

MESH UNIT

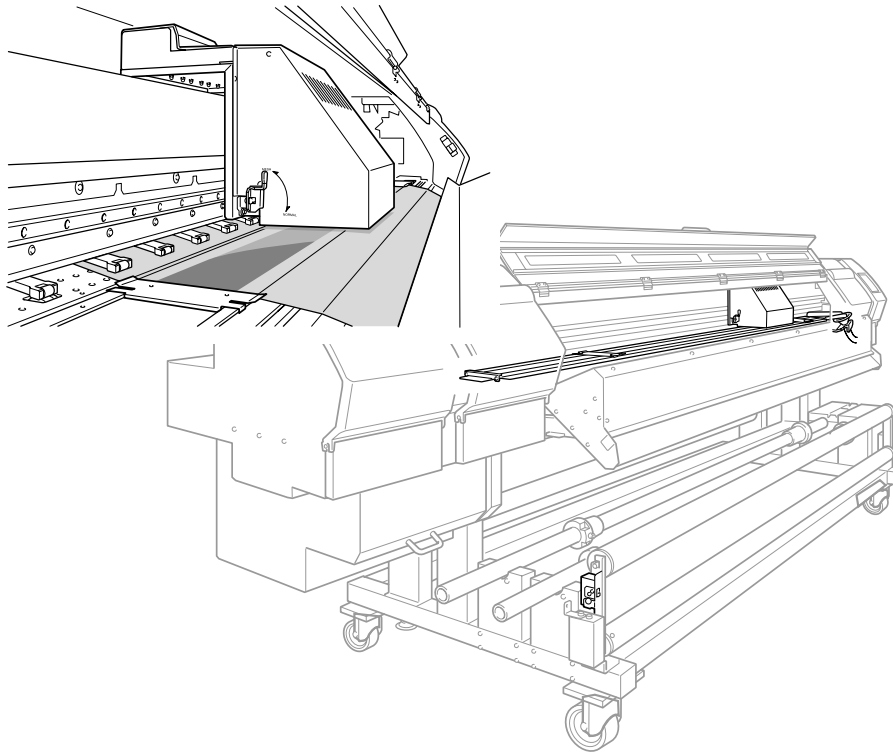
MU-1000

SKIN MAKER ACCESSORY
PLOTTER DA TAGLIO ACCESSORIO
ACCESSOIRE POUR TRACEUR DE DECOUPE
SCHNEIDPLOTTER-ZUBEHÖRTEIL
ACCESORIO PARA MÁQUINA PARA ROTULACION

Mesh-media Printing Unit

MU-1000



USER'S MANUAL



Thank you very much for purchasing this product.

- To ensure correct and safe usage with a full understanding of this product's performance, please be sure to read through this manual completely and store it in a safe location.
 - Unauthorized copying or transferral of this manual, in whole or in part, is prohibited.
 - The contents of this document and the specifications of this product are subject to change without notice.
 - The documentation and the product have been prepared and tested as much as possible. If you find any misprint or error, please inform us.
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Contents

 To Ensure Safe Use	4
 Pour utiliser en toute sécurité	8
Important Notes on Handling and Use	12
Chapter 1 Introduction	13
1-1 Overview of the Unit	14
Features	14
Operations to Make the Printer Support the Unit	14
Important Note on Installation	14
Changes in Printer Functioning	14
Operation Modes	15
1-2 Part Names and Functions	16
1-3 Included Items	17
Chapter 2 Using the Unit	19
2-1 Using the Printer in the Mesh Mode	20
Switching the Printer to the Mesh Mode	20
Loading Media and Making Settings	25
Cutting off the Media	28
2-2 Cleaning	29
About Cleaning the Ink Tray	29
How to Clean the Ink Tray	29
2-3 Using the Printer in the Normal Mode	31
Switching the Printer to the Normal Mode	31
2-4 Storing	35
Storing the Unit	35
Chapter 3 Cleaning Using the Cleaning Kit	37
3-1 Cleaning Using the Cleaning Kit	38
About Cleaning the Print Heads Using the Cleaning Kit	38
How to Perform Cleaning	38
Chapter 4 Feature Reference	43
4-1 Printer Settings in the Mesh Mode	44
Printer Settings in the Mesh Mode	44
4-2 Printer Operation in the Mesh Mode	45
The Lines Printed on the Edges of the Media During Printing	45
Margin Between Pages	45
Correction Features	45
4-3 Using Lightweight Mesh Media	46
When Using Lightweight Mesh Media	46
Installing the Tension Unit	47
Removing the Tension Unit	50
Chapter 5 Appendix	53
5-1 What to Do If...	54
Printing Stops at an Unexpected Location	54
Ink is Discharged at a Location Other Than on the Media	54
Collected Ink Overflows from the Ink Tray	54

5-2 If a Message Appears	55
5-3 If an Error Message Appears	56
5-4 Specifications	58

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


To Ensure Safe Use

Improper handling or operation of this machine may result in injury or damage to property. Points which must be observed to prevent such injury or damage are described as follows.

About WARNING and CAUTION Notices


 WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
 CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. Note: Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols


	The  symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. The symbol at left means "danger of electrocution."
	The  symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. The symbol at left means the unit must never be disassembled.
	The  symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. The symbol at left means the power-cord plug must be unplugged from the outlet.


 **Incorrect operation may cause injury.**


 **WARNING**


 **Be sure to follow the operation procedures described in this documentation. Never allow anyone unfamiliar with the usage or handling of the machine to touch it.**


Incorrect usage or handling may lead to an accident.

 **Keep children away from the machine.**
The machine includes areas and components that pose a hazard to children and may result in injury, blindness, choking, or other serious accident.


 **Never operate the machine while tired or after ingesting alcohol or any medication.**
Operation requires unimpaired judgment. Impaired judgment may result in an accident.


 **Never use the machine for any purpose for which it is not intended, or use the machine in an undue manner that exceeds its capacity.**
Doing so may result in injury or fire.


 **When attempting cleaning, maintenance, follow the instructions given in this guide.**
Incorrect operation or handling may result in injury or electrical shock.


 **Never attempt to disassemble, repair, or modify the machine.**
Doing so may result in fire, electrical shock, or injury. Entrust repairs to a trained service technician.

 **CAUTION**

 **Exercise caution to avoid being pinched or becoming caught.**
Inadvertent contact with certain areas may cause the hand or fingers to be pinched or become caught. Use care when performing operations.

 **Never attempt operation while wearing a necktie, necklace, or loose clothing. Bind long hair securely.**
Such items may become caught in the machine, resulting in injury.

 **Conduct operations in a clean, brightly lit location.**
Working in a location that is dark or cluttered may lead to an accident, such as becoming caught in the machine as the result of an inadvertent stumble.

 **Never climb or lean on the machine.**
The machine is not made to support a person. Climbing or leaning on the machine may dislodge components and cause a slip or fall, resulting in injury.

⚠ Ink, cleaning fluid, and discharged fluid are flammable and toxic.

⚠ WARNING



Keep open flame away from the work area.
Ink and discharged fluid are flammable.



Never store ink, or discharged fluid in any of the following locations.

- Any location exposed to open flame
- Any location where high temperature may occur
- Near bleach or any other such oxidizing agent or explosive material
- Any location within the reach of children

Fire may be a danger. Accidental ingestion by children may pose a health hazard.



Never place an ink cartridge in fire.
Ink may flow out, catch fire, and spread fire to other nearby objects.



Never drink or sniff ink, discharged fluid, or allow them to come in contact with the eyes or skin.

Doing so may be hazardous to the health.

⚠ CAUTION



Ensure adequate ventilation for the work area.

Failing to perform ventilation may result in a health hazard or danger of combustion due to ink fumes.



Never allow an ink cartridge to be subjected to impact, and never attempt to disassemble.

Ink may leak.

⚠ In the event of ingestion or physical distress

- In the event of contact with the eyes, immediately flush with water for at least 15 minutes. If eye irritation continues, seek treatment by a physician.
- In the event of contact with skin, immediately wash with soap. If irritation or inflammation occur, seek treatment by a physician.
- In the event of ingestion, do not induce vomiting, and immediately seek treatment by a physician. Forcibly inducing vomiting may lead to danger of choking.
- If odor leads to physical distress, move to a well-ventilated location and rest quietly. If dizziness or nausea persists, seek treatment by a physician.

 **Danger of fire, burns, or toxic gas emissions**

 **WARNING**



Caution: high temperatures

Areas such as the dryer become hot. Exercise caution to avoid fire or burns.



When printing is not being performed, remove any loaded media or switch off the power.

The continued application of heat at a single location may cause the release of toxic gases from the media or pose a fire hazard.



Never use media that cannot withstand heat.



Doing so may degrade the media, or may result in fire or the release of toxic gases.









Pour utiliser en toute sécurité

La manipulation ou l'utilisation inadéquates de cet appareil peuvent causer des blessures ou des dommages matériels. Les précautions à prendre pour prévenir les blessures ou les dommages sont décrites ci-dessous.

Avis sur les avertissements


 ATTENTION	Utilisé pour avertir l'utilisateur d'un risque de décès ou de blessure grave en cas de mauvaise utilisation de l'appareil.
 PRUDENCE	Utilisé pour avertir l'utilisateur d'un risque de blessure ou de dommage matériel en cas de mauvaise utilisation de l'appareil. * Par dommage matériel, il est entendu dommage ou tout autre effet indésirable sur la maison, tous les meubles et même les animaux domestiques.


À propos des symboles


	Le symbole  attire l'attention de l'utilisateur sur les instructions importantes ou les avertissements. Le sens précis du symbole est déterminé par le dessin à l'intérieur du triangle. Le symbole à gauche signifie "danger d'électrocution".
	Le symbole  avertit l'utilisateur de ce qu'il ne doit pas faire, ce qui est interdit. La chose spécifique à ne pas faire est indiquée par le dessin à l'intérieur du cercle. Le symbole à gauche signifie que l'appareil ne doit jamais être démonté.
	Le symbole  prévient l'utilisateur sur ce qu'il doit faire. La chose spécifique à faire est indiquée par le dessin à l'intérieur du cercle. Le symbole à gauche signifie que le fil électrique doit être débranché de la prise.


⚠ L'utilisation incorrecte peut causer des blessures


⚠ ATTENTION


 **S'assurer de suivre les procédures d'utilisation décrites dans la documentation. Ne jamais permettre à quiconque ne connaît pas le fonctionnement ou la manutention de l'appareil de le toucher.** L'utilisation ou la manutention incorrectes peuvent causer un accident.

 **Garder les enfants loin de l'appareil.** L'appareil comporte des zones et des composants qui présentent un danger pour les enfants et qui pourraient causer des blessures, la cécité, la suffocation ou d'autres accidents graves.


 **Ne jamais faire fonctionner l'appareil après avoir consommé de l'alcool ou des médicaments, ou dans un état de fatigue.** L'utilisation de l'appareil exige un jugement sans faille. L'utilisation avec les facultés affaiblies pourrait entraîner un accident.


 **Ne jamais utiliser l'appareil à des fins autres que celles pour lesquelles il est conçu. Ne jamais l'utiliser de manière abusive ou d'une manière qui dépasse sa capacité.** Le non-respect de cette consigne peut causer des blessures ou un incendie.


 **S'assurer de suivre les instructions données dans ce manuel pour le nettoyage ou l'entretien de l'appareil.** La manipulation ou l'utilisation incorrectes risquent de causer des blessures ou un choc électrique.


 **Ne jamais tenter de démonter, de réparer ou de modifier l'appareil.** Le non-respect de cette consigne risque de provoquer un incendie, un choc électrique ou des blessures. Confier les réparations à un technicien ayant la formation requise.

⚠ PRUDENCE

 **Faire preuve de prudence pour éviter l'écrasement ou le coincement.** La main ou les doigts peuvent être écrasés ou coincés s'ils entrent en contact avec certaines surfaces par inadvertance. Faire preuve de prudence pendant l'utilisation de l'appareil.


 **Ne jamais faire fonctionner l'appareil si on porte une cravate, un collier ou des vêtements amples. Bien attacher les cheveux longs.** Ces vêtements ou ces objets peuvent être coincés dans l'appareil, ce qui causerait des blessures.


 **Utiliser l'appareil dans un endroit propre et bien éclairé.** Travailler dans un endroit sombre ou encombré peut causer un accident; l'utilisateur risque, par exemple, de trébucher malencontreusement et d'être coincé par une partie de l'appareil.

 **Ne jamais grimper ni s'appuyer sur la machine.** La machine n'est pas conçue pour supporter le poids d'une personne. Grimper ou s'appuyer sur la machine peut déplacer des éléments et causer un faux pas ou une chute, ce qui causerait des blessures.

 **L'encre, les liquides nettoyants et les liquides usés sont inflammables et toxiques**


 **ATTENTION**


 **Ne pas approcher une flamme nue de l'espace de travail.**
L'encre et les liquides usés sont inflammables.

 **Ne jamais entreposer d'encre ni de liquides usés dans les endroits suivants :**


- un endroit exposé à une flamme nue;
- un endroit où il y a risque de température élevée;
- près d'eau de Javel, d'un autre agent d'oxydation ou de matériel explosif;
- tout endroit à la portée d'enfants.


Il y a risque d'incendie. L'ingestion accidentelle par un enfant peut présenter un risque pour la santé.


 **Ne jamais incinérer une cartouche d'encre.**
De l'encre pourrait couler, s'enflammer et le feu se répandre à des objets proches.

 **Ne jamais boire ou respirer délibérément l'encre ou les liquides usés, et ne jamais laisser l'encre ou les liquides usés entrer en contact avec les yeux ou la peau.**
Cela est dangereux pour la santé.

 **PRUDENCE**

 **S'assurer que le lieu de travail est bien aéré.**
L'absence d'aération adéquate peut créer une situation dangereuse pour la santé ou un risque de combustion à cause des vapeurs qui émanent de l'encre.

 **Ne jamais soumettre une cartouche d'encre à des chocs. Ne jamais tenter d'ouvrir une cartouche d'encre.**
De l'encre pourrait s'échapper.

 **En cas d'ingestion ou de trouble physique**

- En cas de contact avec les yeux : rincer immédiatement et abondamment à l'eau courante pendant au moins 15 minutes. Si les yeux sont toujours irrités, consulter un médecin.
- En cas de contact avec la peau : laver immédiatement à l'eau et au savon. En cas d'irritation ou d'inflammation de la peau : consulter un médecin.
- En cas d'ingestion : ne pas provoquer le vomissement et demander immédiatement l'aide d'un médecin. Provoquer le vomissement peut créer un risque de suffocation.
- Si l'odeur cause un trouble physique, amener la personne dans un endroit bien aéré et la faire se reposer. Si l'étourdissement ou la nausée persistent, consulter un médecin.

 **Risque d'incendie, de brûlures ou d'émissions de gaz toxiques**

 **ATTENTION**



Attention : températures élevées.

Les zones comme le séchoir chauffent. Faire preuve de prudence pour éviter un incendie ou des brûlures.



Quand aucun travail d'impression n'est en cours, retirer tout support de l'appareil ou couper l'alimentation électrique.

L'application continue de chaleur à un point unique peut causer l'émission de gaz toxiques ou créer un risque d'incendie.



Ne jamais utiliser un support qui ne peut pas supporter la chaleur.

L'utilisation d'un support qui ne supporte pas la chaleur peut détériorer le support, créer un risque d'incendie ou causer l'émission de gaz toxiques.

Important Notes on Handling and Use

This machine is a precision device. To ensure the full performance of this machine, be sure to observe the following important points. Failure to observe them may not only result in loss of performance, but may also cause malfunction or breakdown.

