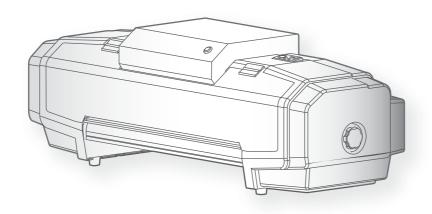




# VJ-628MP Operation Manual

**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

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.

## Illustrations for the printer used in this manual

For simplicity, the stand is excluded in some illustrations.



#### **CAUTION**

· Keep the work area well-ventilated.

The fumes from ink could adversely impact your health.

If you experience headache, fatigue or dizziness, immediately get to fresh air.

If nausea persists, seek medical advice.

This equipment is not suitable for use in locations where children are likely to be present.

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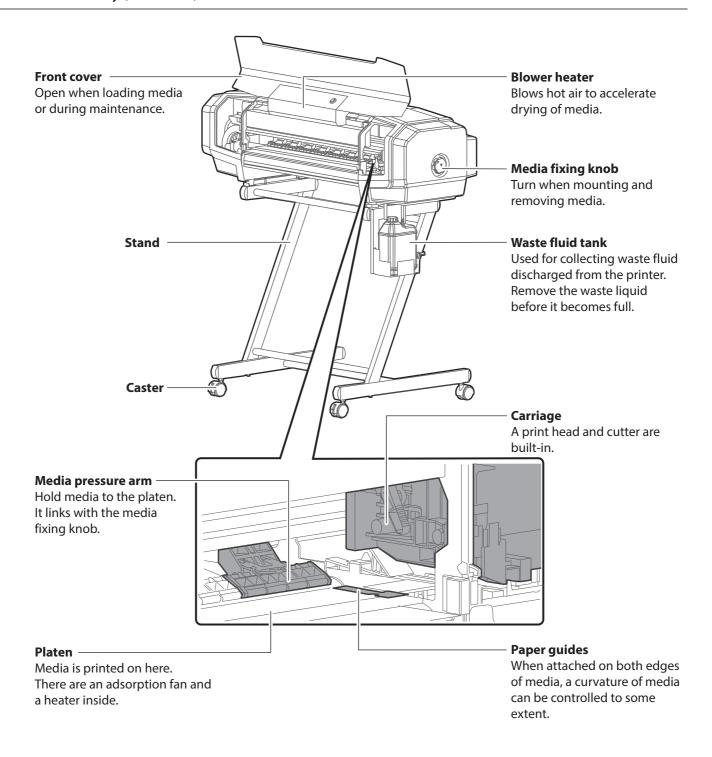
# Chapter 1 Basic Operations

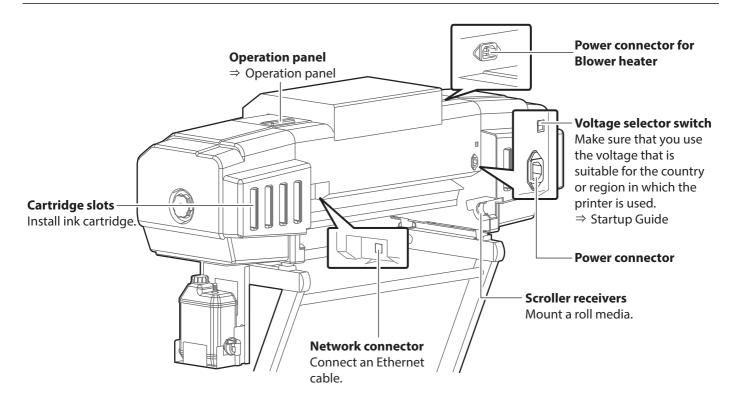
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## Introduction

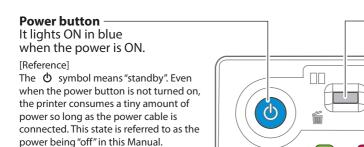
## Name of each part

#### Printer's main body (Front side)





#### Operation panel



Data LED -

Green flashing indicates receiving and analyzing state of printing data.

#### **Error LED**

Red light or flashing displays errors or warnings. Also lights up when the front cover is open or the media fixing handle is released.

#### **Operation key**

Used for various functions in different situations.

#### Printing:

(Short press) Pause/Restart printing (Long press) Cancel printing (data deletion)

#### Waiting for printing: (Long press) Cut media

When linked with MSM and waiting to be confirmed:

(Short press) Confirm

#### While Warming up:

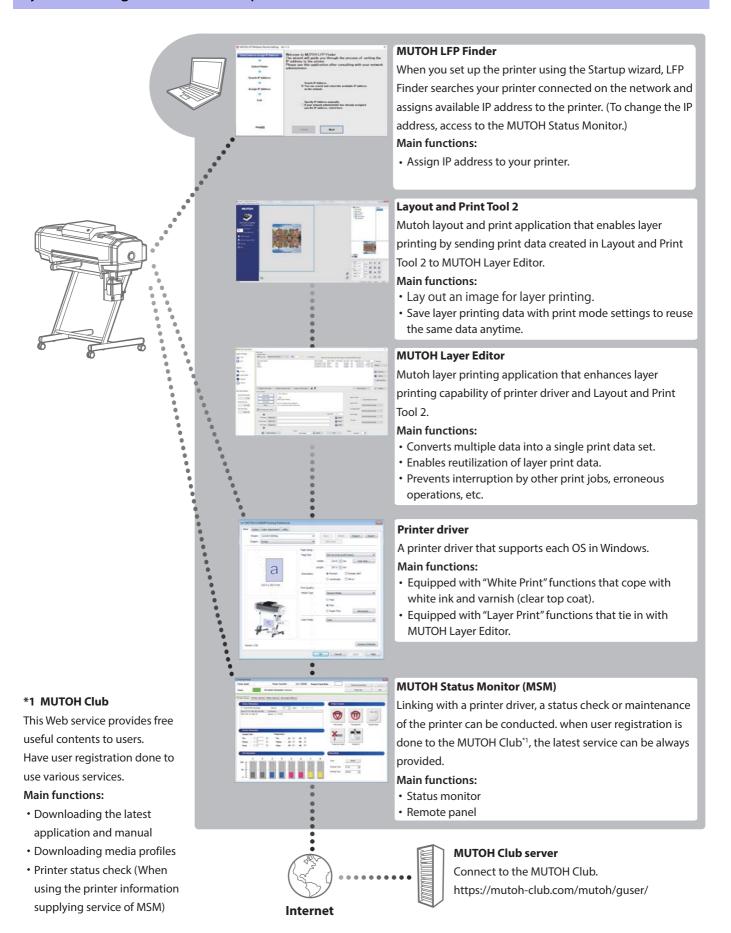
(Short press) Force starting printing

During forwarding/rewinding media: (Short press/Long press) Stop forwarding/rewinding

#### During error:

(Short press) Stop the buzzer

## System configurations of this product



#### Appropriate Use of Layout and Print Tool 2 and MUTOH Layer Editor

The CDROM supplied with this printer contains two print application; Layout and Print Tool 2 and MUTOH Layer Editor. To perform layer printing on VJ-628MP, please use Layout and Print Tool 2.

Each print application has following features.

	Layout and Print Tool 2	MUTOH Layer Editor
		MUTOH Layer Editor
Functions	Enables to print more than one image layer by layer on the same media. Users can edit layer printing layout and save them.	<ul> <li>Receives print data from the printer driver.     Users can assign the received data to each layer to perform layer printing.</li> <li>To create print data file, use Layout and Print Tool 2 or other graphic applications.</li> </ul>
Intended use	<ul> <li>Suitable for small print production or adding text to an image.</li> <li>Recommended to use MUTOH Layer Editor for large print production.</li> </ul>	Saves print data with format converted for the printer to print soon after sending from MUTOH Layer Editor and efficiently reprint the same data.
Image printing (PNG/TIFF)	✓	
Single layer printing	_	<b>✓</b>
Change printer settings on output data	<u>—</u>	(Change carriage speed, vacuum fan and more)



For more details of layer printing and supported file format, see the Layout and Print Tool 2 Operation Manual and MUTOH Layer Editor Operation Manual.

## Displaying the Printing Preferences screen of printer driver

#### [1] Windows 11

Press the [Win] - [R] keys on your keyboard to open the Run command window. In the search field, type "control", then click [OK] or press the [Enter] key on your keyboard. Click [Control Panel] then [Devices and Printers].

#### Windows 10

Click [Start], [All Apps], [Windows System], then [Control Panel]. In the screen that appears, click [Devices and Printers].



Printer driver can run on Windows 11.

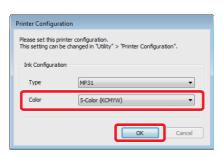
[2]



Right click the "MUTOH VJ-628MP" icon and click [Printing preferences].

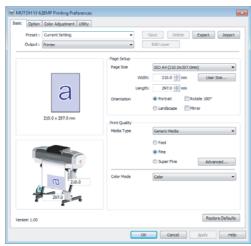
- The "Printer Configuration" dialog box opens only at the first time.
- The Printing Preferences screen of printer driver opens from the second time.

[3]



Select the ink color configuration and click [OK].

 After clicking, the Printing Preferences screen of printer driver opens.



## Launching/Displaying/Exiting MUTOH Status Monitor (MSM)

#### Launching MSM



#### Windows 11 / Windows 10

Double click the MSM icon on the Desktop.



Launching from the Start Menu of Windows

• Windows 11 / Windows 10 From the [Start] menu, click [All Programs (or [All apps])] - [MUTOH] - [MUTOH Status Monitor].

#### **Displaying MSM**



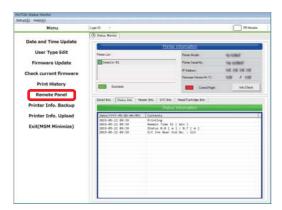
Double click the MSM icon in the task tray.

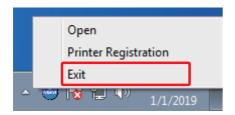
#### Displaying remote panel

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

Click [Remote Panel].

• The remote panel opens.





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



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

## Launching MUTOH LFP Finder

From the [Printer Registration] menu on the MUTOH Status Monitor, click "3. Search printer Assign/Change IP address".



If you have used the old version of Startup wizard in your PC, ValueJet Finder has been already installed. In that case, uninstall the ValueJet Finder.

## Launching MUTOH Layer Editor

#### Windows 11 / Windows 10

From the [Start] menu, click [All Programs (or [All apps])] - [MUTOH] - [MUTOH Layer Editor] in order.



MUTOH Layer Editor can run on Windows 11.

## **Displaying Help**

You can use the Help for the printer driver and MUTOH LFP Finder.

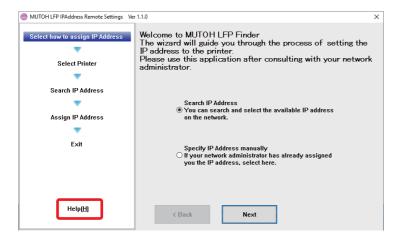
#### Printer driver

Display the Printing Preferences screen of printer driver, and click [Help].



#### **MUTOH LFP Finder**

Launch MUTOH LFP Finder, and click [Help].



## Conditions of usable media

Roll media can be used in this product.

#### Usable size

Maximum width		630 mm (If paper tube > media width, then paper tube width)
Maximum thickness	Head height when Low	0.3 mm
UIICKIIESS	Head height when High	1.3 mm
Roll outer diameter		150 mm
Paper tube diameter		2 or 3 inches
Weight		9 kg or less



Depending on the thickness of media being loaded, select the appropriate head height.

When printing on a thin media with Head Height "High" setting, ink mist is likely to occur, affecting print quality.



Contact your local MUTOH dealer about roll media recommended for your printer.

#### Cautions when handling media

- Be cautious of expansion and contraction of media from temperature and humidity.

  After opening an unopened media, leave the media for approximately an hour to adjust to environments.
- Do not use media with folds, scratches, tears, curvatures, winding curl and weaving.
- Do not leave a roll media set in this product for a long time. The media can be curled becoming unsuitable for printing. When not using for a long time, remove a roll media and store in its original package box.

## Cautions in using this product

#### Do not turn off the printer

Make sure that the power is always turned on. When you are not using the printer, always leave the power on and put the printer into the sleep mode. In the sleep mode, the printer will periodically circulate the ink in its interior.

If you do not put the printer into the sleep mode, the ink in its interior could settle out and/or coagulate, causing poor image quality or printer failure.

#### Agitate the ink cartridges

Agitate the ink cartridges before use. To maintain color stability, make sure that you agitate them periodically. Otherwise, the ink inside the packs 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.

