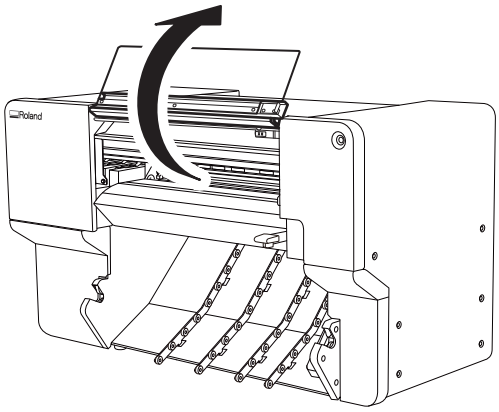
2. **Insert the blade into the blade holder.**
   Insert the blade into the hole so the blade tip is on the outside.



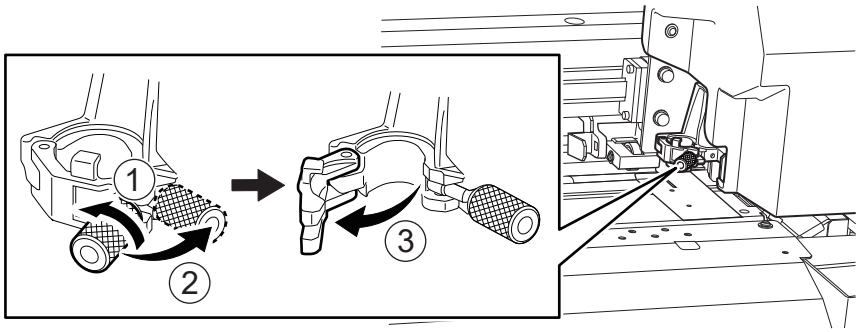
Step 2: Installing the Cutting Tool

Procedure

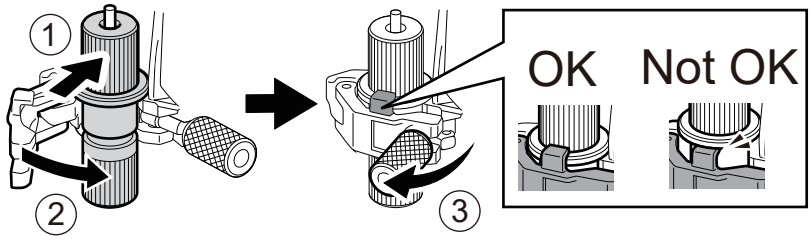
1. Open the front cover.



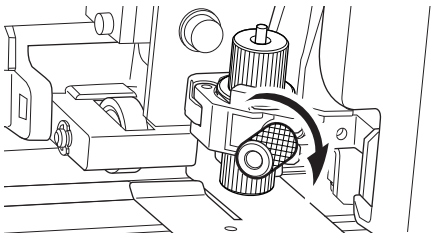
2. Loosen the print-head carriage screw.



3. Install the cutting tool in the print-head carriage.



4. Tighten the screw.



5. Close the front cover.

Loading Media

Media type

In this manual, the paper used for output is called "media." The two main types of media used in this machine are shown below.

- Roll media: Media wound onto a paper tube
- Sheet media: Media not wound onto a paper tube such as standard-size media

Various paper qualities of roll media and sheet media are selectable according to the purpose. For detailed information about each media, contact your media supplier. Media can also be purchased from our web-site.

https://www.rolanddg.com/

Usable media

This machine cannot print on every kind of media. Before selecting media, be sure to perform trial printing to check whether satisfactory output quality is obtained.

Size

	Usable Media
Width *1	150 to 515 mm (5.9 to 20.3 inches)
Cuttable media thickness*1	Max. 0.22 mm (8.66 mil; depending on the media composition)
Maximum media thickness (including backing paper)*1	When only printing: 1.0 mm (39.4 mil) When performing cutting: 0.4 mm (15 mil)
Maximum roll outer diameter	150 mm (5.9 in.)
Paper tube (core) inner diameter	76.2 mm (3 in.) or 50.8 mm (2 in.)

*1 Applies to both roll and sheet media

Maximum roll weight

6 kg (13.23 lb.)

Other conditions

Media such as the following cannot be used.

- Media whose end is attached to the paper tube (core)
- Media that is severely warped or that has a strong tendency to reroll
- Media that cannot withstand the heat of the media heating system
- Media whose paper tube (core) is bent or crushed
- Media that bends under its own weight when loaded
- Media on a sagging roll
- Media that is rolled unevenly

Loading Roll Media

Load the roll media onto the media flange and then load it in the machine. This procedure is not necessary when using sheet media.

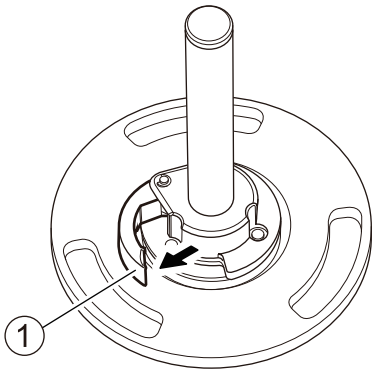
MEMO

Use the following link to view a reference video for this procedure. We recommend that you view this video to understand the overall flow of work.
https://vimeo.com/1003476467/d0c94b8c81
The BN2-20/20A is shown in this video, but the work and operation procedures are the same for this machine.

Procedure

1. **Remove the media shaft from the machine.**

2. **Open the lock lever (①) on the left media flange in the direction of the arrow, and remove the flange from the media shaft.**



3. **Check the orientation of the right media flange (①).**

With the factory default settings, the right media flange is installed so that loading of roll media with a 3-inch paper tube inner diameter is possible.

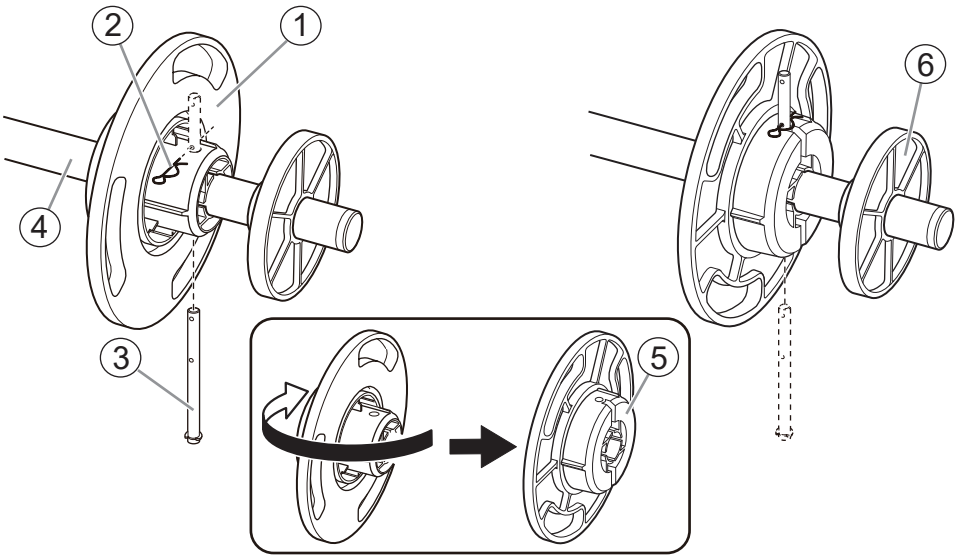
To load roll media with a 2-inch paper tube inner diameter, change the orientation of the right media flange using the following procedure.

(1) **Remove the snap pin (②) and pull out the mounting pin (③).**

(2) **Remove the right media flange from the media shaft (④).**

(3) **Change the orientation of the right media flange and install it on the media shaft with the 3-inch side (⑤) facing the stopper (⑥).**

(4) **Secure the right media flange and media shaft with the mounting pin, and then attach the snap pin.**

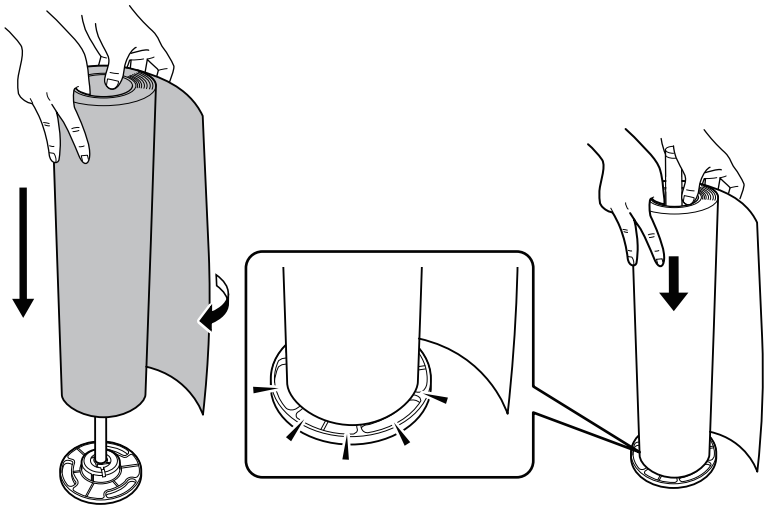


4. **Load the roll media onto the media flange.**

Place the media shaft flange at the bottom and load the roll media so that the media feeds in the clockwise direction when viewed from above.