- Handle carefully, and never subject the machine to impact or excessive force.
- The overall length of the equipment handled when using this unit is approximately three meters. Ensure adequate space during operation and exercise care to prevent collisions with persons or objects.
- Clean the ink tray as often as necessary.
- Never relocate the printer. Installing the printer or moving it to a different location are operations performed by service technicians from Roland DG Corp.

Chapter 1

Introduction

1-1 Overview of the Unit

Features

- This is a mesh-media printing unit exclusively for the AJ-1000. Installing it on the AJ-1000 enables you to print on mesh media.
- Removing this unit permits ordinary printing.
- This unit requires no backing paper for mesh media. This makes it possible to keep running costs low and enables use of media of a wide variety types.
- Printing is possible even for wrinkle-prone thin mesh media (less than approximately 200 g/m² in weight). (Note, however, that the included tension roller and roller stay must be used.)

Supported Model

- AJ-1000

Operations to Make the Printer Support the Unit

Use of this unit requires modifications to the printer to support it, including adding a drain tray and making changes to settings. These operations are performed by a Roland DG Corp. service technician.

Important Note on Installation

Never attempt to move the printer.

The operations to make the printer compatible with the unit keep the printer at a slight incline. This angle of incline is extremely important to the use of the unit, and any change in the angle may cause ink to overflow and soil the printer or its surroundings. When you wish to move the printer, or if unintended movement of the printer has occurred, contact your vendor or the nearest Roland DG Corp. Call Center. .

Changes in Printer Functioning

When the printer has been modified to support this unit, the functioning of the printer changes as follows.

- The printer has two operation modes: a normal mode for ordinary printing and a mesh mode for printing on mesh media.
 - ☞ P. 15, "Operation Modes"
- The method of cleaning the print heads using the cleaning kit is different.
 - ☞ P. 38, "Cleaning Using the Cleaning Kit"

Operation Modes

This section describes the operation modes of the printer fitted with this unit, which are the normal mode and the mesh mode.

☞ P. 20, "Switching the Printer to the Mesh Mode," p. 31, "Switching the Printer to the Normal Mode," and p. 56, "If an Error Message Appears"

Normal Mode

This mode performs printing without using the unit. It allows use of the printer by ordinary unchanged methods, except for the method used to clean the print heads with the cleaning kit.

Mesh Mode

This mode performs printing on mesh media when the unit is installed on the printer. This mode differs from the normal mode in the following ways.

➤ Loading media and pressing **SET UP** displays the character "M" at the top screen of the display.

☞ P. 25, "Loading Media and Making Settings"

➤ Cleaning of the ink tray is required at appropriate intervals on a daily basis.

☞ P. 29, "How to Clean the Ink Tray"

➤ A number of menu items on the printer work differently than in the normal mode.

☞ P. 44, "Printer Settings in the Mesh Mode"

➤ During printing, blackish lines are printed on the edges of the media.

☞ P. 45, "The Lines Printed on the Edges of the Media During Printing"

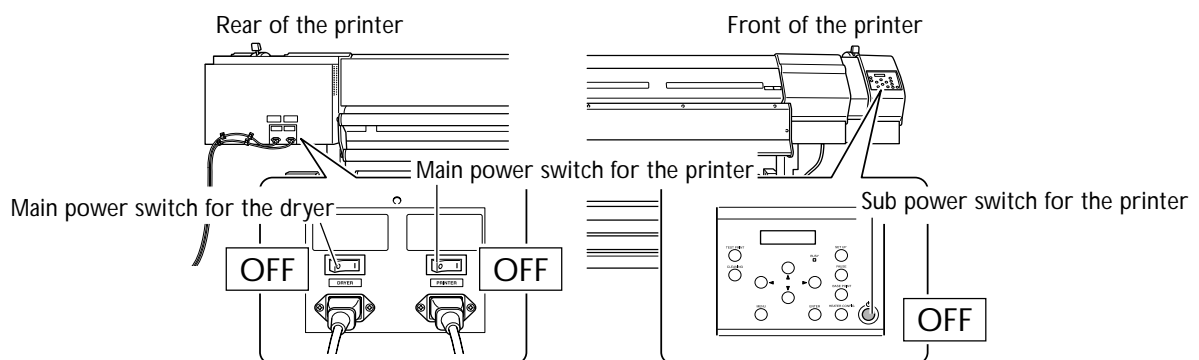
➤ The minimum margin between pages is "106 mm."

☞ P. 45, "Margin Between Pages"

Changing the Operation Mode

When changing the printer's operation mode, before changing the mode, switch off the power at the three locations shown in the figure below. The printer's operation mode cannot be changed while the power at any of these locations remains on, even if operations such as attaching or detaching the unit are performed. Attempting to change the mode while any of these remain on displays an error message on the screen when you load media or start printing, and makes further operation impossible to continue.

☞ P. 56, "If an Error Message Appears"



! CAUTION

When switching off the power to the printer, switch off first the sub power, then the main power. Switching off the main power without first switching off the sub power may cause malfunction.

1-2 Part Names and Functions

Roller stay

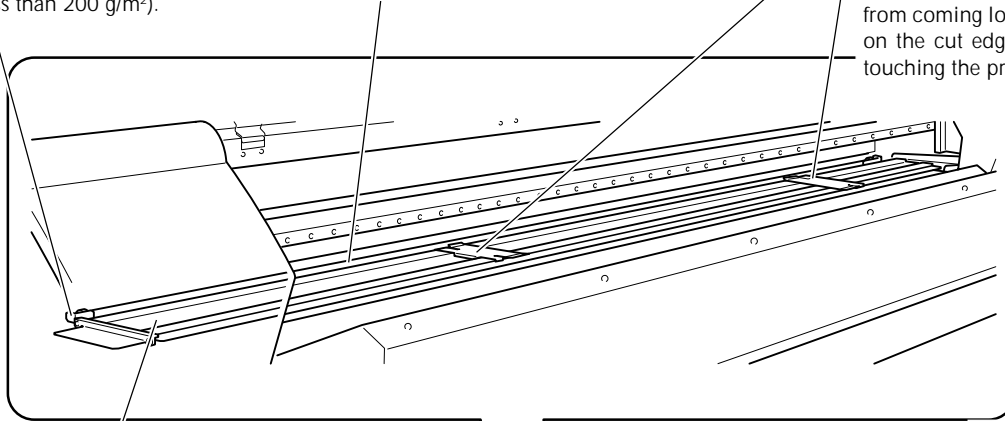
This is used when you're printing lightweight mesh media (as a rough guide, a media weight of less than 200 g/m²).

Tension roller

This is used when you're printing lightweight mesh media (as a rough guide, a media weight of less than 200 g/m²).

Media clamps

These are media clamps exclusively for the unit. They cannot be detached or reattached. These keep the media from coming loose and prevent fuzz on the cut edge of the media from touching the print heads.

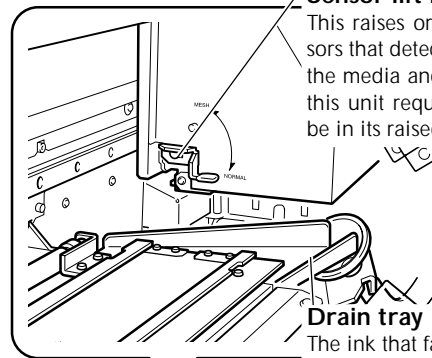


Ink tray

During printing, the media passes over this. Ink that drops through the gaps in the mesh material is caught here.

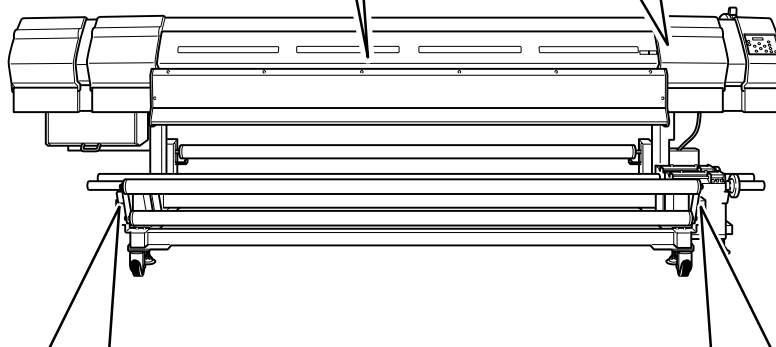
Sensor lift lever

This raises or lowers the sensors that detect the location of the media and the like. Using this unit requires the lever to be in its raised position.



Drain tray

The ink that falls into the ink tray flows into this.

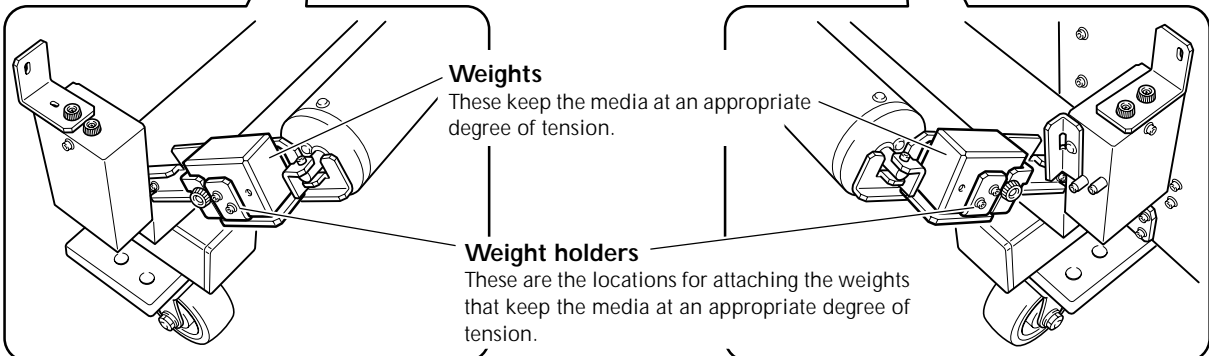


Weights

These keep the media at an appropriate degree of tension.

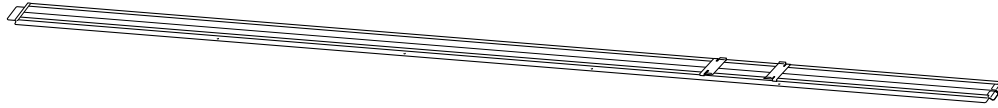
Weight holders

These are the locations for attaching the weights that keep the media at an appropriate degree of tension.



1-3 Included Items

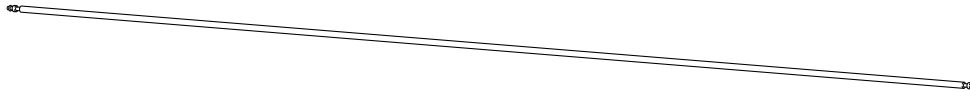
These are the items included with the unit. Make sure they are all present and accounted for.



Ink tray



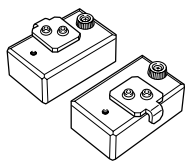
Ink-tray carrier



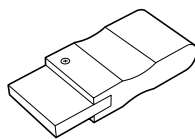
Tension roller *



Roller stay *



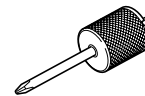
Weights



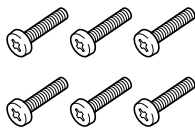
Scraper



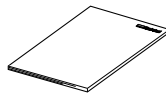
Cleaning fluid



Special screwdriver



Screws



User's Manual

Note : In this manual, the tension roller and roller stay are collectively referred to as the "tension unit."

Chapter 2

Using the Unit

2-1 Using the Printer in the Mesh Mode

Switching the Printer to the Mesh Mode

- ⚠ WARNING** Before attempting cleaning, switch off the sub power of the printer, main power of the printer and dryer, and wait until the preheater and dryer cool (approximately 30 minutes).
Sudden movement of the machine may cause injury, or hot components may cause burns.
- ⚠ CAUTION** Be sure to perform operations as specified by these instructions, and never touch any area not specified in the instructions.
Sudden movement of the machine may cause injury, or hot components may cause burns.
- ⚠ CAUTION** The overall length of the equipment used in this operation is approximately three meters. Ensure ample surrounding space when performing the operation.
Manipulated items may strike persons or other objects, causing injury or damage to equipment.

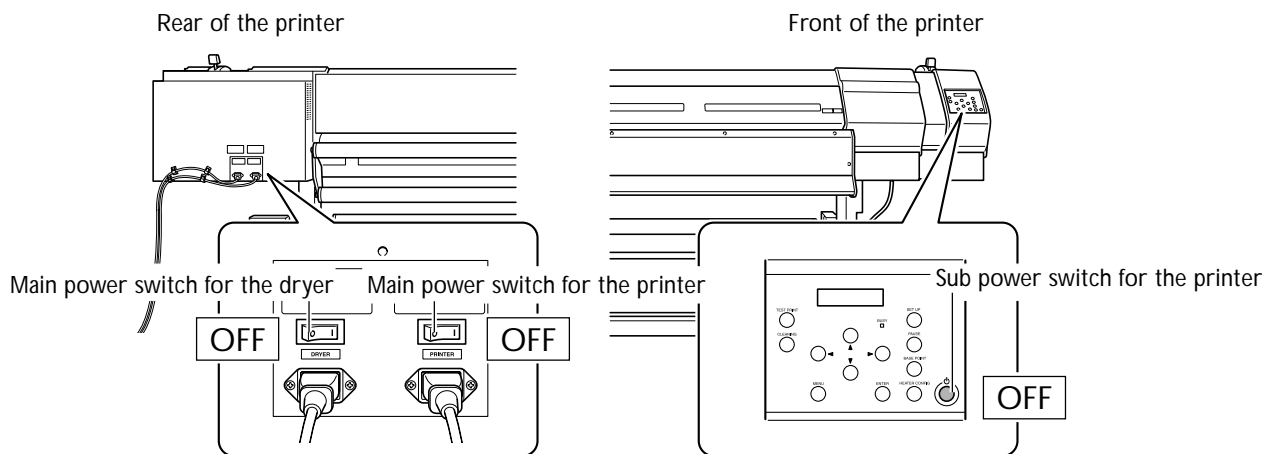
Switch the printer from the normal mode to the mesh mode.

Procedure

- 1 Make sure the printer is not in operation, then switch off the power at the three locations in the figure below.

The printer's operation mode cannot be changed while the power at any of these locations remains on. Completing the subsequent steps while any of these remain on displays an error message on the screen when you load media or start printing, and makes further operation impossible to continue.

☞ P. 56, "If an Error Message Appears"

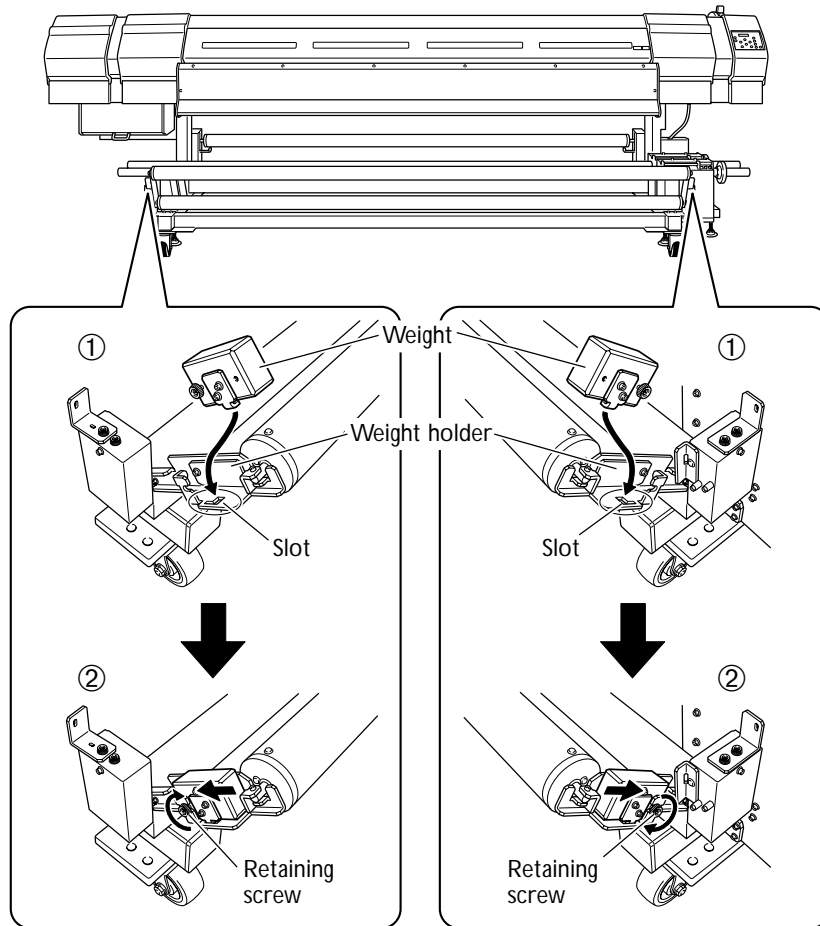


⚠ CAUTION

When switching off the power to the printer, switch off first the sub power, then the main power. Switching off the main power without first switching off the sub power may cause malfunction.