- Check the nozzle before and after printing. If nozzle clog 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" on page 64
- · Drain waste ink in the waste liquid tank periodically.
- · Clean its exterior and inside once a month.

#### Please handle ink cartridge carefully

- Wear protective equipment (gloves, goggles or eye protection, protective mask, protective clothing) when handling ink.
- Before operation, make sure to read the Material Safety Data Sheet (SDS).
- Do not disassemble Ink cartridge. If disassembled, there is a possibility that ink might come into contact with your eyes or skin.
- DO NOT drop or hit an ink cartridge. Ink may leak from the cartridge.
- When handling the ink cartridge, 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.

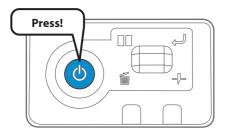
- Parts required to be replaced by users: Absorption material for the flushing box, Cutter, Cleaning wiper
- Parts required to be replaced by service personnel: Various motors, Print head

## Powering ON/OFF

## Turning the power ON

[1] Close the front cover.





Press the power button of this product to turn the power ON.

- The blue light becomes ON.
- This product starts its initialization operations.

## Turning the power OFF

Make sure that the power is always turned on. When you are not using the printer, always leave the power on and put the printer into the sleep mode. If you do not put the printer into the sleep mode, the ink in its interior could settle out and/or coagulate, causing poor image quality or printer failure.

Sleep Mode" on page 20

When you may not be able to run a weekly cleaning on the printer that is in sleep mode:

Perform "Longstore" and then power off the printer. It allows you to store the printer for up to one month (30 days).

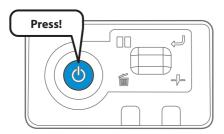


Be sure to perform daily maintenance before turning the printer off.

If you turn the power off without performing daily maintenance, the nozzle may become clogged.

- [1] Make sure printing is done.
- [2] Prepare required items for daily maintenance.
  - \*\*Preparing for Daily maintenance" on page 65

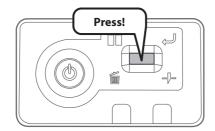
[3]



Press the power button of this product.

• The blue light blinks.

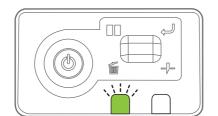
[4]



Short press the operation key on the operation panel.

- The printer automatically performs the cleaning.
- The carriage moves to the maintenance position.

[5]

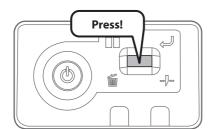


The data LED flashes.

• Open the front cover.

[6] Perform daily maintenance.

[7]



After performing maintenance, short press the operation key on the operation panel.

- This product starts its powering off operations.
- The blue light becomes OFF.



Turn the media fixing knob to release the lock.



When not using this product, release the lock of the media fixing knob regardless of power being OFF.

## Sleep Mode

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

Before putting into sleep mode, make sure to perform daily maintenance.

Leaving the printer in sleep mode without performing daily maintenance may cause damage to the print head.

Taily Maintenance" on page 64

## Important!

- · When you may not be able to run a weekly cleaning on the printer that is in sleep mode: Perform "Longstore" and then power off the printer. It allows you to store the printer for up to one month (30 days). Performing Long Storage" on page 87
- If the printer is going to be in Sleep mode for more than 1 week, follow the steps below to perform daily maintenance once a week.
- · Invert the ink cartridges back and forth to agitate ink.

"Agitating ink cartridges" on page 56

- Wake the printer from sleep mode.
- · Perform a nozzle check to see if there are no nozzle missing.
- Perform daily maintenance, and put the printer into sleep mode.

#### Starting and Canceling Sleep Mode

## **1.** Starting sleep mode

- Check the following printer status. [1]
  - The front cover is closed.
  - The remaining ink level is sufficient.
  - · No ink agitation message is prompted.
  - · No other messages are displayed.
  - The waste ink bottle has enough space.
- Prepare required items for daily maintenance. [2] Preparing for Daily maintenance" on page 65

## Important!

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

- [3] Launch the MSM remote panel.



Click "Sleep Mode" - "Start".

• The confirmation window opens.



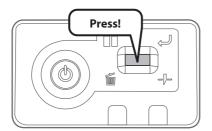
You can also start sleep mode from the printer driver.

[5]



Click "Yes".

[6]

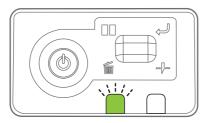


Short press the operation key on the operation panel.

- The printer automatically performs the cleaning. [7]
  - When the Short cleaning is complete, the carriage moves to the maintenance position.



[8]

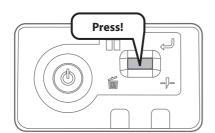


The data LED flashes.

• Open the front cover.

- [9] Perform daily maintenance.
  - "Daily Maintenance" on page 64

[10]



After performing maintenance, short press the operation key on the operation panel.

- The carriage returns to the original position.
- The printer automatically enters to sleep mode.



The data LED flashes during sleep mode.

## 2. How to Cancel Sleep Mode

[1]



To cancel sleep mode, click "Sleep Mode" - "Stop" while in sleep mode.

• The confirmation window opens.

[2]



#### Click "Yes".

• Sleep mode ends.



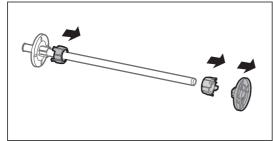
Depending on the time elapsed since the last automatic cleaning, the printer may perform an automatic head cleaning or ink charging when powered on or before printing.

Such operation does not depend on the sleep mode settings. It is an automatic maintenance function of the printer.

## Printing

## Setting up media

[1]

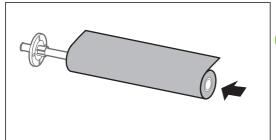


Remove the 3 inches adaptor and media stopper (movable) from the scroller.



When using a roll media with 3 inches paper tube diameter, leave the 3 inches adaptor on.

[2]

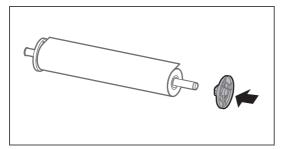


Attach a roll media to the scroller.



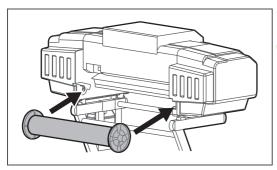
- Attach the media in the rolling direction to be the same with the figure.
- Push in the roll media so that there is no space with the media stopper (fixed).

[3]



Push in the media stopper (movable) until there is no space with the roll media.

[4]

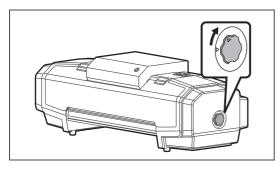


Attach the scroller to the scroller receivers.



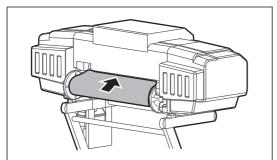
Attach the media stopper (movable) to face to the right, when this product is looked from its back.

[5]



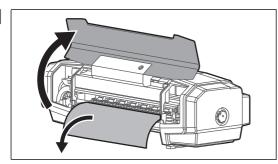
Turn the media fixing knob to release the lock.

[6]



Let the roll media pass through the paper feed slot.

[7]

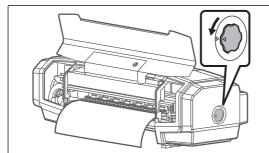


- Open the front cover.
- Pull out the media roller from the front side of the product.



If the media gets loose, rewind the scroller to correct the looseness.

[8]

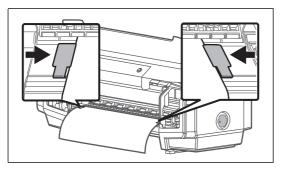


Turn the media fixing knob to lock.



Make sure that the operation switch of the take-up unit is set forward (to take up) while printing.

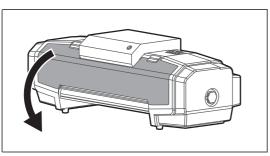
[9]



Set the paper guides to media.

• Slide from both sides of platen and set.

[10]



Close the front cover.

## Adjusting image quality

For the following cases, please conduct this adjustment.

- · Using this product for the first time.
- · Changing a media type.

For any other cases, please proceed to "Nozzle check and cleaning" on page 35.

This adjustment corrects print misalignment that can be generated during bidirectional printing per media type.

#### Bidirectional printing

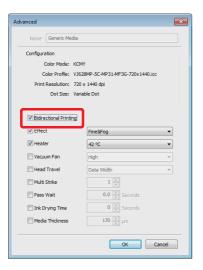
The print head goes back and forth on media during printing. When printing is done for both back and forth directions, it is called "bidirectional printing". Though a printing speed gets faster with a bidirectional printing, a slight misalignment can be generated in the print joints. "Image quality adjustment" corrects such misalignment.

#### Setup method of bidirectional printing

- [1] Display the Printing Preferences screen of printer driver. Tipping the Printing Preferences screen of printer driver on page 12
- [2] Save Delete Export Import а

Click [Advanced...] under the [Basic] tab.

[3]



Place a checkmark in [Bidirectional Printing].



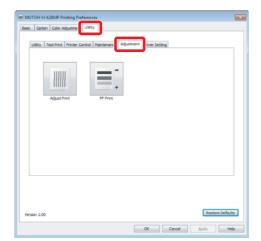
By default, it is checked.

## **1.** Media thickness

[1] Display the Printing Preferences screen of printer driver.

"Displaying the Printing Preferences screen of printer driver" on page 12

[2]



Click the [Adjustment] tab under the [Utility] tab.

[3]



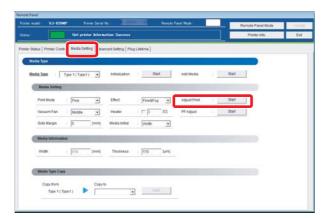
Click [Adjust Print]

• The remote panel of MUTOH Status Monitor (MSM) launches.

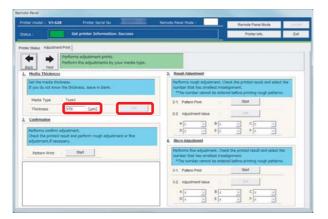


MSM can be launched directly.

- [4] Click [Start] in [Adjust Print] of the [Media Setting] tab.
  - The [Adjust Print] window opens.

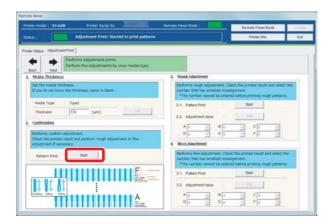


- [5] Enter [Thickness] ([µm]) in [1. Media thickness], and click [Setting].
  - Enter the thickness of a set media.

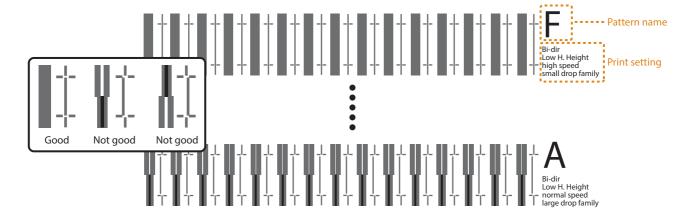


## **2.** Checking picture quality

- [1] Click [Start] in [2. Confirmation].
  - Patterns are printed.

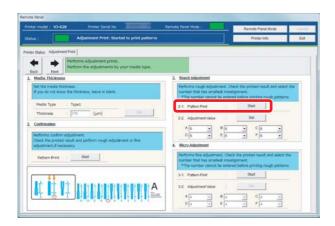


- [2] Check from Pattern A to Pattern F, and if there are misalignments, proceed to "Rough adjustment" on page 28.
  - In the example below, there are misalignments in Pattern A.

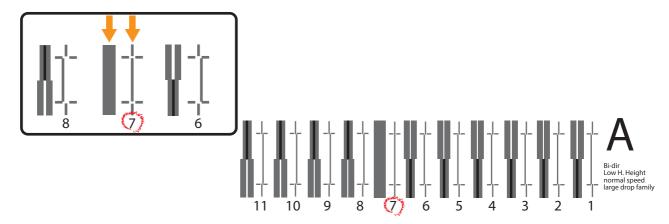


## 3. Rough adjustment

- [1] Click [Start] in [3-1 Pattern Print] of [3. Rough Adjustment].
  - Patterns are printed.



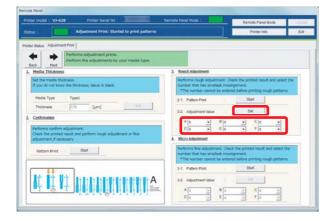
- [2] Look for and mark a number printed under a pattern that has least misalignment in Pattern A.
  - The same pattern (A to F) is printed repeatedly in the center and both edges of media.





