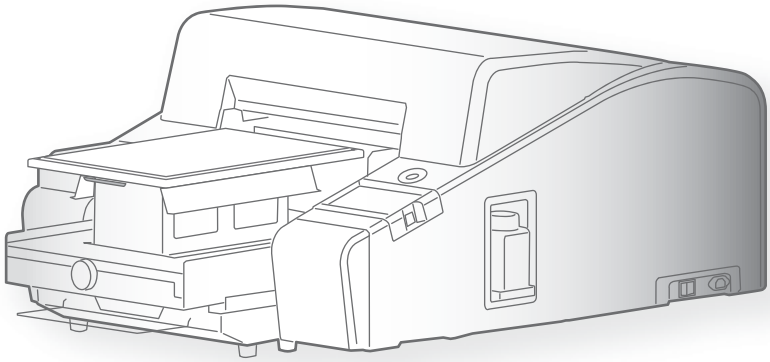
MUTOH

ValueJet

VJ-404GT/405GT

Operation Manual

Operations and Maintenance Methods



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- We have taken all possible measures to ensure the contents of this Manual. However, should you have any questions or notice any errors, please contact our company or the sales agent where you purchasing this product.
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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.

Touch panels and software screens described in this manual

The touch panel screens and softwares (applications, and printer drivers) may display different screens or functions depending on models. In this manual, screens displayed with VJ-405GT are shown, unless otherwise noted.

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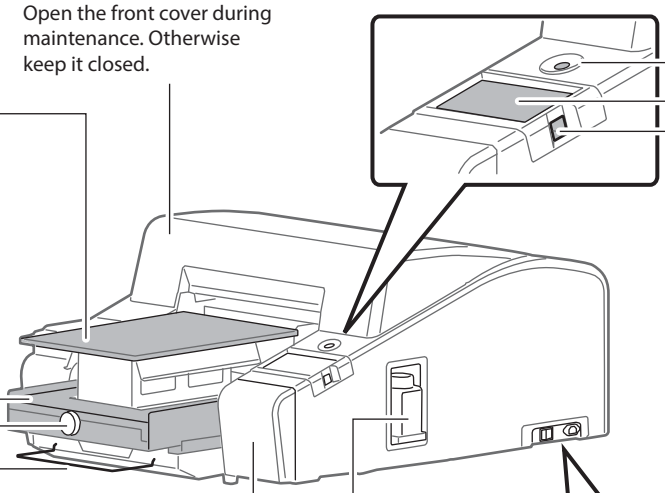
Part Names

Printer front



Front cover
Open the front cover during maintenance. Otherwise keep it closed.

Platen
Place the T-shirt here.
A Platen Medium is already installed.
Platen Large and Small are optional.

Table
The table moves back and forth when printing.
Move the table with the keys [SET] and [EJECT] on the touch panel.
Do not move the table back and forth with your hands.

Table up-down dial
If you turn the dial, the table will move ±15 mm.

Table Position Guide
This serves to measure the distance needed to prevent contact with the table when it is in operation. Do not stand in this area.

Cartridge covers
Open when installing or removing cartridges.

Waste ink bottle
This container stores liquids such as waste ink or used detergent. Check the indicator on the touch panel and when the container is full, pour the waste ink into a different container.

Sub power button
It turns on/off of this device.
Normally do not turn it off.
Use the sleep mode function.

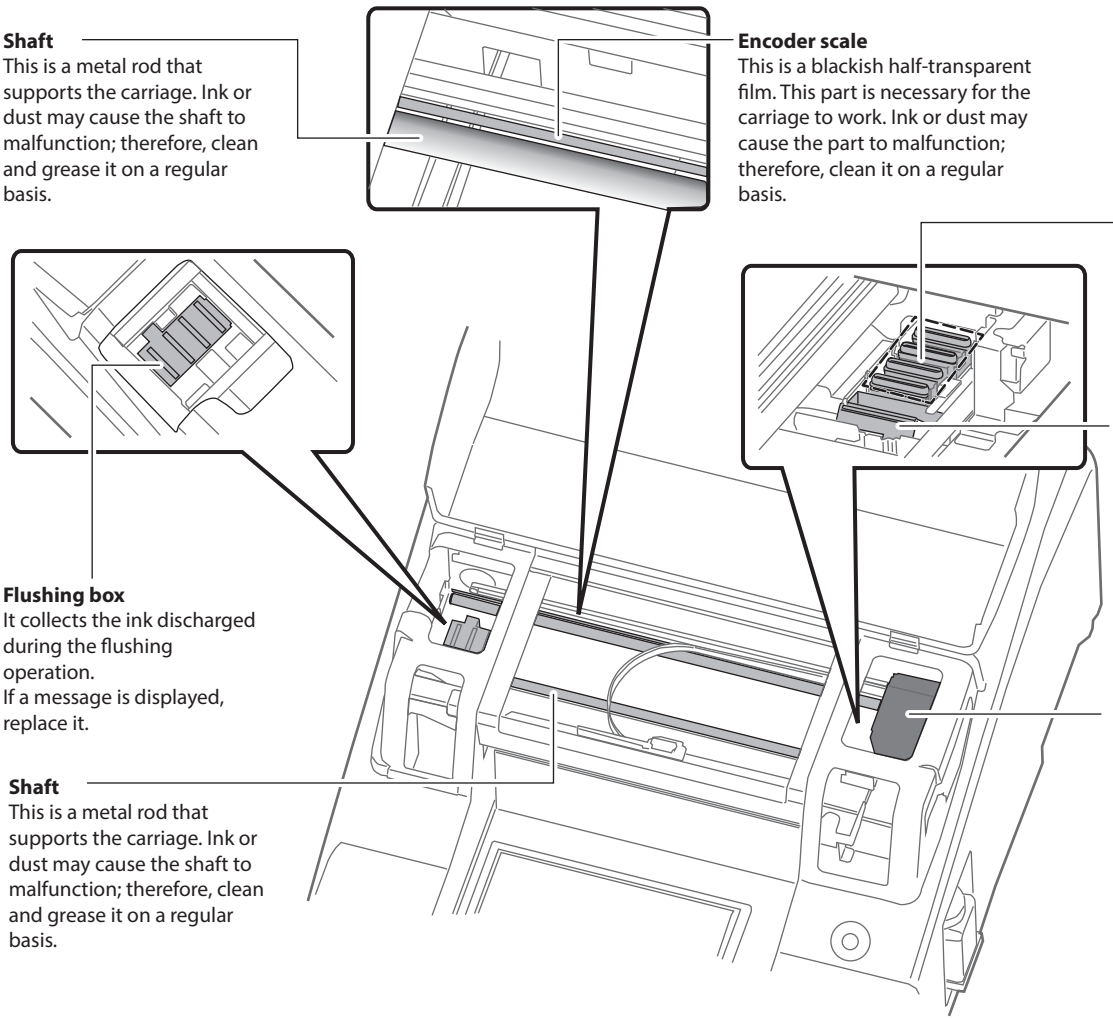
Touch panel
⇒"Touch panel" on Page 8

Network connector
Connect the Ethernet cable.

Power connector

Main power switch
Normally leave it on.
When the device is not in use for a long period of time or when you move the device, turn the main power switch off.

Printer inside



Shaft
This is a metal rod that supports the carriage. Ink or dust may cause the shaft to malfunction; therefore, clean and grease it on a regular basis.

Encoder scale
This is a blackish half-transparent film. This part is necessary for the carriage to work. Ink or dust may cause the part to malfunction; therefore, clean it on a regular basis.

Head cap
It prevents the print head from drying.
VJ-405GT requires daily maintenance.

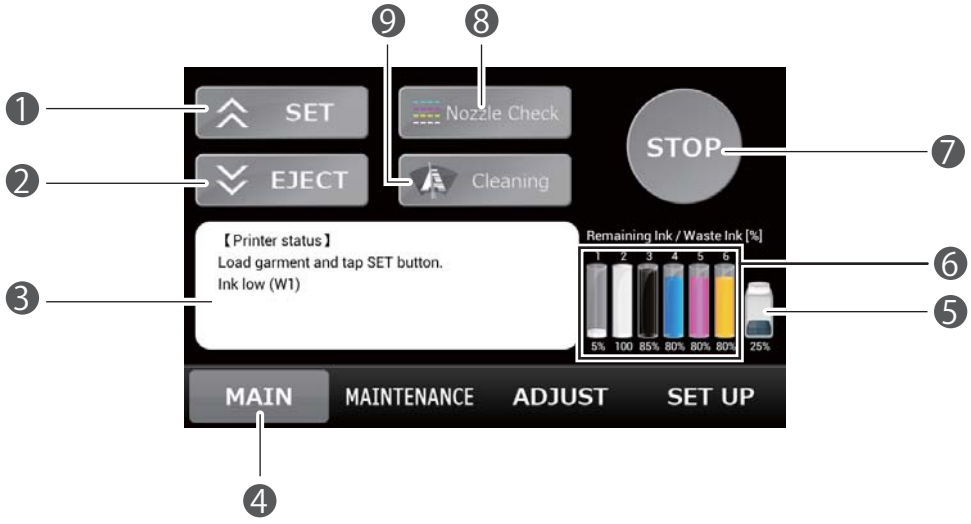
Wiper
It is a gum plate that wipes the ink off on the head nozzle of the print head.
VJ-405GT requires daily maintenance.

Flushing box
It collects the ink discharged during the flushing operation.
If a message is displayed, replace it.

Carriage
Underneath there is the print head and the head nozzle. It moves left and right when printing. The carriage requires regular cleaning.

Shaft
This is a metal rod that supports the carriage. Ink or dust may cause the shaft to malfunction; therefore, clean and grease it on a regular basis.

MAIN menu



1

Moves the table to the print start position.
Stops the table when it is moving.

2

Moves the table to the eject position.
Stops the table when it is moving.

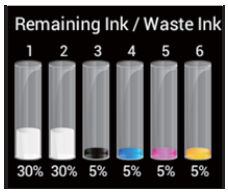
3 [Printer status] Displays the printer status.

4 [MAIN] menu Displays the [MAIN] menu.

5

Displays amount of waste ink in the waste ink bottle.

waste ink bottle Full

6 

Displays the ink cartridge level.

Ink level empty

No cartridge inserted

7

Stops the table when it is moving.
Performs as follows when printing is in progress.

- Tapping pauses printing.
- Tapping two seconds or more cancels printing.

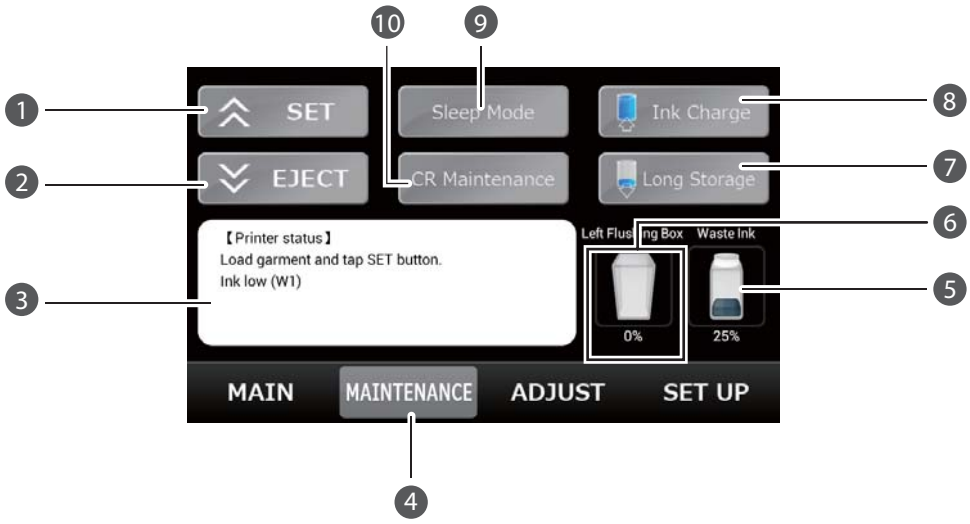
8

Prints a nozzle check result.

9

Performs head cleaning.

MAINTENANCE menu



1

Moves the table to the print start position.
Stops the move when moving is in progress.

2

Moves the table to the eject position.
Stops the move when moving is in progress.

3 [Printer status] Displays the printer status.

4 [MAINTENANCE] menu Displays the [MAINTENANCE] menu.

5

- Displays the level of the waste ink bottle.
- Tap the icon to initialize the waste ink bottle counter.

waste ink
bottle
Full

6

- Displays amount of the waste ink in the left flushing box.
- Tap the icon to initialize the left flushing box counter.

Left flushing box
Full

7

Fills the cleaner. Perform this operation when the printer is not in use for a long period of time or before the printer is shipped.

8

Performs initial ink charging.

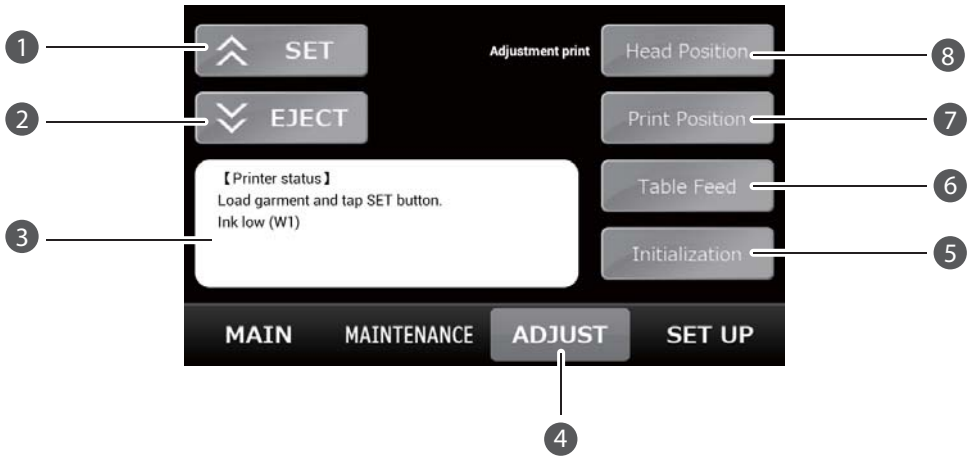
9

Sets the printer to Sleep Mode. Generally keep the printer in this mode while not in use.

10

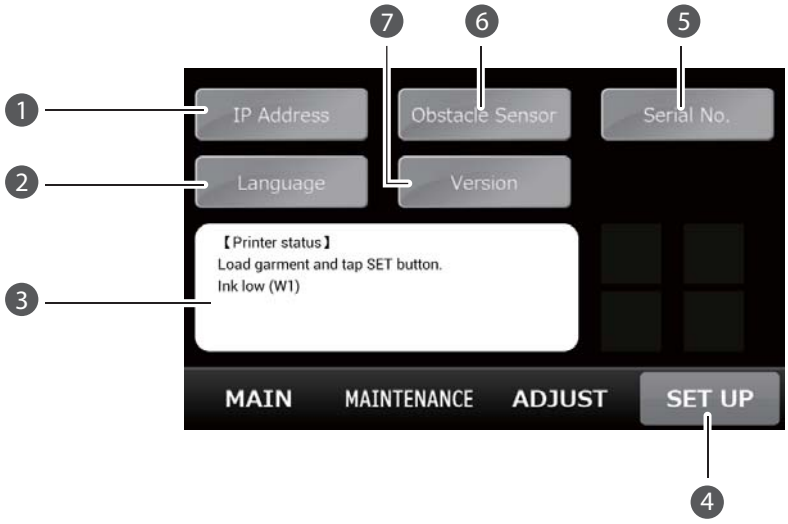
Sets the printer in the CR Maintenance mode. Perform this operation during cleaning or replacing consumables.

ADJUST menu



1		Moves the table to the print start position. Stops the table when it is moving.
2		Moves the table to the eject position. Stops the table when it is moving.
3	[Printer status]	Displays the printer status.
4	[ADJUST] menu	Displays the [ADJUST] menu.
5		Initializes the image quality adjustment value. Image quality adjustment is required after initialization.
6		Corrects the table feeding.
7		Adjusts the print position.
8		Adjusts the head position.

SETUP menu



1	IP Address	Performs various settings of network address.
2	Language	Performs language settings.
3	[Printer status]	Displays the printer status.
4	[SETUP] menu	Displays the [SET UP] tab.
5	Serial No.	Displays the serial number of the printer.
6	Obstacle Sensor	Sets on or off of the obstacle sensor.
7	Version	Displays the internal software version.

Starting Layout and Print Tool

[1]

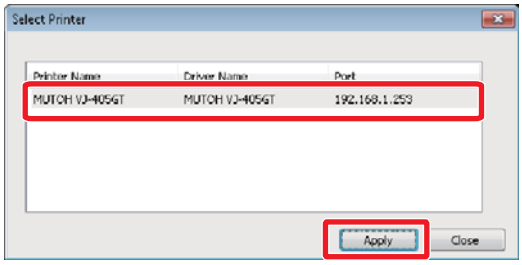
Windows 8/Windows 8.1

- On the [Start] screen, click [Desktop].
- Double-click the Layout And Print Tool icon on the desktop.

Windows 7/Vista/XP

Double-click the Layout And Print Tool icon on the desktop.

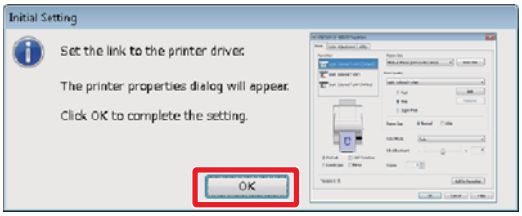
[2]



For the first launch, the printer driver selection screen appears.

- Select the printer driver and then click [Apply].
- The confirmation screen in step 3 is displayed, only when the printer driver setting has not been performed before.

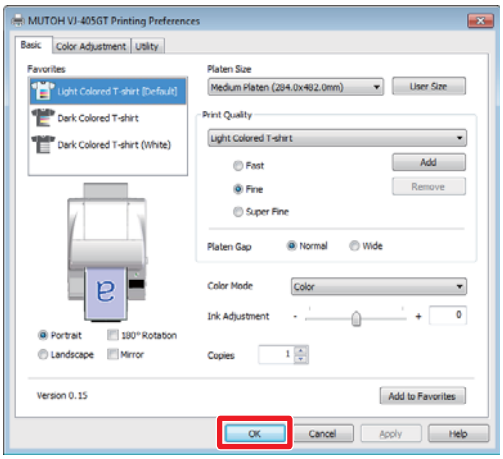
[3]



Click [OK] on the confirmation screen.

- The Printing Preferences dialog will appear.

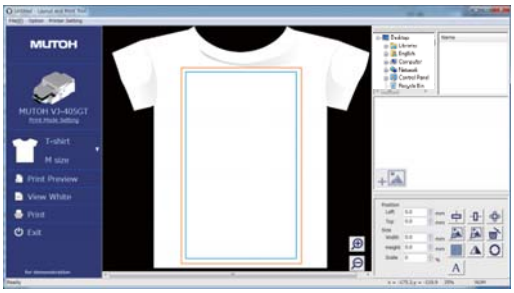
[4]



Click [OK].

- Layout and Print Tool will start.

[5]



Insert images and start printing.

- See below for the operation procedures.

☞"Printing an image from Layout and Print Tool" on page 43

Or,

☞Layout and Print Tool Operation Manual

Displaying the Printing Preference dialog

[1] **Windows 8/Windows 8.1**

Display the Charm bar on the desktop and click [Settings].
Click [Control Panel], and then [Devices and Printers].

Windows 7

Click [Start], and then [Devices and Printers].

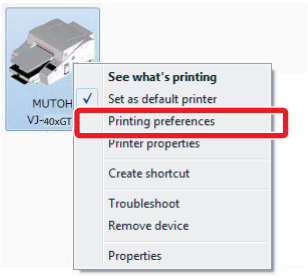
Windows Vista

Click [Start], [Control Panel], and then [Printer].

Windows XP

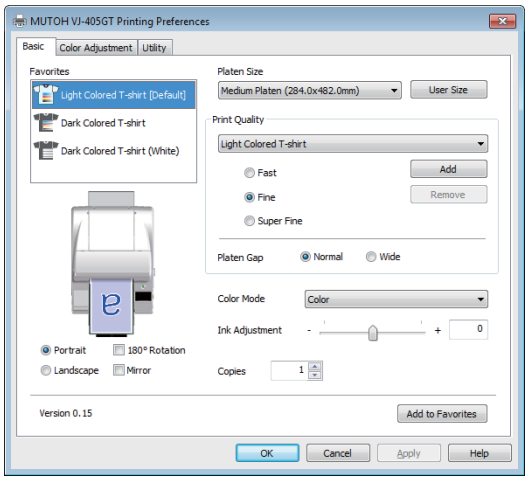
Click [Start], and then [Printers and Faxes].

[2]



Right-click the icon for this printer, and then click [Printing preferences].

- The Printing Preferences dialog will appear.



The Printer Preference Dialog (VJ-405GT)

Displaying Help

Help is available from the Printing Preferences dialog.

Printer driver

Open the Printing Preference dialog, and click [Help].

Requests regarding Use

Do not turn the power off

Make sure that the power is always turned on. When not using this printer, do not turn the power off, but make sure you put the printer into sleep mode. While in sleep mode, the printer periodically circulates ink internally and automatically performs head cleaning. If you do not put the printer in sleep mode, the ink in its interior could settle and/or coagulate, causing poor image quality or printer failure.

Shake the ink cartridge

Shake the ink cartridges before installing them in the printer according to the procedure in this Manual.
Even after it is set, the white ink cartridge must be shaken periodically. If the message is displayed on the operation panel, then shake the ink cartridge according to the procedure on the Instruction sheets for dedicated ink or the Operation Manual.
If you do not, the ink in the cartridge could settle and/or coagulate, causing poor image quality or printer failure.

Perform maintenance periodically

This product requires daily maintenance. Be sure to perform maintenance after thoroughly reading the Instruction sheets for daily maintenance or the Operation Manual.

If the maintenance work is not performed on a daily basis, it could shorten the life of the printer or cause printer failure.

	VJ-405GT	VJ-404GT
Cleaning wiper and caps	Every day	Once a week
Around the print head	Once a week	Once a week
Shaft and encoder scale	Once every 2 weeks	Once every 2 weeks
Waste liquid bottle	Empty the bottle when a message is displayed on the operation panel.	

Note

- After cleaning the shaft, apply grease.
- When 'Head Gap' is set to 'Large', carry out maintenance on the shaft and encoder scale once a week.

Some parts require periodical replacement

- Parts that require replacement

Left flushing box	Needs to be replaced if the message is displayed on the operation panel.
Mist filter	Once every two months.

Note

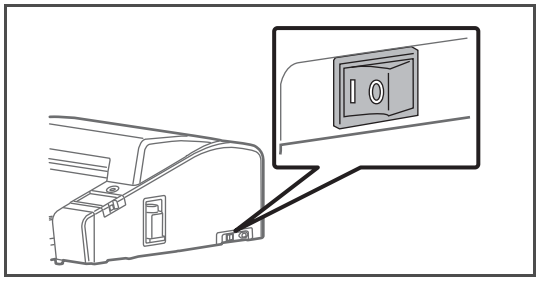
- One flushing box is provided with the printer for replacement.
- When necessary, place an order for parts that need regular replacement (optional products).
- The time interval for parts that need regular replacement may change depending on the environment in which the printer is used and the frequency of its use.

Use the printer periodically

- We recommend using this product once per week. Leaving the printer unused for long periods of time can cause nozzle clogging in the print head and unit failures.
- If you don't use the priner for a long period of time, carry out initial charging when you start using it again.
- If you don' t use the priner for a long period of time, carry out initial charging when you start using it again.

Turning on/off the power supply

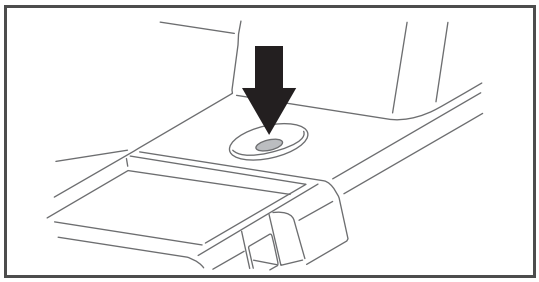
Turning the Power On

[1] 

Turn on the main power switch.

Note

- The | mark on the main power switch indicates ON.
- The ○ mark on the main power switch indicates OFF.

[2] 

Hold down the sub power button for more than 1 second.

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

Turning the Power Off

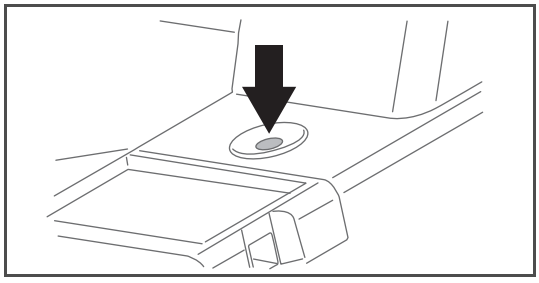
Important!

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

Turning off the sub power button only

Perform the following when this product needs to be turned off temporarily.

[1] Confirm that printing is completed.

[2] 

Hold down the sub power button for more than 3 second.

- The blue light goes off.
- This product starts its power-off operations.

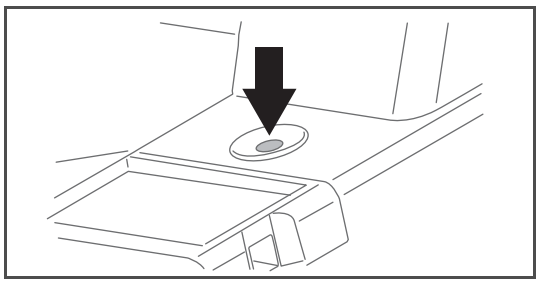
Turning off up to the main power switch

When this product is to be shipped or is not in use for a long period of time, perform the procedure "Long-term storage" on page 124, and then turn off the sub power button and then main power switch.

Important!

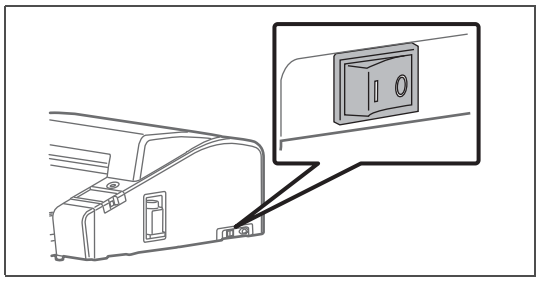
Do not turn off the main power switch before turning off the sub power button. It may cause printer failure.

[1] Confirm that printing is completed.

[2] 

Hold down the sub power button for more than 3 second.

- The blue light goes off.
- This product starts its power-off operations.

[3] 

Turn off the main power switch.

Sleep mode

When not using this printer, make sure you put the printer into the sleep mode; do not turn off the printer. 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.

If you set the printer's sleep mode, the printer performs the following operation.

- Once a certain period of time has passed, head cleaning is performed automatically.
- Circulate white ink line (every hour).

Important!

To continue the sleep mode for a long time, perform the following:

- **Shake the white ink cartridge every 12 hours.**
- **Check the remaining ink when 7 days passed, and if "Ink low (*)" (* indicates the ink color) is displayed, replace the ink cartridge.**
- **Shake the ink cartridge except for white when 7 days passed.**

Entering and waking up from Sleep Mode

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

- The front cover is closed.
- The remaining ink level is sufficient.
- The waste ink bottle has enough space.

Important!

When Sleep Mode is to be continued for a long period of time, empty the waste ink tank first. After emptying the waste ink tankwaste ink tankwaste ink tank, reset the waste ink counter.

[2]

Tap the [MAINTENANCE] menu.

Note

Tap the touch panel firmly. If you touch it lightly, it may not respond as it is pressure-sensitive.

[3]

Tap the [Sleep Mode] key.
The confirmation message will appear.

[4]

Tap [Yes].

- The table will move to the eject position.
- The sleep mode will start.
- To wake up from sleep mode, turn on the sub power button.

Note

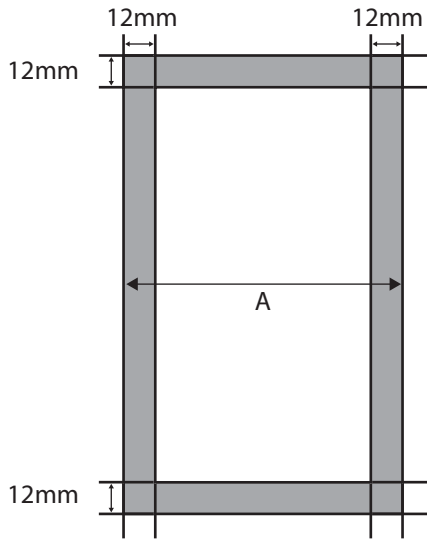
- During sleep mode, the sub power button flashes slowly.
- If you hold down the sub power button for more than 3 seconds during sleep mode, the printer turns off.

