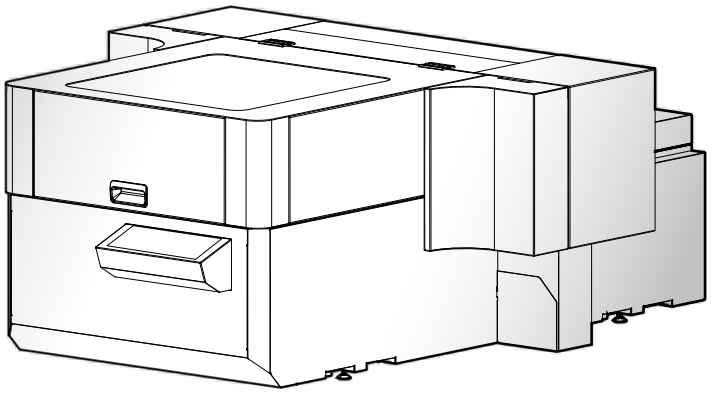
MUTOH

# XPJ-661UF-P

## Operation Manual

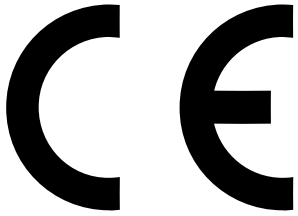
### Operations and Maintenance Methods



XPJ661UFPE-A-01

# Important Notice

**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.

This system (including the housing and safety device) is a Class 1 laser product.
Laser specifications of this system (including the housing)
Wavelength: 658 nm, maximum output: 2.13 mw or less, pulse duration: 1.376 µs

- Complies with IEC 60825-1 Edition 3.0 (2014-05-15). Complies with FDA performance standards for laser products except for deviations pursuant to Laser notice No.56 dated May 8, 2019.

**CAUTION**

Use of controls or adjustments or performance of procedures other than those specified herein may result in radiation exposure.

**For Users in Europe**

Microsoft® and Windows® are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
VerteLith™ is trademark of MUTOH INDUSTRIES LTD.

Company names and product names that appear in this Guide are registered trademarks or trademarks of the respective companies.

- Unauthorized copying or duplication of the whole or part of the contents of this Guide is prohibited.
- 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.
- Please be aware that MUTOH will not be liable in any way for failures or accidents that result from handling or operating the printer according to any procedures other than those set forth in this Guide.
- To return to original place after clicking link in the table of contents or reference, tap Alt + ← keys.

# Table of Contents


## For Safe Use 9

Safety Precautions . . . . . 10
Symbols . . . . . 10
When something wrong occurs. . . . . 11
Power cords. . . . . 12
Printer installation and moving . . . . . 14
Product handling . . . . . 16
Ink and waste fluid. . . . . 18
Warning labels . . . . . 20
Instruction Labels . . . . . 24

## Before Use 25

Printer main components / Functions. . . . . 26
Front view . . . . . 26
Rear view . . . . . 28
Printer control panel . . . . . 29
How to use the printer control panel . . . . . 29
Name of parts / Functions. . . . . 29
Direct keys . . . . . 31
Ink level indicator on the printer control panel . . . . . 32
Computer requirements . . . . . 33
System configurations . . . . . 34
Launching/ Opening/ Exiting MSM. . . . . 35
Launching MSM . . . . . 35
Opening MSM . . . . . 35
Displaying remote panel. . . . . 35
Exiting MSM . . . . . 35
InstallingVerteLith. . . . . 36
Supported media . . . . . 37
Media size. . . . . 37
Media handling cautions . . . . . 38

Media loading cautions . . . . . 38
Table dimensions . . . . . 39
Precautions . . . . . 40
Do not turn off the printer . . . . . 40
Please use this printer regularly . . . . . 40
Please conduct maintenance regularly . . . . . 40
Please be careful of unintended ink curing . . . . . 41
Please handle ink carefully . . . . . 41
Some parts need to be replaced periodically . . . . . 41
Opening and closing printer covers . . . . . 42
Basic Operations 44
Power Operation . . . . . 45
Turn on the printer . . . . . 45
Turn off the printer . . . . . 46
Sleep Mode . . . . . 49
Start the sleep mode . . . . . 49
Wake up from sleep mode . . . . . 49
If you are going to leave the printer in sleep mode for a long period of time . 50
Printing . . . . . 51
Printing area . . . . . 51
Load the media into the printer . . . . . 52
Step1. Place media on the table . . . . . 52
Step2. Check the media . . . . . 54
Nozzle check and head cleaning . . . . . 58
Run a nozzle check . . . . . 58
Perform a head cleaning . . . . . 61
Start printing . . . . . 62
Print an image . . . . . 62
Pause / Resume / Cancel a print job . . . . . 66
Operating from the printer control panel . . . . . 67
Pause / Resume printing . . . . . 67
Cancel printing . . . . . 68
Menus you can access while printing . . . . . 69
Checking the printing area . . . . . 70

1. Specify whether to check the print area before printing . . . . . 71
2. How to check the printing area . . . . . 72
Emit UV light at any desired timing . . . . . 74
Calibrating table height . . . . . 76
Layer printing . . . . . 78
**Agitating ink . . . . . 79**
When using ink cartridges . . . . . 80
When using ink bags with high-capacity ink pack adapters . . . . . 82
Check the remaining time until the next ink agitation is required . . . . . 85
**Checking ink level and replacing ink bag . . . . . 86**
Checking ink level . . . . . 86
When an ink bag is nearing replacement . . . . . 87
Replacing ink . . . . . 88
When using ink cartridges . . . . . 89
When using ink bags with high-capacity ink pack adapters . . . . . 91
Replacing Adapter's plug for high capacity ink pack adapter . . . . . 95
**Various settings 96**
**Panel setup menu . . . . . 97**
How to operate the menu . . . . . 97
**Menu1: Media Type . . . . . 99**
Adjust Layer Print . . . . . 102
Procedure for white layer alignment . . . . . 103
Procedure for layer alignment . . . . . 105
Adjust Print . . . . . 107
**Menu2: Maintenance . . . . . 110**
CR Maintenance . . . . . 113
**Menu3: Test Print . . . . . 114**
Media feed adjustment . . . . . 115
Media feed adjustment . . . . . 116
**Menu4: Utility . . . . . 118**
Ink agitation . . . . . 119
Perform ink agitation . . . . . 120
Check the remaining time until the next ink agitation is required . . . . . 121

Menu5: Setup menus . . . . . 122
Menu6: Option . . . . . 125
Menu7: Printer Info. . . . . 126

Maintenance 128

Type of maintenance and frequency . . . . . 129
Preparations for maintenance . . . . . 131
What you need . . . . . 131
Maintenance jig . . . . . 132
Wearing protective equipment . . . . . 134
How to wear the supplied gloves . . . . . 134
Daily maintenance at the end of work. . . . . 135
Step1. Preparations for maintenance . . . . . 136
Step2. Putting the printer into Sleep mode . . . . . 136
Step3. Perform a daily maintenance . . . . . 138
1. Cleaning of the UV-LED unit . . . . . 138
2. Moisten the surface of print head nozzles. . . . . 140
3. Cleaning of the parts around the print head . . . . . 143
4. Cleaning of the cleaning wiper and the parts around the capping unit . 145
Step4: Ending the daily maintenance . . . . . 146
Regular Maintenance . . . . . 148
Cleaning on the table . . . . . 148
Table Maintenance. . . . . 150
1. Preparation . . . . . 151
2. Apply grease . . . . . 152
3. After greasing. . . . . 154
Emptying waste ink tank . . . . . 155
Maintenance based on your usage. . . . . 159
When nozzle clogging occurred . . . . . 159
Head cleaning . . . . . 159
Nozzle clogging persists even after several head cleaning attempt . . . . . 160
Cleaning each part of the printer . . . . . 160
If severe nozzle clogging occurred . . . . . 162

Little Charge. . . . . 162
Soak Cleaning . . . . . 163
Replace the consumable parts . . . . . 166
Replace the flushing box pad. . . . . 166
1. Checking steps . . . . . 166
2. Replacement steps. . . . . 167
Replace the Cleaning Wiper . . . . . 169
Replace the UV-LED unit glass. . . . . 172
Replace the UV-LED unit filter . . . . . 174
Moving or transporting the printer . . . . . 176
Moving the printer . . . . . 176
Preparation for moving the printer. . . . . 177
Installation after moving. . . . . 177
Transporting the printer . . . . . 178
Step1. Discharging ink . . . . . 178
Step2. Changing Table Position for Packing . . . . . 180
Step3.Repacking . . . . . 181
Reinstalling. . . . . 186
When not using the printer for a long period of time . . . . . 187
Step1. Perform a daily maintenance . . . . . 187
Step2. Discharging ink. . . . . 189
Step3. Skip daily maintenance and power off the printer. . . . . 191
Initial ink charging after Longstore cleaning . . . . . 192
When using ink cartridges. . . . . 193
When using ink bags with high-capacity ink pack adapters . . . . . 194
The procedure after installing ink. . . . . 197
When problems occur 198
Messages and Error Messages. . . . . 199
Status messages . . . . . 199
Error message display and remedies. . . . . 201
Smartchip Recovery . . . . . 204
Error requiring reboot . . . . . 205
Troubleshooting . . . . . 206
Trouble during installation / initial setup . . . . . 206

Printer does not work at all after powered on . . . . . 206
Ink does not come out after initial ink charging. . . . . 206
Nozzle clogging occurs after initial ink charging. . . . . 206
Unable to connect to printer from MSM or RIP. . . . . 207
Media-related problems . . . . . 208
Printer does not work even after media is loaded. . . . . 208
Printer does not detect media correctly . . . . . 208
Print head strikes media while printing. . . . . 209
Table-related troubleshooting . . . . . 210
Abnormal noise from the table when loading media . . . . . 210
The print head hit the media and the jig while printing. . . . . 210
Printing problems . . . . . 211
Data is sent but not printed . . . . . 211
Carriage pauses at either side of the printer during printing. . . . . 211
Media or print is smudged . . . . . 212
Printing position is incorrect or there are areas that are not printing . . . . 212
Printed lines are not aligned/ doubled, Print is faded/ bleeding . . . . . 213
Printed color is not accurate . . . . . 214
Nozzle clogging remains even after head cleaning . . . . . 215

**Appendix** 216

Specifications. . . . . 217
Revision history . . . . . 219

# For Safe Use

# Safety Precautions

## Symbols

In this document, information that must be followed is marked with following symbols to avoid risk of harm to human health or damage to the property.

Please understand the meaning of each mark and use this product safely and correctly.

■ The following signs are used to classify and explain the degree of harm or damage that may result from neglect of instructions or incorrect handling.

| | |
|---|---|
| **Warning** | Failure to follow the instructions could result in serious injury or death. |
| **Caution** | Failure to follow the instructions could result in minor injury or damage to the whole or part of the product. |

■ The following symbols are used to classify and explain the types of instructions that must be observed.

| | |
|---|---|
|  | Indicates an action that you must avoid. |
|  | Indicates an important instruction that you must do. |

■ Other symbols

| | |
|---|---|
| Important! | Provides information that require special attention or should be followed. |
| Note | Provides supplemental or reference information. |
| ➔ | Indicates the link to the reference section. |

**Note**

For the name of each part marked with safety symbols, see the following.

➔ “Printer main components / Functions” P.26

# When something wrong occurs

## Warning

| | |
|---|---|
| | **If something abnormal occurs such as smoke or unusual odor, turn off the power button and unplug the power cord.**<br>Continued use may result in fire or electric shock. Once you have confirmed that smoke is no longer being emitted, contact your local dealer or our service office.<br>Never attempt to repair the machine yourself as it is dangerous. |
| | **If a foreign object, water, or other liquid gets inside the product, immediately turn off the power button and unplug the power plug from the outlet.**<br>Continued use may result in fire or electric shock. After confirming there is nothing wrong, contact your local dealer or our service office.<br>Never attempt to repair the machine yourself as it is dangerous. |
| | **If ink, maintenance cleaning solution, or waste fluid gets on skin, immediately wipe it off with a cloth. Then wash with soap and plenty of water.**<br>If skin irritation or inflammation occurs, seek medical advice. |
| | **If ink, maintenance cleaning solution, or waste fluid gets in eyes, immediately flush with plenty of water for 15 minutes.**<br>If eye pain or irritation is present, seek medical attention immediately.<br>If left untreated, it may cause red eyes or irritation in the eyes. |
| | **If ink, maintenance cleaning solution, or waste fluid is swallowed, do not induce vomiting. Immediately gargle and seek medical attention.**<br>Attempting to induce vomiting may cause vomit to enter the trachea. |

# Power cords

## Warning

**Do not damage or modify power cord or power plug. Also, do not place heavy objects on it, heat it, or forcibly bend or pull it.**

This could damage the power cord, resulting in fire or electric shock.

**Do not use a power cord that is damaged, broken or core wire exposed.**

This could result in fire or electric shock.

**Do not insert the grounding wire into the power outlet. Connect it only to the grounding terminal.**

This could result in fire or electric shock.

**Do not allow metal or other objects to touch the blade of the power plug.**

This could result in fire or electric shock.

**Plug the power cord into the wall outlet.**

Do not use power strips. This may cause heat, resulting in fire.

**Do not connect an earth wire to the following places:**

- Gas pipe: It has potential risks of fire or explosion.
- Earth wire of telephone cables or lightning rods: Large lightning current may flow when lightning strikes.
- Water pipe and faucet: It may not function as a ground if a plastic pipe is connected to the pipe.

**Do not connect or disconnect power plug with wet hands.**

This could result in an electrical shock.

**Be sure to use the designated power cord.**

Failure to do so could result in an electrical shock or fire. For the designated power cord, please contact your local MUTOH dealer.

1. Use a power cord with protective ground terminal and make sure to plug in securely into the outlet.
2. Use a power cord which meets the safety standard, power source, voltage and plug shape of the country to use the product.

**Use the product within the designated power specification range.**

**Plug the power cord into a power outlet near the product.**

This equipment should be installed near the power outlet and should be easily accessible in case of emergency.

**Use the cord clamp to secure the power cord.**

| | |
|---|---|
|  | **Insert the power plug blade securely.**<br>Incomplete insertion may cause fire or electric shock. |
|  | **When unplugging the power cord, be sure to hold the plug and pull it out.**<br>Pulling on the power cord may damage the cord, resulting in fire or electric shock. |
|  | **Clean the power plug regularly with a dry cloth.**<br>Moisture adhering to accumulated dust may cause a short circuit. This could result in fire or electric shock. |
|  | **Unplug the power plug from the outlet when not using the product for an extended period of time.**<br>Dust buildup on the power plug may cause fire or electric shock. |
|  | **Plug the power cord into the wall outlet that has the earth connection and be sure to connect the earth wire.**<br>Failure to connect the earth wire may cause an electrical shock or fire. |
|  | **Make sure to connect an earth wire to the earth connection that meets the following requirements:**<br>• Earth terminal of power socket<br>• An earth wire with a copper plate which is buried more than 650 mm deep into the ground |

# Printer installation and moving

## Warning

**Choose the location which satisfies the requirements below:**

1. The floor must be level
2. Avoid vibration from the neighboring devices
3. Low humidity and free from dust
4. Less chance of temperature and humidity changes
5. Avoid direct sunlight
6. Avoid water
7. Avoid direct air (including air conditioning) onto the printer
8. Low levels of electromagnetic waves

**Install in the area that can be ventilated and ensure that the work area is well ventilated.**

Odor of ink could have adversely impact on health. If you experience headache or feel dizzy or dull, stop your work and get to fresh air. If nausea persists, seek medical advice.

As a guide, Mutoh recommends you to change air 5 to 10 time per hour or use local ventilation system.

**Before taking out the printer from the packaging box, make sure to remove the plastic sheet wrapped around the printer first.**

Failure to do so may cause slip, damaging printer.

**Do not install the product in locations where children are likely to be present.**

## Caution

**At least four people are required for unpacking and moving the printer. When moving, keep the printer level.**

**Empty the waste ink tank even when moving for a short distance.**

Waste fluid may come into contact with your skin. It may also cause the product to malfunction.

**Wearing safety shoes is recommended for moving this product.**

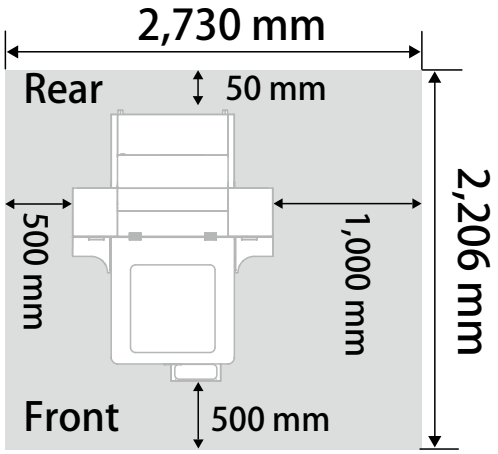
**When transporting this product, please consult your local MUTOH dealer.**

**Important!**

The following space is required for installation.

Printer size

- Width x Depth: 1,230 mm x 1,656 mm
- Height: 1,406 mm *1
  - *1 With front cover fully opened (With optional stand installed: 1,881 mm) A minimum of 2,000 mm height is required for installation space.



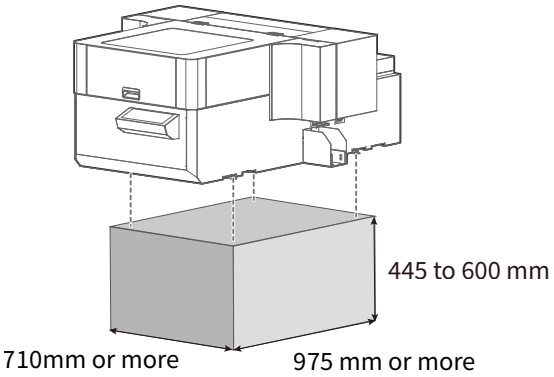

**Note**

When an optional stand is not used, the work table must meet the following requirements.

- The work table must fully support all four adjusters.

  Recommended work table size: W 710 mm x D 975 mm or larger
- It is recommended to use an appropriate stand so that the printer table height would be approximately 850 to 1000 mm.

  Recommended work table height: approximately 445 to 600 mm
- The total weight of the product is 181 kg (187 kg including optional rotary unit). The work table on which the product is installed must be able to support the weight of this product.



# Product handling

## Warning

| | |
|---|---|
|  | **Do not touch the product when lightning starts.**<br>This could result in an electrical shock. |
|  | **Do not insert or drop metal or flammable objects into the printer through openings such as vent.**<br>This could result in fire or electric shock. |
|  | **Do not cover the product with a cloth or other material to block vent.**<br>If the vent is covered, heat may build up inside the product, resulting in fire. |
|  | **Do not touch the moving parts.**<br>This may cause injury or damage to the product. |
|  | **Do not sit or place heavy objects on the product.**<br>This could result in injury from a fall or tumble. |
|  | **Do not tilt or give any impact to the product.**<br>Doing so may cause the printer to tip over or ink to leak from inside the printer. Also proper operation after relocation cannot be guaranteed. |
|  | **Never modify the product or open any covers secured with screws.**<br>This could result in an electrical shock or damage to the printer. Also, modifying or disassembling the product will void the warranty. |
|  | **Be careful not to enter water inside the product.**<br>This could cause short-circuit. |
|  | **This product generates the UV light or potentially harmful radiation from the UV-LED unit.**<br>• **While the printer is in operation, make sure to wear UV protective glasses, protective mask, gloves and protective clothing.**<br>• **Do not stare at the UV-LED unit.**<br>This may cause damage to eyes.<br>• **Avoid direct skin exposure to UV light.**<br>This may cause skin inflammation. |
|  | **After printing, the UV-LED unit gets hot.**<br>Allow it to cool down for 10 minutes and then start maintenance. |

## Caution

**Use the following safety precautions when handling the front cover or maintenance cover:**

- **Do not open or close the cover while you are off balance.**
  You may pinch your finger or get injured.
- **Avoid strong airflow from fan or air conditioner to covers when installing the product.**
  It may accidentally close covers.
- **Check your surroundings for safety when opening cover.**
  Cover may hit someone or something.
- **Make sure to keep the front cover closed unless necessary to open it.**
- **Do not remove covers. Do not modify this product.**
  Modifying or disassembling will void the product's warranty.

**Important!**

This product is equipped with interlocks to ensure safety use.
It will interrupt operation if any cover is opened during operation such as printing or cleaning.

# Ink and waste fluid

## Warning

**The safety concerns involved with using and handling of ink, maintenance cleaning solution and waste fluid are detailed in the Safety Data Sheet (SDS). Make sure to read the SDSs when handling these liquid.**

Download the latest version of SDSs from our website.

**Waste fluid collected from the product is classified as waste oil of industrial waste.**

- 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.
- Dispose of expired ink as industrial waste. Put the emptied ink bag in a plastic bag and dispose of it according to the local regulations.
- Do not allow waste fluid collected from this printer to reach sewage or natural water systems.

**Do not bring fire to the work area.**

There is a risk of fire from ink or waste fluid.

**Keep the ink, cleaning solution and waste fluid away from fire and heat and store in a cool, dark place.**

**Use a HDPE container with light blocking properties to store waste liquid.**

**When storing waste fluid for a long time, slightly loosen the cap on the container to allow air. Do not tightly close it.**

**Do not mix waste fluids with any other substances or liquid not even in small amounts.**

Mixing with other chemicals (such as oxidant) will cause heating.

## Caution



**When handling ink or waste fluid, or doing a task that you may come into contact with ink (such as cleaning print head, capping station, wiper), make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

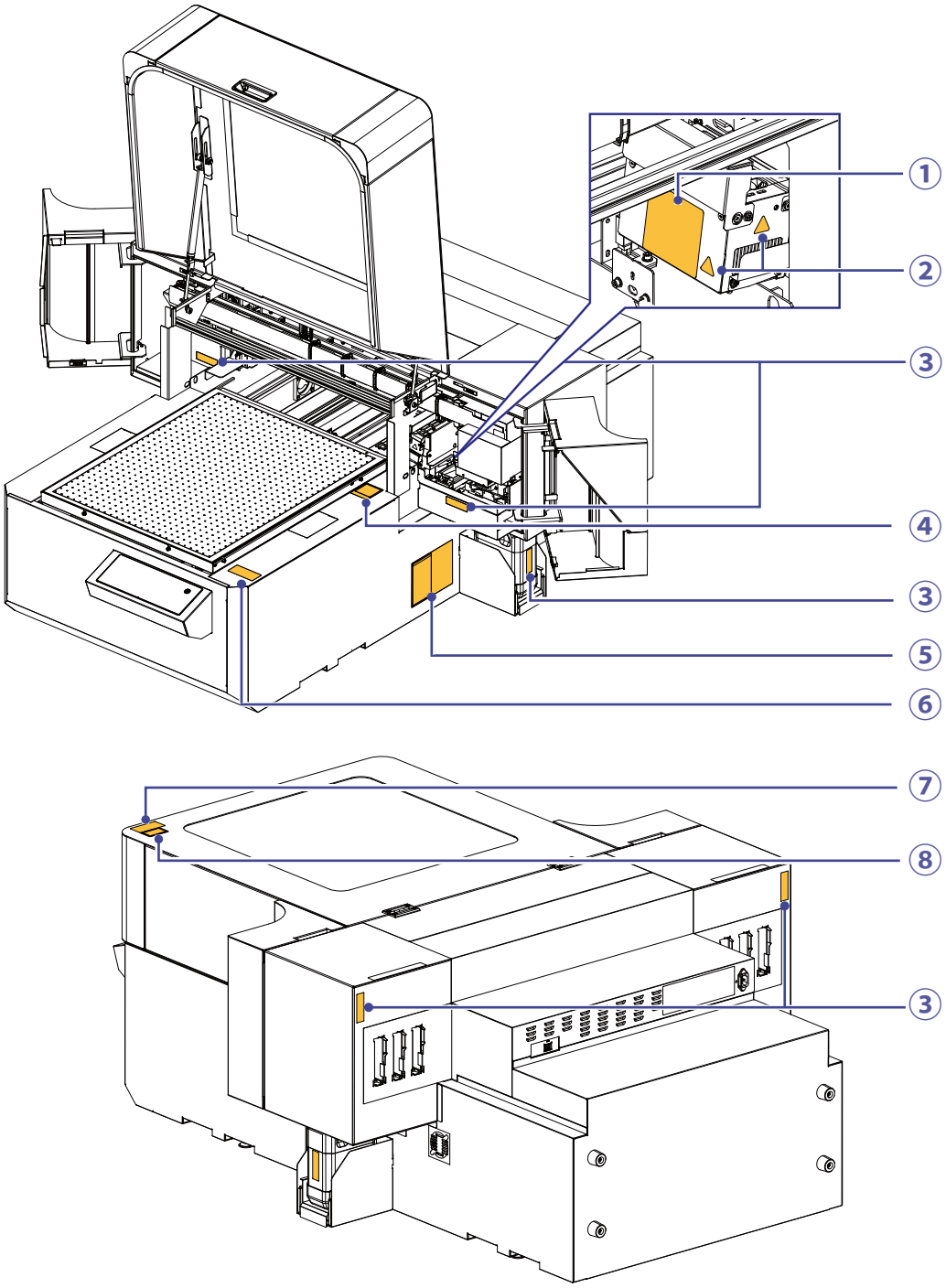
- **Two types of protective gloves are included in the printer package. Ink may penetrate the polyethylene gloves. Please wear rubber gloves (white) over the supplied polyethylene gloves (pink). If those gloves are not available, please wear butyl rubber gloves.**
- **Replace gloves if they become contaminated with ink.**
- **When you check if your print is fully cured, be sure to wear protective gloves.**

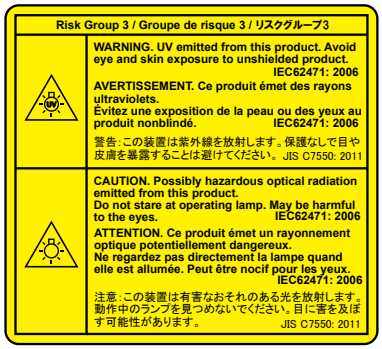
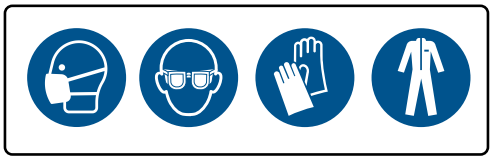
| | |
|---|---|
|  | **Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**<br>If left untreated, it may cause red eyes or irritation in the eyes.<br>If there are some problems, immediately seek medical attention. |
|  | **Do not disassemble ink cartridge (or ink bag).**<br>When disassembled, the ink may get into the eyes or on the skin, causing irritation or allergic reactions. |
|  | **Do not drop or hit an ink cartridge (or ink bag).**<br>Ink may leak. |

# Warning labels

Warning labels are affixed to the hazardous area of the printer. Read and follow the instructions on the labels.

If the label came off or got dirty, please contact your local MUTOH dealer for replacement.



| Type of labels | Name / Meaning |
|---|---|
| ①   | **UV Safety Label**<br>UV light hazard: Avoid direct skin or eye exposure to light. |
| ②  | **Hot Surface Hazard Label**<br>Risk of burns.<br>Do not touch it for at least 10 minutes after printing. |
| ③   | **Personal Protective Equipment Label**<br>Wear protective equipment when handling ink. |
| ④   | **Laser Safety Label**<br>Laser radiation: Do not stare into beam. |

⑤

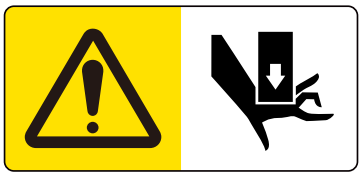



## Waste Fluid Caution Label

Waste ink is harmful to human body.

Wear protective mask, goggles, protective gloves and clothing when handling.

⑥



## Pinch Point Hazard Label

Keep hands clear.

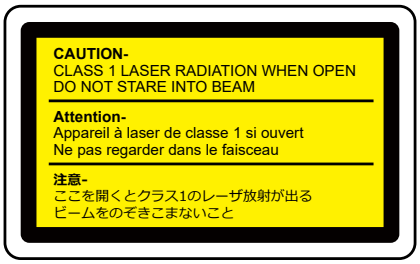
⑦




## UV Safety Label

UV light hazard: Avoid direct skin or eye exposure to light.

⑧




## Laser Caution Label for Access Panel

Laser radiation: Do not stare into beam.

**Note**

The following labels correspond with the Chinese safety standards.



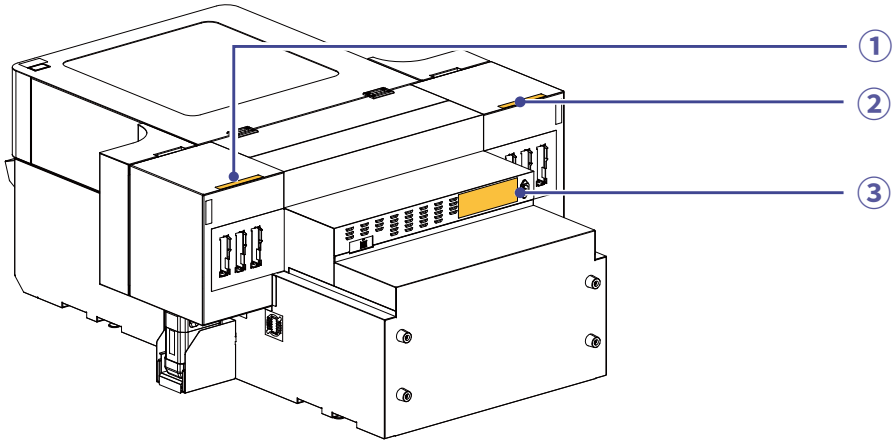

| | |
|---|---|
| 汉文 | 仅适用于海拔2000m以下地区安全使用。 |
| 藏文 | 《2000m ཡར་ ལག་ལེན་གཏོང་ཐུབ་པའི་ གནས་ཁུལ་ ཁོ་ནར་ ལག་ལེན་གཏོང་ དགོས་ ། ཞེས་ བཀའ་སྩལ་ ། ། 》 |
| 蒙古文 | “ᠵᠤᠭ᠎ᠠᠯᠬᠢ᠋ᠳᠠᠪ᠎ᠠᠯᠠᠰ᠎ᠠᠯᠢᠪᠠᠳᠤ᠋ᠭᠠᠷ᠎ᠪᠡᠷ2000ᠮᠧᠲᠷ᠎ᠦᠨ᠎ᠳᠤᠤᠷᠠᠬᠢ᠎ᠭᠠᠵᠠᠷ᠎ᠳᠤ᠌᠎ᠵᠥᠪᠬᠡᠨ᠎ᠠᠵᠢᠯᠯᠠᠬᠤ᠎ᠪᠣᠯᠪᠠᠽᠤᠢ᠃” |
| 壮文 | Dan hab yungh youq gij digih haijbaz 2000m doxroengz haenx ancienz sawjyungh. |
| 维文 | دېڭىز يۈزىدىن 2000 مېتر تۆۋەن رايونلاردىلا بىخەتەر ئىشلەتكىلى بولىدۇ |

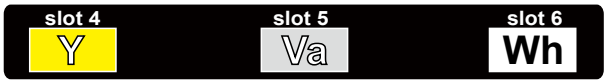
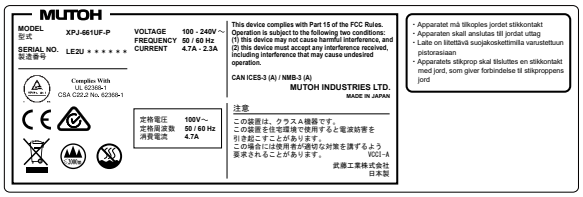


| | |
|---|---|
| 汉文 | “仅适用于非热带气候条件下安全使用。” |
| 藏文 | 《ཉིན་གཅིག་ ཐུག་ཧ ཐུག་ཏེ་ སྐྱེས་ཁམས་ ཀུན་ལ་ ཉན་ཐོབ་པ་ ལག་ལེན་གཏོང་ དགོས་ ། ཞེས་ བཀའ་སྩལ་ ། ། 》 |
| 蒙古文 | “ᠬᠠᠨᠳᠠᠷᠢ᠎ᠪᠠᠢᠭᠠᠯᠢ᠎ᠵᠢᠭᠠᠨ᠎ᠭᠠᠵᠠᠷ᠎ᠲᠠᠶ᠎ᠠᠴᠠᠭ᠎ᠠᠨᠳᠠᠷᠢ᠎ᠪᠠᠢᠭᠠᠯᠢ᠎ᠵᠢᠭᠠᠨ᠎ᠭᠠᠵᠠᠷ᠎ᠳᠤ᠌᠎ᠵᠥᠪᠬᠡᠨ᠎ᠠᠵᠢᠯᠯᠠᠬᠤ᠎ᠪᠣᠯᠪᠠᠽᠤᠢ᠃” |
| 壮文 | Dan hab yungh youq gij dienheiq diuzgen mbouj dwg diegndat haenx ancienz sawjyungh. |
| 维文 | غەيرى ئىسسىق بەلباغ ھاۋا كىلىماتى شارائىتىدىلا بىخەتەر ئىشلەتكىلى بولىدۇ |

# Instruction Labels

Instruction labels are affixed where special attention for operating this product is required.
The contents of each label are shown here.



