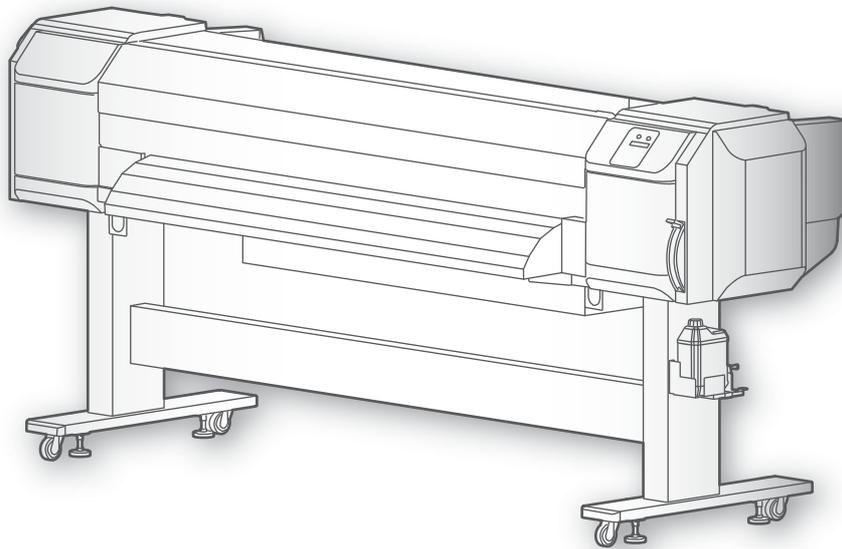


VJ-1638UR

Operation Manual

Operations and Maintenance Methods



-
- Unauthorized copying or duplication of the whole or part of the contents of this manual is prohibited.
 - Every care has been taken in writing the contents of this manual, but please contact MUTOH or the dealer you purchased the product from if you find any unclear, erroneous or otherwise unsatisfactory content in the manual.
 - Please be aware that MUTOH will not be liable in any way for failures or accidents that result from handling or operating the printer according to any procedures other than those set forth in this manual.
 - Company names and product names that appear in this manual are registered trademarks of the respective companies.

For Users in Europe



The CE marking is a mandatory European marking for certain product groups to indicate conformity with the essential health and safety requirements set out in European Directives.

By affixing the CE marking, the manufacturer, his authorized representative, or the person placing the product on the market or putting it into service ensures that the item meets all the essential requirements of all applicable EU directives and that the applicable conformity assessment procedures have been applied.

For Users in the United States

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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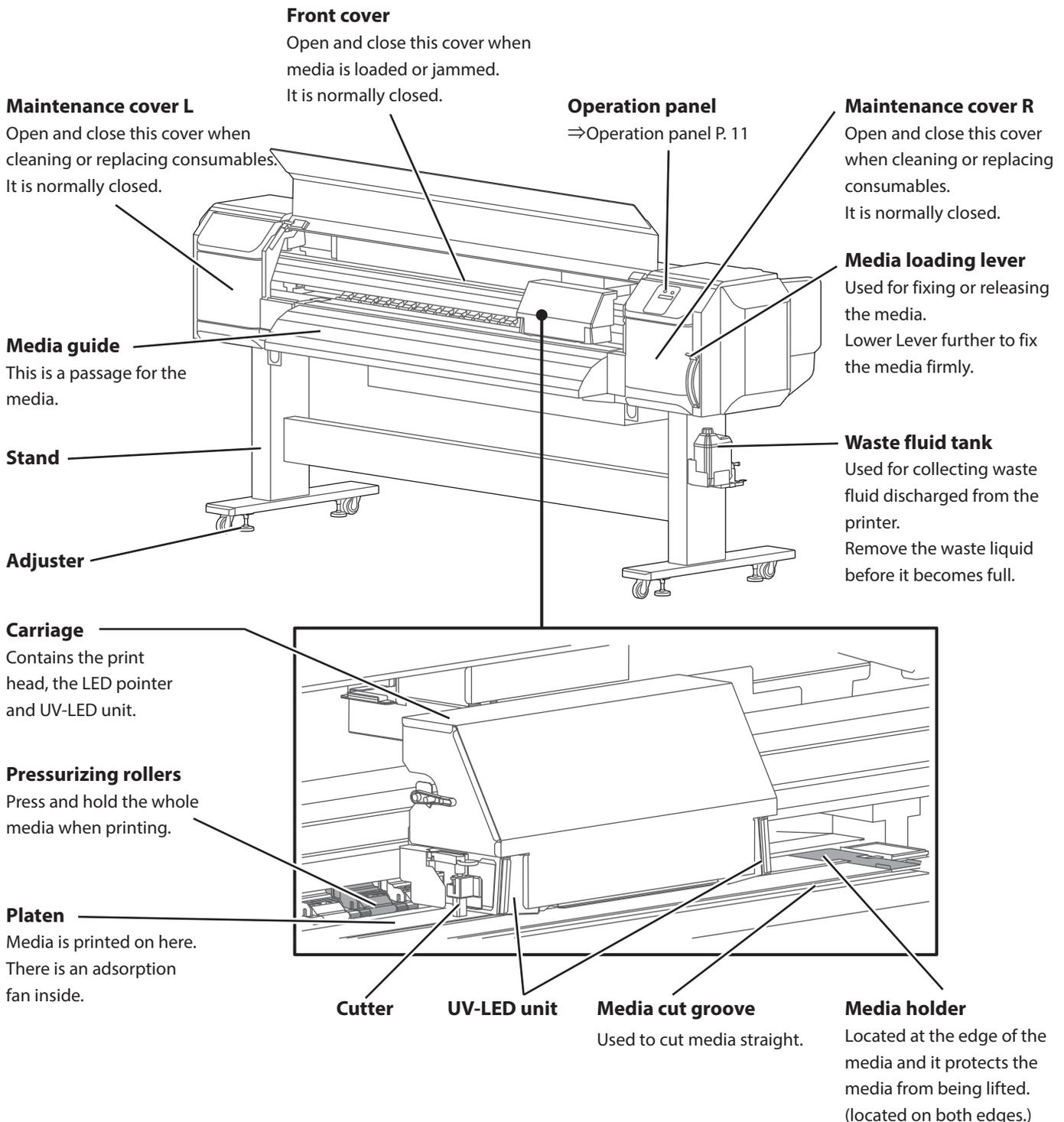
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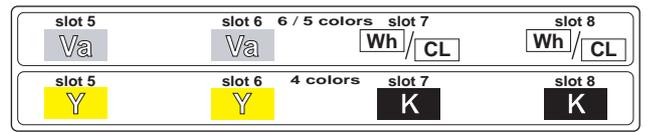
Introduction

Name of each part

Printer's main body (Front side)



Printer's main body (Rear side)



Ink color indicating labels

Cartridge slots

Media loading lever

Used for fixing or releasing the media. This lever is interlocked with the media loading lever on the front side.

Roll media holder

Load the roll media. Equipped with Flanges to attach the roll media and Fixing levers to fix Roll media holders.

Network interface cable connector

AC inlet

Ink color indicating labels

Cartridge slots

Install ink cartridges / High capacity ink pack adapters.

Media feed slot

When setting the media, insert the media here and pass the media to the front side.

Media guide

This is a passage for the media.

Operation panel

Power button

- Pressing this turns the power on. Lights steady in blue when the power is on.
- Pressing this once more turns the power off. Is unlit when the power is off.
- Flashes while data is being received, in the sleep mode, and at other times.

[Reference]

The  symbol means "standby". Even when the power button is not turned on, the printer consumes a tiny amount of power so long as the power cable is connected. This state is referred to as the power being "off" in this Manual.

[Head Height] indicator

- High setting: High indicator is ON.
- Low setting: Low indicator is ON

[Take up] indicator

Lights steady green when the Output mode is set to "Take-up".

[Auto Cut] indicator

Lights steady green when the Output mode is set to "Auto Cut".

[Menu] key

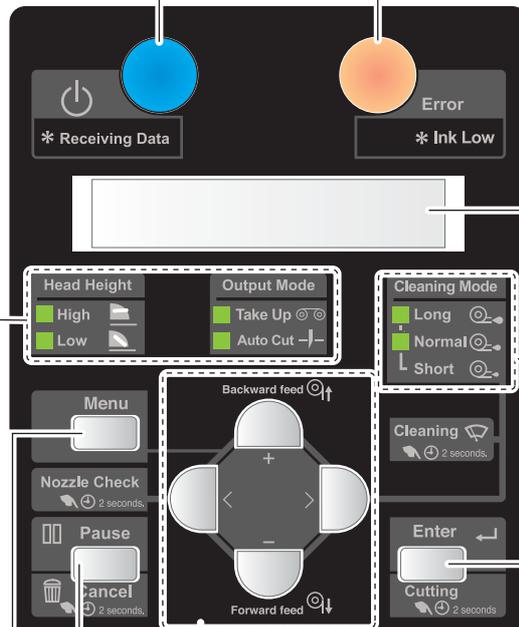
Used for accessing and exiting the menu.

[Pause] / [Cancel] key

- Press this key to pause printing.
- Holding this key pressed down for two seconds or longer will cancel the print job and delete the data received.

When setting the menu:

- Cancels a change of a setting value.



Error indicator

- Lights up in orange when an error has occurred or a cover is open.
- Flashes when the ink is low.

Display

Displays the printer status, setting menu, errors and so on.

[Cleaning Mode] indicators

Light steady green to indicate the head cleaning mode.

[Enter] key

When you have set a media in place, pressing and holding this down for two seconds or longer will run a media cut.

When setting the menu:

- Press this to go to the menu item you select.
- Press this to confirm a set value.

[+] key / [Backward feed] key

Media is fed in the backward direction.

When setting the menu:

- Press this to move to another menu item
- Press this to change a set value.

[-] key / [Forward feed] key

Media is fed in the forward direction.

When setting the menu:

- Press this to move to another menu item
- Press this to change a set value.

[<] key / [Nozzle Check] key

Pressing and holding this down for two seconds or longer will run a nozzle check.

When setting the menu:

- Press this to change a set value.

[>] key / [Cleaning Mode] key

• For changing the cleaning mode.

• Pressing and holding this down for two seconds or longer will execute head cleaning.

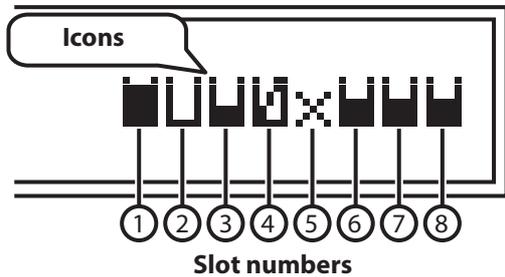
When setting the menu:

- Press this to move to a lower level of menu items.
- Press this to change a set value.

Icon displays on operation panel

Icons to indicate the status of the ink or cartridges are displayed in the following situations:

- When no menu is displayed
- When there is an ink or cartridge error

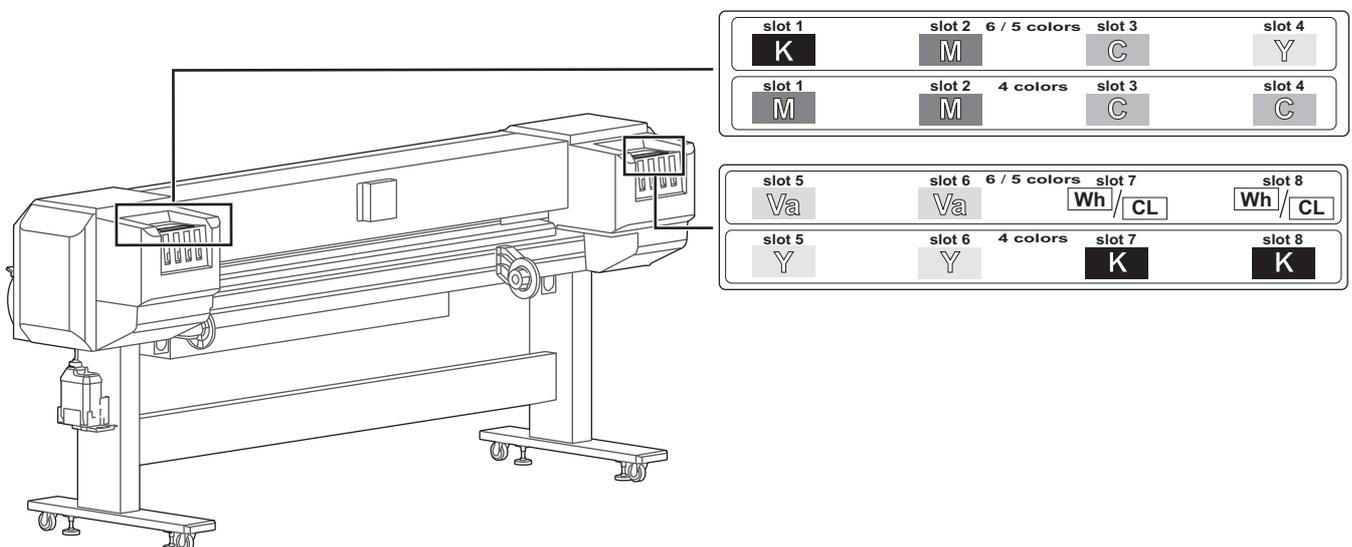


- In the display shown on the left, the slot 2 cartridge's ink is low, the slot 4 cartridge's ink has run out, and no cartridge has been inserted in slot 5.

- The following icons indicate the status of each slot:

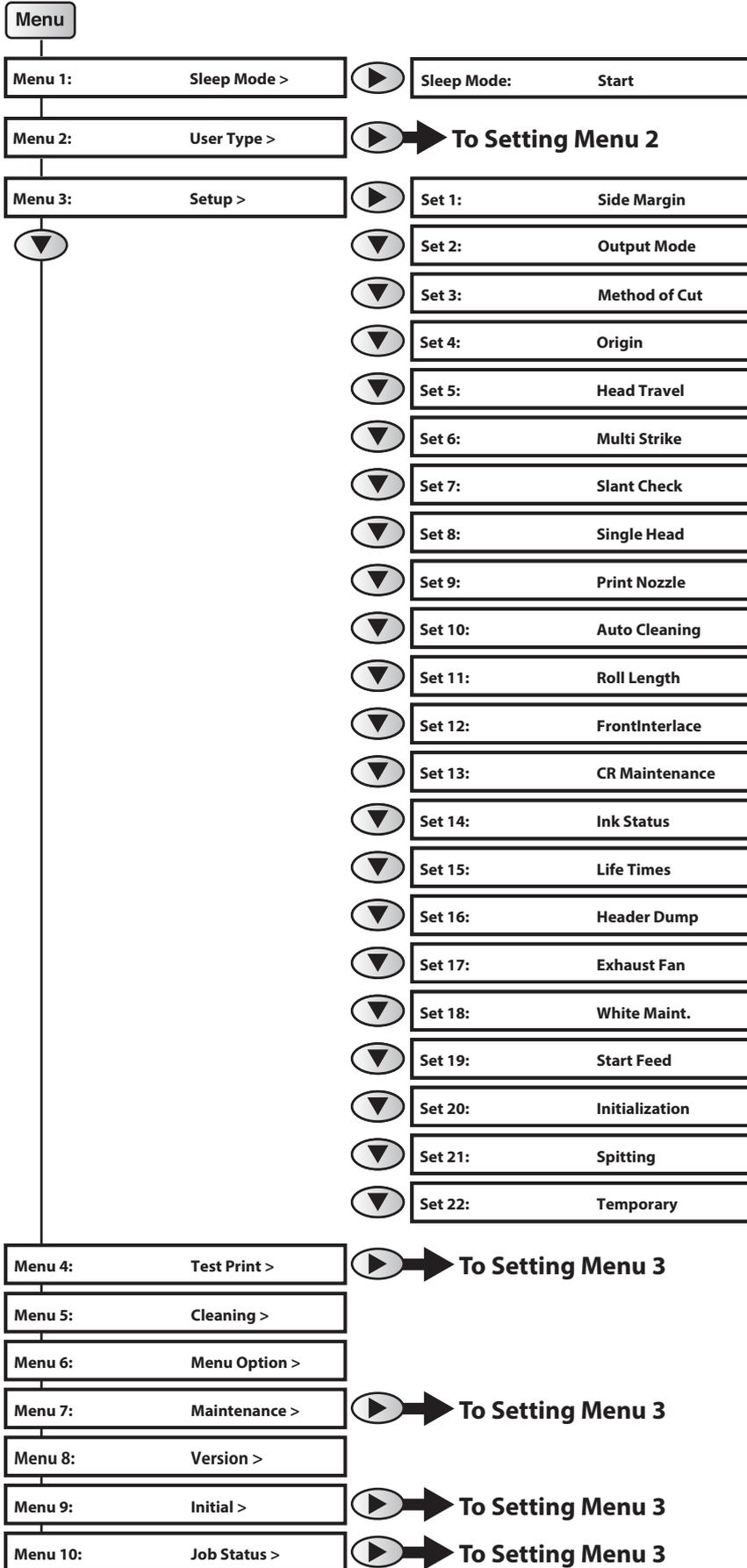
	Remaining ink amount : More than 80%, less than 100%		Remaining ink amount : Less than 20% • If the indicator is blinking, smartchip recovery is being performed on the corresponding ink cartridge. 👉 "Smartchip recovery" P. 142
	Remaining ink amount : More than 60%, less than 80%		Ink Low
	Remaining ink amount : More than 40%, less than 60%		Ink End
	Remaining ink amount : More than 20%, less than 40%		No cartridge

The ink colors and slot locations for each color are shown below.

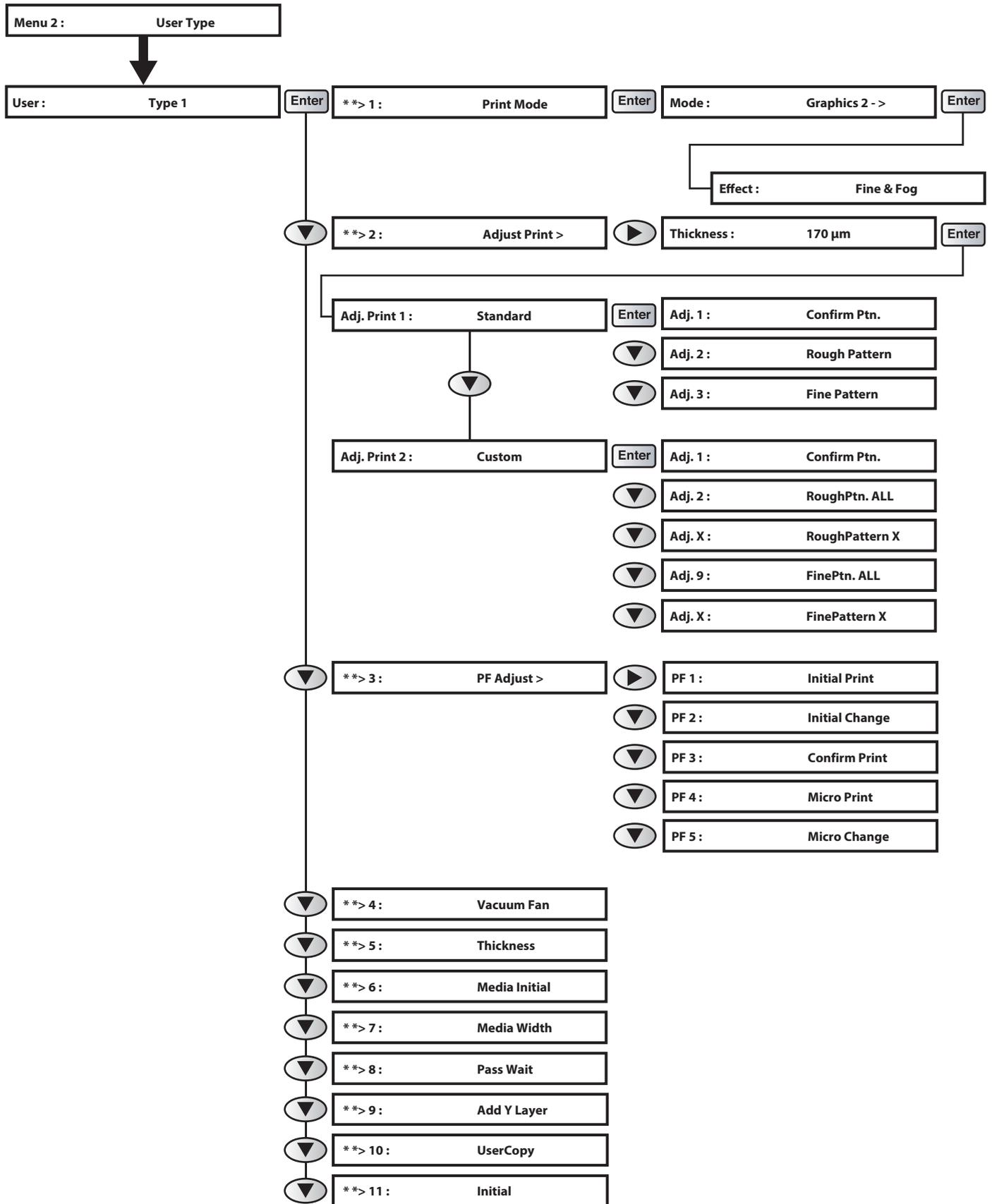


Menu chart

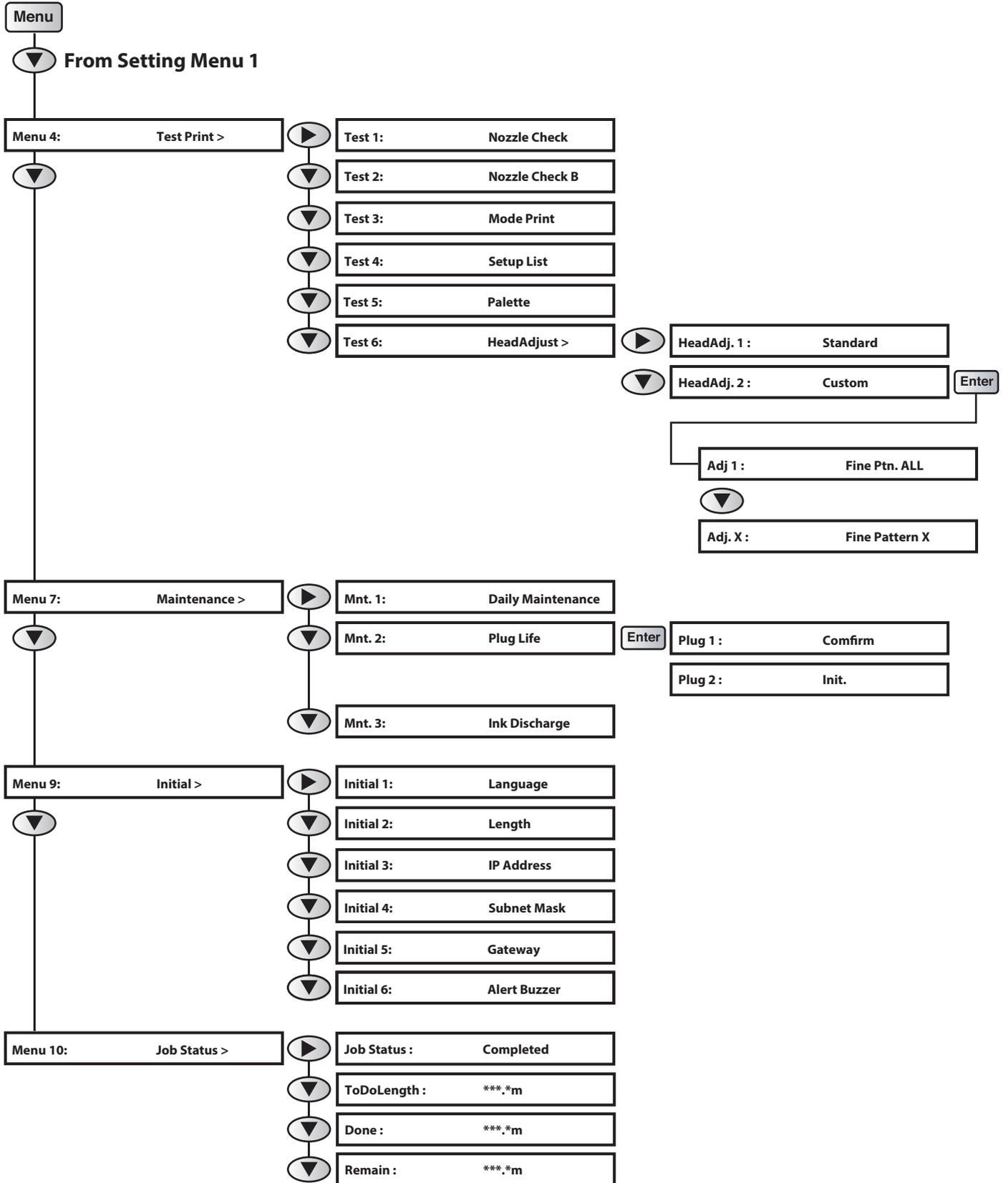
Setting menu 1



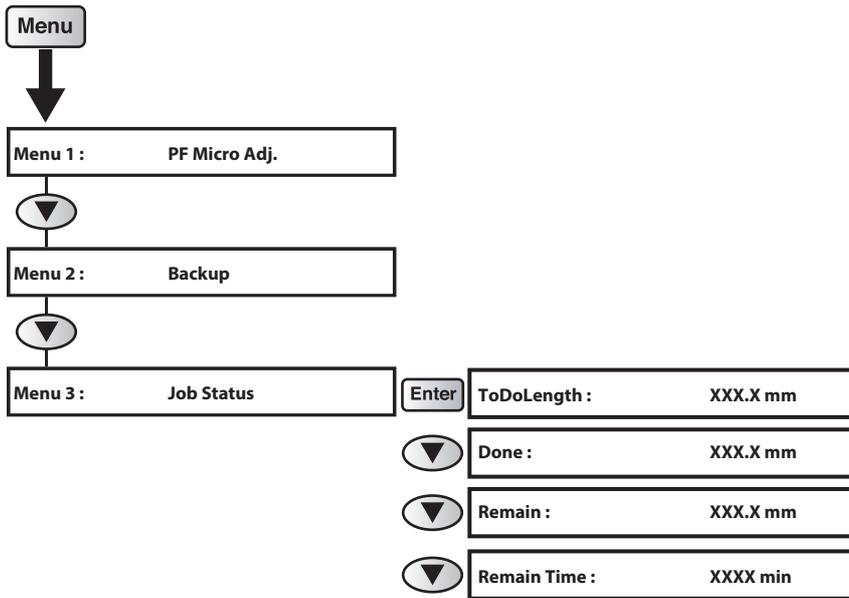
Setting menu 2



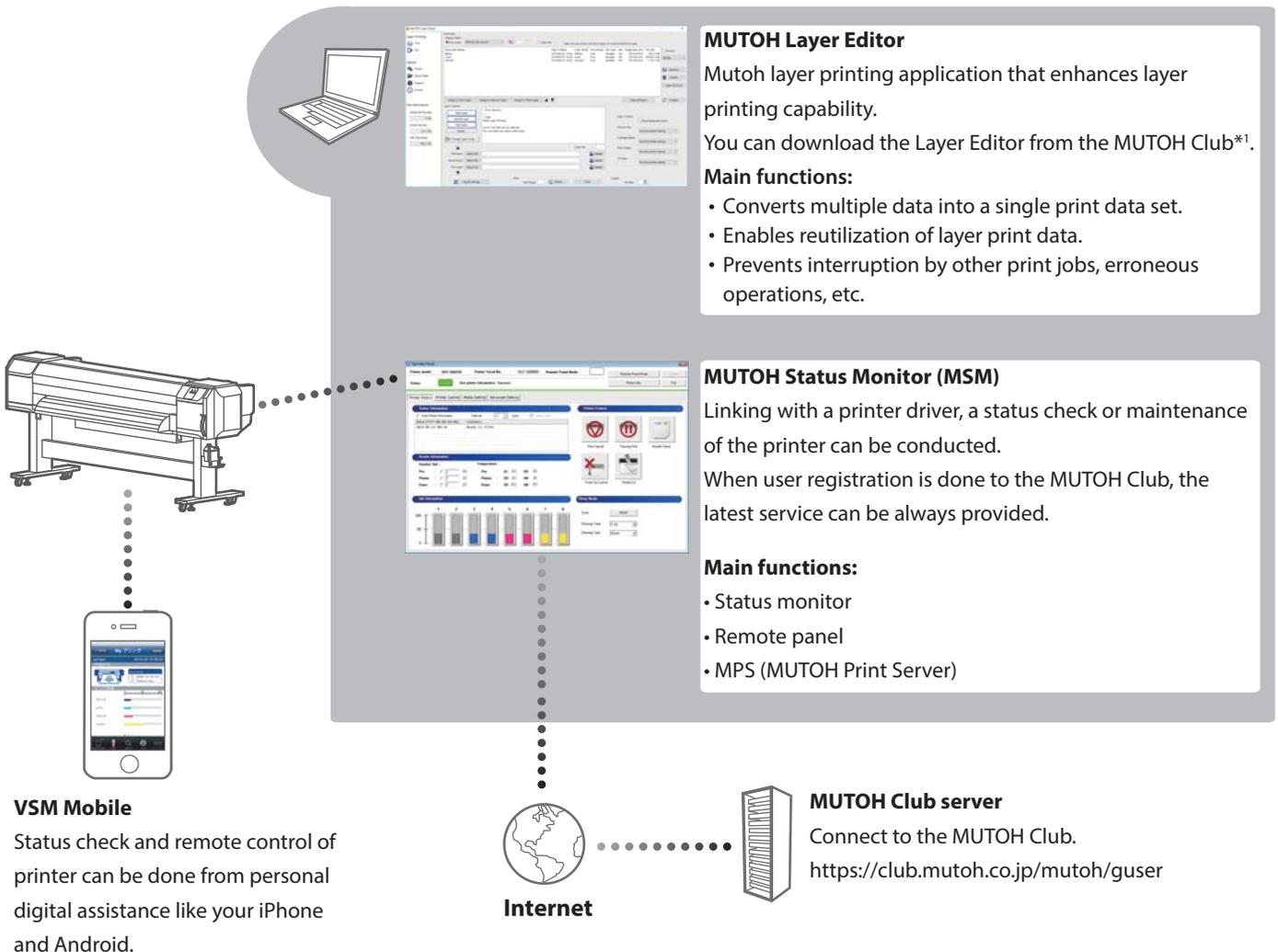
Setting menu 3



Menu during printing



System configurations of this product



MUTOH Layer Editor
 Mutoh layer printing application that enhances layer printing capability.
 You can download the Layer Editor from the MUTOH Club*1.
Main functions:

- Converts multiple data into a single print data set.
- Enables reutilization of layer print data.
- Prevents interruption by other print jobs, erroneous operations, etc.

MUTOH Status Monitor (MSM)
 Linking with a printer driver, a status check or maintenance of the printer can be conducted.
 When user registration is done to the MUTOH Club, the latest service can be always provided.
Main functions:

- Status monitor
- Remote panel
- MPS (MUTOH Print Server)

VSM Mobile
 Status check and remote control of printer can be done from personal digital assistance like your iPhone and Android.

- Main functions:**
- Status monitor
 - Remote panel

***1 MUTOH Club**
 This Web service provides free useful contents to users.
 Have user registration done to use various services.

- Main functions:**
- Downloading the latest application and manual
 - Downloading media profiles
 - Printer status check (When using the printer information supplying service of MSM)

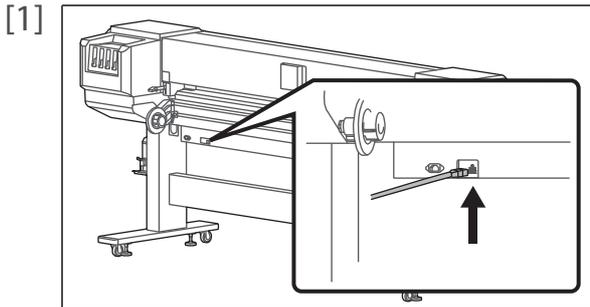
<Print Support Software>
 To get the best out of this product, use the MUTOH Print Server (MPS) function available from MUTOH Status Monitor (MSM).
 You can download the latest version of MSM from the MUTOH Club Server.
 (To use MPS, specify the output port of RIP software to MPS.)

Connecting to a Computer

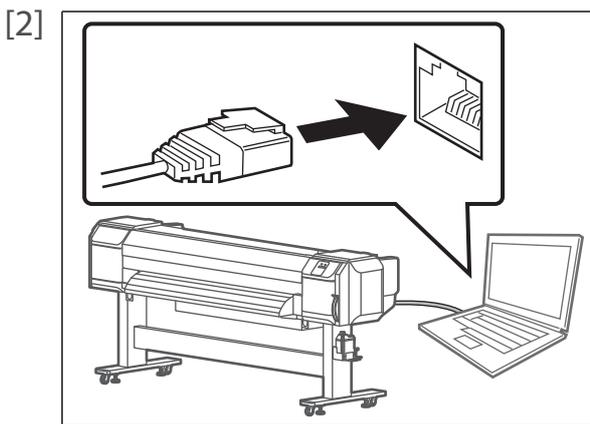
Important!

Make sure your computer meets the following requirements.

- OS: Windows 10 (64bit), Windows 8/8.1 (64bit), Windows 7 (64bit)
- CPU: Intel (R) Core (TM) i5 / i7
- Memory: No less than 8G byte
- Network: Use a network port that supports Gigabit Ethernet, and an Ethernet cable that supports Category 6 Gigabit Ethernet or later.



Connect the Gigabit Ethernet cable to the product.



Connect the Gigabit Ethernet cable to the computer.

[3] Use the printer operation panel to set the IP address, subnet mask and gateway.

 ["Initial 3: IP Address" P. 95](#), ["Initial 4: Subnet Mask" P. 95](#), ["Initial 5: Gateway" P. 95](#)

Note

- The above illustration is the example of peer-to-peer connection between this product and computer. Connection method differs depending on the usage environment.
- If you use the product with a LAN, connect the cable so that the computer and printer are on the same subnet.

Launching/Displaying/Finishing MUTOH Status Monitor (MSM)

Launching MSM



Windows 8 / Windows 8.1

- In the [Start] screen, click [Desktop].
- Double click the MSM icon on the Desktop.

