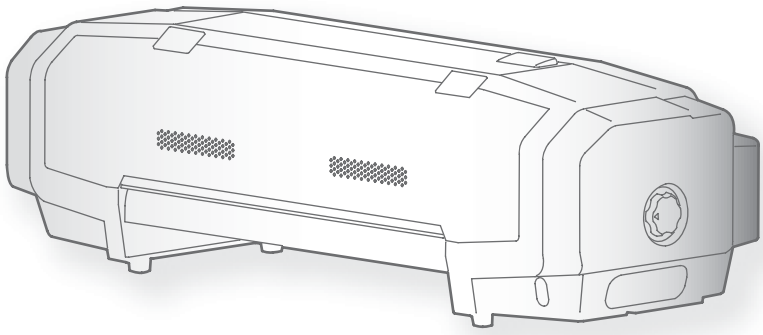
Color is in Our DNA

VJ-628D

Operations Manual

Operations and Maintenance Methods



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For Users in Europe

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

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

For Users in the United States

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warranty Limitations

- STS Inks warrants part repair or replacement as a sole measure only if a failure is found in the system or in the materials and workmanship of the product the seller produced. However, if the cause of failure is uncertain, decide the action after due mutual consultation.
- The warranty shall not apply to any direct or indirect loss, or compensation for the loss due to the product that has been subject to misuse, neglect, or improper alternation.

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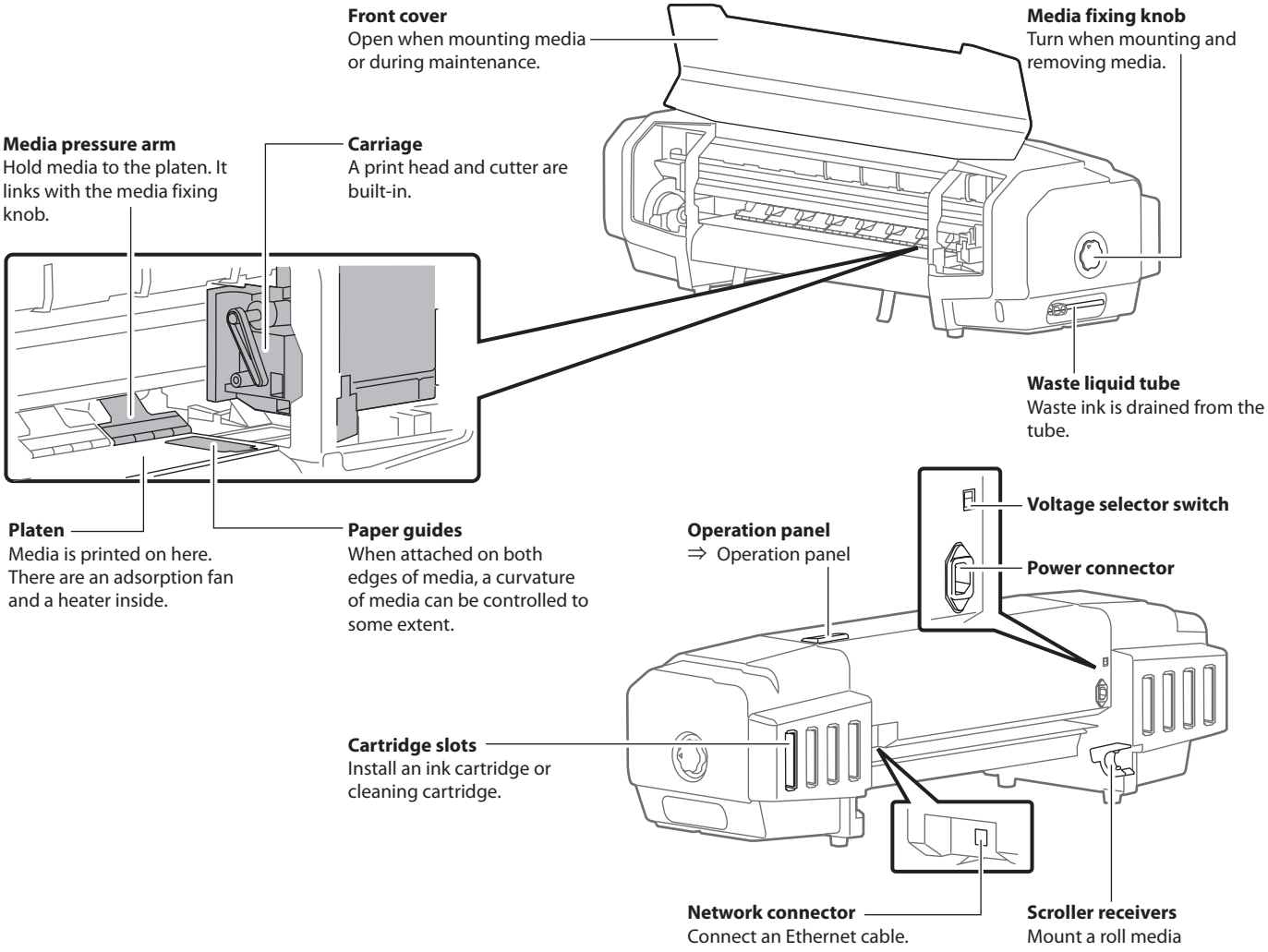
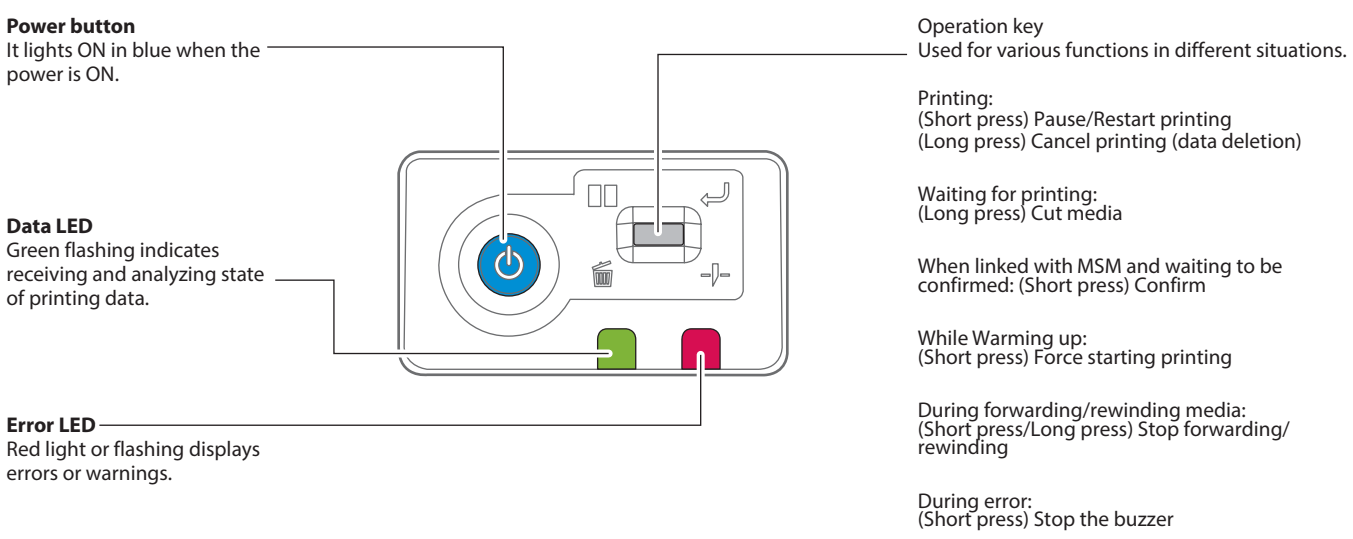
Name of each part

Printer's main body



Operation panel



Conditions of usable media

Roll media can be used in this product.

Usable size

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

Cautions when handling film

- **Please use recommended film**. Contact STS sales for recommended film.
- Be cautious of expansion and contraction of media from temperature and humidity.
  After opening an unopened media, leave the media for approximately 30 minutes 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

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.
- Clean the cleaning wiper once a week.
- When this product is not used for a long time (a week or more), conduct a head cleaning once a week.
- Clean its exterior and inside once a month.
- Drain waste ink in the waste liquid tank periodically.

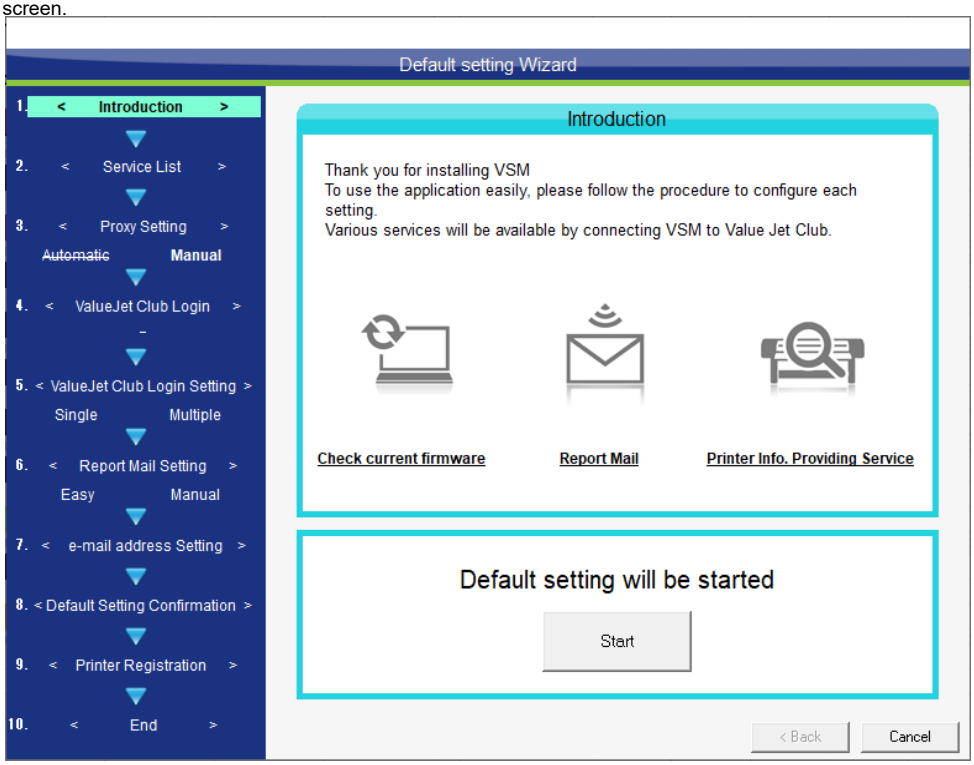
Some parts need to be replaced periodically

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

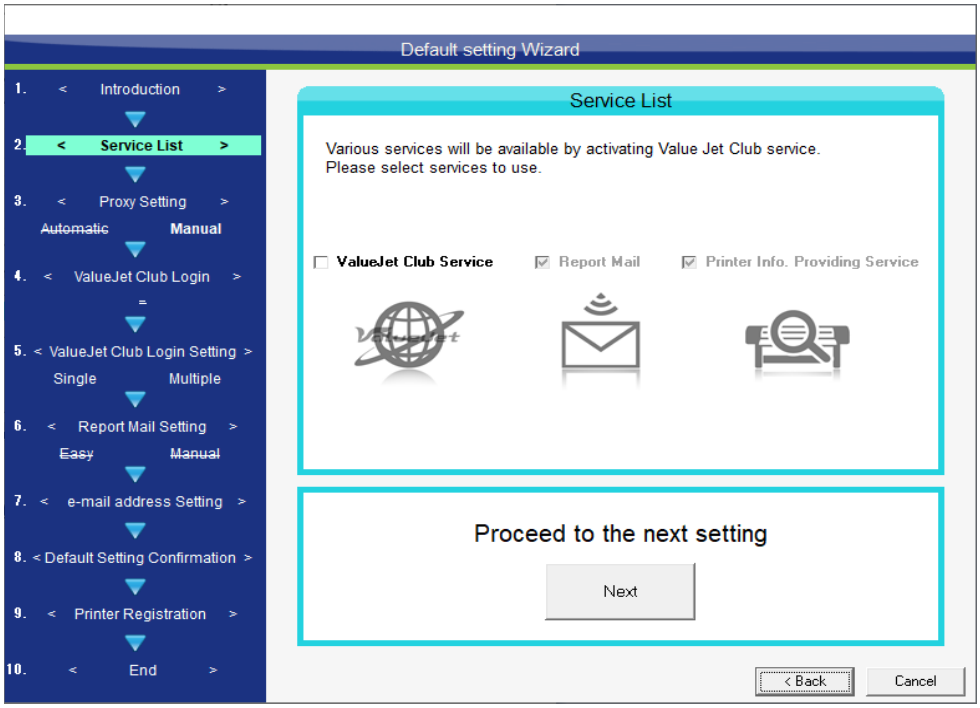
- Parts required to be replaced by users: absorption material for the flushing box, cutter
- Parts required to be replaced by service personnel: Various motors, print head

MSM Setup / Initial Registration

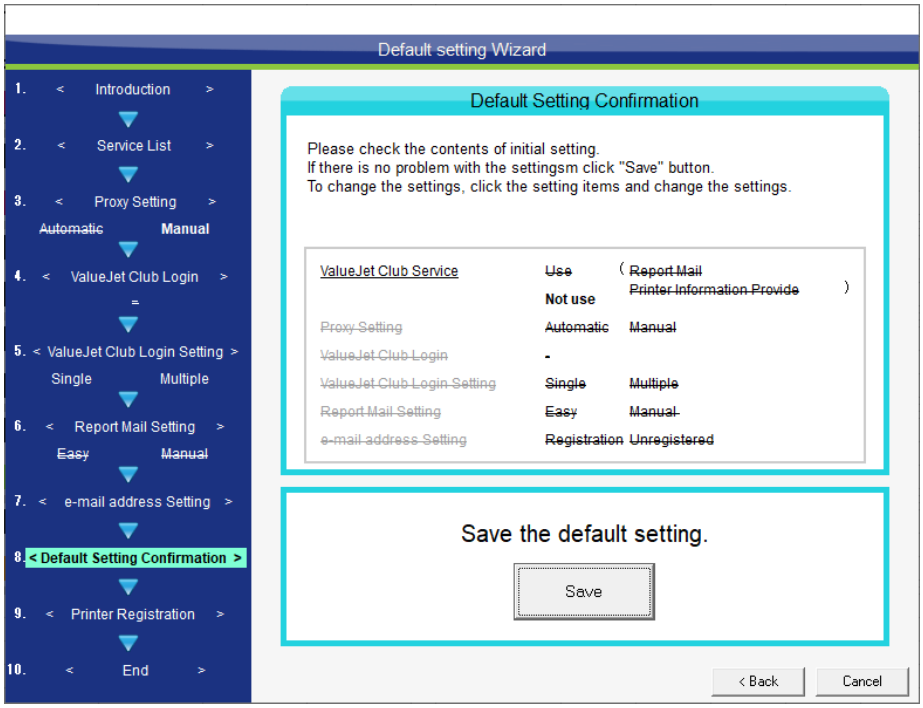
Upon the initial launch of MSM (formerly VSM) you will be faced with the following screen.



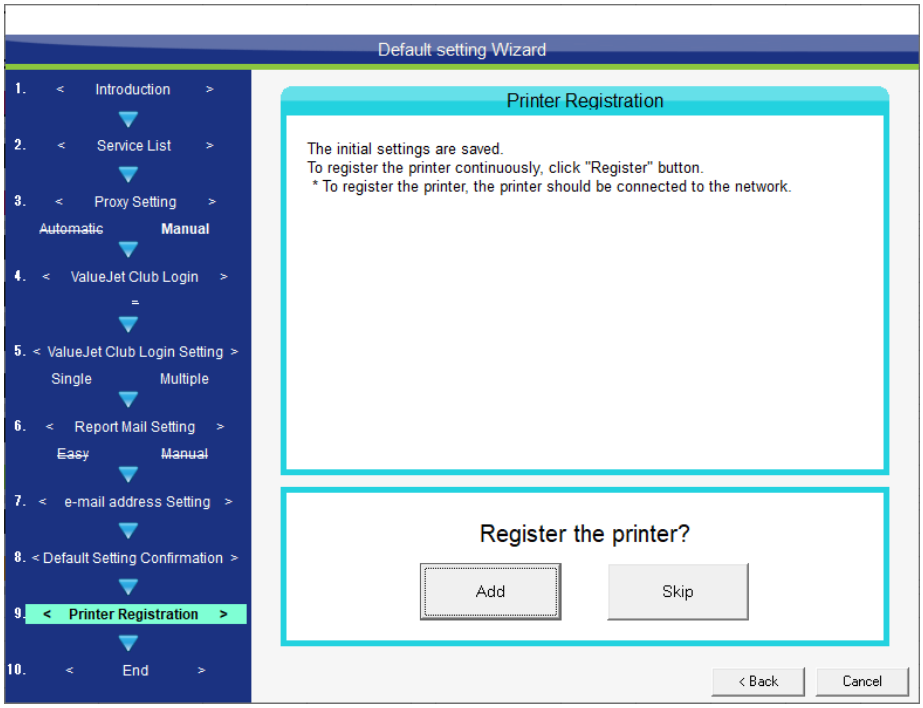
1. Click Start to commence, and untick the ValueJet Club Service.