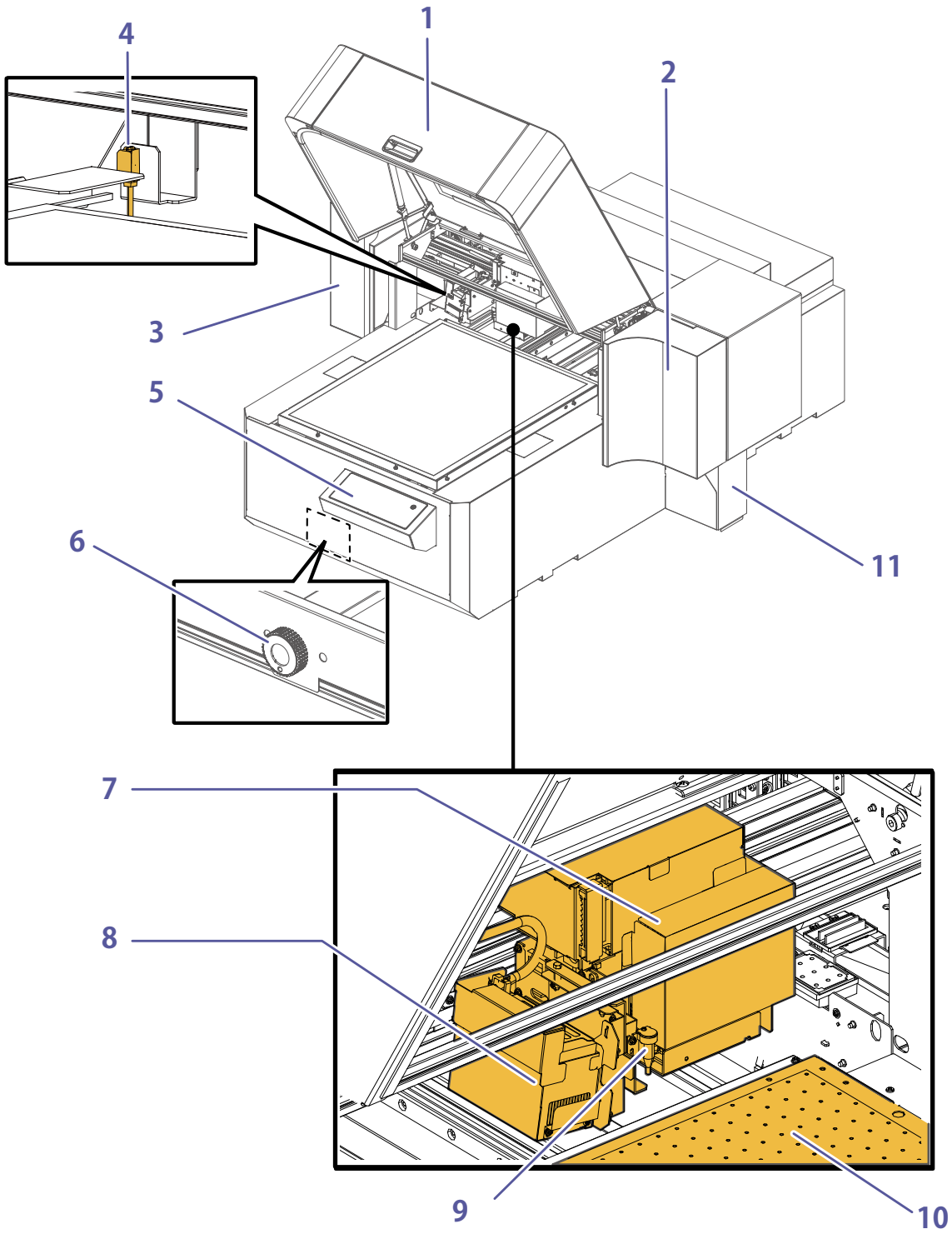

| | Type of labels | Name / Meaning |
|---|---|---|
| ① |  | **Ink Color Label R** |
| ② |  | **Ink Color Label L** |
| ③ |  | **Rating Plate**<br>Provides model, serial number, electrical ratings, certification and notification information. |

# 1 Before Use


Printer main components / Functions 26
Computer requirements 33
System configurations 34
Launching/ Opening/ Exiting MSM 35
InstallingVerteLith 36
Supported media 37
Precautions 40

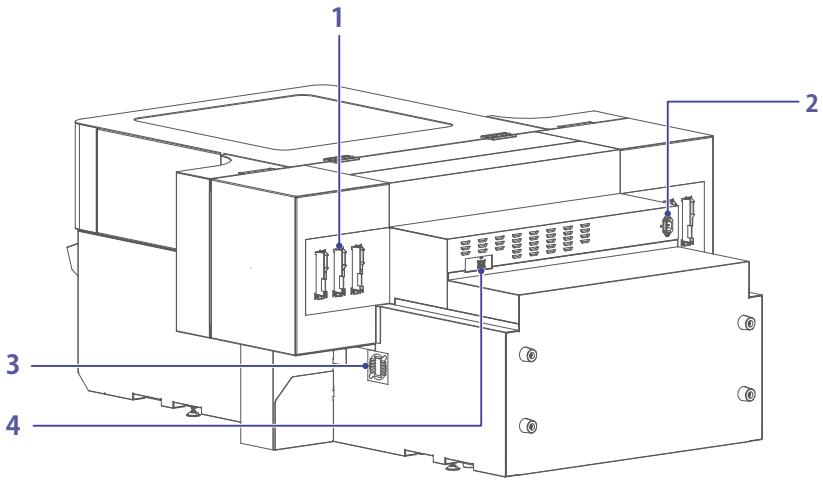
# Printer main components / Functions

## Front view

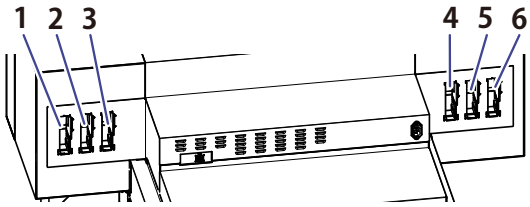


| | | |
|---|---|---|
| 1 | **Front cover** | Opens and closes when loading media or removing jammed paper.<br>Opens and closes when loading media.<br>Normally it is closed. |
| 2 | **Maintenance cover R** | Opens and closes when cleaning or replacing consumable parts.<br>Normally it is closed. |
| 3 | **Maintenance cover L** | |
| 4 | **Obstacle sensor** | Sensor for making sure the media does not contact the print head. |
| 5 | **Printer control panel** | ➔ “Printer control panel” P.29 |
| 6 | **Handle** | Handle exclusively for maintenance by service personnel Do not perform any operations other than those described in this manual. |
| 7 | **Carriage** | Contains the print head, the LED pointer and UV-LED unit.<br>It moves left and right during printing. |
| 8 | **UV-LED unit** | Emits the UV light to cure prints. |
| 9 | **LED pointer** | Used for setting the origin position or for checking the printing area. |
| 10 | **Table** | Media is printed on here.<br>It has a vacuum fan inside. |
| 11 | **Waste ink tank** | Collects waste ink and cleaning solution from the printer.<br>Empty the tank before it becomes full. |

# Rear view




| | | |
|---|---|---|
| 1 | **Ink slots** | Insert ink or cleaning cartridges into the slots. Ink color arrangement is shown below. |




Rear side

| Slot | |
|---|---|
| 1 | K (Black) |
| 2 | M (Magenta) |
| 3 | C (Cyan) |
| 4 | Y (Yellow) |
| 5 | VA (Varnish or Clear) |
| 6 | WH (White) |

| | | |
|---|---|---|
| 2 | **AC inlet** | Connect the power cord. |
| 3 | **Exhaust fan** | Remove exhaust from inside the printer. |
| 4 | **Network interface cable connector** | Use an Ethernet cable to connect the printer to the computer. |

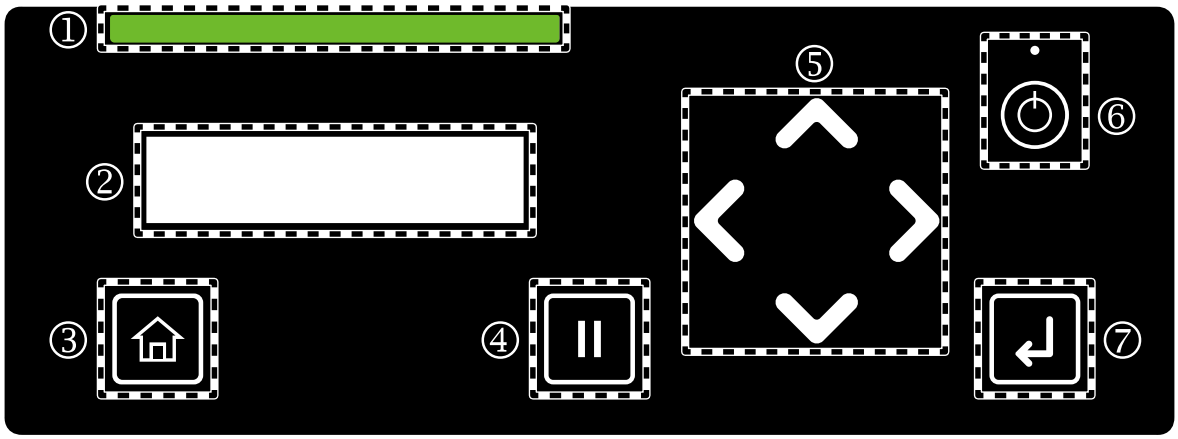
# Printer control panel

## How to use the printer control panel

The printer has a touch-screen panel. The active keys are lit up on the panel for guidance.

- Tap: Lightly touch the key and immediately release your finger.
- Long touch: Press and hold the key.

## Name of parts / Functions




| | | |
|---|---|---|
| 1 | **Status light** | Indicates the printer status and error by LED light.<br>Working normally: Solid green<br>Error state: Solid red |
| 2 | **Display** | Displays printer status, setting menus, errors, etc. |
| 3 |  | **[Home] key:**<br>Select this to access to or exit the setup menu. |
| 4 |  | **[Cancel] key:**<br>Tap to pause printing. Tapping the key again while pausing will resume printing. |
| 5 |  | **Arrow keys:**<br>In the Setup menu, use these keys to select a menu or enter a value.<br>• **[∧]** key: Scroll up the menu list.<br>• **[<]** key: Return to the previous menu without saving the change.<br>• **[>]** key: Go to the next level menu.<br>• **[∨]** key: Scroll down the menu list.<br><br>For information on operating the arrow keys while the printer is in standby mode, see the following section.<br>➔ "Direct keys" P.31 |

| | | |
|---|---|---|
| 6 |  | **Power button:**<br>• Pressing for more than 2 seconds while the power is off will turn on the power. The small LED above the button will turn on white.<br>• When the power is on, pressing this button for more than 2 seconds will start operation for entering sleep mode. The small LED above the button blinks once every 5 seconds. For details, see "Sleep Mode"P.49<br>• Normally use the setup menu on the control panel to turn off the power. The LED above the power button turns off when the power is off.<br>**Note**<br>⏻mark means standby. The printer consumes a small amount of power unless the power cord is disconnected, even when the white LED above the button is off. In this document, this state is referred to as **"power being off"**. The small LED above the Power button turns on when the power cord is plugged into an outlet. |
| 7 |  | **[Enter] key:**<br>Tap to confirm the menu or the value selected. |

## Direct keys

Tapping the following keys while **[Print Ready]** or **[Set media, then Tap [∧] key.]** is displayed will provide a shortcut to a specific menu or switch the printer status between **"Print Ready"** and **"Media Replaceable"**.







**Note**

The active keys light up.

### [ < ] key

Tap to access the nozzle check menu.

➔ **"Run a nozzle check" P.58**

### [ > ] key

Tap to access the following maintenance menu.

➔ **"Perform a head cleaning" P.61**
➔ **"CR Maintenance" P.113**
➔ **"Cleaning each part of the printer" P.160**
➔ **"Little Charge" P.162**
➔ **"Soak Cleaning" P.163**

### [Enter] key

The remaining time until the next ink agitation is required is displayed.

➔ **"Check the remaining time until the next ink agitation is required" P.121**

### [ ∧ ] / [ ∨ ] key

- **[∧]** key: Tap after loading media to put the printer into ready-to-print status.
- **[∨]** key: Tap after printing to remove media from the table.

### [Cancel] key

Tap to access the following Media setting menu.

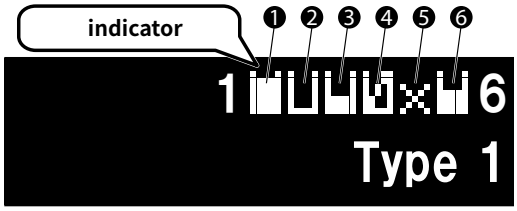
➔ **"Set Media" P.118**
➔ **"Height" P.99**

## Ink level indicator on the printer control panel

Indicators of the ink levels or status of cartridges appear on the display when

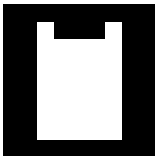
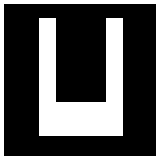
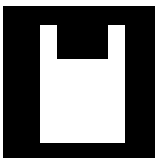
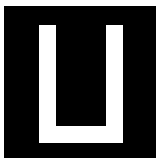
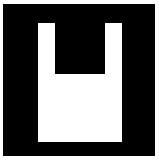
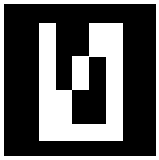
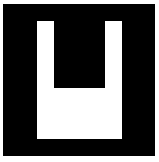
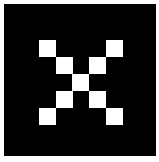
- no menu is displayed on the control panel
- ink or ink cartridge error occurs

Corresponding ink slot number




Each indicator corresponds to the ink slots from Slot 1 through Slot 6. The indicator on the far left shows the status of Slot 1. **[1]** and **[6]** at both ends indicate the slot numbers.

Each indicator has the following meaning:

| | | | |
|---|---|---|---|
|  | Ink level 80% to 100% |  | Ink level less than 20%<br>• The indicator blinks when the smartchip recovery is being performed on the corresponding ink.<br>➔ "Smartchip Recovery" P.204 |
|  | Ink level 60% to 80% |  | Ink is low |
|  | Ink level 40% to 60% |  | Ink is out |
|  | Ink level 20% to 40% |  | No ink cartridge is installed |

# Computer requirements

**Important!**

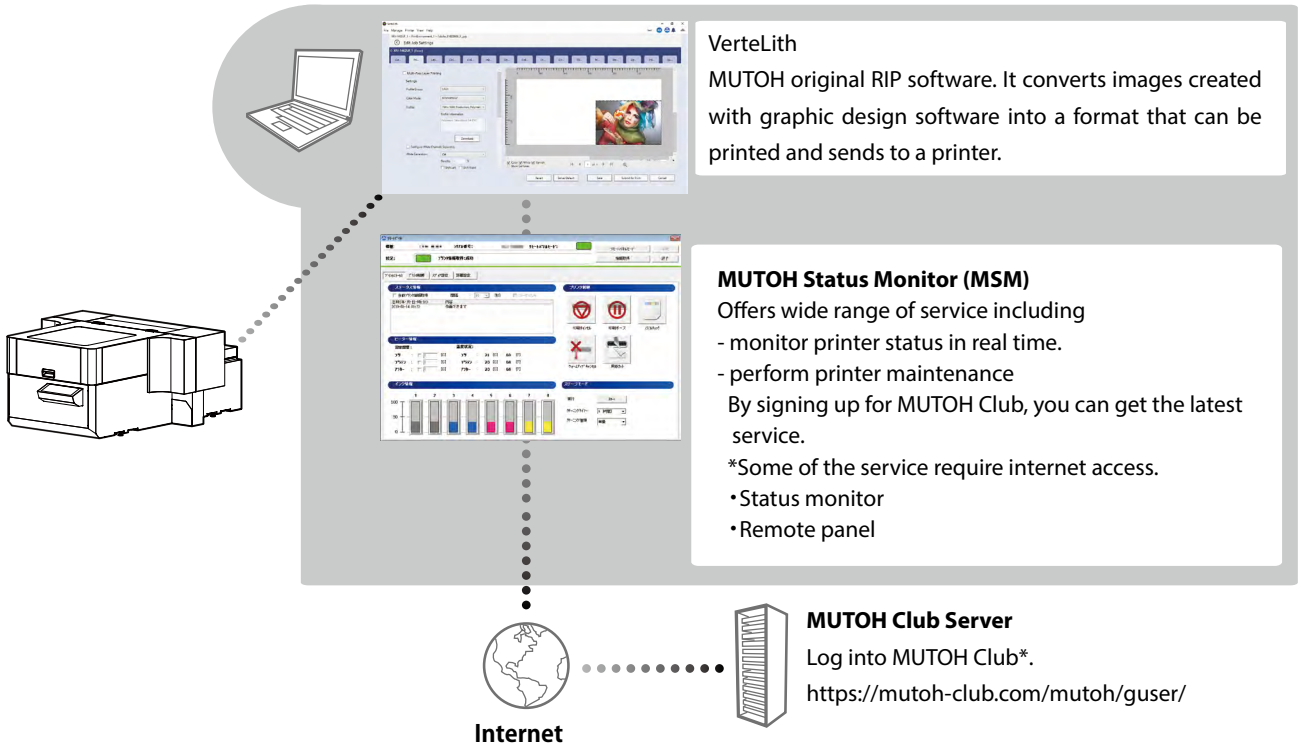
Make sure your computer meets the following requirements:

- OS: Windows 11
- CPU: Intel (R) Core (TM) i5 or more
- Memory: 16GB or more
- Network: Use a Gigabit Ethernet-compatible network port and Gigabit Ethernet cable of Category 6 or higher.

**Note**

- The OS support period of MUTOH software follows the Microsoft support lifecycle policies.
- When using RIP software, please also check the system requirements of your RIP software.

# System configurations




*MUTOH Club

It is a web service that offers free useful contents to users. By signing up for MUTOH Club, you can use various services.

Key features:

- download the latest version of application, operation manual
- download media profile
- check printer status (when using MSM's printer information service)

When printing from a third-party RIP software, please use the Mutoh Print Server (MPS)*2 function in MSM.

The latest version of MSM can be downloaded from MUTOH Club.

Printing can be performed by enabling the MPS function and changing the output destination of your RIP to MPS.

**Note**

*2 MPS functions as preprocessing software and provides printer support in the Ethernet environment.

For details of recommended network environment and setup, see “ MUTOH Status Monitor Operation Manual ”.

# Launching/ Opening/ Exiting MSM

## Launching MSM



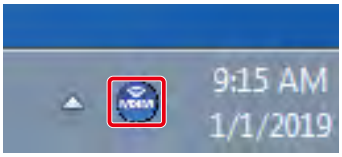

Double-click the MSM icon on the desktop.

**Note**

Launching from the Windows Start menu

From the **[Start]** menu, click **[All Programs]** (or **[All Apps]**) - **[MUTOH]** - **[MUTOH Status Monitor]**.

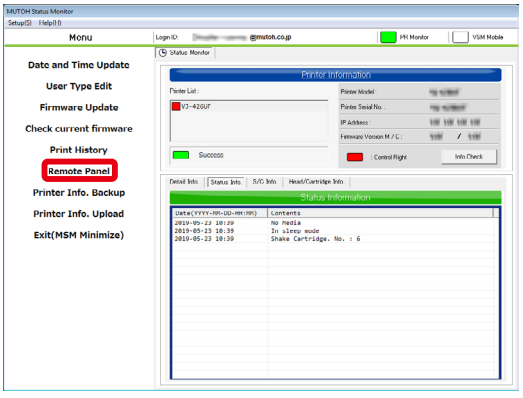
## Opening MSM




Double-click the MSM icon in the task tray.

## Displaying remote panel

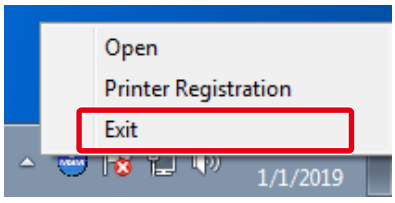
The remote panel allows you to view the printer status and remotely operate your printer.




Click the Remote Panel.

- The remote panel opens.

## Exiting MSM




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

**Note**

While using your printer, do not exit MSM. To close the MSM window, click **[Settings]** - **[Close]** on the menu bar.

# InstallingVerteLith

After purchasing the license, follow the supplied Installation Guide to complete the user registration and VerteLith installation.

Once VerteLith is installed, follow the instructions on the VerteLith operation manual to complete initial set up and printer registration.

# Supported media

Media that meets the requirements below can be used on this product.

## Media size

| | |
|---|---|
| Maximum width | 493 mm |
| Maximum length | 620 mm |
| Maximum thickness | 153 mm |
| Surface height difference | Less than -0.5 mm (guideline) |
| Weight | Up to 8.0 kg(including jig) |

**Important!**

The minimum media width and length that can be set in the media type for the printer are 30 mm x 30 mm. Be careful that when printing on media smaller than this size, the table may be stained with ink.

**Note**

For recommended media, please contact your local MUTOH dealer.

# Media handling cautions

Note the following points when handling media. Failure to follow these instructions could result in damage to the printer.

- Use media with no wrinkle, fold or curl.
- If media does not sit flat on the table such as fold on the edge, secure it on the table using a thin tape to avoid any warps.
- If media has a chance to be deformed while printing, secure it on the table using a thin tape to avoid head strike.
- Do not use media that is sensitive to heat.

  The heat given off by the UV rays could deform such media.
- If printing onto an object that is likely to roll (such as a golf ball or ballpoint pen), use a jig or similar to prevent it from rolling.
- When loading a small and heavy object or a jig on the table, place it as close to the center of the table as possible.
- Printing on non-flat surface media will generate ink mist, causing malfunction or damage to the printer.

  If you are printing on non-flat surface media and there is large distance between the print head and media, you may not be able to achieve predictable print quality.
- Printing on a light reflective material may have a chance to cure the ink on the print head, causing malfunction or damage to the product.

  To print on such materials, it is recommended to mask the non-print area on the material.
- When multiple thick media are placed side by side, the UV light leaking through the gaps between media (stray light) may cure ink on the print head surface, causing printer malfunction or damage.

  It is recommended to cover the gaps between media with a jig. Use a low-reflectance material for the jig.
- If you cover the table surface with thin tape for scratch protection, make sure to use dark-colored tape.

  Do not cover the table surface with light-colored tape such as white. Reflection of UV light may cure ink on the print head surface, causing printer malfunction or damage.

# Media loading cautions

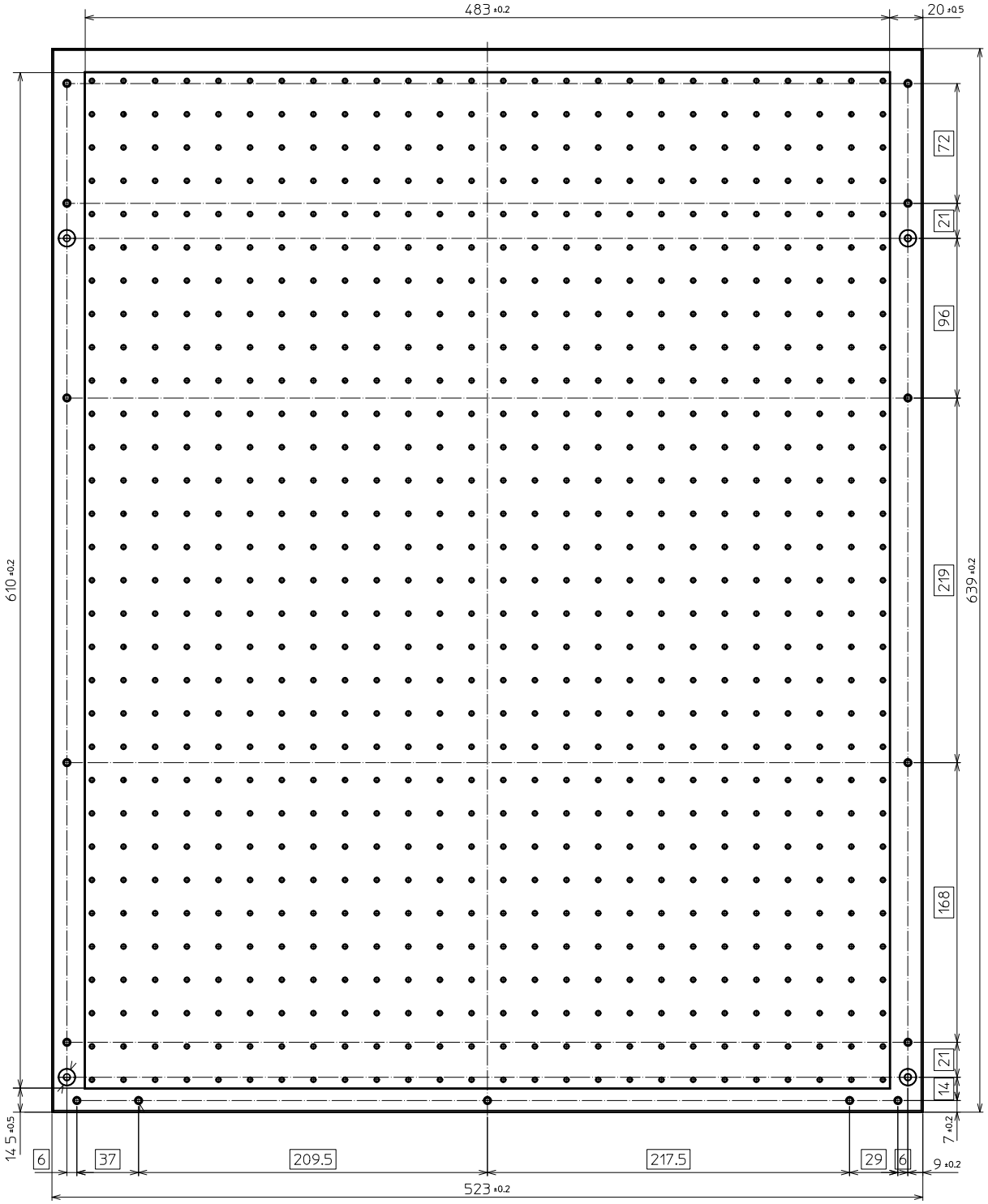
- When loading a new media, make sure to place it on an appropriate position and input correct media information.

  If wrong information is entered, the printer can print on an unintended position of the table. If UV ink stains on the table, it will be cured by UV light and will not be removed from the table.
- Do not place any objects on the sensing area of the media height detector.

  This may cause false detection of the obstacle sensor and the printer may not be able to print correctly.
- This area is outside the sensing area of the obstacle detection sensor. Do not place any objects higher than the loaded media (or jig) in this area.

  This will cause the print head to strike it.
  ➔ “Printing area”P.51

# Table dimensions



# Precautions

## Do not turn off the printer

- This product must be powered on all the time. When not in use, make sure to put it into sleep mode. Do not power off or disconnect the power cord.

  Failure to do so will cause ink settling, leading to print defects or printer failure.
- Use a power outlet and breaker which satisfy the power requirement of the printer.

  The breaker may shut down if it does not meet the power requirements.

## Please use this printer regularly

Mutoh recommends you to use this printer at least once a week. If the printer is not used for a long time, the print head could get clogged, causing damage to the printer.

## Please conduct maintenance regularly

This product requires regular user maintenance.

- Run a nozzle check before and after printing. If the nozzle is clogged, perform a head cleaning.
- Make sure to perform a daily maintenance after you finish printing for the day. Failure to perform daily maintenance could cause print defects or printer failure.

  ➔ **"Daily maintenance at the end of work"P.135**
- If you are not using the printer for an extended period∗ , put it into sleep mode and then perform followings.
  - Agitate the ink.
  - Check the ink level and replace the ink that **[Ink Low]** is displayed.

  If you may not be able to perform above, follow the instructions below and power off the printer.

  ➔ **"When not using the printer for a long period of time"P.187**

  (∗ **"If you are not using the printer for an extended period"** means you are not using the printer for one week to one month.)
- Check the waste ink tank regularly and drain the waste fluid before it becomes full.
- Clean the interior of the printer at least once a month.

# Please be careful of unintended ink curing

**In addition to the UV-LED unit installed in the printer, UV light may be generated in the work area by direct sunlight or artificial lighting. It may cause unintended ink curing, leading to printer failure (nozzle clogging, maintenance unit malfunction, printhead damage). Follow these guidelines.**

- **Do not install the product in direct sunlight.**
- **Make sure to keep the front cover closed unless necessary to open it.**
- **Do not remove covers. Do not modify this product.**

  The warranty does not cover if the product has been modified or disassembled.

# Please handle ink carefully

- **Use MUTOH genuine ink.**

  This product is designed to deliver best performance by using MUTOH genuine ink. The use of non-genuine ink may adversely affect the product as well as print quality. The warranty does not cover such use.
- **Use inks within its shelf life.**

  Continued use of expired ink may cause print defects or printer failure.
- **Agitate the ink.**

  Agitate the ink before using it for the first time. You must agitate ink regularly as instructed on the control panel. Failure to do so will cause the ink inside the ink cartridges (or ink bags) to settle or coagulate, leading to print defects or printer failure.
- **Avoid direct contact with uncured ink.**

  UV ink curing time varies depending on surface characteristics of media. Especially a print with low ink coverage needs to rest for a while (approximately one hour). When you check if your print is fully cured, be sure to wear protective gloves.

# Some parts need to be replaced periodically

**In this product, the following parts must be replaced after a long-term use.**

- **Parts that need to be replaced by the user:**

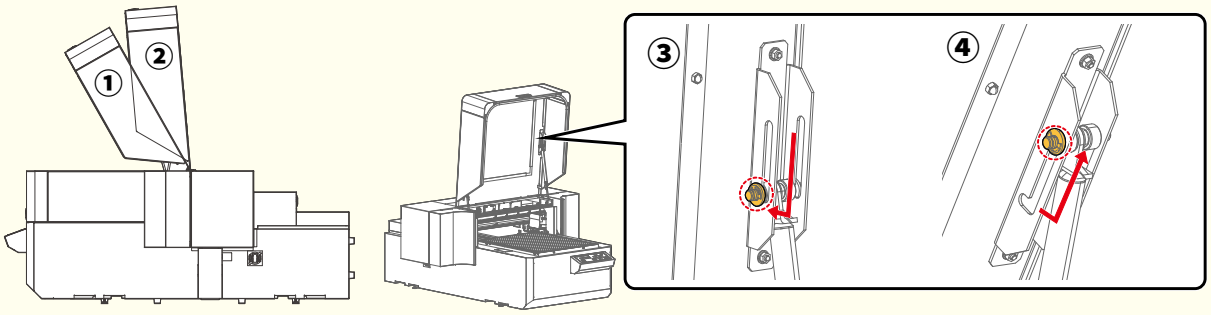
  Flushing box pad, Cleaning wiper, glass and filter of UV-LED unit
- **Parts that need to be replaced by service personnel:**

  Various motors, various pumps, print heads, UV-LED unit

# Opening and closing printer covers

## Caution

- **The front cover has two positions: normal position (①) and full open position (②). The full open position is intended for table maintenance only. For all other operations, keep the front cover in the normal position.**
- **When using the full open position, observe the following precautions. Improper operation may cause the front cover to close suddenly, resulting in injury.**
  - Make sure to lock the damper when using the full open position (③).
  - Before closing the front cover, make sure to unlock the damper (④).

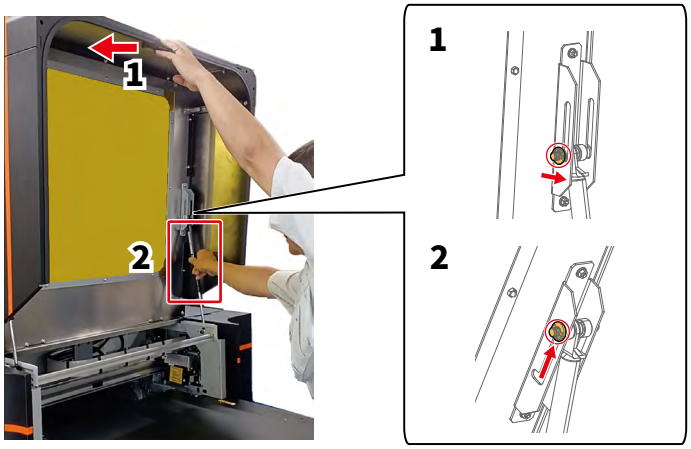



**Important!**

When the front cover is opened to the full open position, always unlock the damper and then close the front cover. Closing the front cover while the damper is locked may cause damage.

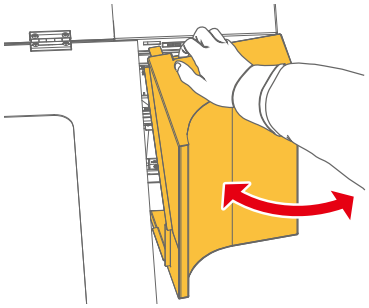
**Unlocking the damper**

1. Push the front cover backward to release the damper lock.
2. Hold the damper at the position shown in the illustration and close the front cover while the damper lock is released.



**Note**

- The maintenance cover can be opened or closed independently on this product. Open the maintenance cover and perform a daily maintenance.
  - Hook your finger at the position shown in the illustration and slowly open and close the cover.



- Do not lean or place a heavy object on the cover.

# 2 Basic Operations


Power Operation 45

Printing 51

Agitating ink 79

Checking ink level and replacing ink bag 86

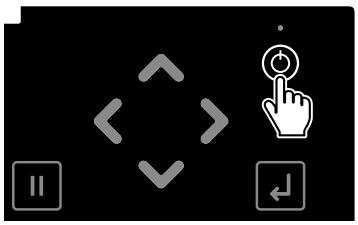
# Power Operation

## Turn on the printer

### Procedure

1. Close the front cover.

2. Press the power button on the control panel for more than two seconds.



- The keys on the control panel light up.
- Printer initialization begins.

> **Note**
>
> When the message "Welcome" appears on the panel, release the Power button.

> **Note**
>
> This product performs initialization of the table when the power is turned on. During this process, the distance between the print head and media is adjusted to the optimum position.
>
> You can manually perform the table initialization from the **[Calibration]** menu in the setup menu.
> ➔ “Calibrating table height” P.76

> **Important!**
>
> - Do not place any objects on the sensing area of the media height detector.
>   This may cause false detection of the obstacle sensor and the printer may not be able to print correctly.
> - This area is outside the sensing area of the obstacle detection sensor. Do not place any objects higher than the loaded media (or jig) in this area.
>   This will cause the print head to strike it.

# Turn off the printer

**Important!**

- Do not power off the product. Make sure to put into sleep mode while not in use.
  If you do not put the printer into the sleep mode, the ink inside the printer could settle out and/or coagulate, causing poor image quality or printer failure.
  ➔ "Sleep Mode" P.49
- If you are not using the printer for an extended period (maximum of one month), follow the steps "When not using the printer for a long time" to turn off the printer.
  ➔ "When not using the printer for a long period of time" P.187

If you temporarily turn off your printer, follow these steps.

## Procedure

1. Check that printing has finished and media and a jig have been removed from the table.
2. Prepare the items required for daily maintenance.
   ➔ "Preparations for maintenance"P.131
3. Tap **[Home]** key.
4. Access the "Power Off" menu.
   Menu flow

   - **[∧]** / **[∨]** key: Select a menu item.
   - **[>]** key: Enter the menu.
5. Tap **[>]** key.
6. Use **[∧]** / **[∨]** key to select **[Power Off? Yes]** and tap **[Enter]** key.

**Note**

- Tapping **[Cancel]** key will turn off the printer without performing a daily maintenance.
  ➔ "Step3. Skip daily maintenance and power off the printer" P.191
- Powering off without daily maintenance could cause ink accumulation around the print head, leading to damage to the printer. Normally make sure to perform a daily maintenance.

**7.** When **[Daily Maintenance Start ->Enter]** appears, tap **[Enter]** key.




- **[Please wait]** appears.

**8.** When **[Unload Media, set Maint Jig, tap Enter]** appears, perform the following:

a. Remove media and jig from the table.

b. Attach the maintenance jig.

➔ **"Setting up the maintenance jig"P.132**

> **Note**
>
> The maintenance jig is not required If you use a cleaning stick for maintenance. Go to the next step.

**9.** Tap **[Enter]** key.

- **[Please wait]** appears.
- The carriage and cleaning wiper move to the maintenance position.

**10.** When **[Daily Maintenance End -> Enter]** appears, start a daily maintenance.

➔ **"Step3. Perform a daily maintenance"P.138**

**11.** Tap **[Enter]** key to end the maintenance.

**"Step4: Ending the daily maintenance" P.146**




a. **[Please wait]** appears.

b. The printer automatically performs the Cleaning "Short".

c. Once the cleaning has finished, the printer begins powering off.



**Important!**

Only in the following cases, you can power off the printer by pressing the power button for more than 2 seconds.

- When an error requiring reboot occurred
- Ink has not been filled in the printer
- During printer activation
- After the printer firmware has been updated in MSM
- During printer initialization process
- After completing the “Moving Printer” menu

Procedure

1. Press the Power button for more than 2 seconds.
   - The printer begins powering off.
   - When [**Power Off**] appears, release the Power button.
   - The LED above the power button turns off.

# Sleep Mode

Do not power off the product. Make sure to put into sleep mode while not in use.

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

Before putting the printer into sleep mode, follow the instructions on the printer control panel to perform a daily maintenance.

During sleep mode, the printer performs the following operation.

- Ink circulation

While in sleep mode, the LED above the power button flashes every 5 seconds and key operation is invalid except **[Enter]** key.

When you need to temporarily turn off the printer for maintenance, operate from the setup menu on the control panel.

➔ "Turn off the printer" P.46

**Important!**

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

- During sleep mode, check the ink level. When the message **[Ink Low]** appears on the control panel, replace them with new ones.
  ➔ "Checking ink level and replacing ink bag" P.86
- Agitate the ink.
  ➔ "Agitating ink" P.79

## Start the sleep mode

Before putting the printer into sleep mode, follow the instructions on the printer control panel to perform a daily maintenance. For detailed procedure, see the following sections.

➔ "Daily maintenance at the end of work" P.135

## Wake up from sleep mode

While the following message appears, tap **[Enter]** key.




The printer wakes up from sleep mode and **[Print Ready]** appears on the panel.

**Important!**

Depending on the elapsed time from the previous automatic maintenance, the printer may automatically perform head cleaning and/or ink charging, etc., when it exits the sleep mode. The operation performed varies depending on the elapsed time. This operation is performed by the printer's automatic maintenance function, not by the sleep mode settings..

## If you are going to leave the printer in sleep mode for a long period of time

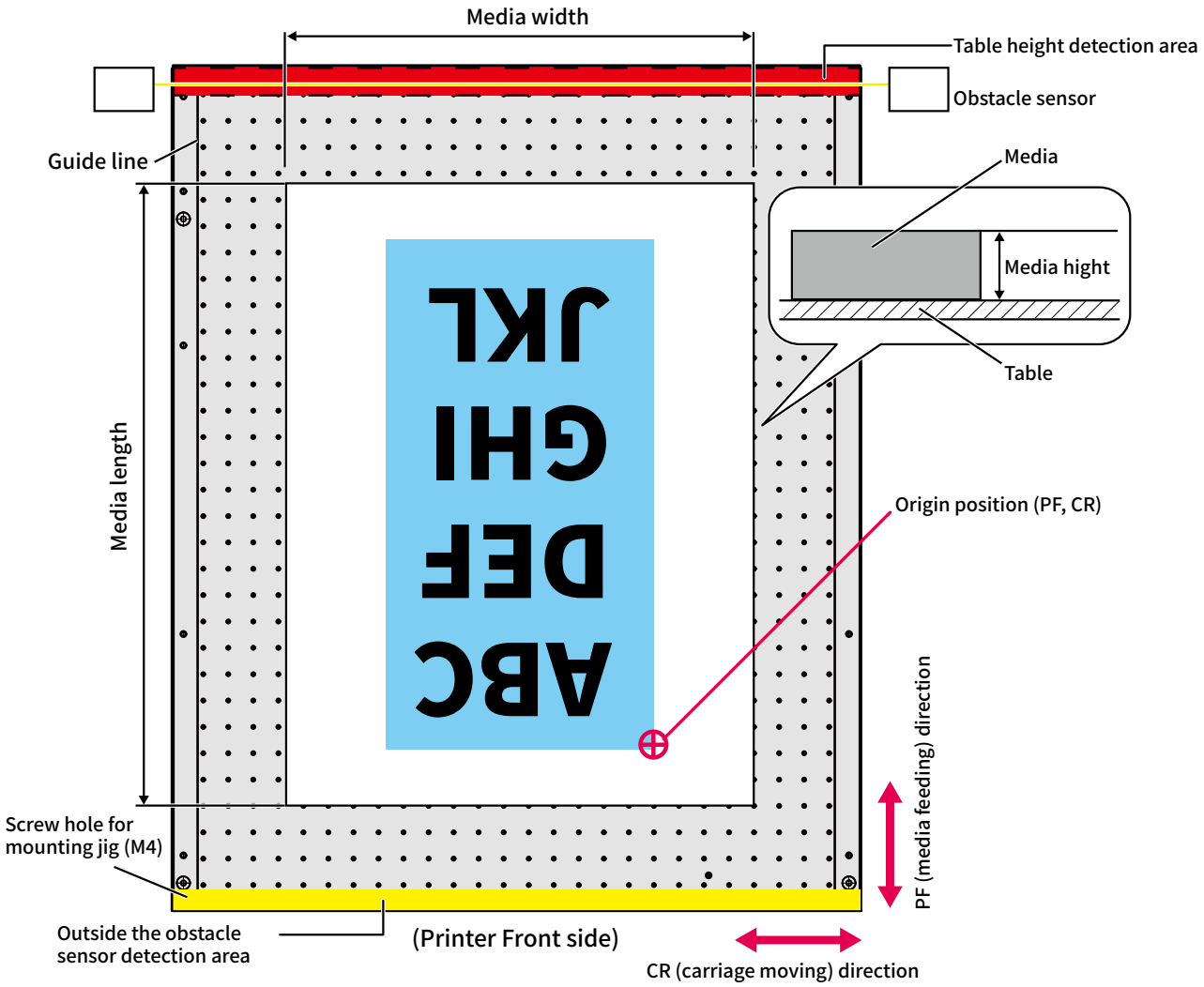
If you are going to leave the printer in sleep mode for a long period of time, perform followings in advance.