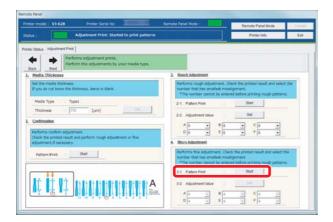
Even in the same pattern, the number that has no misalignment may be different between the center and both edges of media. In such a case, look for a number that has the least misalignment in average.

- [3] Mark a number likewise from Pattern B to Pattern F.
- [4] Enter marked values in A to F of [2-2 Adjust Change] in [3. Rough Adjustment], and click [Setting].
  - Proceed to "Micro adjustment" on page 29.

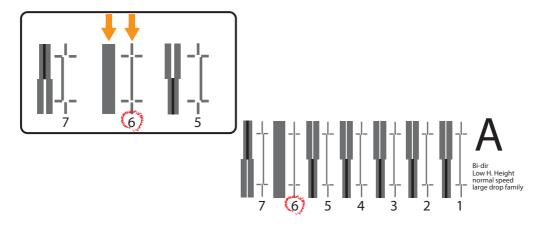


## 4. Micro adjustment

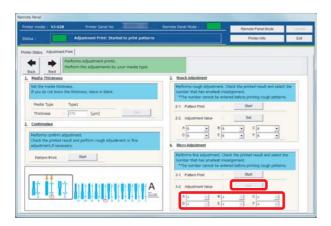
- [1] Click [Start] in [4-1 Pattern Print] of [4. Micro Adjustment].
  - Pattern A to Pattern F are printed.



- [2] Similar to "3. Rough adjustment", mark a number printed under the pattern that has the least misalignment.
  - Mark on Pattern A to Pattern F.



- [3] Enter marked values in A to F of [4-2 Adjust Change] in [4. Micro Adjustment], and click [Setting].
  - This completes the image quality adjustment.



## Correcting paper feed

For the following cases, please conduct this adjustment.

- · Using this product for the first time.
- · Changing a media type.

For any other cases, please proceed to "Nozzle check and cleaning" on page 35.

A ruler is used for this adjustment. Please prepare a commercially available ruler.



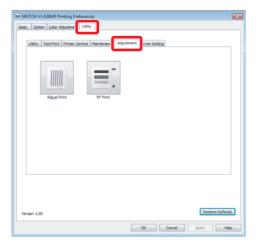
When the following defects are found in printing results, they may improve by conducting a paper feed correction.

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

#### Paper feed correction steps

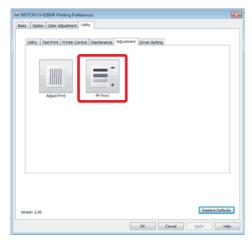
## 1. Initial adjustment

- [1] Display the Printing Preferences screen of printer driver.
  - "Displaying the Printing Preferences screen of printer driver" on page 12
- [2]



Click the [Adjustment] tab under the [Utility] tab.

[3]



Click [PF Print].

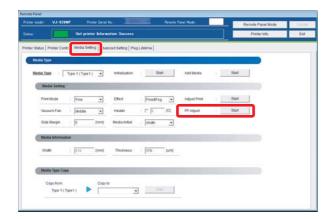
• The remote panel of MSM launches.



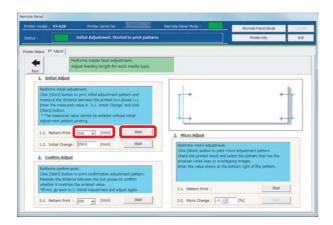
MSM can be launched directly.

□ "Launching MSM" on page 13

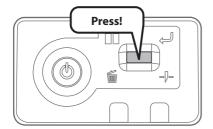
- [4] Click [Start] in [PF Adjust] of the [Media Setting] tab.
  - The [PF Adjust] window opens.



- Select the length ([mm]) of [1-1 Pattern Print] in [1. Initial Adjust], and click [Start]. [5]
  - Select a length that can be measured with a prepared ruler. When a pattern is longer, a precision level improves.
  - A pattern is printed.

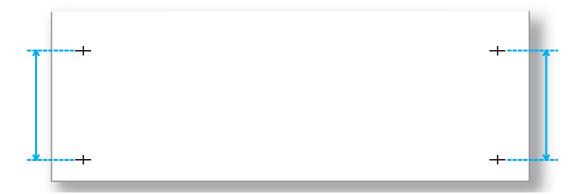


[6]

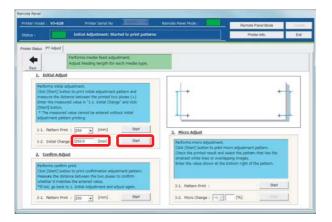


Cut the media.

- Press and hold the operation key on the operation panel for 2 seconds or more.
- The built-in cutter in this product cuts the media.
- With a ruler, measure the length between "+" in the pattern. [7]
  - In the example below, the measured place is shown in blue dotted lines and arrows (the blue parts are not actually printed).

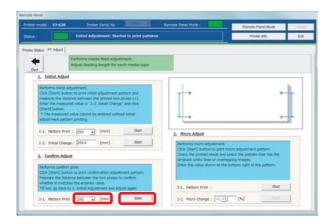


- [8] Enter a measured length to the length ([mm]) of [1-2. Initial Change], and click [Start].
  - The initial change value is saved.
  - Please proceed to "Confirming adjustment" on page 32.



## **2.** Confirming adjustment

- In [2. Confirm Adjust], select a length ([mm]) of [2-1. Pattern Print] from the dropdown menu, and click [Start]. [1]
  - A pattern is printed.



[2]



Cut the media.

- Press and hold the operation key on the operation panel for 2 seconds or more.
- The built-in cutter in this product cuts the media.

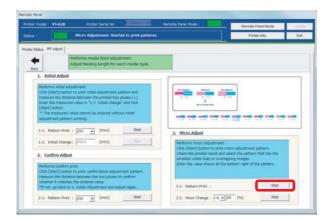
- Using a ruler, measure the length between "+" in the pattern. [3]
  - In the example below, the measured place is shown in blue dotted lines and arrows (the blue parts are not actually printed).



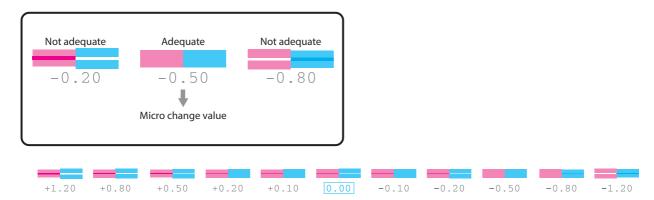
- Confirm the measured length. [4]
  - If the measured length matches the length selected in Step 1, proceed to "Micro adjustment" on page 29.
  - If the measured length does not match the selected length, re-correct with "Checking picture quality" on page 27.

## **3.** Micro adjustment

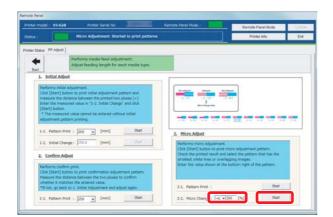
- Click [Start] in [3-1. Pattern Print] of [3. Micro Adjust]. [1]
  - · A pattern is printed.



- Observe the pattern and verify the micro change value. [2]
  - 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 change value.



- [3] Enter the checked value in Step 2 to [3-2. Micro Change], and click [Start].
  - The micro change value is saved.
  - This completes the paper feed correction.





The micro change value saved in Step 3 becomes the pattern's standard value.

For example, if "-0.50" is saved as the micro change value and a pattern is printed again, the number below the center pattern changes from "0.00" to "-0.50", and the left edge to "+0.70" and right edge to "-1.70".

## Nozzle check and cleaning

Before starting everyday operation, please check the nozzle. If nozzle clog is found, conduct cleaning.

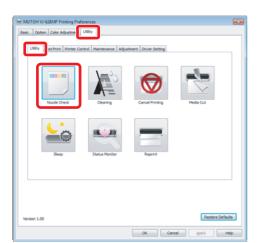
**1.** Nozzle check steps

#### When not using white ink

When you are not using white ink, take the following steps to perform nozzle check.

Display the Printing Preferences screen of printer driver. [1] "Displaying the Printing Preferences screen of printer driver" on page 12

[2]



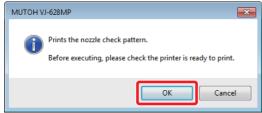
Click [Nozzle Check] in the [Utility] tab under the [Utility] tab.

• The confirmation window opens.



The same can be also done with the remote panel of MSM.

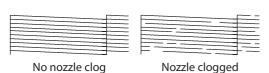
[3]



Click [OK].

• A pattern is printed.

[4]



Check the pattern.

- When there is nozzle clog, proceed to "Cleaning steps" on page 37.
- When there is no nozzle clog, proceed to "Starting printing" on page 38.

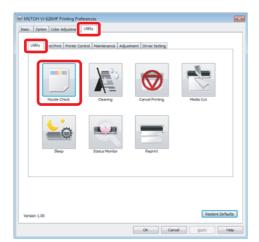
#### When using white ink

When you are using white ink, you can select from regular nozzle check and nozzle check for white ink.

If you select the background color (nozzle check B), the background for some of the nozzle check patterns are printed in color so that the nozzle condition is easy to see.

- Part of the background for the white nozzles is black.
- Part of the background for the white nozzles is not printed.
- The background of the KCMY nozzles are white.
- [1] Displays the Printing Preferences screen for the printer driver.
  - "Displaying the Printing Preferences screen of printer driver" on page 12





Click [Nozzle Check] from the [Utility] tab on the [Utility] tab.

• The selection window opens.



You can also do this for MSM remote panel.

Nozzle Check

Prints the nozzle check pattern.
Before executing, please check the printer is ready to print.

Nozzle Check Type

Nozzle Check Type

Nozzle Check B)

Select the nozzle check type, and then click [Start].

- Normal
  - Prints the standard nozzle check pattern.
- Colored background(Nozzle Check B)
   Prints the nozzle check pattern for white ink.

[4]



No nozzle clog

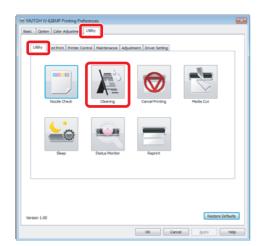
Nozzle clogged

Check the adjustment pattern.

- The illustration on the left is the image of when selecting "Colored background(Nozzle Check B)".
- If the nozzles are clogged, proceed to "Cleaning steps" on page 37.
- If there are no clogged nozzles, proceed to "Starting printing" on page 38.

# 2. Cleaning steps

[1]



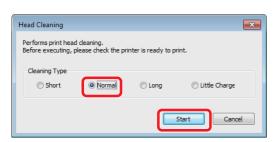
Click [Cleaning] in the [Utility] tab under the [Utility] tab.

• The [Head Cleaning] window opens.



The same can be also done with the remote panel of MSM.

[2]



Select [Normal] and click [Start].

• A cleaning starts.

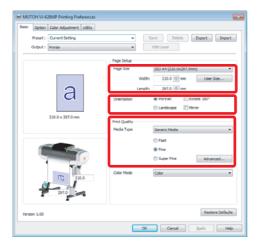
Conduct a nozzle check, again. [3]

• If there is still nozzle clog, repeat [Normal] cleaning. Refer to "Head cleaning" on page 76 for [Short], [Long], [Little Charge] and [Initial Charge].

# Starting printing

In this section, a method to print from the printer driver is explained.

- Open printing data from application software to execute printing. [1]
- [2] Open the print setup screen of the VJ-628MP printer driver from the application software.
- [3]



Conduct print setup.

• Set [Paper Size], [Orientation] and [Print Quality].

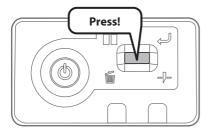
[4]



Click [OK].

- [5] Printing is executed.
- [6] Cut the media.

## Pausing/Restarting printing



During printing, short press the operation key on the operation panel.

- The printing pauses.
- Press the operation key again to restart the printing.



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

## Canceling printing

### Canceling printing from the operation panel



Press and hold the operation key on the operation panel for 2 seconds or more during printing.

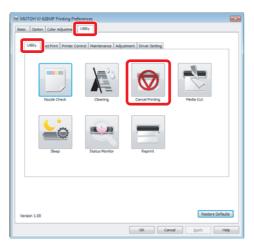
- The printing is canceled (it cannot be restarted).
- The printing data sent to the product are deleted.

