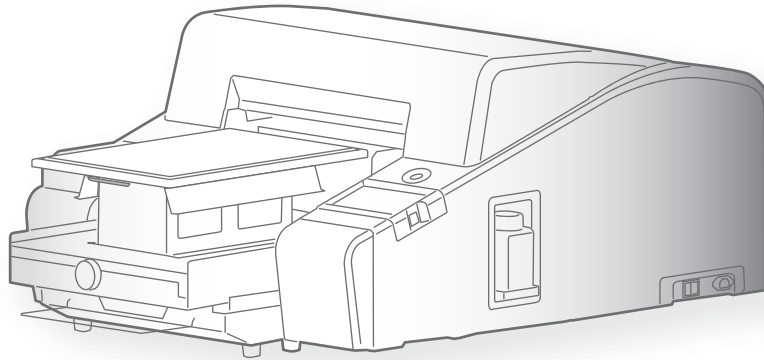


# VJ-404GT/405GT

## Operation Manual

Operations and Maintenance Methods



- 
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  - Every care has been taken in writing the contents of this Guide, but please contact MUTOH or the dealer you purchased the product from if you find any unclear, erroneous or otherwise unsatisfactory content in the Guide.
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## For Users in Europe



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

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

## For Users in the United States

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

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

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

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

### **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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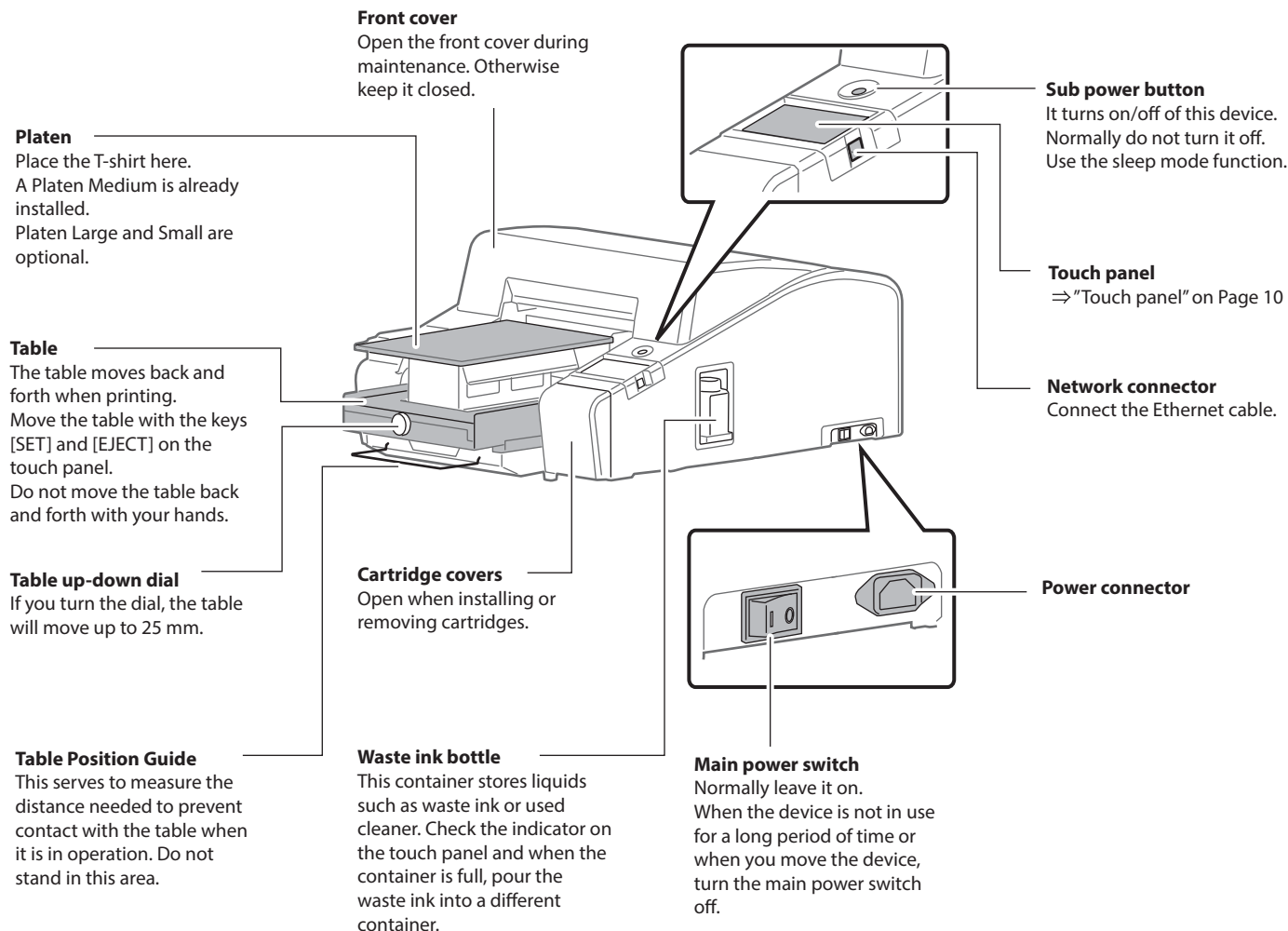
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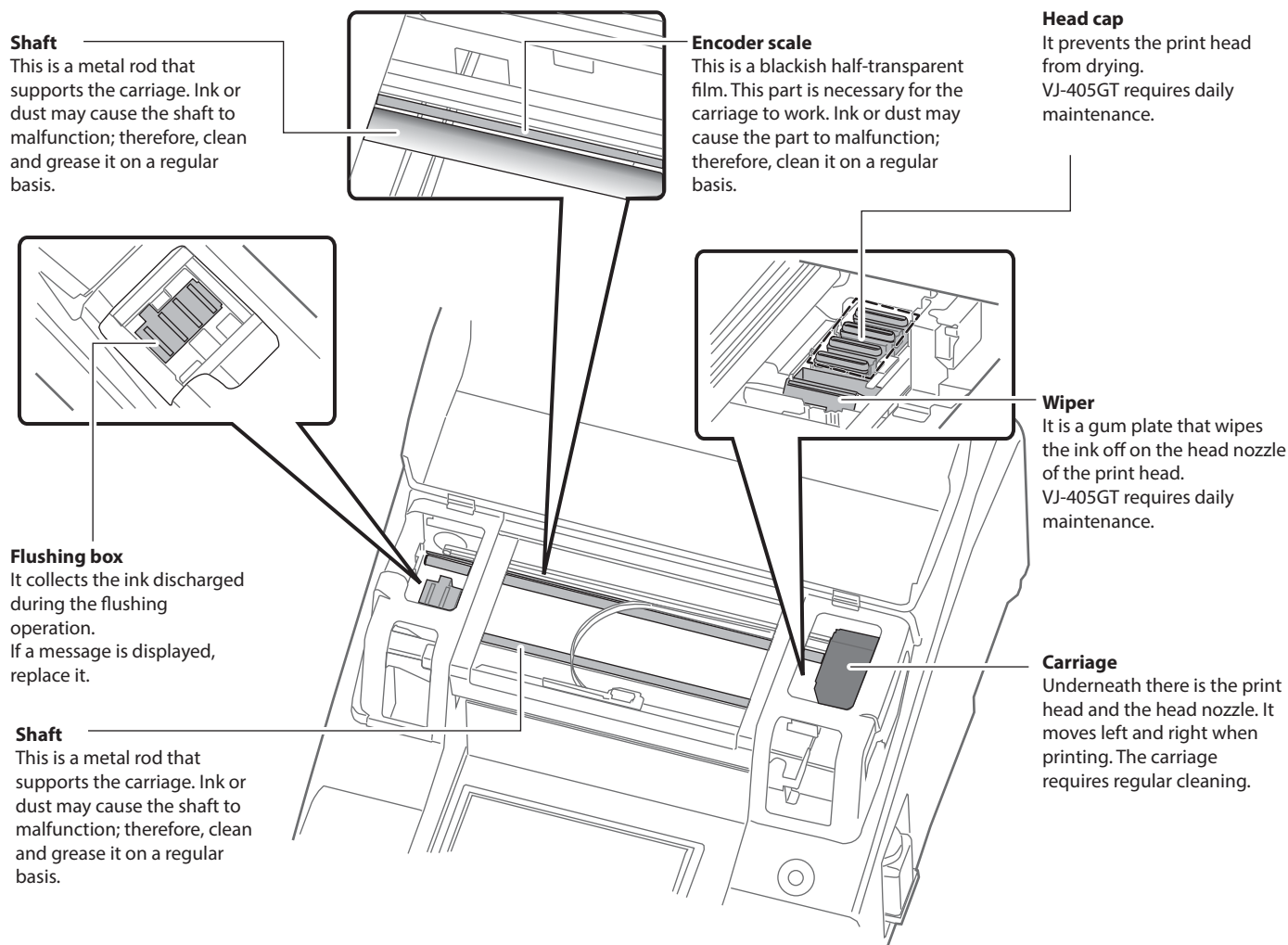
# Introduction

## Part Names

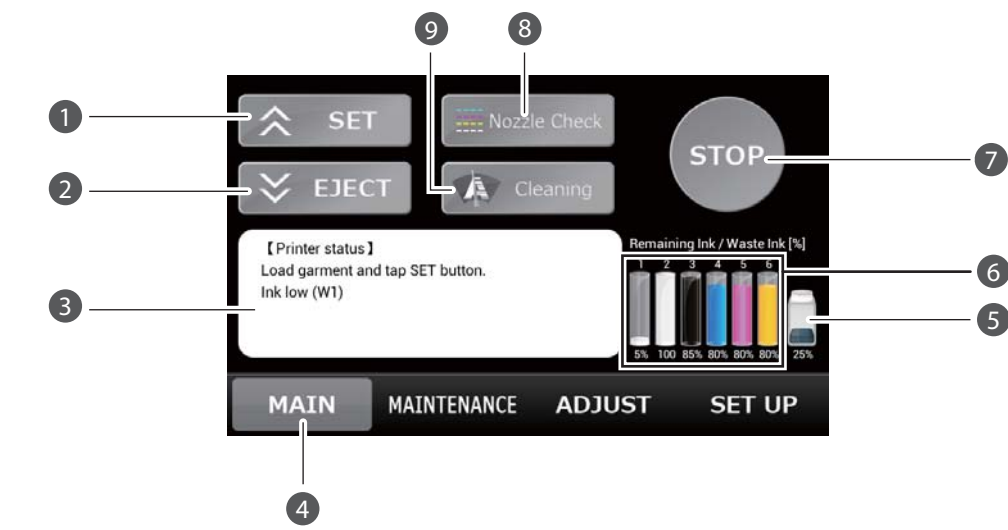
### Printer front



Printer inside



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.
- 6

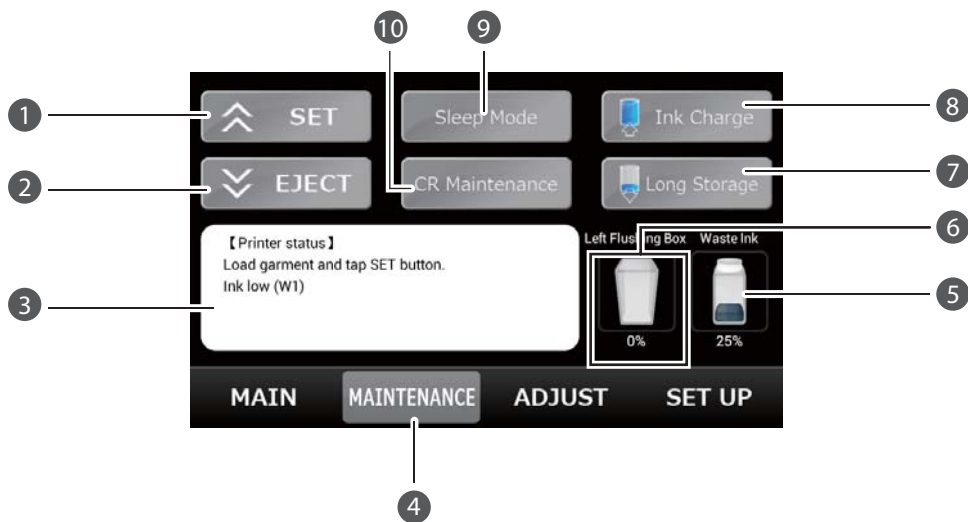
Displays the ink cartridge level.
- 7

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.
- Waste ink  
bottle  
Full
- Ink level  
empty
- No cartridge  
inserted


MAINTENANCE 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


[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

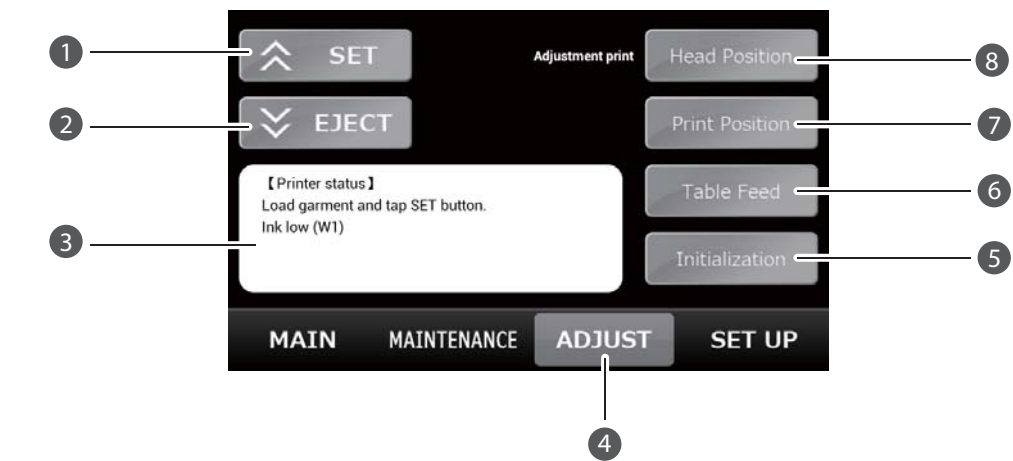







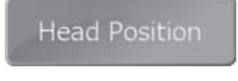
Sets the printer to Sleep Mode. Generally keep the printer in this mode while not in use.
- 10



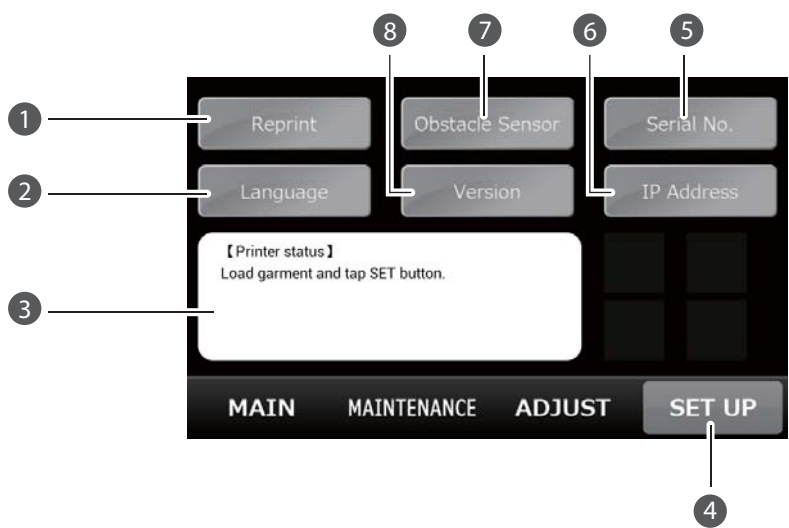
Sets the printer in the CR Maintenance mode. Perform this operation during cleaning or replacing consumables.

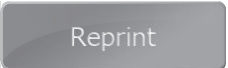

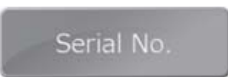



**ADJUST menu**



- |   |                                                                                     |                                                                                                               |
|---|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| ① |    | Moves the table to the print start position.<br>Stops the table when it is moving.                            |
| ② |    | Moves the table to the eject position.<br>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.<br>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      Reprints the previously printed data.
- 2      Performs language settings.
- 3   [Printer status]   Displays the printer status.
- 4   [SETUP] menu   Displays the [SET UP] tab.
- 5      Displays the serial number of the printer.
- 6      Assigns the network settings.
- 7      Sets on or off of the obstacle sensor.
- 8      Displays the internal software version.

## Starting Layout and Print Tool

[1]



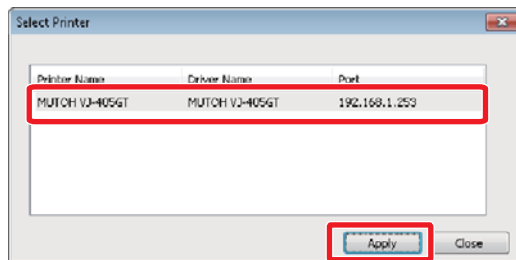
Windows 8 / Windows 8.1

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

Windows 10 / 7 / Vista

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

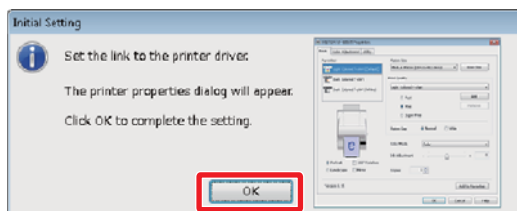
[2]



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

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

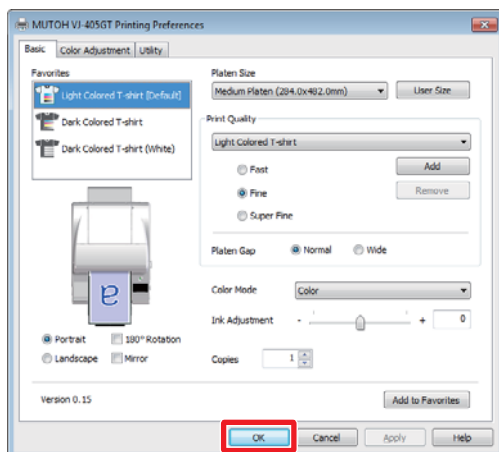
[3]



Click [OK] on the confirmation dialog.

- The Printing Preferences dialog will appear.

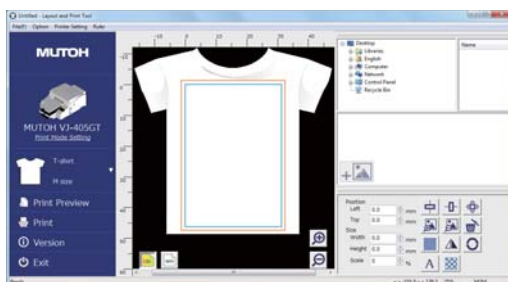
[4]



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 45](#)

Or,

[Layout and Print Tool Operation Manual](#)

## Displaying the Printing Preference dialog

### [1] Windows 10

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

### 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].

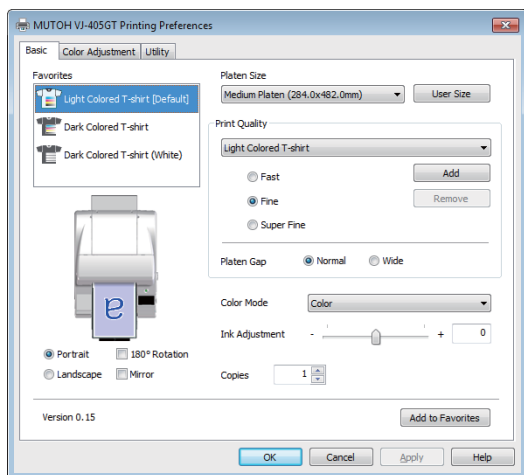
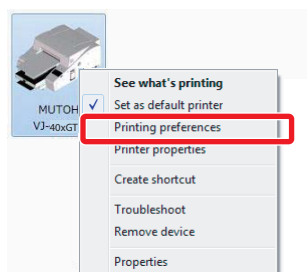
### Windows Vista

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

### [2]

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

- The Printing Preferences dialog will appear.



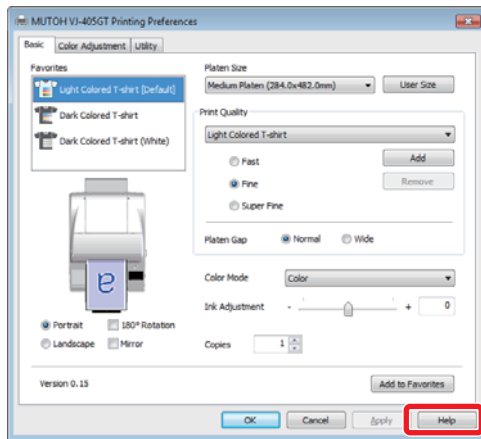
The Printer Preference Dialog (VJ-405GT)

## Displaying Help

Help is available from the Printing Preferences dialog.

### Printer driver

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



### 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.



**DO NOT unplug the power cable from an outlet while using this product or during sleep mode. Doing so will result in failure or damage to the printer.**

### Agitate the ink cartridge

Agitate 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 agitated periodically. Before daily operations, and when the message appears on the operation panel (every 12 hours), then agitate 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 two weeks                                            | Once every two weeks |
| Waste liquid bottle     | Empty the bottle when a message appears on the operation panel. |                      |



- 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 reedit

---

- Parts that require reedit

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




Note

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

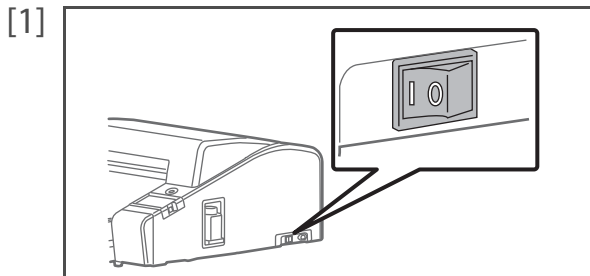
## Use the printer periodically

---

- Please use this product at least once per week. Leaving the printer unused for long periods of time can cause nozzle clogging in the print head and unit failures.
- If the printer is not in use for an extended period of time (more than a week), fill the cleaner to store the printer.
- When you restart the printer after long-term storage, perform initial ink charging.  
 ["Transporting and long-term storage" on page 122](#)

# Turning on/off the power supply

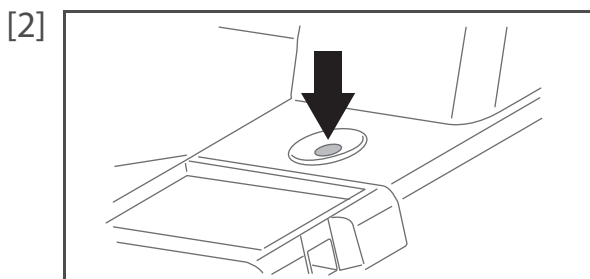
## Turning the Power On



Turn on the main power switch.

 **Note**

- The **I** mark on the main power switch indicates ON.
- The **O** mark on the main power switch indicates OFF.



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

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

## Turning the Power Off

 **Important!**

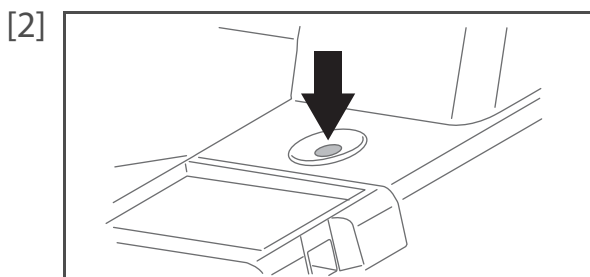
**Make sure that the main power switch and the sub power button are always turned on. When not using this printer, make sure you put the printer into sleep mode.**

**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.



Hold down the sub power button for more than three seconds.

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

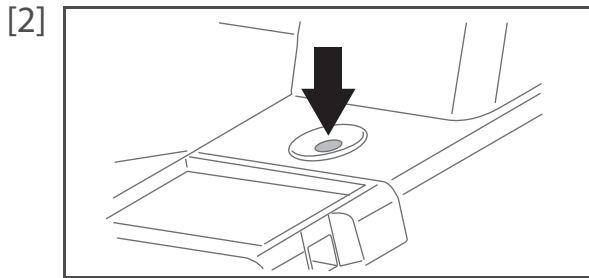
## Turning off up to the main power switch

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 130, and then turn off the sub power button and then main power switch.



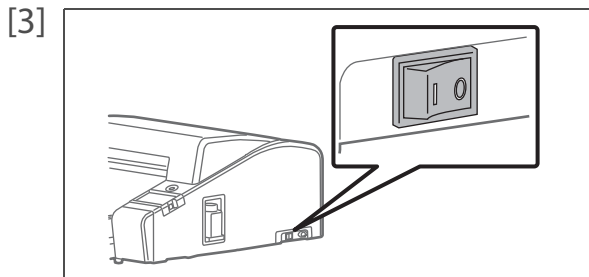
**Do not turn off the main power switch before turning off the sub power button. It may cause printer failure.**

[1] Confirm that printing is completed.



Hold down the sub power button for more than three seconds.

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



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 automatically performs the following operations at regular time intervals:

- Head cleaning
- White ink line circulation

### Important!

- To continue the sleep mode, perform the following:
  - Agitate the white ink cartridge (Once a day).  
If you are unavailable to do it during weekend or holidays, make sure to agitate the white ink cartridge before using the printer next time.
  - Check the remaining ink, and if "Ink low (\*)" (\* indicates the ink color) appears, replace the ink cartridge.
  - Please clean the cleaning wiper, the cap, and the area around the print head (Once a week).
- Please use this product at least once per week. Leaving the printer unused for long periods of time can cause nozzle clogging in the print head and unit failures.
- If the printer is not in use for an extended period of time (more than a week), fill the cleaner to store the printer.  
 ["Transporting and long-term storage" on page 122](#)

## Entering and waking up from Sleep Mode

- [1] Make sure that the printer's operating condition is as follows:
- The front cover and the cartridge covers are closed.
  - The remaining ink level is sufficient.
  - The waste ink bottle has enough space.

### Important!

**To continue the sleep mode, empty the waste ink tank first. After emptying the waste ink, 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.

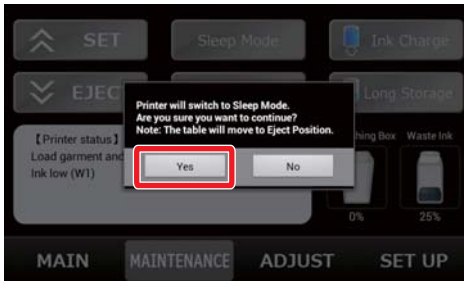
[3]



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 three seconds during sleep mode, the printer turns off.

#### Important!

- **When an error occurs while in sleep mode, the sub power button flashes rapidly. In such cases, follow the instructions on the following page:**  
["Error messages during regular operation and possible solutions" on page 139](#)
- **If a message appears on the touch panel after the printer wakes from sleep mode, follow the instruction on the panel to agitate the ink cartridge.**

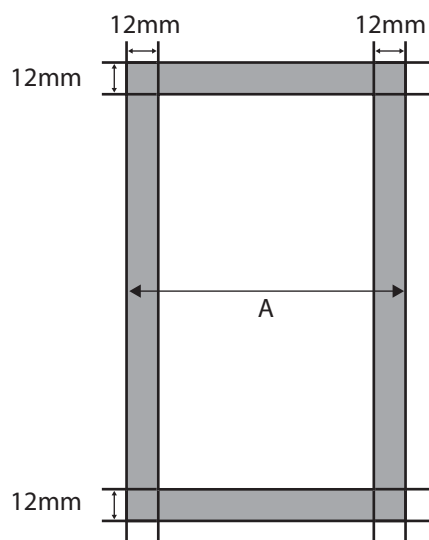
## Printing

### Print area

When using the standard platen

#### Nonprintable area

- The 12 mm 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 |

### Print Color of Printer Driver

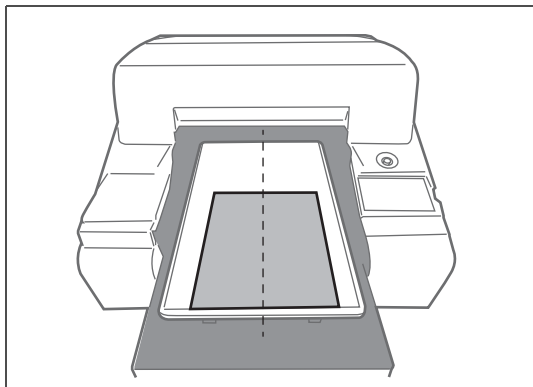
In the VJ-404GT/405GT printer driver version 1.01, print quality has been improved.  
With this improvement, the output color may change when compared the output result with the driver version 1.00.

## 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.

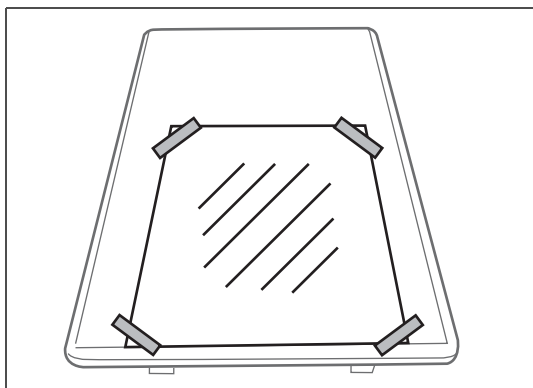
- Set the A4 size (210 mm x 297 mm) media vertically.
- Align the front edge of the media and the front edge of the platen.
- Align the center of the media and that of the platen.
- There is a groove in the center of the platen's front edge. Use it as a measure for the set position.



#### Note

For the white ink test printing in VJ-405GT, transparent or semi-transparent media (OHP film, tracing 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

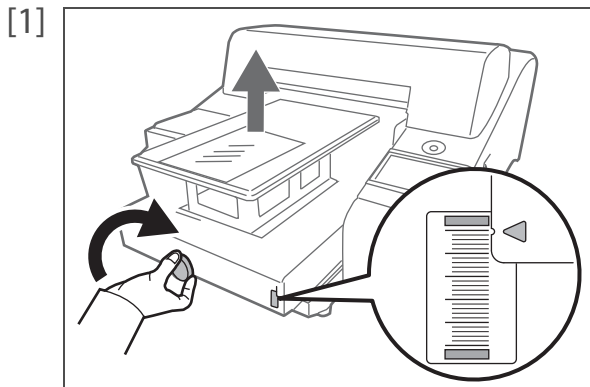
If the textile does not sit flat on the platen, it may cause an error.