Windows 10 / Windows 7

Double click the MSM icon on the Desktop.

Note

Launching from the Start Menu of Windows

- Windows 8 / Windows 8.1
Right click somewhere the [Start] screen tiles are not displayed to display the application bar, and click [All Apps].
- Windows 10 / Windows 7
From the [Start] menu, click [All Programs] (or [All Apps]) - [MUTOH] - [MUTOH Status Monitor].

Displaying MSM



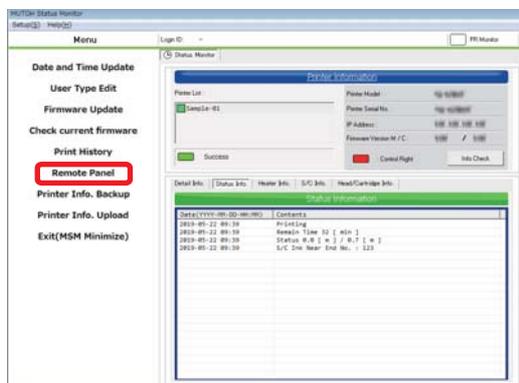
Double click the MSM icon in the task tray.

Displaying remote panel

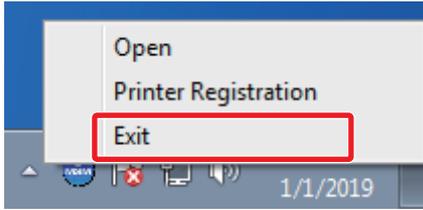
The remote panel is used to view this product's status or operate.

Click [Remote Panel].

- The remote panel opens.



Finishing MSM



Right click the MSM icon in the task tray, and click [Exit].

Note

When using normally, do not finish MSM. When closing the MSM window, click [Settings] - [Close].

Windows 8.1

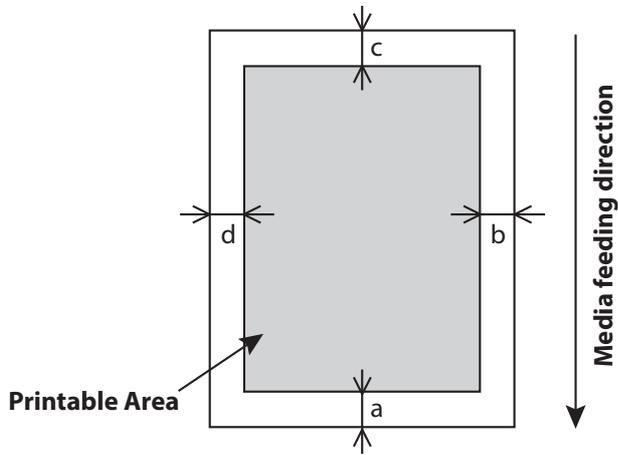
Click the Down Arrow in the [Start] screen.

Click [MUTOH Status Monitor].

Printing area

Printing is always started from Origin position (print start point).

See the figure below as example.



a=5 mm *¹
b=5 mm to 25 mm
c=5 mm
d=5 mm to 25 mm

*¹ The value of "a" will be 15 mm in the following cases:

- Immediately after media initialization
- When feeding the media by using the [Backward] key

The value of "a" will be 40 mm in the following cases:

- When Media Initial menu is set to "Top&Width"
- After cutting the media

Requirements for usable media

Media that meet the requirements below can be used with this printer.

Usable sizes

Outer diameter	150 mm or less
Media tube diameter	2 inches or 3 inches
Weight	30 kg or less
Maximum width	1,625 mm
Minimum width	182 mm
Maximum thickness	1.3 mm (When the head height is set to "High")



The default setting for the head height is "Low".

When the head height is set to "Low", the maximum available media thickness is 0.3 mm.

Cautions for handling media

To achieve expected print quality, follow the instructions below.

Failure to follow these instructions could result in damage to the printer.

- Use media with no wrinkle, fold or curl.
- Do not use heat-sensitive media.
The heat given off by the UV rays could deform such media.
- Do not use media that are liable to reflect the UV light.
The reflective UV light can cure the ink on the print head.

Cautions in using this product

Do not turn the power off

Use the printer with its power turned permanently on. When you are not using the printer, always leave the power on and put the printer into the sleep mode while not in use. In the sleep mode, the printer will periodically circulate the ink inside the printer and carry out head cleaning automatically. If you do not put the printer into the sleep mode, the ink inside the printer could settle out and/or coagulate, causing poor image quality or printer failure.

Avoid direct contact with uncured ink

The curing time for Mutoh UV ink varies by surface properties of media you use. Particularly a low ink density area on a print takes longer time to be cured (approximately one hour).

When you check if your print is fully cured, be sure to wear protective gloves.

Agitate the ink cartridges (ink bags)

Before installing a new ink cartridge (ink bag), invert the ink cartridge (ink bag) back and forth to agitate ink.

Periodical ink agitation is also required when prompted on the operation panel.

Otherwise, the ink inside the cartridges (bags) settles or coagulates and may cause poor print quality or a malfunction.

Please use this product periodically

It is recommended to use this product once a week.

When left unused for a long time, the print head nozzles can get clogged causing damage.

Conduct periodic maintenance

This product requires daily maintenance.

- Perform the Nozzle check before and after printing.
If nozzle missing is found, conduct a head cleaning.
- Make sure to perform daily maintenance after you finish printing for the day.
Failure to perform daily maintenance may affect print quality or result in damage to the printer.
 ["Daily Maintenance" P. 111](#)
- Drain waste fluid in the waste fluid tank periodically before it becomes full.
- Clean its inside once a month.

Please handle ink cartridge (ink bag) carefully

- Before operation, make sure to read the Material Safety Data Sheet (SDS).
- Do not disassemble Ink cartridge (Ink bag).
If disassembled, there is a possibility that ink might come into contact with your eyes or skin.
- When handling the ink cartridge (ink bag), be careful not to let the ink get in your eyes or on your skin.
If the ink gets in your eye or on your skin, immediately wash it off with water.
If not, it could cause bloodshot eyes or light inflammation. Should any anomalies occur, immediately seek medical attention.

Some parts need to be replaced periodically

In this product, there are some parts required to be replaced after a long-term use.

- Parts required to be replaced by users:
Absorption material for the flushing box, Cutter, Cleaning wiper
- Parts required to be replaced by service personnel:
Various motors, Pumps, Print heads, UV-LED lamp filter, UV-LED unit

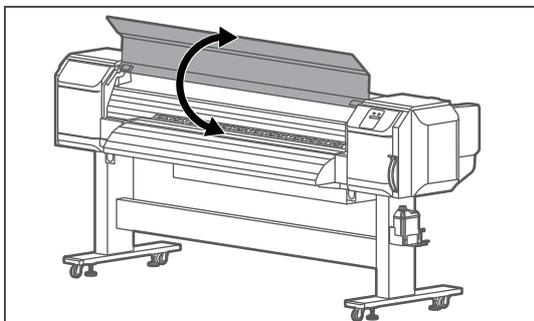
CAUTION



Do not force the front cover closed. It will close by its own weight.

If excessive force is applied to the cover, it will shorten its life or will damage to the printer.

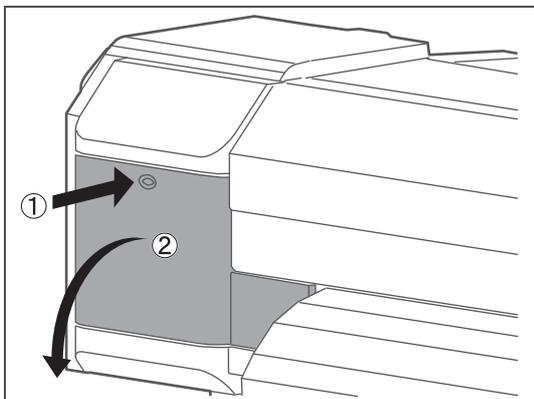
<Opening and closing the front cover>



Open / Close the front cover gently.

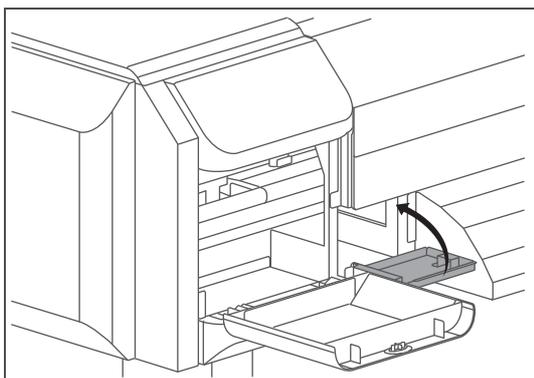
<Detaching the Left Maintenance cover>

[1]



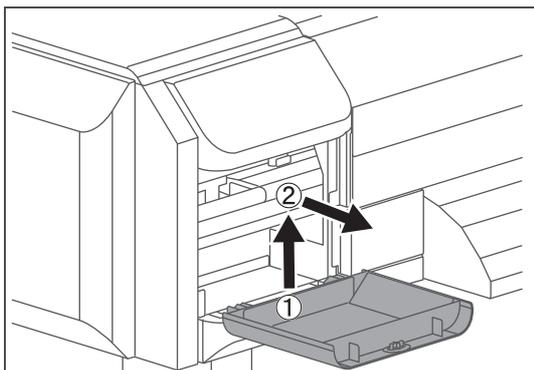
Open the maintenance cover.

[2]



Close the cover next to the maintenance cover.

[3]



Detach the maintenance cover.

[5]

Daily Maint. :	End
-----------------------	------------

The message on the left will appear.

- You can start daily maintenance.
 ["Performing Daily Maintenance" P. 114](#)
- After the daily maintenance is complete, press the [Enter] key.

Cleaning	** %
-----------------	-------------

The printer automatically performs the "Short" cleaning.

Power Off Printer

After the "Short" cleaning, the printer will start turning off.

Sleep Mode

When you are not using the printer, always leave the power on and put the printer into the sleep mode while not in use. If you do not put the printer into the sleep mode, the ink inside the printer could settle out and/or coagulate, causing poor image quality or printer failure.

Make sure to follow the instructions on the operation panel to perform daily maintenance.

The following operations are performed during sleep mode.

- Ink circulation
- "Little Charge"

Important!

To leave the printer in sleep mode for seven days or more, perform followings once a week:

- Check the ink level and replace the relevant ink cartridge (ink bag) if "Ink Low" is displayed.
- Agitate the ink cartridges (ink bags).

Steps

[1] Make sure that the printer's operating condition is as follows:

- The front cover and the maintenance cover are closed.
- No media is loaded.
- The remaining ink level is sufficient.
- The waste ink tank has enough space.

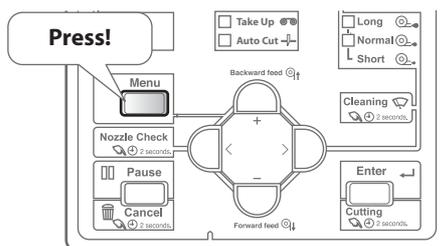
Important!

If you are going to use the sleep mode for a prolonged period of time, first empty the waste ink tank.

[2] Prepare items required for daily maintenance.

 ["Preparing for Daily Maintenance" P. 112](#)

[3]



Press the [Menu] key.

[4]



Press the [>] key.

[5]



Press the [Enter] key.

[6]



Press the [Enter] key.

[7]

Daily Maint. : **Start**

Press the [Enter] key.

Wait for a while

- The carriage and cleaning wiper move to gain access to daily maintenance.

[8]

Daily Maint. : **End**

The message on the left will appear.

- You can start daily maintenance.
 ["Performing Daily Maintenance" P. 114](#)
- After the daily maintenance is complete, press the [Enter] key.

Cleaning **** %**

The printer automatically performs the "Short" cleaning.

Restart **- >** **Enter**

The sleep mode will start.

- To exit the sleep mode, press the [Enter] key.



Note

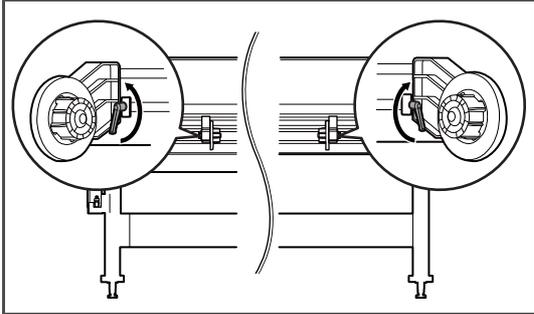
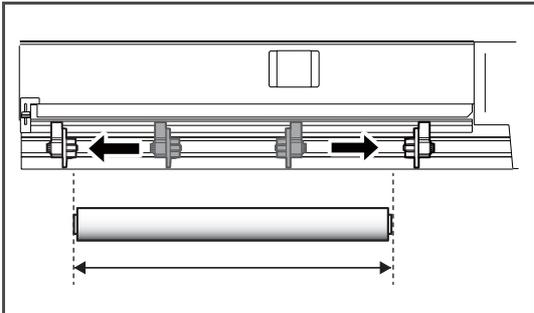
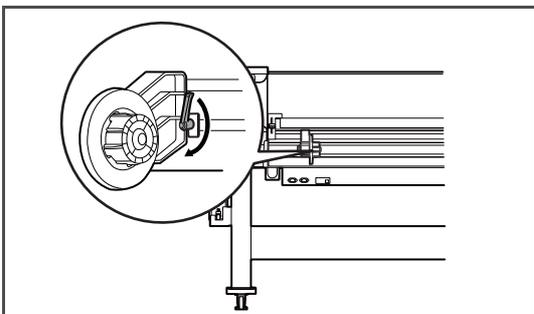
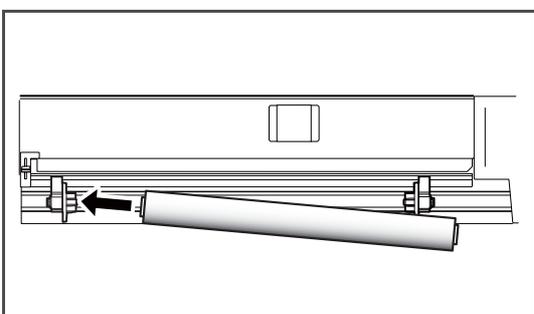
- The power button flashes in blue while the printer is in the sleep mode.
- Depending on the elapsed time from the previous automatic maintenance, the printer may automatically execute head cleaning and/or ink charging, etc., when it exits the sleep mode. Such operation does not depend on the sleep mode settings. It is an automatic maintenance function of the printer.

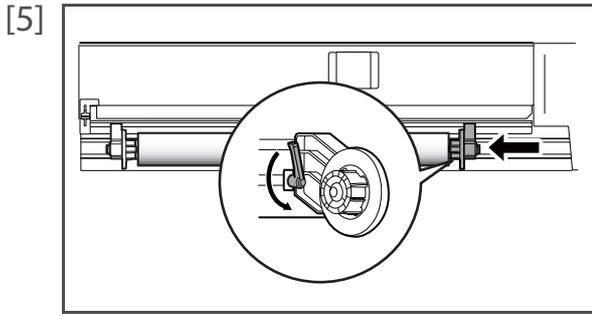
Loading the media

Loading Roll Media onto the Roll media holder

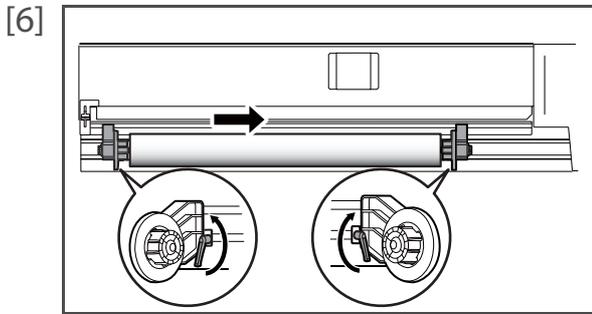


Depending on the type of the media, we recommend that two or more persons set the media.

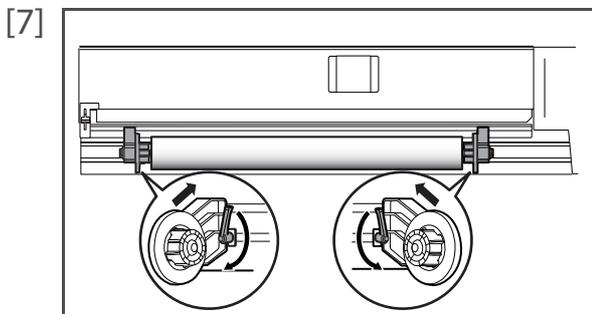
- [1]  Loosen Fixing levers on the Roll media holders (both left and right) on the back of the printer.
- [2]  Set the distance between Roll media holders wider than the actual width of the roll media to be set.
- [3]  Tighten Fixing lever of Roll media holder (left) and fix the Roll media holder (left).
- [4]  Set the roll media to Roll media holder (left).



[5] Attach Roll media holder (right) to the roll media and tighten Fixing lever.



[6] Loosen the Fixing levers of the right and left Roll media holders, move the roll media to the center.



[7] Press Roll media holder toward the printer and fix the Fixing levers.

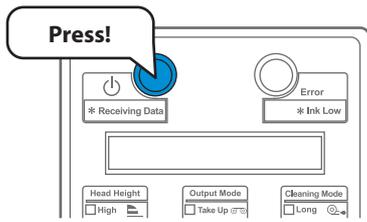
 **Note**

When tightening Fixing lever, press Roll media holder toward the printer.

If you do not press Roll media holder, Fixing lever may not be completely locked because of the weight of the roll media.

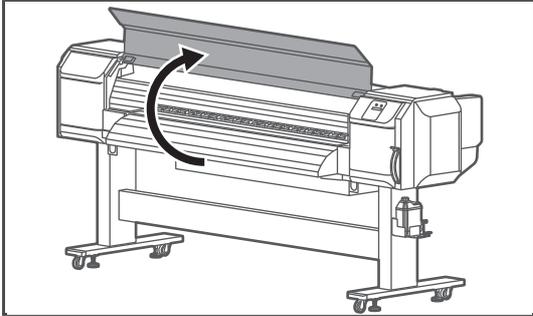
Loading Roll Media into the printer

[1]



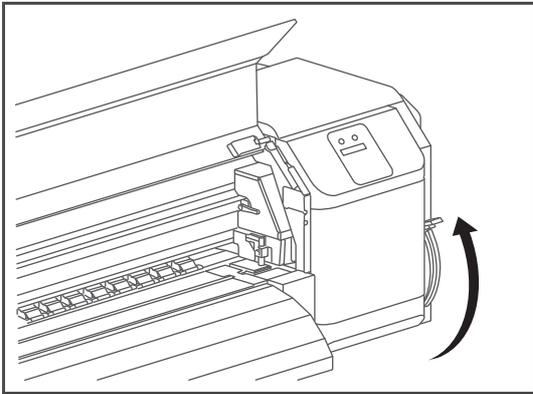
Turn the printer ON.

[2]



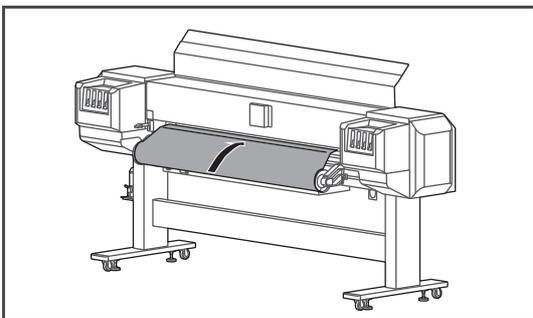
Open the front cover.

[3]



Raise the media loading lever.

[4]



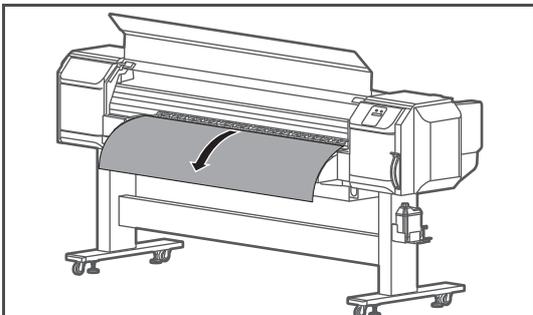
Load the roll media to Media feed slot.



Note

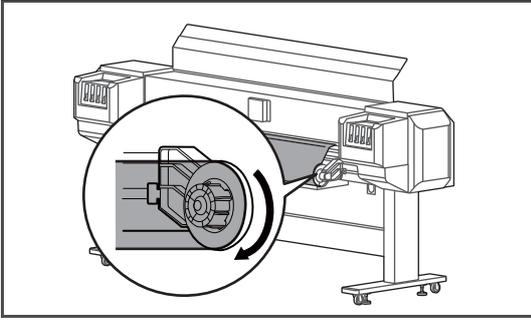
If the end of the roll media is not wound tightly, wind it tightly again, and then load it.

[5]



Pull the roll media out about 1 m from the front Media feed slot.

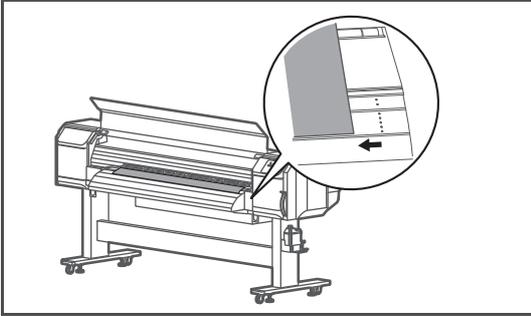
[6]



Rewind the roll media a little by rolling Flange on Roll media holder while holding the edge of the media, and eliminate any slack or slant.

 Note

If you set the roll media free while rewinding, the roll media may fall out from Media feed slot and fall toward the back of the printer.



Confirm that the right edge of the roll media does not go beyond the loading mark. If it does, it may affect print quality.

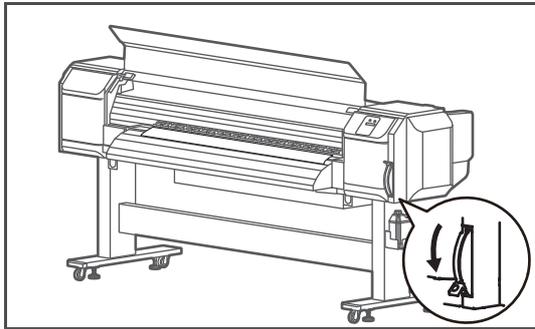
After loading the media...

[1]

Lever Up

"Lever Up" is displayed on the Operation panel.

[2]

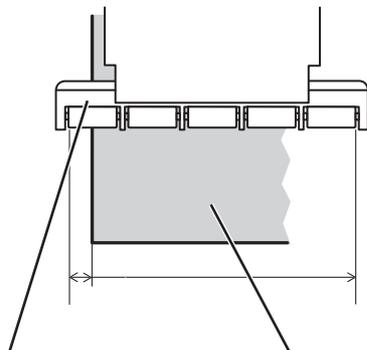


Lower the media loading lever.

[3]

Make sure that the edges of the media is appropriately pressed by Pressurizing rollers.

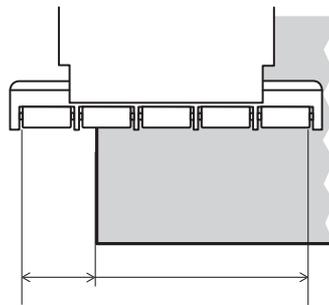
Good



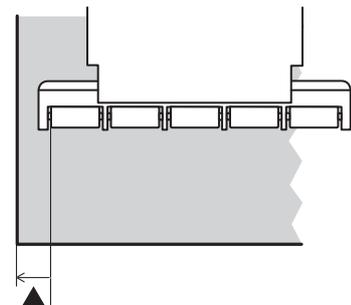
Pressurizing roller

Roll media

Good



Not Good

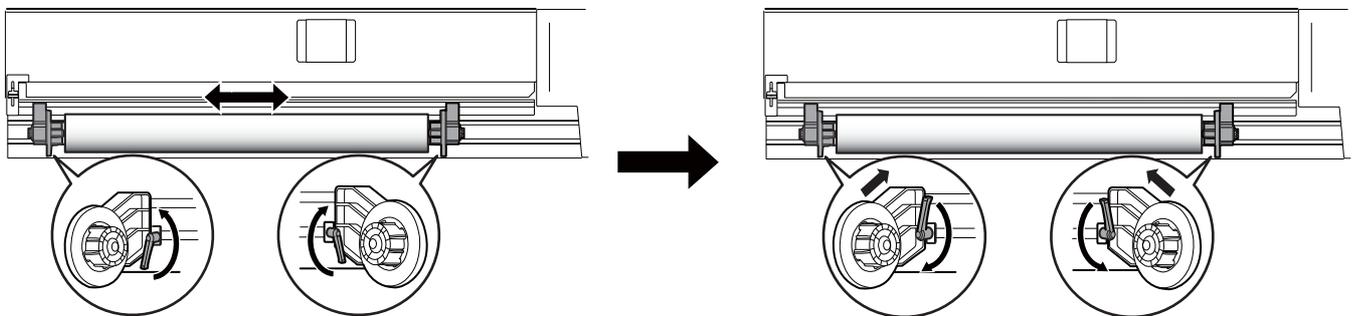


The edge of the roll media is protruding from the pressurizing roller.

[4]

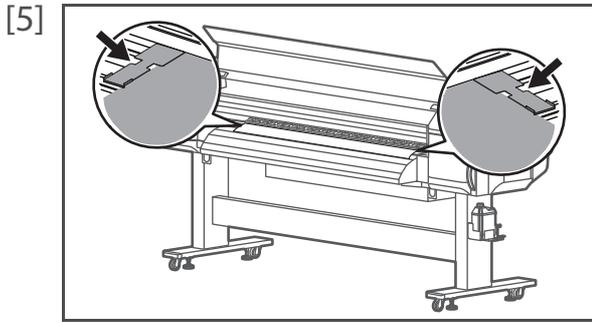
When the media is not appropriately pressed by Pressurizing rollers, follow the procedure to adjust the position of the roll media.

- Raise the media loading lever.
- Loosen Fixing levers of the right and left Roll media holders, and move the roll media to left or right.
- Press Roll media holder toward the printer and fix the Fixing levers.



Note

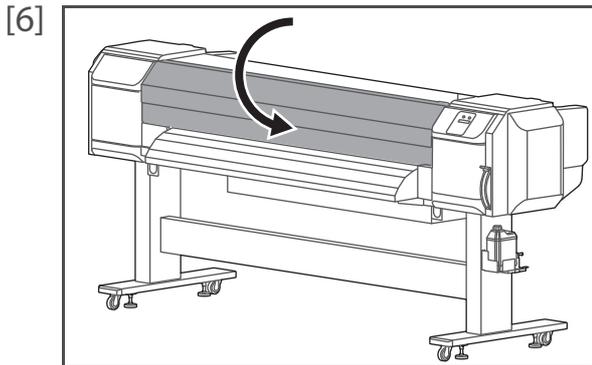
- If the media is not appropriately pressed by Pressurizing rollers, the media may be misaligned or creased during printing.
- When tightening Fixing lever, press Roll media holder toward the printer.
If you do not press Roll media holder, Fixing lever may not be completely locked because of the weight of the roll media.



Set the media holder at both edges of the media.

Important!

With the default settings, the printing operation starts 5 mm from the edge of the media. To hold down the media, make sure that the part overlapping the media is less than 5 mm in length.

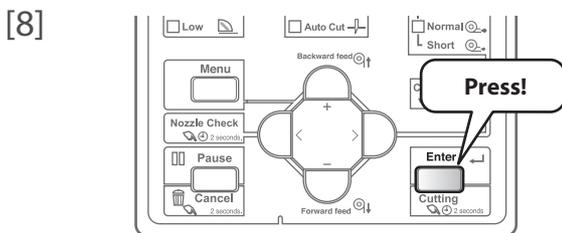


Close the front cover.



"User: Type ** OK?" is displayed on the Operation panel.

- Press the [+] key or [-] key on Operation panel to select the User Type Setting.



Press the [Enter] key to execute media initialization.

- That ends the media loading procedure.

Nozzle check and cleaning

Before starting everyday operation, please perform nozzle check printing to check the print head condition. If nozzle clog is found, perform cleaning.

This printer offers the following two kinds of nozzle checks:

- Nozzle Check - Prints the nozzle check patterns.
- Nozzle Check B - Prints the nozzle check patterns on the partially colored background.

Note

- "Nozzle Check B" will only appear in the menu if the printer is set to 6-color configuration.
- When using white ink, colored media, transparent films or semi-transparent films (such as OHP film, tracing paper and more) are recommended to use for nozzle check.

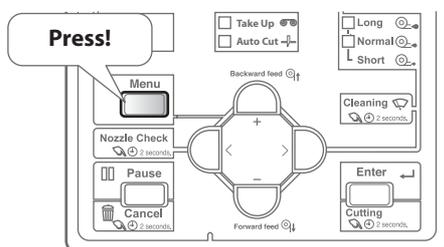
Nozzle check

Nozzle check steps

- [1] Load the media for Nozzle check.

 **"Loading the media" P. 30**

- [2]



Press the [Menu] key.

- [3]



Press the [-] key several times, to bring up the display on the left.

- Press the [>] key.

- [4]



Press the [Enter] key.

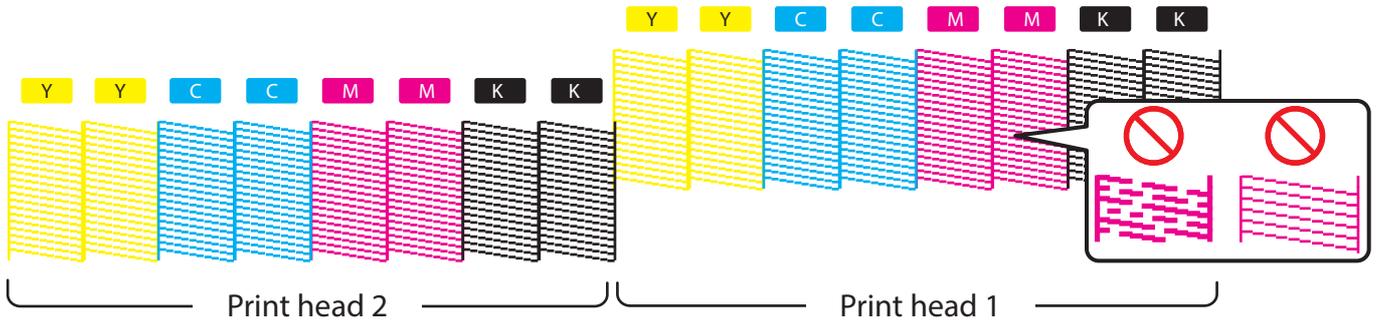
- To select Nozzle Check B, press the [-] key to display "Nozzle Check B", then press the [Enter] key.



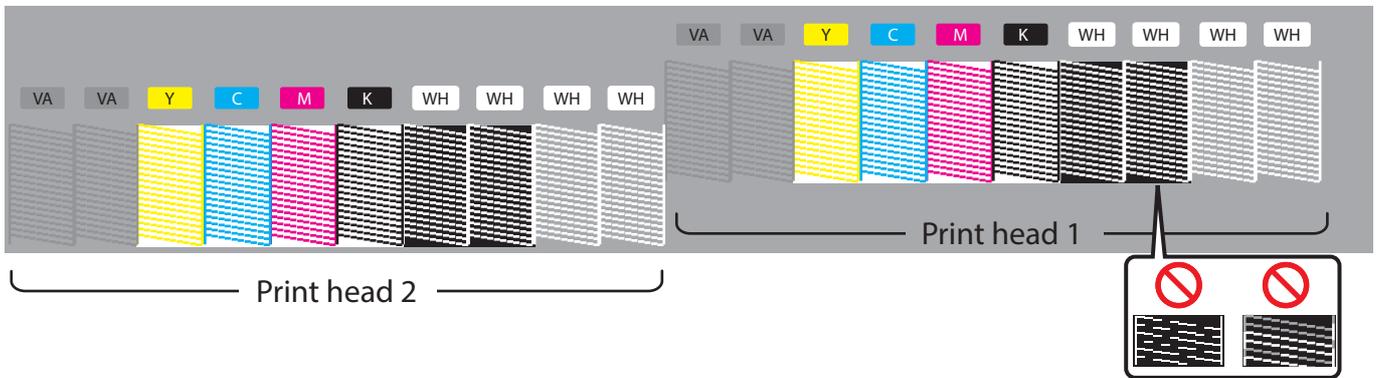
- Nozzle check patterns will be printed.

[5] Check the print result.

- If there is nozzle missing, go to "[Cleaning steps](#)" P. 38.
- If all lines are clearly printed, you can start printing.
- The figure below are examples of the 4-color setting Nozzle Check patterns.



- Nozzle Check B is printed on the partially colored background.
- The figure below is an example of the Nozzle Check B pattern. In this example, non-colored background area is shown in gray.

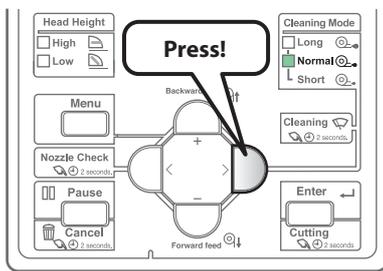


 Note

The printer information (date and time of printing, printer's serial number, firmware version) is printed on the nozzle check pattern.

Cleaning steps

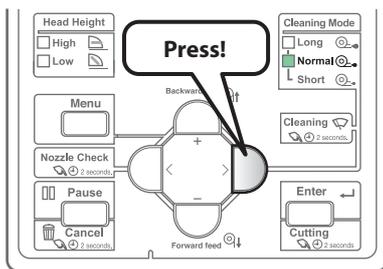
[1]



Press the [Cleaning] key, so that the “Normal” indicator (one of the “Cleaning Mode” indicators) lights steady.

- The cleaning mode will be set to “Normal”.

[2]



Press the [Cleaning] key for more than two seconds.

- Cleaning will start.

[3] Conduct a nozzle check, again.

 ["Nozzle check steps" P. 36](#)

- If there is still nozzle missing, repeat normal cleaning.

See ["Head cleaning" P. 121](#) regarding “Short”, “Long”, “Little Charge” and “Initial Charge” cleaning.

Setting the Printing Precision

Before starting to print for the first time, adjust the printing precision.