### Canceling printing from printer driver/MSM

[1] Display the Printing Preferences screen of printer driver during printing.

"Displaying the Printing Preferences screen of printer driver" on page 12

[2]



Click [Cancel Printing] in the [Utility] tab under the [Utility] tab.

- The remote panel of MSM launches.
- The [Confirmation] window opens.



MSM can be launched directly.

[3]



Click [Yes].

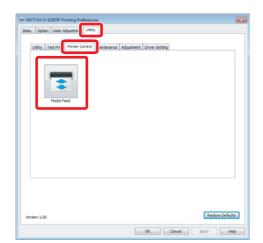
• The printing is canceled.

# Forwarding/Rewinding media

## Forwarding/rewinding media from printer driver/MSM

- [1] Display the Printing Preferences screen of printer driver.
  - Tipplaying the Printing Preferences screen of printer driver on page 12

[2]



Click [Media Feed] in the [Printer Control] under the [Utility] tab.

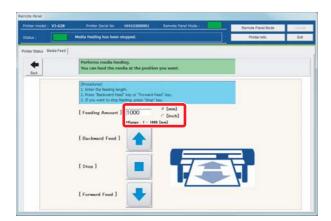
• The remote panel of MSM launches.



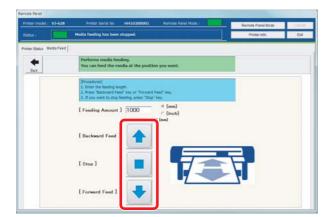
MSM can be launched directly.

TLaunching MSM" on page 13

- [3] Enter [Feed Amount].
  - The unit of [Feed Amount] can be selected from [mm] and [inch].
  - The media is forwarded/rewound by the entered length in the [Feed Amount].



- [4] When [Forward Feed]/ [Backward Feed] is clicked, the media is forwarded/rewound.
  - Click [Stop] during forwarding/rewinding to stop the operation.
  - Or short press the operation key on the operation panel to stop the operation.

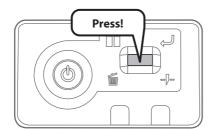


# **Cutting media**

# Cutting from the operation panel

[1] Check printing is done.

[2]



Press and hold the operation key on the operation panel for 2 seconds or more.

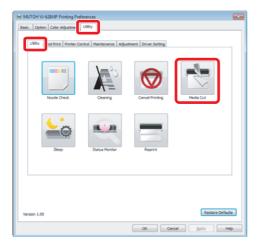
• The built-in cutter in the product cuts the media.

## Cutting from printer driver/MSM

- [1] Check printing is done.
- [2] Display the Printing Preferences screen of printer driver.

"Displaying the Printing Preferences screen of printer driver" on page 12

[3]



Click [Media Cut] in the [Utility] tab under the [Utility] tab.

- The remote panel of MSM launches.
- The [Confirmation] window opens.



MSM can be launched directly.

[4]



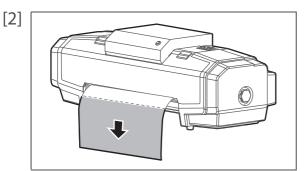
Click [Yes].

• The built-in cutter in the product cuts the media.

# Cutting by hand

For media that cannot be cut with the built-in cutter in the product, please cut following the next steps.

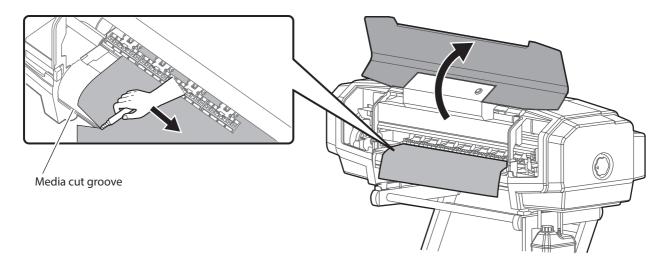
[1] Check printing is done.



Feed the media to a position where printing results can be cut.

☞ "Forwarding/Rewinding media" on page 40

- [3] Open the front cover, and cut the media with a commercial available cutter.
  - Cut along the media cut groove.







Right after printing, Media guide becomes very hot.

Allow Media guide to cool down before the next operation.

[4] Close the front cover.

# **Cutting automatically**

In this product, a setup is possible to cut media automatically after printing is done. Refer to the setup methods described below

# Chapter 2 Advanced Operations

Char	nging head height	44
Relea	asing pressure arms individually	45
Turn	ing the Blower Heater On/Off Manually	46
	Turning the Blower Heater off when it is operating	.46
	Turning on the Blower Heater before printing	.46
Adva	anced settings	47
	Setting auto cut	.47
	Setting the vacuum fan	
	Setting the heater	.50
	How to Enable Color Maintenance	.51

# Changing 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 conduct image quality adjustment.

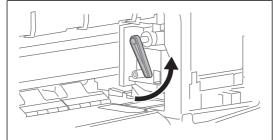


- If media is lifted, the lifted part contacts the bottom part of the print head causing the media to become dirty.
- If media containing a lot of ink becomes sodden and lifted, it contacts the bottom part of the print head causing the media to become dirty.

#### Procedure

[1] Open the front cover.

[2]



Lift the lever and raise the head height.

- [3] Close the front cover.
- [4] Conduct image quality adjustment.

  \*\*Padjusting image quality\* on page 25



Do not change the print head height while printing.

# Releasing pressure arms individually

When printing on thin media or media without stiffness, the media rubs against the print head and becomes dirty. In such a case, it may improve when releasing the pressure arms holding both sides of media.

When releasing the pressure arms individually, always conduct paper feed correction.



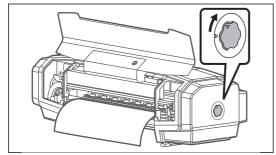
- Thin media or media without stiffness is likely to be wrinkled during printing. Wrinkles can contact the bottom side of the print head causing the media to become dirty. When both edges of the pressure arms of media are released, it can prevent wrinkles.
- When printing on thin media or media without stiffness, wrinkles can be prevented by turning down the vacuum fan.

"Setting the vacuum fan" on page 49

#### Procedure

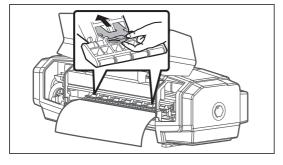
[1] Open the front cover.





Turn the media fixing knob to release the lock.

[3]



Release the pressure arms on both edges of media.

• Push in the release switch to release.

- Close the front cover. [4]
- Conduct paper feed correction. [5]



Note

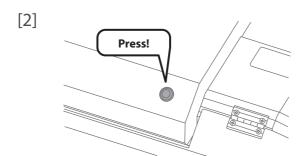
If media still remains dirty, it may improve by increasing the number of pressure arms to release. In such a case, release the same number of pressure arms for right and left each.

# Turning the Blower Heater On/Off Manually

You can manually turn the Blower Heater ON or OFF when you want to turn the Blower Heater off after completing printing, or when you want to warm up the printer interior before printing.

## Turning the Blower Heater off when it is operating

[1] Check printing is done.



Press and hold the Blower Heater operation switch for 3 seconds or longer.

• The Blower Heater turns off. (The light of the operation switch turns off.)



To turn the Blower Heater back on, press and hold the Blower Heater operation switch for 3 seconds or longer.



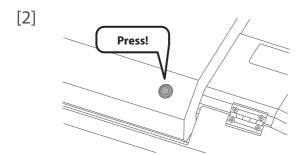
Do not turn the Blower Heater off while the printer is warming up or printing.

Print quality cannot be ensured if the Blower Heater is turned off while the printer is warming up or printing.

## Turning on the Blower Heater before printing

If the Blower Heater is turned on during sleep mode,

- the printer will wake up from sleep mode while the heater warms up.
- the printer can instantly start printing upon receiving a printjob.
- [1] Check the printer is in sleep mode.



Press and hold the Blower Heater operation switch for 3 seconds or longer.

- The Blower Heater begins warming up. (The operation switch flashes.)
- The printer wakes from sleep mode.

# Advanced settings

Settings in this product can be changed to match your usage.

Only a part of functions is introduced here.

For usage functions of software, please refer to help or manual of software.

Tiping Telp" on page 15

## Setting auto cut

It can be set to cut media automatically, when printing is done. Setup is done to match the width, thickness and material of media.

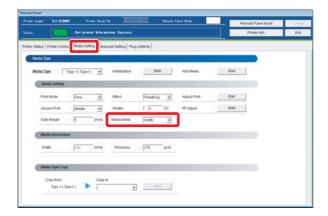


Depending on media, cutting cannot be done. In such a case, cut manually.

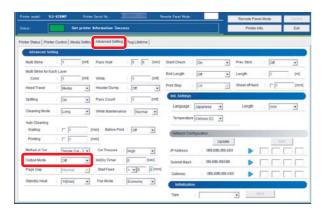
#### **Procedure**

- [1] Launch the remote panel of MSM.

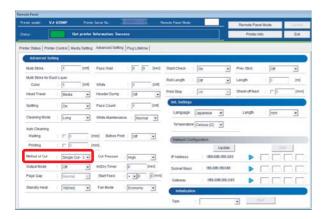
  "Displaying remote panel" on page 13
- [2] Select anything but [Off] in the [Media Initial] menu under the [Media Setting] tab.



[3] Select [Auto Cut] in the [Output Mode] menu under the [Advanced Setting] tab.



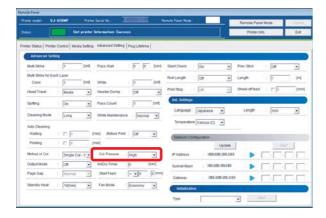
 $\begin{tabular}{ll} [4] & Select a cut method from the [Method of Cut] menu. \end{tabular}$ 



There are following modes in the [Method of Cut] menu.

Single Cut - 2 steps	Cut with fewer steps than "Single Cut - 3 steps". Suitable for media with narrow width.
Single Cut - 3 steps	By default, this cut method is used.
Double Cut - 2 steps	Set when unable to cut with "Single Cut - 2 steps". Suitable for media with narrow width.
Double Cut - 3 steps	Set when unable to cut with "Single Cut - 3 steps".

- $\begin{tabular}{ll} [5] & Select [High] or [Low] for cut strength in the [Cut Pressure] menu. \end{tabular}$ 
  - [Low] is used for thin media.



- [6] Click [Update].
  - The setting is reflected on the product.



# Setting the vacuum fan

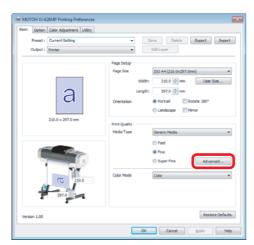
When printing on thin media or media without stiffness, it can prevent wrinkles or media jamming, if the vacuum fan is set to Low.

#### **Procedure**

[1] Display the Printing Preferences screen of printer driver.

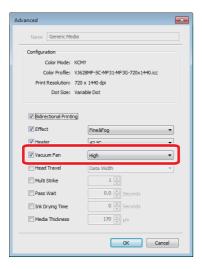
"Displaying the Printing Preferences screen of printer driver" on page 12

[2]



Click [Advanced...] in the [Basic] tab.

[3]

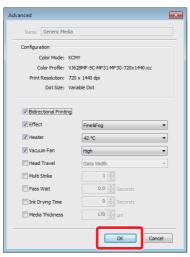


From the [Vacuum Fan] menu, select [Middle] or [Low].



- If the checkmark is removed from the checkbox, the setting already registered in the printer's main body has priority.
- The same can be also done with the remote panel of MSM. Set in the [Vacuum Fan] menu of the [Advanced] tab.

[4]



#### Click [OK].

• The setting is reflected in this product.

## Setting the heater

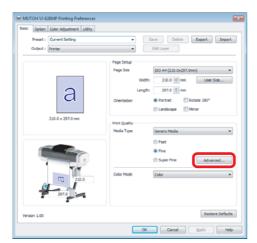
Functions of the heater are to warm up media before and after printing to improve print quality and promote fast drying. If the heater setting is changed matching the thickness or material of media, better results can be obtained.

### Procedure

[1] Display the Printing Preferences screen of printer driver.

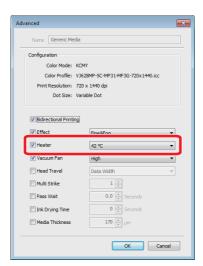
Tisplaying the Printing Preferences screen of printer driver" on page 12

[2]



Click the [Advanced...] in the [Basic] tab.