## 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!

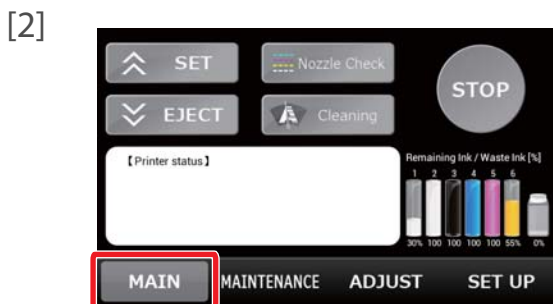
- Do not touch the movable parts, such as the table and platen, during the printer operation.
- To prolong the product life, ensure to manage an appropriate head gap.  
If the head gap becomes larger, error may occur due to ink mist.



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.



Tap the [MAIN] menu.



Tap the [SET] key.

- The table will move to the print start position.
- See below for the response to an obstruction error.

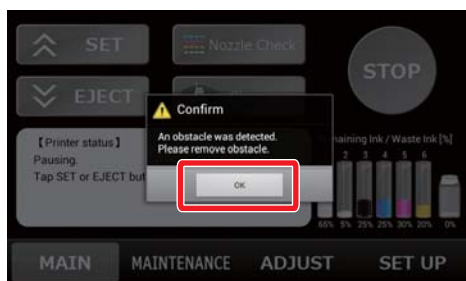
["When an obstruction error has occurred before printing" on page 26](#)

### 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].

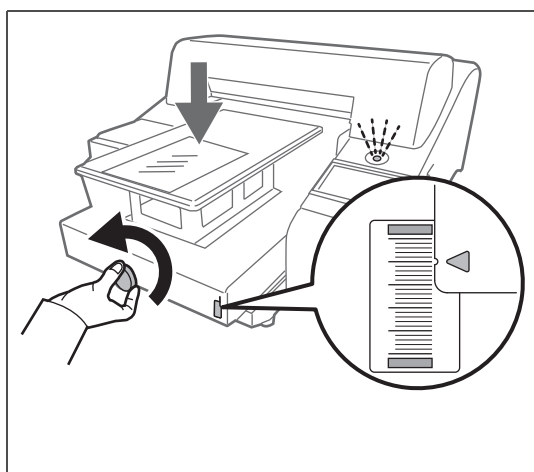
[2]

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 any obstacle is detected 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. Set the head gap (between the print head and test media) as small as possible.

[4]



Tap the [SET] key.

- The table will move to the print start position.

#### Important!

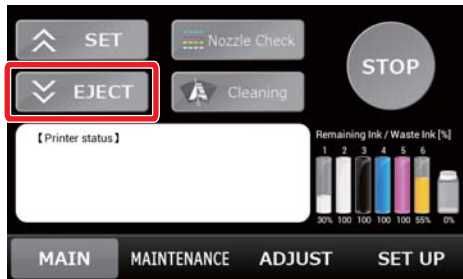
**Never raise the table height, once the table moved to the print start position. The table and print head may contact, causing print head damage.**

## When any obstacle is detected or the media does not sit flat on the platen



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

[1]



Tap the [EJECT] key.

- The table will move 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.

- The table will move to the print start position.

## 4. Nozzle check steps

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



**Do not open or close the cartridge covers 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.



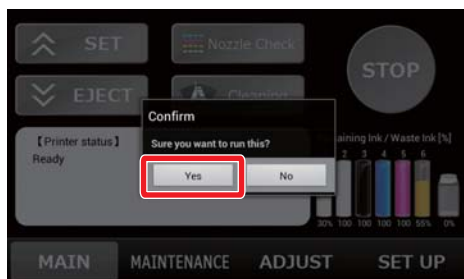
- [3] Tap the [SET] key.  
• The table will move to the print start position.



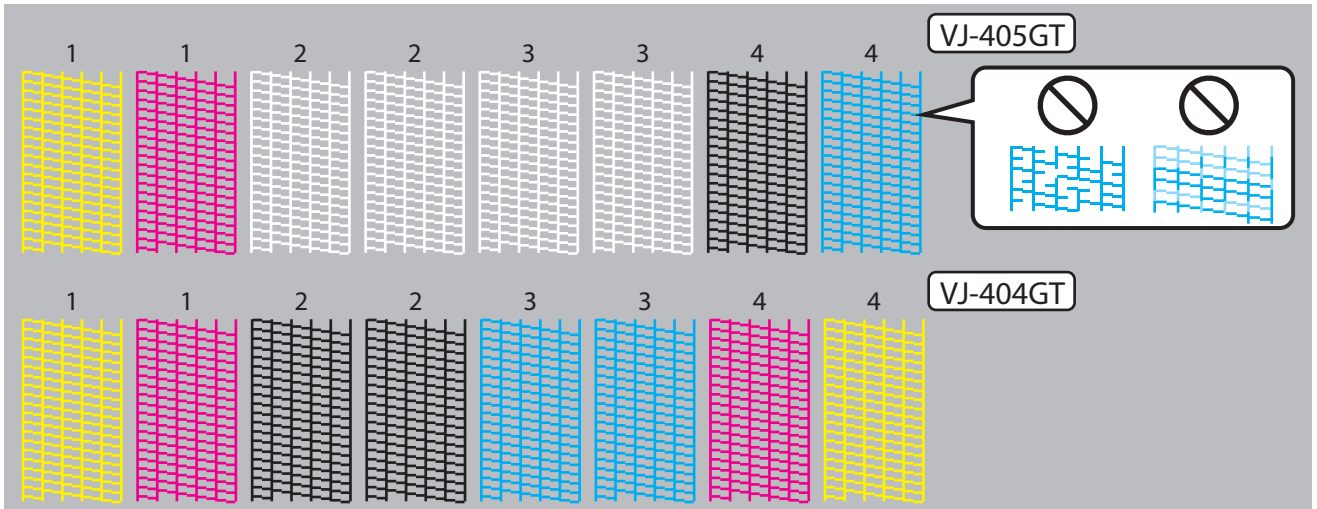
- [4] Tap the [Nozzle Check] key.  
• The confirmation dialog will appear.



- [5] Tap [Yes].  
• The printer prints 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.

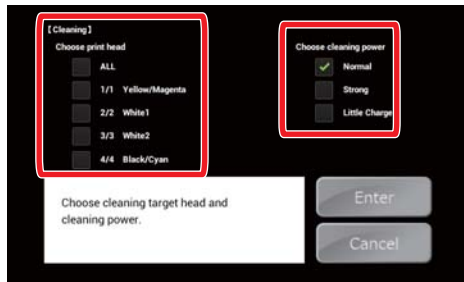
[2]



Tap [Cleaning].

- 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].

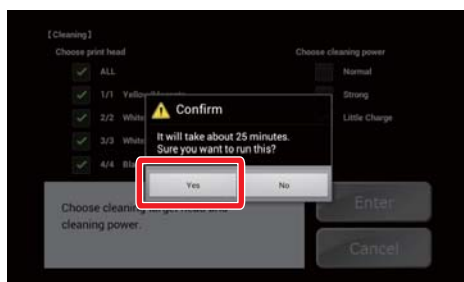
**Note**

- 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.

**Important!**

**Comply strictly with the following when you performing “Little Charge”.**  
**If charging is interrupted, ink will be lost when charging is resumed.**

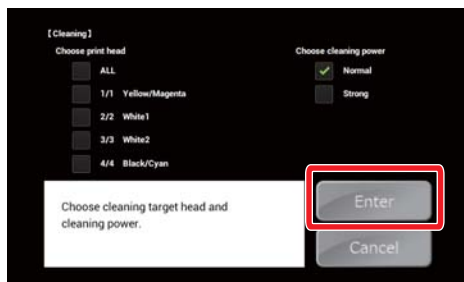
- Do not open the front cover or the cartridge covers.
- Do not use ink cartridges that have little ink remaining.



If the cleaning takes 10 minutes or longer, a message appears.

- Check the time and tap [Yes] to perform cleaning.

[4]



Tap [Enter].

- The cleaning starts.

**Note**

The cleaning progress is indicated in percentage.

[5]

Perform a nozzle check, again.

- Repeat the cleaning and nozzle check until nozzle clogging or faint print is improved.

["Nozzle check steps" on page 28](#)

**Important!**

**When nozzle clogging remains even after repeating “Normal” cleaning several times, conduct “Strong” cleaning.**

**When nozzle clogging remains even after repeating “Strong” cleaning several times, conduct ["Cleaning the cleaning wiper and the cap" on page 101](#) or ["Cleaning the area around the print head" on page 107](#).**

**If the nozzle clogging still is not rectified, carry out “Little Charge”.**

### 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 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.
  - To best preserve the inkjet prints, hand wash is strongly recommended.
  - Avoid washing with warm water.
  - Avoid storing at high temperature, humidity, and direct sunlight.
  - Do not use a tumble-dryer.
  - Do not dry clean.
  - For machine wash, Mutoh recommends that garments be washed inside out using a laundry bag.
  - Prints may fade with washing. Wash the printed garments separately.
  - Hang dry in well-ventilated shade using hangers.
  - 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 have itching, redness or other allergic reactions on your skin when/after wearing the printed garments, do not wear them.
- 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 solution, immediately print and wash it.

## Items needed to print on T-shirts

---

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 fix 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 °C 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 °C or more.

### Pre-treatment solution (supply item)

Two types of pre-treatment solutions 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 solution.

### Pure water (commercial item)

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

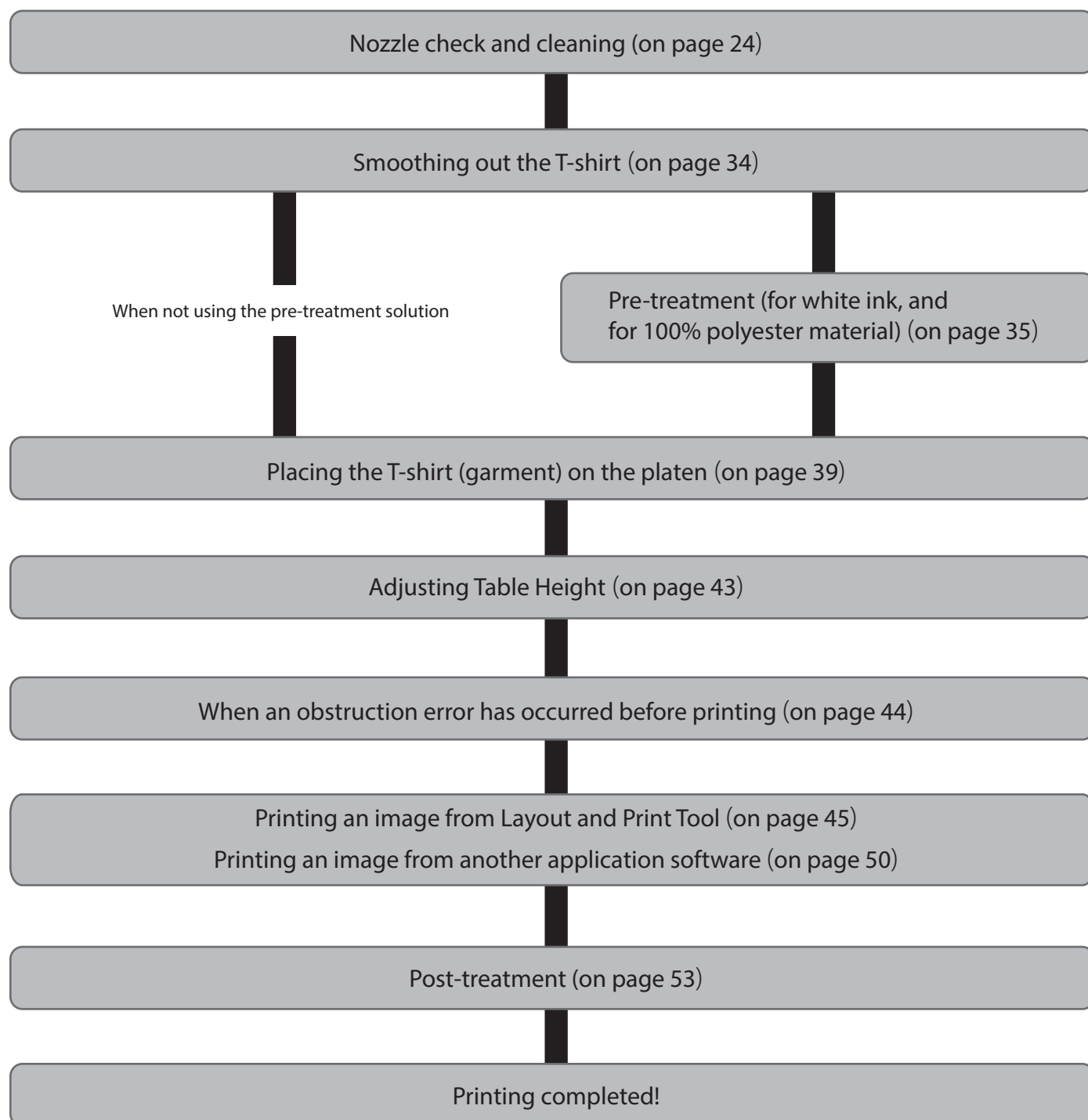
## Printing flow

---

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



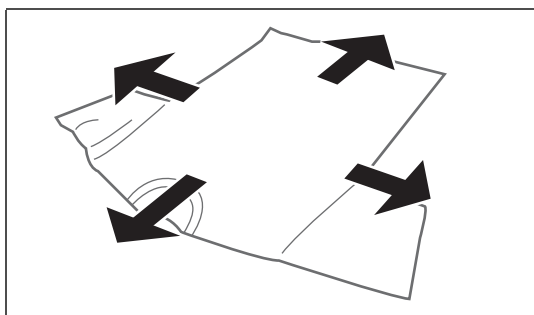
**Visually check the waste ink level in the waste ink bottle before printing. Empty the waste ink bottle if necessary and reset the waste ink counter.**



## 1. Smoothing out the T-shirt

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

[1]



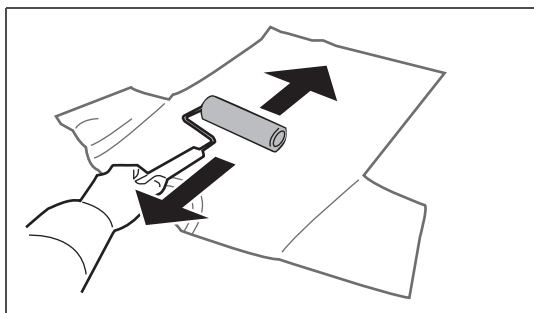
- Spread out a T-shirt on a flat surface.
- Smooth out the wrinkles with hands.



### 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 39](#).
- When white ink and polyester material are used, proceed to ["Pre-treatment \(for white ink, and for 100% polyester material\)" on page 35](#).

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

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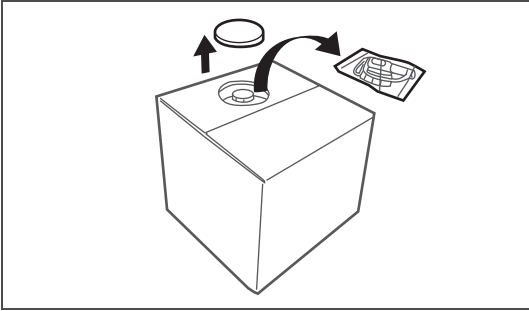
When printing in white ink, use the pre-treatment solution for white ink.

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

- Be sure to shake the pre-treatment solution for white ink before diluting it.
- Dilute the pre-treatment solution before applying it.

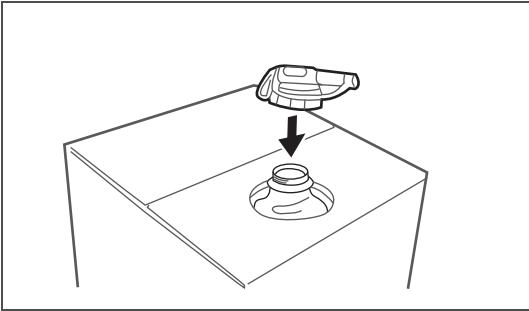
### How to attach the tap (10-liter container type)

[1]



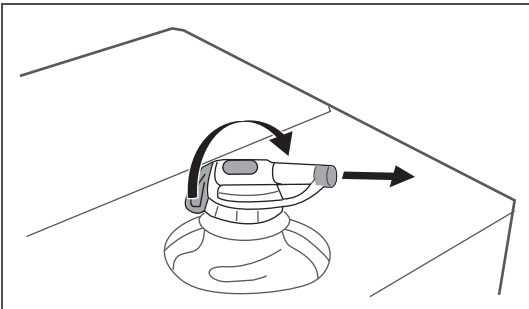
Cut the packaging for the pre-treatment solution along the perforated line and remove the tap.

[2]



Attach the tap.

### How to pour

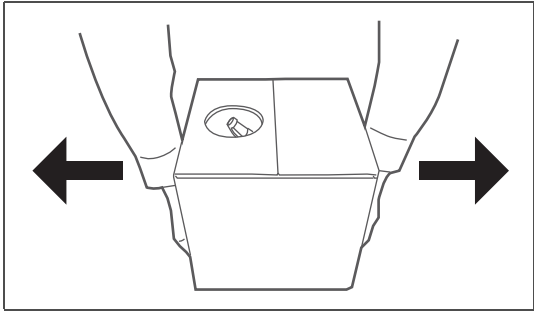


Remove the tap cap then move the lever so that the hole faces downward.

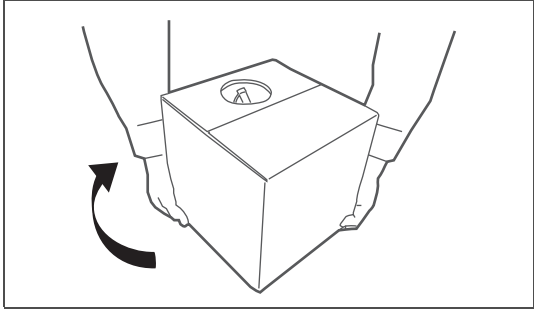
## Shaking the pre-treatment solution for white ink (10-liter container type)

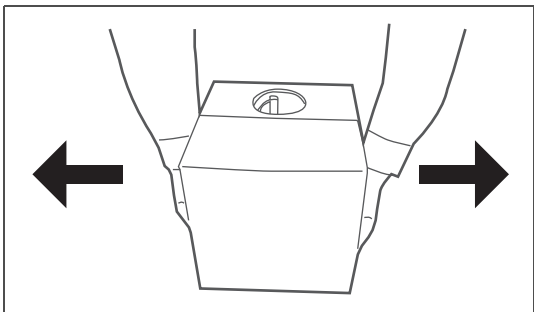
[1] Check that the tap is closed.

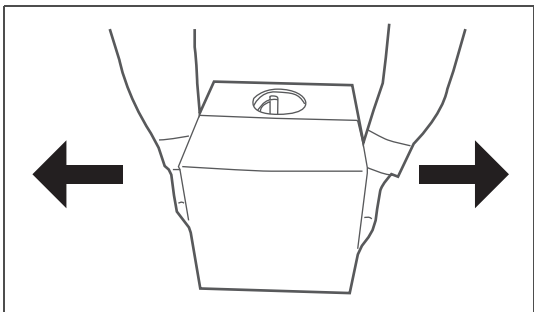
[2]  Shake it left and right for 30 seconds.



[3]  Change the container's orientation.

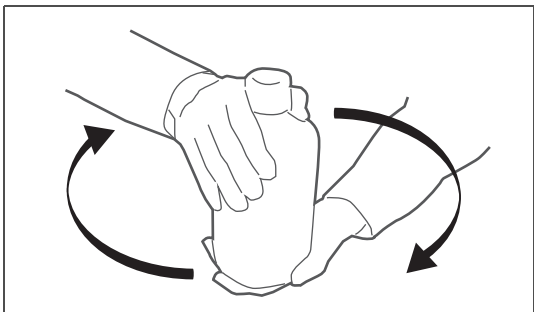


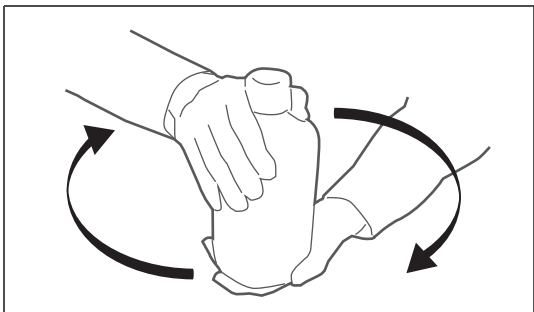
[4]  Shake it another 30 seconds.



## Shaking the pre-treatment solution for white ink (1-liter container type)

[1] Check that the cap is closed.

[2]  Shake it for 1 minute, moving it around horizontally.



## 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 7 g to 12 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.

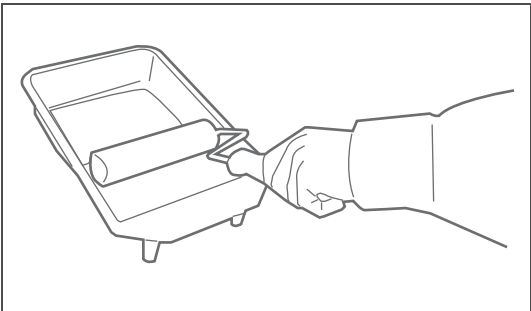
Dilution example (x20):

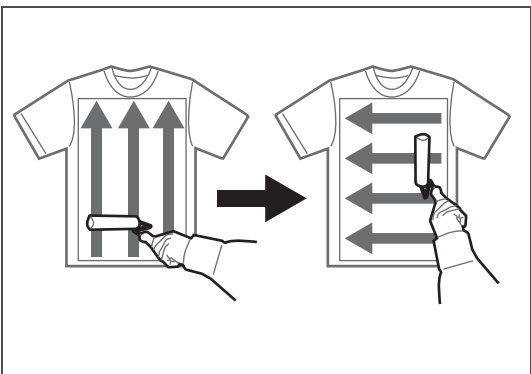
- 100 g of the pre-treatment solution for polyester
- 1,900 g of pure water

## 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 solution vertically, then evenly apply the solution 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 solution.

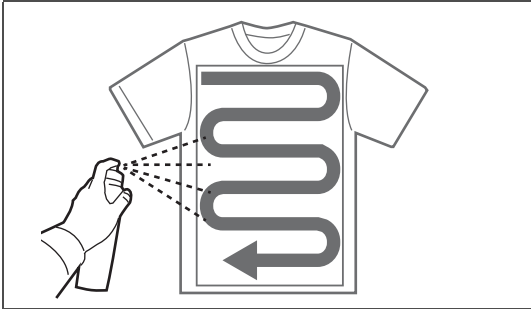
 ["Using the heat press" on page 38](#)

 ["Ink adherence conditions \(with heat press\)" on page 38](#)


When using spray to apply

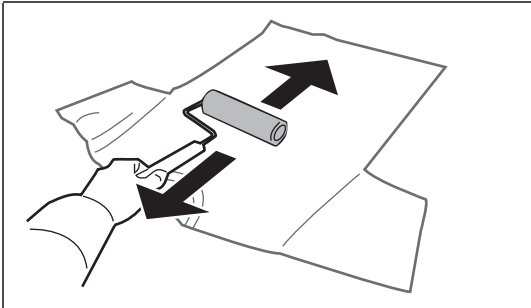
When spraying the pre-treatment solution, follow the procedures below. Prepare a commercial spray container.

- [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 solution.


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)

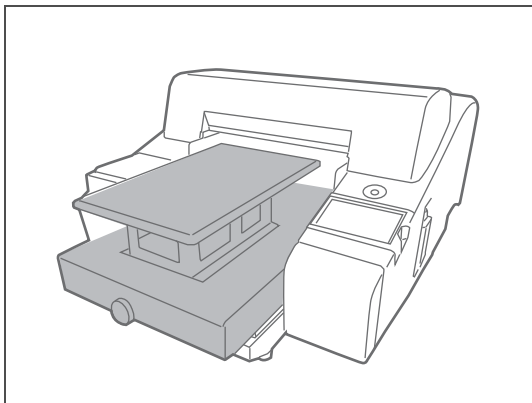
| Temperature | Time       | Pressure                      |
|-------------|------------|-------------------------------|
| 170 °C      | 60 seconds | 3N/cm² (300gf/cm²)<br>or more |

-  **Note**
- Use the conditions above as a reference only, since optimum conditions vary depending on heat press and materials.
  - Heat press application produces vapors.  
Avoid breathing vapors during this operation.
  - If the ink does not fully adhere on the T-shirt, it may cause low wash fastness.
  - After applying the heat press, the pre-treated area is visible on the garment. It can be removed with washing.

### 3. Placing the T-shirt (garment) on the platen

#### For Platen Small or Medium

[1]



Make sure that the table is in the eject position.



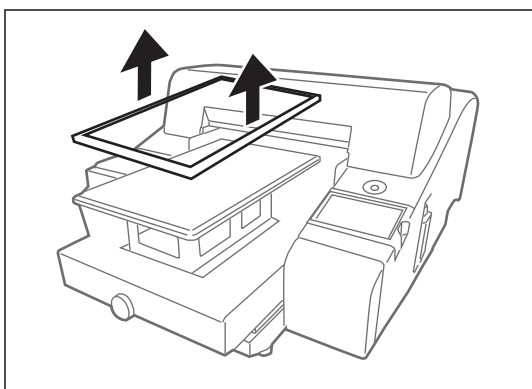
If the table is not in the eject position, tap the [MAIN] menu.



Tap the [EJECT] key.

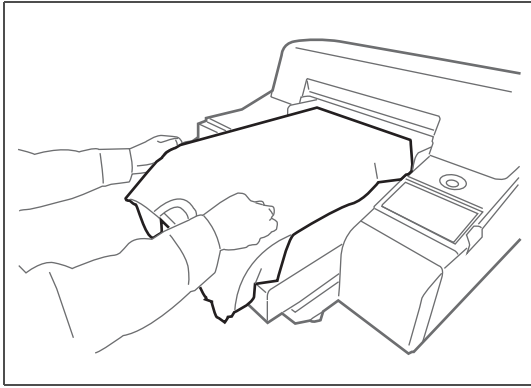
- The table will move to the eject position.

[2]



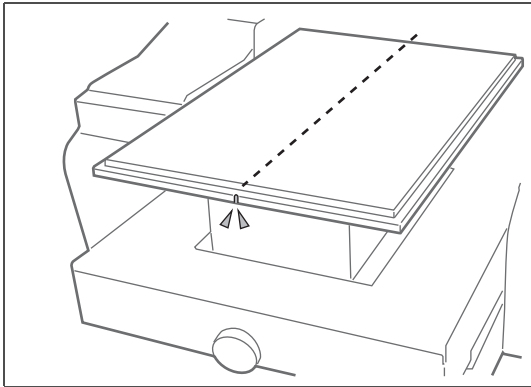
Remove the frame from the platen.

[3]



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

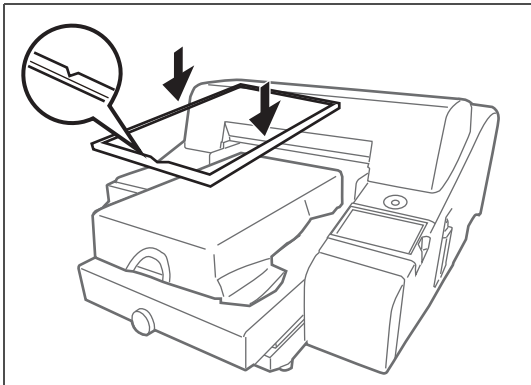
- Lightly smooth out any wrinkles on the T-shirt using a hard roller.



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]



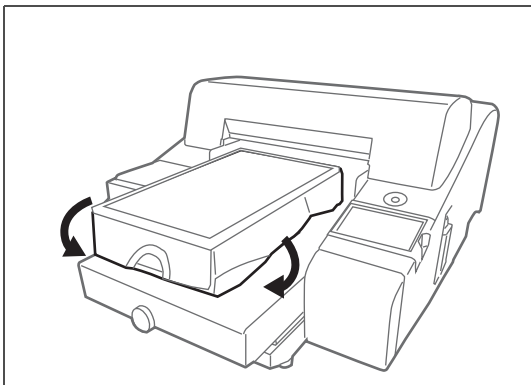
Load the frame.

- Lightly smooth out the T-shirt.



- 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.

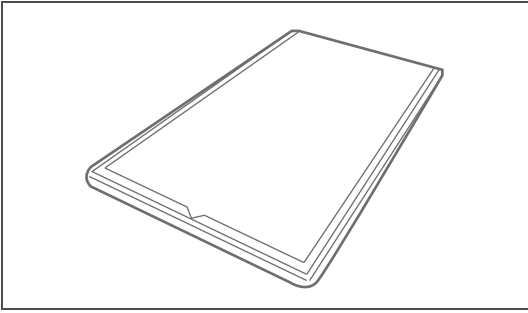
[5]



Tuck the excess shirt material under the platen.

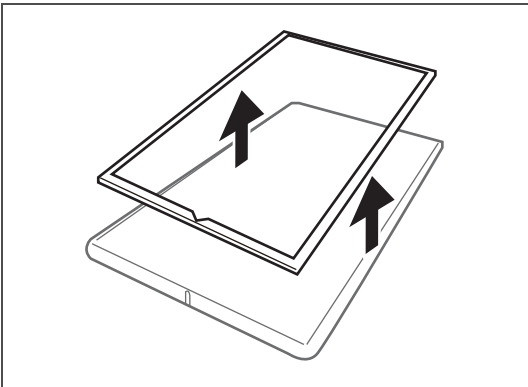
## For Platen Large

[1]



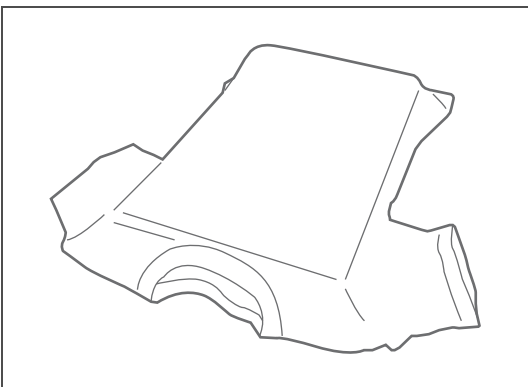
Remove the platen and place it.