Print area

When using the standard platen

Nonprintable area

- The 12mm area around the platen (top, bottom, left and right) is a margin.



A: Platen width

Printable area

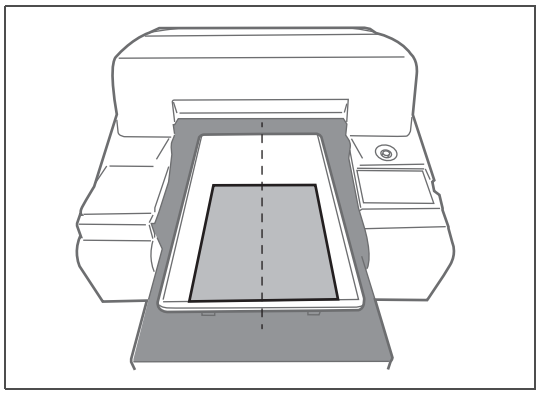
Type	Printable size
Platen Large	W 380 x D 560 mm
Platen Medium	W 310 x D 460 mm
Platen Small	W 230 x D 330 mm

Nozzle check and cleaning

Make sure to perform a nozzle check before printing T-shirts. If there is nozzle clogging, perform head cleaning until the problem is solved.

1. Placing the media on the platen

[1]



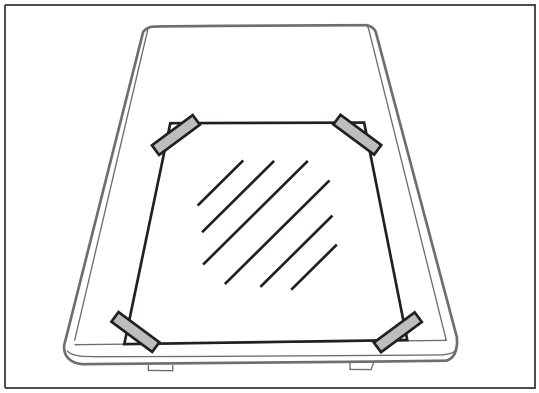
Load the media on the platen.

- Set the A4 size (210 mm x 297 mm) media vertically.
- Align the front edge of the media and the front edge of the platen.
- Align the center of the media and that of the platen.
- There is a groove in the center of the platen's front edge. Use it as a measure for the set position.

Note

For the white ink test printing in VJ-405GT, transparent or semi-transparent media (OHP film, trancing paper, etc.) are recommended.

[2]



If the media does not sit flat on the platen, use tape to fix the four corners of the media.

Note

If the textile does not sit flat on the platen, it may cause an error.

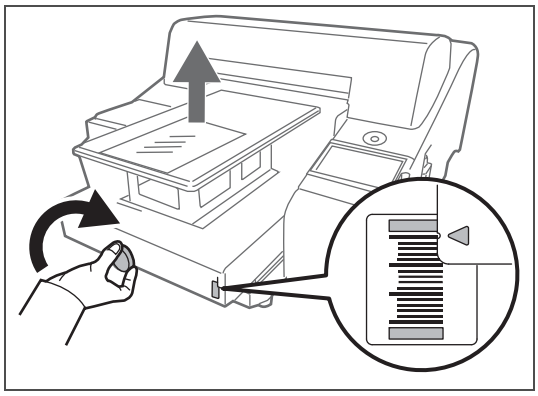
2. Adjusting platen height

To raise the platen to an appropriate height, raise the platen to its highest position to cause an obstruction error, then gradually lower the platen where the error disappears. For better printing, the head gap (between media and print head) should be set as small as possible.

Important!

- **Do not touch the movable parts, such as the table and platen, during the printer operation.**
- **To prolong the product life, ensure to manage an appropriate head gap.**
  If the head gap becomes larger, error may occur due to ink mist.

[1]



Turn the table up down dial to raise the platen to its highest position.

Important!

- **After lifting up the table all the way, do not turn the table up-down dial any further, as doing so could damage the printer.**
- **The same applies when lowering the table all the way.**

[2]

Tap the [MAIN] menu.

[3]

Tap the [SET] key to move the table to the print start position.

- See below for the response to an obstruction error.
  ☞"When an obstruction error has occurred before printing" on page 26

3. When an obstruction error has occurred before printing

If the table height is too high, there is a foreign object on the platen, or the media does not sit flat on the platen,, an obstruction error occurs. During the error, the sub power button flashes.

Follow the steps below and clear the cause of the error.

[1]

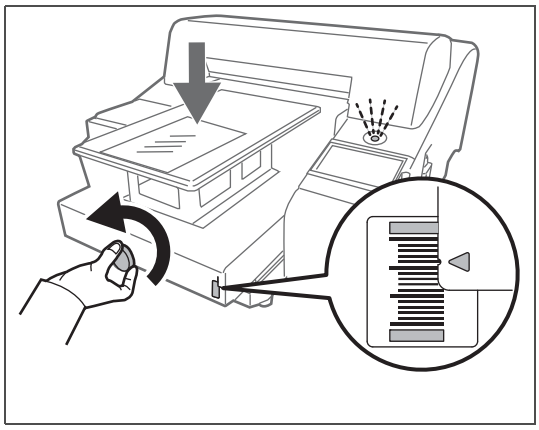
Tap [OK].

[2] Visually check if there is a foreign object on the platen or if the media does not sit flat on the platen,.

- If there is no foreign object on the platen and the media sit flat on the platen, proceed to step 3.
- If there is a foreign object on the platen or the media does not sit flat on the platen, see the following.

"When there is a foreign object on the platen or the media does not sit flat on the platen," on page 27

[3]



If there is no foreign object on the platen and the media sit flat on the platen, turn the table up-down dial to lower the table.

- Check the scale on the right edge of the table and lower the table little by little so that the gap between the print head and the media is not too large.
- Lower the table until the sub power button stops flashing.

Note

- One scale is 1 mm.
- If the head gap (between the print head and media) becomes larger, it may cause poor print quality.
  Bring the print head and media as close together as possible.

[4]

Tap the [SET] key to move the table to the print start position.

Important!

Never raise the table height, once the table moved to the print start position. The table and print head may contact, causing print head damage.

When there is a foreign object on the platen or the media does not sit flat on the platen,

Important!

When obstacles are detected, carefully ensure that the printer is stopped, and then remove obstacles.

[1]

Tap the [EJECT] key to move the table to the eject position.

[2] Remove obstacles on the platen. If the media does not sit flat on the platen, make the flat surface.

[3]

Tap the [SET] key to move the table to the print start position.

4. Nozzle check steps

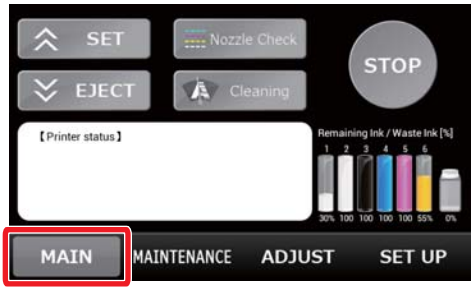
Print the nozzle check pattern. If nozzle clogging occurs, perform cleaning.

Important!

Do not open or close the ink cover during printing or cleaning.
The ink level may be detected erroneously, or indicated as zero.

[1] Set the media to use for nozzle check.
☞"Placing the media on the platen" on page 24

[2]



Tap the [MAIN] menu.

[3]

Tap the [SET] key to move the table to the print start position.

[4]

Tap the [Nozzle Check] key.

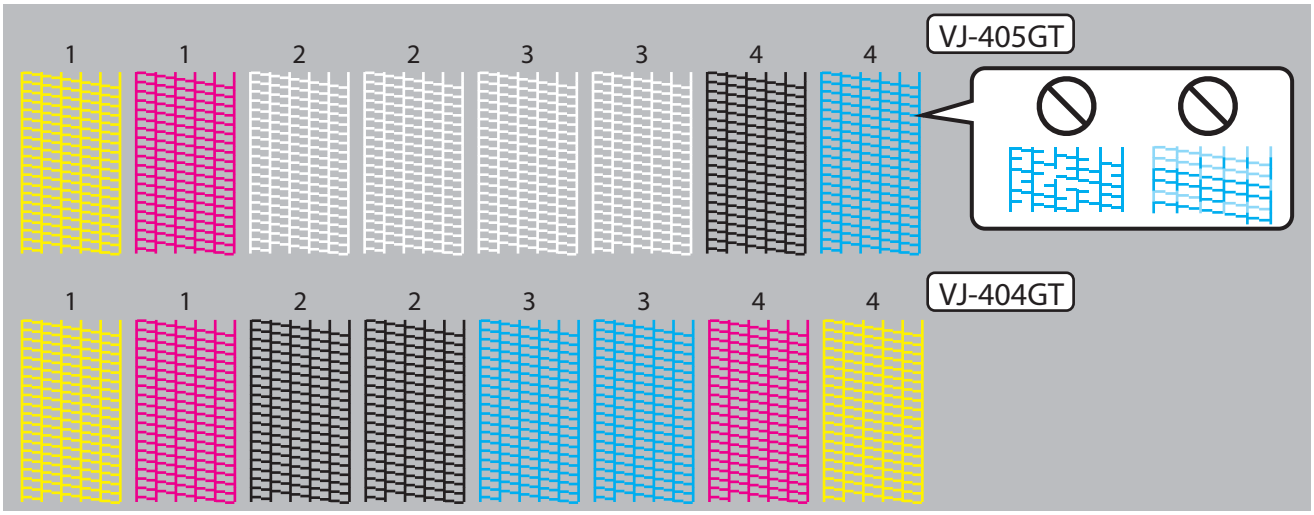
- The confirmation screen will appear.

[5]

Tap [Yes] to print the nozzle check pattern.

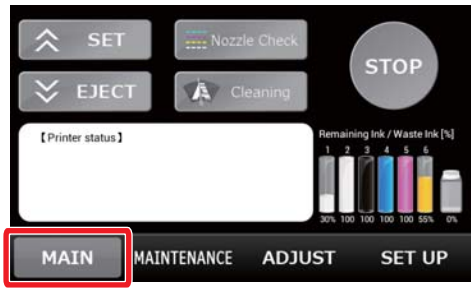
[6] Check the patterns.

- When there is nozzle clogging (missing lines) or faded lines, proceed to "Cleaning steps" on page 29.
  The number above a pattern that is not printed appropriately indicates a number of the print head to be cleaned.
- When patterns are printed appropriately, proceed to "Printing on T-shirts" on page 31.



5. Cleaning steps

[1]



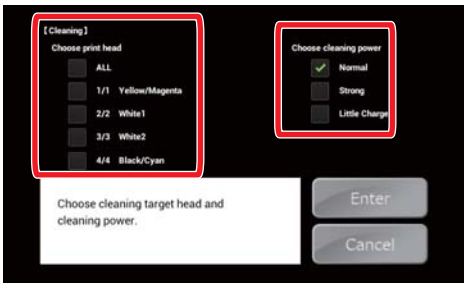
Tap the [MAIN] menu.

[2]

Tap the [Cleaning] key.

- The cleaning head selection screen will appear.

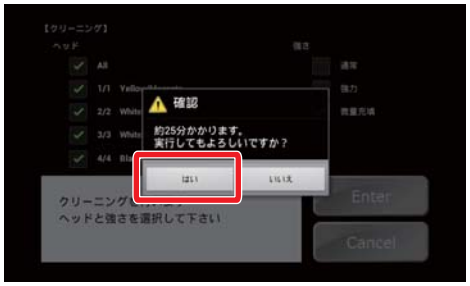
[3]



- Check the print head to be cleaned.
- You can select the strength of cleaning from [Normal], [Strong] and [Little charge].

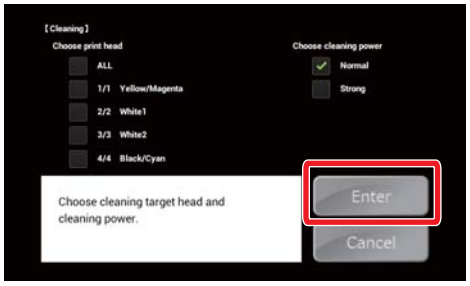
Note

- Head number corresponds to the number on the nozzle check pattern.
- [Little Charge] is a setting for more thorough cleaning than [Strong].
- The screen image on the left is of VJ-405GT.



If the cleaning takes 10 minutes or longer, a message is displayed.
Check the time and press [Yes] if you wish to clean.

[4]



Tap [Enter] to start cleaning.

Note

The cleaning progress is indicated in percentage.

[5] Perform a nozzle check, again.
Repeat the cleaning and nozzle check until nozzle clogging and faded lines do not occur anymore.
☞"Nozzle check steps" on page 28

Printing on T-shirts

About T-shirts (garment)

- We recommend using T-shirts with the following materials.
    - 50% to 100% cotton
    - 100% polyester
- When using T-shirts (Garment) with high ink penetration materials such as mesh material, insert a piece of interleaving paper in between T-shirts layers to avoid ink strike through (ink strikes through to the backside of T-shirt).
- When printing in white ink, apply the pre-treatment solution for white ink on T-shirts, and then apply heat treatment.
- When using 100%-polyester, light-colored T-shirts, apply the pre-treatment solution for polyester on T-shirts, and then apply heat treatment.

Note

- White ink cannot be used for 100% polyester materials.
- Ink strike through or ink bleeding may occur depending on garment materials.

- After printing, perform post-treatment.
- Be careful with the following points after printing on T-shirts.
    - Avoid storing at high temperature, humidity, and direct sunlight.
    - Do not use a tumble-dryer.
    - Do not dry clean.
    - When washing the T-shirt, turn it inside out and dry it.
    - Do not use bleach.
    - Do not use an iron directly on the printed surface.
    - Do not apply any organic solvent.
    - Do not rub the printed surface. It will cause color fading or staining.
    - After applying the pre-treatment solution on the T-shirt, wash it off before wearing it.
- If you apply the pre-treatment solution on a white or light-colored T-shirt, the applied area may turn yellow. After applying the pre-treatment agent, immediately print and wash it.

To print on T-shirts, prepare the following items in addition to T-shirts.

Heat press (commercial item)

Use it to clear wrinkles on materials and to fixate the pre-treatment solution and ink on materials. It is necessary that the press surface is larger than the platen, and that the temperature can be maintained at 170 ℃ or more for 60 seconds.

Sheets with heat-resistance and fissility (commercial item)

Insert it between a heat press and a T-shirt. Use silicone paper or fluorine resin sheet that has heat resistance of 180 ℃ or more.

pre-treatment solution (supply item)

Two types of pre-treatment agents are available: for white ink and for polyester.

- When using white ink, make sure to use the pre-treatment solution for white ink. Otherwise, the ink color does not come out clear.
- For light-colored polyester material with high blending ratio, use the pre-treatment solution for polyester to reduce ink bleed.

Note

When the pre-treatment solution is used, color may fade easily through washing.

Pre-treatment kit (supply item or commercial item)

The kit includes a hard roller, application roller and tray

- Use the hard roller to smooth out the T-shirts.
- Use the application roller to apply the pre-treatment solution on a T-shirt.
- Use the tray to soak the application roller in the diluted pre-treatment agent.

Pure water (commercial item)

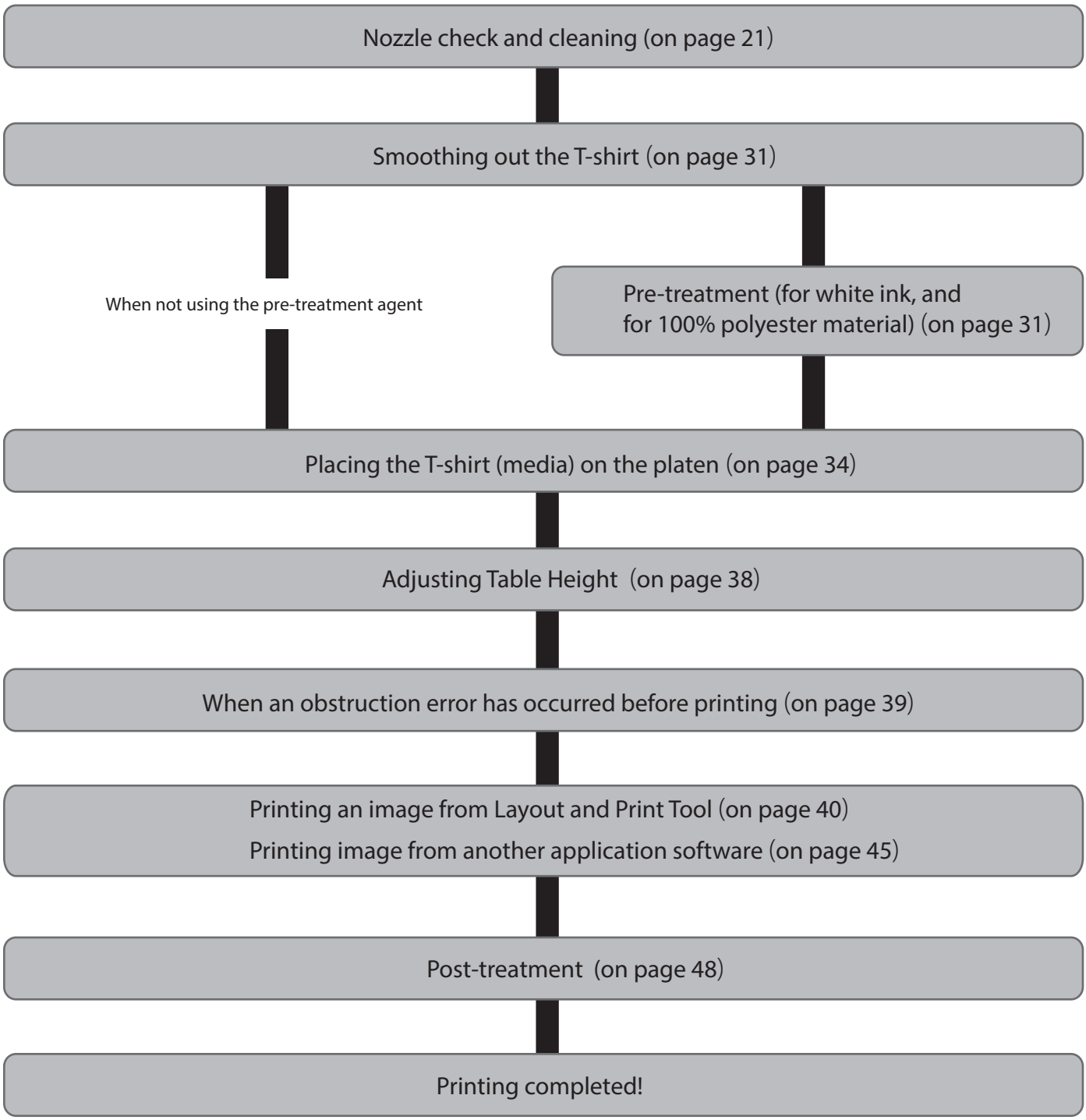
We recommend using pure water (purified water) to dilute the pre-treatment agent.

Printing flow

The general procedures of T-shirt printing is as follows.

Important!

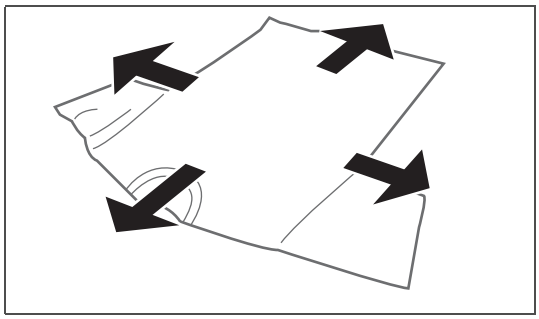
Visually check the waste ink level in the waste ink bottle before printing. Empty the waste ink bottle if necessary and reset the waste ink counter.



1. Smoothing out the T-shirt

This method is applied to all types of ink and garment. Perform these steps first.

[1]

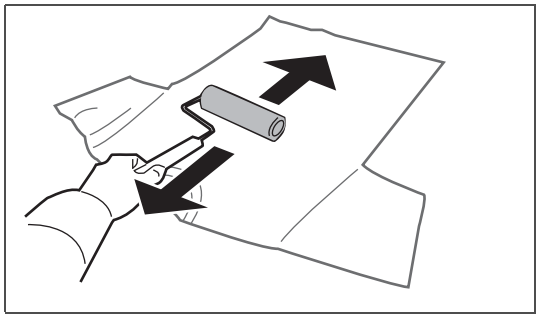


- Spread out a T-shirt on a flat surface.
- Smooth out the wrinkles with hands.

Note

Remove any dust from the surface.

[2]



Use a hard roller to smooth out the T-shirt.

- When neither white ink or polyester material is used, proceed to "Placing the T-shirt (garment) on the platen" on page 37.
- When white ink and polyester material are used, proceed to "Pre-treatment (for white ink, and for 100% polyester material)" on page 34.

2. Pre-treatment (for white ink, and for 100% polyester material)

When printing in white ink, use the pre-treatment solution for white ink.
When printing on light-colored 100% polyester fabric, use the pre-treatment solution for polyester.

Pre-treatment solution for white ink

Dilute the pre-treatment solution for white ink in 1.5 times to 2 times before use.
The recommended coverage is 10 g to 15 g for a A4-sized printing area.

Dilution example (x1.5-2):
- 100 g of the pre-treatment solution for white ink
- 50 g to 100 g of pure water

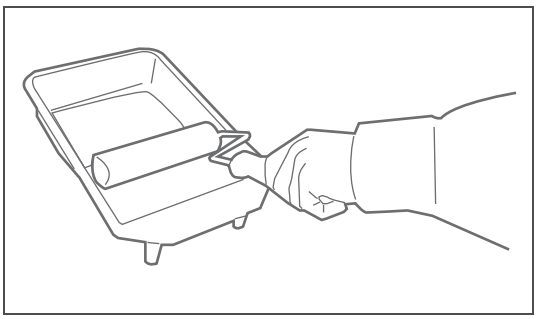
Pre-treatment solution for polyester

Dilute the pre-treatment solution for polyester in 20 times before use.
The recommended coverage is 5 g to 10 g for a A4-sized printing area.

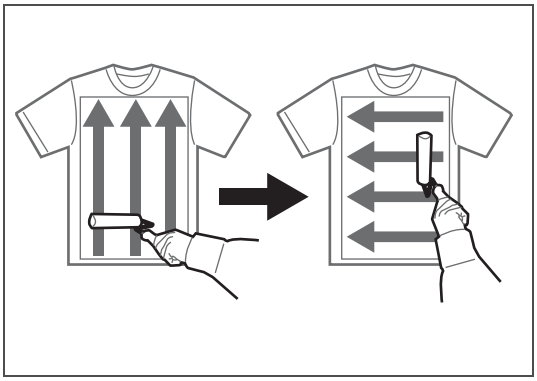
Dilution example (x20):
- 100 g of the pre-treatment solution for polyester
- 1900 g of pure water

When using a roller to apply

[1] Smooth out the T-shirt.
☞"Smoothing out the T-shirt" on page 34

[2] 

Pour the diluted pre-treatment solution in the tray, and then soak the roller in the solution.

[3] 

Use a roller to apply the pre-treatment solution on a T-shirt.

- Evenly apply the agent vertically, then evenly apply the agent again horizontally.

Note

- We recommend spraying the solution to a slightly larger area than an actual printing area.
- Do not apply too much pre-treatment solution.
  Excessive pre-treatment can provide proper print result before washing, however it may cause poor wash fastness and durability (cracking and loss of color may occur).

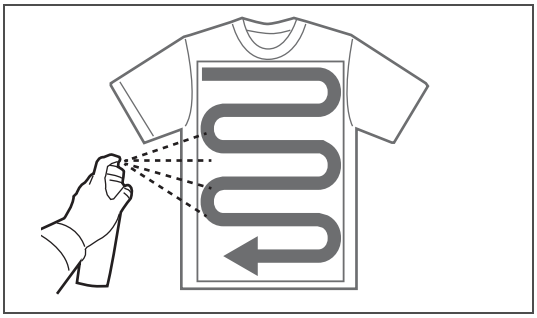
[4] Use the heat press to dry and adhere the pre-treatment agent.
☞"Using the heat press" on page 36
☞"Ink adherence conditions (with heat press)" on page 36

When using spray to apply

When spraying the pre-treatment agent, follow the procedures below. Prepare a commercial spray container.

[1] Smooth out the T-shirt.
☞"Smoothing out the T-shirt" on page 34

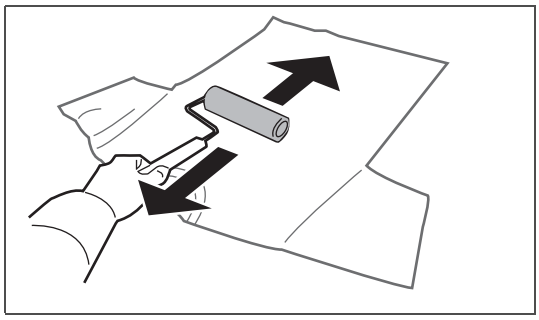
[2] Pour the pre-treatment solution in the spray container.

[3] 

Use the spray to apply the pre-treatment solution evenly.

Note

We recommend spraying the solution to a slightly larger area than an actual printing area.

[4]  Use the roller to even out the sprayed area.

[5] Use the heat press to dry and adhere the pre-treatment agent.

Using the heat press

Use the heat press to clear the wrinkles on the T-shirt, and dry and adhere the pre-treatment solution and ink.

When using a heat press, insert a protective sheet with heat-resistant(180 °C or more) and non-stick coating (e.g.: silicon-coated paper) between top of the T-shirt and the upper press plate.

Ink adherence conditions (with heat press)

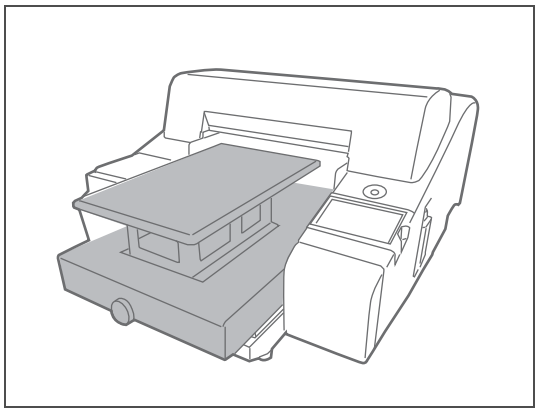
Temperature	Time
170 °C	60 seconds

Note

- Use the conditions above as a reference only, since optimum conditions vary depending on head press and materials.
- If the ink does not fully adhere on the T-shirt, it may cause low wash fastness.

For Platen Small or Medium

[1]

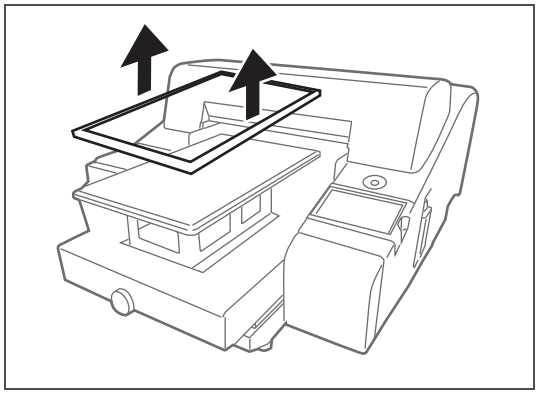


Make sure that the table is in the eject position.

If the table is not in the eject position, tap the [MAIN] menu.

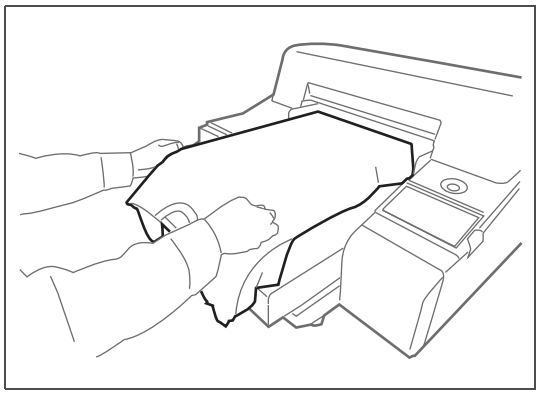
Tap the [EJECT] key to move the table to the eject position.