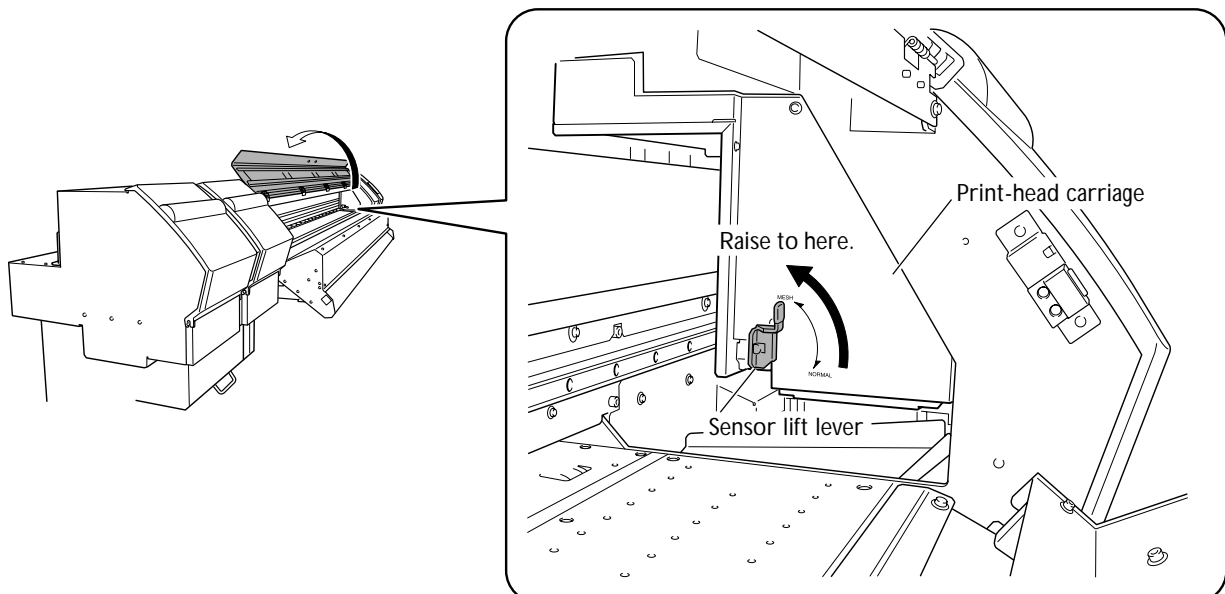
2 Mount the weights in the weight holders.

For each weight, insert the tab on the weight into the slot on the weight holder, then secure the weight in place with the retaining screw.



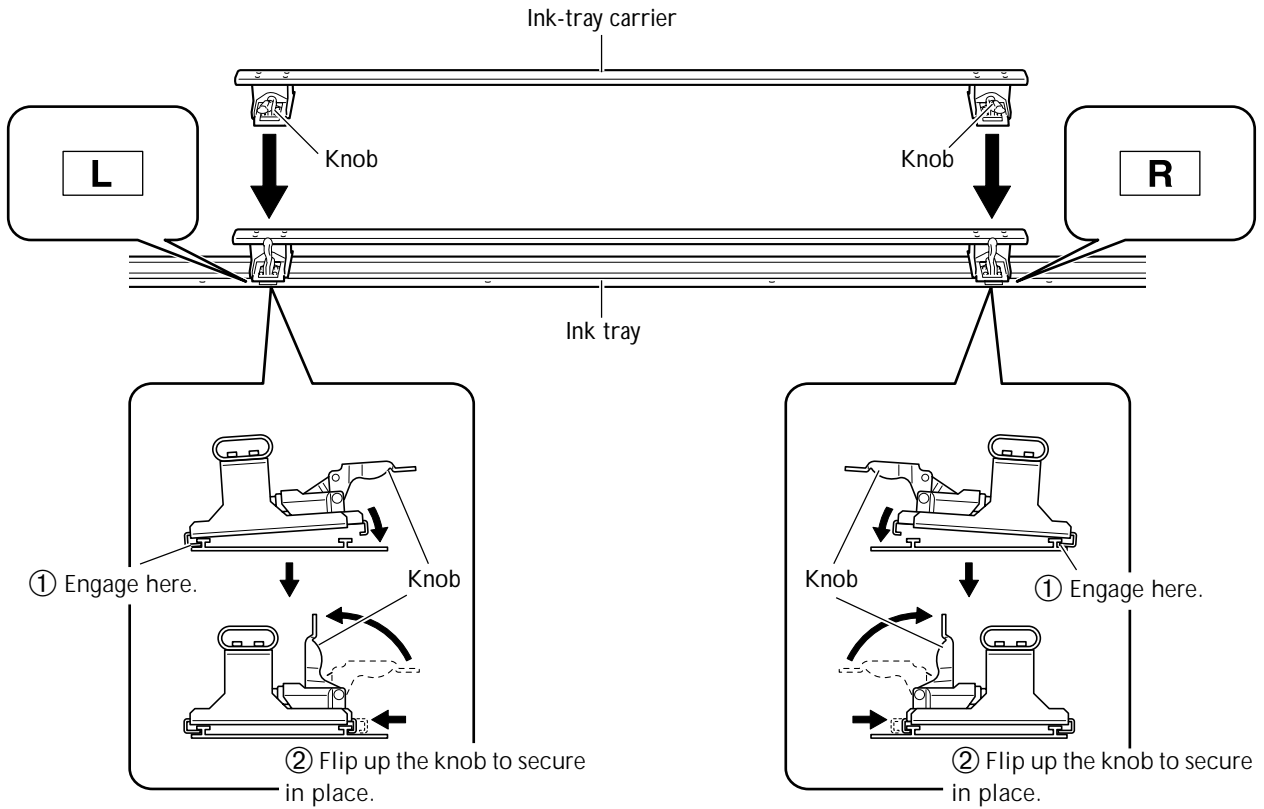
3 Open the front cover and raise the sensor lift lever to the position shown in the figure.

Raise the lever firmly until it reaches the position where further movement is impossible.



4 Attach the ink-tray carrier to the ink tray.

At the "L" and "R" stickers on the ink tray, line up the left and right knobs on the ink-tray carrier and secure in place.

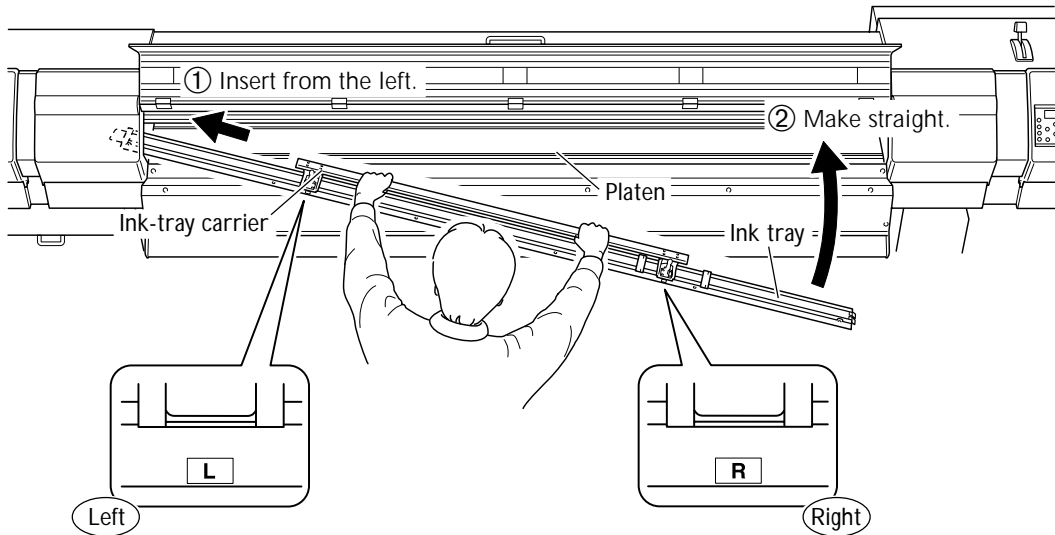


5 Using the ink-tray carrier, place the ink tray on the platen.

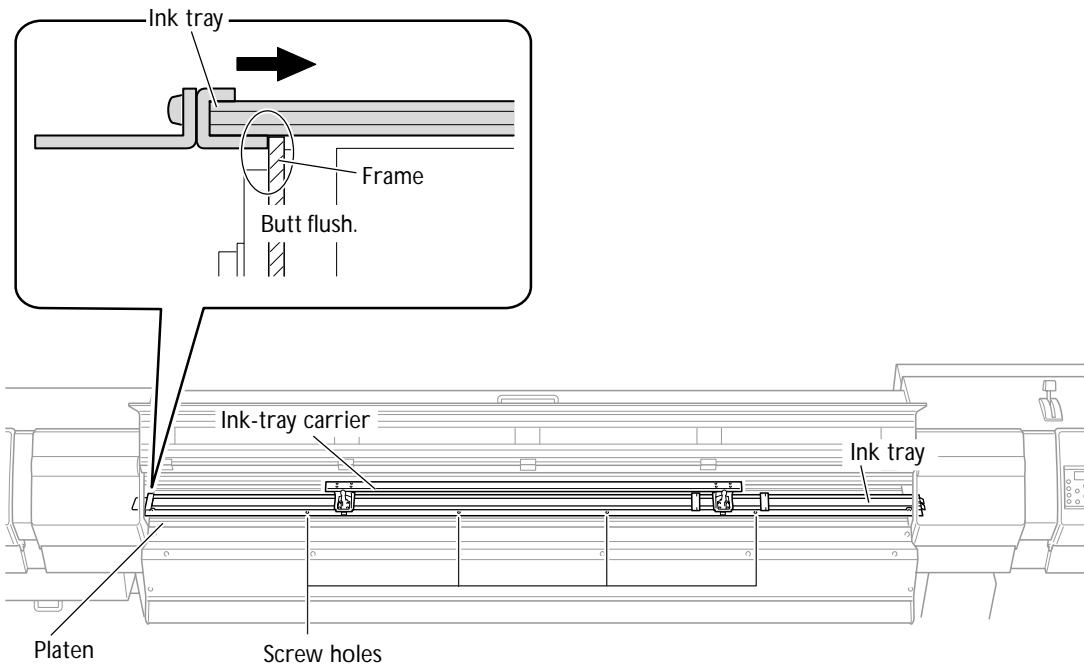
As shown in the figure, hold the ink-tray carrier at the center and keep it evenly balanced.

! CAUTION

Insert the ink tray from the left, mounting it so that it does not strike the print-head carriage. Carry out the installation operation carefully, take care not to strike any other equipment inside the printer.



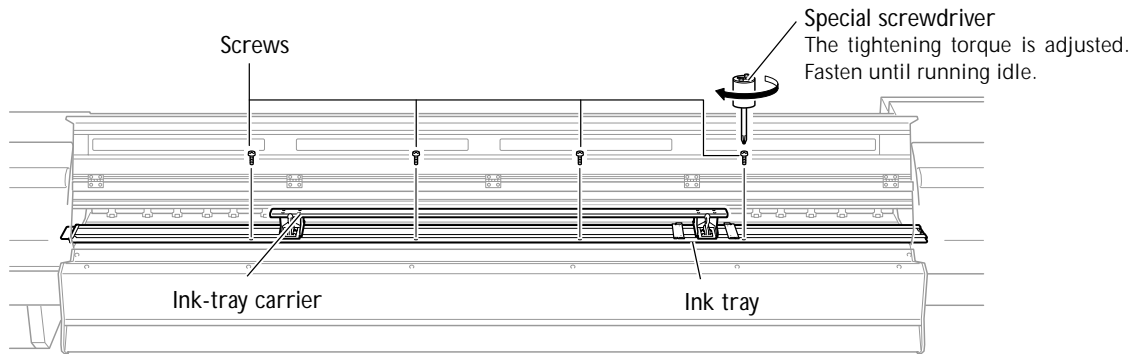
3 Butt the bottom of the left side of the ink tray flush against the frame on the left side of the platen, and line up the locations of the retainer screws.



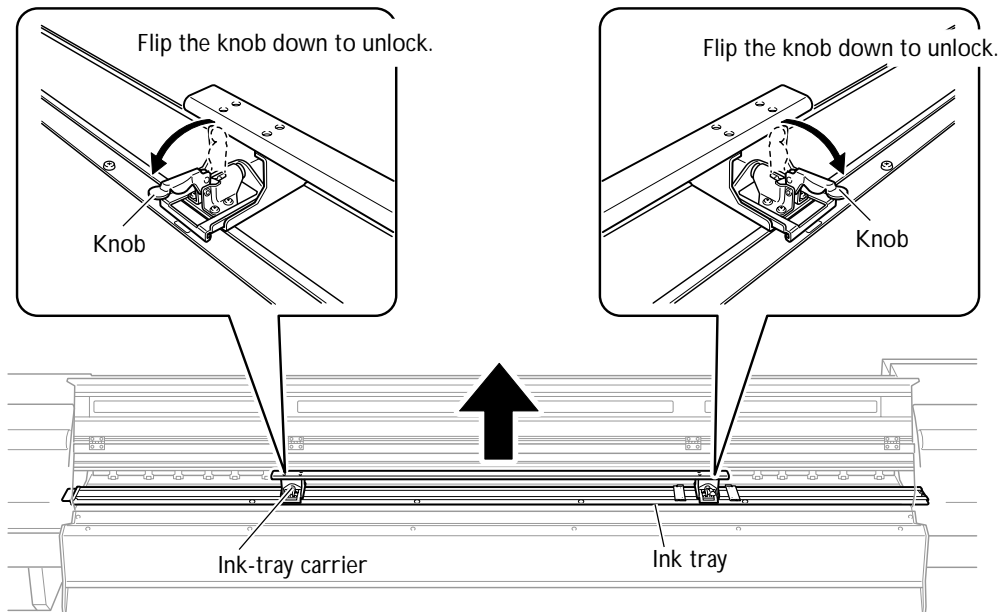
⑥ Secure the ink tray in place, then remove the ink-tray carrier.

① Secure the ink tray in place.

Be sure to use the special screwdriver included with the unit. Using a tool other than the special screwdriver may apply excessive force and damage the screw holes.



② Remove the ink-tray carrier.



⑦ Close the front cover and turn on the two main power switches.

- > Main power switch for the printer
- > Main power switch for the dryer

Important !