[2]



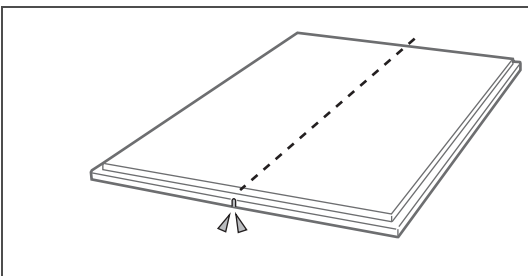
Remove the platen frame.

[3]



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

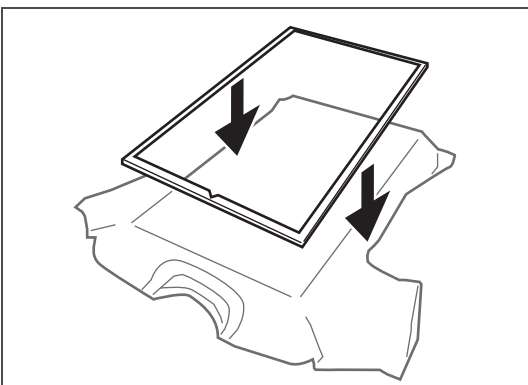
- Lightly smooth out any wrinkles on the T-shirt using a hard roller.



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]



Load the frame.

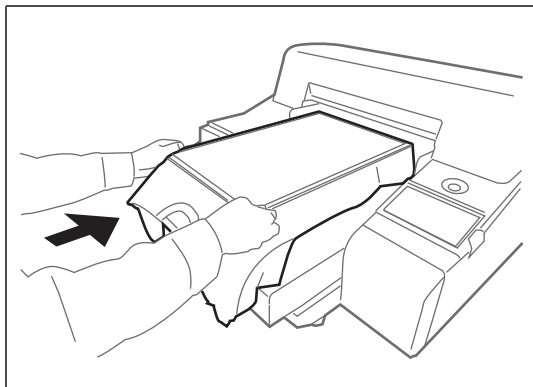
- Lightly smooth out the T-shirt.



### Note

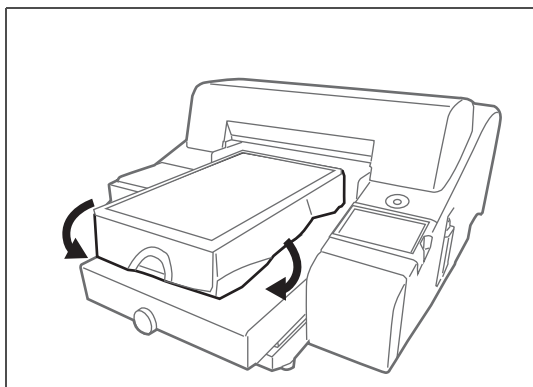
- Do not stretch the T-shirt so much. If so, the T-shirt will shrink after removing the frame and it may affect the print result.
- The V-notch on the frame center indicates the center position of the platen. When the notch and the T-shirt center are misaligned, adjust the T-shirt position.

[5]



- Load 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.

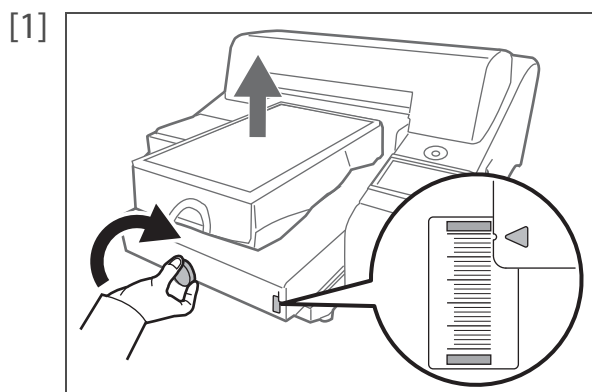
## 4. Adjusting Table Height

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, Set the head gap (between the print head and garment) as small as possible.



**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.**



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



- 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.



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

- The [MAIN] menu will appear.



Tap the [SET] key.

- The table will move 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](#)

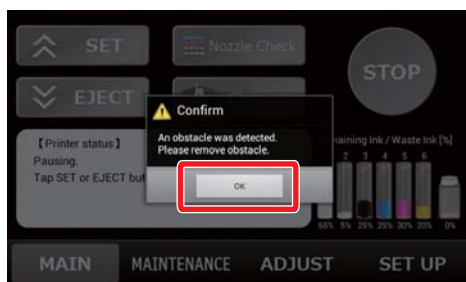
## 5. When an obstruction error has occurred before printing

An obstruction error occurs in the following cases;

- The table height is too high
- Any obstacle is detected on the garment
- Garment does not sit flat on the platen

During the error, the sub power button flashes.

[1]



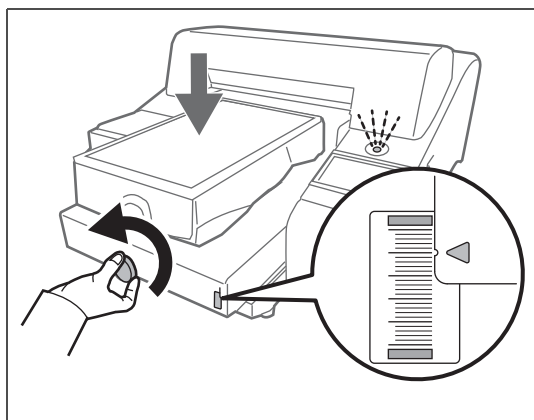
Tap [OK].

[2]

Check to see if you find any obstacle or wrinkle on the garment;

- If NO, proceed to the step 3.
- If YES, go to ["When any obstacle is detected or the media does not sit flat on the platen" on page 27.](#)

[3]



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.  
Set the head gap (between the print head and garment) as small as possible.

[4]



Tap [SET].

- The table will move to the print start position.

## 6. Printing an image from Layout and Print Tool

You can lay out and print out the images using the bundled CD-ROM software, Layout and Print Tool. 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.

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



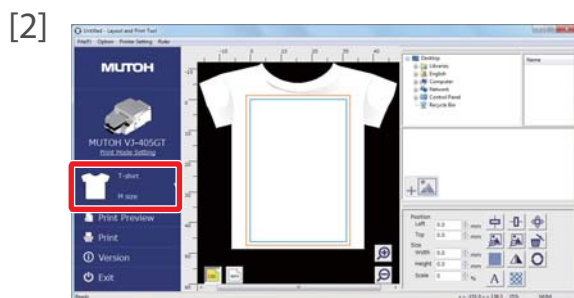
### Note

Some TIFF format images are not supported.

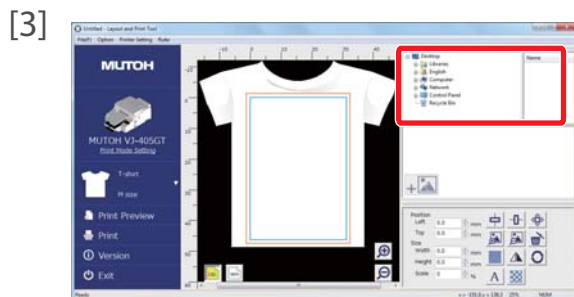
### For color (CMYK) printing

- [1] Start Layout and Print Tool.

 ["Starting Layout and Print Tool" on page 14](#)



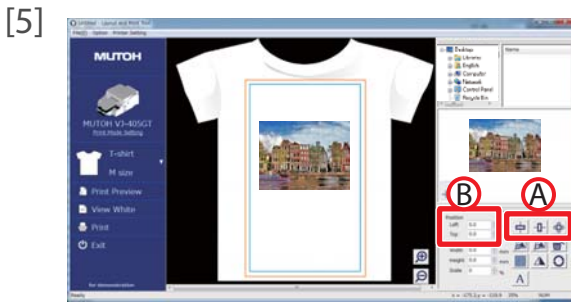
Select the platen size to be used in printing.



Select the image to be used in printing.

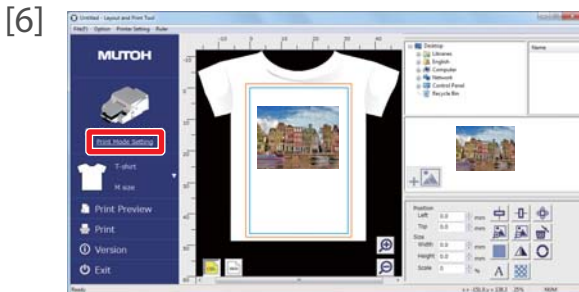


Click the  button to insert the image into the T-shirt.

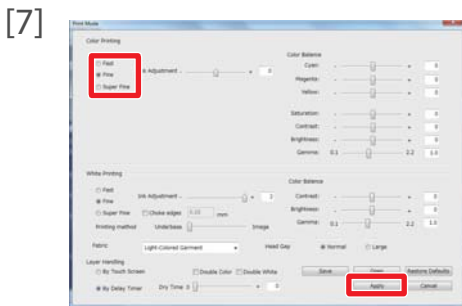


Align the image by using the following methods:

- Drag the image to the preferred position.
- Click the edit buttons (A on the left illustration).
- Enter values directly (B on the left illustration).

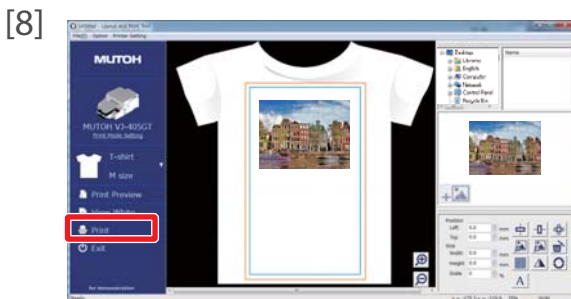


Click [Print Mode Setting].



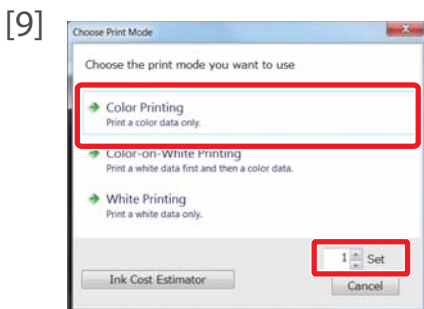
Choose print mode, and click [Apply].

- Fast: Mode for faster print speed. (600 x 600 dpi)
- Fine: Mode for standard performance. (600 x 1,200 dpi)
- Super Fine: Mode for better image quality. (1,200 x 1,200 dpi)



Click [Print].

- The "Choose Print Mode" dialog will appear.



Enter the number of copies and click [Color Printing] to start printing.

#### Note

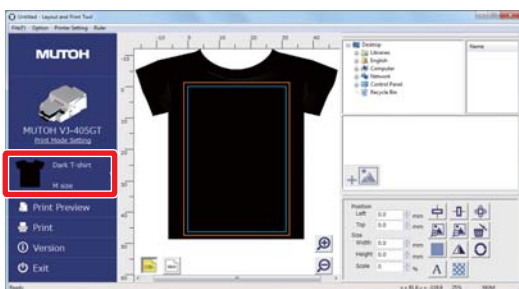
- When an obstruction error has occurred due to the textile expanding while printing, see the following.  
["When an obstruction error has occurred during printing" on page 49](#)
- After printing, make sure you perform post-treatment.  
["Post-treatment" on page 53](#)
- The file name of the data that is being printed appears on the printer's touch panel.



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

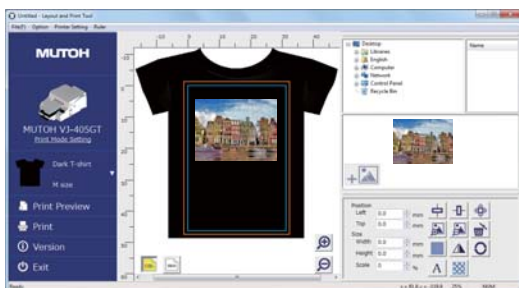
## For white printing

[1]



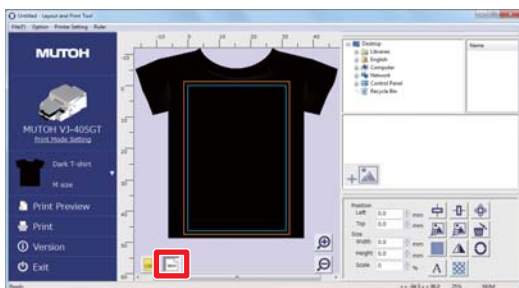
When using dark-colored T-shirts, select [Dark Colored T-shirt], for the platen size.

[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.

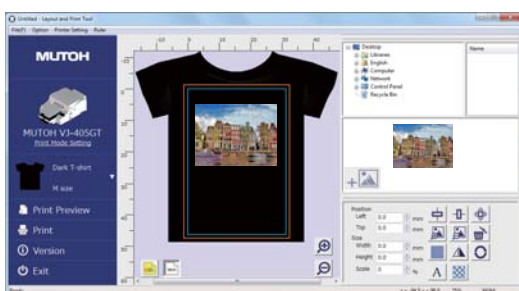
[3]



Click [View White].

- The edit area is switched to the white image.

[4]



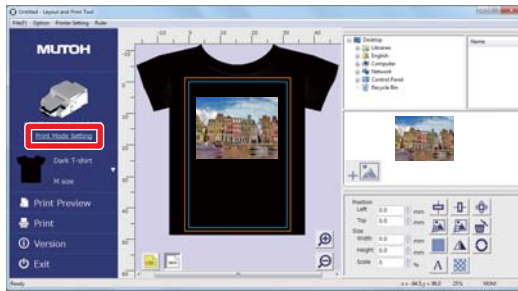
Select and place an image in the same procedure as for the color printing.



### Note

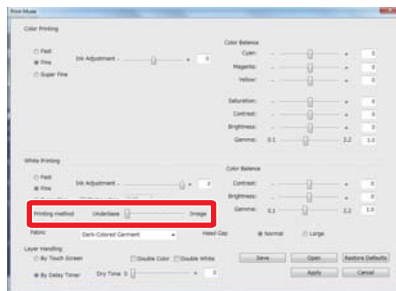
- This application has two separate editing areas: for the color printing and for the white printing. Edit data for the color printing and for the white printing individually.
- Data for the white printing appears in color until printing is processed.

[5]



Click [Print Mode Setting].

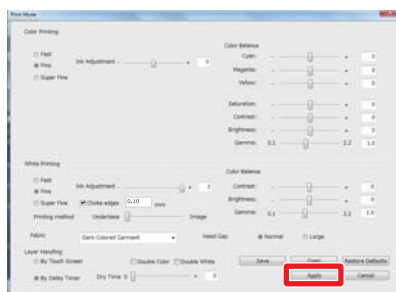
[6]



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

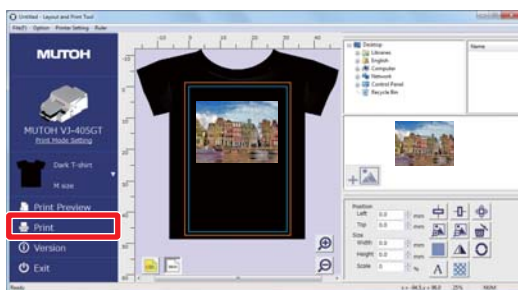
- Underbase: Print solid white underbase without a gradient of image.
- Image: Print white ink with a gradient of image.
- In-between underbase and image: Print white underbase with less ink density.

[7]



Click [Apply].

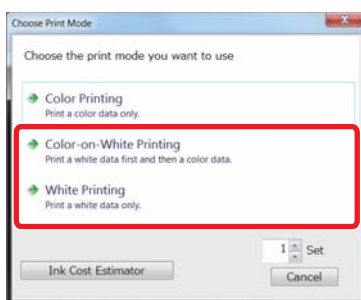
[8]



Click [Print].

- The "Choose Print Mode" dialog will appear.

[9]



Click [White Printing] or [Color-on-White Printing] to start 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 49](#)
- After printing, make sure you perform post-treatment.  
["Post-treatment" on page 53](#)
- The file name of the data that is being printed appears 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.

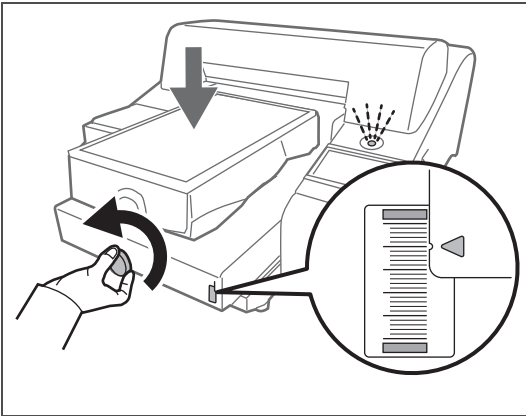
[1]



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.  
Set the head gap (between the print head and garment) as small as possible.

[3]



Tap [Yes].

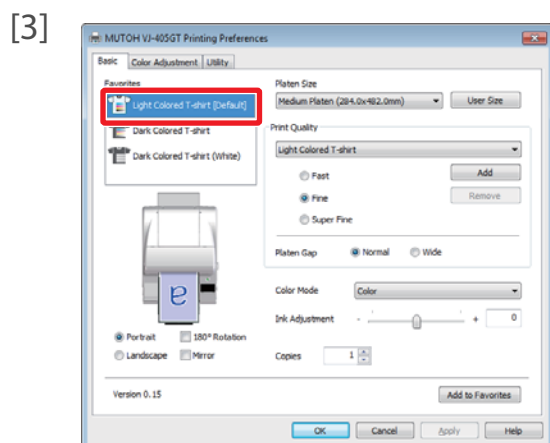
- The printer resumes printing.

## 7. Printing image data from other application software

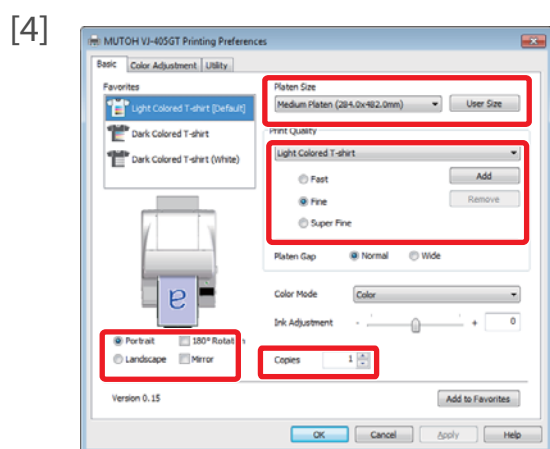
Printing is also available from graphics applications. This section explains how to print the image from graphics applications with the printer driver.

### For color (CMYK) printing

- [1] Start your graphics application and open an image file.
- [2] Open the application's print dialog and select the printer driver of your printer model. Open the Printing Preference dialog for the selected printer driver.



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



Performs print settings.

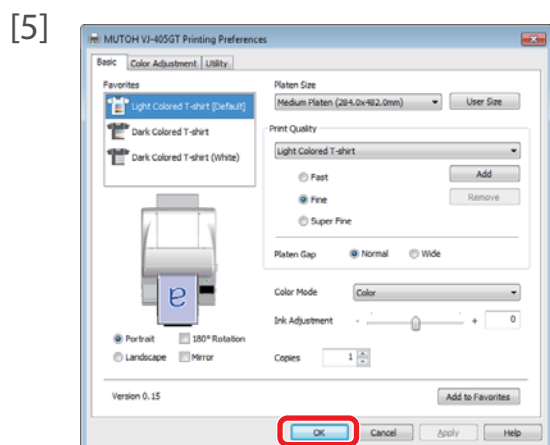
- Set "Platen Size", "Print Quality", "Copies" and printing direction. Three printing modes are available for "Print Quality".

- Fast: Mode for faster print speed. (600 x 600 dpi)
- Fine: Mode for standard performance. (600 x 1,200 dpi)
- Super Fine: Mode for better image quality. (1,200 x 1,200 dpi)



Note

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



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 49](#)
- After printing, make sure you perform post-treatment.  
["Post-treatment" on page 53](#)
- The file name of the data that is being printed appears on the printer's touch panel.

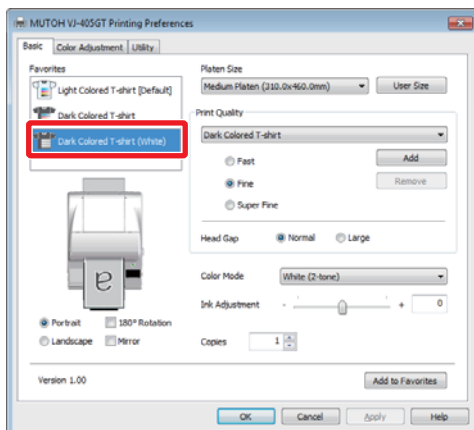
#### Important!

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

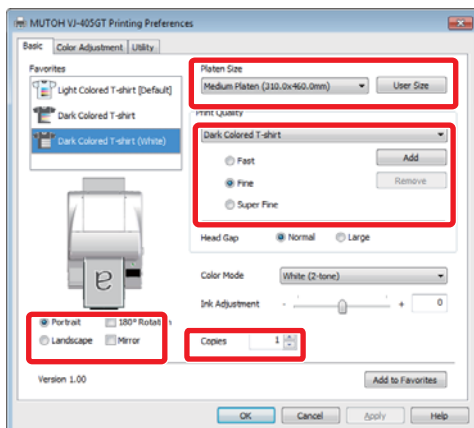
## For white printing

- [1] Start your graphics application and open an image file.
- [2] Open the application's print dialog and select the printer driver of your printer model.  
Open the Printing Preference dialog for the selected printer driver.

[3] Choose [Dark Colored T-shirt (White)] from [Favorites].



[4] Performs print settings.

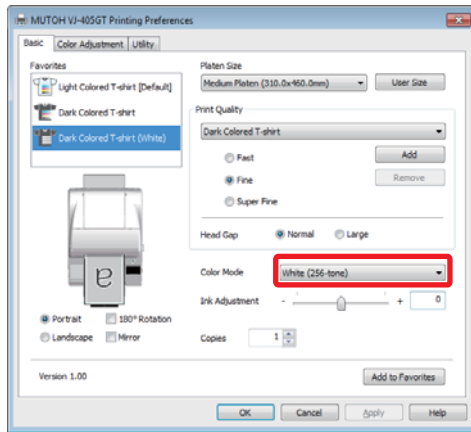


- Set "Platen Size", "Print Quality", "Copies" and printing direction. Three printing modes are available for "Print Quality".
- Fast: Mode for faster print speed. (600 x 600 dpi)
- Fine: Mode for standard performance. (600 x 1,200 dpi)
- Super Fine: Mode for better image quality. (1,200 x 1,200 dpi)

#### Note

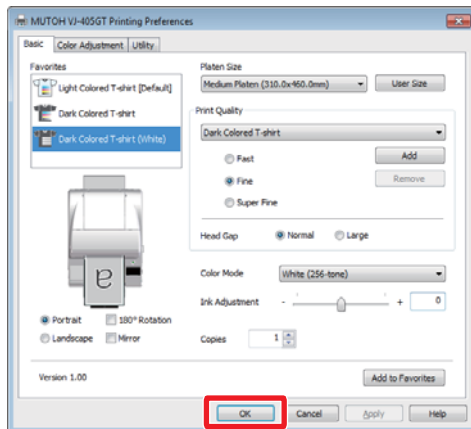
When saving the settings, click [Add to Favorites] after making changes.

[5]



To print a white data with gradations, change [Color Mode] to [White (256-tone)].

[6]



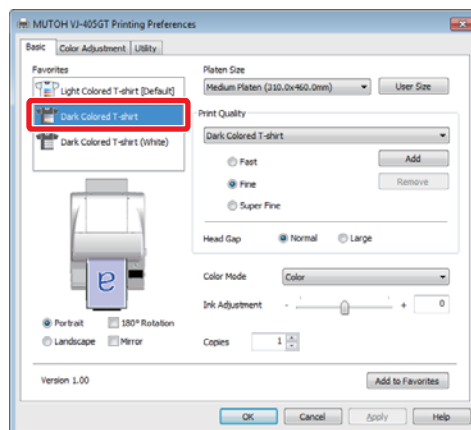
Click [OK].

[7]

Perform printing.

- This is the end of the procedure for white printing.
- When performing color-on-white printing, proceed to step 8.

[8]



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

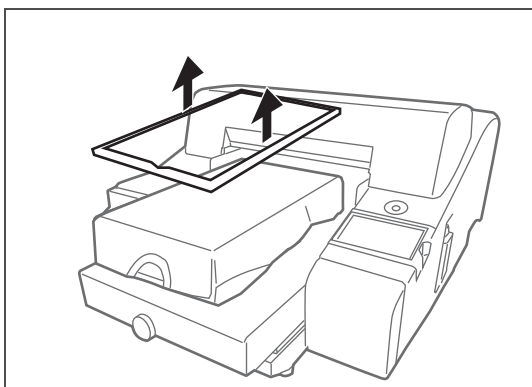
[9]

Follow the step 3 to 7 to print a color data.

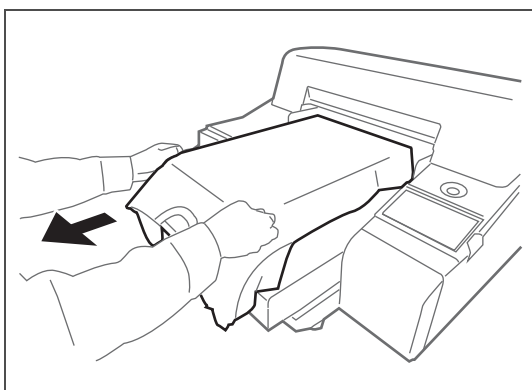
## 8. Post-treatment

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

- [1] Remove the frame.



- [2] Remove the T-shirt.



### Note

Do not touch the printed surface until the ink is fully dried. Otherwise, it may come into contact with the skin.

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 38](#)  
👉 ["Ink adherence conditions \(with heat press\)" on page 38](#)



### Note

Mutoh recommends to apply heat press within 5 minutes after printing.



### Important!

**Perform cleaning according to the Instruction sheet "Daily maintenance" at the end of daily work as necessary.**

**After daily cleaning, enter 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). The error message will appear on the operation panel and printing will pause. After replacing with new ink cartridge, printing will restart.

### Important!

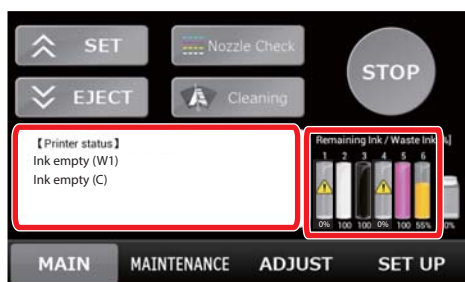
**Be careful not to confuse the ink cartridge with the cleaner cartridge.  
It may cause printer failure.**

### Note

Color unevenness may occur after printing is resumed.

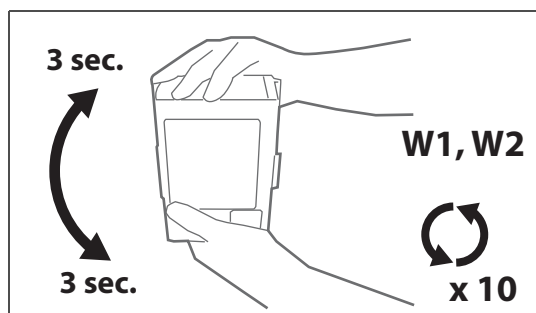
## Steps

[1]



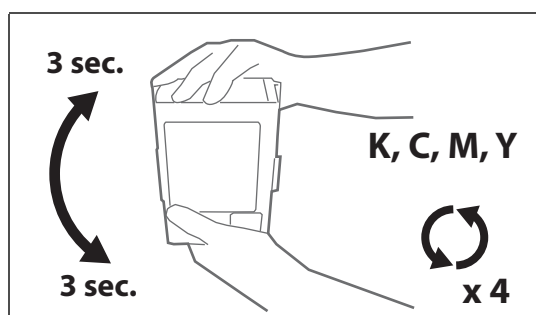
Check the ink level indicators and error message to determine which cartridge needs to be replaced.

[2]



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

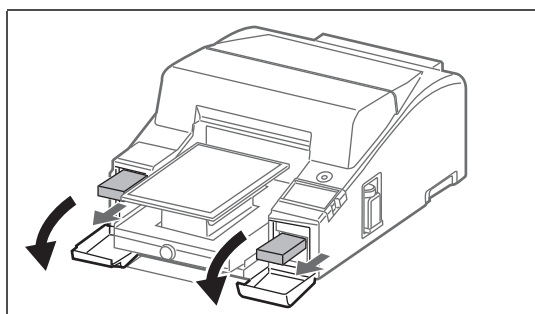
- As for the white ink cartridge, turn the ink plug upward and wait for three seconds.
- Next, turn the ink plug downward and wait for three seconds.
- Repeat that 10 times.



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

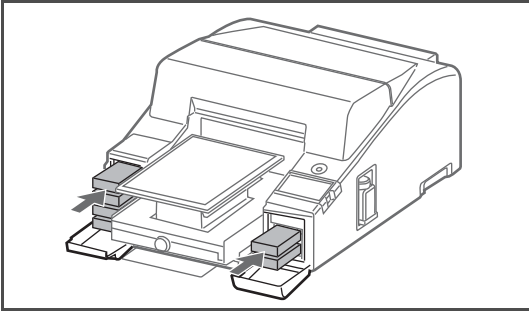
- Next, turn the slot downward and wait for three seconds.
- Repeat that four times.

[3]



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

[4]



Insert a new ink cartridge.



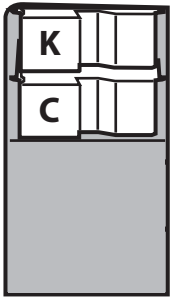
**Note**

- Insert each cartridge into the proper slot.
- Insert the ink cartridges firmly and all the way.