[3]



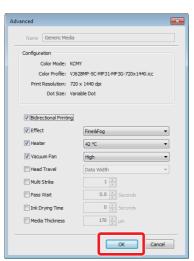
In [Heater] menu of the [Advanced] tab, enter a temperature.

- It can be set to OFF, or between 30°C and 45°C.
- Since the most suitable temperature differs depending on media, conduct test print.



- If the checkmark is removed from the checkbox, the setting already registered in the printer's main body has priority.
- The same can be also done with the remote panel of MSM. Set in the [Heater] menu of the [Advanced] tab.

[4]



#### Click [OK].

• The setting is reflected in this product.

### How to Enable Color Maintenance

If the printer has not been used for a certain period of time from the last use, an automatic color ink maintenance which spits out some ink is performed when powered on or before printing to ensure its performance.

If color inconsistency on prints is noticeable, choose "On" to enable the color maintenance. If the problem still persists, click [Start] to manually run a color maintenance.



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

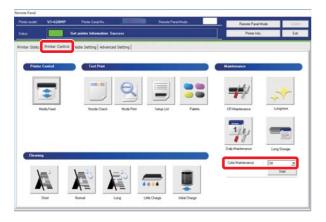
Sleep Mode" on page 20



If enabled, the printer may consume more ink than a normal automatic cleaning performed when powered on or waking from sleep mode. When you click [Start], the printer will begin performing a color maintenance which will consume quite a lot of ink.

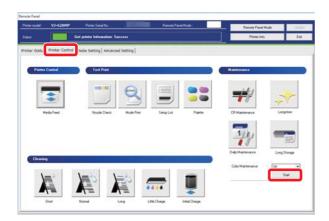
### Procedure for performing automatic color maintenance when powered on or before printing

- Launch the remote panel of MSM. [1]
- Click the [Printer Control] tab. [2] Choose "On" in the Color Maintenance menu.



### Procedure for performing manual color maintenance

- [1] Launch the remote panel of MSM.
- [2] Click the [Printer Control] tab. Click [Start] in the Color Maintenance menu.
  - The printer begins performing a color maintenance.



# Chapter 3 Maintenance

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If not using the printer for a long period of time

# 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	"Agitating ink cartridges" on page 56
	"Nozzle check and cleaning" on page 35
After daily operations	"Daily Maintenance" on page 64
Based on your usage condition	"Head cleaning" on page 76
	"Replacing ink cartridge" on page 60
	"Emptying waste ink tank" on page 62
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	"Inside cleaning" on page 77
	"Performing Long Store (head washing)" on page 84
Every six months	"Replacing the cleaning wiper" on page 81
When not used for a week or more	Weekly "Head cleaning" on page 76

# | Important!

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

- Emergency mode is happening repeatedly.
- The message to notify the life of print head and various motors is displayed in MSM.

"Handling messages / error messages" on page 92

# Agitating ink cartridges

Agitate ink in the ink cartridges in the following cases to avoid ink settlement or coagulation.

- · Before and after daily operations
- When the error lamp on the operation panel turns on and the following message is displayed on the "Status Information" of MSM.
  - "Shake the cartridges No. \*\*" (\*\* indicates the cartridge slot number)



· You must agitate the ink when the message appears. The printer will not print until it is agitated.

### **A** CAUTION

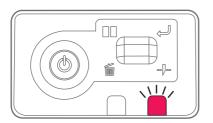


Be cautious that ink does not get into your eye or make a contact with your skin. Wear groves. When ink gets into your eye or make a contact with your skin, wash with water immediately. If left as it is, it may cause red eye or light inflammation. If it is necessary, please see your doctor immediately.

### How to check the message

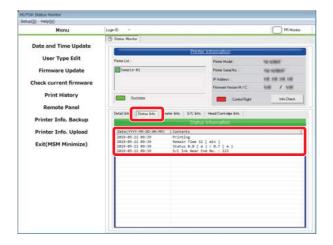
#### **Procedure**

[1]



Check that the error lamp on the operation panel is on.

- [2] Launch MSM.
- [3] Check the [Status Information].
  - For instance, if the message "Shake Cartridge. No. 34" is displayed, agitate the ink cartridges number 3 and 4.



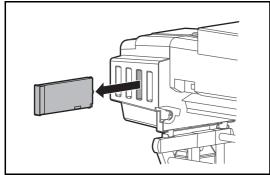


- You can check the slot numbers with the ink color display label on the rear side of the printer.
- When you have launched the MSM remote panel, you can also check from [Printer Status] [Status Information].

# Agitating ink cartridges

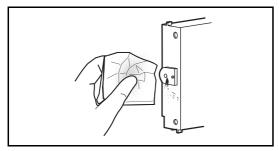
#### **Procedure**



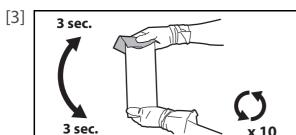


- Check that the printer is turned on.
- Wear the polyethylene gloves and remove ink cartridges from ink cartridge slots.



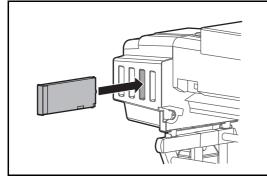


Using the lint-free cloth provided with the printer to wipe off the ink attached to the printer plug of lnk cartridge.



- 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.





Insert the ink cartridge into the original cartridge slots.

### | Important!

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

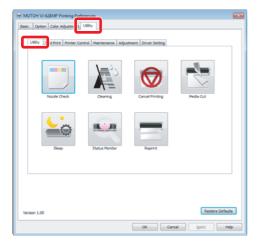
# Checking ink and replacing ink cartridge

# Checking ink level

Display the Printing Preferences screen of printer driver. [1]

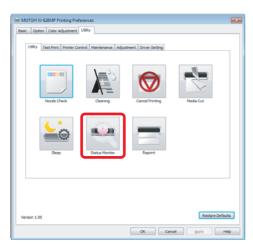
"Displaying the Printing Preferences screen of printer driver" on page 12

[2]



Click the [Utility] tab under the [Utility] tab.

[3]



Click [Status Monitor].

• The MSM remote panel opens.



MSM can be launched directly.

- [4] Check [Ink Information] in the [Printer Status] tab.
  - As ink is used, the colored scale becomes low.

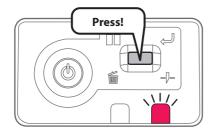


# When it becomes time to replace ink cartridge

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

#### Procedure

[1]



Short press the operation key on the operation panel.

• The buzzer stops.



Sleep mode continues after stopping the buzzer.

- [2] Check the ink cartridge that needs to be replaced.
  - Check [Status Information] also.



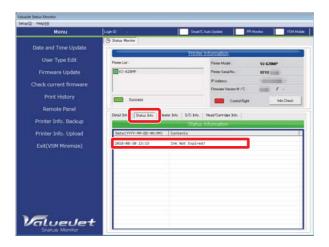
[3] Prepare an ink cartridge to replace.

# When the message "Ink Not Expired?" appears on MSM

After the ink cartridge has been used for a certain period, this message appears on MSM with the error LED to check the ink expiration date on the cartridge.

#### Steps

- [1] Check [Status Info.].
  The following message appears.
  - "Ink Not Expired?"





When the remote panel of MSM is launched, it can be also checked in [Printer Status] - [Status Info.].

[2]



Short press the operation key on the operation panel.

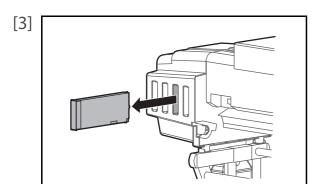
- The error LED turns off.
- The message on MSM is cleared.



cartridge slots.

This operation can also be done from MSM.

MUTOH Status Monitor Operation Manual



• Check the ink expiration date on each cartridge.

• Wear the polyethylene gloves and remove all ink cartridges from ink

[4] If expired, replace with a new ink cartridge.

# Replacing ink cartridge

When ink level becomes low, the error LED of the operation panel flashes and a buzzer sounds. Printing pauses temporarily. It restarts after changed with a new ink cartridge.



### WARNING



Leave ink cartridges away from fire or high temperature objects. It may cause fire.

## | Important!

- Do not replace ink cartridge when the power of this product is OFF. Ink level cannot be detected correctly.
- If ink cartridge is moved from cold to warm place, leave it at least 3 hours.

### Steps

[1]



Short press the operation key on the operation panel.

• The buzzer stops.

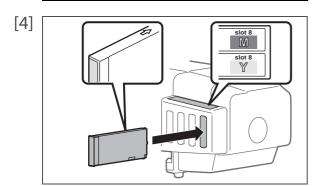
- Check the ink cartridge that needs to be replaced. [2]
  - Check [Status Information] also.



[3] 3 sec. 3 sec.

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

- 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.



Remove the empty ink cartridge and insert the new ink cartridge.

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

# Emptying waste ink tank

When a certain amount of ink is used, the error LED in the operation panel of this product becomes ON, and a buzzer sounds. Pour waste ink inside the waste ink tank to PET bottle, and discharge.



#### **CAUTION**



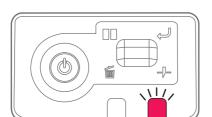
Be cautious that ink does not get into your eye or make a contact with your skin. Wear groves. When ink gets into your eye or make a contact with your skin, wash with water immediately. If left as it is, it may cause red eye or light inflammation. If it is necessary, please see your doctor immediately.



When moving this product, always empty the waste ink tank even if it is for a short distance. If ink splashes inside the waste ink tank while being moved, it can cause damage.

### Procedure

[1]



Check the error LED is flashing.

- Launch MSM and display the remote panel. [2] "Launching/Displaying/Exiting MUTOH Status Monitor (MSM)" on page 13
- Check [Status Information] in the [Printer Status] tab. [3]
  - A message indicating that the waste ink tank is full is displayed.



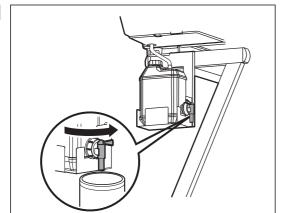
[4] Prepare a container like PET bottle to transfer the waste ink.



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

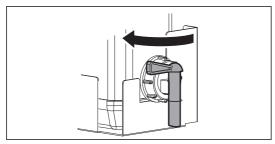
Cover the floor beneath the waste fluid tank using paper you do not need or the like. [5]

[6]



Open the waste fluid valve, and transfer the waste fluid to the container.

[7]



After pouring the waste fluid to the empty container, close the waste fluid valve securely.

- Wipe the opening of Waste fluid valve with a cloth, etc. [8]
- Dispose of the waste fluid as an industrial waste product. [9]

# 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.

- Click [Reset Waste Ink]. [10]
  - The confirmation window opens.





[Reset Waste Ink] can be also done from [Utility] - [Maintenance] of the printer driver.

[11]



#### Click [Yes].

• The waste ink counter is set to 0.

# **Daily Maintenance**

## Flow of Daily Maintenance

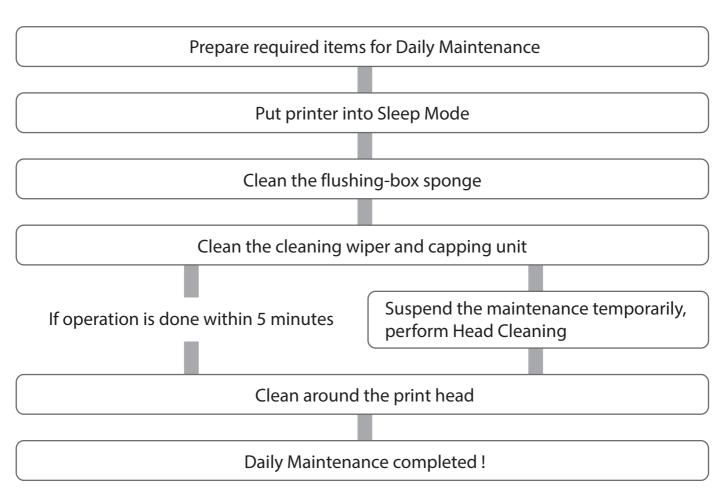
This printer requires daily maintenance.

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



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, refer to** "Continuously using printer after daily maintenance" on page 73.





If you can see any ink stains or dust, clean the inside of the printer.

### Preparing for Daily maintenance

#### Required Items

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



The proper way to store cleaning stick varies depending on where you use it. You will need at least 2 pieces of cleaning sticks for a daily maintenance.

## | Important!

- Use a lint-free cloth 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 cannot suck up maintenance cleaner directly from the maintenance cleaner bottle using the dropper, use one of the plastic cup to pour the cleaner.