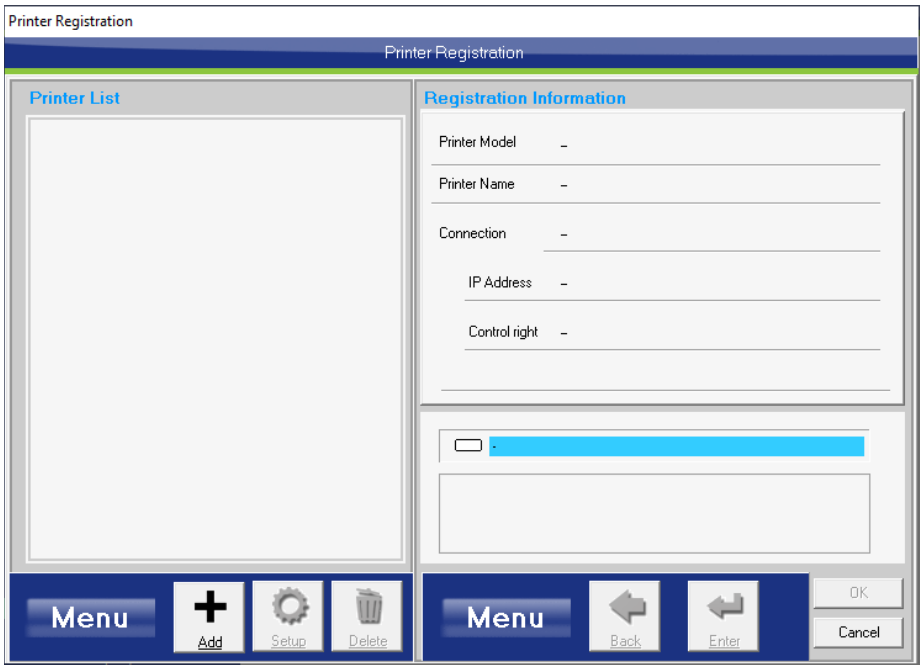
2. Click Save



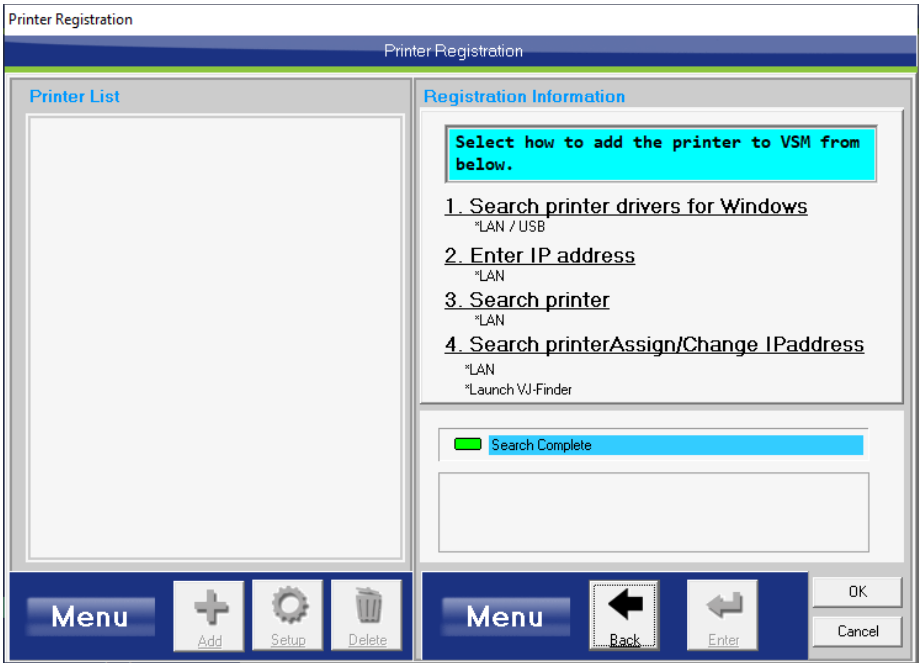
3. If you did not previously register a printer you may do so now



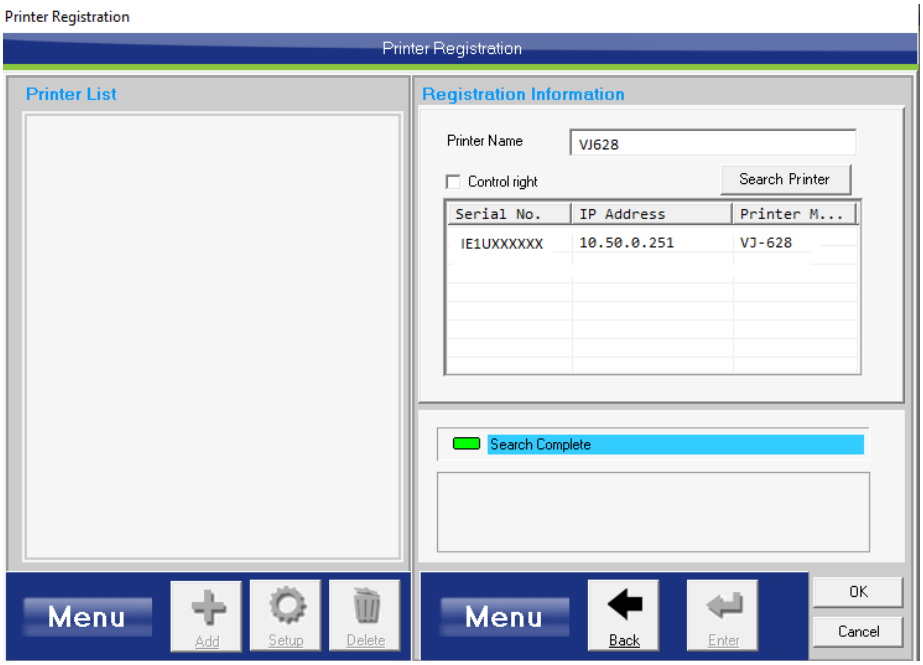
4. Click Add+



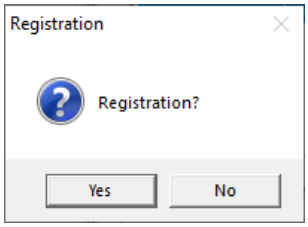
5. Click Search
Printer



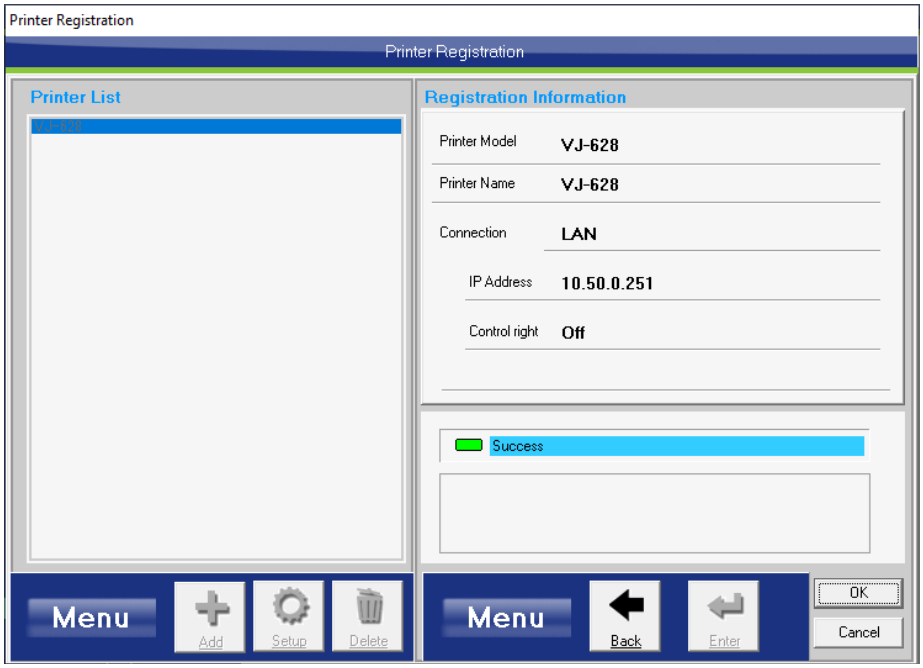
6. Enter a printer name, select the printer and then click Enter



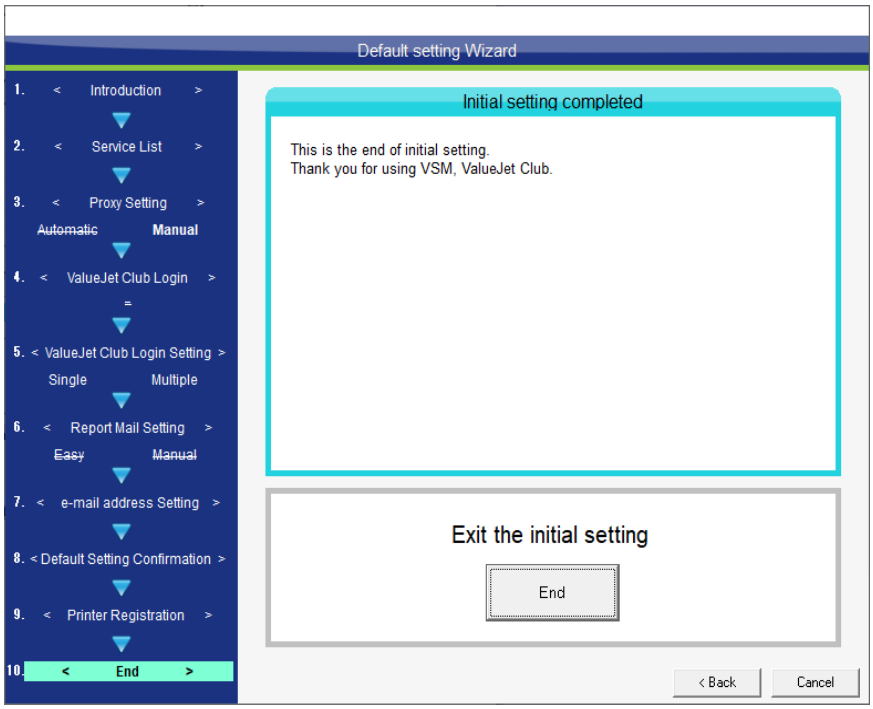
7. Click Yes to register



8. Click OK to complete the registration



9. Click End to finish
the setup



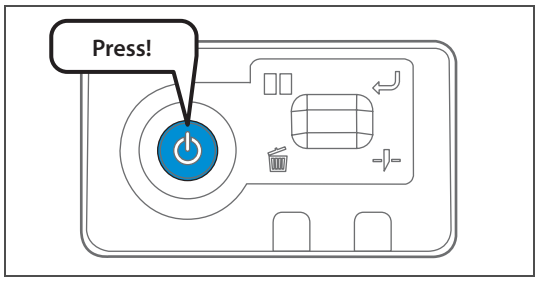
MSM will now open.

Powering ON/OFF

Turning the power ON

[1] Close the front cover.

[2]



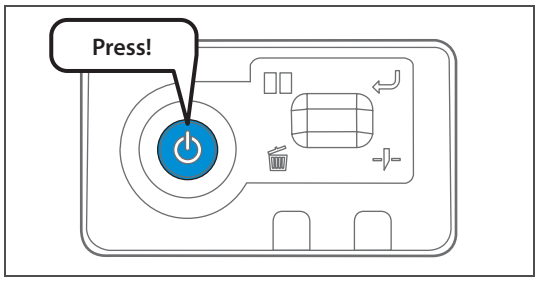
Press the power button of this product to turn the power ON.

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

Turning the power OFF

[1] Make sure printing is finished.

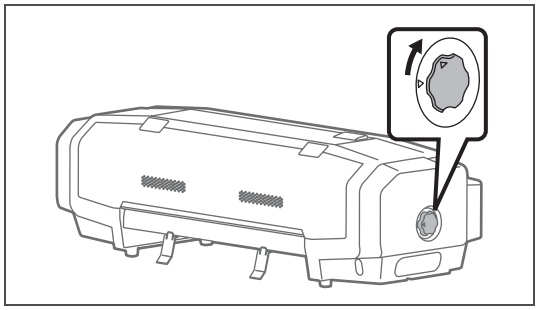
[2]



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

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

[3]



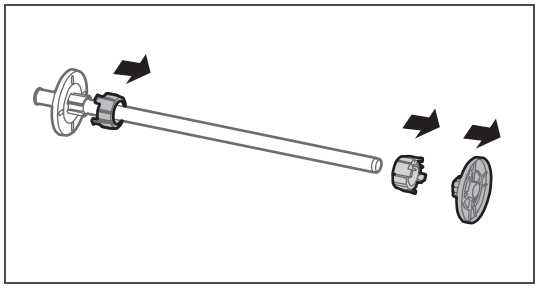
Turn the media fixing knob to release the lock.

Note

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

Setting up media

[1]

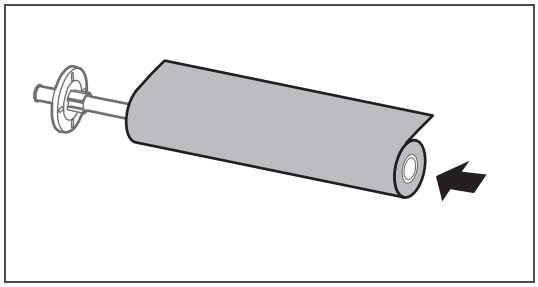


Remove the 3 inches adaptor and media stopper (movable) from the scroller.

Note

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

[2]

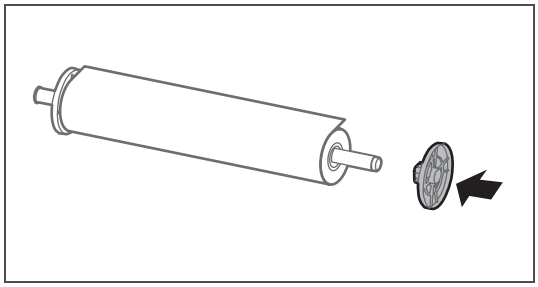


Attach a roll media to the scroller.

Note

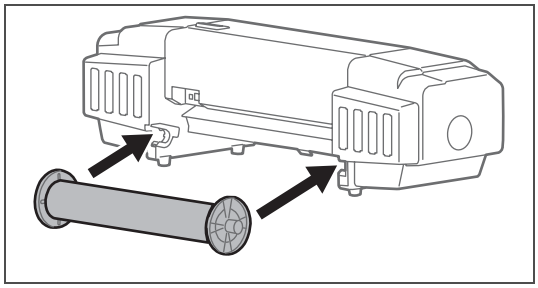
- Attach the media in the rolling direction to be the same with the figure.
- Push in the roll media so that there is no space with the media stopper (fixed).

[3]



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

[4]

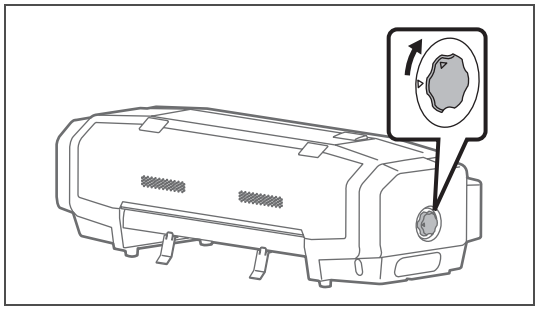


Attach the scroller to the scroller receivers.

Note

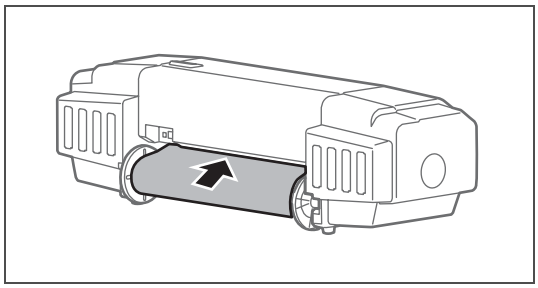
Attach the media stopper (movable) to face to the right, when this product is looked from its back.

[5]



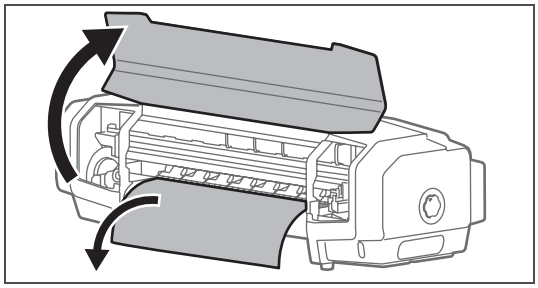
Turn the media fixing knob to release the lock.

[6]



Let the roll media pass through the paper feed slot.

[7]

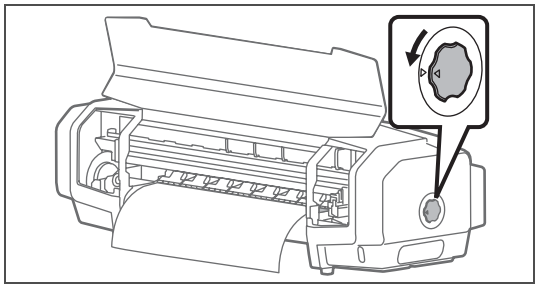


- Open the front cover.
- Pull out the media roller from the front side of the product.

Note

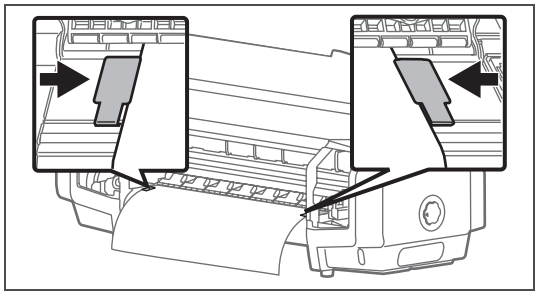
If the media gets loose, rewind the scroller to correct the looseness.

[8]



Turn the media fixing knob to lock.

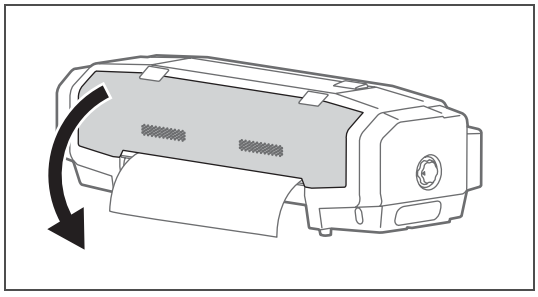
[9]



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 27.

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

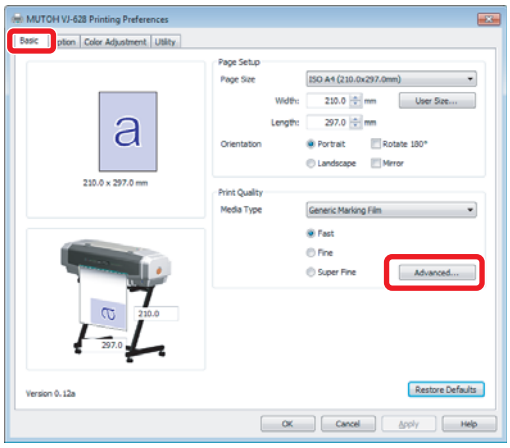
Bidirectional printing

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 shifting can be generated in the print joints. “Image quality adjustment” corrects such shifting.

Setup method of bidirectional printing

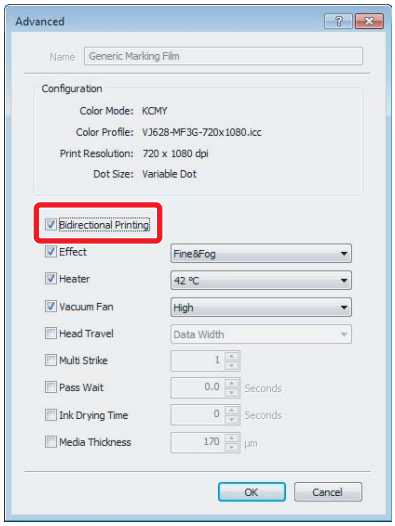
[1] Display the Printing Preferences screen of printer driver.
☞"Displaying the Printing Preferences screen of printer driver" on page 8

[2]



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

[3]



Place a checkmark in [Bidirectional Printing].

Note

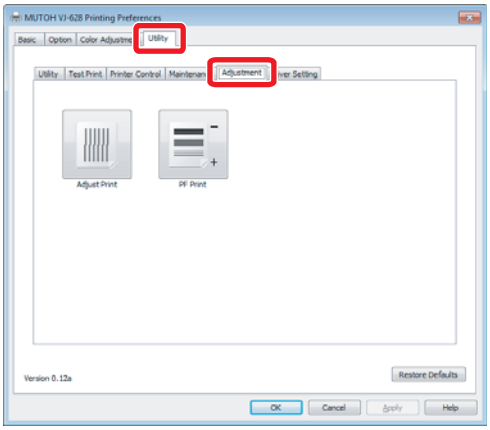
- By default, it is checked.