Head adjustment

You can print out the adjustment pattern in this menu to check the misalignment of the print head, and then adjust it.

Adjustment methods for this printer are as follows.

Head Adj. 1 :	Standard
----------------------	-----------------

Adjusts only the print mode used by the current user definition.
When you have adjusted the print mode using Standard, make the resolution, pass count, and print direction of the print mode on the RIP side equal to those of the userdefined print mode.

Head Adj. 2 :	Custom
----------------------	---------------

Allows you to adjust also a print mode other than the print mode used by the current user definition.
This method optimizes print quality even if the print mode on the RIP side is different from the user-defined mode.

Note

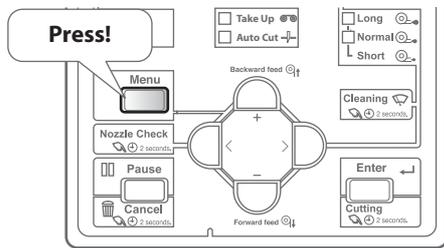
- Print quality may improve by head adjustment in the following situations:
 - Print quality is poor when using the uni-direction print mode  ["Details of print mode" P. 60](#)
 - Print quality does not improve even after performing print quality adjustment
- After you have performed head adjustment, make sure you perform print quality adjustment.
 - There may be misalignment caused by head adjustment.  ["Print quality adjustment" P. 41](#)
- When changing the print mode after performing standard head adjustment, make sure you adjust print head.
- Since all print modes are adjusted at once after performing Custom head adjustment, head adjustment is not required even after changing the print mode.
- When specifying a print mode for RIP software, etc, that is different from the mode set in the user type setting, perform Custom head adjustment and check all patterns (A to F), and then adjust any patterns that are misaligned beforehand.

Head adjustment steps

[1] Turn the printer ON and load the media.

 ["Loading the media" P. 30](#)

[2]



Press the [Menu] key.

[3]



Press the [-] key several times, to bring up the display on the left.

- Press the [>] key.

[4]



Press the [-] key several times, to bring up the display on the left.

- Press the [>] key.

[5]



Select the adjustment method with the [+]/[-] key.

- Press the [Enter] key.



[6]

Starts printing.

- The confirmation pattern will be printed.

[7]

Follow the steps below and adjust the head.

 ["Steps" P. 89](#)

Print quality adjustment

It is used for optimizing the quality of image prints.

Adjustment methods for this printer are as follows.

Adj. Print 1:	Standard
----------------------	-----------------

Adjusts only the print mode used by the current user definition.

When you have adjusted the print mode using Standard, make the resolution, pass count, and print direction of the print mode on the RIP side equal to those of the userdefined print mode.

Adj. Print 2:	Custom
----------------------	---------------

Allows you to adjust also a print mode other than the print mode used by the current user definition.

This method optimizes print quality even if the print mode on the RIP side is different from the user-defined mode.

Note

- When newly setting or changing the user type setting after adjusting Standard adjust print, make sure to adjust print.
- When changing the print mode after performing standard head adjustment, make sure you adjust print head.
- Since all print modes are adjusted at once after performing Custom adjust print, adjust print is not required even after changing the print mode. When specifying a print mode for RIP software, etc, that is different from the mode set in the usertype setting, perform Custom head adjustment and check all patterns (A to F), and then adjust any patterns that are misaligned beforehand.

- Print quality may improve by head adjustment in the following situations:

For adjustment procedure, see  ["Head adjustment" P. 39](#)

Print quality is poor when using the uni-direction print mode.  ["Details of print mode" P. 60](#)

Print quality does not improve even after performing print quality adjustment

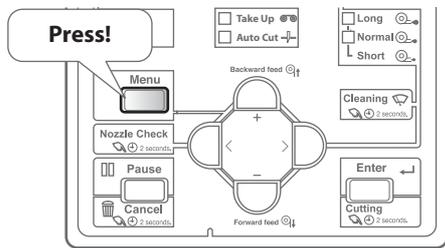
- After you have performed head adjustment, make sure you perform print quality adjustment.
There may be misalignment caused by head adjustment.

Print quality adjustment steps

[1] Turn the printer ON and load the media.

 ["Loading the media" P. 30](#)

[2]



Press the [Menu] key.

[3]



Press the [-] key.

[4]



Press the [>] key.

[5]



Use the [+] / [-] key to select a user type.

- Press the [Enter] key.

[6]



Press the [-] key several times, to bring up the display on the left.

- Press the [>] key.

[7]



Enter the media thickness.

- Press the [Enter] key.

[8]



Select the adjustment method with the [+] / [-] key.

- Press the [Enter] key.



Note

- In Standard print quality adjustment and Custom print quality adjustment, the names in the available patterns are different. For details, refer to the page below.

 ["Adj. Print 1: Standard" P. 61](#)

 ["Adj. Print 2: Custom" P. 62](#)

- For a pre-adjustment check, select "Confirm Ptn."

Check the printing results in "Confirm Ptn.,"

- To adjust large misalignment, select "Rough Pattern".
- To adjust small misalignment, select "Fine Pattern".

[9] Follow the steps below and adjust the print quality.

 ["Steps" P. 63](#)

Media feed adjustment

This adjustment is necessary when:

- you use this product for the first time.
- you change the type of the media.

In other cases, proceed to **"Nozzle check" P. 36**.

For this adjustment, you need a ruler. Use a commercially available ruler.



Note

If you encounter any of the following problems with the printing results, you may be able to solve them by adjusting the media feed.

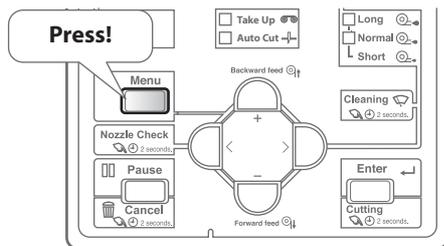
- Printed images overlap.
- White lines are printed over images.

Media feed adjustment steps

[1] Load the media.

 **"Loading the media" P. 30**

[2]



Press the [Menu] key.

[3]



Press the [-] key.

[4]



Press the [>] key.

[5]



Use the [+] / [-] keys to select a user type.

- Press the [Enter] key.

[6]

**> 3:	PF Adjust >
------------------	-----------------------

Press the [-] key several times, to bring up the display on the left.

- Press the [>] key.

[7]

PF 1 :	Initial Print
---------------	----------------------

PF 2 :	Initial Change
---------------	-----------------------

PF 3 :	Confirm Print
---------------	----------------------

PF 4 :	Micro Print
---------------	--------------------

PF 5 :	Micro Change
---------------	---------------------

Use the [+] / [-] key to select a menu.

- Press the [Enter] key.

[8]

Follow the steps below and adjust the print quality.

 ["Steps" P. 65](#)

Changing the Head Height

If media is lifted or when printing that use a large amount of ink is conducted, the media rubs against the print head and becomes dirty. In such a case, it may improve by setting the print head height high.

When the print head height is changed, always perform print quality adjustment.

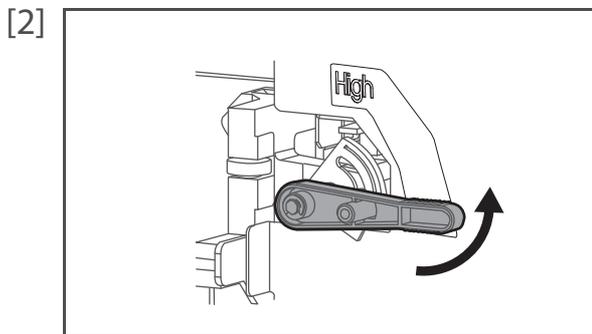
Procedure



Do not open Front cover and change the head height during printing.

If the head height is changed, the adjustment will be changed and high print quality will not be guaranteed.

[1] Open the front cover.



Change the head height by moving Head height adjustment lever (orange).

- When the Head height is set to "Low":
Low lamp on Operation panel lights up in green.
- When the Head height is set to "High":
High lamp on Operation panel lights up in green.

[3] Close the front cover.

[4] Perform print quality adjustment.

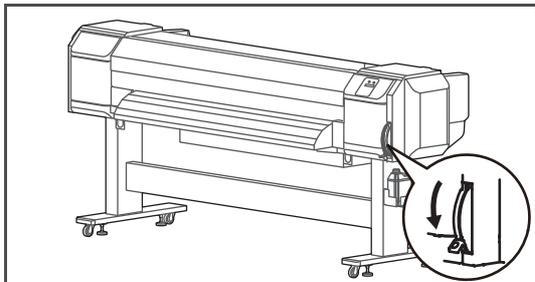
["Print quality adjustment" P. 41](#)

Operating from Operation panel

Feeding media

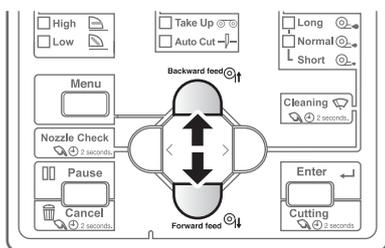
Steps

[1]



Check that Media loading lever is lowered.

[2]



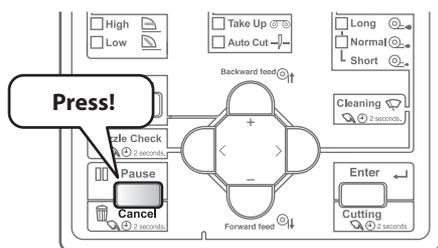
Press the [Forward] key or the [Backward] key on Operation panel.

- [Forward] key: The media is fed forward.
- [Backward] key: The media is fed backward.

[3]

Release the [Forward] key or the [Backward] key on Operation panel after feeding the media to the desired position.

Pausing / Restarting printing



To halt printing, press the [Cancel] key.

- The printing pauses.
- To resume printing, press the [Enter] key.

Note

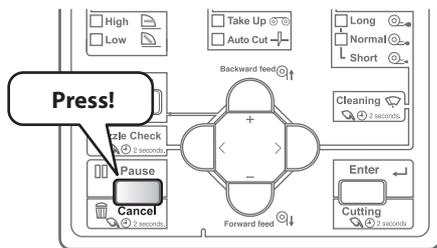
- In this operation, printing data sent to the product are not deleted.
- Please see the followings when canceling printing and deleting data.

["Canceling printing" P. 47](#)

Important!

Mutoh cannot guarantee the print quality when you resume the print.

Canceling printing



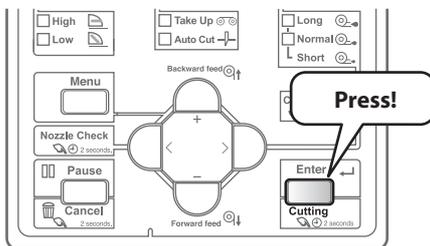
Press and hold the operation key on the operation panel for two seconds or more during printing.

- The printing is canceled (it cannot be restarted).
- The printing data sent to the product are deleted.

Note

You can alternatively do this via the printer driver or the MSM's remote panel.

Cutting media



Press the [Cutting] key on Operation panel for more than two seconds.

- The printer feeds the roll media to the length of the margin and cuts the media.

Note

- When loading the new roll media, cut the front edge of the media if it is not straight.
- When the media detection is set to "Off", the media cannot be cut automatically.
 **"**>6: Media Initial" P. 69**
- If the Output mode menu is set to "Auto Cut", the printer cuts the media automatically after printing.
 **"Set 2: Output Mode" P. 72**
- The cutter is a consumable component. Replace it periodically.
 **"Replacing Cutter" P. 128**

What you can do on the operation panel during printing

[1]

Receiving
Printing
Converting

Press the [Menu] key while any of the messages on the left is displayed.

[2]

Menu 1 :	PF Micro Adj.
Menu 2 :	Backup
Menu 3 :	Job Status

Press the [+] / [-] key to select a menu.

 ["Menu 1: PF Micro Adjustment" P. 48](#)

 ["Menu 2: Backup" P. 49](#)

 ["Menu 3: Job Status" P. 49](#)

Menu 1: PF Micro Adjustment

With this menu item, you can alter the micro-adjustment value for the feed correction. The alteration will be valid for the current printing only.

- See the following related sections of Panel Setting Menus:

 ["***>3: PF Adjust" P. 65](#)

[1]

Menu 1 :	PF Micro Adj.
----------	---------------

Press the [Enter] key.

[2]

Micro :	5.00 %
---------	--------

- Use the [+] / [-] key to change the setting value.
- Press the [Enter] key to set the changed value.

Note

- The changed value set with this menu item will become invalid when the printing ends.
- To have the change reflected in the currently selected User Type, save it using "Menu 2: Backup".

Menu 2: Backup

With this menu item, you can have a change that you made via "Menu1: PF Micro Adj." reflected in the currently selected User Types.

- [1]

Menu 2 :	Backup
-----------------	---------------

 Press the [Enter] key.
- [2]

Update Parameter?

 Press the [Enter] key.
- | |
|-------------------------------|
| * Parameter Updating * |
|-------------------------------|

 The setting value will be saved.

Menu 3: Job Status

This menu item displays data on the job being printed.

- See the following related sections of Panel Setting Menus:

 ["Menu 10: Job Status" P. 96](#)

- [1]

Menu 3 :	Job Status
-----------------	-------------------

 Press the [Enter] key.
- [2]

ToDoLength :	XXX.Xm
---------------------	---------------

 Use the [+] / [-] key to select a menu item.
- | | |
|---------------|---------------|
| Done : | XXX.Xm |
|---------------|---------------|
- | | |
|-----------------|---------------|
| Remain : | XXX.Xm |
|-----------------|---------------|
- | | |
|----------------------|-------------|
| Remain Time : | Xmin |
|----------------------|-------------|
- ToDoLength: display this to check the total length (media feed direction) of the job being printed.
 - Done: display this to check how much of the current job has been printed.
 - Remain: display this to check how much of the current job remains to be printed.
 - Remain time: displays the time remaining to complete the print job.

Note

- The values displayed by this function are approximate. They are not guaranteed to be rigorously accurate.
- If the print job data contains no length information, "0" will be displayed for all these items.

Chapter 2 Advanced Operations

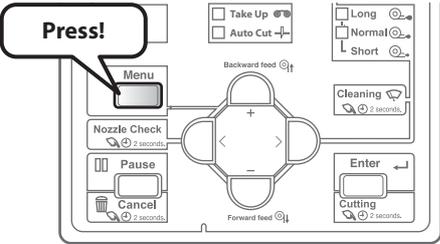
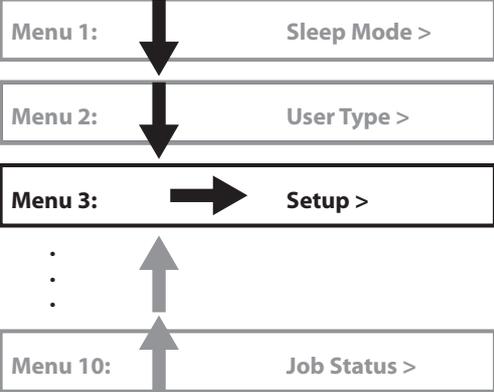
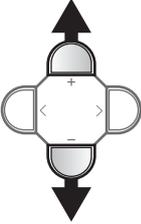
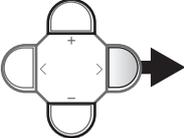
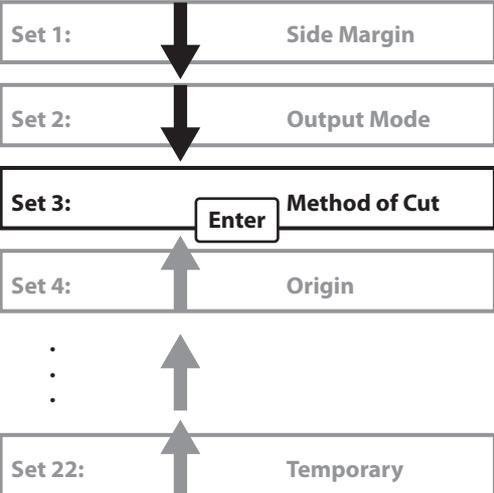
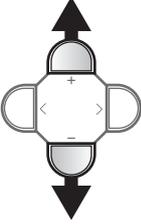
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Introduction

Using the panel setting menus, configure various kinds of settings for the printer.

Operating the keys to use the menus

- [1]  To access the panel setting menus, press the [Menu] key.
-  **Note**
You cannot access the panel setting menus while printing or receiving data (the power button is flashing).
- [2]  Use the [+] / [-] key to scroll through the menus.
-  Press the [>] key to access the menu you are on.
- 
- [3]  Use the [+] / [-] key to select submenus, enter numeric values and so forth.
-  Press the [Enter] key to set/execute.
- 
- Use the [Cancel] key to return to the menu/submenu.
(In the case shown on the left, pressing [Cancel] key will return to "Menu 3: Setup>")
- 

Panel setup menu

Menu 1: Sleep Mode

Menu 1: Sleep Mode >

Activate Sleep Mode.

Submenus

Sleep Mode : Start

 [Menu 1: Sleep Mode](#)

Menu 2: User Type

Menu 2: User Type

Making media settings.

Submenus

**> 1: Print Mode

 [**>1: Print Mode](#)

**> 2: Adjust Print >

 [**>2: Adjust Print>](#)

**> 3: PF Adjust >

 [**>3: PF Adjust](#)

**> 4: Vacuum Fan

 [**>4: Vacuum Fan](#)

**> 5: Thickness

 [**>5: Thickness](#)

**> 6: Media Initial

 [**>6: Media Initial](#)

**> 7: Media Width

 [**>7: Media Width](#)

**> 8: Pass Wait

 [**>8: Pass Wait](#)

**> 9: Add Y Layer

 [**>9: Add Y Layer](#)

**> 10: UserCopy

 [**>10: User Copy](#)

**> 11: Initial

 [**>11: Initial](#)

Menu 3: Setup

Menu 3: Setup >

Various settings of the printer are configured.

Submenus

Set 1: Side Margin

 [Set 1: Side Margin](#)

Set 2: Output Mode

 [Set 2: Output Mode](#)

Set 3: Method of Cut

 [Set 3: Method of Cut](#)

Set 4: Origin

 [Set 4: Origin](#)

Set 5:	Head Travel	 Set 5: Head Travel
Set 6:	Multi Strike	 Set 6: Multi Strike
Set 7:	Slant Check	 Set 7: Slant Check
Set 8:	Single Head	 Set 8: Single Head
Set 9:	Nozzle Select	 Set 9: Nozzle Select
Set 10:	Auto Cleaning	 Set 10: Auto Cleaning
Set 11:	Roll Length	 Set 11: Roll Length
Set 12:	FrontInterlace	 Set 12: FrontInterlace
Set 13:	CR Maintenance	 Set 13: CR Maintenance
Set 14:	Ink Status	 Set 14: Ink Status
Set 15:	Life Times	 Set 15: Life Times
Set 16:	Header Dump	 Set 16: Header Dump
Set 17:	Exhaust Fan	 Set 17: Exhaust Fan
Set 18:	White Maint.	 Set 18: White Maintenance
Set 19:	Start Feed	 Set 19: Start Feed
Set 20:	Initialization	 Set 20: Initialization
Set 21:	Spitting	 Set 21: Spitting
Set 22:	Temporary	 Set 22: Temporary

Menu 4: Test Print

Menu 4: Test Print >

Performs nozzle check of the print head and setup list.

Submenus

Test 1:	Nozzle Check	 Test 1: Nozzle Check
Test 2:	Nozzle Check B	 Test 2: Nozzle Check B
Test 3:	Mode Print	 Test 3: Mode Print
Test 4:	Setup List	 Test 4: Setup List
Test 5:	Palette	 Test 5: Palette

Test 6: HeadAdjust >

 [Test 6: Head Adjust](#)

Menu 5: Cleaning

Menu 5: Cleaning >

Cleans the print head and performs the initial ink charging.

Submenus

Time : Short

 [Menu 5: Cleaning](#)

Time : Normal

Time : Long

Time : Little Charge

Time : Initial Charge

Menu 6: Menu Option

Menu 6: Menu Option >

Choose whether to display the menus in "Menu 3: Setup".

 [Menu 6: Menu Option](#)

Menu 7: Maintenance

Menu 7: Maintenance >

Configures the periodical printer maintenance.

Submenus

Mnt. 1: Daily Maintenance

 [Maintenance 1: Daily Maintenance](#)

Mnt. 2: Plug Life

 [Maintenance 2: Plug Life](#)

Mnt. 3: Ink Discharge

 [Maintenance 3: Ink Discharge](#)

Menu 8: Version

Menu 8: Version >

Displays the versions of the firmware.

 [Menu 8: Version](#)

Menu 9: Initial

Menu 9: Initial >

Sets the interface language and units, to set up the network, or to configure the menu display settings.

Submenus

Initial 1: Language	 Initial 1: Language
Initial 2: Length	 Initial 2: Length
Initial 3: IP Address	 Initial 3: IP Address
Initial 4: Subnet Mask	 Initial 4: Subnet Mask
Initial 5: Gateway	 Initial 5: Gateway
Initial 6: Alert Buzzer	 Initial 6: Alert Buzzer

Menu 10: Job Status

Menu 10: Job Status >

Displays various information of previous print.

 [Menu 10: Job Status](#)

Menu 1: Sleep Mode

Menu 1: Sleep Mode >

Activate Sleep Mode.

Make sure to follow the instructions on the operation panel to perform daily maintenance.

 ["Sleep Mode" P. 28](#)

Submenu

Sleep Mode 1 : Start

Press the [Enter] key to start Sleep Mode.

Important!

During Sleep Mode, head cleaning is not performed under the following circumstances.

- When the front cover is open.
- When the maintenance cover is open.
- Media loading lever is raised.
- The waste fluid tank is full.
- Ink cartridges or High capacity ink pack adapters have been removed.
- The inserted S/C card is not the genuine S/C card, etc.

If one of the above conditions occurs during head cleaning, cleaning is stopped.

When the printer returns to a normal state, head cleaning is restarted.

Menu 2: User Type

Menu 2: User Type >

You can have up to 15 groups of User Type, labeled "Type1" to "Type15". When you select a User Type group ("Type") and press the [Enter] key, that definition group will be set for the printer. Also, a submenu will be displayed.

Setting values

User : Type 1

Select a "Type" number, from "Type1" to "Type15".



When you change to another User Type, all the settings that can be set via the User Type will be changed. When using the printer for the first time or when changing the media, configure the items for the User Type.

User : Type 1

Making media settings.

Submenus

**> 1: Print Mode

****>1: Print Mode**

**> 2: Adjust Print >

****>2: Adjust Print>**

**> 3: PF Adjust >

****>3: PF Adjust**

**> 4: Vacuum Fan

****>4: Vacuum Fan**

**> 5: Thickness

****>5: Thickness**

**> 6: Media Initial

****>6: Media Initial**

**> 7: Media Width

****>7: Media Width**

**> 8: Pass Wait

****>8: Pass Wait**

**> 9: Add Y Layer

****>9: Add Y Layer**

**> 10: UserCopy

****>10: User Copy**

**> 11: Initial

****>11: Initial**

**>1: Print Mode

****> 1: Print Mode**

Making settings for print mode.

- Pressing the [>] key while a mode is displayed will bring up detailed information on that mode (resolution, number of passes, print direction), which will be displayed for as long as the key is held down.
- After setting the print mode, go on to setting of effect.

Setting values

Mode : Quality X ->	Sets up to perform high quality printing. There are four patterns: Quality 1 to Quality 4.
Mode : Graphics X ->	Sets up to perform standard printing. There are two patterns: Graphics 1 and Graphics 2. Graphics 2 is the initial setting.
Mode : Banner X ->	Sets up to perform high-speed printing. There are two patterns: Banner 1 and Banner 2.

Details of print mode

Print Mode	Resolution	Pass (4-color setting)	Pass (5, 6-color setting)	Direction	Initial values for effect
Quality 1	1440 × 1440	16 pass	32 pass	Uni (unidirectional)	i-Weave UV
Quality 2	1440 × 1440	16 pass	32 pass	Bi (bidirectional)	i-Weave UV
Quality 3	720 × 1440	8 pass	16 pass	Uni (unidirectional)	i-Weave UV
Quality 4	720 × 1440	8 pass	16 pass	Bi (bidirectional)	i-Weave UV
Graphics 1	720 × 1080	6 pass	12 pass	Uni (unidirectional)	i-Weave UV
Graphics 2	720 × 1080	6 pass	12 pass	Bi (bidirectional)	i-Weave UV
Banner 1	720 × 720	4 pass	8 pass	Uni (unidirectional)	i-Weave UV
Banner 2	720 × 720	4 pass	8 pass	Bi (bidirectional)	i-Weave UV

Effect

Mode : Graphics 2 - >

Sets up the Effect menu.

Set up this menu when you want to improve print quality by adjusting the set print mode.

Setting values

Effect : None

The Effect function is not used.

Effect : i-Weave UV

The printing joint will shade off.
This is the initially set value.

**>2: Adjust Print>

**> 2: Adjust Print >

Sets up when adjusting the printer for the optimum quality of image print.

Before adjusting this setting, enter the thickness of the media.

Submenus

Adj. Print 1: Standard

Adjusts only the print mode in the user type setting which is currently set.

Adj. Print 2: Custom

Adjusts the print modes other than the mode in the user type setting which is currently set.

Adj. Print 1: Standard

Adj. Print 1: Standard

Adjusts only the print mode in the user type setting which is currently set.

 ["1. Confirm pattern" P. 63](#)

 ["2. Rough adjustment pattern" P. 64](#)

 ["3. Fine adjustment pattern" P. 64](#)

Submenus

Adj. 1: Confirm Ptn.

Print the test pattern for the adjustment.
Check before adjusting.

Adj. 2: Rough Pattern

Perform this to adjust large misalignment.
Print Adjust pattern and enter the set value.

Adj. 3: Fine Pattern

Perform this to adjust small misalignment.
Print Adjust pattern and enter the set value.

Adj. Print 2: Custom

Adj. Print 2:	Custom
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Perform adjustment for all patterns (A to F).

 **"1. Confirm pattern" P. 63**

 **"2. Rough adjustment pattern" P. 64**

 **"3. Fine adjustment pattern" P. 64**

Submenus

Adj. 1:	Confirm Ptn.
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The test patterns of A to F will be printed for Adjust print. Check before adjusting.

Adj. 2:	Rough Ptn. ALL
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For printing all rough adjustment patterns from A to X.

Adj. 3:	Rough Pattern A
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For printing an adjust pattern selected from A to F.

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Adj. 8:	Rough Pattern F
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Adj. 9:	Fine Ptn. ALL
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For printing all fine adjustment patterns from A to X.

Adj. 10:	Fine Pattern A
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For printing an adjust pattern selected from A to F.

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Adj. 15:	Fine Pattern F
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Adjustment patterns for each print mode

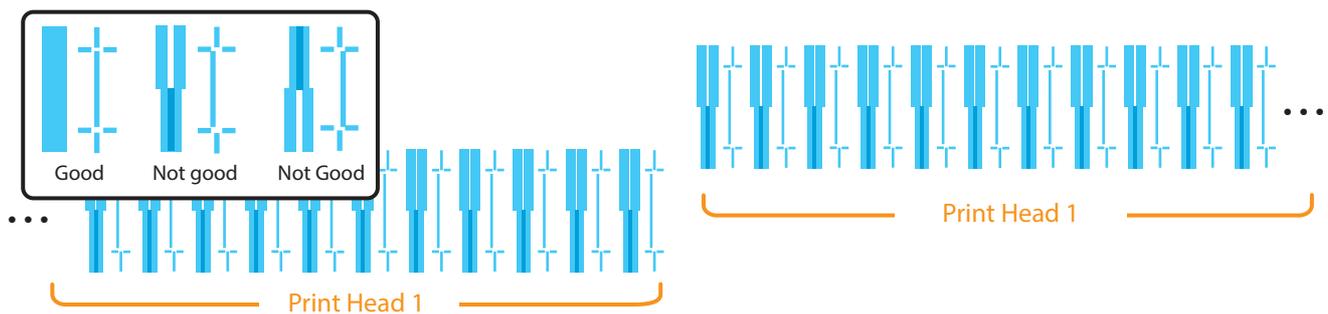
Print mode	Print mode specifications	Adjustment pattern
Quality 1	1440 x 1440, 16 pass / 32 pass, Uni	E
Quality 2	1440 x 1440, 16 pass / 32 pass, Bi	
Quality 3	720 x 1440, 8 pass / 16 pass, Uni	D
Quality 4	720 x 1440, 8 pass / 16 pass, Bi	
Graphics 1	720 x 1080, 6 pass / 12 pass, Uni	
Graphics 2	720 x 1080, 6 pass / 12 pass, Bi	
Banner 1	720 x 720, 4 pass / 8 pass, Uni	
Banner 2	720 x 720, 4 pass / 8 pass, Bi	

Steps

1. Print a confirm pattern and check it for printing errors.
2. Print "Rough adjustment pattern" and look for a place that is properly adjusted in the printing results of print head 1.
 - If you selected "Adj. Print 2: Custom", select "ALL" or "A" to "F".
 - The number printed under the pattern without alignment errors is the adjustment value.
3. Enter the adjustment values.
4. Follow the same procedure to adjust print head 2.
5. Print "Fine adjustment pattern" and look for a place that is properly adjusted in the printing results of print head 1.
 - If you selected "Adj. Print 2: Custom", select "ALL" or "A" to "F".
 - The number printed under the pattern without alignment errors is the adjustment value.
6. Enter the adjustment values.
7. Follow the the same procedure to adjust print head 2.

1. Confirm pattern

- Press the [Enter] key to carry out printing.
- Check the printing results. If there are shifting problems, proceed to rough adjustment pattern printing.
- In the picture below, there are misalignments.

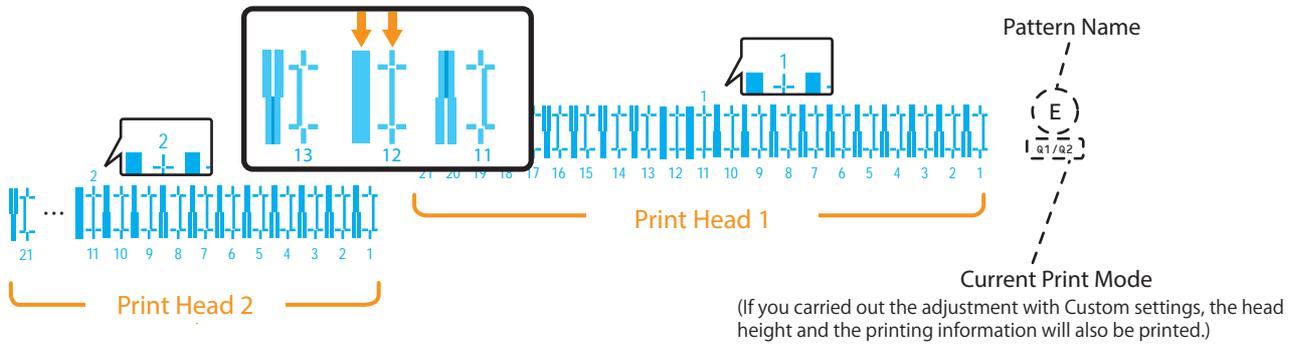


Note

- Because this printer has two Print heads, two rows of confirmation pattern will be printed.
- The above pattern is the example when the printer is set to 4-color setting.

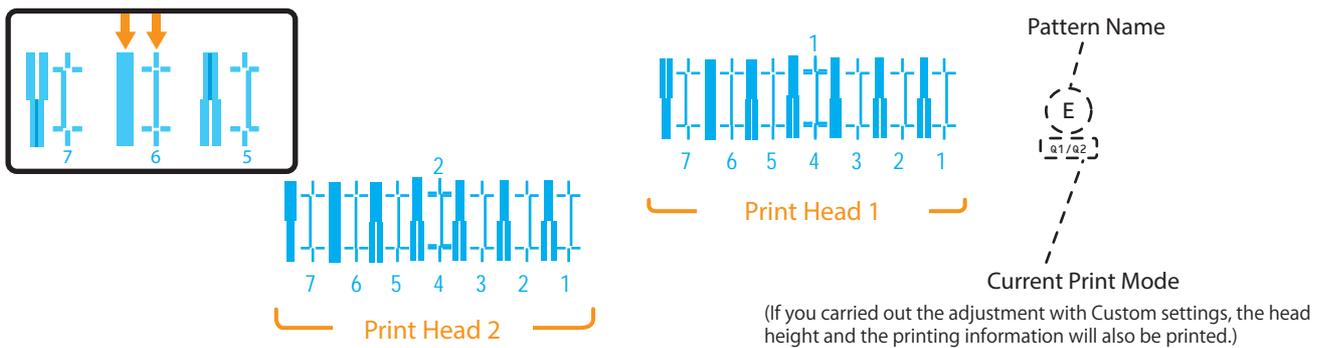
2. Rough adjustment pattern

- Press the [Enter] key to carry out printing.
- For Head 1, check the print results and select the number that looks most aligned between 1 and 21.
- Pattern names such as “Pattern E1: 11” are shown on the display. Use the [+] / [-] key to enter the number of the best-adjusted pattern, and press the [Enter] key.
- In the case of the picture below, enter “12”, so that the display reads “Pattern E1: 12”. Follow the same procedure to adjust print head 2.



3. Fine adjustment pattern

- Press the [Enter] key to carry out printing. For the Fine adjustment pattern, the same patterns will be printed repeatedly on both sides and center of the media.
- For Head 1, check the print results on both sides and center of the media and select the number that looks most aligned between 1 and 7.
- Pattern names such as “Pattern E1: 4” are shown on the display. Use the [+] / [-] key to enter the number of the best-adjusted pattern, and press the [Enter] key.
- In the case of the picture below, enter “6”, so that the display reads “Pattern E1: 6”. Follow the same procedure to adjust print head 2.



**>3: PF Adjust

**> 3: PF Adjust >

Sets up various settings on the Media feed correction.

When the following defects are found in printing results, they may improve by conducting a media feed correction.

- Images are overlapping.
- There are white lines in images.

Submenus

PF1 :	Initial Print	 "PF1: Initial Print" P. 66
PF2 :	Initial Change	 "PF2: Initial Change" P. 67
PF3 :	Confirm Print	 "PF3: Confirm Print" P. 67
PF4 :	Micro Print	 "PF4: Micro Print" P. 68
PF5 :	Micro Change	 "PF5: Micro Change" P. 68

Steps

1. Select "PF1: Initial Print".

- "Feed Length: 250 mm" is displayed on Operation panel.