If the maintenance cleaner still remains in the plastic cup, put a plastic bag or wrap over the cup to keep out dust.

- If you want to purchase the optional maintenance cleaner, contact your local Mutoh dealer or nearest Mutoh sales office.
- [2] Wear the polyethylene gloves.



#### Put the printer into Sleep Mode

[1] Launch the MSM remote panel.

"Displaying remote panel" on page 13

[2]



Click "Sleep Mode" - "Start".

• The confirmation window opens.



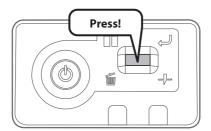
You can also start sleep mode from the printer driver.

[3]



Click "Yes".

[4]

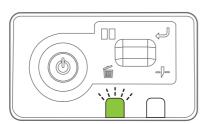


Short press the operation key on the operation panel.

- [5] The printer automatically performs the cleaning.
  - When the Short cleaning is complete, the carriage moves to the maintenance position.



[6]



The data LED flashes.

• Open the front cover.

# | Important!

- Standard cleaning time should be within 5 minutes.
   If it takes longer, the stick can dry causing damage to the print head.
- If maintenance is likely to take more than 5 minutes, suspend it and perform head cleaning before resuming the maintenance.

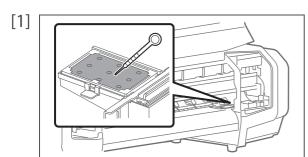
## **Performing Daily Maintenance**

## Important!

When performing daily maintenance, check the points below:

- Do not touch the cleaning wiper and the capping unit with your hands. If oil from your hands gets on those parts, this cleaning may not be performed properly.
- Do not touch the print head surface with fingers or a cleaning stick. It can cause damage to the print head.
- · Always use a cleaning stick dampened with the dedicated maintenance cleaner in the plastic cup. DO NOT use non-dedicated maintenance cleaner. It may cause nozzle clogging.
- DO NOT touch the tip of the cleaning sticks with your finger. If finger oil gets on the stick, it will damage the print head.

### **1.** How to clean the flushing-box sponge



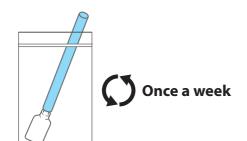
Use the dropper to moisten the flushing-box sponge with maintenance cleaner.

· Amount used: 3.0 ml



Do NOT use the maintenance cleaner in the plastic cup that the cleaning stick is submerged.

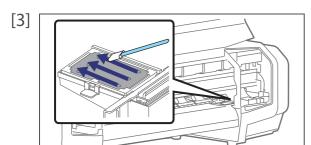
[2]



Prepare a cleaning stick for cleaning the flushing-box sponge.



The cleaning stick can be used for 1 week. Change the cleaning stick once a week, or when the ink on the stick cannot be removed.

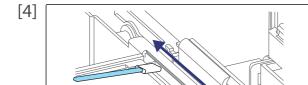


Use the cleaning stick to clean the whole area of sponge.

If you cannot remove ink clumps using the cleaning stick, replace the flushing-box sponge.

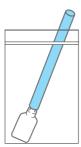
Replacing absorption material for the flushing box" on page 78





Clean off the ink on the left edge of the part, located between the flushing box and cleaning wiper.

[5]



After the cleaning is done, put the cleaning stick in the plastic zipper bag and close the zipper to store.



Make sure to close the zipper firmly to avoid dust in the bag.

# 2. How to clean the cleaning wiper and capping unit

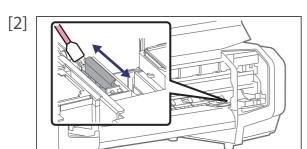
Once a week

Prepare another cleaning stick to clean the cleaning wiper and around the capping unit.

• Pour 30 ml of dedicated maintenance cleaner into the plastic cup and dip the foam tip of the cleaning stick in it.

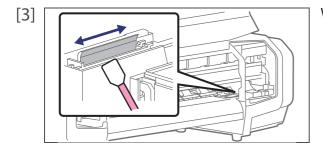
### [ Important!

- The cleaning stick submerged in the plastic cup can be used for 1 week.
   Change the cleaning stick once a week, or when the ink on the stick cannot be removed.
- Make sure to change the maintenance cleaner once a week.
- If the cleaning stick gets dirty while cleaning, submerge the foam tip of the stick into the maintenance cleaner in the cup.



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.

[4] Check that the cleaning wiper and the area around are clean.

Left side of the cleaning wiper

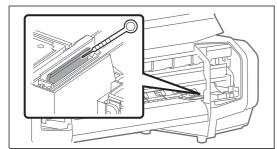








[5]

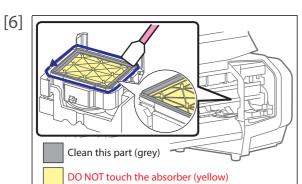


Use a dropper to moisten the cleaning wiper with maintenance

· Amount used: 5.0 ml



Do NOT use the maintenance cleaner in the plastic cup that the cleaning stick is submerged.

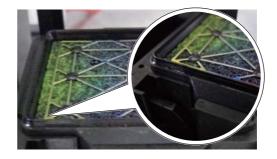


Use the cleaning stick to clean around the rubber part of the capping unit to remove the ink deposits and dust.

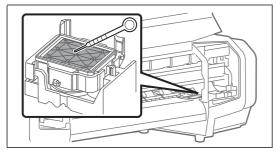
[7] Check that the capping unit and the area around are clean.







[8]



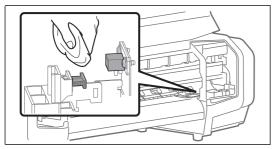
Use the dropper to moisten the absorber of the capping unit with maintenance cleaner.

· Amount used: 1.5 ml



Do NOT use the maintenance cleaner in the plastic cup that the cleaning stick is submerged.

[9]



Moisten the lint-free cloth with maintenance cleaner and clean the air valve surface to remove the ink deposits.



Wear polyethylene groves to avoid contact with maintenance cleaner.

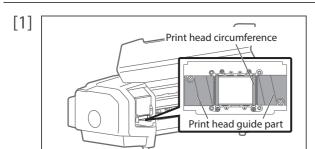
Next clean the print head circumference. [10]

\*\*Bow to clean around the print head" on page 71



- Standard cleaning time should be within 5 minutes.
- If maintenance is likely to take more than 5 minutes, suspend it and perform head cleaning before resuming the maintenance.

## **3.** How to clean around the print head



Look at the bottom side of the carriage and check if dusts and ink lump are adhered.

- Print head circumference (silver metal part)
- Print head guide part (black plastic part)
- [2] Use the cleaning stick to remove the ink deposits or dust on the bottom of the carriage.
  - Clean this part (grey)
  - DO NOT touch the surface of a print head (yellow)

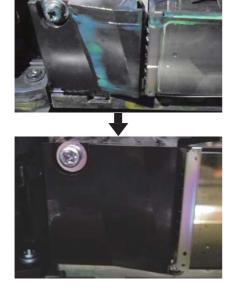
Surface around print head (silver metal part)

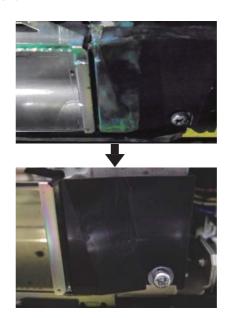
\*Clean the part between the print head and print head guide.

Print head guide (black plastic part)



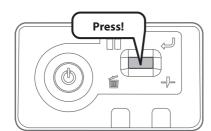
- Do not touch the platen or media guide. The temperature may be high.
- If maintenance cleaner is splashed onto the printer, use a lint-free cloth to wipe it off.
- [3] Check that the area around the print head is clean.





[4] Close the front cover.

[5]



Short press the operation key on the operation panel.

- The carriage returns to the original position.
- The printer automatically enters to sleep mode.

[6]



After cleaning, leave the cleaning stick dipped in dedicated maintenance cleaner.



- Using plastic bag or wrap, cover the plastic cup with dedicated maintenance cleaner inside to keep out dust.
- Check that the lid of the maintenance cleaner is shut properly and store it.
- Clean off the maintenance cleaner from the dropper with lint-free cloth. [7]
- Now the daily maintenance is complete. [8]

### Continuously using printer after daily maintenance

In following cases, clean the daily maintenance parts.

- When print blurring and dot missing remain after head cleaning is done.
- If you perform printing all day without entering to sleep mode and you need to perform daily maintenance.

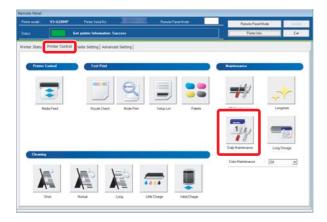
#### **Preparation:**

See "Preparing for Daily maintenance" on page 65 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.
- 1. Putting the printer into the Daily maintenance mode
- [1] Launch the MSM remote panel.

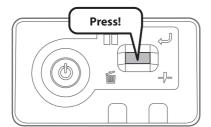
  "Displaying remote panel" on page 13
- [2] Click the [Printer Control] tab. Click [Daily Maintenance].



[3] Click [Start].

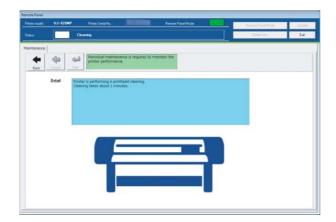


[4]

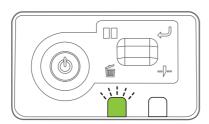


Short press the operation key on the operation panel.

- [5] The printer automatically performs the cleaning.
  - When the Short cleaning is complete, the carriage moves to the maintenance position.



[6]



The data LED flashes.

• Open the front cover.

### **2.** Cleaning daily maintenance parts

The maintenance procedure and parts to be cleaned are the same as "Performing Daily Maintenance" on page 67.

- @"How to clean the flushing-box sponge" on page 67
- Provided the cleaning wiper and capping unit on page 69
- Thow to clean around the print head" on page 71

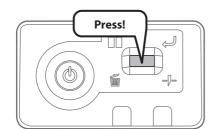
### Important!

- Standard cleaning time should be within 5 minutes.
- If maintenance is likely to take more than 5 minutes, suspend it and perform head cleaning before resuming the maintenance.

### **3.** Finishing maintenance

Close the front cover. [1]

[2]



Short press the operation key on the operation panel.

• The carriage returns to the original position.

[3]



After cleaning, leave the cleaning stick dipped in dedicated maintenance cleaner.

### | Important!

- Using plastic bag or wrap, cover the plastic cup with dedicated maintenance cleaner inside to keep out dust.
- · Check that the lid of the maintenance cleaner is shut properly and store it.
- Clean off the maintenance cleaner from the dropper with lint-free cloth. [4]
- [5] Now the daily maintenance is complete.

### **Printer Maintenance**

### Head cleaning

When nozzle clogging 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 clogging is found.
Long cleaning	Consumes more ink than Normal cleaning. When nozzle clogging 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.
Initial Charge	Gives a rather higher cleaning effect than "Little Charge", but also consumes rather more ink.



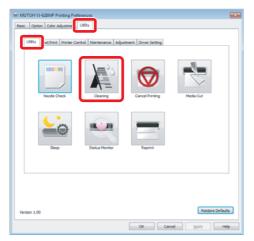
Comply strictly with the following when you performing "Little Charge" or "Initial Charge". If charging is interrupted, ink will be lost when charging is resumed.

- Do not open the Front cover.
- Do not use ink cartridges that have little ink remaining.

#### Steps for head cleaning

- [1] Display the Printing Preferences screen of the printer driver.
  - ☞ "Displaying the Printing Preferences screen of printer driver" on page 12

[2]

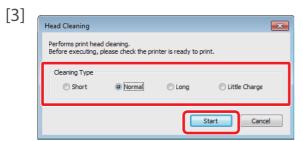


Click [Cleaning] in the [Utility] tab under the [Utility] tab.

• The "Head Cleaning" window opens.



The same can be also done with MSM.



Select a mode of cleaning and click [Start].

· Cleaning starts.

- [4] Conduct Nozzle Check.
  - If nozzle clogging still remains, repeat cleaning and nozzle check.



- · When nozzle clogging remains even after repeating normal cleaning several times, conduct Long cleaning.
- When nozzle clogging remains even after repeating Long cleaning several times, conduct "Flow of Daily Maintenance" on page 64 and perform maintenance.

Yet, when nozzle clogging remains, conduct "Little Charge".

### Inside cleaning

#### **Cleaning period:**

· Monthly

#### **Procedure**

[1] Open the front cover.