VJ-404GT

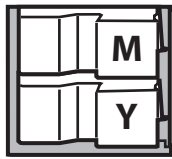
L

R



Black  
(K)

Cyan  
(C)



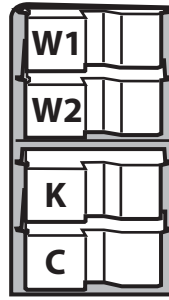
Magenta  
(M)

Yellow  
(Y)

VJ-405GT

L

R

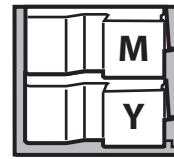


White 1  
(W1)

White 2  
(W2)

Black  
(K)

Cyan  
(C)



Magenta  
(M)

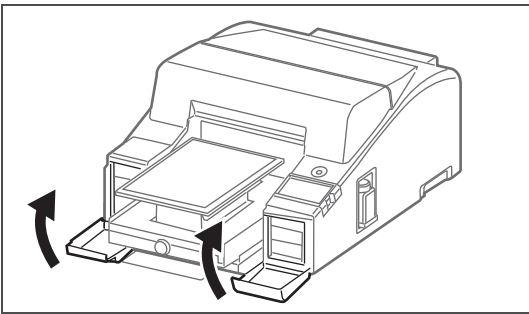
Yellow  
(Y)



**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 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 compliance with Waste Disposal and Public Cleansing Acts as well as local ordinances or delegate disposal to an industrial waste disposal contractor if needed.

## 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.



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 2 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 on non-flat surface

This printer can print on slightly non-flat surface such as T-shirts with pockets and buttons.  
When distance between the print head and a media is larger than usual, perform the following setting.



**When distance between the print head and a media is larger than usual, ink mist may increase and spread inside the printer. Clean the encoder scale and shaft at least once a week.**

## When changing the setting from Layout and Print Tool

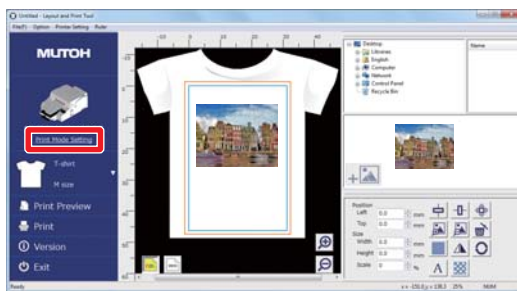
- [1] Start Layout and Print Tool.

["Starting Layout and Print Tool" on page 14](#)

- [2] Insert image data.

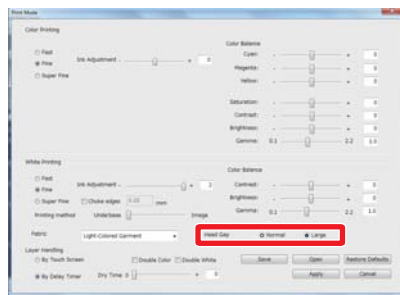
["Printing an image from Layout and Print Tool" on page 45](#)

- [3]



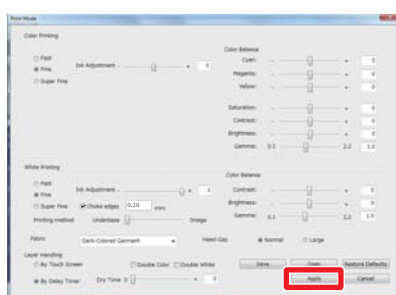
Click [Print Mode Setting].

- [4]



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

- [5]



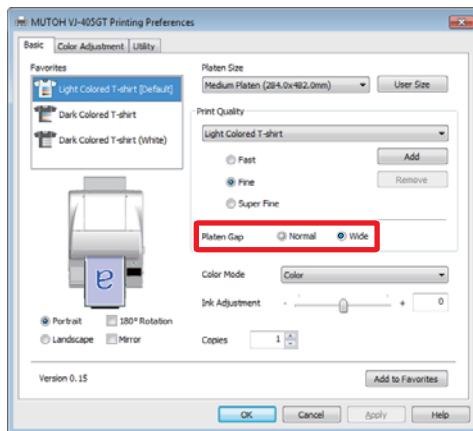
Click [Apply].

## When changing the setting from printer driver

- [1] Open the printing preference dialog for your printer model.

 "Displaying the Printing Preference dialog" on page 15

- [2]



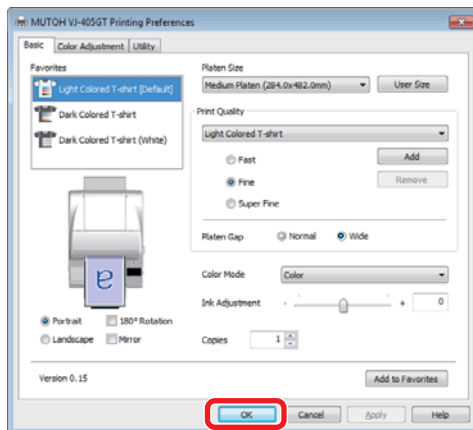
Change the [Head Gap] setting to [Large].



Note

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

- [3]



Click [OK].

# Choking the outline of a white underbase

When the "Color-on-White Printing" mode is used, white underbase might be visible from the design overlaid due to white ink bleeding. In this case, slightly choke the outline of the white underbase from Layout and Print Tool.

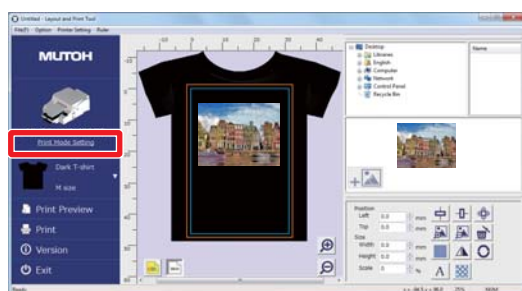
- [1] Start Layout and Print Tool.

 ["Starting Layout and Print Tool" on page 14](#)

- [2] Insert image data.

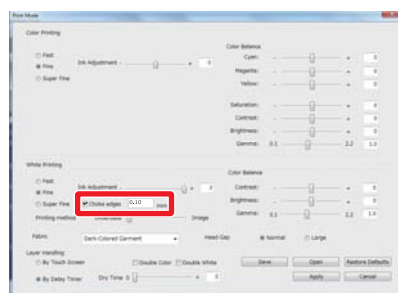
 ["Printing an image from Layout and Print Tool" on page 45](#)

- [3] Click [Print Mode Setting].

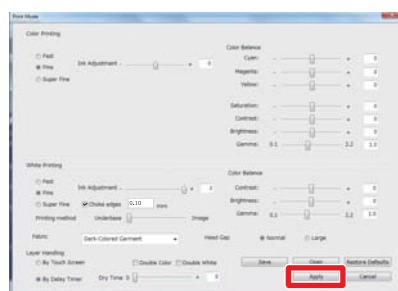


- [4] Check [Choke edges].

• Enter a value of choking amount.



- [5] Click [Apply].



# Performing cost estimation

Ink Cost Estimator, the function of Layout Print Tool, can estimate the ink consumed and cost per printing. 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.

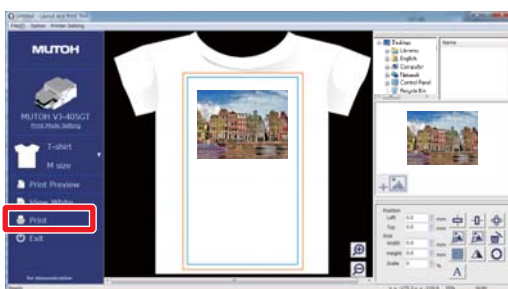
### [1] Start Layout and Print Tool.

☞ ["Starting Layout and Print Tool" on page 14](#)

### [2] Insert image data.

☞ ["Printing an image from Layout and Print Tool" on page 45](#)

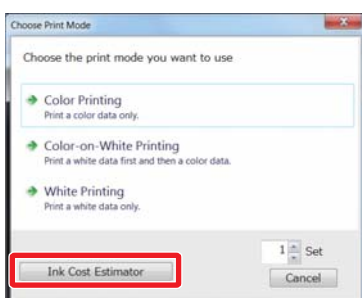
### [3]



Click [Print].

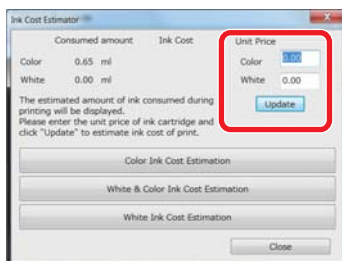
- The printing dialog will appear.

### [4]



Click [Ink Cost Estimator].

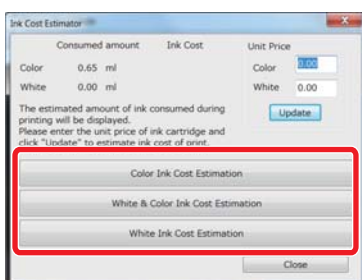
### [5]



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]

| Consumed amount | Ink Cost | Unit Price |
|-----------------|----------|------------|
| Color 0.65 ml   |          | Color 0.00 |
| White 0.00 ml   |          | White 0.00 |

The estimated amount of ink consumed during printing will be displayed.  
Please enter the unit price of ink cartridge and click "Update" to estimate ink cost of print.

Update

Color Ink Cost Estimation

White & Color Ink Cost Estimation

White Ink Cost Estimation

Close

Click [Close].

- The “Ink Cost Estimator” screen is closed.

# Adjusting ink density

Use this function if you need to adjust the ink density for your garment material type.

The following table indicates that items that can be adjusted for each model.

|                                       | VJ-404GT | VJ-405GT |
|---------------------------------------|----------|----------|
| Light-Colored Garment                 | ○        | ○        |
| Dark-Colored Garment (White)          | -        | ○        |
| Dark-Colored Garment (Color on White) | -        | ○        |
| Light-Colored Polyester               | ○        | ○        |

## Note

(VJ-405GT) If the white ink density is not appropriate, the following may occur.

- Low white ink density reduces the color brightness.
- High white ink density causes the ink bleeding.

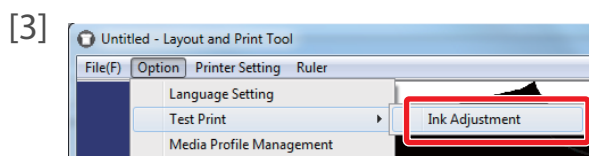
## When changing the setting from Layout and Print Tool

### 1. Adjusting the color (CMYK) ink

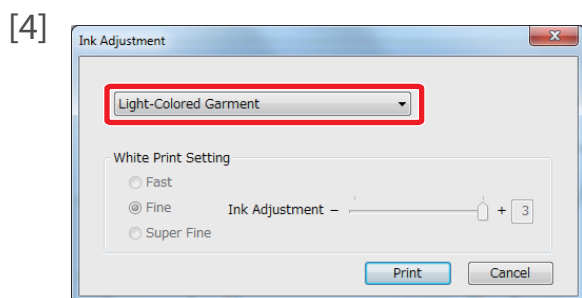
[1] Set a light-colored T-shirt on the printer.

[2] Start Layout and Print Tool.

 ["Starting Layout and Print Tool" on page 14](#)



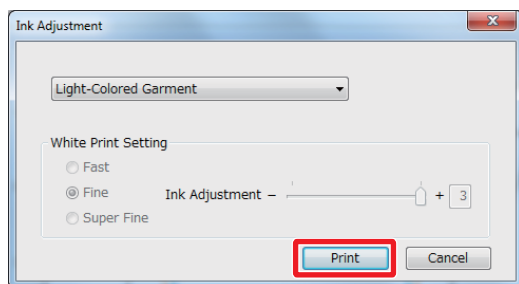
From the [Option] menu, click [Test Print], then [Ink Adjustment].



Select [Light-Colored Garment].

(Select [Light-Colored Polyester] for polyester materials.)

[5]



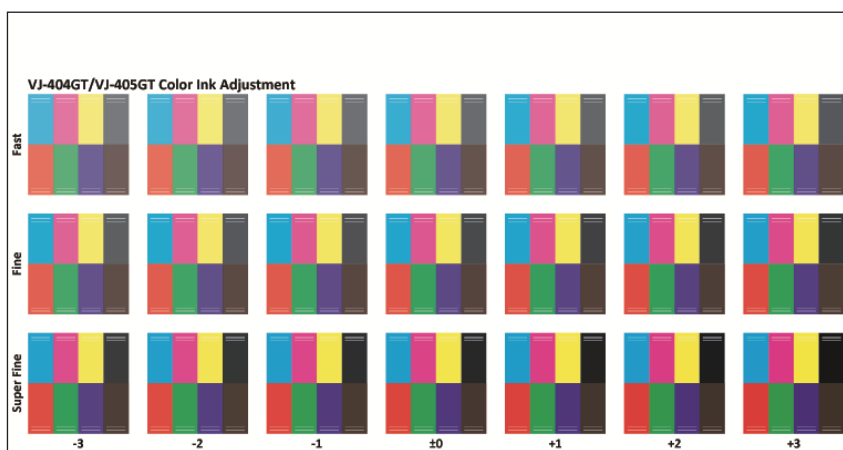
Click [Start Printing].

- The printer prints the adjustment patterns.

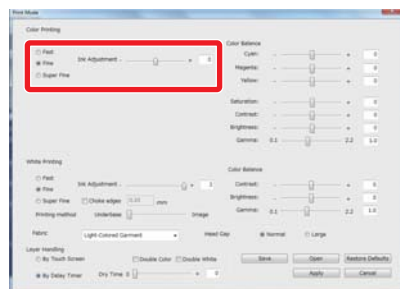
[6]

Use the printed result of the adjustment pattern to determine the optimal print mode and ink adjustment.

- The characters on the left side indicate the print mode.
- The characters on the bottom side indicate the ink adjustment.



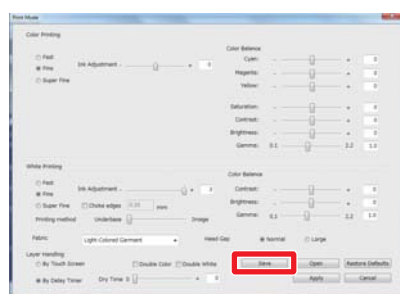
[7]



From [Print Mode Setting] in the Layout and Print Tool, select the print mode for color printing, and then input the ink adjustment.

- Fast: Equivalent to "Fast" on the adjustment pattern.
- Fine: Equivalent to "Fine" on the adjustment pattern.
- Super Fine: Equivalent to "Super Fine" on the adjustment pattern.
- Ink Adjustment: Input the amount of ink you think is optimal based on the adjustment pattern.

[8]



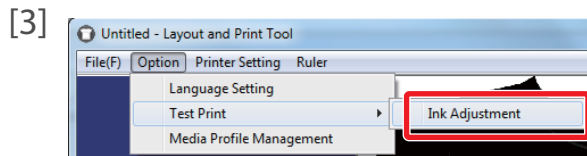
Click [Save] to name and save the settings.

## 2. Adjusting white ink

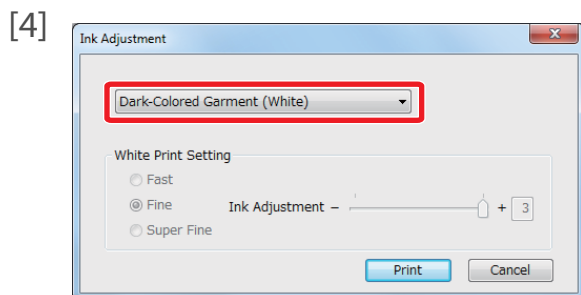
[1] Set a Dark-Colored T-shirt on the printer.

[2] Start Layout and Print Tool.

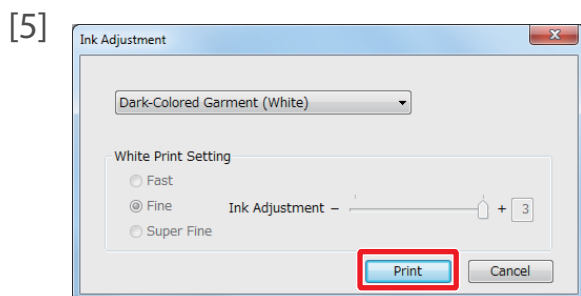
 ["Starting Layout and Print Tool" on page 14](#)



From the [Option] menu, click [Test Print], then [Ink Adjustment].



Select [Dark-Colored Garment (White)].



Click [Start Printing].

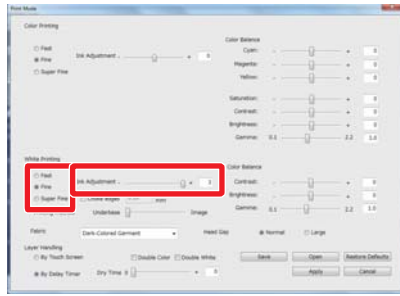
- The printer prints the adjustment patterns.

[6] Use the printed result of the adjustment pattern to determine the optimal print mode and ink adjustment.

- The characters on the left side indicate the print mode.
- The characters on the bottom side indicate the ink adjustment.



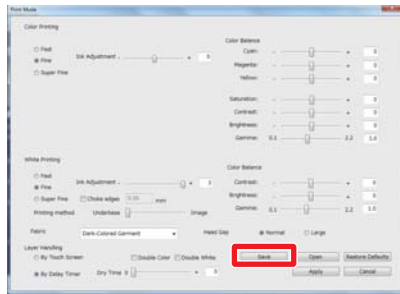
[7]



From [Print Mode Setting] in the Layout and Print Tool, select the print mode for white printing, and then input the ink adjustment.

- Fast: Equivalent to "Fast" on the adjustment pattern.
- Fine: Equivalent to "Fine" on the adjustment pattern.
- Super Fine: Equivalent to "Super Fine" on the adjustment pattern.
- Ink Adjustment: Input the amount of ink you think is optimal based on the adjustment pattern.

[8]



Click [Save] to name and save the settings.

### 3. Adjusting white and color ink (Color on White)

Adjust the color density for when applying color onto white. Perform this adjustment after adjusting the white ink.

[1]

Adjust the white ink.

["Adjusting white ink" on page 65](#)

[2]

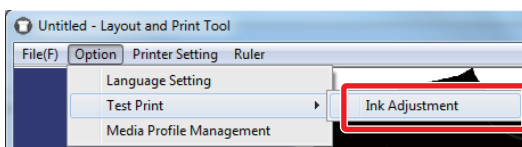
Set a Dark-Colored T-shirt on the printer.

[3]

Start Layout and Print Tool.

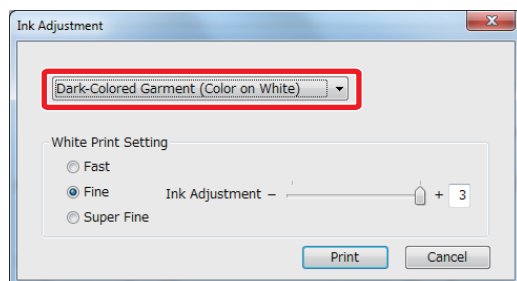
["Starting Layout and Print Tool" on page 14](#)

[4]

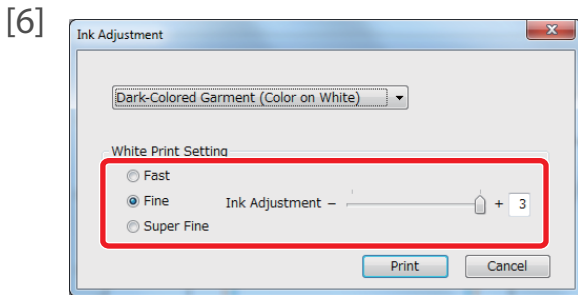


From the [Option] menu, click [Test Print], then [Ink Adjustment].

[5]

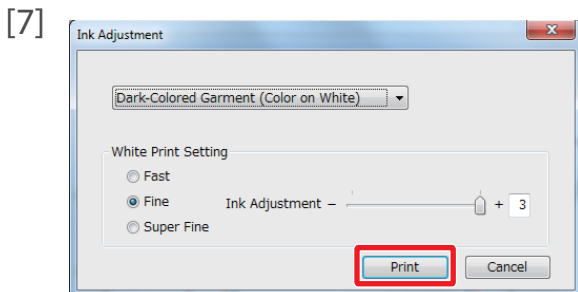


Select [Dark-Colored Garment (Color on White)].



Select the print mode determined in white ink adjustment, and then input the ink adjustment.

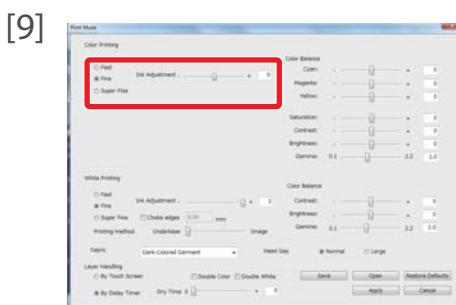
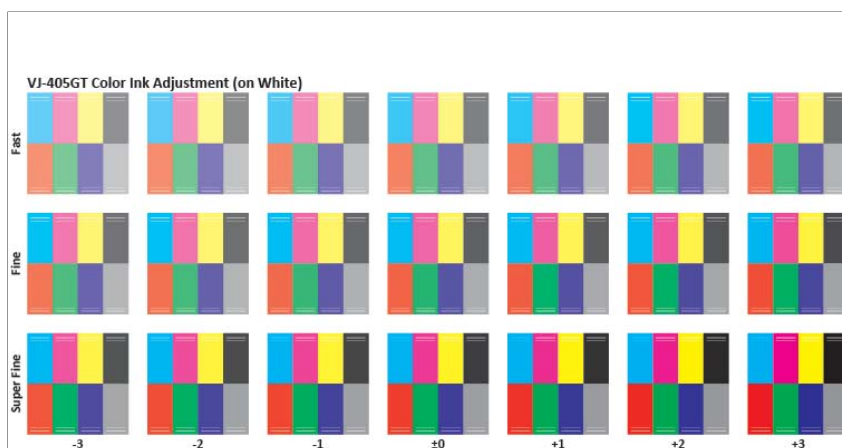
- Fast: Equivalent to “Fast” on the adjustment pattern.
- Fine: Equivalent to “Fine” on the adjustment pattern.
- Super Fine: Equivalent to “Super Fine” on the adjustment pattern.
- Ink Adjustment: Input the amount of ink you think is optimal based on the adjustment pattern.



Click [Start Printing].

- The printer prints the adjustment patterns.

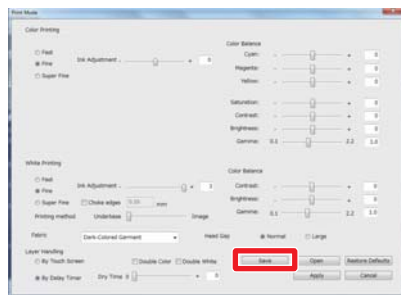
- [8] Use the printed result of the adjustment pattern to determine the optimal print mode and ink adjustment.
- The white underbase of this pattern is printed with the white ink density setting specified in the preceding step.
  - The characters on the left side indicate the print mode.
  - The characters on the bottom side indicate the ink adjustment.



From [Print Mode Setting] in the Layout and Print Tool, select the print mode for color printing, and then input the ink adjustment.

- Fast: Equivalent to “Fast” on the adjustment pattern.
- Fine: Equivalent to “Fine” on the adjustment pattern.
- Super Fine: Equivalent to “Super Fine” on the adjustment pattern.
- Ink Adjustment: Input the amount of ink you think is optimal based on the adjustment pattern.

[10]




Click [Save] to name and save the settings.

## When changing the setting from printer driver

You can also adjust the white ink density level for your garment from the printer driver properties.

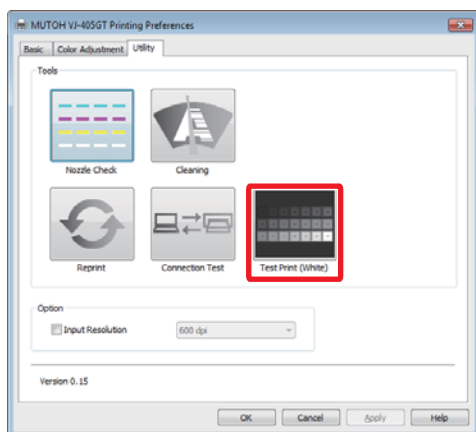
### 4. Performing test printing of white ink

- [1] Place a dark-colored T-shirt on the printer.
- [2] Open the printing preference dialog for your printer model.  
 ["Displaying the Printing Preference dialog" on page 15](#)

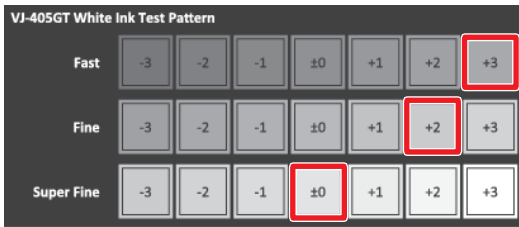
- [3] Click the [Utility] tab.



- [4] Click [Test Print (White)] to print the test patterns.



[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

Choose the square (adjustment value) with the appropriate white ink density and less ink bleeding.

## 5. Adjusting white ink density

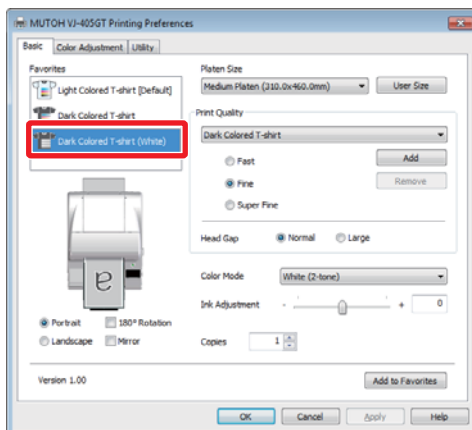
[1]

Start your graphics application and open an image file.

[2]

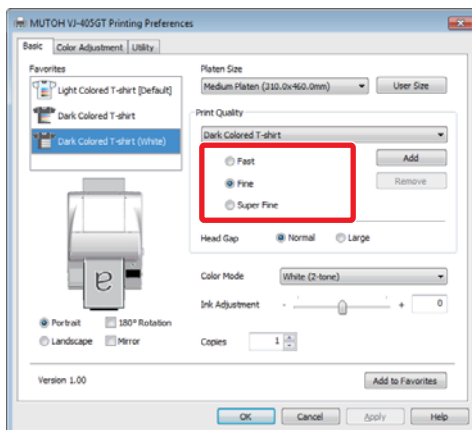
Open the application’s print dialog and select the printer driver of your printer model. Open the Printing Preference dialog for the selected printer driver.

[3]



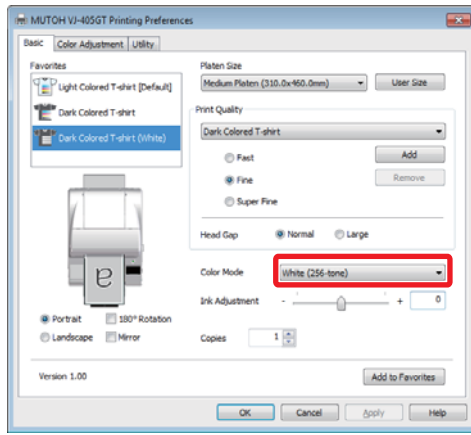
Choose [Dark Colored T-shirt (White)] from [Favorites] on the [Basic] tab.

[4]



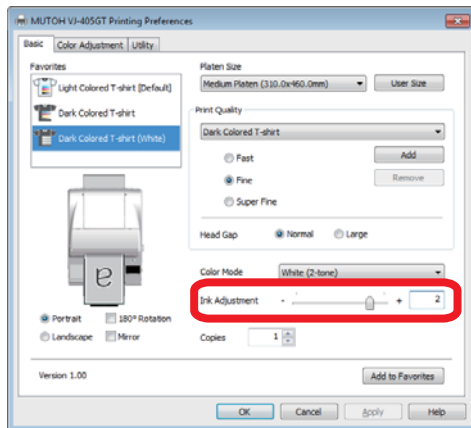
Choose print mode to be adjusted from “Fast”, “Fine” and “Super Fine”.

[5]



To print a white data with gradations, change [Color Mode] to [White (256-tone)].

[6]



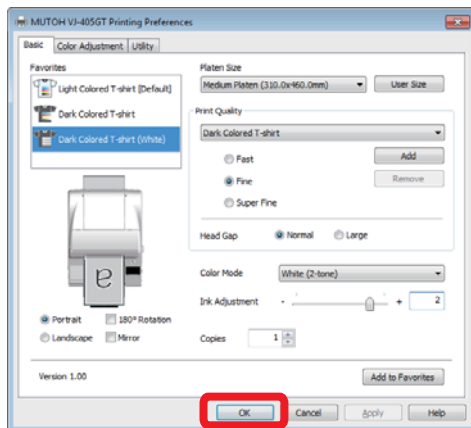
Enter the value confirmed from the test patterns in [Ink Adjustment].



Note

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

[7]



Click [OK].

[8]

Perform printing.

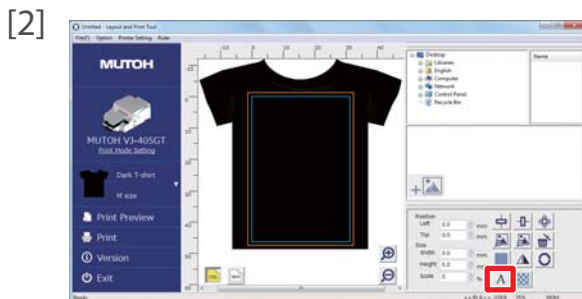
- This is the end of the procedure for white printing.
- When performing color printing on white underbase, choose [Dark Colored T-shirt] from [Favorites] to print a color data.

# Inserting Text

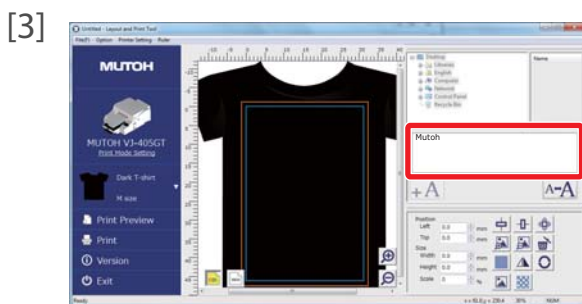
You can print text on T-shirts by using the "Layout and Print Tool".

- [1] Start the "Layout and Print Tool".