2. After the initial adjustment printing, cut the media.

- Measure the distance between the "✚" in the initial adjustment print using a ruler.

3. Refer to Chapter 1 ["Media feed adjustment steps" P. 43](#) and select "PF2: Initial Change" on the operation panel.

4. Press the [+] key or [-] key on Operation panel and enter the measured value in Step 2.

- Press the [Enter] key to save the initial adjustment value.

5. Press the [+] key or [-] key on Operation panel to select "PF3: Confirm Print".

- "Feed Length: 250 mm" is displayed on Operation panel.

6. After the confirmation adjustment printing, cut the media.

- Measure the distance between the "✚" in the confirmation adjustment print using a ruler. Then, confirm that the distance matches the feeding length when printing.
- If the distance does not match the feeding length, follow the procedure from Step 1 to Step 5 and readjust.
- If the distance matches the feeding length, proceed to Step 7.

7. Refer to Chapter 1 "[Media feed adjustment steps](#)" P. 43 and select "PF4: Micro Print" on the operation panel.
 - Check the pattern and micro adjustment value.
 - In the pattern, look for a place that has least white lines or overlapping in images. The number printed below the adequate pattern is the micro adjustment value.
8. Enter the micro adjustment value according to the printing result in Step 7.

When you know the adjustment value (when changing the media or for similar operations)

1. Enter the adjustment value for "PF5: Micro Change".
2. Select whether you wish to print a confirm pattern and complete the setup.

PF1: Initial Print

PF1 :	Initial Print
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Performs Initial Print.
Enter the "Feed Length" and press the [Enter] key.

Setting values

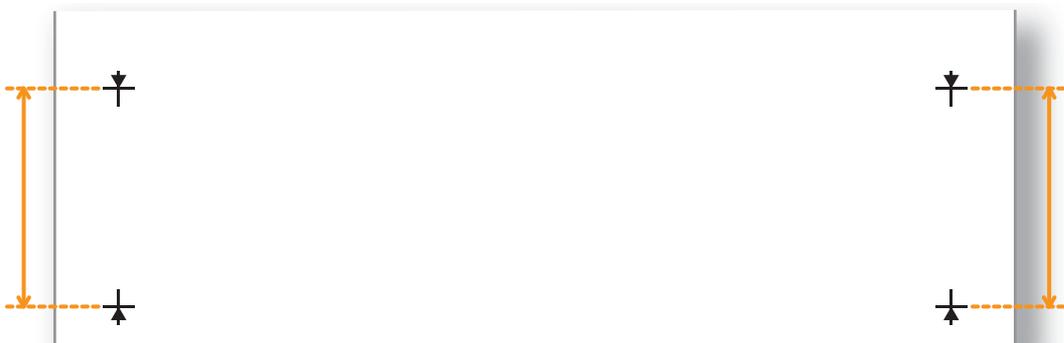
Feed Length :	250 mm
---------------	--------

100 mm to <250 mm> to 500 mm
<> indicates the initial value.

- After the initial adjustment printing, cut the media.
- With a ruler, measure the length between "⊥" in the pattern.
In the example below, the measured place is shown in orange dotted lines and arrows (the orange parts are not actually printed).

Note

The length of media that is fed (feeding length) for initial adjustment printing is normally set at 250 mm. If you increase the feeding length, the accuracy of the Media feed adjustment improves. To change the feeding length, press the [+] key or [-] key on Operation panel and change the set value.



PF2: Initial Change

PF2 : Initial Change

Use the [+] / [-] key to enter the adjustment value, and press the [Enter] key.

Setting values

Init. : 250.0 mm / 250 mm

You can set a value that is between +50 mm and -50 mm of the feed length configured in "Initial Print".

PF3: Confirm Print

PF3 : Confirm Print

Performs Confirm Print.

Enter the "Feed Length" and press the [Enter] key.

Setting values

Feed Length : 250 mm

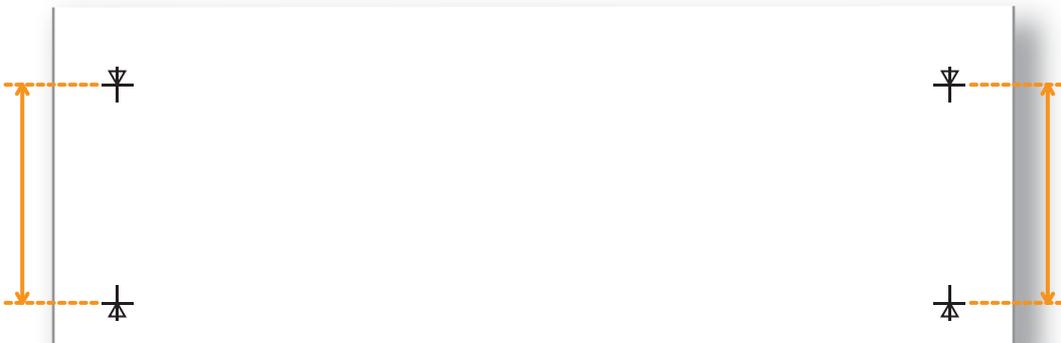
100 mm to <250 mm> to 500 mm
<> indicates the initial value.

- After the confirmation adjustment printing, cut the media.
- With a ruler, measure the length between "∓" in the pattern. In the example below, the measured place is shown in orange dotted lines and arrows (the orange parts are not actually printed).
- If the measured length does not match the feeding length, re-correct with [PF1: Initial Print](#).
- If the measured length matches the feeding length, proceed to [PF4: Micro Print](#).

Note

The length of media that is fed (feeding length) for confirmation adjustment printing, is normally set at 250 mm.

If you increase the feeding length, the accuracy of the Media feed adjustment improves. To change the feeding length, press the [+] key or [-] key on Operation panel and change the set value.



PF4: Micro Print

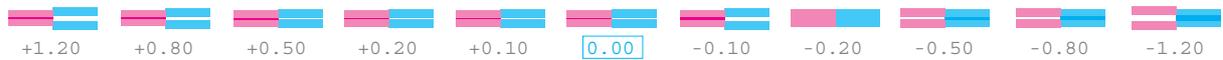
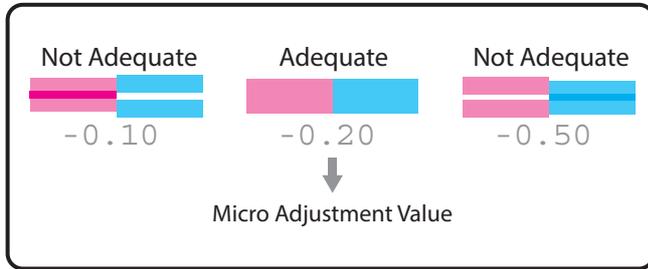
PF4 : **Micro Print**

Performs Micro adjustment Print.

Enter the appropriate micro adjustment value according to the print result.

- Observe the pattern and verify the micro adjustment value. In the pattern, look for a place that has least white lines or overlapping in images. The number printed below the pattern is the micro adjustment value.

Enter the micro adjustment value according to the print result.



Note

Once an appropriate micro adjustment value has been saved, the value will be the baseline value from the next time to be printed in the center of the pattern. For example, if you have entered "-0.20" and print a micro adjustment pattern, values printed below block pattern will be changed to (from left) +1.00, +0.60, +0.30, 0.00, -0.20 (baseline value), -0.30, -0.40, -0.70, -1.00, -1.40.

PF5: Micro Change

PF5 : **Micro Change**

Use the [+] / [-] key to enter the adjustment value, and press the [Enter] key.

Select whether you wish to perform confirmation print and complete the setup.

Setting values

Micro : **0.00%**

-5.00% to <0.00%> to 5.00%

<> indicates the initial value.

**>4: Vacuum Fan

**> 4: Vacuum Fan

Sets up vacuum fan operation.

Use the [+] / [-] key to select the value, and press the [Enter] key.

- If you are using a thin or delicate media and there is risk of it wrinkling due to the fan, set a lower value for the fan.

Setting values

Vacuum Fan : High

<High> / Middle / Low / Off

<> indicates the initial value.

**>5: Thickness

**> 5: Thickness

Sets the thickness of the media you are using.

Use the [+] / [-] key to enter the value, and press the [Enter] key.

Setting values

Thickness : 170 μm

80 μm to <170 μm > to 2,800 μm

<> indicates the initial value.

Note

- This menu is to automatically adjust print quality to a certain extent. If you want to improve print quality, manually adjust it.

 ****>2: Adjust Print>" P. 61**

- If you have adjusted the print settings, you do not need to configure the thickness of the media in this menu.

**>6: Media Initial

**> 6: Media Initial

Sets whether to detect the media width while initializing the media.

Setting values

Init. : Off

The media will not be detected.

Init. : Top&Width

Detect the media width and edge while initializing the media.

Init. : Width

Detect the media width while initializing the media.

This is the initially set value.

Note

When "**>6: Media Initial" is set to "Off", set the media width of the current media in "**>7: Media Width".

**>7: Media Width

****> 7: Media Width**

Sets the width of the current media when the “**>6: Media Initial” is set to “Off”.
Use the [+] / [-] key to enter the value, and press the [Enter] key.
When the “**>6: Media Initial” is set to “Width”, the detected media width will be displayed.

Setting values

Media Width : **1000 mm**

182 mm to <1,000 mm> to 1,625 mm
<> indicates the initial value.

**>8: Pass Wait

****> 8: Pass Wait**

Sets the waiting time between passes in multi-strike setting and normal printing.

Setting values

Pass Wait : **0.0 sec**

<0.0 sec.> to 5.0 sec.
<> indicates the default setting.

**>9: Add Y Layer

****> 9: Add Y Layer**

When “**>9: Add Y Layer” is set to ON, the yellow layer is added underneath of the White-underlay or Three-layer print data to preserve the color of the white layer and the color layer overlaid.

- This function is available in 6-color set.

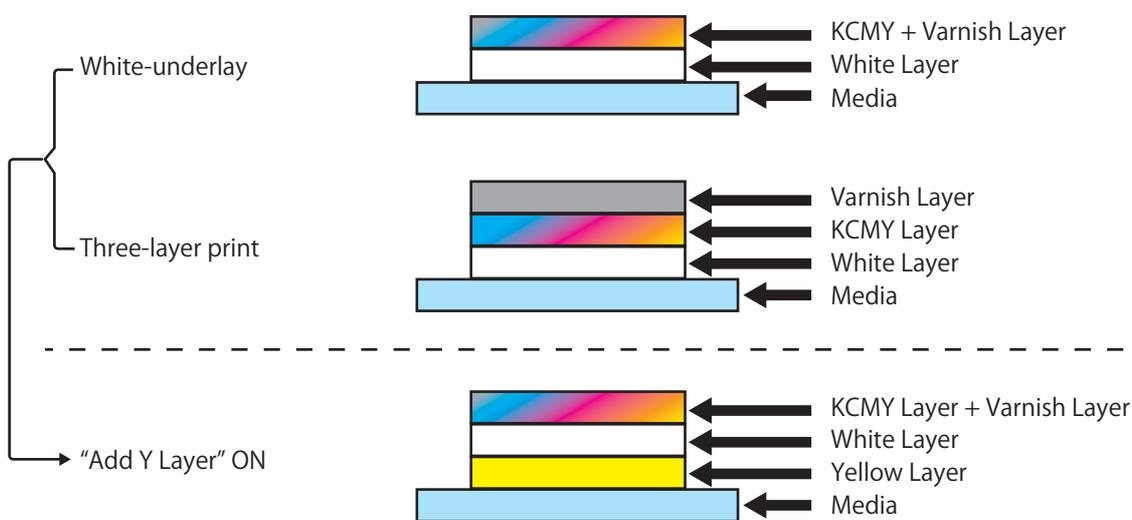
Setting values

Add Y Layer : Off

Yellow layer is not added.
This is the default setting.

Add Y Layer : On

Add the yellow layer under the white layer of White-underlay or Three-layer print data.



Note

In Three-layer print data, when “**>9: Add Y Layer” is set to ON, varnish is blended into KCMY layer as top layer.

**>10: User Copy

****> 10: UserCopy**

This is for copying the currently selected User Type setting into another User Type.

Setting values

UserCopy : Type 1 -> 2

Select the User Type to copy the settings into.
If you select ALL, the settings will be copied into all the User Type.

UserCopy : Type 1 -> ALL

**>11: Initial

****> 11: Initial**

Returns all settings of the currently selected User Type to factory default.

Menu 3: Setup

Set 1: Side Margin

Set 1: Side Margin

Set up the right and left margins (side margins) while printing.
Use the [+] / [-] key to enter the value, and press the [Enter] key.

Setting values

Side Margin : 5 mm

<5 mm> to 25 mm
<> indicates the initial value.



Note

When the "Spitting menu" is set to "On Media", the maximum printable media width becomes 16 mm shorter.
Therefore, the side margins become the value that you have set in Side Margin menu +8 mm.

["Set 21: Spitting" P. 83](#)

Set 2: Output Mode

Set 2: Output Mode

Sets how the media is handled after printing.

Submenus

Output Mode : Off

The Take-up Unit will not be used.

Output Mode : Take Up

Set when using the Take-up Unit.
This is the initially set value.

Output Mode : Auto Cut

Set when cutting the media automatically.

["Set 3: Method of Cut" P. 73](#)

When the "Output Mode" is set to "Take Up"

Output Mode : Take Up
Enter

When the "Output Mode" is set to "Take up", the menu is shifted to "Page Gap".
In the "Page Gap menu", you can change the margin setting between images.

Setting values

Page Gap : Normal

The default margin setting between images
will be applied.

This is the initially set value.

Page Gap : Narrow

The margin setting between images is smaller
than Normal.

Set 3: Method of Cut

Set 3: Method of Cut

Sets the media cutting operation after printing.

Setting values

Cut : Single Cut - 2 steps

Cut with fewer steps than "Single Cut - 3 steps". Suitable for media with narrow width.

Cut : Single Cut - 3 steps

Normal cutting method. This is the initially set value.

Cut : Double Cut - 2 steps

Set when unable to cut with "Single Cut - 2 steps". Suitable for media with narrow width.

Cut : Double Cut - 3 steps

Set when unable to cut with "Single Cut - 3 steps".

Note

- When the media detection is set to "Off", the media cannot be cut automatically.

 ["***>6: Media Initial" P. 69](#)

- Some media may not be cut (cannot be cut at all or cannot be cut finely). In such a case, set the "Output Mode menu" to "Off" and cut the media manually.

 ["Set 2: Output Mode" P. 72](#)

Cut Pressure menu

Cut : Single Cut - 3 steps

Enter

Sets the media cutting pressure for the cutting operation.

Setting values

Cut Pressure : Low

Cut the media at low pressure. Suitable for thin media or if the "High" pressure setting is too strong.

Cut Pressure : High

Normal cutting pressure. This is the initially set value.

Set 4: Origin

Set 4: Origin

Sets the beginning of printing (origin) of the print data.

Set the menu when reprinting on the margin with changing the printing data position to the printed media.

Use the [+] / [-] key to enter the value, and press the [Enter] key.

Setting values

X (PF) : -15000 mm X (media feeding distance):
-15,000 mm to 15,000 mm

·
·

X (PF) : 15000 mm

Y (CR) : 0 mm Y (print head transferring distance)
0 mm to 1,690 mm

·
·

Y (CR) : 1690 mm



Note

Depending on the set value of the side margin, the maximum set value of Y (print head transferring distance) decreases.

👉 ["Set 1: Side Margin" P. 72](#)

The right side margin will be the following sum depending on the setting.

Y of Origin menu + 8 mm (when the spitting is set to On Media) + Value set in Side Margin menu.

👉 ["Set 1: Side Margin" P. 72](#)

👉 ["Set 21: Spitting" P. 83](#)

Set 5: Head Travel

Set 5: Head Travel

Sets up the range that Print head moves while printing.

Setting values

Distance : Data Print head moves the range of the print data width.

Distance : Machine Print head moves from origin to the maximum printable media width.

Distance : Media Print head shifts within the media width. This is the initially set value.

Distance : Data Edge Print head only travels within the range where the image exist.

Since this setting can optimize the head traveling width, the printing speed will be faster compared to "Data" setting.

Set 6: Multi Strike

Set 6: Multi Strike

Sets up the overwrite count per line.

Use the [+] / [-] key to enter the value, and press the [Enter] key.

- The display will shift to setting of layer printing number of strikes only when "Strike Cnt" is set to 1 in 5 or 6-color configuration.

Setting values

Strike Cnt : 1 cnt

<1 cnt> to 9 cnt

<> indicates the initial value.

Layer Multi Str.

Strike Cnt : 1 cnt

The display will shift to layer selection.

Submenus

Layer Multi Str.1 : Co

 [Layer Multi Str.1: Co](#)

Layer Multi Str.2 : Wh

 [Layer Multi Str.2: Wh](#)

Layer Multi Str.3 : Va

 [Layer Multi Str.3: Va](#)

Layer Multi Str.1: Co

Layer Multi Str.1 : Co

Sets the number of times to print the same line in color (CMYK) layer.

Setting values

Color : 1 cnt

<1 times> to 9 times

<> indicates the default setting.

Layer Multi Str.2: Wh

Layer Multi Str.2 : Wh

Sets the number of times to print the same line in white layer.

- This function is available in 6-color set.

Setting values

White : 1 cnt

<1 times> to 9 times

<> indicates the default setting.

Layer Multi Str.3: Va

Layer Multi Str.3 : Va

Sets the number of times to print the same line in varnish layer (clear topcoat).

Setting values

Varnish : 1 cnt

<1 times> to 9 times

<> indicates the default setting.

Set 7: Slant Check

Set 7: Slant Check

Sets up slanting detection during media loading.

Setting values

Media Slant : Off

Slant Check is not performed.
This is the initially set value.

Media Slant : On

Slant Check is performed.

Set 8: Single Head

Set 8: Single Head

You can set whether or not to perform printing using only one Print head.

You can still print even if some of the print heads malfunction. However, in that case the printing speed will drop.

Setting values

Single Head :

Select this setting to use all the print heads for printing.
This is the initially set value.

Head Select : 1

Select this setting to use only print head 1 for printing.

Head Select : 2

Select this setting to use only print head 2 for printing.



In case of any problems with the print heads, contact your local MUTOH dealer.

Set 9: Nozzle Select

Set 9: Nozzle Select

You can set whether to reduce the print head nozzles to half for printing. Print speed will be decreased, but the image quality will be improved.

- This menu will only appear in 4-color configuration.

Setting values

Nozzle Select : ALL

Nozzle Select is not used.
This is the initially set value.

Nozzle Select : Nzl. A

Prints using half of the print head nozzles.
Prints with one nozzle line of the 2 nozzle lines per color.

Nozzle Select : Nzl. B

Uses the nozzle line opposite of "Nozzle A".

Note

- You cannot select this menu when using 6-color for printing.
- You can also use this in combination with the "Single Head" menu.

 ["Set 8: Single Head" P. 76](#)

Set 10: Auto Cleaning

Set 10: Auto Cleaning

Configure the settings for the auto cleaning operation.
The printer automatically performs cleaning when the timer is turned on.

Submenu

Auto Cleaning 1: Accum. Print

Set the timer since the start of printing to perform auto cleaning.

Accumulate Print Auto Cleaning menu

Auto Cleaning 1: Accum. Print

Enter

Set the timer since the start of printing to perform auto cleaning.

Setting values

Accum. Print: Off

<Off> / 1h / 2h / 3h / 4h
<> indicates the initial value.

Set 11: Roll Length

Set 11: Roll Length

Sets up the roll media length.

Setting values

Roll Kind : Off

Roll Length is not used. This is the initially set value.

Roll Kind : Roll 1

Roll Kind : Roll 2

Roll Kind : Roll 3

Sets up the roll media length. The set values of the roll media length can be set as "Roll1" to "Roll3".

When the "Roll Kind" is set to "Roll 1", "Roll 2" or "Roll 3"

Length menu

Roll Kind : Roll 1
Enter

Sets up the roll media length.

Setting values

Length : 30 m

1 m to <30 m> to 200 m
<> indicates the initial value.

Print stop menu

Length : 30 m
Enter

Sets whether or not to display "Roll Remain Error" and pause printing when the length of the roll media that is counted inside the printer becomes 0.

Setting values

Print Stop : Off

The roll media remaining count is not used to judge for pausing printing. Printing pauses when the rear sensor responds. This is the initially set value.

Print Stop : On

Even when the rear sensor does not respond, printing pauses when the roll media remaining count becomes 0.



Note

- Normally you can set this as "Off" as the rear sensor detects when the roll paper is finished.
- If you are using the roll media that does not come off the paper core easily when it is finished, printing may not be paused when the roll media is finished, if the "Print stop menu" is set to "Off". If this happens, set this to "On".

Near End menu

Print Stop :	On
Enter	

Sets whether or not to display "Roll Near End: *m" (* is replaced with a number between 1 and 10) before the length of the roll media that is counted inside the printer becomes 0.

Setting values

Near End :	Off
------------	-----

"Near end" is not displayed.
This is the initially set value.

Near End :	Remain * m
------------	------------

"Near end" is displayed when the remaining count for the roll media becomes the length you selected.

Set 12: FrontInterlace

Set 12:	FrontInterlace
---------	----------------

This menu is used to set media edge treatment menu.

Setting values

FrontInterlace :	Auto
------------------	------

<Auto> / Off
<> indicates the initial value.

Set 13: CR Maintenance

Set 13:	CR Maintenance
---------	----------------

Used in the following cases.

- Replacing absorption material for the flushing box
- Replacing the cleaning wiper
- Replacing the cutter

 ["Maintenance" P. 98](#)

Submenus

Daily Maint. :	Start
----------------	-------

Press the [Enter] key to perform replacement.

- The carriage moves to the center of the printer.
- The cleaning wiper moves upward.

Daily Maint. :	End
----------------	-----

After the replacement is complete, press the [Enter] key.

- The printer moves the carriage and the cleaning wiper back to each original position.

Set 14: Ink Status

Set 14: Ink Status

The amount of ink remaining in each Ink cartridge (ink bag) is displayed. (unit: %)

Setting values

1 2 3 4 : XX / XX / XX / XX

5 6 7 8 : XX / XX / XX / XX

4-color setting

- 1: Magenta (M)
- 2: Magenta (M)
- 3: Cyan (C)
- 4: Cyan (C)
- 5: Yellow (Y)
- 6: Yellow (Y)
- 7: Black (K)
- 8: Black (K)

5-color setting

- 1: Black (K)
- 2: Magenta (M)
- 3: Cyan (C)
- 4: Yellow (Y)
- 5: Varnish (Va)
- 6: Varnish (Va)
- 7: Cleaner (Cl)
- 8: Cleaner (Cl)

6-color setting

- 1: Black (K)
- 2: Magenta (M)
- 3: Cyan (C)
- 4: Yellow (Y)
- 5: Varnish (Va)
- 6: Varnish (Va)
- 7: White (Wh)
- 8: White (Wh)



Note

- To display various information of Ink, use genuine ink and S/C cards.
If Ink other than genuine ink are used, ink status will not be displayed correctly.
- If it is blinking at 10%, smartchip recovery is being performed on the corresponding ink cartridge.
 ["Smartchip recovery" P. 142](#)

Set 15: Life Times

Set 15: Life Times

Displays the operational life time of each part.

- The lifetime of each part is indicated by the asterisks (Maximum 5 asterisks: 100% left).
As the part deteriorates, the number of asterisks decreases one by one (20%).
- The part should be changed when all of the asterisks have disappeared and "Change" is displayed.
Contact your local MUTOH dealer to ask for replacing parts.
- After "Change" appears, "Life Times [Pump]" or a similar message will be displayed when you are not in this menu. You can delete this message by pressing the [Cancel] key.

Submenus

Head 1 : E*** F

Displays the service life for the print head 1.
The service life in this case is at 60%.

Head 2 : E*** F

Displays the service life for the print head 2.

Pump : E*** F

Displays the service life for the pump.

CR Motor : Change	Displays the service life for the CR motor. The service life of the component in this case is over. Have the component replaced.
PF Motor : E**** F	Displays the service life for the PF motor.
C Pump : E*** F	Displays the service life for the Circulation pump.
UV Lamp L : E*** F	Displays the service life for the UV lamp L.
UV Lamp R : E*** F	Displays the service life for the UV lamp R.

Set 16: Header Dump

Set 16: Header Dump

Sets whether to print the following information when printing.

- Data header
- Data dot number (printed only when Header dump setting is "On")
- Printing date and time
- Printer serial number
- Firmware version
- Receiving time (printed only when Header dump setting is "Dump")
- Receiving size (printed only when Header dump setting is "Dump")

Setting values

Header Dump : Off	Dump data is not printed. This is the initially set value.
Header Dump : On	Dump data is printed after the original image is printed.
Header Dump : Dump	Prints only dump data. "Data dot number" is not printed.
Header Dump : Print	Prints the last header dump. If no history is available, "No Print Data" will appear on the operation panel.

Note

- The data will be useful when contacting technical support.
- Performing printing if the printer is connected to PC, the print settings of RIP soft you are using are printed on data header.

Set 17: Exhaust Fan

Set 17: Exhaust Fan

Sets up Exhaust fan operation.

Ventilates the inside of the printer to stabilize the parts performance. It also decreases the contamination by ink mist inside the printer.

We recommend that you use Exhaust fan, especially when printing for a long time.

Setting values

Exhaust Fan : Off

Turn Off Exhaust fan.

Exhaust Fan : Low

Start Exhaust fan at Low.
This is the initially set value.

Exhaust Fan : High

Start Exhaust fan at High.

Set 18: White Maintenance

Set 18: White Maint.

Sets up white ink's maintenance operation.

- If you do not usually use white ink for regular printing, set to "Little" to minimize white ink consumption in standby status.
- This menu will only appear in 6-color configuration.

Setting values

White Maint. : Normal

White ink maintenance operation will be carried out at a normal frequency.
This is the default setting.

White Maint. : Little

White ink maintenance operation will be carried out at a lower frequency.



Note

White ink tends to settle or coagulate inside the print head or ink tubes.

Therefore, the printer regularly discharges a small amount of white ink to maintain the performance, even in standby status.

Set 19: Start Feed

Set 19: Start Feed

You can change the margin setting between images.

- Value over 0: The margin setting between images will be wider than when setting "0".
- Value equal to 0: The default margin setting between images will be applied.
- Value below 0: The margin setting between images will be smaller than when setting "0".

Setting values

Start Feed : 150 mm

-10 mm to <150 mm> to 500.0 mm
<> indicates the initial value.



Note

With take-up system: if you want to set "Start Feed" to below 0, set "Page Gap" to "Narrow".
If not, the Start Feed setting is not reflected properly.

["When the "Output Mode" is set to "Take Up" P. 72](#)

Set 20: Initialization

Set 20: Initialization

Returns the settings of the printer to default.

Submenus

Init : ALL

For initializing the settings of all the menus.

Init : UserType

Initializes the settings in the User Type menu.

Set 21: Spitting

Set 21: Spitting

Sets up the spitting operation while printing.

The display will shift to setting of the pass count only if "On" is set for "Spitting".

Setting values

Spitting : On

Perform the spitting operation on Spitting box located on the origin side for every shuttle.
This is the initially set value.

Spitting : On Media

Perform the spitting operation on the page margins. The printing speed will be improved since the number of time to return to Spitting box is reduced.

Spitting : Off

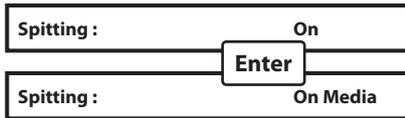
Spitting operation is not performed.

 Note

- Spitting is a maintenance operation for preventing clogging of the print head's nozzles. It consumes ink.
- When Spitting is set to "Off", nozzles will become easily clogged because spitting is not performed. In such a case, print quality cannot be guaranteed.
- When the spitting setting is "On Media", the maximum printable media width becomes 16 mm shorter. Therefore, the side margins become the value that you have set in Side Margin menu +8 mm.

 ["Set 1: Side Margin" P. 72](#)

Pass Count menu



This is for setting the interval at which the print head will carry out spitting operation.

- The head will carry out spitting operation every time it completes the number of passes that you set here.

Setting values

Pass Count : <1 cnt> to 999 cnt
<> indicates the initial value.

 Important!

If the number of spitting returns is set high, there is a higher chance of nozzle clogging when printing for a long time. In such a case, print quality cannot be guaranteed.

<Example of spitting operation>

Spitting setting	Pass Count setting	Operation
On	1 cnt	Perform the spitting operation on Spitting box every time Print head returns to the origin position. Spitting operation is not performed over the media.
On	5 cnt	Performs the spitting operation on Spitting box on the origin side every five times Print head returns to the origin position. Spitting operation is not performed over the media.
On Media	1 cnt	Performs the spitting operation on Spitting box on the origin side every time Print head returns to the origin position. Perform the spitting operation on Spitting box every time Print head returns to the origin position.
On Media	5 cnt	Performs the spitting operation on Spitting box on the origin side every five times Print head returns to the origin position. Perform the spitting operation on Spitting box every time Print head returns to the origin position.
Off	—	Spitting is not performed on Spitting box or the media.

Set 22: Temporary



Displays the menus which have been set to hide in the "Menu4: Menu Option" temporarily.

Press the [Enter] key to return to the previous menu with all set up items displayed.

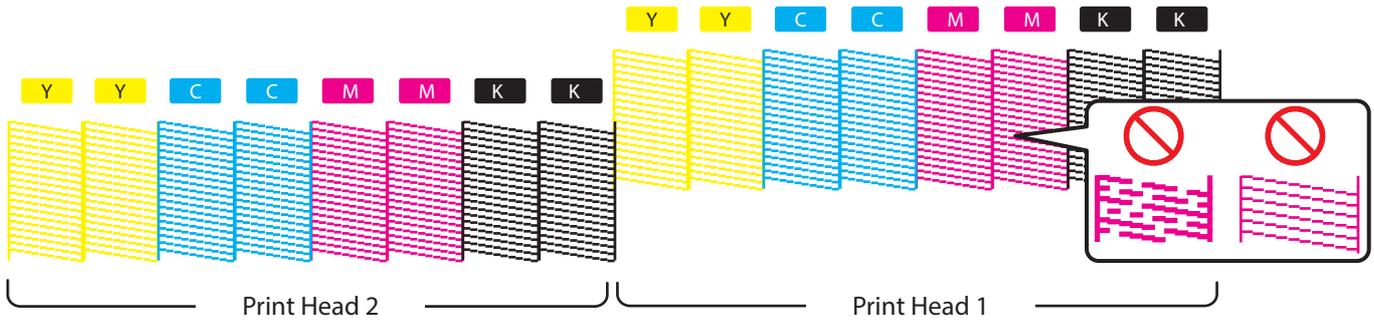
Menu 4: Test Print

Test 1: Nozzle Check

Test 1: Nozzle Check

Use this menu to check that the print head and print nozzles you selected can properly print without nozzle clogging and missing or too light lines.

["Nozzle check" P. 36](#)



Note

- The above pattern is the example when the printer is set to 4-color setting.
- The printer information (date and time of printing, printer's serial number, firmware version) is printed on the nozzle check pattern.

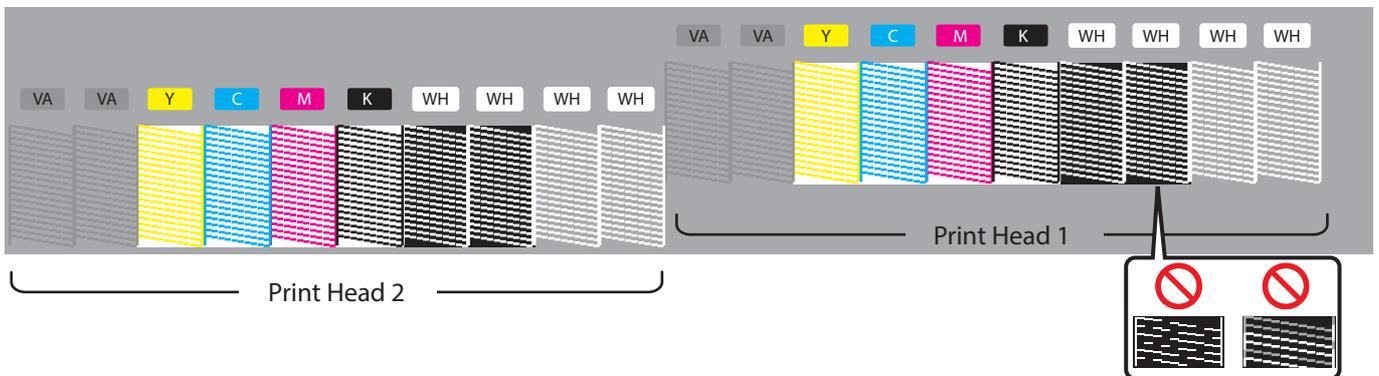
Test 2: Nozzle Check B

Test 2: Nozzle Check B

The background for some of the nozzle check pattern is printed in color so that the nozzle condition is easy to see.

- Part of the background for the white nozzles is black.
- The background of the KCMY nozzles are white.
- For varnish (and part of white) nozzles, the background is not printed.

["Nozzle check" P. 36](#)



Note

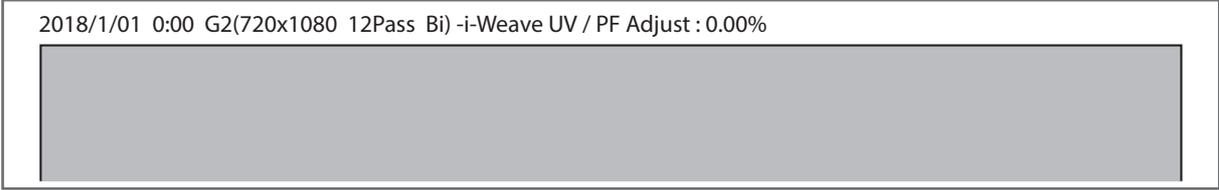
- "Nozzle Check B" will only appear in the menu if the printer is set to 6-color configuration.
- The printer information (date and time of printing, printer's serial number, firmware version) is printed on the nozzle check pattern.

