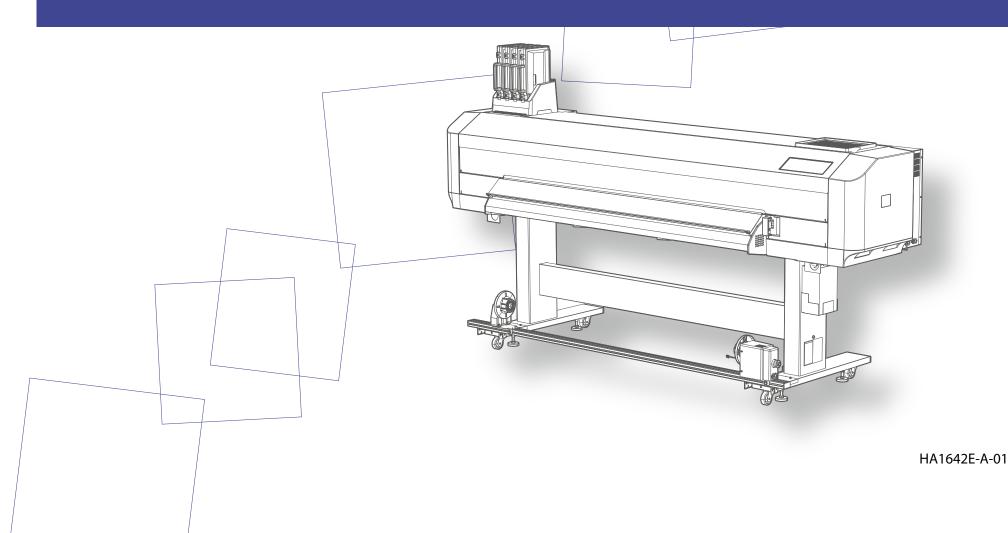


HA-1642

Operation Manual

Operations and Maintenance Methods



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 2 laser product.

Laser specifications of this system (including the housing) Wavelength: 655 nm, maximum output: 1 mW or less, pulse duration: 3 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.

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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.



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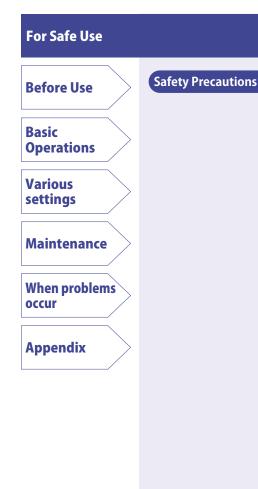
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Safety Precautions

Symbols

In this document, the following symbols are used for the instructions that must be followed 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.

Warnings and cautions

3	
🚹 Warning	Failure to follow the instructions could result in serious injury or death.
1 Caution	Failure to follow the instructions could result in minor injury or damage to the product.

Actions that must be avoided or instructions that must be followed.

\bigcirc	Indicates an action that must be avoided. A symbol in the sign indicates the prohibited action.
0	Indicates an important instruction that must be followed. A symbol in the sign indicates the instruction must be followed.

Other symbols

C Important/	Provides information that require special attention or should be followed.
Note	Provides supplemental or reference information.
- F	Indicates the link to the reference section.



In the event of abnormal conditions

🚹 Warning

0	• In the event of abnormal conditions such as smoke or unusual odor, turn off the main power immediately and unplug the power cord.
	Continuing to use the machine under these conditions may result in failure, electric shock, or fire. Once you have confirmed that smoke is no longer being emitted, contact your local dealer or our service office. Never attempt to repair the machine yourself, which is hazardous.
	 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.
	Continuing to use the machine under these conditions may result in failure, electric shock, or fire. Once you have confirmed is no anomalies, contact your local dealer or our service office. Never attempt to repair the machine yourself, which is hazardous.
	 If ink, maintenance cleaner, or waste fluid, gets on skin, wipe it off immediately with a cloth. Then wash with soap and plenty of water. If skin irritation or inflammation occurs, seek medical advice. If ink, maintenance cleaner, or waste fluid gets into your eyes, immediately flush them with copious amounts of running water for 15 minutes. If irritation or pain is felt in the eyes, seek medical attention immediately. If left untreated, it may cause redness or mild irritation of the eyes.
	• If ink, maintenance cleaner, or waste fluid is swallowed, do not force vomiting; gargle immediately and

seek medical attention immediately. Attempting to force vomiting may cause vomit to enter the trachea.



Usage Precautions

Handling

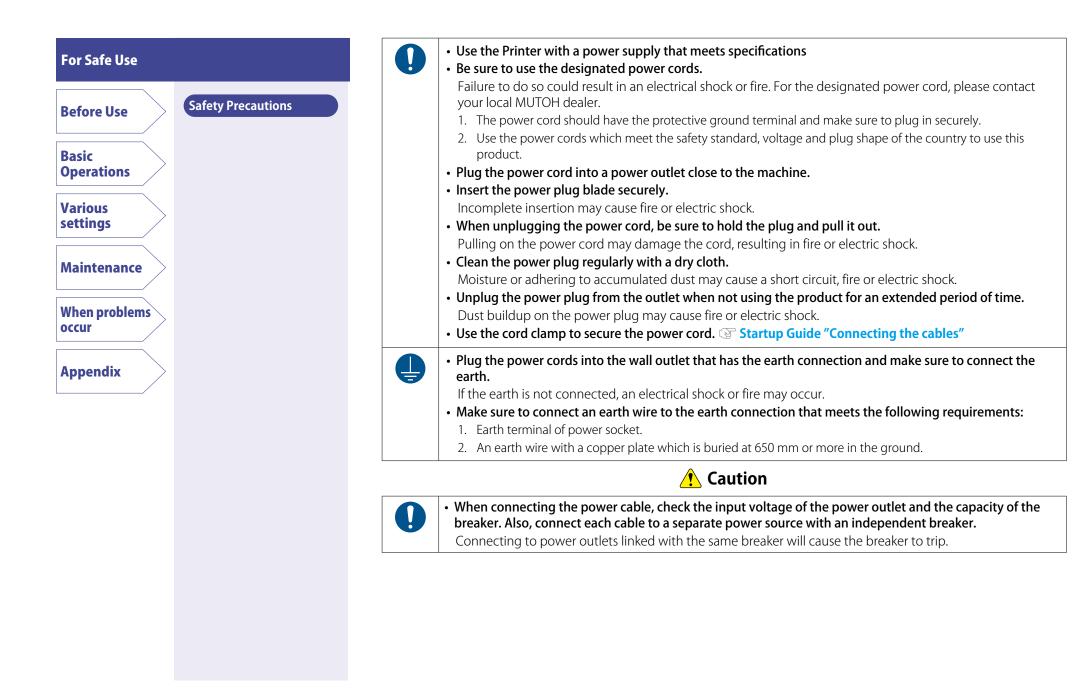
	Marning
	Do not touch the product when lightning starts.
V.	Doing so may cause electric shock.
	• Do not insert or drop metal or flammable objects into the printer through openings such as vent.
	This could result in an electrical shock or fire.
	 Do not block the vent on the product with cloth or other materials.
	If covered, the inside the product gets hot, resulting in fire.
	Do not touch the moving parts.
	This may cause injury or damage to the product.
	 Do not sit on or place heavy objects on the product.
	Failure to do so may result in injury from a fall.
	• Do not touch the media guide while printing or the heater is in operation.
	The media guide becomes hot during operation and you could get burn injuries.
	Never modify the product or open any covers secured with screws.
Ŋ	This could result in an electrical shock or damage to the printer. Also, modifying or disassembling the
	product will void the warranty.
	When handling the printer, please note the following:
	1. Do not stare at the ultraviolet light at close range for long periods of time. This may cause eye damage.
-	2. Do not expose your skin to ultraviolet light at close range for long periods of time. This may cause skin
	inflammation.
	Small amount of UV light (bluish white light) is leaked from the UV-LED unit, but it is minimized to safe level.
	1 Caution
	Do not tilt or give any impact to the product.
V	Doing so may cause the ink inside the printer to leak.
\bigcirc	

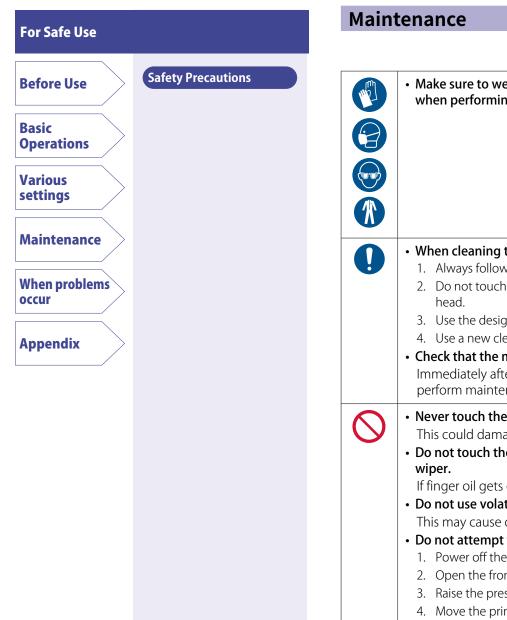
• When handling the front cover or the maintenance cover, always use the following safety precautions:
1. Avoid strong airflow from a fan or an air conditioner to install this printer. If not, it may accidentally close the
cover.
2 When opening the cover make sure the cover does not hit anyone or anything



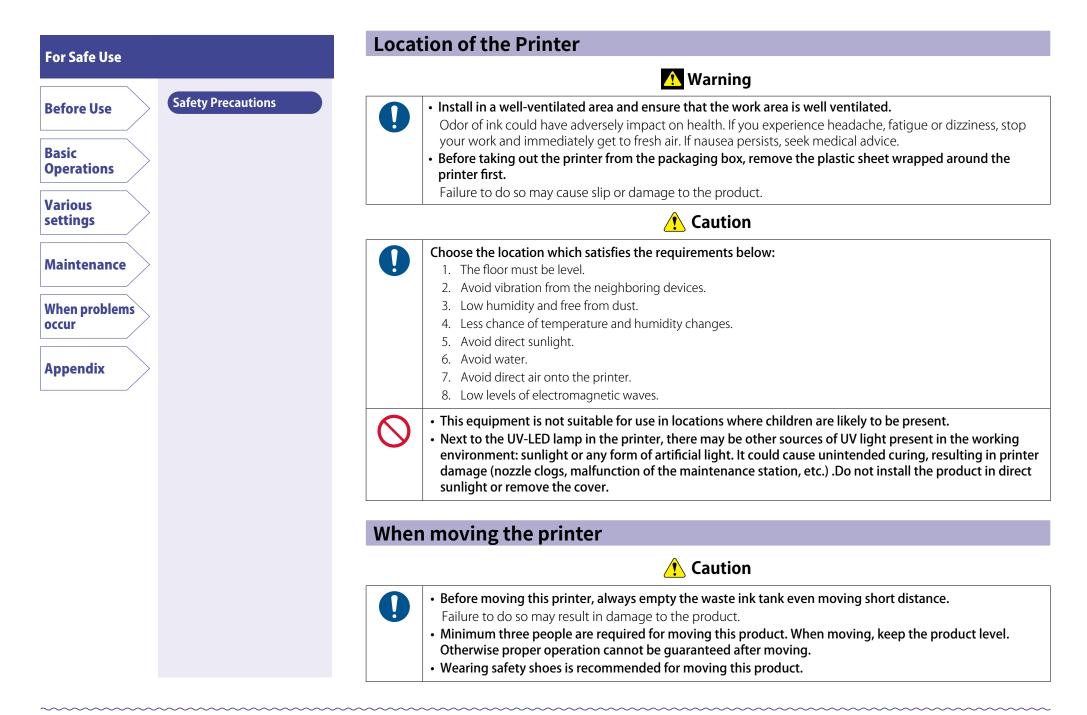
Power cords

The power cord may be damaged, resulting in fire or electric shock. Do not use the power cord if it is damaged or broken or if the core wire is exposed.
This could result in fire or electric shock.
Do not plug the ground terminal into a power outlet.
This could result in an electrical shock or fire.
Do not allow metal or other objects to touch the blade of the power plug.
This could result in an electrical shock or fire.
Do not use extension cords or power strips.
This could result in an electrical shock or fire.
Do not connect an earth wire to the following places:
1. Gas pipe: It has potential risks of fire and explosion.
2. Earth wire of telephone cables or lighting rods: Large current may flow when the lightning strikes.
3. Water pipe or faucet: It may not work properly if a plastic pipe is connected to the pipe.





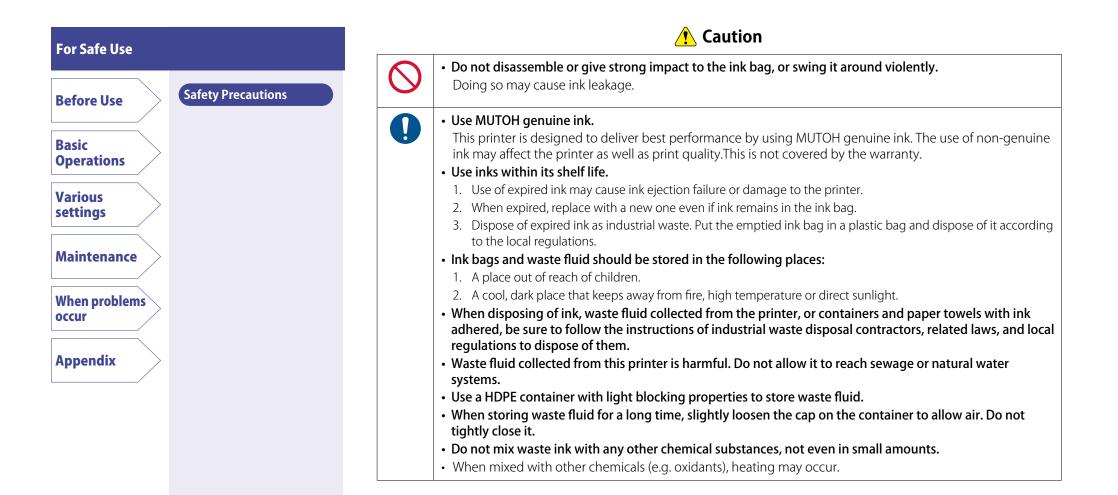
	1 Caution
	Make sure to wear protective equipment (gloves, goggles or eye protection, protective clothing, mask) when performing a maintenance.
	 When cleaning the print head, observe the following: Always follow the steps to perform maintenance. Do not touch the tip of a cleaning stick with fingers. If finger oil gets on the stick, it will damage the print head. Use the designated maintenance cleaner. Use of non-designated one may cause print head failure. Use a new cleaning stick. Reusing used cleaning sticks may cause print head failure. Check that the media guide is cool enough to perform maintenance. Immediately after printing, the media guide is hot. Allow it to cool down for at least 10 minutes and then perform maintenance.
2	 Never touch the print head nozzles when cleaning the parts around the print head. This could damage the print head. Do not touch the cleaning wiper and the print head capping station with bare hands when cleaning the wiper. If finger oil gets on this, head cleaning cannot be performed properly. Do not use volatile chemicals such as thinner, benzine or alcohol for cleaning. This may cause damage to the paint or plastic cover. Do not attempt the following actions during ink charging: Power off the printer and disconnect the power cord. Open the front cover or the maintenance cover. Raise the pressure rollers. Move the printer.

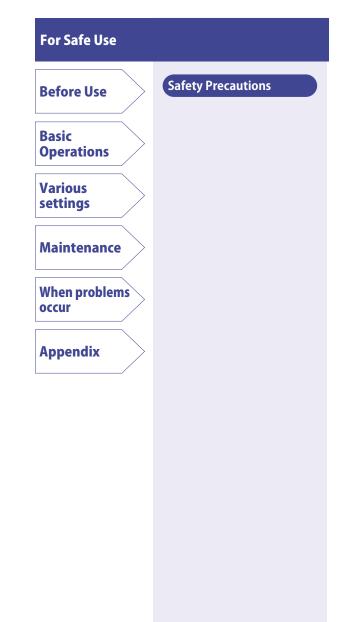




Ink and waste fluid

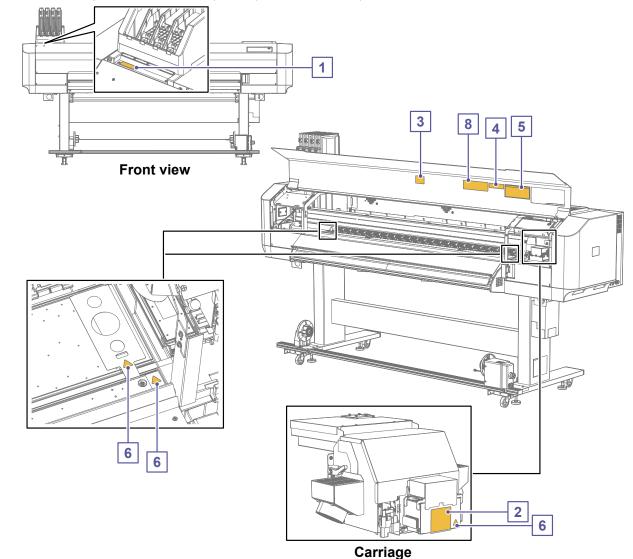
	\Lambda Warning
0	 The safety concerns involved with using and handling of ink and waste fluid are detailed in the Safety Data Sheet (SDS). Please read the SDS carefully before handling these liquids. Please download the latest SDS from our website (https://www.mutoh.co.jp/en/).
	 Always wear protective equipment (gloves, goggles or safety glasses, protective clothing, mask) when handling ink or performing any work that ink may come in contact with your skin (e.g. cleaning print heads, caps, wipers, etc.). Two types of gloves are supplied with the printer. To avoid ink penetration, please wear rubber gloves (white) over polyethylene gloves (pink). If these gloves are not available, butyl rubber gloves are recommended. If glove becomes contaminated with ink, replace with new ones. Do not touch uncured ink with bare hands. Ink curing time varies depending on the surface characteristics of media. Always wear gloves when checking if the ink has cured.
	• Store ink in a cool, dark place and keep away from fire and heat.



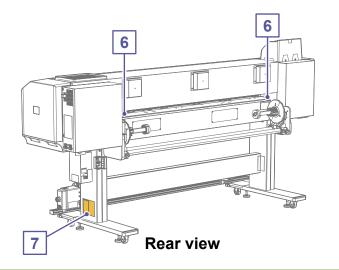


Warning labels

Warning labels are affixed to the hazardous area of the printer. Read and follow the instructions on the labels. In case the warning labels came off or get dirty, please contact your local MUTOH dealer for replacement.

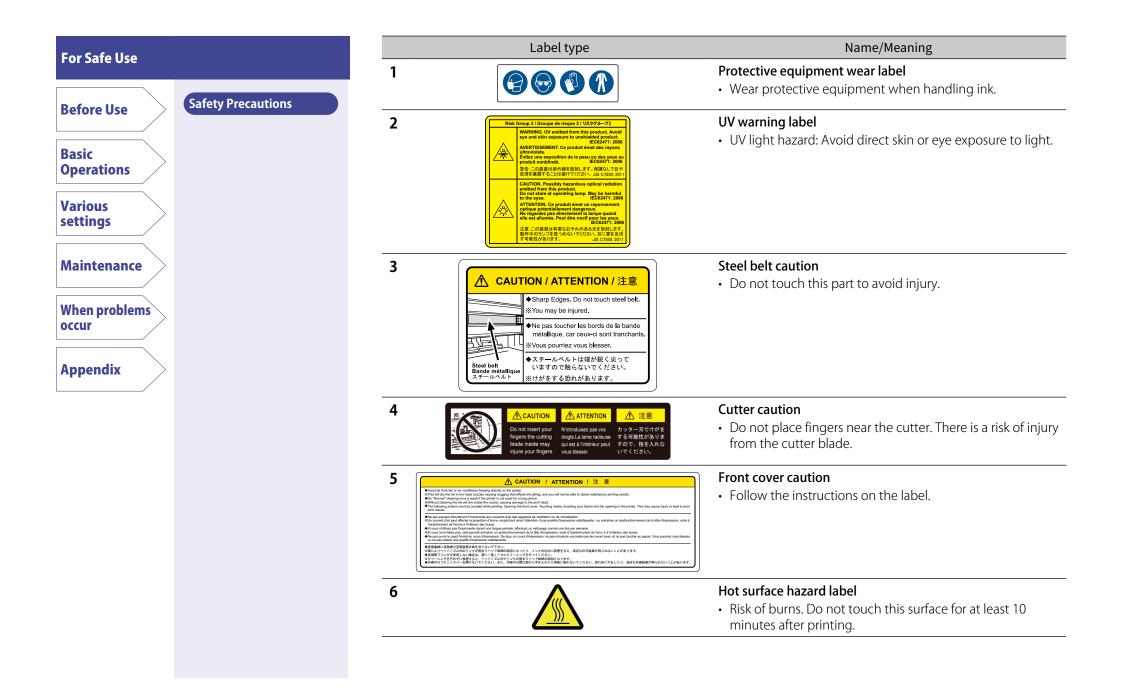


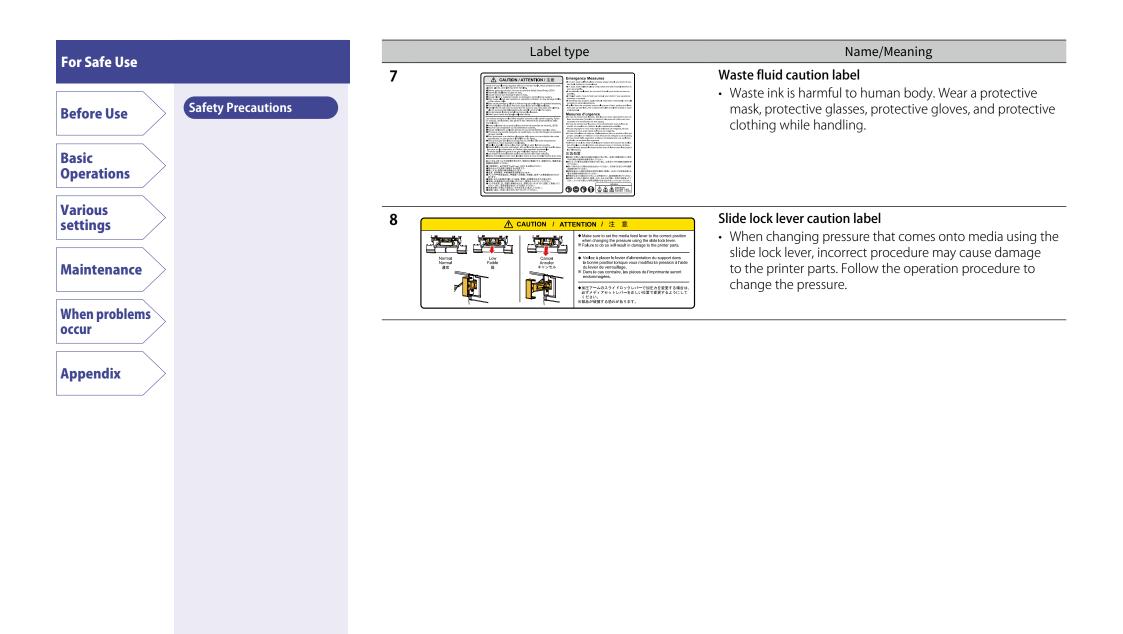




The following marks correspond to Chinese safety standards.

	汉文	仅适用于海拔2000m以下地区安全使用。
2000m	藏文	2000m וגו מסווסרוור וגופרביגו מיר יאישיא ישנט כט וודשיצט ריא מסווי אישיא מיר איישיא איישיא איישיא איישיא איישי
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	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
3	汉文	"仅适用于非热带气候条件下安全使用。"
	藏文	
		איי ר איזער א פא פאלות א איזער אי
	蒙古	
	 蒙古 文	ുണ്ണാം കുഡ ഉക്കു നാനു നുന്നാം പുറുമാര് കാനും കുറുമാര് കുറും പ്രത്തിക്കുന്നു. "എപ്പുപ്പുപ്പുന്നു കുറും പ്രത്തിക്കുന്നും പുറുമാര് കാനും പുറുക്കുന്നു. പ്രത്തിക്കുന്നും പുറുക്കുന്നും പുറും പുറ "ക്കുന്നും കുറും ഉക്കുന്നും പുറുകുന്നും പുറുമാര് കുറുകുന്നും കുറുകുന്നും പുറുകുന്നും പുറുകുന്നും പുറുകുന്നും പു
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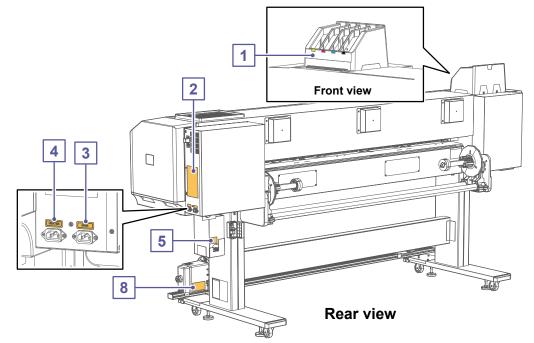


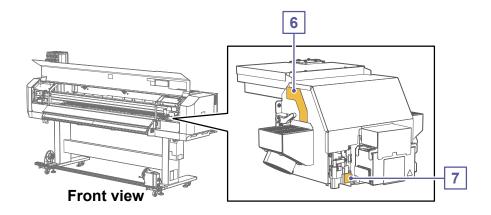


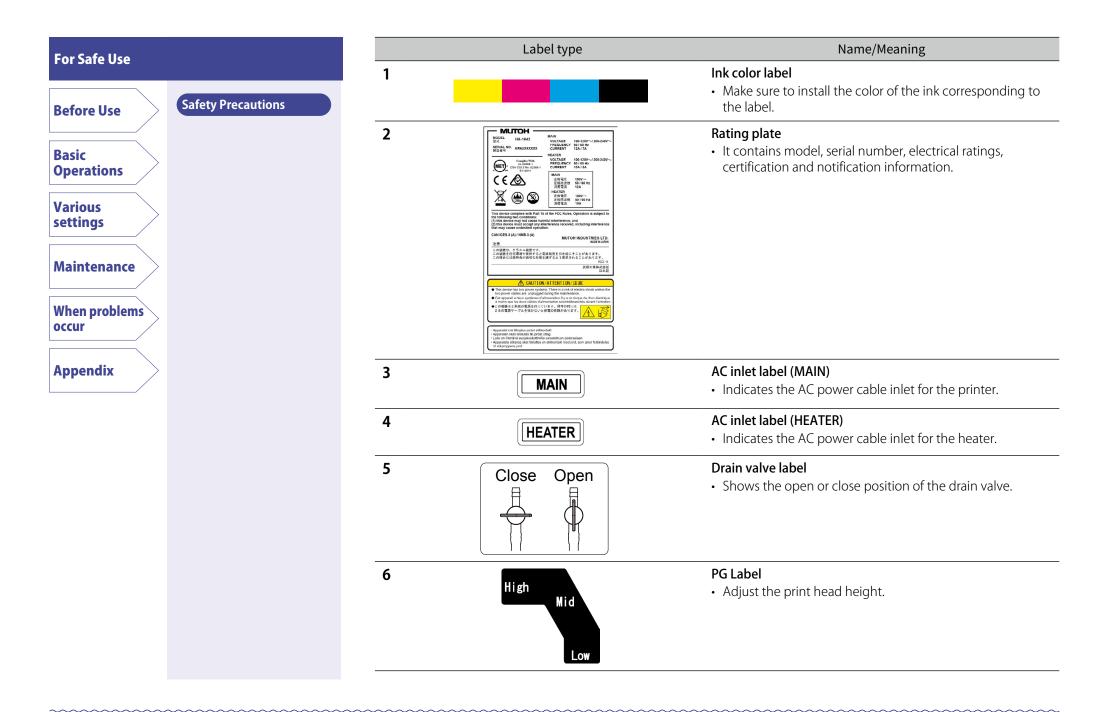


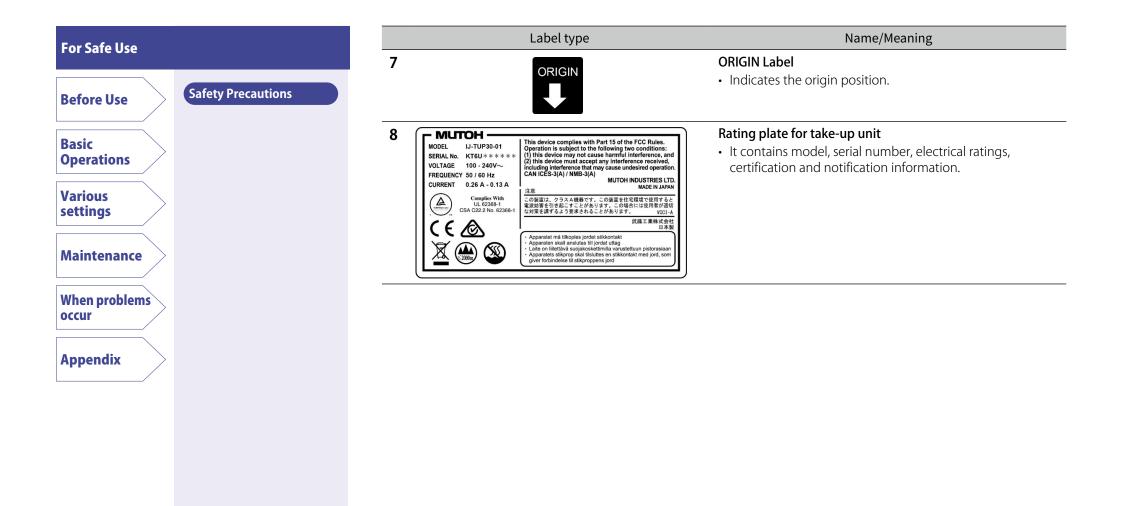
Instruction Labels

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









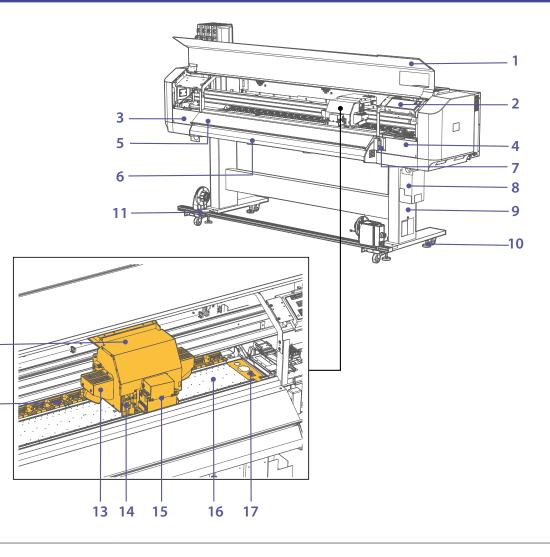




Printer main components / Functions

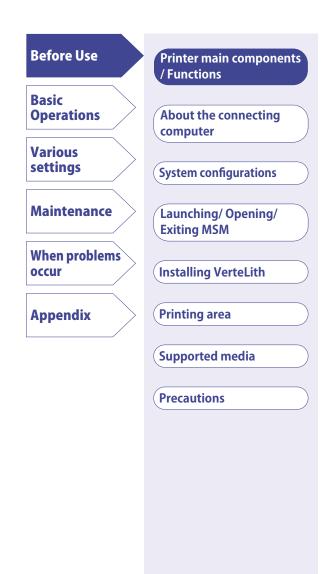
Front view

12

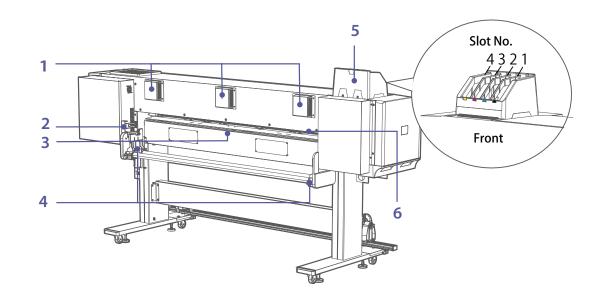


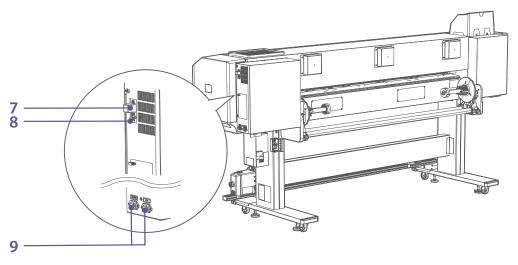
Before Use	Printer main components / Functions
Basic Operations	About the connecting computer
Various settings	System configurations
Maintenance	Launching/ Opening/ Exiting MSM
When problems occur	Installing VerteLith
Appendix	Printing area
	Supported media
	Precautions

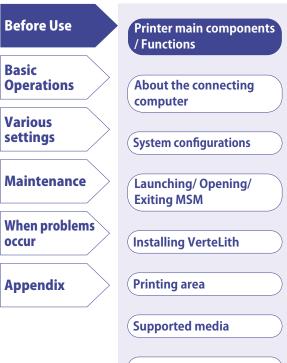
1	Front cover	Opens and closes when loading media or removing jammed paper. Normally, it should be closed.
2	Printer Control Panel	Trinter Control Panel" P.29
3	Maintenance Cover L	Opens and closes when cleaning or replacing consumables. Normally, it should be closed.
4	Maintenance Cover R	Opens and closes when cleaning or replacing consumables. Normally, it should be closed.
5	UV-LED light protective cover	This cover protects eyes from UV light.
6	Media guide	A roll media passes over the media guide. A heater is built in to dry the ink.
7	Media feed lever	Lever to hold down or release the media. Push the lever to hold down the media. The holddown pressure can be changed between "Normal" and "High" using this lever.
8	Waste ink tank	Collects waste fluids from the printer. Empty the tank before it becomes full.
9	Stand	This supports the main body of the printer.
10	Adjuster	This is used to adjust the height of the printer or prevent shaking.
11	Take-up unit	Rewinds printed media.
12	Carriage	The print head is built in. It moves left and right during printing.
13	Dryer unit	Used to cure ink.
14	Cutter	Automatically cut media.
15	UV-LED unit	This unit irradiates UV light (ultraviolet light) to cure the ink.
16	Platen	Media are printed on this position.The vacuum fan that holds down media and the heater that reduces ink bleeding are built in.
17	Edge holder	Place it on both ends of the media to prevent the media from lifting.
18	Pressure rollers	Holds the entire media from above during printing. The slide lock lever on each pressure rollers can be used to reduce or cancel the holddown pressure.



Rear view

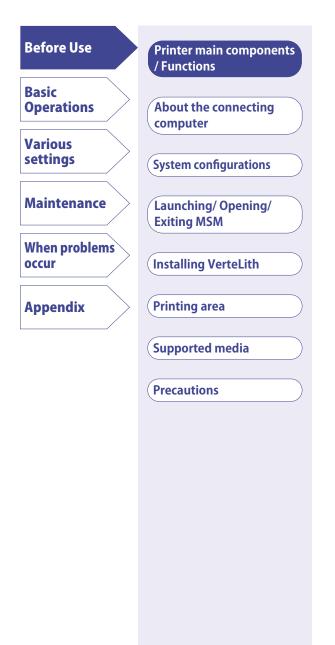






	(P	re	ca	uti	on	S	
--	------------	----	----	-----	----	---	--

1	Exhaust Fan	Remove exhaust from the air inside the printer.
2	Media feed lever	Lever to fix or release the media. It is linked to the media feed lever on the front side.
3	Media guide	Media Pathways. A built-in heater preheats the media before printing to control media temperature changes.
4	Roll media holder	Load the paper roll. Attach the flange to the roll paper and set it in the roll media holder.
5	Ink slots	Set the ink pack case.
6	Media feed slot	When loading media, insert the media here and pass the media through the front.
7	Take-up unit connector	This connector is used to connect the take-up unit to the printer.
8	Network interface cable connector	Connect the Ethernet cable and use it to connect the printer to the computer.
9	AC inlet	Connect the power cable. To prevent the power cable from disconnecting, secure it to the cable clump.



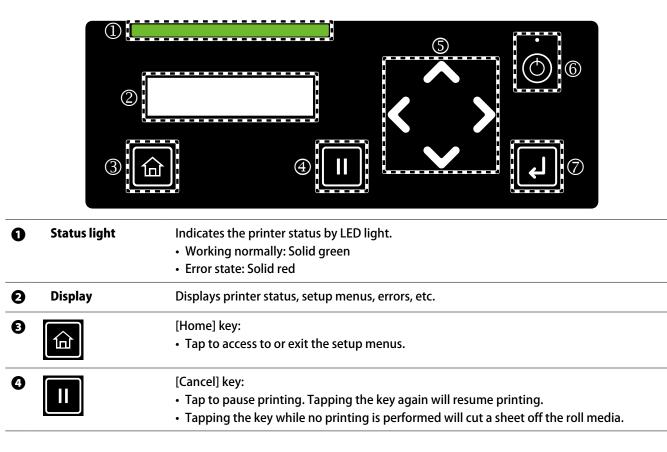
Printer Control Panel

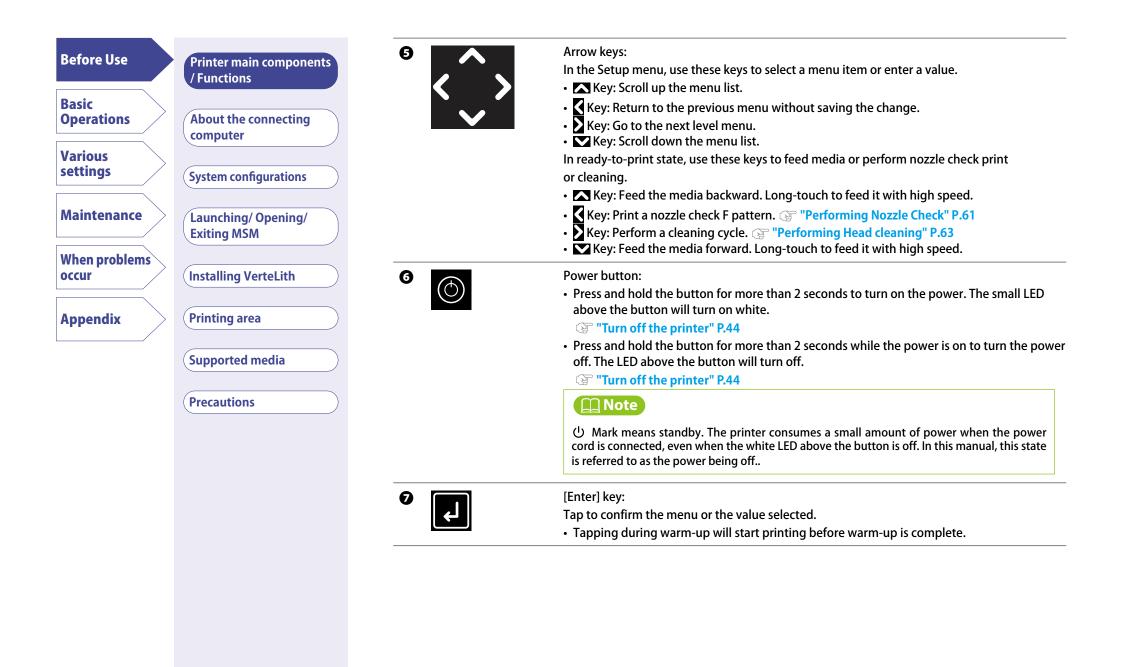
How to use the printer control panel

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.