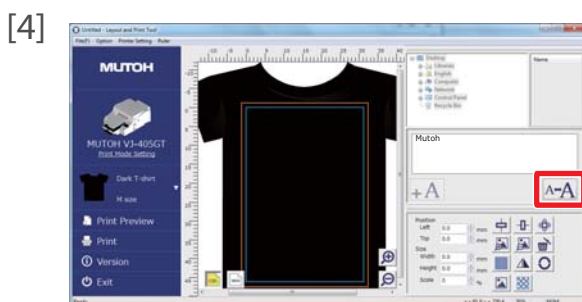
 ["Starting Layout and Print Tool" on page 14](#)



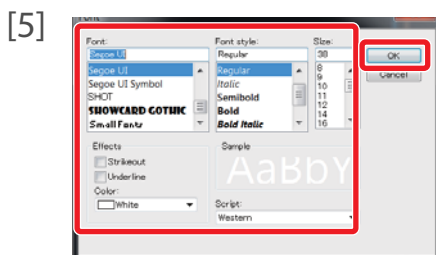
Click [Switch between Image and Text].



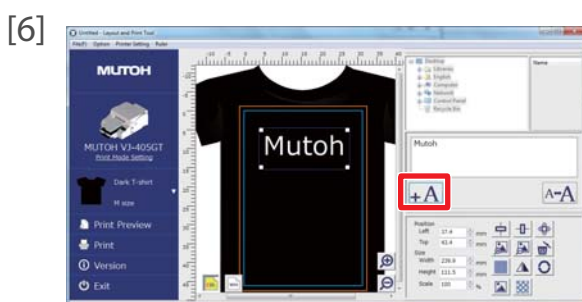
Enter text.



Click [Font].



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



Click [Insert, Update] to insert the text to the T-shirt.



Click the text on the T-shirt if you want to edit it again.

# Reprinting

You can easily reprint the previously printed data.

You can perform printing even if the printer is not connected to a computer.

[1] Set a T-shirt on the printer.

[2]



Tap the [SET UP] menu.

[3]



Tap the [Reprint] key.

- The confirmation dialog will appear.

[4]



Tap [Yes] to start printing.

## Note

- The previously printed data is kept even after the power is turned off.
- If the last print was a nozzle check or the like, the data that the user sent before that is printed.

## 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.

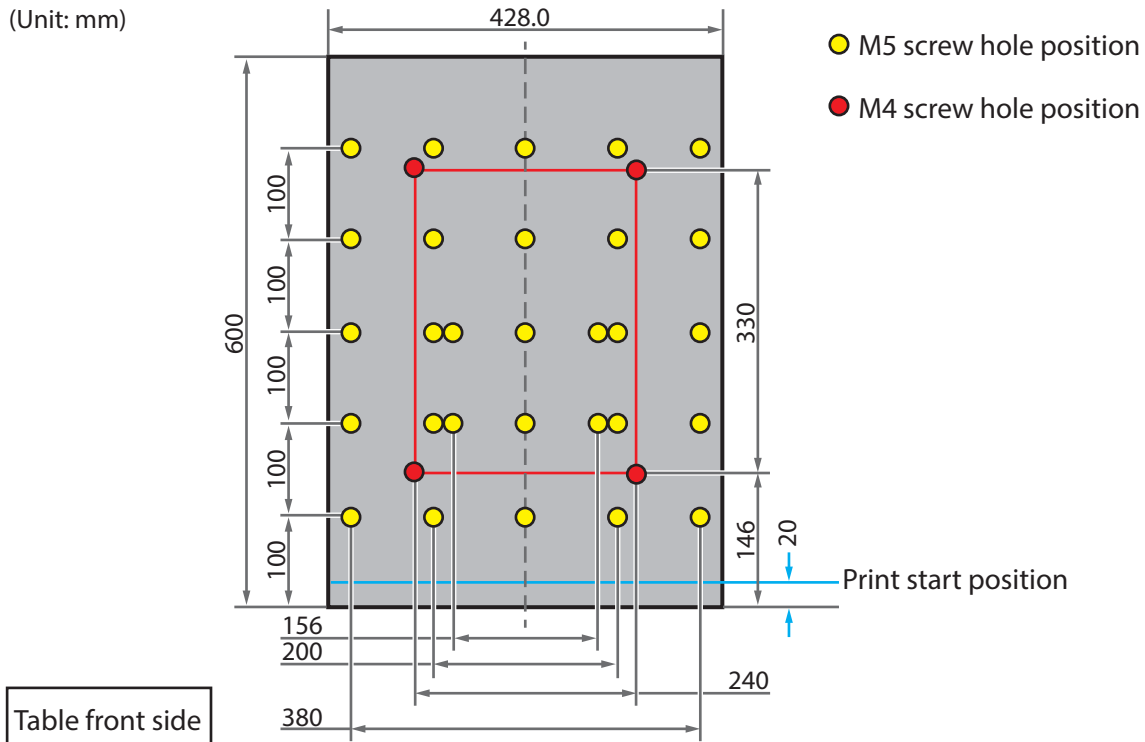
| Item                                                                          | Specification                          |
|-------------------------------------------------------------------------------|----------------------------------------|
| Maximum custom platen size                                                    | 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*                                                            | 145 mm                                 |
| Maximum weight*                                                               | 7 kg                                   |
| * Maximum thickness and maximum weight include the custom platen and garment. |                                        |

#### Important!

- **The total thickness (including the custom platen and garment) should be between 120 mm to 145 mm.**
- **If the total weight (including the custom platen and garment) exceeds 7 kg, the table up-down mechanism may be damaged.**

## Table dimensions and screw hole positions

(Unit: mm)



### Important!

- The screw length should be 10 mm or shorter. If the longer screw is inserted, it may damage inside the table or the table height adjustment mechanism.
- Height of the table is adjustable up to 25 mm by turning the up-down dial.

## Specifying the Platen Size

If a custom platen is in the following case, 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.



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

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

["Table dimensions and screw hole positions" on page 74](#)

## Specifying with Platen Edit Tool

[1] Start the “Platen Edit Tool”.

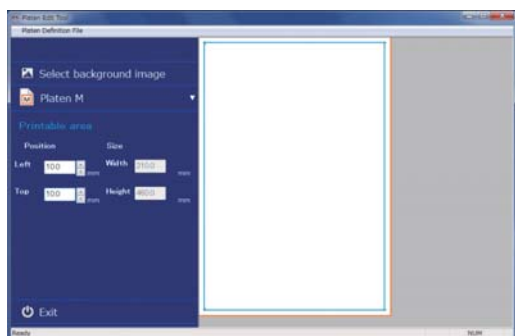


### Note

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

- Windows 10  
Click [All Programs] in the [Start] menu, click [MUTOH] and then click [Platen Edit Tool].
- Windows 8 / Windows 8.1  
Right-click an empty spot on the [Start] screen to open the application bar, and click [All apps]. Click [Platen Edit Tool].
- Windows 7 / Windows Vista  
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.

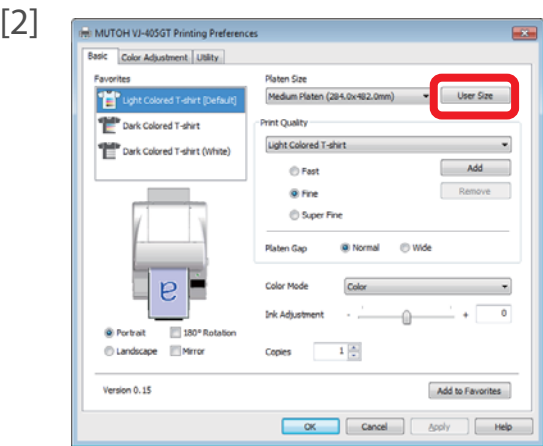


### Note

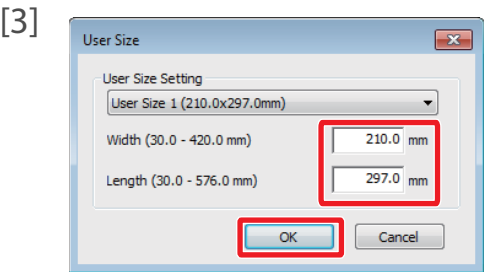
You can find the “Platen Edit Tool Operation manual” in the bundled CD-ROM.


# Specifying with Printer Driver

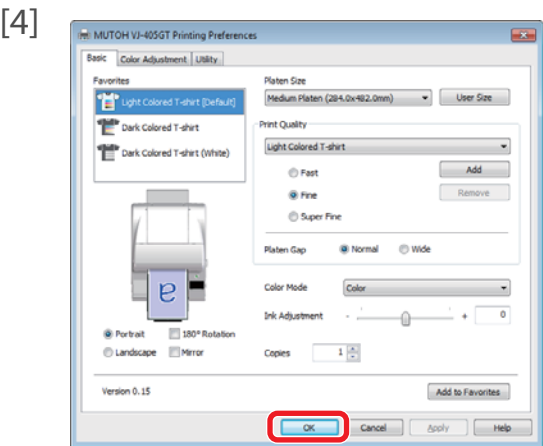
- [1] Open the printing preference dialog for your printer model.  
☞ "Displaying the Printing Preference dialog" on page 15



- Click [User Size].
- The "User Size" dialog will appear.



- Enter [Width] and [Length], and click [OK].
-  **Note**
- When saving the settings, click [Add to Favorites] after making changes.



- Click [OK].

# Chapter 3    Settings and Adjustments

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# 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] menu.

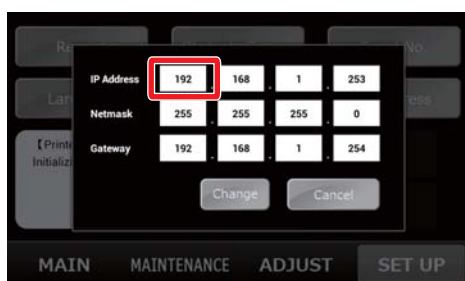
[2]



Tap the [IP Address] key.

- The network setting dialog will appear.

[3]



Set the IP Address.

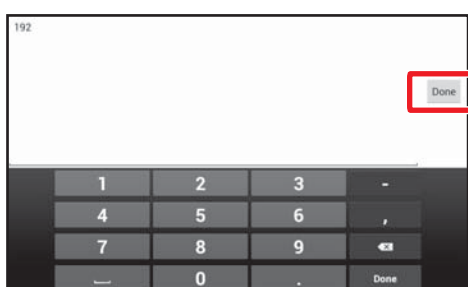
- Tap the segment (number) you want to change.
- The number entry screen will appear.



### Note

- Assign the IP address for the printer. Do not use your PC's IP address.
- Contact your network administrator before setting the IP address.

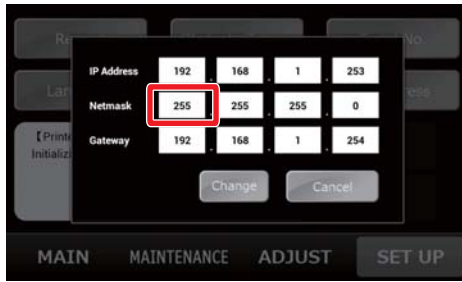
[4]



Use the number keys to enter numbers.

- Tap [Done] to confirm the entry.

[5]



Set the subnet mask (Netmask).

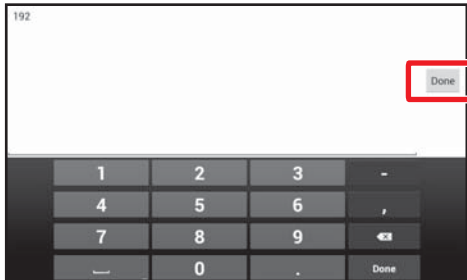
- Tap the segment (number) you want to change.
- The number entry screen will appear.



Note

Contact your network administrator before setting the subnet mask.

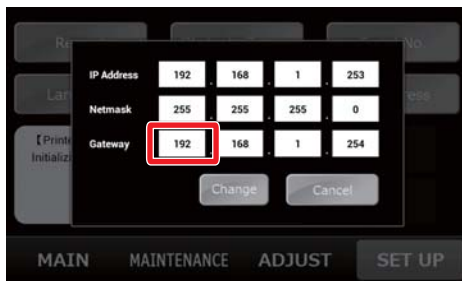
[6]



Use the number keys to enter numbers.

- Tap [Done] to confirm the entry.

[7]



Set the Gateway.

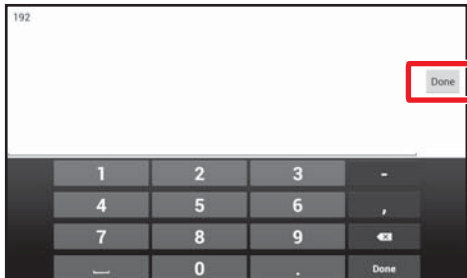
- Tap the segment (number) you want to change.
- The number entry screen will appear.



Note

- If the printer is to be connected to peer-to-peer to a computer, you can leave the settings at the default values.
- Contact your network administrator before setting the Gateway.

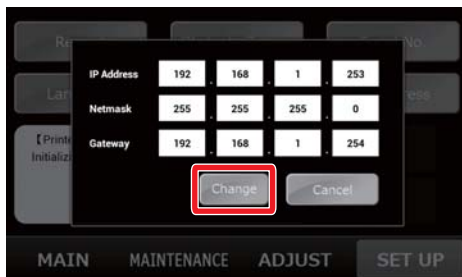
[8]



Use the number keys to enter numbers.

- Tap [Done] to confirm the entry.

[9]



Tap [Cancel] to apply the network configuration change.



Note

Tap [Cancel] to close the network setting dialog.

## Setting obstacle detection sensor

This function turns on/off the sensor to detect any obstacle or wrinkle on the garment.



**Normally turn on the obstacle detection sensor.**

**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] menu.

[2]



Tap the [Obstacle Sensor] key.

- The obstacle sensor setting dialog will appear.

[3]



Switch [On] / [Off].

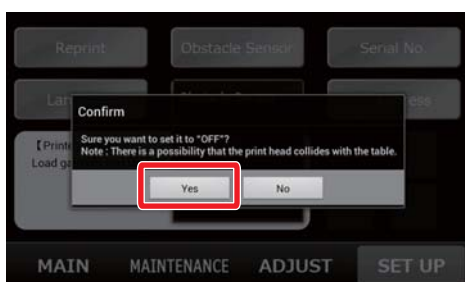
- When [Off] is selected, the confirmation dialog appears.



**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] menu.

- The [SET UP] menu appears.

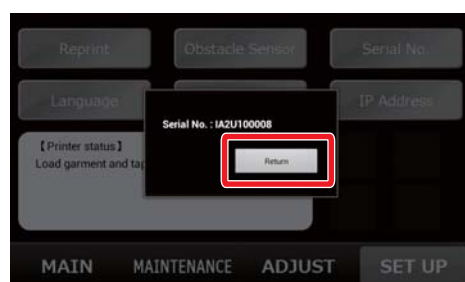
[2]



Tap the [Serial No.] key.

- The serial number check dialog will appear.

[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] menu.

- The [SET UP] menu appears.

[2]



Tap the [Language] key.

- The language select window will appear.

[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] menu.

- The [SET UP] menu appears.

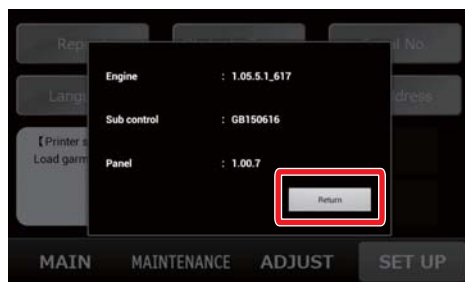
[2]



Tap the [Version] key.

- The software version check dialog will appear.

[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. In general use, no adjustment is required. However, if you have any print quality problem, check the following items first.

- Have you performed proper pretreatment?
- Is there any nozzle clogging?
- Is the distance between the T-shirt and print head not too wide?
- Is the set position of the T-shirt leaning to one side?

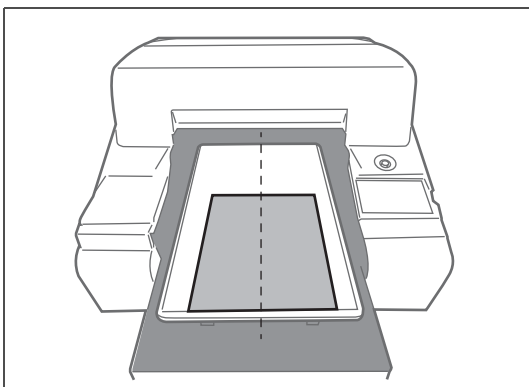
If the condition is still not improved adjust the image quality.

## Correcting table feeding

If light horizontal lines regularly appear 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.

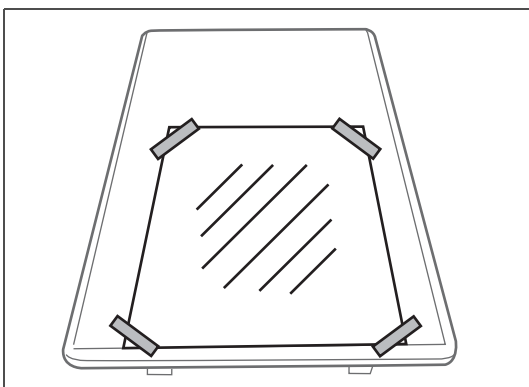
- Set the A4 size (210 mm x 297 mm) media vertically.
- Load the media so that its front edge aligns with the front edge of platen.
- Align the center of the media and platen.



#### 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]

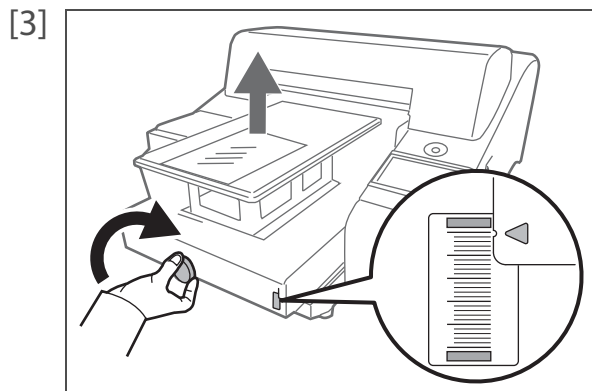


If the media does not sit flat on the platen, use tape to fix the four corners of the media.



#### Note

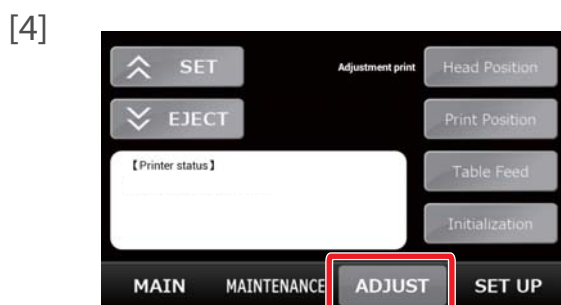
If the media does not sit flat on the platen, it may cause an error.



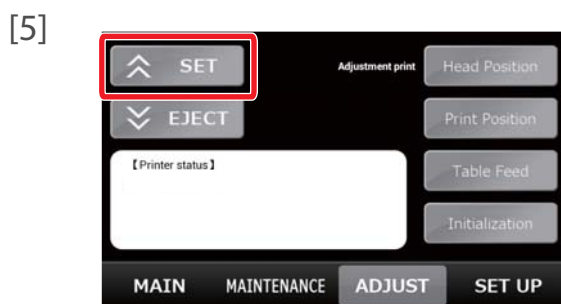
Turn the table up-down dial to lift the table to the top.

**Note**

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



Tap the [ADJUST] key.



Tap the [SET] key.

- The table moves further in.

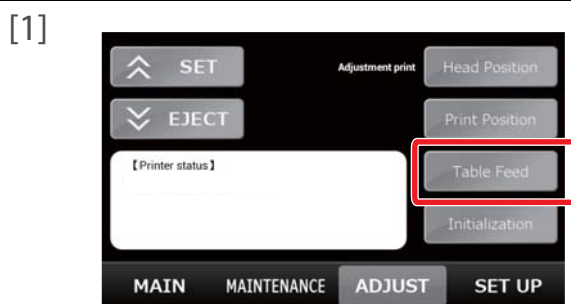
**Note**

When a height error occurs, lower the table height a little at a time.  
Set the head gap (between the print head and test media) as small as possible.

**Important!**

**Even when the Head Gap setting is set to "Large", set the head gap (between the print head and test media) as small as possible for this adjustment.**

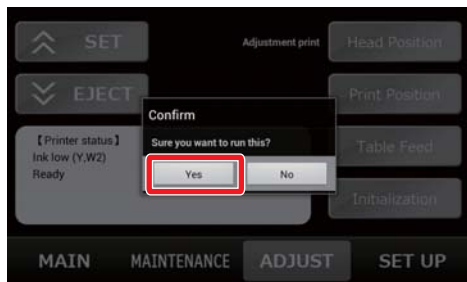
## 2. Print adjustment patterns.



Tap the [Table Feed] key.

- The confirmation dialog will appear.

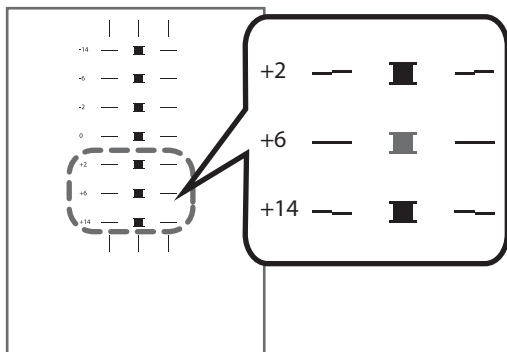
[2]



Tap [Yes].

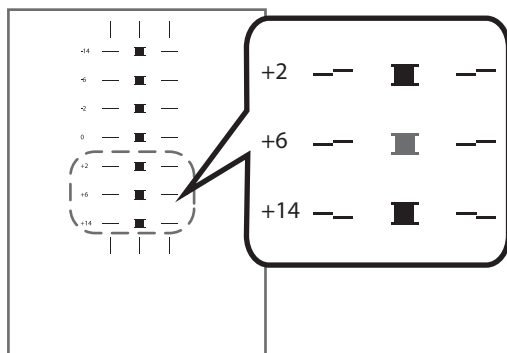
- The printer prints the adjustment patterns.
- The adjustment value entry dialog will appear.

[3]



Look at the print and find the appropriate adjustment value.

- Choose a pattern which shows a lightest-colored square and horizontally aligned lines on both sides of the square.
- 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 appropriate adjustment value exists in-between two values shown on the pattern. 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 "+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".
- Check the degree of misalignment of the horizontal lines and decide an appropriate adjustment value between "+6" and "+14".

[4]



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

[5] Perform the media feed adjustment again.

- Repeat this adjustment until the "0" pattern shows the best result (the lightest-colored square with horizontally aligned lines on both sides).

## Adjusting head

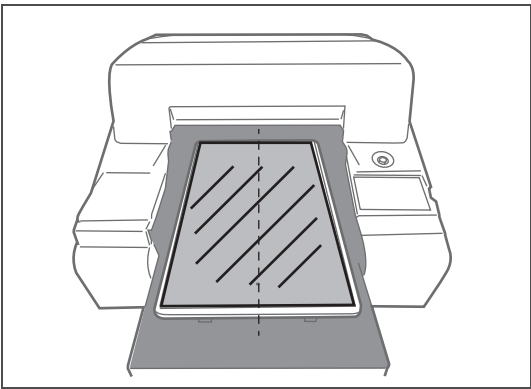

This function adjusts the print head position. When the print result is not clear (for instance, vertical lines are misaligned, or color is not clear.), this adjustment may improve the result.

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 the adjustment patterns of all rows, and perform each adjustment. When the best adjustment value is "0", no adjustment is necessary. Repeat this adjustment until the "0" patterns of all rows show the best result.

### 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 84](#) in "Correcting table feeding".

### 2. Print adjustment patterns

- [1] 
- Tap the [ADJUST] key.
- [2] 
- Tap the [Head Position] key.
- The confirmation dialog will appear.

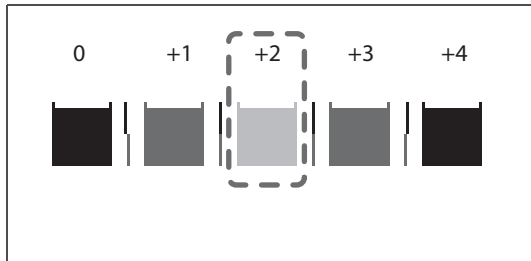
[3]



Tap [Yes].

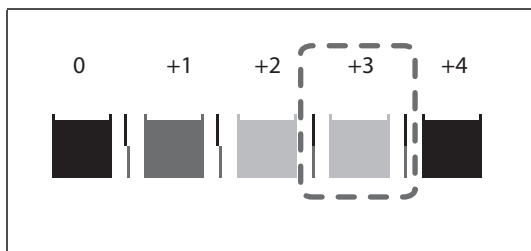
- The printer prints the adjustment patterns.
- The adjustment value entry screen appears.

[4]



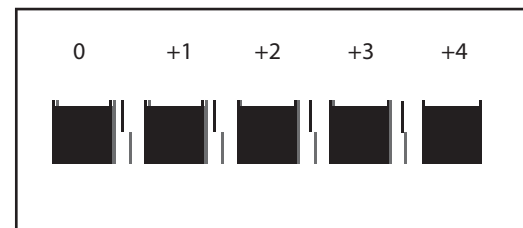
Look at the print and find the appropriate adjustment value.

- Choose a pattern which shows a lightest-colored square and vertically aligned lines on both sides of the square.
- A value shown above 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.

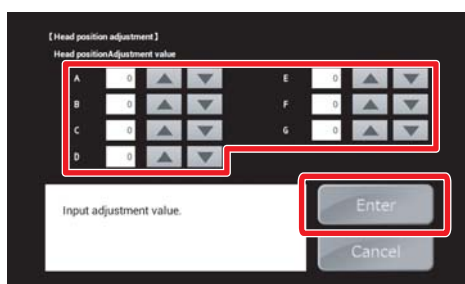
- In the left illustration, an appropriate adjustment value is "+3".



If there is no straight vertical lines, select the pattern which has the smallest misalignment in vertical lines on the left.

- In the left illustration, the value is "+4".
- In this case, an appropriate adjustment value is predicted as "+4" or higher.
- An adjustment value can be within the range of  $\pm 8$ . Therefore, choose an appropriate adjustment value between "+5" and "+8" by referring to the alignment of the lines.

[5]



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

- An adjustment value can be within the range of  $\pm 8$ .

[6]

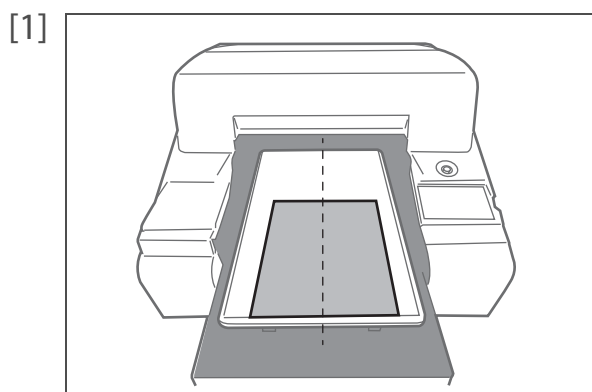
Perform the head adjustment again.

- Repeat this adjustment until the "0" pattern shows the best result (the lightest-colored square with vertically aligned lines on both sides).

## Adjusting the printing position

The printing position can be adjusted finely within the range of  $\pm 4$  mm.

### 1. Set the media onto the platen



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.

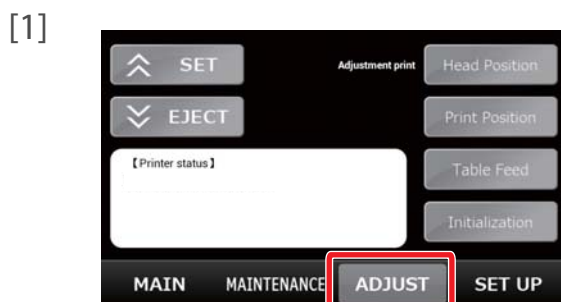


#### Note

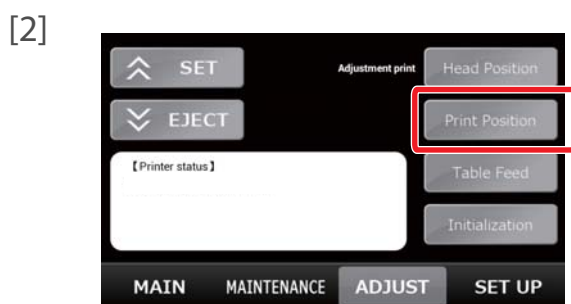
For VJ-405GT, white ink is used. Therefore, we recommend using transparent or translucent media (such as OHP films or tracing paper and so on).

- [2] The procedures that follow are the same as ["Set the media onto the platen" on page 84](#) in "Correcting table feeding".

### 2. Print adjustment patterns



Tap the [ADJUST] key.



Tap the [Print Position] key.

- The confirmation dialog will appear.

[3]



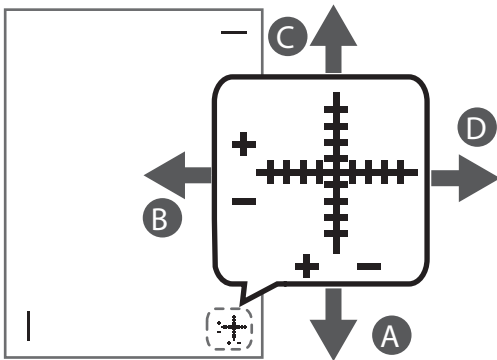
Tap [Yes].

- The printer prints the adjustment patterns.
- The adjustment value entry screen appears.



- The adjustment patterns are shown on the left.

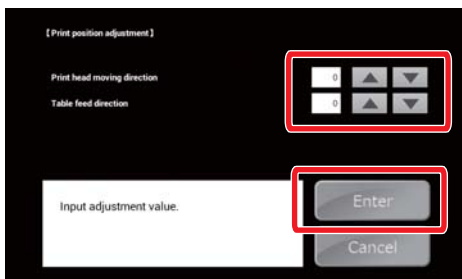
[4]



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

- "A" indicates the front of the printer. Decide in which direction you want to move the printing position.
- Each calibration of the cross shows 1 mm.

[5]



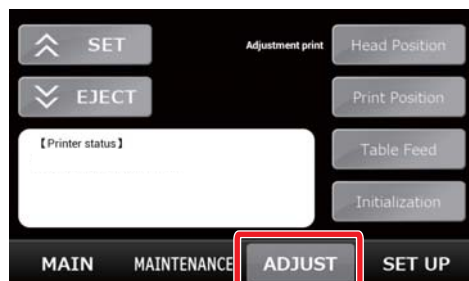
By using the cross as a guide, input an adjustment value, and tap [Enter].