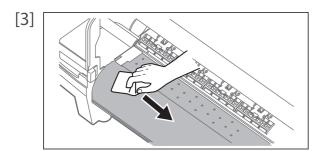
 $Immediately\ after\ turning\ off\ the\ power,\ the\ temperature\ of\ the\ heater\ in\ this\ product\ is\ very\ high.$ 

Touch the platen or media guide and if it is too hot, wait for a while before starting cleaning.

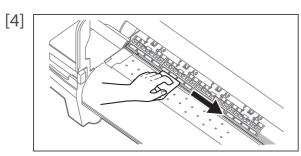
Brush off dusts on the pressure arms with a soft brush.



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



Using a soft cloth that is soaked in water and squeezed tightly, wipe dirt on the platen and media guide.



Using a soft cloth that is soaked in water and squeezed tightly, wipe dirt on the silver part of grid roller.

[5] Close the front cover.

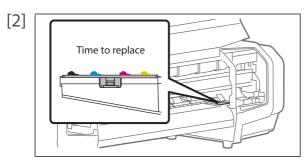
### Replacing consumable parts

### 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.

#### **Cleaning period:**

- Approx. every 2 months (since it differs depending on usage frequency, please check periodically)
- **1.** Checking steps
- [1] Open the front cover.



Check the absorption material for the flushing box.

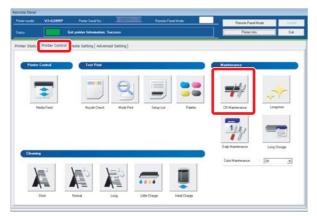
- When there are lumps of ink rise from the frame of the flushing box, it is time to replace.
- When the flushing-box frame was deformed, it is time to replace.

- [3] Close the front cover.
- 2. Replacing steps

#### Put printer in CR Maintenance state

- [1] Launch the MSM remote panel.

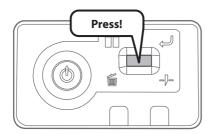
  "Displaying remote panel" on page 13
- [2] Click the [Printer Control] tab. Click [CR Maintenance].



#### [3] Click [Start].



[4]



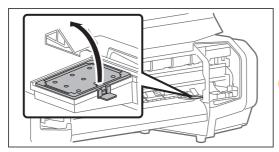
Short press the operation key on the operation panel.

• The carriage moves to the maintenance position.

- [5] Open the front cover.
- Wear the polyethylene gloves. [6]



[7]



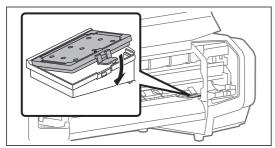
Remove the absorption material for the flushing box.

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



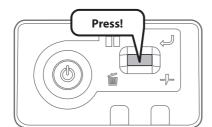
When removing the absorption material for the flushing box, be cautious of ink drops.

[8]



Attach new absorption material for the flushing box.

[9] Close the front cover. [10]



Short press the operation key on the operation panel.

• The carriage returns to the original position.

### Replacing cutter

When the cutter blade becomes dull, replace with a new cutter.

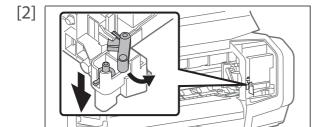


- Do not push the knob of cutter or release suddenly.

  Because there is a spring under the cutter, the cutter can jump out.
- Do not touch the cutter blade. It may cause injury.

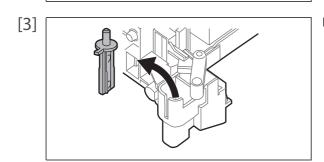
#### Procedure

[1] Open the front cover.

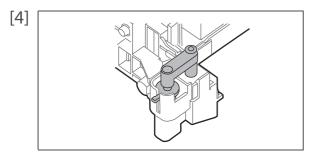


Move the cutter holder a little so that the cutter can be removed.

• While pushing down the cutter knob lightly, move the cutter holder to your side.



Remove the cutter.



Attach a new cutter.

• Set the cutter for the cutter holder to be in the original position.

[5] Close the front cover.

### 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:**

- Cleaning wiper (Supplied accessories)
- Polyethylene gloves (Supplied accessories)

#### Procedure

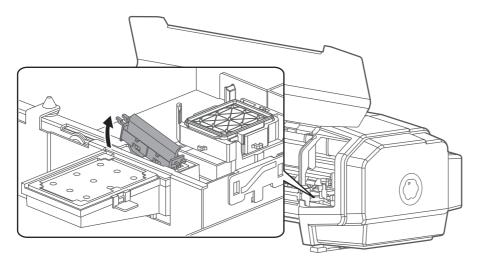
[1] Wear the polyethylene gloves.



[2] Put printer in CR Maintenance state.

"Put the printer into Sleep Mode" on page 65

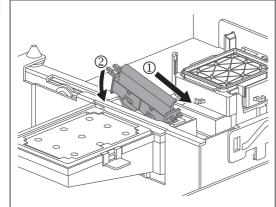
- [3] Open the front cover.
- [4] Remove the cleaning wiper.
  - Lift the cleaning wiper hook and release the hook. Then, remove the cleaning wiper.





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

[5]



Follow the steps below to install new cleaning wiper.

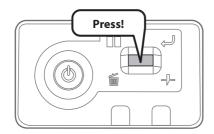
- Slide the front side of the new cleaning wiper into its slot.
- Press the wiper hook down until it clicks into place.



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

[6] Close the front cover.

[7]



Short press the operation key on the operation panel.

- The carriage returns to the original position.
- That ends the procedure.

### **Transporting**

### **Transporting**

When transporting this product, it is necessary to perform head washing from the Long Store menu to wash ink lines with cleaning fluid, then empty the waste ink tank and fixate the print head with packaging material. If transported as it is, it can cause ink leakage and damage to the print head.

When it is used again, conduct reinstallation work and initial charging.

"Performing Long Store (head washing)" on page 84

"Performing Initial Charge" on page 89



- When moving this product, always empty the waste ink tank even if it is for a short distance. If ink splashes inside the waste ink tank while being moved, it can cause damage.
- Do not tilt, set against something or place this product upside down.

  The ink inside the printer may leak. Moreover, normal operation after moving (to these positions) cannot be guaranteed



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

### Performing Long Store (head washing)

### Required item:

- Cleaning cartridges (8 packs)
- [1] Display the Printing Preferences screen of printer driver.
  - "Displaying the Printing Preferences screen of printer driver" on page 12

[2]



Click the [Maintenance] tab under the [Utility] tab.

[3]



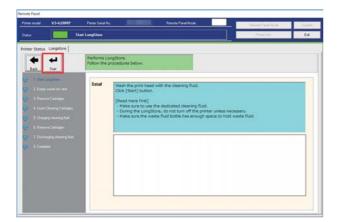
Click [Long Store]

• The MSM remote panel opens.



MSM can be launched directly.

- [4] Click [Start] in the [Long Store] tab.
  - Follow the onscreen instruction.

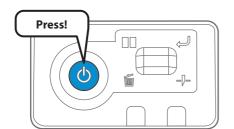


[5] Empty the waste ink tank.

"Emptying waste ink tank" on page 62

[6] Prepare required items for daily maintenance.

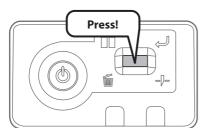




Press the power button of this product.

• The blue light blinks.

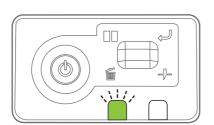
[8]



Short press the operation key on the operation panel.

- The printer automatically performs the cleaning.
- The carriage moves to the maintenance position.

[9]

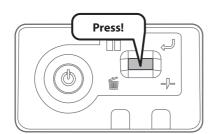


The data LED flashes.

• Open the front cover.

[10] Perform daily maintenance.

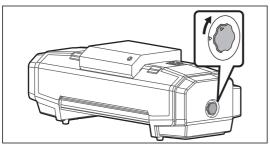
[11]



After performing maintenance, short press the operation key on the operation panel.

- This product starts its powering off operations.
- The blue light becomes OFF.

[12]



Turn the media fixing knob to release the lock.



When not using this product, release the lock of the media fixing knob regardless of power being OFF.

### Long Storage and Initial Charge

### If not using the printer for a long period of time

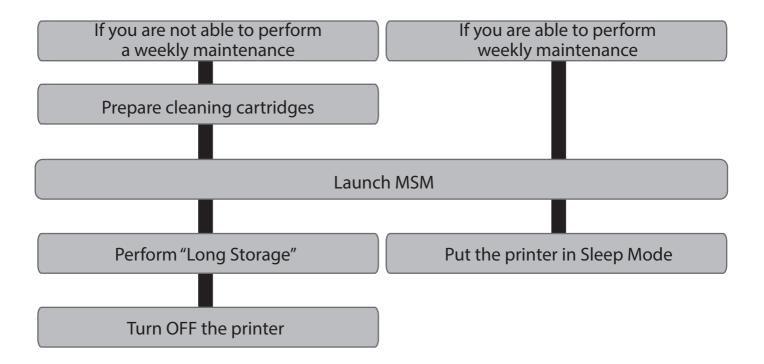
When you may not be able to run a weekly cleaning on the printer that is in sleep mode:

Perform "Longstore" and then power off the printer. It allows you to store the printer for up to one month (30 days).



If you are able to perform weekly maintenance, you can store it in sleep mode.

The procedures of Long Storage is as follows.





Be sure to perform daily maintenance before turning the printer off.  $\label{eq:control} \begin{tabular}{ll} \begin{tabular}{$ 

If you turn the power off without performing daily maintenance, the nozzle may become clogged.

### Performing Long Storage

### Required item:

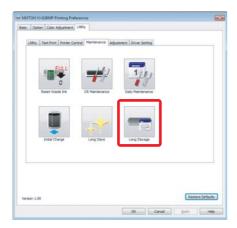
- Cleaning cartridges (8 packs)
- Display the Printing Preferences screen of printer driver. [1]
  - "Displaying the Printing Preferences screen of printer driver" on page 12

[2]



Click the [Maintenance] tab under the [Utility] tab.

[3]



Click [Long Storage]

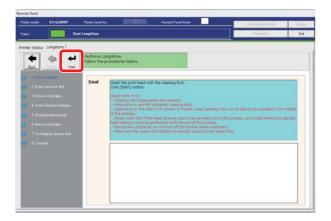
• The MSM remote panel opens.



MSM can be launched directly.

TLaunching MSM" on page 13

- Click [Start] in the [Long Storage] tab. [4]
  - Follow the screens.



[5] Prepare required items for daily maintenance.

\*\*Preparing for Daily maintenance" on page 65





Press the power button of this product.

• The blue light blinks.

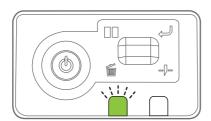
[7]



Short press the operation key on the operation panel.

- The printer automatically performs the cleaning.
- The carriage moves to the maintenance position.

[8]

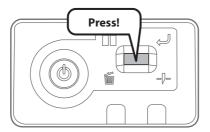


The data LED flashes.

• Open the front cover.

[9] Perform daily maintenance.

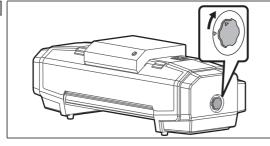
[10]



After performing maintenance, short press the operation key on the operation panel.

- This product starts its powering off operations.
- The blue light becomes OFF.

[11]



Turn the media fixing knob to release the lock.



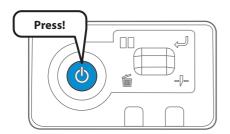
When not using this product, release the lock of the media fixing knob regardless of power being OFF.

[12] To use the printer again, perform initial charging.

\*\*Performing Initial Charge\*\* on page 89

### Performing Initial Charge

[1]



Turn the power button of this product ON.

- Blue light becomes ON.
- The product starts initialization operations.
- [2] Display the Printing Preferences screen of printer driver.
  - "Displaying the Printing Preferences screen of printer driver" on page 12
- [3]



Click the [Maintenance] tab under the [Utility] tab.

[4]



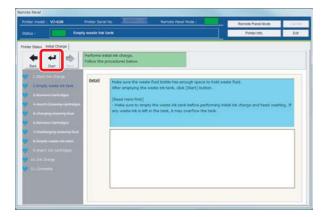
Click [Initial Charge].

• The MSM remote panel opens.

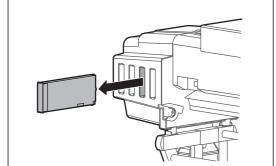


You can perform [Initial Charge] from the [Printer Control] tab on the MSM remote panel.

[5] Click [Start] after emptying the waste ink tank.