Test 3: Mode Print

Test 3: Mode Print

Mode print can be performed. Used to confirm the following printing conditions.

- Print quality
- Effect
- Micro adjustment value for feed correction



Test 4: Setup List

Test 4: Setup List

Setup list printing is performed.

Use this to check the current setting contents and the User Type.

Setup List

Setup List		Head Height/low	Cleaning	Mode/Normal
<Information>				
Serial No.	→ 41000000	→ V.XXX	→ 2:None	→ 4:None
Model	→ 41000000	→ 1:None	→ 3:None	→ 5:None
Memory Size	→ 160MB			
<Menu Setup>				
[Setup] 1 [1] User Type → Type 1 2 [2] Print Mode → Graphics 2 Effect → Fine&Fog 3 [3] PF Adjust 1 [1] Initial Adj. Proc → 250.0/250.0mm 2 [2] Initial Adj. Proc 3 [3] Current Adj. Proc 4 [4] Micro Adj. Proc 5 [5] Micro Adjust → 0.00% 4 [4] Heater (Slipper) → Off 5 [5] Heater (Lower) → Off 6 [6] Vacuum Fan → High 7 [7] Thickness → 170µm 8 [8] Media Initial → Width 9 [9] Media Width → 100mm 10 [10] Roll Kind → Roll 1 (Length → 2bay) Roll 2 (Length → 10m) Roll 3 (Length → 10m) 11 [11] Slit Feed → On 12 [12] Slit Margin → 5mm 13 [13] Slit Open → Off 14 [14] Slit Power Lock → Off 15 [15] Slit Check → Off 16 [16] Slit Sensor Mode → Off 17 [17] Take-Up - Narrow → High 18 [18] Slit Sensor Mode → High 19 [19] Method of Cut → Media 20 [20] Head Travel → 10mm 21 [21] Media Stroke → 10mm 22 [22] Slit Roll Wrt. → 10mm 23 [23] Slit Roll Fan → 10mm 24 [24] Standby Heating → Normal 25 [25] Print Head → Auto 26 [26] Print Nozzle → 100µm 27 [27] Print Density → Pattern 1 28 [28] Head Overlap → On 29 [29] Initial Buzzer → On		1 [1] Maintenance 2 [2] Approximate 3 [3] Language → English 4 [4] Temperature → Celsius(°C) 5 [5] Length → mm 6 [6] Head Dump → Off 7 [7] Address → 00,100,104,128 8 [8] Subnet Mask → 255.255.255.0 9 [9] Gateway → 192.168.194.254 10 [10] Menu Option 11 [11] Status 12 [12] Head Height 1234: 0/ 0/ 0/ 0 5678: 0/ 0/ 0/ 0 13 [13] Life Times Head1 : C*****F CB Motor : E*****F Head2 : E*****F PF Motor : E*****F Pump1 : E*****F C Pump : E*****F Pump2 : E*****F 14 [14] Version 15 [15] Job		

User Type List

<User Type List>					
User Type	Type 1	Type 2	Type 3	Type 4	Type 5
Print Mode	Graphics 2				
Print Mode > Effect	Fine&Fog	Fine&Fog	Fine&Fog	Fine&Fog	Fine&Fog
PF > Initial Adjust	250.0 / 250.0mm				
PF > Micro Adjust	0.00%	0.00%	0.00%	0.00%	0.00%
Heater (Slipper)	Off	Off	Off	Off	Off
Heater (Lower)	Off	Off	Off	Off	Off
Vacuum Fan	High	High	High	High	High
Thickness	170µm	170µm	170µm	170µm	170µm
User Type	Type 6	Type 7	Type 8	Type 9	Type 10
Print Mode	Graphics 2				
Print Mode > Effect	Fine&Fog	Fine&Fog	Fine&Fog	Fine&Fog	Fine&Fog
PF > Initial Adjust	250.0 / 250.0mm				
PF > Micro Adjust	0.00%	0.00%	0.00%	0.00%	0.00%
Heater (Slipper)	Off	Off	Off	Off	Off
Heater (Lower)	Off	Off	Off	Off	Off
Vacuum Fan	High	High	High	High	High
Thickness	170µm	170µm	170µm	170µm	170µm
User Type	Type 11	Type 12	Type 13	Type 14	Type 15
Print Mode	Graphics 2				
Print Mode > Effect	Fine&Fog	Fine&Fog	Fine&Fog	Fine&Fog	Fine&Fog
PF > Initial Adjust	250.0 / 250.0mm				
PF > Micro Adjust	0.00%	0.00%	0.00%	0.00%	0.00%
Heater (Slipper)	Off	Off	Off	Off	Off
Heater (Lower)	Off	Off	Off	Off	Off
Vacuum Fan	High	High	High	High	High
Thickness	170µm	170µm	170µm	170µm	170µm

Test 5: Palette

Test 5: Palette

Palette print is executed for the color demonstration.



Note

When the selected print mode of the user type is Graphics 1 or Graphics 2, Palette menu is not displayed.

☞ *****>1: Print Mode" P.60**

Test 6: Head Adjust

Test 6: HeadAdjust >

There are 4 print heads installed in the carriage of this product. In this menu, you can align the print head 1 to print head 4 in order to prevent the prints from being misaligned. Press the [>] key to open the submenu.

Align the heads in the following cases:

- If the image quality does not improve after you have used the "Adjust Print" menu.
- When switching to thin media or a type of media where ink drops do not spread.

After executing this menu, be sure to perform the "Adjust Print" function. If you don't, the image quality during bidirectional printing may drop.

Submenus

Head Adj. 1 : Standard

Adjustment is performed only for the print mode set by the current User Type. You can make the adjustments more quickly than by selecting "Fine Pattern ALL" in "Custom".

When selecting "Standard" here, you need to use the same print mode settings for the RIP (Raster Image Processor) as the print mode settings for the User Type. Use the same settings for the resolution, pass and printing direction in the RIP print mode as in the print mode for the User Type.

Head Adj. 2 : Custom

You can also adjust a print mode other than the one used for the current User Type. You can print with an optimal image quality even if the RIP print mode is different from the print mode used for the User Type.

When "HeadAdj. 2 Custom" is selected

Head Adj. 2 : Custom

You can select the adjustment method.

When selecting "Fine Pattern X (A to F)", select the option that corresponds to the print mode used for printing.

If the resolution, pass and the printing direction of the RIP print mode differ from the print mode for the User Type, select the fine pattern that is suitable for the RIP.

 ["Adjustment patterns for each print mode" P. 62](#)

Submenus

Adj. 1 : Fine Ptn. ALL

Adjusts all the patterns.

Adj. 2 : Fine Pattern A

For printing an adjust pattern selected from A to F.

•
•
•

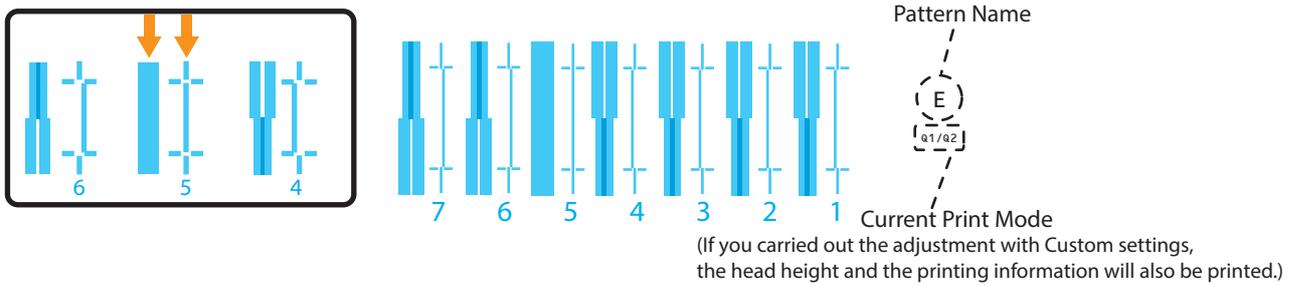
Adj. 7 : Fine Pattern F

Steps

1. Print the Head adjustment pattern and look for a place in the pattern that has least white lines or overlapping images.
 - The number printed under the pattern without alignment errors is the adjustment value.
2. Enter the adjustment value.

Head adjustment pattern

- Press the [Enter] key to carry out printing. For the Head adjustment pattern, the same patterns will be printed on both sides and center of the media.
- Check the print results and select the number that looks most aligned between 1 and 7.
- Pattern names such as "Pattern E: 4" are shown on the display. Use the [+] / [-] key to enter the number of the best-adjusted pattern, and press the [Enter] key.
- In the case of the picture below, enter "5", so that the display reads "Pattern E: 5".
- If you selected "Head Adj. 2: Custom" and "Fine Pattern ALL", enter the adjustment value for A to F.



Note

The above pattern is the example when the printer is set to 4-color setting.

Menu 5: Cleaning

Perform Head cleaning.

Time : **Short**

Consumes less ink than Normal cleaning.

Time : **Normal**

Conduct nozzle check before and after printing, and use when nozzle missing is found.

Time : **Long**

Consumes more ink than Normal cleaning. When nozzle missing still occurs after Normal cleaning, conduct Long cleaning.

Time : **LittleCharge**

Though much better cleaning results can be expected than Long cleaning, it consumes a large amount of ink.

Time : **InitialCharge**

Gives a rather higher cleaning effect than "LittleCharge", but also consumes rather more ink.

Menu 6: Menu Option

You can choose whether to display the menus in “Menu 3: Setup”.
Choose whether you wish to display a menu by pressing the [Enter] key.

[*]= the item will be displayed

[]= the item will not be displayed

1: [*]	Side Margin
--------	-------------

Displays the “Side Margin menu”.
The initial value is [*].

2: [*]	Output Mode
--------	-------------

Displays the “Output Mode menu”.
The initial value is [*].

3: [*]	Method of Cut
--------	---------------

Displays the “Method of Cut menu”.
The initial value is [*].

⋮

⋮

21: [*]	Spitting
---------	----------

Displays the “Spitting menu”.
The initial value is [].

22:	ALL On
-----	--------

If you press the [Enter] key, all the items in Menu Option will be marked with a [*] (displayed).

23:	ALL Off
-----	---------

If you press the [Enter] key, all the items in Menu Option will be marked with a [] (not displayed).

Menu 7: Maintenance

Maintenance 1: Daily Maintenance

Mnt. 1: Daily Maintenance

Use this menu in following cases:

- If the nozzle missing still persists after performing head cleaning.
- If you perform printing all day without entering to sleep mode and you need to perform daily maintenance.

 ["Continuously using printer after daily maintenance" P. 119](#)

Submenus

Daily Maint. : Start

Press the [Enter] key to start maintenance.

Daily Maint. : End

After the maintenance is complete, press the [Enter] key.

- The printer automatically performs the Short cleaning.



To perform daily maintenance after using the printer for the day, see ["Daily Maintenance" P. 111](#).

Maintenance 2: Plug Life

Mnt. 2: Plug Life

Check and initialize the lifetime counter of the adapter's plug in High capacity ink pack adapter.

Submenu

Plug 1: Confirm

Check the adapter's plug lifetime counter.

Plug 2: Init.

Initialize the adapter's plug lifetime counter.

Plug Life Confirmation menu

Plug 1: Confirm

Check each adapter's plug lifetime counter.

- The lifetime of adapter's plug is indicated by the asterisks (Maximum 5 asterisks: 100% left). As the plug deteriorates, the number of asterisks decreases one by one (20%).
- The adapter's plug should be changed when all of the asterisks have disappeared and "Change" is displayed.

Replace the adapter's plug.

 ["Replacing Adapter's plug for High capacity ink pack adapter" P. 107](#)

- After "Change" appears, "[X] Change Plug" will be displayed when you are not in this menu. You can delete this message by pressing the [Cancel] key.

Slot1: E*** F

Displays the lifetime of adapter's plug in the cartridge slot 1.

The service life in this case is at 60%.

•
•
•

Slot8: Change

Displays the lifetime of adapter's plug in the cartridge slot 8.

This means that the plug has already reached to the end of its life. Replace the plug.

Plug Life Initialization menu

Plug 2: Init.

Initialize each adapter's plug lifetime counter.

If you replace the adapter's plug without receiving the replacement message ([*] Change Plug), use this menu to initialize the counter which you replaced.

Init. : Slot1

Initialize the adapter's plug lifetime counter in the cartridge slot 1.

•
•
•

Init. : Slot8

Initialize the adapter's plug lifetime counter in the cartridge slot 8.

 Important!

Do not initialize the plug life for the slot number that has not been replaced. This may cause ink leakage.

Maintenance 3: Ink Discharge

Mnt. 3: Ink Discharge

Discharges the ink in the printer. Use this menu before transporting.

 ["Transporting the printer" P. 133](#)

Menu 8: Version

Menu 8: Version >

Displays the versions of the firmware.

Version : X.XX

Menu 9: Initial

Initial 1: Language

Initial 1: Language

For setting the language that will be displayed.

Setting values

Language : エイゴ English

Displays will be in English.
This is the initially set value.

Language : ニホンゴ Japanese

Displays will be in Japanese.

Initial 2: Length

Initial 2: Length

For setting the length units that will be displayed.

Setting values

Length : mm

Displays the length in millimeters (mm).
This is the initially set value.

Length : inch

Displays the length in inches (inch).

Initial 3: IP Address

Initial 3: IP Address

Sets the IP address of the printer.

- Use the [+] key to increase a setting value.
- Use the [-] key to decrease a setting value.
- Press the [Enter] key to confirm your input for a value. The cursor will move on to the next setting value.
- Confirm your input for each value.

Setting values

IP: 192. 168. 1. 253

0.0.0.0 to <192.168.1.253> to 255.255.255.255
<> indicates the initial value.



Note

Be sure to set the IP address, the Subnet Mask, and the Gateway after consulting the network administrator.

Initial 4: Subnet Mask

Initial 4: Subnet Mask

Sets the subnet mask of the printer.

- Use the [+] key to increase a setting value.
- Use the [-] key to decrease a setting value.
- Press the [Enter] key to confirm your input for a value. The cursor will move on to the next setting value.
- Confirm your input for each value.

Setting values

MASK: 255. 255. 255. 0

0.0.0.0 to <255.255.255.0> to 255.255.255.255
<> indicates the initial value.

Initial 5: Gateway

Initial 5: Gateway

Sets the gateway.

- Use the [+] key to increase a setting value.
- Use the [-] key to decrease a setting value.
- Press the [Enter] key to confirm your input for a value. The cursor will move on to the next setting value.
- Confirm your input for each value.

Setting values

GW: 192. 168. 1. 254

0.0.0.0 to <192.168.1.254> to 255.255.255.255
<> indicates the initial value.

Initial 6: Alert Buzzer

Initial 6: Alert Buzzer

Selects how to turn off the printer beep sound when an error occurs.
For unattended printing, you can select "Off" setting to avoid continuous buzzer beep.

Submenus

Alert Buzzer : On

Press any key on Operation panel to turn off beep sound.

This is the initially set value.

Alert Buzzer : Off

After several beeps, the printer automatically turns off beep sound.

Menu 10: Job Status

Menu 10: Job Status >

Various information of previous print will be displayed.

JobStatus : Completed

Displays if the print is completed.

- When the print is completed: [Completed]
- When the print is canceled: [Canceled]

ToDoLength : XXX.X m

The total length of print data (media feeding direction) will be displayed.

Done : XXX.X m

The printed length will be displayed.

Remain : XXX.X m

The remaining length of print data will be displayed.

Note

- The values displayed in this function are just standard values, not guarantee the accuracy.
- If the print data includes no length data, all information will be displayed as "0".
- This function is to check the information of print data with the print operation is completed. For the details on data while printing, please refer to the ["Menu 3: Job Status" P. 49](#) under ["What you can do on the operation panel during printing" P. 48](#).

Chapter 3 Maintenance

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Maintenance

To maintain the performance of this product, please conduct maintenance by yourself.
The types of maintenance are shown next.

Before and after daily operation	"Wearing the gloves and goggles" P. 99 "Agitating ink" P. 100 "Nozzle check and cleaning" P. 36
After daily operations	"Daily Maintenance" P. 111
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Monthly	"Inside cleaning" P. 123
Every six months	"Replacing the cleaning wiper" P. 130

Important!

Since a service technician has to handle following cases, please contact your local MUTOH dealer.

- Error requiring restart is happening repeatedly.
- The message to notify the life of motor, pump, or UV lamp is displayed.

 ["Messages and Error Messages" P. 138](#)

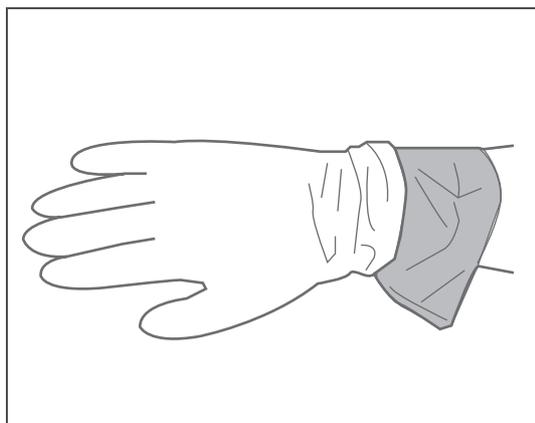
Wearing the gloves and goggles

Skin or eye contact with UV curable ink may cause skin inflammation or allergic reaction. Wear protective gloves, goggles and/or face shield, and clothing while using of the printer.

Especially when performing any of the following operations, be sure to wear the supplied gloves (or solvent resistant gloves) and goggles.

- "Agitating ink" P. 100
- "Replacing ink" P. 104
- "Replacing Adapter's plug for High capacity ink pack adapter" P. 107
- "Emptying waste fluid tank" P. 108
- "Daily Maintenance" P. 111
- "Replacing absorption material for the flushing box" P. 124
- "Replacing the cleaning wiper" P. 130

How to wear the supplied gloves



Wear the rubber gloves over the plastic gloves.

CAUTION



Do not touch uncured UV ink with bare hands.



- If glove becomes contaminated with ink, replace it with new.
- If protective clothing becomes contaminated with ink, immediately remove and wash for re-use.
- If ink gets on skin, immediately wash with soap and plenty of water for 15 minutes. Seek medical advice/attention if irritation or inflammation are present.
- If ink gets in eyes, flush eyes with plenty of water for 15 minutes and seek medical advice/attention immediately.
- If swallowed, rinse mouth immediately and do not induce to vomiting. Seek medical advice/attention.

Agitating ink

Agitating ink

Agitate the ink at the following times to prevent it from settling out and/or coagulating:

- Before installing new ink
- When any of the messages below appears

6-color configuration:

Shake W Cartridge

Agitate the White (Wh) ink.

- Displays every 12 hours.

Shake KMCY Cartridge

Agitate the Black (K), Magenta (M), Cyan (C), and Yellow (Y) ink.

- Displays every 72 hours.

Shake KMCYW Cart.

Agitate the Black (K), Magenta (M), Cyan (C), Yellow (Y), and White (Wh) ink.

5-color configuration:

Shake KMCY Cartridge

Agitate the Black (K), Magenta (M), Cyan (C), and Yellow (Y) ink.

- Displays every 72 hours.

4-color configuration:

Shake ALL Cart.

Agitate the Black (K), Magenta (M), Cyan (C), and Yellow (Y) ink.

- Displays every 72 hours.

Important!

- **Agitate the ink periodically. Otherwise, the ink settles or coagulates and may cause poor print quality or a malfunction.**
- **You should agitate the ink when the message appears. Otherwise, for 12 hours after the message appears, you will repeatedly have to wait a certain time before you can print. When 12 hours have passed, the printer will not print any data. In either case, you can restore the printer to normal condition by agitating the ink.**

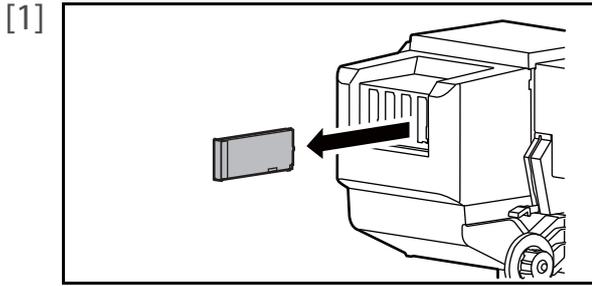
CAUTION



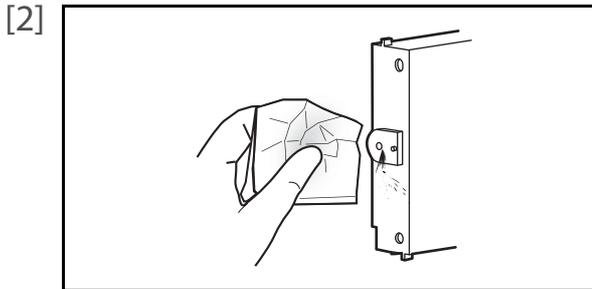
Skin or eye contact with UV curable ink may cause skin inflammation or allergic reaction.

For this operation, be sure to wear the supplied gloves (or solvent resistant gloves) and goggles to prevent ink from contacting with your eyes or skin.

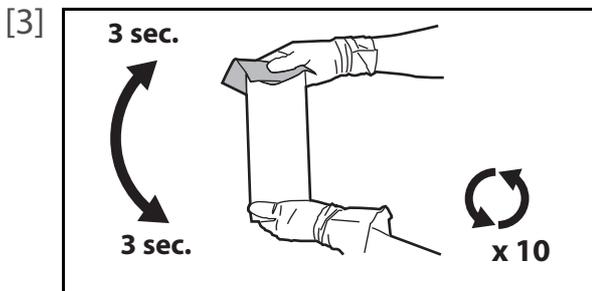
Steps for ink cartridge



Remove ink cartridges from Ink cartridge slots.

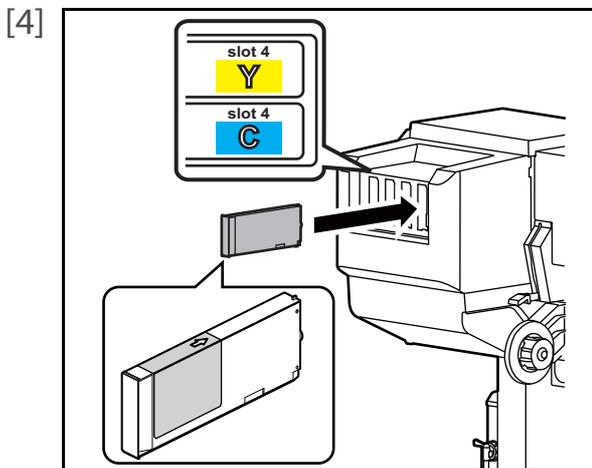


Using the paper towel provided with the printer to wipe off the ink attached to the printer plug of Ink cartridge.



Agitate ink cartridges as described below.

- Place the lint-free cloth over the ink plug of the cartridge, turn the plug up and maintain vertical position for three seconds.
- Rotate cartridge upside down (plug facing down) and hold for three seconds.
- Repeat it 10 times.



Re-insert the ink cartridges into Ink cartridge slots.

- Make sure to match the ink cartridge color with the label of this printer.
- The arrow should face up.
- Insert all the way to the end.

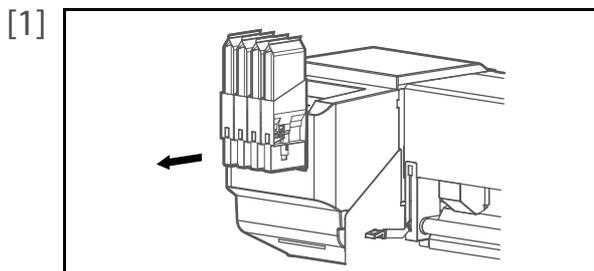
 **Important!**

Make sure you insert the ink cartridges into the original slots. Even when you have the same color ink cartridges, do not switch and insert them into different slots.

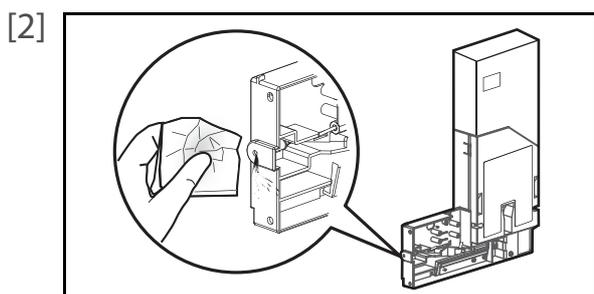
Steps for High capacity ink pack adapter

Note

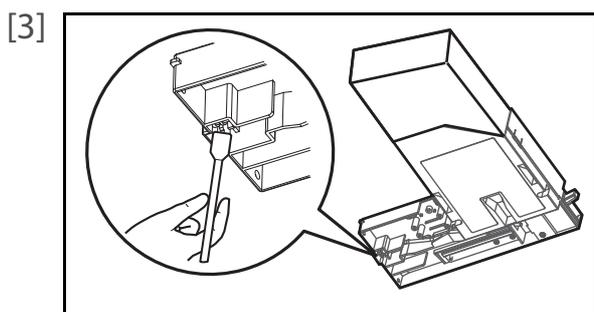
For proper instructions of High capacity ink pack adapter, see the High Capacity Ink Pack Adapter Operation Manual.



Remove High capacity ink pack adapters from the ink cartridge slots.

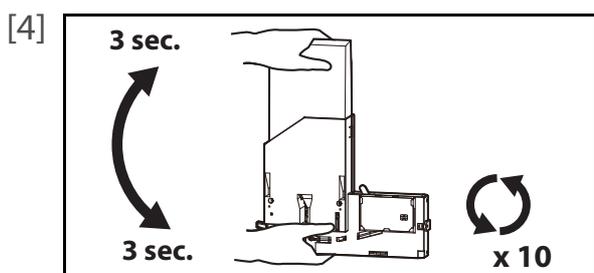


Using the paper towel provided with the printer to wipe off the ink attached to the insertion point for High capacity ink pack adapters.

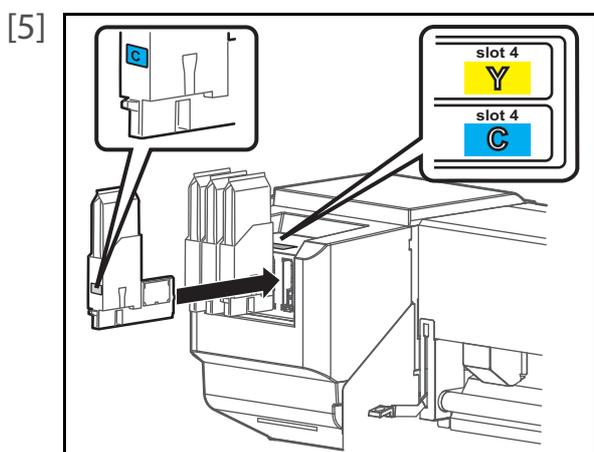


Tilt High capacity ink pack adapters, use cleaning stick provided with the printer, and absorb the ink collected around the tube connectors.

- Tilt High capacity ink pack adapter so that the caution label is facing down.
- Tilt High capacity ink pack adapter so that the insertion point is lowered a little.



- To prevent the ink bag and the High capacity ink pack adapter from separating, hold one hand against the top of the ink bag. Rotate the plug of the ink bag vertically and hold for 3 seconds.
- Then, invert the ink bag with the adapter and hold for 3 seconds.
- Repeat that 10 times.



Re-insert the High capacity ink pack adapters into Ink cartridge slots.

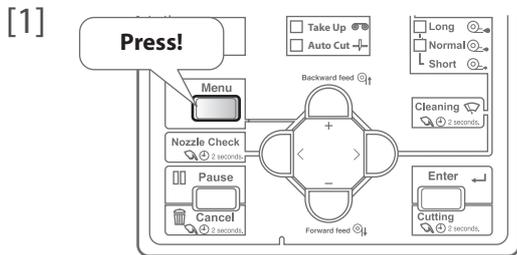
- Make sure to match the ink pack color with the label of this printer.
- Insert all the way to the end.

Important!

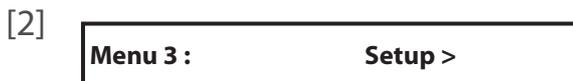
Make sure you insert the High capacity ink pack adapters into the original slots. Even when you have the same color ink packs, do not switch and insert them into different slots.

Checking and replacing ink

Checking ink level



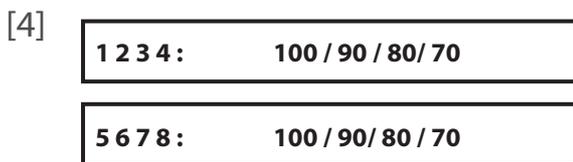
Press the [Menu] key on the operation panel.



Press the [-] key several times, to bring up the display on the left.
Press the [>] key.



Press the [Enter] key.



Press the [-] key to change the display.
• The ink level is displayed from 0% to 100%.



Note

If it is blinking at 10%, smartchip recovery is being performed on the corresponding ink cartridge.

["Smartchip recovery" P. 142](#)

• 4-color setting

1	M1 (Magenta)	2	M2 (Magenta)	3	C1 (Cyan)	4	C2 (Cyan)
5	Y1 (Yellow)	6	Y2 (Yellow)	7	K1 (Black)	8	K2 (Black)

• 5-color setting

1	K (Black)	2	M (Magenta)	3	C (Cyan)	4	Y (Yellow)
5	Va1 (Varnish)	6	Va2 (Varnish)	7	Cl1 (Cleaner)	8	Cl2 (Cleaner)

• 6-color setting

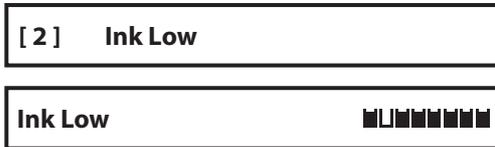
1	K (Black)	2	M (Magenta)	3	C (Cyan)	4	Y (Yellow)
5	Va1 (Varnish)	6	Va2 (Varnish)	7	Wh1 (White)	8	Wh2 (White)

When it becomes time to replace ink

When the ink level becomes low, the error LED of the operation panel flashes and a buzzer sounds.

Steps

[1]



Press the [Enter] key.

- The buzzer stops.
- In the figure to the left, the slot 2 ink cartridge (ink bag) is nearing replacement.

[2] Prepare the replacement ink.



Note

Sleep mode continues after stopping the buzzer.

Replacing ink

When a cartridge or pack is out of ink, the error LED on the operation panel flashes with beep sounds. The printer pauses printing. After replacing with the new ink, it resume printing.



Important!

- **Do not replace ink when the power of this product is OFF. Ink level cannot be detected correctly.**
- **If there is no ink cartridge (ink bag) for replacement at hand, leave the empty ink cartridge (ink bag) inserted in the printer. Leaving the printer with the ink cartridge (ink bag) removed may cause the print head to clog.**
- **If ink is moved from cold to warm place, leave it at least three hours.**



WARNING

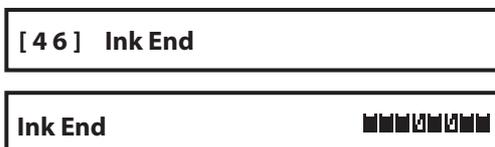


Leave ink cartridges (ink bags) away from fire or high temperature objects.

It may cause fire.

Steps for ink cartridge

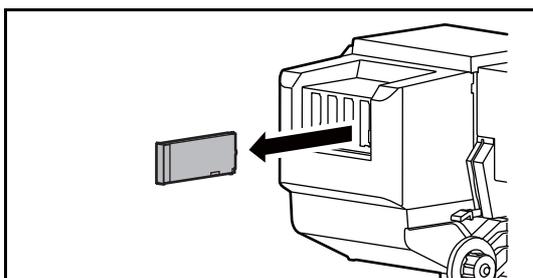
[1]



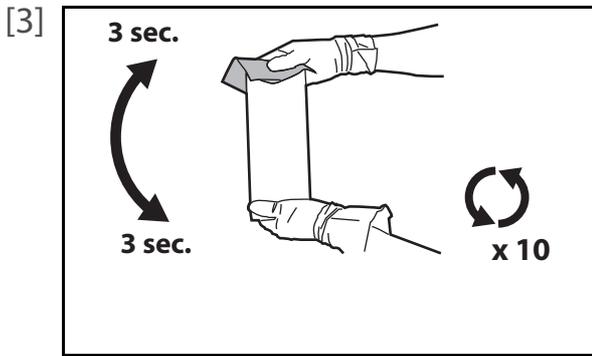
Press the [Enter] key.

- The buzzer stops.
- In the icons shown on the left, the Slot 4 and 6 cartridges need replacing.

[2]



Remove ink cartridges from Ink cartridge slots.



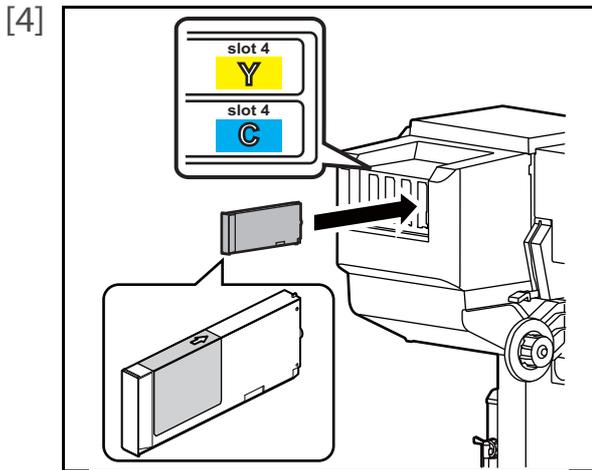
Prepare new ink cartridges and agitate it as described below.

- Place the lint-free cloth over the ink plug of the cartridge, turn the plug up and maintain vertical position for three seconds.
- Rotate cartridge upside down (plug facing down) and hold for three seconds.
- Repeat it 10 times.



Note

When replacing varnish ink or cleaner, you do not have to agitate it.



Insert new ink cartridges into Ink cartridge slots.

- Make sure to match the ink cartridge color with the label of this printer.
- The arrow should face up.
- Insert all the way to the end.

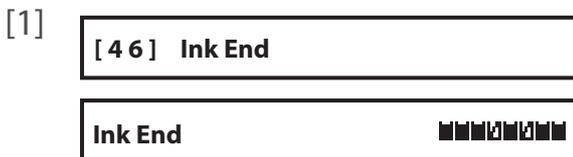


Important!