- 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, you must perform all the image quality adjustment. Pay close attention when using this function.

[1]



Tap the [ADJUST] key.

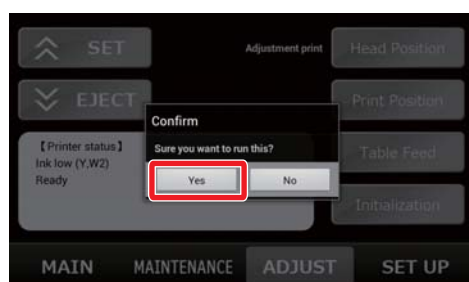
[2]



Tap [Initialization].

- The confirmation dialog will appear.

[3]



Tap [Yes].

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



# Chapter 4 Maintenance

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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                                 | <a href="#">"Agitate the white ink cartridge (VJ-405GT)" on page 95</a><br><a href="#">"Nozzle check and cleaning" on page 24</a>                                                                                                                                                                                                                                                       |
| Every day after work                                            | <a href="#">"Cleaning the cleaning wiper and the cap" on page 101 (VJ-405GT)</a>                                                                                                                                                                                                                                                                                                        |
| Maintenance performed with use                                  | <a href="#">"Empty the waste ink bottle" on page 97</a><br><a href="#">"Replacing the left flushing box and resetting the left flushing box counter" on page 116</a><br><a href="#">"Replacing the mist filters" on page 121</a>                                                                                                                                                        |
| Once a week                                                     | <a href="#">"Cleaning the cleaning wiper and the cap" on page 101 (VJ-404GT)</a><br><a href="#">"Cleaning the area around the print head" on page 107</a><br><a href="#">"Cleaning the encoder scale" on page 110 (When the "Head Gap" setting is set to "Large")</a><br><a href="#">"Cleaning and greasing the shafts" on page 113 (When the "Head Gap" setting is set to "Large")</a> |
| Once every two weeks                                            | <a href="#">"Cleaning the encoder scale" on page 110</a><br><a href="#">"Cleaning and greasing the shafts" on page 113</a>                                                                                                                                                                                                                                                              |
| When not using the printer for one week or more                 | <a href="#">"Long-term storage" on page 130</a>                                                                                                                                                                                                                                                                                                                                         |
| When converting 5-color to 4-color ink configuration (VJ-405GT) | <a href="#">"Converting 5-color to 4-color ink configuration (VJ-405GT)" on page 131</a>                                                                                                                                                                                                                                                                                                |

# Agitate the white ink cartridge (VJ-405GT)

## Agitate the white ink cartridge (VJ-405GT)

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

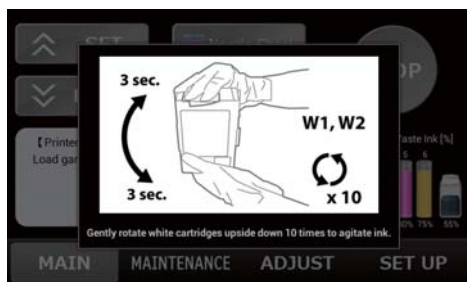
- Every day before and after printer operation.
- When the sub power button flashes quickly (twice a second) and the following message appears on the touch panel:  
"Gently rotate white ink cartridges upside down 10 times to agitate ink."

### Required items:

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

### Steps

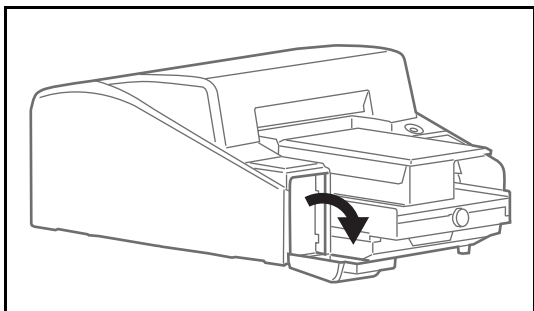
- [1] Make sure that the message appears on the touch panel.



- [2] When agitating 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.

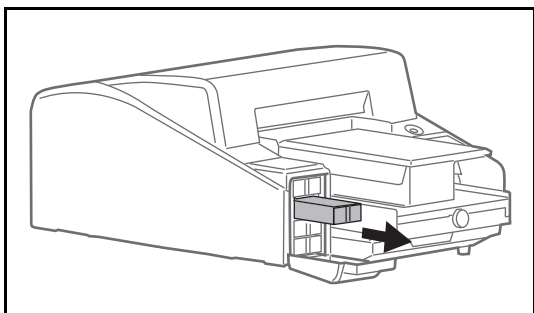
- [4] Open the cartridge cover on the white ink side.

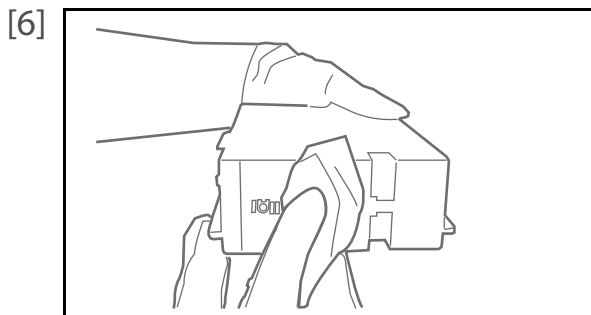


Note

Press the cartridge cover to open it.

- [5] Remove the white ink cartridge from the cartridge slot.

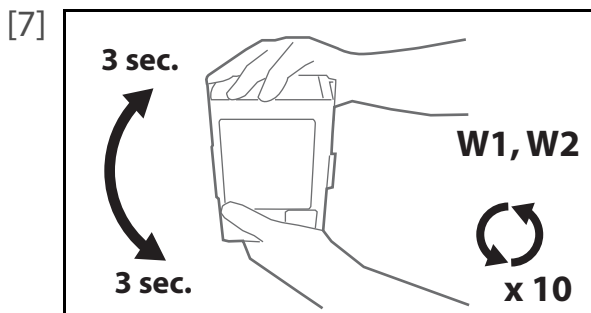




Using a lint-free cloth, wipe off ink adhering to the cartridge ink plug.

**Important!**

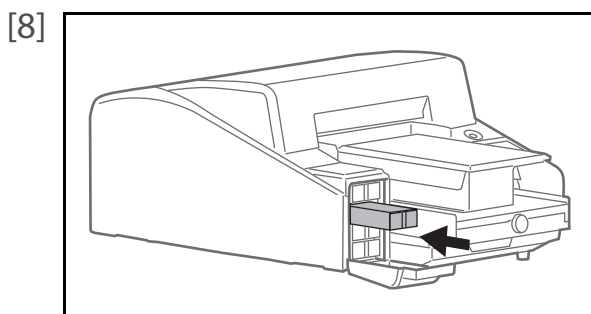
**Avoid touching the IC chip.**



- While holding the ink plug with the lint-free cloth, point the ink plug upward and wait 3 seconds.
- Next, turn the ink plug downward and wait for 3 seconds.
- Repeat that 10 times.

**Important!**

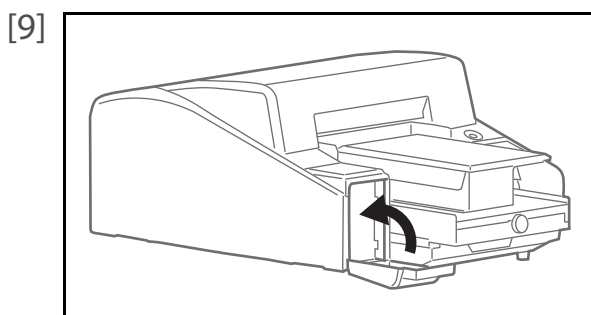
**Be sure to agitate both W1 and W2.**



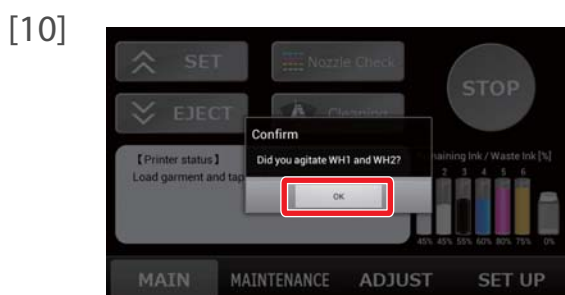
Reinstall the ink cartridge to the original cartridge slot.

**Important!**

- **The white ink cartridge must be agitated periodically.**  
If 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.**



Close the cartridge cover.



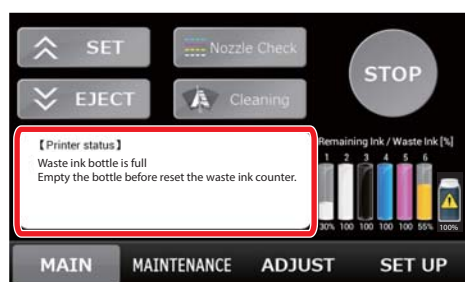
Tap [OK].

# Empty the waste ink bottle

## Empty the waste ink bottle

Once a certain amount of ink has been used, the following message appears on the touch panel.  
Pour 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 bottle before it is full.



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

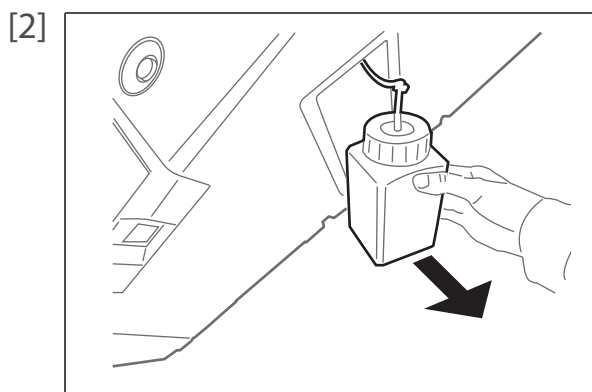
## 1. Transfer the waste ink to a container

---

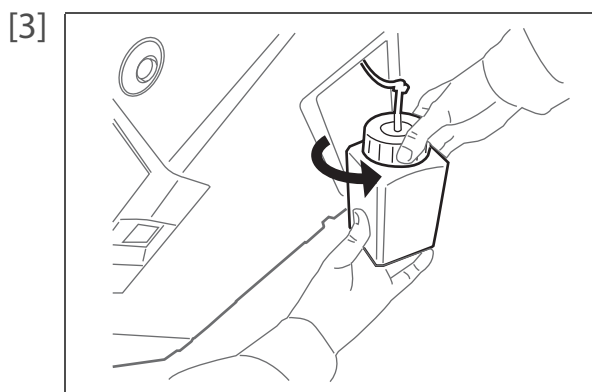
[1] Prepare a container to pour the waste ink into.

 **Important!**

- **The waste ink bottle capacity is 500 ml. Prepare a container that has sufficient capacity to accommodate the waste volume.**
- **Waste ink may spill onto the floor during work. We recommend placing a piece of cloth underneath to protect the floor.**



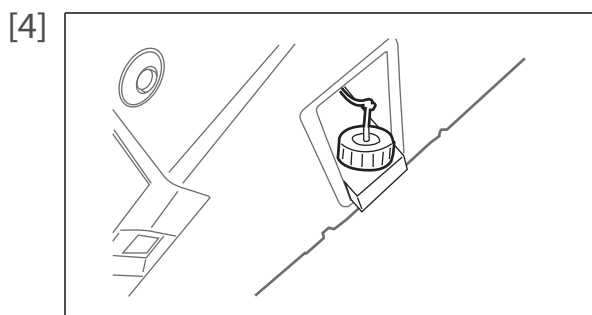
Remove the waste ink bottle from the printer.



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

 **Important!**

**Ink may spill from the tube of the waste ink bottle cap.**

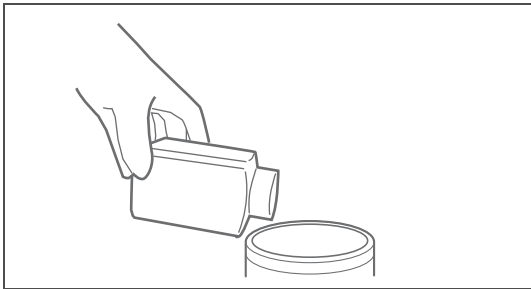


Place the waste ink bottle cap in the waste ink bottle holder.

 **Important!**

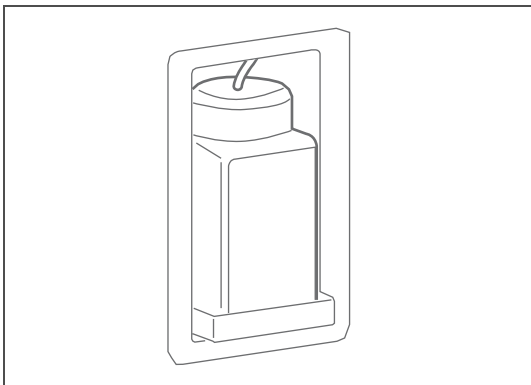
**If ink spills on the holder, wipe off immediately.**

[5]



Pour the waste ink into the container.

[6]



Install the waste ink bottle to the printer.



**After installing 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.
- Avoid contact of waste ink with your eyes or skin.  
If ink contacts your eyes or skin, wash with water immediately. If not, it may result in bloodshot eyes or light inflammation. Consult your doctor immediately if needed.

## 2. Initializing the waste ink

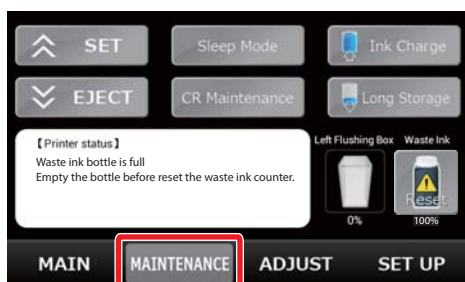
After emptying the waste ink bottle, reset the waste ink counter.

### WARNING



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

[1]



Tap the [MAINTENANCE] menu.

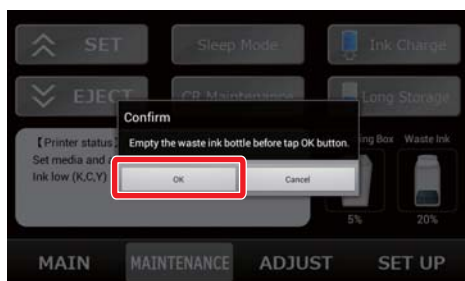
[2]



Tap on the [Waste Ink] icon.

- The confirmation dialog will appear.

[3]



Tap [OK] to reset the waste ink counter.

# Cleaning

## Cleaning the cleaning wiper and the cap

### When to clean:

- VJ-405GT: At the end of daily work
- VJ-404GT: Once a week
- If blurs, or missing lines or text still appears after head cleaning

### Required items:

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



### Make sure followings 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 tip of the cleaning stick with your fingers. Oil from your skin 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.**
- **This process should take no more than five minutes.**

### ⚠ CAUTION



Do not open or close the front cover while you are unstable.  
You may pinch your finger and get injured.

## 1. Setting CR Maintenance mode

[1]



Tap the [MAINTENANCE] key.

[2]



Tap the [CR Maintenance] key.

- The confirmation dialog will appear.

[3]



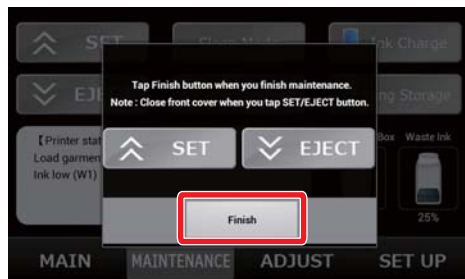
Tap [Yes].

- The carriage moves toward the center of the printer.



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

[4]

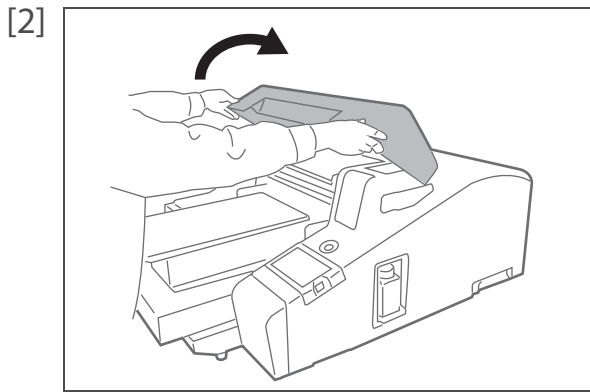


The left message appears.

- 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.



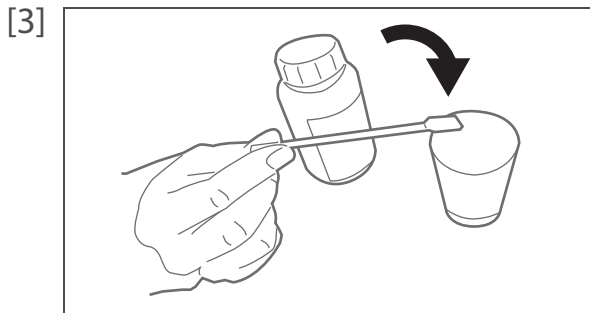
Hold the front cover in the position shown in the left and slowly open with both hands.

- Fully open the front cover.

### CAUTION



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

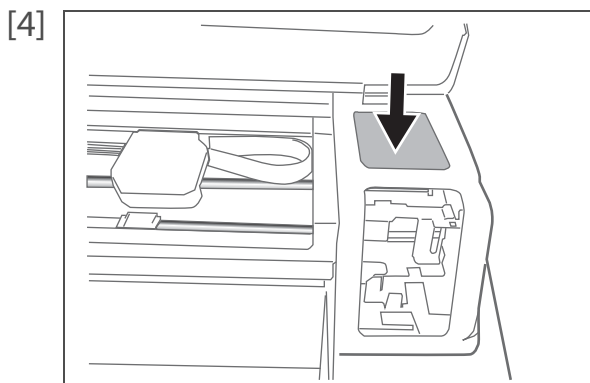


Pour the appropriate amount of maintenance liquid into the plastic cup provided and soak the cleaning stick in the maintenance liquid.



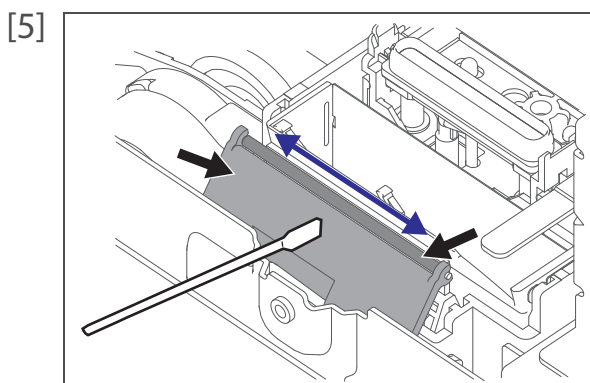
#### Note

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



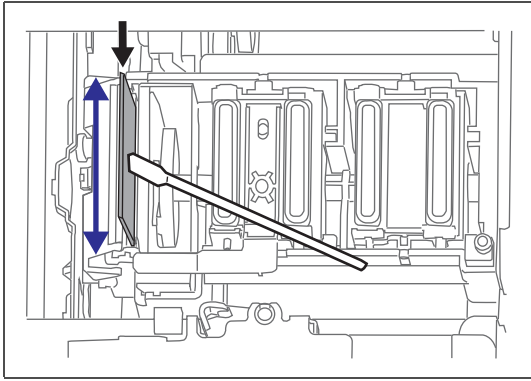
Check the location of the cleaning wiper.

- The cleaning wiper is located under the carriage before the carriage is being moved.



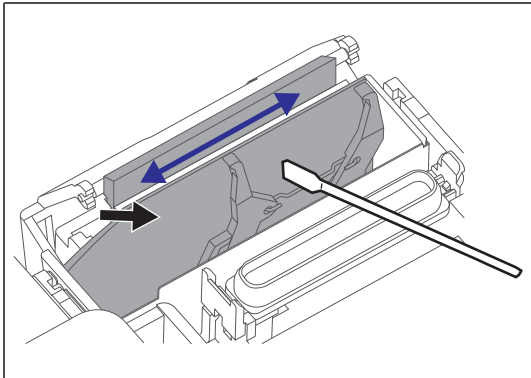
Use the clean stick to wipe off the stain from the left roller of the cleaning wiper and the surrounding area.

[6]



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

[7]



Wipe off the ink on the part located below the cleaning wiper.



**Important!**

**Once cured on this part, ink can accumulate on this area causing damage to the print head.**

[8]

Check that the cleaning wiper and the area around are clean.

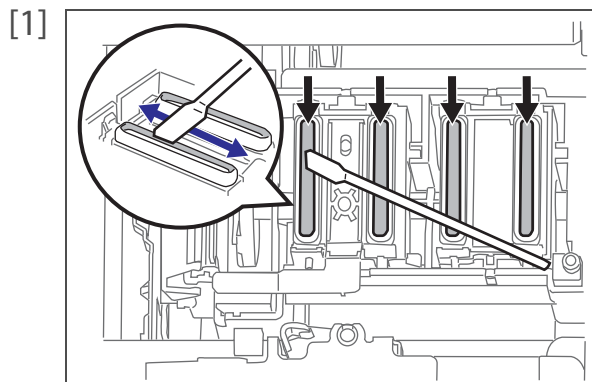
Left roller of the cleaning wiper and the surrounding area



Right side of the cleaning wiper and the surrounding area



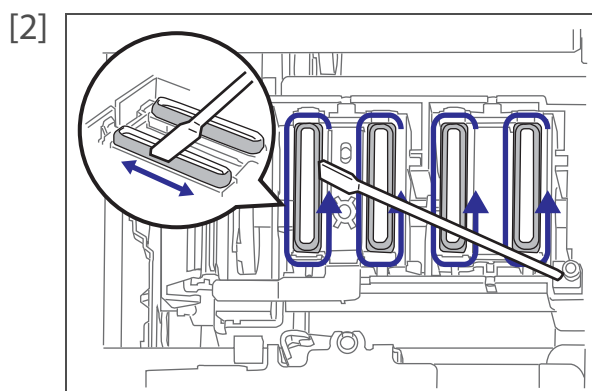
### 3. Cleaning the cap



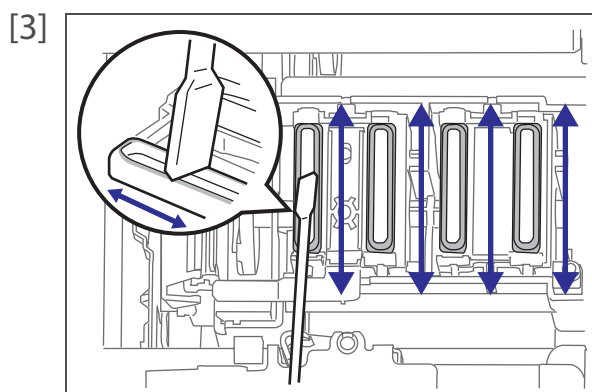
Wipe off the stain on the inside of the four caps.

#### 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. Oil from your fingers may adhere and head cleaning may not be performed correctly.



Wipe off the stain around the caps.



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

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

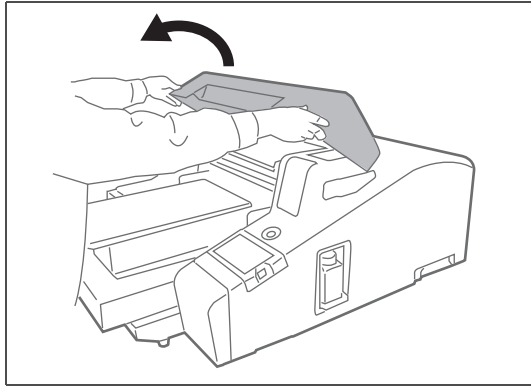
Before



After



[5]



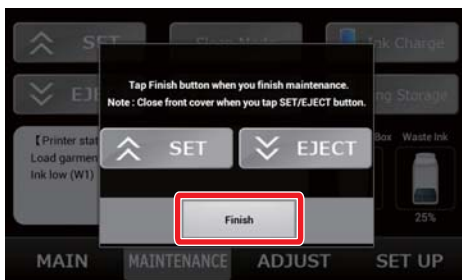
Hold the front cover in the position shown in the left and slowly close with both hands.

## CAUTION



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.

[6]



Tap [Finish] to complete this step.



## Note

If you will clean the area around the print head, move to the next step.

## Cleaning the area around the print head

### When to clean:

- Once a week
- If blurs, or missing lines or text still appears after head cleaning

### Required items:

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

### Important!

#### Make sure followings 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 tip of the cleaning stick with your fingers. Oil from your skin 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.**
- **This process should take no more than five minutes.**

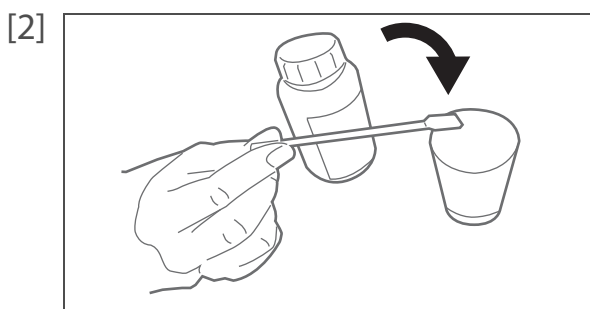
### ⚠ CAUTION



Do not open or close the front cover while you are unstable.  
You may pinch your finger and get injured.

## 1. Cleaning the area around the print head

[1] Wear the gloves provided.




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

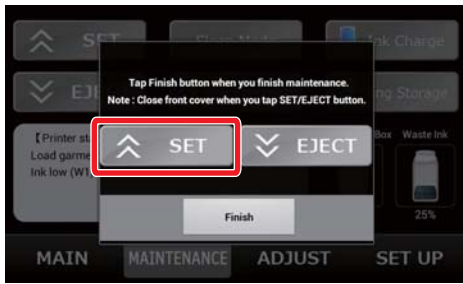
### Note

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 101](#)

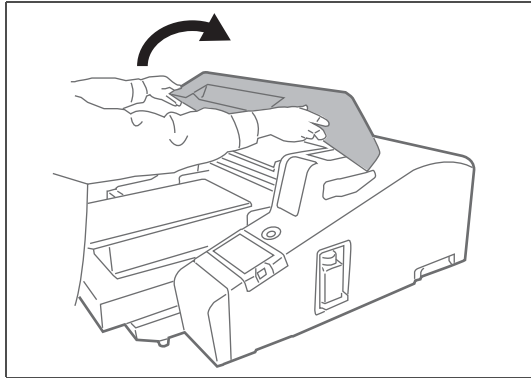
[5]



Tap the [SET] key.

- The table moves to the print start position.

[6]



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

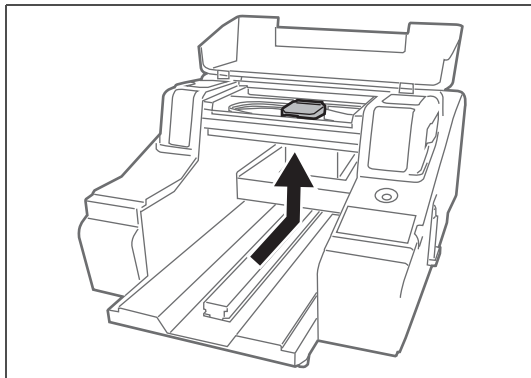
- Fully open the front cover.

### ⚠ CAUTION



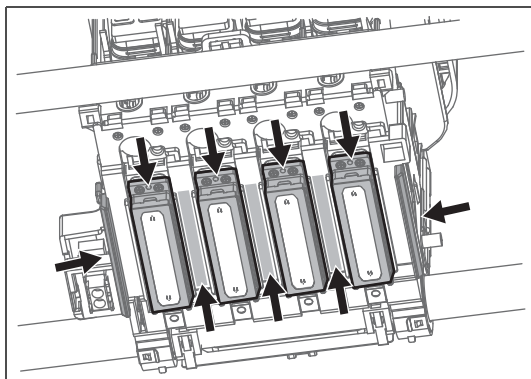
Do not leave the front cover half open.  
The cover may close suddenly.

[7]



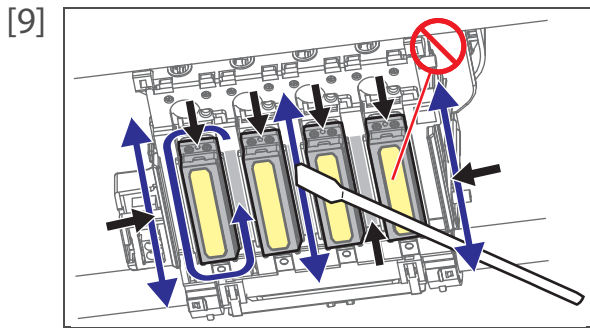
Look at the underside of the carriage.

[8]



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

- The area around each print head (the silver frame)
- Area between print heads
- Both sides of the carriage

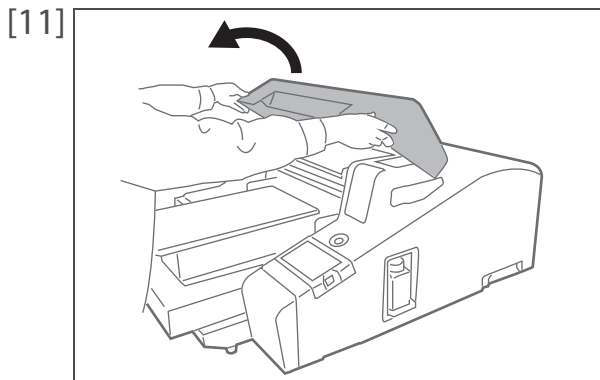
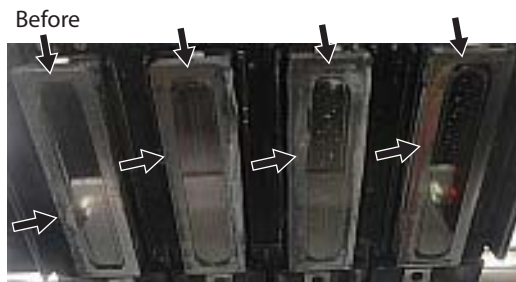


Use the cleaning stick to clean off any dust or ink stains found.