1. Media thickness

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

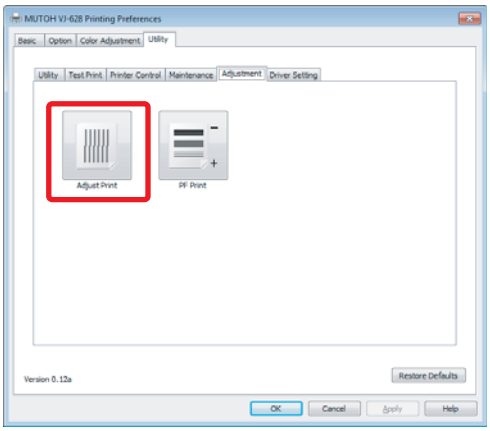
☞"Displaying the Printing Preferences screen of printer driver" on page 8

[2]



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

[3]



Click [Adjust Print]

- The remote panel of VJ-628D Status Monitor (MSM) launches.

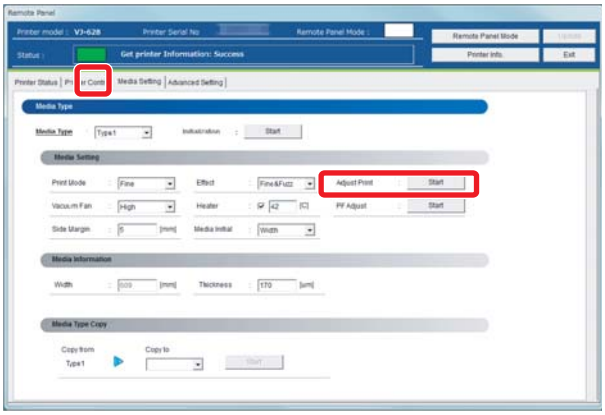
Note

MSM can be launched directly.

☞

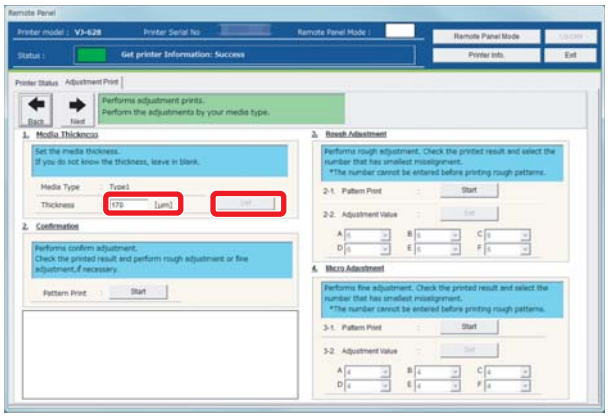
[4] Click [Start] in [Adjust Print] of the [Media Setting] tab.

- The [Adjust Print] window opens.



[5] Enter [Thickness] ([µm]) in [1. Media thickness], and click [Setting].

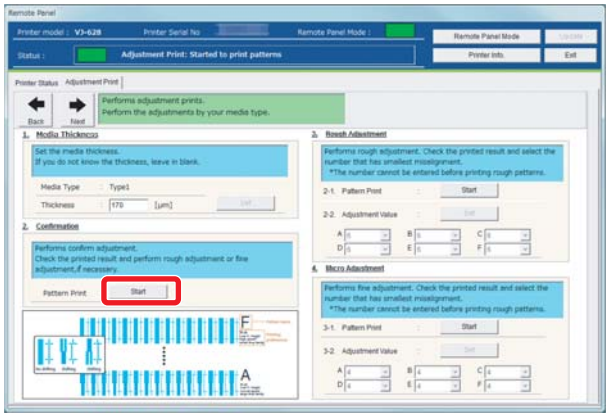
- Enter the thickness of a set media.



2. Checking picture quality

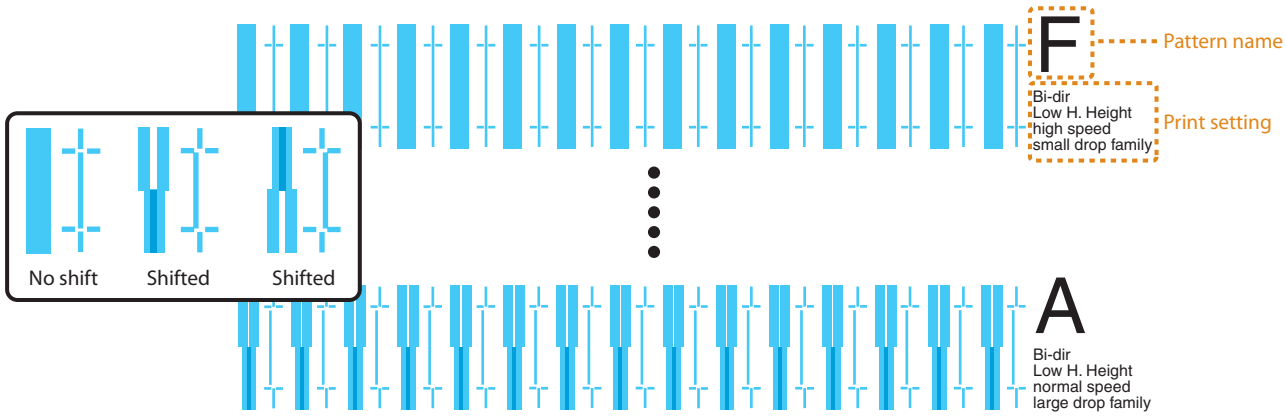
[1] Click [Start] in [2. Confirmation].

- Patterns are printed.



[2] Check from Pattern A to Pattern F, and if there are shifting problems, proceed to "Rough adjustment" on page 20.

- In the example below, there are shifting problems in Pattern A.



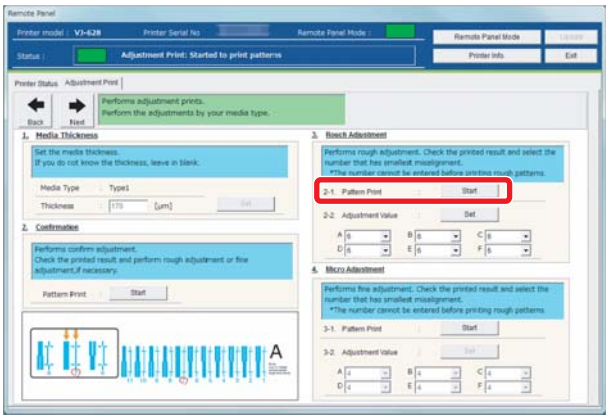
Note

The example is 4 colors setting. In case of 6 colors setting, the pattern color becomes magenta (red type color). The pattern color of rough adjustment and micro adjustment is the same.

3. Rough adjustment

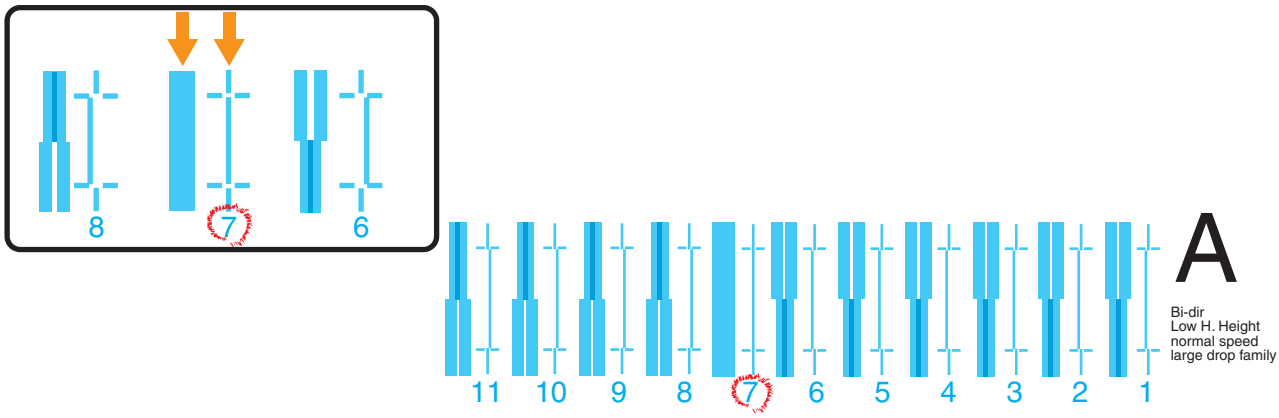
[1] Click [Start] in [3-1 Pattern Print] of [3. Rough Adjustment].

- Patterns are printed.



[2] Look for and mark a number printed under a pattern that has least shifting in Pattern A.

- The same pattern (A to F) is printed repeatedly in the center and both edges of media.



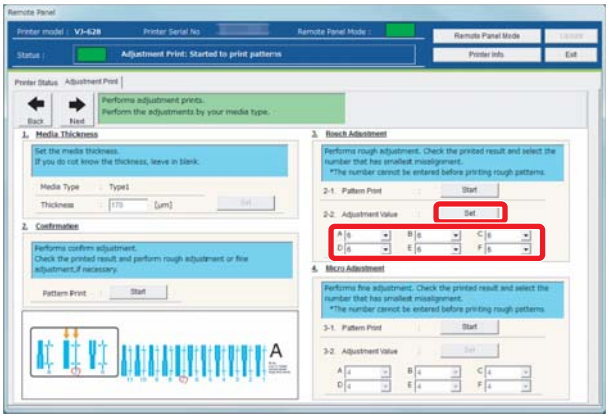
Note

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

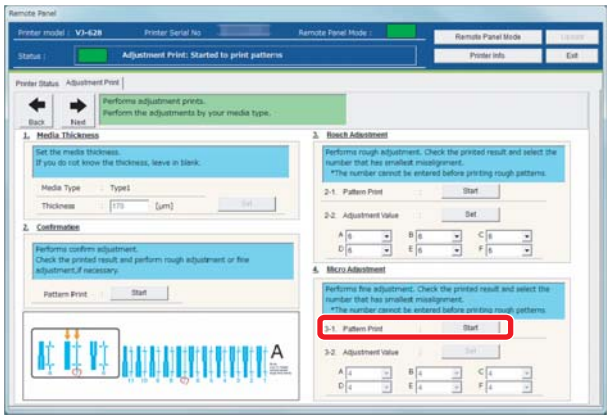
- Proceed to "Micro adjustment" on page 21.



4. Micro adjustment

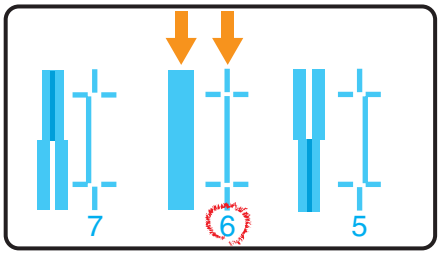
[1] Click [Start] in [4-1 Pattern Print] of [4. Micro Adjustment].

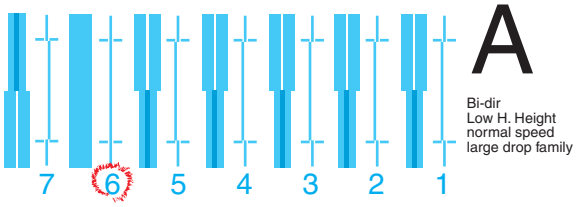
- Pattern A to Pattern F are printed.



[2] Similar to “2. Rough adjustment”, mark a number printed under the pattern that has the least shifting.

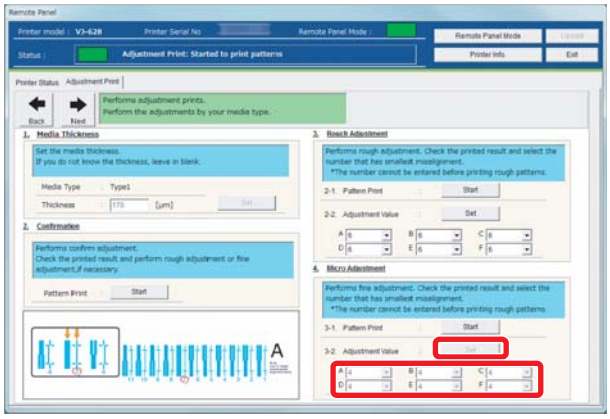
- Mark on Pattern A to Pattern F.





[3] Enter marked values in A to F of [4-2 Adjust Change] in [4. Micro Adjustment] , and click [Setting].

- This completes the picture 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 27.

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

Note

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

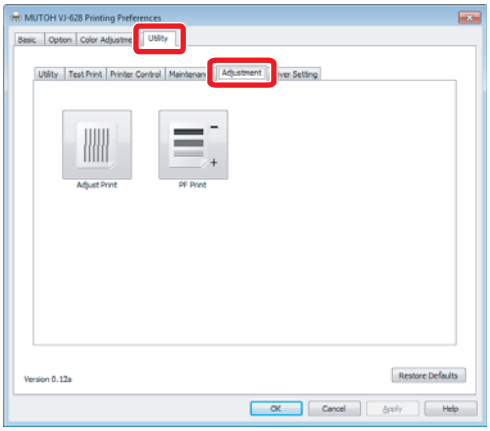
- Images are overlapping.
- There are white lines in images.

Paper feed correction steps

1. Initial adjustment

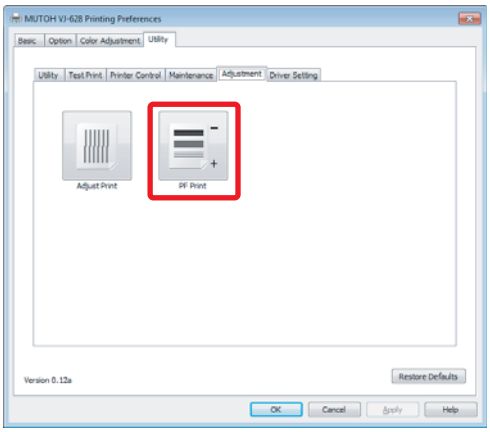
[1] Display the Printing Preferences screen of printer driver.
☞"Displaying the Printing Preferences screen of printer driver" on page 8

[2]



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

[3]



Click [PF Print].

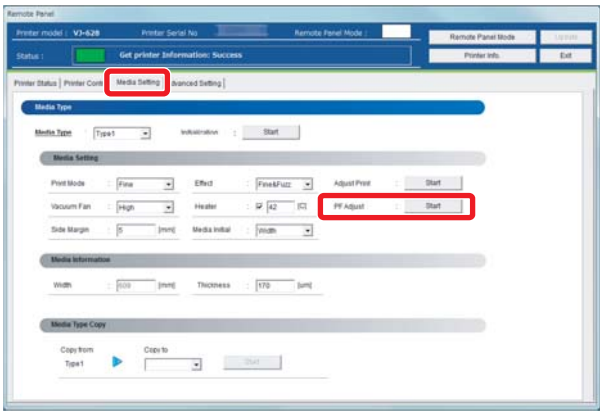
- The remote panel of MSM

Note

MSM can be launched
☞"Launching MSM" on page 9

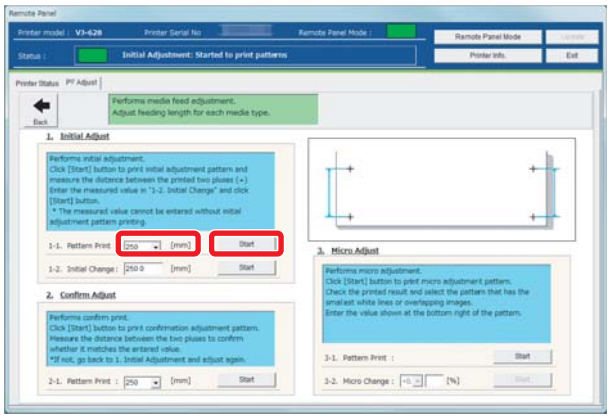
[4] Click [Start] in [PF Adjust] of the [Media Setting] tab.

- The [PF Adjust] window opens.

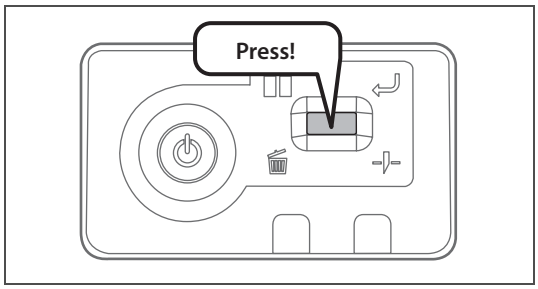


[5] Select the length ([mm]) of [1-1 Pattern Print] in [1. Initial Adjust], and click [Start].

- 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]

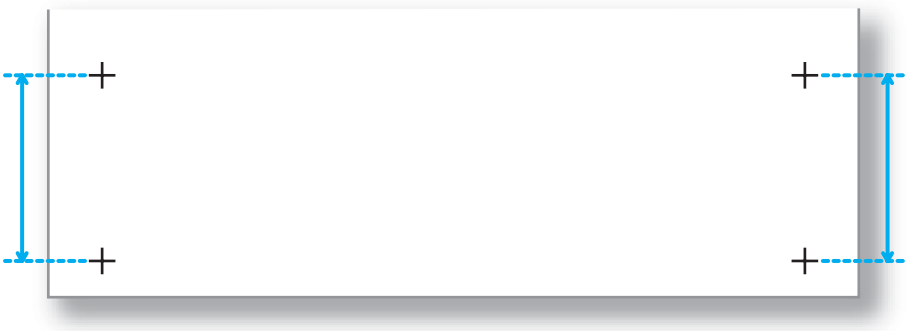


Cut the media.

- 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.

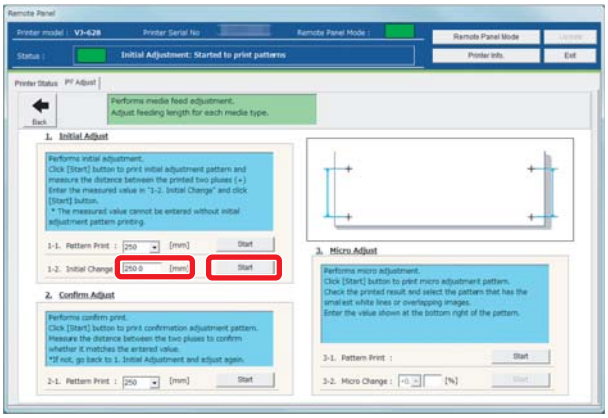
[7] With a ruler, measure the length between “+” in the pattern.

- 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].