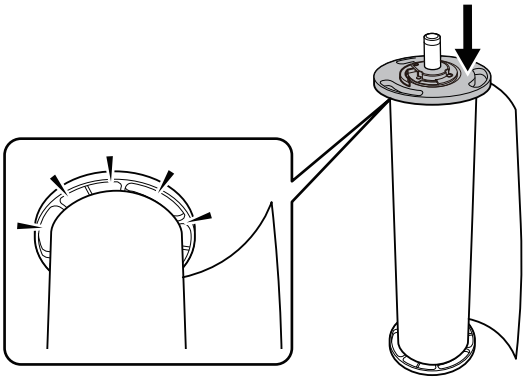
MEMO

Media cannot be loaded correctly if the direction of the roll media is incorrect.
Install the roll media so there is no gap between it and the media flange.
To keep the printing result from being negatively affected, prevent contact with the media print surface as much as possible.



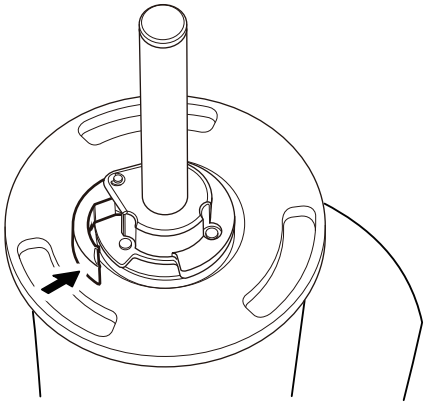
5. **Install the left media flange.**

Install the media flange so there is no gap between it and the roll media.



6. **Secure the left media flange in place.**

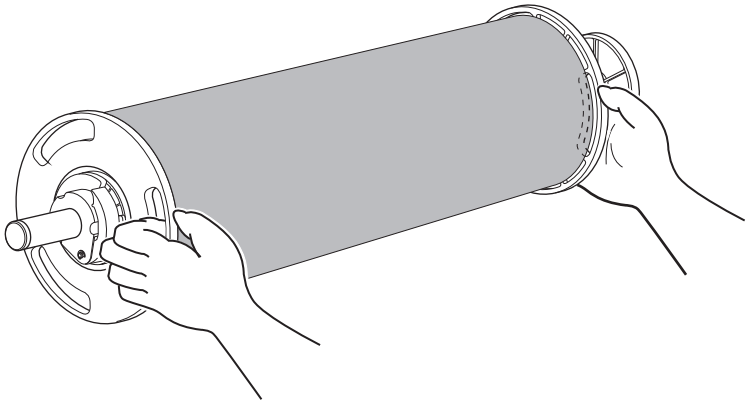
Close the lock lever in the direction of the arrow to secure the left media flange in place.



7. **Load the roll media on the printer.**

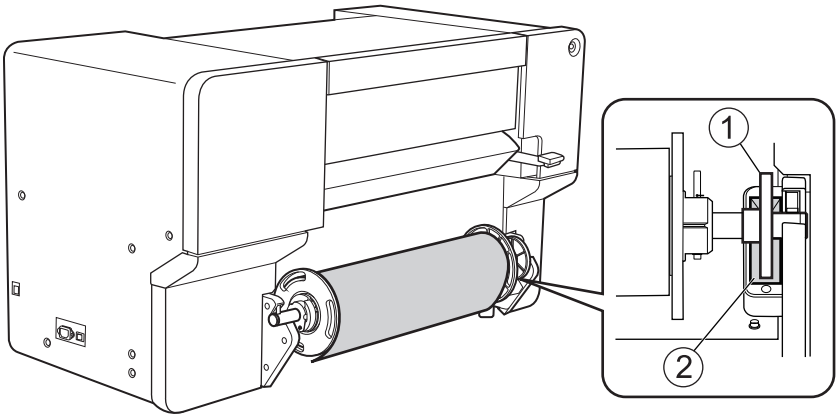
IMPORTANT

When loading the media, hold by the media flange to prevent contact with the media print surface.



(1) **Align the stopper (①) with the guide (②).**

(2) **Press the left and right ends of the media shaft into the shaft holder until you hear a click.**


1
2

Ink Filling and Initial Adjustment

Fill the machine with ink and perform initial adjustment.

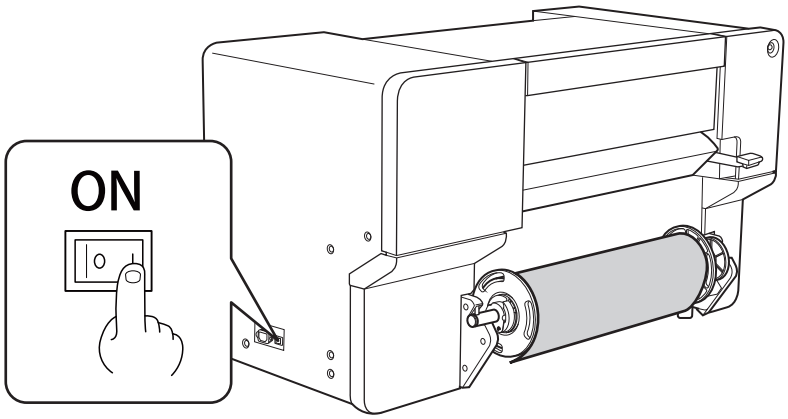
Step 1: Filling with Ink

Use BY Utility to operate the machine.
In this manual, BY Utility is referred to as "Utility."

Procedure

1. **Close the front cover.**

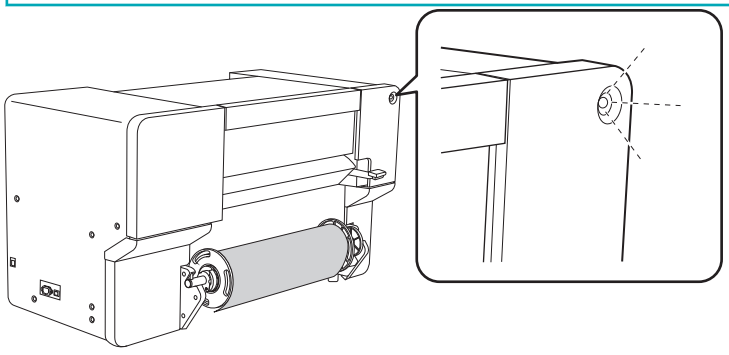
2. **Turn on the main power switch.**



3. **Press the sub power button.**

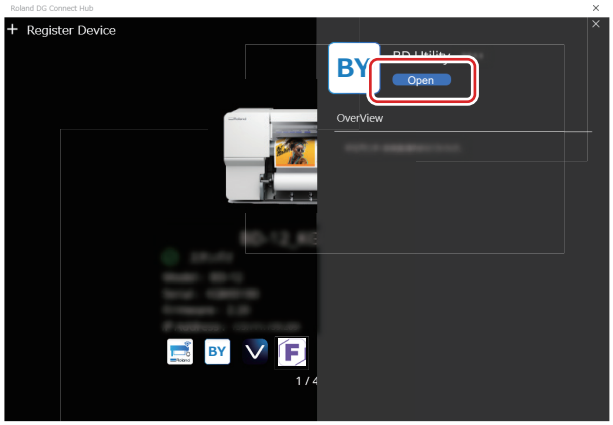
   When the sub power button indicator changes from flashing to steady, startup is finished.

> MEMO
>
> After turning on the main power, wait some time before pressing the sub power button.
> Firmware initialization starts when the main power is turned on, and there will be no response when pressing the sub power button until initialization is complete.

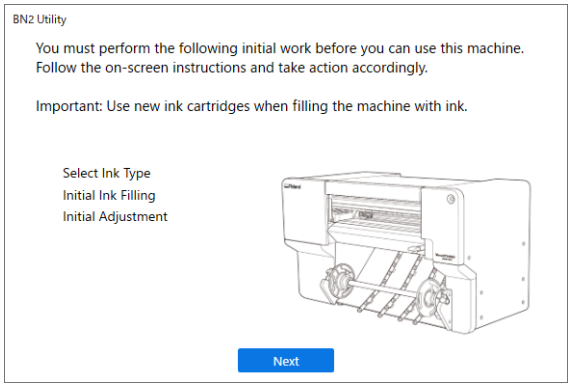


4. **Start Utility from the Roland DG Connect Hub home screen.**

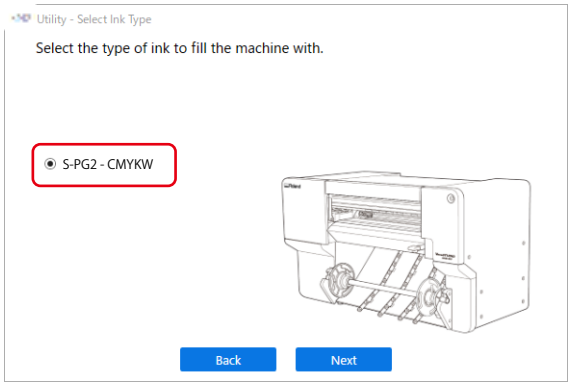
   Click [**Open**] next to Utility.