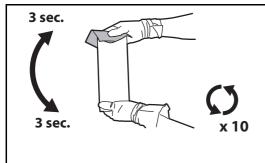


[6]



When cleaning cartridges are inserted to the cartridge slots, remove them all.

[7]



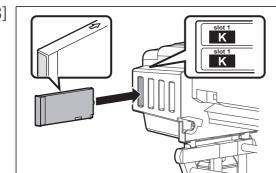
Make sure you agitate the ink cartridge after you unpack it.

- 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.



Be sure to use new ink cartridges. If a used cartridge does not have enough ink, it will run out during the initial ink charging and will consume more ink.

[8]



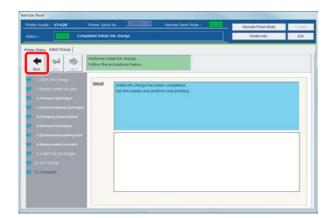
Insert the ink cartridge to this product.

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



After all ink cartridges are inserted, this product starts ink charging.

- [9] In the [Finish] screen, click [Back].
  - It finishes initial charging.



# Chapter 4 Appendix

Troul	bleshooting	94
	Handling messages / error messages	
Spec	ifications of this product	99
	Drawing area	
Revis	List of specificationssion History.	
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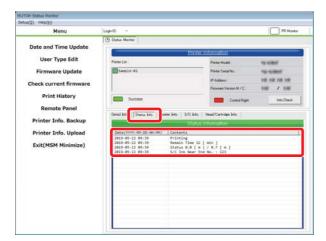
### Troubleshooting

### Handling messages / error messages

#### Checking message / error / warning

MSM is used to check error/warning when problem happens and to check messages while the product is operating correctly.

- [1] Launch MSM.
- [2] Check [Status Info.].
  - Message / error / warning contents are displayed.
  - When countermeasures are displayed, follow them.





- When the remote panel of MSM is launched, it can be also checked in [Printer Status] [Status Info.].
- Operations may be temporarily paused when an error occurs. When an error is corrected, it restarts the operation.

#### Message display of operation panel

The error LED in the operation panel becomes ON.

[1] Check message contents with MSM and handle the message.

"Checking message / error / warning" on page 92

#### Error display of operation panel

The error LED in the operation panel becomes ON (flashes in warning state), and a buzzer sounds.

[1]



Short press the operation key on the operation panel, when the buzzer continues sounding.

• The buzzer stops.

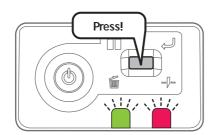
[2] Check error / warning contents with MSM and handle the error / warning.

"Checking message / error / warning" on page 92

#### **Emergency mode**

When a serious error happens, the data LED and error LED in the operation panel flash simultaneously, and the buzzer sounds in a fixed interval.

[1]

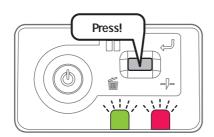


Short press the operation key on the operation panel, when the buzzer continues sounding.

• The buzzer stops.

- [2] Check the serious error contents with MSM.
  - "Checking failure contents of the emergency mode" on page 94
  - After checking it, proceed to step 5.
  - When the status monitor cannot be viewed, proceed to step 3.

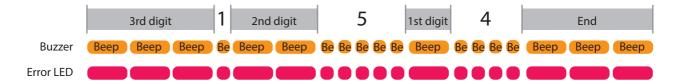
[3]



When the status monitor cannot be viewed, short press the operation key on the operation panel again.

• LED flashes and the buzzer sounds in a regular pattern. The pattern indicates error number.

- [4] Count the number of buzzer sounds (or number of short flashes of LED).
  - Error number is 3 digits.
  - Long sounding buzzer indicates a digit of error number, and the short sounding buzzer after the long buzzer indicates error number.
  - For example, the No. 154 error shows the next pattern. 3 long, **1 short**, 2 long, **5 short**, 1 long, **4 short**, 3 long.

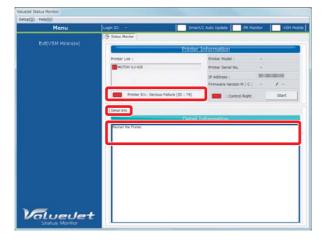




- The pattern will not repeat. To check it again, short press the operation key on the operation panel.
- If error number of a digit is "0", a long buzzer (buzzer indicating a digit), then after having no sound for a fixed time, a long buzzer indicating the next digit sounds. For LED, there is a long flash only, and it moves on to a long flash without having a short flash.
- [5] Check the followings.
  - Open the front cover and if media is jammed, remove it.
  - If there is a replaced part, check it is installed correctly.
- [6] Turn the power of this product OFF. Wait for 10 seconds or more and turn the power ON.
  - If the same error occurs after re-launching, please contact your local MUTOH dealer.

#### Checking failure contents of the emergency mode

- [1] Launch MSM.
- [2] Check [Printer Information] and [Detail Info.].
  - Contents of serious errors and countermeasures are displayed.



#### Smartchip recovery

When the following message is prompted on the MSM, 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.

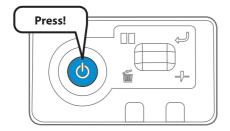
Display	Description	
S/C card Recognition Error No. :*******	An ink cartridge that needs smartchip recovery may have been installed.  Remove the ink cartridge and reload it.  If the printer is still unable to read it, install a new ink cartridge.  • If a message "Check that correct color is correctly installed. No.:****" appears after the ink cartridge is reloaded, follow the message "Check that correct color is correctly installed. No.:****" to operate.	
Check that correct color is correctly installed. No.:****	An ink cartridge that needs smartchip recovery may have been installed. Check that the ink color of the cartridge inserted is correct.  In case of wrong color insertion, load a correct ink color cartridge.  If color is correct, press the operation key on the operation panel. The printer will perform smart chip recovery and will continue to print. This operation can also be done from MSM.  MUTOH Status Monitor Operation Manual	



During smartchip recovery execution, the ink cartridge being recovered highlighted in yellow in the S/C Card Information of MSM.

### Clearing a media jam

[1]



Turn the power button of this product OFF.

- Blue light becomes OFF.
- The product starts powering off operations.

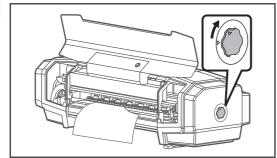
[2] Open the front cover.





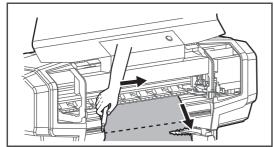
Move the carriage from the top of the media to the right.

[4]



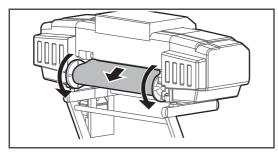
Turn the media fixing knob to release the lock.

[5]



Pull the media to your side, and cut the media with a commercial available cutter.

[6]

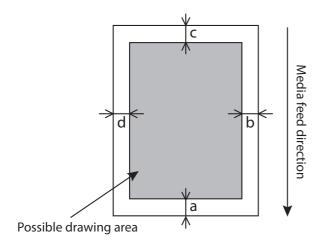


Lift both ends of the scroller, and manually rewind the roll media.

[7] If foreign substances or pieces of media remain inside the printer, remove them.

## Specifications of this product

### Drawing area



```
a=5 mm *1 *2
b=5 mm to 25 mm *3
c=5 mm
d=5 mm to 25 mm *3
```

- \*1 After media initial and manual feedback, and pasting prevention process, printing starts at
- \*2 While the media initial tip and auto-cut is ON, printing starts at 40 mm.
- \*3 According to the remote panel settings

## List of specifications

Model name		VJ-628MP
Print method		On demand piezo method
Drive method		Firmware servo/DC motor drive
Paper feed method		Horizontal conveyance, roll paper, set from the back of the product, front discharge paper with paper feed operation, limited to outward roll
Media fix		Pressure roller down method with manual media fixing knob
Conditions of usable media	Roll paper peripheral	150 mm
	Roll paper weight	9 kg or less
	Maximum paper width	630 mm (In case of paper tube > paper width, paper tube width)
	Maximum paper thickness	Head height when set to "Low": 0.3 mm Max. Head height when set to "High": 1.3 mm Max.
Maximum print width		620 mm
Media cut method		Auto cut or manual cut
Heater		Installed under the media guide, OFF/30 °C to 45 °C
Head height adjustment		2 levels, Low and High
CPU		64 bit RISC CPU
Memory		256 MB
Interface		Ethernet (10/100BASE-TX)
Ink	Color	4 colors (Black, Cyan, Magenta, Yellow) 5 colors (Black, Cyan, Magenta, Yellow, White) 6 colors (Black, Cyan, Magenta, Yellow, Light cyan, Light magenta) 7 colors (WH) (Black, Cyan, Magenta, Yellow, Light cyan, Light magenta, White) 7 colors (Light color) (Black, Cyan, Magenta, Yellow, Light cyar Light magenta, Light black) 7 colors (OGB) (Black, Cyan, Magenta, Yellow, Orange, Blue, Green) 8 colors (Light color) (Black, Cyan, Magenta, Yellow, Light cyar Light magenta, Light black, Cyan, Magenta, Yellow, Light cyar Light magenta, Light black, White) 8 colors (OGB) (Black, Cyan, Magenta, Yellow, Orange, Blue, Green, White) 220 ml cartridge, 500 ml ink bag (Orange, Green and Blue are
		only available in 220ml)
Waste ink tank		Fixed to the leg, capacity 2,000 ml, waste ink discharge by use

Environmental conditions	Operating environment	Temperature 20 to 32 °C, humidity 40 to 60%, (Noncondensing)
	Recommended Printing Environment	Temperature 22 to 30 °C, humidity 40 to 60%, (Noncondensing)
	Change rate	Temperature: No more than 2 °C per 1 hour Humidity: No more than 5% per 1 hour (Non-condensing)
	Environment for storage	<ul> <li>Storage without ink charging: up to 6 months         Temperature -20 to +60 °C, humidity 20 to 80% (Noncondensing)     </li> <li>Storage with ink charging: up to 30 days         (Perform the Daily Maintenance in the operation manual)         Temperature: 5 to 30 °C, humidity: 20 to 80% (Noncondensing)     </li> </ul>
Power supply specifications	Printer	Voltage: AC 100 V to 120 V $\pm$ 10% or 200 V to 240 V $\pm$ 10%
specifications		Frequency: 50 / 60 Hz ±1 Hz
		Capacity: No less than 7.0 A
		Voltage switch: Manual switching with 100/200 V, Selector switch set on 200 V when shipped.
	Blower heater	Voltage: AC 100 V to 240 V ±10%
		Frequency: 50 / 60 Hz ±1 Hz
		Capacity: No less than 4.0 A
Power consumption	Printer	Power off: AC100 V to 120 V, 1 W or below AC200 V to 240 V, 1.1 W or below.
		Operation: 830 W or below
	Blower heater	Power off: AC100 V to 120 V, 1 W or below AC200 V to 240 V, 4.0 W or below.
		Operation: 350 W or below
Current consumption	Printer	100 V to 120 V: 6.5 A or below
		200 V to 240 V: 3.5 A or below
	Blower heater	AC100 V to 120 V: 3.5 A or below
		AC200 V to 240 V: 1.8 A or below
External dimensions	Height	366 mm (with exclusive stand: 1,166 mm)
	Width	1,190 mm
	Depth	438 mm (with exclusive stand: 590 mm)
Weight	Main body	37 kg
	Legs	8.7 kg

## Revision History

Date	Version	Manual code	Supported Firmware
2018. 2	00	VJ628MPE-A-00	V.1.00
2018. 3	01	VJ628MPE-A-01	V.1.00
2019.3	02	VJ628MPE-A-02	V.1.03
2019. 10	03	VJ628MPE-A-03	V.1.04
2020. 3	04	VJ628MPE-A-04	V.1.04
2020. 7	05	VJ628MPE-A-05	V.1.04
2020.8	06	VJ628MPE-A-06	V.1.05
2021.3	07	VJ628MPE-A-07	V.1.05
2021.7	08	VJ628MPE-A-08	V.1.07
2021.8	09	VJ628MPE-A-09	V.1.08
2021.12	10	VJ628MPE-A-10	V.1.09
2022. 2	11	VJ628MPE-A-11	V.1.09
2022. 5	12	VJ628MPE-A-12	V.1.10
2023. 4	13	VJ628MPE-A-13	V.1.12
2024.3	14	VJ628MPE-A-14	V.1.13
2024.6	15	VJ628MPE-A-15	V.1.14 or later

## **MUTOH**