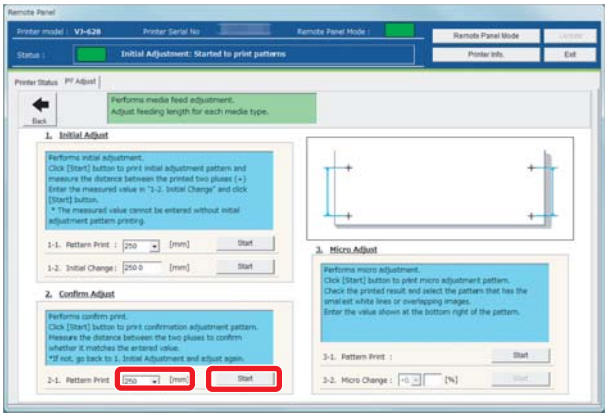
- The initial change value is saved.
- Please proceed to "Confirming adjustment" on page 24.



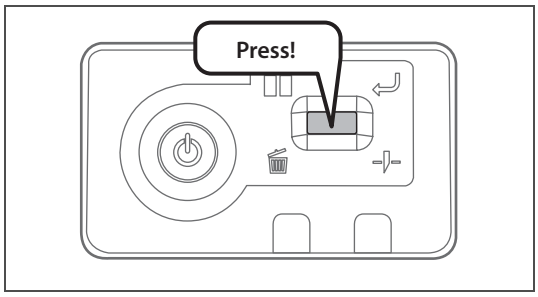
2. Confirming adjustment

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

- A pattern is printed.



[2]

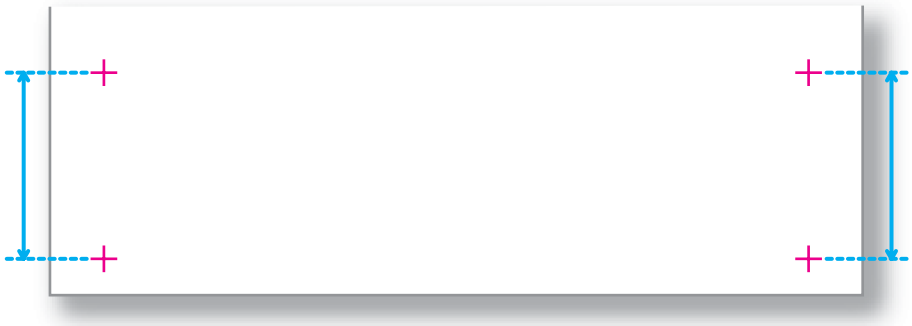


Cut the media.

- 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.

[3] Using a ruler, measure the length between “+” in the pattern.

- In the example below, the measured place is shown in blue dotted lines and arrows (the blue parts are not actually printed).



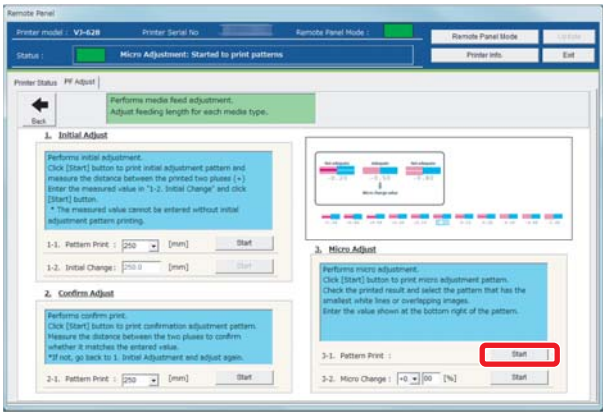
[4] Confirm the measured length.

- If the measured length matches the length selected in Step 1, proceed to "Micro adjustment" on page 21.
- If the measured length does not match the selected length, re-correct with "Checking picture quality" on page 19.

3. Micro adjustment

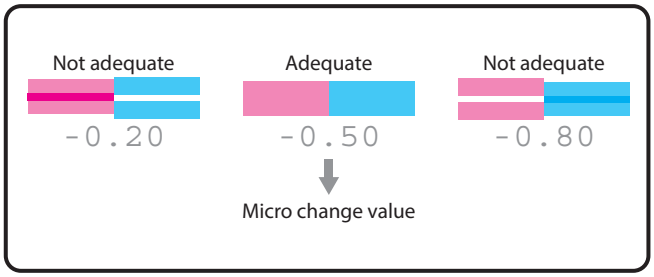
[1] Click [Start] in [3-1. Pattern Print] of [3. Micro Adjust].

- A pattern is printed.



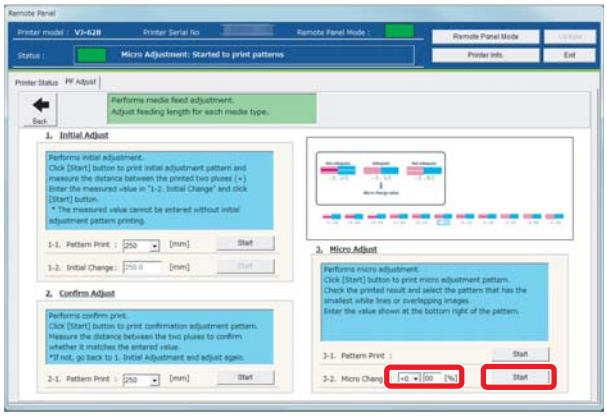
[2] Observe the pattern and verify the micro change value.

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



Note

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".

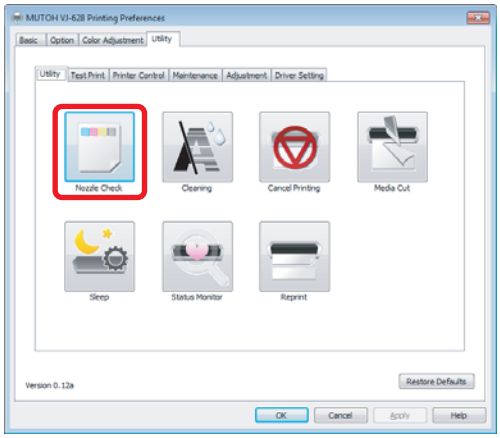
Nozzle check and cleaning

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

1. Nozzle check steps

[1] Display the Printing Preferences screen of printer driver.
☞"Displaying the Printing Preferences screen of printer driver" on page 8

[2]



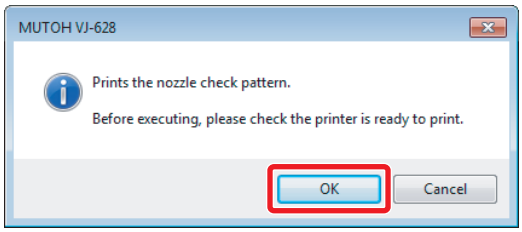
Click [Nozzle Check] in the [Utility] tab under the [Utility] tab.

- The “MUTOH VJ-628” window opens.

Note

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

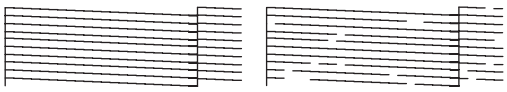
[3]



Click [OK].

- A pattern is printed.

[4]



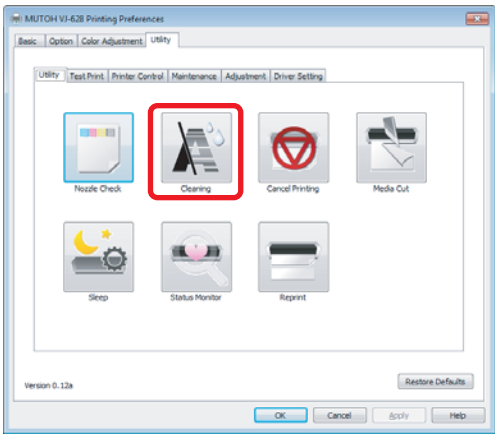
No nozzle clog　　Nozzle clogged

Check the pattern.

- When there is nozzle clog, proceed to "Cleaning steps" on page 28.
- When there is no nozzle clog, proceed to "Starting printing" on page 29.

2. Cleaning steps

[1]



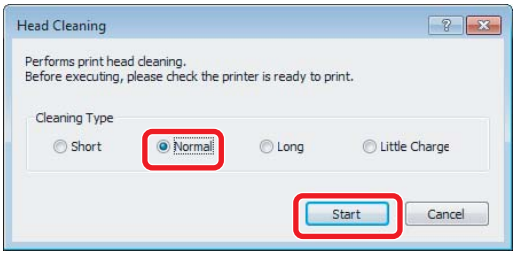
Click [Cleaning] in the [Utility] tab under the [Utility] tab.

- The [Head Cleaning] window opens.

Note

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

[2]



Select [Normal] and click [Start].

- A cleaning starts.

[3] Conduct a nozzle check, again.

☞"Nozzle check steps" on page 27

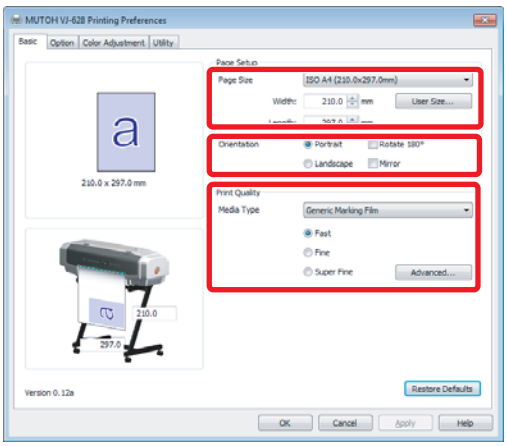
- If there is still nozzle clog, repeat [Normal] cleaning. Refer to "Head cleaning" on page 51 for [Short], [Long] and [Little Charge].

Starting printing

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

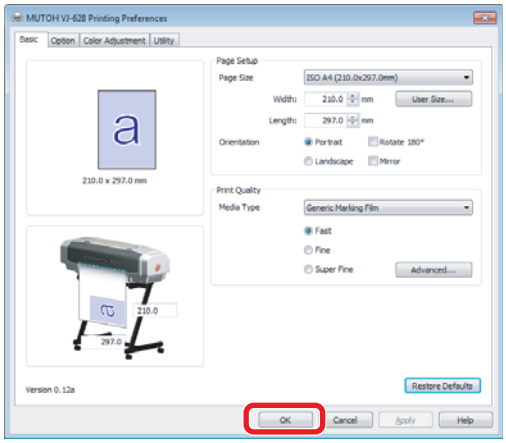
[1] Open printing data from application software to execute printing.

[2] Open the print setup screen of the VJ-628 printer driver from the application software.

[3] 

Conduct print setup.

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

[4] 

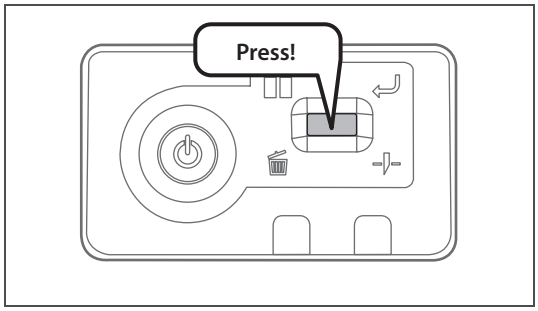
Click [OK].

[5] Printing is executed.

[6] Cut the media.

☞"Cutting media" on page 32

Pausing/Restarting printing



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

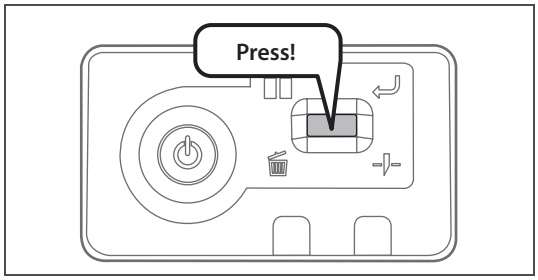
- The printing pauses.
- Press the operation key again to restart the printing.

Note

- In this operation, printing data sent to the product are not deleted.
- Please see the followings when canceling printing and deleting data.
☞"Canceling printing" on page 30

Canceling printing

Canceling printing from the operation panel



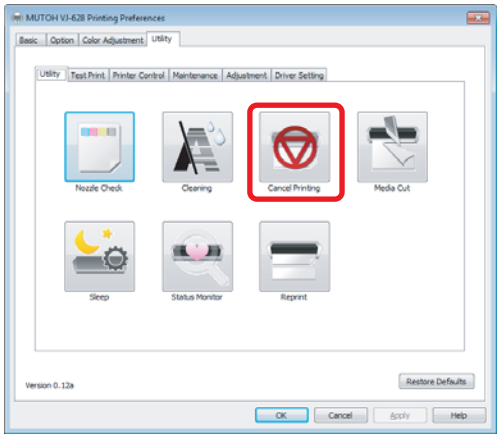
Press and hold the operation key on the operation panel for 2 seconds or more during printing.

- 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 8

[2]



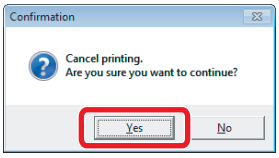
Click [Cancel Printing] in the [Utility] tab under the [Utility] tab.

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

Note

- MSM can be launched
☞"Launching MSM" on page 9

[3]



Click [Yes].

- The printing is canceled.

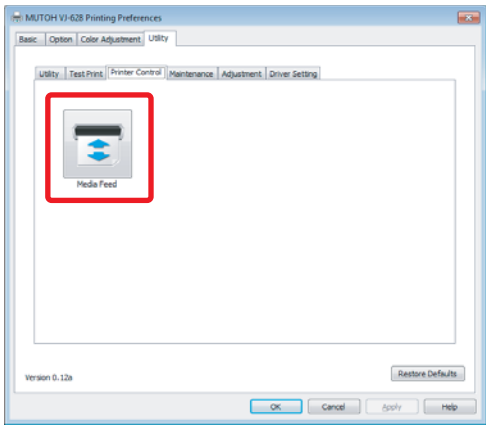
Forwarding/Rewinding media

Forwarding/rewinding media from printer driver/MSM

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

☞"Displaying the Printing Preferences screen of printer driver" on page 8

[2]



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

- The remote panel of MSM launches.

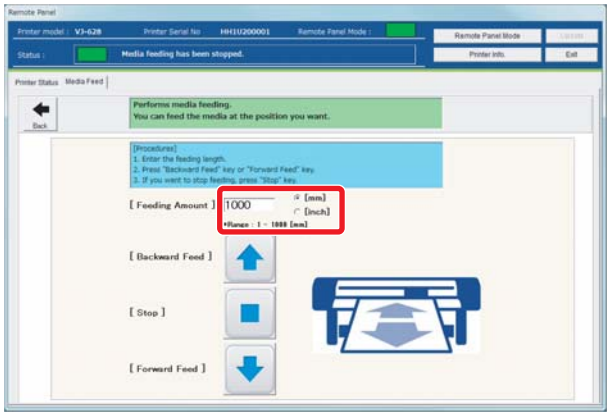
Note

MSM can be launched directly.

☞

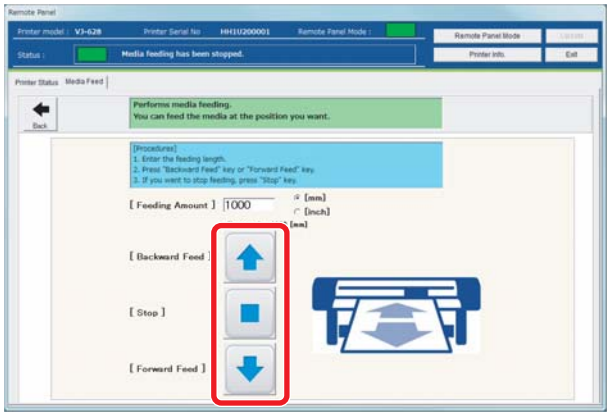
[3] Enter [Feed Amount].

- 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.

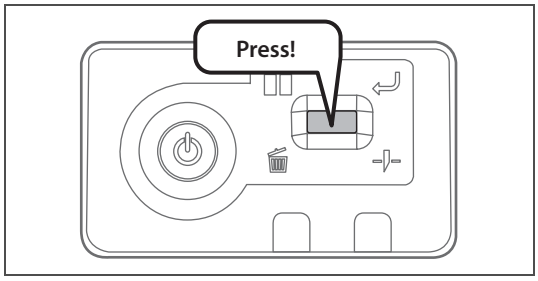


Cutting media

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.

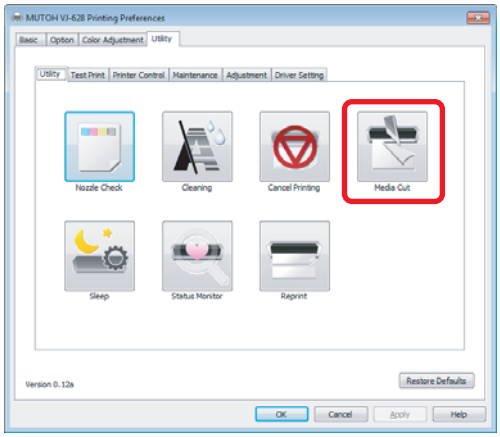
Cutting from printer driver/MSM

[1] Check printing is done.

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

"Displaying the Printing Preferences screen of printer driver" on page 8

[3]



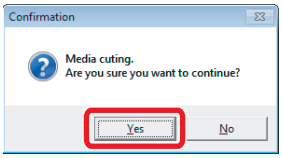
Click [Media Cut] in the [Utility] tab under the [Utility] tab.

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

Note

- MSM can be launched
  "Launching MSM" on page 9

[4]



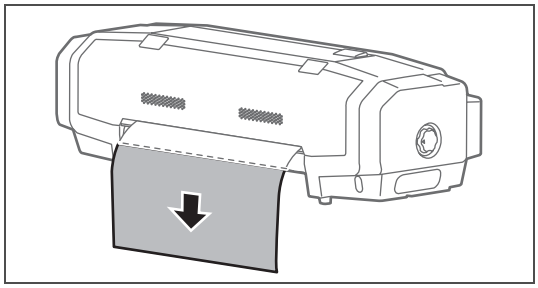
Click [Yes].

- 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.

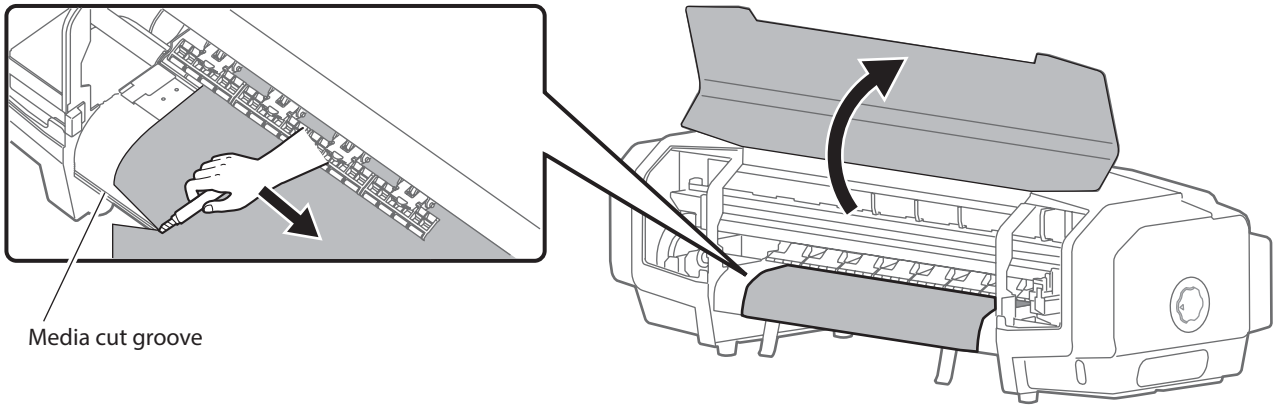
[1] Check printing is done.