5. **When the Operation Guide window appears, click [Next].**



6. **Select the type of ink being used for filling, and then click [Next].**

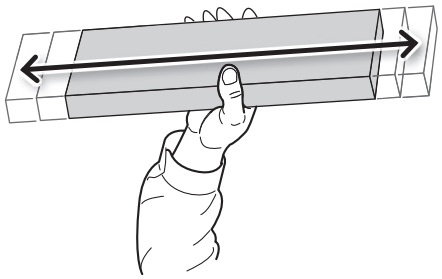


A window appears with selections of the type of ink being used for filling. If the current selection is correct, click [**Next**]. To change the selection, click [**Back**].

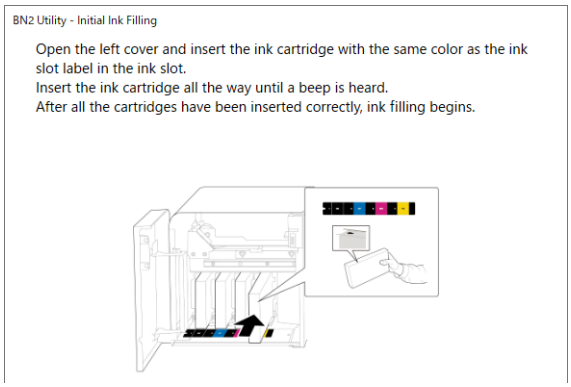
7. **Insert the ink cartridge to fill the machine with ink.**

IMPORTANT

- When filling the machine with ink, be sure to shake any unused ink cartridges to mix the ink.
- Before inserting the ink cartridges, shake each of them 100 times (about 40 seconds).
  The precipitation of the ingredients in the ink disables printing in normal color. So that the ink mixes well, shake the ink cartridge horizontally with a stroke length of around 5 cm (1.97 in.) from each end of the ink cartridge.



Open the left cover and insert the ink cartridge with the same color as the ink label in the ink slot. Insert the ink cartridge all the way until a beep is heard.



8. When the [The ink tanks have been filled.] window appears, click [Next].

Step 2: Loading Media

When [**Load the media, and then make sure that the loading lever is lowered. Start setup.**] is displayed, load the media while referring to the loading instructions for the media being used.

IMPORTANT

Perform printing tests and various adjustments. Load media that is at least 400 mm (15.75 in.) wide and 600 mm (23.63 in.) long.

- When using roll media

  P. 35 Loading Roll Media

- When using sheet media

  P. 40 Loading Sheet Media

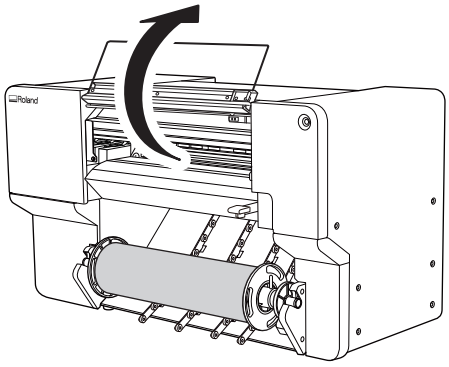
Loading Roll Media

MEMO

Use the following link to view a reference video for this procedure. We recommend that you view this video to understand the overall flow of work.
https://vimeo.com/1003476339/5eb7f8a611
The BN2-20/20A is shown in this video, but the work and operation procedures are the same for this machine.

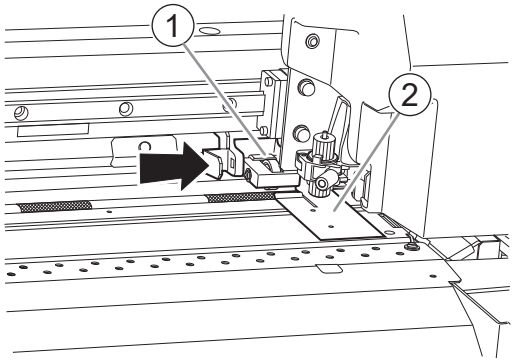
Procedure

1. Open the front cover.



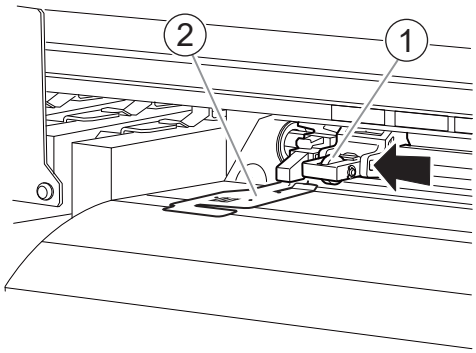
2. Move the right pinch roller (①) and the right media clamp (②) to the right end.

Press the part indicated by the arrow on the right pinch roller to move the roller and the right media clamp together.



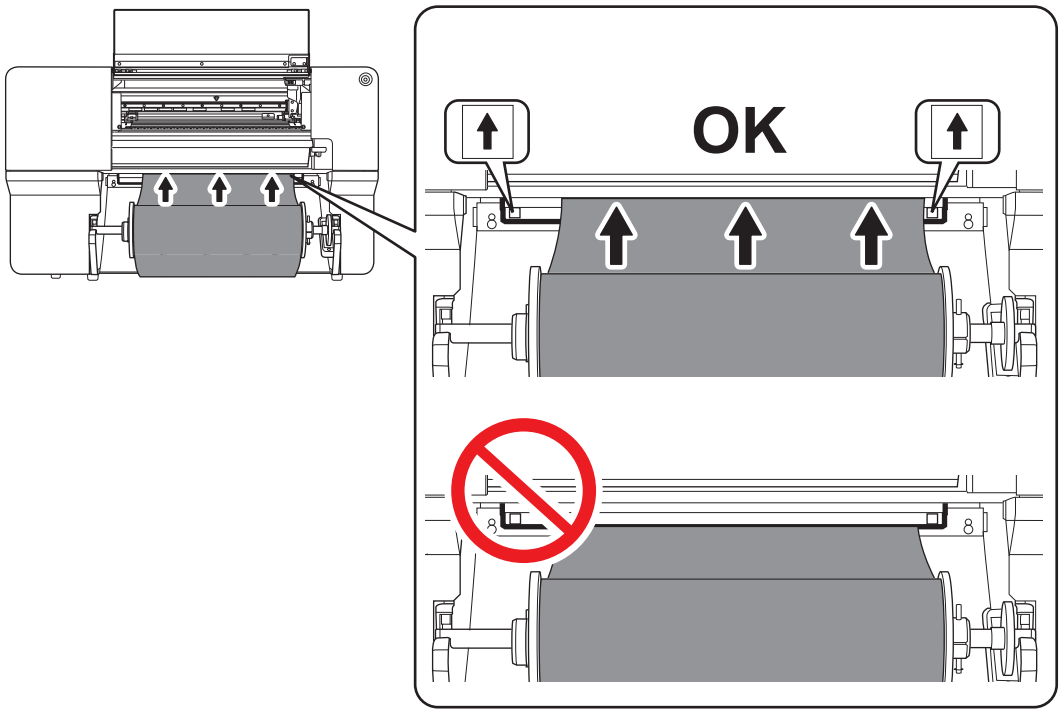
3. **Move the left pinch roller (①) and the left media clamp (②) to the left end.**

Press the part indicated by the arrow on the left pinch roller to move the roller and the left media clamp together.



4. **Use the following procedure to load the media.**

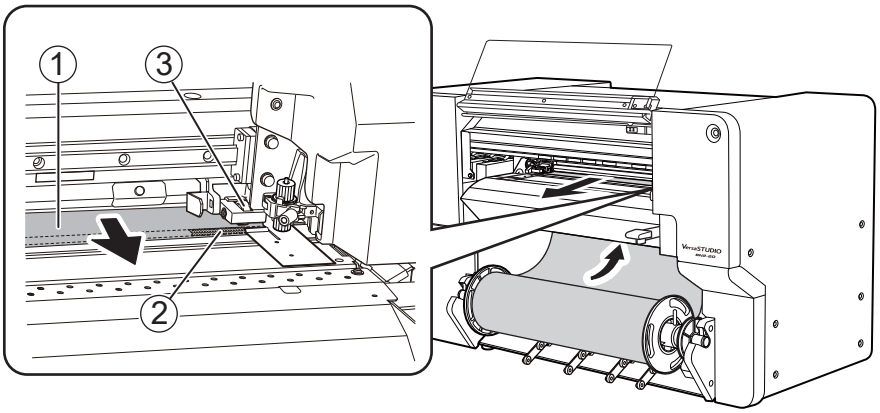
(1) **Pull out the media and load it from above the plate in front with the arrow stickers.**



(2) **Pass the media (①) between the right grit roller (②) and right pinch roller (③).**

MEMO

If the left edge of the media is left of the left pinch roller, pass the media between the left grit roller and left pinch roller as well.