- Check that the ink cartridges (ink bags) have sufficient ink.
  ➔ "Checking ink level"P.86
- Empty the waste ink tank.
  ➔ "Emptying waste ink tank"P.155

# Printing

## Printing area

- You will need to enter the size of media (width and length) loaded on the table.
- The default origin (print start position) is at the front-right corner of the table. You can change the origin depending on the media loaded position.
- The guide line shows the maximum printable area (483 mm × 610 mm).
- The screw holes (M4) can be used for mounting your personal jig.
- For each dimension, see Vacuum Table dimensions.




**Important!**

- **Do not place any objects on the sensing area of the media height detector.**
  This may cause false detection of the obstacle sensor and the printer may not be able to print correctly.
- **This area is outside the sensing area of the obstacle detection sensor. Do not place any objects higher than the loaded media (or jig) in this area.**
  This will cause the print head to strike it.

# Load the media into the printer

**Important!**

- **When loading a new media, make sure to place it on an appropriate position and input correct media information.**
  If wrong information is entered, the printer can print on an unintended position of the table. If UV ink stains on the table, it will be cured by UV light and will not be removed from the table.
- **Do not place any objects on the sensing area of the media height detector.**
  This may cause false detection of the obstacle sensor and the printer may not be able to print correctly.
- **This area is outside the sensing area of the obstacle detection sensor. Do not place any objects higher than the loaded media (or jig) in this area.**
  This will cause the print head to strike it.
  ➔ "Printing area" P.51

## Step1. Place media on the table

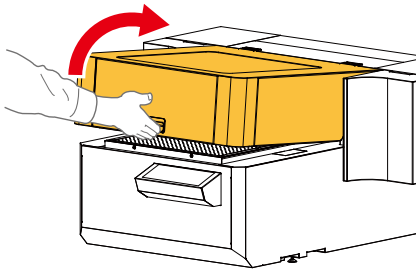
### Procedure

**1.** Check the following message appears.

```
Set media, then
Tap [∧] key.
```

If it is not displayed, tap **[ ∨ ]** key.

**2.** Hold the front cover at the position shown in the illustration and gently open it.



- The following message will appear.

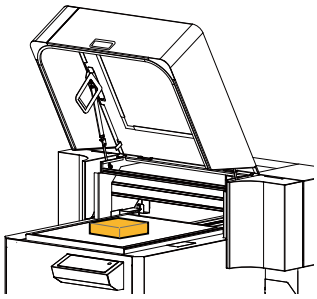
```
Set media, then
close cover.    ∧2∨
```

**Note**

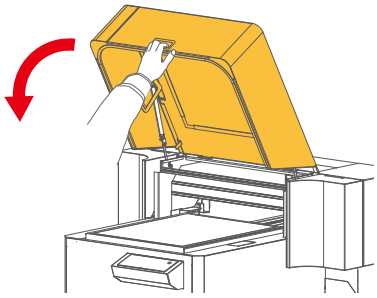
While this message is displayed, you can change the vacuum fan setting by tapping **[∧]** / **[∨]** key (setting range: 0 to 4) When set to 0, the vacuum fan is turned off.

The vacuum fan starts operating when **[∧]** / **[∨]** key is tapped. Any change to the setting will be saved in the currently selected media type.

**3.** Place the media on the table.



**4.** Close the front cover slowly, holding it by the place shown in the picture.



➔ “Step2. Check the media”P.54

## Step2. Check the media

### Specify media height and printer's behavior when obstacle is detected

#### Procedure

**1.** Check the following message appears and tap **[Λ]** key.




- **[Please wait]** appears.
- The obstacle sensor detects the media while the table moves toward the back.

> **Note**
>
> If the table is still positioned too high, the message "Obstacle Detected Tap **[Ú]** key" will appear. Tap**[V]** key and readjust the table height.

**2.** When **[**: Detailed-Set: On]** appears, tap **[Enter]** key.




> **Note**
>
> About the "Detailed-Set" menu
> This menu is only displayed when the media type is selected for the first time.
>
> - On: Each time media is loaded, tap**[Λ]** key and enter the values in the following menus.
>   - **[Height]** - **[Obstacle Detect]** - **[Width]** - **[Length]** - **[Origin]**
> - Off: Each time media is loaded on the table, "Ready to Print" will be displayed after tapping **[Λ]** key. The settings in the above menu uses the settings specified in the currently selected media type.
>
>   Even if **[Off]** is selected, you can enter media height, obstacle detect, media size and origin position from the **[**: Media Setting1 Set Media]** by tapping **[Cancel]** while the message **[Print Ready]** or **[Set media, then Tap [Λ][key.]** appears on the panel.

**3.** When **[**: Height: Auto]** appears, use **[Λ]** / **[V]** key to enter the length of media and tap **[Enter]** key.

- Auto: Automatically detects media height. The table lowers until the obstacle sensor no longer detects the media.
- Manual: manually enter the media height.

> **Note**
>
> If you are using a transparent media, the printer may not be able to detect its height correctly.
> **"Printer does not detect media correctly"P.208**

**4.** Do one of the following based on the selected setting method.

■ **When [Auto] is selected**




a. Use **[∧]** / **[∨]** key to specify the offset value between the print head and media.

b. Tap **[Enter]** key.

- **[**: Confirm Height: Off]** appears. Selecting **[On]** will display the message to confirm if there is a change in media height when a new media is loaded. This message will not appear when selecting **[Off]**.
  ➔ "Confirm Height" P.99

c. Use **[∧]** / **[∨]** key to select **[On]** or **[Off]** and then tap **[Enter]** key.

> **Note**
>
> The default distance between the print head and media is 1.2 mm. To increase the distance, use this menu to specify value in range of 0.0 mm to 1.5 mm.
>
> - **Example:** If "PG Offset" is set to 0.5 mm, the distance between the print head and media is 1.7 mm (1.2 mm + 0.5 mm).

■ **When [Manual] is selected**




a. Use **[∧]** / **[∨]** key to specify the media hight.

b. Tap **[Enter]** key.

> **Note**
>
> You can enter the media height between 0.0 mm and 153.0 mm.

**5.** When **[**:Obstacle Detect: Auto]** appears, use **[∧]** / **[∨]** key to select how the printer performs when the media height detector detects obstacle during printing.

- **Off:** Obstacle detection is disabled during printing.
- **Auto:** Pauses printing. It lowers the table until the sensor no longer detects any obstacle, and then resumes the job.
- **Cancel:** Cancels printing and displays the error message.
- **Confirm:** Pauses printing. The printer pauses the printing and allows users to choose from resume or chancel printing.

> **Note**
>
> If the sensor still detects the obstacle even when the table is lowered to its lowest position, the printer cancels printing and prompts the obstacle error message.

**Important!**

If printing is paused during printing, a line or color difference may appear at the point where printing resumes.

**6.** (This step is required only when [Confirm Height: On] is selected in step 4)
The message **[Same Media Height? H:XXX. X mm Yes]** appears.
Use **[ ∧ ]** / **[ ∨ ]** key to select **[Yes]** or **[No]** and then tap key.

**Note**

- This message appears when Height is set to **[Auto]** and Confirm Height is set to **[On]**, but the following cases are excepted:
  - When you load the first media after the printer is turned on.
  - When you load the first media after changing the Height setting from **[Manual]** to **[Auto]**.
- When the height of media being loaded is the same as the media loaded previously, you should select **[Yes]** to shorten the media height detection time.
- When the height of media being loaded is different from the media loaded previously or an error occurred after selecting **[Yes]**, you should select **[No]** to detect media height again.

**7.** Tap **[Enter]** key.

- **[Please wait]** appears.
- The obstacle sensor detects the media while the table moves toward the back.

■ **If no obstacle is detected, go to the next step.**

➔ "Enter width and length of media and origin" P.56

■ **If an obstacle is detected, an error message will be displayed.**

- Tap **[∨]** key.
- Reload the media on the table and correct the height of media.

➔ "Step1. Place media on the table" P.52
➔ "Step2. Check the media" P.54

## Enter width and length of media and origin

### Procedure

**1.** Enter the width of media.
Use **[ ∧ ]** / **[ ∨ ]** key to enter the width of media and tap **[Enter]** key.




**Note**

Setting range (width): 30 to 483 mm

## 2. Enter the length of media.

Use **[ ∧ ]** / **[ ∨ ]** key to enter the length of media and tap **[Enter]** key.




**Note**

Setting range (length): 30 to 610 mm

## 3. Sets the print start position (origin).

- **[∧]** / **[∨]** key: PF (media feeding) direction
- **[<]** / **[>]** key: CR (carriage moving) direction




**Note**

The origin can be set within the following range:

- PF: 0.0 to 590.0 mm
- CR: 0.0 to 463.0 mm

## 4. Tap **[Enter]** key.

- The table moves to the back.
- The carriage moves to the specified position with the LED pointer turned on.

## 5. Check if the LED pointer shows the correct position.

Make sure to run this calibration in the following cases:

- **[∧]** / **[∨]** key: PF (media feeding) direction
- **[<]** / **[>]** key: CR (carriage moving) direction

## 6. Tap **[Enter]** key to finish the procedure.

- The following will appear.




End the media loading.

# Nozzle check and head cleaning

Before you start daily printer operation, run a nozzle check. If there are clogged nozzles (missing lines), perform a head cleaning.

## Run a nozzle check

Print a nozzle check pattern to check if all nozzles are firing ink properly.

This printer offers the following nozzle check menus:

### Nozzle check menus

| | |
|---|---|
| **Nozzle check B** | Some colors of nozzle check patterns are printed with the background colors. |
| **Nozzle check F** | Prints a nozzle check pattern using all nozzles. |
| **Nozzle Check L** | Print the nozzle check pattern outside the printable area of the table on the non-origin side. The nozzle check pattern can be printed without removing the print media from the table. |

**Note**

When using white ink, colored media, transparent films or semi-transparent films (such as OHP film, tracing paper and more) are recommended to use for nozzle check.

### Procedure

1. Load media to print a nozzle check pattern.

➔ "Load the media into the printer"P.52

**Important!**

Required media size:

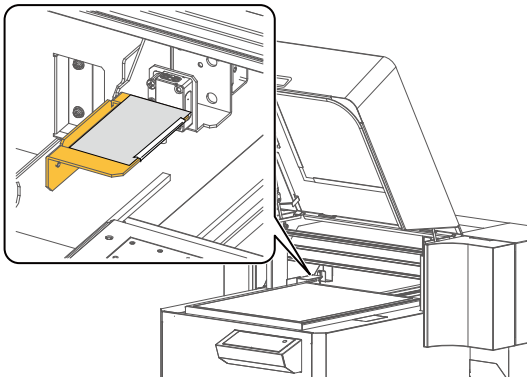
- Nozzle check B and Nozzle checkF: width 260 mm x length 45 mm
- Nozzle Check L: width 50 mm x length 55 mm
  Thickness: 1.5 mm or less

Using small media may cause the print to extend beyond the media. If UV ink stains on the table, it will be cured by UV light and will not be removed from the table.

### For Nozzle Check L

Load the media in the nozzle check L space on the non-origin side.

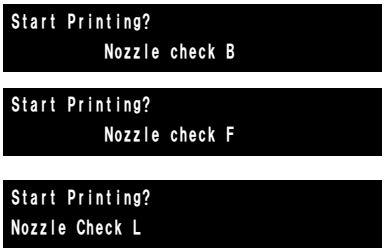
- Align the right edge of the media with the right side of the space.
- Secure the media with tape such as masking tape to keep it flat.



**2.** Tap **[<]** key while **[Print Ready]** is displayed on the panel.

**3.** Use **[∧]** / **[∨]** key to select a type of nozzle check and tap **[Enter]** key.

- When Nozzle Check L is selected, tap **[>]** key and then **[Enter]** key.

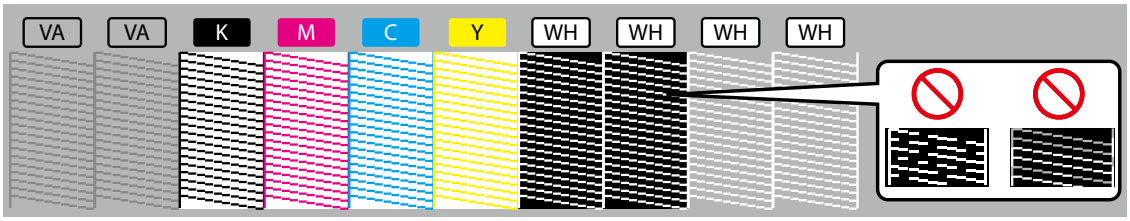



The printer begins printing a nozzle check pattern.

> **Note**
>
> You can select a nozzle check pattern from the setup menu of the printer control panel.
> ➔ "Menu3: Test Print" P.114

**4.** Check the pattern printed.

- If the nozzle is clogged, go to “Perform a head cleaning”.
  ➔ “Perform a head cleaning” P.61
- If all lines are clearly printed, you can start printing.




**Note**

- The above figure is an example of the Nozzle Check B pattern. In this example, non-colored background area is shown in gray.
- Printer information (print time, serial number, and firmware version) is printed next to the pattern.

# Perform a head cleaning

If the nozzle is clogged, perform a head cleaning. The product has several cleaning modes. Use an appropriate mode depending on the nozzle check print result.

## Head cleaning mode

| | |
|---|---|
| **Cleaning "Short"** | Select this mode if there are clogging on about 10 nozzles. Consumes a small amount of ink. |
| **Cleaning "Normal"** | Select this mode if there are clogging on more than 10 nozzles. |
| **Cleaning "Long"** | Select this mode if nozzle clogging persists even after Cleaning "Normal" was performed. Consumes more ink than Cleaning "Normal". |
| **Cleaning "Little Charge"** | Gives higher cleaning efficiency than cleaning "Long", but consumes a lot of ink. |

### Procedure

**1.** Tap **[>]** key while **[Print Ready]** is displayed on the panel.

**2.** Use **[∧]** / **[∨]** key to select a head cleaning mode and tap **[Enter]** key.













- The cleaning cycle begins.




> **Note**
>
> You can also perform a head cleaning from the setup menu of the printer control panel.
> ➔ "Menu2: Maintenance" P.110

**3.** Run a nozzle check print again to see if all nozzles are clear.

➔ "Run a nozzle check"P.58

- If the nozzle clogging persists, repeat the Cleaning "Normal" two or three times. If nozzle clogging persists even after repeated Cleaning "Normal" attempts, try the Cleaning "Long".
- If nozzle clogging persists even after Cleaning "Long" attempts two or three times, try other cleaning.
  ➔ "Nozzle clogging persists even after several head cleaning attempt" P.160

# Start printing

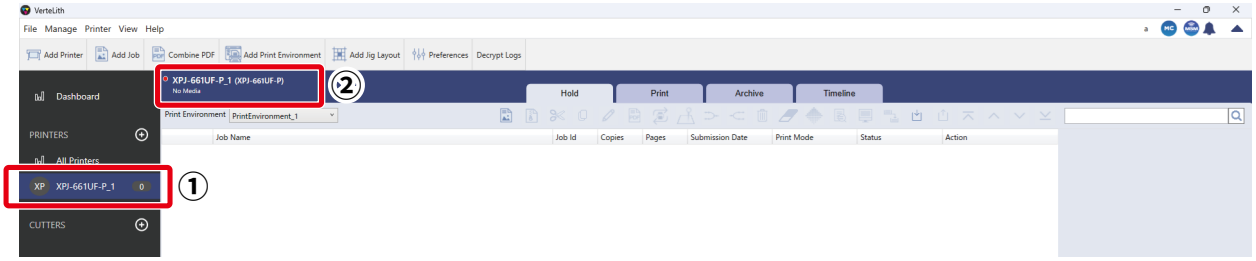
## Print an image

Here we will explain basic printing procedure using MUTOH RIP software **“VerteLith”**.

For more details of VerteLith setup and operation, see the **“VerteLith user manual”**.

### Procedure

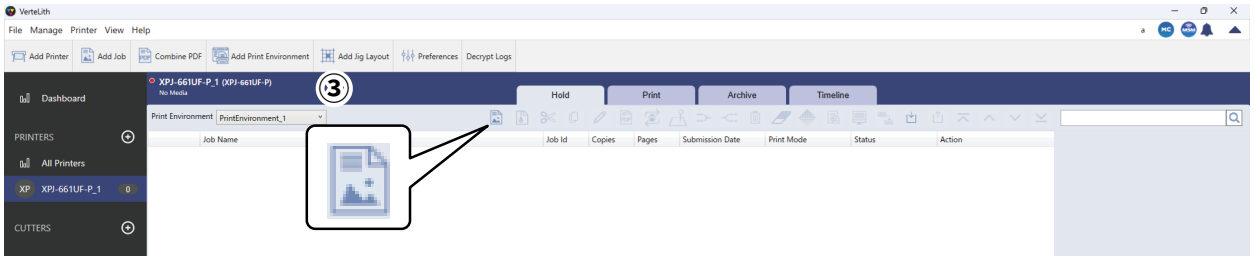
**1.** Start VerteLith. Select “XPJ-661UF-P” from the list of printer (①).
“XPJ-661UF-P” appear ( ② ).



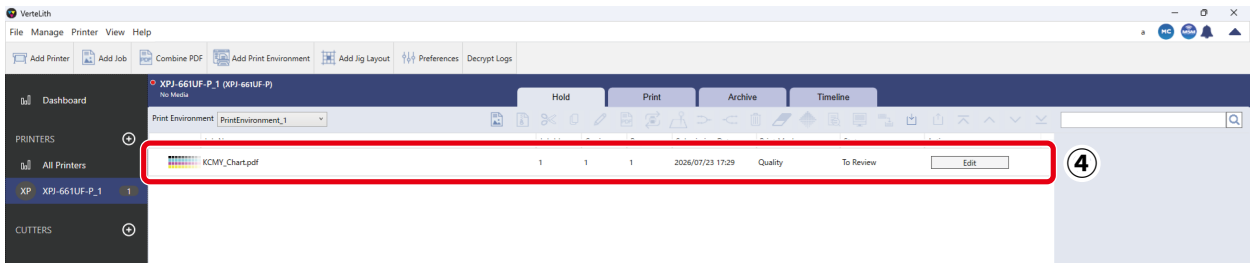

> **Note**
> For how to add a printer to VerteLith, see the “VerteLith user manual”.

**2.** Add an image file you want to print.

- In the Hold queue, click the **[Add Job]** icon (③) so that the open dialog appears.

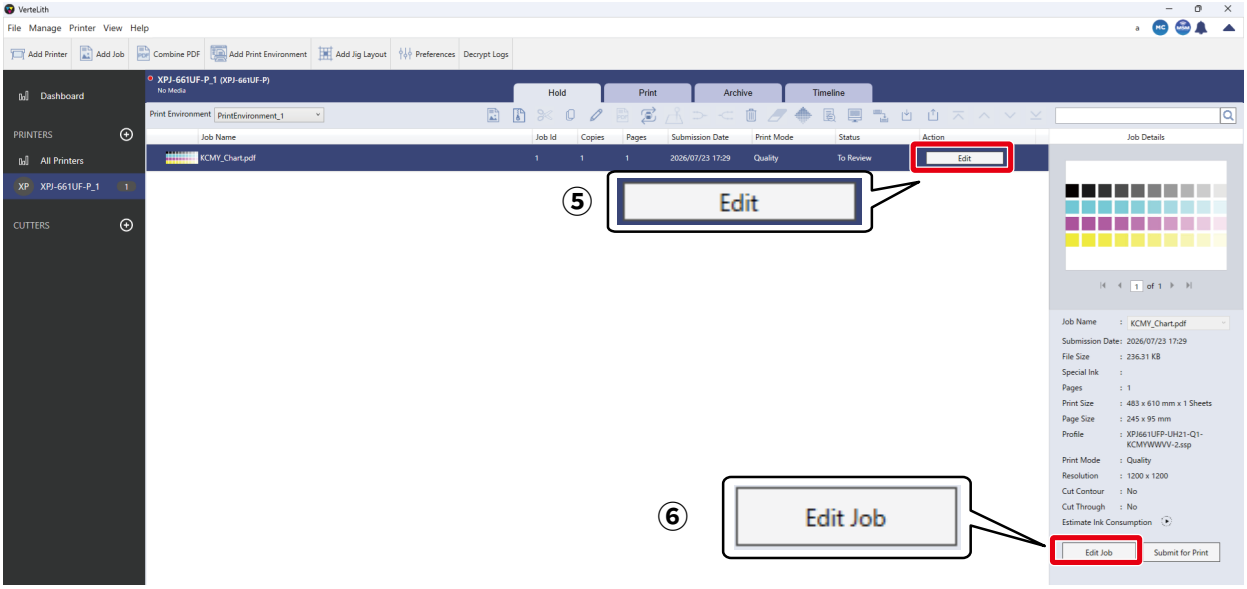



- Select an image file and click **[OK]** to add it to the Hold queue (④). You can add multiple files here.

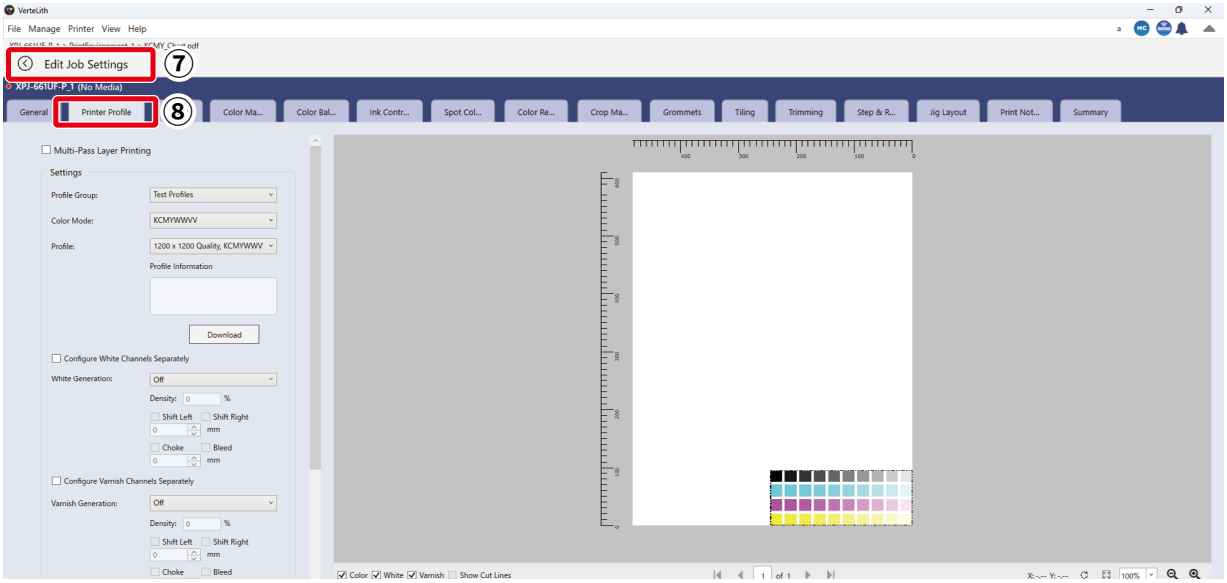



> **Note**
> You can also drag and drop files in the Hold queue.

**3.** Select a print job and click **[Edit]**(⑤) or **[Edit Job]**(⑥).

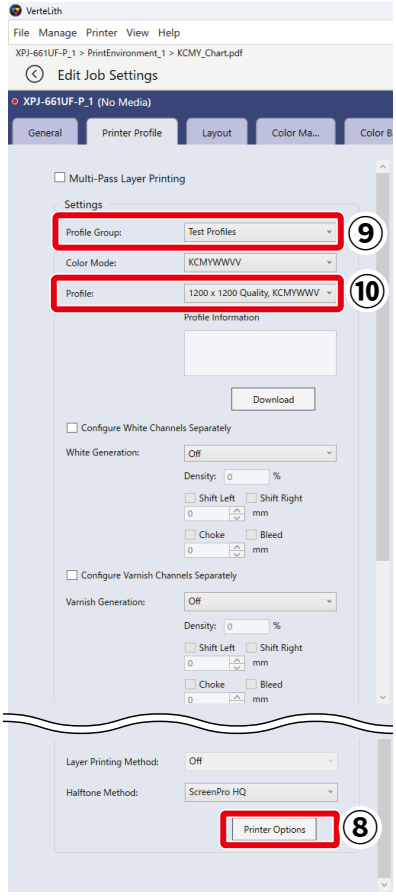



**4.** **[Edit Job Settings]** (⑦) appears. Click the Printer Profile tab (⑧).



## 5. Configure the basic print settings.

- Profile Group option (⑨)
  - Select an appropriate one depending on the ink being used.
- Profile option (⑩)
  - Select an appropriate profile depending on the media type and print mode.
- Printer Options (⑪)
  - Additional advanced settings can be configured (you can also print with default settings).

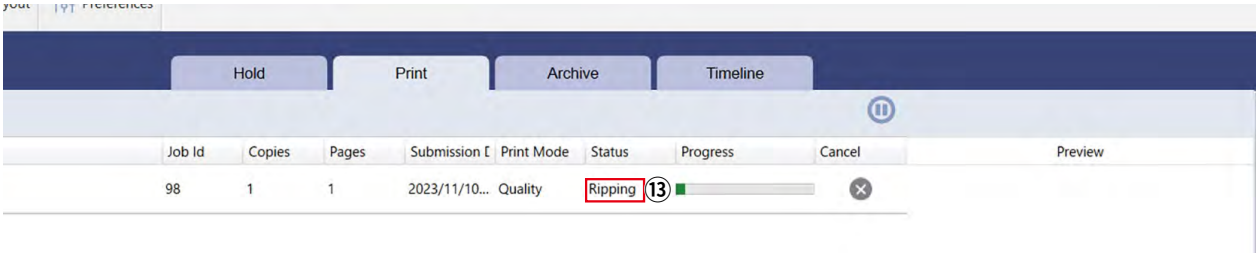


## 6. Click **[Submit for Print]** (⑫).

- The job will move to the Print queue. Printing begins after RIP processing.




- The processing status of the job (Sending, Waiting for ripping, Ripping, Waiting for Print) can be viewed (⑬).



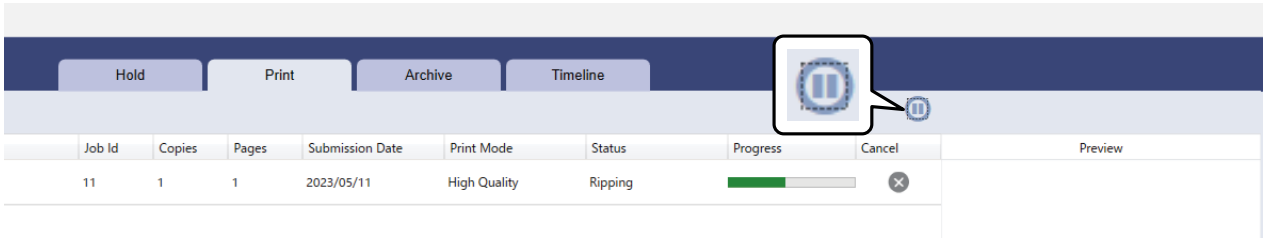

- The job will automatically move to the Hold queue after printing (⑭ ).



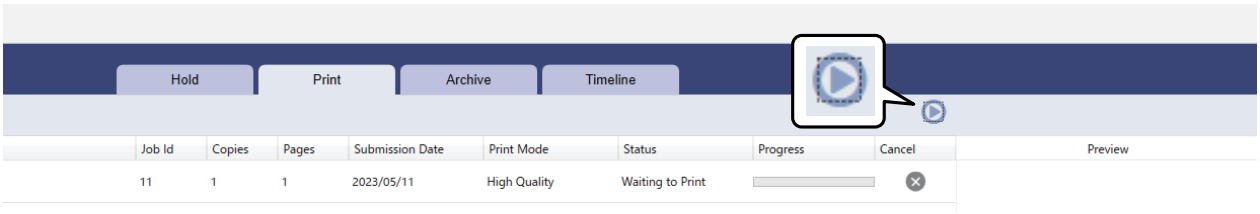
# Pause / Resume / Cancel a print job

## Procedure

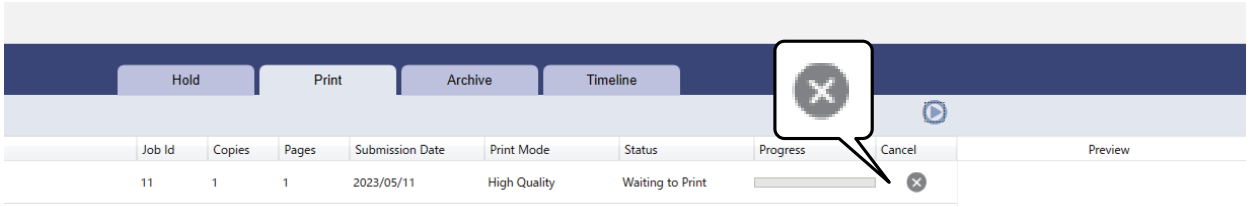
**1.** Clicking the **[Pause Print]** icon (①) will put the RIP processed job into "Waiting for Print" status (you cannot pause the job being sent).




**2.** Clicking the **[Resume Print]** icon (②) will resume the print job which is in "Wait for Print" status.




**3.** Clicking the **[Cancel]** icon (③) will cancel printing the job.

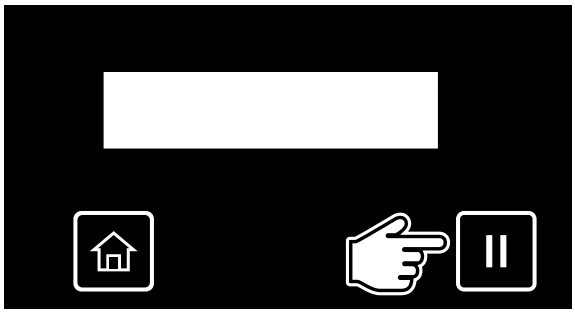


# Operating from the printer control panel

## Pause / Resume printing

### Procedure

**1.** Tap **[Cancel]** key while printing.
Printing pauses.



**Note**

This operation does not delete the print data sent to the printer. To cancel and delete the data, see the following section.
➔ "Cancel printing" P.68

**2.** Tap **[Cancel]** key again to resume printing.



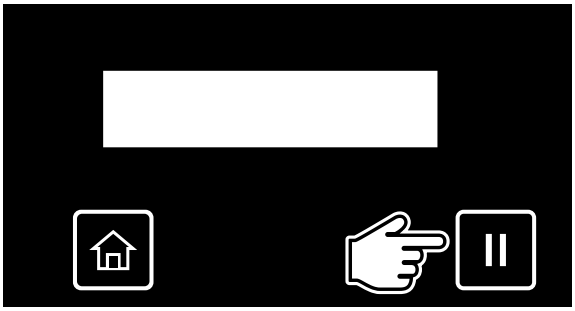

**Important!**

Print quality cannot be guaranteed if printing is paused.

# Cancel printing

## Procedure

**1.** Tap **[Cancel]** key while printing.
Printing pauses.



**Note**

Tapping **[Cancel]** key again will resume printing.

**2.** Tap **[Enter]** key to cancel printing.

- Once canceled, you cannot resume the job.
- The data sent to the printer will be deleted.



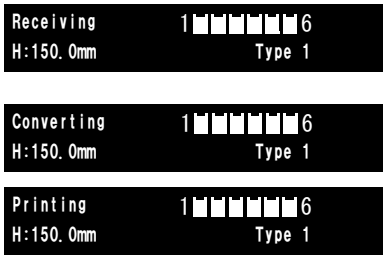

**Note**

You can also cancel printing from the remote panel on MSM.

## Menus you can access while printing

### Procedure

**1.** While one of these messages appears, tap **[Home]** key.




**2.** Select a menu and tap **[>]** key.

| Menu | Functions |
|---|---|
| **PF Adjust** | You can change the micro adjustment value to correct media feeding for the current print job.<br>• **[∧]** / **[∨]** key: Change the setting.<br>• **[Enter]** key: Apply the change.<br>**Note**<br>• The change made will become invalid after printing.<br>• The change made can be saved in the selected media type.<br>➔ "Backup" P.69 |
| **Backup** | Save the change made in the following menus to the selected media type.<br>• PF Micro Adjust<br>Select **[Update Parameter? Yes]** and tap **[Enter]** key. |
| **Job Status** | Displays information about a print job being printed.<br>• **[∧]** / **[∨]** key: Select the item you want to view.<br>- ToDoLength: displays the length of the current job (in media feeding direction).<br>- Done: displays the length of the current job that has been already printed.<br>- Remain: displays the remaining length to finish printing.<br>- Remain time: displays remaining time to finish printing.<br>**Note**<br>• The values displayed are for reference only. Exact accuracy is not guaranteed.<br>• If print data does not contain length information, **[0]** will be displayed in all items. |

# Checking the printing area

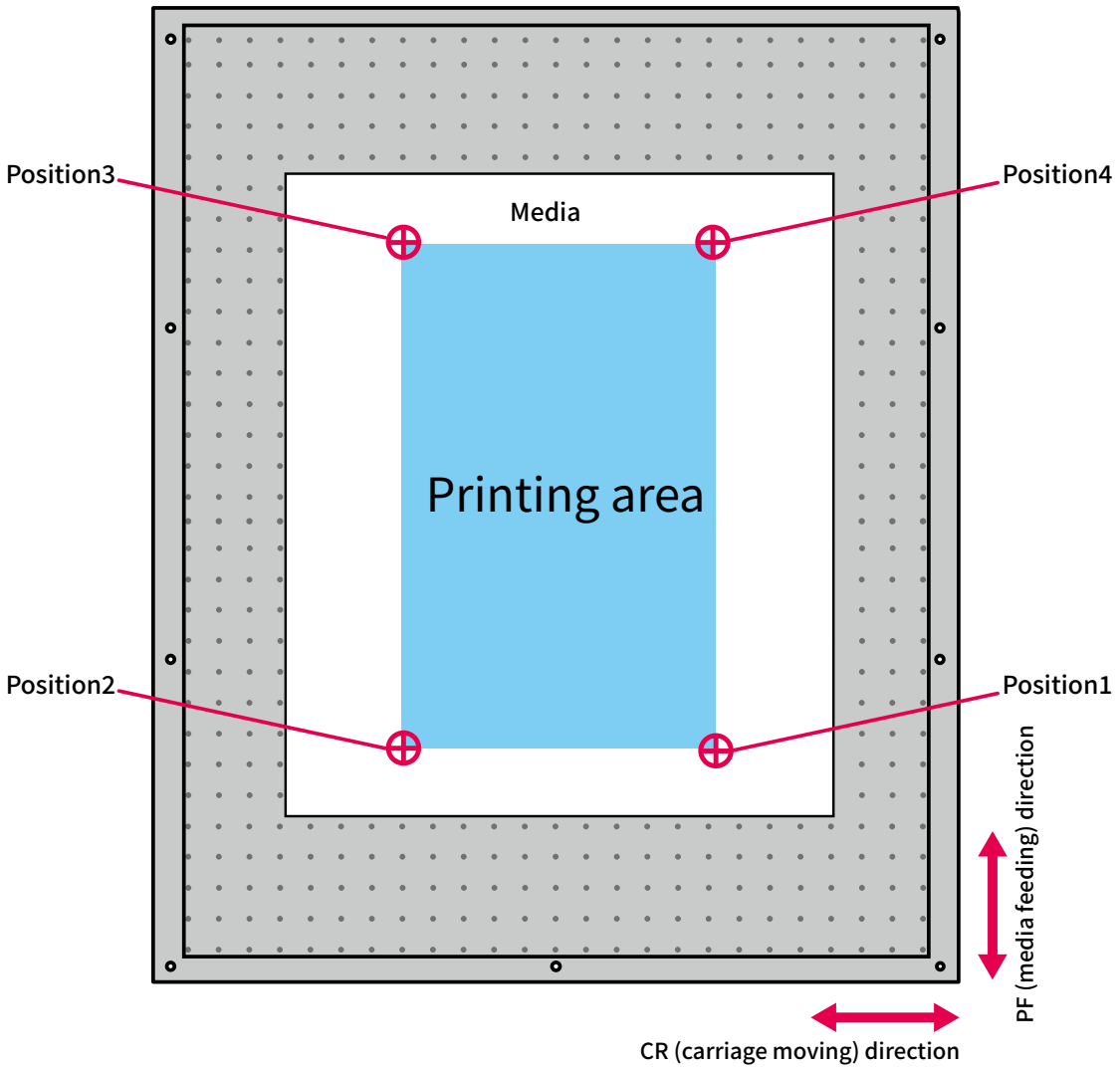
When set to On, you can check the printing area before printing. LED pointer shows the outer edges and corners of the printing area. This helps to avoid misprinting especially when printing on an object that you do not have more than one pieces.

With this function, you can check the following:

- Whether an image can be printed on the intended area on the media.
- Whether the print data can be fitted within the media.