[2]



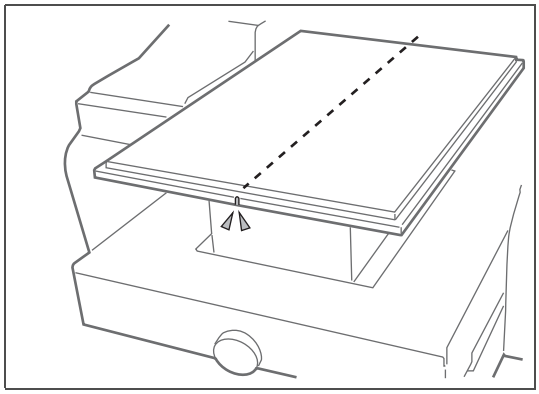
Remove the frame from the platen.

[3]



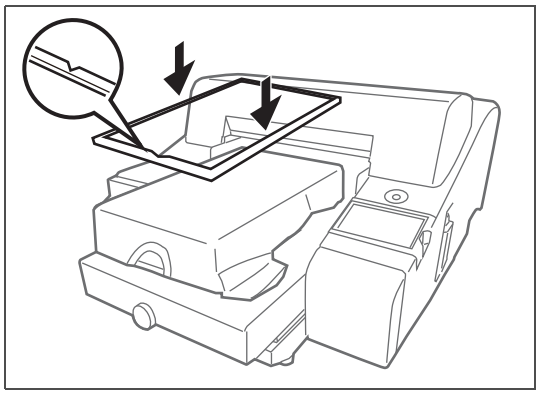
Load the T-shirt on the platen, with the collar on the front side.

- Lightly smooth out any wrinkles on the T-shirt using a hard roller.



- There is a groove on the platen front end to indicate the center position.
  Using the groove as a guide, align the center of the T-shirt and the platen center.

[4]



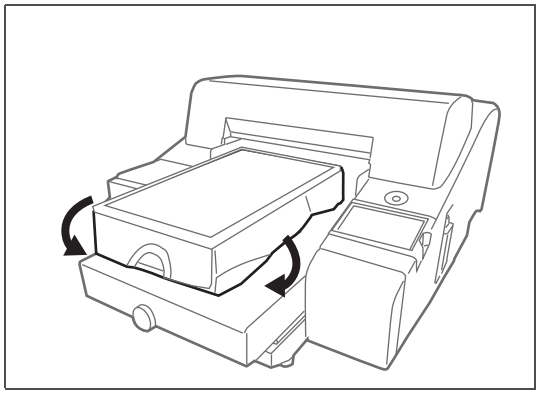
Load the frame.

- Lightly smooth out the T-shirt.

Note

- Do not stretch the T-shirt so much. If so, the T-shirt will shrink after removing the frame and it may affect the print result.
- The V-notch on the frame center indicates the center position of the platen. When the notch and the T-shirt center are misaligned, adjust the T-shirt position.

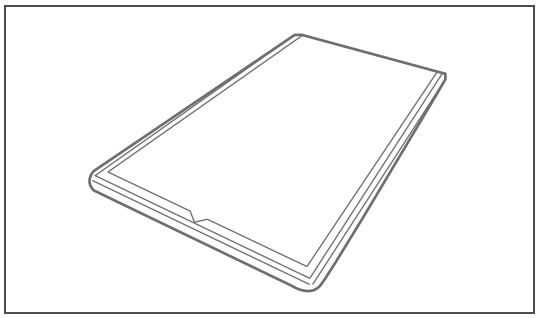
[5]



Tuck the excess shirt material under the platen.

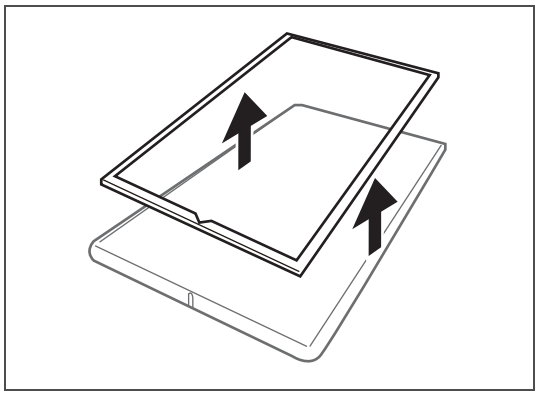
For Platen Large

[1]



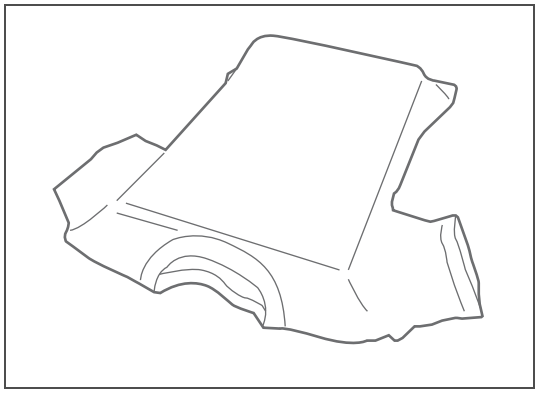
Remove the platen and place it.

[2]



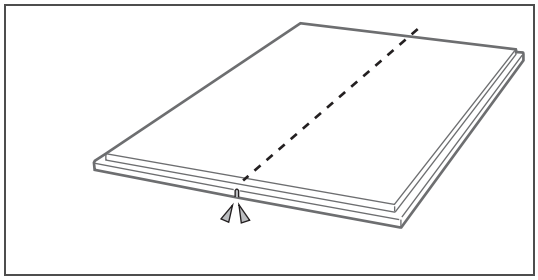
Remove the platen frame.

[3]



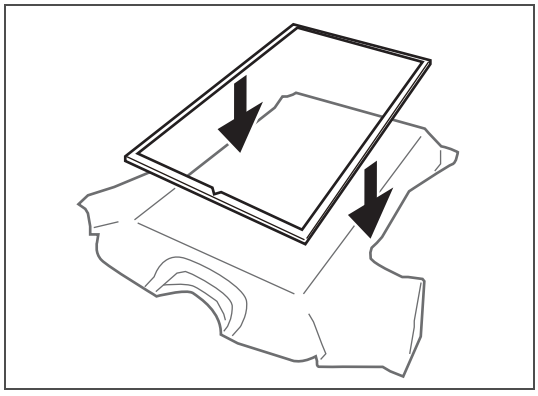
Place the T-shirt on the platen with its collar facing front.

- Lightly smooth out any wrinkles on the T-shirt using a hard roller.



- There is a groove on the platen front end to indicate the center position.
- Using the groove as a guide, align the T-shirt center and the platen center.

[4]



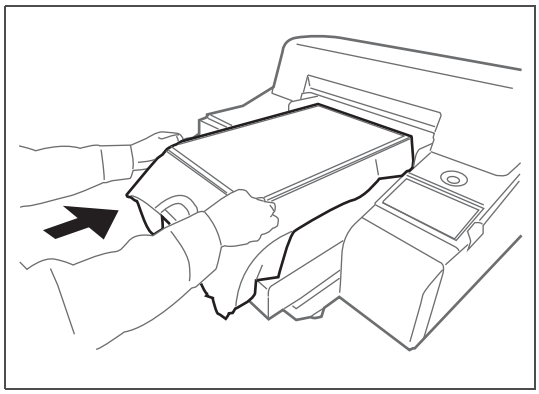
Place the frame.

- Lightly smooth out the T-shirt.

Note

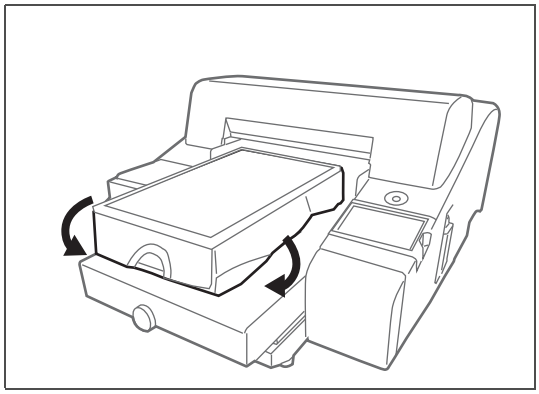
- Do not stretch the T-shirt so much. If so, the T-shirt will shrink after removing the frame and it may affect the print result.
- The V-notch on the frame center indicates the center position of the platen. When the notch and the T-shirt center are misaligned, adjust the T-shirt position.

[5]



- Put the platen on the printer table.
- Fully insert the platen.
- Put the latch on the bottom platen onto the catch on the table.

[6]



Tuck the excess shirt material under the platen.

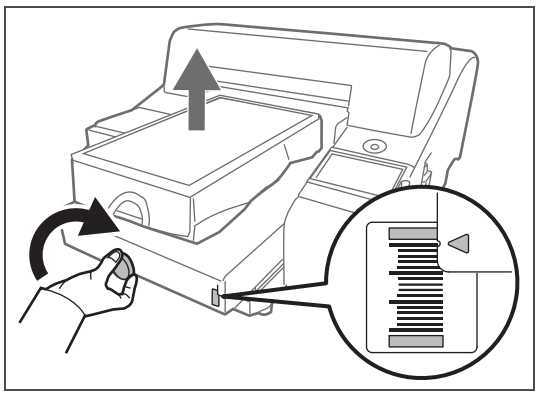
4. Adjusting Table Height

To raise the table to an appropriate height, raise the table up all the way to cause an obstruction error, then gradually lower the table to a height where the error disappears. For better printing, bring the garment and print head as close together as possible (head gap).

Important!

To prolong the product life, ensure to manage an appropriate head gap.
When printing is performed with the "Head Gap" "Large", the printer inside soiled with fine ink droplet may cause errors.

[1]



Turn the table up-down dial, and lift the table all the way to the top.

Important!

- **After lifting up the table all the way, do not turn the table up-down dial any further, as doing so could damage the printer.**
- **The same applies when lowering the table all the way.**

[2]

When the [MAIN] menu is not displayed, tap the [MAIN] key.

- The [MAIN] menu is displayed.

[3]

Tap the [SET] key.

- The table moves to the print start position.
- See below for the response to an obstruction error.
  "When an obstruction error has occurred before printing" on page 26

5. When an obstruction error has occurred before printing

If the table height is too high, there is a foreign object on the platen, or the garment does not sit flat on the platen, an obstruction error occurs. During the error, the sub power button flashes.

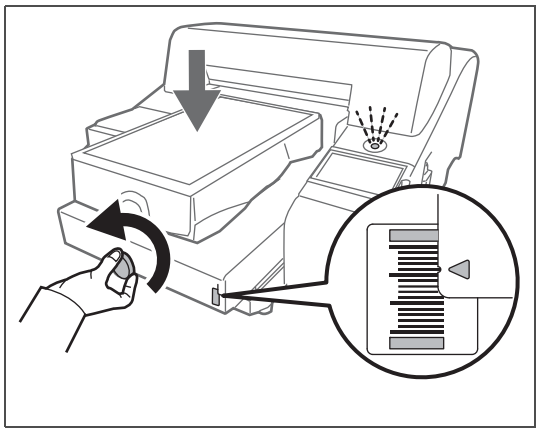
[1]

Tap [OK].

[2] Visually check if there is a foreign object on the platen or if the garment does not sit flat on the platen,

- If there is no foreign object on the platen and the garment sit flat on the platen, proceed to step 3.
- If there is a foreign object on the platen or the garment does not sit flat on the platen, see the following.
☞"When there is a foreign object on the platen or the media does not sit flat on the platen," on page 27

[3]



If there is no foreign object on the platen and the garment sit flat on the platen, turn the table up-down dial to lower the table.

- Check the scale on the right edge of the table and lower the table little by little so that the gap between the print head and the garment is not too big.
- Lower the table until the sub power button stops flashing.

Note

- One scale is 1 mm.
- When the gap between the print head and the garment becomes big, print quality declines.
Bring the print head and garment as close together as possible.

[4]

Tap the [SET] key.

- The table moves to the print start position.

6. Printing an image from Layout and Print Tool

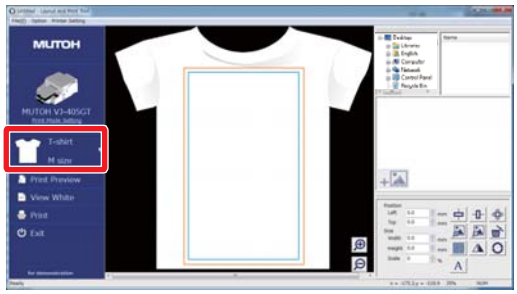
You can layout and print out the images using the Layout and Print Tool that is installed from the supplied CD.
This section explains the basic printing instructions only. For the details, see the user manual for Layout and Print Tool.
For the details for the white printing, see the VJ-405GT White Printing Guide.

Image formats compatible with Layout and Print Tool are as follows.

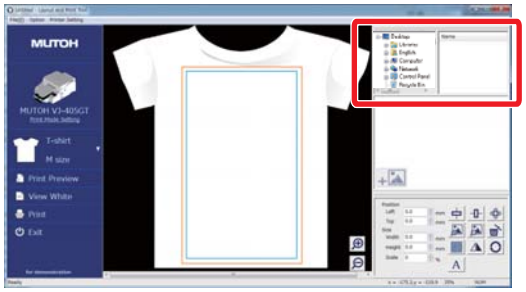
- bitmap (.bmp)
- JPEG (.jpg)
- TIFF (.tif)
- PNG (.png)

For color (CMYK) printing

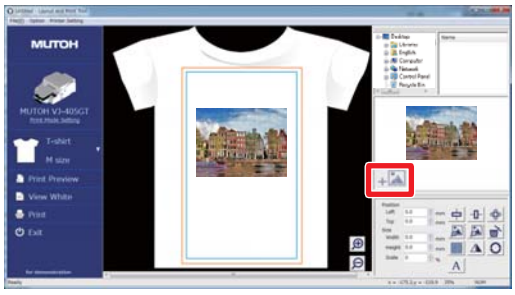
[1] Start Layout and Print Tool.
☞"Starting Layout and Print Tool" on page 14

[2] 

Select the platen size to be used in printing.

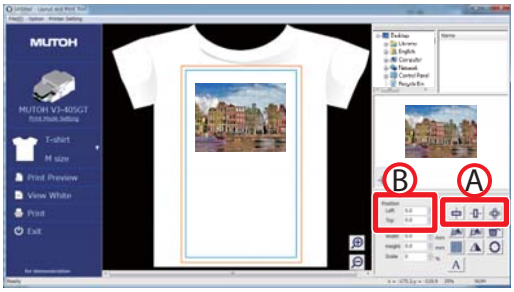
[3] 

Select the image to be used in printing.

[4] 

Click the button, and apply the image to the T-shirt.

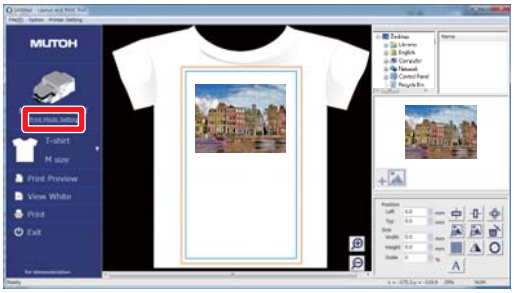
[5]



Adjust the image position. Perform adjustment by using the following methods.

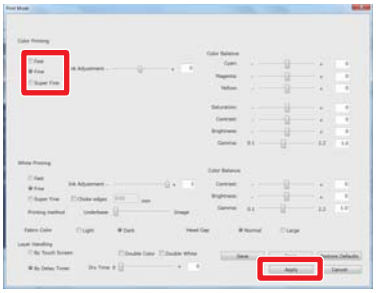
- Move to a preferred position with a mouse.
- Click the placement buttons (A on the left illustration).
- Enter values directly (B on the left illustration).

[6]



Click [Print Mode Setting].

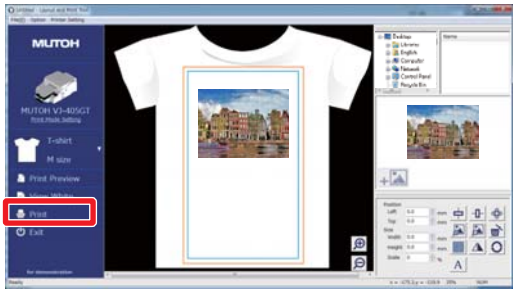
[7]



Choose print mode, and click [Apply].

- Fast: Mode for faster print speed. (600 x 600 dpi)
- Fine: Mode for standard performance. (600 x 1200 dpi)
- Super Fine: Mode for better image quality. (1200 x 1200 dpi)

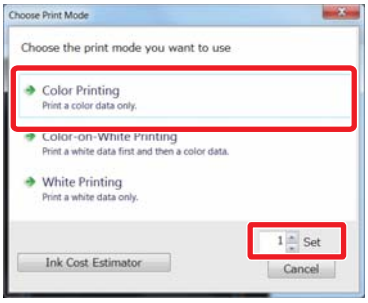
[8]



Click the [Print] button.

- The print mode selection screen is displayed.

[9]



Enter the set value, and then click the [Color Printing] button.

- Printing will start.

Note

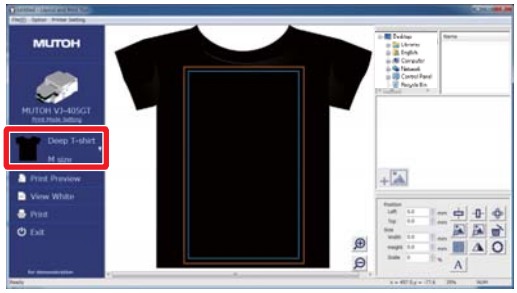
- When an obstruction error has occurred due to the textile expanding while printing, see the following.
  ☞"When an obstruction error has occurred during printing" on page 47
- After printing, make sure you perform post-treatment.
  ☞"Post-treatment" on page 51
- The file name of the data that is being printed is displayed on the printer's touch panel.

Important!

Do not open or close the ink cover during printing or cleaning.
The ink level may be detected erroneously, or indicated as zero.

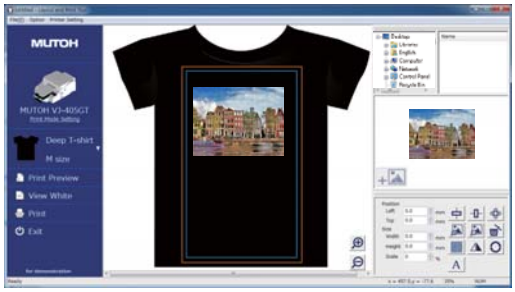
For white printing

[1]



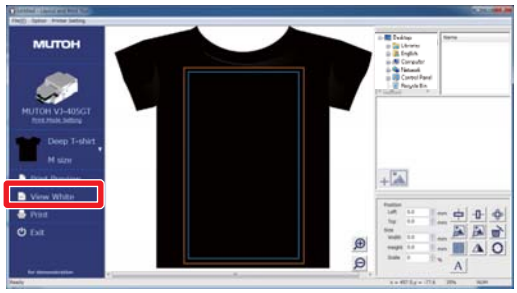
When using dark-colored T-shirts, select [Dark Colored T-shirt], during selecting platen size to be used for printing.

[2]



- When performing [Color-on-White Printing], select and place an image in the same procedure as for the color printing.
- When performing [White Printing], proceed to step 3 without placing an image.

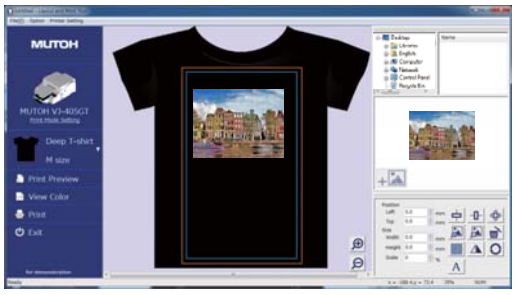
[3]



Click the [View White] button.

- The edit screen for the white printing is displayed.

[4]

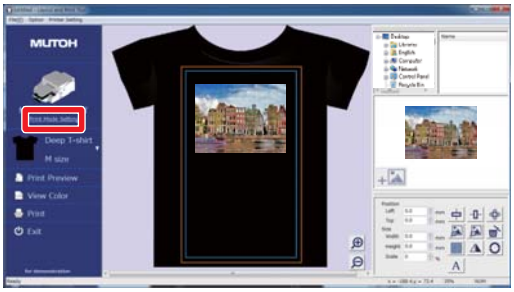


Select and place an image in the same procedure as for the color printing.

Note

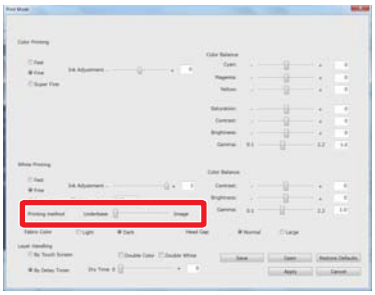
- This application has two separate editing areas: for the color printing and for the white printing. Edit data for the color printing and for the white printing individually.
- Data for the white printing is displayed in color until printing is processed.

[5]



Click [Print Mode Setting].

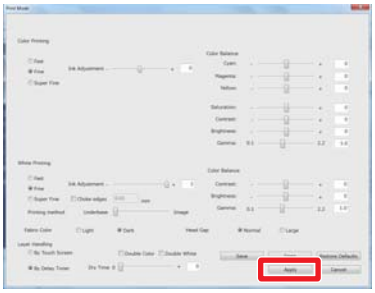
[6]



Change the slider of [Printing method] under [White Printing] depending on purposes of the white printing.

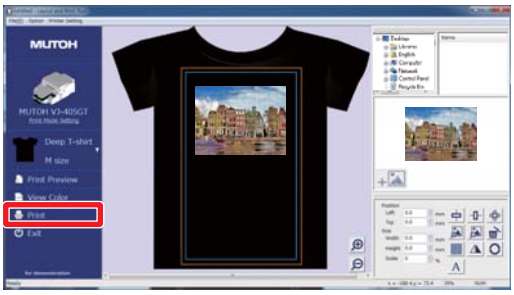
- Underbase: Use this setting when printing the underbase in white.
- Image: Use this setting when printing a tone-image in white.
- In-between underbase and image: Use this setting when reducing amount of white ink.

[7]



Click [Apply].

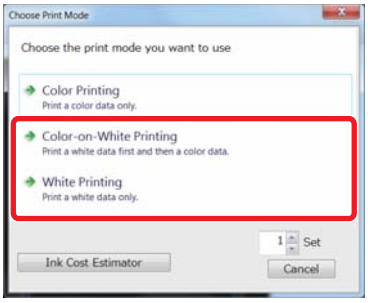
[8]



Click the [Print] button.

- The printing dialog is displayed.

[9]



Click the [White Printing] or [Color-on-White Printing] button.

- Printing will start.

Note

- When an obstruction error has occurred due to the textile expanding while printing, see the following.
  ☞"When an obstruction error has occurred during printing" on page 47
- After printing, make sure you perform post-treatment.
  ☞"Post-treatment" on page 51
- The file name of the data that is being printed is displayed on the printer's touch panel.

When an obstruction error has occurred during printing

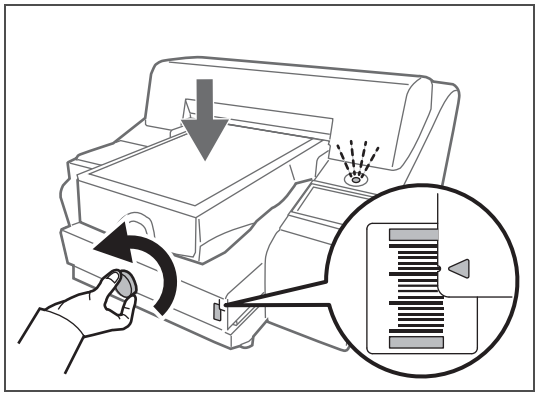
An obstruction error may occur due to the textile expanding from heat while printing. When this occurs, lower the height and then continue printing, or cancel printing.

[1]

Check the error screen.

- To continue printing, proceed to step 2.
- To cancel printing, tap [No].

[2]



Turn the table up-down dial to lower the table.

- Check the scale on the right edge of the table and lower the table little by little so that the gap between the print head and the garment is not too big.
- Lower the table until the sub power button stops flashing.

Note

- One scale is 1 mm.
- When the gap between the print head and the garment becomes big, print quality declines.
  Bring the print head and garment as close together as possible.

[3]

Tap [Yes].

- The printer resumes printing.

7. Printing image data from another application software

Printing can be initiated from image applications other than Layout and Print Tool. This section explains how to print from the printer driver.

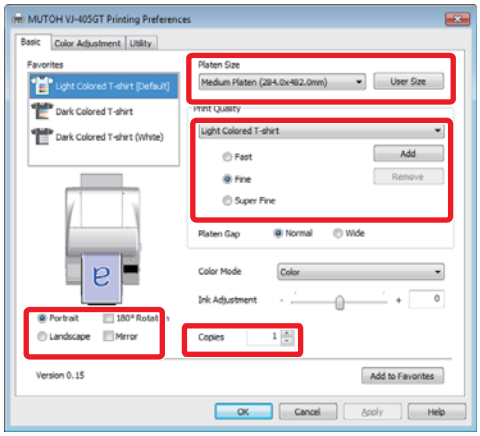
For color (CMYK) printing

[1] Open printing data using application software to perform printing.

[2] Open the print setting screen of the printer driver for this product using the application software.

[3]

Choose [Light Colored T-shirt] from [Favorites].

[4] 

Performs print settings.

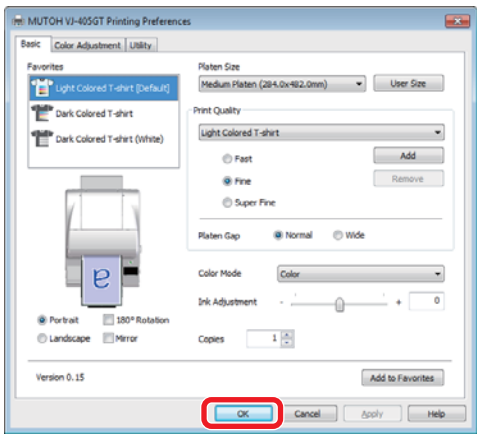
- Set “Platen Size”, “Print Quality”, “Copies” and printing direction.

3 printing modes are available for “Print Quality”.

- Fast: Mode for faster print speed. (600 x 600 dpi)
- Fine: Mode for standard performance. (600 x 1200 dpi)
- Super Fine: Mode for better image quality. (1200 x 1200 dpi)

Note

When saving the settings, click [Add to Favorites] after making changes.

[5] 

Click [OK].

[6] Perform printing.

Note

- When an obstruction error has occurred due to the textile expanding while printing, see the following.
☞"When an obstruction error has occurred during printing" on page 47
- After printing, make sure you perform post-treatment.
☞"Post-treatment" on page 51
- The file name of the data that is being printed is displayed on the printer's touch panel.

Important!

Do not open or close the ink cover during printing or cleaning.
The ink level may be detected erroneously, or indicated as zero.

For white printing

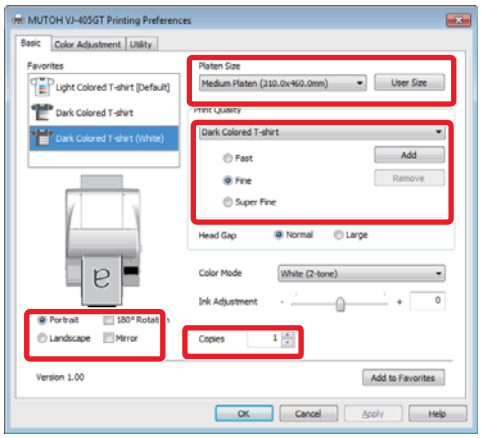
[1] Open printing data using application software to perform printing.

[2] Open the print setting screen of the printer driver for this product using the application software.

[3]

Choose [Dark ColoredT-shirt (White)] from [Favorites].

[4]



Performs print settings.

- Set “Platen Size”, “Print Quality”, “Copies” and printing direction.

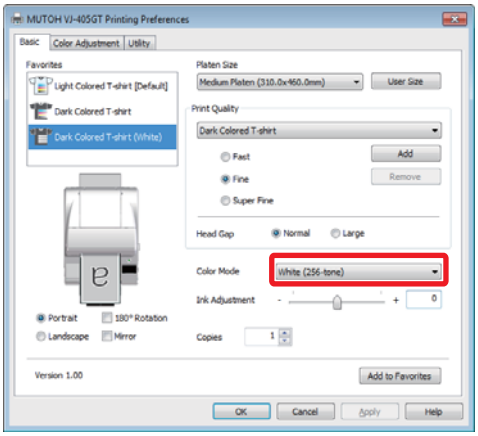
Three printing modes are available for “Print Quality”.