Make sure you insert the ink cartridges into the original slots. Even when you have the same color ink cartridges, do not switch and insert them into different slots.

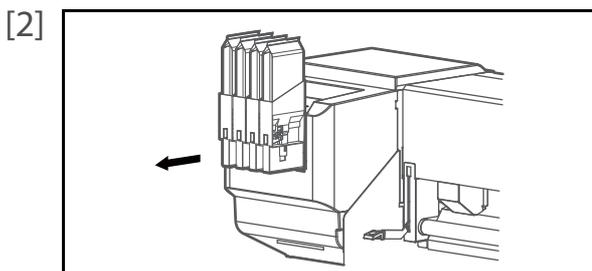
Steps for High capacity ink pack adapter

1. Removing the High capacity ink pack adapter

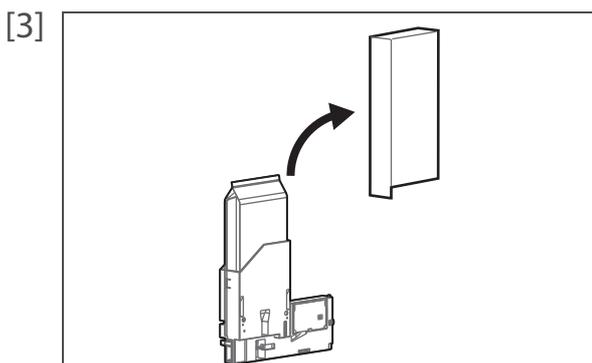


Press the [Enter] key.

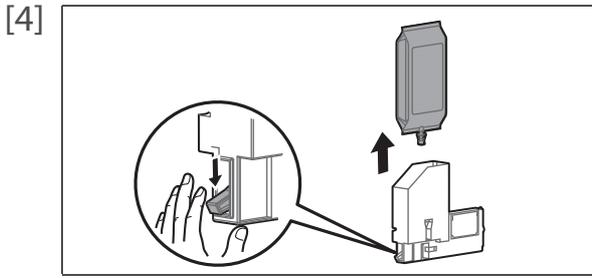
- The buzzer stops.
- In the icons shown on the left, the Slot 4 and 6 ink bags need replacing.



Remove High capacity ink pack adapters from the ink cartridge slots.



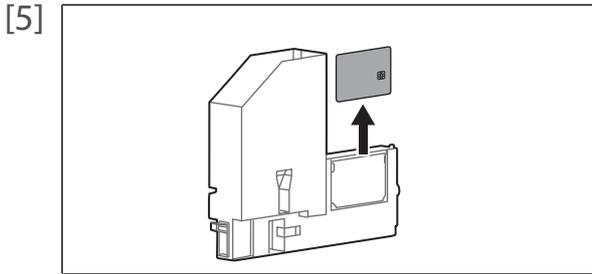
Detach the light-shielding cover from the ink bag.



Lower the lock lever on the High capacity ink pack adapter and detach the empty ink bag.

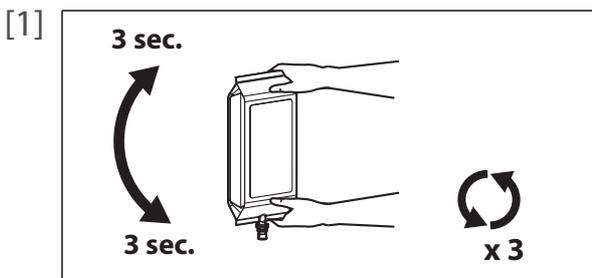
Note

Place the used ink bag in a plastic bag or the like and dispose of it in accordance with local ordinances and municipal instructions.



Remove the S/C card from the High capacity ink pack adapter.

2. Attaching ink bag

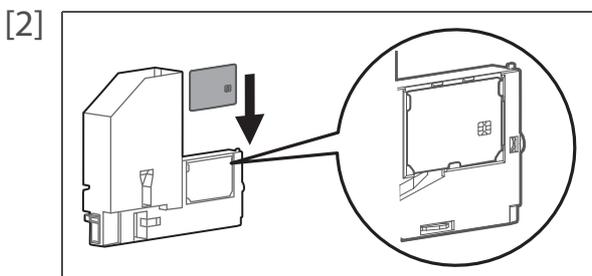


Prepare the new ink bag, and agitate it as instructed below.

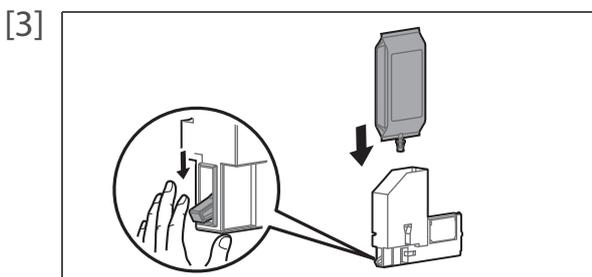
- Turn the ink plug upward and wait for three seconds.
- Next, turn the ink plug downward and wait for three seconds.
- Repeat that three times.

Note

When replacing varnish ink, you do not have to agitate it.

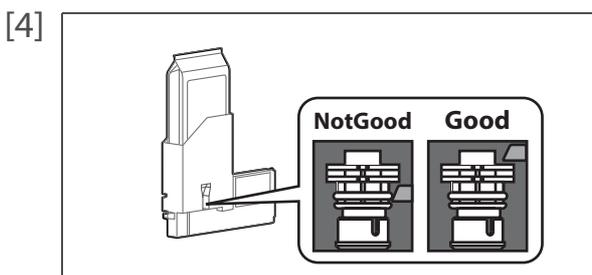


Slide the S/C card into the tabs of the adapter.

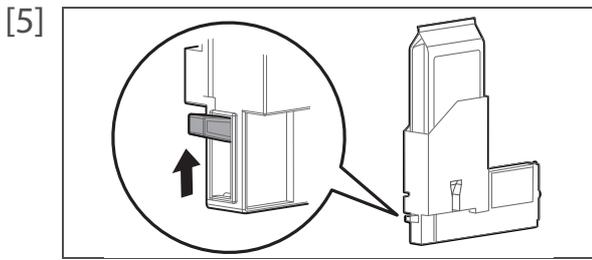


While lowering the lock lever of the High capacity ink pack adapter, insert an ink bag.

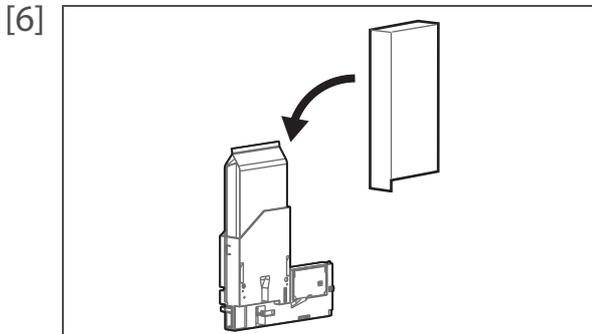
- Make sure to fully insert the ink bag into the High capacity ink pack adapter.



Confirm ink bag is fully seated by checking the lock mechanism is at the top of the ink delivery neck through the observation window, see proper placement in illustration left.



Make sure that the lock lever of the High capacity ink pack adapter is back to its original position.

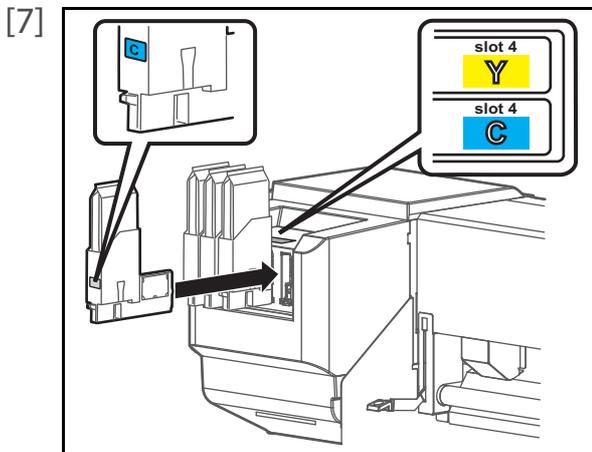


Place the light-shielding cover over the ink bag.



Note

Insert the light-shielding cover inside the High capacity ink pack adapter to only cover the ink bag.



Re-insert the High capacity ink pack adapters into Ink cartridge slots.

- Make sure to match the ink color with the label of this printer.
- Insert all the way to the end.



Important!

Make sure you insert the High capacity ink pack adapters into the original slots. Even when you have the same color ink packs, do not switch and insert them into different slots.

Replacing Adapter's plug for High capacity ink pack adapter

When the plug life runs out, the error LED on the operation panel turns on and a message is displayed.

Follow the procedure below to replace the plug.



Press the [Enter] key.

[2] Follow the procedure described in the operation manual for High capacity ink pack adapter.

"3.3 Replacing Adapter's plug"



When inserting the replaced adapter, the message on the left will appear.

- Press the [-] key.



Press the [Enter] key.

- The adapter's plug lifetime counter will be reset.



Important!

- **If the adapter's plug is not replaced, do not choose "Yes".**
- **Ink leakage may occur by continuing to use such adapter's plug.**

Emptying waste fluid tank

Emptying waste fluid tank

In the following cases, move the waste fluid in the waste fluid tank into a container to discharge it.

- When Waste fluid tank is more than half full
- When "Empty Waste Ink -> E" is displayed
- When "Full WasteInkTank" is displayed

Display messages

Empty Waste Ink -> E

Empty the waste fluid tank.

- The printer stops initial cleaning. After emptying the tank, press the [Enter] key to resume the cleaning.

Full WasteInkTank

The waste fluid tank has become full. Empty the waste fluid tank immediately.

- Printing or other operation will stop. It will resume when you have transferred the waste fluid.

WARNING



Do not mix waste fluid with any other chemicals, even in a small amount. If mixed with other chemicals (e.g. oxidizing agent), it may produce heat. Before pouring waste fluid into a container, make sure:

- the container is empty.
- inside the container is completely dry.

CAUTION



Skin or eye contact with UV curable ink may cause skin inflammation or allergic reaction.

For this operation, be sure to wear the supplied gloves (or solvent resistant gloves) and goggles to prevent ink from contacting with your eyes or skin.

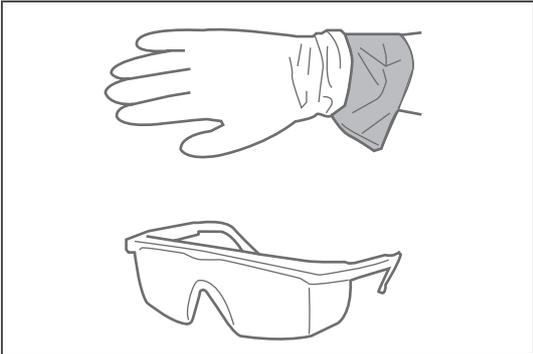
1. Transfer the waste fluid

[1] Prepare a container to put the waste fluid in.

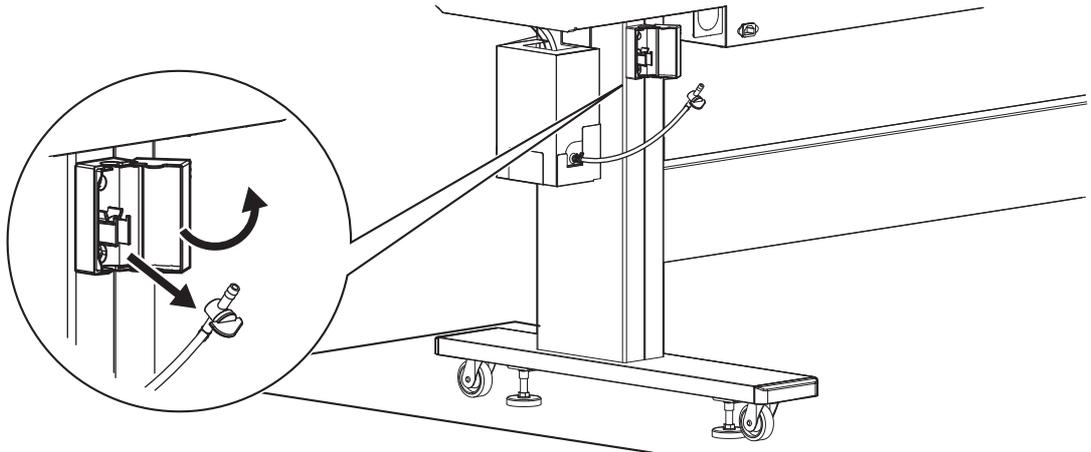
Important!

The capacity of waste fluid tank is 2,000 ml. Make sure to prepare a container that has enough capacity when discharging waste fluid.

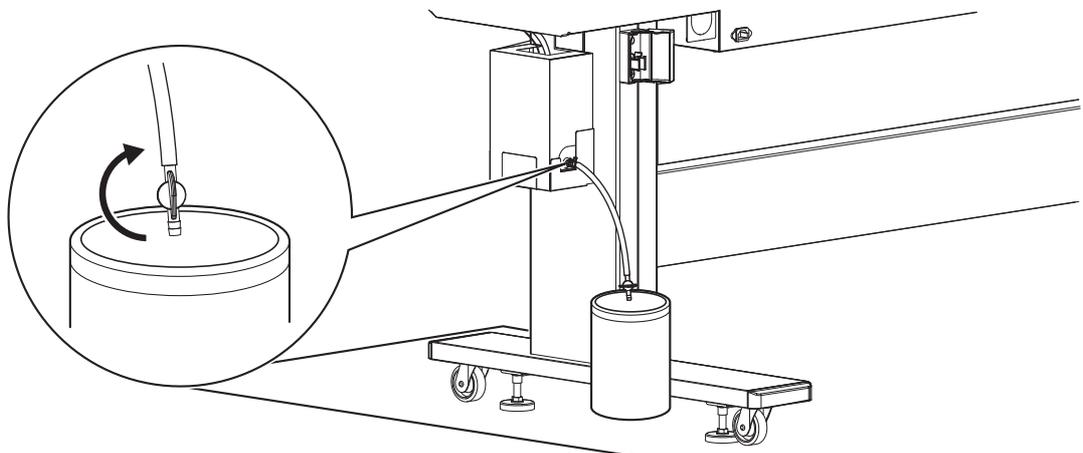
[2] Cover the floor beneath the waste fluid tank using paper you do not need or the like.

[3]  • Wear the rubber gloves over the plastic gloves.
• Wear protective goggles.

[4] Open the cover of the two-way valve clamp, then unhook the two-way valve from the clamp.



[5] Put the tip of the two-way valve in the empty container and open the two-way valve to drain waste ink from the waste ink tank.

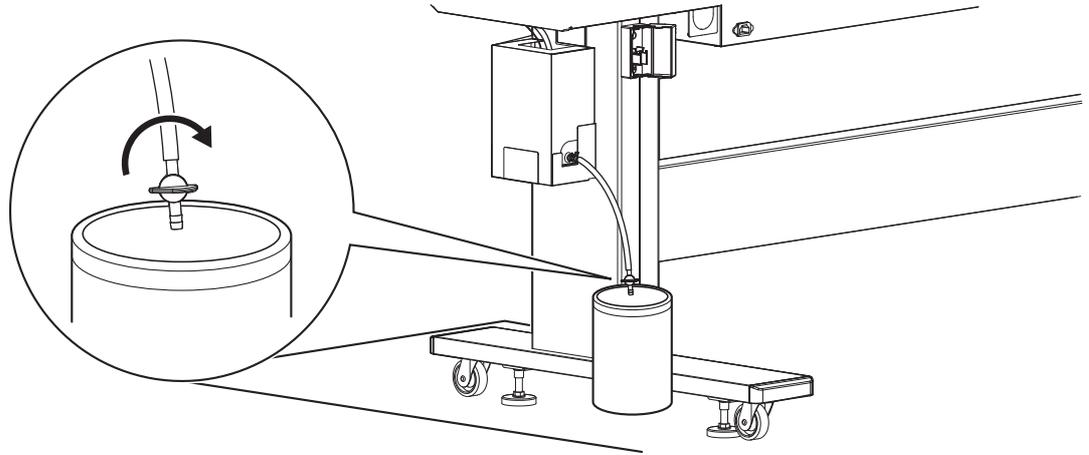


 Note

Waste ink may splash while draining from the waste ink tank.

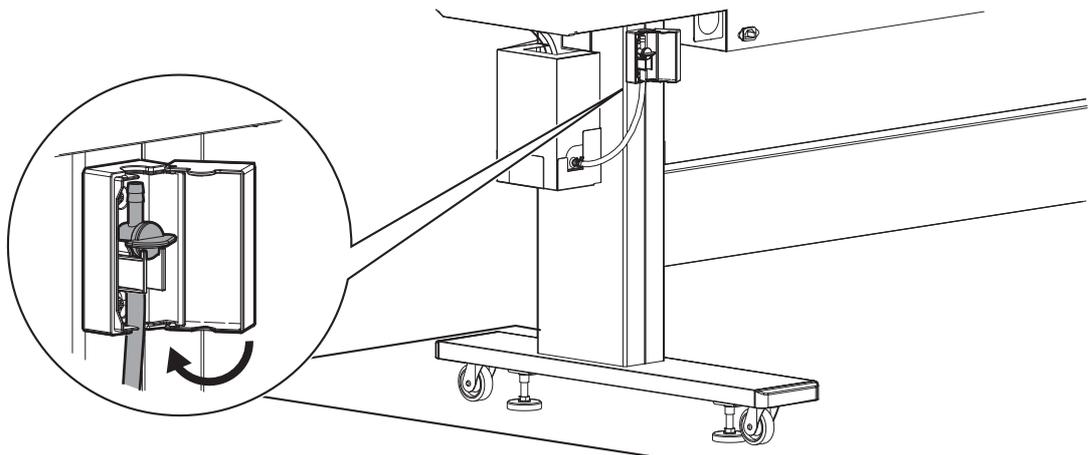
Make sure to put the tip of the two-way valve in the empty container to prevent splash.

- [6] Once you finish emptying the waste ink tank, close the two-way valve.



- [7] Use a dry cloth to clean the tip of two-way valve.

- [8] Hook the two-way valve on the two-way valve clamp, then close the cover.



- [9] Dispose of the waste fluid as an industrial waste product.

 **WARNING**



- You are obligated to properly dispose of waste fluid from the printer in compliance with Wastes Disposal and Public Cleansing Act and local ordinances. Delegate disposal to an industrial waste disposal contractor.
- Waste fluid from this printer is harmful to aquatic organisms. Avoid the waste fluid from out flowing to sewage or natural water systems.
- Keep out of direct sunlight and store the waste fluid container in a cool, dark place.
- Do not mix waste fluid with any other chemicals, even in a small amount.

Daily Maintenance

Flow of Daily Maintenance

This printer requires daily maintenance.

Follow the steps below to perform daily maintenance after you finish your printing for the day.

- "Perform Daily Maint." is prompted on the operation panel after certain period of time from the previous daily maintenance.
Make sure to perform daily maintenance when prompted.

Important!

If you perform printing all day without entering to sleep mode, make sure to perform daily maintenance once a day.

Failure to perform daily maintenance may affect print quality or result in damage to the printer.

To perform daily maintenance without entering to sleep mode, go to "Mnt.1: Daily Maint." on the operation panel.

 ["Maintenance 1: Daily Maintenance" P. 92](#)

 ["Continuously using printer after daily maintenance" P. 119](#)

Prepare required items for Daily Maintenance

Leave the printer in Sleep Mode

Clean the UV Lamp

Moisten the surface of print head nozzles

Clean the print head circumference

Clean the cleaning wiper and the circumference of the cap

The printer automatically performs the Short cleaning

Daily Maintenance completed !

Preparing for Daily Maintenance

Required Items

[1] Prepare the following items to perform daily maintenance.



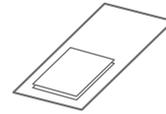
Plastic gloves



Rubber gloves



Protective goggles



Paper towel
or Polyester knit wiper



Dropper



Dedicated maintenance
cleaner



Plastic cup



Cleaning stick

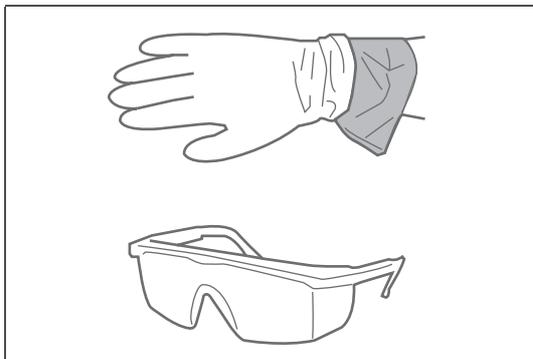


Scraper

Important!

- Use a paper towel supplied with the printer or optional polyester knit wiper. **DO NOT** use a tissue. Lints or flakes on tissue may cause damage to the print head.
- **DO NOT** use non-dedicated maintenance cleaner.
- If you want to purchase the optional maintenance cleaner, contact your local Mutoh dealer or nearest Mutoh sales office.

[2]



- Wear the rubber gloves over the plastic gloves.
- Wear protective goggles.

CAUTION

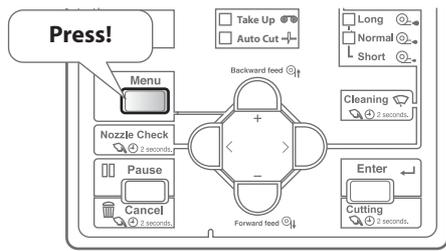


Skin or eye contact with UV curable ink may cause skin inflammation or allergic reaction.

For this operation, be sure to wear the supplied gloves (or solvent resistant gloves) and goggles to prevent ink from contacting with your eyes or skin.

Entering to sleep mode

[1]



Press the [Menu] key.

[2]



Press the [>] key.

[3]



Press the [Enter] key.

[4]



Press the [Enter] key.

[5]



Press the [Enter] key.



- The carriage and cleaning wiper move to gain access to daily maintenance.

[6]



The message on the left will appear.

- You can start daily maintenance.

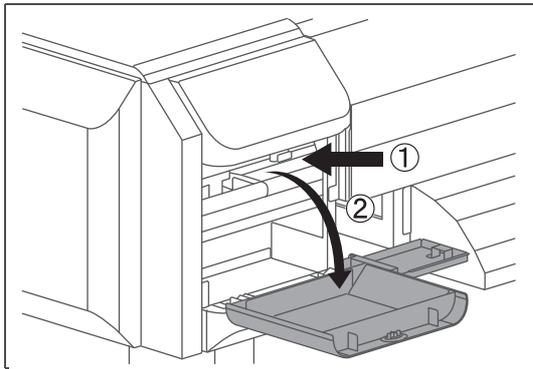


Make sure to complete this maintenance within 10 minutes while the printer is in Daily maintenance state.

Performing Daily Maintenance

1. Cleaning of UV Lamp

[1]

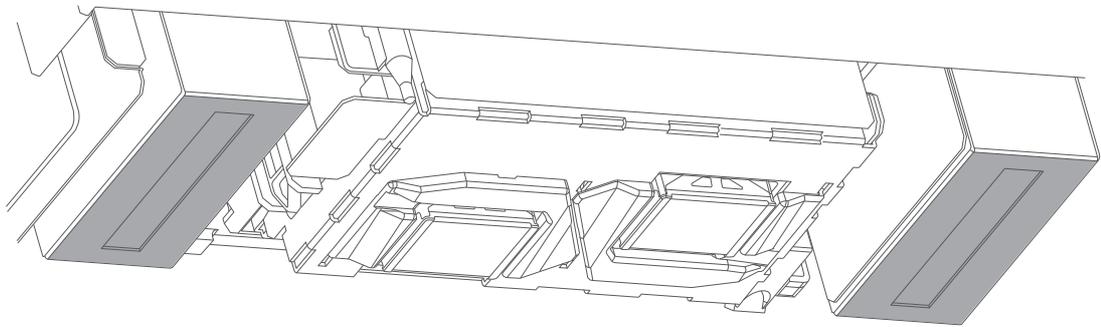


Open the maintenance cover on the left.

[2]

Check for any ink or dust on the UV lamps (x2).

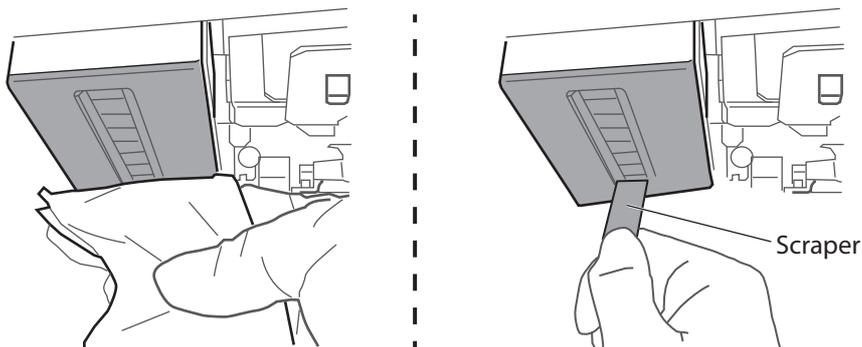
- If no ink or dust is found on the UV lamp, skip this step and move on to "[Moistening the surface of print head nozzles](#)" [P. 115](#).



[3]

If any ink or dust is found, using a paper towel, remove ink and dust from the UV lamp.

- If ink deposits cannot be removed with the paper towel, use the scraper supplied with the printer.
- Press the scraper on the ink deposits with a slight angle and scrape off the ink deposits.
- Use the paper towel to clean the ink scraped from the lamp.



Important!

- **Make sure to use the scraper supplied with the printer.**
- **Never use the corner of the scraper. It can damage the UV lamp.**
- **When using the scraper, do not apply too much pressure to the lamp. It can damage the UV lamp.**

[4]

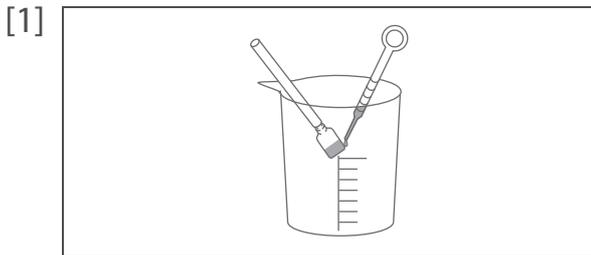
Next moisten the surface of print head nozzles.

2. Moistening the surface of print head nozzles

Important!

During cleaning, please note the followings:

- Always follow this steps to perform daily maintenance.
- When moistening the surface of nozzles, do not use the cleaning stick already used to clean the print head circumference, cleaning wiper or cap circumference. Doing so may result in damage to the print head.
- Always use a new cleaning stick and dampen it with dedicated maintenance cleaner. DO NOT use non-dedicated maintenance cleaner. It may cause nozzle clogging.
- Do not touch the tip of a cleaning stick with fingers. If sebum is adhered, it can cause damage to the print head.
- Do not reuse a cleaning stick. Dusts can adhere causing damage to the print head.

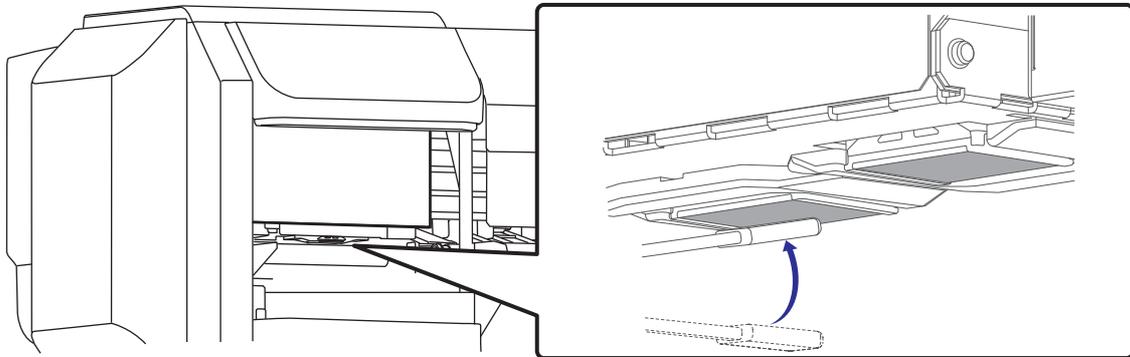


- Put a cleaning stick in the plastic cup.
- Use the dropper to dampen the swab of cleaning stick with dedicated maintenance cleaner. (Amount used: 0.5 ml)

[2] Look the bottom of the carriage.

Using the cleaning stick dampened with the maintenance cleaner, moisten the surface of the print head nozzles.

- Lightly touch with the cleaning stick to moisten the nozzle surface.
- Repeat it a couple of times to moisten the entire nozzle surface.



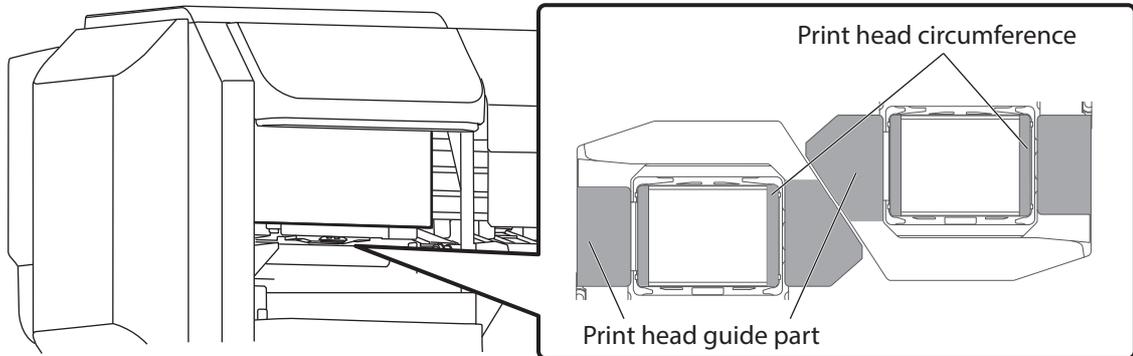
Important!

- DO NOT rub into the nozzle surface. It can cause damage to the print head.
- If the entire nozzle surface has been moistened, you can stop it.

[3] Next clean the print head circumference.

3. Cleaning of print head circumference

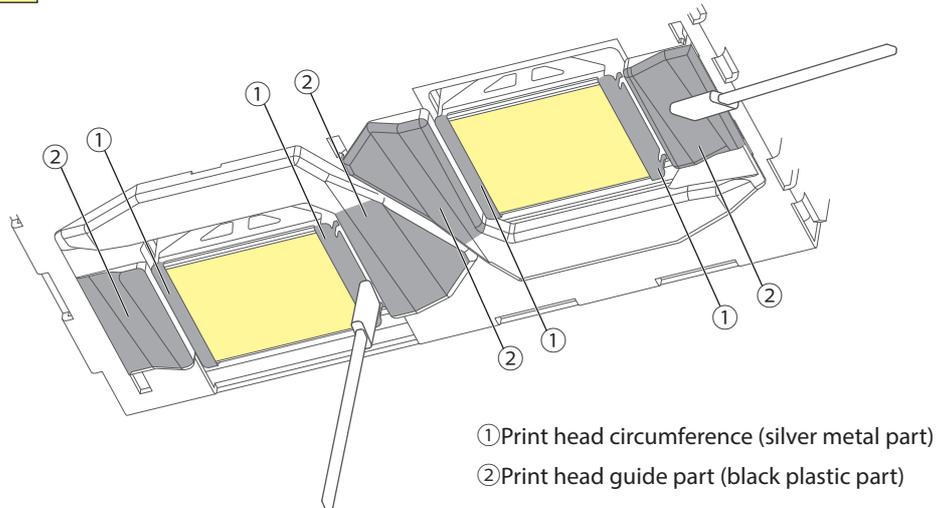
- [1] Look the bottom of the carriage.
Check if dusts and ink deposit are adhered.
- Print head circumference (silver metal part)
 - Print head guide part (black plastic part)



- [2] Use the cleaning stick to remove the ink and dust on the bottom of the carriage.

 Cleaning required

 DO NOT touch the surface of a print head (the yellow portions in the illustration below)

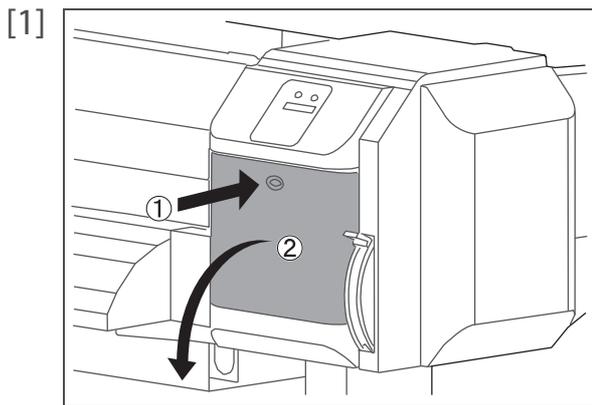


Note

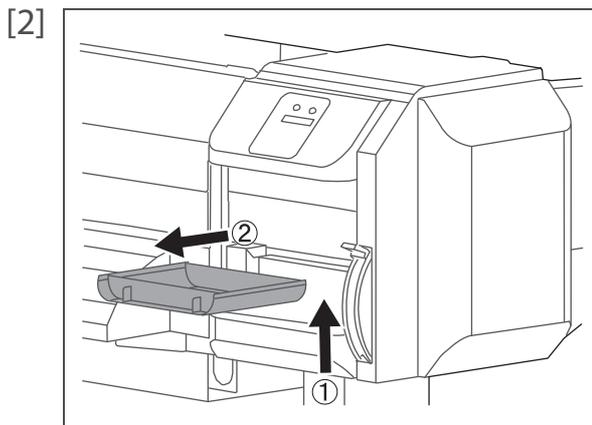
If maintenance cleaner is splashed onto the printer, use a paper towel to wipe it off.

- [3] Close the maintenance cover.
[4] Next clean the cleaning wiper and the cap circumference.

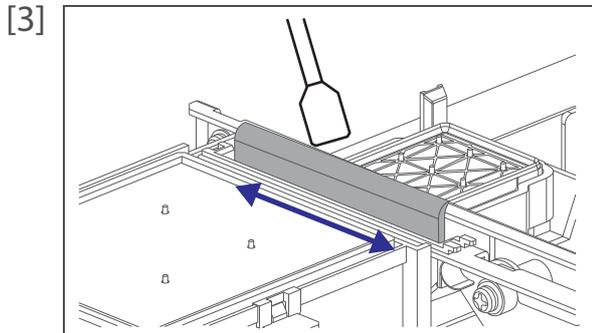
4. Cleaning of cleaning wiper and the circumference of the cap



Open the maintenance cover on the right.