## Operation

- Locate the four corners of the printing area by the LED pointer.
- The LED pointer flashes (every second) on the point.
- The LED pointer lights up when moving from point to point.
- If the print data is too big for the media, the LED pointer flashes fast (twice a second) on the point.
- The pointer moves in the order of **"position1"** to **"position4"** as shown in the illustration.




(Front side of the table)

**Note**

When the print data does not have the length information (PF direction length), the LED pointer does not move from Position3 and 4.

## 1. Specify whether to check the print area before printing

### Procedure

**1.** Tap **[Home]** key.

**2.** Access the “Print Prefs.” menu.

Menu flow




a. Select **[Media Type]** and tap **[>]** key.

b. Use **[∧]** / **[∨]** key to select a media type and tap **[Enter]** key.

c. Use **[∧]** / **[∨]** key to select the **[Print Prefs.]** menu.

**3.** Tap **[>]** key.

**4.** Use **[∧]** / **[∨]** key to select the **[Print Start Opt.]** menu and tap **[>]** key.




**5.** Use **[∧]** / **[∨]** key to select whether to check the print area before printing or print without checking.

- **Off:** The print area is not indicated and no confirmation message is displayed before printing. This is the default setting.
- **Confirm Print Start:** The confirmation message **[Start Printing?]** is displayed.
- **Step:** LED pointer shows where the image will be printed on the media and the printer will ask you at each point of corner if the position is OK.
- **Auto:** LED pointer shows where the image will be printed on the media without checking with the user.

**6.** Tap **[Enter]** key.

Next, check the printing area.

➔ “2. How to check the printing area”P.72

## 2. How to check the printing area

This section explains about when the checking method is set to **[Step]**.

**Note**

When **[Auto]** is selected, skip Step 3. After step 2, the LED pointer moves through the print area in order of "position1" to "position4" without user confirmation.

### Procedure

**1.** Load a media and send a print data to the printer.
The following will appear.



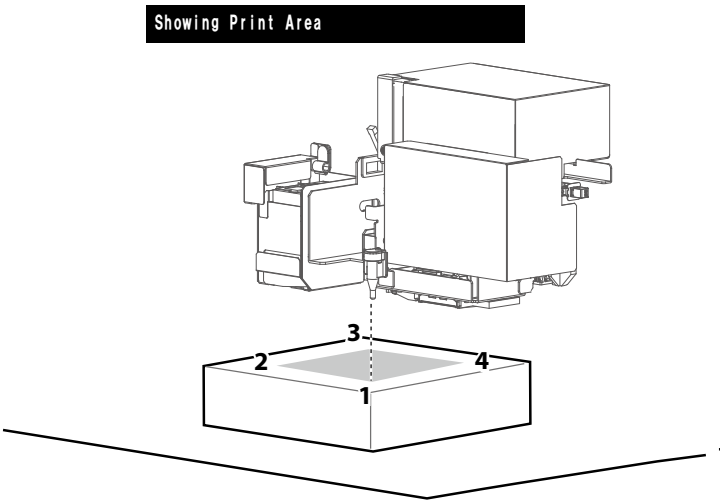

**Note**

If you tap **[<]** key, the printer starts printing without showing print area.

**2.** Tap **[Enter]** key so that the print area confirmation begins.

a. The LED pointer moves to the bottom right corner of the print range (position1) while the LED is turned off.

b. After moving, the LED pointer flashes every second, for a total of 3 times.



**3.** Check that the LED pointer's position is not misaligned with the media position, and then tap **[Enter]** key.




The LED pointer moves to the next corner of the print area.

**Note**

- "X" in **[Position X OK?]** indicates the position of printing area that LED pointer shows (1 to 4).
- The LED pointer remains on until **[Enter]** key is tapped.
- To cancel the job, use **[∧]** / **[∨]** key to select **[No]**, then tap **[Enter]**.
- If the width (CR direction length) or length (PF direction length) of the print data is too big for the media, the LED pointer flashes twice a second, for a total of 6 times after moving.

**4.** Repeat the same procedure to check position 2 through 4.

Once the confirmation until Position 4 is finished, the carriage returns to the original position (capping station). Checking the print area is complete.

**5.** Use **[∧]** / **[∨]** key to select **[Start Printing? Yes]** and tap **[Enter]** key.




Printing will begin.

**Note**

To cancel the job, use **[∧]** / **[∨]** key to select **[No]**, then tap **[Enter]**.

# Emit UV light at any desired timing

Use this function to perform curing process on prints that have not been sufficiently cured.

This is useful for the following cases.

- When printing on media that soaks ink, such as a cloth and so on.
- When printing an image that uses a lot of ink.
- When the multi-layered ink on the media is thick.

**Note**

- The UV curing area depends on the “Size” and “Origin” settings of the currently selected media type.
- For details on the related sections of the setup menu, see the following.
  - Changes the number of back-and-forth scans per inch in the media feed direction during UV scanning.
  ➔ “UV Scan” P.122 > “Number of UV Scan” P.122
  - Automatically perform additional UV scanning every time after printing.
  ➔ “UV Scan” P.122 > “Post Cure” P.122

## Procedure

**1.** After printing, tap **[Home]** key.

**2.** Access the “UV Scan” menu.

Menu flow




- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

**3.** Tap **[>]** key.

**4.** Use **[∧]** / **[∨]** key to enter the number of scans and tap **[>]** key.




**Note**

- Setting range: 2, 4, 8, 16 (times)“UV Scan”P.122 By tapping>“Number of UV Scan”P.122 , the number of UV scans specified is displayed as the default value.
- The setting selected here is not saved in the printer.

**5.** Tap **[Enter]** key.




- UV curing begins.




**Note**

If **[Cancel]** key is tapped while **[Curing]** is displayed, the message **[Curing Cancel? -> Enter]** appears. Tapping **[Enter]** will cancel UV curing.

# Calibrating table height

To optimize the distance between the print head and media, calibrate the table height position. This menu helps to correct following symptoms on your print:

- Ink bleeding
- Faint print
- Ink mottling

## Procedure

**1.** After printing, tap **[Home]** key.

**2.** Access the "Table" menu.

Menu flow




- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

**3.** Tap **[>]** key twice.

The following will appear.




**4.** Tap **[Enter]** key.

- The table moves to the front side of the printer.
- The following will appear.




**5.** Remove media and jig, and tap **[Enter]** key.

- **[Please wait]** appears.
- The printer starts table height calibration.

**6.** The calibration is now complete.




**Note**

If the problem still persists after the calibration, perform printing adjustment and media feeding adjustment.

➔ “Adjust Print” P.107
➔ “Media feed adjustment” P.115

**Important!**

- **Do not place any objects on the sensing area of the media height detector.**
  This may cause false detection of the obstacle sensor and the printer may not be able to print correctly.
- **This area is outside the sensing area of the obstacle detection sensor. Do not place any objects higher than the loaded media (or jig) in this area.**
  This will cause the print head to strike it.
  ➔ “Printing area” P.51

# Layer printing

This printer has the capability for layer printing.

- If you are using the MUTOH RIP software **[VerteLith]**, refer to the separate Printing Guide.
- For details on the related sections of the setup menu, see the following.

➔ “Adjust Layer Print”P.102
➔ “Multi Strike”P.122
➔ “Multi layer”P.123

# Agitating ink

**Important!**

- Ink must be agitated periodically. Otherwise, the ink in the ink cartridges (or ink bags) settles, causing print defects or printer malfunction.
- For the next 12 hours after the ink agitation message is displayed, the printer remains in standby to allow you to agitate ink before printing. Printing begins after ink has been agitated or a certain period of time has elapsed. After 12 hours, printing cannot be performed until the ink is agitated.
- The remaining time until the next agitation is required is displayed.
  ➔ "Check the remaining time until the next ink agitation is required" P.85
- You can perform ink agitation at any desired time.
  ➔ "Ink agitation" P.119

To avoid ink settling, you must agitate the ink in the following timing:

- When you open a new ink cartridge or ink bag.
- Before and after daily operations.
- When the following message appears on the control panel.*




Agitate White (WH) inks.

This message appears every 12 hours.




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

This message appears every 72 hours.




Agitate Black (K), Magenta (M), Cyan (C), Yellow (Y) and White (WH) inks.

This message appears every 72 hours.

# When using ink cartridges

## Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

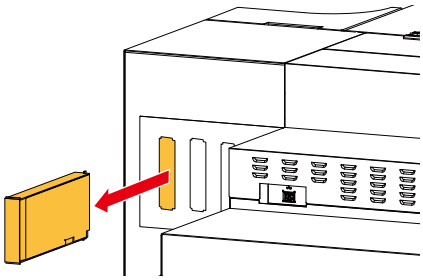
## Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

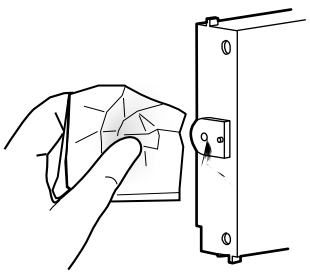
If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

### Procedure

1. Wear protective equipment.
   ➔ "Wearing protective equipment"P.134
2. Check that the printer is powered on.
3. Remove the ink cartridge from the ink slot.



4. Using the paper towel provided with the printer, wipe off the ink around the ink outlet of the cartridge.

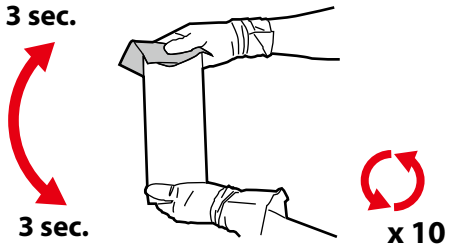


**5.** Follow these steps to agitate ink in the cartridge.

**a.** While placing the lint-free cloth over the ink outlet of the cartridge, hold the ink cartridge with the ink outlet facing up and wait for three seconds.

**b.** Invert it with the ink outlet facing down and wait for 3 seconds.

**c.** Repeat this 10 times. (20 times for white ink)




**Note**

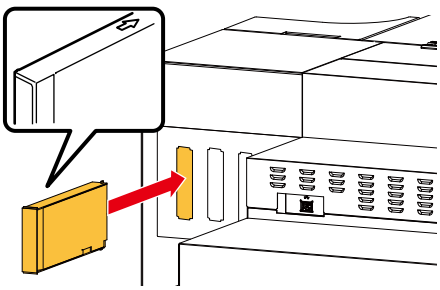
Varnish (clear) ink can be used without agitation.

**6.** Insert the ink cartridge back to the original ink slot.

**a.** Make sure to match the color of the ink cartridge with the color of the label attached to the ink slot.

**b.** Face the arrow mark upward.

**c.** Make sure that they are fully inserted.



**Important!**

- Insert it into its original ink slot. Even if it is the same color, do not insert it into a different slot.
- Gently insert it. Inserting it forcefully may cause ink leakage.

# When using ink bags with high-capacity ink pack adapters

## Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

## Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

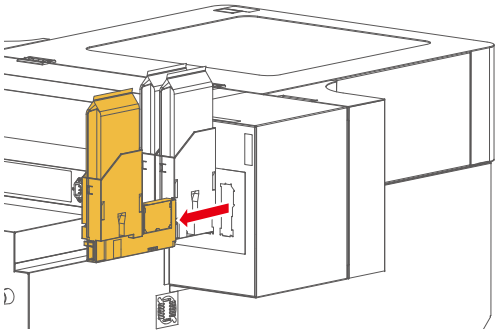
If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

**Note**

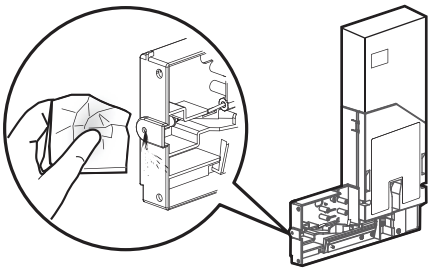
For proper instructions of high capacity ink pack adapter, see the high capacity Ink Pack Adapter Operation Manual.

### Procedure

1. Wear protective equipment.
   ➔ “Wearing protective equipment”P.134
2. Check that the printer is powered on.
3. Remove the high-capacity ink pack adapter of the ink bag to be replaced.

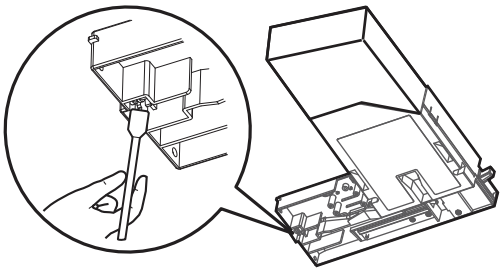


**4.** Using the paper towel provided with the printer, wipe off the ink around the ink outlet of the high-capacity ink pack adapter.



**5.** Tilt the adapter and absorb the ink dripping off the adapter using a cleaning stick.

- Tilt it with the ink outlet slightly facing down.
- When tilting the adapter, make sure that the side with the warning label attached is facing down.

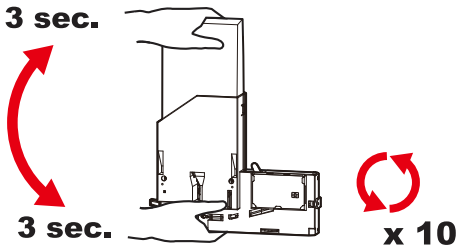


**6.** Follow these steps to agitate ink in the cartridge.

a. Hold the high-capacity ink pack adapter as shown by holding the light blocking cover down with one hand, making sure not to remove the ink bag from the adapter, and wait for 3 seconds.

b. Invert it with the ink outlet facing down and wait for 3 seconds.

c. Repeat this 10 times. (20 times for white ink)



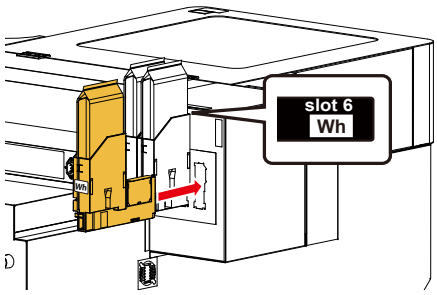

**Note**

Varnish (clear) ink can be used without agitation.

**7.** Insert the high-capacity ink pack adapter back to the original ink slot.

**a.** Make sure to match the color of the ink bag label with the color of the label attached to the ink slot.

**b.** Make sure that they are fully inserted.




**Important!**

- Insert it into its original ink slot. Even if it is the same color, do not insert it into a different slot.
- Gently insert it. Inserting it forcefully may cause ink leakage.

# Check the remaining time until the next ink agitation is required

Check the remaining time until the next ink agitation is required. You can perform ink agitation immediately.

## Procedure

**1.** Tap **[Enter]** key while **[Print Ready]** or **[Set media, then Tap [∧] key.]** is displayed on the panel.

> **Note**
>
> You can also check the time until the next ink agitation from the setup menu of the printer control panel.
> ➔ "Ink agitation" P.119

**2.** Use **[∧]** / **[∨]** key to select the ink you want to check the remaining time until the next agitation.




Time for the next agitation is shown in 1-hr increments.

- Example:
  - It is more than 2 hours but less than 3 hours: **[2h]** appears.
  - It is more than 1 hour but less than 2 hours: **[1h]** appears.
  - It is less than 1 hour: **[<1h]** appears.
  - When the message **[Agitate ∗ Ink]** is already displayed: **[Immediately]** appears.

**3.** Tapping **[<]** key will return to the original display. To perform ink agitation immediately, tap **[>]** key. See the following section for agitation procedure.

➔ "Perform ink agitation"P.120

# Checking ink level and replacing ink bag

## Checking ink level

### Procedure

**1.** Tap **[Home]** key.

**2.** Access the “Ink Status” menu.

Menu flow




- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

**3.** Tap **[>]** key.

The following will appear.




**4.** Tap **[>]** key.

The ink level is displayed in percentage (0 % to 100 %).




➔ “When an ink bag is nearing replacement”P.87

**Note**

- See the following section for information on ink color and corresponding ink slot.
  ➔ “Ink slots” P.28
- To display various information on ink, use genuine ink and smart chip cards. Ink status will not be displayed correctly if non-genuine products are used.
- If the ink level is blinking at 10 %, smart chip recovery is being performed for the corresponding ink.
  ➔ “Smartchip Recovery” P.204

# When an ink bag is nearing replacement

When the ink level is low, the status light on the printer control panel blinks in red with beep sound.

## Procedure

**1.** Tap **[Enter]** key.

- The beep sound stops.
- In this figure, the slot 1 ink bag is nearing replacement.




> **Note**
> Sleep mode continues after stopping the buzzer.

**2.** Replace with a new ink bag.

➔ "Replacing ink"P.88

# Replacing ink

When an ink bag runs out of ink, the status light on the printer control panel turns on red with beep sound.

The printer pauses printing.

Replacing with a new ink will resume printing.

## Warning

**Keep the ink, cleaning solution and waste fluid away from fire and heat and store in a cool, dark place.**

## Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

## Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

**Important!**

- When the printer is powered off, do not replace with a new ink bag. The printer may not be able to detect ink level correctly.
- When moving an ink from cold to warm place, rest it in room temperature for at least 3 hours before use.
- If you do not have a new ink for replacement, leave the empty ink cartridge inserted in the printer. Leaving the printer without ink installed could cause nozzle clogging.

## When using ink cartridges

### Procedure

**1.** Wear protective equipment.

**2.** Tap **[Enter]** key.

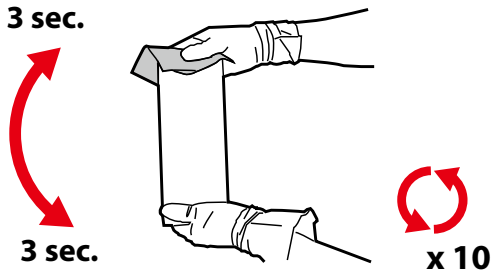
- The beep sound stops. The buzzer beeps again if ink is not replaced even after a while.
- In this figure, the slot 1 and slot 6 cartridges need replacing.




> **Note**
> Sleep mode continues after stopping the buzzer.

**3.** Prepare a new ink cartridge and follow the instructions below to agitate ink.

a. Hold the ink bag with the ink outlet facing up and wait for 3 seconds.
b. Invert it with the ink outlet facing down and wait for 3 seconds.
c. Repeat this 10 times. (20 times for white ink)



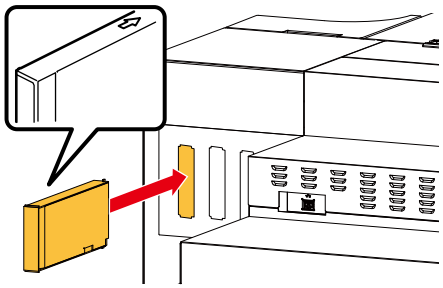

> **Note**
> Varnish (clear) ink can be used without agitation.

**4.** Remove the empty ink cartridge and insert the new one.

a. Make sure to match the color of the ink cartridge with the color of the label attached to the ink slot.

b. Face the arrow mark upward.

c. Make sure that they are fully inserted.



**Important!**

- Insert it into its original ink slot. Even if it is the same color, do not insert it into a different slot.
- Gently insert it. Inserting it forcefully may cause ink leakage.

## When using ink bags with high-capacity ink pack adapters

### 1. Remove the high-capacity ink pack adapter

#### Procedure

**1.** Wear protective equipment.

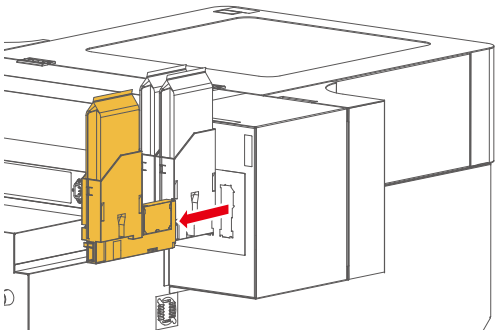
**2.** Tap **[Enter]** key.

- The beep sound stops. The buzzer beeps again if ink is not replaced even after a while.
- In this figure, the slot 1 and slot 6 cartridges need replacing.

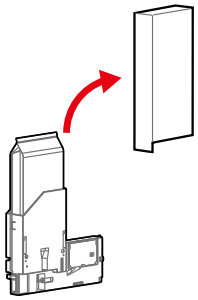



> **Note**
> Sleep mode continues after stopping the buzzer.

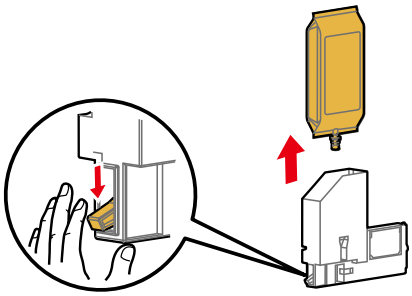
**3.** Remove the high-capacity ink pack adapter of the ink bag to be replaced.



**4.** Remove the light-blocking cover.



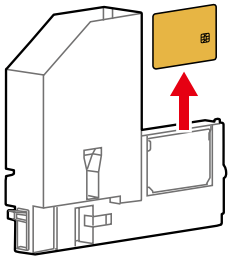
**5.** Remove the empty ink bag while lowering the lock lever on the high-capacity ink pack adapter.



**Note**

Put the empty ink bag in a plastic bag and dispose of it according to the local regulations.

**6.** Remove the smartchip card from the high-capacity ink pack adapter.



## 2. Loading a new ink bag

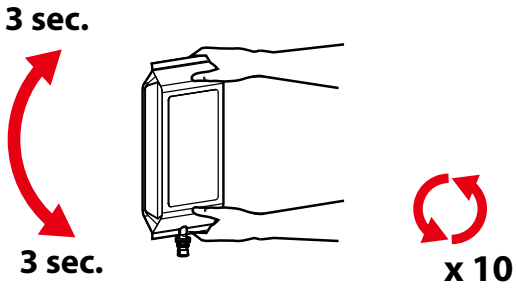
### Procedure

**1.** Prepare a new ink bag and follow the instructions below to agitate ink in the ink bag.

a. Hold the ink bag with the ink outlet facing up and wait for 3 seconds.

b. Invert it with the ink outlet facing down and wait for 3 seconds.

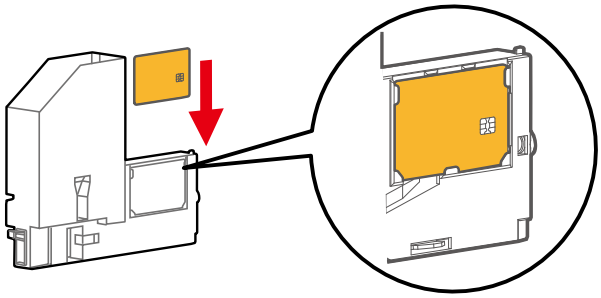
c. Repeat this 10 times. (20 times for white ink)




**Note**

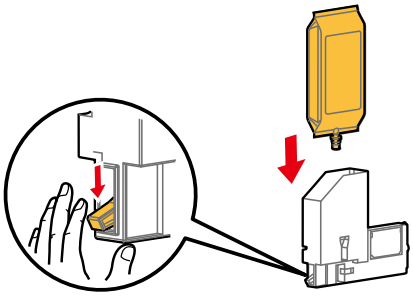
Varnish (clear) ink can be used without agitation.

**2.** Insert the new smartchip card into the card slot on the high-capacity ink pack adapter.

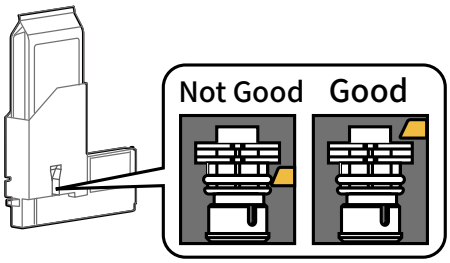


**3.** Insert the new ink bag while lowering the lock lever on the high-capacity ink pack adapter.

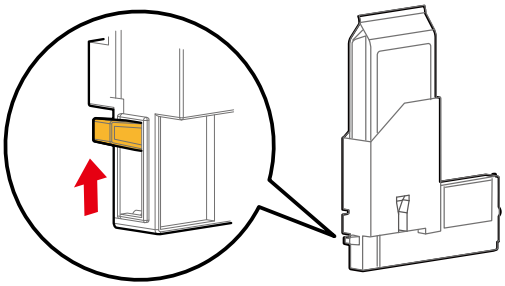
**a.** Insert the ink bag all the way in to seat properly.



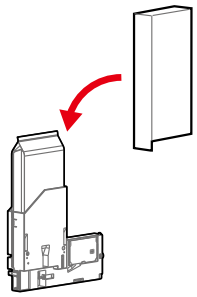
**b.** Ensure that the ink bag is fully seated and locked.




**c.** Check that the lock lever of the high-capacity ink pack adapter is back to its original position.



**4.** Cover the ink bag with the light-blocking cover.



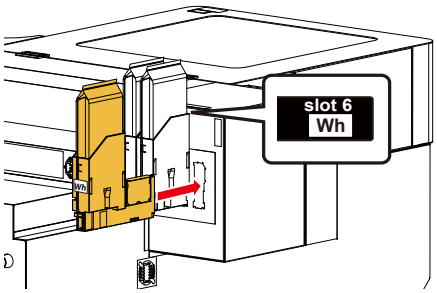
**Important!**

Attach it so that the light-blocking cover comes inside the high-capacity ink pack adapter.

**5.** Insert the high-capacity ink pack adapter back to the original ink slot.

a. Make sure to match the color of the ink bag label with the color of the label attached to the ink slot.

b. Make sure that they are fully inserted.




**Important!**

- Insert it into its original ink slot. Even if it is the same color, do not insert it into a different slot.
- Gently insert it. Inserting it forcefully may cause ink leakage.

# Replacing Adapter’s plug for high capacity ink pack adapter

When the plug reaches the end of life, the status light on the printer control panel turns red and the message appears.

Follow these steps to replace with a new plug.

## Procedure

**1.** Tap **[Enter]** key.




- The number in parentheses identifies the slot number.
- The following message will appear.




**2.** Follow the instructions in the high-capacity ink pack adapter's operation manual to replace with a new plug.

➔ **High-capacity Ink Pack Adapter Operation Manual "Replacing Adapter’s Plug"**

- When the high-capacity ink pack adapter is installed after the plug replacement, the message on the left will appear.




**3.** Use **[∧]** / **[∨]** key to select **[Yes]** and tap **[Enter]** key.




The lifetime counter of the adapter's plug will be reset.

**Important!**

Do not select **[Yes]** if the adapter plug has not been replaced. Continued use without replacing the plug may cause ink leakage.

# 3 Various settings


Panel setup menu 97
Menu1: Media Type 99
Menu2: Maintenance 110
Menu3: Test Print 114
Menu4: Utility 118
Menu5: Setup menus 122
Menu6: Option 125
Menu7: Printer Info. 126

# Panel setup menu

You will configure the various settings using the setup menu in the printer control panel.

## How to operate the menu

### Procedure

**1.** Tap **[Home]** key.
The setup menu appears in the printer control panel.



**Note**

You cannot enter the setup menu while printing or receiving data (while the power button is blinking).

**2.** To select a menu item
Tapping **[ ∧ ]** or **[ ∨ ]** key will scroll through the menu.



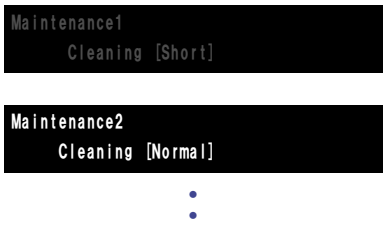
## 3. To go to the selected menu

Tap **[ > ]** key.



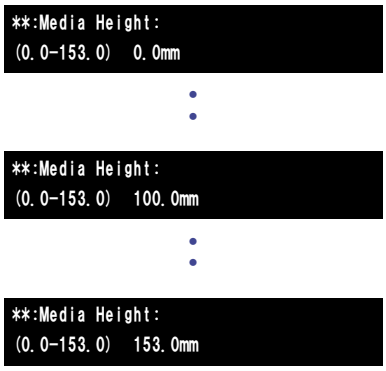

## 4. To return to the upper level menu

Tap **[ < ]** key. In this example, the display returns to **[Menu2 Maintenance]**.



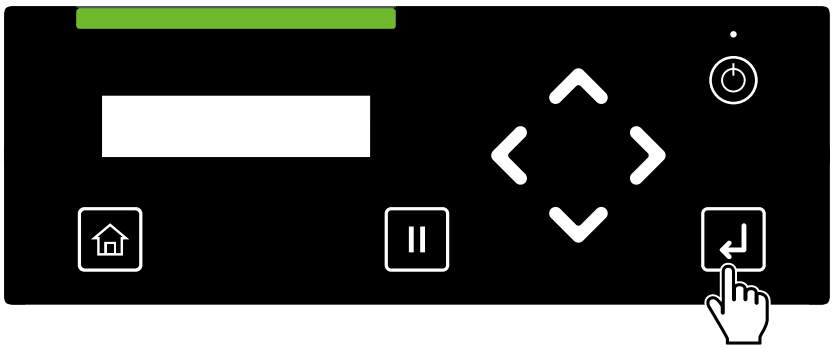

## 5. To choose the setting item or enter the value

Tapping **[ ∧ ]** or **[ ∨ ]** key will scroll through the item or increase or decrease a value.




## 6. To confirm the setting or run the selected function

Tap **[Enter]** key.



# Menu1: Media Type

## Menu List

Underlines in the setting range indicate the default settings.

| | Setting range/ Submenu | Description | → |
|---|---|---|---|
| **Type1 to Type15** | | Create your own media preset for each media type and save it with appropriate printer settings. You can create up to 15 types.<br>**Important!**<br>**Selecting a different media type will switch all the settings in the printer that can be changed in the user type setting. If the current media type settings differ from the previous ones, pay attention to the print start position. The printer may print in unintended position or outside the media.** | |
| **Size** | | Enter the media size. | P.56 |
| **Width** | 30 to 483 (mm) | Enter the width of the media. | |
| **Length** | 30 to 610 (mm) | Enter the length of the media. | |
| **Height** | Auto, Manual | • Auto: The printer detects the thickness of the media being loaded and automatically adjusts the height of the print head.<br>• Manual: Enter the thickness of the media. | P.54 |
| **PG Offset** | 0.0 to 1.5 (mm) | This option is available when Height is set to **[Auto]**.<br>Specify the PG offset value so that the print head is raised for the value from the automatically adjusted height. Use this option if you want to have more margin for the distance between media and the print head. | |
| **Confirm Height** | On, Off | This option is available when Height is set to **[Auto]**.<br>• On: The confirmation message **[Same Media Height?]** appears when a new media is loaded. If you repeatedly print on media with the same thickness, the **[On]** setting will help you shorten the time for media height detection.<br>• Off : The confirmation message is not displayed when a new media is loaded. | |
| **Media Height** | 0.0 to 153 (mm) | This option is available when Height is set to Manual. Enter the hight (thickness) of the media. | |
| **Origin** | PF: 0.0 to 590.0 (mm)<br>CR: 0.0 to 463.0 (mm) | Sets the print start position (origin). | P.56 |

| | Setting range/ Submenu | Description | → |
|---|---|---|---|
| **Adj. Layer Prn.** | White Confirm Pattern, White Pattern ALL/ White Pattern A, B, C, D<br>Layer Confirm Pattern, Layer Rough Pattern ALL, Layer Rough Pattern B, C, D, Layer Fine Pattern ALL, Layer Fine Pattern B, C, D | Use this option when you want to correct layer shifting.<br>• White layer alignment: Correct white layer shifting in single-layer or multi-layer printing.<br>• Layer alignment: Correct layer shifting in multi-layer printing. If layer shifting still occurs in multi-layer printing after performing white layer alignment, perform layer alignment. | P.102 |
| **Adjust Print** | Confirm Pattern, Rough Pattern ALL, Rough Pattern A, B, C, Fine Pattern ALL, Fine Pattern A, B, C | Calibrate dot placement position in bidirectional printing. Print an adjustment pattern and Enter the number of the pattern that has the least misalignment. | P.107 |
| **Detailed-Set** | Off, On | Select whether or not to display the **[Set media]** menu when loading media.<br>Even if "Off" is selected, you can display "Set Media" menu by tapping **[Cancel]** while the message **[Print Ready]** or **[Set media, then Tap [∧][key.]** appears on the panel. | P.118 |
| **Media Set Mode** | Normal, High-Accuracy | Select the detection accuracy of the obstacle sensor when loading media.<br>If printing fails due to failure to detect media warp with "Normal" mode, try "High-Accuracy" mode. | |
| **Print Prefs.** | | | |
| **Vacuum Fan** | Low, Medium, Medium-Hi, High, Off | Select the suction power level to hold down media. For soft media, reduce suction power. | |
| **Obstacle Detected** | Off, Auto, Cancel, Confirm | You can specify how the printer performs when the media height detector detects obstacle during printing.<br>• Off: Obstacle detection is disabled during printing.<br>• Auto: Pauses printing. It lowers the table until the sensor no longer detects any obstacle, and then resumes the job.<br>• Cancel: Cancels printing and displays the error message.<br>• Confirm: Pauses printing. The printer pauses the printing and allows users to choose from resume or chancel printing. | |

| | Setting range/ Submenu | Description | ➔ |
|---|---|---|---|
| **Print Start Opt.** | Off, Confirm Print Start, Show Edges Step, Show Edges Auto | You can check the print area before printing, LED pointer shows where the image will be printed on the media.<br>• Off: The printing area is not indicated and the print start confirmation message is not displayed. This is the default setting.<br>• Confirm Print Start: The confirmation message **[Start Printing?]** is displayed.<br>• Step: LED pointer shows where the image will be printed on the media and the printer will ask you at each point of corner if the position is OK.<br>• Auto: LED pointer shows where the image will be printed on the media without checking with the user. | P.70 |
| **Table Standby Pos.** | Back, Front | Sets the table standby position after media is loaded.<br>• Back: The table stays the back side of the printer. Table movement is minimized when print data is sent, allowing printing to start immediately. However, the media may become more difficult to handle.<br>• Front: The table stays at the front side of the printer, making it easier to handle media after loading. However, it takes longer to start printing than when “Back” is selected. | |
| **Copy Media Type** | Type1 to Type15, ALL | Copy all settings (Print mode, Effect, Adjust Print, Adjust Layer Print, Vacuum fan, Size, Height, Print start options, Table standby position, Obstacle detect. ) of the selected media type to another media type. Selecting **[ALL]** will copy these settings to all media types. | |
| **Initialization** | | Resets the currently selected media type settings. | |

# Adjust Layer Print

Use this option when you want to correct layer shifting.

- White layer alignment: Correct white layer shifting in single-layer or multi-layer printing.
- Layer alignment: Correct layer shifting in multi-layer printing. If layer shifting still occurs in multi-layer printing after performing white layer alignment, perform layer alignment.

**Note**

Required media size: width 210 mm x length 100 mm

Using small media may cause the print to extend beyond the media. If UV ink stains on the table, it will be cured by UV light and will not be removed from the table.

## Procedure

**1.** Load media into the printer.

➔ "Load the media into the printer"P.52

**2.** Tap **[Home]** key.

**3.** Access the "Adjust Layer Print" menu.

Menu flow




a. Select **[Media Type]** and tap **[>]** key.

b. Use **[∧]** / **[∨]** key to select a media type and tap **[Enter]** key.

- **[Size]** will appear.

c. Use **[∧]** / **[∨]** key to select **[Adjust Layer Print]**.

**4.** Tap **[>]** key.

**5.** Use **[∧]** / **[∨]** key to select a menu and follow these step to perform an adjustment.

➔ "Procedure for white layer alignment"P.103
➔ "Procedure for layer alignment"P.105

**6.** Tap **[Enter]** key to finish the adjustment.

## Procedure for white layer alignment

**1.** Print a white confirm pattern and check for layer shifting.

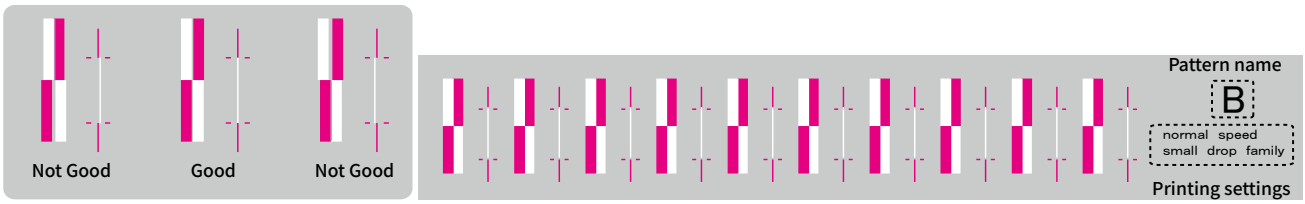
➔ "White confirm pattern"P.103

**2.** Print white adjustment patterns and enter correction values.

➔ "White adjustment pattern"P.104

### White confirm pattern

1. Tap **[Enter]** key to print a confirmation pattern.
2. Look at the print and check for layer shifting in the pattern.




**Note**

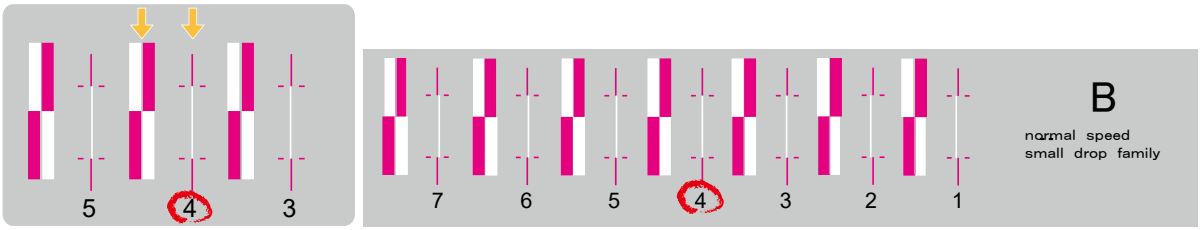
The above illustration is an example of the white adjustment B pattern. In this example, non-colored background area is shown in gray.