- Fast: Mode for faster print speed. (600 x 600 dpi)
- Fine: Mode for standard performance. (600 x 1200 dpi)
- Super Fine: Mode for better image quality. (1200 x 1200 dpi)

Note

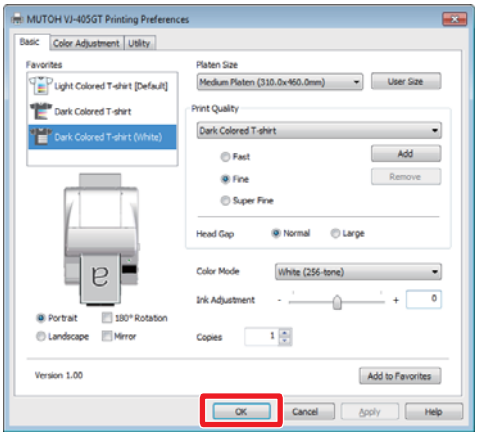
When saving the settings, click [Add to Favorites] after making changes.

[5]



When printing a tone-image in white, change [Color Mode] to [White (256-tone)].

[6]



Click [OK].

[7] Perform printing.

- This is the end of the procedure when printing completes in white only.
- When performing color printing over white base, proceed to step 8.

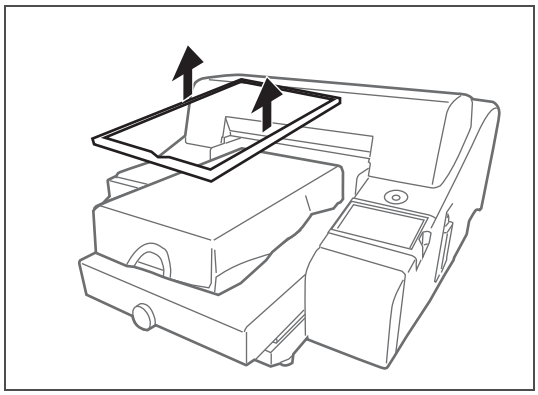
[8]

Choose [Dark Colored T-shirt] from [Favorites].

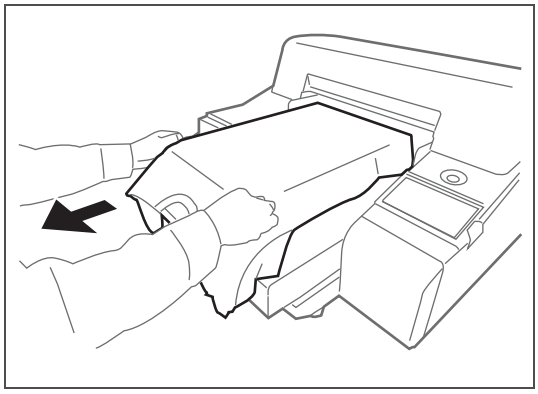
[9] Perform printing one more time using the procedures from step 3 to step 7.

8. Post-treatment

After printing, you have to use the heat tap to fixate the ink. Do not touch the printed surface until post-treatment is complete.

[1] 

Remove the frame.

[2] 

Remove the T-shirt.

Note

- The ink is not dry yet. Therefore, the ink adheres if you touch the surface. Be careful not to touch the ink.
  When the ink comes in contact with the skin, follow the first aid treatment described in the Safety Data Sheet (SDS) for ink.

[3] Use the heat press to dry and adhere the ink.

☞"Using the heat press" on page 36
☞"Ink adherence conditions (with heat press)" on page 36

Important!

- After operations are completed for the day, clean each part by referring to the instruction sheet for dedicated ink, if necessary.
- To finish, put the printer into sleep mode; do not turn off the printer.

☞"Sleep mode" on page 21

When ink runs out during printing

When ink runs out, the sub power button flashes quickly (twice a second) and an error message is displayed on the operation panel. Printing pauses. Printing resumes after the ink cartridge is replaced with a new one.

Important!

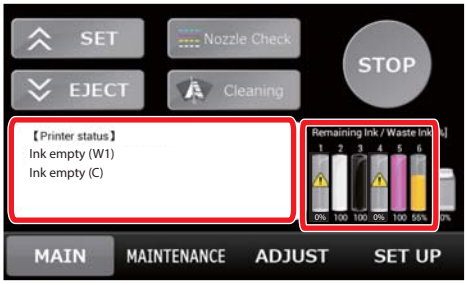
Be careful not to confuse the ink cartridge with the cleaner cartridge.
It may cause printer failure.

Note

Color unevenness may occur after printing is resumed.

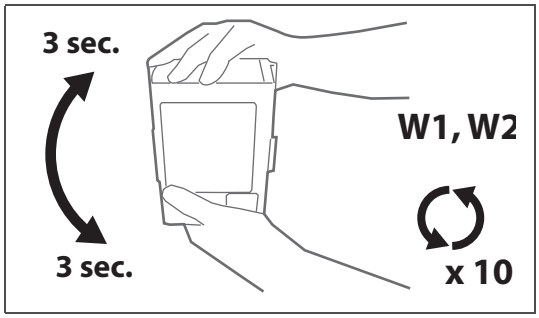
Steps

[1]



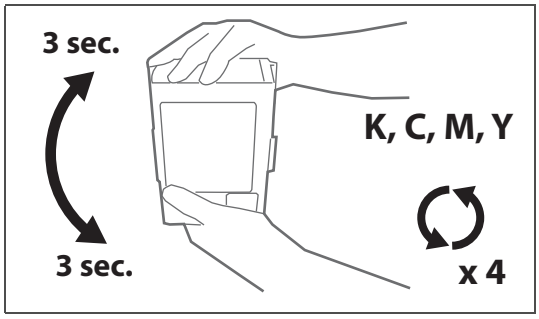
Check the touch panel to find an ink cartridge to be replaced.

[2]



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

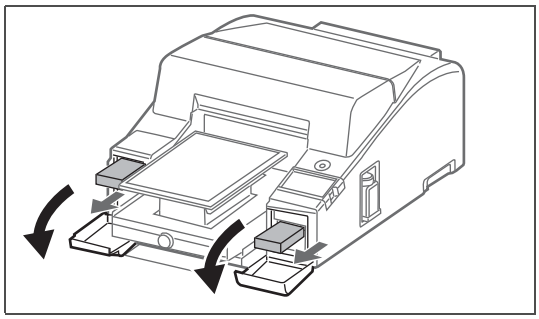
- As for the white ink cartridge, turn the ink plug upward and wait for 3 seconds.
- Next, turn the ink plug downward and wait for three seconds.
- Repeat that ten times.



As for other ink cartridges, turn the ink plug upward and wait for three seconds

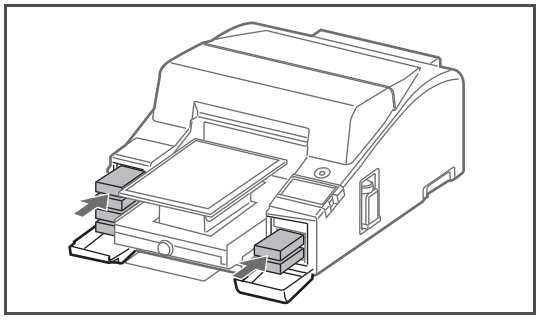
- Next, turn the slot downward and wait for three seconds
- Repeat that four times.

[3]



Press and open the cartridge covers on both sides, remove the used ink cartridge..

[4]



Set a new ink cartridge.

Note

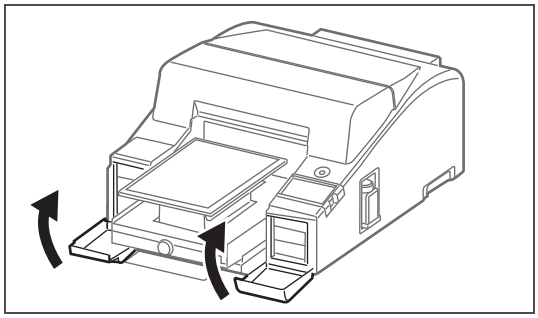
- Match the label of this product to the color of ink cartridge.
- Insert the ink cartridges firmly and all the way.

VJ-404GT		VJ-405GT	
L	R	L	R
K: Black (K) C: Cyan (C)	M: Magenta (M) Y: Yellow (Y)	W1: White 1 (W1) W2: White 2 (W2) K: Black (K) C: Cyan (C)	M: Magenta (M) Y: Yellow (Y)

Important!

- **The cartridge shapes for the white ink W1 and W2 are different. If the cartridges are installed in the wrong slots, the printer may be damaged.**
- **When the printer power is off, do not replace ink cartridges.**
  Ink levels will not be able to be detected correctly.
- **When transferring ink cartridges from a cold location to a warm location, leave them at least three hours before use.**

[5]



Close the cartridge covers

WARNING

- Dispose of ink cartridges in a manner based on regulations prescribed in the Waste Management Act and those of each municipality by requesting the services of an industrial waste treatment contractor, etc.

Pausing/resuming/canceling printing

Pausing/resuming printing

Tap the [Stop] key on the operation panel.

- Printing pauses.
- Tap the [Stop] key again to resume printing.

Note

- This operation does not delete printing data transmitted to the printer.

Canceling printing from the operation panel

Tap and hold the [Stop] key on the operation panel for two seconds or more.

- Printing is canceled. (Printing cannot be resumed.)
- Printing data transmitted to the printer is deleted.

Chapter 2 Practical Use

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Printing to garment with uneven surface

This device is compatible with items with slight uneven surface such as T-shirts with pockets and buttons.
When distance between the print head and a T-shirt is larger than usual, perform the following setting.

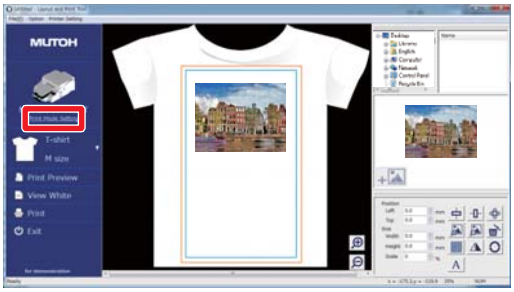
Important!

When this function is used, the printer inside becomes soiled easily due to increased fine ink droplet. Clean the encoder scale and shaft at least once a week.

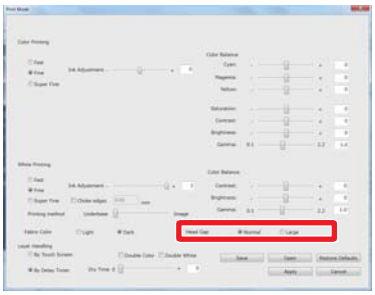
When changing the setting from Layout and Print Tool

[1] Start Layout and Print Tool.
☞"Starting Layout and Print Tool" on page 14

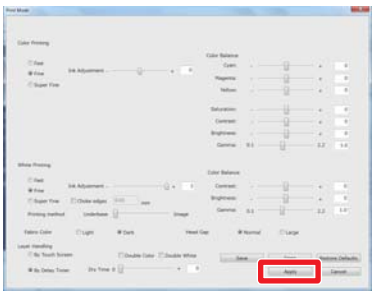
[2] Place image data.
☞"Printing an image from Layout and Print Tool" on page 43

[3] 

Click [Print Mode Setting].

[4] 

Change the [Head Gap] setting to [Large].

[5] 

Click [Apply].

When changing the setting from printer driver

[1] Start the print setting screen for the printer driver.

☞"Displaying the Printing Preference dialog" on page 15

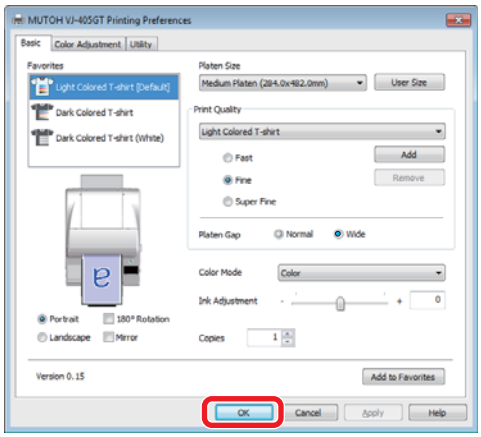
[2]

Change the [Head Gap] setting to [Large].

Note

When saving the settings, click [Add to Favorites] after making changes.

[3]



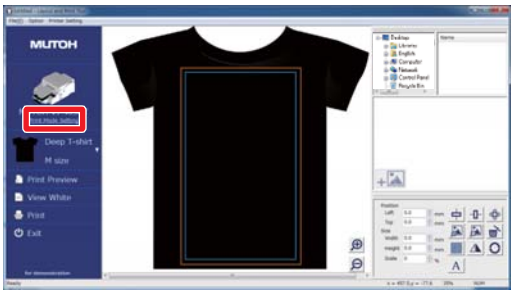
Click [OK].

Preventing white underbase from oozing

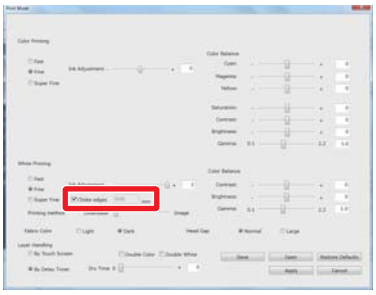
When the “Color-on-White Printing” mode is used, white underbase may ooze slightly due to the ink soaking into materials. In this case, slightly choke edges of the white printing image with Layout and Print Tool.

[1] Start Layout and Print Tool.
☞"Starting Layout and Print Tool" on page 14

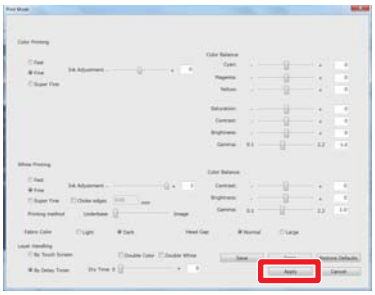
[2] Place image data.
☞"Printing an image from Layout and Print Tool" on page 43

[3] 

Click [Print Mode Setting].

[4] 

- Check [Choke edges].
- Enter a value of choking width for the edges.

[5] 

Click [Apply].

Performing cost estimate

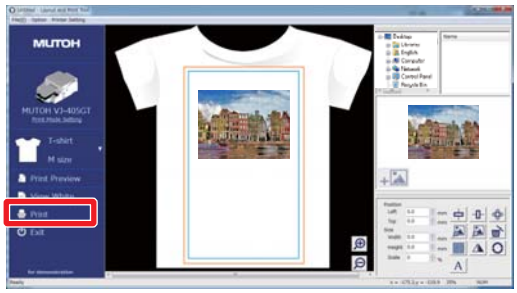
Estimated amount of ink usage per one printing is indicated with Layout and Print Tool. Ink cost estimation is available by entering unit price of an ink cartridge.

Note

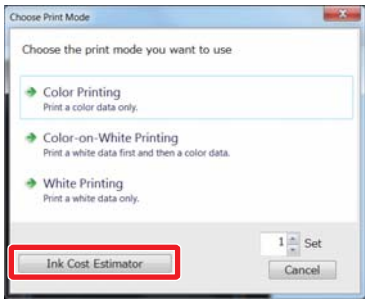
Amount of ink usage and cost of ink indicated by the ink cost estimation should be used as a reference only.
Accuracy of the values is not guaranteed to be used as an actual amount of ink usage or cost of ink.

[1] Start Layout and Print Tool.
☞"Starting Layout and Print Tool" on page 14

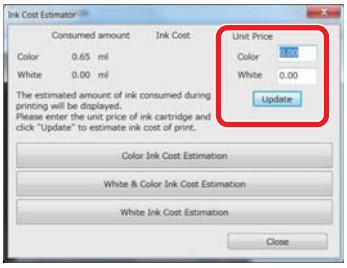
[2] Place image data.
☞"Printing an image from Layout and Print Tool" on page 43

[3] 

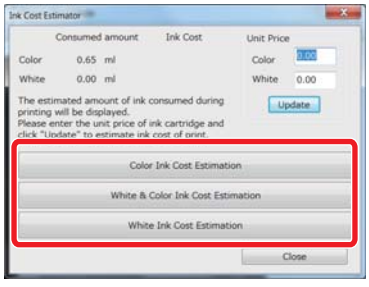
Click the [Print] button.
- The printing dialog is displayed.

[4] 

Click [Ink Cost Estimator].

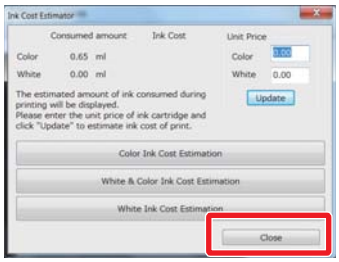
[5] 

Enter [Unit Price], and click [Update].
- [Unit Price] is updated.

[6] 

Select and click the print mode you wish to apply the ink cost estimation to.
- The estimation process begins.
- When the estimation process ends, the ink cost and the amount used are displayed.

[7]



Click [Close].

- The “Ink Cost Estimator” screen is closed.

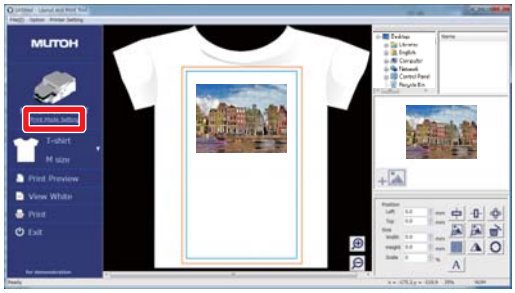
Adjusting density of white (VJ-405GT)

Use this function when only amount of white ink needs to be adjusted to match fabric of a T-shirt.

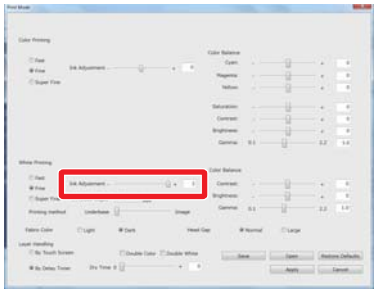
- When amount of white ink is inadequate: Color density becomes low.
- When amount of white ink is excessive: Color becomes blurred.

When changing the setting from Layout and Print Tool

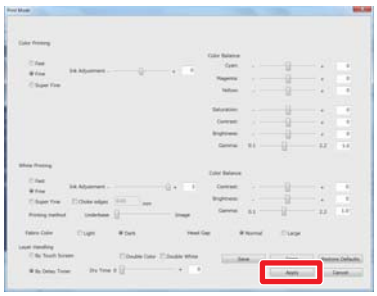
[1] Start Layout and Print Tool.
☞"Starting Layout and Print Tool" on page 14

[2] 

Click [Print Mode Setting].

[3] 

Change the [Ink Adjustment] setting.

[4] 

Click [Apply].

When changing the setting from printer driver

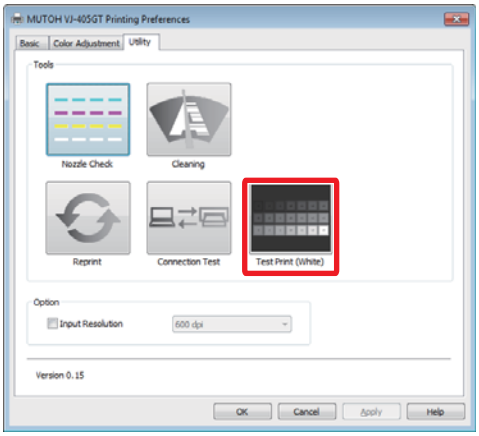
1. Performing test printing of white ink

[1] Load a dark-colored T-shirt on the printer.

[2] Start the print setting screen for the printer driver.
☞"Displaying the Printing Preference dialog" on page 15

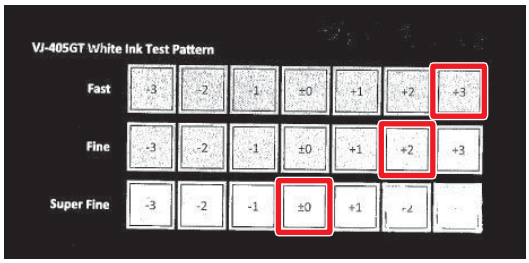
[3]

Click the [Utility] tab.

[4] 

Click [Test Print (White)].

- Test patterns are printed.

[5] 

Check each row of test patterns to find a square that is printed in an appropriate color density. Values indicated inside the squares are adjustment values.

- [Fast]: Density of white ink with print mode “Fast”
- [Fine]: Density of white ink with print mode “Fine”
- [Super Fine]: Density of white ink with print mode “Super Fine”

Note

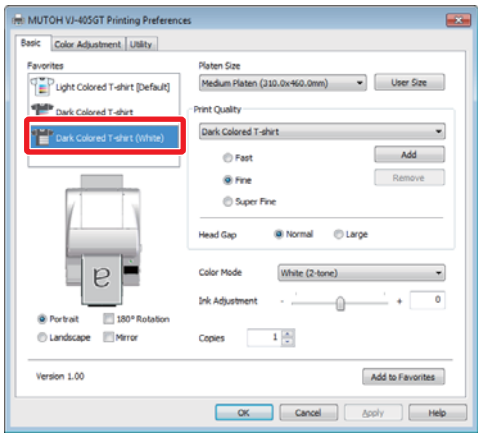
Check a value from a square with a pattern in proper color density (not low density) and without blurred letters or lines.

2. Adjusting amount of white ink

[1] Open printing data using the application software to perform printing.

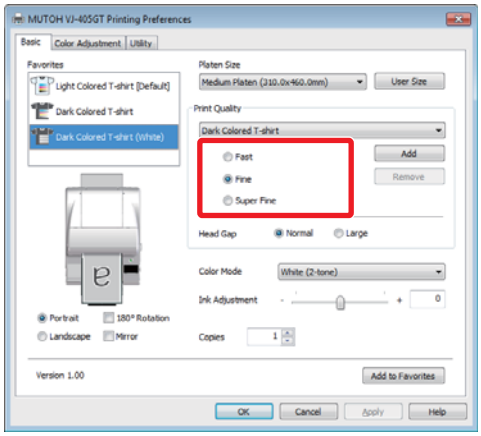
[2] Open the print setting screen of the printer driver for this product using the application software.

[3]



Choose [Dark Colored T-shirt (White)] from [Favorites] on the [Basic] tab.

[4]

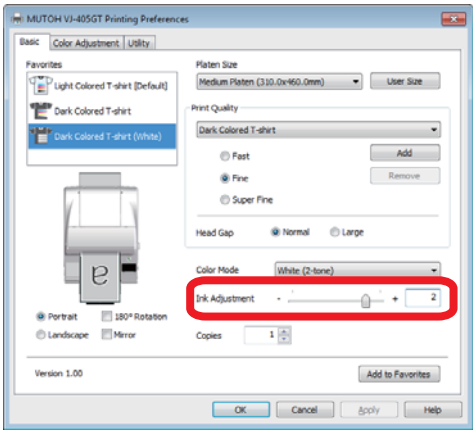


Choose print mode to be adjusted from “Fast”, “Fine” and “Super Fine”.

[5]

When printing a tone-image in white, change [Color Mode] to [White (256-tone)].

[6]

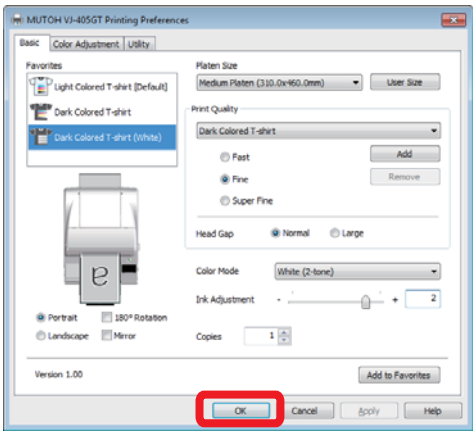


Enter the value confirmed from the test patterns in [Ink Adjustment].

Note

When saving the settings, click [Add to Favorites] after making changes.

[7]



Click [OK].

[8] Perform printing.

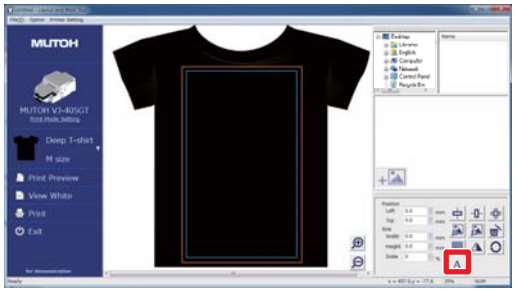
- This is the end of the procedure when printing completes in white only.
- When performing color printing over white underbase, change [Favorites] to [Dark Colored T-shirt] and print again.

Inserting Characters

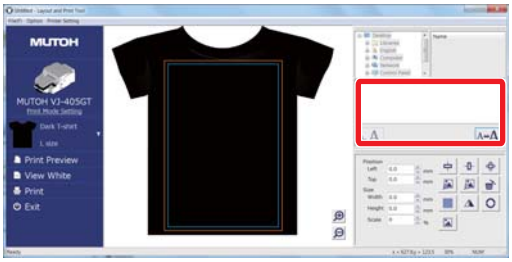
You can print characters on T-shirts by using the "Layout and Print Tool".

[1] Start the “Layout and Print Tool”.

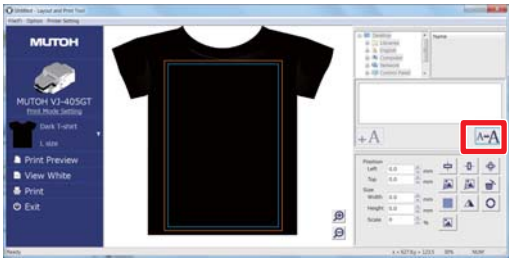
☞"Starting Layout and Print Tool" on page 14

[2] 

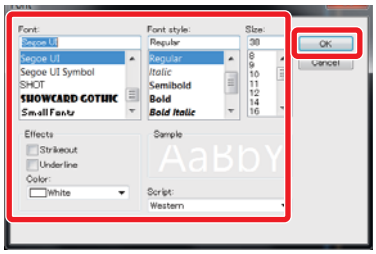
Click [Switch between Image and Text] button.

[3] 

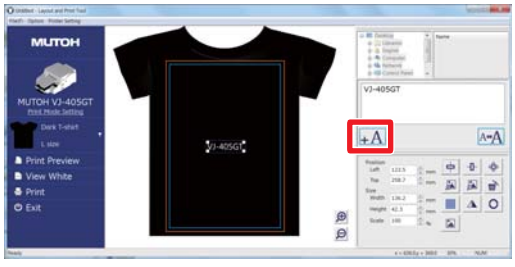
Insert characters.

[4] 

Click the [Font] button.

[5] 

Set the font, font color, size and other parameters and click [OK].

[6] 

Click the [Insert, Apply] button.

- The characters are inserted on the T-shirt.

Note

Click the characters on the T-shirt if you wish to edit them again.

Preparing a custom platen

This device allows customers to remove the standard platen and platen fixing base, and to attach a custom platen.

Printable area, thickness and weight

When a custom platen is used, maximum print size and maximum thickness are different from those when the standard platen is used.
See the table below for specifications.

Item	Specification
Maximum custom platen size	W 428 x D 600 mm
Maximum print size	W 420 x D 576 mm
Print margins	Top 20 mm, left, right and bottom 4 mm
Maximum thickness*	155 mm
Maximum weight*	7 kg
* Maximum thickness and maximum weight include the custom platen and garment.	

Important!

- **Make the total thickness of a custom platen and garment between 140 mm and 155 mm.**
- **If total weight of a custom platen and garment exceeds 7 kg, the up-down mechanism may become malfunctioned.**

Table outer dimensions and screw hole positions

(Unit: mm)

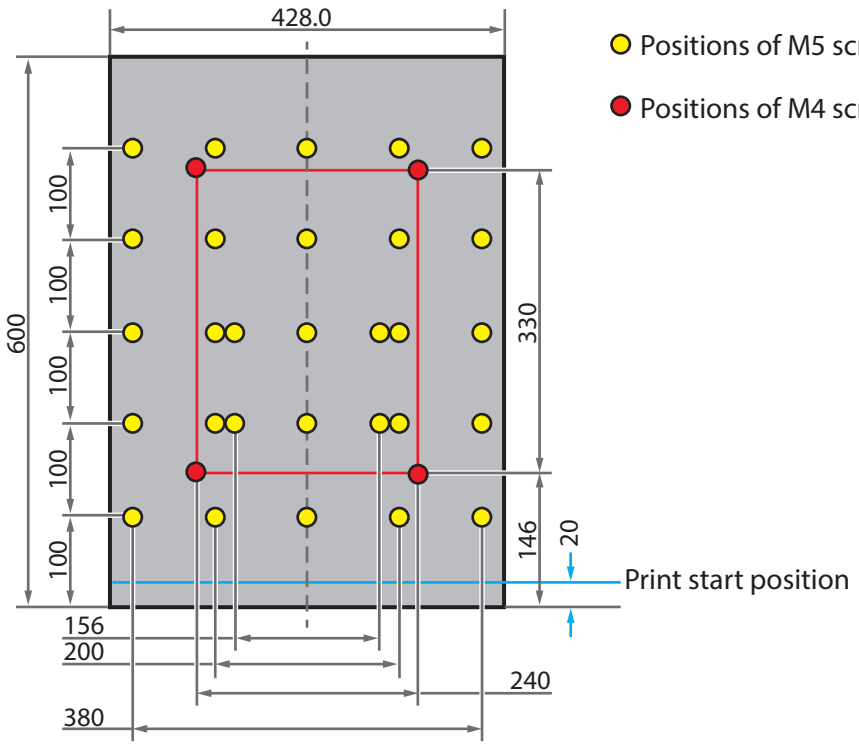


Table front side

Important!