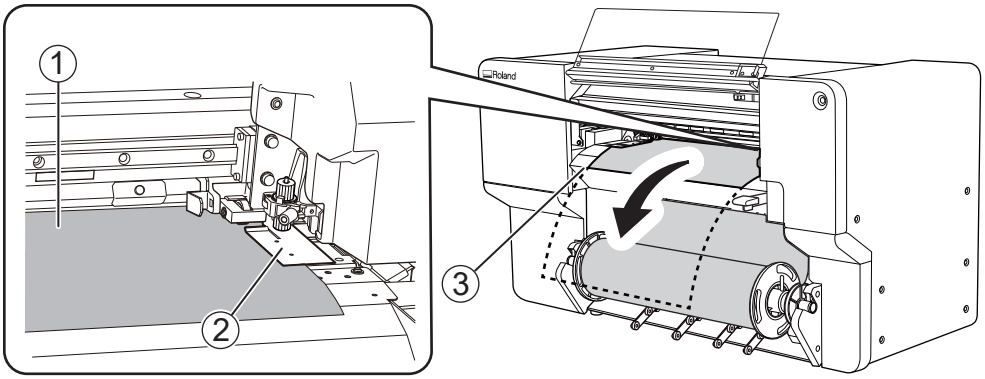
(3) **Pass the media (①) under the right media clamp (②), and pull it out about 20 cm (7.87 in.) from the edge of the apron (③).**

MEMO

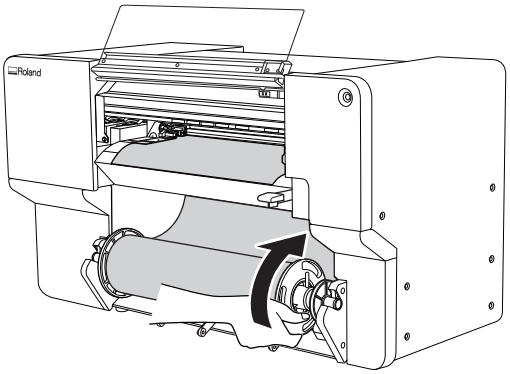
If the left edge of the media hits the left media clamp, pass the media under the left media clamp.

MEMO

You will hear a beep. Approximately 2 seconds later, you will hear two beeps, and then the suction fan will activate. While this fan is operating, the position of the media will be maintained even if you remove your hands from it.



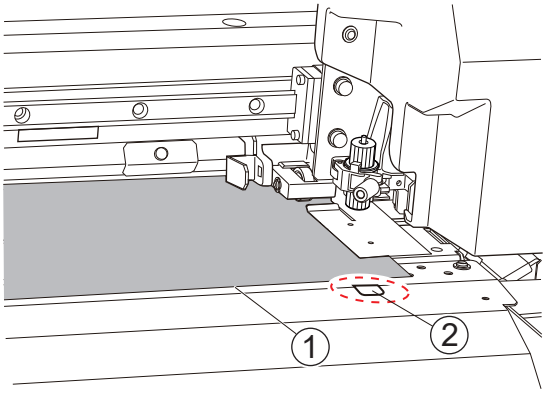
(4) **Hold the media holder flange and take up about 20 cm (7.87 in.) of media.**



MEMO

Do not take up so much media (①) that the sensor (②) becomes visible.

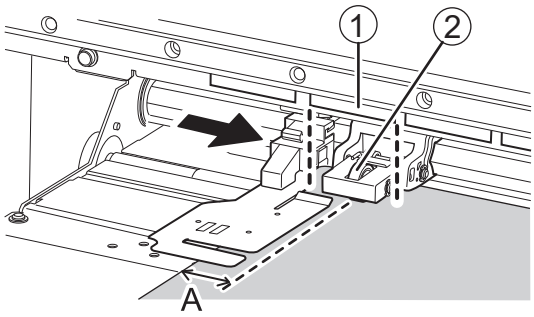
If you take up too much media, you will hear two short beeps and the suction fan will stop. If the media comes off or is not straight, take up the media and redo the procedure from step 4.



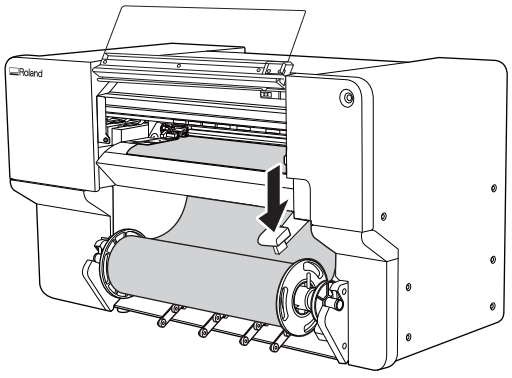
5. **Place the left media clamp and the left pinch roller.**

Place the left pinch roller (②) within the grit pattern (①).

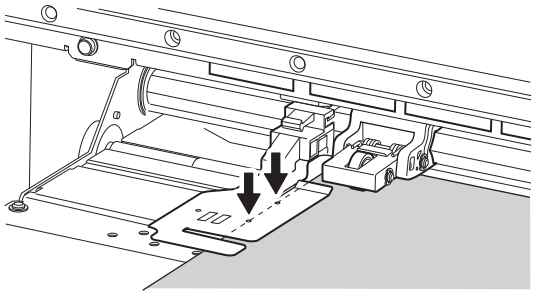
Ensure that margin A from the left edge of the media to the left pinch roller is about 10 mm (0.39 in.).



6. **Lower the loading lever.**

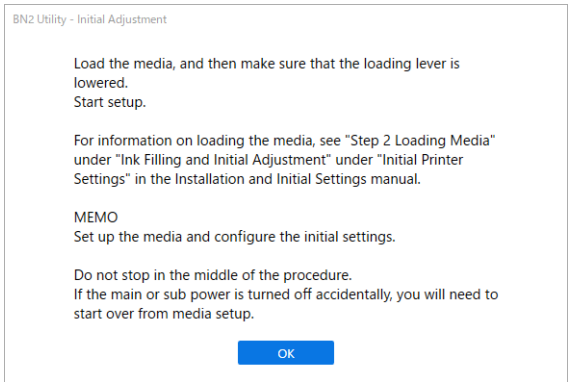


7. **Line up the edges of the media with the centers of the holes of the left media clamp.**



8. Close the front cover.

9. Click [OK].



Loading Sheet Media

When loading sheet media in the machine, use the right edge of the media as a reference. This is because the range of movement of the right pinch roller is fixed.

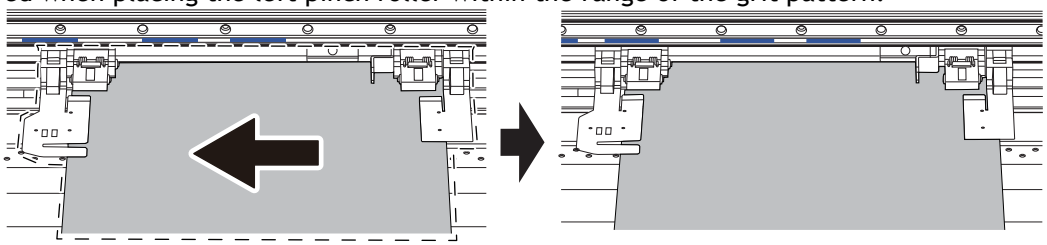
Place the media in a position where the following conditions are met and where media waste will be minimized.

- Position of right edge of media

  Within the right pinch roller movable range and where about 10 mm (0.39 in.) between the right roller edge of the right pinch roller and the right edge of the media can be secured.

- Position of left edge of media

  Where about 10 mm (0.39 in.) between the left edge of the roller and the left edge of the media can be secured when placing the left pinch roller within the range of the grit pattern.

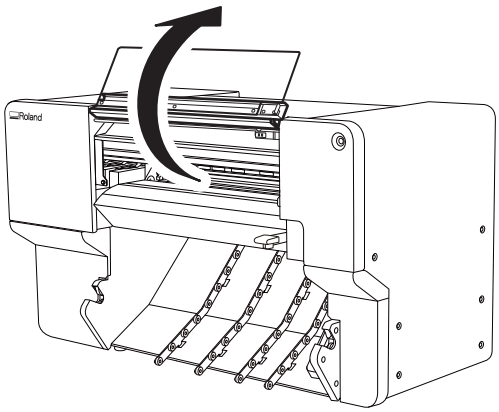


MEMO

Use the following link to view a reference video for this procedure. We recommend that you view this video to understand the overall flow of work.
https://vimeo.com/1003475093/b41e56efdf
The BN2-20/20A is shown in this video, but the work and operation procedures are the same for this machine.

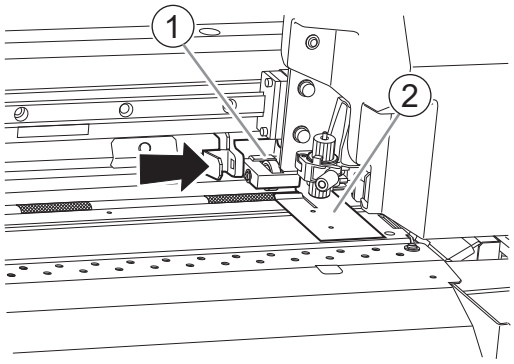
Procedure

1. Open the front cover.



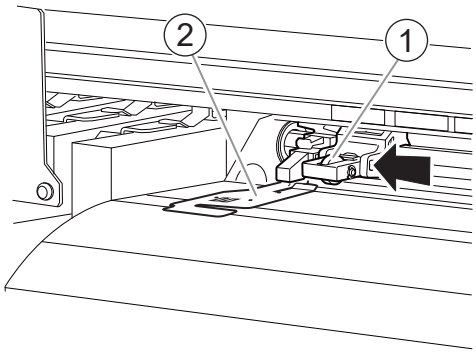
2. Move the right pinch roller (①) and the right media clamp (②) to the right end.