- If no layer shifting exists, tap **[Enter]** key to end the calibration.
- If layer shifting appears, tap **[Enter]** key to end the calibration and go to the white adjustment pattern.

➔ "White adjustment pattern" P.104

## White adjustment pattern

1. Use **[∧]** / **[∨]** key to select a pattern from **[White Pattern ALL]**, **[White Pattern A]** , **[White Pattern B]**, **[White Pattern C]** or **[White Pattern D]** and tap **[Enter]** key.
2. Check the printed pattern and select the number written under the pattern that has the least misalignment.




3. Use **[∧]** / **[∨]** key to select the number of the pattern with no misalignment and tap **[Enter]** key.

   For the above illustration, you will enter **[Pattern B: 4]**.

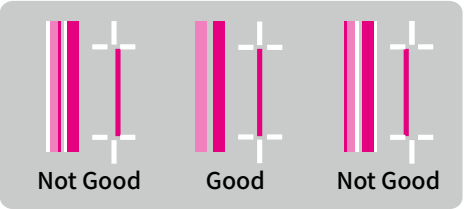


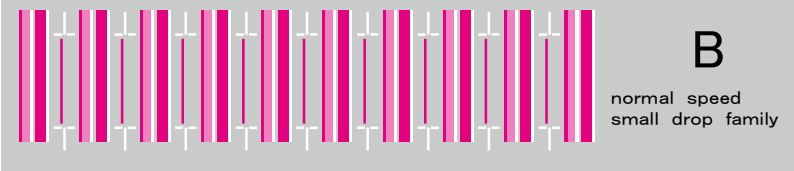
## Procedure for layer alignment

1. Print a layer confirm pattern and check for layer shifting.
   ➔ “Layer confirm pattern”P.105
2. Print rough layer adjustment patterns and enter correction values.
   ➔ “Rough layer adjustment pattern”P.106
3. Print fine layer adjustment patterns and enter correction values.
   ➔ “Fine layer adjustment pattern”P.106

### Layer confirm pattern

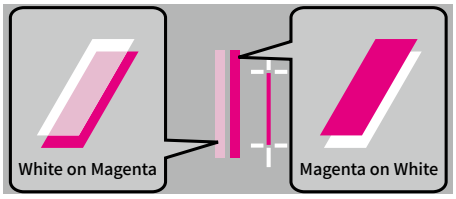
1. Tap **[Enter]** key to print a confirmation pattern.
2. Look at the print and check for layer shifting in the pattern.




**Note**

- The above illustration is an example of the white adjustment B pattern. In this example, non-colored background area is shown in gray.
- Two types of layer patterns are printed; "White on Magenta" prints a white layer over a magenta layer and "Magenta on White" prints a magenta layer over a white layer.

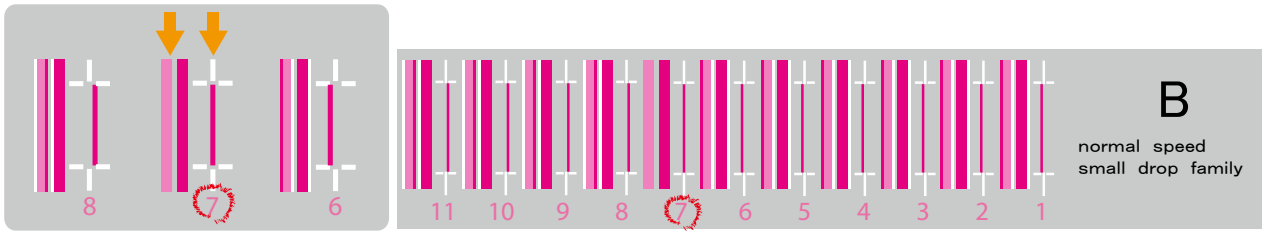



- If no layer shifting exists, tap **[Enter]** key to end the calibration.
- If layer shifting appears, tap **[Enter]** key to end the calibration and move to the rough layer adjustment pattern.

➔ “Rough layer adjustment pattern” P.106

## Rough layer adjustment pattern

1. Use **[∧]** / **[∨]** key to select a pattern from **[Layer Rough Ptn. ALL]**, **[Layer Rough Ptn. A]**, **[Layer Rough Ptn. B]**, **[Layer Rough Ptn. C]** or **[Layer Rough Ptn. D]** and tap **[Enter]** key.
2. Check the printed pattern and select the number written under the pattern that has the least misalignment.



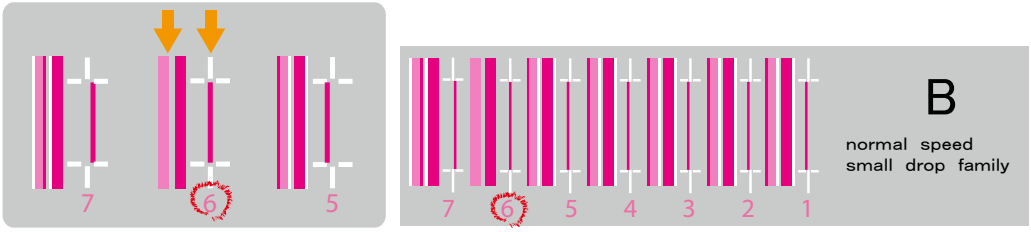

3. Use **[∧]** / **[∨]** key to select the number of the pattern with no misalignment and tap **[Enter]** key.
   - For the above illustration, you will enter **[Pattern B: 7]**.




4. Next, print a fine layer adjustment pattern.
   ➔ “Rough layer adjustment pattern” P.106

## Fine layer adjustment pattern

1. Use **[∧]** / **[∨]** key to select a pattern from **[Layer Fine Ptn. ALL]**, **[Layer Fine Ptn. A]** , **[Layer Fine Ptn. C]** or **[Layer Fine Ptn. D]** and tap **[Enter]** key.
2. Check the printed pattern and select the number written under the pattern that has the least misalignment.




3. Use **[∧]** / **[∨]** key to select the number of the pattern with no misalignment and tap **[Enter]** key.

   For the above illustration, you will enter **[Pattern B: 6]**.



# Adjust Print

Calibrate dot placement position in bidirectional printing. Ink landing position varies depending on print head height and media thickness.

**Note**

Required media size: width 210 mm x length 100 mm

Using small media may cause the print to extend beyond the media. If UV ink stains on the table, it will be cured by UV light and will not be removed from the table.

## Procedure

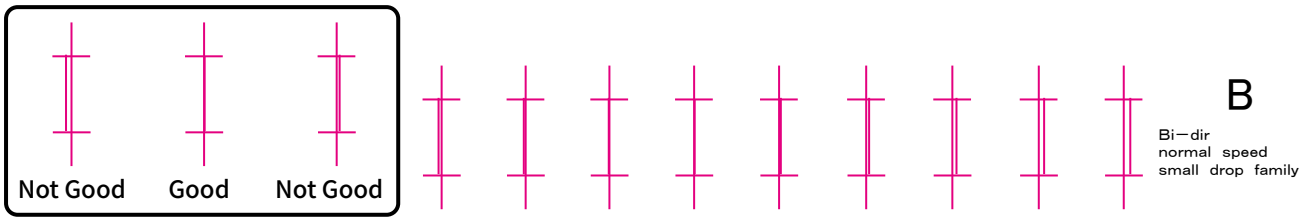
1. Load media into the printer.
   ➔ "Load the media into the printer"P.52
2. Tap **[Home]** key.
3. Access the "Adjust Print" menu.
   Menu flow

   a. Select **[Media Type]** and tap **[>]** key.
   b. Use **[∧]** / **[∨]** key to select a media type and tap **[Enter]** key.
      - **[Size]** will appear.
   c. Use **[∧]** / **[∨]** key to select **[Adjust Print]**.
4. Tap **[>]** key.
5. Print a confirm pattern and check for misalignment.
   ➔ "Confirm pattern"P.108
6. If misalignment occurs, follow these steps to run a calibration.
   a. Print rough adjustment patterns and enter correction values.
      ➔ "Rough pattern" P.108
   b. Print fine adjustment patterns and enter correction values.
      ➔ "Fine adjustment pattern" P.109
7. Tap **[Enter]** key to finish the adjustment.

## Confirm pattern

1. Tap **[Enter]** key to print pattern.
2. Look at the print and check if there is no misalignment in the pattern.

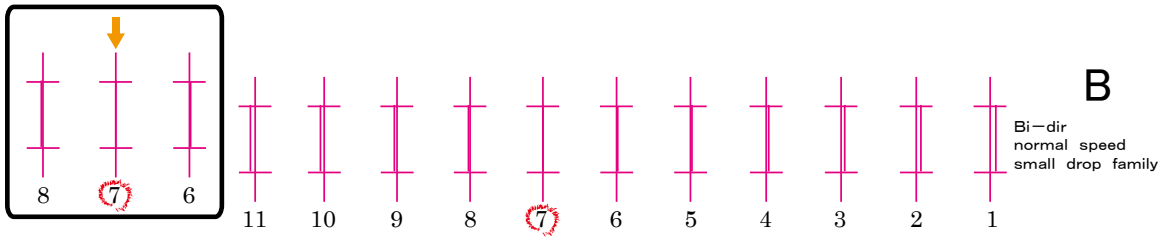



- If no misalignment exists, tap **[Enter]** key to end the calibration.
- If misalignment exists, tap **[Enter]** key to end the calibration and move to the rough adjustment pattern.

➔ "Rough pattern" P.108

## Rough pattern

1. Use **[∧]** / **[∨]** key to select a pattern from **[Rough Pattern ALL]**, **[Rough Pattern A]** , **[Rough Pattern B]** or **[Rough Pattern C]** and tap **[Enter]** key.
2. Check the printed pattern and select the number written under the pattern that has the least misalignment.




3. Use **[∧]** / **[∨]** key to select the number of the pattern with no misalignment and tap **[Enter]** key.

   For the above illustration, you will enter **[Pattern B: 7]**.




4. Next, print a fine adjustment pattern.

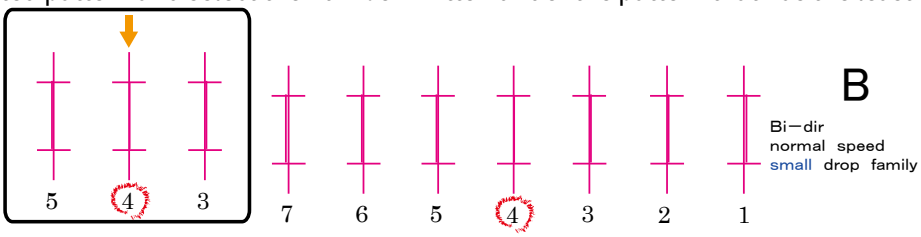
➔ "Fine adjustment pattern" P.109

## Fine adjustment pattern

1. Print a fine adjustment pattern.

   Select a pattern from **[Fine Pattern ALL]**, **[Fine Pattern A]**, **[Fine Pattern B]** or **[Fine Pattern C]** and tap **[Enter]** key.

2. Check the printed pattern and select the number written under the pattern that has the least misalignment.




3. Use **[∧]** / **[∨]** key to select the number of the pattern with no misalignment and tap **[Enter]** key.

   For the above illustration, you will enter **[Pattern B: 4]**.



# Menu2: Maintenance

## Menu List

Underlines in the setting range indicate the default settings.

| | Setting range/ Submenu | Description | → |
|---|---|---|---|
| **Cleaning [Short]** | | Consumes a small amount of ink. | P.61 |
| **Cleaning [Normal]** | | Select this mode if there are clogging on more than 10 nozzles. | |
| **Cleaning [Long]** | | Select this mode if nozzle clogging persists even after Cleaning "Normal" was performed. | |
| **Cleaning [Little Charge]** | | Gives high cleaning efficiency, but consumes a lot of ink. | P.162 |
| **Daily Maintenance** | | Use this menu to run a daily maintenance.<br>1. Tap **[>]** key.<br>2. When **[Daily Maintenance Start ->Enter]** appears, tap **[Enter]** key.<br>3. When **[Unload Media, set Maint Jig, tap Enter]** appears, perform the following:<br>- Remove media and jig from the table.<br>- Attach the maintenance jig.<br>4. When **[Daily Maintenance End -> Enter]** appears, start cleaning each part of the printer.<br>5. Tap **[Enter]** key to end the maintenance.<br>**Important!**<br>This is the daily maintenance procedure when the printer is not put into sleep mode. For daily maintenance at the end of the day, put the printer into sleep mode before performing the procedure.<br>→ "Daily maintenance at the end of work" P.135 | P.160 |
| **Other Maintenance** | | | |
| **CR Maintenance** | | Move the carriage and perform printer maintenance. | P.113 |
| **Soak Cleaning** | | Soak the print head in the maintenance cleaning solution filled in the head cap to clean dirt off the nozzle surface. Designated maintenance cleaning solution is required. | P.163 |

| | Setting range/ Submenu | Description | → |
|---|---|---|---|
| **Initial Charge** | | Offers more powerful cleaning than Little Charge, but consume large amount of ink.<br>1. Tap **[>]** key.<br>- **[Initial Charge Start —>Enter]** appears.<br>2. Tap **[Enter]** key.<br>- The message **[Empty Waste Ink Tank then Tap Enter]** appears.<br>3. Empty the waste ink tank and tap **[Enter]** key.<br>4. Perform ink agitation, then insert the ink cartridges (high-capacity ink pack adapters) into the ink slots.<br>- This printer starts ink charging.<br>**Important!**<br>Avoid the following actions when ink filling is in progress. If ink charging is interrupted, it may consume more ink to do the ink charging again.<br>• Turn off the printer or unplug the power cord.<br>• Open the front cover or maintenance cover | P.192 |
| **Table** | | Use this menu to configure table operation and perform maintenance. | |
| **Calibration** | | To optimize the distance between the print head and media, calibrate the table height position. | P.76 |
| **Table Maintenance** | | Use this menu to apply grease to the table. The table moves to the maintenance position. | P.150 |
| **Moving Printer** | | Use this menu when transporting the product. The table moves to the position to secure the table with shipping brackets. | P.178 |
| **Longstore** | | Discharge the ink from the printer. | P.178 |
| **Power Off** | | Turn off the printer. | P.46 |
| **Maintenance Setup** | | | |
| **Auto Cleaning** | | Set an automatic head cleaning operation. This will prevent nozzle clogging. | |
| **Before Print** | | Sets the automatic cleaning to be performed before printing. | |
| **Cleaning Type** | Off, Short, Normal, Long | Select the type of cleaning. | |
| **Accum. Print Time** | Off, 1, 2, 3, 4 (hour) | Set the timer for auto cleaning to be performed by total print time.<br>**Note**<br>The cleaning type for Accum. Print Time is Cleaning “Long”. This setting cannot be changed. | |

| | Setting range/ Submenu | Description | → |
|---|---|---|---|
| **White Maintenance** | Little, Normal | Sets the maintenance operation for white ink.<br>If you do not usually use white ink for regular printing, set to "Little" to minimize white ink consumption in standby status.<br>**Note**<br>**Because white ink tends to settle or coagulate in the print head or ink tube, this product periodically discharges a small amount of white ink even while in standby mode.** | |
| **Color Maintenance** | Off, Little, Normal | If the printer is not used for a certain period, it discharges a certain amount of ink to maintain printer performance.<br>• Off: Color maintenance is not performed.<br>• Little: If you do not usually use white ink for regular printing, set to "Little" to minimize white ink consumption in standby status.<br>• Normal: Color maintenance is performed. | |
| **Sleep Mode** | | In the sleep mode, the printer will periodically circulate the ink inside the printer.<br>1. Tap **[>]** key.<br>- **[Sleep Mode Start ->Enter]** appears.<br>2. Tap **[Enter]** key.<br>3. When **[Daily Maintenance Start ->Enter]** appears, tap **[Enter]** key.<br>- Make sure to perform a daily maintenance according to the instructions on the control panel. For replacement procedure, see **"Daily maintenance at the end of work"P.135** .<br>4. To wake up from sleep mode, tap **[Enter]** key. | P.49 |

# CR Maintenance

CR maintenance menu allows you to move the carriage to be able to perform maintenance.

Use this menu to perform the following maintenance;

- “Replace the flushing box pad”P.166
- “Replace the Cleaning Wiper”P.169
- “Replace the UV-LED unit glass”P.172
- “Replace the UV-LED unit filter”P.174

## Procedure

1. Tap [<] key while **[Print Ready]** or **[Set media, then Tap [∧] key.]** is displayed on the panel.

2. Use [∧] / [∨] key to select **[CR Maintenance Start —> Enter]**.




> **Note**
>
> • You can also select this from the setup menu of the printer control panel.
> ➔ “CR Maintenance” P.110

3. Tap **[Enter]** key to start maintenance.
   - The carriage moves to the left maintenance space.
   - The wiper moves to the maintenance position.
   - **[CR Maintenance End —> Enter]** appears.

4. Open the covers and perform a maintenance.
   If the cover is open for more than ten minutes, **[Close the Cover]** will be displayed.

> **Note**
>
> Tapping [∨] key will drive the suction pump to suck waste fluids in the capping unit.

5. Once maintenance is complete, close all the covers.

6. Tap **[Enter]** key to end the maintenance.



# Menu3: Test Print

Menu List

Underlines in the setting range indicate the default settings.

| | Setting range/ Submenu | Description | ➔ |
|---|---|---|---|
| **Nozzle check B** | | Some colors of nozzle check patterns are printed with the background colors. | P.58 |
| **Nozzle check F** | | Prints a nozzle check pattern using all nozzles. | |
| **Nozzle Check L** | | Print the nozzle check pattern outside the printable area of the table on the non-origin side. The nozzle check pattern can be printed without removing the print media from the table. | |
| **PF Adjust** | | This adjustment corrects the media feed amount. | P.115 |
| **Print** | 7 patterns: 0, ±0.1, ±0.2, ±0.5 (%) | Print an adjustment pattern and Enter an optimal adjustment value. | |
| **Adjustment** | -1.00 to 0.00 to 1.00 (%) | Enter an adjustment value. | |

# Media feed adjustment

This adjustment corrects the media feed amount.

This menu helps to correct following symptoms on your print:

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

**Note**

Required media size: width 210 mm x length 45 mm

Using small media may cause the print to extend beyond the media. If UV ink stains on the table, it will be cured by UV light and will not be removed from the table.

## Procedure

**1.** Load media into the printer.

➔ "Load the media into the printer"P.52

**2.** Tap **[Home]** key.

**3.** Access the "PF Adjust" menu.

Menu flow




- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

**4.** Tap **[>]** key.

**5.** Use **[∧]** / **[∨]** key to select a menu and tap **[>]** key.

| | |
|---|---|
| **Print** | Print an adjustment pattern and enter an optimal adjustment value.<br>➔ "Media feed adjustment" P.116 |
| **Adjustment** | Enter an adjustment value.<br>If you already know the adjustment value (such as media replacement), enter the adjustment value in "Adjustment".<br>➔ "If you already know the adjustment value" P.117 |

## Media feed adjustment

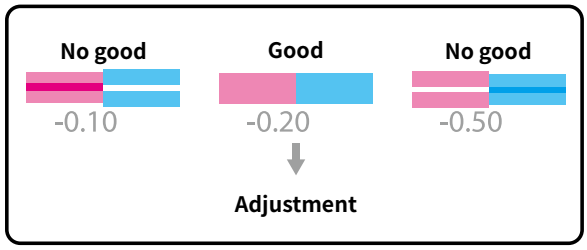
You will print an adjustment pattern and then check and enter an adjustment value.

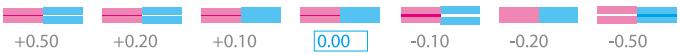
**1.** Tap **[Enter]** key to print pattern.




**2.** Check the printed pattern and enter an adjustment value using **[∧]** / **[∨]** key.

Select the pattern that has the least white or dark-colored lines. The value written under the pattern is the adjustment value.




**Note**

Once the adjustment value has been entered, the value will become the reference value to be printed in the center of the pattern from the next print.

- Example:

  If you have saved **[+0.13]** and print an adjustment pattern, values printed below block pattern will be changed to (from left) +0.63, +0.33, +0.23, +0.13 (reference value), +0.03, -0.07, -0.37.

**3.** Tap **[Enter]** key to finish the adjustment.

## If you already know the adjustment value

### Procedure

1. Tap [>] key.
   The following will appear.




2. Use [∧] / [∨] key to enter the adjustment value and tap **[Enter]** key.

# Menu4: Utility

## Menu List

| | Setting range/ Submenu | Description | ➔ |
|---|---|---|---|
| **Set Media** | | Specify the following media settings in a sequence.<br>- **[Height]** - **[Obstacle Detect]** - **[Width]** - **[Length]** - **[Origin]**<br>These settings must be performed with the media loaded on the table. | P.52 |
| **Start UV Scan** | | Performs further UV curing. Use this menu to perform additional UV curing after printing.<br>Tapping **[Enter]** key will move to the "Number of Scan" menu. | P.74 |
| **Number of UV Scan** | 2, 4, 8, 16 | Select the number of times the UV scanning is performed per inch in the front-back direction.<br>Tapping **[>]** key will move to the confirmation screen for UV curing start. | |
| **Ink agitation** | | This function is for ink agitation. | P.119 |
| **Perform** | | Select an ink and perform ink agitation. | |
| **Next time** | | Checks the remaining time until the next ink agitation is required. You can perform ink agitation immediately. | |

# Ink agitation

This function is for ink agitation.

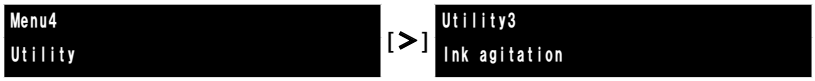
You can check the remaining time until the next ink agitation or perform ink agitation at your desired timing.

## Procedure

1. Tap **[Home]** key.

2. Access the “Ink Agitation” menu.

   Menu flow

   - **[∧]** / **[∨]** key: Select a menu item.
   - **[>]** key: Enter the menu.

3. Tap **[>]** key.

4. Use **[∧]** / **[∨]** key to select a menu and tap **[>]** key.

| | |
|---|---|
| **Perform** | ➔ “Perform ink agitation” P.120 |
| **Next time** | ➔ “Check the remaining time until the next ink agitation is required” P.121 |

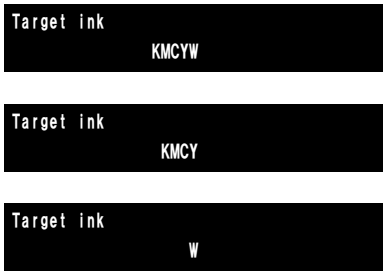
5. Follow each step to end the procedure.

## Perform ink agitation

Select an ink and perform ink agitation. If you want to print overnight or continuously, you can agitate ink beforehand to allow for a consistent printing.

### Procedure

**1.** Use [∧] / [∨] key to select an ink to agitate.




**Note**

- If a message **[Agitate ∗ Ink]** is already displayed on the control panel, the ink selection options will be changed as follows:
  - When **[Agitate KMCY Ink]** appears: **[KMCYW]** or **[KMCY]** is selectable.
  - When **[Agitate W Ink]** appears: **[KMCYW]** or **[W]** is selectable.

**2.** Tap **[Enter]** key.
**[Please wait]** appears.

**3.** When the following message appears, follow each step to agitate ink.




➔ "When using ink cartridges"P.80
➔ "When using ink bags with high-capacity ink pack adapters"P.82

Agitate the ink colors displayed on the control panel. Once you have agitated all the inks displayed, the message will disappear.

## Check the remaining time until the next ink agitation is required

Check the remaining time until the next ink agitation is required. You can perform ink agitation immediately.

**Note**

You can also check it on VerteLith or MSM.

### Procedure

1. Use [∧] / [∨] key to select an ink you want to check the remaining time until the next agitation.




- Time for the next agitation is shown in 1-hr increments.
  Example:
  - It is more than 2 hours but less than 3 hours: **[2h]** appears.
  - It is more than 1 hour but less than 2 hours: **[1h]** appears.
  - It is less than 1 hour: **[<1h]** appears.
  - When the message **[Agitate ∗ Ink]** is already displayed: **[Immediately]** appears.

2. Tapping [<] key will return to the original display. To perform ink agitation immediately, tap [>] key. See the following section for agitation procedure.

➔ "Perform ink agitation"P.120

# Menu5: Setup menus

## Menu List

Underlines in the setting range indicate the default settings.

| | Setting range/ Submenu | Description | → |
|---|---|---|---|
| **UV Scan** | | Specify the number of UV curing passes. | |
| **Number of UV Scan** | 2, 4, 8, 16 | Select the number of times the UV scanning is performed per inch in the front-back direction.<br>Tapping **[Enter]** key will move to the confirmation screen for UV curing start. | P.74 |
| **Post Cure** | Off, On | When it is set to **[On]**, the printer automatically performs post curing to apply additional UV light after printing. | |
| **Header Dump** | Off, On, Dump,Print | Select whether to print the dump information for the print data; (Data header/ Data dot number/ pint time/ printer serial number/ firmware version/ receiving time/ receiving size).<br>• Off: Dump data will not be printed.<br>• On: The printer prints an image data followed by dump information. “Receiving time” and “Receiving size” will not be printed.<br>• Prints only dump data. “Data dot number” is not printed.<br>• Print: The printer prints the last dump data. “Receiving time” and “Receiving size” will not be printed. If there is no dump information in the history, **[No Print Data]** will be displayed.<br>**Note**<br>• **Please provide the dump data when you receive technical support.**<br>• **When you are printing through computer, the print settings configured in the RIP software will be printed in "Data header".** | |
| **Print Prefs.** | | | |
| **Multi Strike** | 1 to 9 (cnt) | Specify the number of times the printer prints over the same line. Increasing the number of multi-strike passes can improve ink density or increase ink film thickness. Use this function for printing on transperant media.<br>• When the multi-strike is set to 1, the display goes to the Layer Multi Strike setting. Multi strike setting can be specified individually for color, white or varnish layer. | |
| **(Layer Multi Strike) Color Layer** | 1 to 9 (cnt) | Sets the number of times to print over the same line in color (CMYK) layer. | |

| | Setting range/ Submenu | Description | ➔ |
|---|---|---|---|
| **(Layer Multi Strike) White Layer** | 1 to 9 (cnt) | Sets the number of times to print over the same line in white layer. | |
| **(Layer Multi Strike) Varnish Layer** | 1 to 9 (cnt) | Sets the number of times to print over the same line in varnish (clear top coat) layer. | |
| **Pass Wait** | 0.0 to 5.0 ( sec) | Sets the time to pause the carriage each time it scans. Use this setting if the ink does not cure sufficiently such as multi-strike printing. It helps reduce ink bleeding and improve color unevenness. | |
| **Spitting** | Off, On | Enable or disable the ink flushing maintenance. Flushing is the print head maintenance to avoid nozzle clogging. It consumes a slight amount of ink.<br>• Off: Printer does not perform an ink flushing maintenance. Nozzle gets clogs easily. Normally, do not select **[Off]**.<br>• On: Perform an ink flushing on the flushing box. Tapping **[Enter]** key will move to the Pass Count menu. MUTOH cannot guarantee print quality if the Pass Count menu is set to more than **[1]**. Normally it should be set to **[1]**. | |
| **Pass Count** | 1 to 999 (cnt) | Specify the interval to perform flushing in the flushing box. This menu is not displayed when the "Spitting" menu is set to **[Off]**.<br>• Example:<br>- Pass Count 1: Printer performs ink flushing on the flushing box each time the print head travels back and forth.<br>- Pass Count 5: Printer performs ink flushing on the flushing box once the print head travels back and forth five times. | |
| **Head Travel** | Data, Machine, Media | Select the width that the print head travels for printing.<br>• Data: Travels the data width.<br>• Machine: Travels the maximum printable area.<br>• Media Width: Travels the media width. | |
| **Multi layer** | Off, On | Enable or disable multi layer printing.<br>• Off: Prints normally. After printing is completed, reload the media before printing the next job.<br>• On: Keeps the printer ready for multi-layer printing after printing is completed. By sending the next print job, it can be printed over the previous job.<br>**Note**<br>**When performing "Adjust Print", "Adj. Layer Prn.", "PF Adjust" and "Test Print", you have to reload a media even if [On] is selected.** | |

| | Setting range/ Submenu | Description | → |
|---|---|---|---|
| **Initial Settings** | | | |
| **Language** | English, Dutch, Spanish, French, Italian, Portuguese, German, Japanese | Select the language to be displayed on the control panel. | |
| **Length** | mm, inch | Select the unit of length to be used on the display of the control panel. | |
| **Remain Ink** | Off, On | Select the way to indicate ink levels.<br>• Off: Ink level indicator will not be displayed. Displays the slot numbers that an error (warning) is occurring such as no ink, ink low, no cartridge.<br>• On: Displays the ink level indicator. | P.32 |
| **IP Address** | 0.0.0.0 to 192.168.1.253 to 255.255.255.255 | **Important!**<br>Make sure to consult your network administrator before setting the IP address, subnet mask, and gateway of the printer. | |
| **Subnet Mask** | 0.0.0.0 to 255.255.255.0 to 255.255.255.255 | | |
| **Gateway** | 0.0.0. to 192.168.1.254 to 255.255.255.255 | | |
| **Alert Buzzer** | Off, On | Select how the alert buzzer beeps when an error occurs.<br>• Off: The buzzer beeps a certain number of times and then stops. This prevents the alert buzzer from sounding continuously at night when unattended.<br>• On: The buzzer beeps continuously. | |
| **Initialization** | | Restore the settings of the printer to the factory defaults. | |
| **Media Type** | | Reset all the settings in **[Media Type]**. | |
| **Except Media Type** | | Reset all settings except **[Media Type]**. | |
| **ALL** | | Reset all the settings. | |

# Menu6: Option

Use this menu to attach the optional Rotary Unit. For more details of this menu, see the Rotary Unit Operation Manual.

**Note**

If the printer starts switching to Rotary Mode due to wrong key operation, you can cancel it by tapping [<] key while the following message is displayed on the operation panel.

- **[Empty Waste Ink Tank then Tap Enter]**
- **[Install Rotary Unit then Tap Enter]**

# Menu7: Printer Info.

Displays printer information.

Menu List

| | Description | → |
|---|---|---|
| **Printer Status** | | |
| **Ink Status** | Displays the amount of ink remaining in each ink bag (Unit: %).<br>Use genuine ink and smart chip cards. Ink status will not be displayed correctly if non-genuine products are used. | |
| **Levels** | Displays the amount of ink remaining in each ink cartridge (unit: %).<br>**Note**<br>**If the ink level is blinking at 10 %, smart chip recovery is being performed for the corresponding ink.**<br>**→ "Smartchip Recovery" P.204** | **P.86** |
| **Expiration** | Displays the use before date of the ink.<br>"————／——／——" is displayed for the ink slot that smartchip recovery is being performed.<br>**→ "Smartchip Recovery" P.204** | |
| **Plug Lifetime** | Use this menu to check and replace the plug for high-capacity ink pack adapter. | |
| **Confirm** | Use this menu to check the remaining life of the adapter's plug on the high-capacity ink pack adapter.<br>• The remaining life is indicated by the asterisks (Maximum 5 asterisks: 100% left). As the part is nearing the end of its service life, the number of asterisks decreases one by one (20%).<br>• The plug must be replaced when all of the asterisks have disappeared and **[Change]** is displayed. | **P.95** |
| **Initialization** | Resets the life time counter for adapter plug after replacement. Select the target ink slot and then reset the counter. | |

| | Description | ➔ |
|---|---|---|
| **Life Times** | Displays remaining life of the following parts:<br>• Print head<br>• CR motor<br>• PF motor<br>• PG motor<br>• Pump<br>• Circulation pump<br>• UV-LED unit<br>The remaining life is indicated by the asterisks (Maximum 5 asterisks: 100% left). As the part is nearing the end of its service life, the number of asterisks decreases one by one (20%).<br>• Example:<br>- **[Pump: E∗∗∗∗∗F]**: 100 to 80 % life remaining<br>- **[Pump: E∗∗ F]**: 40 to 20 % life remaining<br>- **[Pump: E∗ F]**: 20 % or less life remaining<br>- **[Pump: Change]**: Request replacement of the part. When the part needs to be replaced, **[Life Times [Pump]**] will appear. Tapping **[Enter]** key will delete this message. This message will appear again after 7days. | |
| **Job Status** | | |
| **Status** | Indicates whether printing is complete. | |
| **ToDoLength** | Displays the total length of print data (in media feed direction). | |
| **Done** | Displays the length of data printed. | |
| **Remain** | Displays the length of data which has not been printed yet. | |
| **Total Print Area** | Displays the cumulative area printed from the time of purchase to the present. | |
| **System Info.** | | |
| **Version** | Displays the firmware version (M: main firmware, C: controller firmware). | |
| **Printer Model** | Displays the printer model name. | |
| **SerialNo.** | Displays the serial number of the printer. | |
| **Ink Type** | Displays the ink type loaded on the printer. | |
| **MAC Address** | Displays the serial number of the MAC Address | |

# 4 Maintenance


Type of maintenance and frequency 129
Preparations for maintenance 131
Daily maintenance at the end of work 135
Regular Maintenance 148
Emptying waste ink tank 155
Maintenance based on your usage 159
Replace the consumable parts 166
Moving or transporting the printer 176
When not using the printer for a long period of time 187

# Type of maintenance and frequency

To maintain your printer performance, please conduct maintenance by yourself.

## Regular Maintenance

Maintenance that must be performed daily or periodically

| Timing | Menu |
|---|---|
| Before daily operation | → "Nozzle check and head cleaning" P.58 |
| After daily operations | → "Daily maintenance at the end of work" P.135 |
| When the message is prompted | → "Emptying waste ink tank" P.155 |
| Once a week | → "Soak Cleaning" P.163 **(Recommended)** |
| Once a month | → "Cleaning on the table" P.148 |
| Every 12 months | → "Table Maintenance" P.150 |

## Maintenance based on your usage

Please perform this maintenance at an appropriate time based on your printer status.

| Timing | Menu |
|---|---|
| When nozzle clogging occurred | → "Head cleaning" P.159 |
| • Nozzle clogging persists even after several head cleaning attempt<br>• you are printing all day long without entering to sleep mode and need to perform a daily maintenance. | → "Cleaning each part of the printer" P.160 |
| If severe nozzle clogging occurred | → "Little Charge" P.162<br>→ "Soak Cleaning" P.163 |
| When printer is not used for a long period | → "When not using the printer for a long period of time" P.187 |

## Replace the consumable parts

To ensure consistent print quality, replace the following parts at the appropriate time.

| Timing | Menu |
|---|---|
| When looking from the side, the ink deposits accumulated on the flushing pad is visible through the flushing box frame.<br>(Please check periodically as it depends on your usage) | ➔ "Replace the flushing box pad" P.166 |
| If jetting failure, ink dripping or color mixing persists even after cleaning the cleaning wiper. | ➔ "Replace the Cleaning Wiper" P.169 |
| Once a month or when the filter gets dirty by dust or ink.<br>(Please check periodically as it depends on your usage) | ➔ "Replace the UV-LED unit filter" P.174 |
| • When the glass has cracks or chips.<br>• When the ink cannot be removed from the glass. | ➔ "Replace the UV-LED unit glass" P.172 |

**Important!**

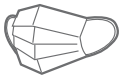
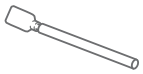
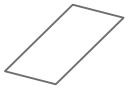
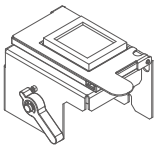
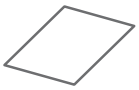
In the following cases, please contact your local MUTOH dealer to request service personnel.

- The same system error occurred repeatedly.
- The message notifying the life of following parts is displayed on the control panel.
  - various motors, various pumps, print head, UV-LED unit

➔「Messages and Error Messages」

# Preparations for maintenance

## What you need

| | | | | |
|---|---|---|---|---|
|  Protective goggles |  Polyethylene gloves |  Protective mask |  Protective clothing |  Cleaning stick |
|  Dropper |  Maintenance cleaning solution |  Paper towel |  Rubber gloves |  Scraper |
|  Stainless tray |  Plastic cup |  Maintenance jig |  Polynit wiper | |

**Note**

- Use a supplied paper towel or polynit wiper.
- Do not use tissue paper. Lint or flakes on tissue may cause the print head to malfunction.
- Do not use non-designated maintenance cleaning solution. To purchase the optional accessories such as designated maintenance cleaning solution, please contact your local MUTOH dealer.

# Maintenance jig

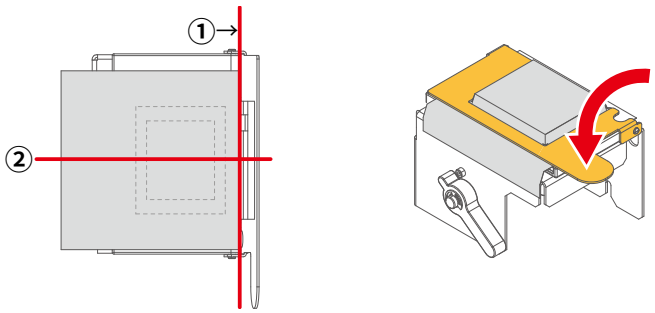
This jig is used for printhead maintenance. Attach the polynit wiper moistened with maintenance cleaning solution to the jig before use.