- **Use screws that have a length of 10 mm or less from the table surface. When long screws are used, the table inside may be damaged and may cause malfunction in the up-down mechanism.**
- **Height of the table is adjustable up to 15 mm by turning the up-down dial.**

Specifying the Platen Size

If a customized platen corresponds to the items below, specify the platen size.

- **The size of the printable area differs from the standard platen.**

How to specify the platen size:

- **Use the "Platen Edit Tool" to specify the size when printing with the "Layout and Print Tool".**
- **When you print from other applications using the printer drivers specify the platen size with the printer driver.**

Important!

When specifying the platen width, measure it from the [Print start position] of the printer.

The [Print start position] is 20mm from the front edge of the table.

☞"Table outer dimensions and screw hole positions" on page 67

Specifying with Platen Edit Tool

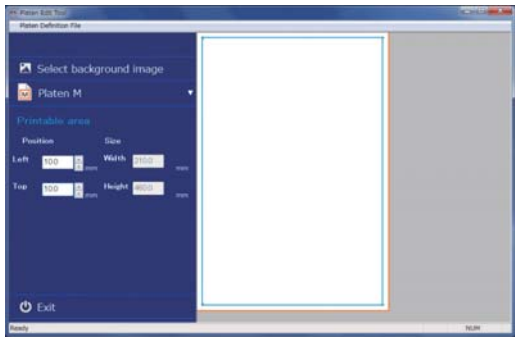
[1] Start the "Platen Edit Tool".

Note

How to start the program from the [Start] menu in Windows

- Windows 8/ Windows8.1
  Right-click an empty spot on the [Start] screen to open the application bar, and click [All apps]. Click [Platen Edit Tool] button.
- Windows7/ Windows Vista/ Windows XP
  Click [All Programs] (or [Programs]) in the [Start] menu, click [MUTOH] and then click [Platen Edit Tool].

[2]



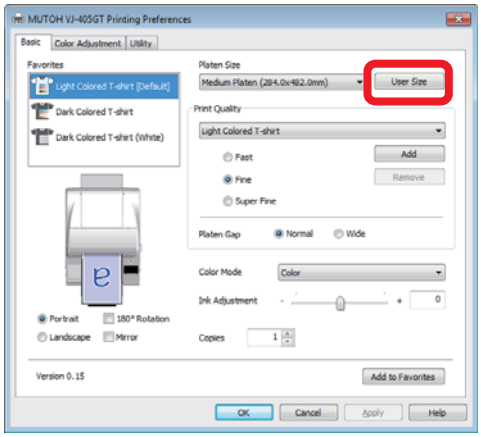
Change the platen settings.

- For detailed information on the use of the Platen Edit Tool refer to its operation manual.

Note

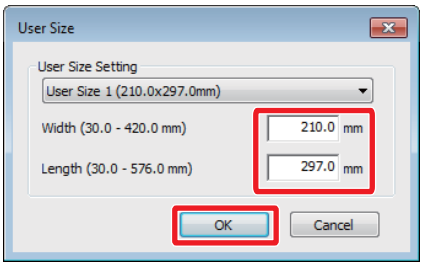
You can find the “Platen Edit Tool Operation manual” on the included CD.

[1] Start the print setting screen for the printer driver.
☞"Displaying the Printing Preference dialog" on page 15

[2] 

Click [User Size].

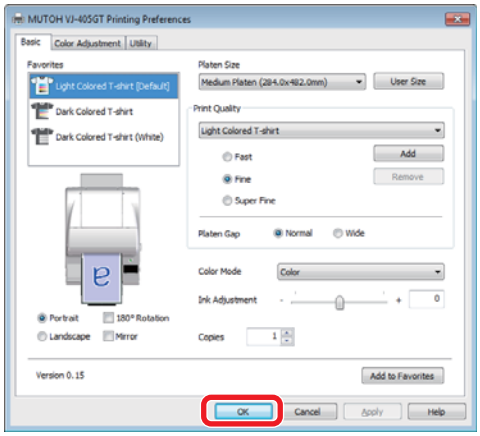
- The [User Size] setting screen is displayed.

[3] 

Enter [Width] and [Length], and click [OK].

Note

When saving the settings, click [Add to Favorites] after making changes.

[4] 

Click [OK].

Chapter 3 Settings and Adjustments

Changing/checking settings 66

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Displaying serial number 69
Changing display language 70
Displaying software version 71

Adjusting image quality 72

Correcting table feeding 72
Adjusting head 75
Adjusting the printing position 78
Initializing adjustment 80

Changing/checking settings

This section describes how to change/check settings of this device from the touch panel.

Changing the network settings

This function changes settings of the IP address, subnet mask and Gateway.

[1]

Tap the [SET UP] key.

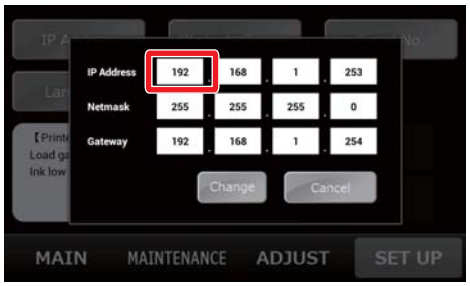
- The SET UP menu is displayed.

[2]

Tap the [IP Address] key.

- The address setting screen is displayed.

[3]



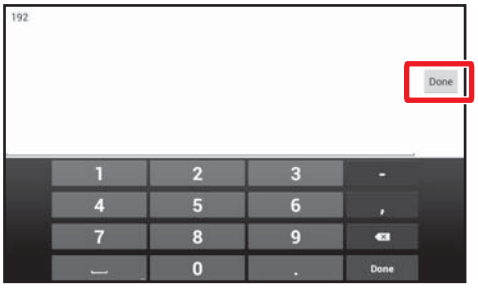
Set the IP Address.

- Tap the segment (number) you want to change.
- The number entry screen is displayed.

Note

- Set an IP address that is different from the IP address of the computer that the printer will be connected to.
- Be sure to set the IP address after consulting the network administrator.

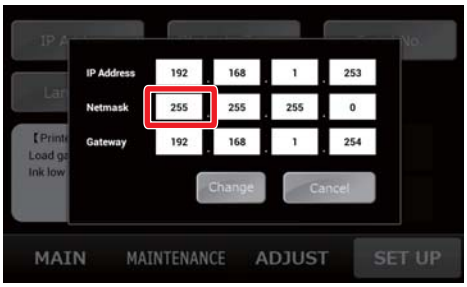
[4]



Use the numerical keyboard to enter numbers.

- Tap [Done] to confirm the entry.

[5]



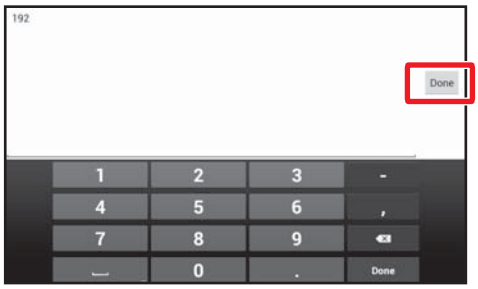
Set the subnet mask (Netmask).

- Tap the segment (number) you want to change.
- The number entry screen is displayed.

Note

- Be sure to set the subnet mask after consulting the network administrator.

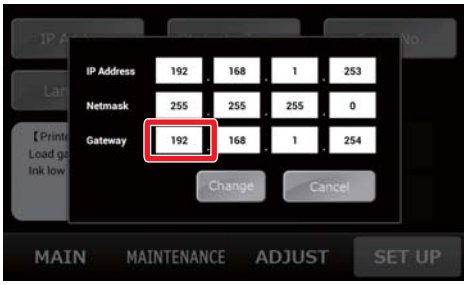
[6]



Use the numerical keyboard to enter numbers.

- Tap [Done] to confirm the entry.

[7]



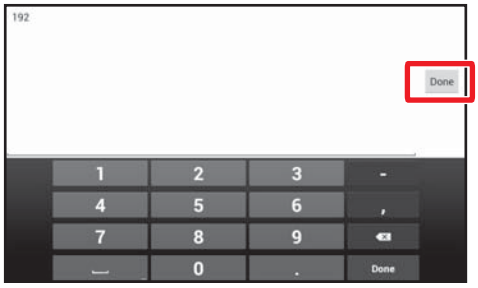
Set the Gateway.

- Tap the segment (number) you want to change.
- The number entry screen is displayed.

Note

- If the printer is to be connected to peer-to-peer to a computer, you can leave the settings at the default values.
- Be sure to set the Gateway after consulting the network administrator.

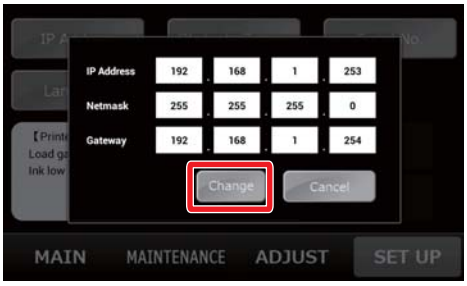
[8]



Use the numerical keyboard to enter numbers.

- Tap [Done] to confirm the entry.

[9]



Tap the [Change] key.

- Update the printer's address settings with the entered value.

Note

Tap [Cancel] to close the address setting screen.

Setting obstacle sensor

This function turns on/off the sensor that detects obstacles on the platen and raised garment.

- Make sure to use the device with the obstacle sensor on.
  Using the device with the obstacle sensor off may cause damage to the print head, when there is an obstacle or the platen position is too high.

[1]

Tap the [SET UP] key.

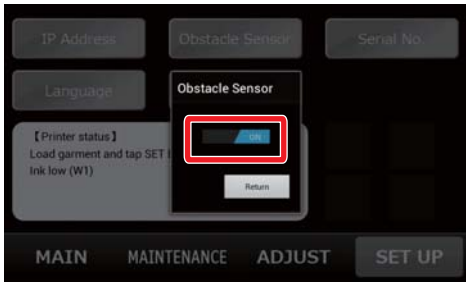
- The SET UP menu is displayed.

[2]

Tap the [Obstacle Sensor] key.

- The obstacle sensor setting screen is displayed.

[3]



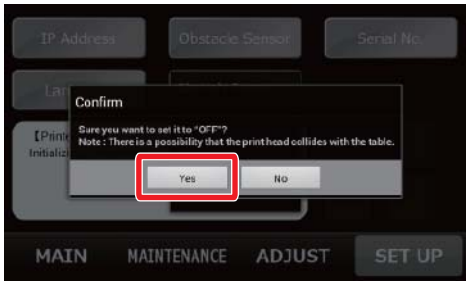
Switch [On] / [Off].

- When [Off] is selected, the confirmation screen is displayed.

Note

Tap the [Return] key to return to the [SET UP] menu.

[4]



Tap [Yes].

Displaying serial number

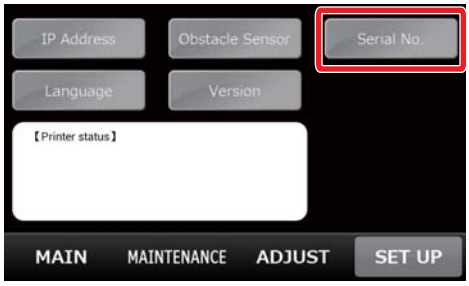
This function displays the product serial number.

[1]

Tap the [SET UP] key.

- The [SET UP] menu is displayed.

[2]



Tap the [Serial No.] key.

- The serial number screen is displayed.

[3]

Check the number, and Tap the [Return] key.

- The screen returns to the [SET UP] menu.

Changing display language

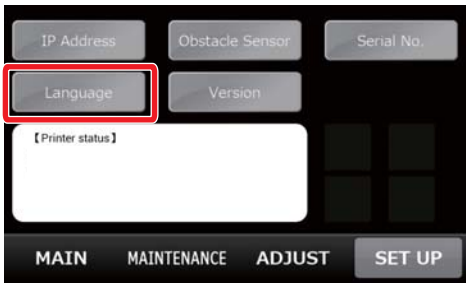
This function changes language displayed on the touch panel.
However, the function keys remain in English, even after the display language is changed.

[1]

Tap the [SET UP] key.

- The [SET UP] menu is displayed.

[2]



Tap the [Language] key.

- The language select window is displayed.

[3]

Tap the language you would like to use, then tap [Change].

- The language setting is changed.

Note

Tap the [Cancel] key to return to the [SET UP] menu.

Displaying software version

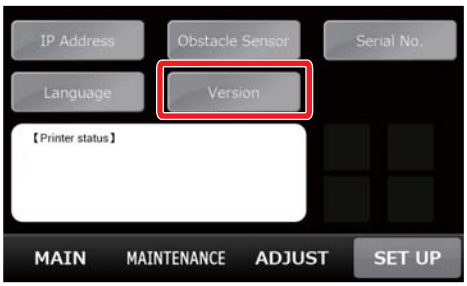
This function displays internal software version of this product.

[1]

Tap the [SET UP] key.

- The [SET UP] menu is displayed.

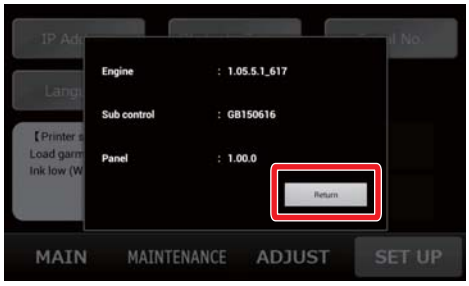
[2]



Tap the [Version] key.

- The software version screen is displayed.

[3]



Check the number, and tap the [Return] key.

- The screen returns to the [SET UP] menu.

Adjusting image quality

Image quality adjustment of this product is performed at the factory. Therefore, no adjustment is necessary in general use. When there is any image quality defect, check the following items first.

- Is preprocessing preparation appropriate?
- Is there any nozzle clogging?
- Is the distance between the T-shirt and print head too far?
- Is the set position of the T-shirt leaning to one side?

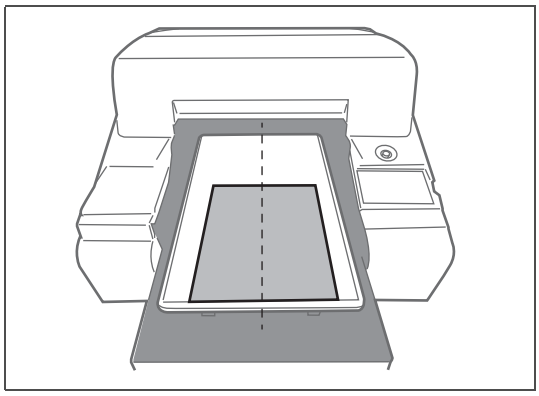
When the condition is not improved even after ensuring the items, adjust the image quality.

Correcting table feeding

When whitish horizontal lines are found at regular intervals on the print result, performing this adjustment may improve the condition.

1. Set the media onto the platen

[1]



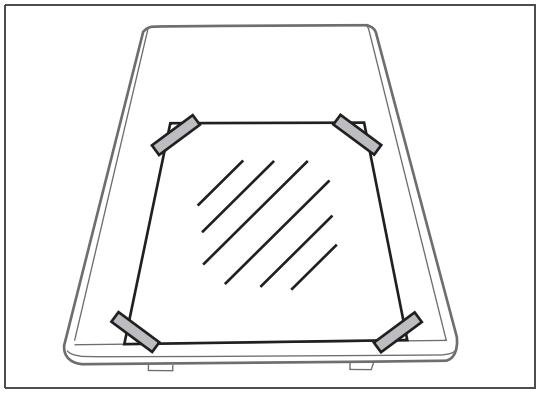
Load the media on the platen.

- Set the A4 size (210 mm x 297 mm) media vertically.
- Load the media so that its front edge aligns with the front edge of platen.
- Align the center of the media and platen.

Note

For VJ-405GT, white ink is used. Therefore, we recommend using transparent or translucent media (such as OHP films or tracing paper and so on).

[2]

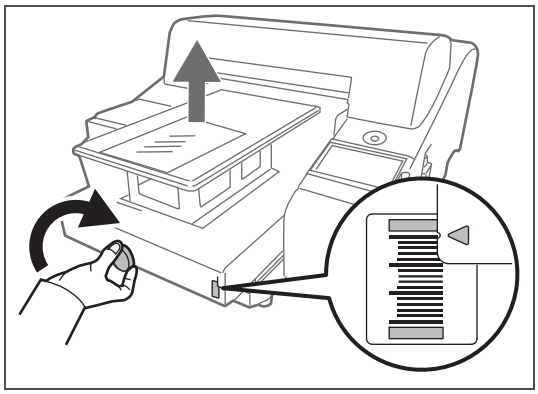


If the media does not sit flat on the platen, use tape to fix the four corners of the media.

Note

If the media does not sit flat on the platen, it may cause an error.

[3]



- Turn the table up-down dial to lift the table all the way to the top.

Note

- After lifting up the table all the way, do not turn the table up-down dial any further, as doing so could damage the printer.
- The same applies when lowering the table all the way.

[4]

Tap the [ADJUST] key.

[5]

Tap the [SET] key.

- The table moves further in.

Note

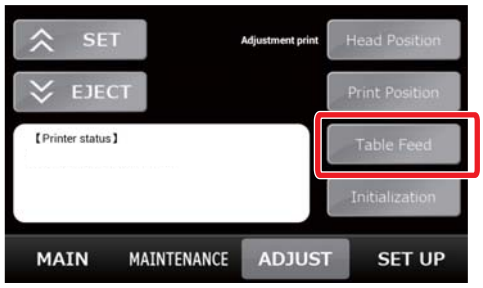
When a height error occurs, lower the table height a little at a time.
Bring the platen and the print head as close together as possible.

Important!

Bring the platen and the print head as close together as possible for the image quality adjustment, even when the "Head Gap" setting is set as "Large".

2. Print adjustment patterns.

[1]



Tap the [Table Feed] key.

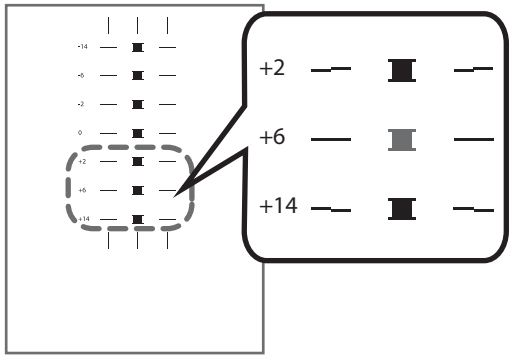
- The confirmation screen is displayed.

[2]

Tap [Yes].

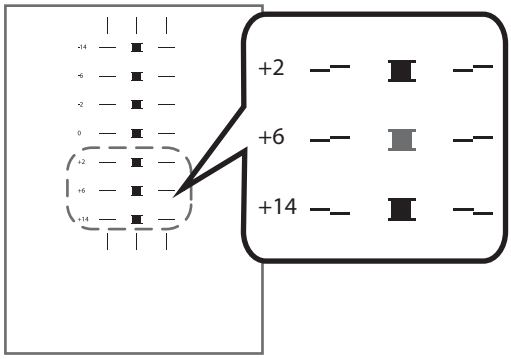
- Adjustment patterns are printed.
- The adjustment value entry screen is displayed.

[3]



Find an appropriate adjustment value from the print result of adjustment patterns.

- Find a pattern with a square in the lightest color and horizontal lines on both sides aligned.
- A value on the left of the pattern indicates an appropriate adjustment value.
- In the left illustration, an appropriate adjustment value is “+6”.



In some cases, an adjustment value is an in-between value of patterns. The following shows an example.

- When a square is in the lightest color, but horizontal lines on both sides are misaligned.
- In the left illustration, a square in the lightest color is for “+6”, but horizontal lines on both sides are misaligned. In this case, check horizontal lines for one pattern above and one pattern below of the square.
- The horizontal lines for “+2” and “+6” are misaligned in the same direction, but the horizontal lines for “+14” are misaligned in the opposite direction.
- In this case, a value that horizontal lines align exists somewhere in between “+6” and “+14”. After passing the value, the horizontal lines begin to be misaligned in the opposite direction as getting closer to “+14”.
- By referring to the alignment of the lines, decide a value between “+6” and “+14” as an appropriate adjustment value.

[4]

Input the adjustment value from Step 3, and tap [Enter].

[5] Perform the media feed adjustment again.

- Perform the adjustment until a square for the “0” pattern becomes the lightest color and horizontal lines on both sides are aligned.

Adjusting head

This function adjusts the print head position. When the print result is not clear (for instance, vertical lines are misaligned, or color is not clear.), this adjustment may improve the result.

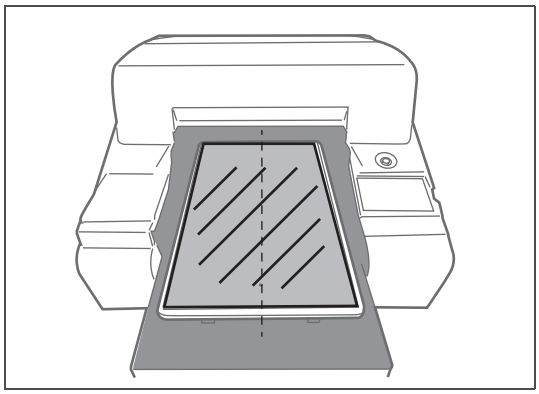
Perform the head adjustment for each printing mode.

- [Quality]: Perform adjustment when the “Print Quality” setting of the printer driver is “Fine” or “Super Fine”.
- [HighSpeed]: Perform adjustment when the setting is “Fast”.

In either case, check adjustment values of all lines for the adjustment patterns, and perform each adjustment. When an adjustment value is “0”, no adjustment is necessary. Perform adjustment until adjustment values of all rows become “0”.

1. Set the media onto the platen

[1]



Load the media on the platen.

- Set the A3 size (297 mm x 420 mm) media vertically.
- Make sure that the front edge of the media is at the position shown in the left illustration.
- Align the center of the media and platen.

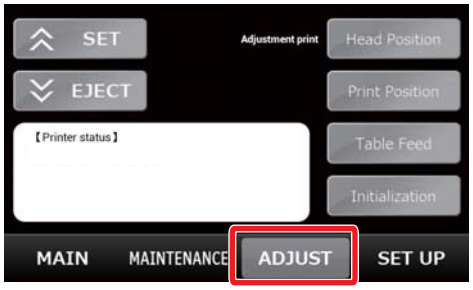
Note

For VJ-405GT, white ink is used. Therefore, we recommend using transparent or translucent media (such as OHP films or tracing paper and so on).

[2] The procedures that follow are the same as "Set the media onto the platen" on page 78 in “Correcting table feeding”.

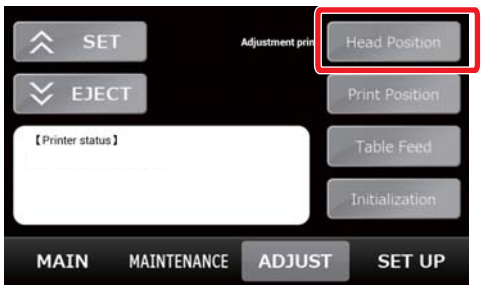
2. Print adjustment patterns

[1]



Tap the [ADJUST] key.

[2]



Tap the [Head Position] key.

- The printing mode selection screen is displayed.

[3]

Tap [Quality] or [HighSpeed].
[Quality]: Perform adjustment when the print setting of the printer driver is “Fine” or “Super Fine”.
[HighSpeed]: Perform adjustment when the setting is “Fast”.

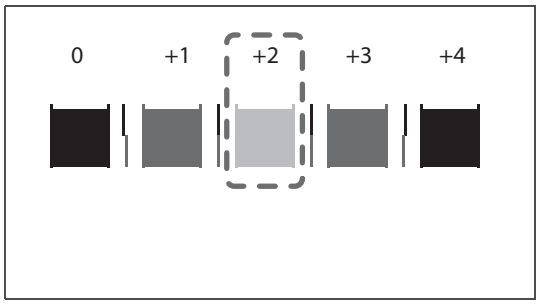
- The confirmation screen is displayed.

[4]

Tap [Yes].

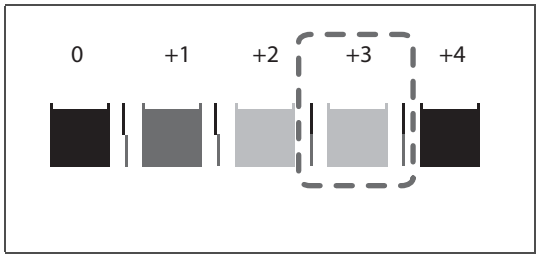
- Adjustment patterns are printed.
- The adjustment value entry screen is displayed.

[5]



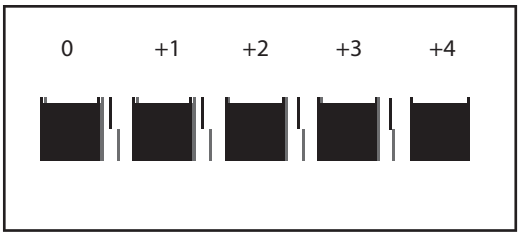
Find an appropriate adjustment value from the print result of adjustment patterns.

- Find a pattern with a square in the lightest color and vertical lines on both sides aligned.
- A value indicated over the pattern indicates an appropriate adjustment value.
- In the left illustration, an appropriate adjustment value is “+2”.
- Check adjustment values for all the rows.



When it is difficult to choose, select one with vertical side lines closest to straight.

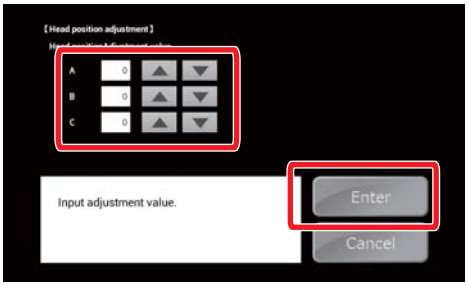
- In the left illustration, an appropriate adjustment value is “+3”.



When there is no straight vertical side lines, check the last square out of the sequence of squares with the smallest gap in side lines, and find a corresponding value.

- In the left illustration, the value is “+4”.
- In this case, an appropriate adjustment value is predicted as “+4” or higher.
- For instance, for [Quality], an adjustment value can be within the range of ±15. Therefore, choose an appropriate adjustment value between “+5” and “+15” by referring to the alignment of the lines.

[6]



Input the adjustment value from Step 4, and tap [Enter].

- For [Quality], an adjustment value can be within the range of ±15.
- For [HighSpeed], an adjustment value can be within the range of ±8.

Note

The left illustration shows the [Quality] screen.

[7] Perform the head adjustment again.

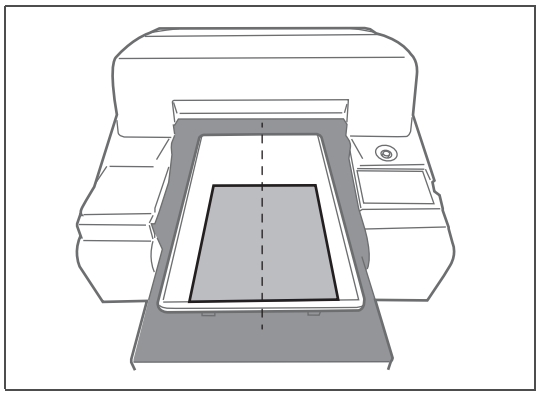
- Repeat the adjustment until a square of the “0” pattern becomes the lightest color and the vertical lines on both sides become aligned.

Adjusting the printing position

The printing position can be adjusted finely within the range of ±4 mm.

1. Set the media onto the platen

[1]



Load the media on the platen.

- Set the A4 size (210 mm x 297 mm) media vertically.
- Make sure that the front edge of the media is at the position shown in the left illustration.
- Align the center of the media and platen.

Note

For VJ-405GT, white ink is used. Therefore, we recommend using transparent or translucent media (such as OHP films or tracing paper and so on).

[2] The procedures that follow are the same as "Set the media onto the platen" on page 78 in “Correcting table feeding”.