About the parts of the printer control panel





Before Use

Basic Operations

Various settings System configurations

Maintenance

When problems occur

Installing VerteLith

Launching/ Opening/

Printer main components

About the connecting

/ Functions

computer

Appendix

Printing area

Exiting MSM

Supported media

Precautions

About the connecting computer

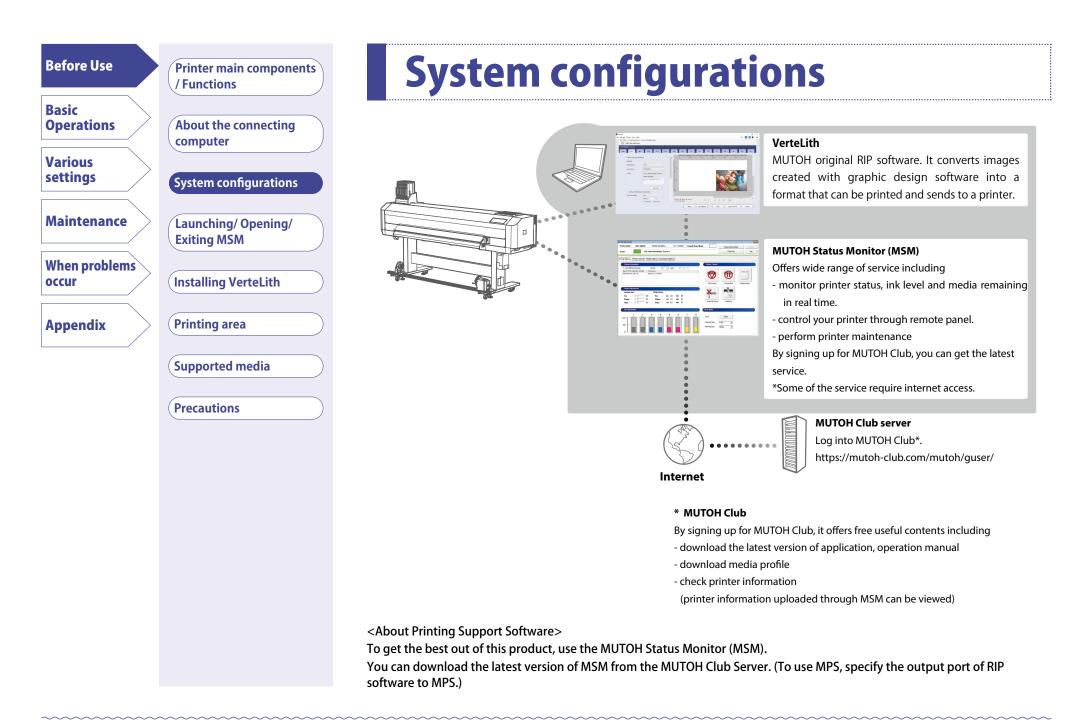
G Important#

Computers must meet the following requirements OS: Windows 11, Windows 10 CPU: Intel (R) Core (TM) i5 or higher Memory: 8 Gbytes or more

Network: Use a network port that supports Gigabit Ethernet, and an Ethernet cable that supports Category 6 Gigabit Ethernet or later.

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.
- If you are using the LAN connection, make sure that your printer and computer are on the same subnet



Before UsePrinter main componentsBasic
OperationsAbout the connecting
computerVarious
settingsSystem configurationsMaintenanceLaunching/ Opening/
Exiting MSMWhen problems
occurInstalling VerteLith

occur

Appendix

Printing area

Supported media

Precautions

Launching/ Opening/ Exiting MSM

1. Double-click the MSM icon on the desktop.

Launching MSM

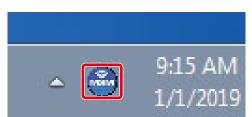


De Note

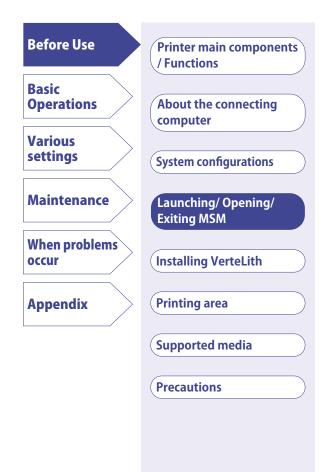
How to start from the Windows Start Menu Windows 11 / Windows 10 • From the [Start] menu, click [All Programs] (or [All Apps]) - [MUTOH] - [MUTOH Status Monitor].

Windows 11 / Windows 10

Displaying MSM



1. Double-click the MSM icon in the task tray.



Displaying remote panel

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

1. Click on the Remote panel.

• The remote panel opens.

Menu	Login ID: -			PR Honitor	
Date and Time Update	(9) Status Monitor				
	Printer Information				
User Type Edit	Printer List :		Printer Model :	19.586	
Firmware Update	Sample-01		Printer Secial No. :	10.02807	
Check current firmware			IP Address :	108.108.108.108	
			Firmware Version M / C :	100 / 100	
Print History	Success		Control Right	Info Check	
Remote Panel	Detail Inte. Status Info.	Heater Into. S/O Into.	Head/Cartridge Info.		
Printer Info. Backup	Status Information				
Printer Info. Upload	Date(YYYY-RN-DD-HH:RN) Contents				
Exit(MSM Minimize)	2019-05-22 09130 2019-05-22 09130 2019-05-22 09136 Status 0.0 [=] / 0.7 [=] 2019-05-22 09139 Srdus 0.0 [=] / 0.7 [=] 2019-05-22 09139 SrC Ink Rear ton No. : 123				

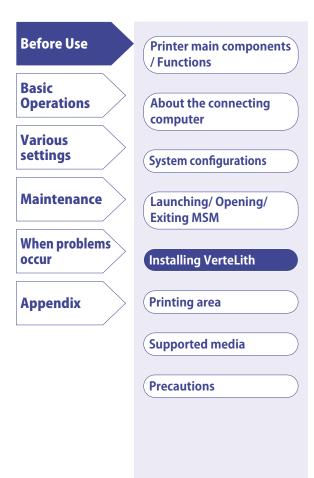
Exiting MSM

<u> </u>	🐨 🔯 🖃 🖤 1/1/20	10
	Exit	
	Printer Registration	
	Open	

Windows 11 / Windows 10 1. Right-click the MSM icon in the task tray and click [Exit].

Note

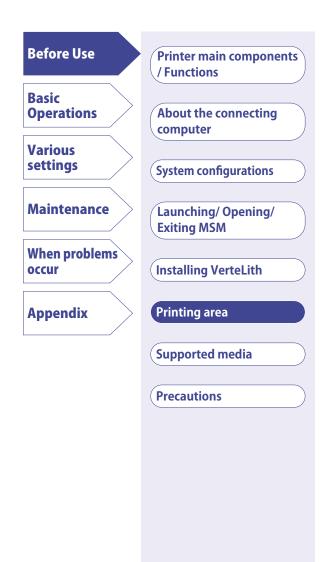
While using your printer, do not exit MSM. To close the MSM window, click [Settings] - [Close] on the menu bar.



Installing VerteLith

Follow the instructions on Install Guide supplied with the VerteLith package to complete user registration and installation.

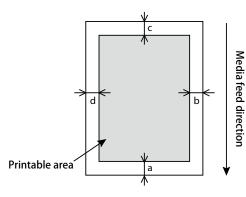
Once installed, follow the VerteLith user manual to complete initial setup and printer registration.



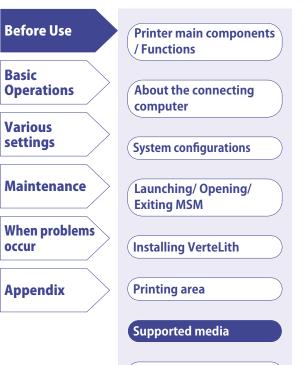
Printing area

The printer always starts printing from the origin position (print start point) with following margin. The illustration below is an example of the printed result.

menu



a=5 mm *1 b=5 mm to 25 mm *2 c=5 mm d=5 mm to 25 mm *2 *1 The margin will be 15 mm in the following cases: • The first printing after media initialization • When feeding the media backward by using ▲ key. The margin will be 40 mm in the following cases: • When the Media Initial menu is set to "Top&Width" • After cutting the media *2 Side margin can be changed from the Side Margin



(Precautions

Supported media

Media size

Media outer diameter	up to 200 mm
Media core diameter	2 inches: 50 mm to 52 mm 3 inches: 75.5 mm to 79 mm
Weight	up to 30 kg
Width	500 mm to 1,625 mm
Recommended media thickness	up to 1.0 mm

G Important!!

The factory default head height is set to "Low".

In the "Low" setting, media up to 0.3 mm thick can be loaded on the printer.

Note

For recommended media, please contact your local MUTOH dealer.



Cautions on handling media

When handling media, please note the following

• Media should be used in an appropriate environment. The temperature and humidity suitable for printing are as follows

-	Recommended Printing Environment	Temperature: 22° C to 30° C Humidity: 40% to 60%, no condensation					
	Change rate	Temperature: within 2° C per hour Humidity: within 5% per hour					

- Use media with no fold, scratch, tear or curl.
- The size of media may change according to changes in humidity in the printing environment. Before using
 media, leave it for 1 hour in the printing environment to adapt it to the environment.
 If printing is started before the printer is accustomed to the printing environment, paper jams may occur due
 to misalignment or wrinkling of the printed media. It also has a negative impact on print quality.
- When used in a low-humidity environment, cut media may not fall off depending on how the media is affixed. In such cases, after cutting the media tip, open the front cover and remove the media.
- Do not use heat sensitive media. It will deform during ink curing by UV light.
- Do not touch the printing surface of the media. Moisture and oil on your hands can affect print quality.
- Do not leave media loaded for long periods of time.
 Some media may become habitual, causing paper lift, paper jams, and poor print quality. Avoid using such media, especially during winter and dry periods.
- Printing on a light reflective material may have a chance to cure the ink on the print head, causing malfunction or damage to the printer.
- Do not discard the original packaging box and plastic bag of roll media. You will use them for storing media.

Precaution on storing media after use

When storing roll media after use, follow these precautions to avoid print defects caused by wrinkles.

- After removing your roll media from the media flange, wind it back onto the roll properly and put it in the original plastic bag. Then store it in the package it came in.
- Avoid high temperature, high humidity, and direct sunlight when storing media.
- Keep the media dry.



Precautions

Please use this printer regularly

It is recommended that printers be used once a week.

If left unattended for a long period of time, the nozzles of the print head will clog, causing a malfunction.

Please handle ink bag carefully

- Before using the ink pack for the first time, be sure to read the Safety Data Sheet (SDS) before carrying out any work.
- Do not disassemble the ink pack.

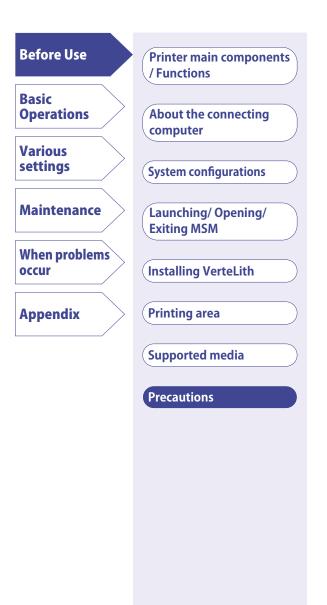
When decomposed, the ink may get into the eyes or on the skin, causing irritation or allergic reactions.

- Wear gloves, protective glasses, and a mask when handling ink packs.
- When handling ink packs, be careful not to get ink in your eyes or on your skin.
 If it gets into eyes or adheres to skin, rinse immediately with water. If left untreated, it may cause redness and mild irritation of the eye. In case of any abnormality, consult a physician immediately.
- Do not drop the ink pack or hit it hard. Ink may leak.
- Ink should be used up within the expiration date.

Expired ink should be disposed of as industrial waste, and empty ink packs should be placed in plastic bags and disposed of in accordance with local ordinances and municipal regulations.

• Use of genuine ink is recommended.

The printers are manufactured to perform at full capacity by using genuine MUTOH inks. Use of non-genuine ink may adversely affect the product itself and print quality.



Please conduct maintenance regularly

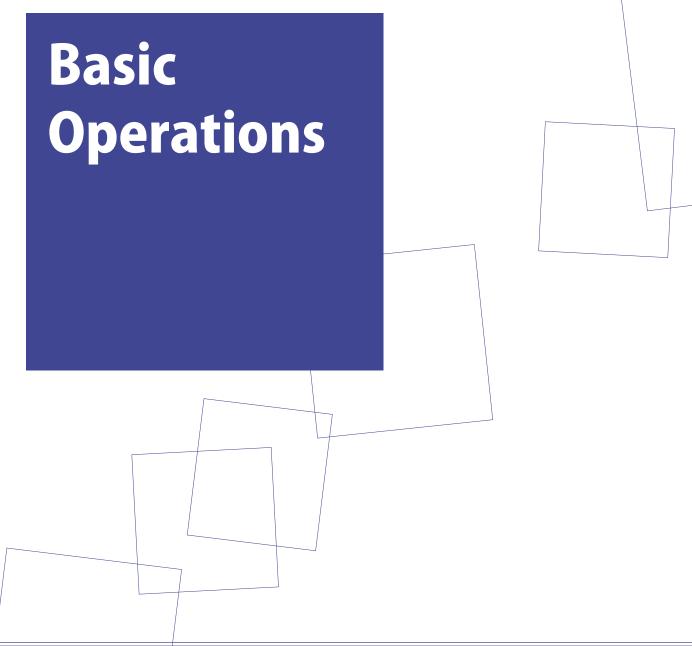
Printers require routine maintenance.

- Perform nozzle checks before and after printing. If the nozzle is clogged, perform head cleaning.
- Please be sure to carry out daily maintenance after the end of the work day. Failure to perform daily maintenance nance may result in poor image quality or malfunction. The "Daily maintenance at the end of work" P.144
- Clean the cleaning wiper, the outer circumference of the cap, and the outer circumference of the print head once a week.
- If not used for long periods of time*, head cleaning should be performed once a week.
 If head cleaning cannot be performed, perform long-term storage.
 "Long-term storage" P.179
 *When "Not in use for an extended period of time" is defined as leaving it unattended for a week to a month.
- Internal cleaning should be performed once a month.
- Check the waste ink tank regularly and drain the waste liquid before it becomes full.

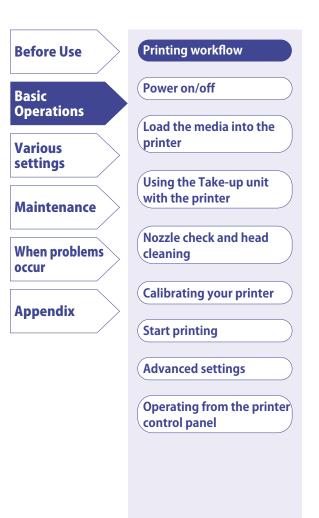
Some parts need to be replaced periodically

Some parts of the printer will need to be replaced after prolonged use.

- Parts that need to be replaced by the user:
 - Spitting boxe, cutters, cleaning wipers, absorbent material for wipers, UV-LED unit filters, UV-LED unit glass
- Parts that need to be replaced by service personnel: Various motors, various pumps, print heads



Printing workflow	42
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Nozzle check and head cleaning	61
Calibrating your printer	65
Start printing	66
Advanced settings	72
Operating from the printer control panel	80



Printing workflow

The basic workflow for printing is as follows

- **1.** Turn on the power.
 - Turn on the printer" P.43
- 2. Load media into the printer.

"Load the media into the printer" P.45
"Using the Take-up unit with the printer" P.57

3. Run a nozzle check (perform cleaning if needed)

The set of the set of

4. Adjust printing accuracy. (When necessary)

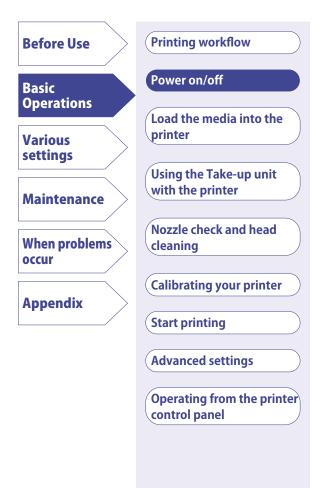
The calibrating your printer P.65

5. Print a design.

This section explains how to print using our genuine "VerteLith" RIP software.

6. End the printing operation.

The set of a set of



Power on/off

Turn on the printer



Close the front cover.

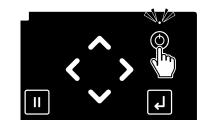
2

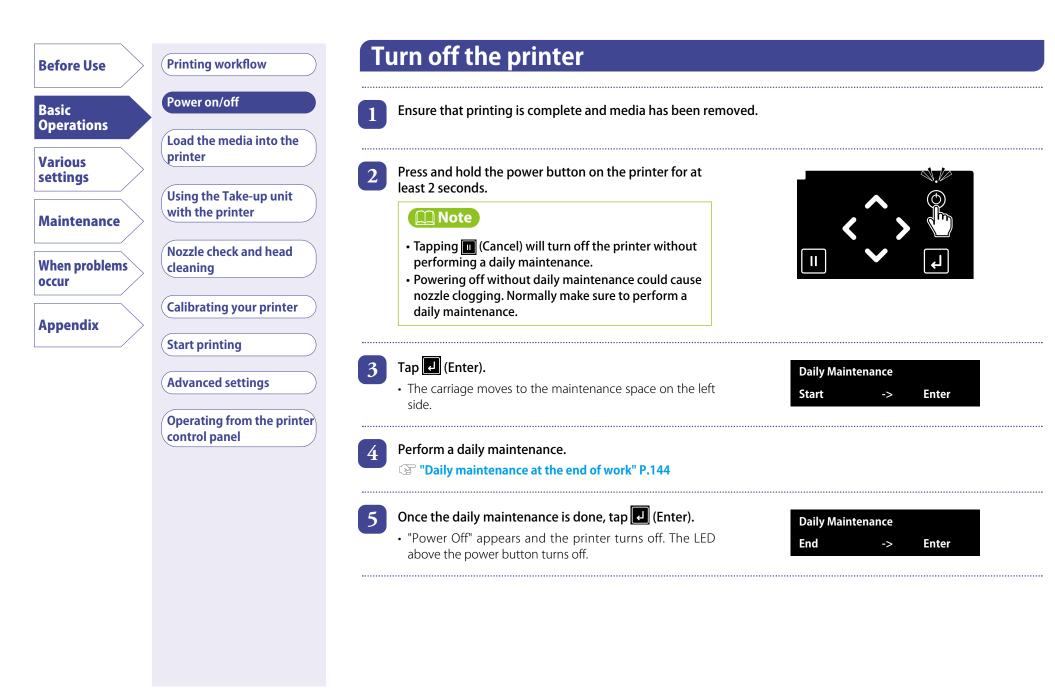
Press and hold the power button on the printer for at least 2 seconds.

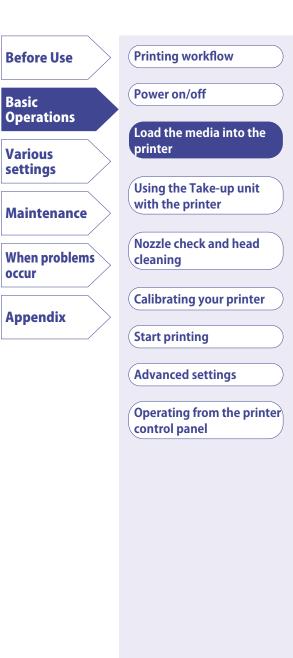
- The LED above the power button lights up.
- The printer initialization begins.

Note

- When the LED lights up, release the power button.
- The take-up unit rotates during initial operation.







Load the media into the printer

G Important#

Depending on the size of media, two or more people are required.

Loading a roll media into the printer

Follow these steps to load the media into the printer.

1. Attach the flange to the media

Items Required:

- Media: 1 piece
- Media flange: 2 pcs.

Replace the flange adapter depending on the size of paper core of roll media.

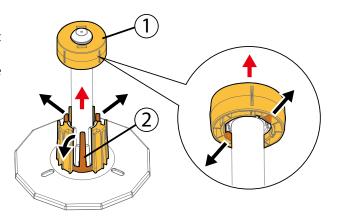
If you are using 2-inch core roll media;

Remove the 3-inch adapter from the media flange.

- ① : Pull two tabs on the adapter outward, then remove it from the flange.
- 2 : Pull three tabs on the adapter outward, then remove it from the flange.

🛄 Note

- If ② adaptor cannot be removed, turn the handle on the flange anticlockwise to loose (see Step 2), then remove it.
- If you are using 3-inch core roll media, skip this step.





When replacing 2-inch core roll media with 3-inch core roll media;

Attach the 3-inch adapters to the media flange.

- ① : Align the tabs (x3) on the adapter with the dents on the base of flange to click into place.
- ② : Align the notches (x4) on the inside of adapter with the protrusions (x4) on the leading edge of media flange as shown to the right to attach it to the edge of the media flange.

🛄 Note

• If ② adapter is misaligned, it will not be properly fixed to the media flange.

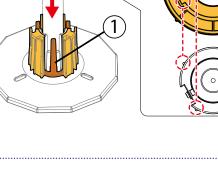
Push the media flange (x2) into the both ends of the media core.

• Before inserting, twist the handle on the flange anticlockwise to unlock it.

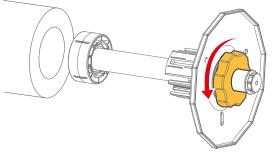
Twist the handle clockwise to lock the flange.

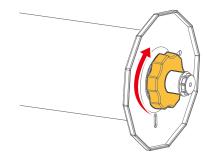
G Important/

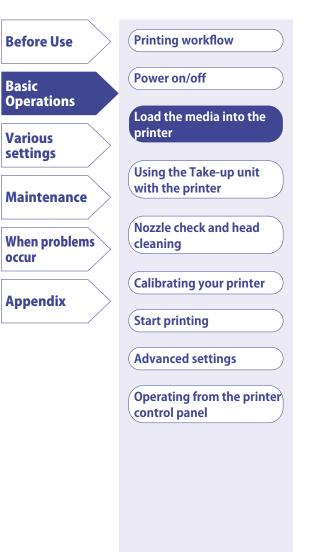
Check that the flange is firmly locked. If not, the media can be removed from the flanges while printing, affecting the print quality.



2





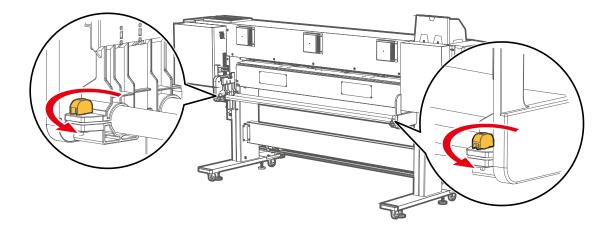


2. Enabling torque on media holders

If you want to apply torque to the media holders, follow these steps.

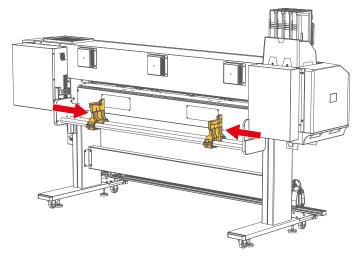


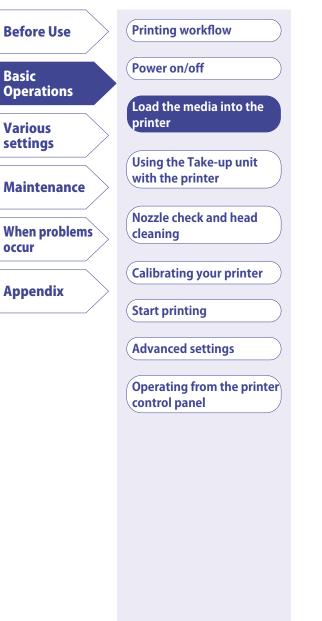
Twist the knob bolt on the left and right media holders anticlockwise to loosen.





Slide both left and right media holders about 30 cm towards the center of the slider for easy access.





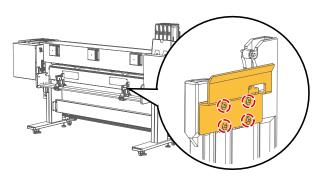


Tighten the knob bolts on both media holders.

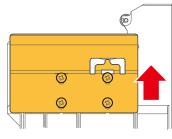


5

(When looking from the rear side of the printer) Use the screwdriver to loosen four screws securing the roller shaft guide plate to the right media holder.



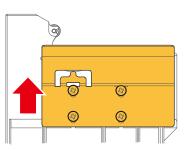
Slide up the roller shaft guide plate as far as it will go and tighten the screws.

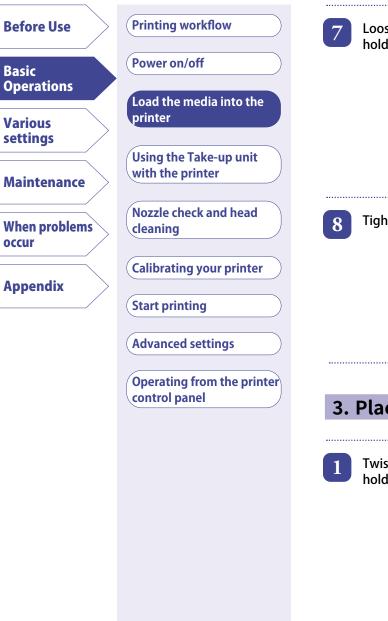


Roller shaft guide plate (right)

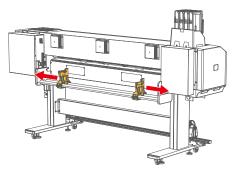


Do the same for the left media holder to slide up the roller shaft guide plate as far as it will go and tighten the screws.

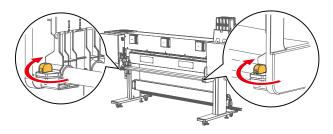




Loosen the knob bolts and slide back both media holders to the original position.

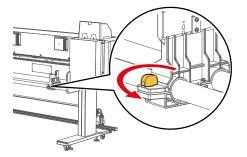


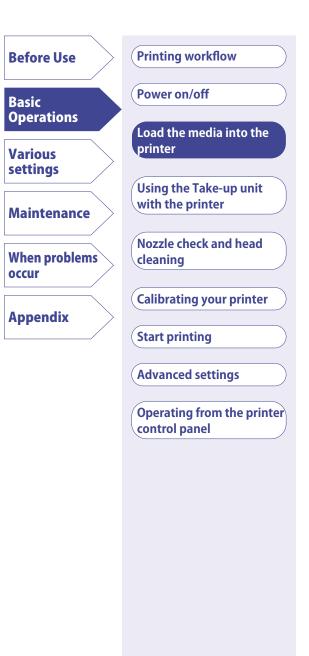
Tighten the knob bolts on both media holders.



3. Placing the media onto the media holder

Twist the knob bolt on the right side of the media holder anticlockwise to loosen.

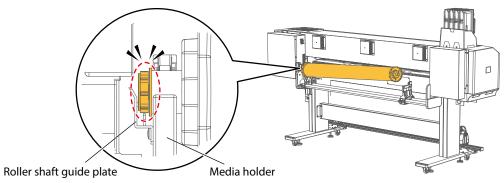






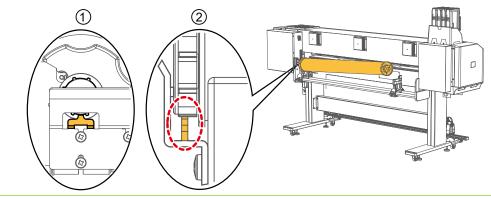
Place the roll media onto the left media holder. Carefully and gently place it on the holder.

• Place the flange between the roller shaft guide plate and the media holder as shown in the illustration.



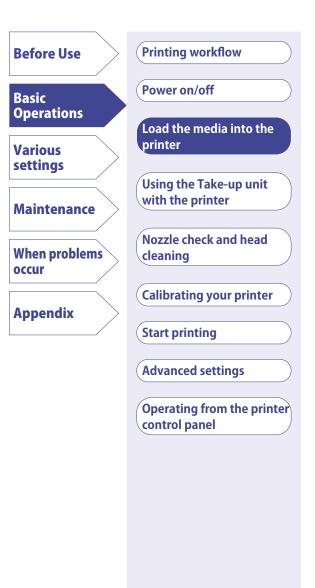
If you have enabled torque, check the following.

- ①: When looking from the left side, check that the protrusion on the roller shaft guide plate is fitted into between two protrusions on the flange end cap.
- ② : When looking from the rear side of the printer, check that the flange end cap is properly placed on the protrusion on the roller shaft guide plate.



G Important/

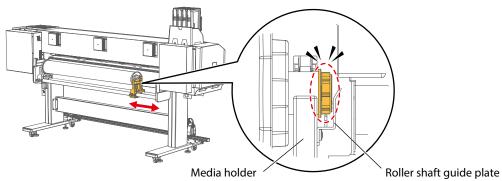
- Do not drop or apply excessive impact while placing the media. This will cause damage to the part.
- When you adjust the position of the media holder (left), do not move it more than 450 mm away from the lefthand end. The printer will not be able to detect media.





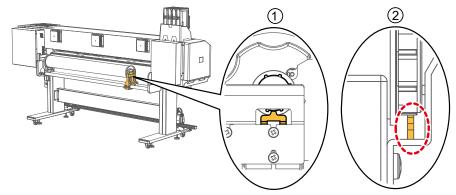
Place the roll media onto the right media holder. Carefully and gently place it on the holder.

- Slide the right side of the media holder to place the right side of the flange onto the holder.
- Place the flange between the roller shaft guide plate and the media holder as shown in the illustration.



If you have enabled torque, continue to check the following.

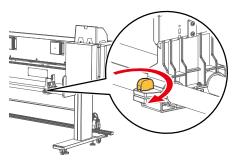
- ①: When looking from the right side, check that the protrusion on the roller shaft guide plate is fitted into between two protrusions on the flange end cap.
- ② : When looking from the rear side of the printer, check that the flange end cap is properly placed on the protrusion on the roller shaft guide plate.







Twist the knob bolt on the right side of the leading holder clockwise to tighten.



4. Loading the media into the printer

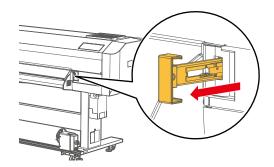


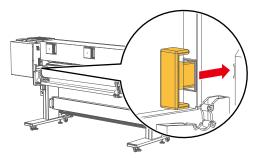
Check that the printer is powered on.

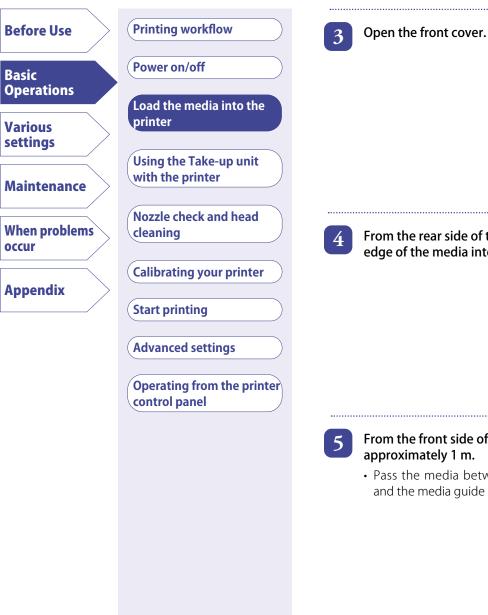
From the front side of the printer, fully pull the media feed lever towards you to release the pressure rollers.

You can also access to the media feed lever from the rear side of the printer.

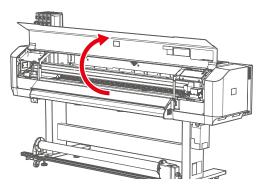
• To release the pressure rollers, push the lever as far as it goes.



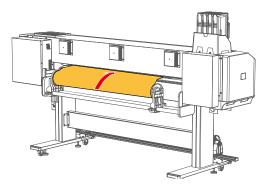






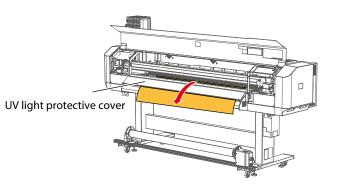


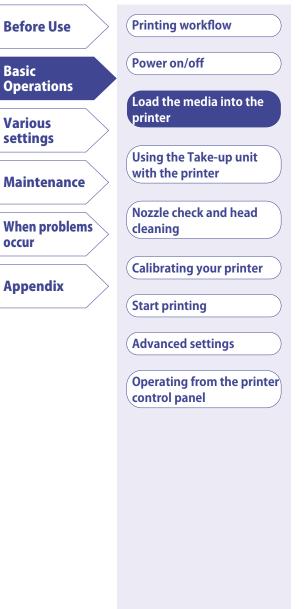
From the rear side of the printer, insert the leading edge of the media into the media slot.



From the front side of the printer, pull the media for approximately 1 m.

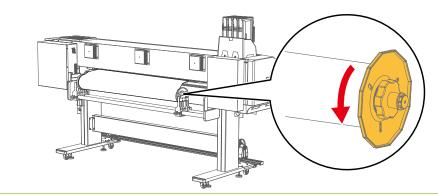
• Pass the media between the UV light protective cover and the media guide and pull it.





6

While one person holds the leading edge of the media, the other person turns the flange to slightly rewind the media onto the roll to remove warp or skew.

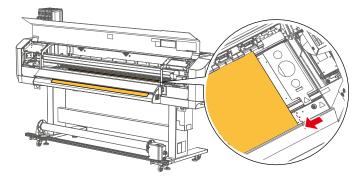


Note

If you remove your hands from the leading edge of the media while rewinding, the media can be removed from the media slot.

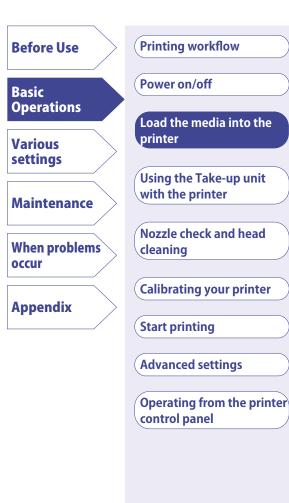


Check that the right-hand edge of the media is located at the left side of the media guide line. If not, print quality can be affected.





f needed, use a slide lock lever on the pressure rollers to individually cancel or reduce the pressure. **Change pressure of pressure rollers individually**" P.76



5. After loading the media

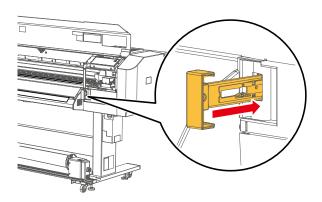
From the front side of the printer, push the media feed lever to hold down the media flat with pressure rollers.

Note

2

Using the media feed lever, the pressure can be changed to the two levels (Normal/ High). For normal use, pull the lever towards you until it clicks to set the pressure to "Normal".

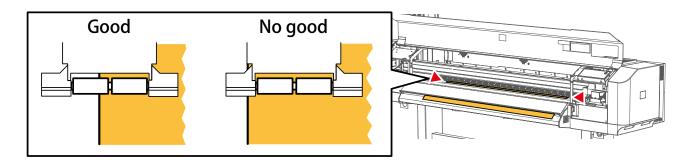
Change pressure that comes onto entire media P.75

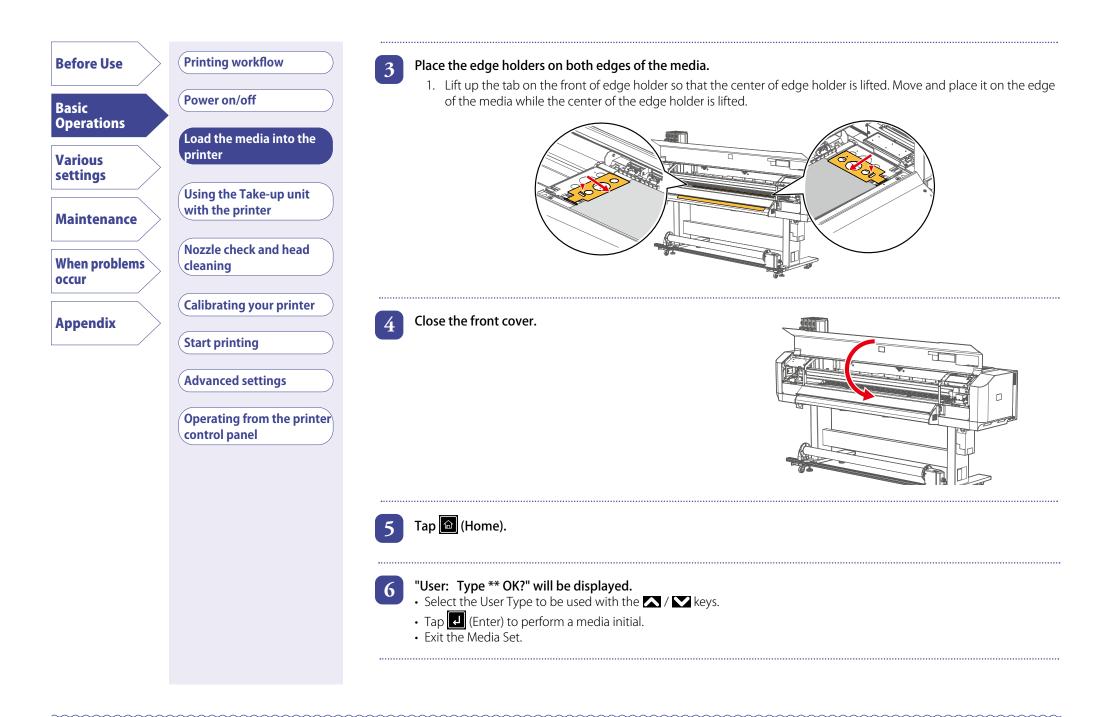


Check that both edges of the media are held down properly by the pressure rollers.

• If it is held like "No Good" example, pull the media feed lever towards you as much as possible, then adjust the position of the left or right side of the media holder until the both edges of the media are held down properly.