Even if you don't intend to start printing immediately after enabling the mesh mode, turn on the two main power switches as described above and leave them on at all times. Be careful never to allow to the printer to stand with the two switches left switched off. (The printer monitors the print heads for dryness and automatically performs cleaning while switched on.)

Loading Media and Making Settings

- ⚠ WARNING** When loading or moving roll media, use lifting equipment, and exercise care to prevent falls. Attempting manual lifting of heavy media that taxes your strength may cause physical injury. Also, if dropped, such items may cause injury.
- ⚠ WARNING** Never load media that weighs more than 100 kg (220 lb.) . The printer may fail to withstand the weight and tip over or cause the media to fall.
- ⚠ CAUTION** Be sure to perform operations as specified by these instructions, and never touch any area not specified in the instructions. Sudden movement of the machine may cause injury.

Read This First

Refer to the AJ-1000 User's Manual and load media correctly. Incorrect loading may result in poor printing results or cause the media to become crooked. Mesh media in particular wrinkles easily and demands special care.

☞ AJ-1000 User's Manual, p. 46, "Using Lightweight Mesh Media"

Important ! : Is the ink tray free of soiling ?

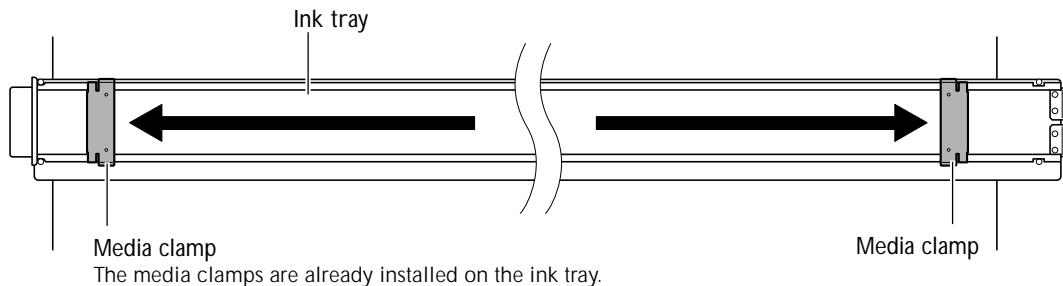
Loading media while the ink tray is dirty may transfer grime to the media or the printer. Before loading media, make sure the ink tray is free of soiling.

☞ P.29, "How to Clean the Ink Tray"

Load the media on the printer and make the settings for the media.

1. Open the front cover and move the media clamps to the left and right sides.

Use the media clamps that are exclusively for the unit. These media clamps are not detachable, so before you load the media, move the media clamps to the left and right sides.



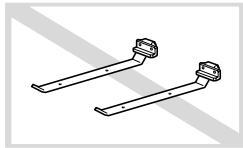
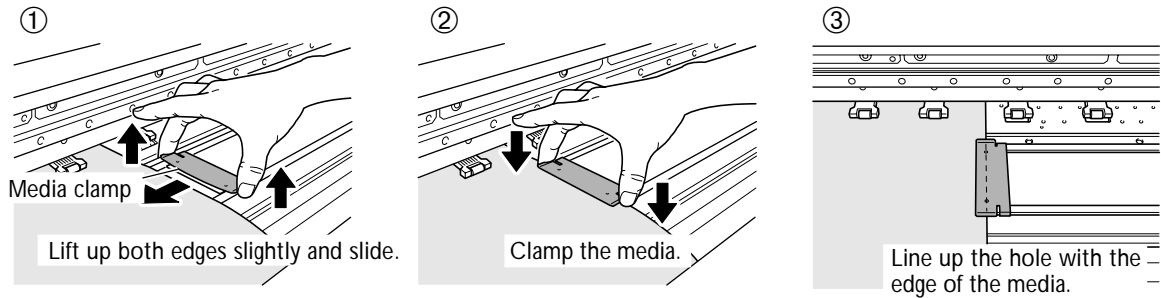
2. Refer to the AJ-1000 User's Manual and load media.

Use the media clamps that are exclusively for the unit.

Refer to "How to Use the Media Clamps" below and carry out this operation only at the locations for attaching the media clamps specified in the AJ-1000 User's Manual.

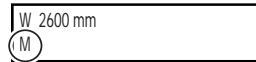
How to Use the Media Clamps

Slide the media clamps to clamp the media and hold it in place.



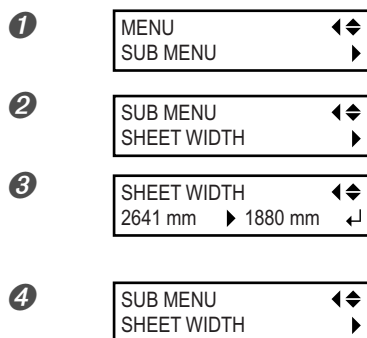
These media clamps are not used when in the mesh mode.

Top screen for the mesh-mode display



Loading media and pressing **SET UP** makes an "M" character appear on the top screen.

3. Make the setting for the media width.



Press **MENU**.
Press **▼** several times.

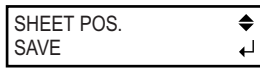
Press **▶**.
Press **▼**.

Press **▶**.
Use **▲** and **▼** to enter the media width.
Press **ENTER** to enable the setting.

Press **◀** to go back to the previous screen.

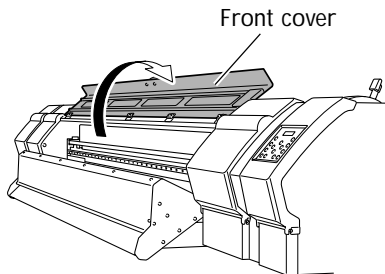
4. Make the setting for the position of the media's right edge.

①

Press .Press .

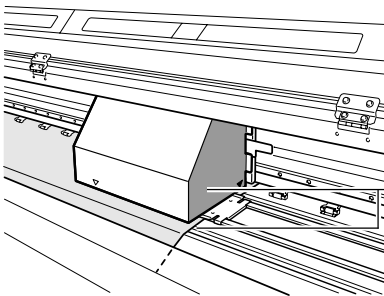
The print heads move to the position now set.

②



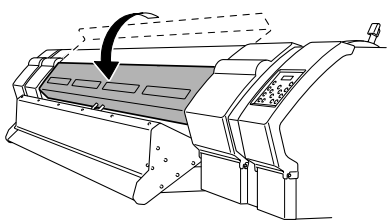
Open the front cover.

③


Use  and  to move the heads.

Align this surface with the edge of the media.


④



After positioning, close the front cover.

Press  to enable the setting.

⑤

Press .Use  to go back to the original screen, then press.

About Media Settings

In the mesh mode, the media's "width" and "position" values are not detected automatically, even when [SHEET TYPE] is set to "OPAQUE". (Note, however, that the trailing edge of the media is detected automatically.) This means that the settings for [SHEET WIDTH] and [SHEET POS.] must be made manually. Failing to make these settings correctly may make it impossible to carry out printing as intended or may cause ink to be sprayed at locations other than the media. After loading the media, be sure to make the [SHEET WIDTH] and [SHEET POS.] settings.

☞ P. 54, "Printing stops at an unexpected location," p. 45, "The Lines Printed on the Edges of the Media During Printing"

5. Perform actual printing and check whether the media is loaded properly.

If the media wrinkles or the intended printing is impossible, go back to step 1. and reload the media.

When you're using media that is extremely light in weight and tends to wrinkle even when loaded correctly, refer to "Using Lightweight Mesh Media" on page 46 and load the media as described there.

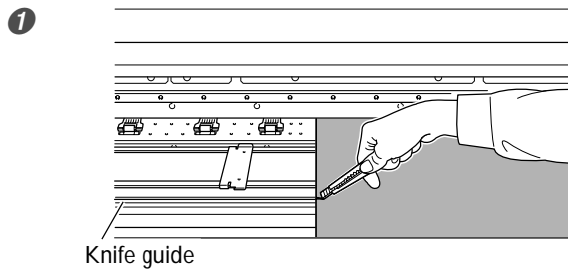
☞ P. 46, "Using Lightweight Mesh Media"

Cutting off the Media

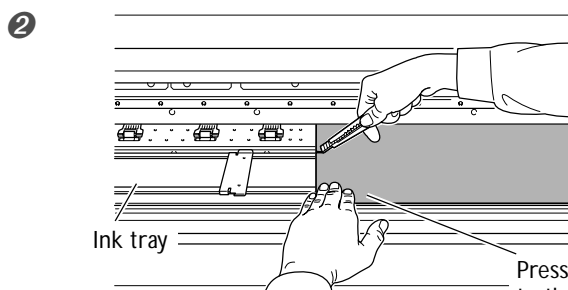
⚠ CAUTION The cutter knife used here is sharp and poses a hazard. Carry out operations with caution to avoid injury.

Cut off the media using a retractable knife or the like.

Procedure



Cut off along the knife guide.



While pressing down on media with your hand as shown in the figure, cut off along the inner edge of the ink tray.

3 Remove the media remaining above the ink tray, then clean the ink tray.
When removing the media, be careful not to let any ink get onto the nearby area.

☞ P. 29, "How to Clean the Ink Tray"

2-2 Cleaning

About Cleaning the Ink Tray

Clean the ink tray as often as necessary.

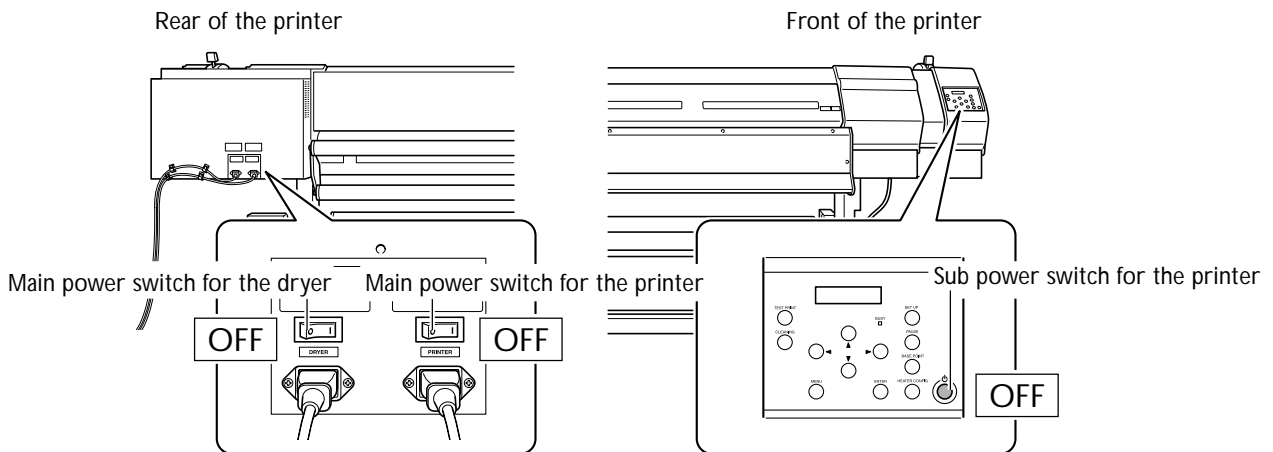
With this unit, ink that passes through the gaps in mesh material during printing collects in the ink tray. Loading media with collected ink left in the ink tray may cause the collected ink to be transferred to the media, and if printing is performed while in this state, the ink may soil the printer as well. **When loading or cutting off media, be sure to clean the ink tray.**

How to Clean the Ink Tray

- ⚠ WARNING** Never use gasoline, alcohol, thinner, or any other flammable material. Doing so may cause fire.
- ⚠ CAUTION** Before attempting cleaning, be sure to switch off the sub power for the printer, main power for the printer and dryers, and wait until the preheater and dryer cool (approximately 30 minutes). Sudden movement of the machine may cause injury, or hot components may cause burns.
- ⚠ CAUTION** Be sure to perform operations as specified by these instructions, and never touch any area not specified in the instructions. Sudden movement of the machine may cause injury, or hot components may cause burns.
- ⚠ CAUTION** When cleaning the ink tray, wear rubber gloves or other such protective gear. Performing cleaning with bare hands may result in transfer of ink to the skin, which may cause inflammation or the like.

Procedure

- 1 Switch off the power at the three locations in the figure below and wait for the preheater and dryer to cool.

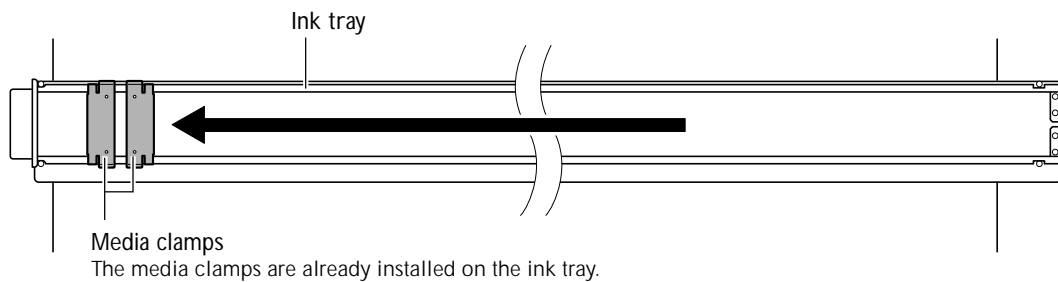


⚠ CAUTION

When switching off the power to the printer, switch off first the sub power, then the main power. Switching off the main power without first switching off the sub power may cause malfunction.

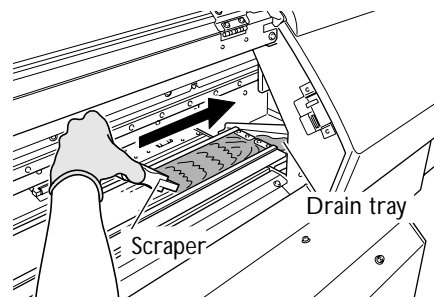
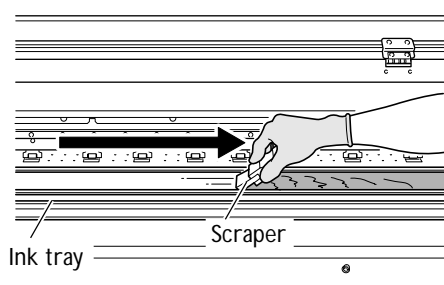
- Remove media from the ink tray and move the media clamps to the left edge.

☞ P. 28, "Cutting off the Media"



- Using the included scraper, wipe away any ink remaining in the ink tray.

Be sure to wipe from left to right so that the ink falls into the drain tray on the right side of the printer.



Important !

Wipe carefully. Wiping too fast or too forcefully may make ink spill out of the ink tray.

- Moisten a piece of cloth or the like with the included cleaning fluid and use it to wipe the ink tray. Carefully wipe away any remaining ink.

If you run out of cleaning fluid, purchase more from your vendor or the nearest Roland DG Corp. Call Center.

2-3 Using the Printer in the Normal Mode

Switching the Printer to the Normal Mode

- ⚠ CAUTION** Before attempting cleaning, switch off the sub power of the printer, main power of the printer and dryer, and wait until the preheater and dryer cool (approximately 30 minutes).
Sudden movement of the machine may cause injury, or hot components may cause burns.
- ⚠ CAUTION** Be sure to perform operations as specified by these instructions, and never touch any area not specified in the instructions.
Sudden movement of the machine may cause injury, or hot components may cause burns.
- ⚠ CAUTION** The overall length of the equipment used in this operation is approximately three meters. Ensure ample surrounding space when performing the operation.
Manipulated items may strike persons or other objects, causing injury or damage to equipment.

Switch the printer from the mesh mode to the normal mode. It allows use of the printer by ordinary unchanged methods, except for the method used to clean the print heads with the cleaning kit.