2. Print adjustment patterns

[1]

Tap the [ADJUST] key.

[2]

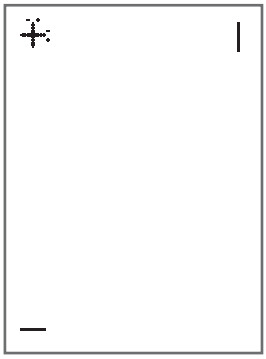
Tap the [Print Position] key.

- The confirmation screen is displayed.

[3]

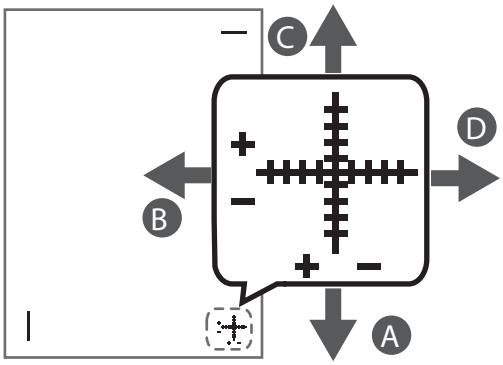
Tap [Yes].

- Adjustment patterns are printed.
- The adjustment value entry screen is displayed.



- The adjustment patterns are shown on the left.

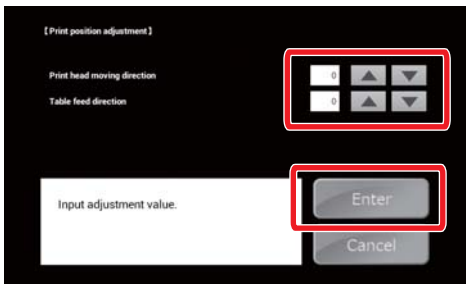
[4]



Position the paper so that the cross on the test print paper comes at the right bottom corner.

- Decide the moving direction of the print result, while considering that "A" indicates the front of the printer.
- Each calibration of the cross shows 1 mm.

[5]



By using the cross as a guide, input an adjustment value, and tap [Enter].

- Values can be selected between "-4.0" and "+4.0" in increments of 0.1 mm.
- To move the print position to the "B" direction shown in the figure in Step 3, input a value between "+1" and "+4" into [Print head moving direction].
  To move to the "D" direction, input a value between "-1" and "-4".
- To move the print position to the "C" direction shown in the figure in Step 3, input a value between "+1" and "+4" into [Table feed direction].
  To move to the "A" direction, input a value between "-1" and "-4".

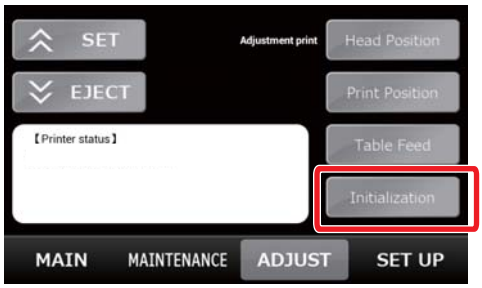
Initializing adjustment

This function initializes setting values of the image quality adjustment. When this function is performed, all the settings are reset to pre-factory default conditions. Therefore, the image quality adjustment becomes necessary for all the items. Pay close attention when using this function.

[1]

Tap the [ADJUST] key.

[2]



Tap [Initialization].

- The confirmation screen is displayed.

[3]

Tap [Yes].

- All adjustment values for the image quality adjustment are initialized.
- Perform image quality adjustment for all the items.

Chapter 4 Maintenance

Maintenance 82

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Maintenance

We ask the customers to perform maintenance to maintain product performance.
The types of maintenance performed include the following.

Every day before and after work	"Shake the white ink cartridge (VJ-405GT)" on page 89 "Nozzle check and cleaning" on page 24
Every day after work	"Cleaning the cleaning wiper and the cap" on page 95 (VJ-404GT)
Maintenance performed with use	"Empty the waste ink bottle" on page 91 "Replacing the left flushing box and reseting the left flushing box counter" on page 110 "Replacing the mist filters" on page 115
Once a week	"Cleaning the cleaning wiper and the cap" on page 95 (VJ-404GT) "Cleaning the area around the print head" on page 100 Cleaning the encoder scale (When the “Head Gap” setting is set to “Large”) Cleaning and greasing the shafts (When the “Head Gap” setting is set to “Large”)
Once every two weeks	"Cleaning the encoder scale" on page 103 "Cleaning and greasing the shafts" on page 106
When not using the printer for one week or more	"Long-term storage" on page 124

Shake the white ink cartridge (VJ-405GT)

Shake the white ink cartridge (VJ-405GT)

When using white ink, shake the ink cartridge in the following situations to avoid ink sedimentation and coagulation.

- Every day before and after printer operation.
- When the sub power button flashes quickly (twice a second) and the following message is displayed on the touch panel "Please shake white cartridges to prevent sedimentation".

Required items:

- Lint-free cloth (supplied accessory or commercially available item: however, use items such as polyester non-woven fabric with low dust production.)
  Or polyknit wipers (optional product)
- Gloves (supplied accessory)

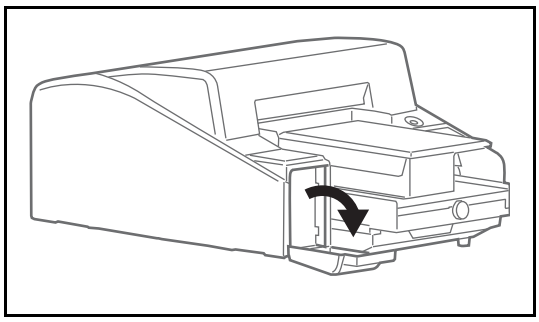
Steps

[1]

Make sure that the message is displayed on the touch panel.

[2] When shaking the ink cartridge while the message is not displayed, make sure that the printer is turned on.

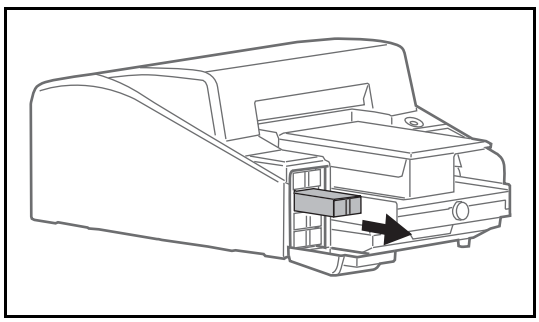
[3] Wear the gloves supplied with the product.

[4] 

Open the cartridge cover on the white ink side.

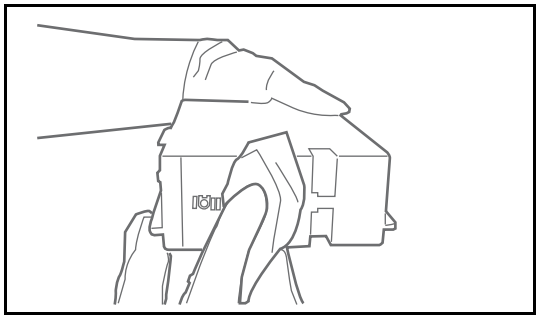
Note

Press the cartridge cover, and it opens forward.

[5] 

Remove the white ink cartridge from the cartridge slot.

[6]

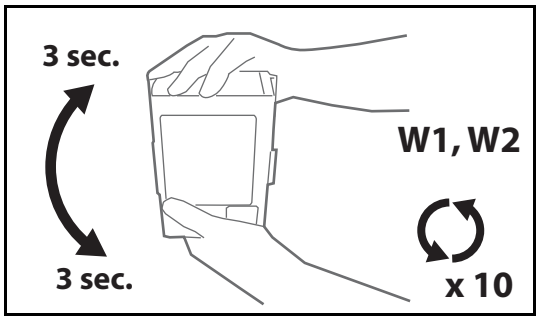


Using a Lint-free cloth, wipe off residual ink adhering to the cartridge ink plug.

Important!

Take care so as not to touch the IC chip.

[7]

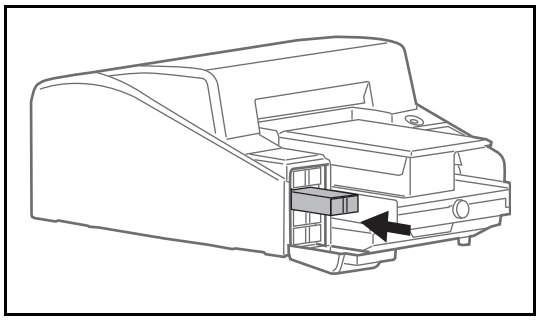


- While holding the ink plug with the Lint-free cloth, point the ink plug upward and wait three seconds.
- Next, turn the ink plug down downward and wait for three seconds.
- Repeat that ten times.

Important!

Be sure to shake both W1 and W2.

[8]

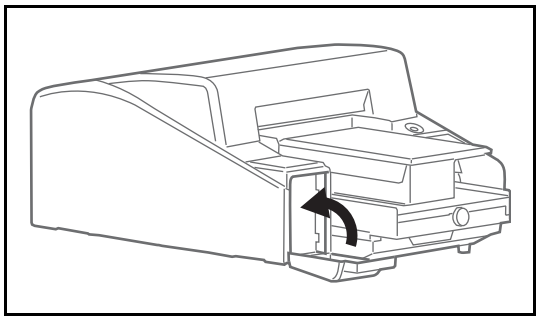


Reinstall the ink cartridge to the original cartridge slot.

Important!

- **The white ink cartridge must be shaken periodically.**
  If you do not, the ink in the cartridge could settle and/or coagulate, causing poor image quality or printer failure.
- **The cartridge shapes for the white ink W1 and W2 are different. If the cartridges are installed in the wrong slots, the printer may be damaged.**

[9]



Close the cartridge covers.

[10]

Tap [OK].

Empty the waste ink bottle

Empty the waste ink bottle

Once a certain amount of ink has been used, the following message is displayed on the touch panel.
Put the waste ink from the waste ink bottle into a container to discharge it.

Status display

The following messages are displayed in the status display area of the touch panel.

- “Waste ink bottle is near full”
- “Waste ink bottle is full. Empty the bottle before reset the waste ink counter”

Icon display

The waste ink bottle is almost full. Empty the waste ink in the waste ink bottle before it becomes full.

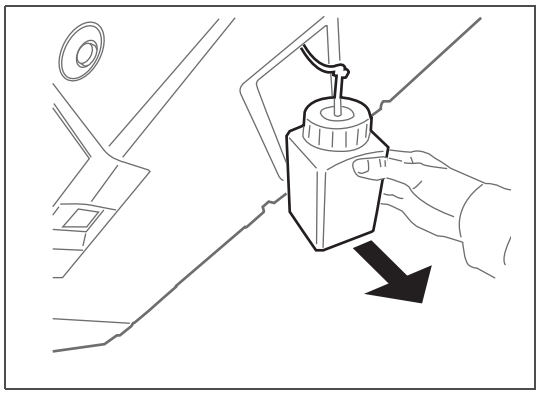
The waste ink bottle is full. Promptly empty the waste ink in the waste ink bottle.

1. Transfer the waste ink to a container

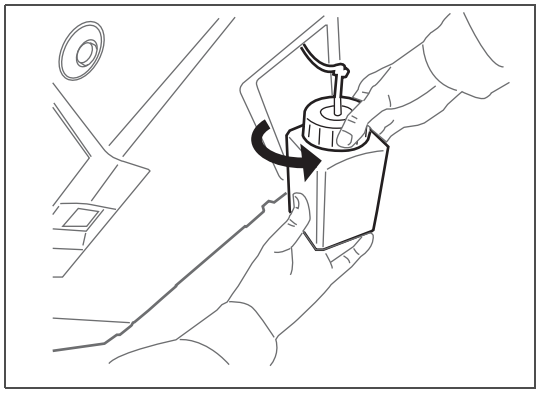
[1] Prepare a container to put the waste ink in.

Important!

- **The volume of the waste ink bottle is 500 ml. Prepare a container of sufficient volume when emptying the waste ink.**
- **Waste ink may leak onto the floor during work. We recommend placing a piece of cloth that can become dirty underneath when performing work.**

[2] 

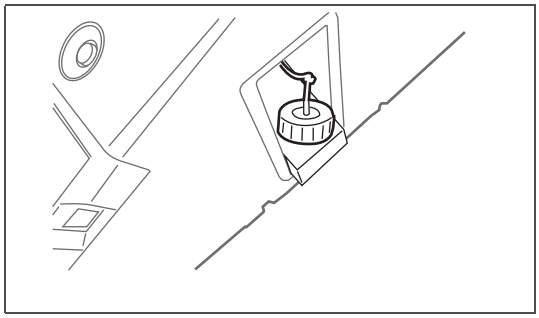
Remove the waste ink bottle from the printer.

[3] 

Turn the cap of the waste ink bottle and remove it.

Important!

Ink may leak out of the tube from the waste ink bottle cap.

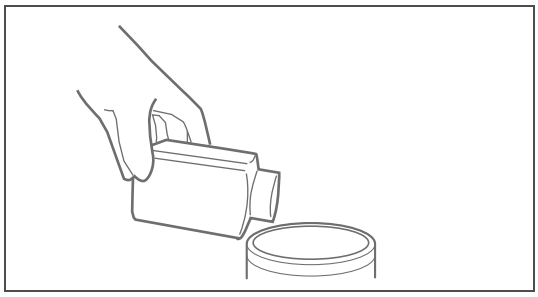
[4] 

Place the waste ink bottle cap in the waste ink bottle holder.

Important!

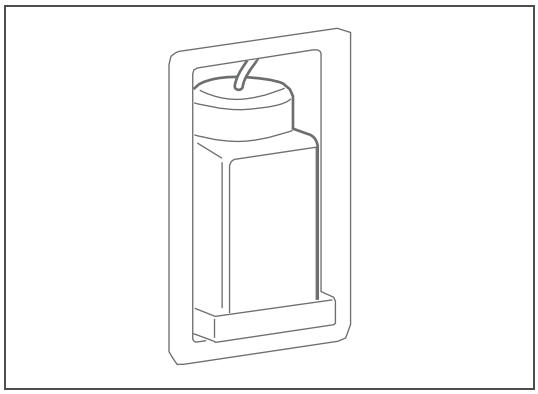
Immediately wipe up any ink that spills onto the waste ink bottle holder.

[5]



Put the waste ink into the container.

[6]



Install the waste ink bottle to the printer.

Important!

After you have mounted the bottle, make sure that the waste ink tube is not bent or dented.
If the tube is bent or dented, the waste ink may leak into the printer.

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.
- Take care so that ink does not enter your eyes, or adhere to your skin.
  Wash your eyes or skin immediately with water if this happens. Leaving this untreated may cause the eye to become bloodshot and this may cause mild inflammation. Contact a doctor immediately if something is wrong.

2. Initializing the waste ink

After putting the waste ink into the container, perform waste ink initialization, and then reset the waste ink counter.

WARNING

Perform this only when you have put the waste ink into the container. Otherwise waste ink may overflow and stain, or the printer may be damaged.

[1]

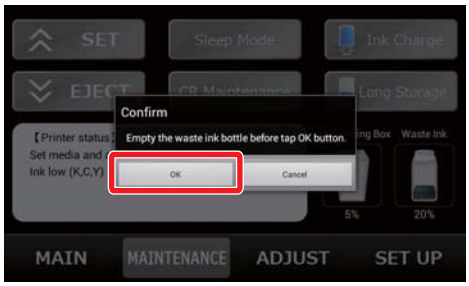
Tap the [MAINTENANCE] menu.

[2]

Tap on the [Waste Ink] icon.

- The confirmation dialog will appear.

[3]



Tap [OK] to reset the waste ink counter.

Cleaning each part

Cleaning the cleaning wiper and the cap

When to clean:

- VJ-405GT: After each day of work
- VJ-404GT: Once a week
- If blurs and unprinted areas do not go away after head cleaning

Required items:

- Cleaning stick (supplied accessory or optional product),
- Maintenance liquid (optional product)
- Gloves (supplied accessory)
- Plastic cup (supplied accessory)

Important!

Observe the following when cleaning.

- **Soak the cleaning stick in the maintenance liquid. If you use water, it will damage the print head.**
- **Wash out any ink that may adhere to the cleaning stick during cleaning with the maintenance liquid. Do not continue working with a dirty cleaning stick.**
- **Do not touch the end of the cleaning stick with your fingers. If the cleaning stick touches your skin it could damage the print head.**
- **Do not reuse cleaning sticks. If dust or other grime adheres to the cleaning stick, it could damage the print head.**
- **If the stain is hard to remove, perform Normal cleaning, and then try cleaning again.**
- **This process should take no more than five minutes.**

CAUTION

Do not open or close the front cover while you are unstable.
You could nip your hand and so on while opening or closing it and get injured.

1. Setting CR Maintenance mode

[1]

Tap the [MAINTENANCE] key.

[2]

Tap the [CR Maintenance] key.

- The confirmation screen is displayed.

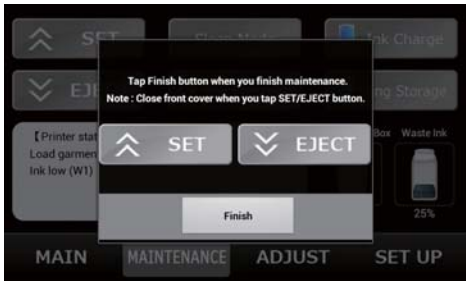
[3]

Tap [Yes].
The carriage moves toward the center of the printer.

Important!

Do not leave CR maintenance mode on for five minutes or more. Doing so may cause the print head to clog up.

[4]



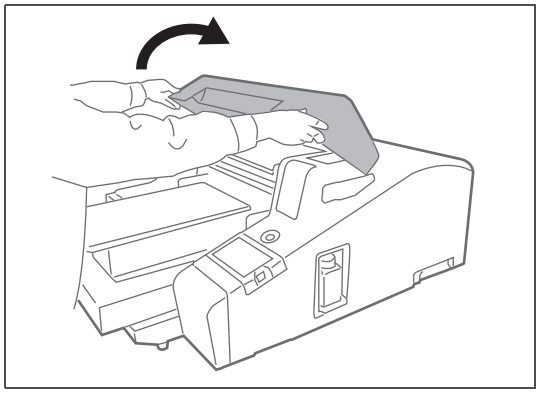
The left message is displayed.

- Tap the [SET] key to move the platen to the start printing position.
- Tap the [EJECT] key to move the platen to the eject position.
- Once maintenance is complete, Tap [Finish].

2. Cleaning the cleaning wiper

[1] Wear the gloves provided.

[2]



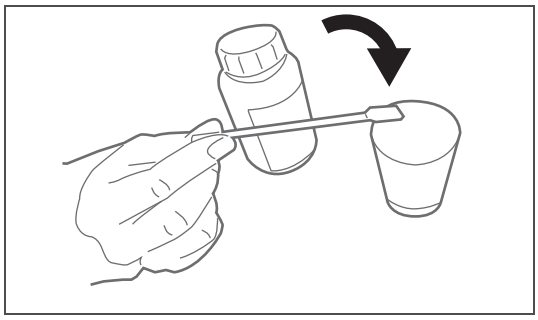
Hold the front cover in the position shown in the diagram and slowly open with both hands.

- Open the front cover all the way.

CAUTION

Be sure to open the front cover all the way.
Stopping mid-way could cause the cover to close suddenly.

[3]

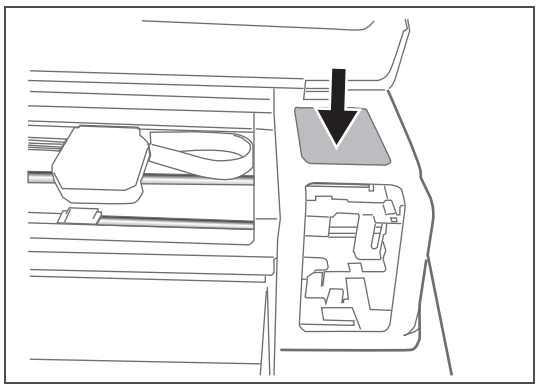


Pour the appropriate amount of maintenance liquid into the plastic cup provided and soak the cleaning stick in the maintenance liquid.

Note

Soak so that maintenance liquid does not drip from the cleaning stick.

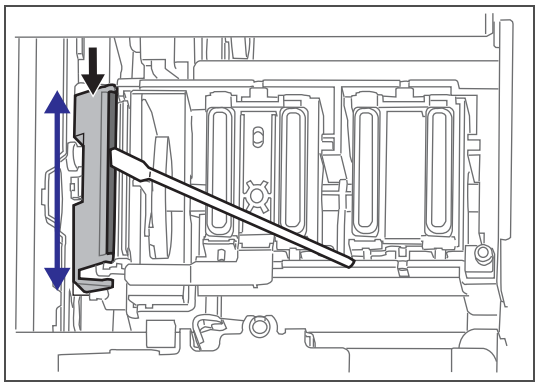
[4]



Check the position of the cleaning wiper.

- The cleaning wiper is under the carriage position prior to being moved.

[5]

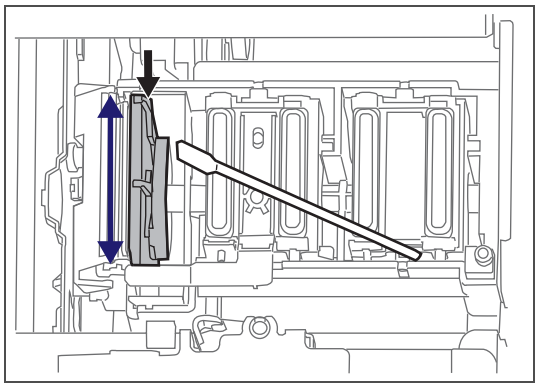


Use the clean stick to wipe off the stain from the left roller of the cleaning wiper and the surrounding area.

Important!

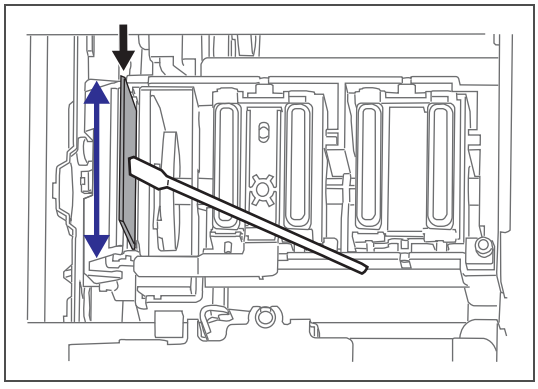
If the stain is hard to remove, perform [Normal] cleaning, and then try cleaning again.

[6]



Wipe off the stain on the right side of the cleaning wiper.

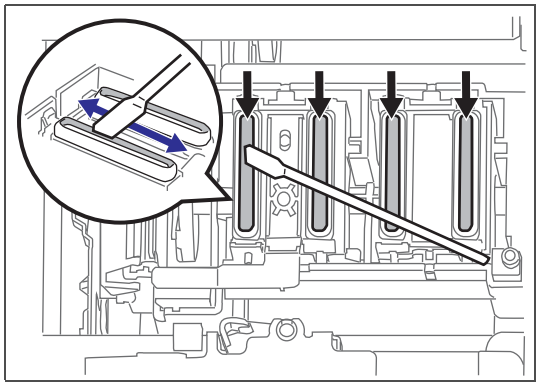
[7]



Wipe off the stain from the cleaning wiper (blackish rubber plate).

3. Cleaning the cap

[1]

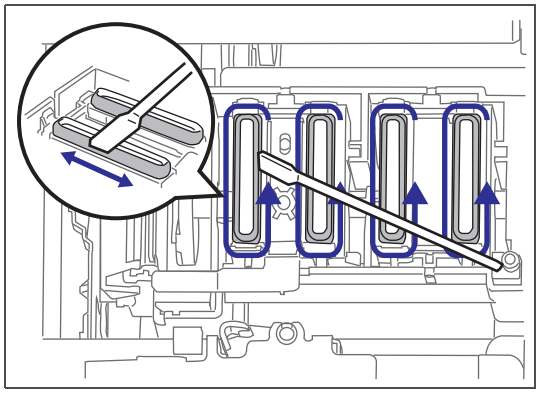


Wipe off the stain on the inside of the four caps.

Important!

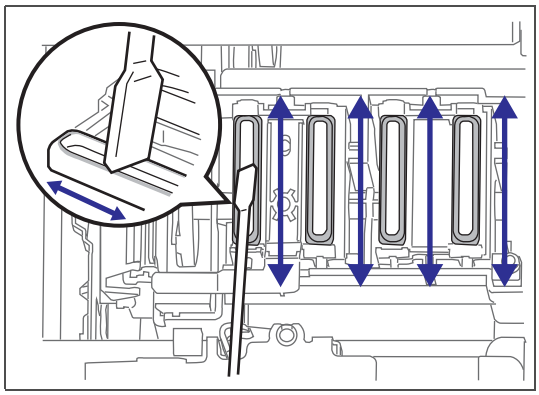
- **For the left-end cap, clean the inner wall only. Do not touch the sponge inside the cap. When the sponge is pushed in, the ink may not be absorbed properly.**
- **Do not touch the cleaning wiper and head cap unit. Fat and oil from your fingers may adhere and head cleaning may not be performed correctly.**

[2]



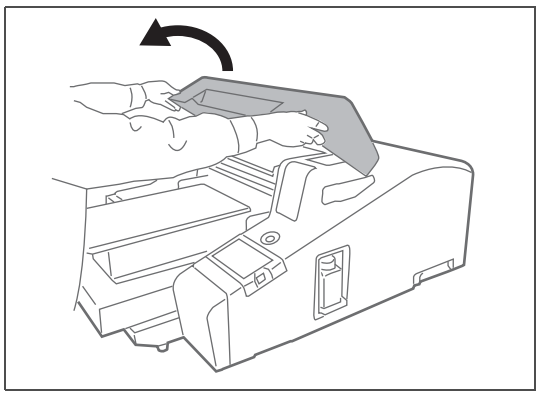
Wipe off the stain around the caps.

[3]



Wipe off the stain along the rim on top of the caps.

[4]

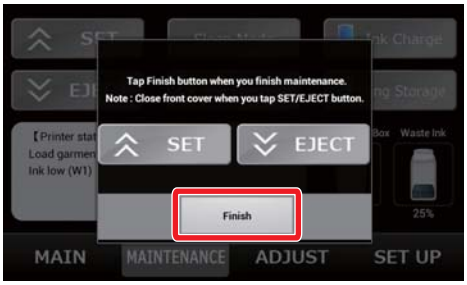


Hold the front cover in the position shown in the diagram and slowly close with both hands.

⚠ CAUTION

When closing the front cover, be sure to place both hands on the specified positions.
Placing your hands on the edge of the printer port or around there could cause your hand to get caught and cause an injury.

[5]



Tap [Finish].

- This completes the procedure.

Note

If cleaning the area around the print head, do not stop here and perform cleaning.

Cleaning the area around the print head

When to clean:

- Once a week
- If blurs and unprinted areas do not go away after head cleaning

Required items:

- Cleaning stick (supplied accessory or optional product)
- Maintenance liquid (optional product)
- Gloves (supplied accessory)
- Plastic cup (supplied accessory)

Important!

Observe the following when cleaning.

- **Soak the cleaning stick with the maintenance liquid. If you use water, it will damage the print head.**
- **Wash out any ink that may adhere to the cleaning stick during cleaning with the maintenance liquid. Do not continue working with a dirty cleaning stick.**
- **Do not touch the end of the cleaning stick with your fingers. If the cleaning stick touches your skin it could damage the print head.**
- **Do not reuse cleaning sticks. If dust or other grime adheres to the cleaning stick, it could damage the print head.**
- **If the stain is hard to remove, perform Normal cleaning, and then try cleaning again.**
- **This process should take no more than five minutes.**

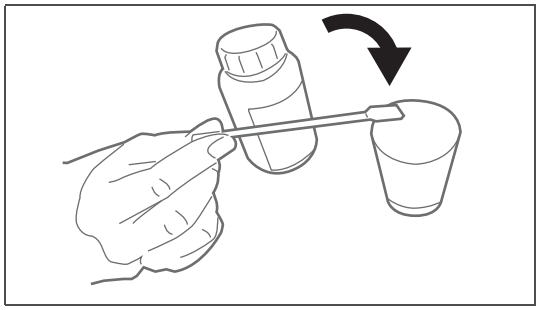
CAUTION

Do not open or close the front cover while you are unstable.
You could nip your hand and so on while opening or closing it and get injured.

1. Cleaning the area around the print head

[1] Wear the gloves provided.

[2]



Pour the appropriate amount of maintenance liquid into the plastic cup provided and soak the cleaning stick in the maintenance liquid.