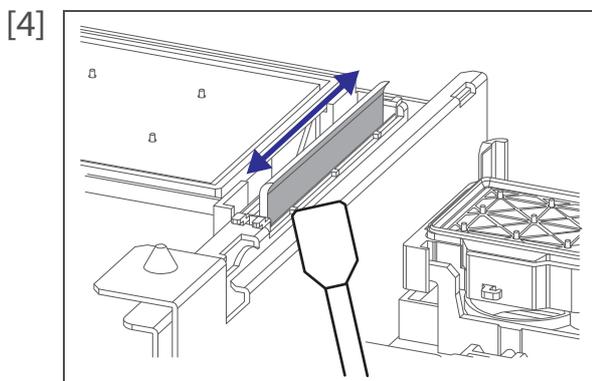


Detach the maintenance cover.

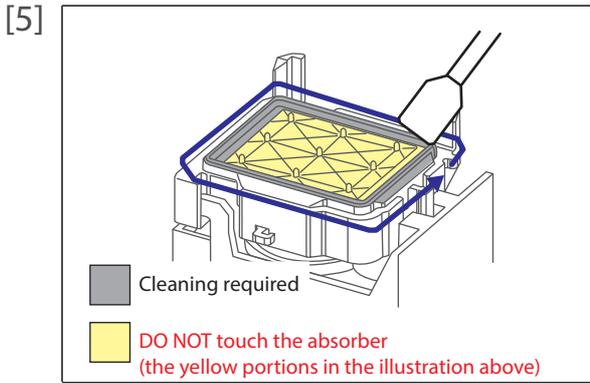


Wipe the cleaning wiper with a cleaning stick.

- Wipe the left side surface of cleaning wiper going back and forth.



Wipe the right side surface of cleaning wiper going back and forth.



Use the cleaning stick to remove the ink and dust on the circumference of the cap.

- [6] Close the maintenance cover.
- [7] Next finish the daily maintenance.

5. Finishing daily maintenance

- [1] Daily Maint. : End Press the [Enter] key.

- [2] The printer automatically performs the "Short" cleaning.
- [3] When the Short cleaning is complete, the printer automatically enters to sleep mode.
- [4]
- Dispose of the used cleaning stick.
 - Use a paper towel to wipe the maintenance cleaner off the dropper.
 - Dispose of the maintenance cleaner in the plastic cup and dry the cup well using the paper towel.

Important!

- **Do not reuse a cleaning stick.**
Dusts can adhere causing damage to the print head.
 - **Check that the lid of the maintenance cleaner is shut properly and store it.**
- [5] Now the daily maintenance is complete.

Continuously using printer after daily maintenance

In following cases, clean the daily maintenance parts.

- If faint print or dot missing still persists even after head cleaning has been performed.
- If you perform printing all day without entering to sleep mode and you need to perform daily maintenance.

Preparation:

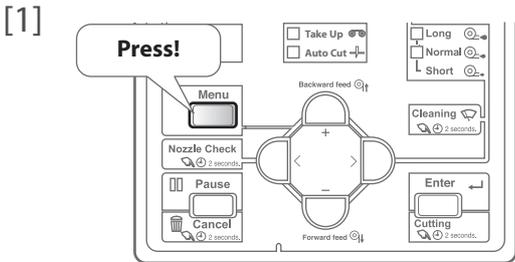
See ["Preparing for Daily Maintenance" P. 112](#) to prepare items required for the maintenance.



If you want to continuously use the printer after this maintenance, follow the steps below.
If you will not use the printer after this maintenance, enter to sleep mode and then perform maintenance.

["Daily Maintenance" P. 111](#)

1. Putting the printer into the Daily maintenance mode



Press the [Menu] key.



The message on the left will appear.



Press the [-] key several times, to bring up the display on the left.

- Press the [>] key.



Press the [Enter] key.



Press the [Enter] key.



- The carriage and cleaning wiper move to gain access to daily maintenance.



The message on the left will appear.

- You can start daily maintenance.

2. Cleaning daily maintenance parts

The maintenance procedure and parts to be cleaned are the same as **"Daily Maintenance" P. 111**. Follow the steps described in **"Performing Daily Maintenance" P. 114** to clean each part.

- **"Cleaning of UV Lamp" P. 114**
- **"Moistening the surface of print head nozzles" P. 115**
- **"Cleaning of print head circumference" P. 116**
- **"Cleaning of cleaning wiper and the circumference of the cap" P. 117**



Make sure to complete this maintenance within 10 minutes while the printer is in Daily maintenance state.

3. Finishing maintenance

[1] Close the front cover and the maintenance cover.

[2]  Press the [Enter] key.

[3] The printer automatically performs the "Short" cleaning.

- [4]
- Dispose of the used cleaning stick.
 - Use a paper towel to wipe the maintenance cleaner off the dropper.
 - Dispose of the maintenance cleaner in the plastic cup and dry the cup well using the paper towel.



- **Do not reuse a cleaning stick.**
Dusts can adhere causing damage to the print head.
- **Check that the lid of the maintenance cleaner is shut properly and store it.**

[5] Now the maintenance is complete.

Cleaning each part

To use this product always in its best condition, please clean periodically.

Head cleaning

When nozzle missing is found in nozzle check, conduct head cleaning. Head cleaning consumes ink.

There are several cleaning modes in this product. Please use them accordingly based on your usage condition.

Short cleaning	Consumes less ink than Normal cleaning.
Normal cleaning	Conduct nozzle check before and after printing, and use when nozzle missing is found.
Long cleaning	Consumes more ink than Normal cleaning. When nozzle missing still occurs after Normal cleaning, conduct Long cleaning.
Little Charge	Though much better cleaning results can be expected than Long cleaning, it consumes a large amount of ink. *This mode cannot be selected via the "Cleaning" key. Select it from the Cleaning submenu in the Panel Setting Menus.  "Menu 5: Cleaning" P. 90
Initial Charge	Gives a rather higher cleaning effect than "LittleCharge", but also consumes rather more ink. *This mode cannot be selected via the "Cleaning" key. Select it from the Cleaning submenu in the Panel Setting Menus.  "Menu 5: Cleaning" P. 90

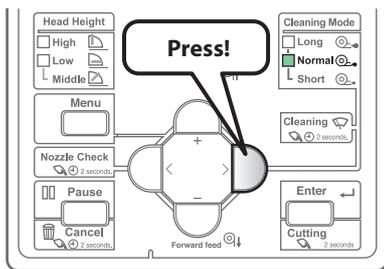
Important!

Comply strictly with the following when you performing "Little Charge" or "Initial Charge". If charging is interrupted, ink will be lost when charging is resumed.

- Do not open the Front cover or the Maintenance cover.
- Do not use ink cartridges (ink bags) that have little ink remaining.

Steps for head cleaning

[1]

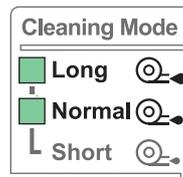


Use the [Cleaning] key to select a cleaning mode.

- The "Cleaning Mode" indicators will change each time the key is pressed.

Note

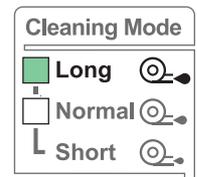
- You can alternatively do this via the MSM's remote panel.
- The "Cleaning Mode" indicators will change as shown below.



Short Cleaning

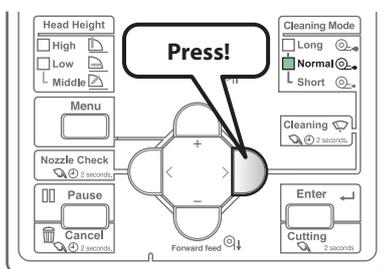


Normal Cleaning



Long Cleaning

[2]



Press the [Cleaning] key for more than two seconds.

- Cleaning will start.

[3]

Perform Nozzle Check.

- If there is still nozzle missing, repeat cleaning and nozzle check.

["Steps for head cleaning" P. 122](#)

Note

- When nozzle missing remains even after repeating normal cleaning several times, perform Long cleaning.
- When nozzle missing remains even after repeating Long cleaning several times, conduct ["Continuously using printer after daily maintenance" P. 119](#).
- If the nozzle missing still is not rectified, perform "LittleCharge" via the Cleaning menu in the Panel Setting Menus.

Inside cleaning

Cleaning period:

- Monthly
- When dust or ink stains are visible

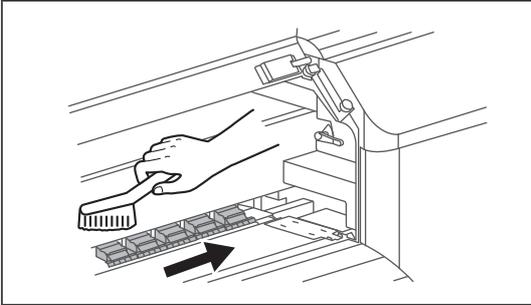
Preparation:

- Soft brush
- Soft cloth

Steps

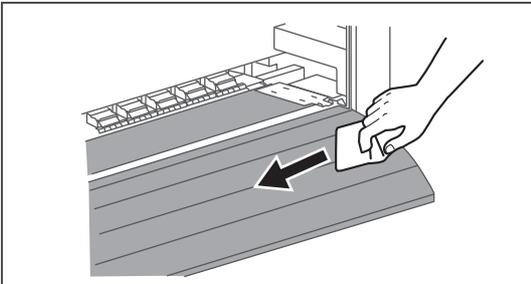
[1] Remove the media.

[2] Open the front cover.

[3]  Brush off dusts on the pressurizing rollers with a soft brush.

 **Important!**

Do not blow off dusts inside the product with a gas duster.
Dust can attach to moving parts, causing abnormal sound or malfunctions.

[4]  Use a wet, tightly-wrung soft cloth to clean the media guide.

[5] Close the front cover.

Replacing consumable parts

Replacing absorption material for the flushing box

The flushing box is a part that keeps receiving ink discharged from the print head. Please replace the absorption material for the flushing box periodically. If used without replacing, it can cause damage to the print head.

Replacing period:

- When ink clumps have accumulated on the flushing-box sponges beyond the flushing-box frame. (since it differs depending on usage frequency, please check periodically)

Preparation:

- Plastic gloves
- Rubber gloves
- Goggles
- Absorption material for the flushing box
- Paper you can get dirty (paper which ink will not bleed through)

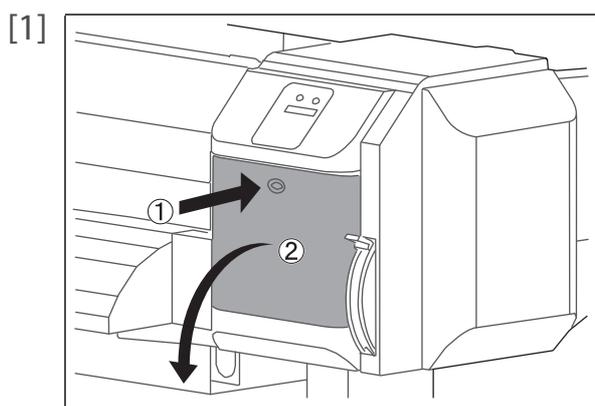
CAUTION



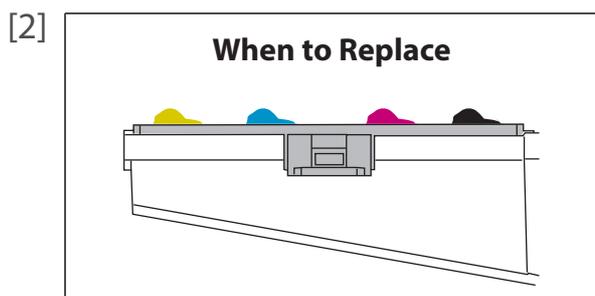
Skin or eye contact with UV curable ink may cause skin inflammation or allergic reaction.

For this operation, be sure to wear the supplied gloves (or solvent resistant gloves) and goggles to prevent ink from contacting with your eyes or skin.

1. Checking steps



Open the maintenance cover on the right side.

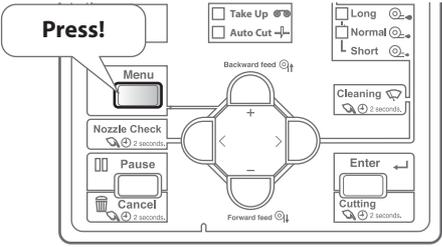


Check the absorption material for the flushing box.

- When there are lumps of ink rise from the frame of the flushing box, it is time to replace.

[3] Close the maintenance cover.

2. Putting the printer into the CR maintenance mode

- [1]  Press the [Menu] key.
- [2]

Menu1:	Sleep Mode >
---------------	------------------------

 The message on the left will appear.
- [3]

Menu3:	Setup >
---------------	-------------------

 Press the [-] key several times, to bring up the display on the left.
 - Press the [>] key.
- [4]

Set1 :	Side Margin
---------------	--------------------

 The message on the left will appear.
- [5]

Set13 :	CR Maintenance
----------------	-----------------------

 Press the [-] key several times, to bring up the display on the left.
 - Press the [Enter] key.
- [6]

CR Maint. :	Start
--------------------	--------------

 Press the [Enter] key.
 - The carriage and cleaning wiper move to maintenance position.

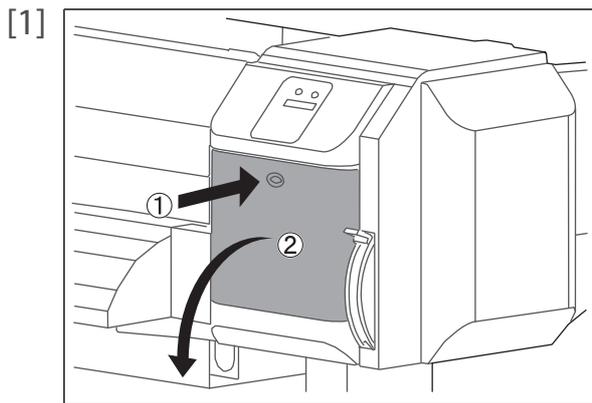
Wait for a while

- [7]

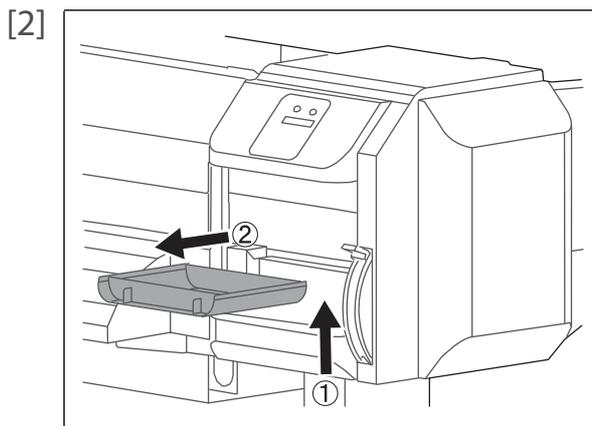
CR Maint. :	End
--------------------	------------

 The message on the left will appear.
 - You can start replacement.

3. Replacing steps



Open the maintenance cover on the right side.

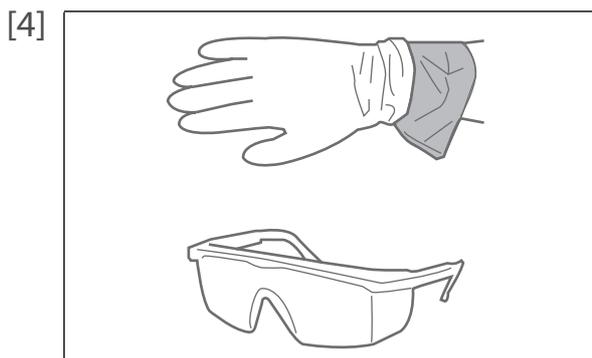


Detach the maintenance cover.

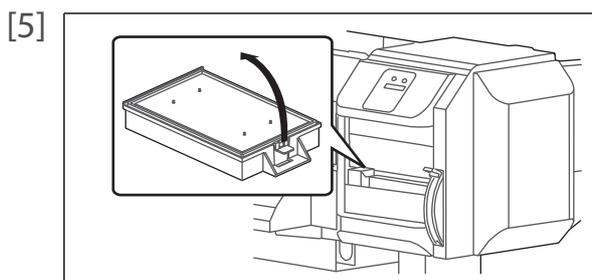
[3] Cover the platen with the paper you can get dirty.

Important!

**Ink may drip from the absorption material for the flushing box.
We recommend covering the floor with paper as well.**



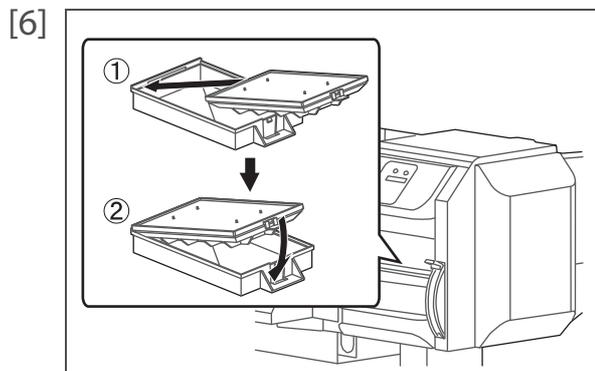
- Wear the rubber gloves over the plastic gloves.
- Wear protective goggles.



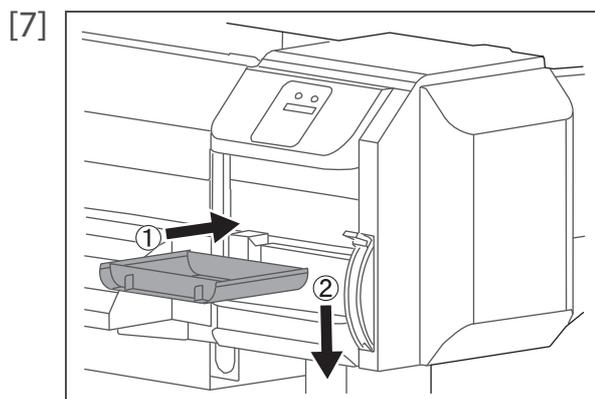
Pull the tab up of the absorption material for the flushing box, and release the hook.
Then remove the absorption material for the flushing box.

Important!

When removing the absorption material for the flushing box, be cautious of ink drops.



Attach new absorption material for the flushing box.



Attach the maintenance cover.

[8] Close the maintenance cover.



Press the [Enter] key.



The message on the left will appear.

- That ends the procedure.

Replacing Cutter

Replacing period:

- When the media is not cut smoothly
- When the cut surface is feathered, etc

Preparation:

- Cutter replacement blade

CAUTION



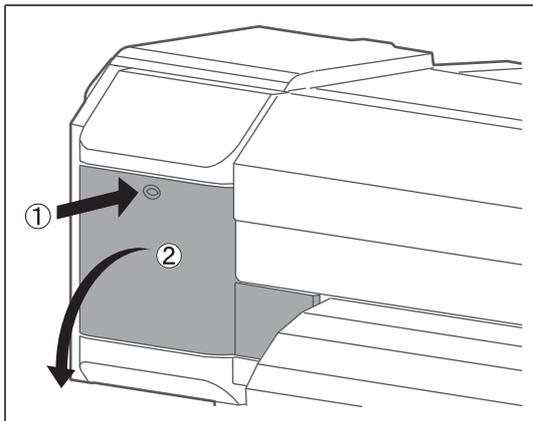
- **Do not push the knob of cutter or release suddenly.**
Because there is a spring under the cutter, the cutter can jump out.
- **Do not touch the cutter blade.**
It may cause injury.

Steps

- [1] Put the printer into the CR maintenance mode.

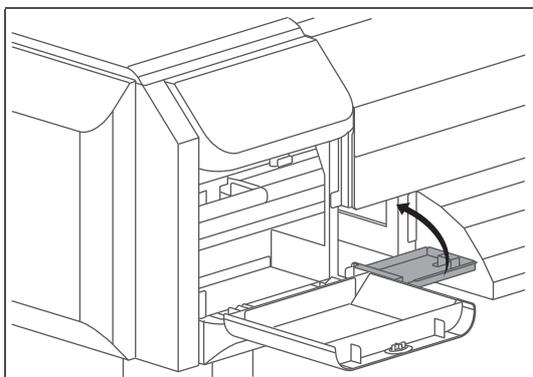
 ["Putting the printer into the Daily maintenance mode" P. 119](#)

[2]

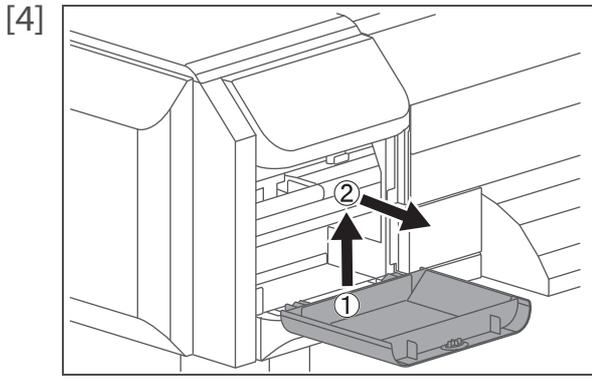


Open the maintenance cover on the left side.

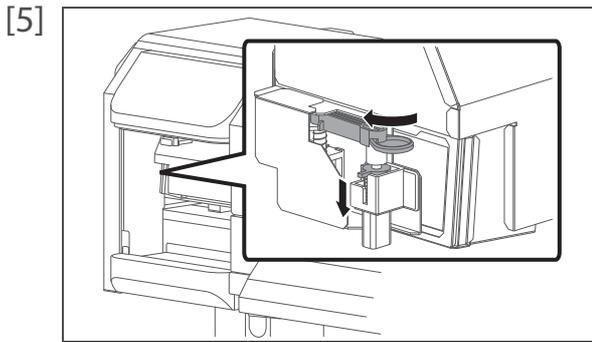
[3]



Close the cover next to the maintenance cover.



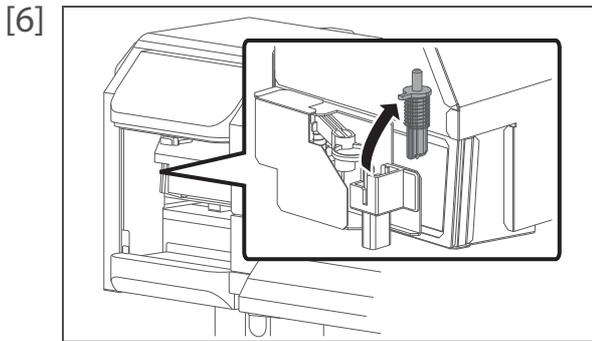
Detach the maintenance cover.



Press the tab of Cutter lightly, turn cutter cap in the direction as illustrated below.

Important!

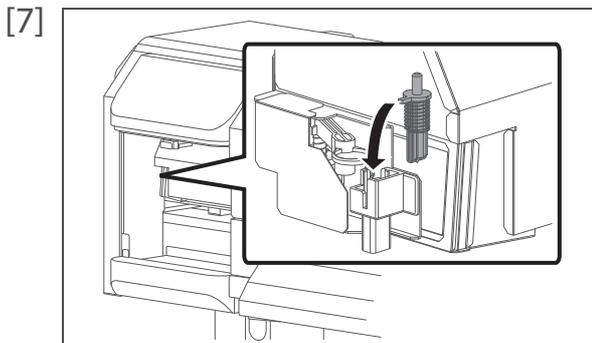
Do not push down the cutter cap. It may damage the part.



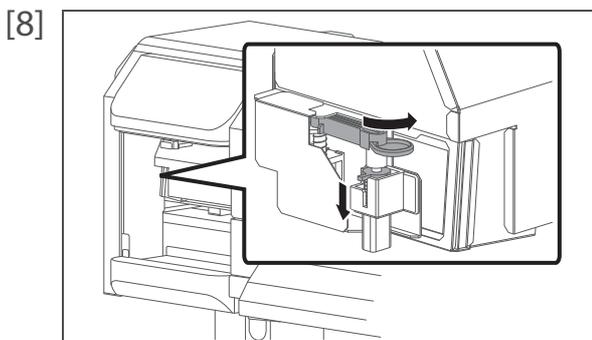
Remove the Cutter.

Note

Used Cutter should be put in a plastic bag, etc, and dispose of it in compliance with local ordinance and instructions of local authorities.



Attach a new cutter.



Press the tab of Cutter lightly, return cutter cap to its initial position.

[9] Attach the maintenance cover, and then close it.

[10]

CR Maint. :	End
-------------	-----

Press the [Enter] key.

CR Maint. :	Start
-------------	-------

The message on the left will appear.

- That ends the procedure.

Replacing the cleaning wiper

The cleaning wiper is an essential part to make printing consistent. Please replace it periodically.

Replacing period:

- Approx. every six months

Preparation

- Plastic gloves
- Rubber gloves
- Goggles
- Absorption material for the flushing box
- Paper you can get dirty (paper which ink will not bleed through)

CAUTION



Skin or eye contact with UV curable ink may cause skin inflammation or allergic reaction.

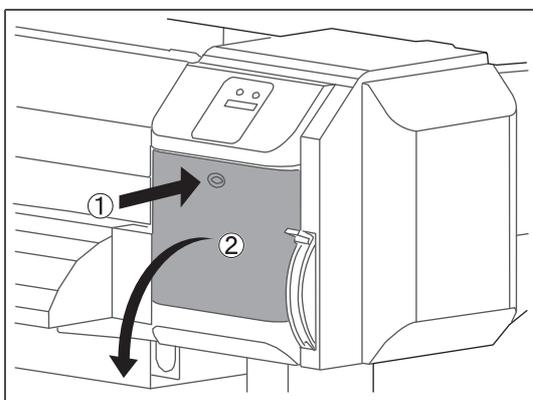
For this operation, be sure to wear the supplied gloves (or solvent resistant gloves) and goggles to prevent ink from contacting with your eyes or skin.

Replacing Steps

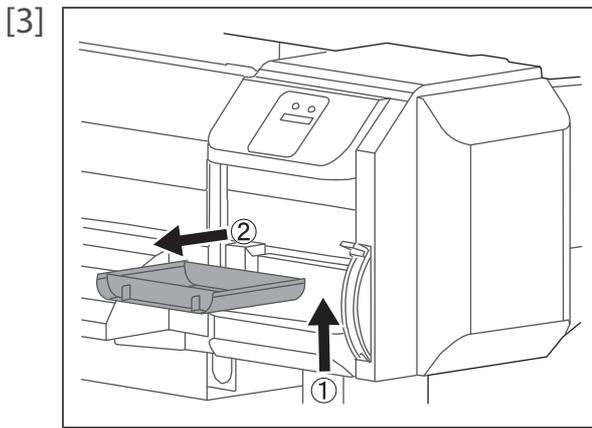
[1] Put the printer into the CR maintenance mode.

 ["Putting the printer into the Daily maintenance mode" P. 119](#)

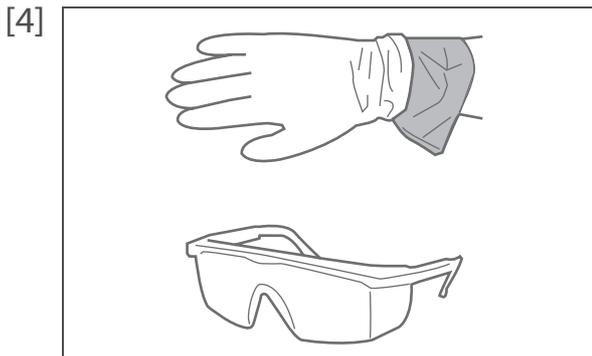
[2]



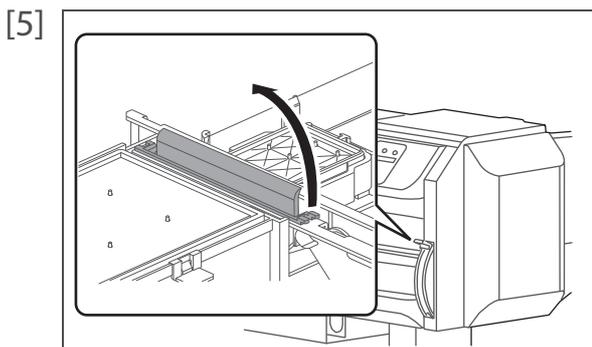
Open the maintenance cover on the right side.



Detach the maintenance cover.



- Wear the rubber gloves over the plastic gloves.
- Wear protective goggles.

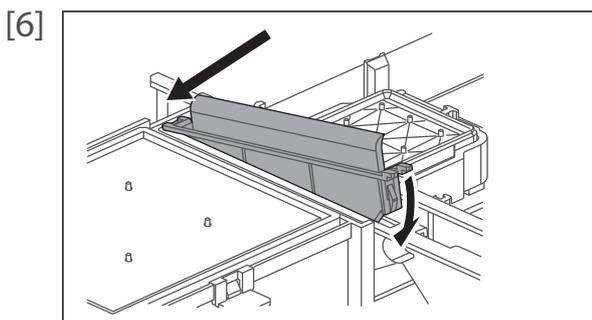


Remove the cleaning wiper.

- Lift the cleaning wiper hook and release the hook. Then, remove the cleaning wiper.

Important!

When removing the cleaning wiper, be cautious of ink drops.



Follow the steps below to install new cleaning wiper.

- Slide the front side of the new cleaning wiper into its slot.
- Press the wiper hook down until it clicks into place.

Important!

Do NOT touch the cleaning wiper rubber with your bare hand. If finger oil gets on the rubber, it will damage the print head.

[7] Attach the maintenance cover, and then close it.



Press the [Enter] key.



The message on the left will appear.

- That ends the procedure.

Moving or transporting the printer

This section describes how to move or transport the printer.

Moving the printer

This section describes how to move the printer.

Important!

- **When moving the printer, make sure to maintain a horizontal position.**
- **Do not tilt, set against something or place this product upside down.**
Otherwise the ink may leak or the handling mentioned above may cause abnormality.
- **When moving this printer, always empty the waste ink tank even moving short distance.**
If ink splashes inside the waste ink tank while being moved, it can cause damage.

1. Preparation before moving

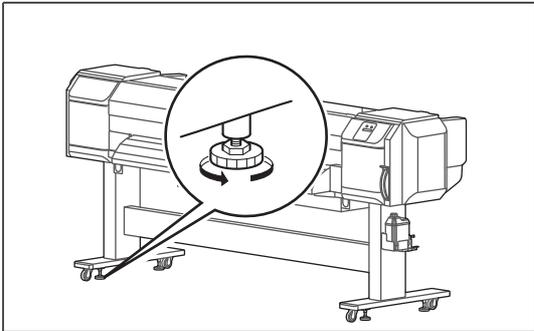
[1] Turn OFF the printer.

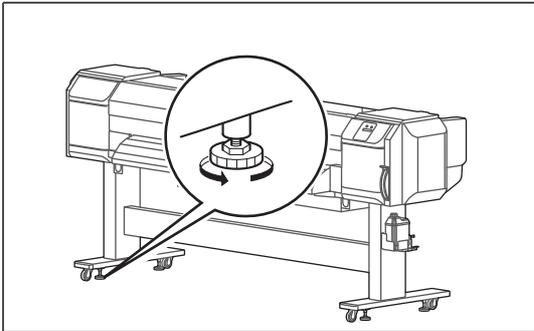
 ["Turning the power OFF" P. 26](#)

[2] Dispose of waste fluid.

 ["Emptying waste fluid tank" P. 108](#)

[3] Remove all the cables, such as Power cord set.

[4]  Loosen the four adjusters of Stand as shown in the left.



[5] Move the printer.

2. Reinstalling

- [1] Select a suitable place for installation.
 [Startup Guide](#)
- [2] Move and install the printer to the location.
- [3] Attach Cables, such as Power cord set.
- [4] Perform Nozzle check, and then confirm that there is no clogging in Print head.
 ["Nozzle check steps" P. 36](#)
- [5] Perform print quality adjustment.
 ["Print quality adjustment steps" P. 42](#)

Transporting the printer

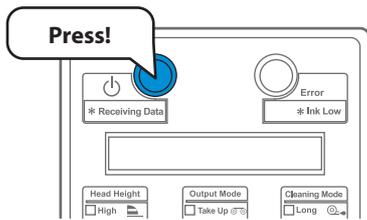
When transporting the printer, make sure to pack it in the same condition as purchased, using protective and packing materials to protect the printer from vibration and shocks.



When transporting the printer, consult the MUTOH product dealer at your point of purchase.

Performing initial charging after head cleaning

[1]



Turn the printer ON.

- Blue light becomes ON.
- The product starts initialization operations.

[2]



When the message to the left is displayed, press the [Enter] key.

[3]



When the message on the left appears, transfer the waste fluid into a container.

["Emptying waste fluid tank" P. 108](#)

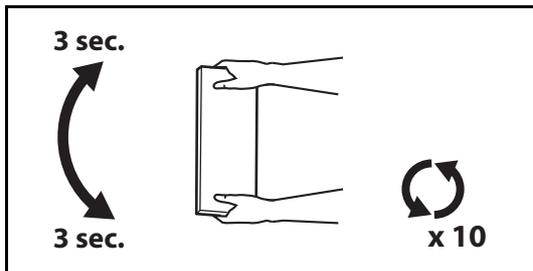
[4]



The message on the left will appear.

Steps for ink cartridge

[1]



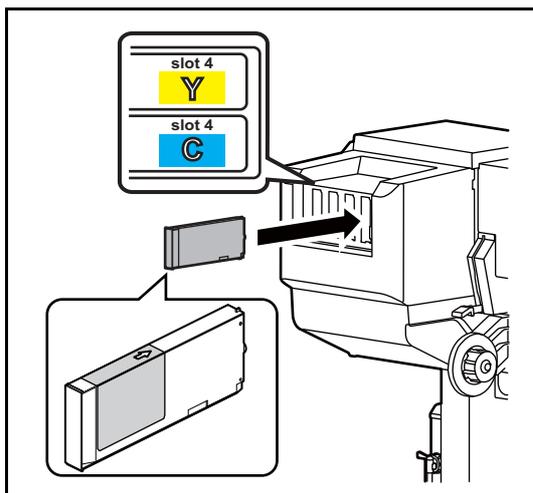
Make sure you agitate the ink cartridge after you unpack it.