## Setting up the maintenance jig

**1.** Place a polynit wiper on the cushion of the maintenance jig.

a. Align the polynit wiper with the right end of the jig (①) and the center of the cushion (②).

b. Attach the lid to secure the polynit wiper.



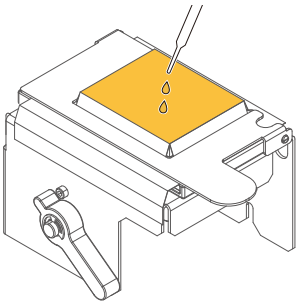

**Important!**

Do not handle the polynit wiper with bare hands. Finger oil may cause print head malfunction.

**2.** Moisten the polynit wiper with maintenance cleaning solution.

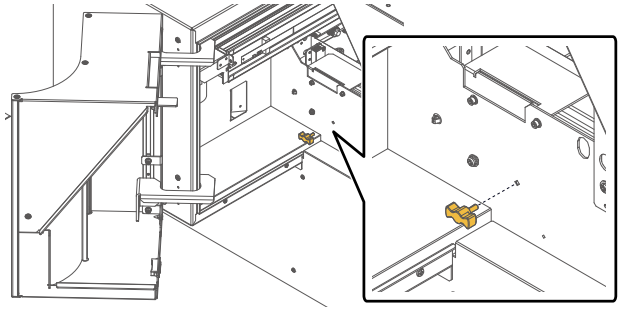
Use a dropper to apply maintenance cleaning solution over the entire cushion.

- Use about 2 to 3 ml

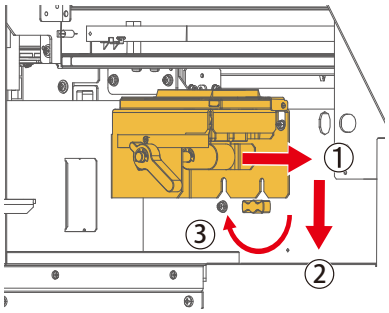


**3.** Open the left maintenance cover and temporarily secure the wing screw to the printer.

Keep the wing screw horizontal.



**4.** Align the groove of the maintenance jig with the screw and the wing screw, then tighten the wing screw to secure the jig.



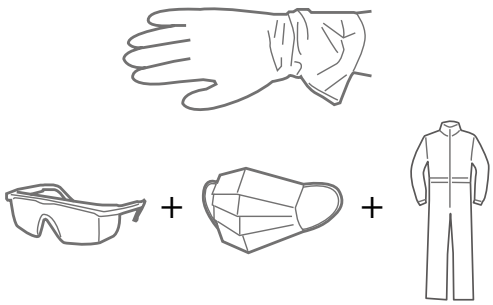

**Note**

➔ “Daily maintenance at the end of work” P.135

# Wearing protective equipment

When performing the following maintenance, wear protective equipment such as supplied gloves (or solvent-resistant gloves) and protective goggles.

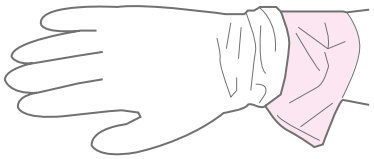
- “Agitating ink”P.79
- “Checking ink level and replacing ink bag”P.86
- “Daily maintenance at the end of work”P.135
- “Cleaning on the table”P.148
- “Cleaning each part of the printer”P.160
- “Soak Cleaning”P.163
- “Replace the flushing box pad”P.166
- “Replace the Cleaning Wiper”P.169
- “Replace the UV-LED unit glass”P.172
- “Replace the UV-LED unit filter”P.174



## How to wear the supplied gloves

Wear the rubber gloves over the polyethylene gloves (pink).

Replace gloves if they become contaminated with ink.



# Daily maintenance at the end of work

This product requires regular user maintenance. Follow the steps below to perform daily maintenance.

**Step1. Preparations for maintenance**

**Step2. Putting the printer into Sleep mode**

**Step3. Perform a daily maintenance**

1. Cleaning of the UV-LED unit
2. Moisten the surface of print head nozzles
3. Cleaning of the parts around the print head
4. Cleaning of the cleaning wiper and the parts around the capping unit

**Step4: Ending the daily maintenance**

**Important!**

- The message **[Perform Daily Maint.]** is prompted on the control panel after a certain period of time passed from the last daily maintenance. Make sure to perform a daily maintenance.
- Even if you print all day long without entering to sleep mode, you need to perform a daily maintenance once a day. Insufficient maintenance will cause print defects or printer failure. If the printer is not put into sleep mode or turned off, see “Cleaning each part of the printer”.
➔ “Cleaning each part of the printer” P.160

# Step1. Preparations for maintenance

## Procedure

1. Prepare the necessary items for maintenance.
   ➔ "What you need"P.131

2. Wear protective equipment.
   ➔ "Wearing protective equipment"P.134

# Step2. Putting the printer into Sleep mode

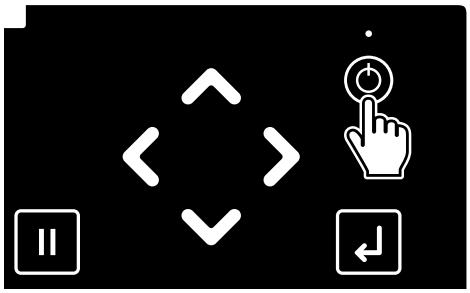
## Procedure

1. Check that
   - the front cover and the maintenance covers are closed.
   - No object including a jig is loaded on the table.
   - ink cartridges (ink bags) have sufficient ink.
   - the waste ink tank has enough space.

   **Important!**

   If you are going to leave the printer in sleep mode for a long period of time, empty the waste ink tank.

2. Press the power button on the control panel for more than two seconds.



**Note**

You can also put the printer into sleep mode from the setup menu of the printer control panel.
➔ "Sleep Mode" P.112

**Note**

Sleep mode cannot be started in the following cases:

- A error is occurring (Ink End, No Bag, Full Waste Ink Tank, Cover Open, etc.)
- Printer is running (during Media Initial, printing, etc.)

**3.** When **[Daily Maintenance Start ->Enter]** appears, tap **[Enter]** key.




■ **If [Daily Maintenance Start -> Enter] does not appear,**

- **[Clear the error]** appears: Clear the error that is being displayed and then put the printer into sleep mode.
- **[Unable to Enter to Sleep Mode]** appears: The printer is in operation. After the printer has finished its operation, put it into sleep mode.

**4.** When **[Unload Media, set Maint Jig, tap Enter]** appears, perform the following:

a. Remove media and jig from the table.

b. Attach the maintenance jig.

➔ "Setting up the maintenance jig"P.132

**Note**

The maintenance jig is not required If you use a cleaning stick for maintenance. Go to the next step.

**5.** Tap **[Enter]** key.

- **[Please wait]** appears.
- The carriage and cleaning wiper move to the maintenance position.

**6.** When **[Daily Maintenance End -> Enter]** appears, start a daily maintenance.




➔ "Step3. Perform a daily maintenance"P.138

# Step3. Perform a daily maintenance

## Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

## Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

**Note**

The standard maintenance time is about five minutes. If more than 5 minutes elapse after opening the cover, a warning buzzer will beep and **[Close cover]** is displayed. Close all covers and tap **[Enter]** key. If it takes longer, the print head will get dried, causing the damage.

## 1. Cleaning of the UV-LED unit

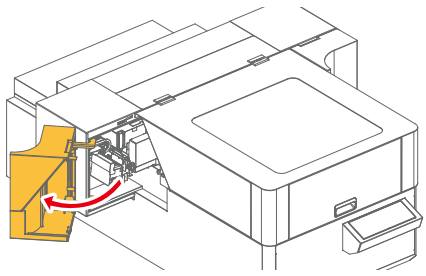
## Caution

**After printing, the UV-LED unit gets hot.**

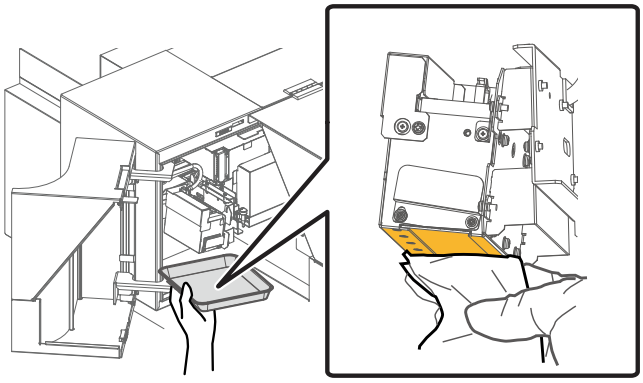
Leave it for 10 minutes to cool down and then start maintenance.

### Procedure

1. Open the maintenance cover on the left side.



**2.** Look at the bottom surface of the UV-LED unit and wipe off any sticking ink or dust with a paper towel.

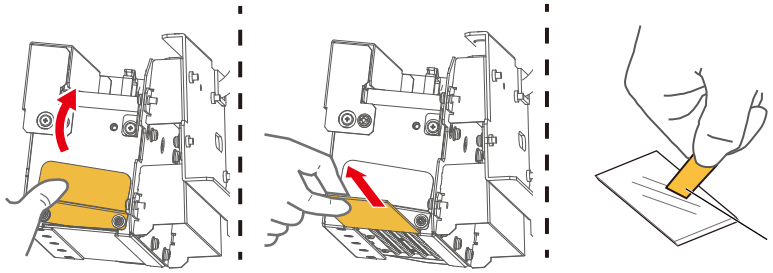


**Note**

If it is difficult to see the bottom of the carriage, use the stainless tray as a mirror to check it.

**3.** If ink is on the glass, follow these steps to clean it.

a. Slide up the left side of the exhaust fan cover using the right side screw serves as a fulcrum.
b. Slide the glass attached on the bottom of the UV-LED unit towards the front to remove it.
c. Press the scraper on the ink deposits with a slight angle and scrape it off.
d. Use the paper towel to clean the ink scraped from the glass.
e. Put the glass back on the UV-LED unit.
f. Firmly slide it into the end and then put the exhaust fan cover back in place.



**Important!**

- Make sure to use the scraper supplied with the printer.
- Do not press the scraper corners too hard. This will cause damage to the glass.
- Make sure that the emitting window glass is attached to the lamp and the exhaust fan cover is put back in place. Using your printer without them will cause damage to the UV-LED unit.

**4.** Next, moisten the nozzle surface of the print head.

➔ "2. Moisten the surface of print head nozzles"P.140

## 2. Moisten the surface of print head nozzles

Cleaning method varies depending on the cleaning tool used.

➔ “Maintenance using the maintenance jig” P.140
➔ “Maintenance using a cleaning stick” P.142

### Maintenance using the maintenance jig

**Important!**

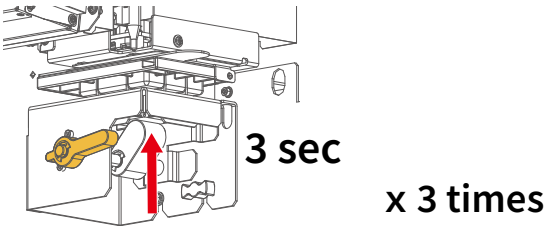
- Make sure to use a new polynit wiper and moisten it with the designated maintenance cleaning solution before maintenance. Using a used wiper or non-designated maintenance cleaning solution may damage the printhead.
- If the carriage is not positioned directly above the maintenance jig, manually move it to the end position on the non-origin side.

**1.** Using the maintenance jig, clean the ink and dust from the bottom surface of the print head.

a. Check that the carriage is positioned directly above the maintenance jig (end position on the non-origin side).

b. Lift the lever with your finger, hold it for three seconds, and then lower it.

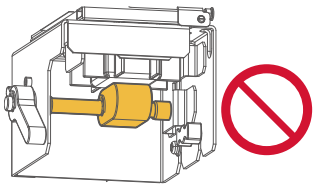
c. Repeat this 3 times.



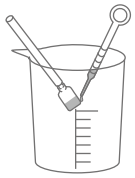

**Important!**

Do not touch the shaft and cam inside the maintenance jig.

If the maintenance jig is raised higher than necessary, the printhead may be damaged.



2. Put a new cleaning stick in the plastic cup. Use the dropper to drop the designated maintenance cleaning solution onto the tip of the cleaning stick to moisten (Use about 5 ml).



**Important!**

Do not touch the tip of cleaning stick with finger. Finger oil may cause print head malfunction.

3. Close the left maintenance cover.

4. Next, clean the cleaning wiper and the parts around the capping unit.

➔ "4. Cleaning of the cleaning wiper and the parts around the capping unit"P.145

**Note**

If ink or dust is present on the print head guide, use a cleaning stick to perform "3. Cleaning of the parts around the print head"P.143 .

## Maintenance using a cleaning stick

**Important!**

- Make sure to perform a daily maintenance in the correct order. In particular, do not moisten the nozzle surface with the same cleaning stick that is used to clean the print head area, cleaning wiper, or capping unit. This may cause print head failure.
- Make sure to use a new cleaning stick and the designated maintenance cleaning solution. Use of used stick or non-designated cleaning solution may cause nozzle clogging.
- Do not touch the tip of cleaning stick with finger. Finger oil may cause print head malfunction.

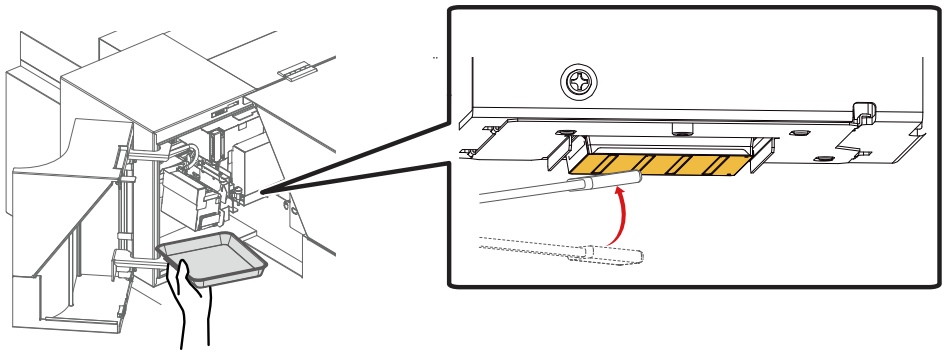
**1.** Put a new cleaning stick in the plastic cup. Use the dropper to drop the designated maintenance cleaning solution onto the tip of the cleaning stick to moisten (Use about 5 ml).



**2.** Look at the bottom surface of the carriage and moisten the nozzle surface of the print head.

a. Lightly touch with the cleaning stick dampened with the designated cleaning solution to moisten the print head nozzles.

b. Repeat several times until the entire surface of the nozzle is moistened.



**Important!**

- Never touch the nozzle surface. This may cause print head failure.
- It is sufficient if the entire nozzle surface is wet. Avoid repeating this unnecessarily.

**Note**

If it is difficult to see the bottom of the carriage, use the stainless tray as a mirror to check it..

**3.** Next, clean the parts around the print head.

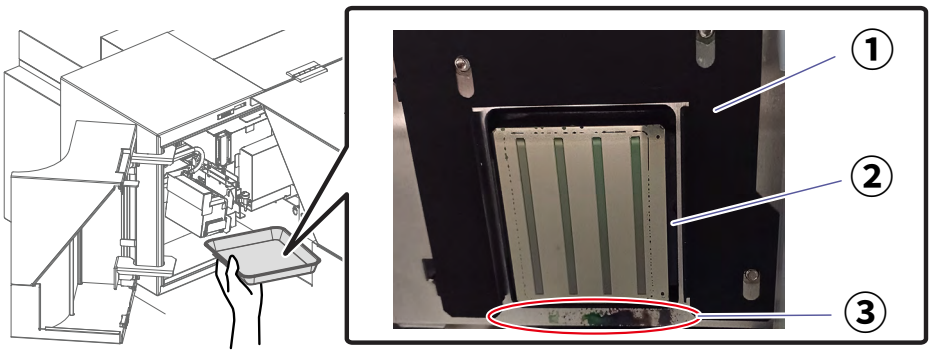
➔ "3. Cleaning of the parts around the print head"P.143

## 3. Cleaning of the parts around the print head

### Procedure

**1.** Look at the bottom of the carriage to check for ink or dust buildup.

- Print head guide (①)
- Parts around the print head (②)
- Rear side of the print head (③)

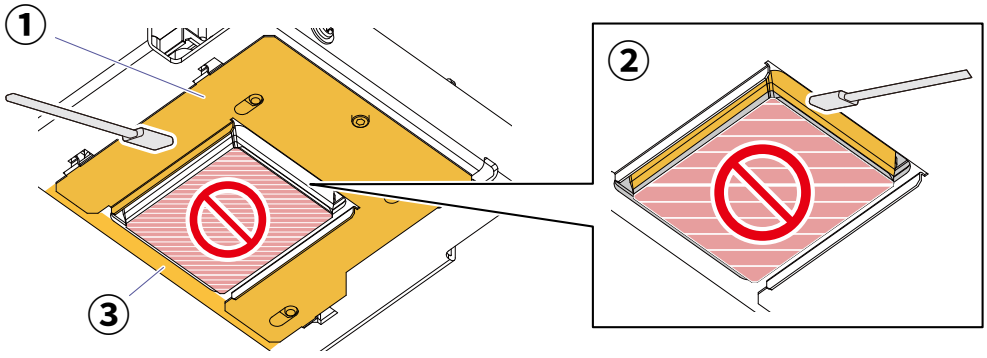



**Note**

- If it is difficult to see the bottom of the carriage, use the stainless tray as a mirror to check it.
- Cleaning is not required if there is no ink or dust on any of the above areas. Close the left maintenance cover and move to "4. Cleaning of the cleaning wiper and the parts around the capping unit"P.145 .

**2.** If ink or dust is present, use a cleaning stick to clean it.

- : Clean this part
  - Print head guide (①)
  - Parts around the print head (②)
  - Rear side of the print head (③)
- : Nozzle surface (Never touch)




**Important!**

If the maintenance cleaning solution gets on the printer, wipe it off with a paper towel..

**3.** Close the left maintenance cover.

**4.** Next, clean the cleaning wiper and the parts around the capping unit.

➔ "4. Cleaning of the cleaning wiper and the parts around the capping unit"P.145

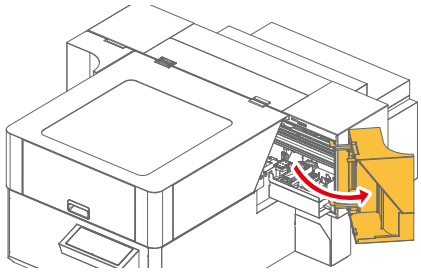
**Important!**

If ink or dust is sticking to the cleaning stick during cleaning, pour the maintenance cleaning solution into a plastic cup and clean the stick. If ink or dust cannot be removed, replace with a new cleaning stick and move to the next step.

## 4. Cleaning of the cleaning wiper and the parts around the capping unit

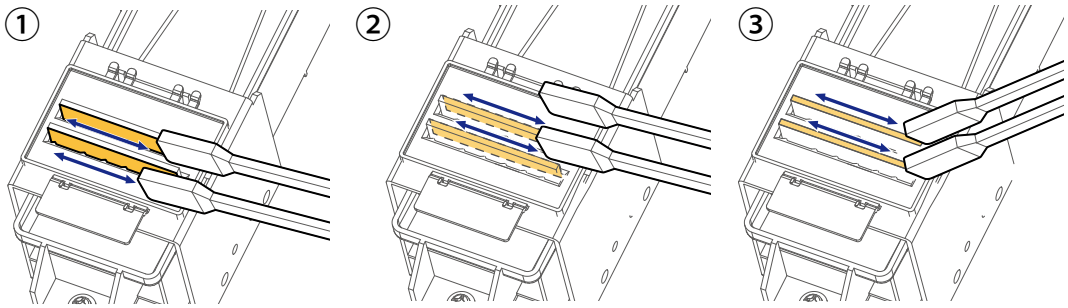
### Procedure

**1.** Open the maintenance cover on the right side.



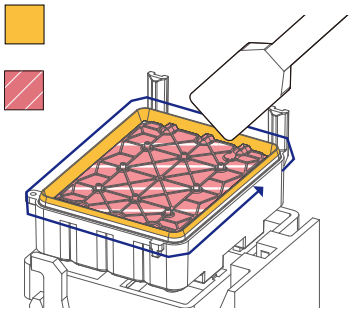
**2.** Use the cleaning stick to remove ink or dust sticking to the cleaning wiper in the following order:

① : Front surface ② : Back surface ③ : Top surface




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

- : Clean this part
- : Absorbent material (Never touch)



**4.** Close the maintenance cover on the right side.

**5.** Next, end the maintenance.

➔ “Step4: Ending the daily maintenance”P.146

# Step4: Ending the daily maintenance

## Procedure

**1.** Tap **[Enter]** key to end the maintenance.



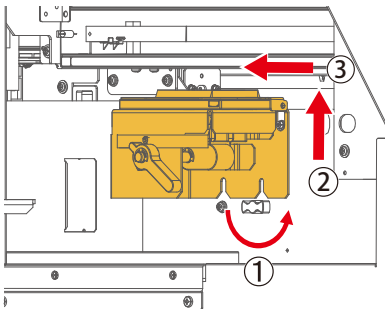

- **[Please wait]** appears.
- The carriage and cleaning wiper return to their original positions.

**2.** When **[Remove Maint Jig, then tap Enter]** appears, remove the maintenance jig.

a. Open the left maintenance cover.

b. Check that the carriage is not positioned directly above the maintenance jig.

c. Loosen the wing screw and remove the maintenance jig.




**Important!**

The maintenance jig must be removed when the carriage is not positioned directly above the jig.

**Note**

If you are not using the maintenance jig, proceed to the next step.

**3.** Tap **[Enter]** key.

The printer automatically performs Cleaning "Short".

**4.** When the cleaning is complete, the printer automatically enters sleep mode.




➔ “Sleep Mode”P.49

**5.** Put away the maintenance tools.

**a.** Dispose of the used polynit wiper and cleaning stick.

**b.** Wipe the maintenance cleaner on the dropper with a paper towel.

**c.** Dispose of the maintenance cleaning solution in the plastic cup and wipe the plastic cup clean with a paper towel.

**d.** Wipe the tray with paper towels.

**Important!**

- Do not reuse the polynit wiper and cleaning stick. Dust and other particles may adhere to the print head, causing it to malfunction.
- Close the cap of the designated maintenance cleaning solution bottle securely and store it.
- Once cleaning is finished, the printer is put into sleep mode.

**Note**

Put the used polynit wiper and cleaning stick in a plastic bag and dispose of it according to the local regulations.

# Regular Maintenance

## Cleaning on the table

Cleaning period:

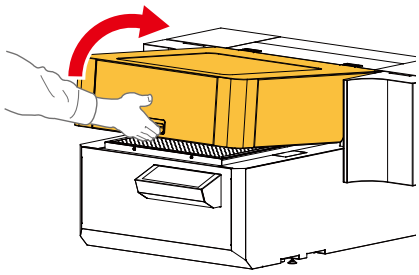
Once a month

**Caution**

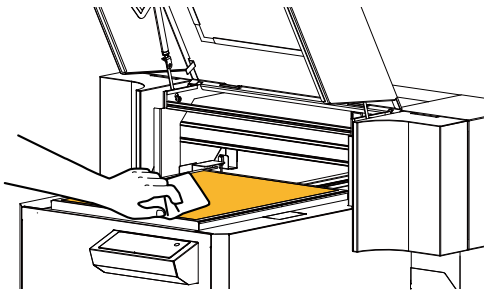
When cleaning table, do not apply too much pressure on the table.
It may affect the print quality.

### Procedure

**1.** Hold the front cover at the position shown in the illustration and gently open it.



**2.** Clean away dirt from the table using a cloth soaked in water and thoroughly wrung out.



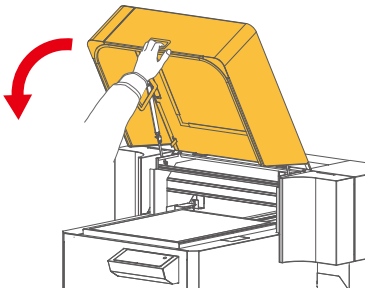
**Important!**

- Do not use air duster to clean the dust inside the printer. Dust may accumulate on the moving parts, leading to damage or noise.
- Do not rub the cured ink on the table with the supplied scraper. This will damage the table.

**Note**

If ink on the table cannot be removed, use your personal resin squeegee or scraper to remove it. Be sure not to damage the table.

3. Close the front cover slowly, holding it by the place shown in the picture.



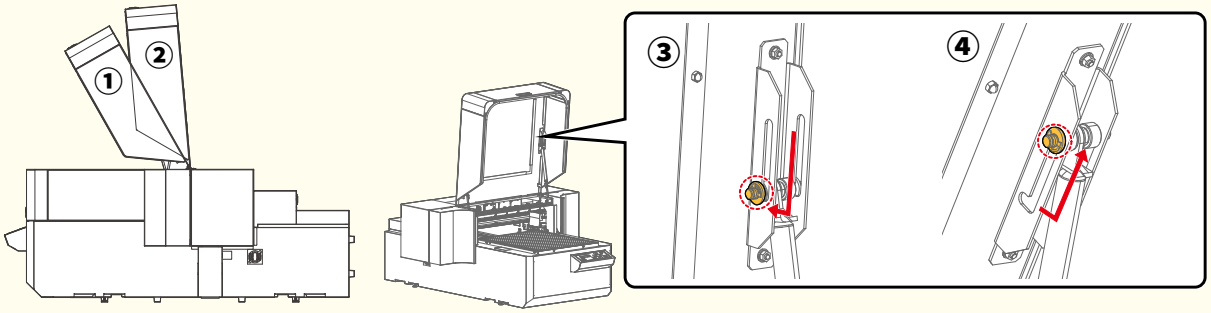
# Table Maintenance

Cleaning period:

Every 12 months

## Caution

- **The front cover has two positions: normal position (①) and full open position (②). The full open position is intended for table maintenance only. For all other operations, keep the front cover in the normal position.**
- **When using the full open position, observe the following precautions. Improper operation may cause the front cover to close suddenly, resulting in injury.**
  - Make sure to lock the damper when using the full open position (③).
  - Before closing the front cover, make sure to unlock the damper (④).

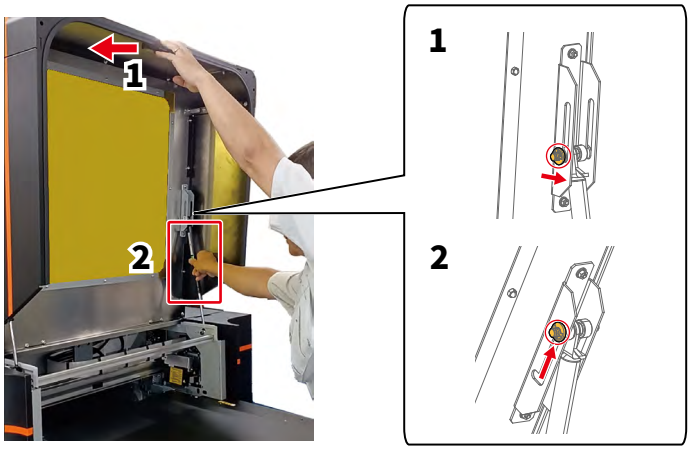



**Important!**

When the front cover is opened to the full open position, always unlock the damper and then close the front cover. Closing the front cover while the damper is locked may cause damage.

**Unlocking the damper**

1. Push the front cover backward to release the damper lock.
2. Hold the damper at the position shown in the illustration and close the front cover while the damper lock is released.



**Important!**

Follow these precautions when cleaning:

- Do not apply lubricating grease on area other than specified.
- Please use the paper towels supplied with the product or the optional poly-knit wiper. Do not use tissue paper.
- Do not place any objects on the sensing area of the media height detector.
  This may cause false detection of the obstacle sensor and the printer may not be able to print correctly.
- This area is outside the sensing area of the obstacle detection sensor. Do not place any objects higher than the loaded media (or jig) in this area.
  This will cause the print head to strike it.
  ➔ "Printing area" P.51

## 1. Preparation

### Procedure

**1.** Prepare the necessary items for maintenance.

- Paper towel or Poly-knit wiper
- Lubricating grease
- Cleaning stick

**2.** Check the front cover is closed.

**3.** Tap **[Home]** key.

**4.** Access the "Table" menu.

Menu flow




- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

**5.** Tap **[>]** key.

**6.** Use **[∧]** / **[∨]** key to select **[Table Maintenance]** and tap **[>]** key.

The following will appear.




**7.** Tap **[Enter]** key.

- **[Please wait]** appears.
- The table moves to the front side of the printer.

**8.** Once removing media and the jig. tap **[Enter]** key.




- **[Please wait]** appears.
- The table move to the maintenance position.

**Important!**

When the printer detected obstacles, the message **[Obstacle detected. Tap [V] key]** appears. Tap **[V]** key so that **[Set media, then Tap [∧] key]** will appear. Remove media and jig and perform the procedure again.

**9.** When **[Table Maintenance End -> Enter]** appears, start a table maintenance.

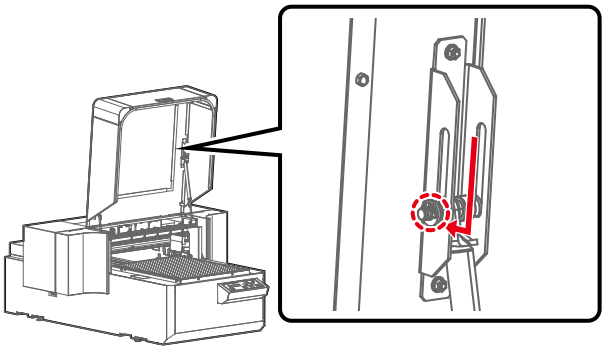



➔ "2. Apply grease"P.152

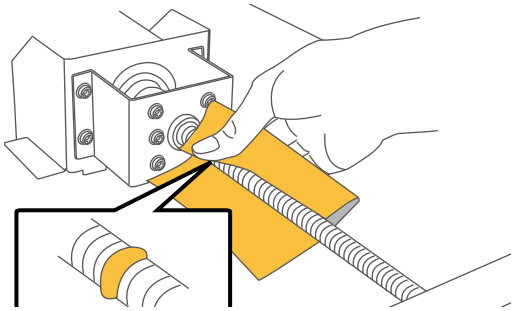
## 2. Apply grease

### Procedure

**1.** Open the front cover at the full-open position and lock the damper.

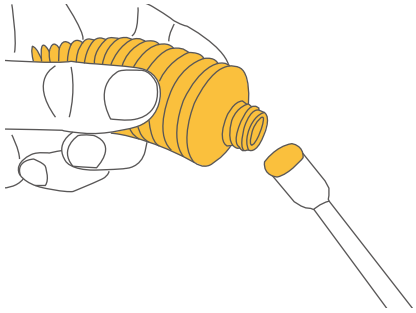


**2.** Use the paper towel supplied with the printer to lightly wipe off grease built up on the screw shaft as shown in the illustration.

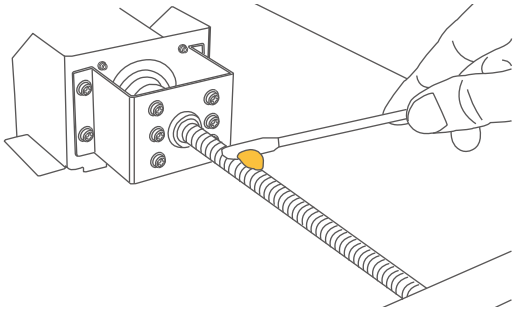


**3.** Apply the grease on the screw shaft.

**a.** Apply approximately 5 mm of lubricating grease on the cleaning stick.

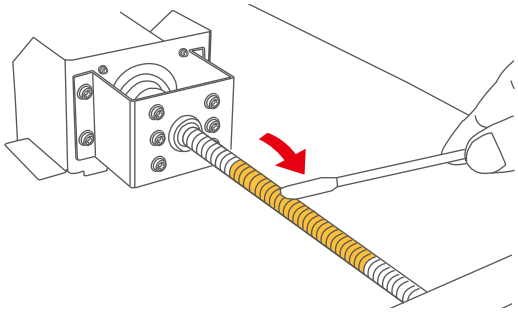


**b.** Apply it on the area where the grease was built up in Step 2.



**c.** Spread the applied grease thinly.

- Apply it towards the front to evenly grease on the screw shaft.



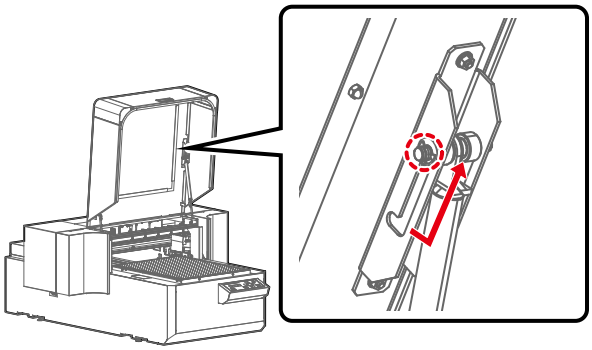
➔ "3. After greasing"P.154

## 3. After greasing

### Procedure

**1.** Unlock the damper and gently close the front cover.

➔ “Unlocking the damper”P.150



**2.** Tap **[Enter]** key to finish the procedure.




a. The table moves up and down to smooth out the grease on the shaft.

b. The table moves to the original position.

c. The following will appear.



# Emptying waste ink tank

In the following cases, drain waste fluids into a container to empty the waste ink tank;

- When the following message appears on the panel.

| | |
|---|---|
| Empty Waste Ink Tank<br>then Tap Enter | It appears periodically. Empty the waste ink tank.<br>After emptying the tank, tap **[Enter]**key so that the display returns to the previous menu. |
| Full WasteInkTank | The status light on the printer control panel turns on red with beep sound. Immediately empty the waste ink tank.<br>The printer stops operation. Once emptied, the printer operation will begin. |

## Warning

- **Keep the ink, cleaning solution and waste fluid away from fire and heat and store in a cool, dark place.**
- **Use a HDPE container with light blocking properties to store waste liquid.**
- **When storing waste fluid for a long time, slightly loosen the cap on the container to allow air. Do not tightly close it.**
- **Do not mix waste fluids with any other substances or liquid not even in small amounts.**
  Mixing with other chemicals (such as oxidant) will cause heating.

## Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

- Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.
- Replace gloves if they become contaminated with ink.

## Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

## Procedure

**1.** Prepare a container to collect waste fluid.

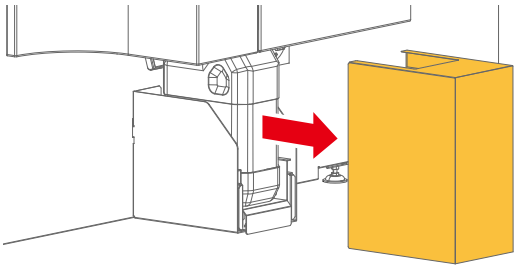
> **Important!**
> The capacity of the waste ink tank is 2,000 ml.
> Make sure to prepare a container that has enough capacity to collect waste fluid.

**2.** Cover the floor under the waste ink tank with waste paper or cloth.

**3.** Wear protective equipment.

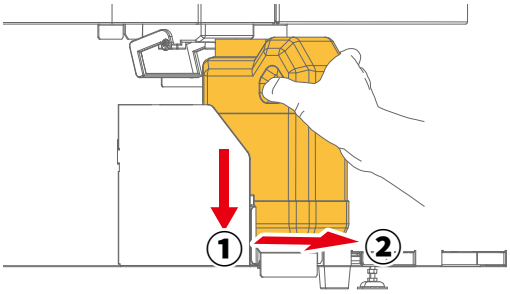
➔ "Wearing protective equipment"P.134

**4.** Remove the cover from the waste ink tank.



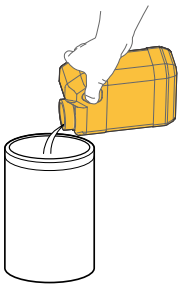
**5.** Remove the waste ink tank.

Push down the waste ink tank holder ( ① ) and pull it toward you ( ② ).




> **Important!**
> If waste fluid gets on the mouth of waste ink tank, wipe it off with a paper towel.

**6.** Drain the waste fluid into an empty container.

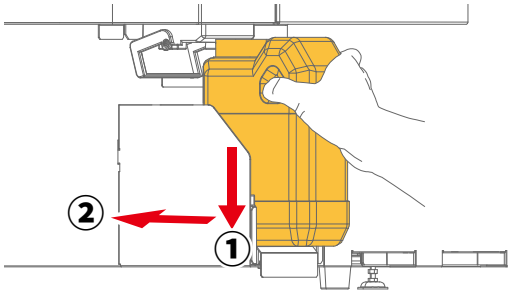


**Important!**

If waste fluid gets on the mouth of waste ink tank, wipe it off with a paper towel.

**7.** Once emptied, attach the waste ink tank to the printer.

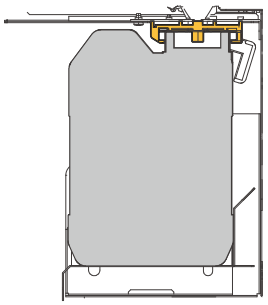
Push down the waste ink tank holder ( ① ) and push it toward the back ( ② ).