3. Placing the media onto the media holder" P.49





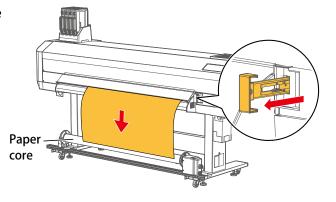


Using the Take-up unit with the printer

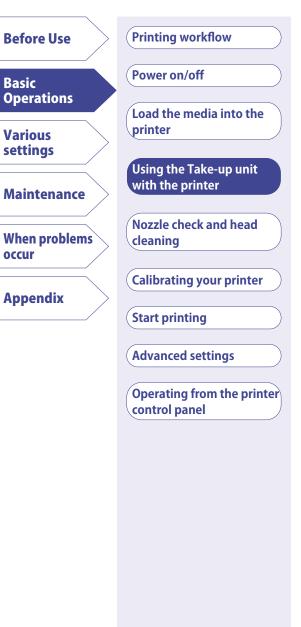
To wind up the media, follow these steps to load the media into the take-up unit.

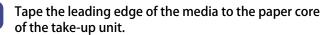
Using the printer control panel, make necessary setting(s) to use the take-up unit. "Menu 1: Setup menus" P.90 > "Output Mode" P.93

- Fully pull the media feed lever towards you and raise the pressure rollers.
- Pull out the paper until its leading edge reaches the paper core.



- Loosen the two thumbscrews on the take-up unit and adjust the paper core by shifting it left or right so that 3 the right end of the paper core is aligned with the right end of the media. • After adjustment, tighten the thumbscrews.

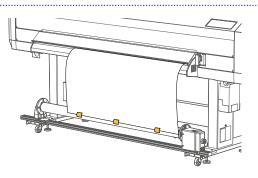




• Ensure that the leading edge of the media is parallel to the paper core. If they are not parallel, follow the procedure of step 5 through 7 to adjust it.

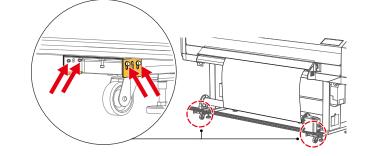
🛄 Note

This illustration shows when winding media with printed side facing out.



5

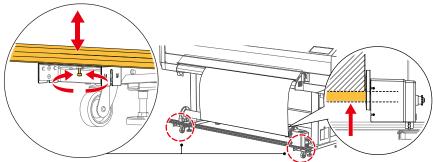
Using the supplied hex wrench, gently loosen the eight hex screws securing the rail holder.

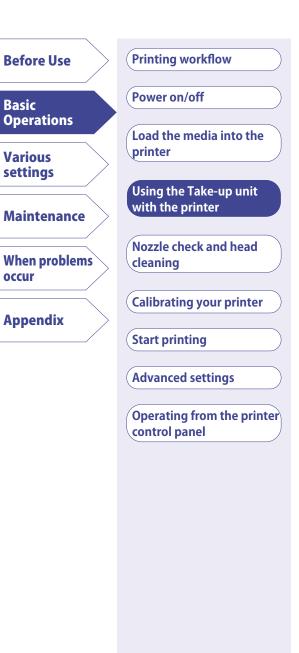




Adjust the height of both ends of the rail. Turn one hex screw on the underside of the rail base with the supplied hex wrench so that the leading edge of the media is parallel to the paper core.

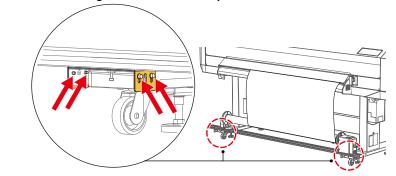
- To raise height: Turn the screw counterclockwise
- To lower height: Turn the screw clockwise







Tighten the eight hex screws securing the rail holder firmly.



8 Turn the operation switch to A or C and wind the media for about two rounds.

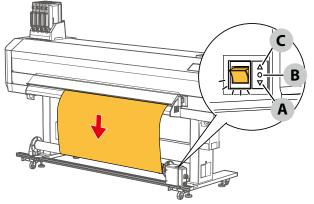
- A: Wind media counterclockwise (printed side facing out).
- B: Stop

9

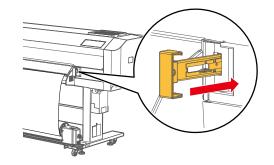
• C: Wind media clockwise (printed side facing in).

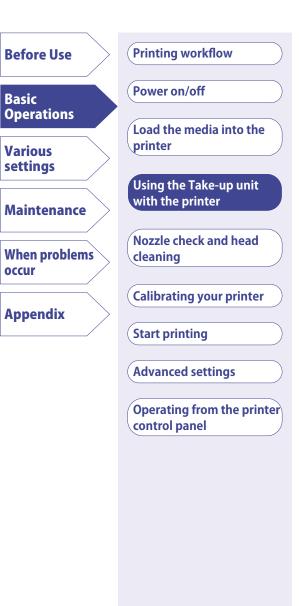
🛄 Note

- Operation switch turns green during operation.
- Make sure that the operation switch is turned on (to wind) while printing.



Push the media feed lever all the way in and lower the pressure rollers.

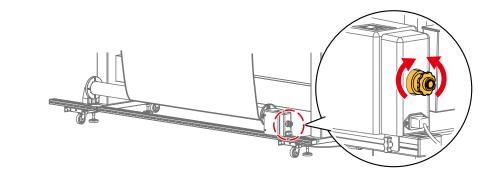




10 T

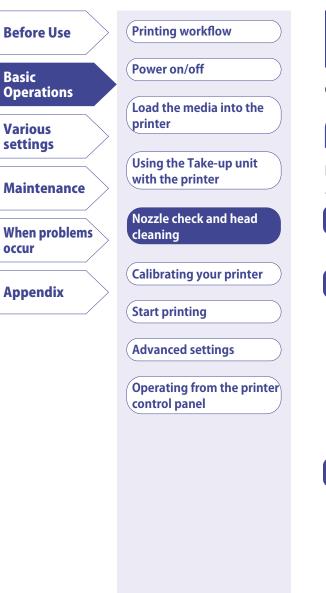
To change the winding force, adjust the torque adjustment screw.

- Clockwise: Increase the winding force
- Counterclockwise: Decrease the winding force



🛄 Note

Adjust it when the media is loose on the paper core or the take-up unit is not winding correctly.



Nozzle check and head cleaning

Check nozzles before each day's work. If the nozzle is clogged, perform head cleaning.

Performing Nozzle Check

Run a nozzle check print to see if the print head fires ink properly.



Load a roll media to print nozzle check pattern. The second secon

- Tap 🕻 key while "Print Ready" is displayed.
- The "Nozzle Check F Start -> Enter" will appear.

🔲 Note

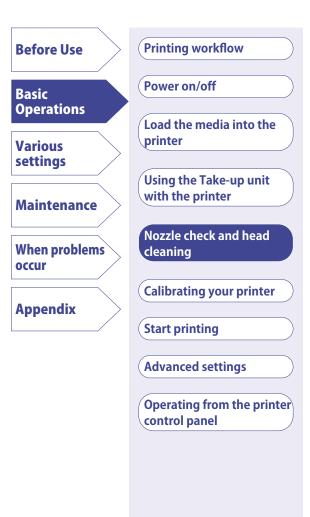
A nozzle check can also be performed from the following menu:

- 1. Tap 👩 (Home). "Setup" will be displayed.
- 2. Tap 🔼 / 💟 key to display "Test Print".
- 3. Tap key to display "Nozzle Check F".



Tap 🛃 (Enter).

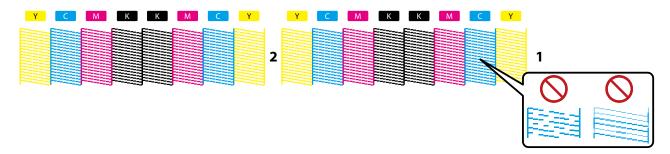
• The printer begins printing a nozzle check pattern.



Check the pattern printed.

4

If the nozzle is clogged, go to "Performing Head cleaning" P.63.



🛄 Note

Printer information (print time, serial number, and firmware version) is printed next to the pattern.

G Important/

If you run a nozzle check print immediately after the initial ink charging, the following symptoms may occur

- lines are faded.
- patterns are partially missing.

In such cases, perform [Little Charge] cleaning. If it does not help to solve the problem, leave the printer for at least one hour, then perform cleaning or [Little Charge] cleaning again. If the problem still persists, please contact your local MUTOH dealer.



Performing Head cleaning

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

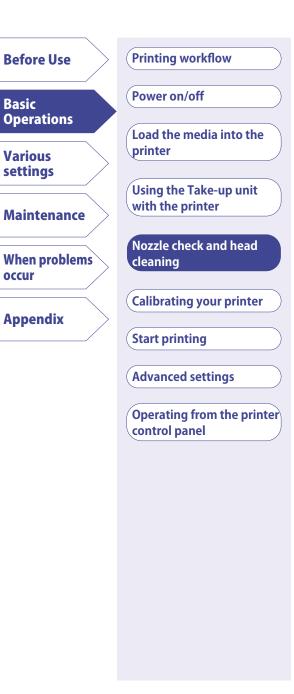
Head cleaning mode

Short Cleaning	Consumes a small amount of ink.
Normal cleaning	Select this mode if there are nozzle clogging.
Long cleaning	Select this mode if nozzle clogging persists even if "Normal cleaning" was performed.
Little Charge * Cleaning menu only	Gives high cleaning efficiency, but consumes large amount of ink.
Initial Charge * Cleaning menu only	Offers more powerful cleaning than "Little Charge", but consume large amount of ink.

G Important!!

When performing Little Charge and Initial Charge, observe the followings:

- Do not turn off the power.
- Do not unplug the power cord.
- Do not open the front cover or maintenance cover.
- Do not raise the pressure rollers.
- Do not remove the ink bag case or smartchip card.
- Do not use ink bags with low ink levels.



Tap 🔰 key.

• "Clean Print Head?" is displayed.

Note

The following procedure allows you to select the print head (All / Head1 / Head2) you want to clean.

- 1. Tap 👩 (Home). "Setup" will be displayed.
- 2. Tap 🔼 / 💟 key to display "Cleaning".
- 3. Tap key to display "Head Select:".
- 4. Tap $\overline{\mathbf{A}}$ / \mathbf{V} key to select the head to be cleaned.

2 Us

4

Use 🖍 / 🗙 key to select an appropriate cleaning mode.

• For more information on cleaning modes, see "Head cleaning mode" P.63.

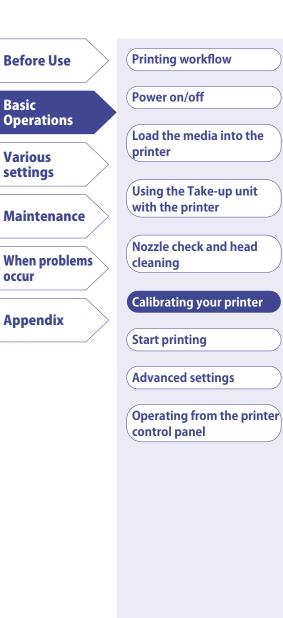
3 Tap 🛃 (Enter).

- The cleaning cycle begins.
- Run a nozzle check print to see all nozzles are clear.
- Performing Nozzle Check" P.61
- If the nozzle clogging persists, repeat the Normal cleaning.

Note

If nozzle clogging persists after repeated Normal cleaning attempts, try the following solutions for a reference.

- 1. Perform a Long cleaning. (If the problem persists, move to the next one)
- 2. Clean the following parts. (If the problem persists, move to the next one)
- 🐨 "4. Clean the cleaning wiper and the parts around the capping unit" P.150
- 🐨 "3. Clean the parts around the print head" P.149
- 3. Perform a Little Charge cleaning. (If the problem still persists, move to the next one)
- 🐨 "Menu 3: Cleaning" P.112
- 4. Perform a soak cleaning.
- 🐨 "Menu 12: Soak Cleaning" P.128



Calibrating your printer

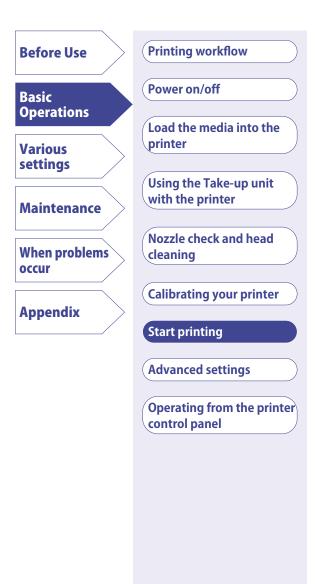
The following calibration must be performed before you print for the first time.

- "Adjust Head" P.109
- This product is equipped with two printheads. This adjustment will calibrate dot placement between two print heads. After performing "Adjust Head", you must perform print quality calibration ("Adjust Print").
- "Print quality calibration (Adjust Print)" P.98

This calibration will adjust the dot placement in bidirectional printing. You will enter the thickness of media before adjustment.

"Media feed adjustment" P.103

This adjustment will correct the media feed amount.



Start printing

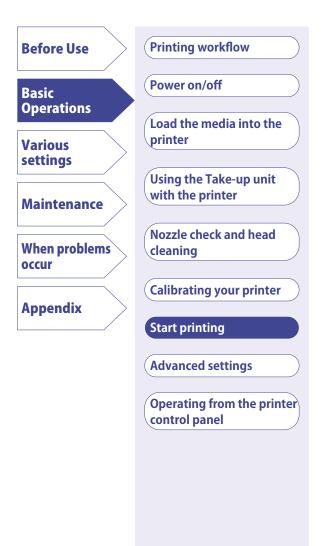
This section describes the basic printing procedure using VerteLith. Please refer to the separate "VerteLith User Manual" for VerteLith setup and detailed operating instructions.

Start VerteLith. Select "HA-1642" from the list of printer (①).

	ill appear (②).										
VerteLith [NOT FOR RESALE]									-	0	×
ile Manage Printer View Hel	shinya_nakano		-								
Add Printer Add Job	Add Print Environment 🔣 Add Jig Layout	수↓수 Preferences									
🖬 Dashboard	• HA-1642_1 (HA-1642) Ready to Print		Hold	Print	Archive	Timeline					
	Print Environment PrintEnvironment_1	-	K 0 0	\gg <	û 🔶 B 📮		~ ^ [[Q
PRINTERS	Job Name	Job I	ld Copies	Pages Submissi	on [Print Mode Status	Action					
Dal All Printers											
HA HA-1642_1 0	1										
CUTTERS 🕤											

🛄 Note

For how to add a printer to VerteLith, see the VerteLith user manual.



2

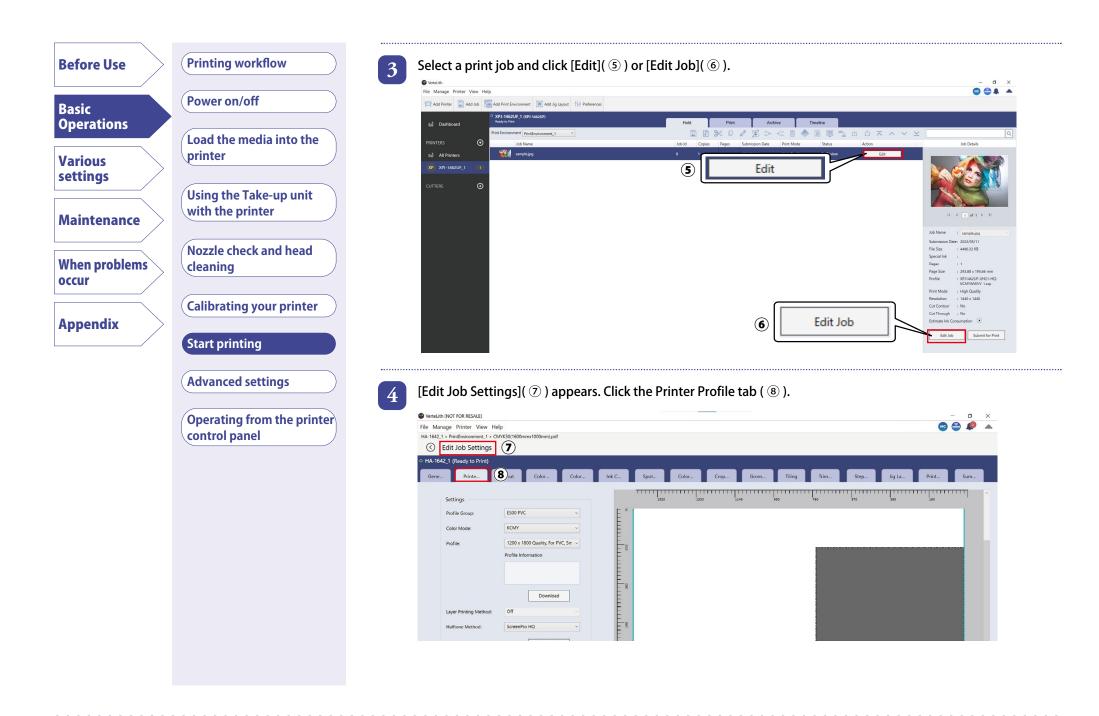
Add an image file you want to print.

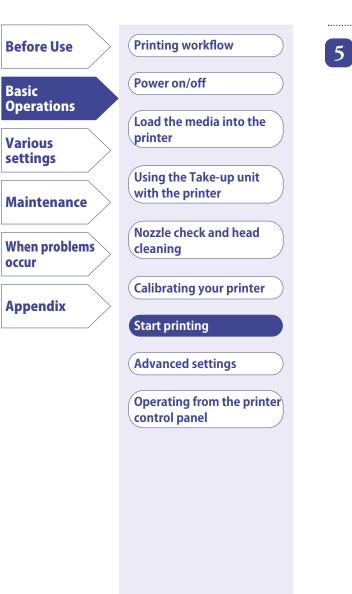
• In the Hold queue, click the [Add Job] icon (③) so that the open dialog appears.

VerteLith [NOT FOR RESALE]		- o ×
File Manage Printer View H	łelp	🐵 🥯 🐥 🔺
T Add Printer Add Job	Add Print Environment III Add Jig Layout	
🖬 Dashboard	HA-16421 (HA-1642) Ready to Print Archive Timeline	
	Print Environment 🖓 🚽 🖓 👔 🛠 🗘 🖉 😰 🗁 << 🛍 🔶 🗟 💻 🖞 🖞 🛪 🔨	Q
PRINTERS		
HA HA-1642_1 0	3	
CUTTERS 🕒		

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

VerteLith [NOT FOR RESALE]			- 🛛 🗙
File Manage Printer View He	elp		🚥 🥯 Ք 🔺
Add Printer Add Job	Add Print Environment 🗮 Add Jig Layout 🙌 Preferences		
🖬 Dashboard	O HA-1642_1 (HA-1642) Ready to Print	Hold Print Archive Timeline	
	Print Environment_1	🛚 🗶 0 🖉 🖻 🗢 🗇 🗟 📮 🐁 占 白 末 🔺 📃	Q
PRINTERS 🕀	Job Name	Job Id Copies Pages Submission I Print Mode Status Action	
nd All Printers	CMYK30(1600mmx1000mm).pdf	98 1 1 2023/11/10 Quality To Review Edit	
HA HA-1642_1	CMYK30(1600mmx1000mm).pdf		
CUTTERS 🕒			
Note	-		
/ou can also dra	ag and drop files in the Hold	queue.	





Configure the basic print settings.

Profile Group option (())

• Select an appropriate profile group depending on the ink being used.

Profile option (10)

• Select an appropriate profile depending on the media type and print mode.

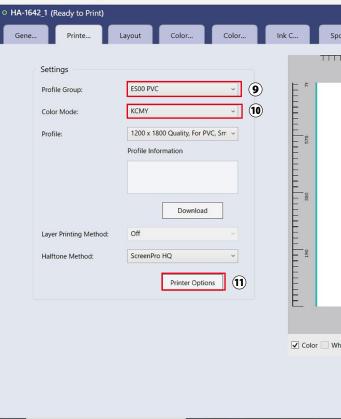
Printer Options (11)

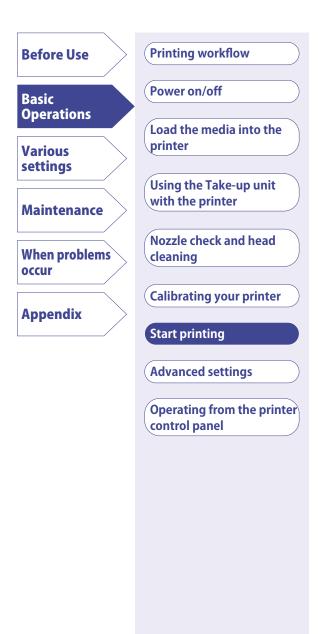
• Additional advanced settings can be configured (you can also print with default settings).

VerteLith [NOT FOR RESALE]

File Manage Printer View Help HA-1642_1 > PrintEnvironment_1 > CMYK30(1600mmx1000mm).pdf

Edit Job Settings





6

Once you have set the print settings, click [Submit for Print](⁽¹⁾) so that the job will move to the Print queue. Printing begins after RIP processing.

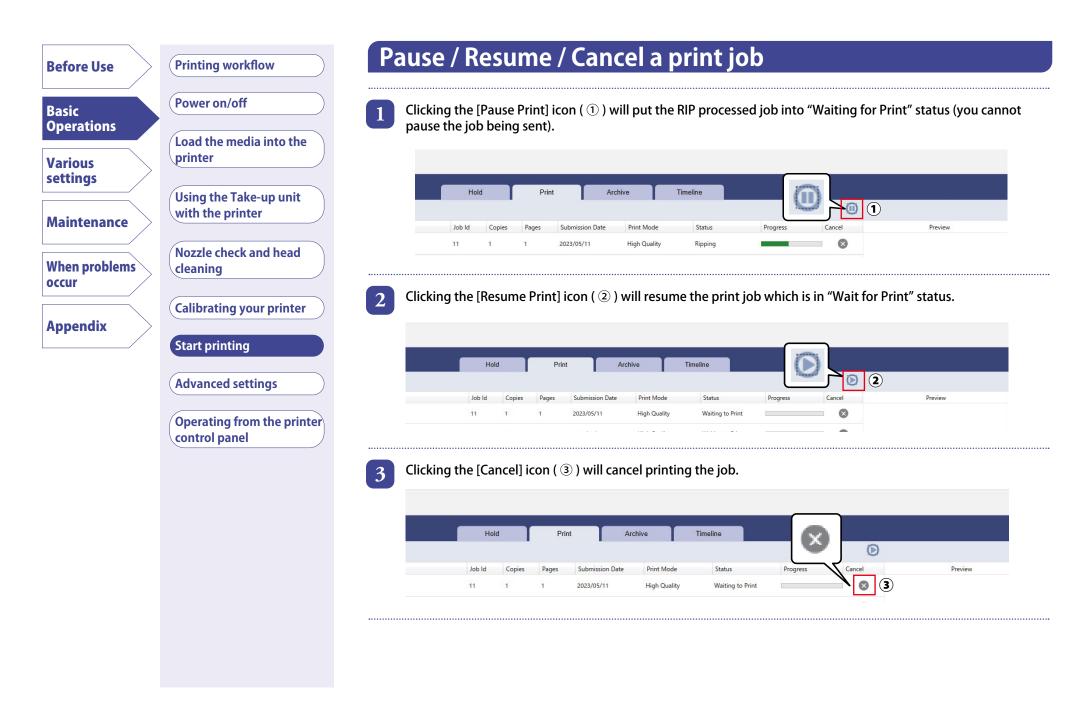
Halftone Method: ScreenPro HQ	 			
	Color White Varnish Show Cut Lines			X:Y: C 🔯 100% 🗸 🍳
		Revert Set as Default	Save	Submit for Print Cancel

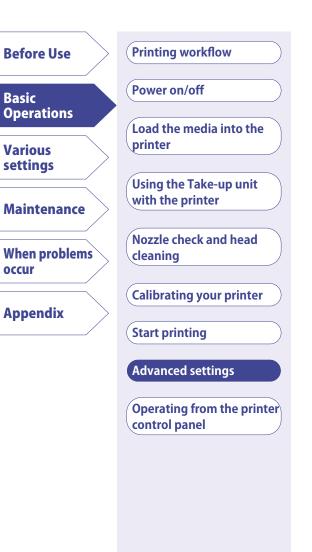
• The processing status of the job (Sending, Waiting for ripping, Ripping, Waiting for Print) can be viewed ((1)).

	Hold	P	Print	Arch	nive	Timeline		
Job Id	Copies	Pages	Submission [Print Mode	Status	Progress	Cancel	Preview
98	1	1	2023/11/10	Quality	Ripping 13			

• The job will automatically move to the Hold queue after printing (4).

VerteLith [NOT F	OR RESALE]															-	٥	×
File Manage P	Printer View	Help													6	•	P	-
Add Printer	Add Job	Add Print Environment	Add Jig Layout	∳↓∳ Preferences														
🖬 Dashboa	ard	 HA-1642_1 (HA-1642 Ready to Print)			Hold	Pr	int	Archive		Timelin	e						
		Print Environment Print	invironment_1	-	B %	00	2 :	≻ ~⊂ [i 🔶 🛙		1. L	17	< ^					Q
PRINTERS	Œ	Job Name			Job Id	Copies	Pages	Submissio	n [Print Mode	Status	Action							
🗐 🛛 All Printe	ers	CMYK30(1	600mmx1000mm).pdf		98	1	1	2023/11/1	0 Quality	To Review	N	Edit		14				
HA HA-1642	2_1 1		CMYK30(1600mr	nx1000mm).pdf														





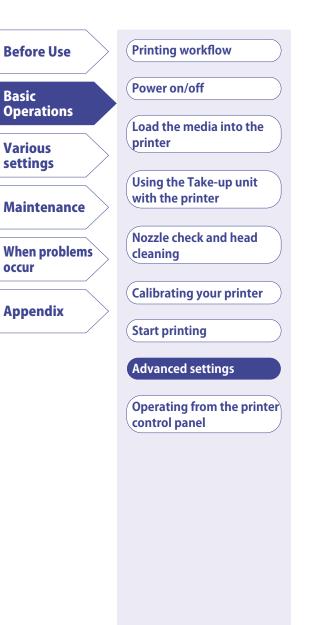
Advanced settings

Change the printer settings depending on the media being used and how it is used.

- When the media rubs against the print head and gets dirty
- The second secon
- When printing on thin or soft media
- **W** "Change pressure that comes onto entire media" P.75
- **W** "Change pressure of pressure rollers individually" P.76

Note

When printing on thin or soft media, reducing the vacuum fan is also helps to prevent wrinkling. **Wacuum Fan** P.91



Print head Height

Normally choose the "Low" or "Middle" head height option depending on media thickness. The closer the distance between the media and the print head, the better the consistency of the image quality.

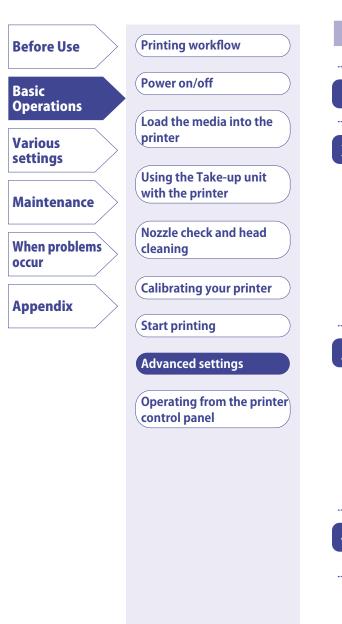
G Important!!

Depending on the condition of the media and wrinkling caused by printing conditions, you may get a head strike causing ink smears on the media. In such cases, try the following

- Lower the preheater and platen heater temperature settings
 - "Menu 1: Setup menus" P.90> "User Type" P.90> "Preheater"91 Page, "Platen Heater" P.91
- Reduce/cancel the pressure on the individual pressure rollers holding down the area where the wrinkle occurred. "Change pressure of pressure rollers individually" P.76
- After you change the head height, make sure to perform the print quality calibration (Adjust Print).
- Do not open the front cover to switch head height during printing. Switching the head height will change the "Print quality calibration (Adjust Print)" and print quality cannot be guaranteed.

See the following table for the relationship between head height and recommended media thickness. Avoid using higher head height unless absolutely necessary, as the wider head gap will cause ink mist to adhere to the nozzles, media, and inside the machine, which may result in poor print quality and damage to printer parts

Head height	Recommended media thickness (1.0 mm or less)	Maximum media thickness that printer can feed	Description.
Low	Max. 0.3 mm	0.3 mm	Normally use this head height.
Middle	0.3 mm to 0.8 mm	0.8 mm	Use this option for media between 0.3 mm to 0.8 mm thick or when the head strikes occur with Low setting.
High	0.8 mm to 1.3 mm	1.3 mm	 Avoid using this option if a head strike does not occur with Middle setting. Because of wide distance between the print head and media, printing with "High" setting will generate ink mist, Nozzle clogging Ink smudges due to ink mist Ink sticking inside of the printer

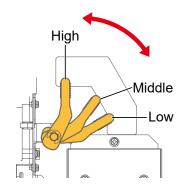


Change head height

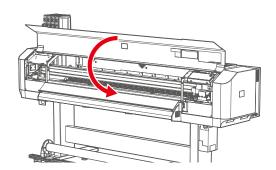
Open the front cover.

2 Use this lever to change the head height.

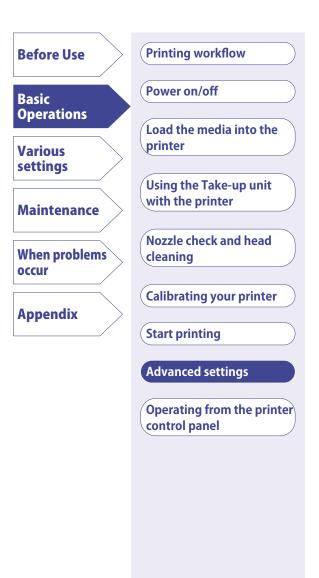
Head height	Description.		
High	The highest head height setting.		
Middle	Use this option for media between 0.3 mm to 0.8 mm thick or when the head strikes occur with Low setting.		
Low	Default head height. The lowest head height setting.		



3 Close the front cover.



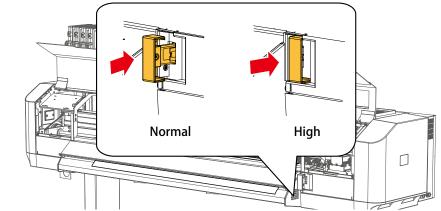




Change pressure that comes onto entire media

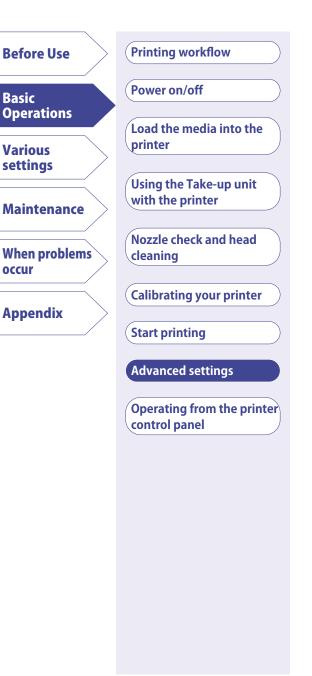
If you want to change the holddown pressure applied across the entire width of media, change it using the media feed lever. Depending on the position of the lever, you can choose the pressure between Normal and High.

- Normal: Recommended for typical roll media. To apply "Normal" pressure, push the lever from the front side of the printer until it clicks.
- High: Recommended for heavy weight media (such as Tarpaulin). To apply "High" pressure, push it as far as it goes.



G Important!!

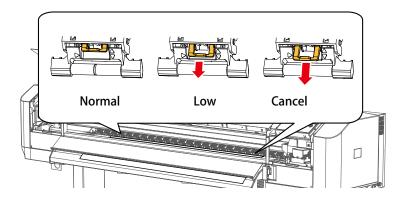
Every time after you change the holddown pressure by the media feed lever, you must perform the media feed adjustment. Wedia feed adjustment" P.103



Change pressure of pressure rollers individually

When printing on thin or soft media, sometimes the media hits the print head causing ink smudge on the media. By reducing pressure or disabling the pressure rollers individually, it helps to reduce the chance of head strike. The slide lock lever on each pressure rollers can be used to change the pressure to "Normal," "Low," or "Cancel".

- Normal: Recommended for typical roll media. The factory default is set to "Normal".
- Low: Less pressure than "Normal".
- Cancel: The pressure rollers that were set to "Cancel" by the slide lock lever remain in UP position even if the media feed lever is pushed in.

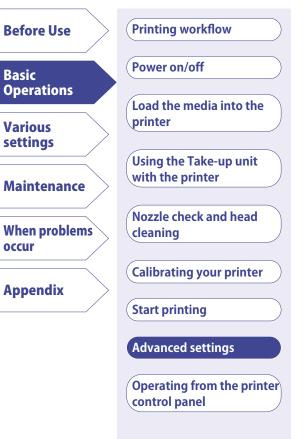


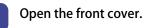
- Changing the slide lock lever to "Normal" or "Low" while the media feed lever is fully pulled towards you (pressure rollers are up) can cause malfunction. Follow the operation procedure on the next page to change the pressure.
- Every time after you change the holddown pressure by individual slide lock lever, you must perform the media feed adjustment.

Wedia feed adjustment" P.103

D Note

Thin or stiff media tends to wrinkle easily during printing. Wrinkles can contact the bottom side of the print head causing ink smudge on the media. Canceling the pressure rollers on both edges of media will help prevent wrinkling. First, try with the pressure rollers holding both ends of the media, and if the problem persists, reduce or cancel more rollers.





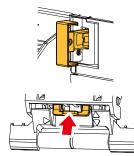


Change the position of the media feed lever and the slide lock lever depending on the use.

• To change the position of the slide lock lever, push the lever down then change the position

• To set the slide lock lever to "Normal"

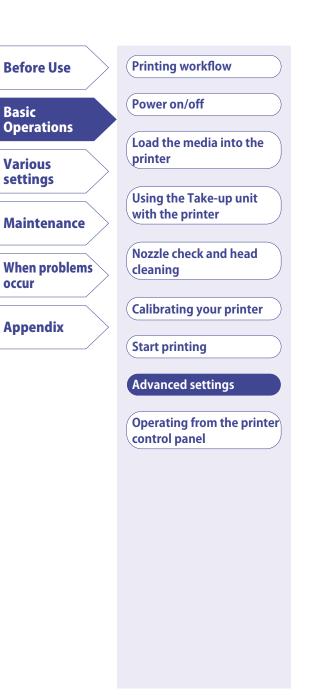
- 1. Set the media feed lever to the "Normal" set position.
- **W** "Change pressure that comes onto entire media" P.75
- 2. Set the slide lock lever to "Normal".
- Push the lever all the way in.



🛄 Note

If you want to change the pressure that comes onto entire media to "High", push the media feed lever all the way in after changing the pressure using the slide lock lever.

Change pressure that comes onto entire media" P.75



• To set the slide lock lever to "Low"

1. Set the media feed lever to the "Normal" set position.

Thange pressure that comes onto entire media" P.75

- 2. Set the slide lock lever to "Low".
- Pull the lever towards the front until it clicks into place.

🛄 Note

If you want to change the pressure that comes onto entire media to "High", push the media feed lever all the way in after changing the pressure using the slide lock lever.

W "Change pressure that comes onto entire media" P.75

• To set the slide lock lever to "Cancel"

1. Pull the media feed lever to the very front and raise the pressure rollers.

2. Set the slide lock lever to "Cancel".

• Pull the lever to the very front.

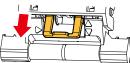
3. Push the media feed lever to lower the pressure rollers.

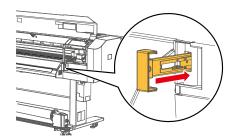
Note

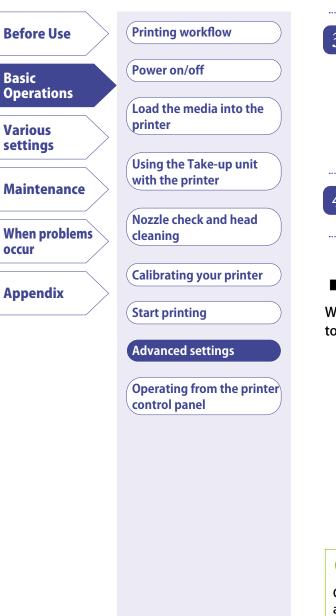
Using the media feed lever, the pressure can be changed to the two levels (Normal/ High). For normal use, pull the lever towards you until it clicks to set the pressure to "Normal".

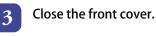
******* "Change pressure that comes onto entire media" P.75

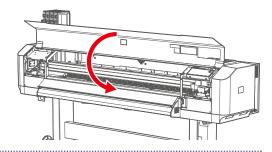










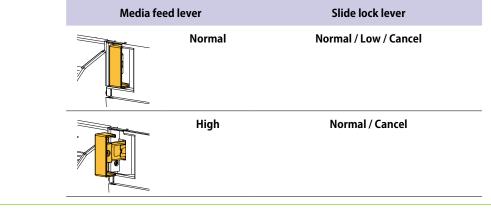




Perform media feed adjustment "Media feed adjustment" P.103

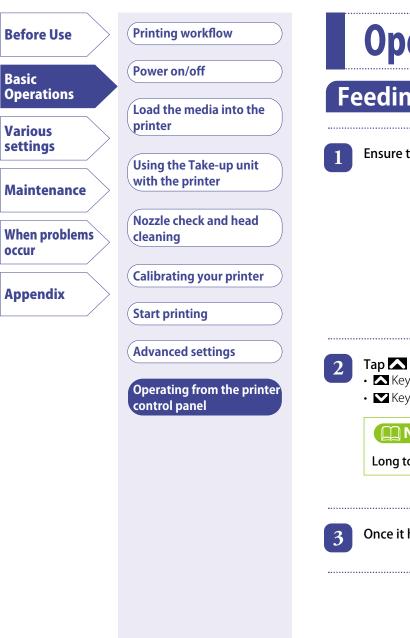
Restrictions on slide lock lever

When the media feed lever is set to "High", you can only choose between "Normal" and "Cancel". Even you set it to "Low", the holddown pressure will not be reduced.



G Important

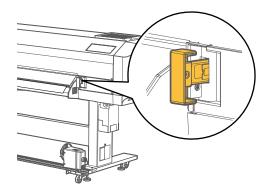
Changing the slide lock lever to "Normal" or "Low" while the media feed lever is fully pulled towards you (pressure rollers are up) can cause malfunction.



Operating from the printer control panel

Feeding media

Ensure that the pressure rollers is lowered.

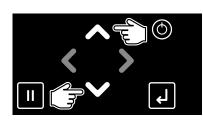




- Tap or key.
- Key: Feed the media backward.
- Key: Feed the media forward.

Note

Long touch the key to feed the media with high speed.



Once it has reached the intended position, release the key.



Pause / Resume printing

While printing, tap 🛄 (Cancel).

• Printing pauses.