[2] 

Feed the media to a position where printing results can be cut.
☞"Forwarding/Rewinding media" on page 31

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

- Cut along the media cut groove.



[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.

☞"Setting auto cut" on page 38

Chapter 2 Advanced Operations

Changing head height 36

Releasing pressure arms individually 37

Advanced settings 38

Setting auto cut 38
Setting the vacuum fan 40
Setting the heater 41

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.

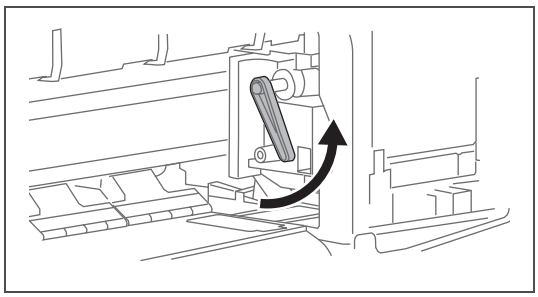
When the print head height is changed, always conduct image quality adjustment.

Note

- 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.

Steps

[1] Open the front cover.

[2] 

Lift the lever and raise the head height.

[3] Close the front cover.

[4] Conduct image quality adjustment.

☞ **Adjusting image quality**

Important!

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.

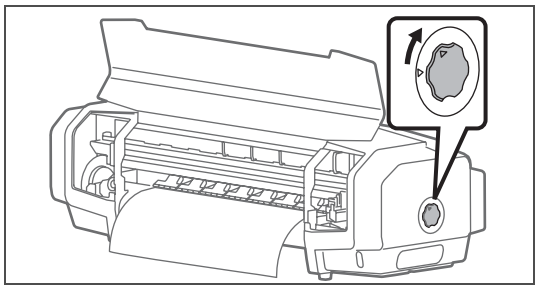
When releasing the pressure arms individually, always conduct paper feed correction.

Note

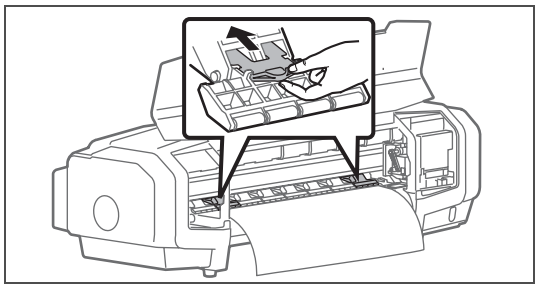
- Thin media or media without stiffness is likely to be wrinkled during printing. Wrinkles can contact the bottom side of the print head causing the media to become dirty. When both edges of the pressure arms of media are released, it can prevent wrinkles.
- When printing on thin media or media without stiffness, wrinkles can be prevented by turning down the vacuum fan.
  ☞"Setting the vacuum fan" on page 40

Steps

[1] Open the front cover.

[2] 

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.

[4] Conduct paper feed correction.
☞"Correcting paper feed" on page 22

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.

[5] Close the front cover.

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.
☞"Displaying Help or Manual" on page 11

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.

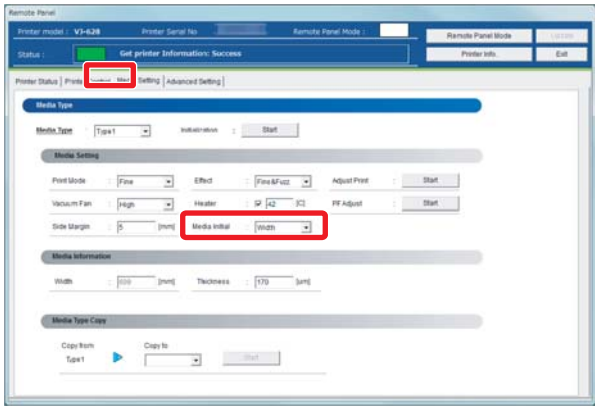
Note

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

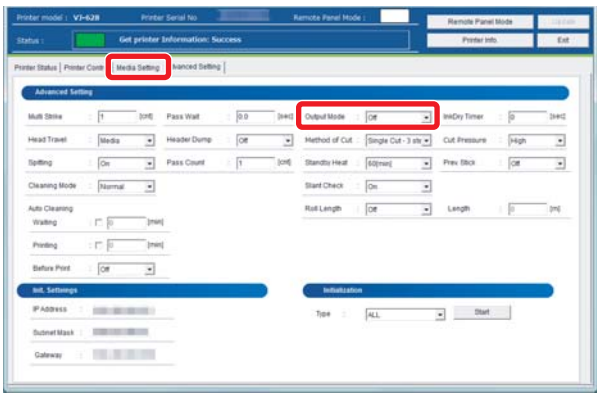
Steps

[1] Launch the remote panel of MSM.
☞"Displaying remote panel" on page 9

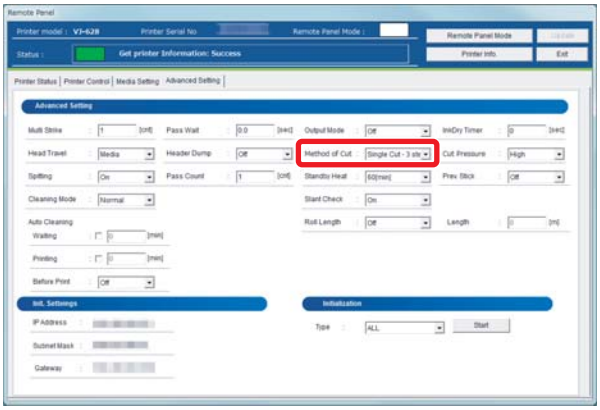
[2] Select anything but [Off] in the [Media Initial] menu under the [Media Setting] tab.



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



[4] Select a cut method from the [Method of Cut] menu.

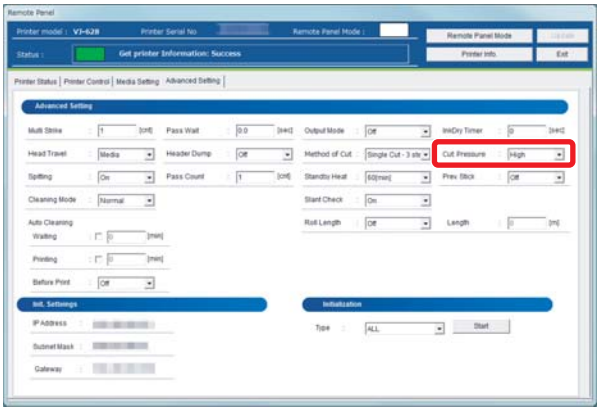


There are following modes in the [Method of Cut] menu.

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”.

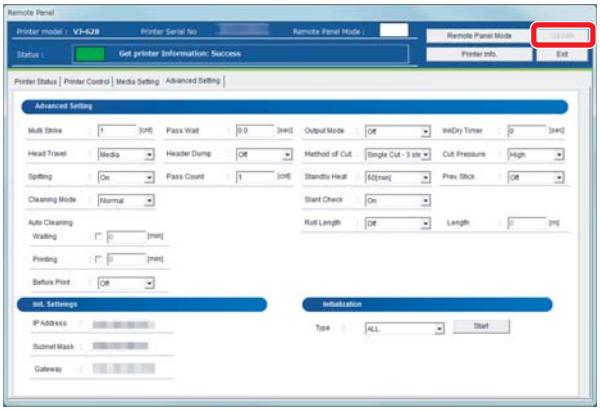
[5] Select [High] or [Low] for cut strength in the [Cut Pressure] menu.

- [Low] is used for thin media.



[6] Click [Update].

- The setting is reflected on the product.



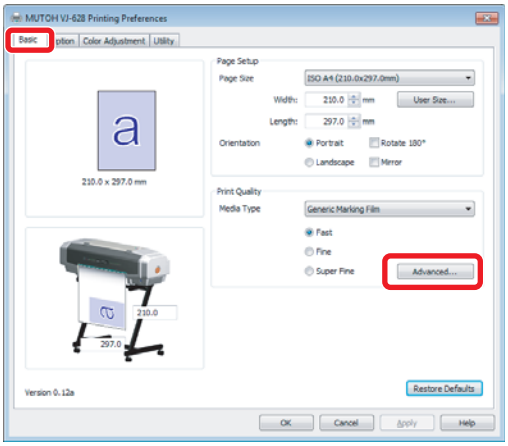
Setting the vacuum fan

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

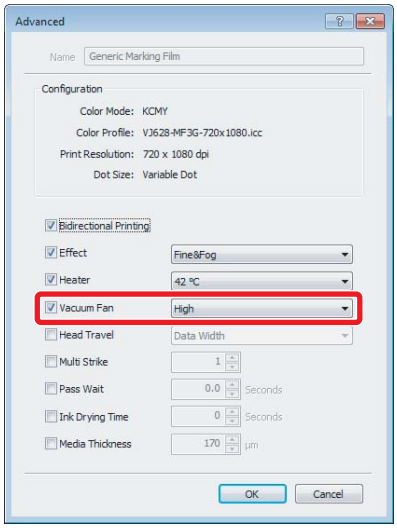
Steps

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

☞"Displaying the Printing Preferences screen of printer driver" on page 8

[2] 

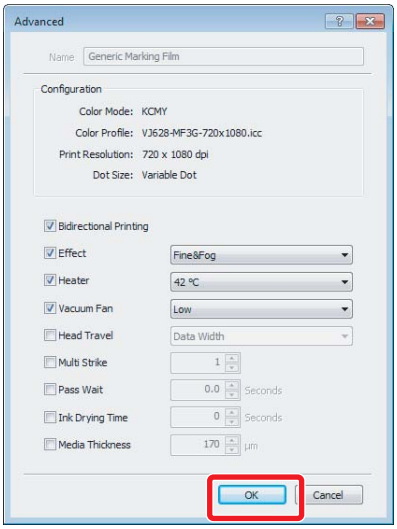
Click [Advanced...] in the [Basic] tab.

[3] 

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

Note

- 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

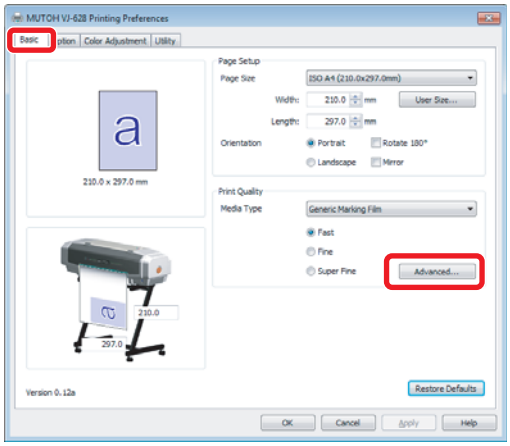
Functions of the heater are to warm up media before and after printing to improve print quality and promote fast drying. If the heater setting is changed matching the thickness or material of media, better results can be obtained.

Steps

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

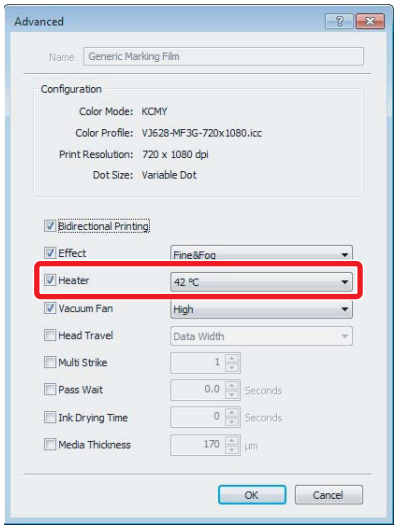
"Displaying the Printing Preferences screen of printer driver" on page 8

[2]



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

[3]



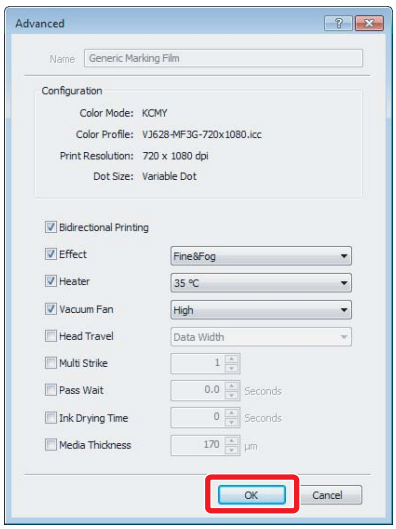
In [Heater] menu of the [Advanced] tab, enter a temperature.

- 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.

Note

- 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.

Chapter 3 Maintenance

Maintenance 44

Checking ink and replacing ink cartridge 45

Checking ink level 45
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Replacing absorption material for the flushing box 58
Replacing cutter 61

Transporting and long-term storage 62

Transporting 62
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Storing for a long time 70

Maintenance Schedule

To maintain the performance of this product, please conduct maintenance by yourself.
The types of maintenance individually performed are below.

Before and after daily operation	"Nozzle check and cleaning" on page 27
Based on your usage condition	"Head cleaning" on page 51 "Replacing ink cartridge" on page 47 "Emptying waste ink tank" on page 49 "Replacing absorption material for the flushing box" on page 58 "Replacing cutter" on page 61
Weekly	"Cleaning of cleaning wiper" on page 53 "Cleaning of print head circumference" on page 55
Monthly	"Inside cleaning" on page 57
When not used for a week or more	Weekly "Head cleaning" on page 51

Important!

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

- Emergency mode is happening repeatedly.

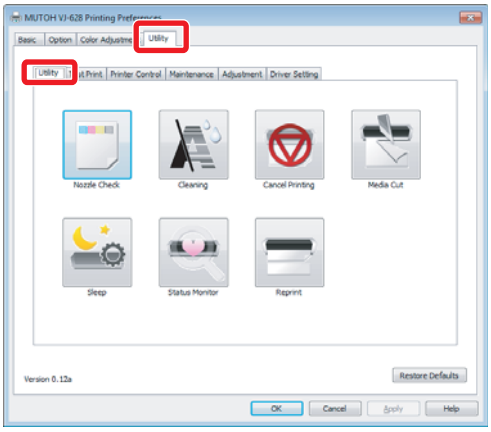
Checking ink and replacing ink cartridge

Checking ink level

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

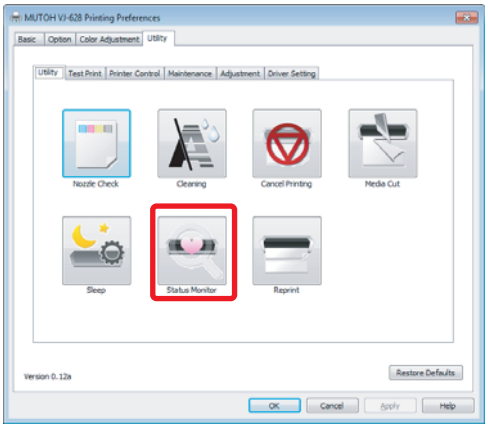
☞"Displaying the Printing Preferences screen of printer driver" on page 8

[2]



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

[3]



Click [Status Monitor].

- The MSM remote panel opens.

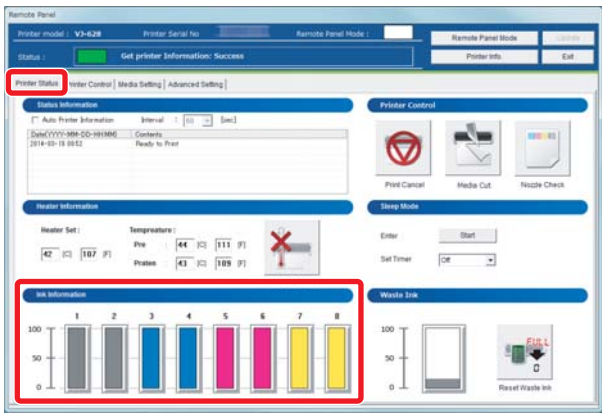
Note

- MSM can be launched directly.

☞

[4] Check [Ink Information] in the [Printer Status] tab.

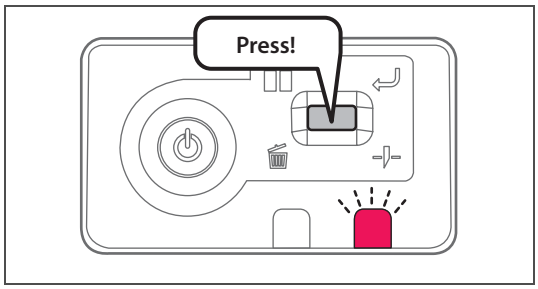
- As ink is used, the colored scale becomes low.



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.

Steps

[1] 

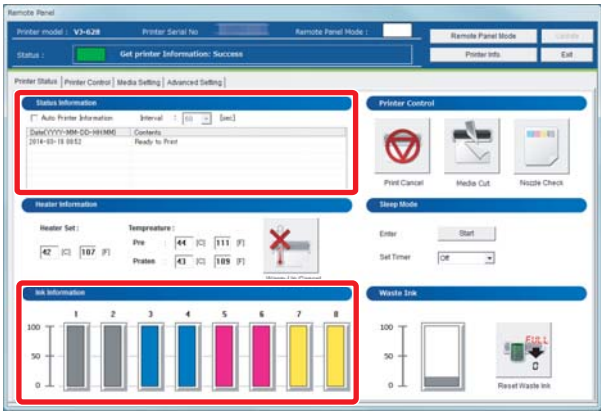
Short press the operation key on the operation panel.

- The buzzer stops.

[2] Check the ink cartridge that needs to be replaced.

☞"Checking ink level" on page 45

- Check [Status Information] also.



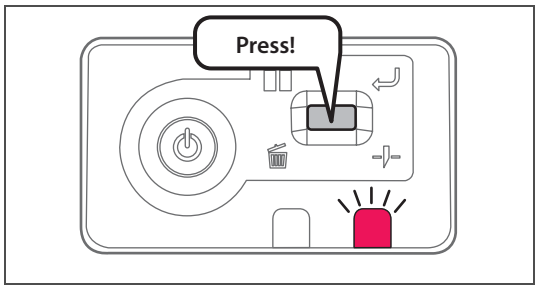
[3] Prepare an ink cartridge to replace.

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.