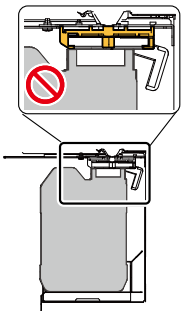

**Important!**

Check that the tube is firmly inserted in the mouth of the tank. If the waste ink tank is not inserted far enough or is installed at an angle, waste ink may leak.

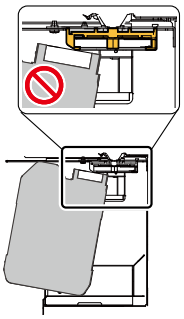
**Good**



**Not Good**



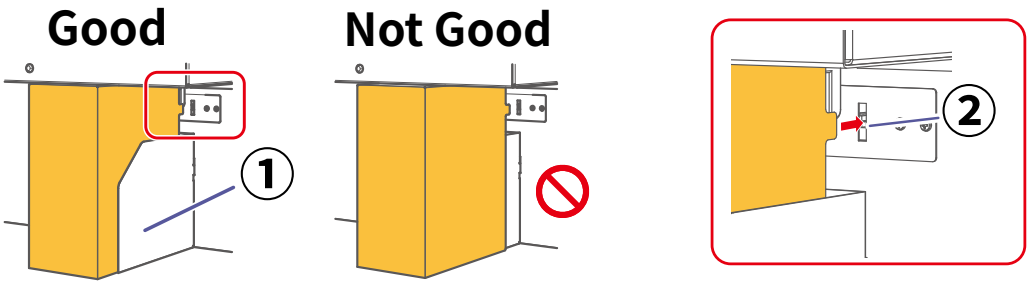
**Not Good**



**8.** Attach the light-blocking cover to the waste ink tank.

a. Attach it so that the light-blocking cover comes inside the waste ink tank holder base (①).

b. Check that the tab of the light-blocking cover is properly inserted into the sensor at the rear right side.




**Important!**

If the waste ink tank or light-blocking cover is detached or installed at an angle, one of the following errors will remain displayed.

- **[No WasteInkTank]**
- **[No WasteInkCover]**

The error will be cleared once it is installed correctly.

## Warning

**Waste fluid collected from the product is classified as waste oil of industrial waste.**

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.

# Maintenance based on your usage

## When nozzle clogging occurred

### Head cleaning

Run a head cleaning if you run a nozzle check before printing and the nozzles are clogged.
➔ “Nozzle check and head cleaning” P.58

**Important!**

Even if you are not using a printer for more than one week, perform a head cleaning once a week.

**Note**

If nozzle clogging persists even after repeated Cleaning “Normal” attempts, try following troubleshooting steps:

1. Perform a cleaning "Long" 2 or 3 times. (If the problem persists, move to the next one)
   ➔ “Perform a head cleaning” P.61
2. Clean each part of the printer. (If the problem persists, move to the next one)
   ➔ “Cleaning each part of the printer” P.160
3. Perform a "Little Charge" 2 or 3 times. (If the problem persists, move to the next one)
   ➔ “Little Charge” P.162
4. Perform a "Soak Cleaning".
   ➔ “Soak Cleaning” P.163

The problem still persists, contact your local Mutoh dealer.

# Nozzle clogging persists even after several head cleaning attempt

## Cleaning each part of the printer

You will need to clean each part of the printer when

- missing lines or thin lines still persist after head cleaning was performed.
- Performing a daily maintenance while printing all day without entering sleep mode.

### Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

### Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

**Important!**

This is the daily maintenance procedure when the printer is not put into sleep mode. For daily maintenance at the end of the day, put the printer into sleep mode before performing the procedure.

➔ "Daily maintenance at the end of work" P.135

### Procedure

1. Prepare the necessary items for maintenance.
   ➔ "What you need"P.131
2. Wear protective equipment.
   ➔ "Wearing protective equipment"P.134
3. Check that printing has finished and media and a jig have been removed from the table.
4. Tap [>] key while **[Print Ready]** or **[Set media, then Tap [∧] key.]** is displayed on the panel.

**5.** Use **[∧]** / **[∨]** key to select **[Daily Maintenance Start -> Enter]** and tap **[Enter]** key.

> **Note**
>
> You can also perform a "Daily Maintenance" from the setup menu of the printer control panel.
> ➔ "Daily Maintenance" P.110

**6.** When **[Unload Media, set Maint Jig, tap Enter]** appears, perform the following:

a. Remove media and jig from the table.

b. Attach the maintenance jig.

➔ "Setting up the maintenance jig"P.132

> **Note**
>
> The maintenance jig is not required If you use a cleaning stick for maintenance. Go to the next step.

**7.** Tap **[Enter]** key.

- **[Please wait]** appears.
- The carriage and cleaning wiper move to the maintenance position.

**8.** When **[Daily Maintenance End -> Enter]** appears, start cleaning each part of the printer.
The parts you need to clean and procedures are the same as those for "Daily Maintenance". See "Step3. Perform a daily maintenance" P.138 to clean each part.

➔ "1. Cleaning of the UV-LED unit"P.138
➔ "2. Moisten the surface of print head nozzles"P.140
➔ "3. Cleaning of the parts around the print head"P.143
➔ "4. Cleaning of the cleaning wiper and the parts around the capping unit"P.145

> **Important!**
>
> The standard maintenance time is about five minutes.

**9.** Ending the daily maintenance.
Refer to "Step4: Ending the daily maintenance" P.146 and end the daily maintenance.

# If severe nozzle clogging occurred

## Little Charge

Gives higher cleaning efficiency than cleaning **"Long"**, but consumes a lot of ink. Follow the precautions when performing.

**Important!**

Avoid the following actions when ink filling is in progress. If ink charging is interrupted, it may consume more ink to do the ink charging again.

- Turn off the printer or unplug the power cord.
- Open the front cover or maintenance cover

### Procedure

1. Tap **[Home]** key.
2. Tap **[>]** key while **[Print Ready]** is displayed on the panel.
3. Use **[∧]** / **[∨]** key to select **[Cleaning[Little Chg]  Start –> Enter]**.




**Note**

You can also perform the "Little Cleaning" menu from the setup menu of the printer control panel.
➔ "Cleaning [Little Charge]" P.110

4. Tap **[Enter]** to start a Little Charge.
   The following will appear.




5. When ink charging is complete, the following will be displayed.




That ends the procedure.

**Note**

If nozzle clogging persists even after repeated "Little Charge" two or three times, perform a "Soak Cleaning".
➔ "Soak Cleaning" P.163

## Soak Cleaning

Soak the print head in the maintenance cleaning solution filled in the head cap to clean dirt off the nozzle surface.

### Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

### Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

### Procedure

1. Prepare the necessary items for maintenance.
   - Dropper
   - Designated maintenance cleaning solution
2. Wear protective equipment.
   ➔ “Wearing protective equipment”P.134
3. Tap **[>]** key while **[Print Ready]** is displayed on the panel.
4. Use **[∧]** / **[∨]** key to select **[Soak Cleaning  Start ―> Enter]**.




**Note**

You can also perform the “Soak Cleaning” menu from the setup menu of the printer control panel.
➔ “Soak Cleaning” P.110

**5.** Tap **[Enter]** key to start maintenance.

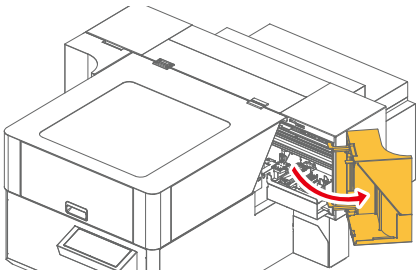
- The carriage moves to the left maintenance space.
- **[Pour Cleaning fluid End –> Enter]** appears.

**Important!**

**Soak cleaning cannot be performed when the printer is in the following conditions.**

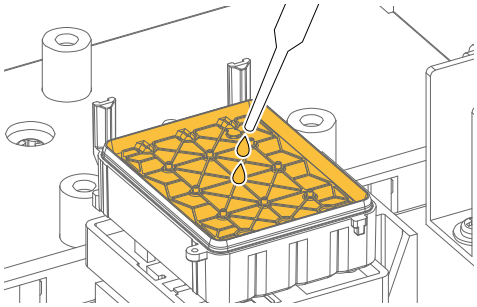
- Front cover or maintenance cover is open
- Waste ink tank is full.
- The ink cartridge (or high-capacity ink pack adapter) has been removed.
- A non-genuine smart chip card is inserted.

**6.** Open the maintenance cover on the right side.

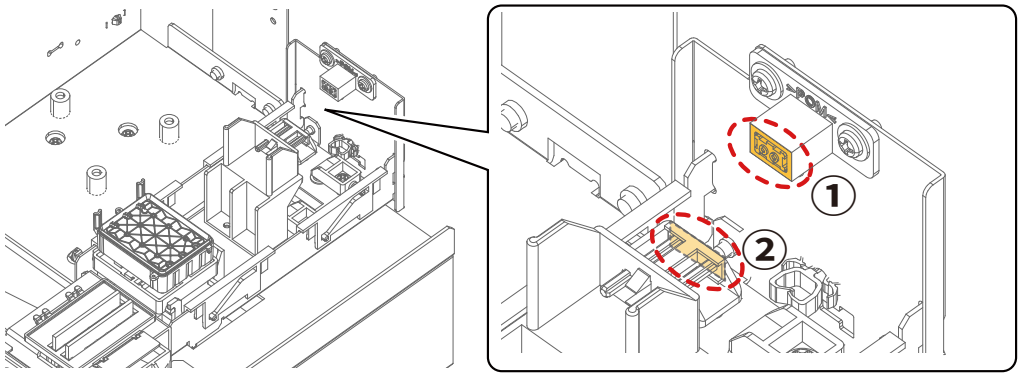


**7.** Fill the head cap with maintenance cleaning solution.

Use a dropper to fill it with maintenance cleaning solution until the cleaning solution almost overflows the cap.



**8.** Using a paper towel, wipe off any ink on the surface of the air valve (parts ① and ② ).



**9.** Tap **[Home]** key.

The carriage returns to the home position.




**10.** Use **[∧]** / **[∨]** key to specify a soaking time and tap **[Enter]** key.

- 10 minutes is recommended for soak cleaning time.
- The countdown begins.
- When the soak cleaning timer reaches zero, the suction begins followed by cleaning. (Or suction only if cleaning cannot be performed)




**11.** End the soak cleaning.

Wipe the maintenance cleaning solution on the dropper with a paper towel.

**Note**

**Please keep the bottle lid of the designated maintenance cleaning solution tightly closed.**

# Replace the consumable parts

## Replace the flushing box pad

Flushing box is a part to collect waste fluids from the print head.

Replace the flushing box pad periodically. Continued use without replacement will cause damage to the print head.

### Replacement timing guideline

When looking from the side, the ink deposits accumulated on the flushing pad is visible through the flushing box frame.

(Please check periodically as it depends on your usage)

**Caution**

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

**Caution**

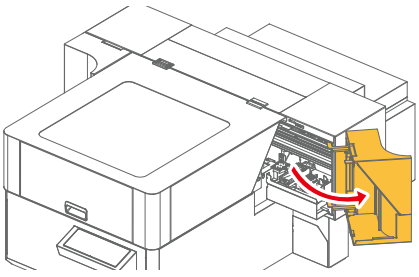
**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

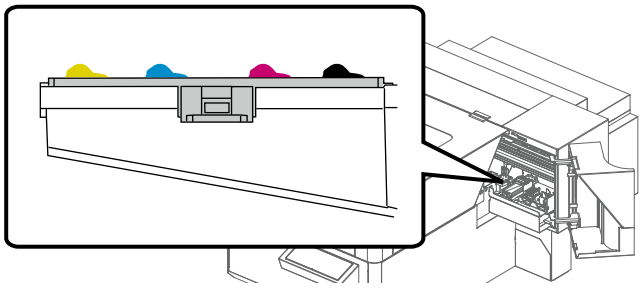
### 1. Checking steps

**Procedure**

1. Open the maintenance cover on the right side.



**2.** Check the flushing box pad.
(When looking from the side) if the ink deposits accumulated on the flushing pad is visible through the flushing box frame, you need to replace it.



**3.** Close the maintenance cover on the right side.

## 2. Replacement steps

### Procedure

**1.** Prepare the necessary items for maintenance.

- Flushing box pad
- Waste paper (paper that ink does not bleed through)

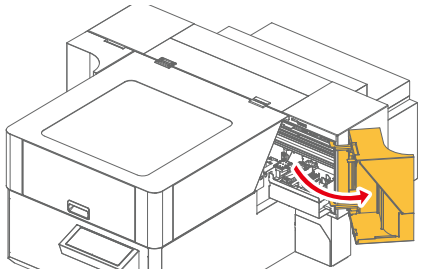
**2.** Wear protective equipment.

➔ "Wearing protective equipment"P.134

**3.** Put the printer into CR Maintenance state.

➔ "CR Maintenance"P.113

**4.** Open the maintenance cover on the right side.

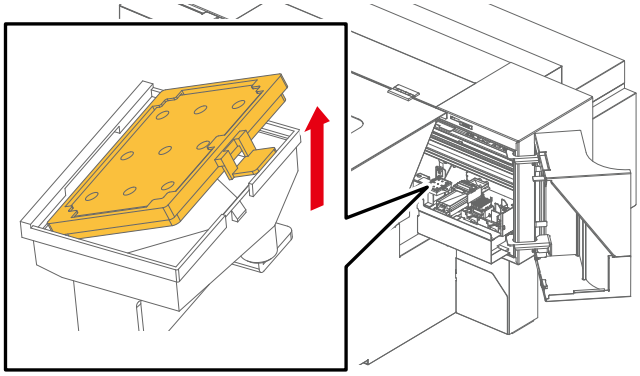


**5.** Cover the platen with the waste paper.

**Important!**

Ink may drip from the flushing box pad. We recommend covering the floor with paper as well.

**6.** Lift the tab on the flushing box pad to unhook the box and remove the pad.



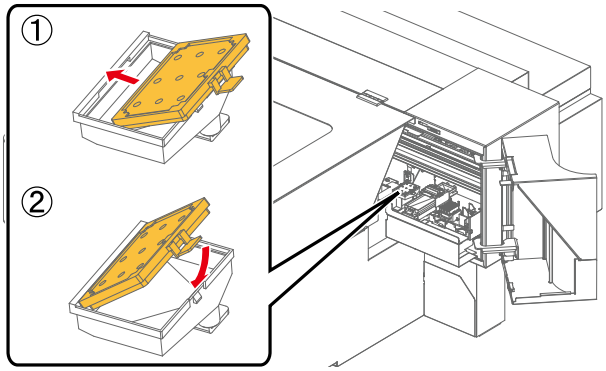
**Important!**

When removing the flushing box pad, be careful of ink dripping.

**Important!**

Put the used flushing box pad in a plastic bag and dispose of it according to the local regulations.

**7.** Attach a new flushing box pad.




**8.** Close the maintenance cover on the right side.

**9.** Tap **[Enter]** key to end the maintenance.




**10.** Tap **[Home]** key to end the procedure.



# Replace the Cleaning Wiper

The cleaning wiper is a necessary component for maintaining consistent printing quality. Replace regularly.

## Replacement timing guideline

About 6 months

### Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

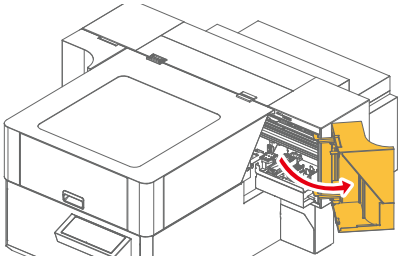
### Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

### Procedure

1. Prepare the necessary items for maintenance.
   - Replacement cleaning wiper
   - Waste paper (paper that ink does not bleed through)
2. Wear protective equipment.
   ➔ "Wearing protective equipment"P.134
3. Put the printer into CR Maintenance state.
   ➔ "CR Maintenance"P.113
4. Open the maintenance cover on the right side.



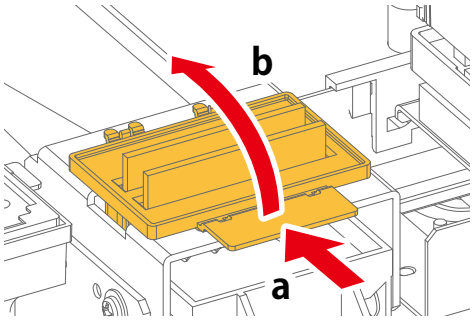
**5.** Cover the platen with the waste paper.

> **Important!**
> Ink may drip from the cleaning wiper. We recommend covering the floor with paper as well.

**6.** Remove the cleaning wiper.

a. Slide the hook on the wiper to the back to unhook from the wiper slot.

b. Lift the hook and remove the cleaning wiper.



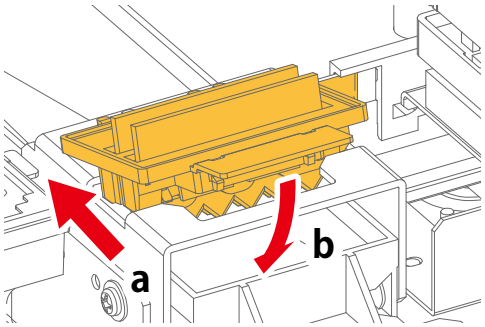

> **Important!**
> When removing the cleaning wiper, be careful of ink dripping.

> **Important!**
> Put the used cleaning wiper in a plastic bag and dispose of it according to the local regulations.

**7.** Replace with an appropriate cleaning wiper depending on the print head height.

a. Slide the back side of the new cleaning wiper into its slot.

b. Push the wiper hook down until it clicks into place.




> **Important!**
> Do not touch the rubber part of the cleaning wiper with bare hands. Finger oil may cause print head malfunction.

8. Close the maintenance cover on the right side.

9. Tap **[Enter]** key to end the maintenance.




10. Tap **[Home]** key to end the procedure.



# Replace the UV-LED unit glass

This glass protects the UV-LED unit. If the glass is damaged or used while still dirty, it may cause failure of the UV-LED unit or improper ink curing. Replace with a new one as needed.

## Replacement timing guideline

- When the glass has cracks or chips.
- When the ink cannot be removed from the glass.

### Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

### Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

### Caution

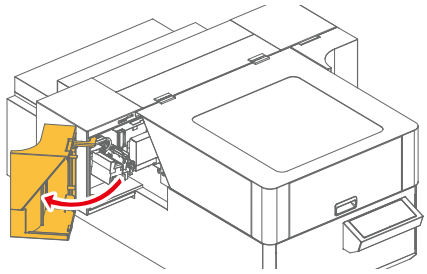
**After printing, the UV-LED unit gets hot.**

Leave it for 10 minutes to cool down and then start maintenance.

### Procedure

1. Prepare the necessary items for maintenance.
   Replacement glass
2. Wear protective equipment.
   ➔ "Wearing protective equipment"P.134
3. Put the printer into CR Maintenance state.
   ➔ "CR Maintenance"P.113

**4.** Open the maintenance cover on the left side.



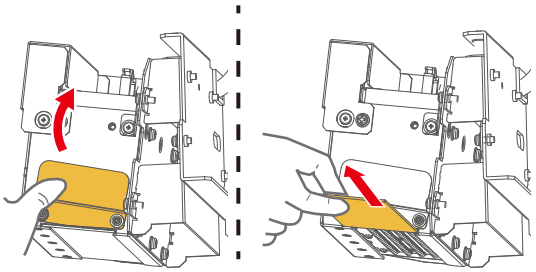
**5.** Check the glass and replace if there are defects or cracks.

a. Slide the exhaust cover up using the screw on the right side of the exhaust cover as a fulcrum.

b. Slide the glass attached on the bottom of the UV-LED unit to remove it.

c. Check for cracks, chips, or ink on the glass.

d. Attach a new glass to the UV-LED unit. Firmly slide it into the end and then put the exhaust fan cover back in place.



**Important!**

Make sure that the emitting window glass is attached to the lamp and the exhaust fan cover is put back in place. Failure to do so will cause failure of the UV-LED unit.

**6.** Close the left maintenance cover.

**7.** Tap **[Enter]** key to end the maintenance.




**8.** Tap **[Home]** key to end the procedure.



# Replace the UV-LED unit filter

This filter protects the UV-LED unit from ink mist. If you continue using it with accumulated dirt, it may cause failure of the UV-LED unit. Replace regularly.

## Replacement timing guideline

Once a month or when the filter gets dirty by dust or ink.
(Please check periodically as it depends on your usage)

### Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

### Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

### Caution

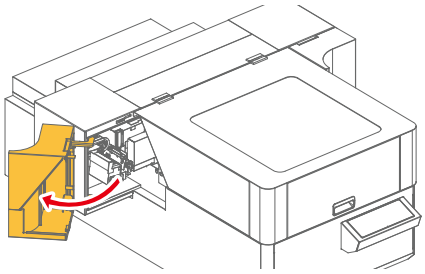
**After printing, the UV-LED unit gets hot.**

Leave it for 10 minutes to cool down and then start maintenance.

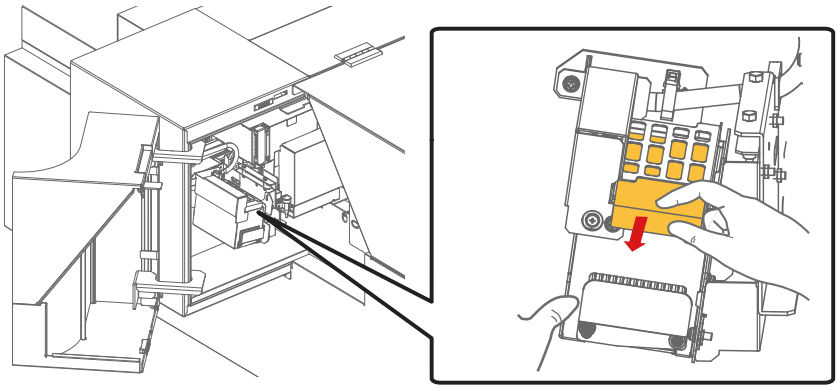
### Procedure

1. Prepare the necessary items for maintenance.
   Replacement filters
2. Wear protective equipment.
   ➔ “Wearing protective equipment”P.134
3. Put the printer into CR Maintenance state.
   ➔ “CR Maintenance”P.113

**4.** Open the maintenance cover on the left side.



**5.** While holding the UV-LED unit, remove the filter.



**6.** Replace it with a new filter.
Insert the filter firmly all the way in.

**7.** Close the left maintenance cover.

**8.** Tap **[Enter]** key to end the maintenance.




**9.** Tap **[Home]** key to end the procedure.



# Moving or transporting the printer

## Moving the printer

This section explains how to move this product.

### Caution

- **At least four people are required for moving or transporting the printer. When moving, keep the printer level.**
- **Do not place this product upside down.**

  Doing so may cause and accident by falling or ink leakage. Also proper operation cannot be guaranteed after moving.

### Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

### Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

**Important!**

- Empty the waste ink tank even when moving for a short distance.

  Waste fluid may come into contact with your skin. It may also cause the product to malfunction.
- Wearing safety shoes is recommended for moving this product.

## Preparation for moving the printer

### Procedure

1. Emptying waste ink tank
   ➔ “Emptying waste ink tank”P.155
2. Turn off the printer.
   ➔ “Turn off the printer”P.46
3. Remove all the cables including the power cord.
4. Move the printer.

## Installation after moving

### Procedure

1. Select a suitable location for installation.
   ➔ **Startup Guide**
2. Connect the cables including the power cord.
3. After moving the printer to the installation site, use the adjusters to lock the printer.
   ➔ **Startup Guide**
4. Turn on the printer.
   ➔ “Turn on the printer”P.45
5. Run a nozzle check to make sure all nozzles are clear.
   ➔ “Nozzle check and head cleaning”P.58

# Transporting the printer

When transporting this product, the ink and waste fluid must be discharged, and the print head and table must be secured with the packaging materials. Failure to do so may cause ink leakage or damage to the print head. When using the printer again, perform reinstallation and initial ink charging.

## Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

## Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

## Step1. Discharging ink

### Procedure

**1.** Wear protective equipment.

➔ “Wearing protective equipment”P.134

**2.** Tap **[Home]** key.

**3.** Access the “Longstore” menu.

Menu flow




- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

**4.** Tap **[>]** key.

**5.** Tap **[Enter]** key to begin the task.



**6.** If the message **[Empty Waste Ink Tank then Tap Enter]** appears, drain waste fluids into a container.




➔ “Emptying waste ink tank”P.155

**Note**

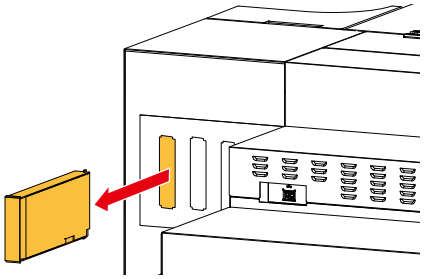
Tapping **[Cancel]** key will cancel the “Longstore” menu.

**7.** After emptying the waste ink tank, tap **[Enter]** key.

- The following will appear.




**8.** Remove the ink cartridges (or high-capacity ink pack adapters) from all the ink slots.



**a.** Once all ink cartridges (or high-capacity ink pack adapters) are removed, the printer will begin discharging ink.




**b.** Once discharging is done, the following will appear.






## Step2. Changing Table Position for Packing

### Procedure

**1.** Tap **[Home]** key.

**2.** Access the “Table” menu.
Menu flow




- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

**3.** Tap **[>]** key.

**4.** Use **[∧]** / **[∨]** key to select **[Moving Printer]** and tap **[>]** key.
The following will appear.




**5.** Use **[∧]** / **[∨]** key to select **[Yes]** and tap **[Enter]** key.



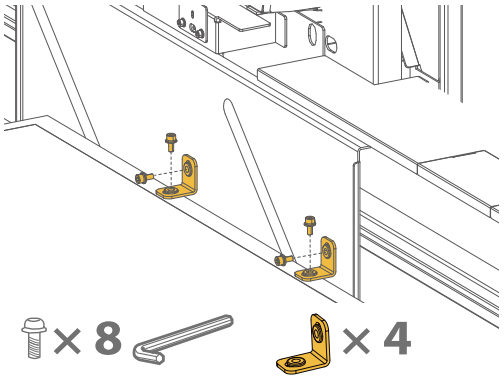

- **[Please wait]** appears.
- The table moves to the front side of the printer.

**6.** When **[Unload Media then Tap Enter]** appears, remove media and jig from the table and tap **[Enter]** key.




- **[Please wait]** appears.
- The table raises and lowers.

**7.** When **[Fix table with plate then Tap Enter]** appears, attach the support brace between table fixing plates with screws.




**8.** Once the support brace is attached, tap **[Enter]** key.

- **[Please wait]** appears.
- The table moves back and forth.

> **Important!**
>
> When the printer detected obstacles, the message **[Obstacle detected. Tap [V] key]** appears. Tap **[V]** key so that **[Set media, then Tap [∧] key]** will appear. Remove media and jig and perform the procedure again.

**9.** **[Power Off Printer]** appears, turn off the printer.

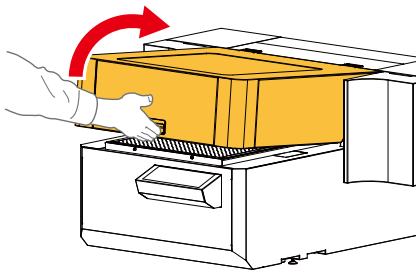



- Press the Power button for more than 2 seconds.
  - The printer begins powering off.
  - When **[Power Off]** appears, release the Power button.
  - The LED above the power button turns off.

**10.** Remove all the cables including the power cord.

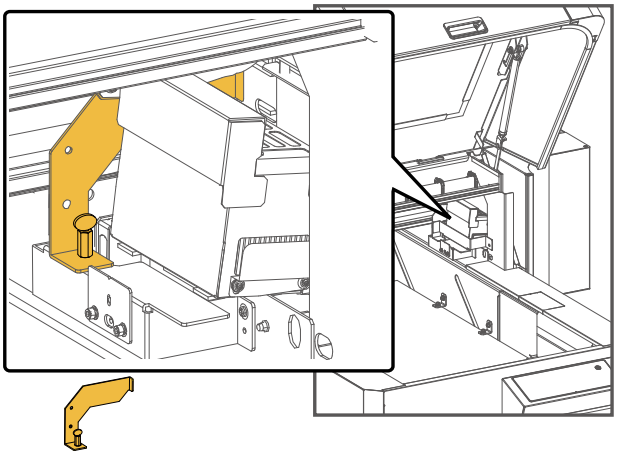
## Step3. Repacking

**1.** Hold the front cover at the position shown in the illustration and gently open it.



**2.** Attach the head fixing plate with screws.

Slide the head fixing plate rightward to attach it.



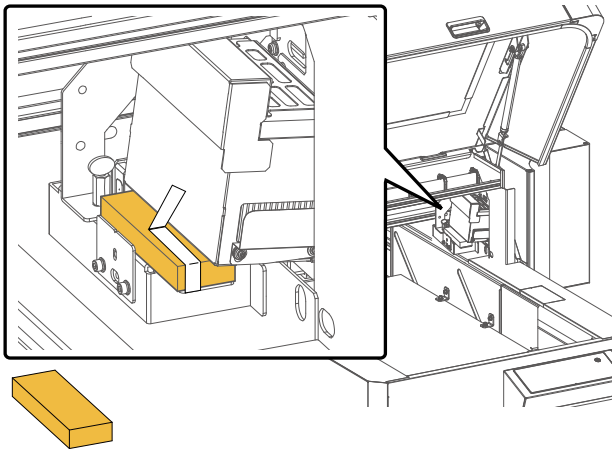
**Important!**

Attach the fixing plate carefully to avoid damaging the surrounding parts. If it is damaged, print quality may be reduced.

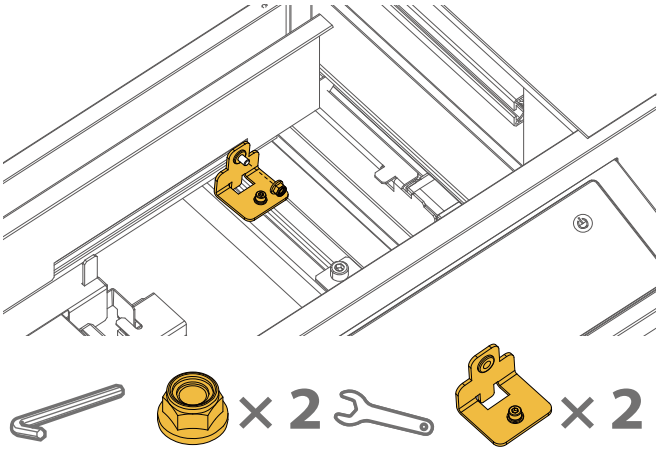
**3.** Attach the protective material to the UV-LED unit.

**a.** Attach it by sliding it from the front toward the back.

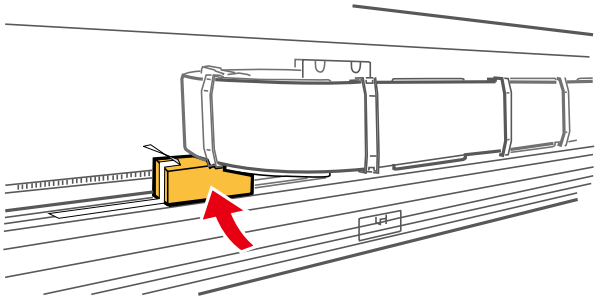
**b.** Apply tape to secure the protective material.



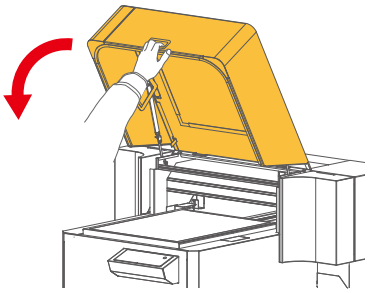
**4.** Attach table fixing plate (x2) with screws.
Use the hexagon wrench supplied with the printer.




**5.** Attach the protective material to the steel veyor.
Apply tape to secure the protective material.

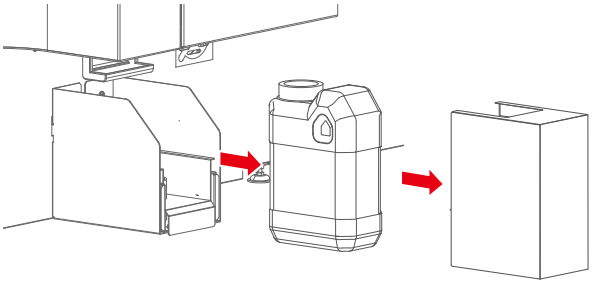


**6.** Hold the front cover at the position shown in the illustration and gently close it.



**7.** Remove the light-blocking cover of the waste ink tank and waste ink tank.

After removing the waste ink tank, close it with the cap that was kept during printer unpacking.

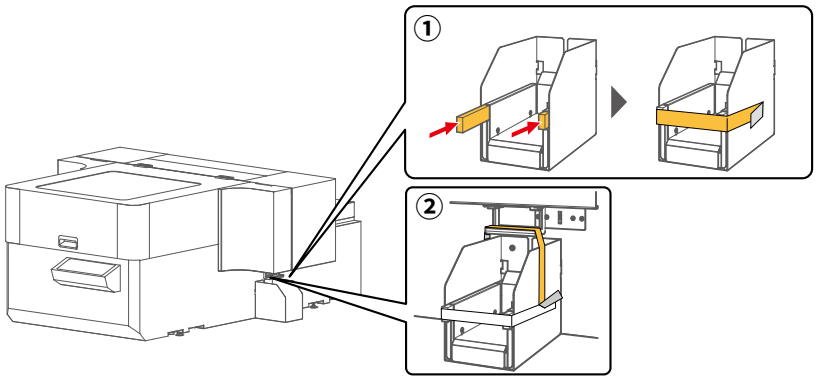


**Important!**

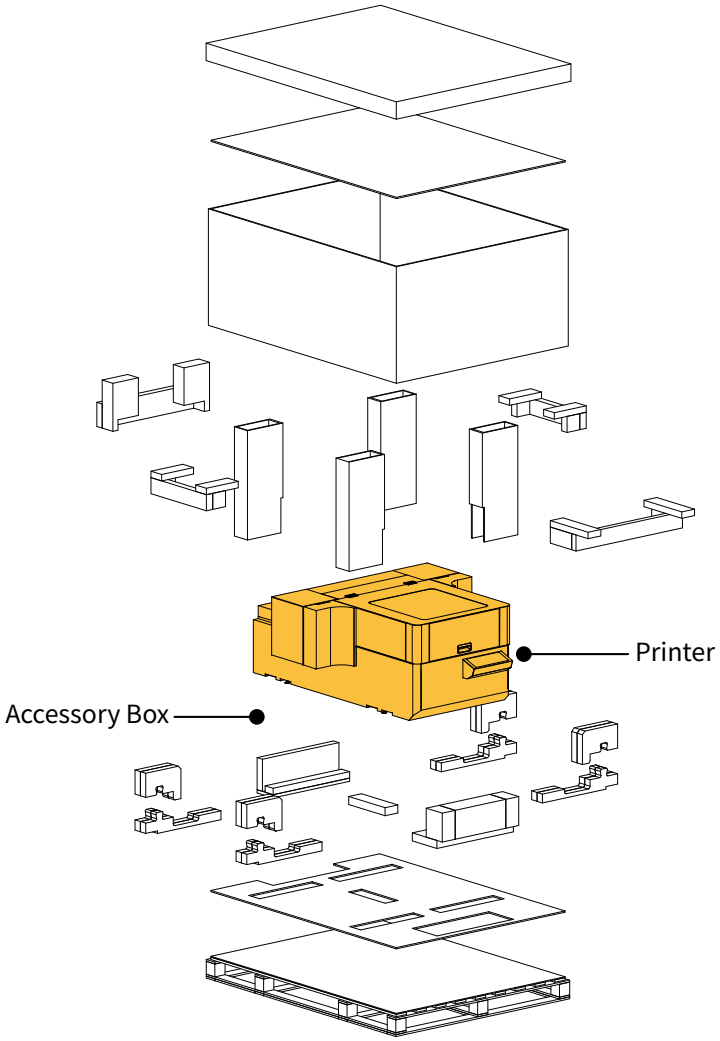
If waste fluid gets on the mouth of waste ink tank or waste ink tank holder, wipe it off with a paper towel.

**8.** Attach the protective material to the waste ink tank holder.

- Insert the protective material as far as it will go, and secure it with tape. (①)
- Secure the waste ink tank guide with tape. (②)



**9.** Attach protection materials, and place the product inside the package box.



## Reinstalling

1. Referring to “Startup Guide”, unpack the product and assemble.
   Conduct up to “Leveling Printer”.

2. Carry out initial ink charging after ink discharge.
   ➔ “Initial ink charging after Longstore cleaning”P.192

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

If you are not using the printer for an extended period (maximum of one month), follow these steps to turn off the printer.

### Caution

**When handling ink or waste fluid, or doing a task that you may come into contact with ink, make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, protective mask).**

Two types of protective gloves are included in the printer package. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, wear butyl rubber gloves.

Replace gloves if they become contaminated with ink.

### Caution

**Be careful ink does not get into eyes or skin when you handle ink. If ink gets in eyes or on skin, immediately flush with water.**

If left untreated, it may cause red eyes or irritation in the eyes. If there are some problems, immediately seek medical attention.

## Step1. Perform a daily maintenance

**Procedure**

1. Prepare the necessary items for maintenance.
   ➔ "What you need"P.131
2. Wear protective equipment.
   ➔ "Wearing protective equipment"P.134
3. Check that printing has finished and media and a jig have been removed from the table.
4. Tap **[>]** key while **[Print Ready]** or **[Set media, then Tap [∧] key.]** is displayed on the panel.