Note

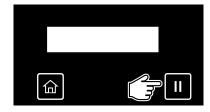
This operation does not delete the print data sent to the printer. To cancel printing and delete data, see the following section.

W "Cancel printing" P.82

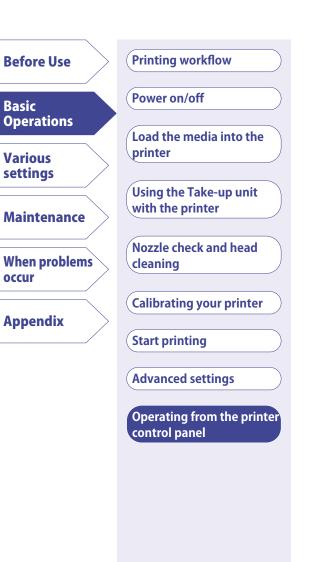
Tap 🛄 (Cancel) again to resume printing.

G Important!!

Print quality cannot be guaranteed if printing is paused.



Pausing Print		
Cancel Print	->	Enter



Cancel printing



2

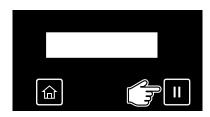
While printing, tap 🛄 (Cancel).

• Printing pauses.

Note

To resume printing, tap Cancel key again.

• Print data sent to the printer is deleted.

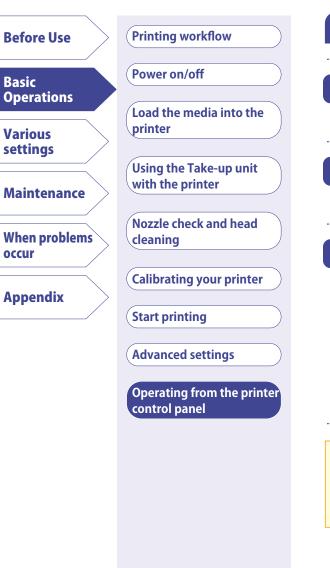




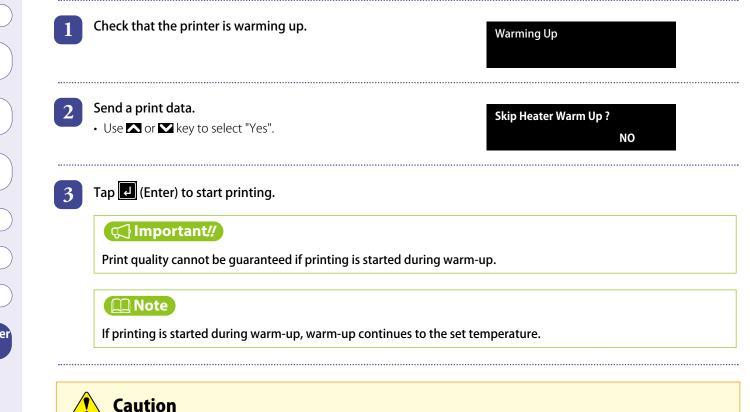
🔲 Note

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

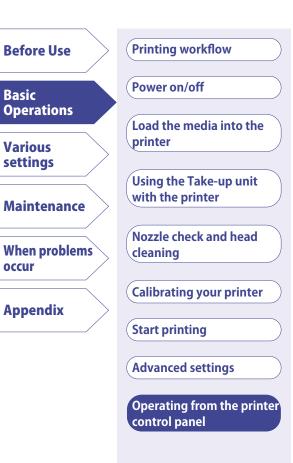
Tap 🛃 (Enter) to cancel printing (Once canceled, you cannot resume the job again.)



Start printing during warm-up



Do not touch the media guide while printing or when the message "Warming Up" appears on the panel. There is a risk of burn injuries.



Cutting Media



Ensure that printing is finished. • Tap (Cancel).

Tap 🛃 (Enter).

• The printer will advance the media for the bottom margin and will cut it off the roll media.



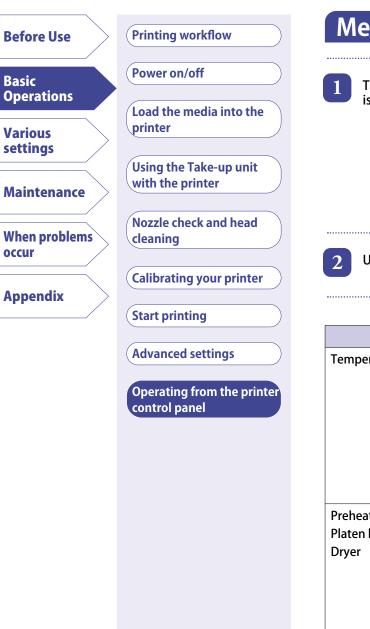
습

Start

-> Enter

Note

- If the leading edge of a new roll media is not straight, cut it before printing.
- When Media Initial menu is set to "Off", the printer does not cut the media automatically. The setup menus P.90 > "User Type" P.90 > The setup menus P.93 (Setup Media Initial P.93) (Setup Media Initial P.93)
- When the Output Mode menu is set to "Auto Cut", the printer cuts the media automatically after printing. The setup menus P.90 > "User Type" P.90 > The setup menus P.93 (Contract Contract Co
- The cutter blade is consumable parts. Replace it when needed.
- **Bare States and State**



Menus you can access while printing

Tap 🙆 (Home) when one of the messages on the right is displayed.

Receiving	
PG: Low	W: 1625 mm
Printing	
PG: Low	W: 1625 mm
Converting	
PG: Low	W: 1625 mm

Use \blacksquare or \blacksquare key to select the menu, then tap the ≥ key.

ltem	Description
Temperature	 Check heater temperature. The current temperature and the specified temperature are displayed in []. Use / key to select the item you want to view. Image: Note The temperatures displayed are for reference only. Exact accuracy is not guaranteed. The current temperature blinks constantly regardless of whether the warm-up is completed or not.
Preheater Platen heater Dryer	 Change heater temperature. Use ▲ / ▲ key to change the temperature setting, then tap ▲ (Enter). Note The change made will become invalid after printing. You can also save this change in the selected user type. Backup" P.86

		ltem	Description
Before Use Basic Operations Various settings	Printing workflow Power on/off Load the media into the printer	PF Micro Adjust	 Correct the media feed amount. Use ▲ / ▲ key to change the settings, then tap ④ (Enter). Note The change made will become invalid after printing. You can also save this change in the selected user type. Backup" P.86
Maintenance When problems occur	Using the Take-up unit with the printer Nozzle check and head cleaning Calibrating your printer	Backup	 Save the change made in the following menus to the selected user type. Preheater Platen Heater Dryer PF Micro Adjust Use ▲ / ▲ key to select "Yes" and tap ▲ (Enter)
Appendix	Start printing Advanced settings Operating from the printer	Job status	 Displays information about a print job being printed. ToDoLength: Displays the length of print data. (media feed direction). Done: Displays the length printed. Print Remain: Displays the length of data which has not been printed yet. Remain Time: Displays the time remaining to finish printing. Use / key to select the item you want to view.
	control panel		 Note The value displayed is reference only, not guaranteed. If print data does not contain length information, "0" is displayed for all items.
		MPS	Displays the status of the MPS function. MPS function settings can be changed from the MSM



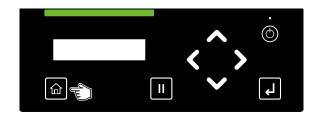


Key operation

You will configure the various settings using the panel setup menu.



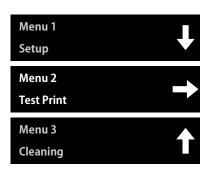
To enter the panel setup menu, tap 🙆 (Home).



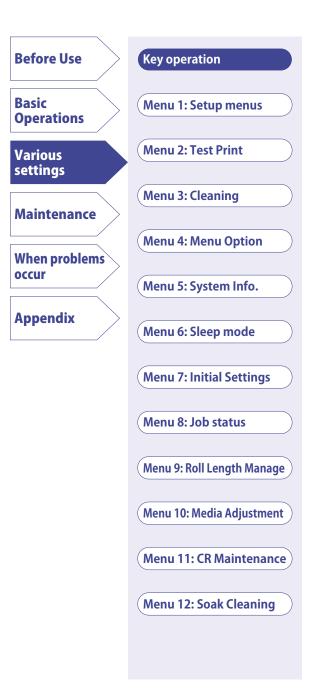
🛄 Note

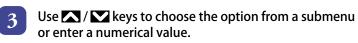
You cannot enter the panel setup menu while printing or receiving data (while the power button is blinking).

Use or key to scroll through the menu.
Use key to enter the menu.

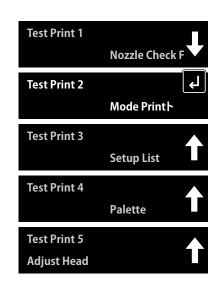


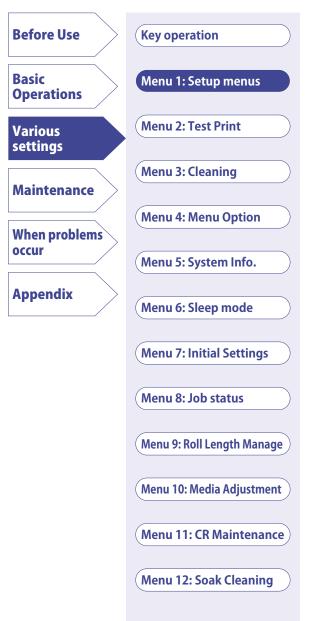






- let (Enter): Tap to confirm the setting or run the selected function.
- Key: Use to return to the upper level menu. (In the illustration on the right, it returns to "Menu 2: Test Print.")



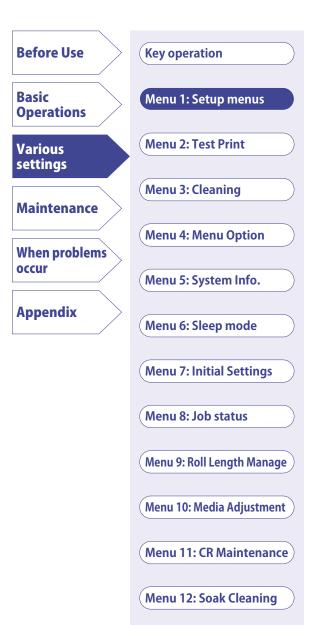


Menu 1: Setup menus

Menu List

Underlines in the setting range are default values.

ltem	Range of values	Description		
User Type	<u>Type1</u> to Type15	Create your own media preset for each media type and save it with appropriate printer settings as "Type xx". You can define up to 15 user types.		
Adjust Print Print quality calibration (Adjust Print)" P.98		Perform bidirectional printing calibration to align dot placement position. You will enter the thickness of media before calibration Note Warm up the heater and then start printing. Heating can be skipped, but this is not recommended because it will change the position of the dot landing.		
Auto	Adjust Pattern A	Run an automatic print quality calibration (Adjust Print) by reading the adjustment pattern using the color sensor. If performing the auto calibration does not improve print quality (banding or graininess appears), run an [Auto] calibration again or perform [Custom] calibration.		
Custom	Confirm Pattern, Rough Pattern A, Fine Pattern A	 Print an adjustment pattern and enter the number of the pattern that has the least misalignment. Confirm patternn: Prints a confirm pattern. Check for misalignment. Rough pattern: Perform this if misalignment is large. Enter the number of the pattern that has the least misalignment. Fine pattern: Perform this if misalignment is small. This menu prints an adjustment pattern at both ends and in the center of the media. Enter the number of the pattern that has the least misalignment. 		



tem	Range of values	Description		
PF Adjust "Media feed adjustment" P.103		This adjustment corrects the amount of media feed.		
Auto		The color sensor reads the adjustment pattern print and the printer runs automatic media feed correction.		
Initial Print 100 to 250 to 500 mm		Specify the media feeding length and print an initial adjustment pattern.		
Initial Change	Initial adjustment print ± 50.0 mm	Measure the adjustment pattern printed and enter the measured length.		
Confirm Print	100 to <u>250</u> to 500 mm	Print a confirmation pattern to check the adjustment.		
Micro Print	11 patterns: ± 0 %, ± 0.1 %, ± 0.2 %, ± 0.5 %, ± 0.8 %, and ± 1.2 %.	Print the adjustment pattern for fine adjustment.		
Micro Change - 5.00 to <u>0.00</u> to 5.00 %		Check the adjustment pattern for fine adjustment and enter the best fine adjustment value.		
Preheater	Off, <u>30</u> to 50° C	Preheats media to control rapid temperature changes.		
Platen Heater	Off, <u>30</u> to 50° C	Suppresses blurring of printed ink.		
Dryer	Off, <u>30</u> to 50° C	Allow the printed ink to dry.		
Vacuum Fan	Off, Low, Medium, <u>High</u> , Ex High	Select the suction power level to hold down media. For soft media, reduce the suction power.		
Thickness 80 to 170 to 1300 um		Enter the thickness of the media being loaded. If the setting has already been made in the Adjust Print menu, no entry is requir The adjust Print P.90		
Copy User Type	Type1 to Type15, ALL	The following settings of the selected user type can be copied to another user type: Adjustment value of Adjust Print/ PF Adjust / Vacuum fan / Thickness/ Various heater settings. When [ALL] is selected, these settings will be copied to all user types.		

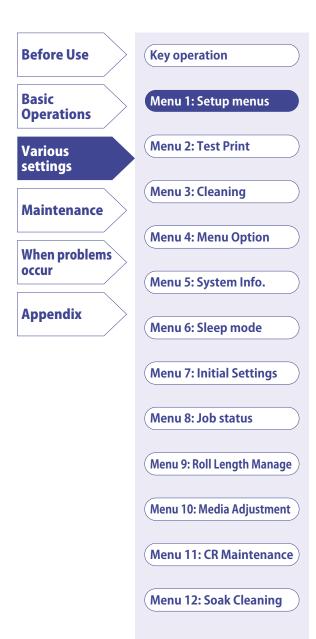
Before Use	(Key operation	ltem	Range of values	Description		
Basic Operations	Menu 1: Setup menus	Spitting	<u>On</u> , On Media, Off	• On: Select Normally, th	t this to ne Pass (ne ink flushing maintenance. perform an ink flushing on the flushing box. Count menu should be set to [1]. MUTOH print quality if it is set to more than [1].
Various settings	Menu 2: Test Print			box and n shortened	nedia m d by 16 i	
Maintenance	Menu 3: Cleaning				er does r	" P.93 not perform an ink flushing maintenance. With le clogs easily. Normally, do not select [Off].
When problems occur	Menu 4: Menu Option			Not		
Appendix	Menu 5: System Info.			clogging. I	lt consu	int head maintenance to avoid nozzle Imes some ink.
прреник	Menu 6: Sleep mode	Pass Count	<u>1</u> to 999 cnt	option does	Specify the interval to perform flushing on the flushing be option does not appear when the Spitting menu is set to	
	Menu 7: Initial Settings			Spitting	Pass Count:	Operation
	Menu 8: Job status				One cnt	Printer performs flushing on the flushing box each time the print head travels back and forth.
	Menu 9: Roll Length Manage					Printer performs flushing on the flushing box once the print head travels back and forth five times.
	Menu 10: Media Adjustment			On Media	1 cnt	Printer performs flushing on the flushing box and on the media margin each time the print head travels back and forth.
	Menu 11: CR Maintenance				5 cnt	Printer performs flushing on the flushing box once the print head travels back and forth five times. Flushing is performed on
	Menu 12: Soak Cleaning					the media margin each time the print head travels back and forth.

Before Use	Key operation
Basic Operations	Menu 1: Setup menus
Various settings	Menu 2: Test Print
Maintenance	Menu 3: Cleaning
When problems	Menu 4: Menu Option
occur	Menu 5: System Info.
Appendix	Menu 6: Sleep mode
	Menu 7: Initial Settings
	Menu 8: Job status
	Menu 9: Roll Length Manage
	Menu 10: Media Adjustment
	Menu 11: CR Maintenance

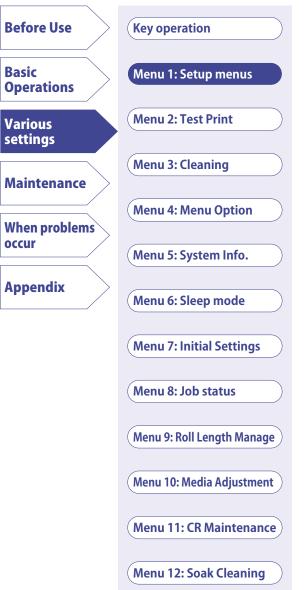
ltem	Range of values	Description		
Side Margin	<u>5</u> to 25 mm	Sets the left and right margins of the media.		
		C Important!!		
		If media skewed, you will get ink smudge on the media that is held down by the edge holder. In such cases, the side margin should be set to more than 10 mm.		
		Note		
		If the Spitting Menu is set to [On Media], the maximum print width will be 16 mm shorter. The left and right margins are "set value + 8 mm". To pitting" P.92		
Media Initial	Off, Top&Width, <u>Width</u>	Select how the printer detects the width of media.		
		Off: No detection is performed. Enter the media width in the [Media Width] menu.		
		 Top&Width: Automatically detects the width and the leading edge of media. 		
		Width: Automatically detects media width.		
Media Width	210 to <u>1000</u> to 1625 mm	Enter the width of media being loaded. If the Media Initial menu is set to [Width] or [Top & Width], the media width that the printer automatically detected will be displayed.		
		🗖 / 🔀 key in, then tap 🛃 Enter.		
Output Mode	Off, <u>Take Up</u> , Auto Cut	 Select the how the printed media is processed. Off: Select this when you do not use the take-up unit. Take Up: Select this when you use the take-up unit. Auto cut: Automatically cuts media after printing. 		
InkDryTimer	<u>0</u> to 60 min	Set the time interval between after printing and before next printing for ink drying. Next printing will start when the specified time has passed.		

Menu 12: Soak Cleaning

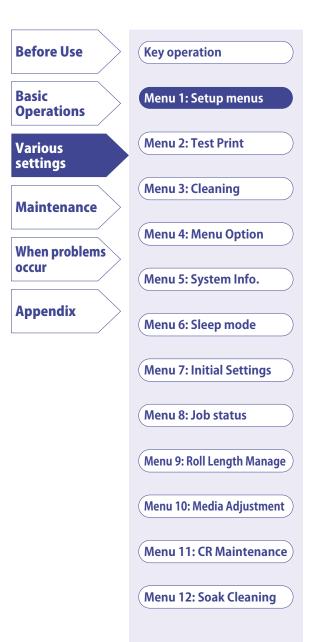
Before Use	(Key operation	ltem	Range of values	Description
Basic Operations Various settings	Menu 1: Setup menus Menu 2: Test Print	Method of Cut	Single Cut to 2 steps <u>Single Cut</u> to <u>3 steps</u> Double Cut to 2 steps Double Cut to 3 steps	 Sets the media cut operation after printing. Single Cut - 2 steps: Cut with less process than "Single Cut - 3 steps". Suitable for narrower width media. Single Cut - 3 steps: Normal cutting method. Double Cut - 2 steps: Select this when "Single Cut - 2 steps" cannot fully cut the media. Double Cut - 3 steps: Select this when "Single Cut - 3 steps"
Maintenance When problems occur	Menu 3: Cleaning Menu 4: Menu Option Menu 5: System Info.			 If the Media Initial menu is set to [Off], media cutting will not be performed. The Media Initial P.93 This option may not cut off some types of media. In such cases, set the Output Mode menu to [Off] and cut the media
Appendix	Menu 6: Sleep mode Menu 7: Initial Settings	Cut Pressure	Low, <u>High</u>	 Sets the pressure to cut the media. Low: Select this mode, when the High mode gives too much pressure or when you are using thin media.
	Menu 8: Job status Menu 9: Roll Length Manage Menu 10: Media Adjustment	Origin	PF, CR	 High: Normal cutting pressure. Sets the print start position (origin). ▲ / ▲ key: Change the print start position (origin) in the media feeding direction (PF). ▲ / ▲ key: Change the print start position (origin) in the print head moving direction (CR). ▲ (Enter): Tap the key so that the carriage will move to the specified print start position.
	Menu 11: CR Maintenance Menu 12: Soak Cleaning			



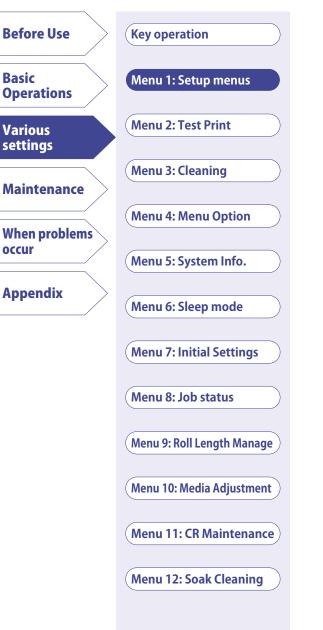
ltem	Range of values	Description	
Prevent Stick	<u>Off</u> , On	Feed media back and forth before printing to prevent media sticking. This menu is disabled if the [Output Mode] menu is set to [Take Up].	
Standby Heating	10 to <u>60</u> min	Sets the heater off time after printing.	
Head Travel	Data, Machine, <u>Media</u>	 Select the width that the print head travels for printing. Data: Travels the data width. Machine: Travels the full printer width. Media: Travels the media width. 	
Multi Strike	<u>1</u> to 9 cnt	Specify the number of times the printer prints the same line. Increase the number of times if you want to perform high density printing on transparent media.	
Pass Wait	0. <u>0</u> to 5.0 sec	Sets the amount of time the carriage is paused each time it scans. Ink bleeding can be improved when ink does not dry easily, such as in layered applications.	
Slant Check	Off, <u>On</u>	The printer checks skew after printing. If media skew is detected, an error message will be displayed.	
Auto Cleaning		Set the type and timer of automatic cleaning. It prevents nozzle clogging.	
Standby Mode		Sets the automatic cleaning to be performed while in ready-to- print state. Interval includes power off time. Auto-cleaning is not performed when the power is turned off, but is performed the next time the power is turned on.	
Cleaning Type	Off, Short, Normal, Long	Select the type of automatic cleaning.	
Cleaning interval	10 to <u>360</u> to 1440 min	Set the timer for automatic cleaning.	
While Printing		Sets the automatic cleaning to be performed during printing. When the print time setting is exceeded, cleaning begins. When cleaning is complete, printing resumes.	
Cleaning Type	Off, Short, Normal, Long	Sets the type of cleaning.	
Cleaning interval	5 to <u>180</u> min	Sets the cleaning interval.	
Before Print		Sets the automatic cleaning to be performed before printing.	
Cleaning Type	<u>Off</u> , Short, Normal, Long	Sets the type of cleaning.	



ltem	Range of values	Description
Exhaust Fan	Off, <u>Low</u> , High	Exhausts the air inside the printer. Ink mist is also ejected, reducing contamination inside the printer. It is recommended to operate for long printing runs.
Longstore		Clean the print head. ADesignated maintenance cleaner is required.
Initialization		Restores various settings to factory defaults.
ALL		Initializes all settings.
User Type		Initialize all the user types.
Except UserType		Initialize the settings other than user type.
Header Dump	Off, on, Dump, Print	 Select whether to print the following dump information for the print data; (Data header / Data dot number / pint time / serial number / firmware version / receiving time / receiving size). Off: This information will not be printed. On: The printer prints an image data followed by dump information. "Receiving time" and "Receiving size" are not printed. Dump: PThe printer prints dump information except data dot number. Print: The printer prints the last dump information. "Receiving time" and "Receiving size" are not printed. Print: The printer prints the last dump information. "Receiving time" and "Receiving size" are not printed. The message [No data] will appear if there is no dump information in the history Dump data is used for reference information when you receive technical support. When you are printing through computer, the print settings configured in the RIP software will be printed here.



ltem	Range of values	Description	
Heater Control	<u>Normal</u> , Fixer, Dryer	 Sets heater operation. Normal: Printing starts when the heater reaches the specified temperature. Use this option when you do not experience media cockling. Fixer: Printing starts before the heater reaches the specified temperature. Printing colors may change. Dryer: Use this option when you are using the take-up unit or you want to reduce a chance of media cockling without reducing ink drying. 	
Start Feed	<u>0</u> to 500 mm	 reducing ink drying. Sets the margins between print data. Image: Note When the Output Mode menu is set to [Off], the margin between print data will be the length specified in the Start Feed menu plus 10 mm. When the Output Mode menu is set to [Take Up], the margin between print data will be the length specified in the Start Feed menu. When the Output Mode menu is set to [Take Up], the margin between print data will be the length specified in the Start Feed menu. Margins between print data are set at 10 mm. Image: Image: Image:	
Temporary		Temporarily displays the menu set to hidden in the "Menu Option" menu.	



Print quality calibration (Adjust Print)

This calibration adjusts dot placement position for bidirectional printing. Enter the thickness of the media before adjusting.

- Be sure to perform this calibration in the following cases
- 1. When using this product for the first time
- 2. When you changed with the different type of media
- 3. After you performed the "Adjust Head" calibration 3 "Adjust Head" P.109
- If any of the following symptoms are observed, perform this calibration
- 1. When graininess look or blurred lines appear on the print in bidirectional printing

■ "Adjust Head" has following menus:

Auto	Run an automatic print quality calibration (Adjust Print) by reading the adjustment pattern using the color sensor. If performing the auto calibration does not improve print quality (banding or graininess appears), run an [Auto] calibration again or perform [Custom] calibration.
Custom	 Print an adjustment pattern and enter the number of the pattern that has the least misalignment. Confirm patternn: Prints a confirm pattern. Check for misalignment. Rough pattern: Perform this if misalignment is large. Enter the number of the pattern that has the least misalignment.
	 Fine pattern: Perform this if misalignment is small. This menu prints an adjustment pattern at both ends and in the center of the media. Enter the number of the pattern that has the least misalignment.

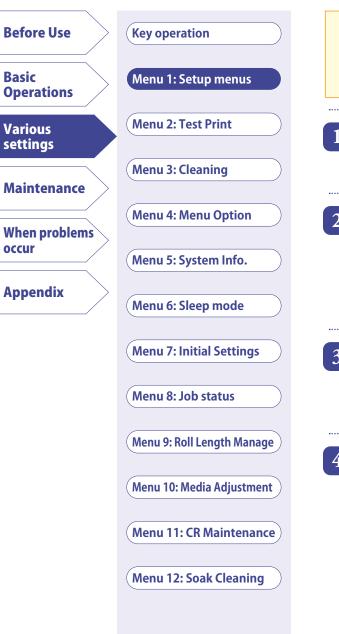
🛄 Note

 To print an adjustment pattern, more than 550 mm width of printable area is required. If less than 550 mm, adjustment cannot be performed. Printable width on the media can be adjusted by changing CR origin and side margin (left and right side margin) settings.

The state of the second second

• Heater warming up is performed before printing the pattern. The printer control panel will display the message "Skip Heater Warm Up? No". Printing can be started during warm-up, but this is not recommended because the dot placement position may change.

- If the image quality does not improve after adjusting the "Print quality calibration (Adjust Print)", "Adjust Head" may improve the image quality.
 - The second secon



Caution

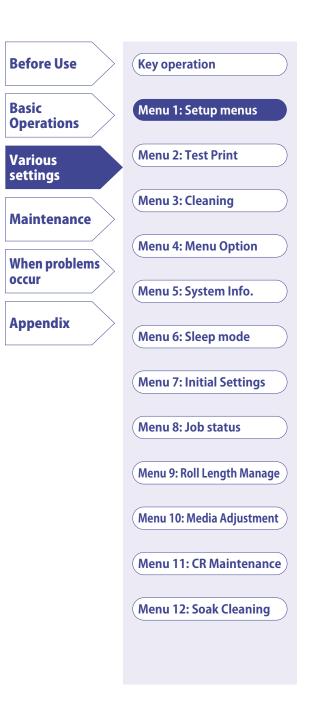


Do not touch the media guide while printing or when the message "Warming Up" appears on the panel. There is a risk of burn injuries.

Load media and detect media width. **The second seco** Make sure to load it without any warps or curls. Access the "Adjust Print" menu in the user type menu. 2 1. Tap 👩 (Home). "Setup" will be displayed. 2. Tap key to display "User Type Type 1". 3. Tap 🔼 / 💟 key to select any user type. 4. Tap [J (Enter). 5. Tap 🔼 / 💟 key to select "Adjust Print". Tap the key to display "Thickness: ". 3 Enter the media thickness. • A / Key: Enter a value • (Enter): Confirm the setting



Tap A / Key to select the adjustment method. **Print quality calibration (Adjust Print)**" P.98



Tap 🛃 (Enter) to start the adjustment.

5

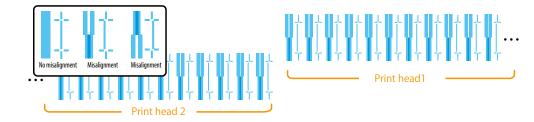
- 🔲 (Cancel): Cancels printing.
- When "Auto" is selected: the calibration is performed automatically.
- If the adjustment is successful, "AutoAdjust Succeeded OK -> Enter" is displayed.
- If the adjustment fails, the message "AutoAdjust Failed OK -> Enter" is displayed. Redo the auto adjustment or perform a custom adjustment. The adjustment value for the pattern which has been failed to calibrate or has not been calibrated yet will not be saved in the printer.

🛄 Note

• If the image quality does not improve after performing the Auto Adjustment (e.g. banding, graininess, etc.), redo the Auto Adjustment or perform a Custom Adjustment.

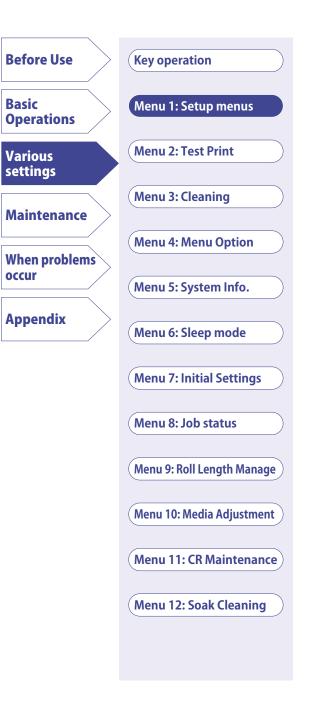
• When Custom is selected:

1. Prints the "Confirm patternn". Check for misalignment. If there is no misalignment, proceed to the next step.



- If the amount of misalignment is large: Print a rough pattern. 3 "Rough pattern" P.101
- If the amount of misalignment is small: Print a fine pattern. ③ "Fine pattern" P.102

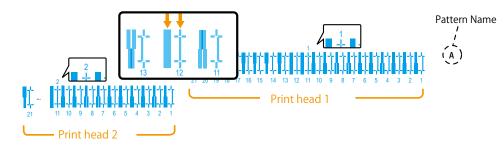
Tap 🛃 (Enter) to finish the adjustment.



Rough pattern

1. Perform a rough adjustment.

- Tap 📉 / 💟 key to select the "Rough Pattern".
- Tap 🛃 (Enter) to print the adjustment pattern.
- 2. Look at the print for Print Head 1 and select the number written under the pattern that looks most aligned.



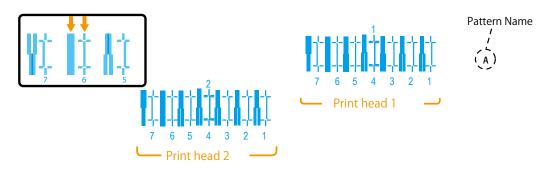
- 3. Enter the number of the pattern with no misalignment.
- For the above illustration, you will enter "Pattern A: 12".
- 🔼 / 💟 : Change the number.
- (Enter): Confirm the change..
- 4. Enter the number for Print Head 2 in the same way.
- 5. Perform a fine adjustment.
 - Fine pattern P.102



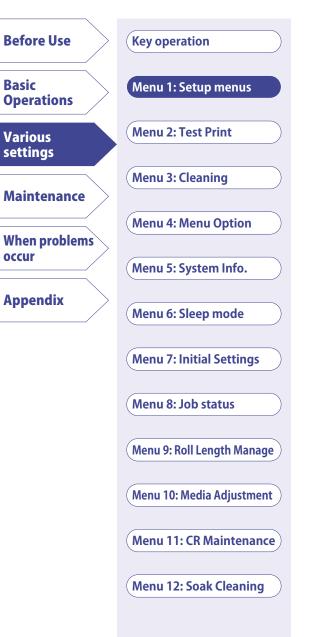
Fine pattern

1. Perform fine-tuning.

- Tap ▲ / ▲ key to select the "Fine pattern".
- Tap 🛃 (Enter) to print the adjustment pattern. Adjustment patterns are printed on both ends and in the center of the media.
- 2. Look at the results for Print Head 1 and select the number written under the pattern that looks most aligned.



- 3. Enter the number of the pattern with no misalignment.
- For the above illustration, you will enter "Pattern A: 6".
- 🔼 / 💟 : Change the number.
- (Enter): Confirm the change.
- 4. Perform an adjustment for Print Head 2 in the same way.



Media feed adjustment

This adjustment corrects the amount of media feed.

- Run this adjustment if any of the following symptoms are observed
- 1. When white or dark-colored lines appear the scanning direction of the carriage

• Be sure to run this adjustment in the following cases

- 1. When using this product for the first time
- 2. When you changed with the different type of media
- 3. When you changed the pressure on the pressure rollers

■ "PF Adjust" has the following menus:

Auto	 The color sensor reads the adjustment pattern print and the printer runs automatic media feed correction. The value after the Auto adjustment is automatically saved in Micro Change. The value of Initial Change may be initialized. The value of Initial Change may be initialized. 	
Initial Print	Specify the media feeding length and print an initial adjustment pattern.	
Initial Change	Measure the adjustment pattern printed and enter the measured length.	
Confirm Print	Print a confirmation pattern to check the adjustment.	
Micro Print	Print the adjustment pattern for fine adjustment.	
Micro Change	Check the adjustment pattern for fine adjustment and enter the best fine adjustment value.	

🛄 Note

- To print an adjustment pattern, more than 400 mm width of printable area is required. If less than 400 mm, adjustment cannot be performed. Printable width on the media can be adjusted by changing CR origin and side margin (left and right side margin) settings.
 - Image: Comparison of the second state of the s
- Heater warming up is performed before printing the pattern. The printer control panel will display the message "Skip Heater Warm Up? No". Printing can be started during warm-up, but this is not recommended because the dot placement position may change.

W "Start printing during warm-up" P.83



Caution

Do not touch the media guide while printing or when the message "Warming Up" appears on the panel. There is a risk of burn injuries.

Load media and detect media width. The second secon

Make sure to load it without any warps or curls.

Access the PF Adjust menu in the User Type menu.

- 1. Tap 👩 (Home). "Setup" will be displayed.
- 2. Tap key to display "User Type Type 1".
- 3. Tap A / Key to select any user type.
- 4. Tap 🛃 (Enter).
- 5. Tap 🔼 / 💟 key to select "PF Adjust".

Tap A / Key to select the adjustment method. The second secon

Tap 🛃 (Enter) to start the adjustment.

- (Cancel): Cancels printing.
- When "Auto" is selected: the calibration is performed automatically.
- If the adjustment is successful, "AutoAdjust Succeeded OK -> Enter" is displayed.
- If the adjustment fails, the message "AutoAdjust Failed OK -> Enter" is displayed.

🔲 Note

If white or dark colored line still appears even after auto adjustment, perform media feed adjustment manually.

When you select a menu other than Auto: 🐨 "Perform manual media feed adjustment" P.105

Tap (Enter) to finish the adjustment.



Perform manual media feed adjustment

You will need a ruler for this adjustment. Please prepare a commercially available ruler. If you already know the adjustment value, enter it in the "Micro Change" (Step9 (P.106)).

- 1. Perform an "Initial Print".
- Tap ▲ / ▲ key to select "Initial Print".
- Tap 🛃 (Enter) to print the adjustment pattern.

Note

- The default value for feed length is set to 250 mm. Increasing the feed length slightly improves the accuracy of "Media feed adjustment".
- 2. Cut the media if needed.
- 3. Using a ruler, measure the length between the printed " + ".



- 4. Enter the measured length in "Initial Change".
- Tap ▲ / ▲ key to select "Initial Change".
- Enter the actual measured value and tap 🛃 (Enter).
- 5. Perform a "Confirm Print".
- Tap ▲ / ▲ key to select "Confirm Print".
- Tap 🛃 (Enter) to print the adjustment pattern.

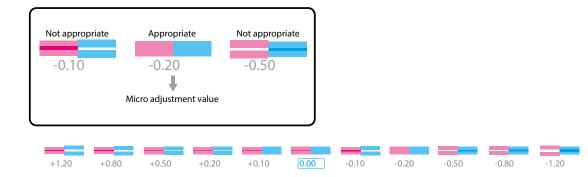
🛄 Note

 The default value for feed length is set to 250 mm. Increasing the feed length slightly improves the accuracy of "Media feed adjustment".



6. Cut the media if needed.

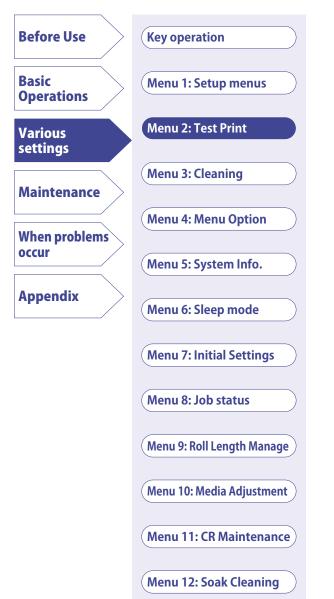
- 7. Using a ruler, measure the length between the printed " + " (as well as Step3 (P.105)).
- If the length being displayed and the measured distance match: proceed to the next step.
- If the length being displayed and the measured distance do not match: Start over from the "Initial Print" (Step1 (P.105)).
- 8. Perform a "Micro Print".
- Tap ▲ / ▲ key to select "Micro Print".
- Tap 🛃 (Enter) to print the adjustment pattern.
- Look at the print and select the value written under the pattern that has least white lines or overlapping.



- 9. Enter the selected value in the "Micro Change" field.
- Tap ▲ / ▼ the key to select "Micro Change".
- Enter a value and tap 🛃 (Enter).

Note

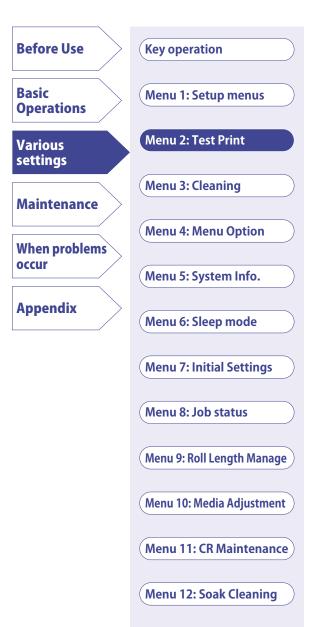
• Once the micro adjustment value has been saved, the value will become the reference value to be printed in the center of the pattern from the next print. For example, if you have entered "-0.20" and print a micro adjustment pattern, values printed below block pattern will be changed to (from left to right) +1.00, +0.60, +0.30, 0.00, -0.20 (reference value), -0.30, -0.40, -0.70, -1.00, -1.40.