Press the part indicated by the arrow on the right pinch roller to move the roller and the right media clamp together.



3. Move the left pinch roller (①) and the left media clamp (②) to the left end.

Press the part indicated by the arrow on the left pinch roller to move the roller and the left media clamp together.



4. Use the following procedure to load the media.

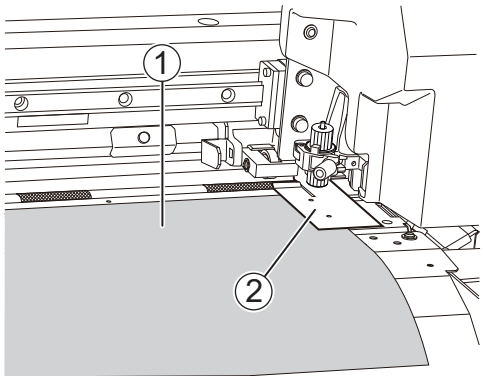
(1) **Pass the media (①) under the right media clamp (②).**

MEMO

If the left edge of the media hits the left media clamp, pass the media under the left media clamp.

MEMO

Lifting the tip of the media clamp to pass the media through may cause the blade to come into contact with the media. Be careful not to allow contact with the blade.

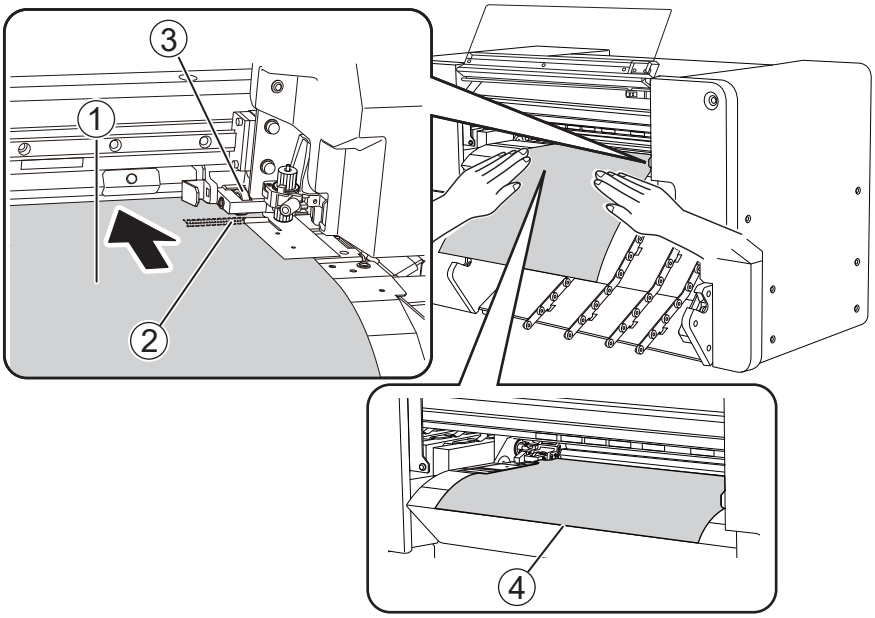


(2) **Pass the media (①) between the right grit roller (②) and right pinch roller (③) to the back.**

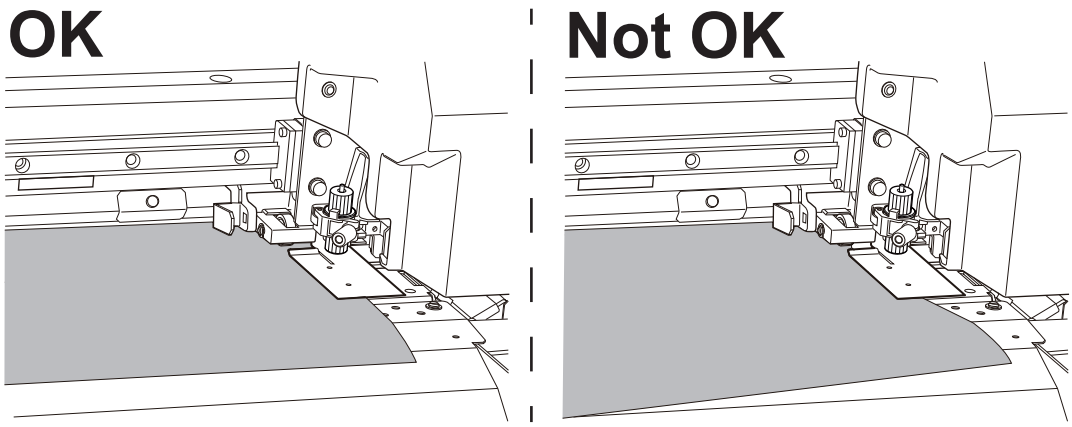
Feed the media and line up the edge of the media with the edge of the apron (④).

MEMO

If the left edge of the media is left of the left pinch roller, pass the media between the left grit roller and left pinch roller as well.



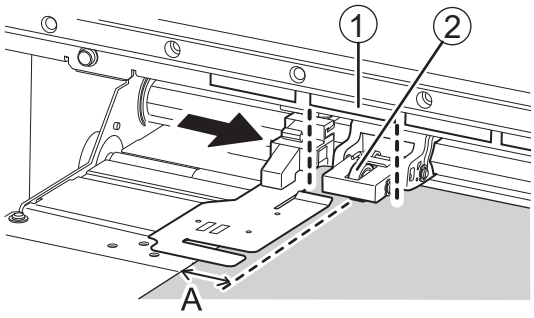
5. **Straighten the media.**



6. **Press lightly on the media, and place the left media clamp and left pinch roller on the media.**

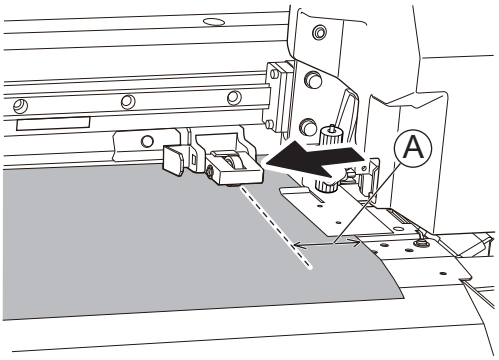
Place the left pinch roller (②) within the grit pattern (①).

Ensure that margin A from the left edge of the media to the left pinch roller is about 10 mm (0.39 in.).

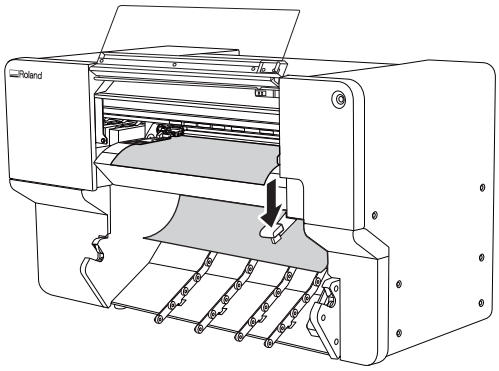


MEMO

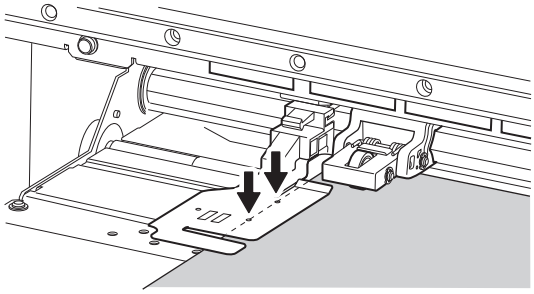
If 10 mm (0.39 in.) cannot be ensured for margin A from the left edge of the media to the left pinch roller, move the right pinch roller and the media to the left to provide the margin.
The range of motion of the right pinch roller is fixed. Place the right pinch roller within the movable range in a position that ensures margin A from the right edge of the media to the right pinch roller is about 10 mm (0.39 in.).



7. **Lower the loading lever.**

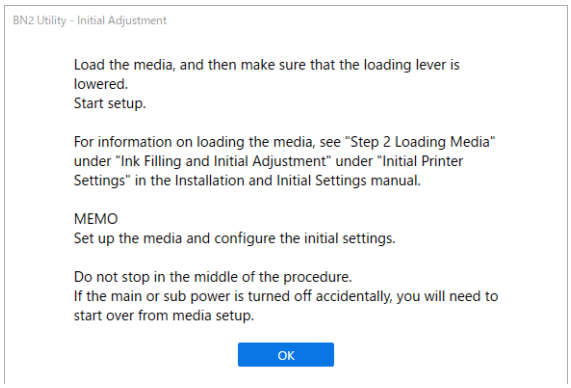


8. **Line up the edges of the media with the centers of the holes of the left media clamp.**



9. **Close the front cover.**

10. **Click [OK].**


BN2 Utility - Initial Adjustment
Load the media, and then make sure that the loading lever is lowered.
Start setup.
For information on loading the media, see "Step 2 Loading Media" under "Ink Filling and Initial Adjustment" under "Initial Printer Settings" in the Installation and Initial Settings manual.
MEMO
Set up the media and configure the initial settings.
Do not stop in the middle of the procedure.
If the main or sub power is turned off accidentally, you will need to start over from media setup.
OK

Step 3: Nozzle Drop-out Test

Check the print head ink discharge conditions.