Procedure

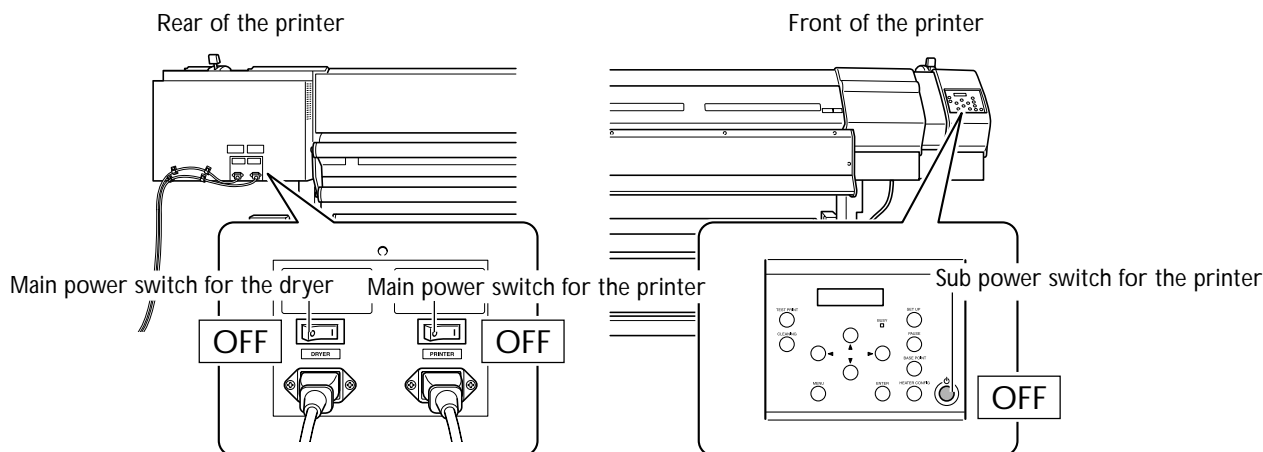
1 Clean the ink tray.

☞ P. 29, "How to Clean the Ink Tray"

2 Switch off the power at the three locations in the figure below and wait for the preheater and dryer to cool.

The printer's operation mode cannot be changed while the power at any of these locations remains on. Completing the subsequent steps while any of these remain on displays an error message on the screen when you load media or start printing, and makes further operation impossible to continue.

☞ P. 56, "If an Error Message Appears"



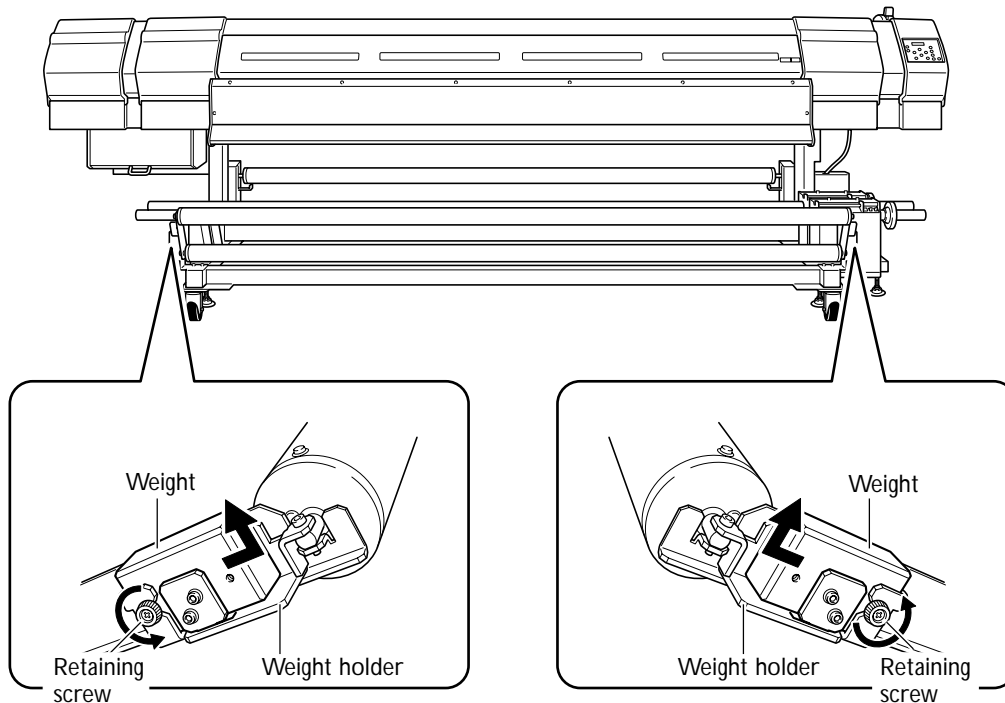
⚠ CAUTION

When switching off the power to the printer, switch off first the sub power, then the main power. Switching off the main power without first switching off the sub power may cause malfunction.

3 Detach the weights from the weight holders.

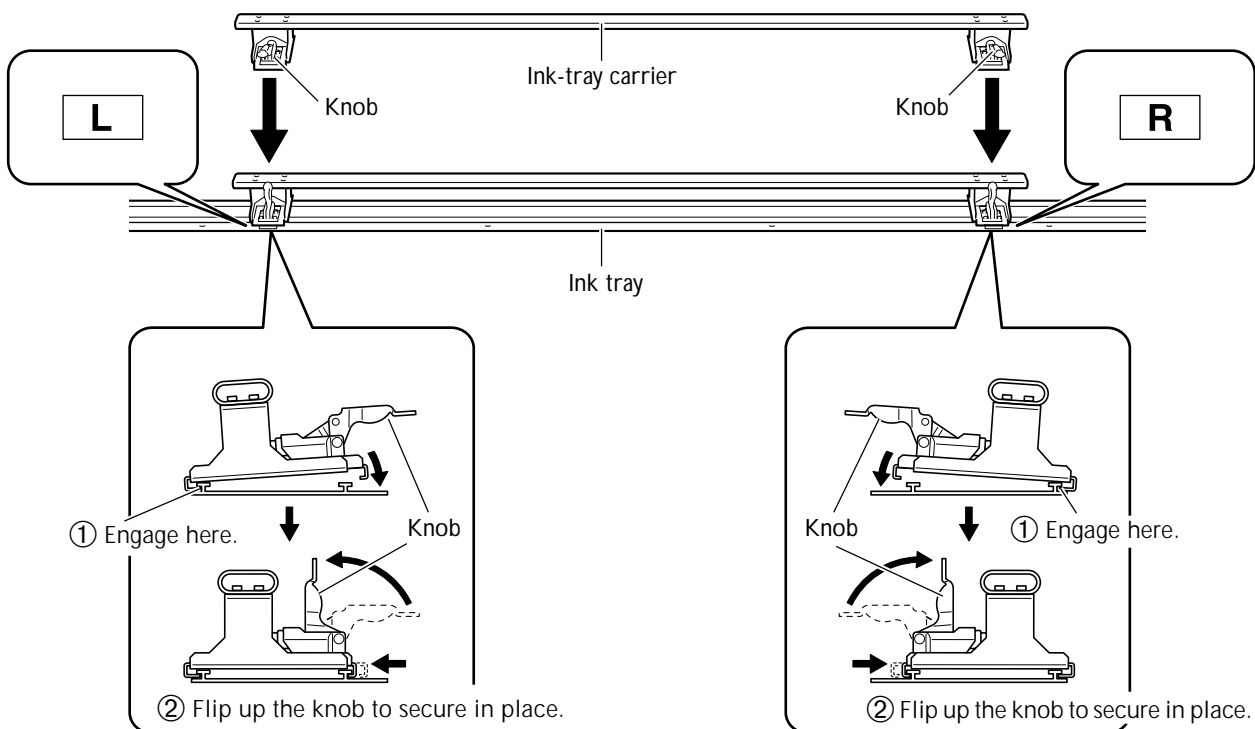
For each weight, loosen the retaining screw, then remove the weight from the weight holder. Performing printing in the normal mode without first detaching the weights may cause a motor error.

P.56, "If an Error Message Appears"



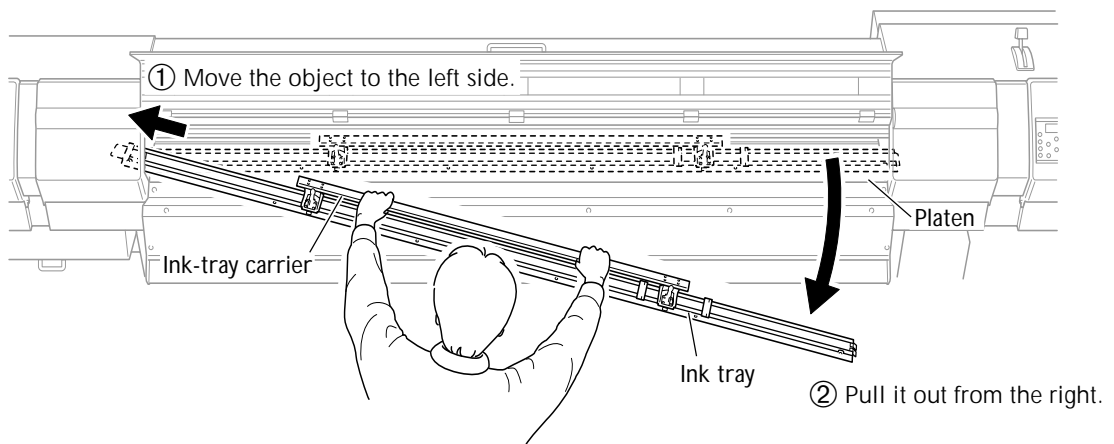
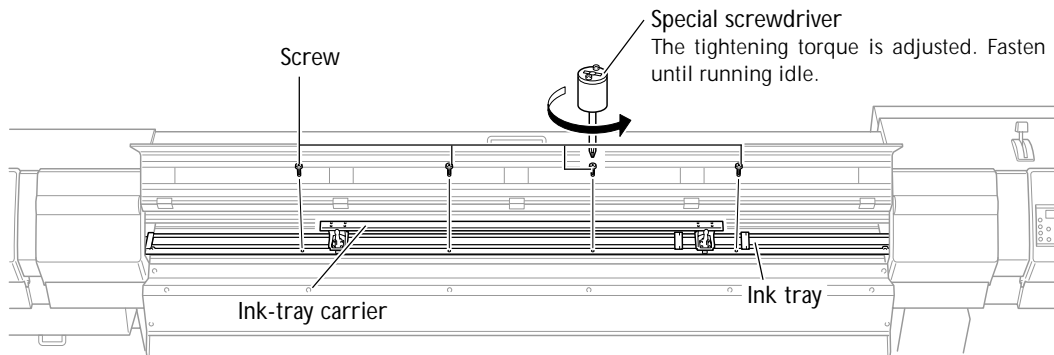
4 Open the front cover and attach the ink-tray carrier to the ink tray.

At the "L" and "R" stickers on the ink tray, line up the left and right knobs on the ink-tray carrier and secure in place.



⑤ Remove the screws and detach the ink tray.

As shown in the figure, hold the ink-tray carrier at the center and keep it evenly balanced.

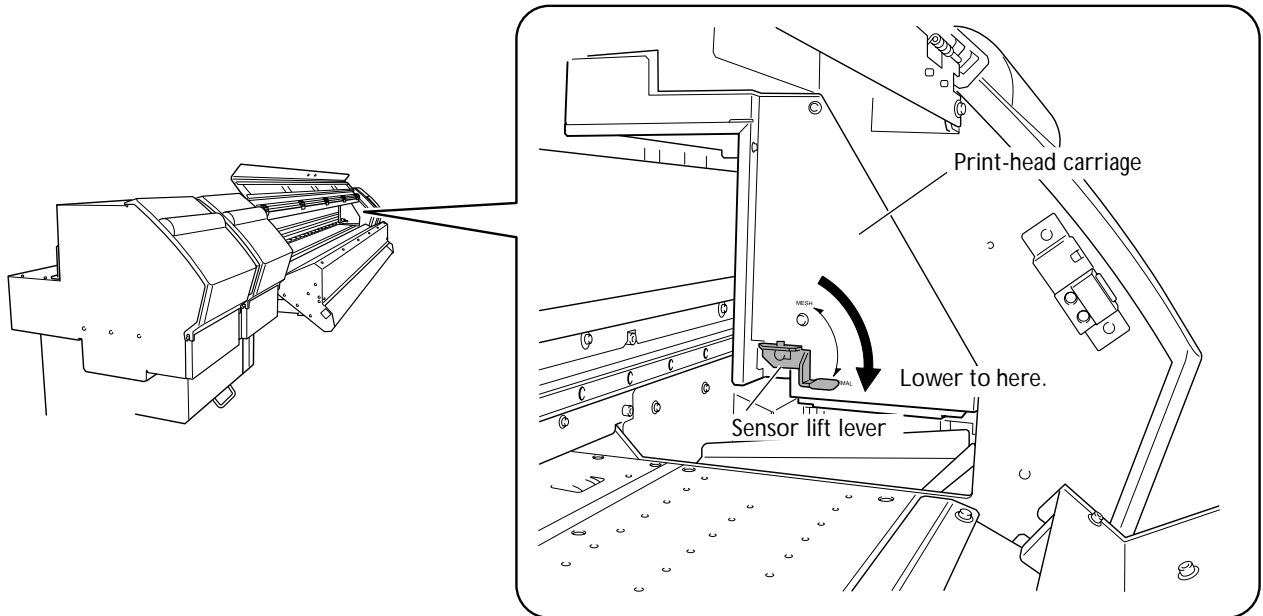


! CAUTION

Move the ink tray slightly away to the left, tilt it, then pull it out from the right, taking care not to strike the print-head carriage. Carry out the removal operation carefully, taking care not to strike any other equipment inside the printer.

⑥ Lower the sensor lift lever to the position shown in the figure.

Lower the lever firmly until it reaches the position where further movement is impossible.



⑦ Close the front cover and turn on the two main power switches.