Steps

[1]

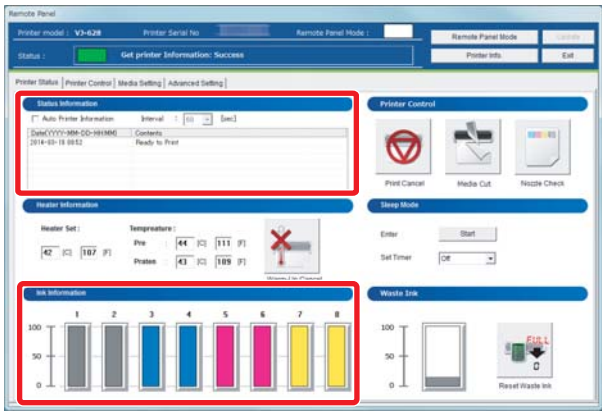


Short press the operation key on the operation panel.

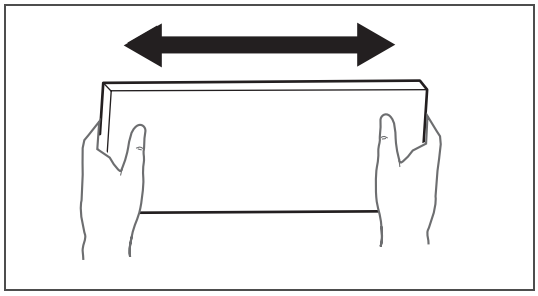
- The buzzer stops.

[2] Check the ink cartridge that needs to be replaced.
☞"Checking ink level" on page 45

- Check [Status Information] also.

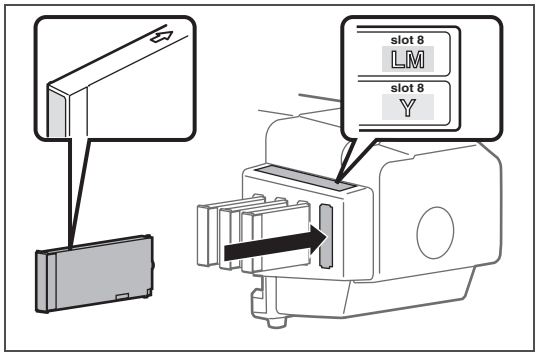


[3]



Shake the ink cartridge 2 or 3 times lightly.

[4]



Remove the empty ink cartridge and insert the new one.

- 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.

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.

WARNING

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

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.

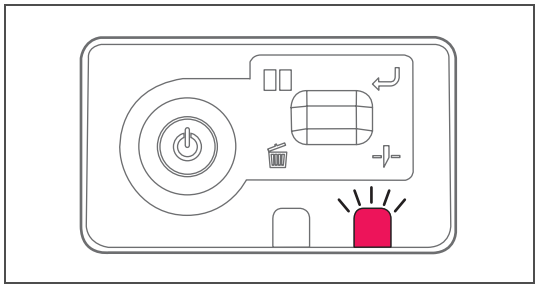
CAUTION

- Be cautious that ink does not get into your eye or make a contact with your skin. Wear goggles and 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.

Important!

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.

Steps

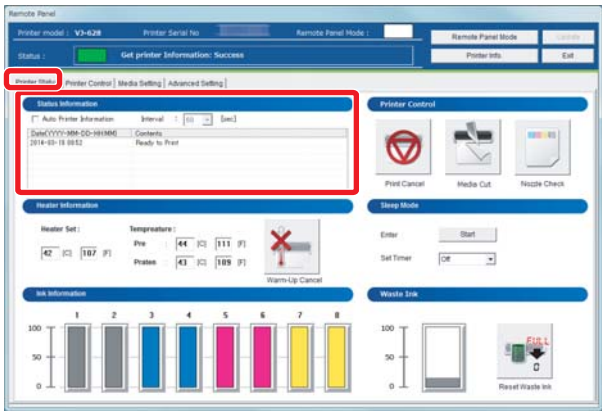
[1] 

Check the error LED is flashing.

[2] Launch MSM and display the remote panel.
☞

[3] Check [Status Information] in the [Printer Status] tab.

- A message indicating that the waste ink tank is full is displayed.

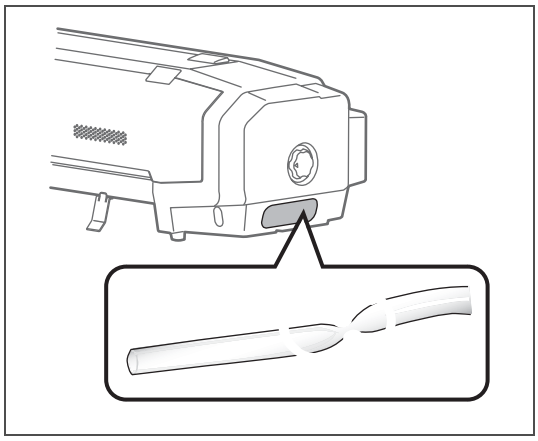


[4] Prepare a container like PET bottle to transfer the waste ink.

Important!

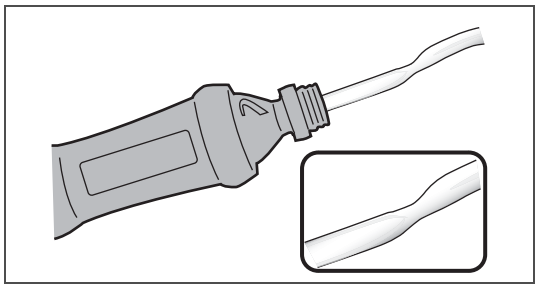
The capacity of waste ink tank is 1500 ml. Make sure to prepare a container that has enough capacity when discharging waste ink.

[5]



Pull out the tip of the waste ink tube.

[6]



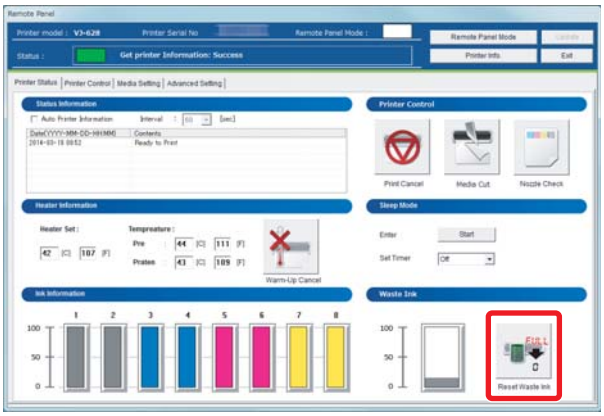
- Insert the waste ink tube into a container.
- Turn the valve so it's aligned in the direction of the tube to open.
- Pour waste ink into the container.
- If their is a blockage use a syringe placed into the waste tube to gently suction out any debris that may have blocked waste ink flow.

WARNING

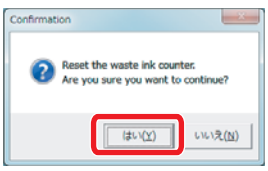
You are obligated to properly dispose of waste fluid from the printer in compliance with Wastes Disposal and Public Cleansing Act and local ordinances. Delegate disposal to an industrial waste disposal contractor.

[7] Click [Reset Waste Ink].

- The confirmation window opens.



[8]



Click [Yes].

- The waste ink counter is set to 0.

Cleaning each part

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

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.

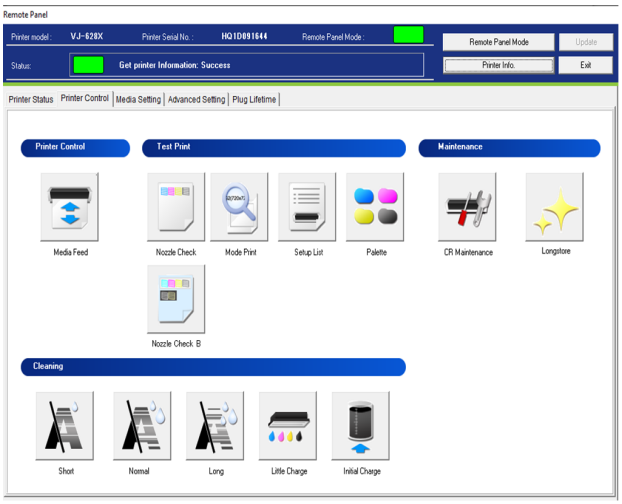
Short cleaning	Consumes less ink than Normal cleaning.
Normal cleaning	Conduct nozzle check before and after printing, and use when nozzle clogging is found.
Long cleaning	Consumes more ink than Normal cleaning. When nozzle clogging still occurs after normal cleaning, conduct Long cleaning.
Little Charge	Much better cleaning results can be expected than Long cleaning if necessary.

Steps for head cleaning

[1]

Open MSM and go to "Printer control"

[2]



Select a mode of cleaning "short, normal or long" and click [Start].

- Cleaning starts.

[4] Conduct Nozzle Check.

- If nozzle clogging still remains, repeat cleaning and nozzle check.

Note

- 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 clean wiper blades and print head circumference
- Yet, when nozzle clogging remains, conduct "Little Charge".

Cleaning of cleaning wiper

Cleaning period:

- Weekly
- When print blurring and dot missing remain after head cleaning is done.

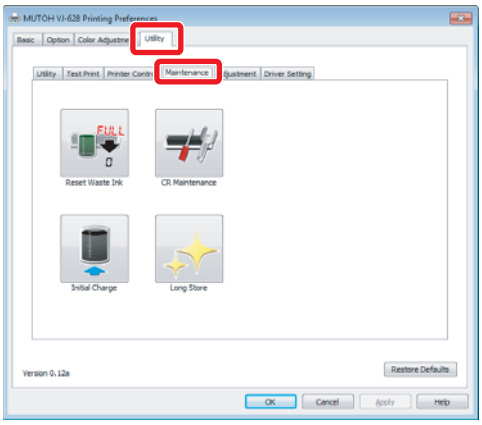
Preparation:

- Cleaning stick

Steps

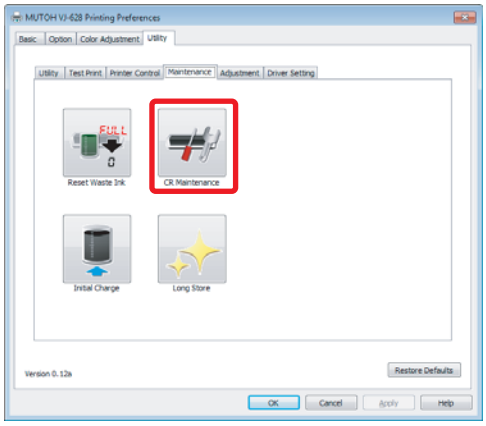
[1] Display the Printing Preferences screen of printer driver.
"Displaying the Printing Preferences screen of printer driver" on page 8

[2]



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

[3]



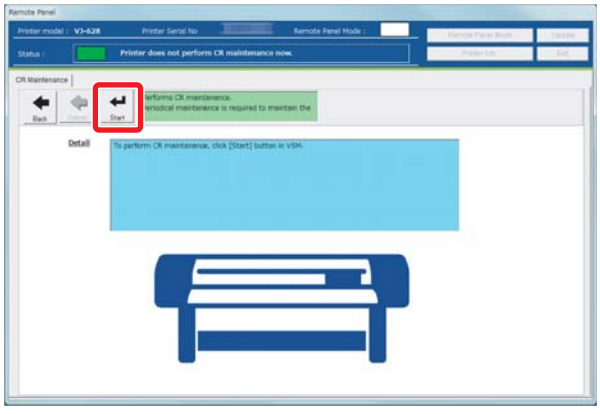
Click [CR Maintenance].

- The MSM remote panel opens.

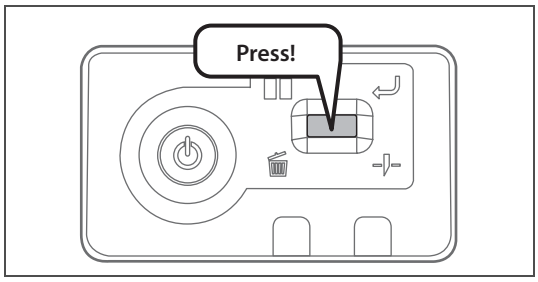
Note

- MSM can be launched directly.

[4] Click [Start].



[5]



Short press the operation key on the operation panel.

- The carriage moves to the maintenance position inside the front cover.

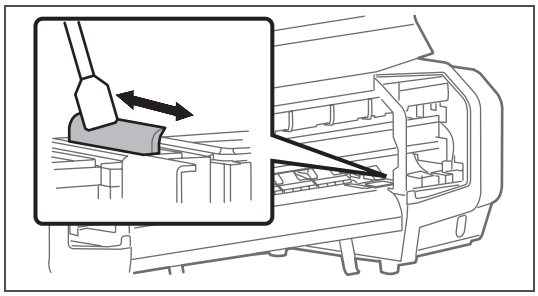
[6] Open the front cover.

Important!

When cleaning the cleaning wiper, please note the followings.

- Use a cleaning stick in dry condition. If moisten with water or solution, it can cause damage to the print head.
- Do not reuse a cleaning stick. Dusts can adhere causing damage to the print head.
- Standard cleaning time should be within 5 minutes. If it takes longer, the stick can dry causing damage to the print head.

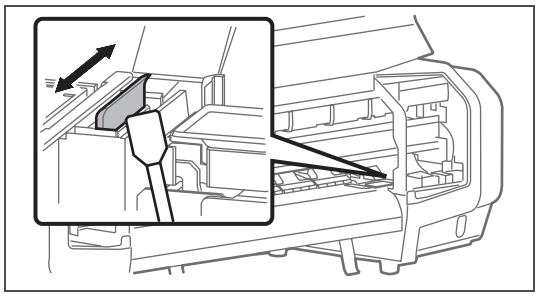
[7]



Wipe the cleaning wiper with a cleaning stick.

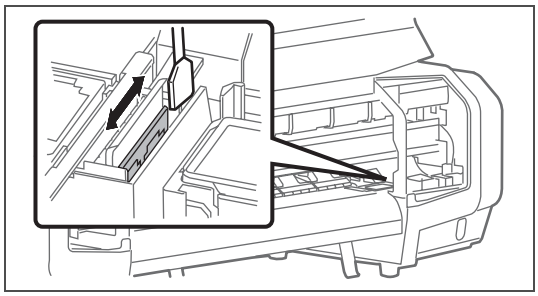
- Wipe the left side surface of cleaning wiper going back and forth.

[8]



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

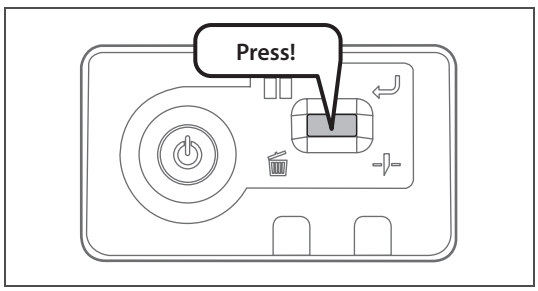
[9]



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

[10] Close the front cover.

[11]



Short press the operation key on the operation panel.

- The carriage moves to the original position inside the front cover.

Cleaning of print head circumference

Cleaning period:

- Weekly
- When print blurring and dot missing remain after head cleaning is done.

Preparation:

Cleaning stick

Important!

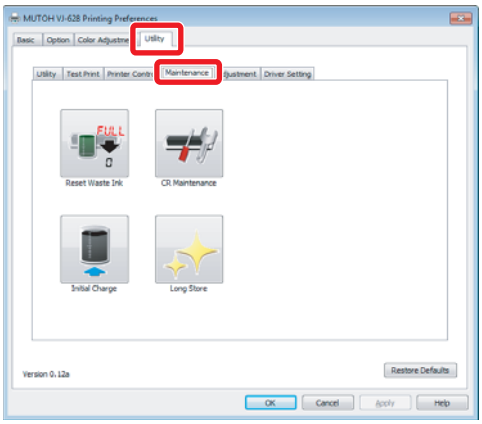
During cleaning, please note the followings.

- Use a cleaning stick in dry condition. If moisten with water or solution, it can cause damage to the print head.
- Do not touch the tip of a cleaning stick with fingers. If sebum is adhered, it can cause damage to the print head.
- Do not reuse a cleaning stick. Dusts can adhere causing damage to the print head.
- Standard cleaning time should be within 5 minutes. If it takes longer, the stick can dry causing damage to the print head.

Steps

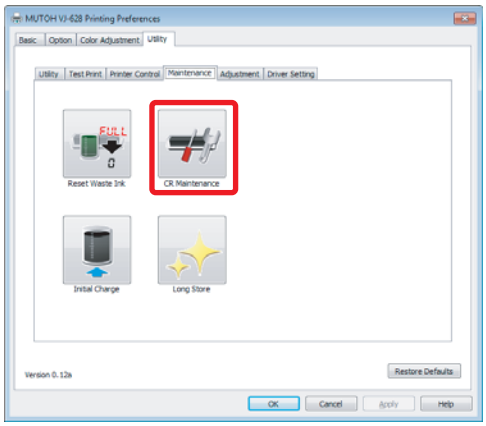
[1] Display the Printing Preferences screen of printer driver.
"Displaying the Printing Preferences screen of printer driver" on page 8

[2]



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

[3]



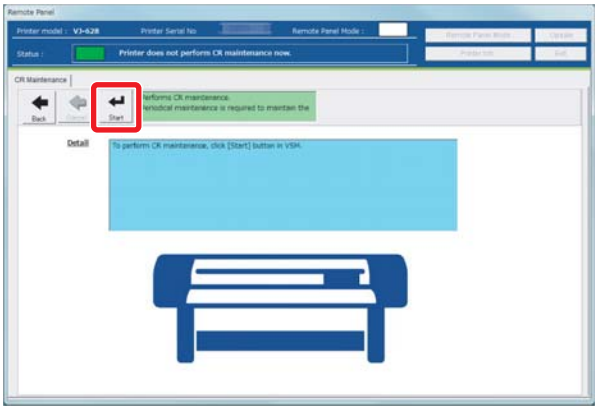
Click [CR Maintenance].

- The MSM remote panel opens.

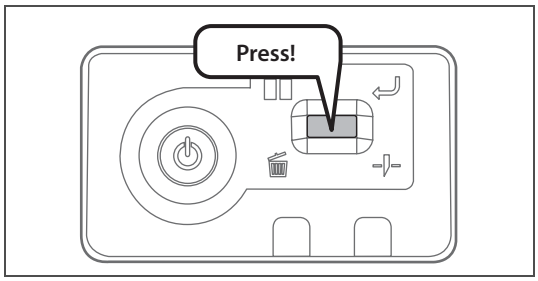
Note

- MSM can be launched directly.

[4] Click [Start].



[5]

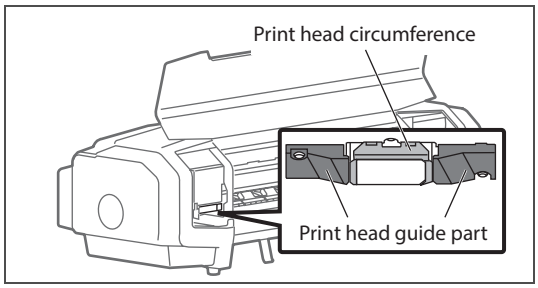


Short press the operation key on the operation panel.

- The carriage moves to the maintenance position inside the front cover.