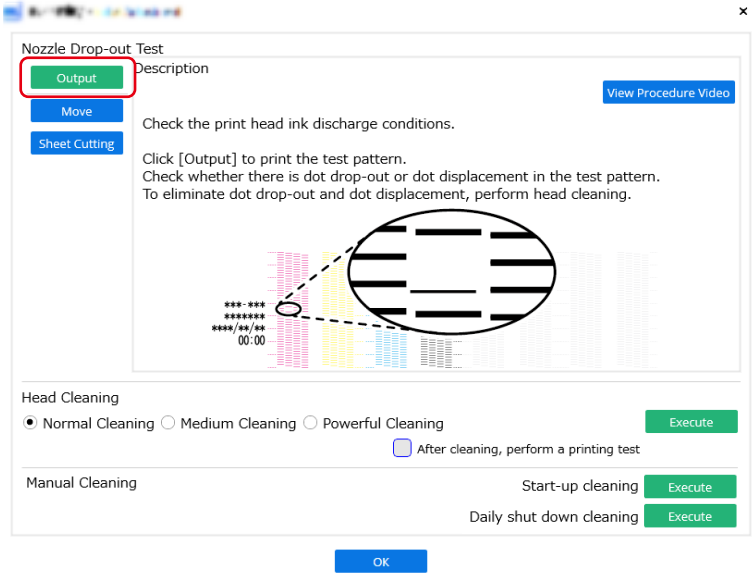
MEMO

Use the following link to view a reference video for this procedure. We recommend that you view this video to understand the overall flow of work.
https://vimeo.com/1003475749/6df9f81a6c
The BN2-20/20A is shown in this video, but the work and operation procedures are the same for this machine.

Procedure

1. **Click [Output].**

   Printing of the test pattern starts.



2. **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 there is no dot drop-out or dot displacement, click **[OK]**.
   - If dot drop-out or dot displacement is present, perform cleaning.

P. 55 Fixing Dot Drop-out and Dot Displacement

MEMO

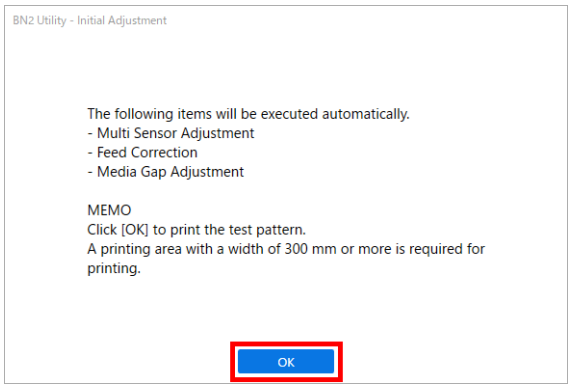
Even if nozzle drop-out does not appear to be improved by cleaning, it may be possible to ignore the effect on products if drop-out occurs in just a few locations. Try printing. If you can judge that the product is not affected, use the printer without any further cleaning.

Step 4: Performing Automatic Correction

Automatically correct the media feed amount and ink landing position.

Procedure

1. **Click [OK].**



A test pattern will be printed for automatic correction.

> **MEMO**
>
> Automatic correction may not finish depending on the characteristics of media such as transparent media and silver media with high light reflectance.
> In these situations, click [**Skip**].
> Clicking [**Skip**] applies the standard value.



When correction is complete, the blade adjustment window will be displayed.

Step 5: Blade Adjustment

Adjust the media cutting quality.

If you are not using the blade, skip the blade adjustment.

MEMO

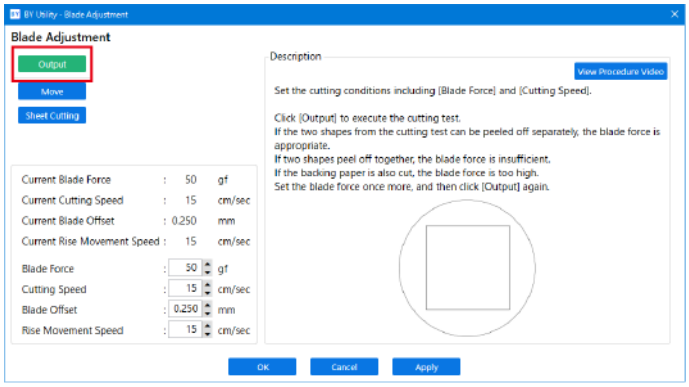
Use the following link to view a reference video for this procedure. We recommend that you view this video to understand the overall flow of work.
https://vimeo.com/1003474895/208e3298e2
The BN2-20/20A is shown in this video, but the work and operation procedures are the same for this machine.

Procedure

1. **Make sure the cutting tool is installed, and then click [Next].**

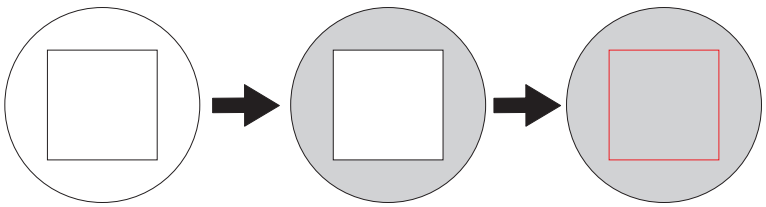
   If no cutting tool has been installed, install one.
   Installing the Cutting Tool

2. **Click [Output].**



   A cutting test will be performed.

3. **Check the cutting results.**



Check item	Result	Setting item	Adjustment
Check the shape.	The cut shape is distorted.	**[Cutting Speed]**	Reduce
Peel off the circle.	The square also peels off.	**[Blade Force]**	Increase
	Some uncut areas remain.	**[Cutting Speed]**	Reduce
Peel off the square.	The blade leaves faint traces on the backing paper.	**[Cutting Speed]**	No change
	The blade trace is indistinct.		Increase
	The blade trace is too deep and cuts into the backing paper.		Reduce

Check item	Result		Setting item	Adjustment
Check the shape of the square you have peeled off.		The corners are not rounded and do not have "horns."	[Blade Offset]	No change
		The corners are rounded.		Increase
		The corners have "horns."		Reduce

4. **Enter the value for the area to be changed.**

For information on adjusting the amount of blade extension, refer to "Adjusting the Amount of Blade Extension."

P. 54 Adjusting the Amount of Blade Extension

Cutting condition	Setting details	Default settings
[Blade Force]	Set the force (pressure) of the blade.	50 gf
[Cutting Speed]	Set the speed of cutting.	15 cm/s (5.91 in./s)
[Blade Offset]	Set the blade offset. Enter the listed offset value for the blade. The offset value for the included blade is 0.250 mm (9.8 mil).	0.250 mm (0.010 in.)
[Rise Movement Speed]	Set the blade's up speed during cutting (the speed at which the blade travels when it moves to the next cutting line after cutting one cutting line). If the media comes loose during no-load feed and the blade damages the surface of the media, reduce the speed.	15 cm/s (5.91 in./s)

5. **Click [Apply].**

6. **Continue adjusting the cutting conditions until the settings are optimized.**

Repeat steps 2 to 6 to adjust the conditions.

Once adjustment is complete, click [**OK**].

Step 6: Print & Cut Position Adjustment

Adjust any printing or cutting position misalignment.

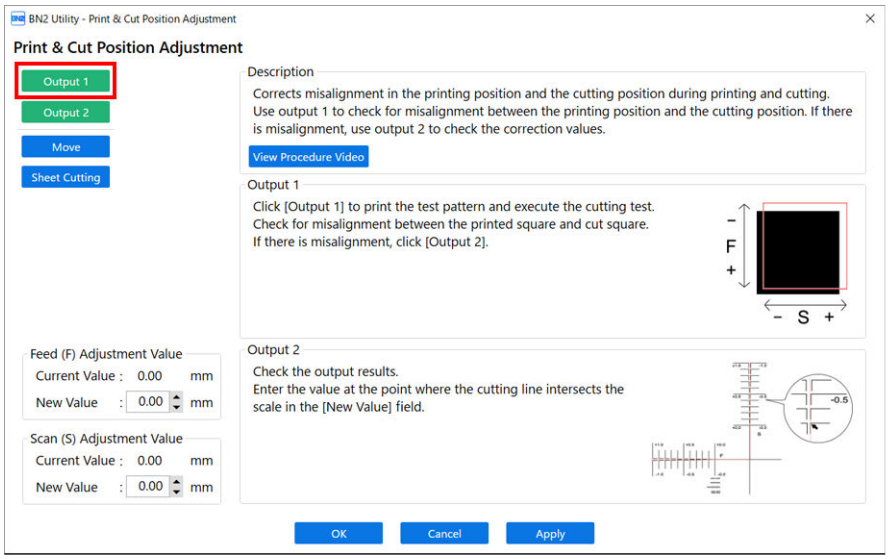
If you are not using the blade, skip the blade adjustment.