- Turn the ink plug upward and wait for three seconds.
- Next, turn the ink plug downward and wait for three seconds.
- Repeat that 10 times.

Note

You do not have to agitate varnish ink and cleaner before use.

[2]



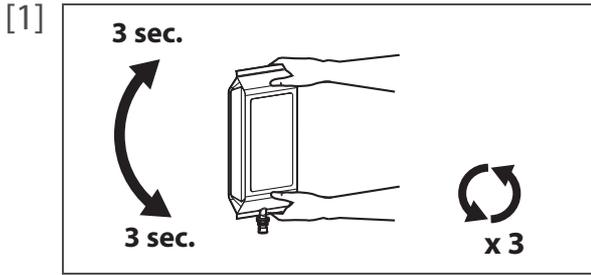
Insert ink cartridge to this printer.

- Match the label of this printer to the color of ink cartridge.
- The arrow should face up.
- Insert all the way to the end.

Important!

Load the same ink color configuration as before.

Steps for High capacity ink pack adapter

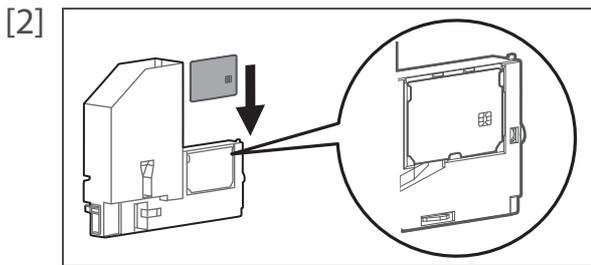


Make sure you agitate the ink bag after you prepare it.

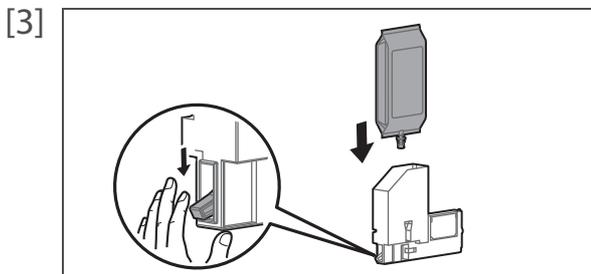
- Turn the ink plug upward and wait for three seconds.
- Next, turn the ink plug downward and wait for three seconds.
- Repeat that three times.

 **Note**

You do not have to agitate varnish ink before use.

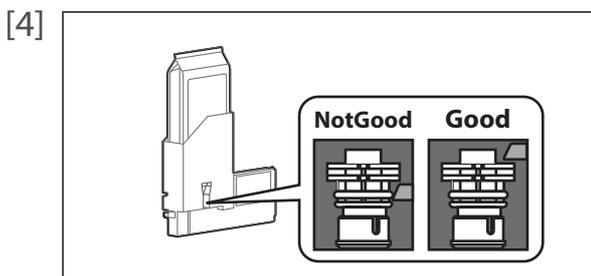


Slide the smart chip card into the tab on the High capacity ink pack adapter to install it.

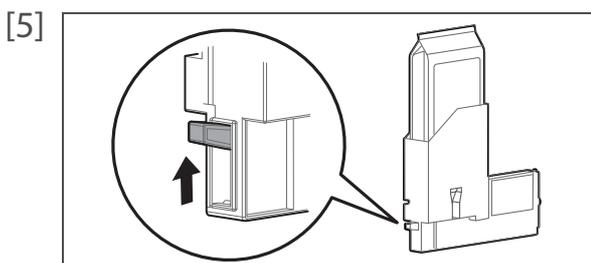


Lower the lock lever on the High capacity ink pack adapter and insert the ink bag.

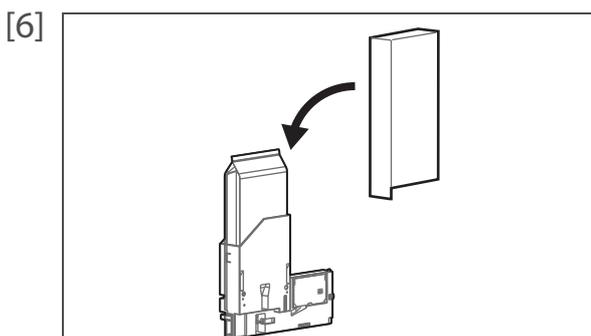
- Insert all the way to the end.



Confirm that the ink bag is inserted all the way and is locked.



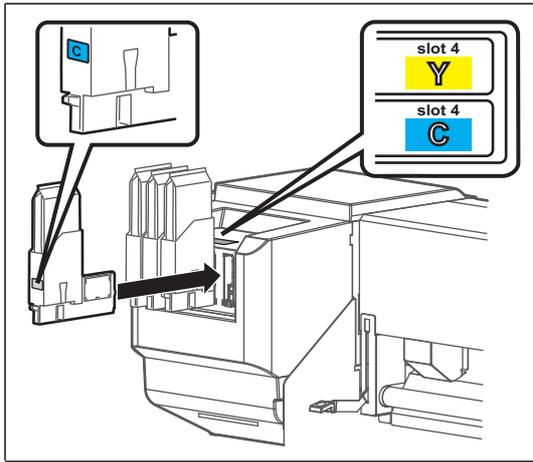
Confirm that the lock lever on the High capacity ink pack adapter is in its original position.



 **Note**

Insert the light-shielding cover inside the High capacity ink pack adapter to only cover the ink bag.

[7]



Insert the High capacity ink pack adapter.

- Match the colors of the label on the printer and the label on the High capacity ink pack adapter.
- Firmly insert it all the way in.

 Important!

Load the same ink color configuration as before.

Ink charging procedure after loading ink set

Ink Refill

**0%

The message on the left will appear.

- Ink charging begins.

CAUTION



During ink charging, make sure:

- Not to turn OFF the printer.
- Not to unplug the power cable of the printer.
- Not to open the front cover.
- Not to open the maintenance cover.
- Not to raise the media loading lever.

Media End

When ink charging is complete, the message to the left is displayed.

 Important!

If the printer perform the nozzle check printing immediately after the initial ink charge is complete, the following results may occur.

- Printed lines become blurred.
- The data is partially not printed.

In such cases, follow "[Menu 5: Cleaning](#)" P. 90 and perform "Little Charge". Then, check the print result.

If there is no improvement in the print result even after performing "Little Charge", leave the printer unused for an hour or more.

Then perform "Little Charge" again and check the print result.

If there is still no improvement, contact your local Mutoh dealer.

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Messages and Error Messages

This section describes messages displayed during normal printer operation or when errors occur, and solutions to the messages.

Status messages

This section describes messages displayed during printer normal operation.

When the product is operating correctly, each operation status is displayed on the operation panel as below.

Display	Description
Ready to Print	Standby (Media is loaded).
Media End	Standby (Media is not loaded).  "Loading the media" P. 30
Receiving	Receiving data.
Converting	Analyzing data.
Printing	Under printing.
Print Remain: XXX.Xm	Displays the length of the data that has not been printed in meters for the data currently being printed.
Remain Time: XXX.Xmin	Displays the time remaining to print in minutes for the data currently being printed.
Cleaning **%	Cleaning the head. Please wait a while.
Moving Origin Pos.	The print head is moving to the original printing position in the Origin setup menu. Please wait a while.
** Initializing **	Initializing the setting in the Initialization menu. Please wait a while.
*** Press 2sec. ***	The [Cleaning] key or the [Nozzle Check] key is pressed for less than 2 seconds. Press the key for more than 2 seconds again.
Lever Up	Set the media, and then lower the Media loading lever.
User: Type ** OK?	Initializing the media. Please wait a while.
Media Initial	(** represents the set User type.)
Perform Daily Maint.	Make sure to perform daily maintenance when prompted.  "Continuously using printer after daily maintenance" P. 119
Life Times [Pump]	The operational life of the pump motor has almost expired. (Continues operation) Contact your local MUTOH dealer.
Life Times [CR Motor]	The operation life CR motor has almost expired. (Continues operation) Contact your local MUTOH dealer.
Life Times [PF Motor]	The operational life of the PF motor has almost expired. (Continues operation) Contact your local MUTOH dealer.

Display	Description
Life Times [UV Lamp *]	The operational life of the UV Lamp has almost expired. (Continues operation) Contact your local MUTOH dealer.
Life Times [C Pump]	The operational life of the Circulation pump has almost expired. (Continues operation) Contact your local MUTOH dealer.
Power Off	Turning OFF the printer. Wait for a while.
S/C Reading	Reading the S/C card.
*** Remote Mode ***	The remote panel mode is running, via MSM or similar. In the remote panel mode, operations via the operation panel are not possible. To terminate the remote panel mode, press the [Cancel] key for more than two seconds.
Roll Remain Error	The remaining roll paper count has become 0. (Printing stops)
Roll Near End: *m	The remaining roll paper count is almost 0. The remaining roll paper is *m.
Installed Wiper? -> No	Install the cleaning wiper.  Startup Guide
Installed Wiper? -> Yes	After installing the cleaning wiper, press the [Enter] key.
Start Ink Charge -> E	Ink charging starts. Press the [Enter] key.
Ink Comb.: * color	Select the ink type you want to use from 4-color set or 6-color set.
Insert CleaningCart.	Washing Print head. Install cleaning cartridges.
Busy-Washing	<ul style="list-style-type: none"> • Initial charging, ejecting filler fluid. • Washing the print head by cleaning fluid. Please wait a while.
Remove Cartridges	Washing Print head or discharging ink. Remove cleaning cartridges.
Insert Ink Cartridges	Charging the ink. Insert ink cartridges (High capacity ink pack adapters).
Ink Refill **%	Charging the ink. Please wait a while.
Empty Wastelnk -> E	Transfer the waste fluid from the waste ink tank into a container, and press the [Enter] key.  "Emptying waste fluid tank" P. 108

Error message display and remedies

This section describes error messages and remedies.

Error messages are displayed when certain failures occur during printer operation.

If an error that can be displayed occurs, the printer may display the following error messages on the operation panel and stop operation.

Display	Description
Cover Open	Front cover is open. Close Front cover.
Maint. CoverL Open	Left Maintenance cover is open. Close Maintenance cover.
Maint. CoverR Open	Right Maintenance cover is open. Close Maintenance cover.
Undefined Media	Media detection has failed. (Stops operation) Reload the media.
Media Slant	Media is fed obliquely. (Stops operation) Reload the media.
Media Cut Error	The media was not cut. (Stops operation)
Print End Media End	The Media has run out. (Stops operation) Printing was completed. To continue printing, load a new media.  "Loading the media" P. 30
Check Media Size Media End	Media ran out while printing. Load a new media.  "Loading the media" P. 30  Note If the printer detects media end while printing, it will not print a complete image. In such cases, Mutoh does not guarantee the print quality at the end of the print.
Shake W Cartridge	Agitate the White (Wh) ink cartridge (ink bag).
Shake KMCY Cartridge	Agitate the Black (K), Magenta (M), Cyan (C), and Yellow (Y) ink cartridges (ink bags).
Shake KMCYW Cartridge	Agitate the Black (K), Magenta (M), Cyan (C), Yellow (Y), and White (Wh) ink cartridges (ink bags).
Shake ALL Cartridge	Agitate all ink cartridges (ink bags). Agitate the Black (K), Magenta (M), Cyan (C), and Yellow (Y) ink cartridges (ink bags).
[*****] Ink Low	Slot * ink is low. Get a replacement cartridge (bag) ready.  "Replacing ink" P. 104
[*****] Ink End	Ink has run out. (Stops operation) Replace with a new ink cartridge (ink bag).  "Replacing ink" P. 104
[*****] No Cartridge	Ink cartridge (High capacity ink pack adapter) is not inserted. (Stops operation) Insert Ink cartridge (High capacity ink pack adapter).

Display	Description
[*****] Discharged	Ink is not filled. Perform initial ink charging.  "Performing initial charging after head cleaning" P. 134
Full WasteInkTank	The waste fluid tank has become full. (Stops operation) Immediately transfer the waste fluid into a container.  "Emptying waste fluid tank" P. 108
[*****] S/C ReadErr	Reading S/C Card has been failed. Insert S/C Card again.
[*****] S/C Col.Err	Ink cartridges (High capacity ink pack adapter) are inserted in wrong slots. Insert ink cartridges (High capacity ink pack adapter) correctly again.
[*] S/C Ink Err	The ink cannot be used for this printer. Contact your local MUTOH dealer.
[*] S/C CodeErr	Inserted ink cartridge (ink bag) is not a proper one. Contact your local MUTOH dealer.
[*] Broken Chip	S/C Card has been broken. Insert new ink cartridge (ink bag).
[*] Check Ink	Ink cartridges (High capacity ink pack adapters) were not recognized correctly. Insert ink cartridges (High capacity ink pack adapters) correctly again. Contact your local MUTOH dealer.
Ready to Print/PFErr	PF origin sensor could not detect the origin position for feeding. You can still print, but print quality is not guaranteed. If this still does not clear the problem, contact your local MUTOH dealer.
Life Warning [CPump]	You must replace the Circulation pump. Please contact your Mutoh dealer to replace the Circulation pump. If you want to stop the beep and continue printing, follow these steps. <ul style="list-style-type: none"> 1. Press the [Enter] or [Cancel] key to stop the beep. 2. The message "MaintenanceCall?" appears on the operation panel. Use the [+] / [-] key to select [Yes] or [No]. 3. Press the [Enter] key. <ul style="list-style-type: none"> • When [Yes] is selected, the message "Ready To Print" will appear on the operation panel. You can continue printer operation. • When [No] is selected, the message "Printer Stop Shortly" will appear on the operation panel. Go to Step 4. 4. Press the [Enter] key. The message "Ready To Print" appears on the operation panel.
Replace [CPump]	The Circulation pump reached the end of the life cycle. You cannot operate the printer from the operation panel until replacing the pump. <ul style="list-style-type: none"> 1. Press the [Enter] or [Cancel] key to stop the beep. 2. Contact your dealer immediately to replace the Circulation pump. <ul style="list-style-type: none"> • In this stage, the automatic ink maintenance will no longer work. The printer performance after the replacement cannot be guaranteed.

 **Note**

- [*****] in the error message indicates the target ink cartridge slot.
- If "Ink End" and "No Cartridge" occur at the same time, "No Cartridge" message has priority to be displayed.

Smartchip recovery

When the following message is prompted on the operation panel, a smartchip error such as broken chip may have occurred in the ink cartridge.

Check that the correct color is inserted in the cartridge slot and perform smartchip recovery.

This will allow you to continue to print.

To perform smartchip recovery, do one of the followings according to the message appeared.

Display	Description
[****] S/C Recog. Err.	An ink cartridge that needs smartchip recovery may have been installed. Remove the ink cartridge and reload it. If the printer is still unable to read it, install a new ink cartridge. <ul style="list-style-type: none">• If a message "[***] Check Color ->E" appears after the ink cartridge is reloaded, follow the message "[***] Check Color ->E" to operate.
[***] Check Color ->E	An ink cartridge that needs smartchip recovery may have been installed. Check that the ink color of the cartridge inserted is correct. <ul style="list-style-type: none">• In case of wrong color insertion, load a correct ink color cartridge.• If color is correct, press the [Enter] key. The printer will perform smart chip recovery and will continue to print.

Note

- During smartchip recovery execution, the ink cartridge being recovered blinks in the ink level indicator and ink status menu.

 ["Icon displays on operation panel" P. 12](#), ["Set 14: Ink Status" P. 80](#)

Error requiring restart

An error requiring restart is displayed if a fatal operational failure such as the following occurs.

- When an obstacle that prevents printing occurs.
- When a problem occurs with the electrical circuit (PCB, motor, sensor, etc.) of the printer.
- When a failure in the printer control program occurs.

If an error requiring restart occurs, the printer stops operating after performing the following operations.

1. The drive power automatically shuts down.
2. All lamps on the operation panel blink, and the buzzer rings continuously.
3. The error message is displayed on the operation panel.

Pressing any key on the operation panel stops the beeping.

For an error requiring restart, operation will return to normal after removing the cause of the error and restarting the printer.

If the same error continues to be displayed, contact the your local MUTOH dealer.

Be sure to tell us the code no. of the error message when you contact us.

Display	Description
E***Err []	<p>A problem that does not have a remedy has occurred.</p> <ol style="list-style-type: none">1. Remove obstacles such as paper scraps in the drive system.2. Confirm that the replaced items are correctly attached.3. Turn the power button off. Wait a short while, then turn the power button on, to restart the printer.

Note

- "***" in the error message is the code no. that indicates what type of error occurred.
- The command code representing the error occurred may be indicated in [].

Troubleshooting

This section describes undisplayed malfunctions and failures of the printer, possible causes and countermeasures.

Note

- The current status and error information of your printer can be checked from the Printer Status tab > Status Information on MSM.
If your printer is not operating correctly, check this Status Information first.
 - Make sure to use the latest version of MSM.
To check the latest available version, go to Help > Version > Check for updates on MSM.
If old version is installed in your computer, download the latest version from MUTOH Club.
-  MUTOH Status Monitor Operation Manual

Installation and initial setup troubleshooting

Cannot perform the initial ink charging.

Is the front cover, or the maintenance cover open?

- Close the front cover, or the maintenance cover.

Is the media loading lever raised?

- Lower the media loading lever.

Are ink cartridges / High capacity ink pack adapters inserted all the way into the printer?

- Make sure ink cartridges / High capacity ink pack adapters are all inserted properly.

Ink does not come out after ink charging.

Is the ink too cold?

- Leave the ink at room temperature for at least three hours, and perform cleaning several times.

Is the power turned OFF during ink charging?

- Turn the power ON again and continue ink charging.

Nozzle missing occurs after initial ink charging.

Did you perform head cleaning?

- Perform cleaning, then, check the print result.

- If there is no improvement in the print result even after performing cleaning, leave the printer unused for an hour or more.
Then perform cleaning or "Little Charge" again and check the print result.

- If there is still no improvement, contact your local Mutoh dealer.

 ["Head cleaning" P. 121](#)

MSM or RIP cannot access to the printer.

Is Gigabit Ethernet cable connected correctly? - Securely connect the Gigabit Ethernet cable to the Ethernet Port.
Are the network settings configured correctly? - Configure the network settings correctly.
Do the printer's network settings match the computer's settings? - Match this product's network settings with the computer side environment.

 ["Connecting to a Computer" P. 18](#), ["Initial 3: IP Address" P. 95](#), ["Initial 4: Subnet Mask" P. 95](#), ["Initial 5: Gateway" P. 95](#)

Boot-up troubleshooting

Does not work at all after power activation / after loading the media.

Is the power cable connected to the plug? - Connect the power cable.
Does the AC power supply provide the specified voltage? - Connect the cable to another outlet.
Is the front cover, or the maintenance cover open? - Close the front cover, or the maintenance cover.
Is the media loading lever raised? - Lower the media loading lever.
Is the media loaded correctly? - Load the media correctly.
Is the ink cartridge / High capacity ink pack adapter inserted? - Insert the ink cartridge / High capacity ink pack adapter.
Do you use the printer within recommended environmental conditions? - Make sure to use the printer within the specification range.
Is there any error message displayed on MSM? - Go to the Printer Status tab in MSM and check that if any error message is displayed in the Status Information.

 ["Loading the media" P. 30](#), "Ensuring a suitable place for installation" of the "Startup Guide" on page P.5

The media slips, is torn / crumpled during initialization.

<p>Is the media loaded correctly?</p> <ul style="list-style-type: none"> - Load the media correctly.
<p>Are there any foreign materials such as torn paper attached to Pressurizing rollers?</p> <ul style="list-style-type: none"> - Clean Pressurizing rollers.
<p>Do you use the printer within recommended environmental conditions?</p> <ul style="list-style-type: none"> - Make sure to use the printer within the specification range.
<p>Are any curls or warps present on your media?</p> <ul style="list-style-type: none"> - Set the media holder at both edges of the media. - Check that you select the appropriate vacuum fan setting.
<p>Are you using creased, damaged, torn or curled media?</p> <ul style="list-style-type: none"> - Replace the media.



Note

If the media is jammed or torn, remove it according to "The media is jammed" P.148.

The printer does not detect the media.

<p>Is the media loaded correctly?</p> <ul style="list-style-type: none"> - Load the media correctly.
<p>Is the media loaded at an angle?</p> <ul style="list-style-type: none"> - Load the media straight.
<p>Do you use the printer within recommended environmental conditions?</p> <ul style="list-style-type: none"> - Make sure to use the printer within the specification range.
<p>Did you load the media which has been printed before?</p> <ul style="list-style-type: none"> - Use a new media.

 ["Loading the media" P. 30](#), ["Inside cleaning" P. 123](#), ["After loading the media..." P. 34](#), ["***>4: Vacuum Fan" P. 69](#), ["The media is jammed" P. 151](#), "Ensuring a suitable place for installation" of the "Startup Guide" on page P.5

Media jams frequently occur.

Do you use the printer within recommended environmental conditions?

- Make sure to use the printer within the specification range.

Are any curls or warps present on your media?

- Set the media holder at both edges of the media.

- Check that you select the appropriate vacuum fan setting.

Are you using creased, damaged, torn or curled media?

- Replace the media.



Note

If the media is jammed or torn, remove it according to "The media is jammed" P.148.

The media skews during printing.

Is the media loaded correctly?

- Load the media correctly.

 "Ensuring a suitable place for installation" of the "Startup Guide" on page P.5, ["After loading the media..." P. 34](#), ["4: Vacuum Fan" P. 69](#), ["The media is jammed" P. 151](#), ["Loading the media" P. 30](#)

The printer does not print.

Is Gigabit Ethernet cable connected correctly?

- Securely connect the Gigabit Ethernet cable to the Ethernet Port.

Is there any error message displayed on MSM?

- Go to the Printer Status tab in MSM and check that if any error message is displayed in the Status Information.

Have you enabled MPS in MSM?

- In MSM, go to the MPS Info. tab to check that MPS is enabled.

Have you set the output port to MPS on your RIP software?

- Check that the output port of your RIP is set to MPS.

The carriage pauses at either side of the printer while printing.

Does your computer meets the following requirements?

- OS: Windows 10 (64bit), Windows 8/8.1 (64bit), Windows 7 (64bit)
- CPU: Intel (R) Core (TM) i5 / i7
- Memory: No less than 8G byte
- Network: Use a network port that supports Gigabit Ethernet, and an Ethernet cable that supports Category 6 Gigabit Ethernet or later.

Do you use a Gigabit Ethernet cable?

- To connect your printer to your computer, use a Gigabit Ethernet cable Category 6 or later.

Are any curls or warps present on your media?

- Set the media holder at both edges of the media.
- Check that you select the appropriate vacuum fan setting.

Smears or missing area partially appears on the prints.

Does the printer heater deform your media?

- If the heater deforms the media loaded to the printer before printing, go to the "Start Feed" menu to increase the media feeding amount.

Does the media contain moisture or are you using the creased or wrinkled media?

- Replace it with the new media.

 ["Connecting to a Computer" P. 18](#), ["After loading the media..." P. 34](#), ["4: Vacuum Fan" P. 69](#), ["Set 19: Start Feed" P. 83](#)

The printing position is incorrect (some parts of the media cannot be printed on).

Is the media loaded correctly?

- Load the media correctly.

Did you set up the origin?

- Cancel or reset the settings of the origin.

Printing is blurred.

Is the media printed on the printing surface?

- Check the printing surface of the media and set it correctly.

Did you perform Print quality adjustment?

- Perform Print quality adjustment.

Did you perform Media feed adjustment?

- Perform Media feed adjustment.

White or black lines appear on printed media.

Is the media loaded correctly?

- Load the media correctly.

Does the media contain moisture or are you using the creased or wrinkled media?

- Replace it with the new media.

Are Nozzles in good condition?

- Perform Nozzle check.
Then if nozzle missing is found, conduct cleaning.

Did you perform Print quality adjustment?

- Perform Print quality adjustment.

Did you perform Media feed adjustment?

- Perform Media feed adjustment.

 ["Loading the media" P. 30](#), ["Set 4: Origin" P. 74](#), ["***>2: Adjust Print>" P. 61](#), ["***>3: PF Adjust" P. 65](#), ["Nozzle check and cleaning" P. 36](#)

Printing lines are not straight / are duplicated or patchy.

Are Nozzles in good condition?

- Perform Nozzle check.
Then if nozzle missing is found, conduct cleaning.

Did you agitate ink in the cartridge (bag)?

- When "Shake XX Cartridge" message appears on the operation panel, agitate ink in the cartridge (bag).

Did you perform Print quality adjustment?

- Perform Print quality adjustment.

Did you perform Media feed adjustment?

- Perform Media feed adjustment.

Is Ink cartridge (bag) within the validity period?

- Use a non-expired ink cartridge (bag).

Printed color is not accurate.

Are Nozzles in good condition?

- Perform Nozzle check.
Then if nozzle missing is found, conduct cleaning.

Did you install an ink bag on each High capacity ink pack adapter with correct ink color of S/C card?

- Check that the ink color written on S/C card matches the ink color of ink bag installed on each High capacity ink pack adapter.
- If it does not match, contact your local Mutoh dealer.

Did you agitate ink in the cartridge (bag)?

- When "Shake XX Cartridge" message appears on the operation panel, agitate ink in the cartridge (bag).

Nozzle missing remains after head cleaning.

Is there any ink stains or deposits on the cleaning wiper or circumference of the print head?

- Perform head cleaning or "Little Charge" again and check the nozzle check print.
- Perform Daily Maintenance and check the nozzle check print.
- The problem still persists, contact your local Mutoh dealer.

Did you select an appropriate cleaning setting?

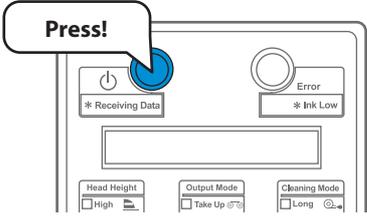
- If nozzle missing still persists after attempting Normal Cleaning or Long Cleaning two or three times, perform "Little Charge".

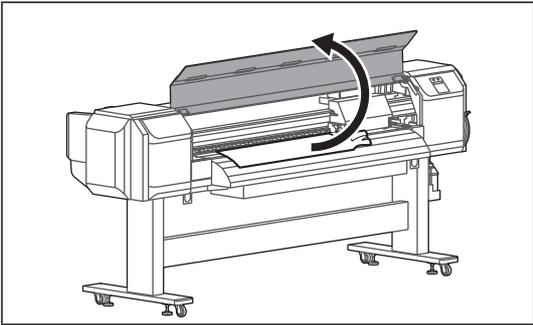
 **"Nozzle check and cleaning" P. 36, "***>2: Adjust Print>" P. 61, "***>3: PF Adjust" P. 65, "Menu 5: Cleaning" P. 90, "Daily Maintenance" P. 111, "***>1: Print Mode" P. 60**

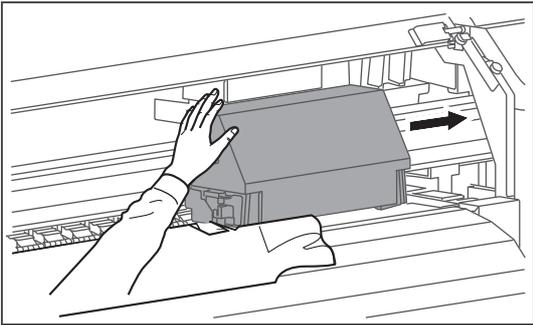
The media is jammed

When the media is jammed in the printer, follow the procedure below to remove it.

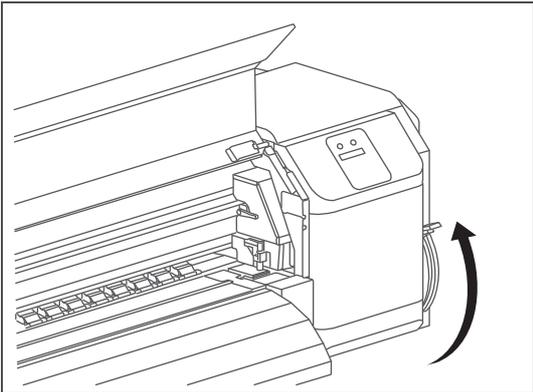
Steps

- [1]  Turn the printer OFF.

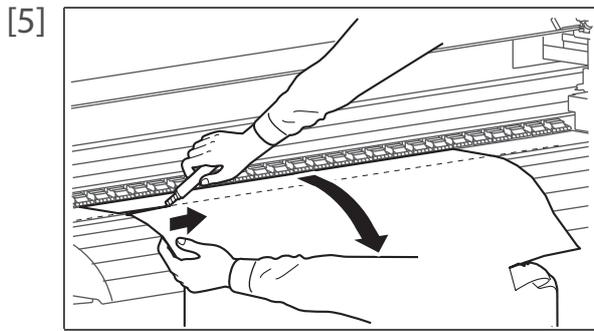
The diagram shows the printer's control panel. A blue circle highlights the power button, with a callout bubble above it containing the word "Press!". Below the power button are indicators for "Receiving Data" and "Ink Low". To the right is an "Error" indicator. At the bottom, there are three mode selection buttons: "Head Height" (with "High" and "Low" options), "Output Mode" (with "Take Up" and "Long" options), and "Cleaning Mode".
- [2]  Open the front cover.

The diagram shows the printer from a side-front perspective. A curved arrow indicates the front cover is being lifted upwards.
- [3]  Move the carriage from the top of the media.

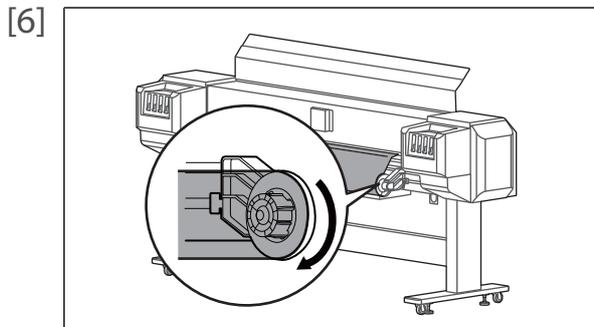
Important!
When the head height is set to Low, change it to High and then shift Head.
After shifting Head, change the setting back to Low.
☞ ["Changing the Head Height" P. 45](#)

The diagram shows a close-up of the printer's carriage and media. A hand is shown moving the carriage from the top of the media. A black arrow points to the right, indicating the direction of movement.
- [4]  Raise the media loading lever.

The diagram shows the printer from a side-front perspective. A curved arrow indicates the media loading lever is being raised.



Pull the media towards you, and cut the torn part with cutting tools such as a razor blade.



Rewind the media a little by rolling Flange on Roll media holder.

[7] If paper dust or pieces of paper remain inside the printer, remove them.

[8] Turn the printer ON.

[9] Perform Nozzle Check.

 ["Nozzle check and cleaning" P. 36](#)

- If there is nozzle missing, go to ["Cleaning steps" P. 38](#).
- If all lines are clearly printed, you can start printing.

Specifications of this product

List of specifications

Model Name	VJ-1638UR	
Print method	On demand piezo method	
Drive method	Firmware servo/DC motor drive	
Media feed method	Multipoint pressurizing Grid roller system	
Media fixing system	Pressurization roller down system by manual lever	
Ink curing device	UV-LED Lamp	
Conditions of usable media	Roll media outer diameter	Φ150 mm or less
	Tube diameter	2 inches or 3 inches
	Weight	30 kg or less
	Maximum width	1,625 mm
	Minimum width	182 mm
	Maximum thickness	0.3 mm (when the head height is set to Low) 1.3 mm (when the head height is set to High)
Maximum print width	1,615 mm	
Maximum print length	200 m	
Head height adjustment	Two-level adjustment of Low and High	
CPU	64bit RISC CPU	
Memory	384 MB	
Interface	Gb-Ethernet (1000BASE-T)	
Waste fluid tank	Fixed to the body type, capacity 2,000 ml, waste fluid discharge by users	
Ink	Color	4-color (Black, Cyan, Magenta, Yellow) 5-color (Black, Cyan, Magenta, Yellow, Varnish, Cleaner) 6-color (Black, Cyan, Magenta, Yellow, White, Varnish)
	Type	220 ml ink cartridge, 800 ml ink bag (500 ml ink bag for White ink)

Environmental conditions	Printer Operation Environment	Temperature 20 to 32 °C, humidity 40 to 60% No condensation
	Printer Accuracy Guaranteed Environment	Temperature 22 to 30 °C, humidity 40 to 60% No condensation
	Printer Storage Environment	Storage without ink charging: up to 6 months Temperature -20 to +60 °C, humidity 20 to 80% No condensation Storage with ink charging: up to 30 days Temperature 5 to 30 °C, humidity 20 to 80% No condensation
	Ink Storage Environment	<ul style="list-style-type: none"> • Soft UV ink (US11) Black/Cyan/Magenta/Yellow/Varnish(220 ml or 800 ml each) White (220 ml or 500 ml) Temperature 5 to 35 °C Humidity: No condensation • Cleaning cartridge (200 ml) Temperature 5 to 35 °C Humidity: No condensation
Power supply specifications	Voltage	AC 100V to 240V ±10%
	Frequency	50/ 60Hz ±1Hz
Power consumption	Power off	4 W or below
	Standby	52 W or below
	Sleep Mode	25 W or below
	Operation	770 W or below
Current consumption	100V to 120V	10.0 A or below
	200V to 240V	4.0 A or below
External dimensions	Height	1,261 mm (Size of printer when the front cover is opened: 1,529 mm)
	Width	2,983 mm
	Depth	818 mm
Weight	Main body	152 kg
	Stand	37 kg

Options / Supply list

For more information about the options and the supply items, contact your local MUTOH dealer.

Revision History

Date	Version	Manual code	Supported Firmware
2018.5	00	VJ1638URE-A-00	V.1.00
2018.6	01	VJ1638URE-A-01	V.1.00
2018.10	02	VJ1638URE-A-02	V.1.03
2020.3	03	VJ1638URE-A-03	V.1.03
2020.8	04	VJ1638URE-A-04	V.1.05
2020.11	05	VJ1638URE-A-05	V.1.05 or later

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