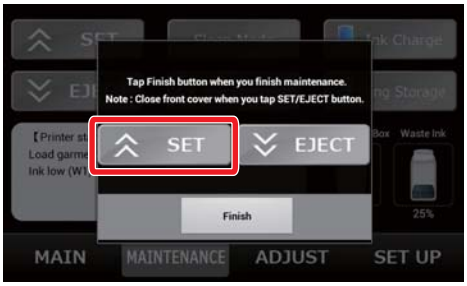
Note

Soak so that maintenance liquid does not drip from the cleaning stick.

[3] Remove the platen.

[4] Set the printer to CR maintenance mode.
☞"Setting CR Maintenance mode" on page 95

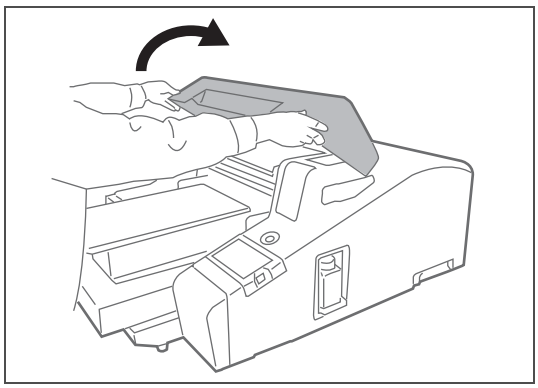
[5]



Tap the [SET] key.

- The table moves further in.

[6]



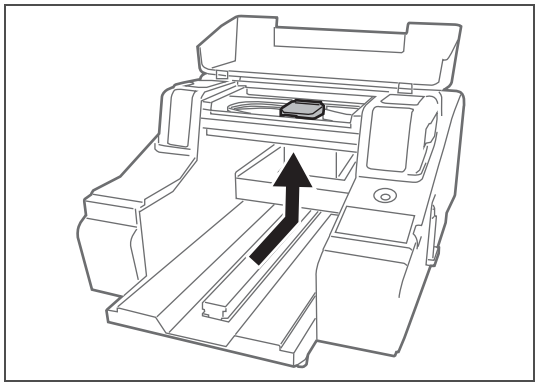
Hold the front cover in the position shown in the diagram and slowly open with both hands.

- Open the front cover all the way.

CAUTION

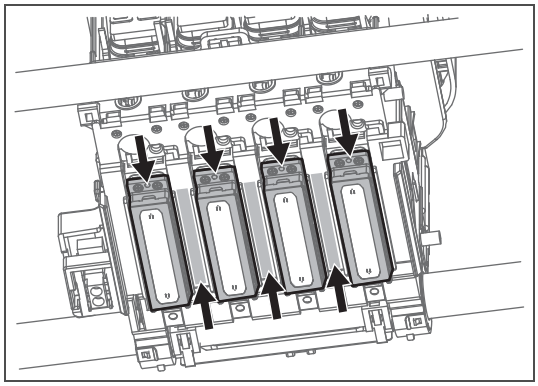
Be sure to open the front cover all the way.
Stopping mid-way could cause the cover to close suddenly.

[7]



Look at the underside of the carriage.

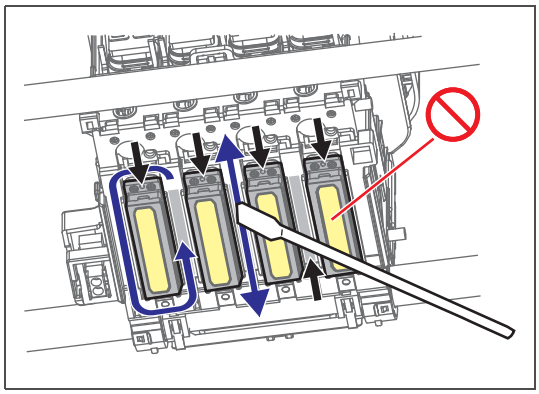
[8]



Check the following points to see if any dust or ink blotches can be found.

- The area around each print head (the silver frame)
- Gap between print heads

[9]

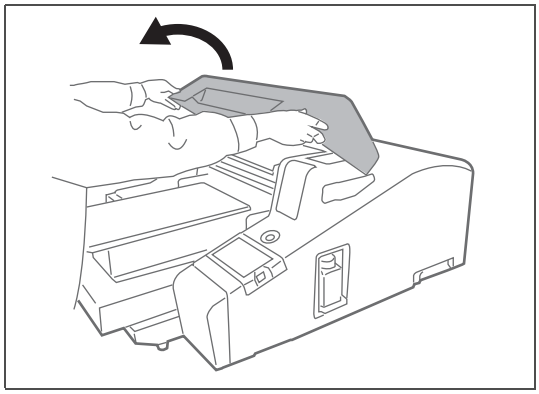


Use the cleaning stick to clean off any dust or ink blotches found.

Important!

Do not touch the surface of a print head (the yellow portions in the left illustration) with your fingers or the cleaning stick. Doing so could damage the print head.

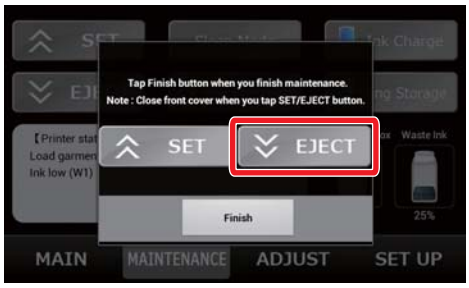
[10]



Hold the front cover in the position shown in the diagram and slowly close with both hands.

When closing the front cover, be sure to place both hands on the specified positions.
Placing your hands on the edge of the printer port or around there could cause your hand to get caught and cause an injury.

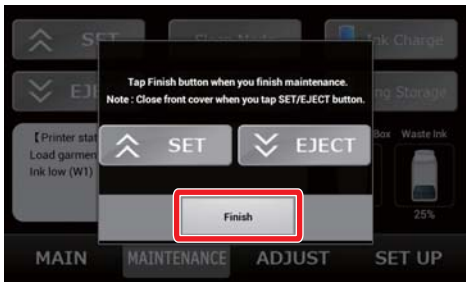
[11]



Tap the [EJECT] key.

- The table moves further out.

[12]



Tap [Finish].

- This completes the procedure.

Cleaning the encoder scale

When to clean:

- Under normal use: Once every two weeks
- After frequent use with the “Head Gap” set to “Large”: Once every week
- If a CR encoder error occurs

Required items:

- Lint-free cloth (supplied accessory or commercially available item: however, use items such as polyester non-woven fabric with low dust production.) Or polyknit wipers (optional product)
- Ethanol (commercially available item: Use one with a concentration of 50% or higher.)
- Gloves (supplied accessory)

Important!

- **Use non-fluffed Lint-free cloths. Do not use tissue paper. The fiber and fine dust from paper could negatively impact the encoder scale.**
- **The encoder scale is a sensitive component. Perform work carefully in a circumspect manner so as to avoid damaging the encoder scale. Damaging the encoder scale will result in errors and a drop in print quality.**
- **Make sure to clean the encoder scale before cleaning and greasing the shaft.**
  Grease from the shaft adhering to the encoder scale may cause errors.

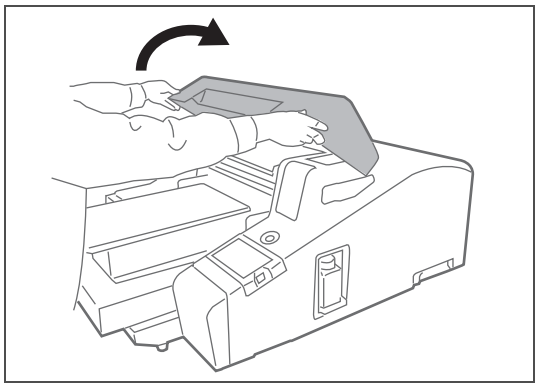
1. Cleaning the left side and the center of the encoder scale

[1] Check that the power is on.

[2] Wear the gloves supplied with the product.

[3] Lightly apply ethanol on the Lint free cloth.

[4]



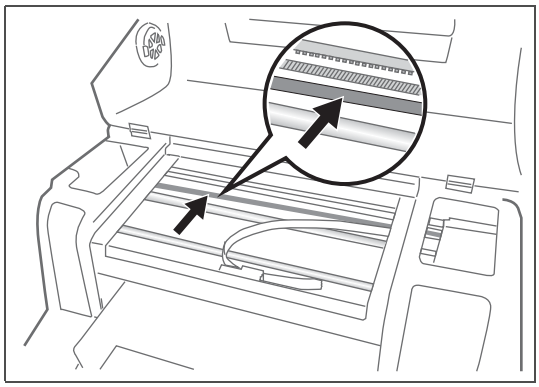
Hold the front cover in the position shown in the left and slowly open with both hands.

- Fully open the front cover.

CAUTION

Do not leave the front cover half open.
The cover may close suddenly.

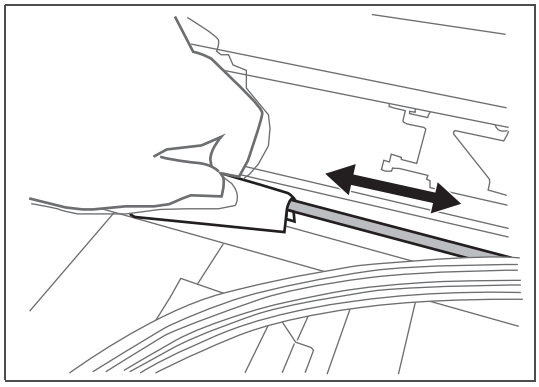
[5]



Check the position of the encoder scale.

- The encoder scale is a blackish translucent film.
- It is near the rear of the 2 metal shafts inside the front cover.

[6]



Softly cover the front and back of the encoder scale with a Lint-free cloth and slide the cloth to the right and left from the left side encoder scale mounting position to clean it.

Important!

- **Take extra care not to hold it too tightly, or to bend the film.**
- **Be careful not to touch other parts.**
  Adhering grease could result in errors.

[7] Set the printer to CR maintenance mode after wiping.
Next, clean the right side of the encoder scale.

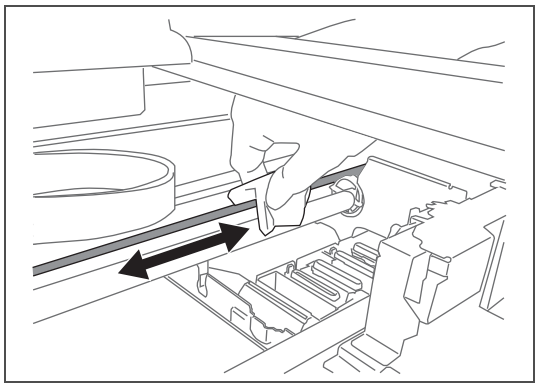
☞"Setting CR Maintenance mode" on page 95
☞"Cleaning the right side of the encoder scale" on page 105

Important!

Please complete this maintenance within 5 minutes while in CR maintenance mode. If not, the print head will get dry and will cause damage.

2. Cleaning the right side of the encoder scale

[1]

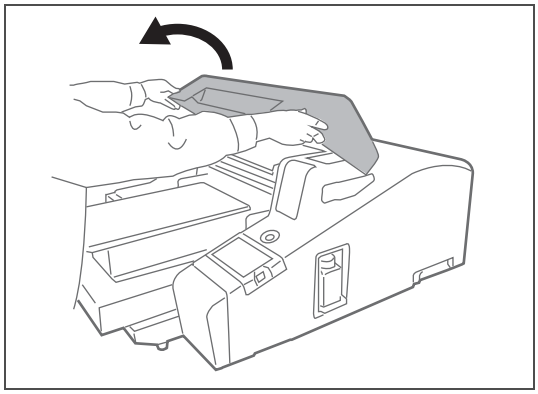


Wipe down the remaining part of the encoder scale. Softly cover the front and back of the encoder scale with a Lint-free cloth and slide the towel to the left and right to clean it.

Important!

- **Take extra care not to hold it too tightly, or to bend the film.**
- **Be careful not to touch other parts.**
  Adhering grease could result in errors.

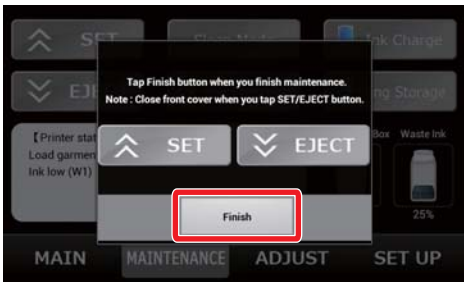
[2]



After wiping, hold the front cover in the position shown in the diagram and slowly close with both hands.

When closing the front cover, be sure to place both hands on the specified positions.
Placing your hands on the edge of the printer port or around there could cause your hand to get caught and cause an injury.

[3]



Press [Finish].

- This completes the procedure.

Note

If the shaft is not cleaned, do not stop here and perform cleaning.

Cleaning and greasing the shafts

When to clean:

- Under normal use: Once every two weeks
- After frequent use with the “Head Gap” set to “Large”: Once every week
- When the shafts get dirty with ink stains.
- If a CR encoder error occurs

Required items:

- Lint-free cloth (supplied accessory or commercially available item: use non-woven fabric with low dust production.)
  Or polyknit wipers (Optional product)
- Ethanol (commercially available item: Use one with a concentration of 50% or higher.)
- Shaft grease (supplied accessory or optional product)
- Gloves (supplied accessory)
- Cotton swabs (commercially available item)

Important!

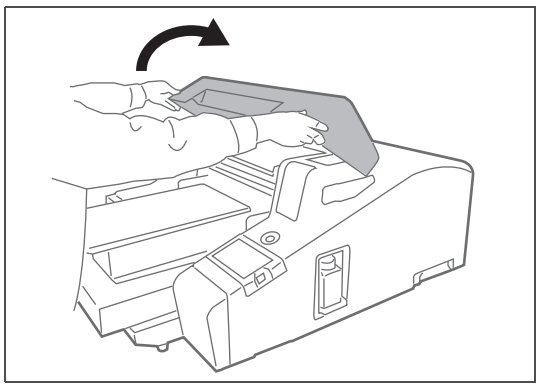
Use non-fluffed Lint-free cloths. Do not use tissue paper. The fiber and fine dust from paper could negatively impact the encoder scale.

1. Cleaning the left side and center of the shaft

[1] Check that the power is on.

[2] Wear the gloves supplied with the product.

[3] Lightly apply ethanol on the Lint free cloth.

[4] 

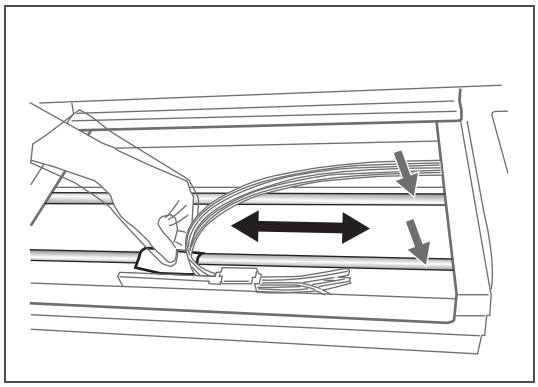
Hold the front cover in the position shown in the left and slowly open with both hands.

- Fully open the front cover.

CAUTION

Do not leave the front cover half open.
The cover may close suddenly.

[5]



Wipe the left side of both shafts (front and rear) with the lint free cloth to remove ink mist.

Important!

- **Do not touch the encoder scale. Adhered grease may cause errors.**
- **Be careful not to touch other parts.**

[6] Set the printer to CR maintenance mode.
Next, follow the step below to clean the right side of the shafts and grease the entire length of both shafts.

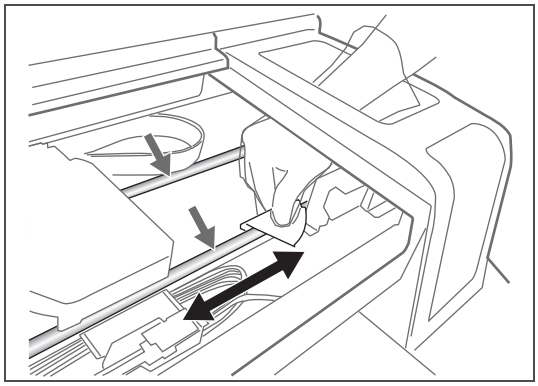
☞"Setting CR Maintenance mode" on page 95
☞"Cleaning the right side of the shafts and greasing the entire length of both shafts" on page 107

Important!

Please complete this maintenance within 5 minutes while in CR maintenance mode. If not, the print head will get dry and will cause damage.

2. Cleaning the right side of the shafts and greasing the entire length of both shafts

[1]

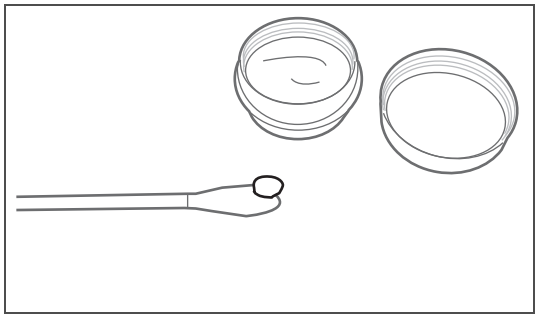


Wipe the right side of both shafts to remove ink mist.

Important!

- **Do not touch the encoder scale. Adhered grease may cause errors.**
- **Be careful not to touch other parts.**

[2]

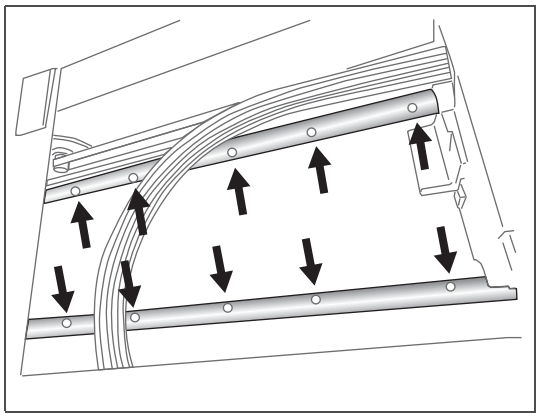


Scoop small amount of grease with a cotton swab.

Important!

Applying too much grease may reduce output quality.

[3]



Apply grease to the left side of the shafts.

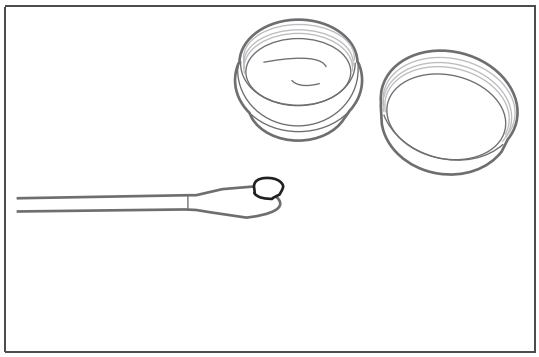
- First, apply the grease evenly along the 5 points on the top part of the front shaft.
- Next, apply the grease evenly along the 5 points on the part that is slightly lower than the top part of the rear shaft.
- Make sure to thinly apply grease on the shafts. Do not add more grease.

Important!

Clean the encoder scale if grease adheres to the encoder scale.

"Cleaning the encoder scale" on page 103

[4]

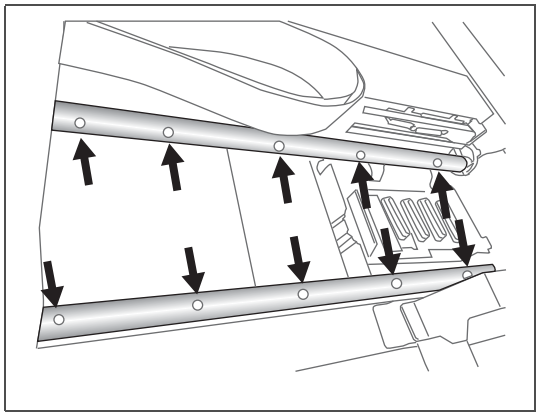


Scoop small amount of grease with a cotton swab once more.

Important!

Applying too much grease may reduce output quality.

[5]



Apply grease to the right side of the shafts.

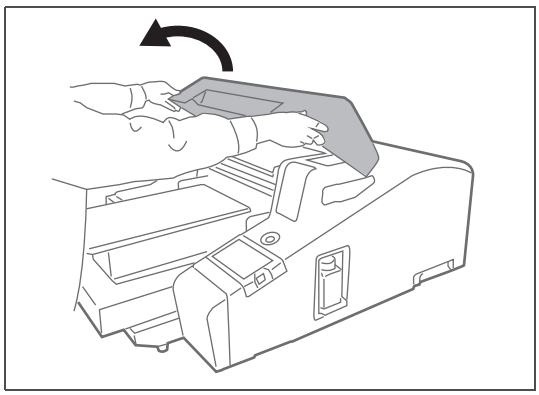
- First, apply the grease evenly along the 5 points on the top part of the front shaft.
- Next, apply the grease evenly along the 5 points on the top part and a slightly lower part of the rear shaft.
- Make sure to thinly apply grease on the shafts. Do not add more grease.

Important!

Clean the encoder scale if grease adheres to it. ??????????????????

"Cleaning the encoder scale" on page 103

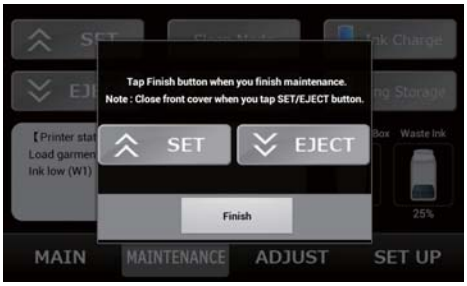
[6]



Hold the front cover in the position shown in the left and slowly close with both hands.

When closing the front cover, be sure to place both hands on the specified positions.
If not, you may pinch your finger and get injured.

[7]



Tap [Finish] to complete this step.

Replacing the left flushing box and reseting the left flushing box counter

Once a certain amount of ink has been used, the following message is displayed on the touch panel and the printer stops printing. After resetting the left flushing box counter, the printer will restart.

Status display

The following messages are displayed in the status display area of the touch panel.

- "Left flushing box is full"
  "Replace the box before reset the left flushing box counter."

Icon display

Flushing box icon displayed on the maintenance menu are as follows.

The flushing box is full. Immediately replace the flushing box.

Items to be replaced:

- Cross-shaped screwdriver (commercially available item)
- Left flushing box (supplied accessory or optional product)
- Gloves (supplied accessory)

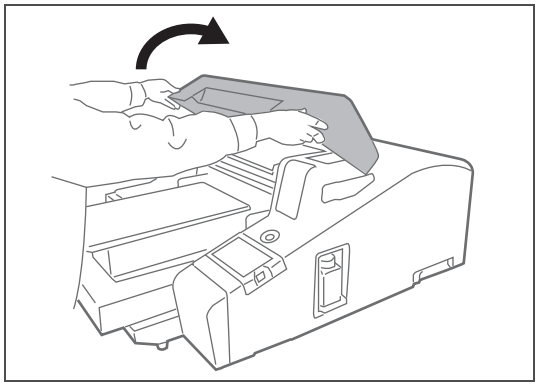
Note

The printer comes with one spare flushing box . You can order more if necessary (optional items).

1. Replacing the flushing box

[1] Wear the gloves supplied with the product.

[2]



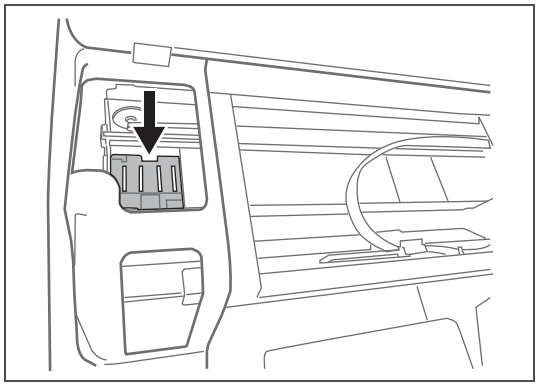
Hold the front cover in the position shown in the left and slowly open with both hands.

- Fully open the front cover.

⚠ CAUTION

Do not leave the front cover half open.
The cover may close suddenly.

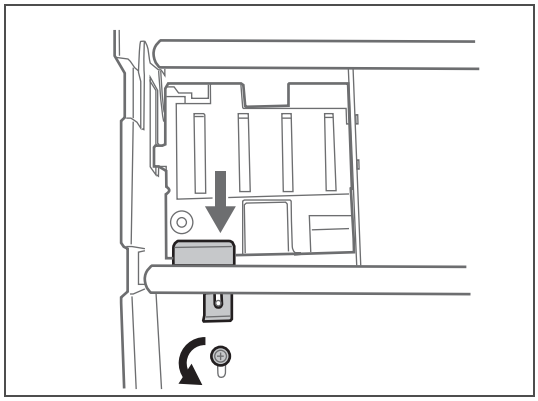
[3]



Check the position of the flushing box.

- The black flushing box is located in the recess on the left side of the product.
- There are 4 vertically long gaps at the top.

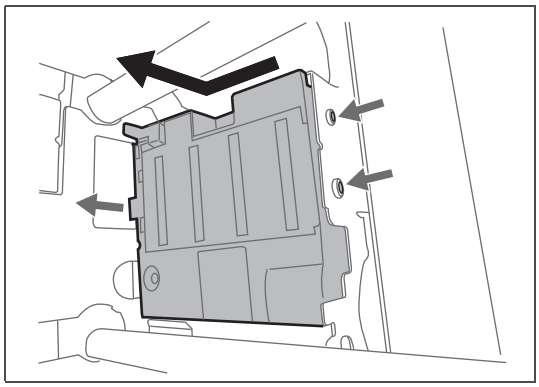
[4]



Loosen the screw (M3) on the side of the flushing box closest to you with a cross-shaped screwdriver and slide the fixing metal fitting out toward you.

- Do not remove the screws.
- The fixing metal fitting holds the front side of the flushing box in place.

[5]



Remove the flushing box.

- Pull the flushing box up by dislodging the grippers on the left side of the flushing box and the protrusion on the right side.

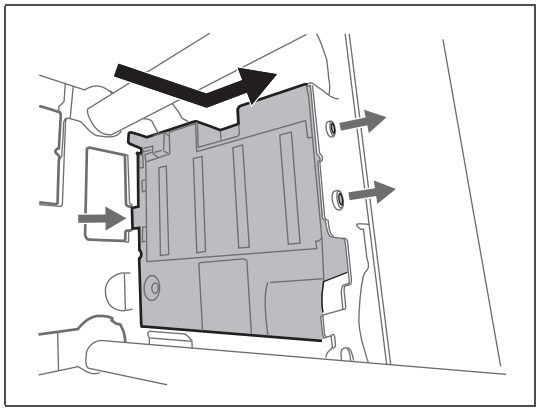
Important!

- **Do not spill ink inside the flushing box.**
- **Take care so as not to have the flushing box touch the encoder scale or the shafts.**

WARNING

Dispose of used flushing boxes in a manner based on regulations prescribed in the Waste Management Act and those of each municipality by requesting the services of an industrial waste treatment contractor, etc.

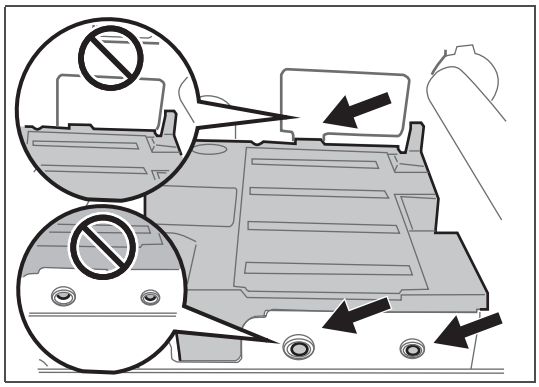
[6]



Install a new flushing box.

- Insert the protrusions (2) on the right side of the flushing box into the holes in the metal frame (2).
- Insert the grippers on the left side of the flushing box into the metal frame.

[7]



Look at the flushing box from the right side of the printer and check the following.

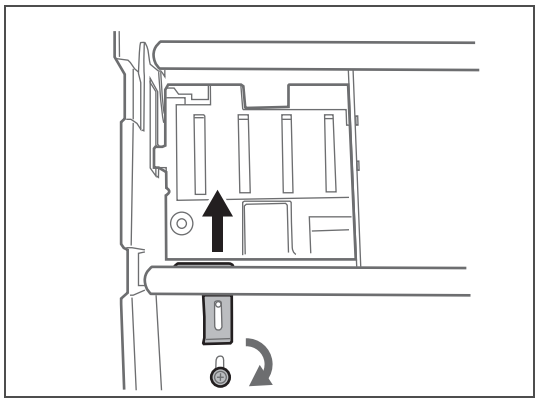
- Are the protrusions (2) on the right side of the flushing box inserted into the holes in the metal frame (2)?
- Are the grippers on the left side of the flushing box inserted into the metal frame?