Menu 2: Test Print

Menu List

Item	Description	
Nozzle check F "Performing Nozzle Check" P.61	Prints a nozzle check pattern using all nozzles.	
Mode Print	Prints the following information set in the currer • Settings of each heater Preheater" P.91,"Platen Heater" P.91,"D • Micro adjustment value of media feed adjustm ""PF Adjust" P.91 2021/10/08 0:00 Pre: 30°C	Dryer" P.91
Setup List	Prints the settings configured in the printer and	Term Term <th< th=""></th<>
	Carter D. S. A. S.	Image: Second for the second



Item	Description	
Pallet	Prints a color palette pattern.	
Adjust Head	This product is equipped with two printheads. This adjustment will calibrate dot placement between two print heads.	
Custom	Print the adjustment pattern and enter the number of the pattern that has least misalignment. that has least misalignment.	
Auto	The color sensor reads the adjustment pattern and the printer automatically runs a print head alignment.	



Adjust Head

This product is equipped with two printheads. This adjustment will calibrate dot placement between two print heads.

- Be sure toperform this adjustment in the following cases
- 1. When using this product for the first time
- · Perform this adjustment if any of the following symptoms are observed
- 1. When graininess look or blurred lines appear in the unidirectional printing.
- 2. When you noticed the misalignment between two print heads.
- 3. When the image quality does not improve even after "Print quality calibration (Adjust Print)" is performed.
- 4. Ink dot does not spread when printing on thin media

"Adjust Head" has the following menus:

Auto The color sensor detects the adjustment pattern and the printer runs automatic calibrati		
Custom	Print the adjustment pattern and enter the number of the pattern that has least misalignment.	

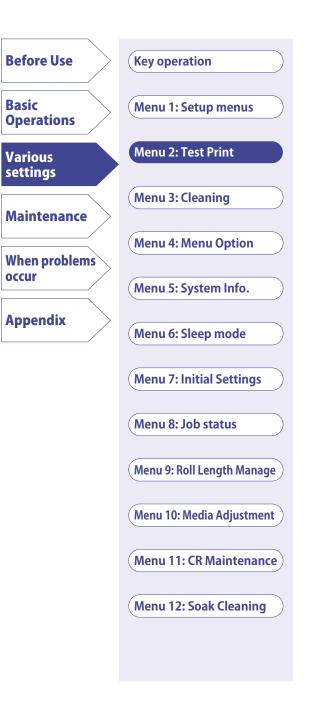
🛄 Note

- After performing "Adjust Head" be sure to perform "Print quality calibration (Adjust Print)". Misalignment may occur in the bidirectional printing due to the head alignment. 3 "Print quality calibration (Adjust Print)" P.98
- If the image quality does not improve after performing the Auto Adjustment (banding or graininess is observed), redo the Auto Adjustment or perform a Custom Adjustment.
- To print an adjustment pattern, more than 550 mm width of printable area is required. If less than 550 mm, adjustment cannot be performed. Printable width on the media can be adjusted by changing CR origin and side margin (left and right side margin) settings. So "Media Width" P.93, "Origin" P.94, "Side Margin" P.93
- Heater warming up is performed before printing the pattern. The printer control panel will display the message "Skip Heater Warm Up? No". Printing can be started during warm-up, but this is not recommended because the dot placement position may change. ③ "Start printing during warm-up" P.83

<u> C</u>aution



Do not touch the media guide while printing or when the message "Warming Up" appears on the panel. There is a risk of burn injuries.



Head adjustment procedure



• Make sure to load it without any warps or curls.

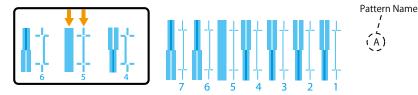
Access the "Adjust Head" menu.

- 1. Tap 👩 (Home). "Setup" will be displayed.
- 2. Tap 🗙 key to display "Test Print".
- 3. Tap key to display "Nozzle check".
- 4. Tap 🗖 / 💟 key to select "Adjust Print".
- 5. Tap 📐 key.

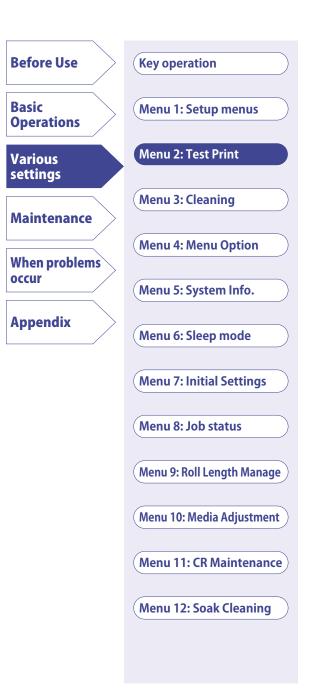
3 Tap ▲ / ▲ key to select the adjustment method.

Tap 🛃 (Enter) to start the adjustment.

- 🔲 (Cancel): Cancels printing.
- When "Auto" is selected: the calibration is performed automatically.
- If the adjustment is successful, "AutoAdjust Succeeded OK
 - -> Enter" is displayed.
- If the adjustment fails, the message "AutoAdjust Failed OK -> Enter" is displayed. Redo the auto adjustment or perform a custom adjustment. The adjustment value for the pattern which has been failed to calibrate or has not been calibrated yet will not be saved in the printer.
- When Custom is selected: The adjustment pattern will be printed on both ends and in the center of the media.
- 1. Check the printed results to find the pattern with the least misalignment.

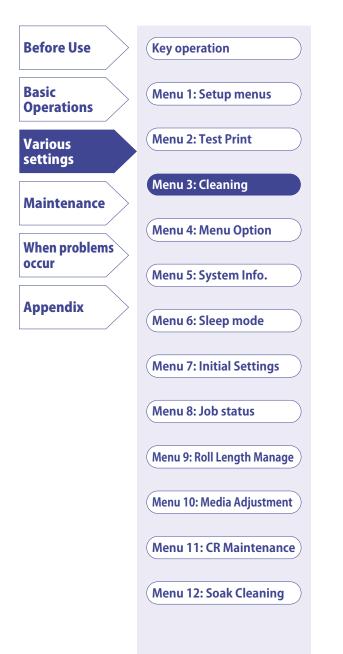


2. Tap ▲ / ▲ key and enter the number of the pattern with no misalignment.
For the above illustration, you will enter "Pattern A: 5".





Tap 🛃 (Enter) to finish the adjustment.



Menu 3: Cleaning

Clean the print head. You can select the heads to be cleaned and the type of cleaning.

Menu List

Item		Range of values	Description
Cleaning			
	Head Select	All, Head 1, Head 2	Select the print head to be cleaned. If nozzle clogging is occurring in a particular printhead, ink consumption can be reduced by selecting the target printhead.
	Cleaning Type "Head cleaning mode" P.63	Short, Normal, Long, Little Charge, Initial Charge	Select the cleaning type. Use it according to the print results of the nozzle check. Initial Charge is displayed when [All] is selected for head selection.

G Important!!

When performing Little Charge and Initial Charge, observe the following. A large amount of ink is consumed to re-fill the ink.

- Do not turn off the power.
- Do not unplug the power cord.
- Do not open the front cover or maintenance cover.
- Do not raise the pressure rollers.
- Do not pull out the ink bag case or smart chip card.
- Do not use ink bags with low ink levels.



Menu 4: Menu Option

You can select items to be displayed in the "Setup" menu. It Menu 1: Setup menus P.90

1	Access the "Menu Option" menu.
	1. Tap 🝙 (Home). "Setup" will be displayed.
	2. Tap 🗖 / 🔽 key to display "Menu Option".
	3. Tap 🔰 key to select "User Type".
	_
2	Tap 🔼 / 💟 key to select an item to show/hide.

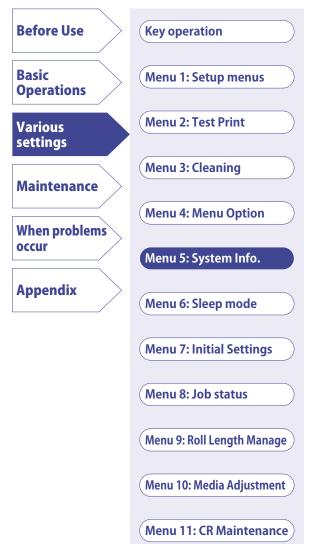
Tap 🛃 (Enter) to show or not to show the item.

[*]: to be displayed, []: not to be displayed

Note Note

3

"All On" and "All Off" can be used to show or hide all items at once.



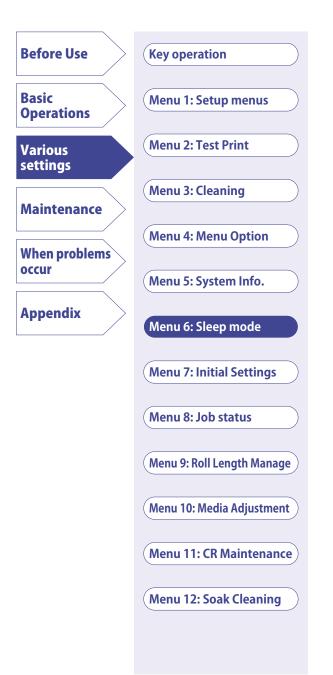
Menu 5: System Info.

Displays printer information.

Menu List

ltem	Description				
Version	Displays the version of the firmware (M: Main, C: Controller).				
Printer Model	Displays the model name of the printer.				
Serial Number	Displays the serial number of the printer.				
Color	Displays the ink set being used				
Total Print Area	Displays the cumulative area printed from the time of purchase to the present.				
Ink Status	 Displays the amount of ink remaining in each ink bag (Unit: %). 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 bag. Smartchip Recovery" P.193 				
Life Times	 Displays remaining life of the parts that need to be replaced. Parts life is indicated by the number of [*] marks (max. 5 (100 % remaining)). The number of [*] marks decreases by one (20 %) as the life of the component approaches. Example: [Pump 1 E****F]: 100 to 80 % life remaining [Pump 1 E** F]: 40 to 20 % life remaining [Pump 1 E* F]: 20 % or less life remaining [Pump 1 Change]: Request replacement of parts. When the parts need to be replaced, the message "Life Time [xxx]/ OK -> Enter" will appear on the panel. This message can be cleared by tapping the [] (Enter), but it will be prompted again in seven days. 				
Ink expiration	Displays ink expiration date.				

Menu 12: Soak Cleaning



Menu 6: Sleep mode

Sleep mode allows head cleaning to be performed periodically even when the printer is not in use. During sleep mode, all keys except the power button and [Enter] key are disabled.

Menu List

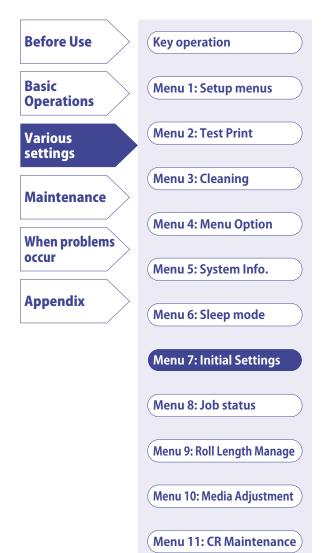
Underlines in the setting range are default values.

Item	Range of values	Description
Cleaning Setting		Sets the automatic head cleaning to be performed during sleep mode.
Cleaning Timer	1 to <u>6</u> to 24 hours	Sets the timer for automatic cleaning.
Start		 Perform a daily maintenance before entering into sleep mode. "Daily maintenance at the end of work" P.144 To wake up from sleep mode, tap (E) (Enter). Sleep mode cannot be entered in the following cases Errors are occurring (Ink End, No Bag, Full Waste Ink Tank, Cover Open, etc.) Printer is running (e.g., during Media Initial, printing, etc.)

G Important#

If any of the following conditions occur during sleep mode, head cleaning will not be executed (operation will be stopped during head cleaning). When restored to normal conditions, head cleaning will resume.

- Front cover or maintenance cover is open.
- The pressure rollers is up.
- Waste ink tank is full.
- Ink bag case is removed.
- Smart chip card is removed.
- A non-genuine smart chip card is inserted.



Menu 7: Initial Settings

Configure printer settings.

Menu List

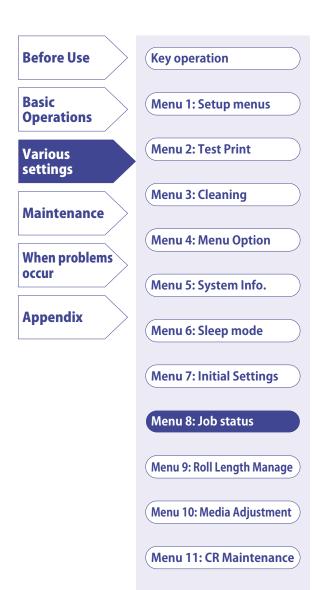
Underlines in the setting range are default values.

ltem	Range of values	Description
Language	English, Dutch, Spanish, France, Italian, Portuguese, German, Japanese	Select the language to be displayed on the panel.
Temperature	<u>Celsius [° C]</u> , Fafrenheit [° F]	Select the temperature unit to be displayed on the panel.
Length	<u>mm</u> , inch	Select the length unit to be displayed on the panel.
IP Address	0.0.0.0 ~ <u>192.168.1.253</u> ~ 255.255.255.255	
Subnet Mask	0.0.0.0 ~ <u>255.255.255.0</u> ~ 255.255.255.255	
Gateway	0.0.0.0 ~ <u>192.168.1.254</u> ~ 255.255.255.255	
Alert Buzzer	Off, <u>On</u>	 Select how the alert buzzer beeps when an error occurs. On: The buzzer beeps continuously. Off: The buzzer stops after a certain number of beeps. This prevents the alert buzzer from sounding continuously at night or when the operator is not present.

द्∏ Important<u>//</u>

Menu 12: Soak Cleaning

Always consult your network administrator before setting the IP address, subnet mask, and gateway of the printer.



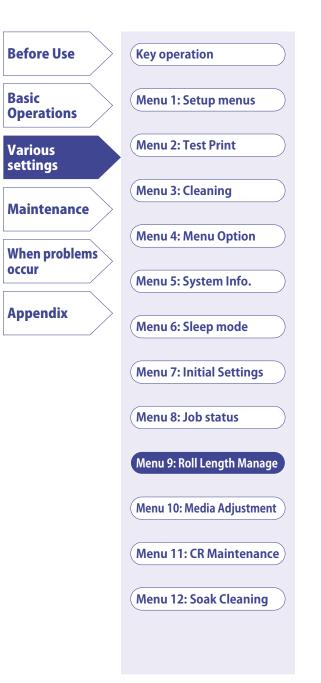
Menu 8: Job status

Displays various information on previous printout results.

Menu List

ltem	Description			
Status	Indicates whether printing is complete.			
ToDoLength	Displays the total length of the print data (Media feed direction).			
Done	Displays the length of the printed data.			
Print Remain	Displays the length of data not printed.			

Menu 12: Soak Cleaning

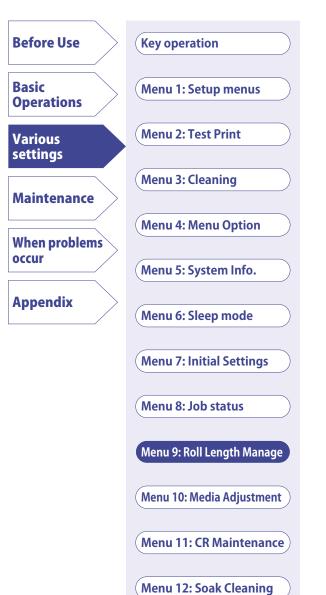


Menu 9: Roll Length Manage

This menu allows you to manage the remaining length information of roll media being loaded in the printer. You can print this information on the roll media with text and a code. The next time when the roll media is loaded, the printer will read the code and manage the remaining length.

Note

- In the following cases, you will not be able to select the menu other than "Rollkind" P.120. (An error message will appear)
- When the Media Initial menu is set to "Off". 3 "Media Initial" P.93
- When no media is loaded I "Load the media into the printer" P.45
- "Print" P.119 or "Simple Print" P.119 requires at least 400 mm printable width. If it is less than 400 mm, you will not be able to print it. (An error message will appear)
- Printable width on the media can be adjusted by changing CR origin and side margin (left and right side margin) settings. Se



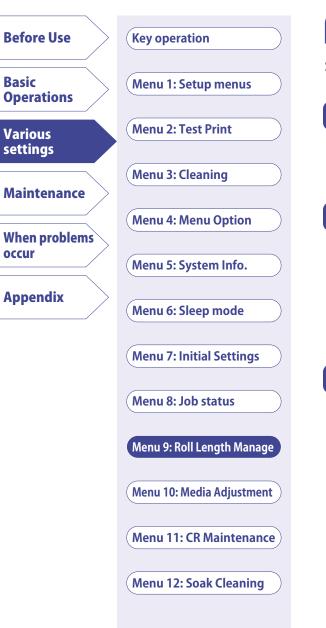
Menu List

Underlines in the setting range are default values.

ltem	Set value	Description			
Print		After cutting the print off the roll media, print a roll remaining length management information (roll media type, remaining length, date printed, roll length management code) on the roll media. This information cannot be printed when the "Rollkind" menu is set to [Off]. 🐨 "Rollkind" P.120			
Simple Print		After cutting the print off the roll media, print a roll remaining length management information (roll media type, remaining length, date printed) on the roll media. This information cannot be printed when the "Rollkind" menu is set to [Off]. The "Rollkind" P.120			
Scan Scan" P.122		Read the roll length management code printed on the roll media. If the reading fails, the "Roll Length" menu appears. Please enter manually. 🐨 "Rollkind" P.120			

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Before Use		ltem	Set value	Description	
Basic Operations	Key operation Menu 1: Setup menus	Auto Scan	<u>Off</u> , On	 Select whether or not the printer automatically scans the remaining length management code. Off: The printer does not automatically read the code. On: The printer automatically scans the code. Tapping the III (Cancel) will cancel the 	
Various settings	Menu 2: Test Print			reading.	
Maintenance	Menu 3: Cleaning			Read timing When the printer is turned on When the roll media is replaced 	
When problems occur	Menu 4: Menu Option Menu 5: System Info.			If the "Auto Scan" is set to "On" but the printer does not read the code, check if the following settings are set to "Off" or "Auto Cut".	
Appendix	Menu 6: Sleep mode	Auto Print	<u>Off</u> , On	Select whether or not to prompt a confirmation message when you perform media cutting, asking you whether to print a remaining length management information on a roll media.	
	Menu 7: Initial Settings				 Off (Default): This message is not prompted. On: The confirmation message [Print Roll's Remain?] appears after you perform media cutting. Select "Yes" or "No" and tap (Cinter).
	Menu 8: Job status			If the "Roll Length" menu is set to [Off], the Auto Print menu cannot be set to [On].	
	Menu 9: Roll Length Manage			Image: Weight of the second se	
	Menu 10: Media Adjustment Menu 11: CR Maintenance				
	Menu 12: Soak Cleaning				



Scan

Scan the remaining length management code.



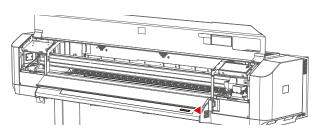
Load a roll media that the remaining length management code has been printed on into the printer. "Load the media into the printer" P.45

Wenu 9: Roll Length Manage" P.118, Print P.119

• Make sure to load it without any warps or curls.

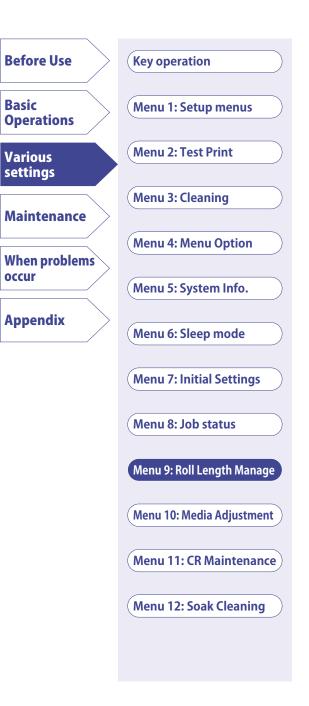


Check that the code printed on the media has passed through the pressure rollers.



3 Access the Scan menu in the "Roll Length Manage" menu.

- 1. Tap 👩 (Home). "Setup" will be displayed.
- 2. Tap 🗖 / 🗙 key to display "Roll Length Manage".
- 3. Tap key to display "Print".
- 4. Tap ▲ / ▲ key to select "Read".





4

Tap 🛃 (Enter) to start reading.

• (Cancel): Cancels the reading.

When the printer scanned the code successfully, the following settings will automatically be specified in Roll Length:

Wenu 9: Roll Length Manage" P.118

- Type of roll media
- Remaining roll length

Note

• The printer may fail to scan if a remaining length management code has dirt or fold marks on it. In case failed to scan the code, manually specify the Roll Length settings based on the remaining length management information printed in text on the media.

B "Rollkind" P.120



Menu 10: Media Adjustment

The printer automatically runs print quality calibration and media feed adjustment.

(a) "Print quality calibration (Adjust Print)" P.98, "Media feed adjustment" P.103

Note

• This menu prints an adjustment pattern. To print it, more than 550 mm of printable area is required. If less than 550 mm, calibration cannot be performed. Printable width on the media can be adjusted by changing CR origin and side margin (left and right side margin) settings.

The Media Width P.93, Origin P.94, Side Margin P.93

 If the image quality does not improve after adjusting the "Print quality calibration (Adjust Print)", "Adjust Head" may improve the image quality.

Tradjust Head" P.109

• Heater warming up is performed before printing the pattern. The printer control panel will display the message "Skip Heater Warm Up? No". Printing can be started during warm-up, but this is not recommended because the dot placement position may change.

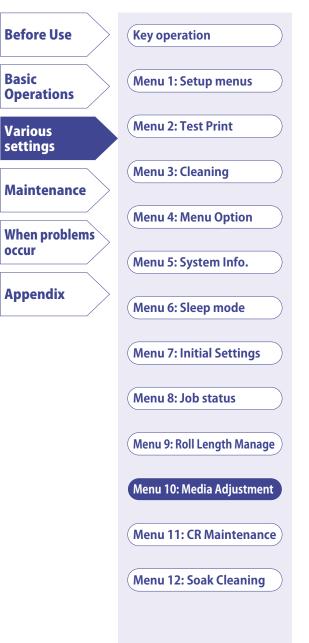
W "Start printing during warm-up" P.83

• The User Type and media thicknesses selected here are reflected in the set values.

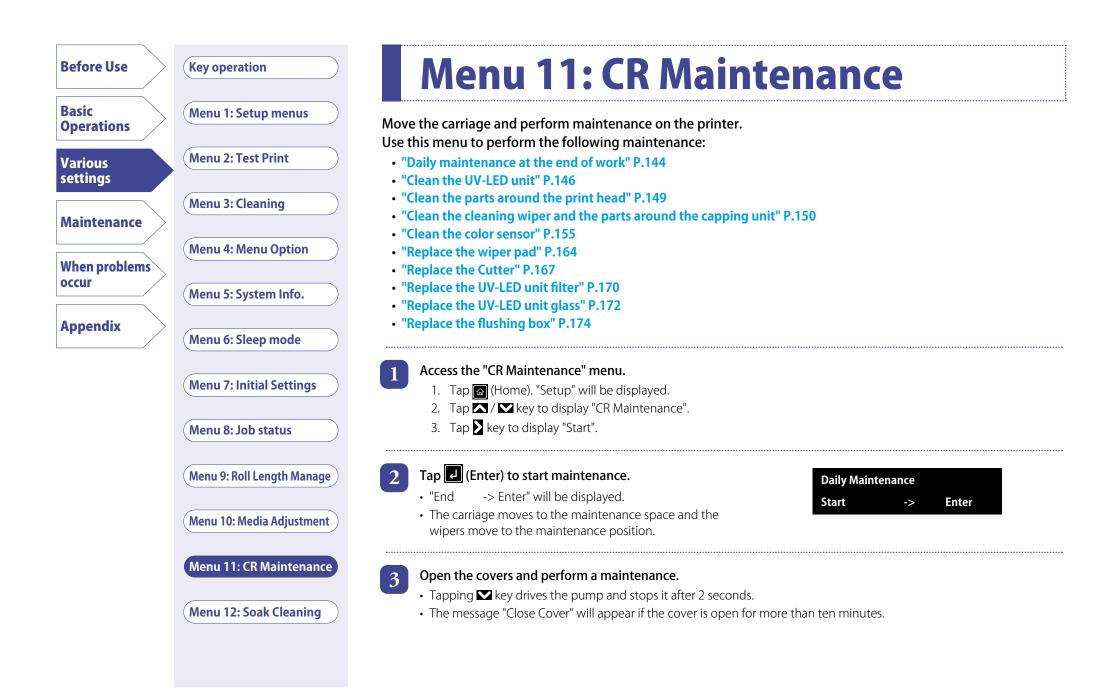
1 Caution

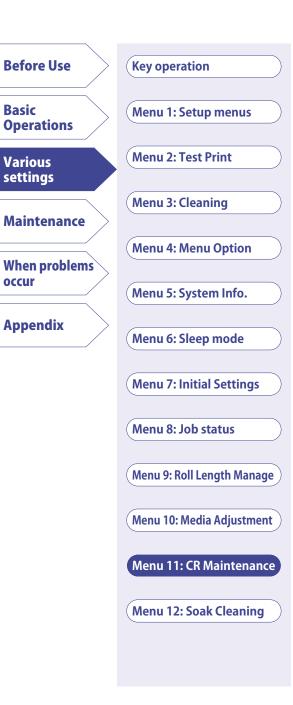


Do not touch the media guide while printing or when the message "Warming Up" appears on the panel. There is a risk of burn injuries.



	Access the "Media Adjustment" menu.
<u>_</u>	1. Tap 🝙 (Home). "Setup" will be displayed.
	2. Tap 🗖 / 💟 key to display "Media Adjustment".
	3. Tap 🔰 key to display "User Type Type 1".
3	Tap 🗖 / 🔀 key to select any user type.
4	Tap 🛃 (Enter) to enter the media thickness.
Τ	• ► / ► Key: Enter a value
	• I (Enter): Confirm the setting
5	Tap 🛃 (Enter) to start automatic adjustment.
	• 🔟 (Cancel): Cancels printing.
	 If the adjustment is successful, "AutoAdjust Succeeded OK -> Enter" is displayed.
	 If the adjustment fails, the message "AutoAdjust Failed OK -> Enter" is displayed. Please redo it mar Print quality calibration (Adjust Print) P.98 and Media feed adjustment P.103). The adjustment va the pattern which has been failed to calibrate or has not been calibrated yet will not be saved in the printer
	Note
	• If the image quality does not improve after performing the Auto Adjustment (e.g. banding, graininess, e the Auto Adjustment or perform a Custom Adjustment.
	• The initial values for User Type and media thickness reflect the currently selected User Type values.





Clo	se all covers when maintenance is complete.

4

5

Tap 🛃 (Enter) to exit maintenance.

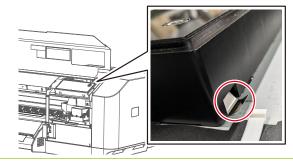
Note

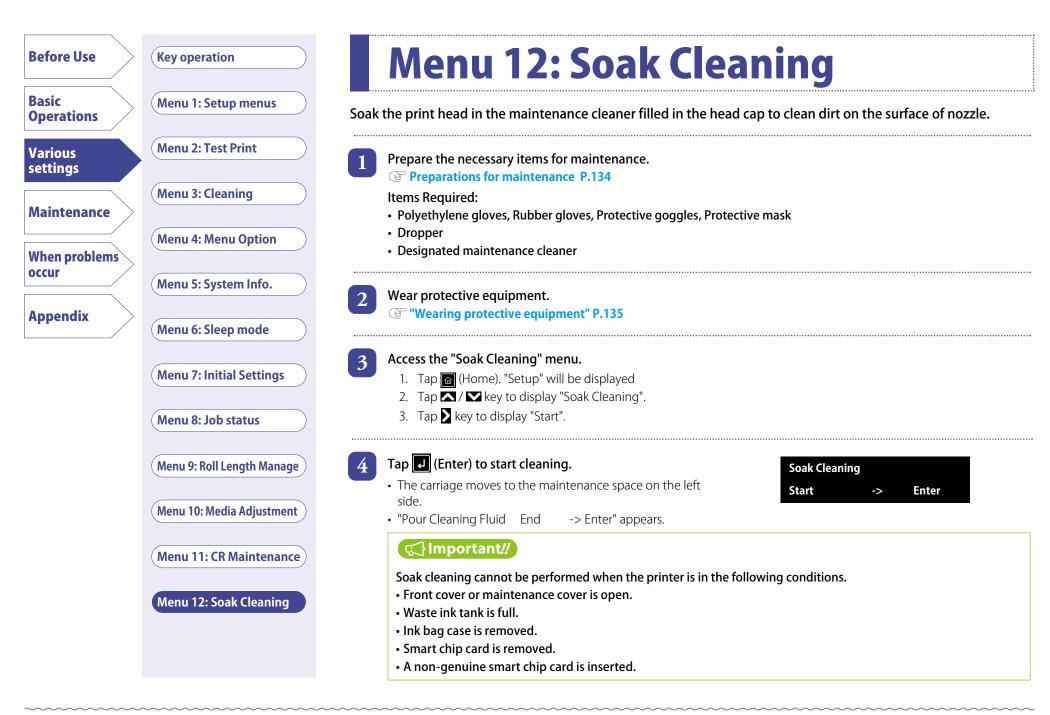
After 30 seconds of closing the cover, maintenance is automatically terminated.

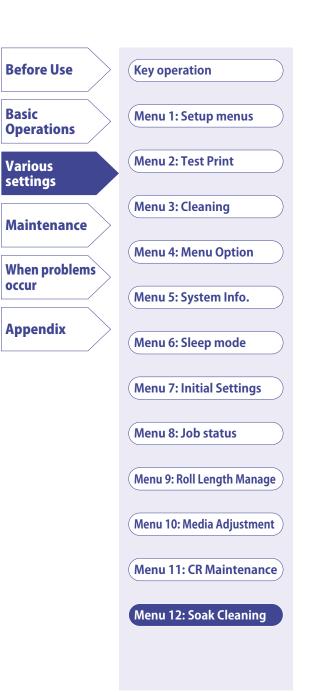
Daily Maintenance		
End	->	Enter

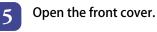
G Important

When you open the front cover, there is the metal part popped out on the upper right of the printer control panel. Do not touch it to avoid injury.



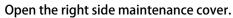


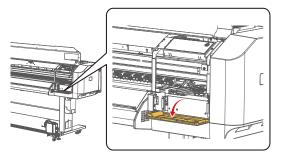




6

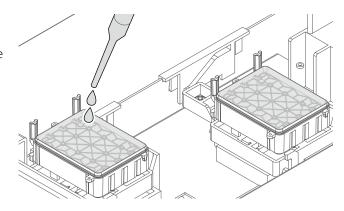






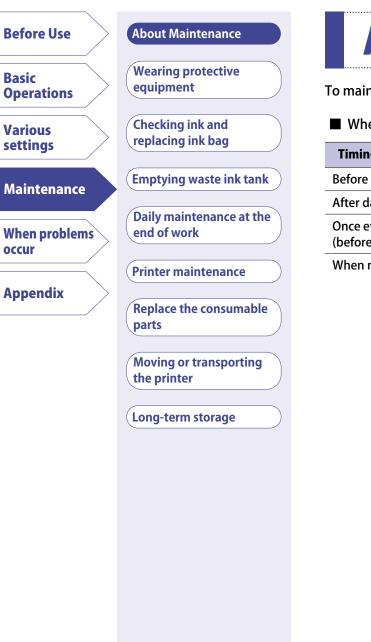
Fill the head cap with maintenance cleaner.

• Use a dropper to fill it with maintenance cleaner until the cleaner almost overflows the cap.







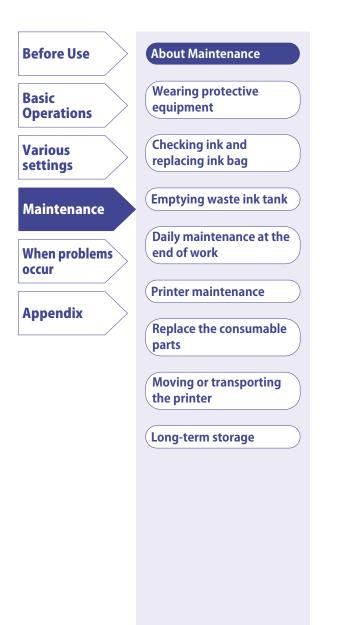


About Maintenance

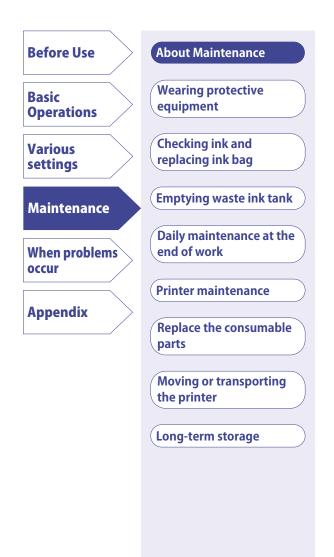
To maintain your printer performance, please conduct the following maintenance.

■ When to perform maintenance

Timing	Item "Nozzle check and head cleaning" P.61		
Before daily operation			
After daily operation	"Daily maintenance at the end of work" P.144		
Once every two days (before printer operation)	"Filling maintenance cleaner (For flushing box)" P.159		
When needed	"Replace the ink bag" P.137		
	"Emptying waste ink tank" P.141		
	 "Clean the parts around the print head" P.149 When clogged nozzles or blurred or missing prints do not disappear after head cleaning When printing is partially stained. 		
	 Cleaning Wipers When clogged nozzles or blurred or missing prints do not disappear after head cleaning Clean the cleaning wiper and the parts around the capping unit" P.150 		
	 "Menu 12: Soak Cleaning" P.128 When clogged nozzles or blurred or missing prints do not disappear after head cleaning 		
	 "Clean the color sensor" P.155 When auto adjustment fails repeatedly in "Print quality calibration (Adjust Print)" and "Adjust Head". 		
	 "Replace the wiper pad" P.164 When ink has accumulated on absorbent material. 		
	 "Replace the Cutter" P.167 When the media cannot be cut straight or fluffing occurs at the cut section. 		
	 "Replace the UV-LED unit glass" P.172 When the glass is defective or stains are not removed. 		
	 "Replace the flushing box" P.174 When the ink accumulated on the flushing box 		



Once a week	"Menu 12: Soak Cleaning" P.128	
Once a month	 "Replace the UV-LED unit filter" P.170 If the filter is significantly dirty, do not wait one month before replacing. 	
	 "Cleaning inside the printer" P.157 If it is significantly dirty, do not wait one month before cleaning. 	
Once a year	"Cleaning Wiper" P.161	
When not used for a week or "Nozzle check and head cleaning" P.154 more "Nozzle check and head cleaning" P.154		
When not used for a long period "Long-term storage" P.179		



Preparations for maintenance

Prepare the following items for maintenance.

Polyethylene gloves	Rubber gloves	Protective goggles	Protective mask	Protective clothing
			O	
Designated maintenance cleaner	Cleaning stick	Plastic cup	Dropper	Paper towel or polyknit wipers
Тгау				

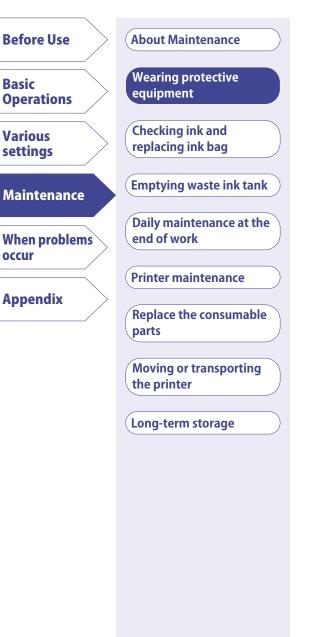
G Important/

• Please use the paper towels supplied with the product or the optional poly-knit wiper.

• Do not use tissue paper. Lint or flakes on tissue may cause the print head to malfunction.

• Do not use non-designated maintenance cleaner.

• To purchase the optional accessories such as designated maintenance cleaner, contact your local MUTOH dealer.



Wearing protective equipment

Wear protective equipment such as supplied gloves (or solvent-resistant gloves) and protective goggles, especially when performing the following maintenance

- "Checking ink and replacing ink bag" P.136
- "Emptying waste ink tank" P.141
- "Daily maintenance at the end of work" P.144
- "Menu 12: Soak Cleaning" P.128
- "Clean the color sensor" P.155
- "Cleaning inside the printer" P.157
- "Filling maintenance cleaner (For flushing box)" P.159
- "Replace the flushing box" P.174
- "Cleaning Wiper" P.161
- "Replace the wiper pad" P.164
- "Replace the UV-LED unit filter" P.170
- "Replace the UV-LED unit glass" P.172

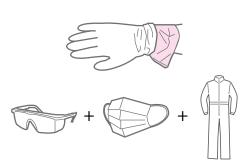
Before starting maintenance, please read the following sections:

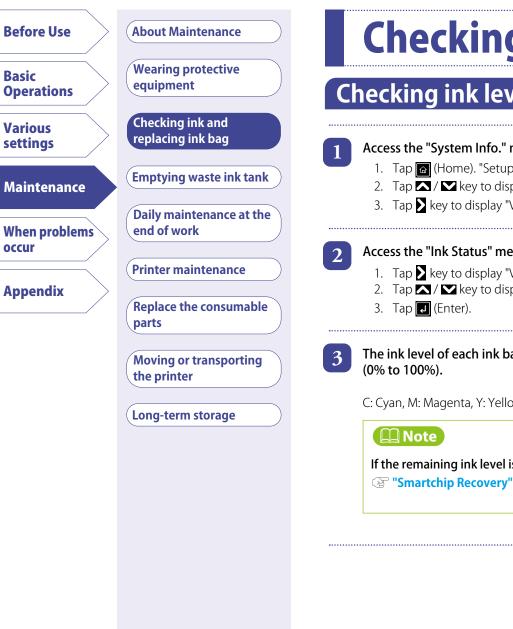
- The second secon
- Ink and waste fluid P.15

Wearing the supplied gloves

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



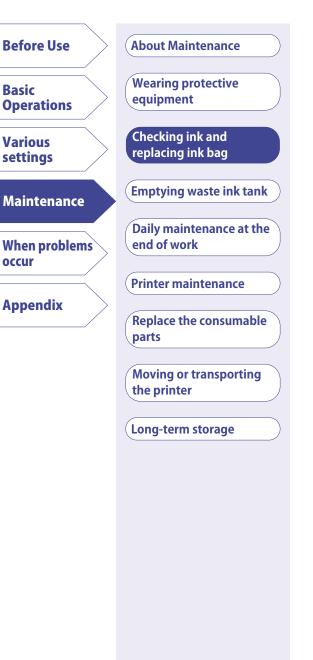




Checking ink and replacing ink bag

Checking ink level

	Access the "System Info." menu.
y waste ink tank	 Tap (Home). "Setup" will be displayed. Tap ▲ / ➡ key to display the "System Info.".
intenance at the ork	 3. Tap key to display "Version".
	2 Access the "Ink Status" menu.
aintenance	 Tap ≥ key to display "Version". Tap ► / ► key to display "Ink Status".
the consumable	3. Tap 🛃 (Enter).
or transporting er	3The ink level of each ink bag is displayed in percentage (0% to 100%).KCMY:100/90/90/80
m storage	C: Cyan, M: Magenta, Y: Yellow, K: Black
Joinge	Note
	If the remaining ink level is blinking at 10%, Smartchip recovery is being performed for the corresponding ink bag. Smartchip Recovery" P.193



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.