**5.** Use [∧] / [∨] key to select **[Daily Maintenance Start -> Enter]** and tap **[Enter]** key.

> **Note**
> You can also perform a "Daily Maintenance" from the setup menu of the printer control panel.
> ➔ "Daily Maintenance" P.110

**6.** When **[Unload Media, set Maint Jig, tap Enter]** appears, perform the following:

a. Remove media and jig from the table.

b. Attach the maintenance jig.

➔ "Setting up the maintenance jig"P.132

> **Note**
> The maintenance jig is not required If you use a cleaning stick for maintenance. Go to the next step.

**7.** Tap **[Enter]** key.

- **[Please wait]** appears.
- The carriage and cleaning wiper move to the maintenance position.

**8.** When **[Daily Maintenance End -> Enter]** appears, start cleaning each part of the printer.
The parts you need to clean and procedures are the same as those for "Daily Maintenance". See "Step3. Perform a daily maintenance" P.138 to clean each part.

➔ "1. Cleaning of the UV-LED unit"P.138
➔ "2. Moisten the surface of print head nozzles"P.140
➔ "3. Cleaning of the parts around the print head"P.143
➔ "4. Cleaning of the cleaning wiper and the parts around the capping unit"P.145

> **Important!**
> The standard maintenance time is about five minutes.

**9.** Ending the daily maintenance.
Refer to "Step4: Ending the daily maintenance" P.146 and end the daily maintenance.

# Step2. Discharging ink

## Procedure

**1.** Wear protective equipment.

➔ “Wearing protective equipment”P.134

**2.** Tap **[Home]** key.

**3.** Access the “Longstore” menu.

Menu flow




- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

**4.** Tap **[>]** key.

**5.** Tap **[Enter]** key to begin the task.




**6.** If the message **[Empty Waste Ink Tank then Tap Enter]** appears, drain waste fluids into a container.




➔ 「Emptying waste ink tank」

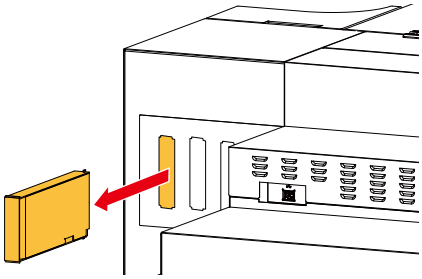
> **Note**
>
> Tapping **[Cancel]** key will cancel the “Longstore” menu.

**7.** After emptying the waste ink tank, tap **[Enter]** key.

- The following will appear.



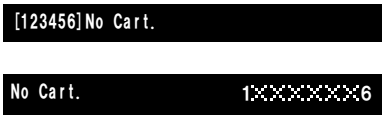
**8.** Remove the ink cartridges (or high-capacity ink pack adapters) from all the ink slots.



**a.** Once all ink cartridges (or high-capacity ink pack adapters) are removed, the printer will begin discharging ink.




**b.** Once discharging is done, the following will appear.



# Step3. Skip daily maintenance and power off the printer

## Procedure

**1.** Tap **[Home]** key.

**2.** Access the “Power Off” menu.

Menu flow




- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

**3.** Tap **[>]** key.

The following will appear.




**4.** Tap **[Cancel]** key.

This will skip a daily maintenance.

> **Important!**
>
> Make sure to perform a daily maintenance beforehand and then turn off the printer. Powering off without daily maintenance could cause ink accumulation around the print head, leading to damage to the printer.

**5.** The printer begins powering off.



# Initial ink charging after Longstore cleaning

**Important!**

Avoid the following actions when ink filling is in progress. If ink charging is interrupted, it may consume more ink to do the ink charging again.

- Turn off the printer or unplug the power cord.
- Open the front cover or maintenance cover

## Procedure

**1.** Turn on the printer.

➔ "Turn on the printer"P.45

**2.** Tap **[Enter]** to start initial ink charging.




**3.** If the message **[Empty Waste Ink Tank then Tap Enter]** appears, drain waste fluids into a container.




➔ "Emptying waste ink tank"P.155

**4.** After emptying the waste ink tank, tap **[Enter]** key.

- The following will appear.




**5.** Perform ink agitation and insert the ink cartridges (high-capacity ink pack adapters) into the ink slots.

➔ "When using ink cartridges"P.193
➔ "When using ink bags with high-capacity ink pack adapters"P.194

## When using ink cartridges

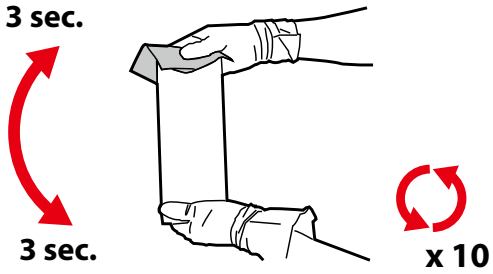
### Procedure

**1.** Prepare a new ink cartridge and follow the instructions below to agitate ink.

a. Hold the ink bag with the ink outlet facing up and wait for 3 seconds.

b. Invert it with the ink outlet facing down and wait for 3 seconds.

c. Repeat this 10 times. (20 times for white ink)




**Important!**

Make sure to use a new ink cartridge. If an ink cartridge does not have enough ink, it will run out of ink during initial ink charging and will consume more ink.

**Note**

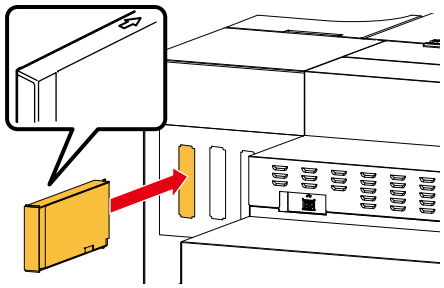
Varnish (clear) ink can be used without agitation.

**2.** Remove the empty ink cartridge and insert the new one.

a. Make sure to match the color of the ink cartridge with the color of the label attached to the ink slot.

b. Face the arrow mark upward.

c. Make sure that they are fully inserted.



**Important!**

- Insert it into its original ink slot. Even if it is the same color, do not insert it into a different slot.
- Gently insert it. Inserting it forcefully may cause ink leakage.

d. "The procedure after installing ink"P.197

## When using ink bags with high-capacity ink pack adapters

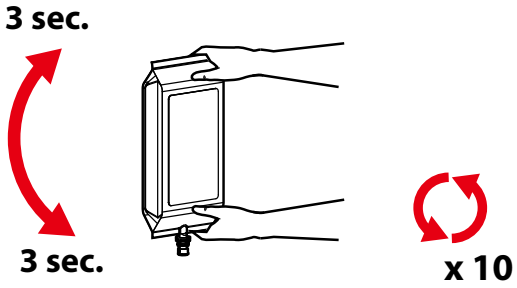
### Procedure

**1.** Prepare a new ink bag and follow the instructions below to agitate ink in the ink bag.

a. Hold the ink bag with the ink outlet facing up and wait for 3 seconds.

b. Invert it with the ink outlet facing down and wait for 3 seconds.

c. Repeat this 10 times. (20 times for white ink)



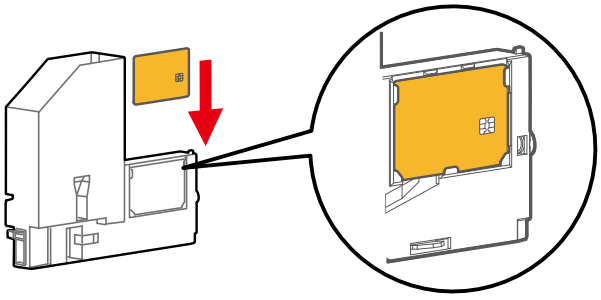

**Important!**

Make sure to use a new ink bag. If an ink bag does not have enough ink, it will run out of ink during initial ink charging and will consume more ink.

**Note**

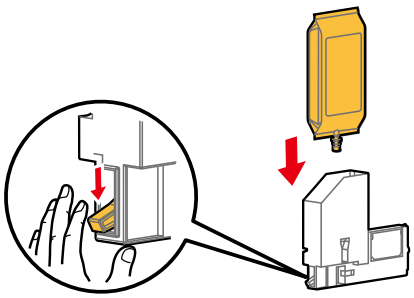
Varnish (clear) ink can be used without agitation.

**2.** Insert the new smartchip card into the card slot on the high-capacity ink pack adapter.

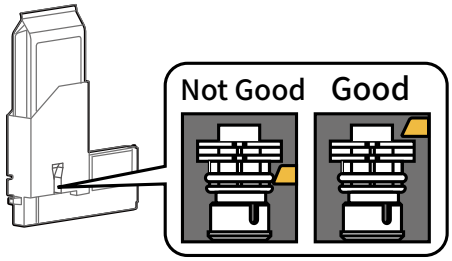


**3.** Insert the new ink bag while lowering the lock lever on the high-capacity ink pack adapter.

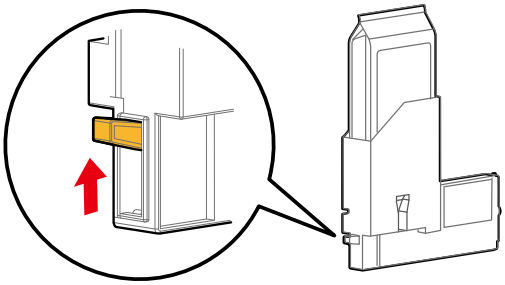
a. Insert the ink bag all the way in to seat properly.



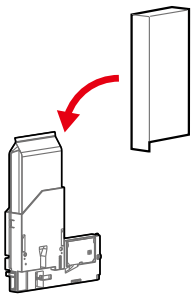
b. Ensure that the ink bag is fully seated and locked.




c. Check that the lock lever of the high-capacity ink pack adapter is back to its original position.



**4.** Cover the ink bag with the light-blocking cover.



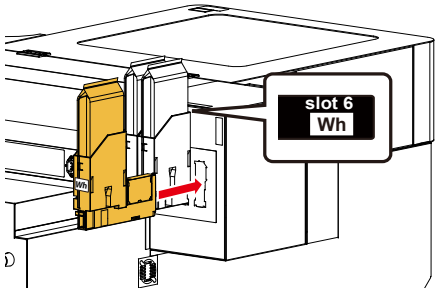
**Important!**

Attach it so that the light-blocking cover comes inside the high-capacity ink pack adapter.

**5.** Insert the high-capacity ink pack adapter back to the original ink slot.

a. Make sure to match the color of the ink bag label with the color of the label attached to the ink slot.

b. Make sure that they are fully inserted.




**Important!**

- Insert it into its original ink slot. Even if it is the same color, do not insert it into a different slot.
- Gently insert it. Inserting it forcefully may cause ink leakage.

c. "The procedure after installing ink"P.197

# The procedure after installing ink

## Procedure

**1.** This printer starts ink charging.




**Important!**

Avoid the following actions when ink filling is in progress. If ink charging is interrupted, it may consume more ink to do the ink charging again.

- Turn off the printer or unplug the power cord.
- Open the front cover or maintenance cover

**2.** When ink charging is complete, the following will be displayed.




That ends the procedure.

**Important!**

If you run a nozzle check print immediately after the initial ink charging, the following symptoms may occur.

- Printed lines are faded.
- Patterns are partially missing.

In such cases, perform “Little Charge” and then check the printed results.

If the print result has no change even after Little Charge attempt, rest the printer for at least one hour and then perform a head cleaning or “Little Charge” cleaning again.

The problem still persists, contact your local Mutoh dealer.

# 5 When problems occur

Messages and Error Messages 199
Troubleshooting 206

# Messages and Error Messages

This section describes the messages that appear and solution to the messages

## Status messages

This section describes the messages when the printer is working properly.

| Display | Description |
|---|---|
| Activation required | Printer has not been activated yet. Activate your printer. |
| Initializing | The printer is initializing. |
| Set media, then<br>Tap [∧] key. | Ready-to-print state (Media is not loaded).<br>➔ "Load the media into the printer" P.52 |
| Print Ready | Ready-to-print state (Media is loaded) |
| Receiving | Data is being received. |
| Converting | Data is being converted. |
| Printing | Printing is in progress. |
| Remain: XXX.Xm | Displays the length remaining to print for the data currently being printed (unit: meter). |
| Remain Time: XXXXmin | Displays the time remaining to print for the data currently being printed (unit: minute). |
| Pausing Print<br>Cancel Print-> Enter | Printing is being paused.<br>Tapping **[Cancel]** key will resume printing.<br>Tapping **[Enter]** will cancel printing. |
| Canceling | Printing is being canceled. |
| Cleaning **% | Cleaning is in progress.<br>Please wait for a while. |
| Discharging **% | Discharging ink.<br>Please wait for a while. |
| Dump data available | When Header Dump is set to **[ON]**, this message appears notifying that there is a dump data to be printed. |
| Life Times [Pump]<br>OK -> Enter | The pump motor is nearing the end of its service life (The printer will continue to operate).<br>Please contact your local MUTOH dealer. |
| Life Times [CR Motor]<br>OK -> Enter | The CR motor is nearing the end of its service life (The printer will continue to operate).<br>Please contact your local MUTOH dealer. |
| Life Times [PF Motor]<br>OK -> Enter | The PF motor is nearing the end of its service life (The printer will continue to operate).<br>Please contact your local MUTOH dealer. |
| Life Times [C Pump] | The circulation pump motor is nearing the end of its service life (The printer will continue to operate).<br>Please contact your local MUTOH dealer. |

| Display | Description |
|---|---|
| Life Times [UV Lump] | The UV-LED unit is nearing the end of its service life (The printer will continue to operate).<br>Please contact your local MUTOH dealer. |
| Power Off | The printer is being powered off.<br>Please wait for a while. |
| S/C Reading | The smart chip card is being read. |
| *** Remote Mode ***<br>End -> Enter | Remote panel mode is running through MSM.<br>You cannot operate the printer control panel while in remote panel mode.<br>Tapping **[Enter]** key will force quit the remote panel mode. |
| Ink Circulation | Ink is circulating inside the printer. |
| Perform Daily Maint. | The scheduled time has passed since the last daily maintenance.<br>Perform a daily maintenance.<br>➔ "Cleaning each part of the printer" P.160 |
| Empty Waste Ink Tank<br>then Tap Enter | The waste ink tank became full during initial ink charging.<br>Transfer the waste fluid from the waste ink tank into a container, and tap **[Enter]** key. |
| Insert CleaningCart. | Head cleaning is in progress.<br>Install the cleaning cartridge. |
| Washing Head **% | Initial cleaning involves filling and draining cleaning solution.<br>Or, the print head flushing is in progress in the head cleaning process.<br>Please wait for a while. |
| Remove Cartridges | Head cleaning or ink discharging process is in progress.<br>Remove the ink cartridges (or high-capacity ink pack adapters). |
| Insert InkCartridges | Ink filling is in progress.<br>Insert ink cartridges (or high-capacity ink pack adapters). |
| Ink Refill **% | Ink filling is in progress.<br>Please wait for a while. |
| Move To Origin Position | In the "Origin Setting" menu, the print head is moving to the print start position.<br>Please wait for a while. |

# Error message display and remedies

This section describes error messages and remedies.

These errors appear when some failure occurs during printer operation.

The printer displays the following error messages on the control panel and may stop operation.

| Display | Description |
|---|---|
| Cover Open | The front cover is open.<br>Close the cover. |
| Maint. Cover Open | The maintenance cover is open.<br>Close the cover. |
| [******] Ink End | Ink is out. (The printer will stop operation)<br>Insert a new ink cartridge (or a new smartchip card and a new ink bag for high-capacity ink pack adapter).<br>➔ "Checking ink level and replacing ink bag" P.86 |
| [******] No Cart. | Ink cartridge (or high-capacity ink pack adapter) is not inserted (Stops operation).<br>Insert an ink cartridge (or high-capacity ink pack adapter). |
| [******] Discharged | Ink is not filled.<br>Perform an initial ink charging.<br>➔ "Initial ink charging after Longstore cleaning" P.192 |
| Full WasteInkTank | The waste ink tank has become full. (The printer will stop operation)<br>Immediately empty the tank.<br>➔ "Emptying waste ink tank" P.155 |
| [******] S/C ReadErr | Failed to read the smart chip card.<br>Insert the ink cartridge (or high-capacity ink pack adapter) again. If the printer is still unable to read it, install a new ink cartridge (for high-capacity ink pack adapter, install a new ink bag and a new smartchip card). |
| [******] S/C Col. Err | Wrong ink color.<br>Insert a correct ink color cartridge (or ink bag). |
| [******] S/C Ink Err | This type of ink cannot be used for this product.<br>Please contact your local MUTOH dealer. |
| [******] S/C CodeErr | Inserted ink cartridge (or smartchip card in case of high-capacity ink pack adapter) is not a proper one.<br>Please contact your local MUTOH dealer. |
| [*] Ink Low | The ink became low (The printer continues operations).<br>Prepare a new ink cartridge (or ink bag) for replacement. |
| [******] Check Ink | ""Ink cartridges (or high-capacity ink pack adapters) were not recognized correctly.<br>Insert the cartridge straight into the ink slot. |
| [*] ReseatCart. | Because the smartchip card is poor in contact, the reinsertion of the ink cartridge (or the high-capacity ink pack adapter) is necessary.<br>Reseat all the ink cartridges (or the high-capacity ink pack adapters). |

| Display | Description |
|---|---|
| [*]Broken Chip | The smart chip card is damaged.<br>Insert a new ink cartridge (or a new smartchip card and a new ink bag for high-capacity ink pack adapter).<br>➔ “Checking ink level and replacing ink bag” P.86 |
| Daily Maint. Error<br>Tap [V] key. | An obstacle has been detected. Tap **[Enter]**.<br>Remove any object including a jig from the table and then perform daily maintenance. |
| Obstacle detected<br>Tap [V] key. | An obstacle has been detected.<br>Tap **[V]** key and load media again.<br>➔ “Load the media into the printer” P.52 |
| Table Height Error<br>Tap [V] key. | The printer cannot lower the table any further as specified by RIP software. Printing will be canceled. |
| Obstacle Detected<br>Cancel | An obstacle has been detected.<br>Tap **[Enter]** key to cancel the job. |
| Obstacle Detected<br>Print Continue | An obstacle has been detected.<br>Tap **[Enter]** key to resume the job. |
| Activation Failed<br>Reboot Printer | Activation has failed.<br>Restart the printer and activate the printer again. |
| Unable to Enter to<br>Sleep Mode | An error has occurred while in preparation process of sleep mode (daily maintenance).<br>Tap **[Enter]** key and follow the instructions displayed to operate the printer. |
| [123456]Change Plug | The high-capacity ink pack adapter was used for a certain number of times.<br>Replace with a new plug in the adapter. |
| Ink Not Expired? | Check the “Use Before” date on the cartridge (ink bag) label.<br>Once you have finished checking the expiration date or replacing the ink cartridge (ink bag), tap **[Enter]** key. |
| [******]Ink Expired | Displays when the ink cartridge (ink bag) is expired. Replace with non-expired ink. |
| Print data Error<br>Tap [V] key. | Unable to print the job. The print mode specified in the RIP software or other tool is not supported. The job will be canceled. |
| Agitate W Ink | Agitate White (WH) inks. |
| Agitate KMCY Ink | Agitate Black (K), Magenta (M), Cyan (C) and Yellow (Y) inks. |
| Agitate KMCYW Ink | Agitate Black (K), Magenta (M), Cyan (C), Yellow (Y) and White (WH) inks. |
| Temperature too low | Printer’s temperature is too low.<br>Adjust room temperature. Wait until the warning message is no longer displayed.<br>➔ “Specifications” P.217 |
| Temperature too high | Printer’s temperature is too high.<br>Adjust room temperature. Wait until the warning message is no longer displayed.<br>➔ “Specifications” P.217 |

**Note**

- **[∗∗∗∗]** in the error message indicates the target ink bag of warning.
- When **[Ink End]** or **[No S/C Card]** and **[No Bag]** occur at the same time, the **[No Bag]** will be displayed in priority to other two errors.

## Smartchip Recovery

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

When the following error message appears, check that the correct smartchip card is inserted and perform smartchip recovery. This will allow you to continue to print.

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

| Display | Description |
|---|---|
| [*]S/C Recog. Err | The smartchip card that needs smartchip recovery may have been installed.<br>Remove the ink cartridge (for high-capacity ink pack adapter, remove the highcapacity ink pack adapter and the smartchip card) and reload it.<br>If the printer is still unable to read it, install a new ink cartridge (for high-capacity ink pack adapter, install a new ink bag and a new smartchip card).<br>• If **[[*] Check Color OK —> Enter]** is displayed after reinserting the ink cartridge (or high-capacity ink pack adapter), follow the instructions below. |
| [*] Check Color<br>OK -> Enter | The smartchip card that needs smartchip recovery may have been installed.<br>Check that the correct smartchip card is inserted.<br>• In case of wrong color insertion, load a correct ink color cartridge (or bag).<br>• If color is correct, tap **[Enter]** key. The printer will perform smartchip recovery and will continue to print. |

**Note**

- **[*]** in the error message identifies the ink slot where a warning occurs.
- During smartchip recovery execution, the ink bag being recovered blinks in the ink status menu.

➔ "Ink level indicator on the printer control panel" P.32 , "Ink Status" P.126

# Error requiring reboot

An error requiring reboot is displayed when the printer experiences a fatal failure in its operation, such as

- When an error that prevents the printer from driving occurred.
- When the electrical circuit (PCB, motor, sensor, etc.) of the printer is broken.
- When a failure in the printer control program occurred.

If an error requiring reboot occurs, the printer will stop operation after

1. the power of driving system is automatically shut down.
2. all the LED on the printer control panel blink, and the buzzer beeps repeatedly.
3. An error message appears in the printer control panel.

Tapping any key on the control panel will stop the beeps.

For an error requiring reboot, the printer will recover by removing the cause of the error and restarting the printer.

If the same error message appears again, please contact your local MUTOH dealer. When contacting us, please be sure to provide the code number of the error message.

| Display | Description |
|---|---|
| Emergency Mode: EXXX | A trouble that the error cannot be released has occurred.<br>1. Check that the part you replaced has been installed correctly.<br>2. Turn off the printer. Wait for a while and then restart the printer. |
| Emergency Mode: AC | The power was shut down instantaneously while the printer is operating.<br>• Turn off the printer. Wait for a while and then restart the printer. |
| Emergency Mode: CPU | CPU error occurred.<br>• Turn off the printer. Wait for a while and then restart the printer. |

**Important!**

When an error requiring reboot occurs, you cannot turn off the printer from the setup menu in the control panel. Pressing the power button for more than 2 seconds will power off the printer.

**Note**

- **[XXX]** in the error message is the error code showing what type of error occurred.

# Troubleshooting

This section describes printer troubles that an error message is not prompted, and possible cause and solutions.

**Note**

- Printer status and error information can be checked from MSM status information.
  If the printer is not working properly, please check MSM.
- Please use the latest version of MSM.
  You can check the version information in MSM's help to see if there is a newer version than your MSM.
  If a newer version is available, download it from MUTOH Club.
  ➔ **MUTOH Status Monitor Operation Manual**

## Trouble during installation / initial setup

### Printer does not work at all after powered on

- **Check that the power cord is connected correctly.**
- **Does the AC power supply provide the specified voltage?**
  Connect to another outlet.
- **Check that the front cover and maintenance covers are closed.**
- **Make sure that the ink cartridges (or high-capacity ink pack adapters) are all the way seated in the slots.**

### Ink does not come out after initial ink charging.

- **Check that the ink cartridge (or ink bag) is not too cold.**
  Rest the ink bags for at least 3 hours at room temperature, and then perform head cleaning several times.
  ➔ "Perform a head cleaning"P.61
- **Is the power turned OFF during ink charging?**
  Turn the power ON and perform an initial ink charging again.

### Nozzle clogging occurs after initial ink charging.

- **Perform a head cleaning.**
  ➔ "Perform a head cleaning"P.61
  If there is no improvement in the print result even after performing head cleaning, rest the printer for at least 1 hour. Then perform a head cleaning or Little Charge and run a nozzle check.
  If the problem still persists, please contact your local MUTOH dealer.

## Unable to connect to printer from MSM or RIP

- **Check that the Ethernet cable is connected securely to the Ethernet port.**
- **Check that the network settings are configured correctly.**
- **Check that the printer's network settings match with the computer's settings.**

➔ "Computer requirements"P.33
➔ "Initial Settings"P.124

# Media-related problems

## Printer does not work even after media is loaded

- **Check that the front cover and maintenance covers are closed.**
- **Do you use the printer within recommended environmental conditions?**

  Make sure to use the printer within the specification range.
  ➔ "Specifications"P.217
- **Is there any error message displayed on MSM?**

  Check the MSM status information.
- **Make sure that the ink cartridges (or high-capacity ink pack adapters) are all the way seated in the slots.**

## Printer does not detect media correctly

- **Do you use the printer within recommended environmental conditions?**

  Make sure to use the printer within the specification range.
  ➔ "Specifications"P.217
- **Is there any media or jig present on the table height detection area?**

  Do not place any objects on the sensing area of the media height detector. This may cause false detection of the obstacle sensor and the printer may not be able to print correctly.
- **Do you use transparency or low opacity media?**
  - The sensor may not detect those media. Make sure that the sensor correctly detects the media being used.
  - Change the Media Setting Height to **[Manual]**.

  ➔ "Height"P.99
- **Do you use textured media or uneven media?**

  The sensor detects the highest position on the media as media surface.The printer may not be able to print properly.
  ➔ "Media handling cautions"P.38
- **Do you use the media with uneven or curved bottom surface?**

  The laser light will not be blocked by the rear edge of media so that the printer may not be able to optimize the table height.
- **Is an error message "Temperature too low" or "Temperature too high" displayed on the control panel?**

  If the product is used in the environment that does not meet **"Environmental Requirements"**, the height of media may be detected higher or lower than the actual height. In such cases, tap **[∨]** key to remove media and then adjust room temperature.

  Once you confirm the message is no longer displayed, tap **[∧]** key again and load media.

## Print head strikes media while printing

- **Check that the media is loaded into the printer correctly.**

  ➔ "Load the media into the printer"P.52

- **Is any wrinkles present on the media?**

  Smooth out the media to sit flat on the table.

- **Is warp, fold or curl present on your media?**

  If media does not sit flat on the table, secure it on the table using a thin tape to avoid any warps.

  ➔ "Media handling cautions"P.38

- **If you are using the optional vacuum table, is the vacuum fan power appropriate for the media being loaded?**

  If media warps, change the vacuum fan setting higher to reduce the chance of warp. If it does not help, cover the vacuum holes around the media with papers to increase suction power.

  ➔ "Vacuum Fan"P.100

- **Is there any curls on the media while printing?**

  While printing, media may curl by UV lamp or ink curing. Use heat-resistant media or use a jig to prevent curls.

  ➔ "Media handling cautions"P.38

# Table-related troubleshooting

## Noise occurs while the table moves up and down / Table does not move and noise is present

- **Do you perform table maintenance as instructed?**

  Apply lubricating grease on the table screw shaft. Perform this maintenance once a month.

- **Did you place a small and heavy media or jig on either end of the table?**

  If you are using those items, place it as close to the center of the table as possible.
  ➔ "Supported media"P.37

- **Is total weight of media and jig within 8.0 kg?**

  The maximum weight on the table is 8.0 kg.
  Remove items on the table and reboot the printer.
  ➔ "Supported media"P.37

  If problem persists, please contact your local MUTOH dealer.

## Abnormal noise from the table when loading media

- **Depending on the size or position of the media placed on the table, an abnormal noise may occur.**

  If you hear an abnormal noise, cover all the holes around the media with paper or thin materials.

  **Important!**
  - When covering the holes, avoid using materials thicker than the media to be printed. The printer may not be able to print properly.
  - When covering the holes, do not place any objects in the table height detection area. This may cause false detection of the obstacle sensor and the printer may not be able to print correctly.

  ➔ "Printing area"P.51

## The print head hit the media and the jig while printing

- **Is there any media or jig placed in the area in front of the guide line on the front side of the table?**

  This area is outside the sensing area of the obstacle detection sensor. Do not place any objects higher than the loaded media (or jig) in this area. This will cause the print head to strike it.
  ➔ "Printing area"P.51

# Printing problems

## Data is sent but not printed

- **Check that the Ethernet cable is connected securely to the Ethernet port.**
- **Is there any error message displayed on MSM?**

  Check the MSM status information.

## Carriage pauses at either side of the printer during printing.

- **Does your computer meet the following requirements?**
  - OS: Windows 11
  - CPU: Intel (R) Core (TM) i5 or more
  - Memory: 16GB or more
  - Network: Use a Gigabit Ethernet-compatible network port and Gigabit Ethernet cable of Category 6 or higher.

> **Note**
> - The OS support period of MUTOH software follows the Microsoft support lifecycle policies.
> - When using RIP software, please also check the system requirements of your RIP software.

- **Are you using a Gigabit-capable Ethernet cable to connect to the printer?**

  Use a Gigabit-capable Ethernet cable of Category 6 or higher to connect the printer to the computer.
- **Check the status of the MPS function.**

  ➔ “Menus you can access while printing”P.184 >[MPS] P.184
  - When set to **[On]**: Check that your computer (specification, CPU load), Ethernet cable (specification, connectivity) and network environment meet the requirements.
  - When set to **[Off]**: In MSM, the checkbox "MUTOH Print Server (MPS)" is unchecked or "MPS Optimization" is set to "Disable". Enabling the MPS function may resolve the problem.

> **Note**
>
> MPS function settings can be changed from MSM.

- **Did you set waiting time in "Pass Wait"?**

  Set it to 0.0 (sec) again.

  ➔ “Pass Wait”P.123

## Media or print is smudged

- **Does the media contain moisture or are you using the creased or wrinkled media?**

  Replace with a new media.

- **Are the parts around the print head clean?**

  ➔ "Cleaning each part of the printer"P.160

## Printing position is incorrect or there are areas that are not printing

- **Check that the media is loaded into the printer correctly.**

  ➔ "Load the media into the printer"P.6

- **Is the media loaded on the correct position?**

  Go to the Show Edges menu to check the printing area by LED pointer.

  ➔ "Checking the printing area"P.70

- **Did you set up the origin?**

  - Cancel or reset the settings of the origin.

    ➔ "Enter width and length of media and origin" P.56

  - Go to the Show Edges menu to check the print start position by LED pointer.

    ➔ "Checking the printing area" P.70

> **Note**
>
> When the "Print Start Opt." menu is set to **[Show Edges Step]** or **[Show Edges Auto]**, you can check the print area before printing.
>
> ➔ "Checking the printing area" P.70

## Printed lines are not aligned/ doubled, Print is faded/ bleeding

- **Are nozzles in good condition?**

  Run a nozzle check. If the nozzle is clogged, perform a head cleaning.
  ➔ "Nozzle check and head cleaning"P.58

- **Perform an "Adjust Print" calibration.**
  ➔ "Adjust Print"P.107

- **Perform a "PF Adjust" calibration.**
  ➔ "Media feed adjustment"P.115

- **Perform a "Layer Alignment".**
  ➔ "Adjust Layer Print"P.186

- **Is the ink bag within its expiration date?**

  Use ink bags that are within the expiration date.

- **Did you agitate ink in the cartridge?**

  When **[Agitate XX Ink]** message appears, agitate ink in the cartridge.
  ➔ "Agitating ink"P.79

- **Is the Color Maintenance option set to [Off]?**

  Set it to **[Normal]** or **[Little]**.
  ➔ "Color Maintenance"P.112

- **If you are using the optional vacuum table, is the vacuum fan power appropriate for the media being loaded?**

  If media warps, change the vacuum fan setting higher to reduce the chance of warp. If it does not help, cover the vacuum holes around the media with papers to increase suction power.
  ➔ "Vacuum Fan"P.100

## Printed color is not accurate

- **Are nozzles in good condition?**

  Run a nozzle check. If the nozzle is clogged, perform a head cleaning.
  ➔ "Nozzle check and head cleaning"P.187

- **Is the ink bag within its expiration date?**

  Use ink bags that are within the expiration date.

- **Did you agitate ink in the cartridge?**

  When **[Agitate XX Ink]** message appears, agitate ink in the cartridge.
  ➔ "Agitating ink"P.79

- **Is the Color Maintenance option set to [Off]?**

  Set it to **[Normal]** or **[Little]**.
  ➔ "Color Maintenance"P.112

- **Did you pause printing?**

  If printing is paused, a line or color difference may appear at the point where the printing is resumed.
  If any of the following occurs, the printer displays an error message and pauses (or stops).
  - Waste ink tank is full.
  - Ink cartridge (ink bag) runs out of ink.
  - Printer detects obstacles.

  ➔ "Error message display and remedies"P.201

## Nozzle clogging remains even after head cleaning

- **Is it time to replace the following parts?**
  - Cleaning wiper
  - Flushing box pad

  Check the condition of each part. Replace it if needed.
  ➔ “Replace the consumable parts”P.166

- **Did you select an appropriate cleaning mode?**
  ➔ “Perform a head cleaning”P.61

**Note**

If nozzle clogging persists even after repeated Cleaning “Normal” attempts, try following troubleshooting steps:

1. Perform a cleaning "Long" two or three times. (If the problem persists, move to the next one)
   ➔ “Perform a head cleaning” P.61
2. Clean each part of the printer. (If the problem persists, move to the next one)
   ➔ “Cleaning each part of the printer” P.160
3. Perform a "Little Charge" 2 or 3 times. (If the problem persists, move to the next one)
   ➔ “Little Charge” P.162
4. Perform a "Soak Cleaning".
   ➔ “Soak Cleaning” P.163

The problem still persists, contact your local Mutoh dealer.

**Important!**

Do not use media that easily reflects UV light. The reflective UV light can cure the ink on the print head.

# 6 Appendix

Specifications 217
Revision history 219

# Specifications

| | | |
|---|---|---|
| Model name | | XPJ-661UF-P |
| Printing method | | On-demand piezo method |
| Driving method | | Firmware servo / DC motor drive |
| Media feed method | | Open the front cover and load or remove media from the front of the table. |
| Media hold-down system | | Vacuum hold-down using the vacuum fan |
| Ink curing device | | UV-LED unit |
| Media size | Maximum width | 493 mm |
| | Maximum length | 620 mm |
| | Maximum thickness | 153 mm |
| | Weight | Up to 8.0 kg(including jig) |
| Maximum printable width | | 483 mm |
| Maximum printable length | | 610 mm |
| Table height adjustment | | Automatic adjustment with obstacle sensor and motor (Manual adjustment via printer control panel) |
| CPU | | 64bit RISC CPU |
| Memory | | 384MB |
| Interface | | Gb-Ethernet (1000BASE-T) |
| Waste ink tank | | Detachable tank with 2,000 ml capacity. Empty the tank when needed. |
| Ink | Colors | 6 colors (Black, Byan, Magenta, Yellow, Varnish or Clear) |
| | Type | US61/UH71 |
| | Ink volume | 220 ml ink cartridge (UH71 ink only), 800 ml ink bag |
| Environmental Requirements | Printer operation environment | Temperature: 20 °C to 32 °C<br>Humidity: 40 % to 60 %, non-condensing |
| | Recommended printing environment | Temperature: 22 °C to 30 °C<br>Humidity: 40 % to 60 %, non-condensing |
| | Change rate | Temperature: within 2 °C per hour<br>Humidity: within 5 % per hour |
| | Printer storage environment | • Storage without ink filled: within 6 months<br>- Temperature: -20 °C to 60 °C<br>- Humidity: 20 % to 80 %, non-condensing<br>• Storage with ink filled: within 1 month*1 *2<br>- Temperature: 5 °C to 30 °C<br>- Humidity: 20 % to 80 %, non-condensing<br>*1 Perform a "Daily Maintenance".<br>*2 Always leave the printer in sleep mode and check the remaining ink level once a week. Agitate the ink once a week as instructed. |

| | | |
|---|---|---|
| | Ink storage environment | • US61 ink<br>- Black, Cyan, Magenta, Yellow, White, Varnish (800 ml each)<br>- Temperature: 5 °C to 30 °C<br>- Humidity: Non-condensing<br>• UH71 ink<br>- Black, Cyan, Magenta, Yellow, White, Clear (220 ml or 800 ml)<br>- Temperature: 10 °C to 35 °C<br>- Humidity: Non-condensing<br>• Cleaning cartridge (220 ml) (Common to all ink type)<br>- Temperature: -20°C to 40°C (Storage at 40°C must be within one month)<br>Keep away from heat and flammable materials. Store in a cool, dark and well-ventilated place. |
| Power supply specifications | Input voltage | AC 100 to 240 V±10% |
| | Input frequency | 50 / 60 Hz ± 1 Hz |
| | Ink volume | No less than 5 A |
| Current consumption | | AC 100 V to 240 V: 4.7 A or less |
| Power consumption | Ready-to-print | 49 W*3<br>*3 When the Vacuum fan is off. |
| | Sleep Mode | 18 W |
| | Operation | 310 W |
| External Dimensions | Height | 632 mm<br>• With front cover fully open: 1,406 mm (with stand: 1,881 mm) |
| | Width | 1,230 mm |
| | Depth | 1,656 mm |
| Weight | Printer | 172 kg |
| | Stand (option) | 43 kg |

# Revision history

| Date | Version | Manual control number | Supported firmware |
|---|---|---|---|
| 2026.9 | 00 | XPJ661UFPE-A-00 | V.1.00 |
| 2026.10 | 01 | XPJ661UFPE-A-01 | V.1.01 or later |

MUTOH