Important!

The following issues will occur if the flushing box has not been mounted properly.

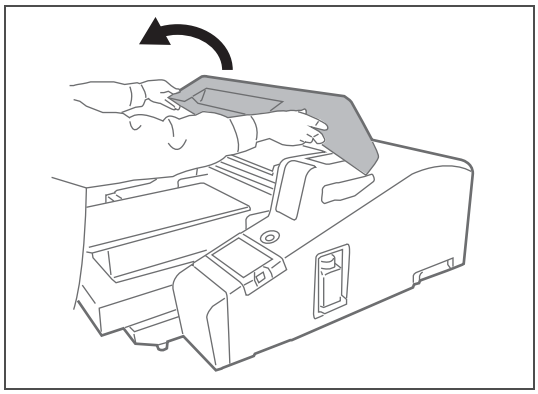
- **The flushing box could come into contact with a print head, damaging it.**
- **Fine ink droplet within the machine could cause errors.**

[8]



Slide the fixing metal fitting into the flushing box and firmly tighten the screws with a cross-shaped screwdriver.

[9]



Hold the front cover in the position shown in the diagram and slowly close with both hands.

When closing the front cover, be sure to place both hands on the specified positions.
Placing your hands on the edge of the printer port or around there could cause your hand to get caught and cause an injury.

2. Resetting the left flushing box counter

[1]

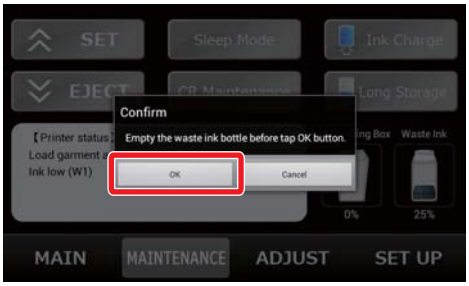
Tap the [MAINTENANCE] menu.

[2]

Tap the [Left Flushing Box] key.

- The reset confirmation dialog will appear.

[3]



Tap [OK] to complete this step.

Replacing the mist filters

Replace the mist filters if either has become dirty.

Replacement cycle:

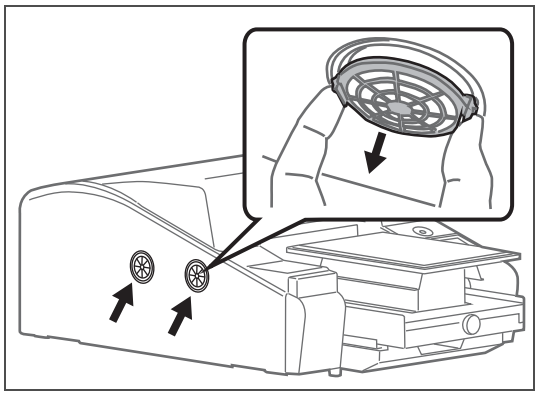
Approximately every two months (Check this regularly as this may vary depending on the frequency of use)

Items to be replaced:

- New mist filters (2 filters, optional product)
- Gloves (supplied accessory)

Steps

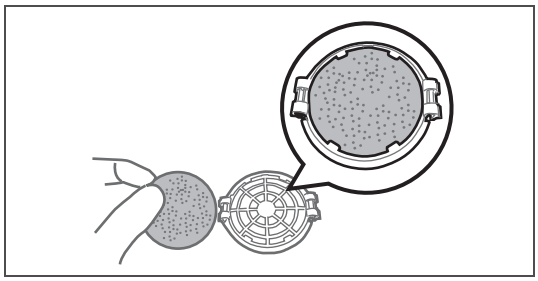
[1] Wear the gloves supplied with the product.

[2] 

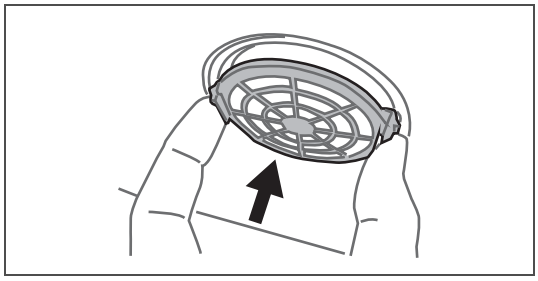
Pick the protrusion coming out of the filter cover on the left side of the printer and remove it.

Note

Mist filters are not used for filter covers on the right side of the printer. Do not remove.

[3] 

Attach a new mist filter on the filter cover.
Insert the mist filter into the gripper on the filter cover.

[4] 

Attach the filter cover back in the printer in the same manner as it was originally.

[5] Replace the other mist filter in the same manner.

WARNING

- Dispose of mist filters in a manner based on regulations prescribed in the Waste Management Act and those of each municipality by requesting the services of an industrial waste treatment contractor, etc.

Transporting and long-term storage

Please read this section when transporting the product or the product is not in use for a prolonged period of time.

Transporting procedure

Before transporting the product, you need to

1) Fill cleaner into the printer
2) Empty waste ink bottle
3) Fix the platen table with the shipping brackets.

If not, the ink may leak from the printer and it may result in the print head damage.

When using the product again, reinstall the printer and perform initial ink charging.

Important!

- **Empty the waste ink bottle when moving this product, even for short distances.**
  Spilling waste ink while moving may lead to a malfunction.
- **Do not tilt, place the product on a lean, or turn it upside down.**
  Doing so may cause the internal ink to leak. Further, normal operation is not guaranteed after moving.

1. Charging the cleaner and removing the waste ink

[1]

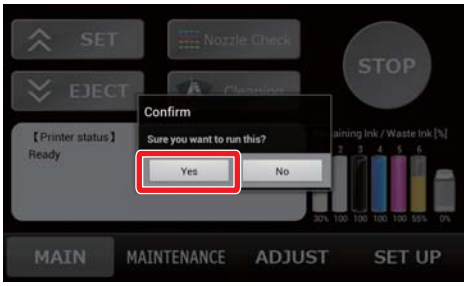
Tap the [MAINTENANCE] menu.

[2]

Tap the [Long Storage] key.

- The confirmation dialog will appear.

[3]



Tap [Yes].

- The waste ink bottle confirmation dialog will appear.

[4]

- Check the waste ink bottle, and then put the waste ink into the container.
  ☞"Empty the waste ink bottle" on page 91
- Tap [Yes].
- The cartridge confirmation dialog will appear.

Important!

After you have mounted the bottle, make sure that the waste ink tube is not bent or dented.
If the tube is bent or dented, the waste ink may leak into the printer.

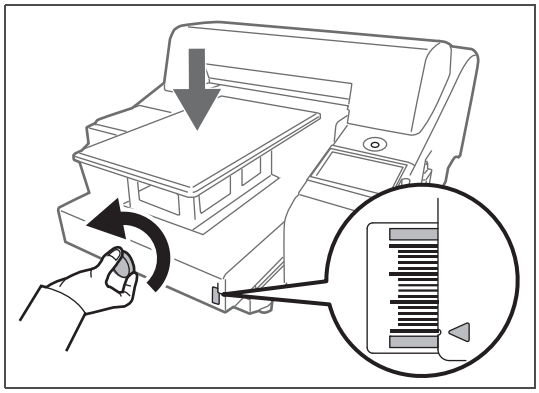
[5]

- Remove all ink cartridges, and then insert cleaner cartridges.
- Tap [Yes] to start charging cleaner.

Note

The charging progress is indicated in percentage.

[1]



Turn the table up-down dial to lower the table all the way to the bottom.

Note

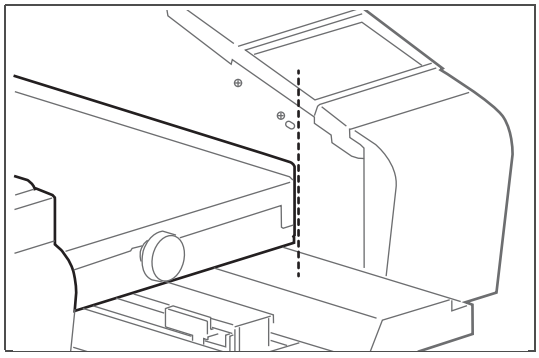
- Once the table is moved to the bottom, do not turn the table up-down dial any further, as doing so could damage the printer.

[2] Remove the platen.

[3]

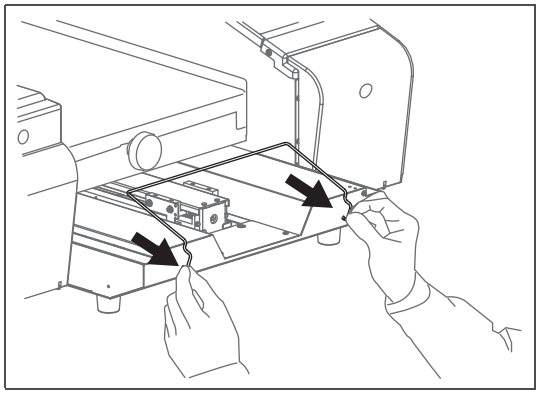
Tap the [SET] key.

- Tap the [Set] key again to stop the table at the position in the illustration below.



[4] Turn off the sub power button and main power switch.

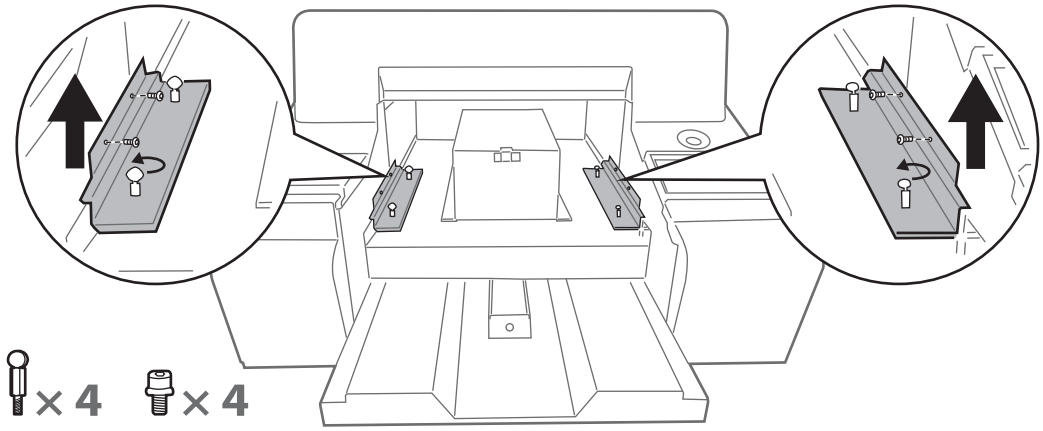
[5]



Remove the Table Position Guide

[6] Install the shipping brackets (2) on the platen table with screws (4).

- Remove the screws (M4, two pieces on each side) on the side surfaces using a hexagon wrench.

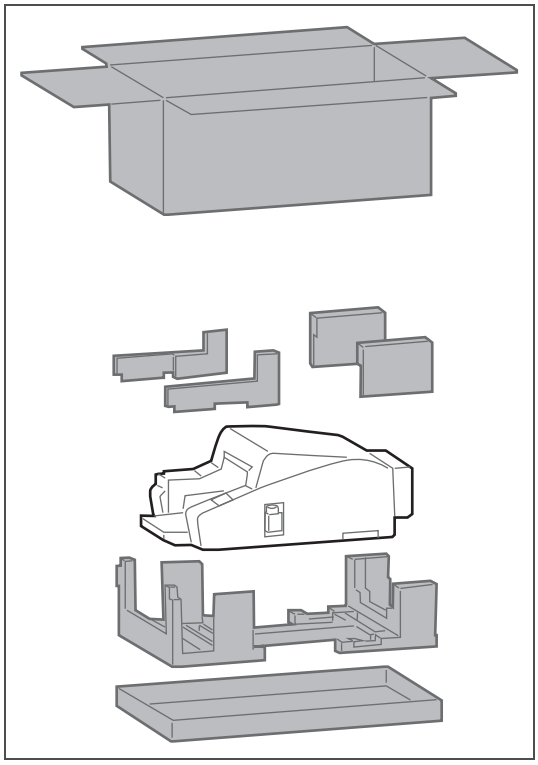


Note

Adjust the table position by hand.

[7] Remove all the cable from the printer.

[8]



Add cushioning materials and place the product in a packing box.

3. Reinstallation

[1] Unpack and install the product according to the “Startup Guide”.

- Follow the steps until “Turning the power on”.

[2] Perform initial ink charging.

☞"Initial charging method" on page 121

Initial charging method

[1] Turn the main switch and sub power button on.

[2]

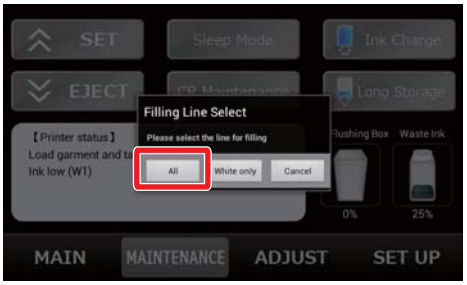
Tap the [MAINTENANCE] menu.

[3]

Tap the [Ink Charge] key.

- The confirmation dialog will appear.

[4]



Tap [ALL].

- The waste ink bottle confirmation screen is displayed.

Note

Tapping [White only] will only fill up the white ink supply.

[5]

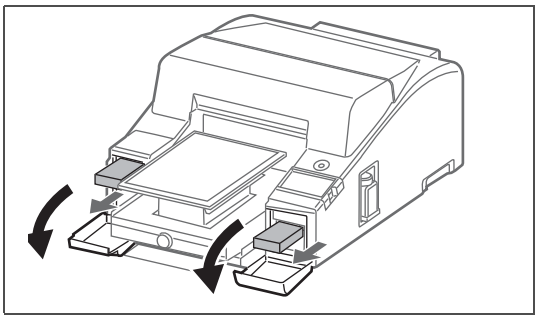
- Check the waste ink bottle, and then put the waste ink into the container.
  ☞"Empty the waste ink bottle" on page 91
- Tap [Yes].
- The cartridge confirmation dialog will appear.

Important!

After you have mounted the bottle, make sure that the waste ink tube is not bent or dented.
If the tube is bent or dented, the waste ink may leak into the printer.

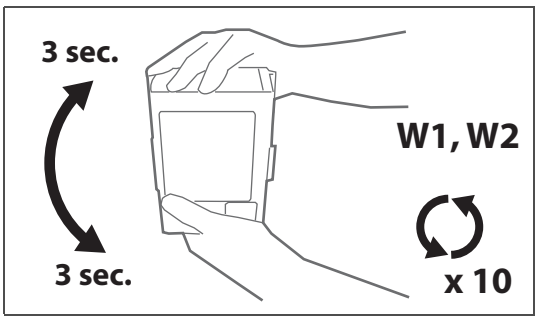
- Do not Tap any key while the dialog on the left appears.

[6]



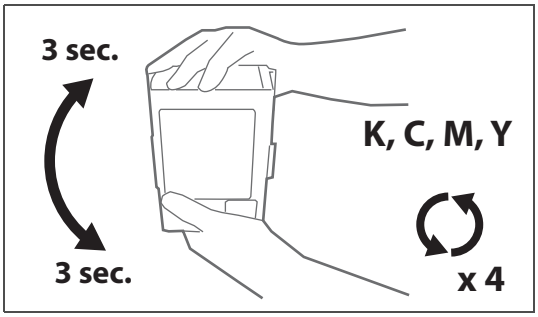
Open the cartridge cover and remove all cartridges.

[7]



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

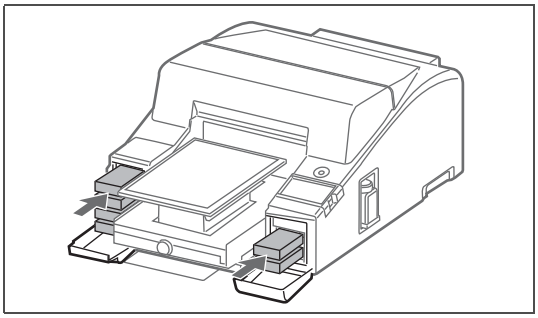
- As for the white ink cartridge, turn the ink plug upward and wait for 3 seconds.
- Next, turn the ink plug downward and wait for three seconds.
- Repeat that ten times.



As for other ink cartridges, turn the ink plug upward and wait for three seconds

- Next, turn the slot downward and wait for three seconds
- Repeat that four times.

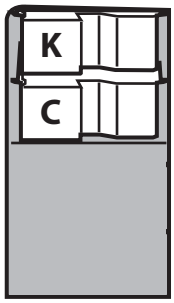
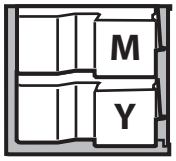
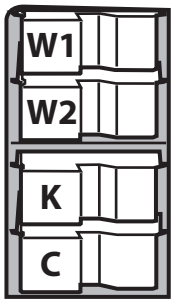
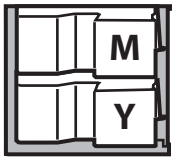
[8]



Insert the new ink cartridges.

Note

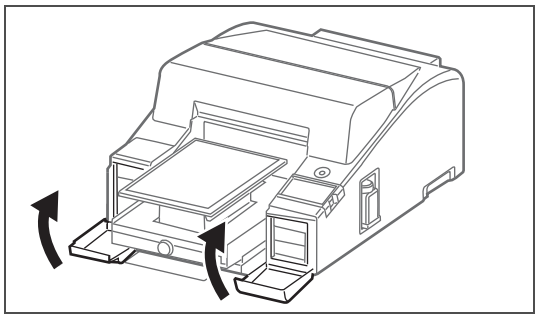
- Match the label of this product to the color of ink cartridge.
- Insert the ink cartridges all the way into each slot.

VJ-404GT		VJ-405GT	
L	R	L	R
 Black (K) Cyan (C)	 Magenta (M) Yellow (Y)	 White 1 (W1) White 2 (W2) Black (K) Cyan (C)	 Magenta (M) Yellow (Y)

Important!

- **White ink W1 and W2 cartridges have different shapes. Make sure to install in the correct slots. If not, it may cause printer damage.**
- **When the printer power is off, do not replace ink cartridges.**
  Ink levels will not be able to be detected correctly.
- **When transferring ink cartridges from a cold location to a warm location, leave them at least three hours before use.**

[9]



Close the cartridge covers.

[10]

Tap [YES] to start ink charging.

Note

充てん中に進捗状況をパーセントで表示します。

Note

To perform the initial cleaning after the initial ink filling, set the head selection to [ALL] and the cleaning power to [Strong].

Long-term storage

[1] Fill the cleaner and empty the waste ink bottle when the product is not in use for a prolonged period.
☞ "Charging the cleaner and removing the waste ink" on "Transporting procedure" on page 116

[2] Perform initial charging when using the product again.
☞"Initial charging method" on page 121

Chapter 5 Appendix

Troubleshooting 120

Warning messages 120
Error messages appearing during regular operation and how to resolve them. . . 121
Errors that do not occur under regular use 123
Problems that do not show a message 124

Product specifications 125

List of specifications 125

Troubleshooting

This section covers troubleshooting methods for this product.

Warning messages

The printer can continue operating when a warning message appears.

Display	Description
Waste ink bottle is nearly full	[Cause] The waste ink bottle is almost full. Empty the waste ink bottle before it is full. ☞"Empty the waste ink bottle" on page 91
Ink low ([Color name])	[Cause] The amount of remaining ink is low (20% or less remaining). • The [Color name] in the warning message indicates the color of ink cartridge the warning applies to.
Failed maintenance	[Cause] Maintenance was suspended due to a low amount of remaining ink or another reason. Try performing the suspended maintenance operation again.
The temperature is too low. Able to print.	[Cause] An abnormally low temperature was detected. Printing is possible.
The temperature is too high. Able to print.	[Cause] An abnormally high temperature was detected. Printing is possible.
Part lifetime notice ([Part name])	[Cause] Lifetime of the part is about to end. • [Part name] indicates the name of a respective part. [PF Motor] [CR Motor] [Maintenance Unit] [Print Head Unit] [IH Assy (R)] [IH Assy (L upper)] [IH Assy (L lower)] (VJ-405GT only) [Solution] Contact our service counter.

Error messages appearing during regular operation and how to resolve them

This section covers the content of error messages which may appear while operating this product and how to resolve these issues.

Display	Description
Used cartridge is loaded ([Color name])	[Cause] A used cartridge has been loaded. [Solution] Replace the ink cartridge. ☞"When ink runs out during printing" on page 52
Ink empty ([Color name])	[Cause] The amount of remaining ink left in the cartridge has reached 0%. [Solution] Replace the ink cartridge.
Cartridge cover open	[Cause] The cartridge cover is open. [Solution] Close the cartridge cover.
Left flushing box is full Replace the box before reset the left flushing box counter.	[Cause] The left flushing box is full. [Solution] Replace the left flushing box and reset the waste ink counter. ☞"Replacing the left flushing box and reseting the left flushing box counter" on page 110
Front cover open	[Cause] The front cover is open. [Solution] Close the front cover.
Cartridge is not loaded	[Cause] An ink cartridge is not loaded in a cartridge slot. [Solution] Load the ink cartridge.
Waste ink bottle is full Empty the bottle before reset the waste ink counter.	[Cause] The waste ink bottle is full. [Solution] Empty the waste ink bottle and reset the waste ink counter. ☞"Empty the waste ink bottle" on page 91
The temperature is too low.	[Cause] An abnormally low temperature was detected. [Solution] Have the printer temperature settle in an environment with the recommended ambient temperature before restarting. ☞"List of specifications" on page 131
The temperature is too high.	[Cause] An abnormally high temperature was detected. [Solution] Have the printer temperature settle in an environment with the recommended ambient temperature before restarting. ☞"List of specifications" on page 131
Non-supported cartridge is inserted.	[Cause] A cartridge that is not a genuine MUTOH product has been loaded. [Solution] Load a supported cartridge.
Cartridge error. Please check cartridge and try again.	[Cause] A cartridge combination error has occurred. [Solution] Check that ink cartridges have been set in the correct combination.
Printing Failed. Please check the Ethernet connection.	[Cause] The printing data could not be received. [Solution] Check if the ethernet cable is properly connected.
Service call: ***	[Cause] An issue has occurred preventing the removal of the error state. [Solution] 1. Turn off the sub power button. Turn on the sub power button after waiting a while and restart the printer. 2. If this issue continues to occur after restarting several times over make a note of the number and contact our service counter.

Display	Description
Fatal error occurred! Reboot the printer. Error code: PF MOTOR ERROR	[Cause] An error occurred with table control and this function has been stopped. [Solution] 1. Remove any obstructions along the moving pathway of the table and restart the printer. 2. If the problem persists after removing any obstructions a malfunction may have occurred in the PF encoder or the PF motor. Please contact our service counter.
Fatal error occurred! Reboot the printer. Error code: PF STOP FAILURE	
Fatal error occurred! Reboot the printer. Error code: PF ENCODER CHECK TIMEOUT	
Fatal error occurred! Reboot the printer. Error code: PF ENCODER CHECK ERROR	
Fatal error occurred! Reboot the printer. Error code: PF OVERLOAD	
Fatal error occurred! Reboot the printer. Error code: CR ENCODER ERROR	[Cause] A CR encoder error has occurred. [Solution] 1. Restart and clean the encoder scale and the shafts. 2. If this occurs immediately after replacing the left flushing box there may be a problem with how the flushing box was mounted. Mount the flushing box again. 3. Please contact our service counter if this occurs again. ☞"Cleaning the encoder scale" on page 103 ☞"Cleaning and greasing the shafts" on page 106
Ink supply error 1 Reboot the printer.	[Cause] An abnormality was found with the head tank or related part. [Solution] 1. Turn off the sub power button. Turn on the sub power button after waiting a while and restart the printer. 2. Perform head cleaning with the print head selection set to “ALL” and the cleaning strength set to “Strong”. 3. If the problem persists after trying this several times over a malfunction may have occurred in the carriage. Please contact our service counter. ☞ "Cleaning steps" on page 29
Ink supply error 2 Reboot the printer.	
Ink supply error 3 Reboot the printer.	

Note

- The [Color name] in the error message indicates the color of ink cartridge the warning applies to.
- The [***] in an error message represents the code number indicating the type of error that has occurred.

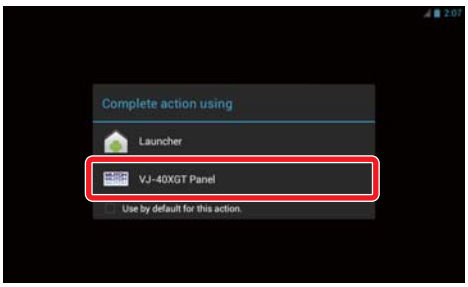
Errors that do not occur under regular use

Display	Description
CTL USB connection failure. Retrying to establish connection. Please restart the printer if this message does not disappear in few minutes.	[Cause] A communication error occurred between the touch panel and the printer engine when starting up the printer. [Solution] 1. Wait around 30 seconds. 2. If the problem does not resolve itself, turn the sub power button off. Turn on the sub power button after waiting a while and restart the printer. 3. If the problem still is not resolved please contact our service counter.
Mismatch Color Configuration (CTL) Color Config Switching Failure (SCB)	[Cause] A mismatch between the 4color/5 color settings for the printer and the firmware was detected when starting up the printer. [Solution] 1. Check the firmware version and confirm that the appropriate firmware is installed for the device. ☞"Displaying software version" on page 77 2. If no problem is found, turn the sub power button off. Turn on the sub power button after waiting a while and restart the printer. 3. If the problem still is not resolved after restarting please contact our service counter.
Engine service call : ***	[Cause] An issue occurred with the printer engine. [Solution] 1. Turn off the sub power button. Turn on the sub power button after waiting a while and restart the printer. 2. If this issue continues to occur after restarting several times over make a note of the number and contact our service counter.
Right flushing box is full	[Cause] The right side flushing box is full. [Solution] A replacement by one of our service personnel is required. Please contact our service counter.

Note

The [***] in an error message represents the code number indicating the type of error that has occurred.

Problems that do not show a message

Problem	Solution
When the printer does not start after pressing the sub power button.	1. Check the main power switch and turn it on if it is in the off position. 2. If it is in the on position, wait around five seconds before holding down the sub power button.
A screen similar to that below appears 	Select “VJ-40XGT Panel”.

Product specifications

List of specifications

Model name		VJ-404GT/405GT
Printing method		On-demand piezo type
Drive system		Firmware servo/DC motor driven
Media set system		Load and remove from the front
Printing modes	Fast	600 x 600 dpi: Unidirectional, 4 pass
	Fine	600 x 1200 dpi: Unidirectional, 8 pass
	Super Fine	1200 x 1200 dpi: Unidirectional, 16 pass
Head gap adjustment		Table height can be adjusted with the table up-down dial, the obstruction sensor is used to manage interference between the printing media and the head.
Table	Table size	W429 mm x D600 mm
	Table height adjustment	15 mm
Interface	LAN	10/100BASE-T
	Printing port	Information not available (Cannot print to TCP9100)
Ink	Color	VJ-404GT: Four colors (Black, cyan, magenta, yellow) VJ-405GT: Five colors (Black, cyan, magenta, yellow, white)
	Type	200 ml cartridge
waste ink bottle		Volume 500 ml, users discharge waste ink
Left flushing box		Volume 170 ml, users replace on a regular basis
Environment conditions	Operating environment	Temperature: 20 °C to 32 °C, Humidity: 40% to 60% (Non-condensing)
	Range for ensured print accuracy	Temperature: 22 °C to 30 °C, Humidity: 40% to 60% (Non-condensing)
	Rate of change	Temperature: 2 °C or less per hour Humidity: 5% or less per hour
	Storage environment	Storage without ink charged: Within 6 months Temperature: -20 °C to 60 °C, Humidity: 20% to 60% (Non-condensing) Storage with ink charged: Within 1 week Temperature: 5 °C to 30 °C, Humidity: 20% to 60% (Non-condensing) *Requires regular power flow via sleep mode.
Power	Rated voltage	AC 100 - 120V or AC 220 - 240V (Not compatible)
	Voltage range	AC 90 - 132V or AC 198 - 264V (Not compatible)
	Frequency	50/60 Hz ± 1 Hz

Power consumption	Power off	9 W or less
	On standby	29 W or less
	Sleep mode	17 W or less
	Operation	130 W or less
Current consumption	100V - 120V	1.9A or less
	200V - 240V	1.3A or less
External dimensions	Height	488 mm
	Width	817 mm
	Depth	1,425 mm
Weight	Unit	82 kg

MUTOH