1	Тар	Ļ	(Enter).
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- The beep sound stops.
- In this figure,, the black ink is nearing replacement.



Replace with a new ink bag.

Replace the ink bag" P.137

Replace the ink bag

When an ink bag runs out of ink, the status light on the printer control panel turns on red with beep sound. "Ink End" or "S/C Ink End" will appear on the printer control panel. Promptly replace it with a new ink bag and smartchip card. If ink is not replaced for a certain period of time, printing will pause. In this case, replace the ink bag with a new one and printing will resume.

🚺 Caution

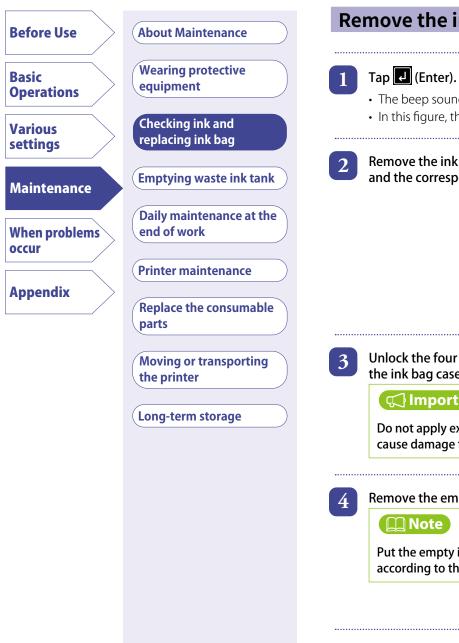
Be careful not to get ink in your eyes or on your skin. Wear gloves, protective glasses, and a mask. If in eyes or on skin, immediately flush with water. If left untreated, it may cause redness and mild irritation of the eye. In case of any abnormality, consult a physician immediately.

[K] S/C Ink Low

W:1625 mm

PG:Low

- If 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 bag from cold place to warm place, rest it in room temperature at least 3 hours before use.
- If you do not have a new ink bag for replacement, leave the old one installed. Leaving the printer without ink bags installed could cause nozzle clogging.



Remove the ink bag case

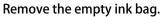
- The beep sound stops.
- In this figure, the black ink needs to be replaced.

Remove the ink bag case of the ink bag to be replaced and the corresponding smartchip card.

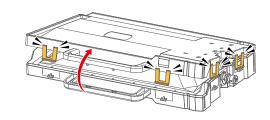
Unlock the four latches on the ink bag case and open the ink bag case.

🗔 Important!!

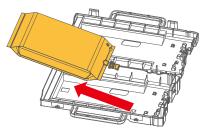
Do not apply excessive force when unlocking. This may cause damage to the latch.



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



[KCMY] Ink End





Load a new ink bag

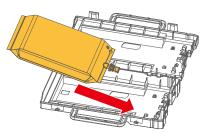
Agitate the ink in the ink bag.

- 1. Hold the ink bag with the ink outlet facing up and wait for 3 seconds.
- 2. Invert it so that the ink outlet is facing down and wait for 3 seconds.
- 3. Repeat this 3 times.

Put the ink bag into the ink bag case.

3 sec.





Close the ink bag case.

• Make sure that the spout of the ink bag is properly fitted into the groove in the case..

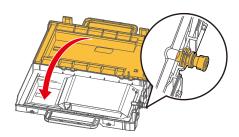
G Important/

If not fitted, the printer cannot correctly detect the ink bag.

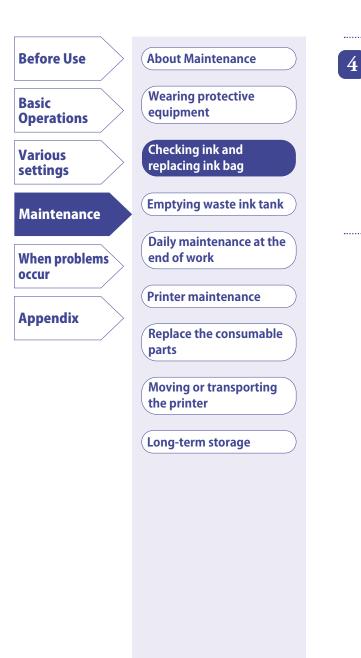
• Close the latches (x 4) of the case properly.

G Important/

If not secured, it may cause ink leakage.

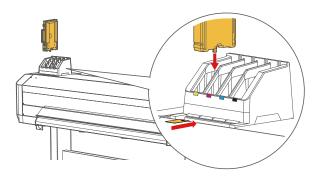


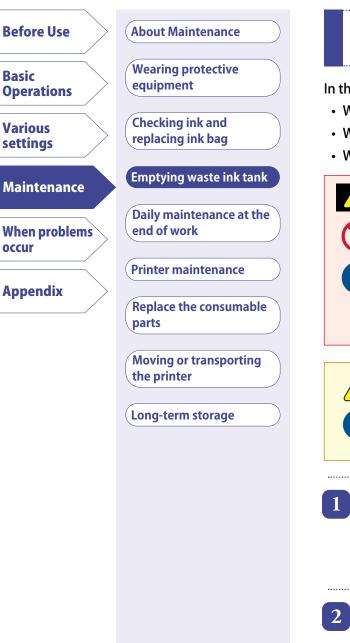




Insert the ink bag case and smartchip card into an appropriate slot.

- Make sure to match the color of the ink bag label with the color of the label attached to the ink slot.
- 1. Face the latch side towards you and insert the case into the slot.
- 2. Make sure that they are fully inserted.





Emptying waste ink tank

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

- When the waste ink tank is more than half full.
- When the message [Empty Waste Ink Tank then Tap Enter] appears. (P.188).
- When the message [Full WastelnkTank] appears. (P.191)

WARNING

• Store waste fluids in a cool, dark place and avoid direct sunlight.



- Keep away from fire and heat. • Do not mix waste ink with any other chemical substances or liquid, not even in small amounts.
 - Mixing with other chemical substances (e.g. oxidizing agent) could cause heat.

 - Use a HDPE container with light blocking properties to store waste fluid.
 - When storing waste fluid for a long time, slightly loosen the cap on the container to allow air. Do not tightly close it.

Caution



- Skin or eye contact with UV curable ink may cause skin inflammation or allergic reaction.
- When emptying the tank,, be sure to wear the gloves (or solvent-resistant gloves) and protective goggles provided, and take care not to get ink on them.

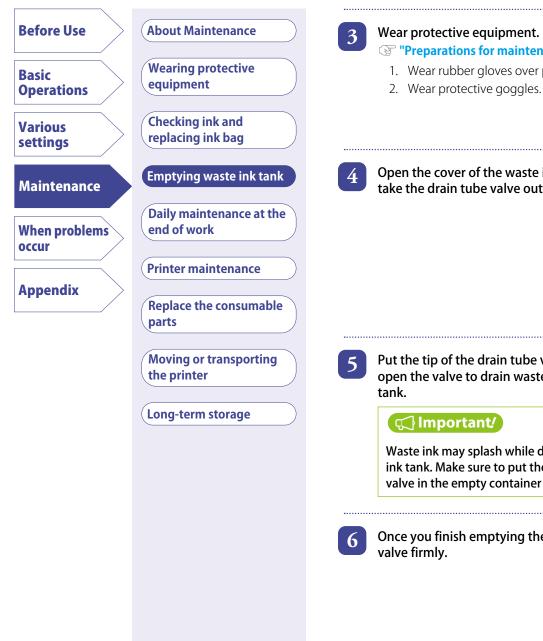
Prepare a container to collect waste liquid.

(💭 Important/)

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



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

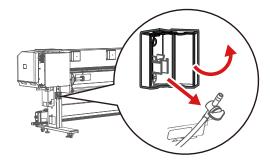








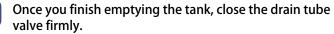
Open the cover of the waste ink valve case, and then take the drain tube valve out from the case.

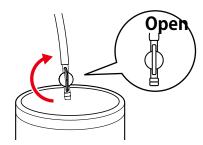


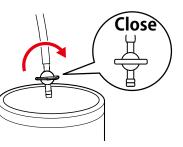
Put the tip of the drain tube valve in the container and open the valve to drain waste ink from the waste ink tank.

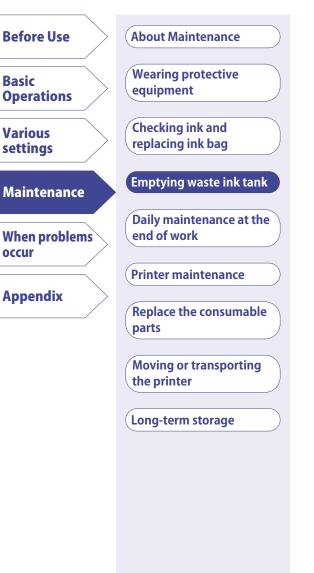
(📢 Important/)

Waste ink may splash while draining from the waste ink tank. Make sure to put the tip of the drain tube valve in the empty container to drain.









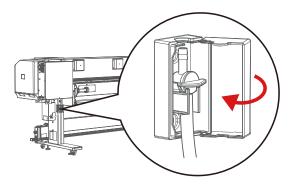


Use a dry cloth to clean the tip of the valve.



9

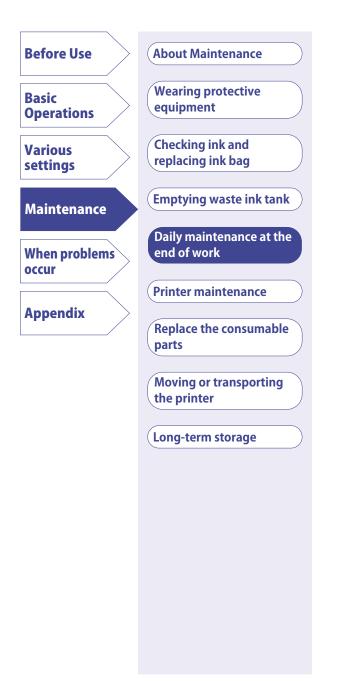
Hook the drain tube valve on the clamp of the waste ink valve case, then close the cover.



Dispose of the waste fluids as industrial waste.

WARNING

- Waste liquids fall under the category of waste oil (waste ink) in 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.
- Waste fluid from this printer is harmful to aquatic organisms. Do not allow it to reach sewage or natural water systems.



Daily maintenance at the end of work

Printers require daily maintenance. Follow these steps to perform a daily maintenance when you are done printing for the day

Make sure to read the following sections before this task.

"Handling" P.10
"Ink and waste fluid" P.15

G Important/

Make sure to perform daily maintenance once a day. Failure to perform maintenance may result in poor image quality or malfunction.

Preparations for maintenance P.134

1. Clean the UV-LED unit P.146

2. Moisten the surface of print head nozzles P.147

3. Clean the parts around the print head P.149

4. Clean the cleaning wiper and the parts around the capping unit P.150

5. Filling maintenance cleaner P.152

6. End the maintenance P.153

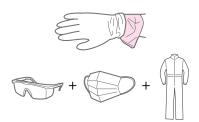


Preparation

Wear protective equipment.



- 1. Wear rubber gloves over polyethylene gloves.
- 2. Wear protective equipment such as protective goggles, protective masks, protective clothing, etc.





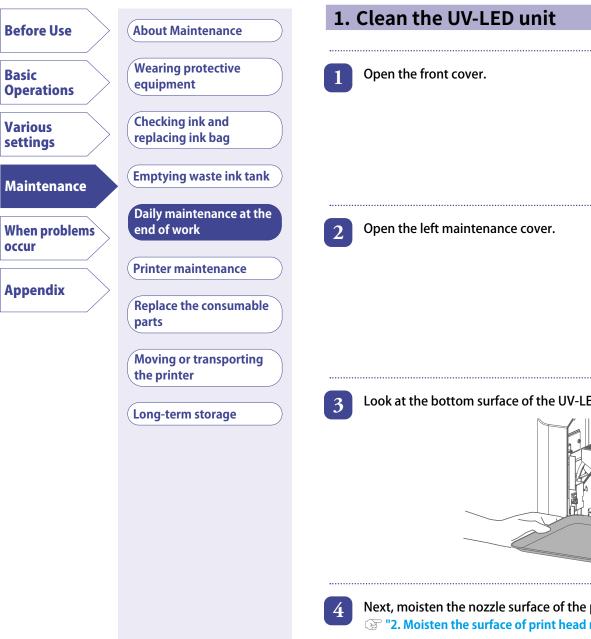
Procedure

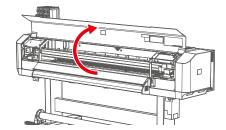


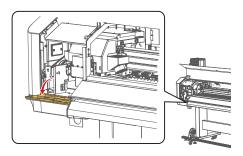
The UV-LED lamp may get hot after printing. Allow the lamp to cool down for at least 10 minutes after printing and then start this task.

Note

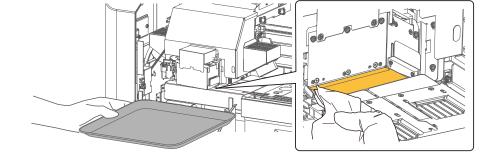
Standard cleaning time is within 5 minutes. If more than 10 minutes have passed since the cover was opened the message "Close the Cover" will appear with beep sound.



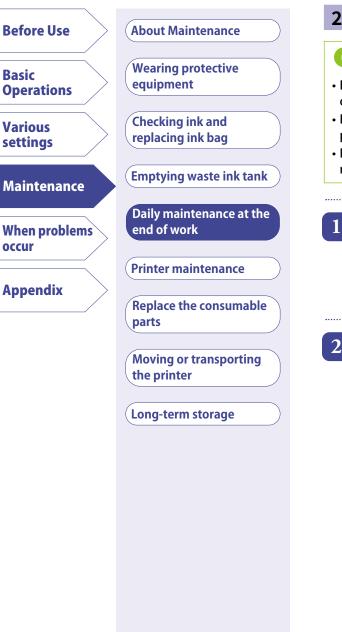




Look at the bottom surface of the UV-LED lamp and wipe off any sticking ink or dust with a paper towel.



Next, moisten the nozzle surface of the print head. **32** "2. Moisten the surface of print head nozzles" P.147



2. Moisten the surface of print head nozzles

G Important/

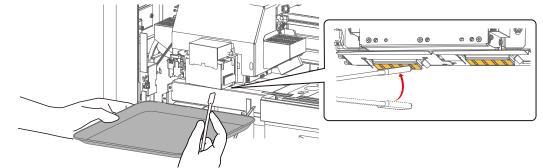
- Be sure to follow the cleaning procedure as instructed. In particular, do not moisten the nozzle surface with the same cleaning stick that is used to clean the print head area, cleaning wiper, or capping unit. This may cause print head failure.
- Be sure to use a new cleaning stick and the designated maintenance cleaner. Use of non-designated one may cause the print head failure.
- Do not touch the tip of the cleaning stick with your finger. If skin oil gets on the stick, it may cause the print head to malfunction.

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



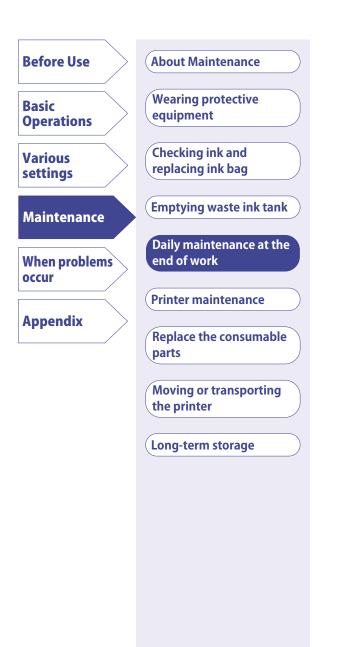
Look at the bottom surface of the carriage and moisten the nozzle surface of the print head with the cleaning stick dampened with the maintenance cleaner.

- Lightly touch with the cleaning stick.
- Repeat several times until the entire surface of the nozzle is moistened.



📢 Important/

- Never rub the surface of the nozzles. This may cause print head failure.
- When the entire nozzle surface has been moistened, you can stop it. Do not repeat more than necessary.



3	Next, o
	۲" جر

Next, clean the parts around the print head. "3. Clean the parts around the print head" P.149



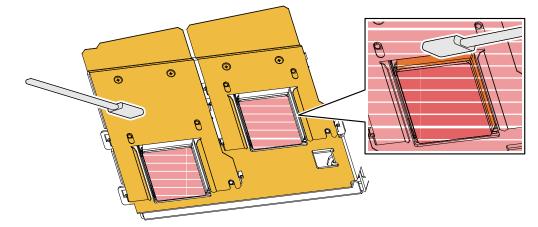
3. Clean the parts around the print head



Clean the bottom surface of the carriage and the side surface of the print heads.

: Cleaning area.

: Never touch the nozzle surface.

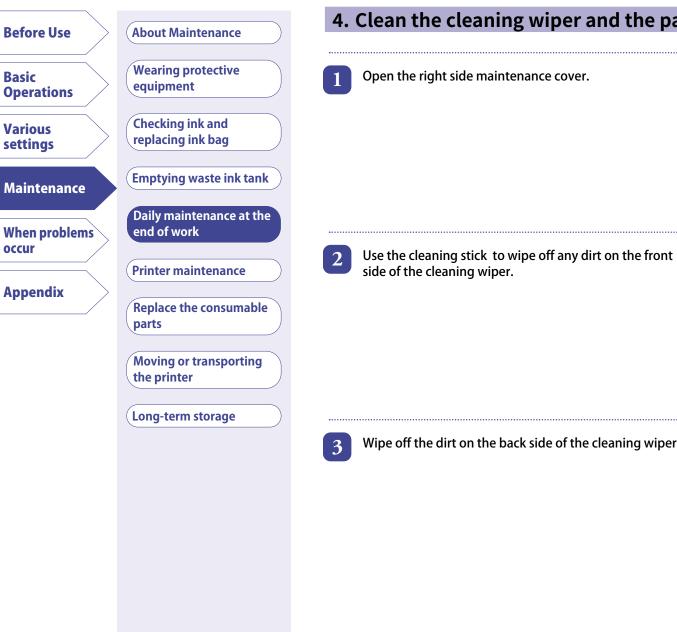


C Important/

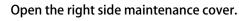
If the maintenance fluid gets on the printer, wipe it off with a paper towel.

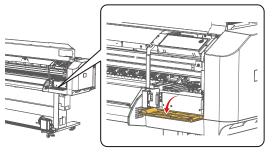
द् lmportant/

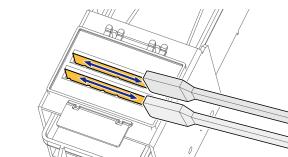
• If the cleaning stick becomes dirty during cleaning, put the maintenance cleaner in the plastic cup and submerge the foam tip of the stick into the maintenance cleaner in the cup to clean it. If the dirt does not get off, replace it with a new one.



4. Clean the cleaning wiper and the parts around the capping unit

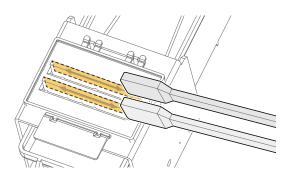


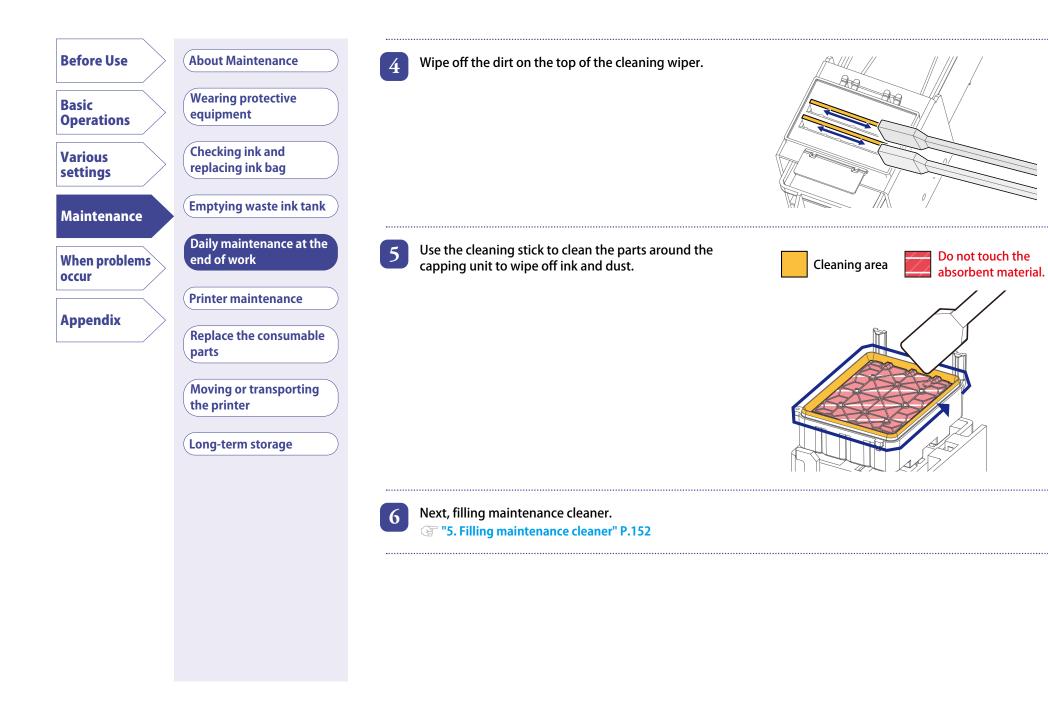


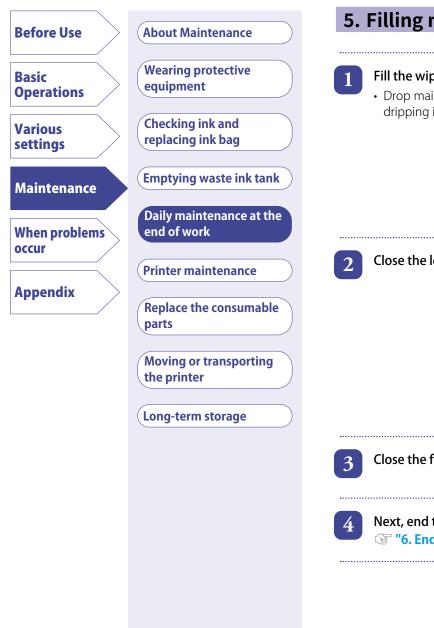




Wipe off the dirt on the back side of the cleaning wiper.



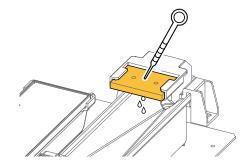




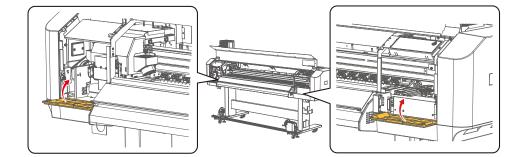
5. Filling maintenance cleaner

Fill the wiper pad with maintenance cleaner.

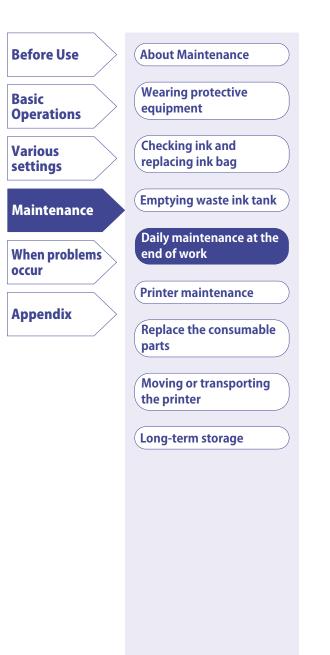
• Drop maintenance cleaner until the entire pad is wet and dripping in the tray under the pad (Use about 10 ml).



Close the left and right maintenance covers.



Close the front cover.



6. End the maintenance



1

2

Turn off the printer" P.44

• The carriage moves to the CR maintenance position on the right side.

🛄 Note

• After 30 seconds of closing the cover, maintenance is automatically terminated.

• When performed maintenance from [CR Maintenance]



When performed maintenance from [Turn off the printer]



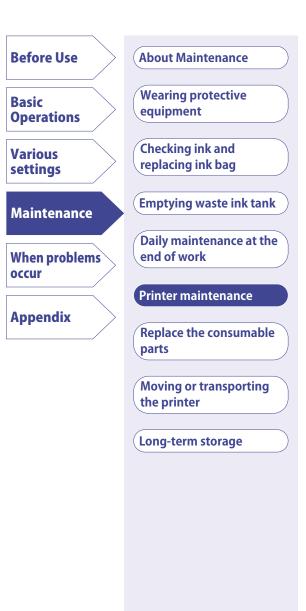
- Dispose of cleaning stick .
- Wipe the maintenance cleaner on the dropper with a paper towel.
- Dispose of the maintenance cleaner in the plastic cup and wipe the plastic cup clean with a paper towel.
- Wipe the tray with paper towels.

📢 Important/

- Do not reuse the cleaning stick . Dust and other particles may adhere to the print head, causing it to malfunction.
- Please keep the bottle lid of the designated maintenance cleaner tightly closed.

🛄 Note

• Used cleaning stick and the maintenance cleaner left in the plastic cup are industrial waste. Dispose of them in accordance with the local regulations.



Printer maintenance

Nozzle check and head cleaning

If the nozzles are clogged after a nozzle check, head cleaning should be performed.

• 3 "Performing Nozzle Check" P.61

Run a nozzle check print to see if the print head fires ink properly.

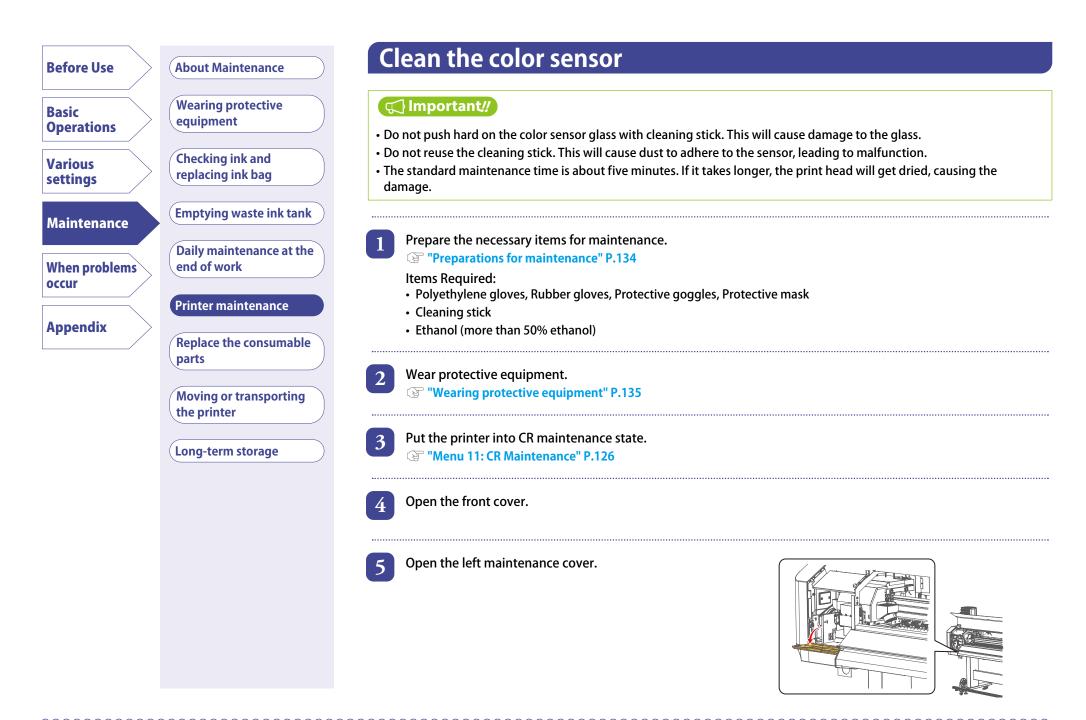
• The second sec

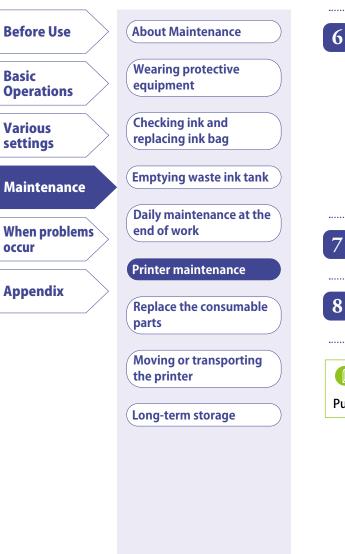
If the nozzle is clogged, perform a head cleaning. The product has several cleaning modes. Select an appropriate mode depending on the result of the nozzle check print.

Note

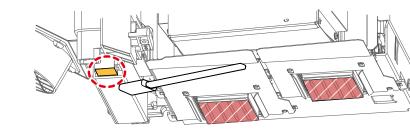
If nozzle clogging persists after repeated Normal cleaning attempts, try the following solutions for a reference.

- 1. Perform a Long cleaning. (If the problem persists, move to the next one)
- 2. Clean the following parts. (If the problem persists, move to the next one)
- \Im "4. Clean the cleaning wiper and the parts around the capping unit" P.150
- 🐨 "3. Clean the parts around the print head" P.149
- 3. Perform a Little Charge cleaning. (If the problem still persists, move to the next one)
- 🐨 "Menu 3: Cleaning" P.112
- 4. Perform a soak cleaning.
- 🚱 "Menu 12: Soak Cleaning" P.128





Gently clean the glass surface of the color sensor on the bottom of the carriage with a cleaning stick dampened in a small amount of ethanol to remove ink and dust.



Close the maintenance cover and then the front cover.





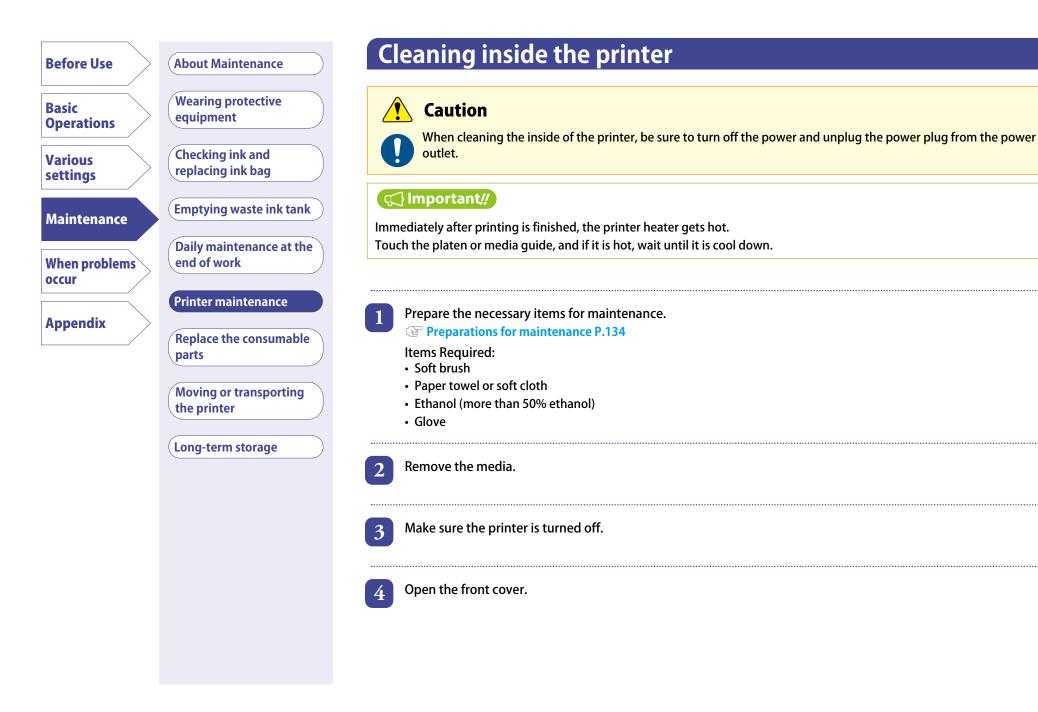
Never touch the head surface.



Tap [] (Enter) to exit maintenance. **16. End the maintenance** P.153

Note

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



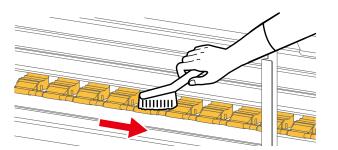


Use a sorrollers.

Use a soft brush to clean the dust off the pressure rollers.

G Important!!

Do not use air duster to clean the dust inside the printer. This will cause dust to accumulate on the moving parts, leading to damage or noise.

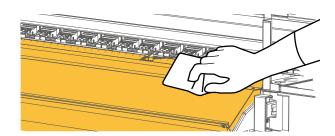


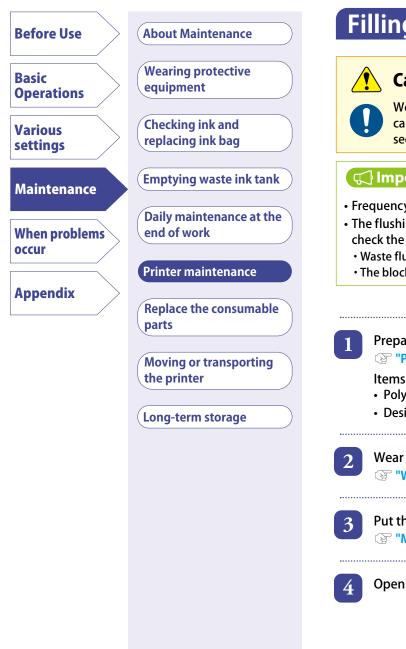
Using a paper towel or soft cloth dampened with in a small amount of ethanol, clean the platen, media guide and edge holders to remove dust.

G Important!!

Wear gloves when cleaning.

Close the front cover.





Filling maintenance cleaner (For flushing box)

Caution

Wear the protective gloves, glasses and masks, and avoid contact with your eyes or skin. Eye or skin contact may cause slight irritation or bloodshot eyes. If in eyes or on skin, immediately flush with water. If irritation is present, seek medical advice/attention immediately.

G Important !!

- Frequency of filling maintenance cleaner is once every two days (before printer operation).
- The flushing box runs out of maintenance cleaner quickly in the high temperature environment. We recommend you to check the flushing box before daily printer operation. You must fill maintenance cleaner into the flushing box when:
- Waste fluid is sticking to the flushing box
- The block inside the flushing box is not immersed in liquid

Prepare the necessary items for maintenance.

Preparations for maintenance P.134

Items Required:

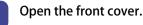
- Polyethylene gloves, Rubber gloves, Protective goggles, Protective mask
- Designated maintenance cleaner, Plastic cup

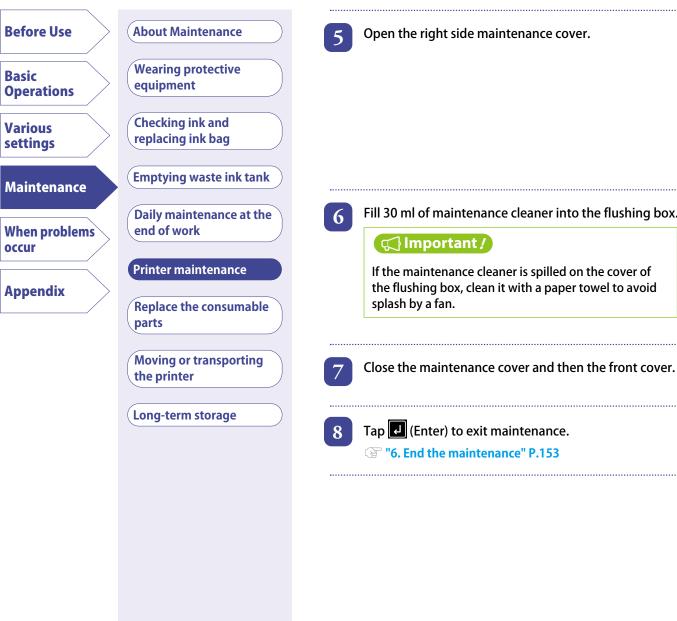


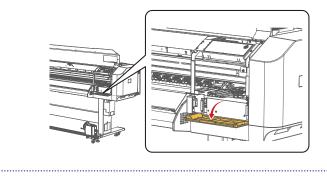
Wear protective equipment.

Wearing protective equipment" P.135

Put the printer in CR maintenance state. "Menu 11: CR Maintenance" P.126



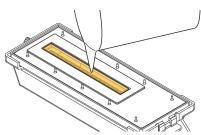




Fill 30 ml of maintenance cleaner into the flushing box.

(Clmportant /

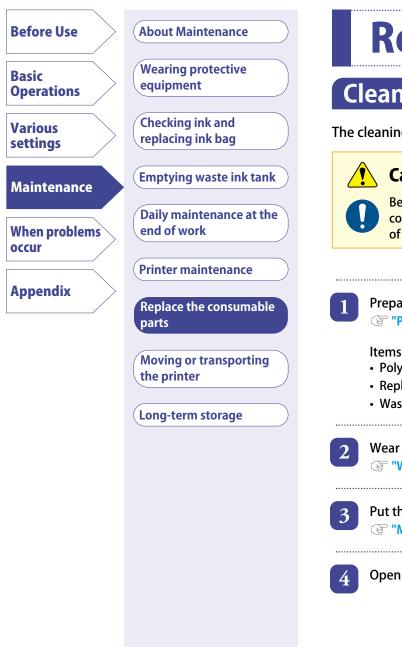
If the maintenance cleaner is spilled on the cover of the flushing box, clean it with a paper towel to avoid splash by a fan.





Tap 🛃 (Enter) to exit maintenance.

6. End the maintenance" P.153



Replace the consumable parts

Cleaning Wiper

The cleaning wiper is a necessary component for maintaining consistent printing quality. Replace it regularly.