**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] Check that the area around the print head is clean.

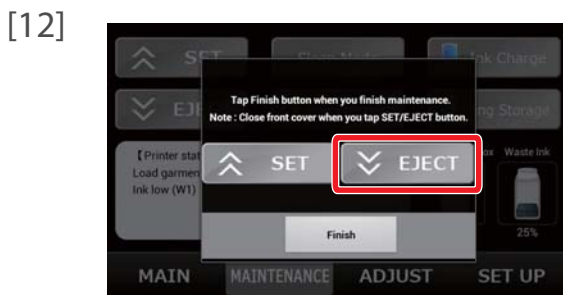


Hold the front cover in the position shown in the left and slowly close with both hands.

**CAUTION**

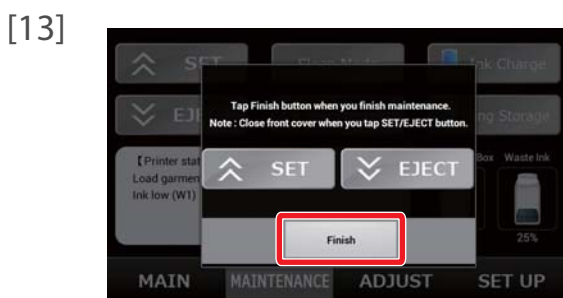


When closing the front cover, be sure to place both hands on the specified positions. If not, you may pinch your finger and get injured.



Tap the [EJECT] key.

- The table moves to the eject position.



Tap [Finish] to complete this step.

## 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:

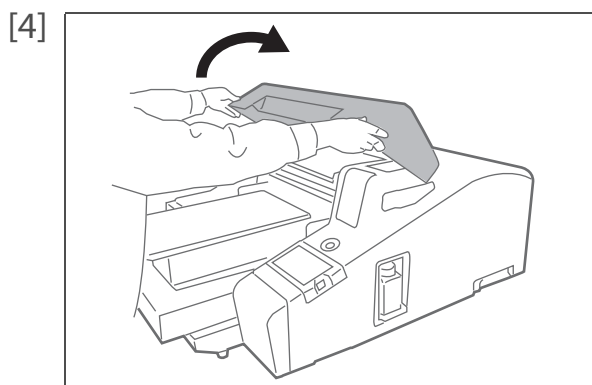
- Lint-free cloth (supplied accessory or commercially available item: use items such as polyester non-woven fabric with low dust production.) Or polyknit wipers (optional product)
- Ethanol (commercially available item: Use one with a concentration of 50% or higher.)
- Gloves (supplied accessory)

### 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. Take extra care 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.



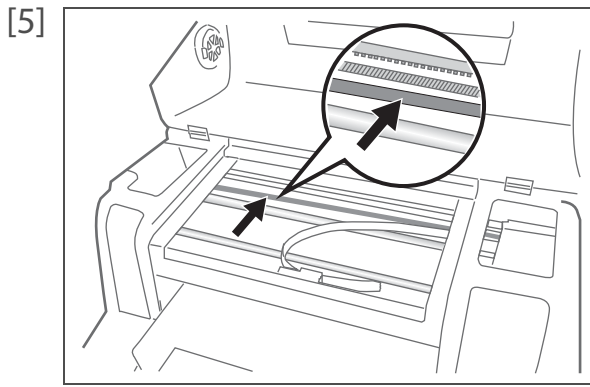
Hold the front cover in the position shown in the left and slowly open with both hands.

- Fully open the front cover.

### CAUTION

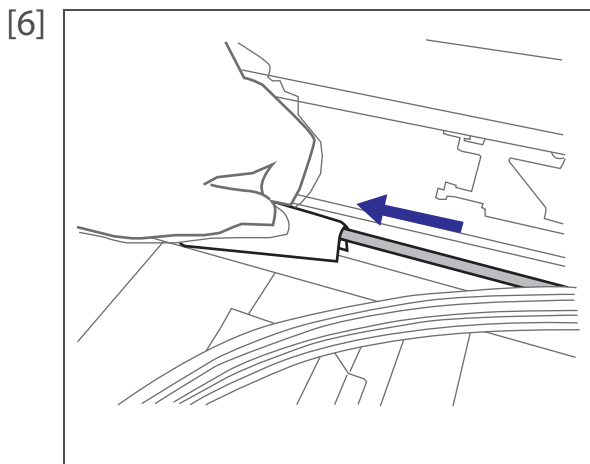


Do not leave the front cover half open.  
The cover may close suddenly.



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.



Softly cover the front and back of the encoder scale with a lint-free cloth.  
From the center toward the far left of the scale, wipe it from right to left.

**Important!**

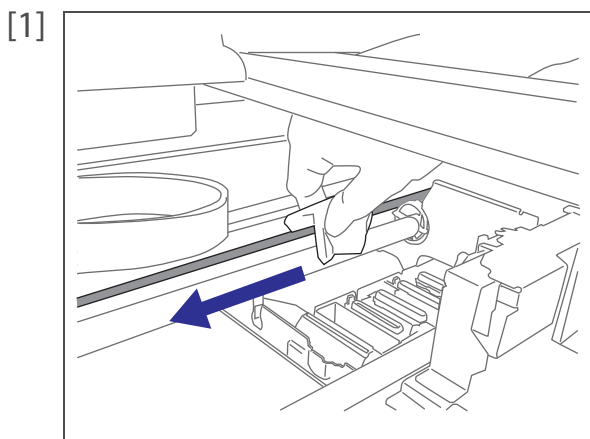
- **Take extra care not to hold it too tightly, or to bend the film.**
- **Avoid touching other parts.**  
**Adhering grease could result in errors.**
- **Always wipe the encoder scale from right to left.**  
**If you try to wipe from left to right, the encoder scale will come off.**

- [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 101](#)
  - ["Cleaning the right side of the encoder scale" on page 111](#)

**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



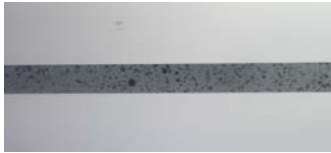
Wipe down the remaining part of the encoder scale.  
Softly cover the front and back of the encoder scale with a lint-free cloth.  
Wipe it from right to left.

**Important!**

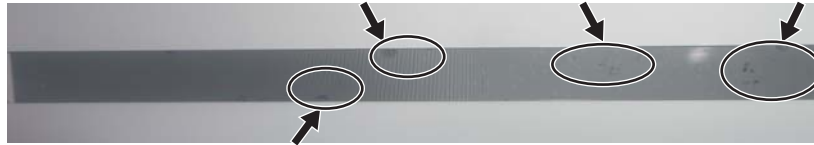
- **Take extra care not to hold it too tightly, or to bend the film.**
- **Avoid touching other parts.**  
**Adhering grease could result in errors.**
- **Always wipe the encoder scale from right to left.**  
**If you try to wipe from left to right, the encoder scale will come off.**

- [2] Check that the encoder scale is clean.

Before



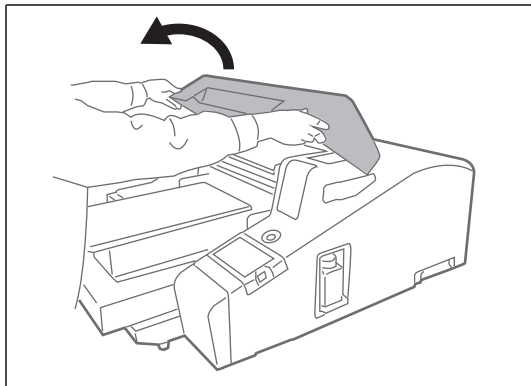
After



**Important!**

If dust or ink stain remains on the encoder scale, slightly moisten a lint-free cloth with ethanol and wipe it from right to left.

- [3]



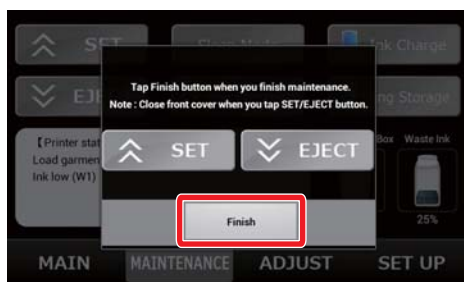
After wiping, hold the front cover in the position shown in the left and slowly close with both hands.

**CAUTION**



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.

- [4]



Tap [Finish] to complete this step.

**Note**

If you have not cleaned the shafts, move to the next step to clean them.

## 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)

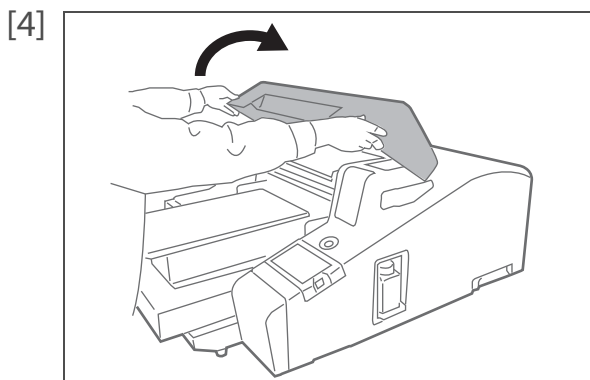


**Use non-fluffed lint-free cloths. Do not use tissue paper. The fiber and fine dust from paper could negatively impact the encoder scale.**

### 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.



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

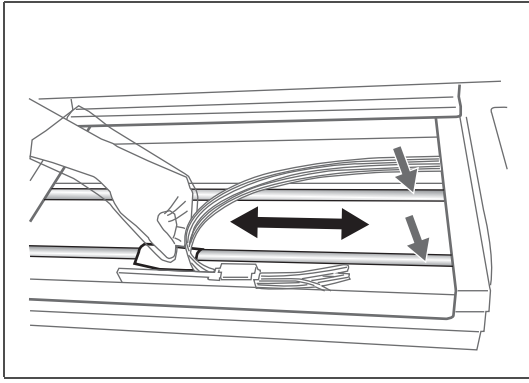
- Fully open the front cover.

### CAUTION



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

[5]



Wipe from the left side to the center 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.**
- **Avoid touching 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 101](#)

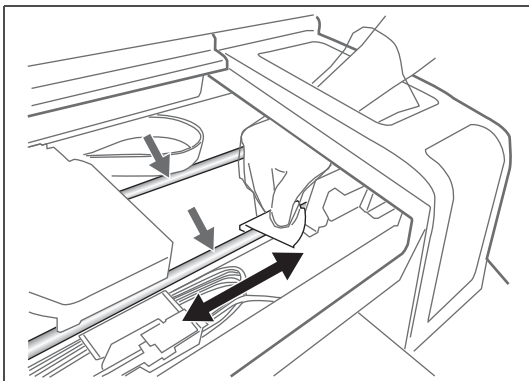
["Cleaning the right side of the shafts and greasing the entire shafts" on page 114](#)

**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 shafts

[1]

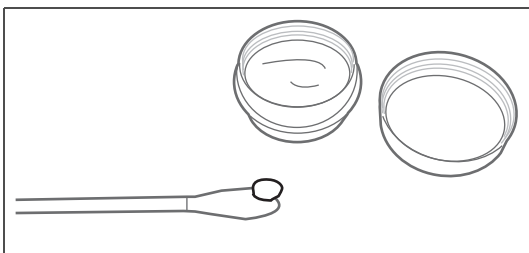


Wipe the rest of both shafts to remove ink stains.

**Important!**

- **Do not touch the encoder scale.**  
**Adhered grease may cause errors.**
- **Avoid touching other parts.**

[2]

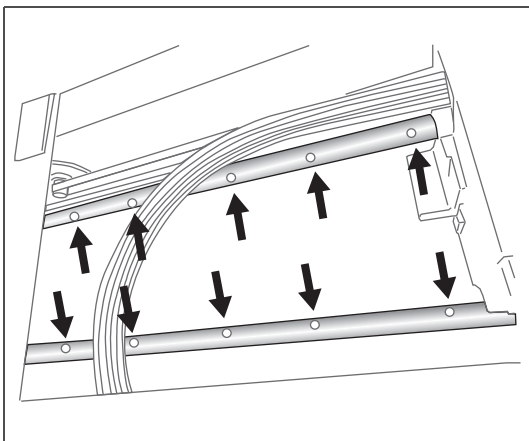


Scoop small amount of grease with a cotton swab.

**Important!**

**Applying too much grease may reduce output quality.**

[3]



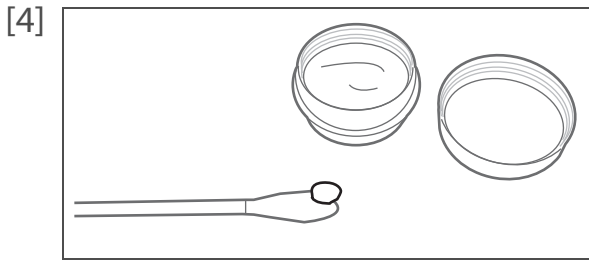
Apply grease to the left side of the shafts.

- 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.**  
**It may cause an error.**

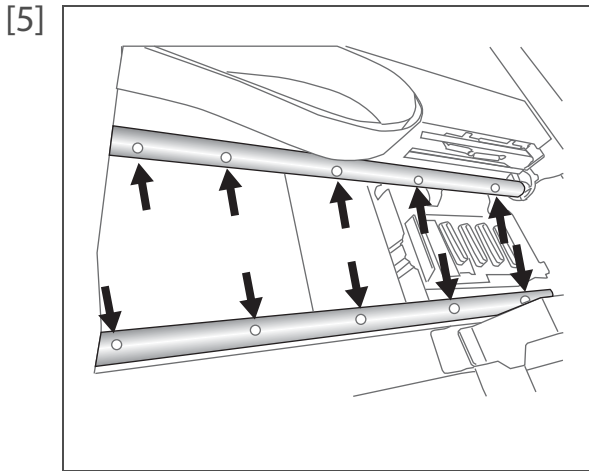
["Cleaning the encoder scale" on page 110](#)



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



**Applying too much grease may reduce output quality.**



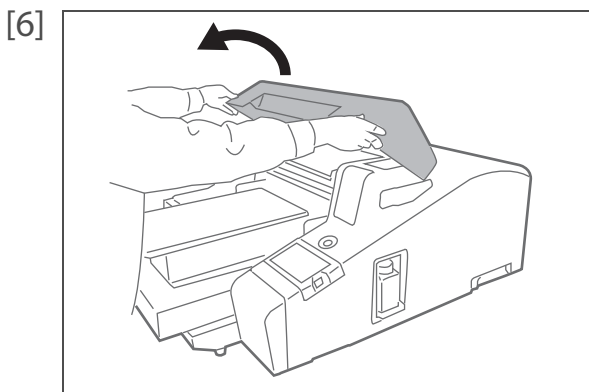
Apply grease to the right side of the shafts.

- 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.



**Clean the encoder scale if grease adheres to it. It may cause an error.**

["Cleaning the encoder scale" on page 110](#)

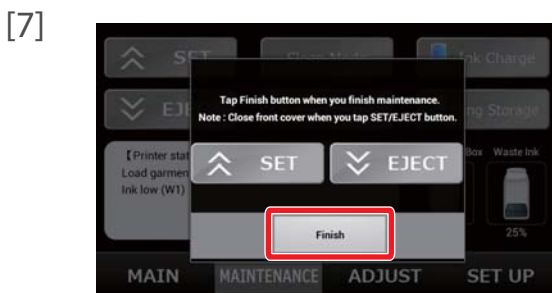


Hold the front cover in the position shown in the left and slowly close with both hands.

## CAUTION



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.



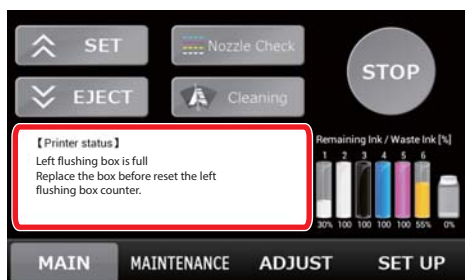
Tap [Finish] to complete this step.

# Replacing expendable items

## Replacing the left flushing box and resetting the left flushing box counter

Once a certain amount of ink has been used, the following message appears 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 is as follows.



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

### Required items for replacement:

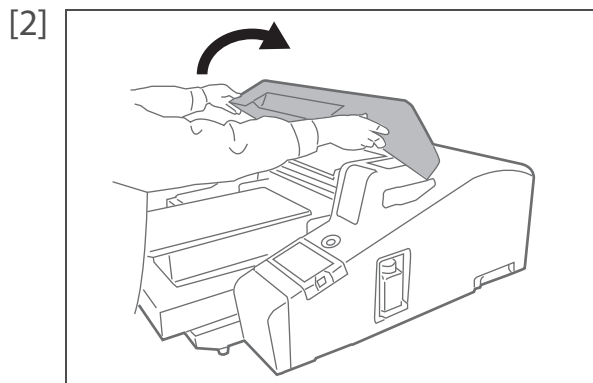
- Phillips-head screwdriver (commercially available item)
- Left flushing box (supplied accessory or optional product)
- Gloves (supplied accessory)

#### Note

The printer comes with one spare flushing box. It is also available as optional accessory.

## 1. Replacing the flushing box

[1] Wear the gloves supplied with the product.



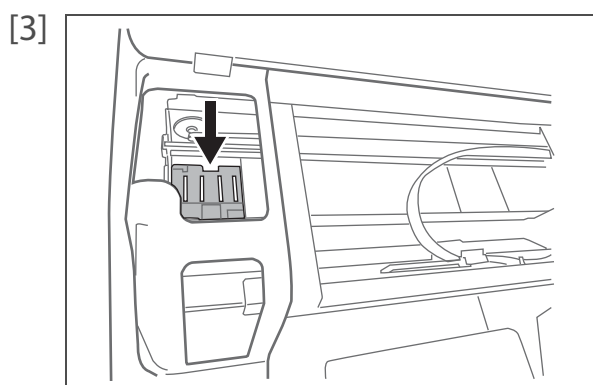
Hold the front cover in the position shown in the left and slowly open with both hands.

- Fully open the front cover.

### CAUTION

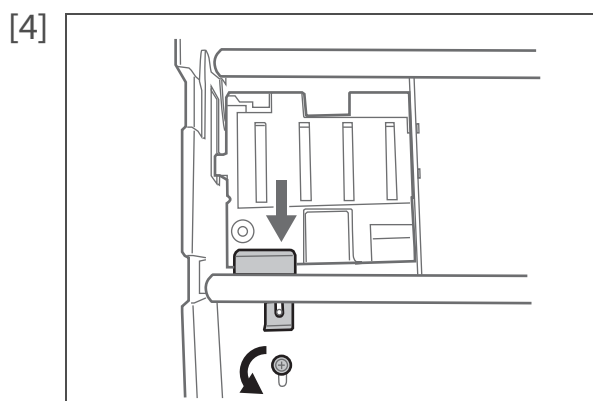


Do not leave the front cover half open.  
The cover may close suddenly.



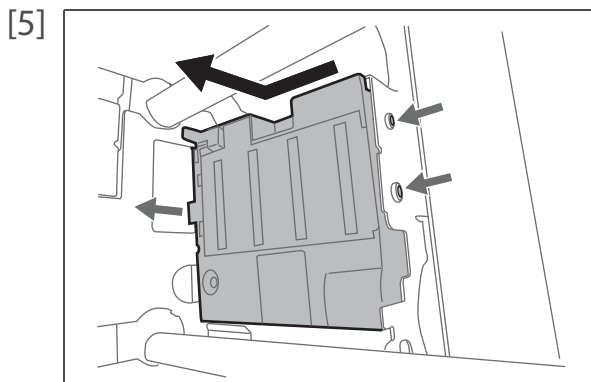
Check the position of the flushing box.

- The black flushing box with four vertical holes on the top is located in the recess on the left side of the product.



Loosen the screw (M3) on the side of the flushing box closest to you with a phillips-head 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.



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.

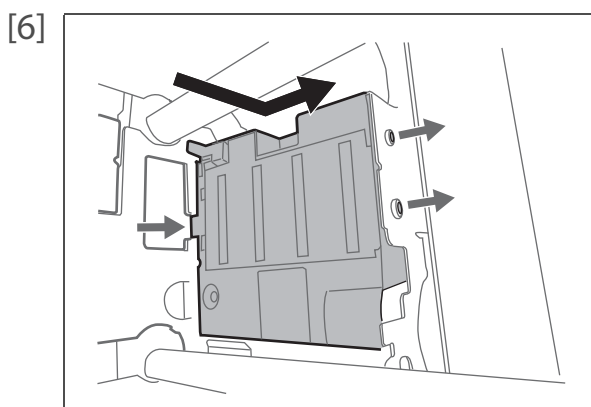
Important!

- **Do not spill ink inside the flushing box.**
- **Avoid touching the encoder scale or the shafts with the flushing box.**

**WARNING**

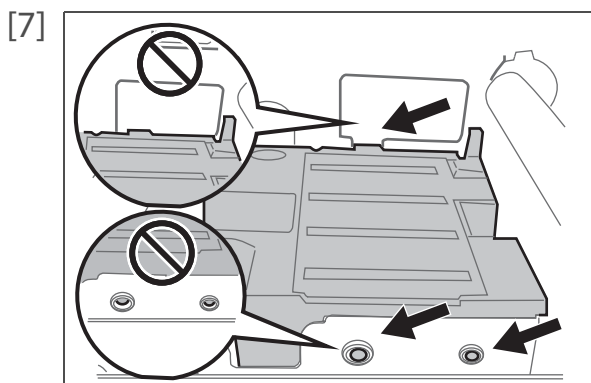


Dispose of used flushing boxes in a manner based on regulations prescribed in the Waste Management Act and those of each municipality by requesting the services of an industrial waste treatment contractor, etc.



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.



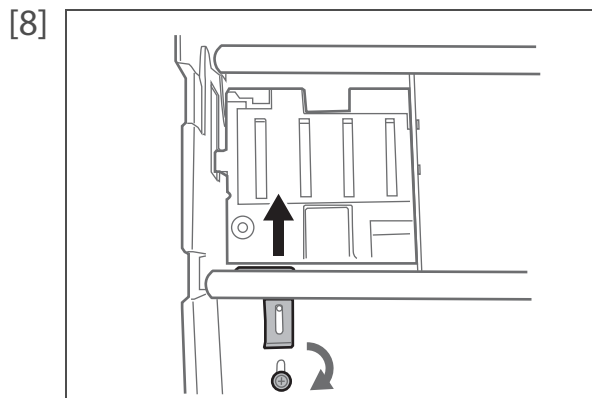
Look at the flushing box from the right side of the printer and check the following.

- 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?

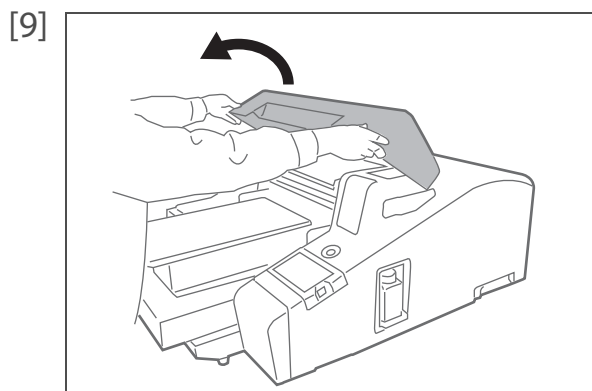
Important!

The following issues will occur if the flushing box is not installed properly.

- The flushing box may strike a print head, and it may cause the print head damage.
- If the ink mist stains inside the printer, it could cause errors.



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



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. If not, you may pinch your finger and get injured.

## 2. Resetting the left flushing box counter



Tap the [MAINTENANCE] menu.



Tap the [Left Flushing Box] key.

- The reset confirmation dialog will appear.

[3]



Tap [OK] to reset the counter.

## Replacing the mist filters

Replace the mist filters if either has become dirty.

Reedit cycle:

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

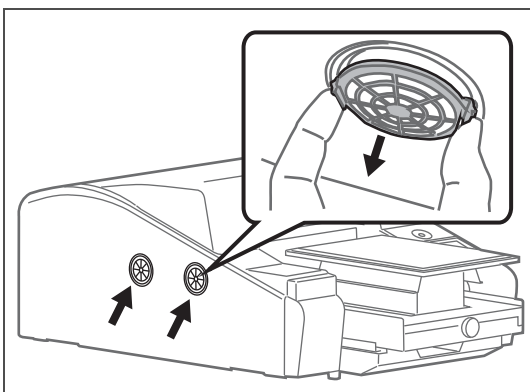
Required items for replacement:

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

### Steps

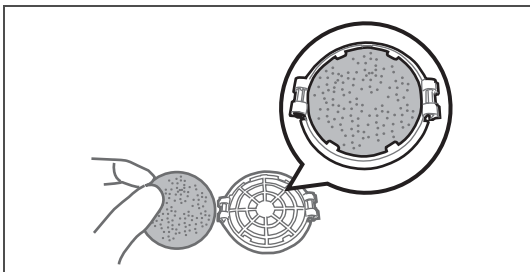
[1] Wear the gloves supplied with the product.

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

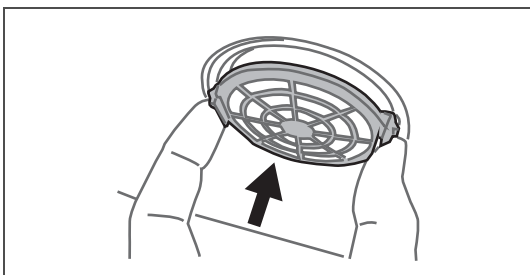


Mist filters are not used for filter covers on the right side of the printer. Do not remove.

[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 an extended period of time.

## Transporting procedure

Before transporting the product, you need to

- 1) Fill cleaner into the printer. ["Charging the cleaner and removing the waste ink" on page 122](#)
- 2) Perform cleaning of the printer. ["Cleaning each part" on page 101](#)
- 3) Empty waste ink bottle. ["Empty the waste ink bottle" on page 97](#)
- 4) Fix the platen table with the shipping brackets. ["Repackaging" on page 124](#)

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.

["Reinstallation" on page 126](#), ["Initial ink charging method" on page 127](#)

### Important!

- **When moving this product, even for short distances, always empty the waste ink bottle. 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 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.

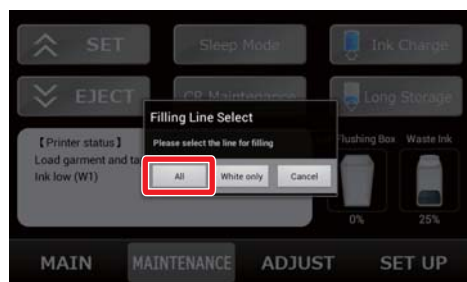
[2]



Tap the [Long Storage] key.

- The filling ink line selection dialog will appear.

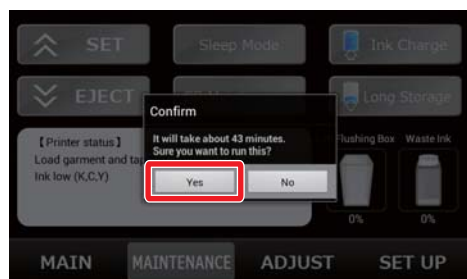
[3]



Tap [All].

- The confirmation dialog will appear.

[4]



Tap [Yes] to confirm ink filling time.

- The waste ink bottle confirmation dialog will appear.



Note

If you tap [No], the screen goes back to the MAINTENANCE menu.

[5]



- Check the waste ink bottle, and then put the waste ink into the container.

 ["Empty the waste ink bottle" on page 97](#)

- Tap [Yes].
- The cartridge confirmation dialog will appear.

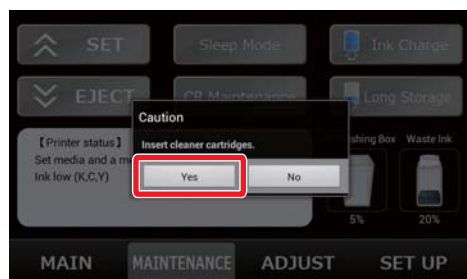


Important!

**After you installing 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.**

[6]



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

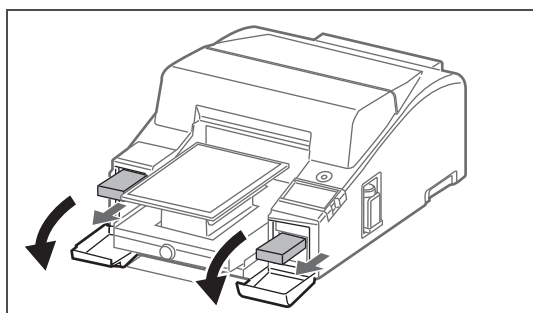


Note

The charging progress is indicated in percentage.

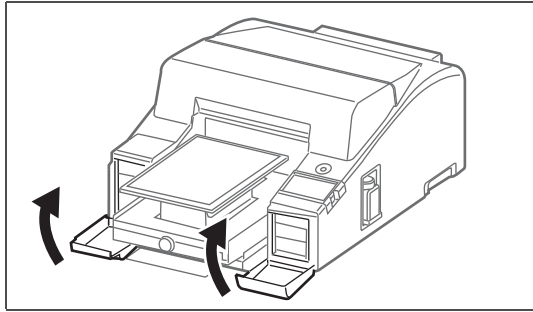
[7] Make sure that the charging is completed.

[8]



Open the cartridge covers and remove all cleaner cartridges.

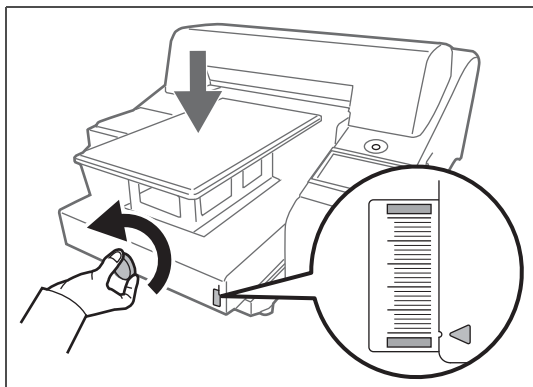
[9]



Close the cartridge covers.