- > Main power switch for the printer
- > Main power switch for the dryer

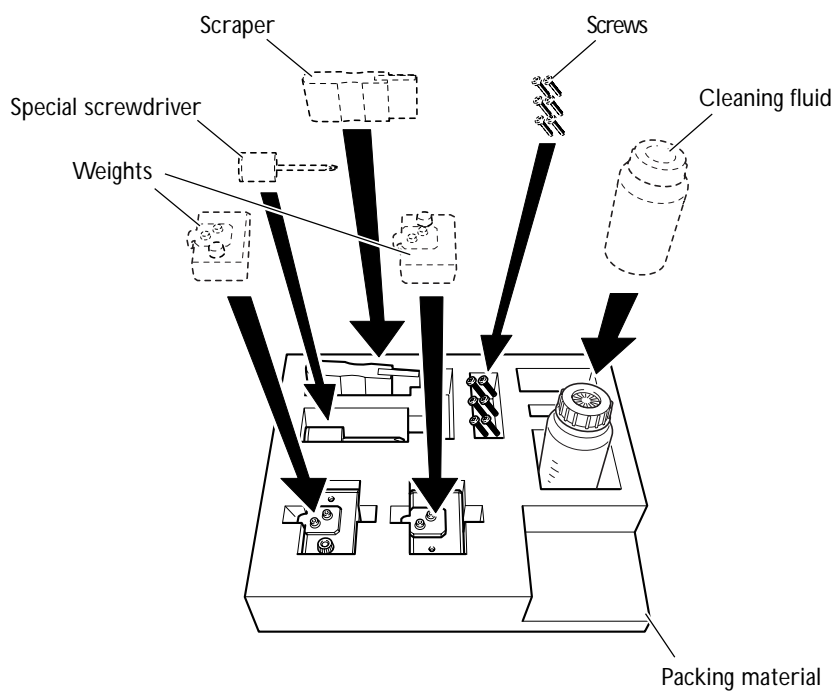
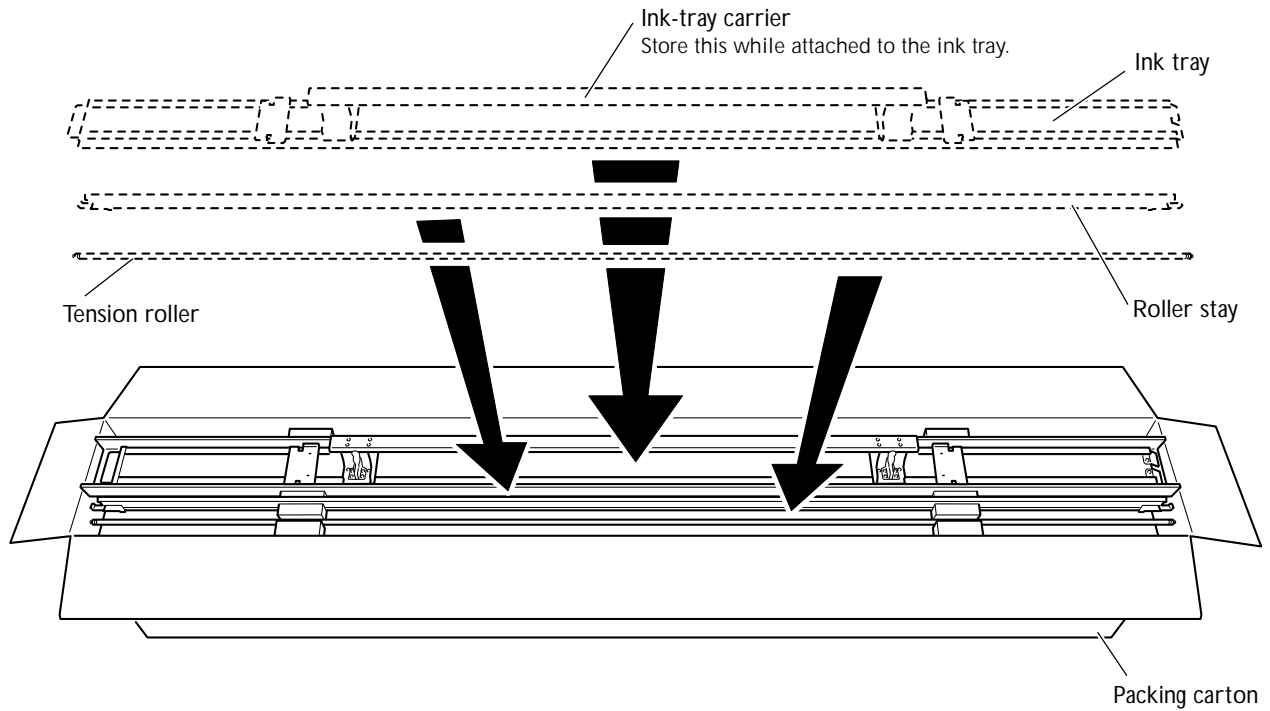
Important !

Even if you don't intend to start printing immediately after uninstalling the unit, turn on the two main power switches as described above and leave them on at all times. Be careful never to allow to the printer to stand with the two switches left switched off. (The printer monitors the print heads for dryness and automatically performs cleaning while switched on.)

2-4 Storing

Storing the Unit

The ink tray and other included items can be stored using the packing carton and packing material for the unit.



Chapter 3

Cleaning Using the Cleaning Kit

3-1 Cleaning Using the Cleaning Kit

About Cleaning the Print Heads Using the Cleaning Kit

On an AJ-1000 made to support this unit, the method of cleaning the print heads using the cleaning kit differs from the method used on the ordinary, unmodified AJ-1000. Regardless of whether the operation mode is the normal mode or the mesh mode, follow the instructions in this section to carry out cleaning of the print heads with the cleaning kit.

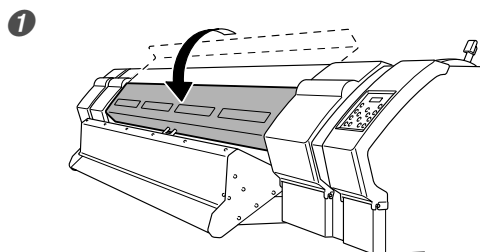
How to Perform Cleaning

Important Notes on This Procedure

- > To prevent the heads from drying out, finish this procedure in 10 minutes or less.
- > A warning beep sounds after 10 minutes. At this time, stop work, attach the right side cover, and press **ENTER**. When the head-protection operation finishes, restart the procedure from the beginning.
- > Never use any implement other than the included cleaning stick. Cotton swabs or other lint-producing items may damage the heads.
- > Never touch the nozzle surface of the heads.
- > Stroke the sponges very gently, applying as little pressure as possible. Never rub, scrape, or crush them.

CAUTION Be sure to perform operations as specified by these instructions, and never touch any area not specified in the instructions. Sudden movement of the machine may cause injury.

1. Change to the print-head manual-cleaning mode.



Remove any media from the platen and close the front cover.

2

MENU	◀▶
SUB MENU	▶

Press **MENU**.
Press **▼** several times.

3

SUB MENU	◀▶
MAINTENANCE	▶

Press **▶**.
Press **▲**.

4

MAINTENANCE	◀▶
CLEANING	◀↓

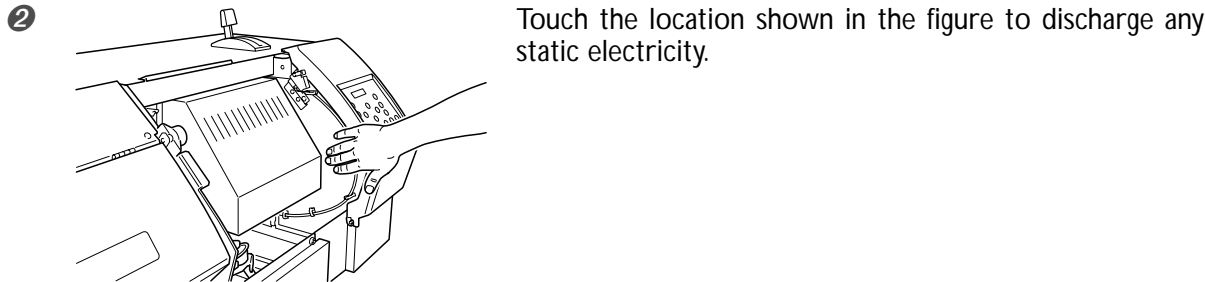
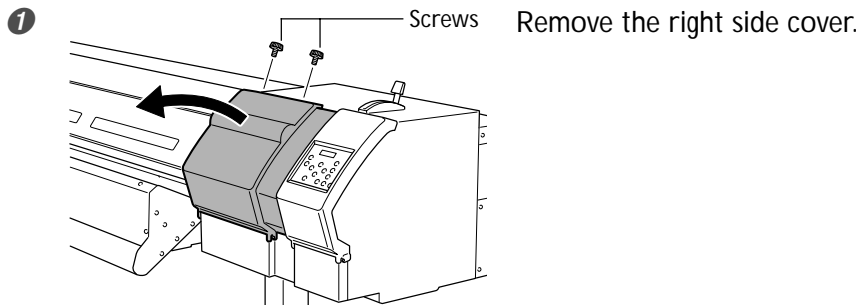
Press **▶**.
Press **ENTER**.

5

FINISHED?	◀↓
-----------	----

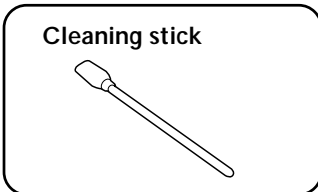
Preparations are complete when this screen appears.


2. Remove the right side cover.

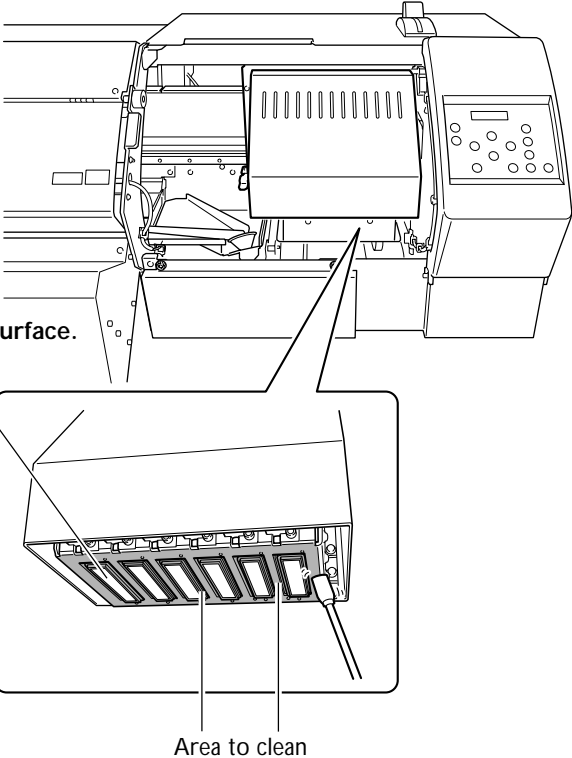


3. Clean around the print heads using the cleaning stick.

Be especially careful to clean away any fibrous dust (lint).

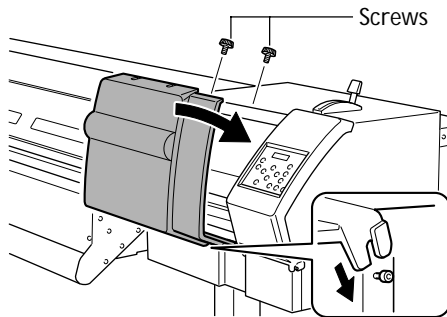


 **Never touch the nozzle surface.**
Clean only the metal frame.



4. Reattach the right side cover and press **ENTER**.

1 Attach the right side cover.



2 **NOW PROCESSING..**

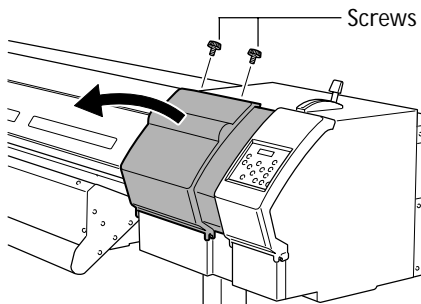
Press **ENTER**.

3 **FINISHED?**

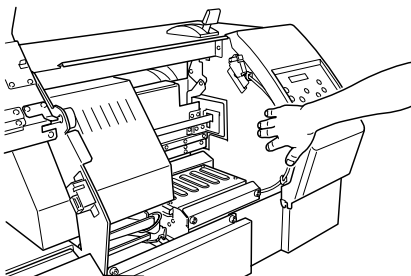
Preparations are complete when this screen appears.

5. Remove the right side cover.

1 Remove the right side cover.

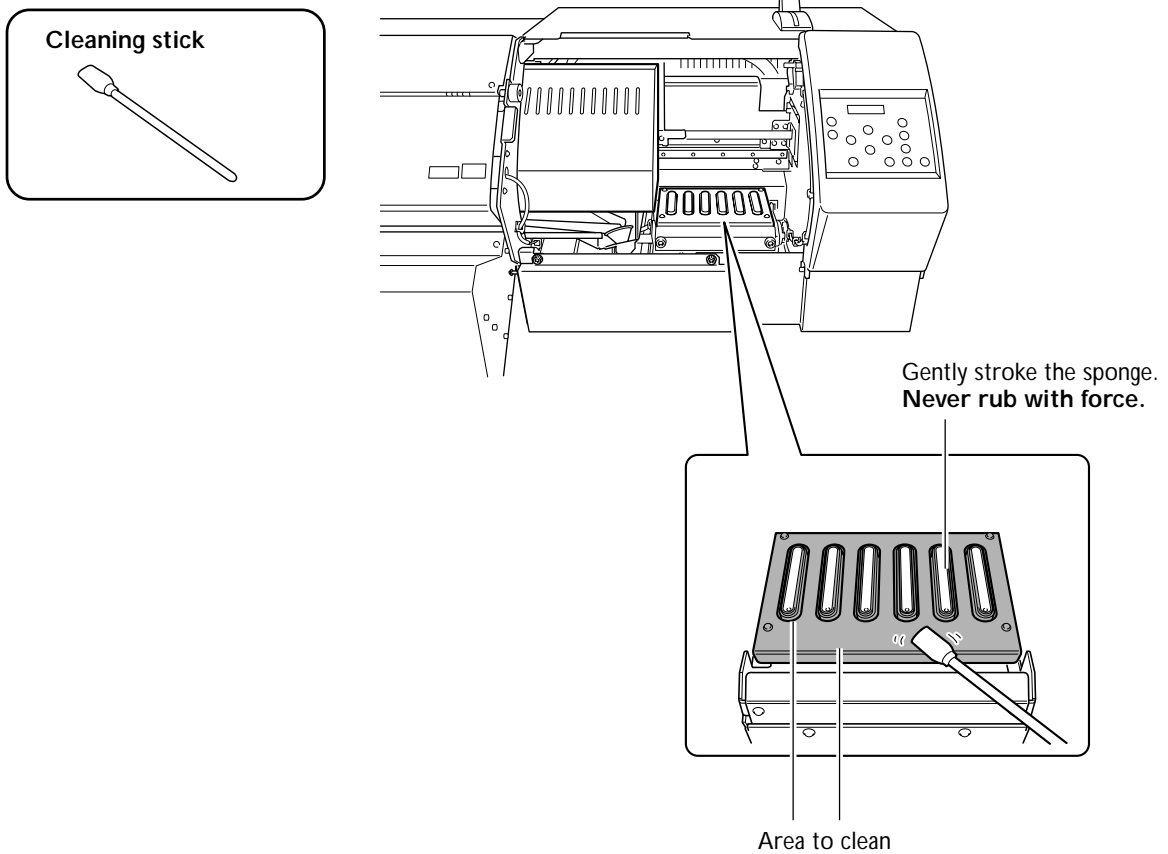


2 Touch the location shown in the figure to discharge any static electricity.



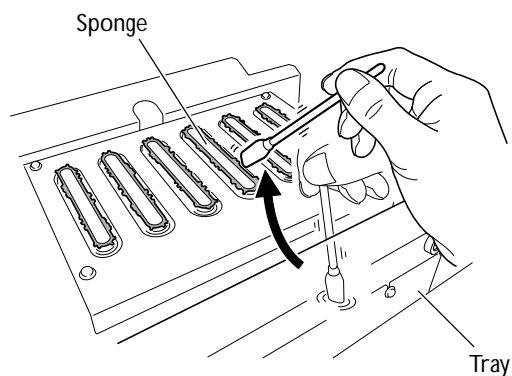
6. Clean around the print-head caps using the cleaning stick.

Be especially careful to clean away any fibrous dust (lint).



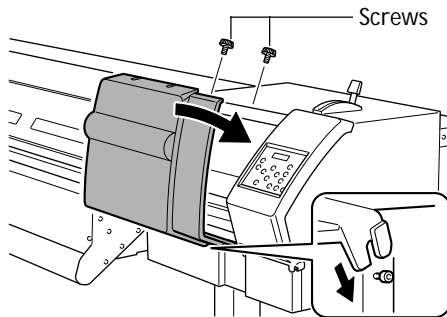
You can clean away ink buildup using maintenance liquid.

If ink has built up around the sponges, it may be a good idea to moisten a cleaning stick with the maintenance liquid in the tray and clean away the buildup.

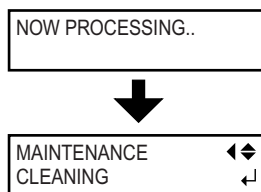


7. Reattach the right side cover and quit the manual cleaning mode.

① Attach the right side cover.