🚺 Caution

Be careful not to get ink in your eyes or on your skin. Wear gloves, protective glasses, and a mask. In case of contact with eyes or skin, rinse immediately with water. If left untreated, it may cause redness and mild irritation of the eye. In case of any abnormality, consult a physician immediately.

Prepare the necessary items for maintenance. Preparations for maintenance" P.134

Items Required:

- Polyethylene gloves, Rubber gloves, Protective goggles, Protective mask
- Replacement cleaning wipers
- Waste paper (paper that ink does not bleed through)

Wear protective equipment.

Wearing protective equipment P.135

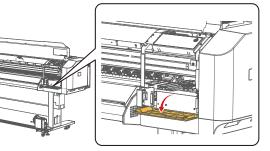
Put the printer in CR maintenance state. **Menu 11: CR Maintenance**" P.126

Open the front cover.





Open the right side maintenance cover.





Cover the platen with the waste paper.

G Important!!

Ink may drip from the cleaning wiper. We recommend covering the floor with paper as well.

Remove the cleaning wipers.

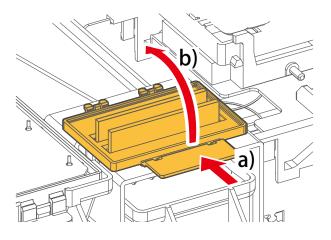
- 1. Push the tab of the cleaning wiper to the back to release the hook in the front.
- 2. Remove the cleaning wiper by lifting up the tab of the cleaning wiper.

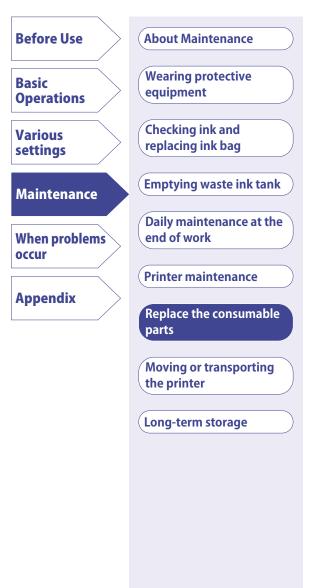
G Important!!

- Wear gloves when cleaning.
- When removing the cleaning wiper, be careful of ink dripping.

🛄 Note

Put the used pad in a plastic bag and dispose of it according to the local regulations.



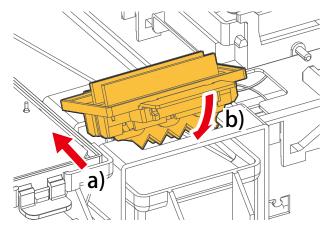


Install a new cleaning wiper.

- 1. Insert the back of the cleaning wiper.
- 2. Push in the tab of the cleaning wiper until it clicks into place.

G Important!!

Be careful not to touch the rubber part of the cleaning wiper with bare hands. Sebum can cause print head failure.



Close the maintenance cover and then the front cover.

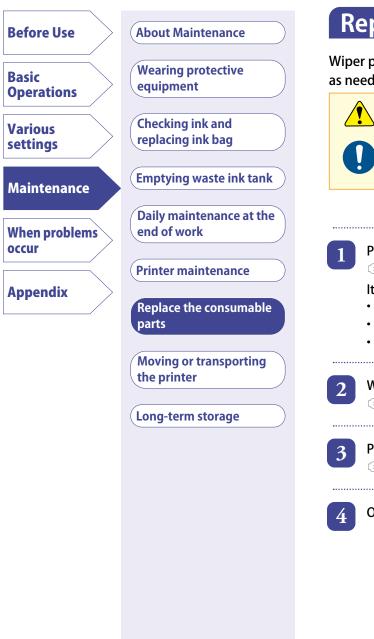


9

8

Tap 🛃 (Enter) to exit maintenance.

127 "6. End the maintenance" P.153



Replace the wiper pad

Wiper pad is used to keep cleaning wipers clean. Ink sticking to the wiper can cause poor print guality. Replace it as needed.

Caution



Be careful not to get ink in your eyes or on your skin. Wear gloves, protective glasses, and a mask. In case of contact with eyes or skin, rinse immediately with water. If left untreated, it may cause redness and mild irritation of the eye. In case of any abnormality, consult a physician immediately.

Prepare the necessary items for maintenance.

Preparations for maintenance P.134

Items Required:

- Polyethylene gloves, Rubber gloves, Protective goggles, Protective mask
- Designated maintenance cleaner, Dropper
- · Replacement wiper pad

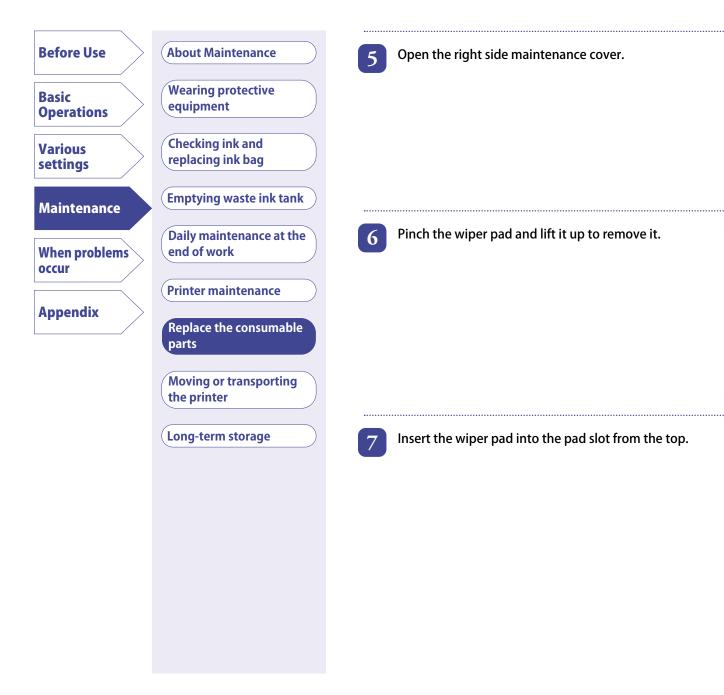
Wear protective equipment.

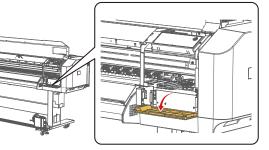
Wearing protective equipment" P.135

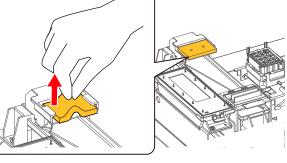


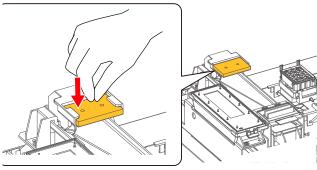
Put the printer in CR maintenance state. (Menu 11: CR Maintenance" P.126

Open the front cover.





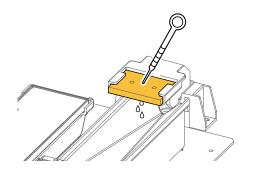






Fill the wiper pad with maintenance cleaner.

• Drop maintenance cleaner until the entire pad is wet and dripping in the tray under the pad (Use about 10 ml).



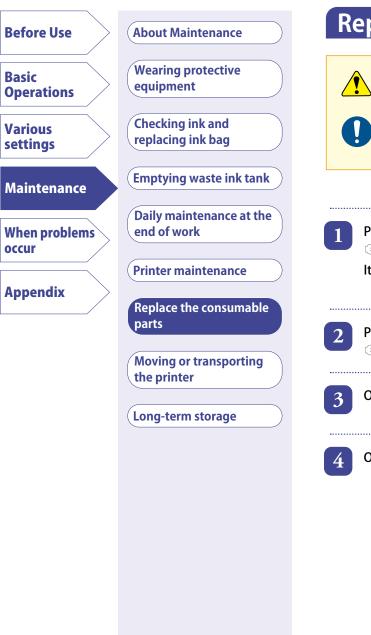


Close the maintenance cover and then the front cover.



Tap 🛃 (Enter) to exit maintenance.

(Figure 19.153) (Figure 19.153)



Replace the Cutter

Caution



• Do not push the tab on the cutter holder too hard or release suddenly. There is a spring under the cutter so that the cutter may jump out from the holder.

• Do not touch the cutter blade. There is a risk of injury.

Prepare the necessary items for maintenance. **Preparations for maintenance** P.134

Items Required:

Cutter replacement blade

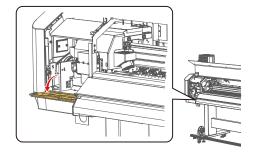
Put the printer in CR maintenance state. "Menu 11: CR Maintenance" P.126

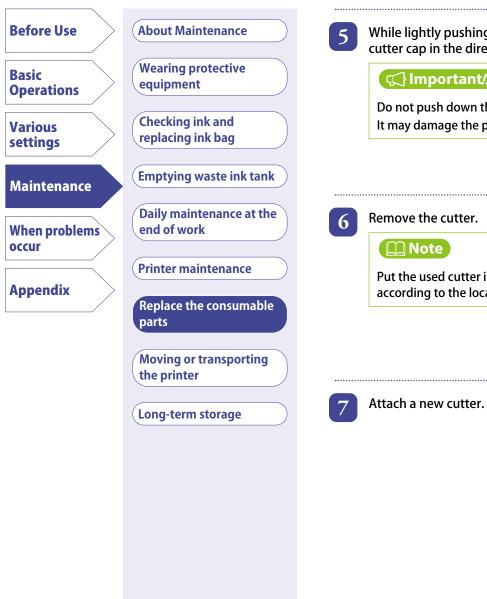


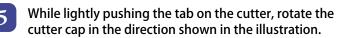
Open the front cover.



Open the left maintenance cover.

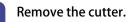






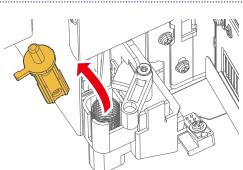
G Important!!

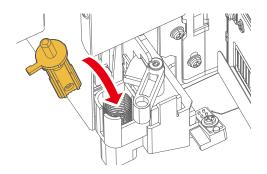
Do not push down the cutter cap. It may damage the part.

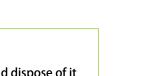


🔲 Note

Put the used cutter in a plastic bag and dispose of it according to the local regulations.



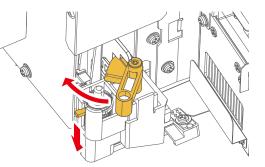








While lightly pushing the tab on the cutter, put the cutter cap back to its original position.



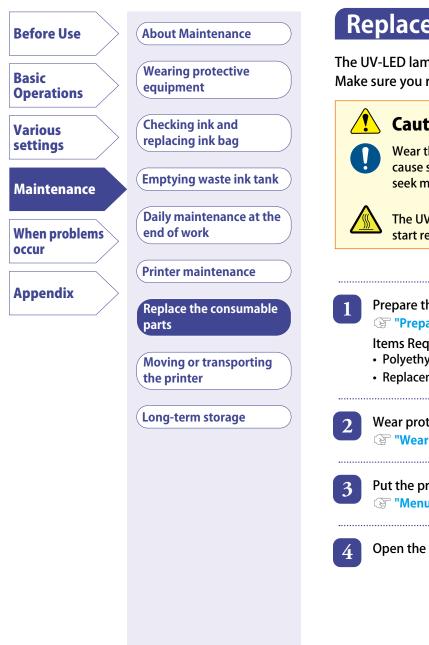


Close the maintenance cover and then the front cover.



Tap 🛃 (Enter) to exit maintenance.

(Figure 19.153) (Figure 19.153) (Figure 19.153)



Replace the UV-LED unit filter

The UV-LED lamp filter protects the lamp from ink mist. Using a dirty filter will cause damage to the lamp. Make sure you replace it regularly.

Caution

Wear the protective gloves, glasses and masks and avoid contact with your eyes or skin. Eye or skin contact may cause slight irritation or bloodshot eyes. If in eyes or on skin, immediately flush with water. If irritation is present, seek medical advice/attention immediately.

The UV-LED lamp may get hot after printing. Allow the lamp to cool down for 10 minutes after printing and then start replacement.

Prepare the necessary items for maintenance.

B "Preparations for maintenance" P.134

Items Required:

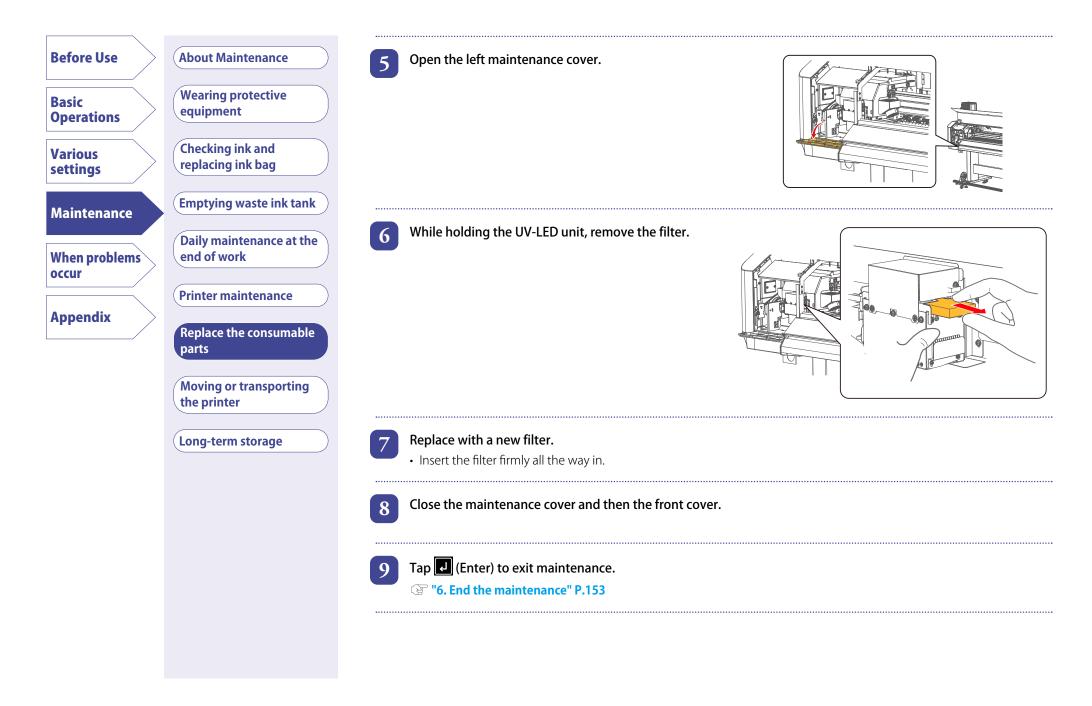
- · Polyethylene gloves, Rubber gloves, Protective goggles, Protective mask
- Replacement Filters

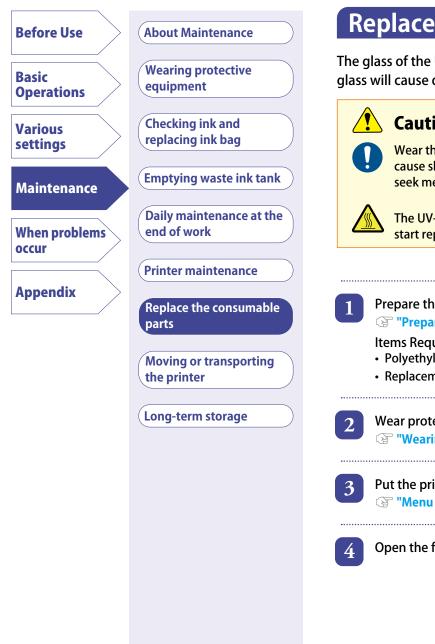
Wear protective equipment.

Wearing protective equipment" P.135

Put the printer in CR maintenance state. The second secon

Open the front cover.





Replace the UV-LED unit glass

The glass of the UV-LED unit is a component to protect the UV-LED unit. Using the printer with dirty or broken glass will cause damage to the lamp or insufficient ink curing. Please replace the glass as needed.

Caution

Wear the protective gloves, glasses and masks and avoid contact with your eyes or skin. Eye or skin contact may cause slight irritation or bloodshot eyes. If in eyes or on skin, immediately flush with water. If irritation is present, seek medical advice/attention immediately.

The UV-LED lamp may get hot after printing. Allow the lamp to cool down for 10 minutes after printing and then start replacement.

Prepare the necessary items for maintenance.

Preparations for maintenance P.134

Items Required:

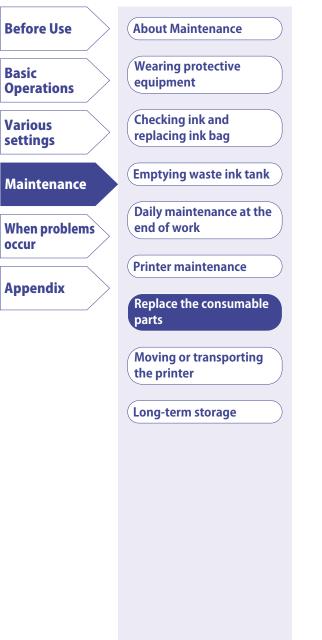
- Polyethylene gloves, Rubber gloves, Protective goggles, Protective mask
- Replacement Glass

Wear protective equipment.

Wearing protective equipment" P.135

Put the printer in CR maintenance state. "Menu 11: CR Maintenance" P.126

Open the front cover.





Open the left maintenance cover.



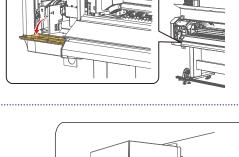
8

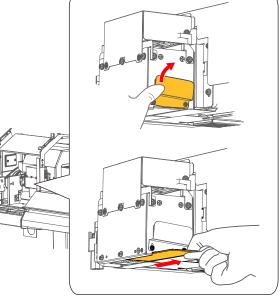
Check the glass and replace if there are defects or cracks.

- 1. Slide the exhaust cover up using the screw on the right side of the exhaust cover as a fulcrum.
- 2. Slide the glass attached on the bottom of the UV-LED unit to the right to remove it.
- 3. Check for cracks, chips, or ink on the glass.
- 4. Attach a new glass to the UV-LED unit. Insert the glass firmly all the way to the back and lower the exhaust cover as before.

G Important/

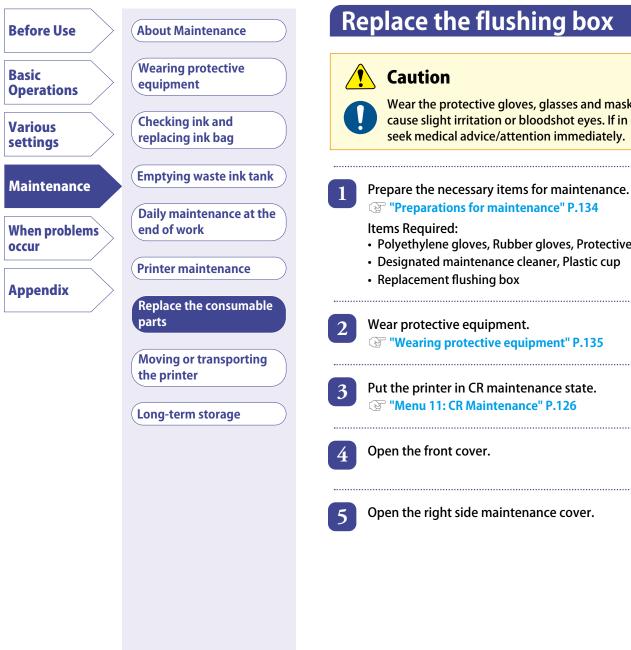
Make sure that the glass is attached to the UV-LED unit and the exhaust cover is put back in place. Using your printer without them will cause damage to the unit.





Close the maintenance cover and then the front cover.

Tap (Enter) to exit maintenance.

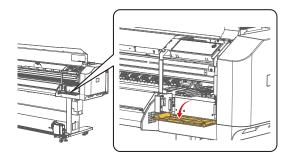


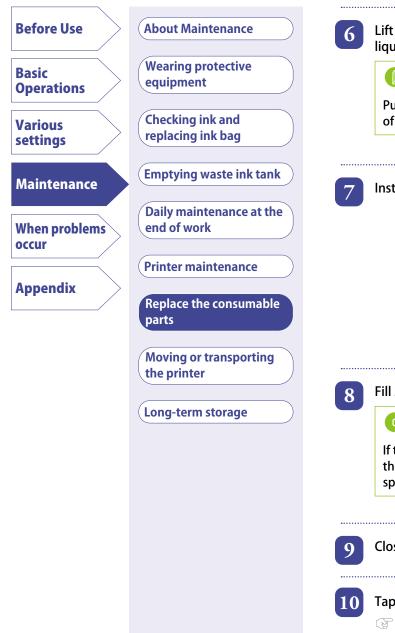
Replace the flushing box

Wear the protective gloves, glasses and masks, and avoid contact with your eyes or skin. Eye or skin contact may cause slight irritation or bloodshot eyes. If in eyes or on skin, immediately flush with water. If irritation is present, seek medical advice/attention immediately.

- Polyethylene gloves, Rubber gloves, Protective goggles, Protective mask
- Designated maintenance cleaner, Plastic cup

Put the printer in CR maintenance state.



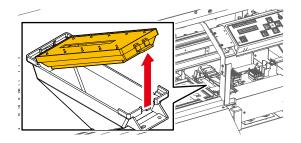


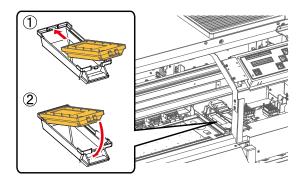
Lift the tabs and tilt the flushing box to drain the waste liquid.

🛄 Note

Put the used flushing box in a plastic bag and dispose of it according to the local regulations

Install a new flushing box.

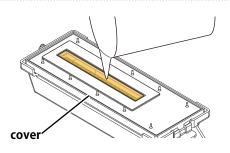




Fill 30 ml of maintenance cleaner into the flushing box.

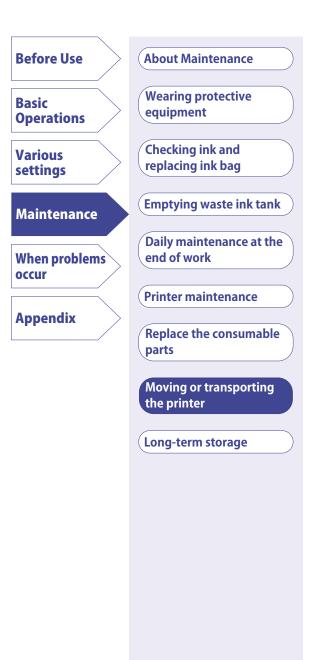
GImportant /

If the maintenance cleaner is spilled on the cover of the flushing box, clean it with a paper towel to avoid splash by a fan.



Close the maintenance cover and then the front cover.

Tap (Enter) to exit maintenance.



Moving or transporting the printer

Transporting the printer

When transporting this product, it must be repacked in the original packaging and packaging materials as you purchased to protect the printer from vibration and shock.

G Important#

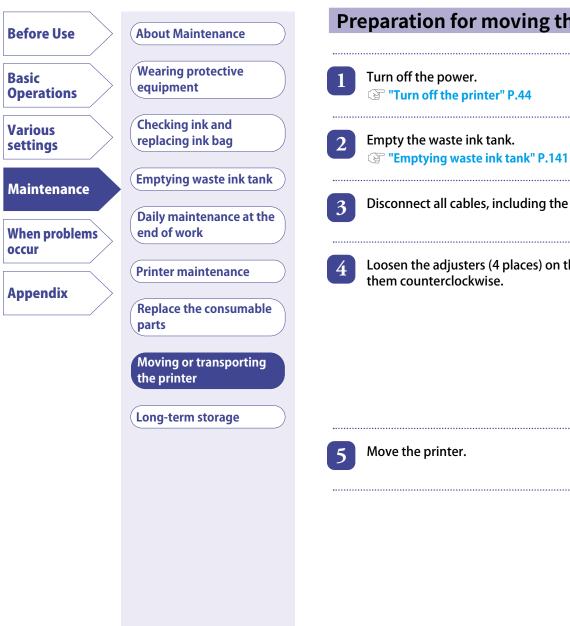
When transporting this product, please consult your local MUTOH dealer.

Moving the printer

This section explains how to move this product.

G Important

- Before moving this printer, always empty the waste ink tank even moving short distance. Failure to do so may result in damage to the product.
- Minimum three people are required for moving this product. When moving, keep the product level. Otherwise proper operation cannot be guaranteed after moving.
- Wearing safety shoes is recommended for moving this product.

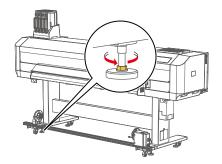


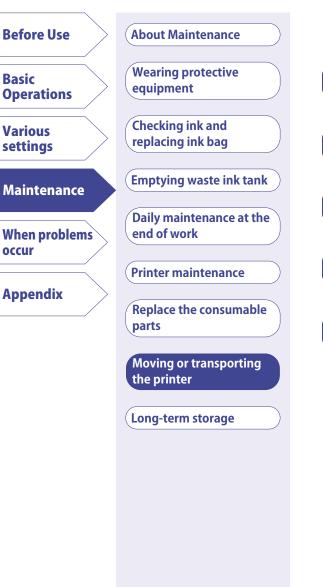
Preparation for moving the printer

Turn off the printer" P.44

Disconnect all cables, including the power cord.

Loosen the adjusters (4 places) on the stand by rotating them counterclockwise.





After moving the printer

Select a suitable location for installation.



1

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After moving the printer to the installation site, use the adjusters to lock the printer.



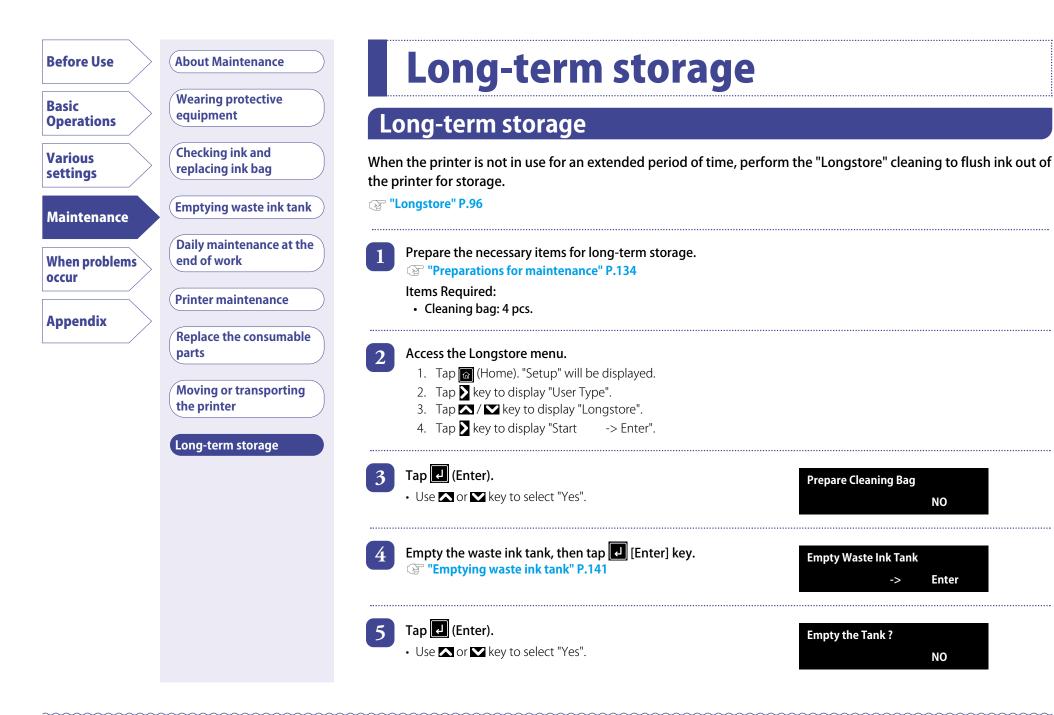
Connect the cables including the power cord.



Run a nozzle check to make sure all nozzles are clear. Performing Nozzle Check" P.61



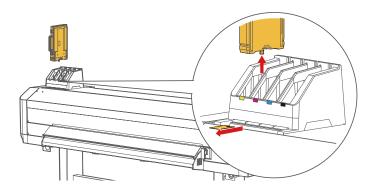
Perform "Print quality calibration (Adjust Print)".





Start cleaning.

- "Remove Bags" will appear.
- 1. Remove all ink bag cases and smartchip cards.
- Once removed, the printer begins flushing ink out of the printer.



- 2. Store the ink bags with the corresponding smartchip cards.
- 3. When ink flushing is completed, "Insert Cleaning Bags" will appear.

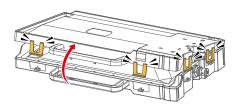
Place the cleaning bag in the ink bag case.

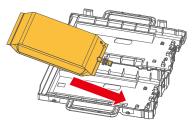
1. Unlock the latches (x 4) and open the ink bag case.

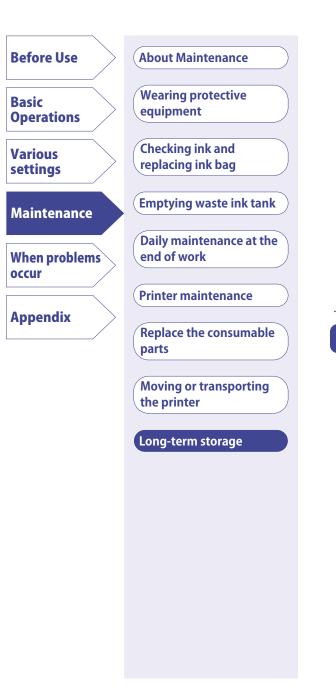
G Important/

Do not apply excessive force when unlocking the latch. This may cause damage to the latch.

2. Place the cleaning bag in the ink bag case.







3. Close the ink bag case.

(C) Important/

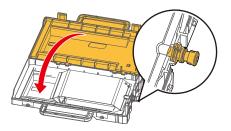
Make sure that the spout of the cleaning bag is properly fitted into the groove in the case. If not fitted, the printer cannot detect the cleaning bag correctly.

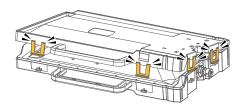
4. Lock the latches (x 4) firmly.

📢 Important!!

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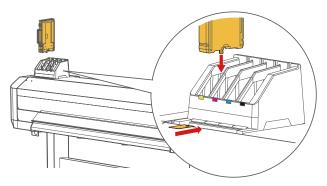
Check that all the latches (x 4) are closed. If not, it may cause cleaner spillage.



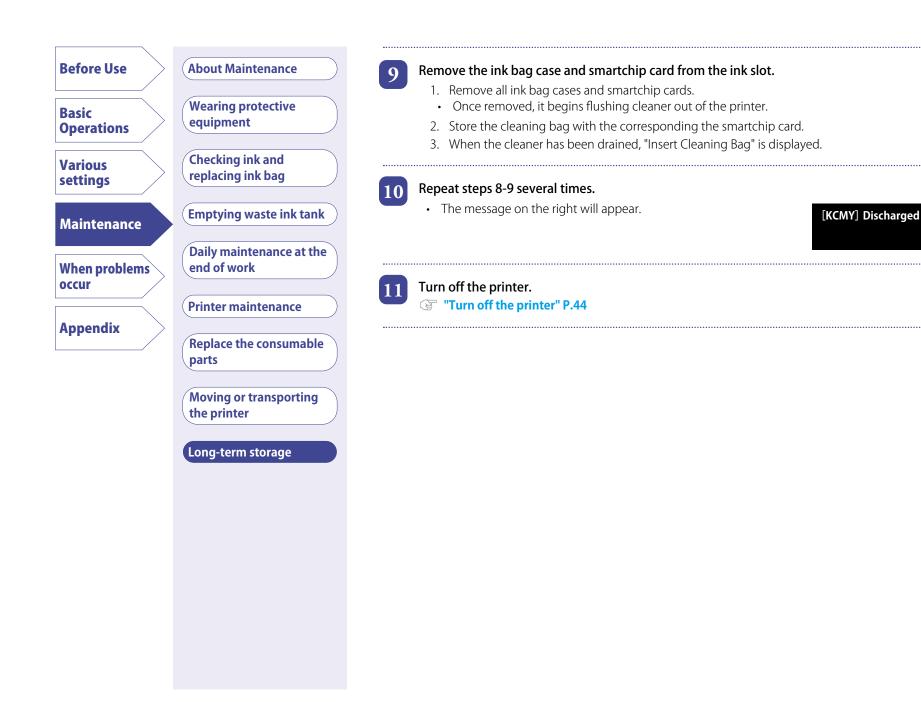


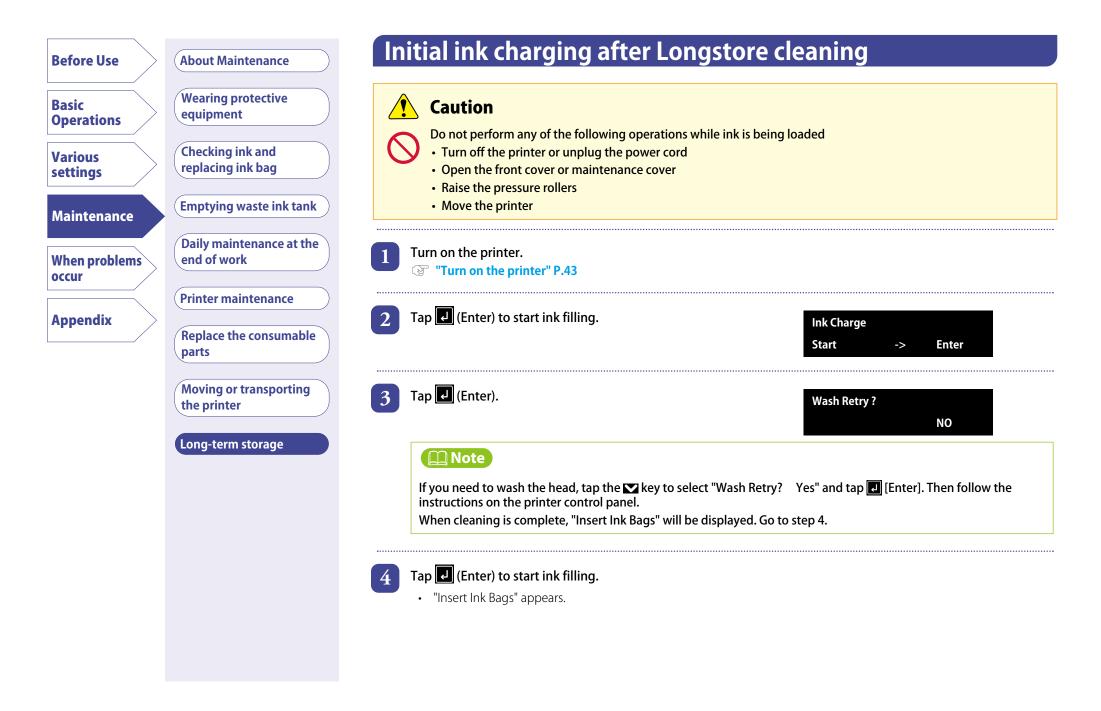
Insert the ink bag case and smartchip card into the ink slot.

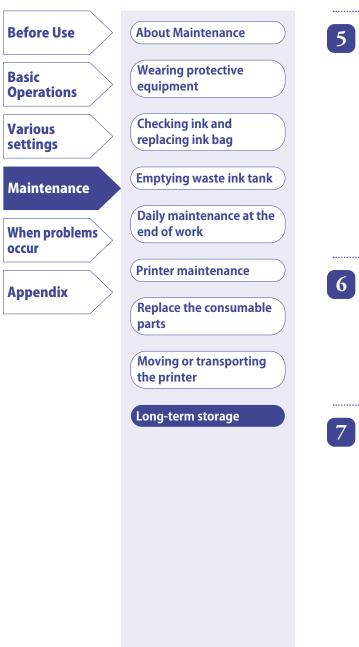
- 1. Face the latch side towards you and insert the case into the slot.
- Make sure that they are fully inserted.
- Once loaded, the printer begins head cleaning.



2. Once the printer is filled with the cleaner, "Remove Bags" will be displayed.







Agitate the ink in a new ink bag.1. Hold the ink bag with the ink outlet facing up and

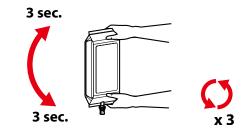
- wait for three seconds.Invert it with the ink outlet facing down and wait for three seconds.
- 3. Repeat this 3 times.

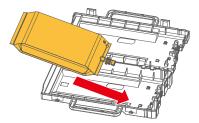
📢 Important//

Be sure to use a new ink bag.

If a used ink bag does not have enough ink, it will run out of ink during initial ink charging and will consume more ink.

Put the ink bag into the ink bag case.





Close the ink bag case.

 Make sure that the spout of ink bag is properly fitted into the groove in the case.

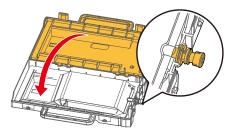
G Important/

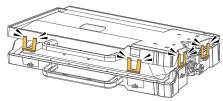
If not fitted, the printer cannot correctly detect the ink bag.

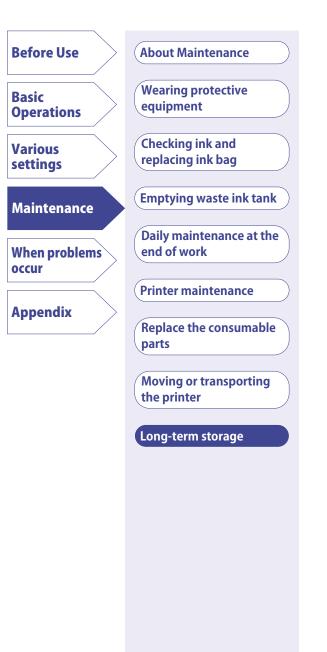
• Close the latches (x 4) of the case properly.

G Important/

If not, it may cause ink spillage.



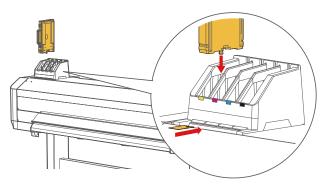




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Insert the ink bag case and smartchip card into the ink slot.

- Match the color of the label on the printer with the color of the label on the ink bag.
- 1. Face the latch side towards you and insert the case into the slot.
- Make sure that they are fully inserted.
- Once loaded, ink charging begins.