## 2. Repackaging

[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]

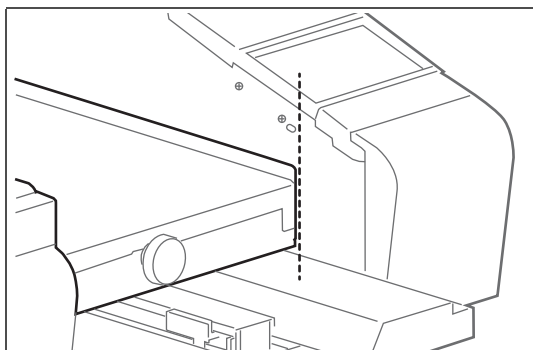
Remove the platen.

[3]



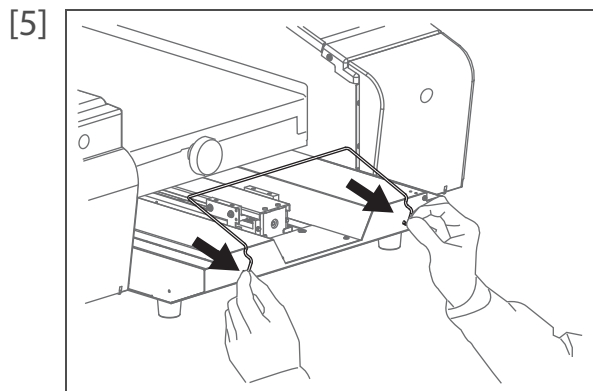
Tap the [SET] key.

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



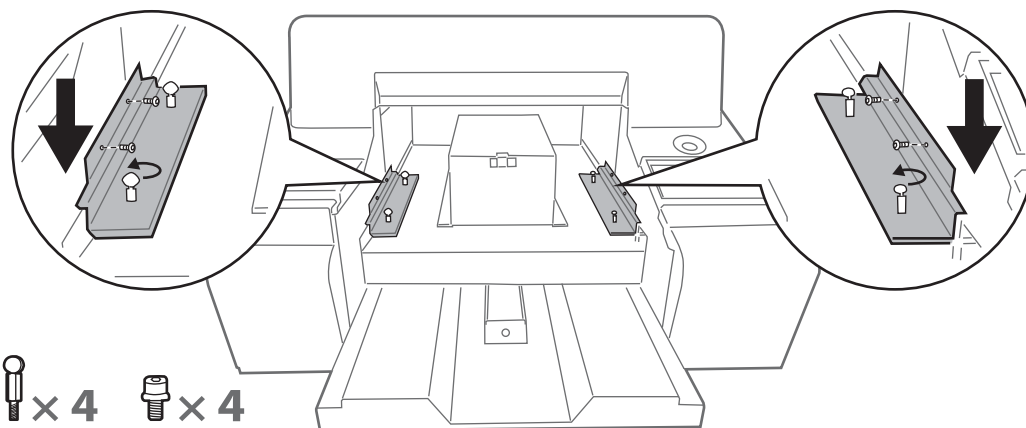
[4]

Turn off the sub power button and main power switch.



Remove the Table Position Guide.

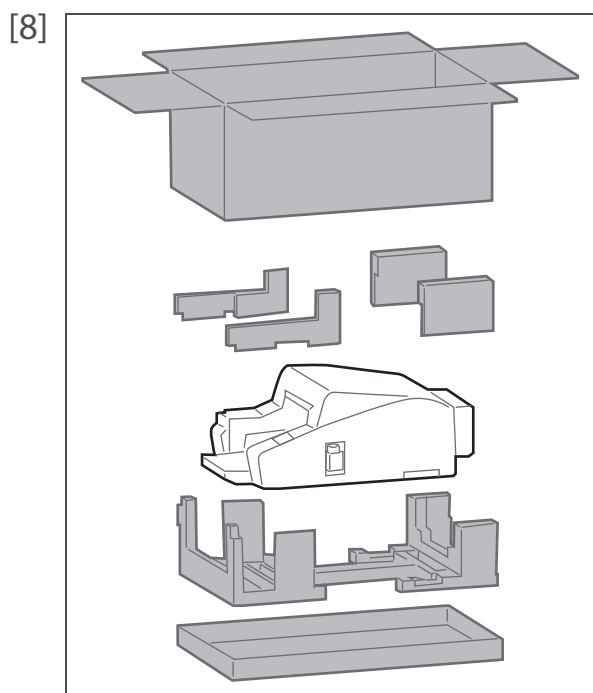
- [6] Install the shipping brackets (2) on the platen table with screws (four each).
- To fasten the screws (M4, two pieces each) on the side surfaces, use a hexagon wrench.



Note

Adjust the table position by hand.


- [7] Remove all the cable from the printer.



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 ink charging method" on page 127](#)

## Initial ink charging method

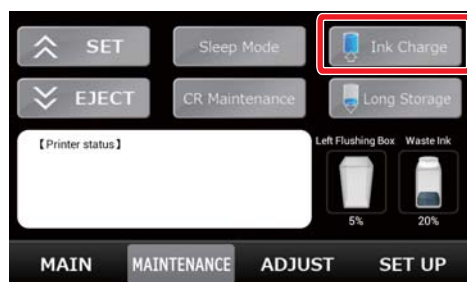
[1] Turn the main switch and sub power button on.

[2]



Tap the [MAINTENANCE] menu.

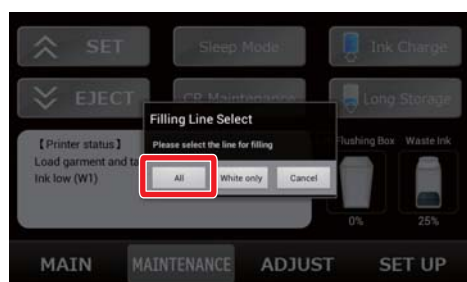
[3]



Tap the [Ink Charge] key.

- The filling ink line selection dialog will appear.

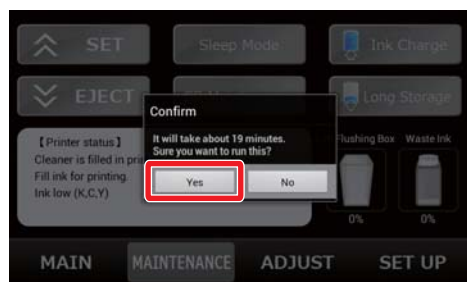
[4]



Tap [All].

- The confirmation dialog will appear.

[5]



Tap [Yes] to confirm ink filling time.

- The waste ink bottle confirmation dialog will appear.



Note

If you tap [No], the screen goes back to the MAINTENANCE menu.

[6]



- Check the waste ink bottle, and then put the waste ink into the container.

 ["Empty the waste ink bottle" on page 97](#)

- Tap [Yes].
- The cartridge confirmation dialog will appear.



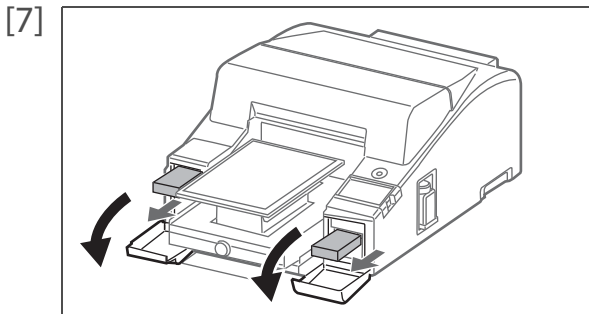
Important!

**After installing the bottle, make sure that the waste ink tube is not bent or dented.**

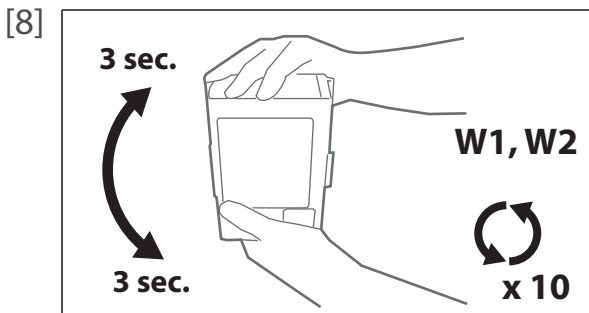
**If the tube is bent or dented, the waste ink may leak into the printer.**



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

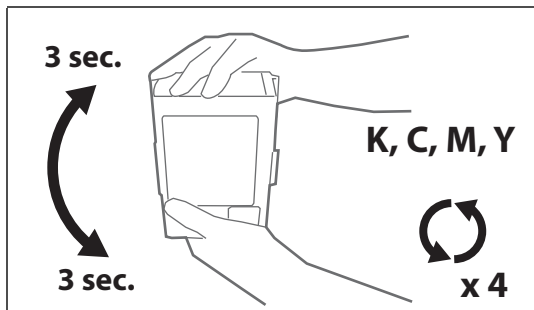


Open the cartridge covers and remove all cartridges.



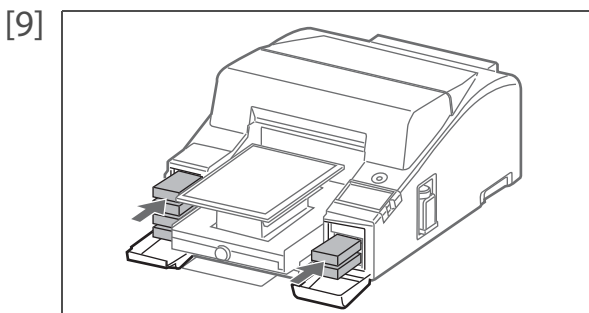
Make sure you agitate the ink cartridge after you unpack it.

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



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

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

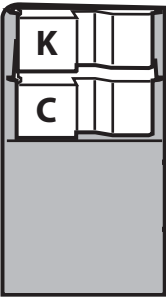
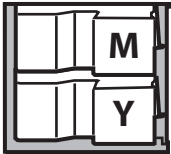
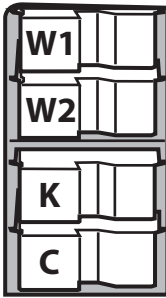
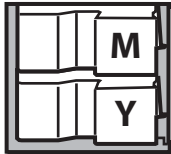


Insert the new ink cartridges.



**Note**

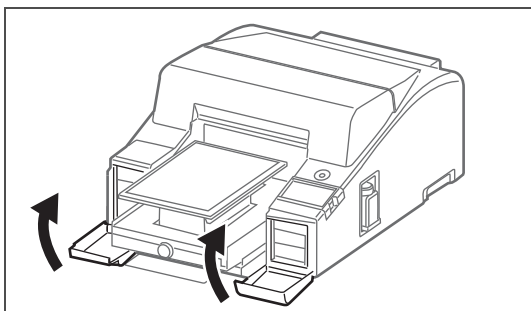
- Insert each cartridge into the proper slot.
- Insert the ink cartridges all the way into each slot.

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

### Important!

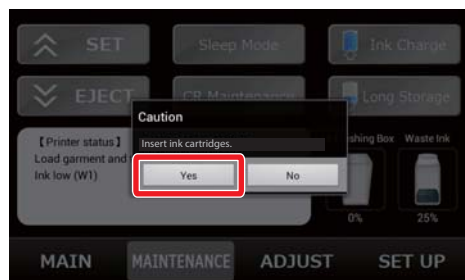
- **White ink W1 and W2 cartridges have different shapes. Make sure to install in the correct slots.**  
If not, it may cause printer damage.
- **When transferring ink cartridges from a cold location to a warm location, leave them at least three hours before use.**

[10]



Close the cartridge covers.

[11]





Tap [Yes] to start ink charging.

### Note

The ink charging progress is indicated in percentage.

## Long-term storage

- [1] Fill the cleaner and empty the waste ink bottle when the product is not in use for an extended period.  
 ["Charging the cleaner and removing the waste ink" on "Transporting procedure" on page 122](#)
- [2] Perform initial ink charging when using the product again.  
 ["Initial ink charging method" on page 127](#)

# Converting 5-color to 4-color ink configuration (VJ-405GT)

Please read this section when converting the ink configuration of your VJ-405GT from 5-color to 4-color setup.

## Performing "White only" cleaner filling (VJ-405GT)

Follow the steps below to perform "White only" flushing to flush the white ink lines and fill cleaner into those ink lines. Without filling cleaner, when you use the printer with white ink again, the print head can get clogged, causing damage to the printer.

When using the printer in 5-color configuration again, follow the instructions to fill white ink into the ink lines.

👉 "Performing "White only" ink filling (VJ-405GT)" on page 133

### Important!

- To perform "White only" flushing, make sure that the firmware version 1.07 or later is installed on your printer. If you use the earlier version of firmware and attempt "White only" flushing, it can clog the print head, causing damage to the printer.
- After converting to 4-color configuration, when the printer is not in use, always leave it in sleep mode and never turn it off. If not, ink inside the printer could settle out or coagulate, causing poor image quality or printer failure.

[1]



Tap the [MAINTENANCE] menu.

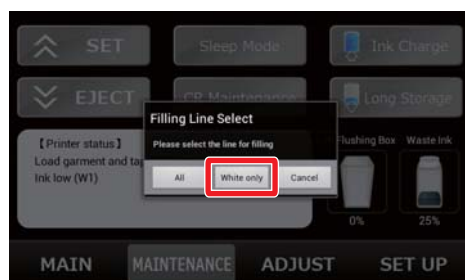
[2]



Tap the [Long Storage] key.

- The filling ink line selection dialog will appear.

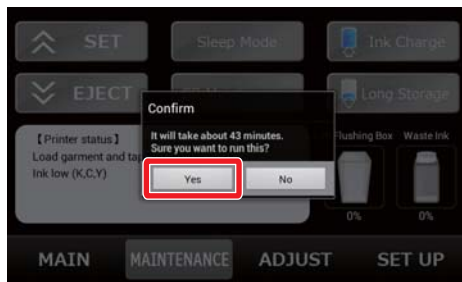
[3]



Tap [White only].

- The confirmation dialog will appear.

[4]



Tap [Yes] to confirm ink filling time.

- The waste ink bottle confirmation dialog will appear.



Note

If you tap [No], the screen goes back to the MAINTENANCE menu.

[5]



- Check the waste ink bottle, and then put the waste ink into the container.

 ["Empty the waste ink bottle" on page 97](#)

- Tap [Yes].
- The cartridge confirmation dialog will appear.

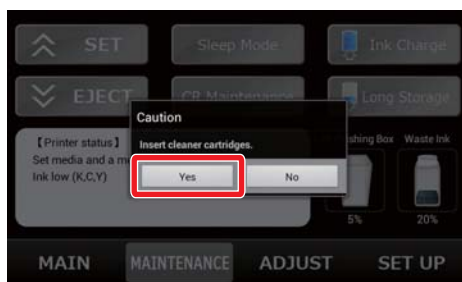


Important!

**After you installing 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.**

[6]



- Remove the white ink cartridges from the cartridge slot W1 and W2 and insert cleaner cartridges into those slots.

- Tap [Yes] to start charging cleaner.



Note

The charging progress is indicated in percentage.

[7]

Make sure that the charging is completed.

## Performing "White only" ink filling (VJ-405GT)

[1]



Tap the [MAINTENANCE] menu.

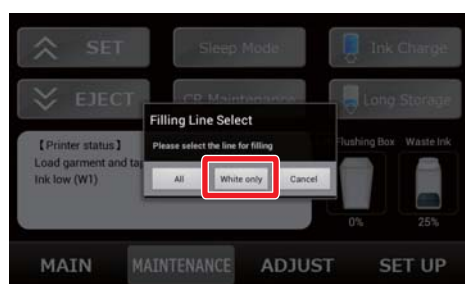
[2]



Tap the [Ink Charge] key.

- The filling ink line selection dialog will appear.

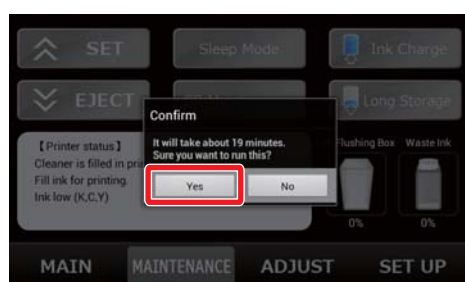
[3]



Tap [White only].

- The confirmation dialog will appear.

[4]



Tap [Yes] to confirm ink filling time.

- The waste ink bottle confirmation dialog will appear.



Note

If you tap [No], the screen goes back to the MAINTENANCE menu.

[5]



- Check the waste ink bottle, and then put the waste ink into the container.

☞ ["Empty the waste ink bottle" on page 97](#)

- Tap [Yes].
- The cartridge confirmation dialog will appear.



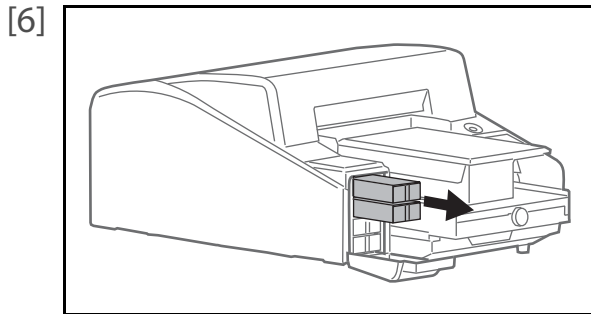
Important!

**After installing the bottle, make sure that the waste ink tube is not bent or dented.**

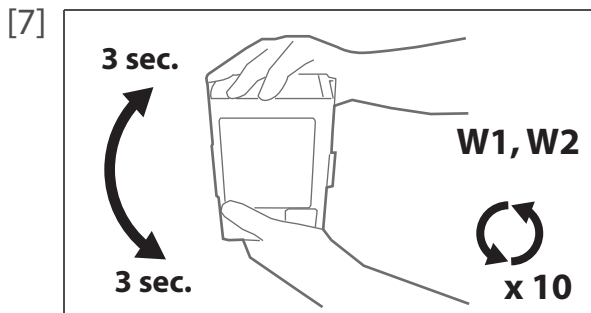
**If the tube is bent or dented, the waste ink may leak into the printer.**



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

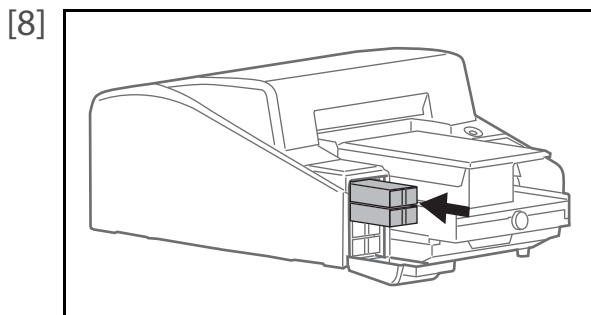


Open the left side cartridge cover and remove the cleaner cartridges from the cartridge slot W1 and W2.



Agitate the white ink cartridge.

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

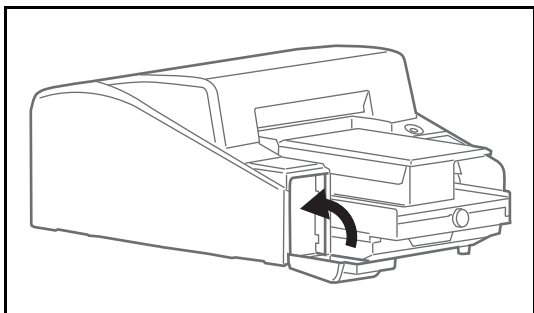


Insert the W1 and W2 cartridges into the appropriate cartridge slots.

 **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 transferring ink cartridges from a cold location to a warm location, leave them at least three hours before use.**

[9]

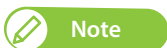


Close the cartridge cover.

[10]



Tap [Yes] to start ink charging.



Note

The ink charging progress is indicated in percentage.



# Chapter 5    Appendix




- Troubleshooting ..... 138
  - Warning messages ..... 138
  - Error messages during regular operation and possible solutions ..... 139
  - Errors that do not occur under regular use ..... 141
  - Problems that do not show a message ..... 142
- Product specifications ..... 143
  - List of specifications ..... 143

# 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.<br>[Solution] Empty the waste ink bottle before it is full.<br> <a href="#">"Empty the waste ink bottle" on page 97</a>                                                                                                                                               |
| Right Flushing Box is nearly full<br>Printer will stop working when the box comes to full | [Cause] The right flushing box is almost full.<br>[Solution] Please contact your Mutoh dealer before it is full.                                                                                                                                                                                                                                                                                    |
| Left Flushing Box is nearly full                                                          | [Cause] The left flushing box is almost full.<br>[Solution] Replace the left flushing box before it is full, and reset the waste ink counter.<br> <a href="#">"Replacing the left flushing box and resetting the left flushing box counter" on page 116</a>                                                        |
| Ink low ([Color name])                                                                    | [Cause] The amount of remaining ink is low (20% or less remaining). <ul style="list-style-type: none"><li>• The [Color name] in the warning message indicates the color of ink cartridge the warning applies to.</li></ul>                                                                                                                                                                          |
| Failed cleaning. Please retry.                                                            | [Cause] Cleaning was suspended due to a low amount of remaining ink or another reason.<br>[Solution] Try performing the suspended cleaning operation again.<br>If this message is displayed during cleaning after the initial ink charge, perform long cleaning.<br> <a href="#">"Cleaning steps" on page 29</a> |
| 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. <ul style="list-style-type: none"><li>• [Part name] indicates the name of a respective part.<br/>[PF Motor]<br/>[CR Motor]<br/>[Maintenance Unit]<br/>[Print Head Unit]<br/>[IH Assy (R)]<br/>[IH Assy (L upper)]<br/>[IH Assy (L lower)] (VJ-405GT only)</li></ul><br>[Solution] Contact your Mutoh dealer.                                          |






## Error messages during regular operation and possible solutions




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



### Note

If an error occurs, the sub power button flashes rapidly.

| Display                                                                                  | Description                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Used cartridge is loaded ([Color name])                                                  | [Cause] A used cartridge has been loaded.<br>[Solution] Replace the ink cartridge.<br> <a href="#">"When ink runs out during printing" on page 54</a>                                                                                           |
| Ink empty ([Color name])                                                                 | [Cause] The amount of ink remaining in the cartridge has reached 0%.<br>[Solution] Replace the ink cartridge.                                                                                                                                                                                                                    |
| Cartridge cover open                                                                     | [Cause] The cartridge cover is open.<br>[Solution] Close the cartridge cover.                                                                                                                                                                                                                                                    |
| Left flushing box is full<br>Replace the box before reset the left flushing box counter. | [Cause] The left flushing box is full.<br>[Solution] Replace the left flushing box and reset the waste ink counter.<br> <a href="#">"Replacing the left flushing box and resetting the left flushing box counter" on page 116</a>               |
| Right flushing box is full                                                               | [Cause] The right side flushing box is full.<br>[Solution] A reedit by our service personnel is required.<br>Please contact your Mutoh dealer.                                                                                                                                                                                   |
| Front cover open                                                                         | [Cause] The front cover is open.<br>[Solution] Close the front cover.                                                                                                                                                                                                                                                            |
| Cartridge is not loaded                                                                  | [Cause] An ink cartridge is not loaded in a cartridge slot.<br>[Solution] Load the ink cartridge.                                                                                                                                                                                                                                |
| Waste ink bottle is full<br>Empty the bottle before reset the waste ink counter.         | [Cause] The waste ink bottle is full.<br>[Solution] Empty the waste ink bottle and reset the waste ink counter.<br> <a href="#">"Empty the waste ink bottle" on page 97</a>                                                                   |
| The temperature is too low.                                                              | [Cause] An abnormally low temperature was detected.<br>[Solution] Have the printer temperature settle in an environment with the recommended ambient temperature before restarting.<br> <a href="#">"List of specifications" on page 143</a>  |
| The temperature is too high.                                                             | [Cause] An abnormally high temperature was detected.<br>[Solution] Have the printer temperature settle in an environment with the recommended ambient temperature before restarting.<br> <a href="#">"List of specifications" on page 143</a> |
| Non-supported cartridge is inserted.                                                     | [Cause] Non-supported cartridge has been loaded.<br>[Solution] Load a supported cartridge.                                                                                                                                                                                                                                       |
| Cartridge error.<br>Please check cartridge and try again.                                | [Cause] A cartridge combination error has occurred.<br>[Solution] Check that ink cartridges have been set in the correct combination.                                                                                                                                                                                            |

| Display                                                                                                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Printing Failed.<br>Please check the Ethernet connection.                                                                          | [Cause] The printer failed to receive the print data.<br>[Solution] Check if the ethernet cable is properly connected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Service call: ***                                                                                                                  | [Cause] An issue has occurred preventing the removal of the error state.<br>[Solution]<br>1. Turn off the sub power button. Leave it off for a while and then turn on the sub power button to restart the printer.<br>2. If the problem still persists after several attempts, please contact your Mutoh dealer with the error code.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Fatal error occurred! Reboot the printer.<br>Error code: PF MOTOR ERROR                                                            | [Cause] An error occurred with table control and this function has been stopped.<br>[Solution]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Fatal error occurred! Reboot the printer.<br>Error code: PF STOP FAILURE                                                           | 1. Remove any obstructions along the moving pathway of the table and restart the printer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Fatal error occurred! Reboot the printer.<br>Error code: PF ENCODER CHECK TIMEOUT                                                  | 2. If the problem persists after removing any obstructions a malfunction may have occurred in the PF encoder or the PF motor. Please contact your Mutoh dealer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Fatal error occurred! Reboot the printer.<br>Error code: PF ENCODER CHECK ERROR                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Fatal error occurred! Reboot the printer.<br>Error code: PF OVERLOAD                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Fatal error occurred!<br>Error code: CR ENCODER ERROR                                                                              | [Cause] A CR encoder error has occurred.<br>[Solution]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| If the carriage is left while not capping, the head nozzles will be clogged.<br>Please tap “Cap in” button and reboot the printer. | 1. Remove any obstructions along the moving pathway of the carriage.<br>2. Restart and clean the encoder scale and the shafts.<br>3. 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.<br>4. Please contact your Mutoh dealer if this occurs again.<br> <a href="#">"Cleaning the encoder scale" on page 110</a><br> <a href="#">"Cleaning and greasing the shafts" on page 113</a><br> <a href="#">"Replacing the flushing box" on page 117</a> |



#### 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.<br>Retrying to establish connection.<br>Please restart the printer if this message does not disappear in few minutes. | <p>[Cause] A communication error occurred between the touch panel and the printer engine when starting up the printer.</p> <p>[Solution]</p> <ol style="list-style-type: none"> <li>1. Wait around 30 seconds.</li> <li>2. If the problem persists, turn the sub power button off. Leave it off for a while and then turn on the sub power button to restart the printer.</li> <li>3. If the problem still persists, please contact your Mutoh dealer.</li> </ol>                                                                                                      |
| Mismatch Color Configuration (CTL)                                                                                                                | <p>[Cause] A mismatch between the 4 color / 5 color settings for the printer and the firmware was detected when starting up the printer.</p> <p>[Solution]</p> <ol style="list-style-type: none"> <li>1. Check the firmware version and make sure that the appropriate firmware is installed for the device.</li> <li>2. If the correct firmware is installed, turn off the sub power button. Leave it off for a while and then turn on the sub power button to restart the printer.</li> <li>3. If the problem persists, please contact your Mutoh dealer.</li> </ol> |
| Color Config Switching Failure (SCB)                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Engine service call : ***                                                                                                                         | <p>[Cause] An issue occurred with the printer engine.</p> <p>[Solution]</p> <ol style="list-style-type: none"> <li>1. Turn off the sub power button. Leave it off for a while and then turn on the sub power button to restart the printer.</li> <li>2. If the problem still persists after several attempts, please contact your Mutoh dealer with the error code.</li> </ol>                                                                                                                                                                                         |



### 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. | <div>1. Check the main power switch and turn it on if it is in the off position.</div> <div>2. If it is in the on position, leave it for five seconds, and then hold down.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| When nozzle clogging remains even after "Normal" cleaning.           | <div>1. When nozzle clogging remains even after repeating "Normal" cleaning several times, conduct "Strong" cleaning.</div> <div>2. When nozzle clogging remains even after repeating "Strong" cleaning several times, conduct "<a href="#">Cleaning the cleaning wiper and the cap on page 101</a>" or "<a href="#">Cleaning the area around the print head on page 107</a>".</div> <div>3. If the nozzle clogging still is not rectified, carry out "Little Charge".<br/> "<a href="#">Nozzle check and cleaning on page 24</a>"</div> |
| 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 (VJ-405GT) / 2 pass (VJ-404GT)                                                |
|                     | Fine                                                                                                                                                     | 600 x 1,200 dpi: Unidirectional, 8 pass (VJ-405GT) / 4 pass (VJ-404GT)                                              |
|                     | Super Fine                                                                                                                                               | 1,200 x 1,200 dpi: Unidirectional, 16 pass (VJ-405GT) / 8 pass (VJ-404GT)                                           |
| 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                                                                                                                                  | 25 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)<br>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)                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                         | Recommended Printing Environment | Temperature: 22 °C to 30 °C, Humidity: 40% to 60% (Non-condensing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                         | Rate of change                   | Temperature: 2 °C or less per hour<br>Humidity: 5% or less per hour                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                         | Printer Storage Environment      | <Storage with cleaner filling (Within 6 months)> <ul style="list-style-type: none"> <li>• Temperature: 20 °C to 50 °C</li> <li>• Humidity: 20% to 80% RH (without condensation)</li> </ul> *When the printer is left at 50 °C, the storage period should be within 5 days.<br><Storage with ink filling (Within 1 week)> <ul style="list-style-type: none"> <li>• Temperature: 5 °C to 30 °C</li> <li>• Humidity: 20% to 60% RH (without condensation)</li> </ul> * Constant power supply is required by entering the sleep mode. |
|                         |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Ink Storage Environment |                                  | Black/Cyan/Magenta/Yellow/White (200 ml each) <ul style="list-style-type: none"> <li>• Temperature: 5 °C to 35 °C</li> <li>• Humidity: Non-condensing</li> </ul><br>Pre-treatment Solution <ul style="list-style-type: none"> <li>• Temperature: 5 °C to 35 °C</li> <li>• Humidity: Non-condensing</li> </ul><br>Cleaning Cartridge <ul style="list-style-type: none"> <li>• Temperature: 5 °C to 35 °C</li> <li>• Humidity: Non-condensing</li> </ul>                                                                            |
| 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                      | 1.9 A or less                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                         | 200V - 240V                      | 1.3 A or less                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| External dimensions     | Height                           | 488 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                         | Width                            | 817 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                         | Depth                            | 1,425 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Weight                  | Unit                             | 82 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |



**MUTOH**