[6] Open the front cover.

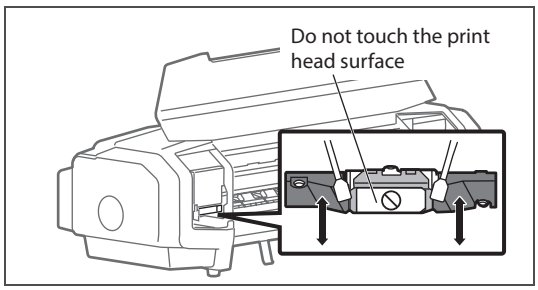
[7]



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)

[8]



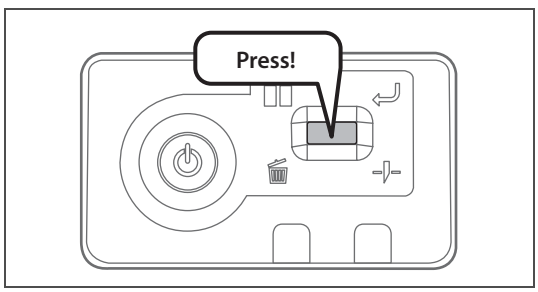
If dusts or ink lump are adhered, clean with a cleaning stick.

Important!

- Do not touch the print head surface with fingers or a cleaning stick. It can cause damage to the print head.
- Do not touch the platen or media guide. The temperature may be high.

[9] Close the front cover.

[10]



Short press the operation key on the operation panel.

- The carriage returns to the original position inside the front cover.

Inside cleaning

Cleaning period:

- Monthly

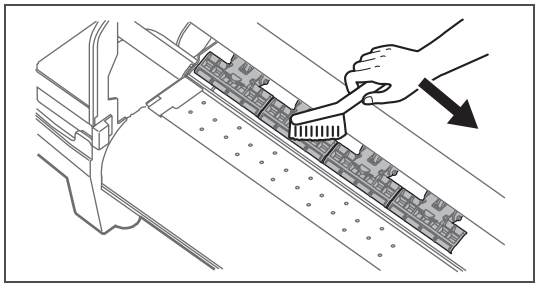
Steps

[1] Check the power is OFF.

[2] Open the front cover.

Important!

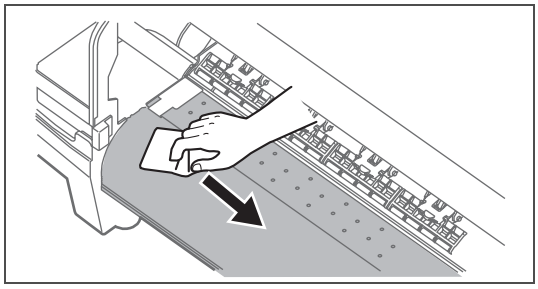
Immediately after turning off the power, the temperature of the heater in this product is very high.
Touch the platen or media guide and if it is too hot, wait for a while before starting cleaning.

[3] 

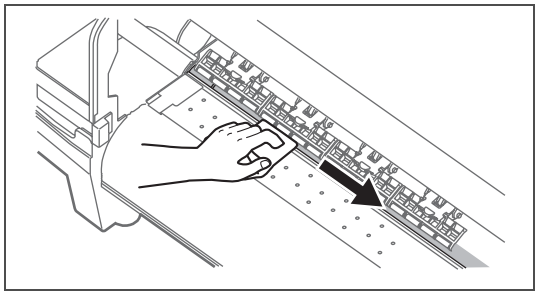
Brush off dusts on the pressure arms with a soft brush.

Important!

- Do not blow off dusts inside the product with a gas duster. It may cause abnormal noise.

[4] 

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

[5] 

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

[6] 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.

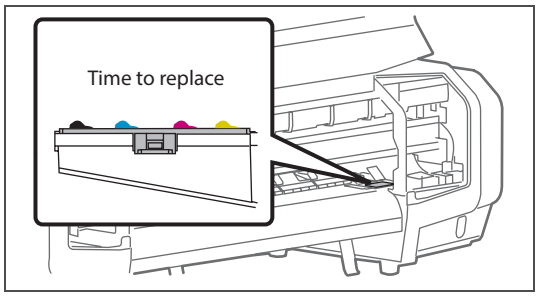
Cleaning period:

- Approx. every 2 months (since it differs depending on usage frequency, please check periodically)

1. Checking steps

[1] Open the front cover.

[2]



Check the absorption material for the flushing box.

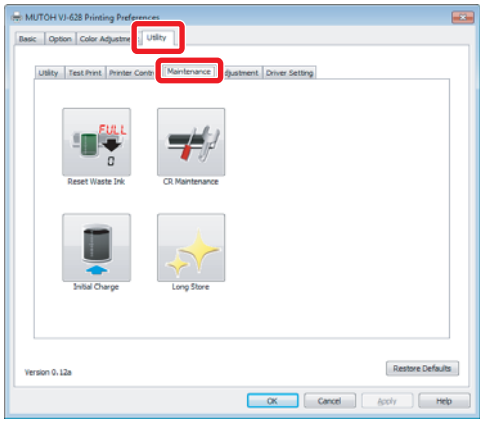
- When there are lumps of ink rise from the frame of the flushing box, it is time to replace.

[3] Close the front cover.

2. Replacing steps

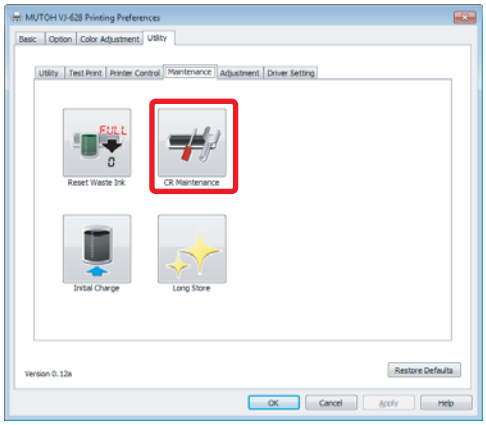
[1] Display the Printing Preferences screen of printer driver.
☞"Displaying the Printing Preferences screen of printer driver" on page 8

[2]



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

[3]



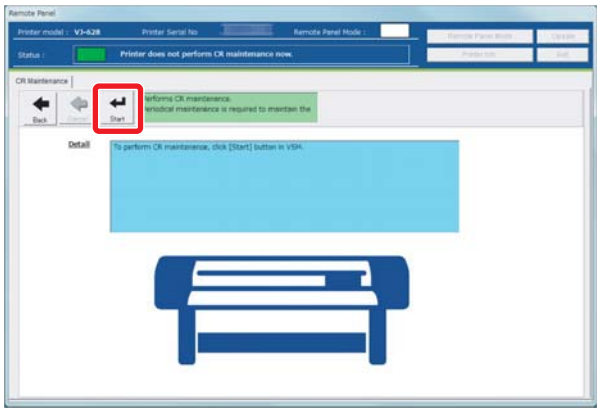
Click [CR Maintenance].

- The MSM remote panel opens.

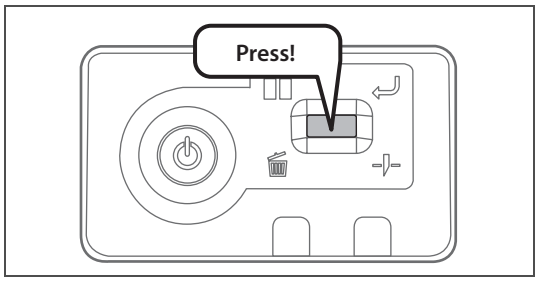
Note

- MSM can be launched directly.

[4] Click [Start].



[5]

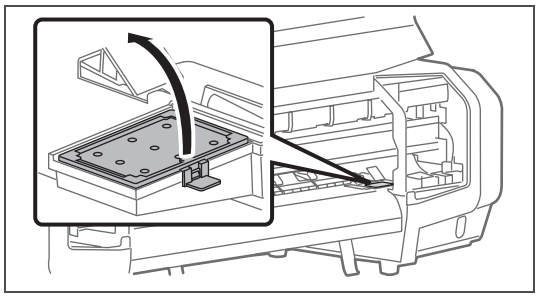


Short press the operation key on the operation panel.

- The carriage moves to the maintenance position inside the front cover.

[6] Open the front cover.

[7]



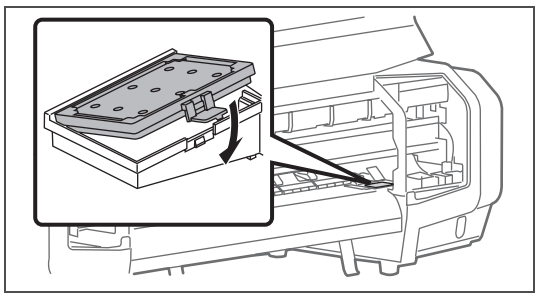
Remove the absorption material for the flushing box.

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

Important!

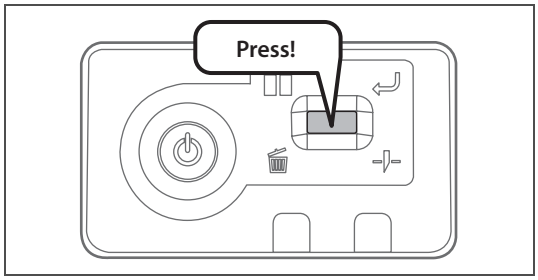
When removing the absorption material for the flushing box, be cautious of ink drops.

[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 moves to the original position inside the front cover.

Replacing cutter

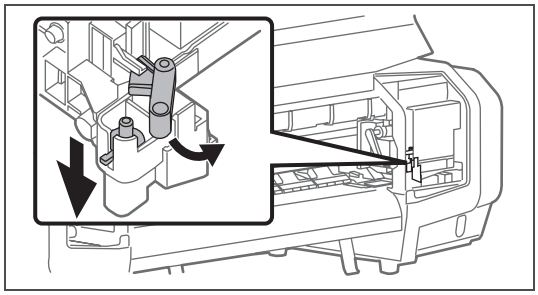
When the cutter blade becomes dull, replace with a new cutter.

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

Steps

[1] Open the front cover.

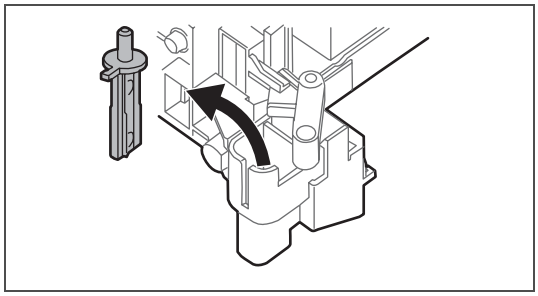
[2]



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

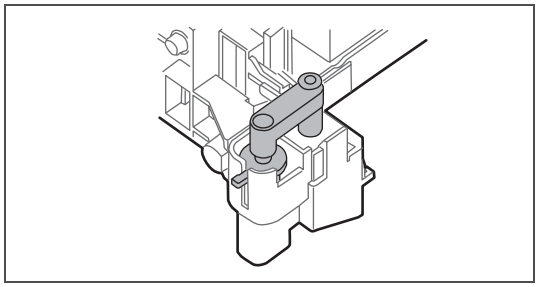
- While pushing down the cutter knob lightly, move the cutter holder to your side.

[3]



Remove the cutter.

[4]



Attach a new cutter.

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

[5] Close the front cover.

Transporting and long-term storage

Please refer to this section when transporting or storing this product for a long time.

Transporting

When transporting this product, it is necessary to wash inside with cleaning cartridge, discharge waste ink 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.

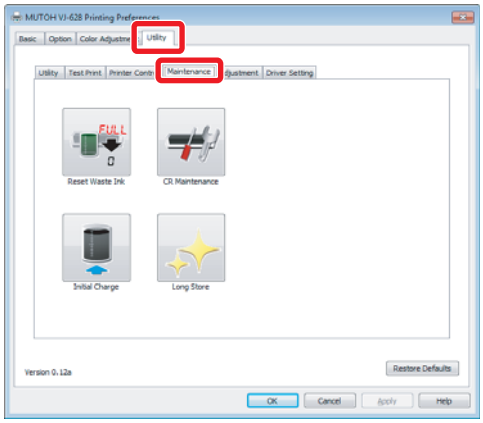
Important!

- 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.
  Otherwise the ink may leak or the handling mentioned above may cause abnormality.

1. Head cleanining and discharging waste ink

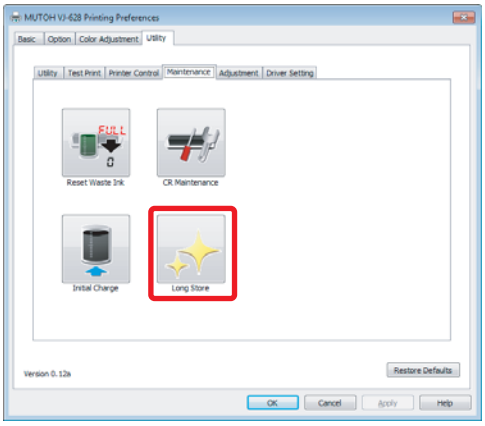
[1] Display the Printing Preferences screen of printer driver.
☞"Displaying the Printing Preferences screen of printer driver" on page 8

[2]



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

[3]



Click [Long Store]

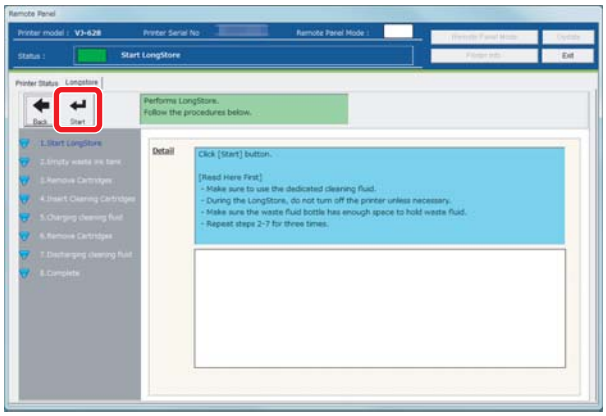
- The MSM remote panel opens.

Note

- MSM can be launched directly ☞

[4] Click [Start] in the [Longstore] tab.

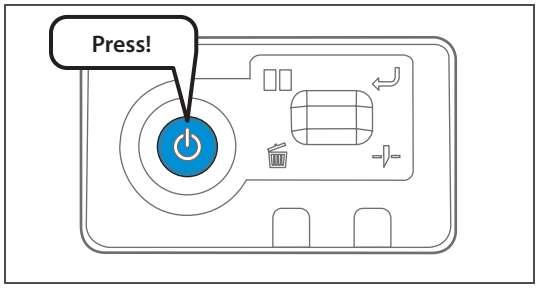
- Conduct head cleaning following the screens.
- After head cleaning is done, do not conduct re-launching and initial charging.



[5] Empty the waste ink tank.

☞"Emptying waste ink tank" on page 49

[6]



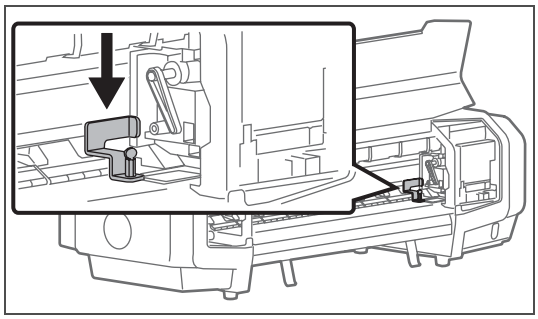
Turn the power button of this product OFF.

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

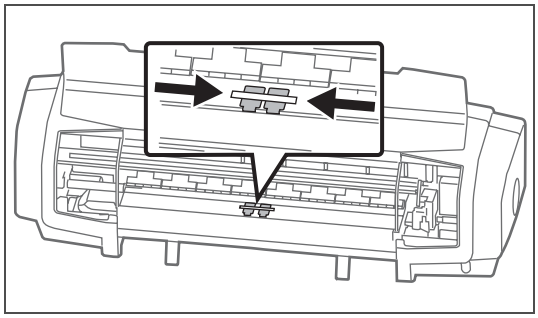
2. Repacking

[1] Remove all cables like power cable.

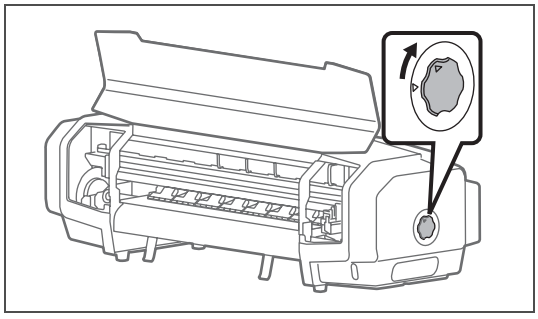
[2] Open the front cover.

[3] 

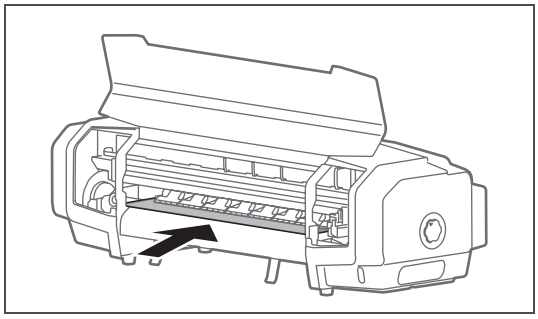
Attach the head fixing plate with screws.

[4] 

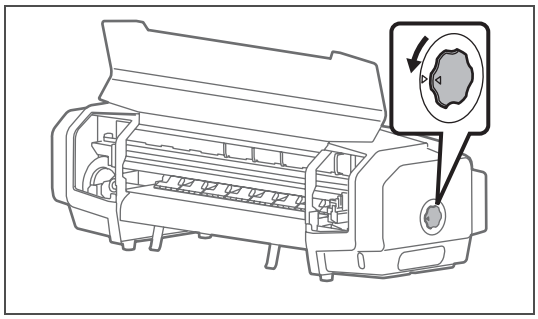
Move the paper guides to the center and place taping.

[5] 

Turn the media fixing knob to release the lock.

[6] 

Attach the roller protective sheet.

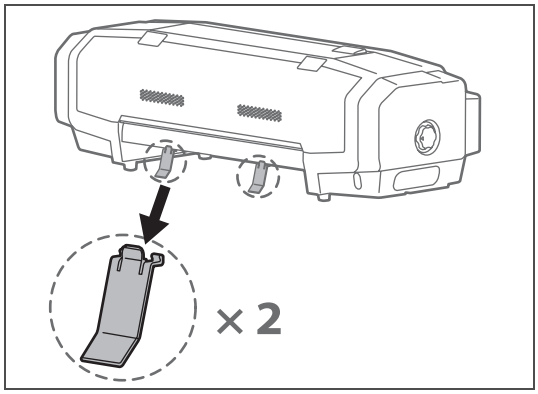
[7] 

Turn the media fixing knob to lock.

- The roller protective sheet is fixed.