2. When ink charging is completed, "Media End" is displayed.

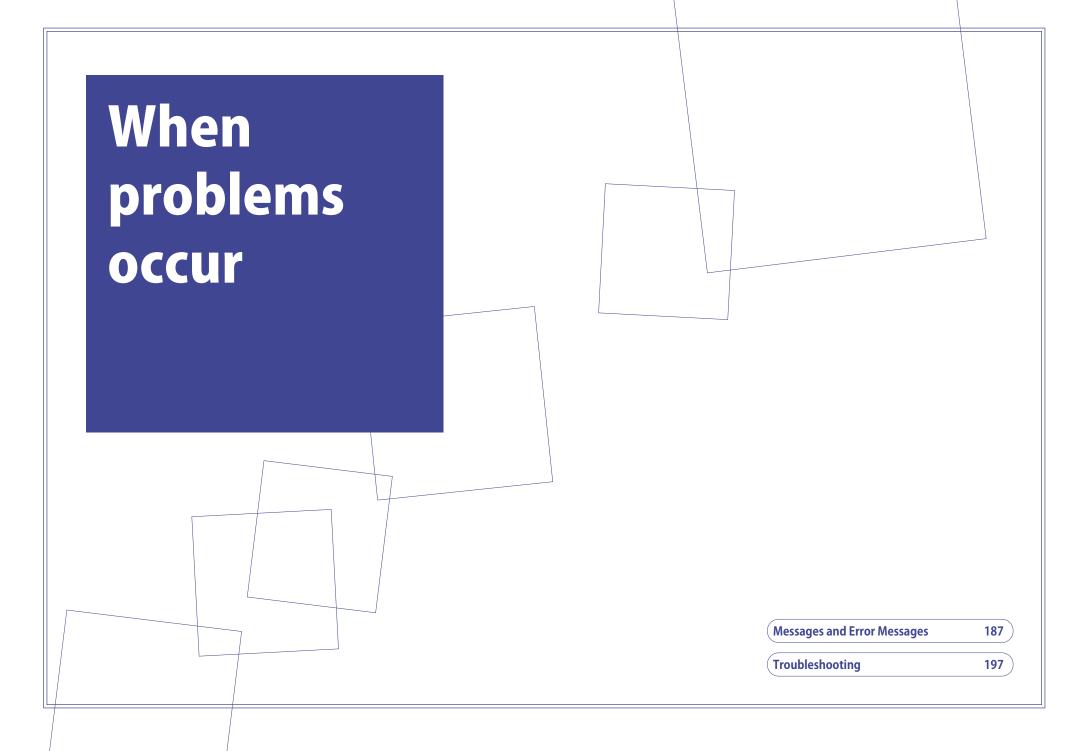
G Important!!

If you run a nozzle check print immediately after the initial ink charging, the following symptoms may occur.

- Lines are faded.
- Patterns are partially missing.

In such cases, perform Little Charge according to "Menu 3: Cleaning" P.112 and then check the printed results.

If it does not help to solve the problem, leave the printer for at least one hour, then perform cleaning or "Little Charge" cleaning again. If the problem still persists, please contact your local MUTOH dealer.



Before Use

Basic Operations

Various settings

Maintenance

When problems occur

Appendix

Messages and Error Messages

This section describes the messages that appear and how to deal with them.

Status messages

This section describes the messages when the printer is working properly.

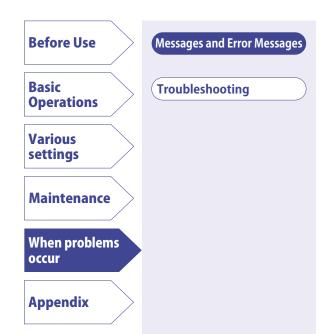
Display	Description		
Print Ready	Ready-to-print state (Media is loaded)		
Media End	Ready-to-print state (Media is not loaded).		
Receiving	Data is being received.		
Converting	Data analysis is in progress.		
Printing	Printing is in progress.		
Print Remain: *** m	Displays the length in meters of data that has not yet been printed for the currently printed data.		
Remain Time: *** min	Displays the time remaining to print in minutes for the data currently being printed.		
Roll Remain: *** m	Displays the remaining length of the currently set roll media in meters.		
Pausing Print Cancel Print -> Enter	 Printing is being paused. Tap III (Cancel) to resume printing. Tap II (Enter) to stop printing. 		
Canceling	Printing is being canceled.		
Feeding Forward	Feeding the media forward.		
Feeding Backward	Rewinding the media.		
Warming Up	Heater is warming up.		
Warming Up Skip -> Enter	To start printing before the heater warms up, tap 🔃 (Enter).		

Messages and Error Messages

Troubleshooting



Display	Description			
Cleaning **%	Cleaning in progress. Please wait a moment.			
Ink Refill **%	Charging the Ink. Please wait a moment.			
SubTank Refill **%	Filling ink in the subtank. Please wait a moment.			
Washing Head	The cleaning solution is filled and drained in the initial cleaning. Or, the print head is being cleaned in the head cleaning process. Please wait a moment.			
User: Type ** OK? Media Initial	Initializing media. Please wait a moment. (** indicates tthe selected user type)			
Move To Origin Position	In the origin setting menu, the print head is moving to the print start position. Please wait a moment.			
Confirm Position End -> Enter	The print head has moved to the print start position. Locate and tap 🛃 (Enter).			
Power Off	Turning off the printer. Please wait a moment.			
Insert Ink Bags	s Ink filling is in progress. Install the ink bag case.			
Insert Cleaning Bags	Bags Head cleaning process in progress. Install the cleaning bag case.			
Remove BagsHead cleaning or ink discharging process is in progress. Remove the ink bag case.				
Empty Waste Ink Tank then Tap Enter	The waste ink tank became full during Initial Charge. Empty the waste ink tank and tap 🛃 (Enter).			
S/C Reading	The smart chip card is being read.			
*** Remote Mode *** End -> Enter	Remote panel mode is being executed by MSM or other means. Operations from the printer control panel are not possible while in remote panel mode. Tap 🛃 (Enter) to force the remote panel mode to exit.			
Roll Remain Error	The remaining media count has reached zero (Stops printing).			
Roll Near End: *** m	The remaining media count will soon reach zero. Remaining media capacity is * m.			
Life Times [Pump*] OK -> Enter	The pump motor is approaching the end of its service life (Continue operation). Please contact the MUTOH product dealer where you purchased the product or the MUTOH Customer Support Desk.			



Diamlary	Description
Display	Description
Life Times [CR Motor]	CR motor is nearing the end of its service life (Continue operation).
OK -> Enter	Please contact the MUTOH product dealer where you purchased the product or the MUTOH Customer Support Desk.
Life Times [PF Motor] OK -> Enter	PF motor is nearing the end of its service life (Continue operation). Please contact the MUTOH product dealer where you purchased the product or the MUTOH Customer Support Desk.
Life Times [UV Lamp] OK -> Enter	UV Lamp is nearing the end of its service life (Continue operation). Please contact the MUTOH product dealer where you purchased the product or the MUTOH Customer Support Desk.
PG: **** L: ***mm	When the Roll Kind menu is set to other than Off, the remaining roll length of the selected media is displayed. I TROLLEND P.120
PG: **** L!: ***mm	When the End Detection menu is set to [Off], an exclamation mark (!) appears on the panel. There is a risk of printing on the platen as the printer does not detect the presence of media. To really a set of the platen as the printer does not detect the presence of media.



Message type error display and how to deal with it

This section describes the message-type errors and their countermeasures. Message-type errors appear when some failure occurs during printer operation. The printer control panel may display an error message and stop operation.

Display	Description	
Cover Open	Any or all of the covers (front cover, maintenance cover right, maintenance cover left) are open. Close the cover.	
Use Lever Lower pressure Rollers	The pressure rollers is raised. Lower the pressure rollers.	
Load Media	No media is loaded. Load the media. Image: White the second se	
Undefined Media	Media recognition failed (Operation is stopped). Re-load the media.	
Media Slant	Media slanted (Operation is stopped). Re-load the media.	
Media Cut Error	Media could not be cut (Operation is stopped). Re-load the media.	
End of Roll	The media is gone (Operation is stopped). Load new media. 🞯 "Load the media into the printer" P.45	
Change Head Gap *** PG: **** W: ***mm	The head height specified in the print data is different from the actual head height. Change to the indicated head height. The second s	
[****] Ink End	Ink is gone (Operation is stopped). Replace with a new ink bag. ③ "Replace the ink bag" P.137	
[****] No Bag	Ink bag case is not inserted (Operation is stopped). Insert the ink bag case.	
[****] No S/C Card	Smart chip card is not inserted (Operation is stopped). Insert the smart chip card.	
[****] S/C Ink Low	Ink is running low (Operation continues). Prepare replacement ink bagks.	



Display	Description	
[****] S/C Ink End	Smart chip card has run out of remaining capacity (Operation is stopped). Replace with a new ink bag. Treplace the ink bag" P.137	
[*] Chg. S/C Card	Replace with a new smart chip card.	
[****] Discharged	Ink is not filled. Perform Initial Charge. Image: White the second sec	
Full WasteinkTank	The waste ink tank has become full (Operation is stopped). Immediately transfer the liquid waste to a container.	
[****] S/C ReadErr	Failed to read smart chip card. Reinsert the smart chip card.	
[****] S/C Col.Err	The ink bag case is installed in the wrong ink slot. Install the ink bag case in the correct ink slot.	
[****] S/C Ink Err	This type of ink cannot be used with this product. Please contact the MUTOH product dealer where you purchased the product or a MUTOH sales office.	
[****] S/C CodeErr	An incorrect ink bag has been inserted. Please contact the MUTOH product dealer where you purchased the product or a MUTOH sales office.	
[****] Broken Chip	The smart chip card is damaged. Replace with a new ink bag.	
[****] Ink term warns	The ink has expired. Replace with a new ink bag.	
[****] Ink Expired	The ink has expired. (Operation is stopped). Replace with a new ink bag.	

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When problem occur	s		Canr
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			Canr Rollk
			Canr

Display	Description		
Cannot Operate Outside Print Area	 Printing is not performed because the width of the printable area is insufficient. The width of the printable area is based on the media width of the loaded media, and is increased or decreased by the amount of change in the CR direction of the origin setting and the amount of change in the side margin (total of left and right). Wedia Width" P.93 , "Origin" P.94 , "Side Margin" P.93 The width of the required printable area varies for each function. Adjust to the appropriate width. "Menu 1: Setup menus" P.90 > "Print quality calibration (Adjust Print)" P.98 (over 550 mm) "Menu 1: Setup menus" P.90 > "Media feed adjustment" P.103 (over 400 mm) "Menu 2: Test Print" P.107 > "Adjust Head" P.109 (over 550 mm) "Menu 9: Roll Length Manage" P.118 > "Simple Print" P.119 (over 400 mm) 		
Cannot Operate Media Initial - Off	The "Roll Length Manage" menu cannot be displayed because the Media Initial is set to "Off". Set the Media Initial to "Top&Width" or "Width" and then select the "Roll Length Manage" menu. "Media Initial" P.93, "Menu 9: Roll Length Manage" P.118		
Cannot Operate Media	No media is loaded. Load the media. [•] "Load the media into the printer" P.45		
Cannot Operate Rollkind Off	 Cannot print because the "Roll Length" is set to "Off" and cannot be printed. After setting the "Roll Length", click on the Print menu or the Simple Print menu in the Print menu or the Simplified Print menu. "Rollkind" P.120 "Print" P.119, "Simple Print" P.119 		
Cannot Operate Output Mode - Take Up	The scanner cannot be scanned because the Output Mode is set to "Take Up" and cannot be scanned. Set the Output Mode to "Off" and then select the read menu in the read menu.		

Note

• "Change Head Gap ***" can be either High, Middle or Low.

- The error display [****] indicates the ink bag that is the target of the warning.
- When "Ink End" or "No S/C Card" and "No Bag" occur at the same time, the "No Bag" indication has priority.



Smartchip Recovery

If the following message appears on the printer control panel, a smartchip error such as broken chip may have occurred in the smartchip card.

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. E	 The smartchip card that needs smartchip recovery may have been installed. Remove the smartchip card and insert it again. If the printer is still unable to read it, insert a new smartchip card. If "[*] Check Color OK -> Enter" is displayed after reinserting the smart chip card, follow the instructions. 	
[*] Check Color OK -> Enter	 The smartchip card that needs smartchip recovery may have been installed. Check that the ink color of the smartchip card inserted is correct. In case of wrong color insertion, insert a correct smartchip card. If the correct smart chip card is inserted, tap (Enter). The printer will perform smartchip recovery and will continue to print. 	
[*] Chg. S/C Card	The smartchip card that the smartchip recovery was performed has run out of ink. Replace with a new smart chip card.	

Note

- [*] in the error message indicates the ink bag that is subject to alert.
- While Smart Chip Recovery is in progress, the target ink will blink in the "Ink Status" menu.
 - Tink Status" P.114



Maintenance

When problems occur

Appendix

Error requiring reboot

An error requiring a restart is indicated when the printer experiences a fatal failure in its operation, such as

- When obstacles that interfere with driving occur
- If an electrical circuit (board, motor, sensor, etc.) fails
- When an abnormality occurs in the control program

If this error occurs, the printer will stop operation after

1. Automatically shuts off power of the drive system.

2. All the LEDs on the printer control panel blink and the buzzer sounds intermittently.

3. Error message appears in the printer control panel.

- Tap any key on the printer control panel to stop the buzzer sound.
- For this kind of error, the printer will be recovered by removing the cause of the error and restarting the printer.
- If the same error message appears again, please contact the MUTOH dealer you purchased your printer from or the MUTOH Customer Support Center. When contacting us, please be sure to provide the code number of the error message.

Display	Causes and remedies		
E016 xxxxxxx[xx]	A problem was detected with the control program. 1. Turn off the power on the machine and turn it on after a while.		
CPU ERROR [35]	A problem was detected with the control PCB. 1. Turn off the power on the machine and turn it on after a while.		
E065 ERROR PF Motor	A problem was detected during motor control.		
E066 ERROR CR Motor	1. Turn off the power on the machine and turn it on after a while.		
E067 ERROR PF Encoder			
E068 ERROR CR Encoder			
E069 ERROR PF Timeout			
E070 ERROR CR Timeout			

Before Use	Messages and Error Messag
Basic Operations	Troubleshooting
Various settings	
Maintenance	
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Appendix	
/	

Display	Causes and remedies	
E071 ERROR PF Current	Overcurrent or overload was detected during motor operation.	
E072 ERROR CR Current	1. Open the front cover and check for any obstructions to carriage operation.	
E073 ERROR PF2 Current	 Check if the media is loaded correctly. Turn off the power on the machine and turn it on after a while. 	
E074 ERROR CR2 Current		
E076 ERROR Pre Heat	A problem was detected with the heater control.	
E077 ERROR Platen Heat	1. Turn off the power on the machine and turn it on after a while.	
E078 ERROR Dryer		
E079 ERROR Board Commu.	A problem was detected with the communication between the control PCBs. 1. Turn off the power on the machine and turn it on after a while.	
E081 ERROR CR Origin	A problem was detected during the origin detection. 1. Turn off the power on the machine and turn it on after a while.	
E090 ERROR Heater Volt	A problem was detected with the heater voltage.1. Turn off the power on the machine and turn it on after a while.	
E092 ERROR CR Over Load	The CR motor was overloaded.1. Turn off the power on the machine and turn it on after a while.	
E093 ERROR Control Ver.	Control PCB version mismatch was detected.1. Turn off the power on the machine and turn it on after a while.	
E097 ERROR NVRAM	A problem was detected with the parameter.	
E126 ERROR VBS 1	1. Turn off the power on the machine and turn it on after a while.	
E127 ERROR VBS 2		
E13x ERROR SubTank x	A problem was detected with the sub-tanks in the ink supply path. 1. Turn off the power on the machine and turn it on after a while.	
E140 ERROR Pre Therm.	A problem was detected with the heater temperature.	
E141 ERROR PlatenTherm.	1. Turn off the power on the machine and turn it on after a while.	
E142 ERROR Dryer Therm.		

		Display	Causes and remedies
Before Use	Messages and Error Messages	E186 ERROR Head Temp 1	A problem was detected with the head temperature.
Pasia		E187 ERROR Head Temp 2	1. Turn off the power on the machine and turn it on after a while.
Basic Operations	Troubleshooting	E188 ERROR Head Heat 1	
		E189 ERROR Head Heat 2	
Various settings	>	E190 ERROR H Trans Th.1	
		E191 ERROR HTrans Th.2	
Maintenance	E228 ERROR UV Fan1	A problem was detected with in the fan for cooling the UV-LED unit.	
/		E229 ERROR UV Fan2	1. Turn off the power on the machine and turn it on after a while.
When problems		E231 ERROR UV HeadDet.	UV-LED unit are not yet installed.
occur		1. Turn off the power on the machine and turn it on after a while.	
	E232 ERROR Wiper Sensor A problem was detected in the operation of the cleani	A problem was detected in the operation of the cleaning wiper.	
Appendix		E233 ERROR Wiper Motor	 Check if there are any obstructions to interrupt cleaning wiper operation. Turn off the power on the machine and turn it on after a while.

Before Use

Messages and Error Messages

Troubleshooting

Basic Operations

Various settings

Maintenance

When problems occur

Appendix

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 the 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 old version is installed in your computer, download the latest version from MUTOH Club.

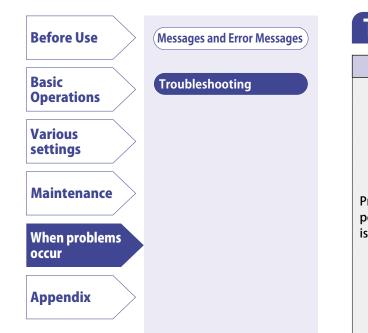
WTOH Status Monitor

Trouble during installation / initial setup

Symptoms	Possible cause and Remedy		
	Check that the front cover and the maintenance cover are closed.		
Cannot perform initial ink	Check that the pressure rollers are down.		
charging.	Make sure that ink bag cases and smartchip cards are all the way seated in the slots. "Load a new ink bag" P.139		
Ink does not come out after Initial Charge.	 Check that the 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. Wozzle check and head cleaning P.154 		
	Is the power turned OFF during ink charging? • Turn the power ON and perform an initial ink charging again.		

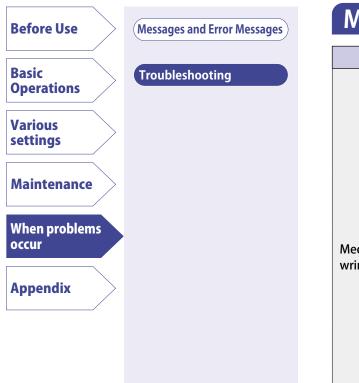
Before Use	>	Messages and Error Messages
Basic Operations		Troubleshooting
Various settings		
Maintenance	>	
When problem occur	s	
Appendix	$\left>$	

Symptoms	Possible cause and Remedy		
Nozzle clogging occurs after initial ink charging.	 Perform cleaning and then check the print results. "Nozzle check and head cleaning" P.154 If there is no improvement in the print result even after performing cleaning, leave the printer unused for an hour or more. Then perform cleaning or "Little Charge" again and check the print result. If the problem still persists, contact your local Mutoh dealer. 		
	Check that the Ethernet cable is connected securely to the Ethernet port.		
Upable to connect to printer	Check that the network settings are configured correctly.		
Unable to connect to printer from MSM or RIP	Check that the printer's network settings match with the computer's settings. "Menu 7: Initial Settings" P.116 "IP Address" P.116, "Subnet Mask" P.116, "Gateway" P.116		



Trouble with operation

Symptoms	Possible cause and Remedy		
	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 the maintenance covers are closed.		
	Check that the pressure rollers are down		
Printer does not work at all after powered on or even after media	Check that the media is loaded into the printer correctly. "Load the media into the printer" P.45		
is loaded.	Check that the ink bag cases are inserted into the ink slots.		
	 Do you use the printer within recommended environmental conditions? Make sure to use the printer within the specification range. Confirm installation location" Getting Started Guide 		
	Is there an error displayed in MSM? • Check MSM status information.		



Media-related problems

Symptoms	Factors and Countermeasures		
	Check that the media is loaded into the printer correctly. "Load the media into the printer" P.45		
	 Are there any foreign materials such as torn paper adhering to the pressure roller? Clean the pressure roller. Cleaning inside the printer" P.157 		
	 Do you use the printer within recommended environmental conditions? Make sure to use the printer within the specification range. Confirm installation location Getting Started Guide 		
Media detached, torn, or wrinkled during media initials	 Are any curls or warps present on your media? Place the edge holders on both ends of the media. Check that you select the appropriate vacuum fan setting. S. After loading the media" P.55 Menu 1: Setup menus" P.90 > "Vacuum Fan" P.91 		
	Are you using folded, scratched, torn, and winding curled media? Replace the media. 		
	 Is holddown pressure adequate for the roll media? Try using the slide lock levers on the pressure rollers to individually reduce or cancel the pressurization. Change pressure of pressure rollers individually P.76 		

Note

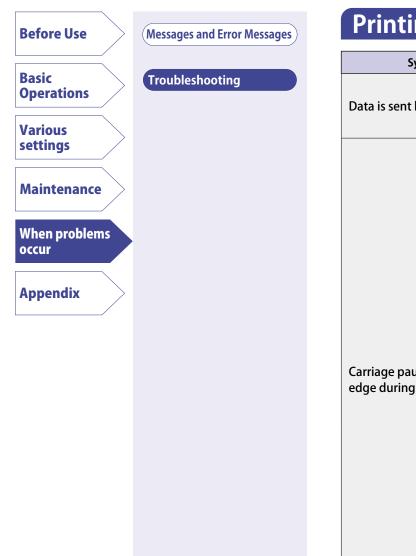
Remove jammed or torn media according to "In case of media jam" P.206.

Before Use (Messages and Error Messages)	Symptoms	Possible cause and Remedy
	Media initials do not correctly identify media	Check that the media is loaded into the printer correctly.
Basic Operations Troubleshooting		Is the media set at an angle?
Various		 Load the media straight. "Load the media into the printer" P.45
settings Maintenance		 Do you use the printer within recommended environmental conditions? Make sure to use the printer within the specification range. Confirm installation location" Getting Started Guide
When problems		Are you using media that has been printed before? Use new media.
occur Appendix	Frequent media jams.	 Do you use the printer within recommended environmental conditions? Make sure to use the printer within the specification range. Confirm installation location" Getting Started Guide
		 Are any curls or warps present on your media? Place the edge holder on both ends of the media. Check that you select the appropriate vacuum fan setting. Se "5. After loading the media" P.55 Wenu 1: Setup menus" P.90 > "Vacuum Fan" P.91
		Are you using folded, scratched, torn, and rolled media?Replace the media.

Note

Remove jammed or torn media according to"In case of media jam" P.206.

Symptoms	Possible cause and Remedy	
Media skews during printing	Check that the media is loaded into the printer correctly.	



Printing problems

Symptoms	Possible cause and Remedy		
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 MSM status information.		
Carriage pauses at right or left edge during printing	 Does your computer meets the following requirements? OS: Windows 11, Windows 10 CPU: Intel (R) Core (TM) i5 or higher Memory: 8 Gbytes or more Network: Gigabit Ethernet-capable network port, using Category 6 or later Gigabit-capable Ethernet cable Note The OS support period of MUTOH software follows the Microsoft support lifecycle policies. When using RIP software, please also see the system requirements of your RIP software. Are you using a Gigabit-capable Ethernet cable to make the connection? Use a Gigabit-capable Ethernet cable of Category 6 or higher to connect the printer to the computer. Is the MPS function enabled? Check the settings of the MPS function. Image: "MPS" P.86 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". Try enabling MPS in MSM.		

Before Use Me	essages and Error Messages	Symptoms	Factors and Countermeasures
Basic Operations	roubleshooting		 Are any curls or warps present on your media? Place the edge holder on both edges of the media. Check that you select the appropriate vacuum fan setting. Some "5. After loading the media" P.55 Menu 1: Setup menus" P.90 > "Vacuum Fan" P.91
Various settings Maintenance		Printing is partially smudged or missing.	 Is the media deformed by heat? If the media is deformed by heat during standby, increase the feed amount from the Start Feed menu. Wenu 1: Setup menus" P.90 > "Start Feed" P.97
When problems			Does the media contain moisture or are you using the creased or wrinkled media? • Replace with new media.
occur Appendix			 Is the parts around the print head clean? Perform cleaning of the outer circumference of the print head. 3. Clean the parts around the print head" P.149
		Printing is misaligned or there are areas that do not print.	Check that the media is loaded into the printer correctly.
			 Have you set the origin? Cancel or reset the origin setting. Wenu 1: Setup menus" P.90 > "Origin" P.94
		Printed lines bleed.	Are you printing on the printed side of the media?Check the print side of the media and set it correctly.
			 Did you perform "Print quality calibration (Adjust Print)"? Perform "Print quality calibration (Adjust Print)". Image: "Menu 1: Setup menus" P.90 > "Print quality calibration (Adjust Print)" P.98
			 Did you perform Media feed adjustment? Perform Media feed adjustment. Image: Image: Ima

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Before Use	(Messages and Error Messages)	Symptoms	Factors and Countermeasures
		White or black line appears on the print.	Check that the media is loaded into the printer correctly. "Load the media into the printer" P.45
asic perations	Troubleshooting		Does the media contain moisture or are you using the creased or wrinkled media? • Replace with new media.
/arious ettings			Is the nozzle in good condition? Perform a nozzle check.
Aaintenance			 If the nozzle is clogged, perform head cleaning. "Nozzle check and head cleaning" P.61
When problems			 Did you perform "Print quality calibration (Adjust Print)"? Perform "Print quality calibration (Adjust Print)". Image: Image: Ima
Appendix			 Did you perform media feed adjustment? Perform a media feed adjustment. Image: Image: I
			 Is the nozzle in good condition? Perform a nozzle check. If the nozzle is clogged, perform head cleaning. Wozzle check and head cleaning" P.61
		Printing lines are not aligned/ doubled, Printed results are blurred.	 Did you perform "Print quality calibration (Adjust Print)"? Perform "Print quality calibration (Adjust Print)".
			 Did you perform media feed adjustment? Perform a media feed adjustment. Image: Image: I
		Is the ink bag within its expiration date?Use ink bags that are within the expiration date.	

Before Use	(Messages and Error Messages)	Symptoms
Basic Operations	Troubleshooting	Printed color is not accura
Various settings		
Maintenance		
When problems occur		
Appendix		Nozzle clogging remains a head cleaning.
		Ink does not dry easily after

Symptoms	Factors and Countermeasures	
	 Is the nozzle in good condition? Perform a nozzle check. If the nozzle is clogged, perform head cleaning. "Nozzle check and head cleaning" P.61 	
Printed color is not accurate.	Did you install ink ink bags and smartchip cards in the printer in correct color combination?If the combination is incorrect, perform "Longstore" cleaning, then an initial ink charging.	
Nozzle clogging remains after head cleaning.	 Are the cleaning wipers and the parts around the print head clean? Clean the cleaning wiper and the parts around the print head. 27 "4. Clean the cleaning wiper and the parts around the capping unit" P.150 27 "3. Clean the parts around the print head" P.149 	
	 Did you select an appropriate cleaning option? Head Select: Select "all" or heads with clogged nozzles. "Menu 3: Cleaning" P.112 Cleaning mode selection: If the nozzle clogging is not resolved after 2 or 3 times of Normal or Long cleaning, perform Little Charge. "Menu 3: Cleaning" P.112 	
	 Is it time to replace cleaning wipers or the pad for the flushing box? Check the conditions of cleaning wiper and flushing box pad and replace them if required. "About Maintenance" P.132 "Cleaning Wiper" P.161 	
Ink does not dry easily after printing	Are you using a heater? Check the heater settings. "Menu 1: Setup menus" P.90 > "Preheater" P.91 , "Platen Heater" P.91 , "Dryer" P.91 , 	

Note

K

• When printing that uses a lot of ink, there is a risk that the ink may not dry easily after printing.

• Depending on the media you are using, the ink may not dry easily.



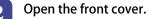
In case of media jam

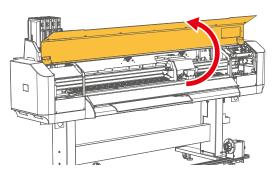
When the media is jammed in the printer, follow these steps to remove it.



3

Turn on the printer. Turn off the printer" P.44



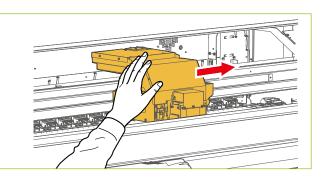


Move the carriage from the top of the media to the right side.

G Important!!

When the head height is set to Low or Middle, change it to High and then move the carriage. After moving, change the head height back to Low or Middle.

Print head Height" P.73







5

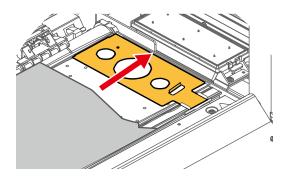
6

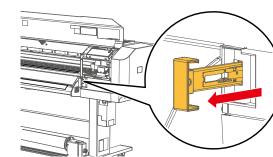
Remove the edge holder from the media.

G Important!!

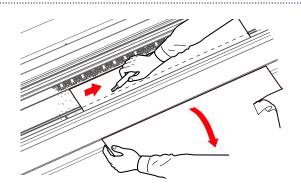
Raise the pressure rollers.

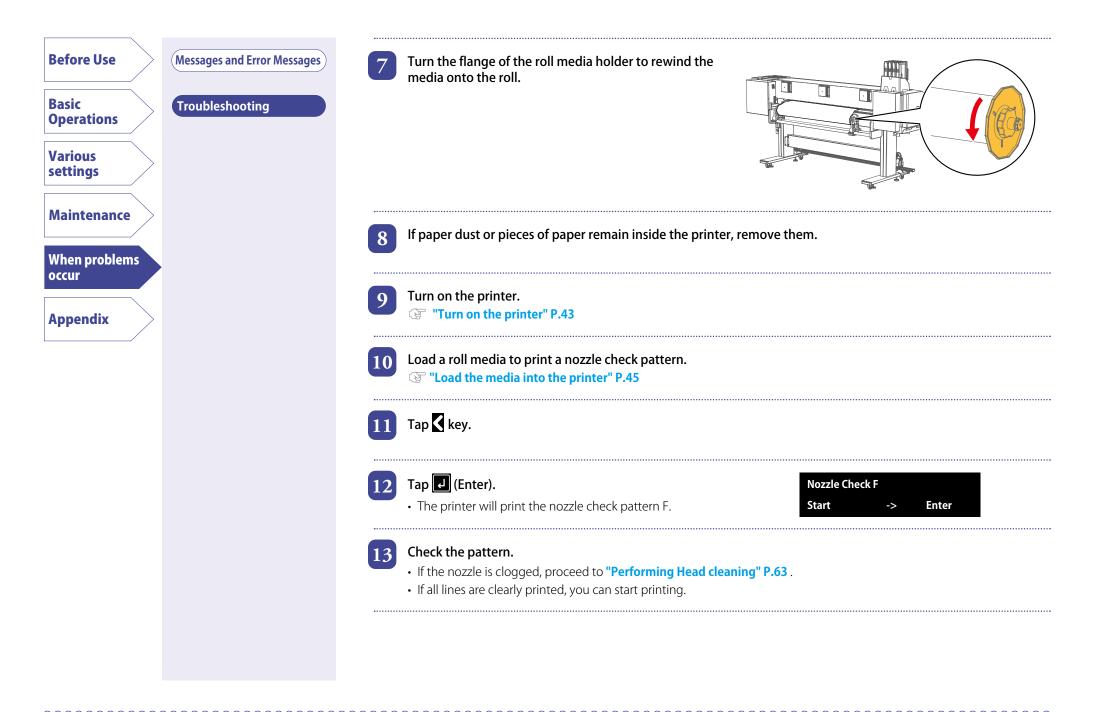
If the edge holder is deformed, stop using the printer and contact your local MUTOH dealer.

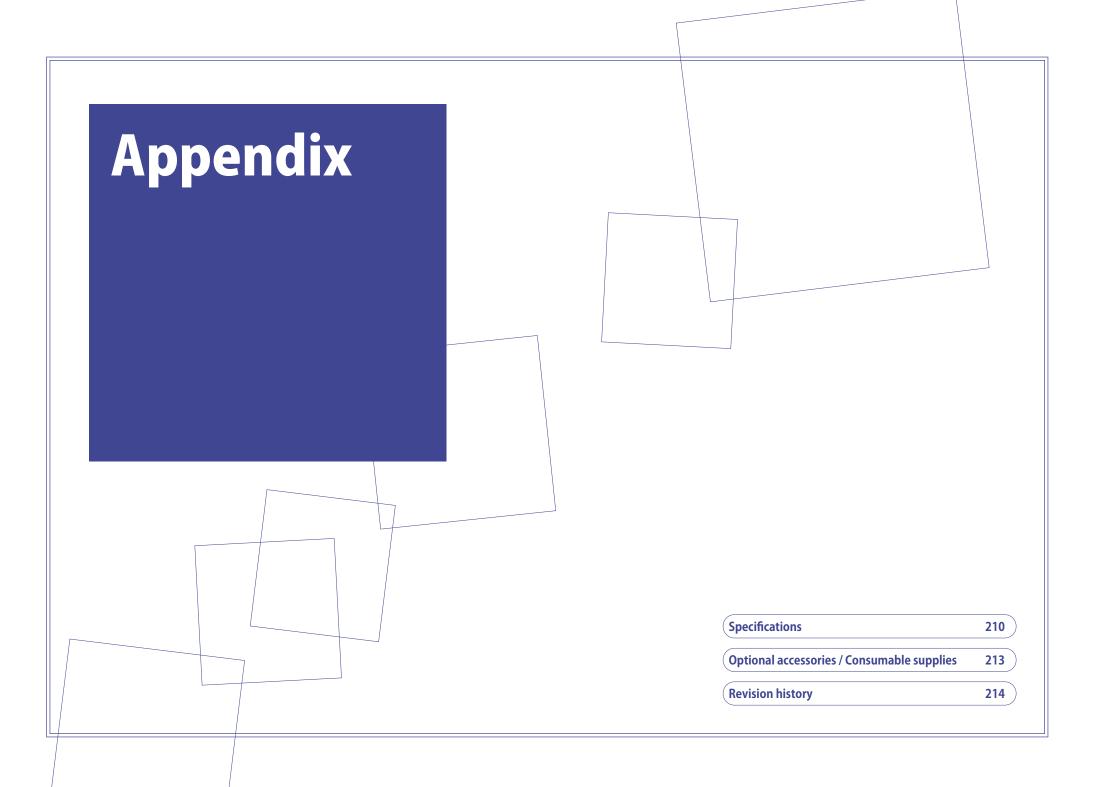




Pull the media toward the front and use a personal cutter to cut the torn part of the media along the groove.









Specifications

ltem		Description
Model name		HA-1642
Printing method		On-demand piezo method
Driving method		Firmware servo / DC motor drive
Media feed method		Multipoint pressurized grid roller system
Media hold-down system		Pressure rollers down system with manual lever
Ink curing system		UV-LED
Media size	Media outer diameter	Less than 200 mm
	Paper core diameter	2 inch or 3 inch
	Weight	30 kg or less
	Width	500 mm to 1,625 mm
	Recommended media thickness	1.0 mm or less
Maximum printable width		1,615 mm
Maximum printable length		1,500 m
Head height adjust	ment	Low / Middle / High 3-step adjustment
Interface		Gb-Ethernet (1000BASE-T)
Waste ink tank		2,000 ml tank attached to the printer
Ink	Colors	4 colors (black, cyan, magenta, yellow)
	Туре	1,000 ml ink bag

Before Use	Specifications	ltem	
Basic	Optional accessories /	Environmental Requirements	Operating condition
perations	Consumable supplies		Printing Condition
arious ettings	Revision history		Fluctuation
aintenance			Printer Storage Condition
nen problems cur			
ppendix			Ink Storage Condition
			-
		Power	Printer:
		specifications	Input voltage
			Input frequency
			Input current

tem		Description
nvironmental equirements	Operating condition	Temperature: 20 ° C to 32 ° C Humidity: 40 % to 60 %, non condensing
	Printing Condition	Temperature: 22 ° C to 30 ° C Humidity: 40 % to 60 %, non condensing
	Fluctuation	Temperature: No more than 2 ° C per hour Humidity: No more than 5 % per hour
	Printer Storage Condition	 Without ink filled: Within 6 months: Temperature: 10° C to 60° C Humidity: 20% to 80%, non condensing With ink filled: Within1 week: Temperature: 10° C to 40° C Humidity: 20% to 80%, non condensing Storage must be within 4 days when stored between 32° C to 40° C.
	Ink Storage Condition	 Black / Cyan / Magenta / Yellow (1,000 ml each) Temperature: 10 ° C to 40 ° C Humidity: 5 % to 85 %, non condensing Storage must be within one month when stored at 40 ° C. Keep away from heat sources and flammable materials and store in a cool, dark and well-ventilated place. Cleaner bag (300 ml) Temperature: 10 ° C to 40 ° C Humidity: Below 80 %, non condensing Storage must be within one month when stored between 30 ° C and 40 ° C
ower pecifications	Printer: Input voltage	AC 100V to 120V \pm 10%. AC 200V to 240V \pm 10%.
	Input frequency	50/ 60 Hz ± 1Hz
	Input current	AC 100V to 120V 12.0 A or less AC 200V to 240V 7.0 A or less

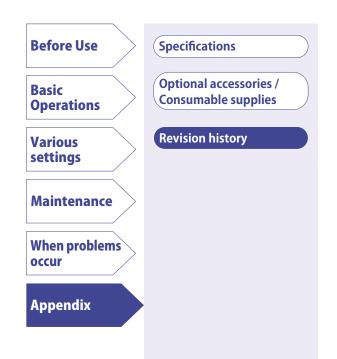
/	> Specifications	lte
		Pow
Basic Operations	Optional accessories / Consumable supplies	spe
Various settings	Revision history	
Maintenance	>	Pow
When problems occur	>	
Appendix		Pow

ltem		Description
Power	Heater: 1	
specifications	Input voltage	AC 100V to 120V \pm 10%.
		AC 200V to 240V \pm 10%.
	Input frequency	50/ 60 Hz \pm 1Hz
	Input current	AC 100V to 120V 10.0 A or less
		AC 200V to 240V 5.0 A or less
Power	Take-up unit: 1	
specifications	Input voltage	AC 100V to 240V \pm 10%
	Input frequency	50/ 60 Hz \pm 1Hz
	Input curren	AC 100V to 240V: 0.26 to 0.13A max.
Power	Power off	20 W or less
consumption	Ready-to-print	240 W or less (When heater is not used)
	Sleep Mode	41 W or less
	Operation	1400 W or less (Peak 2700 W)
Dimensions	Height	1,428 mm
		When ink bag case (1,000 ml) is installed: 1,611 mm
	Width	2,770 mm
	Depth	895 mm
Weight	Printer body	146 kg
	Stand	32 kg
	Take-up unit	8 kg



Optional accessories / Consumable supplies

For information about optional accessories and consumable supplies, please contact your local MUTOH dealer.



Revision history

Date	Version	Manual control number	Supported firmware
2024.07	00	HA1642E-A-00	V.1.00
2024.12	01	HA1642E-A-01	V.1.01