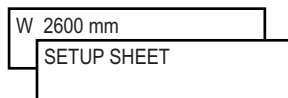
②



Press **ENTER**.

After the processing to quit the manual cleaning mode ends, the screen shown in the figure appears.

③



Press **MENU**.

Press **←** to go back to the original screen.

8. Carry out actual printing to make sure the operation was successful.

Try performing actual printing, and check the results.
Perform automatic cleaning several times as required.

Chapter 4

Feature Reference

4-1 Printer Settings in the Mesh Mode

Printer Settings in the Mesh Mode

In the mesh mode, the operation of several printer-setting menu item for optimizing printing is different from the normal mode. For detailed information about these menu items, refer to the table below. Also, for these settings, the values shown in the table below are applied even when different settings have been made for them on the computer.

Menu item	Valid settings in the mesh mode	Details
HEAD HEIGHT	"MIDDLE" "HIGH"	Setting this to "LOW" has no effect. When this is set to "LOW," the head position in actual operation is the same as for the "MIDDLE" setting.
SHEET TYPE	"CLEAR" "OPAQUE" (However, operation when set to "OPAQUE" differs from the normal mode.)	"CLEAR" As in the normal mode, the size of the media is not detected automatically. Set [SHEET WIDTH] and [SHEET POS.] manually. "OPAQUE" Unlike when in the normal mode, the width and position of the media are not detected automatically. Set [SHEET WIDTH] and [SHEET POS.] manually. Note, however, that the trailing edge of the media is detected automatically, and so printing pauses automatically when the trailing edge of the media is sensed. <small>☞ P. 25, "Loading Media and Making Settings"</small>
VACUUM POWER	"0%"	A setting of "AUTO" or of "1%" or higher has no effect. Operation is always at a setting of "0%."
FULL WIDTH S	"SHEET" "FULL"	Setting this to "OFF" has no effect. Setting this to "OFF" results in operation using the "SHEET" setting.
PRINT HEATER (Setting under HEATER CONFIG)	"OFF"	Any temperature settings made have no effect. Operation is always at a setting of "OFF."

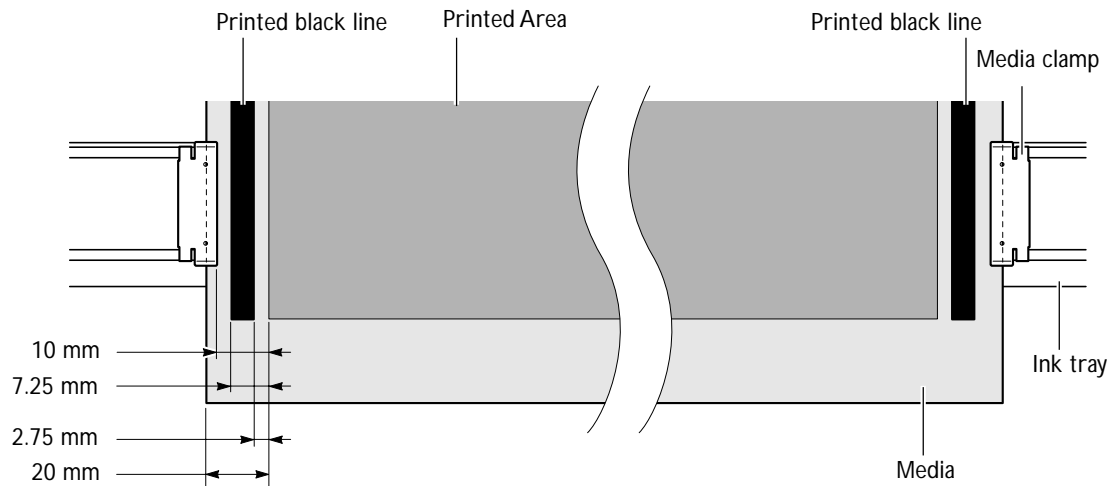
4-2 Printer Operation in the Mesh Mode

The Lines Printed on the Edges of the Media During Printing

In the mesh mode, blackish lines approximately 4.5 millimeters in width are printed at the edges of the media during printing. This is normal operation and necessary for printing in the mesh mode. Also, because these lines are printed at locations that are the margins in the normal mode, they do not make the printing area narrower in the mesh mode than in the normal mode.

However, if [SHEET WIDTH] and [SHEET POS.] have not been set appropriately, these lines may be printed on the media clamps. Set [SHEET WIDTH] and [SHEET POS.] appropriately.

☞ P. 25, "Loading Media and Making Settings"



Margin Between Pages

The minimum margin between pages in the mesh mode is "106 mm." Any setting made on the computer for a margin between pages of less than 106 millimeters is ignored; a margin of 106 millimeters or more is always used.

Correction Features

In printing on mesh material, reading images such as in printing tests using the printer correction features is extremely difficult. For correction in the mesh mode, determine the state of printing from actual printing results and fine-tune the settings as required.

4-3 Using Lightweight Mesh Media

When Using Lightweight Mesh Media

When you're using lightweight mesh media, the media may wrinkle due to a lack of appropriate tension even when it has been loaded the proper way. If this happens, you can compensate for the lack of tension by using the tension unit *. As a general guide, you should use the tension unit when the weight of the media is less than 200 g/m². After loading the media, carry out actual printing and make sure the media doesn't wrinkle during printing.

Note : In this manual, the tension roller and roller stay are collectively referred to as the "tension unit."

Important !

As a general guide, use the tension unit with media whose weight is less than 200 g/m². The tension unit is intended to augment the media tension, and so using it with media that weighs 200 g/m² or more may apply excessive tension and make it impossible to perform printing as intended.

Installing the Tension Unit

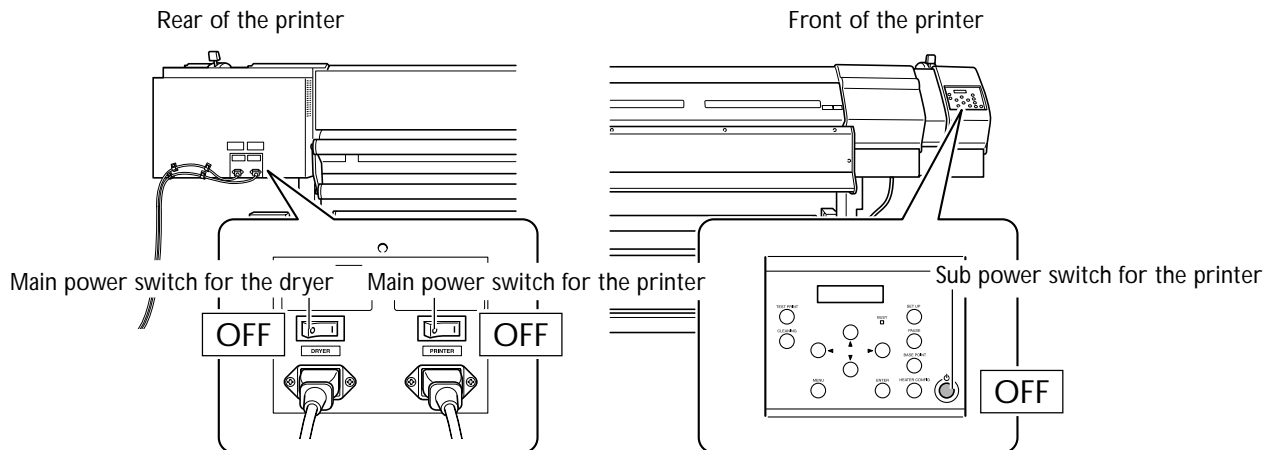
- ⚠ WARNING** Before attempting cleaning, be sure to switch off the sub power for the printer, main power for the printer and dryers, and wait until the preheater and dryer cool (approximately 30 minutes).
Sudden movement of the machine may cause injury, or hot components may cause burns.
- ⚠ CAUTION** Be sure to perform operations as specified by these instructions, and never touch any area not specified in the instructions.
Sudden movement of the machine may cause injury, or hot components may cause burns.
- ⚠ CAUTION** The overall length of the equipment used in this operation is approximately three meters. Ensure ample surrounding space when performing the operation.
Manipulated items may strike persons or other objects, causing injury or damage to equipment.

Procedure

- 1 Switch the printer to the mesh mode.

☞ P.20, "Switching the Printer to the Mesh Mode"

- 2 Make sure the printer is not in operation, then switch off the power at the three locations in the figure below.



⚠ CAUTION

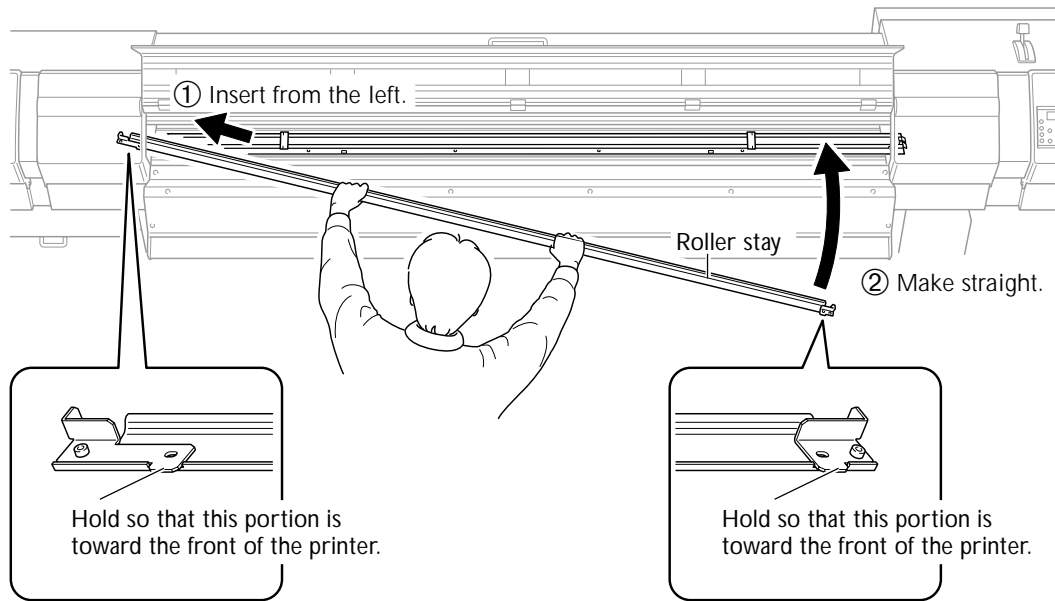
When switching off the power to the printer, switch off first the sub power, then the main power. Switching off the main power without first switching off the sub power may cause malfunction.

3 Place the roller stay on the platen and secure it in place.

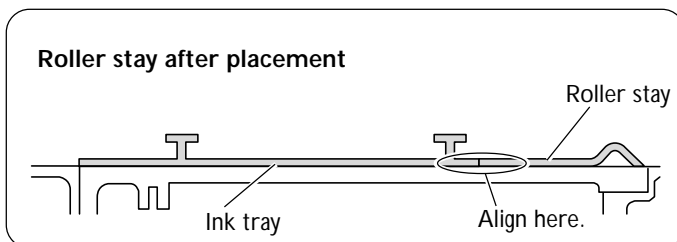
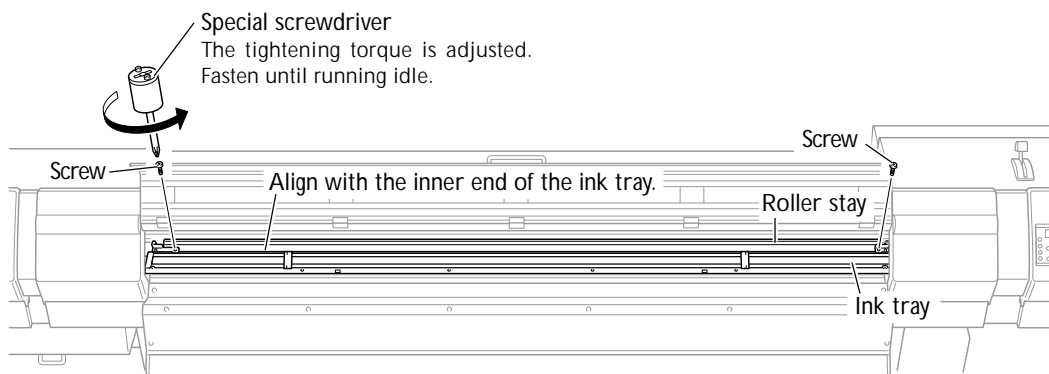
As shown in the figure, hold the roller stay at the center and keep it evenly balanced.

! CAUTION

Insert the roller stay from the left, mounting it so that it does not strike the print-head carriage. Carry out the installation operation carefully, taking care not to strike any other equipment inside the printer.



3 Place so that it is aligned with the inner edge of the ink tray, line up the screw locations, and secure in place. Be sure to use the special screwdriver that came with the unit. Using a tool other than the special screwdriver may apply excessive force and damage the screw holes.



4 Close the front cover and turn on the two main power switches.

- Main power switch for the printer
- Main power switch for the dryer

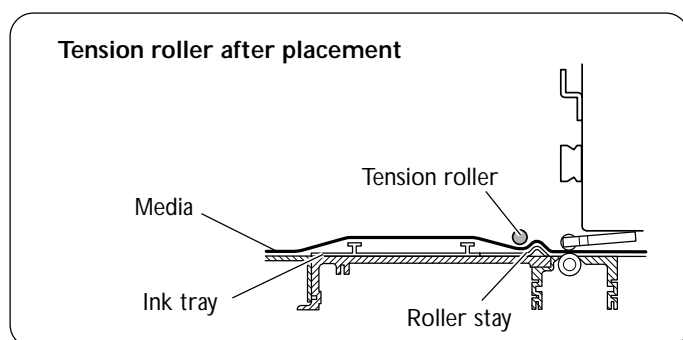
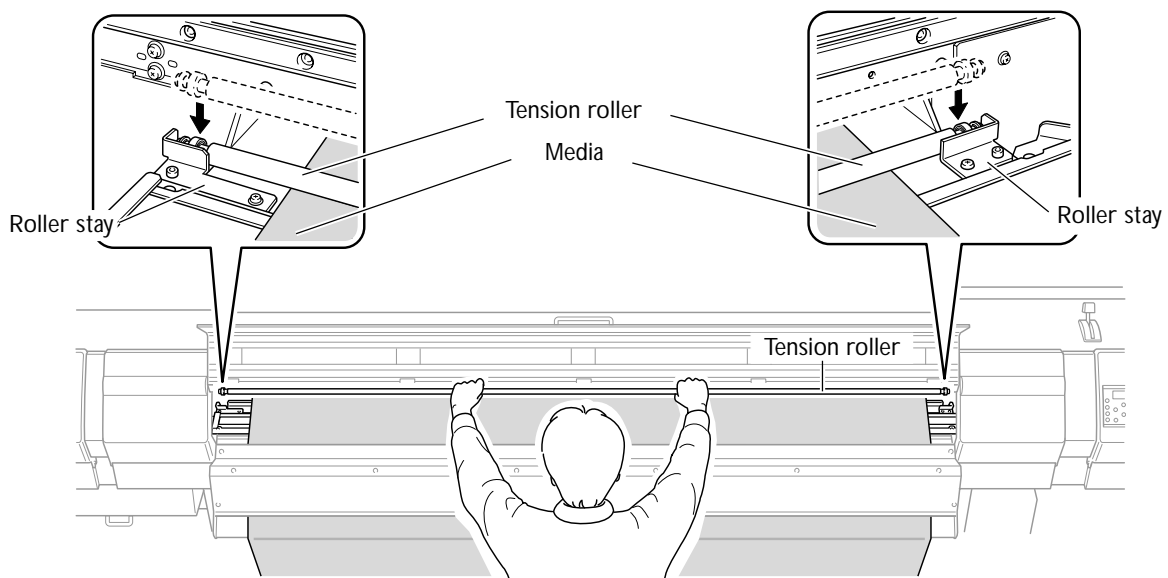
Important !