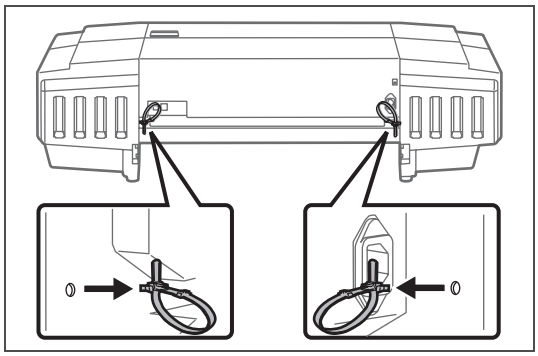
[8] Close the front cover.

[9]



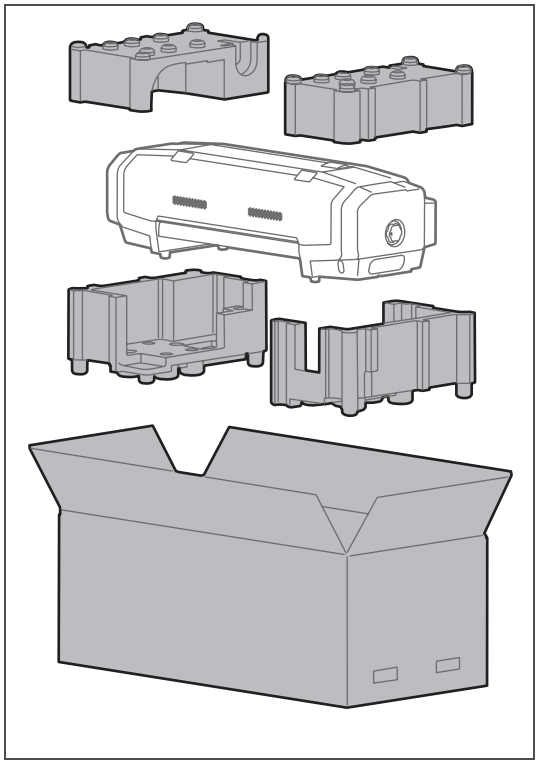
Remove 2 media guides.

[10]



Remove 2 tying bands.

[11]



Attach protection materials, and place the product inside the package box

3. Reinstalling

[1] Referring to “Startup Guide” , unpack the product and assemble.

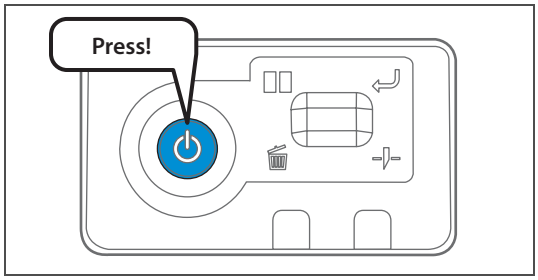
- Conduct up to “Starting Setup” .

[2] Conduct initial charging.

☞"Initial charging" on page 67

Initial charging

[1]



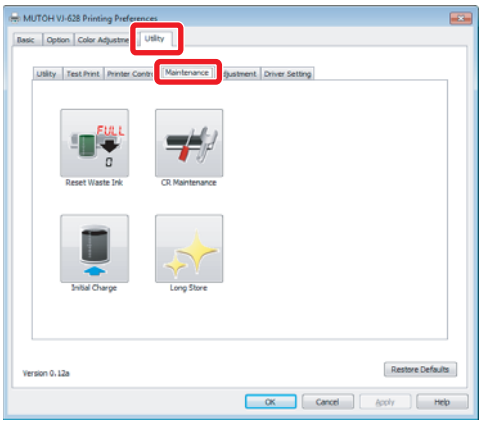
Turn the power button of this product ON.

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

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

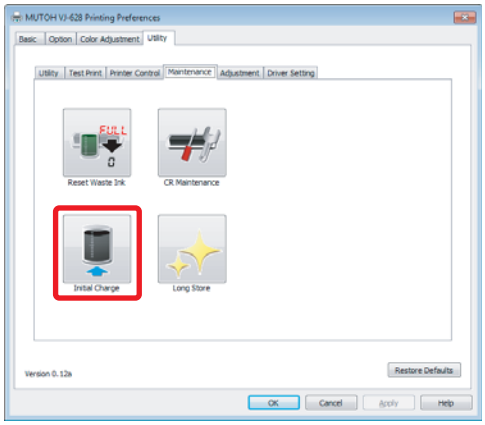
☞"Displaying the Printing Preferences screen of printer driver" on page 8

[3]



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

[4]



Click [Initial Charge].

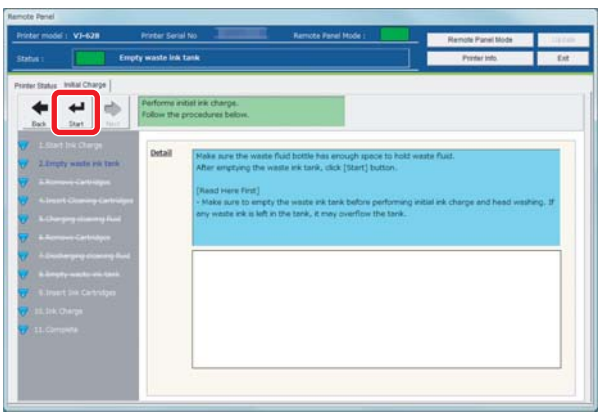
- The MSM remote panel opens.

Note

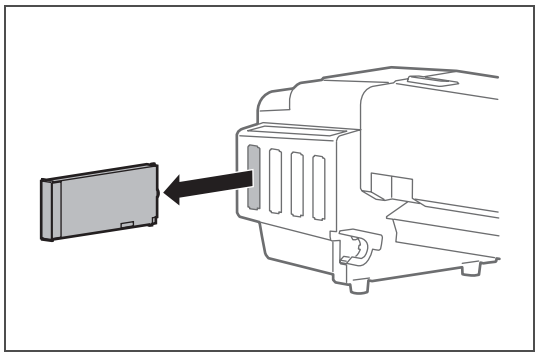
- MSM can be launched directly.
  ☞

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

☞"Emptying waste ink tank" on page 49

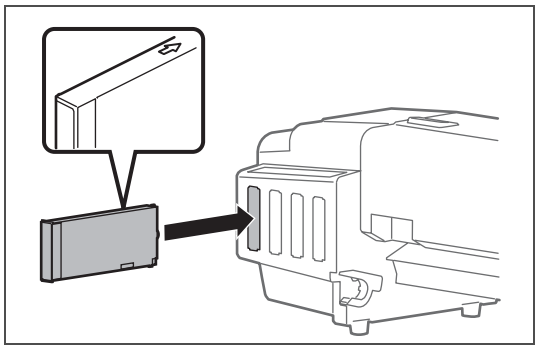


[6]



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

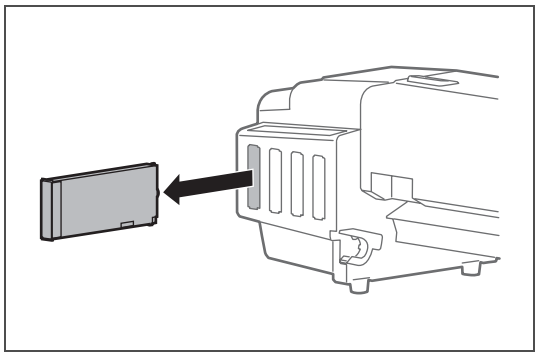
[7]



Insert cleaning cartridge to all cartridge slots.

- The arrow should face up.
- Insert all the way to the end.
- Start charging cleaning fluid

[8]

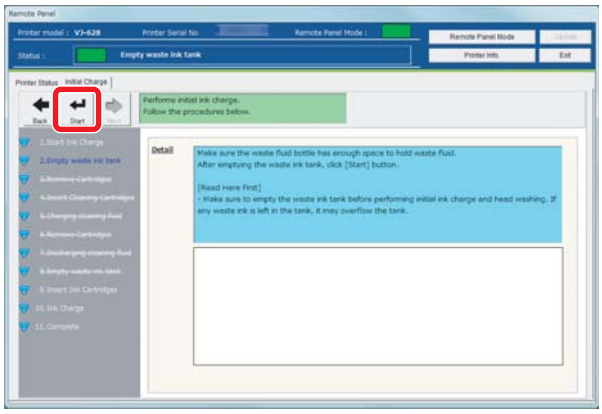


After cleaning fluid charging is done, remove all cleaning cartridges.

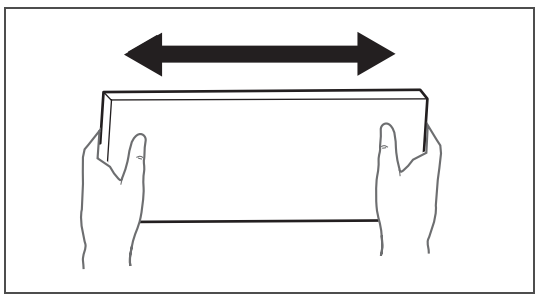
- Cleaning fluid starts to be discharged.

[9] After emptying the waste ink tank, click [Start].

☞"Emptying waste ink tank" on page 49

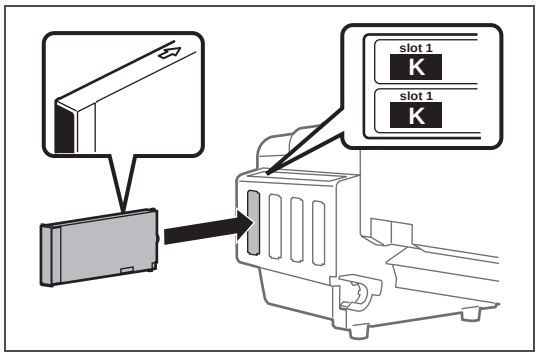


[10]



Shake the ink cartridge 2 or 3 times lightly.

[11]



Insert ink cartridge to this product.

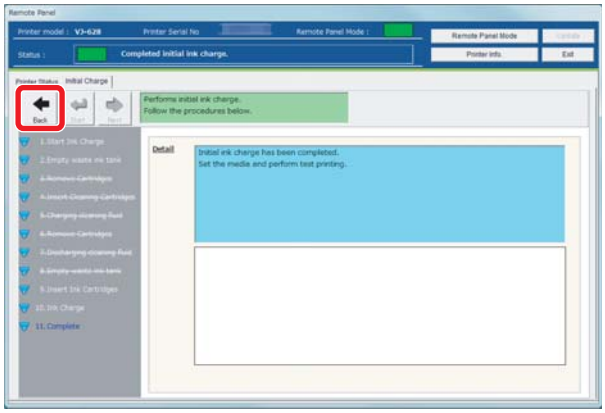
- Match the label of this product to the color of ink cartridge.
- The arrow should face up.
- Insert all the way to the end.

Note

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

[12] IIn the [Finish] screen, click [Back].

- It finishes initial charging.



Storing for a long time

[1] When not using for a long time, conduct head washing and discharging of waste ink.
☞"Transporting" on page 62 in "Head cleanining and discharging waste ink"

[2] When used again, conduct initial charging.
☞"Initial charging" on page 67

Chapter 4 Appendix

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Troubleshooting

Handling messages/error messages

Checking message/error/warning

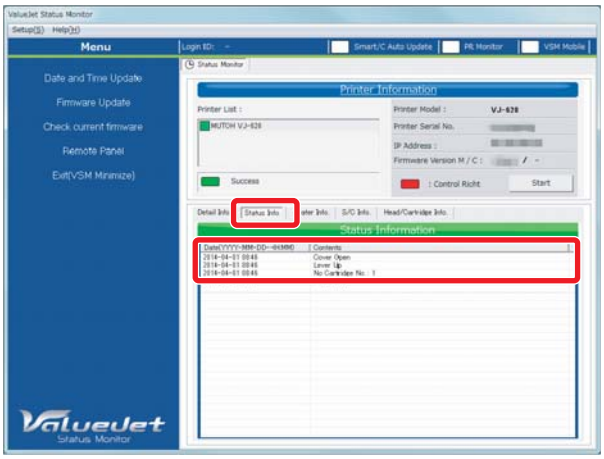
MSM is used to check error/warning when problem happens and to check messages while the product is operating correctly.

[1] Launch MSM.

"Launching MSM" on page 9

[2] Check [Status Info.].

- Message/error/warning contents are displayed.
- When countermeasures are displayed, follow them.



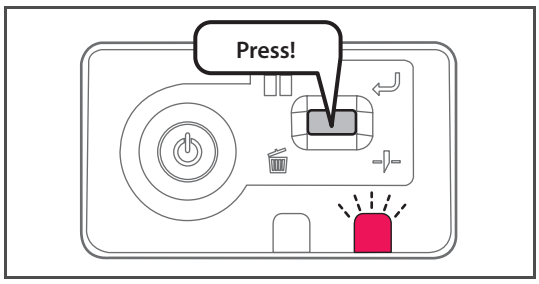
Note

- 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.

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.

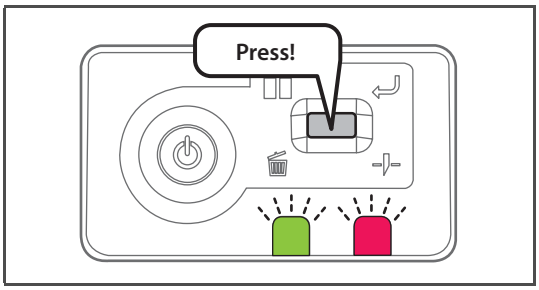
[2] Check error/warning contents with MSM and handle the error/warning.

"Checking message/error/warning" on page 72

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.

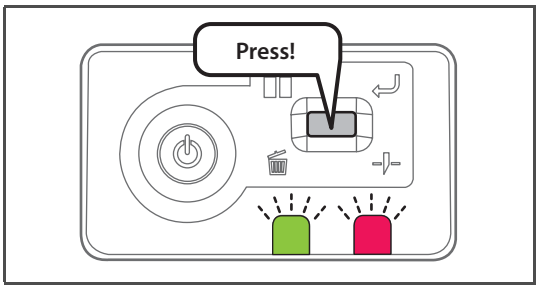
- The buzzer stops.

[2] Check the serious error contents with MSM.

☞"Checking failure contents of the emergency mode" on page 74

- After checking it, proceed to step 5.
- When the status monitor cannot be viewed, proceed to step 3.

[3]

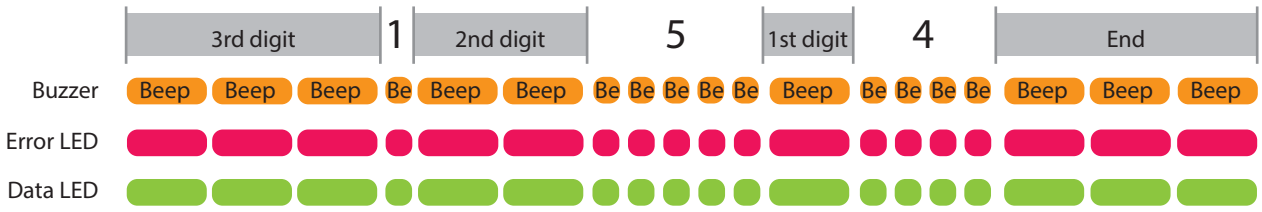


When the status monitor cannot be viewed, short press the operation key on the operation panel again.

- 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.



Note

- 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.

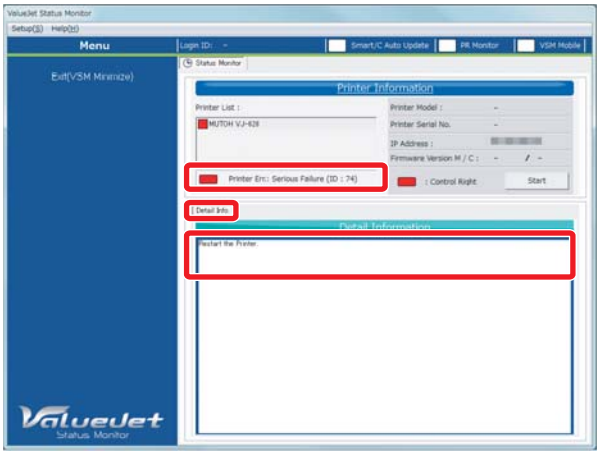
Checking failure contents of the emergency mode

[1] Launch MSM.

☞"Launching MSM" on page 9

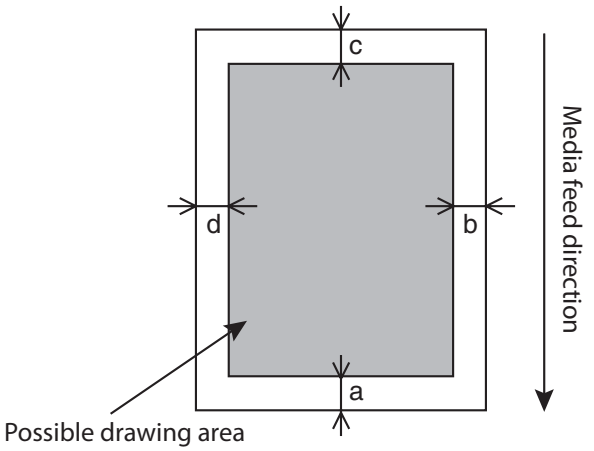
[2] Check [Printer Information] and [Detail Info.].

- Contents of serious errors and countermeasures are displayed.



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 15 mm.

*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-628D
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) 6 colors (Black, Cyan, Magenta, Yellow, Light Cyan, Light Magenta), 8 color adds 2 Cleaning/2 White
	Type	220 ml cartridge, 1L clear DTF bags (900ML White)
Waste ink tank		Fixed to the body type, capacity 1500 ml, waste ink discharge by users
Environmental conditions	Operating environment	Temperature 68-75 °F, humidity 45 to 55%, no condensation.
	Ranges to ensure printing precision	Temperature 68-75 °F, humidity 45 to 55 %, no condensation.
	Change rate	Temperature: No more than 4 °F per 1 hour Humidity: No more than 5 % per 1 hour
	Environment for storage	• If not charged with ink when stored: up to 6 months Temperature 20 - 85F, humidity 20 to 70 %. • If charged with ink when stored: up to 1 week* Temperature 45 - 85° F, humidity 20 to 70 %. *Up to 4 days if the ambient temperature is within the above range.

Power supply specifications	Voltage	AC 100 V to 120 V ±10 % or 200 V to 240 V ±10 %
	Frequency	50 / 60 Hz ±1 Hz
	Capacity	No less than 10 A
Power consumption	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
Voltage switch		Manual switching with 100/200 V , Selector switch set on 200 V when shipped.
Current consumption	100 V to 120 V	6.5 A or below
	200 V to 240 V	3.5 A or below
External dimensions	Height	366 mm (with exclusive stand: 1166 mm)
	Width	1190 mm
	Depth	438 mm (with exclusive stand: 590 mm)
Weight	Main body	31.8 kg
	Legs	8.7 kg

INKS
Color is in Our DNA