MEMO

Use the following link to view a reference video for this procedure. We recommend that you view this video to understand the overall flow of work.
https://vimeo.com/1003475897/fd4a2d1bdd
The BN2-20/20A is shown in this video, but the work and operation procedures are the same for this machine.

Procedure

1. **Click [Output 1].**



The machine will print a test pattern and perform a cutting test.

2. **Check the results of [Output 1].**

Check for misalignment between the printed square and cut square.

- Adjustment is not necessary if there is no misalignment. Click [**OK**] and proceed to step 9.
- If there is misalignment, proceed to step 3 to perform adjustment.

3. **Click [Output 2].**

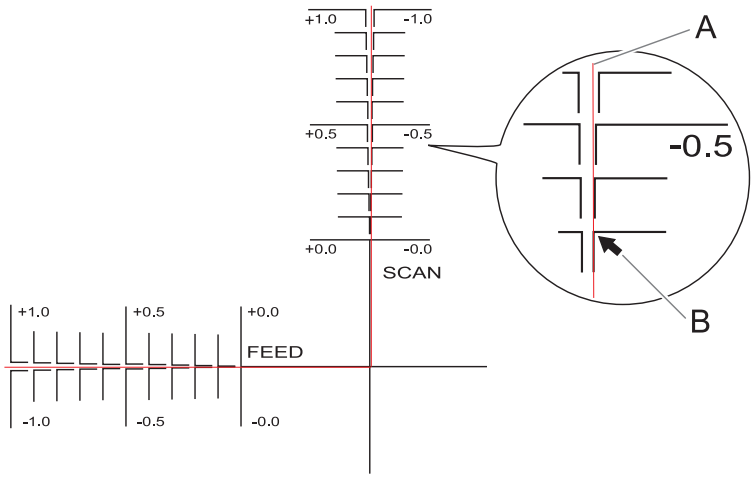
The machine will print a test pattern for adjustment and perform a cutting test.

4. **Check the results of [Output 2].**

The point where the cutting line (A) intersects the correction-value scale (B) is the correction value. In the following figure, the correction value is "−0.3."

MEMO

Cutting will be performed along the red lines in the following figure. Peel the media from the backing paper for checking.



Check along the FEED (media feed direction) and SCAN (print-head carriage movement direction) axes.

5. **Enter the correction values for the FEED (media feed direction) and SCAN (print-head carriage movement direction) axes.**

a. Enter the FEED (media feed direction) correction value as a new value for [**Feed (F) Adjustment Value**].

b. Enter the SCAN (print-head carriage movement direction) correction value as a new value for [**Scan (S) Adjustment Value**].

6. **Click [Apply].**

7. **Click [Output 1].**

The machine will print a test pattern for adjustment and perform a cutting test.

8. **Check the results of [Output 1].**

If the printing and cutting lines are aligned, adjustment is complete. Click [**OK**].

If further adjustment is needed, repeat steps 3 to 8.

MEMO

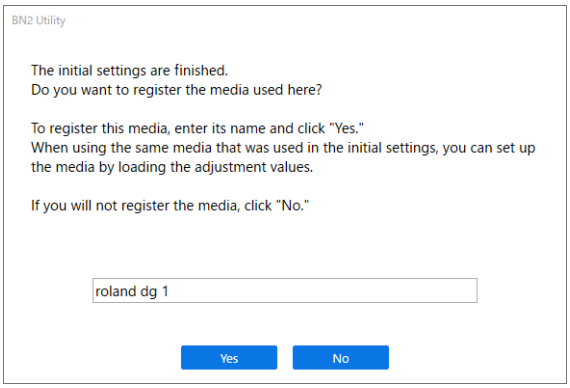
Default settings

- [**Feed (F) Adjustment Value**] (correction value of the media feed direction): 0.00 mm
- [**Scan (S) Adjustment Value**] (correction value of the print-head carriage movement direction): 0.00 mm

9. **On the initial settings completion window, select whether to register the media being used.**

- **To register the media**

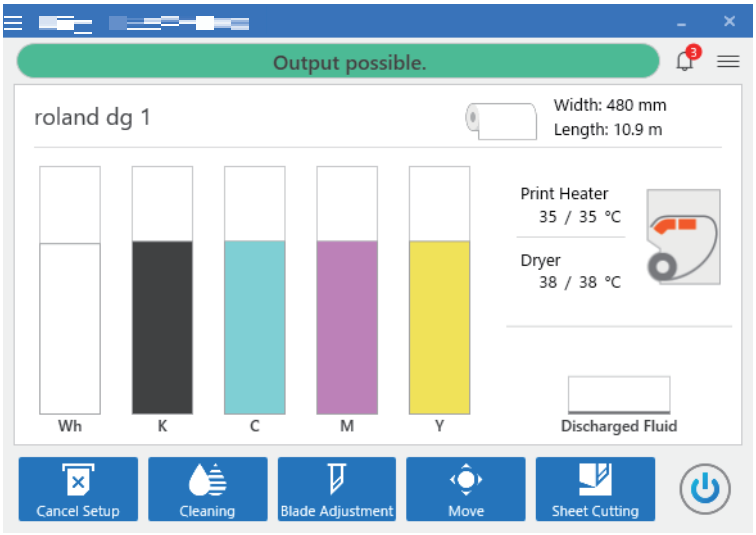
  Enter the media name, and then click [**Yes**].



MEMO

Enter a name to save the configured adjustment and correction values.
Registering the media makes it possible to set up the media without having to perform adjustment or correction again when using the same media.

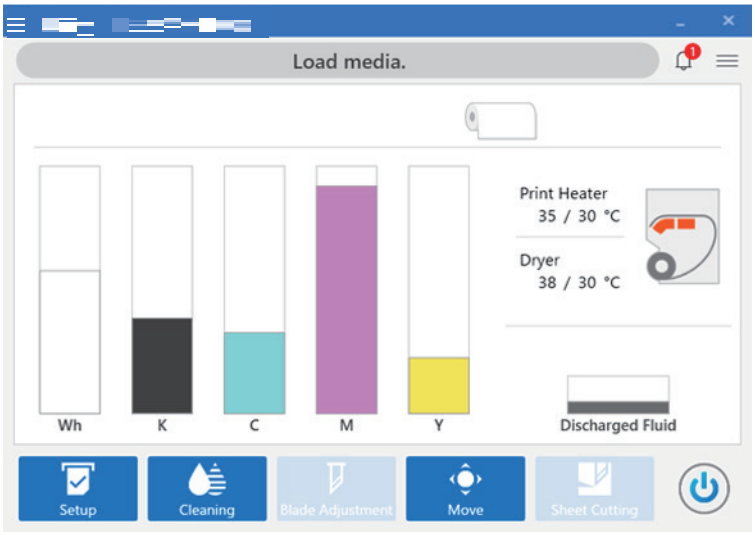
The operation is complete once the following window is displayed.



- **To continue without registering**

  Click **[No]**.

  The operation is complete once the following window is displayed.

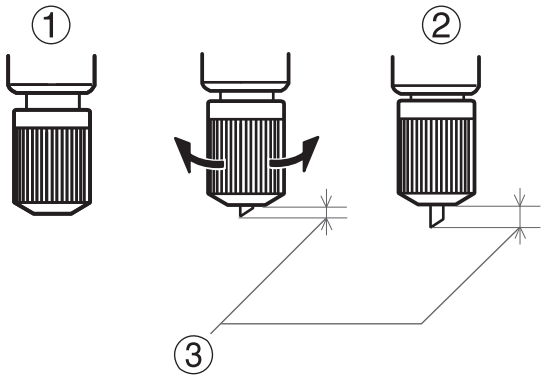

Load media.
Print Heater
35 / 30 °C
Dryer
38 / 30 °C
Wh
K
C
M
Y
Discharged Fluid
Setup
Cleaning
Blade Adjustment
Move
Sheet Cutting

Adjusting the Amount of Blade Extension

When you want to perform accurate and fine adjustment of the cutting-in amount, such as when cutting media with thin backing paper, you can obtain good results by adjusting the amount of blade extension (③). Turn the cap portion of the blade holder to adjust the amount of blade extension. Each indicator tick corresponds to 0.1 millimeters, and adjustment for 0.5 millimeters can be made by rotating the cap one full turn.

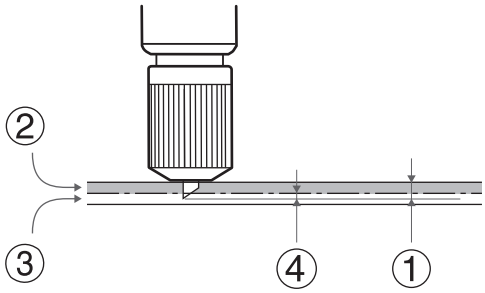
Note that making the amount of blade extension too small may cause the tip of the blade holder cap to touch the printed surface, soiling and damaging it. It is important to be especially careful about this when you are using media that has poor ink-adhesion properties.

The amount of blade extension (③) is 0 mm (①) at minimum and 2.5 mm (98.42 mil) (②) at maximum.



Rough Estimate for the Amount of Blade Extension

Set the amount of blade extension to an amount that is the sum (①) of the thickness of the material portion (②) and half (④) the thickness of the backing paper (③).