Even if you don't intend to start printing immediately after installing the roller stay, turn on the two main power switches as described above and leave them on at all times. Be careful never to allow the printer to stand with the two switches left switched off. (The printer monitors the print heads for dryness and automatically performs cleaning while switched on.)

5 Load the media.

☞ P. 25, "Loading Media and Making Settings"

6 Open the front cover and place the tension roller at the location shown in the figure.



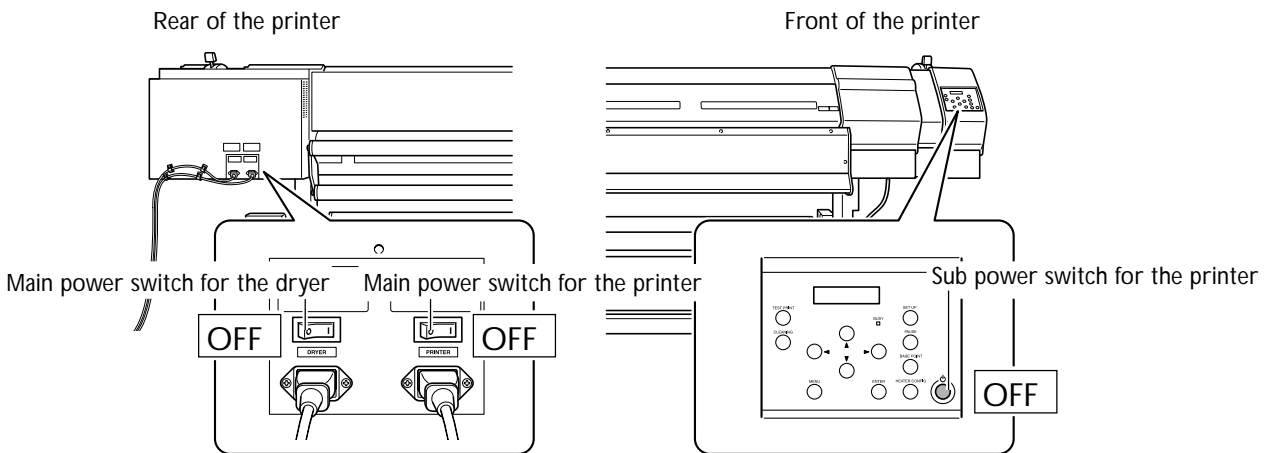
7 Close the front cover.

Removing the Tension Unit

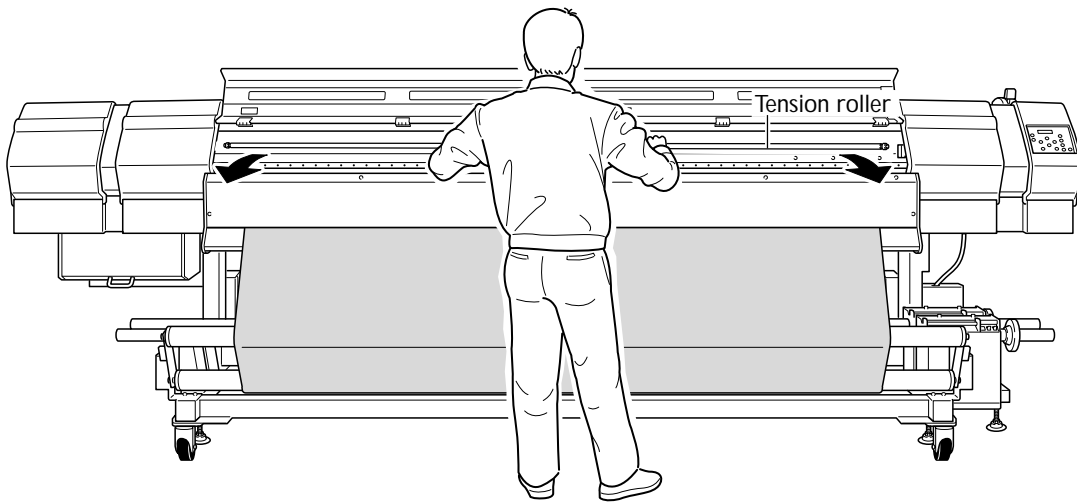
- ⚠ WARNING** Before attempting cleaning, be sure to switch off the sub power for the printer, main power for the printer and dryers, and wait until the preheater and dryer cool (approximately 30 minutes).
Sudden movement of the machine may cause injury, or hot components may cause burns.
- ⚠ CAUTION** Be sure to perform operations as specified by these instructions, and never touch any area not specified in the instructions.
Sudden movement of the machine may cause injury, or hot components may cause burns.
- ⚠ CAUTION** The overall length of the equipment used in this operation is approximately three meters. Ensure ample surrounding space when performing the operation.
Manipulated items may strike persons or other objects, causing injury or damage to equipment.

Procedure

- 1 Make sure the printer is not in operation, then switch off the power at the three locations in the figure below.



- 2 Open the front cover and remove the tension roller.

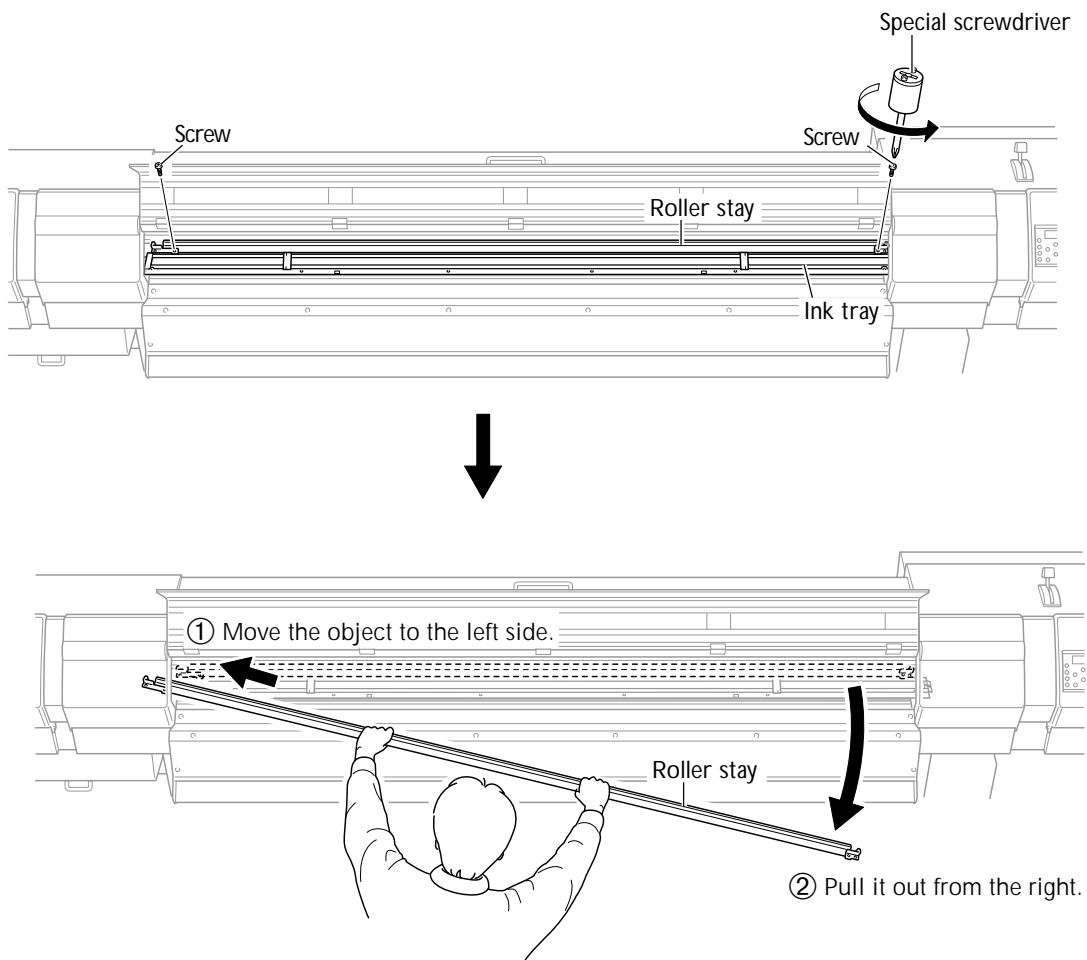


- 3 Remove any media, then clean the ink tray.

☞ P. 28, "Cutting off the Media," and p. 29, "How to Clean the Ink Tray"

④ Remove the screws, and then detach the roller stay from the printer.

As shown in the figure, hold the roller stay at the center and keep it evenly balanced.



⚠ CAUTION

Move the roller stay slightly away to the left, tilt it, then pull it out from the right, taking care not to strike the print-head carriage. Carry out the removal operation carefully, taking care not to strike any other equipment inside the printer.

⑤ Close the front cover and turn on the two main power switches.

- Main power switch for the printer
- Main power switch for the dryer

Important !

Even if you don't intend to start printing immediately after removing the tension unit, turn on the two main power switches as described above and leave them on at all times. Be careful never to allow to the printer to stand with the two switches left switched off. (The printer monitors the print heads for dryness and automatically performs cleaning while switched on.)

Chapter 5

Appendix

5-1 What to Do If...

Printing Stops at an Unexpected Location

If printing stops at an unexpected location, set [SHEET TYPE] to "CLEAR" to disable automatic detection of the trailing edge of the media. With mesh media that has an extreme coarse mesh, correct automatic sensing of the trailing edge of the media may fail, causing printing to stop at an unintended location.

☞ P. 25, "Loading Media and Making Settings"

Ink is Discharged at a Location Other Than on the Media

Are the settings for the media's width and right edge in the mesh mode correct?

If ink is discharged at a location other than on the media, redo the settings for the width and right edge of the media to make the values correct. In the mesh mode, the media's width and right edge are not detected automatically, regardless of the setting for [SHEET TYPE]. This means that if the media's width and right edge are not set correctly, the printer cannot correctly detect the position of the media, and so ink may be discharged at a location other than on the media.

☞ P. 25, "Loading Media and Making Settings"

Collected Ink Overflows from the Ink Tray

Has the printer's angle of incline changed?

If the printer is moved for some reason and its angle of incline changes, the ink in the ink tray may fail to flow to the drain tray correctly. If this problem occurs, contact your vendor or the nearest Roland DG Corp. Call Center.

5-2 If a Message Appears

These are messages that appear only in the mesh mode when you're using this unit. They do not indicate any error. Take action as instructed by the message.

[CLEAN THE MESH UNIT]

This appears when the loading lever is flipped to the rear after loading media. If this appears after the media has been cut off, clean the ink tray. Pressing the **ENTER** key returns you to the original screen.

☞ P. 29, "How to Cleaning the Ink Tray"

5-3 If an Error Message Appears

These are the new error messages that may appear on a printer modified to support this unit, and the actions to take if the error message is displayed. If the action described here does not correct the problem, or if an error message not described here or in the AJ-1000 User's Manual appears, contact your vendor or the nearest Roland DG Corp. Call Center.

[DO NOT REMOVE THE MESH UNIT WHILE THE POWER IS ON]

When in the mesh mode, the ink tray was removed while the power remained on, and so the printer can no longer operate normally.

Operation cannot be continued. Switch off all power, carry out one of the following operations, then redo the task from the beginning.

- Install the ink tray with the sensor lift lever remaining set at the mesh-mode position.
 - With the ink tray remaining uninstalled, lower the sensor lift lever to the normal-mode position.
- ☞ P. 15, "Operation Modes"
☞ P. 20, "Switching the Printer to the Mesh Mode"
☞ P. 31, "Switching the Printer to the Normal Mode"

[RAISE THE SENSOR U/D LEVER]

When in the mesh mode, the sensor lift lever was lowered to the normal-mode position while the power remained on, and so the printer can no longer operate normally.

Operation cannot be continued. Switch off all power, carry out one of the following operations, then redo the task from the beginning.

- With the ink tray remaining installed, raise the sensor lift lever to the mesh-mode position.
 - Detach the ink tray with the sensor lift lever remaining set at the normal-mode position.
- ☞ P. 15, "Operation Modes"
☞ P. 20, "Switching the Printer to the Mesh Mode"
☞ P. 31, "Switching the Printer to the Normal Mode"

[DO NOT INSTALL THE MESH UNIT WHILE THE POWER IS ON]

When in the normal mode, the ink tray was installed while the power remained on, and so the printer can no longer operate normally.

Operation cannot be continued. Switch off all power, carry out one of the following operations, then redo the task from the beginning.

- Detach the ink tray with the sensor lift lever remaining set at the normal-mode position.
 - With the ink tray remaining installed, raise the sensor lift lever to the mesh-mode position.
- ☞ P. 15, "Operation Modes"
☞ P. 20, "Switching the Printer to the Mesh Mode"
☞ P. 31, "Switching the Printer to the Normal Mode"

[LOWER THE SENSOR U/D LEVER]

When in the normal mode, the sensor lift lever was raised to the mesh-mode position while the power remained on, and so the printer can no longer operate normally.

Operation cannot be continued. Switch off all power, carry out one of the following operations, then redo the task from the beginning.

- With the ink tray remained uninstalled, lower the sensor lift lever to the normal-mode position.
 - Install the ink tray with the sensor lift lever remaining set at the mesh-mode position.
- ☞ P. 15, "Operation Modes"
☞ P. 20, "Switching the Printer to the Mesh Mode"
☞ P. 31, "Switching the Printer to the Normal Mode"

[MOTOR ERROR TURN POWER OFF]

A motor error occurred.


Operation cannot be continued. Switch off the sub power. Next, eliminate the cause of the error, then immediately switch on the sub power. If the printer is allowed to stand with the error uncorrected, the print heads may dry out and become damaged.

On a printer modified to support the MU-1000, leaving the weights attached during use in the normal mode causes this error to occur. Remove the weights, then switch on the sub power.

For other causes and action to take, refer to the AJ-1000 User's Manual.

- ☞ P. 31, "Switching the Printer to the Normal Mode"
☞ AJ-1000 Use's Manual

[MOTOR ERROR CAP PRINT HEADS]**A motor error occurred.**

Eliminate the cause of the error, then press . The heads move to the standby position. After the heads have moved, switch off the sub power.

If the machine is allowed to stand with the error uncorrected, the print heads may dry out and become damaged.

On a printer modified to support the MU-1000, leaving the weights attached during use in the normal mode causes this error to occur. Remove the weights, then switch on the sub power.

For other causes and action to take, refer to the AJ-1000 User's Manual.

☞ P. 31, "Switching the Printer to the Normal Mode"

☞ AJ-1000 Use's Manual

5-4 Specifications

		MU-1000
Installable model		AJ-1000
Loadable media width		1220 to 2641 mm (48 to 104 in.)
Printable area		Maximum width: 2600 mm (102.3 in.)
Distance accuracy (*1)		Error of less than $\pm 0.3\%$ of distance traveled, or 0.3 mm, whichever is greater
Total weight of contents		11 kg (24.2 lb.)
Environment	Power on (*2)	Temperature: 20 to 32°C (68 to 89.6°F), humidity: 35 to 80% (no condensation)
	Power off	Temperature: 5 to 40°C (41 to 104°F), humidity: 20 to 80% (no condensation)
Included items		Ink tray, Roller stay, Tension roller, Ink-tray carrier, Weights, Special screwdriver, screws, scraper, Cleaning fluid, User's Manual.

*1

- At Roland PET film, print travel: 1 m
- Temperature: 25°C (77°F), humidity: 50%
- Not assured when the media heating system is used.

*2

Environment