Fixing Dot Drop-out and Dot Displacement

Clean the print heads to improve ink discharge conditions such as dot drop-out and dot displacement.

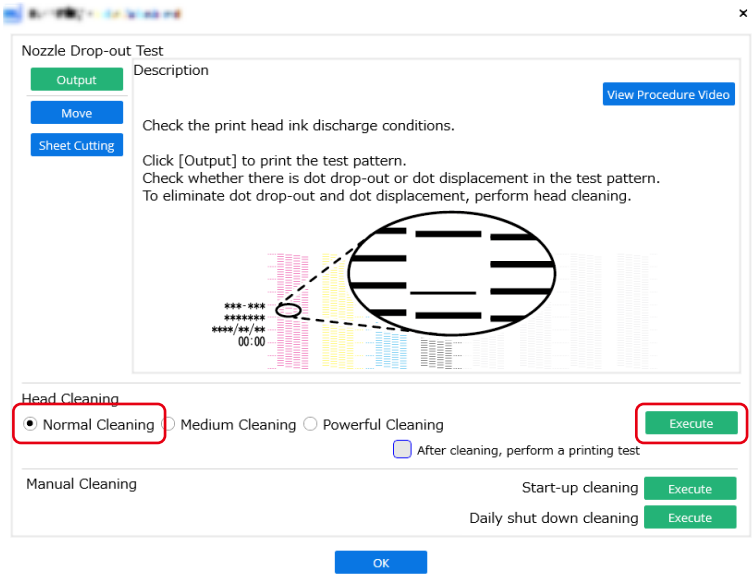
Normal Cleaning

MEMO

If the media has already been set up, the [**After cleaning, perform a printing test**] menu appears. When this is turned on, a printing test is performed after cleaning.

Procedure

1. **Select [Normal Cleaning] from the head cleaning item.**



2. **Click [Execute].**

   [Normal Cleaning] is executed.

3. **Click [Output].**

   Printing of the test pattern starts.

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

   - If there is no dot drop-out or dot displacement, click **[OK]** and proceed to Step 4: Performing Automatic Correction.
   - If the problem persists, try performing **[Normal Cleaning]** again.

     If the problem persists even after performing **[Normal Cleaning]** two or three times, perform **[Medium Cleaning]**.

MEMO

Even if nozzle drop-out does not appear to be improved by cleaning, it may be possible to ignore the effect on products if drop-out occurs in just a few locations. Try printing. If you can judge that the product is not affected, use the printer without any further cleaning.

Medium Cleaning

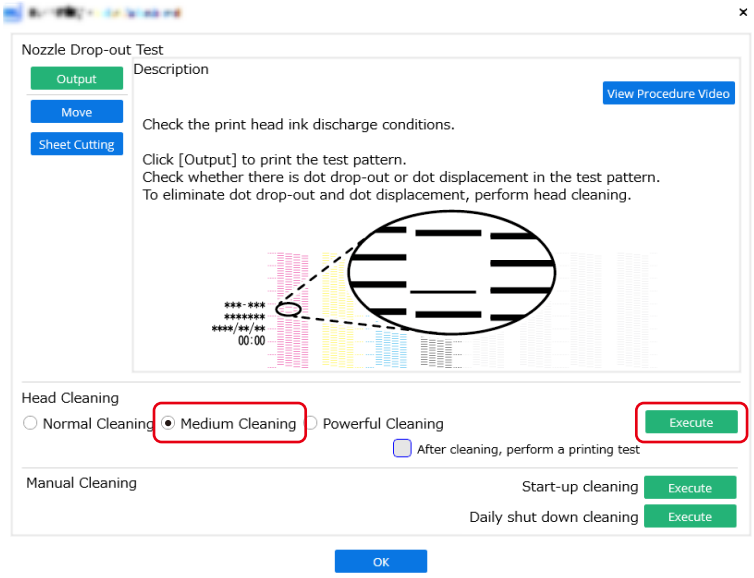
If dot drop-out and dot displacement persist even after performing [**Normal Cleaning**], perform the more forceful [**Medium Cleaning**].

MEMO

If the media has already been set up, the [**After cleaning, perform a printing test**] menu appears. When this is turned on, a printing test is performed after cleaning.

Procedure

1. **Select [Medium Cleaning] from the head cleaning item.**



2. **Click [Execute].**

   [**Medium Cleaning**] is executed.

3. **Click [Output].**

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

   - If there is no dot drop-out or dot displacement, click [**OK**] and proceed to Step 4: Performing Automatic Correction.
   - If the problem persists, try performing [**Medium Cleaning**] again.

     If the problem persists even after performing [**Medium Cleaning**] two or three times, perform [**Powerful Cleaning**].

MEMO

Even if nozzle drop-out does not appear to be improved by cleaning, it may be possible to ignore the effect on products if drop-out occurs in just a few locations. Try printing. If you can judge that the product is not affected, use the printer without any further cleaning.

Powerful Cleaning

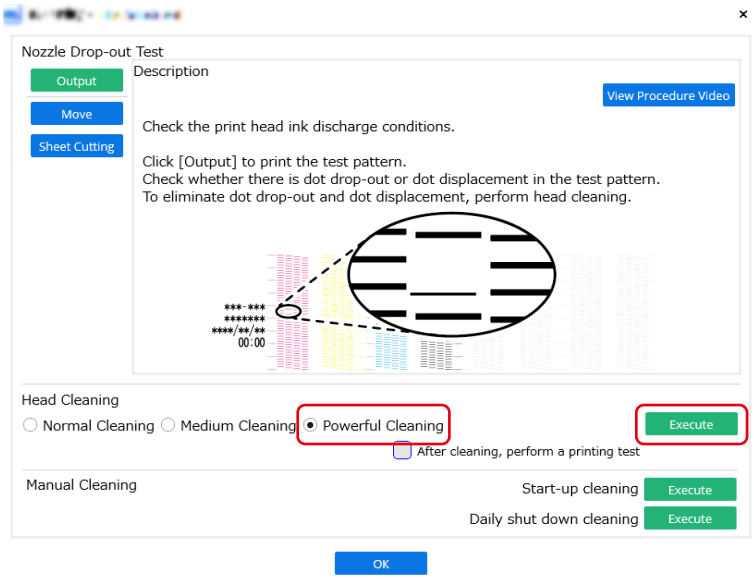
If dot drop-out and dot displacement persist even after performing [**Medium Cleaning**], perform the more forceful [**Powerful Cleaning**].

MEMO

If the media has already been set up, the [**After cleaning, perform a printing test**] menu appears. When this is turned on, a printing test is performed after cleaning.

Procedure

1. **Select [Powerful Cleaning] from the head cleaning item.**



2. **Click [Execute].**

   [**Powerful Cleaning**] is executed.

3. **Tap [Output].**

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

   - If there is no dot drop-out or dot displacement, click [**OK**] and proceed to Step 4: Performing Automatic Correction.
   - If the problem persists, try performing [**Powerful Cleaning**] again.

     If the problem persists even after performing [**Powerful Cleaning**] two or three times, perform [**Start-up cleaning**].

MEMO

Even if nozzle drop-out does not appear to be improved by cleaning, it may be possible to ignore the effect on products if drop-out occurs in just a few locations. Try printing. If you can judge that the product is not affected, use the printer without any further cleaning.

Start-up cleaning

If dot drop-out and dot displacement persist even after performing [**Powerful Cleaning**], perform the [**Start-up cleaning**].

⚠ WARNING

Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.
Sudden movement of the machine may cause injury.

IMPORTANT

Important notes on this procedure

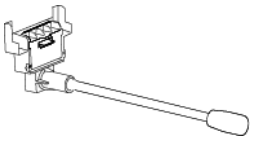
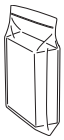
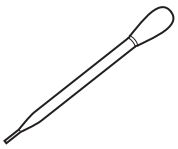
- Before attempting this operation, remove any media.
- To prevent the print heads from drying out, finish this procedure in 10 minutes or less.
- Never use any implements other than the included cleaning sheet.
- Do not use cleaning liquid other than the included cleaning liquid.
- Be sure to use a new cleaning sheet. Reusing a cleaning sheet will adversely affect the printing results.

If a warning beep sounds during operation

- A warning beep sounds 10 minutes after operation starts. Perform the operation by following the message displayed in the Utility window.

MEMO

- When the cleaning sheet and cleaning liquid used for start-up cleaning run out, purchase them from your authorized dealer.
- The print heads are components that wear out. Periodic replacement is required, with the frequency of replacement depending on use. Contact your authorized dealer.
- Use the following link to view a reference video for this procedure. We recommend that you view this video to understand the overall flow of work.
  https://vimeo.com/1084879988/ef435ce499

Required items			
			
Head nozzle refresher	Cleaning sheets	Dropper	S-PG2-CL cleaning liquid

Procedure

1. **Remove any media.**

2. **Click [Execute] for start-up cleaning.**

   MEMO

   The procedure for performing start-up cleaning appears in the Utility window. Carefully read the on-screen instructions and carry out the work.

3. **When [Start-up cleaning] is complete, click [Finish All].**

The nozzle drop-out test window appears.

Perform a nozzle drop-out test.
Step 3: Nozzle Drop-out Test(P. 45)


Roland