Process-free CTP system for paper based offset printing plates **CTP Thermal Digiplate**

Thermal
Digiplater *TDP-459*

Users Manual

Introduction

Thank you for purchasing this THERMAL DIGIPLATER TDP-459 made by MITSUBISHI PAPER MILLS, LTD.
Read this manual carefully before using the Thermal Digiplater and become familiar with the installation and operation procedures.
Keep this users manual at hand so that it can be referred to at any time during operation of the Thermal Digiplater.
This manual has been carefully prepared, however, if you find any mistakes, or have any questions, please let us know.

⬩ If this manual is lost or damaged, promptly place an order for a new one from a distributor near you.
⬩ If this Thermal Digiplater is transferred to another party, please attach this manual to the Thermal Digiplater.

■ After receiving this product, check that:
○ It is the product that you ordered.
○ It has not been damaged during shipping.
○ All accessories are present.
* If a damaged or abnormal part is found, contact the distributor immediately.

The specifications in this document are subject to change without prior notice for product improvement.
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Chapter 1 Safety Precautions

The purpose of this manual is to use this product safely.
Carefully read this manual and leaflets attached to the Thermal Digiplater and become familiar with the installation and operation procedures for safe use.

◆ This manual contains precautionary statements to prevent hazardous operations.
The statements are categorized as follows so that you can better understand all safety precautions for this Thermal Digiplater.

⚠ WARNING
Indicates a hazardous situation that could result in death or serious injury if the Thermal Digiplater is handled incorrectly.

⚠ CAUTION
Indicates a hazardous situation that could result in minor injury or property damage if the Thermal Digiplater is handled incorrectly.

Note
Indicates causes of problem or conditions of working environment.

◆ It is impossible for us to anticipate all hazards that may occur when the Thermal Digiplater is installed and used under various environmental conditions. Therefore, all possible warnings and cautions are not included in the users manual, other leaflets or labels on the Thermal Digiplater.
Should the Thermal Digiplater be operated or inspected in any way other than as indicated in the users manual, you shall be responsible for the safety.
◆ The precautionary notes on how to use and inspect the Thermal Digiplater indicated in the users manual and other leaflets are intended only for when the Thermal Digiplater is used for its originally specified purpose.
Should the Thermal Digiplater be used for any purposes other than as intended in the users manual, you shall be solely responsible for the safety.
◆ Never perform operations that are prohibited in the users manual and other leaflets.

1.1   Cautions for working environment and installation

Pay attention to the following to use the Thermal Digiplater safely:

⚠ WARNING
Do not use the Thermal Digiplater in an environment with volatile substances, such as alcohol and thinner, or combustible gases.

⚠ WARNING
Do not put a vessel containing water, such as a vase, plant pot, cup, or any metallic article on this Thermal Digiplater. If water is spilt or a metallic piece enters the Thermal Digiplater, a fire or electric shock can occur.

⚠ WARNING
Do not cover the vent holes of the Thermal Digiplater. Doing so will not allow the heat to escape from the Thermal Digiplater, thereby causing a fire.

⚠ WARNING
Do not insert or drop a metallic or flammable article inside through any vent hole. Doing so can cause a fire or electric shock.

⚠ WARNING
Provide an electric oulet at an accessible place near this product.

⚠ CAUTION
Make sure that children do not touch the Thermal Digiplater and cables. Failure to do so can result in injury or electric shock.

⚠ CAUTION
Do not install the Thermal Digiplater in damp, dusty or sandy places, such as a bathing place, a bathroom, near a hot spring, on a road or by the side of a pool. Doing so can cause a fire, electric shock or failure.

⚠ CAUTION
Do not install the Thermal Digiplater on a shaky stand, inclined floor or any other unstable place. If so, it can fall or turn over and cause personal injury.

Note
Do not install the Thermal Digiplater in an area with an extremely low or high temperature. Do not install it, for example, in an area of a ski site or skating rink with a low ambient temperature or in an outdoor area where it will be exposed to direct sunlight and heat.

1.2 Handling the Thermal Digiplater

Pay attention to the following warnings and caution when handling the Thermal Digiplater:

⚠ **WARNING**

Take the Thermal Digiplater out of the package and place it on a horizontal and stable table or desk.

⚠ **WARNING**

As it weighs approximately 55 kg (121lbs), it is dangerous for a single person to try to hold or carry the Thermal Digiplater. When taking it out of the package, take care not to injure your fingers or hands.

⚠ **WARNING**

The Thermal Digiplater's center of gravity is at the front. Take care not to lose balance when carrying it. At least 3 persons are required to carry and install it.

⚠ **WARNING**

Use extreamly caution when carrying it on a slippery floor.

⚠ **WARNING**

If it is dropped and damaged, turn off the power switch on the main body, disconnect the power cable from the electric oulet and contact the distributor. If it is used without servicing, it can cause a fire or electric shock.

⚠ **WARNING**

Plug the power cable all the way into the electric oulet.

⚠ **WARNING**

The thermal head is heated while the Thermal Digiplater is operating. This is not an abnormal phenomenon. It is heated to a high temperature. Never touch it.

⚠ **WARNING**

If an abnormality occurs, take only the measures for the abnormalities described in this users manual. If normal operation cannot be recovered, contact the distributor from whom you bought it.

⚠ WARNING
Use only the power cable supplied with the Thermal Digiplater. Be sure to connect the power cable to the electric outlet to be grounded according to all relevant local regulations (resistance:less than 100 ohm). If a short circuit occurs while the Thermal Digiplater is operating without being grounded, a fire or electric shock can occur. In addition, radio and television reception can be affected. If the Thermal Digiplater cannot be grounded, consult the distributor.

| ⚠ CAUTION |
| --- |
| **Do not disconnect the power cable while data is being printed or transferred. Doing so can cause the Thermal Digiplater to break down.** |

Note
If you touch the surface of the thermal head directly with your hand, the head can be damaged. If hard particles, such as sand, enter the head, it can be damaged. Take care when handling the head.

Note
Use the USB cable supplied with the Thermal Digiplater to connect it to your computer when installing the Thermal Digiplater.

1.3 Kind of warning labels and its attachment part

The following warning labels are attached inside the Thermal Digiplater to prevent the accident and avoid the danger.If the label come off or can't be seen, contact the distributor from whom you bought it immediately.
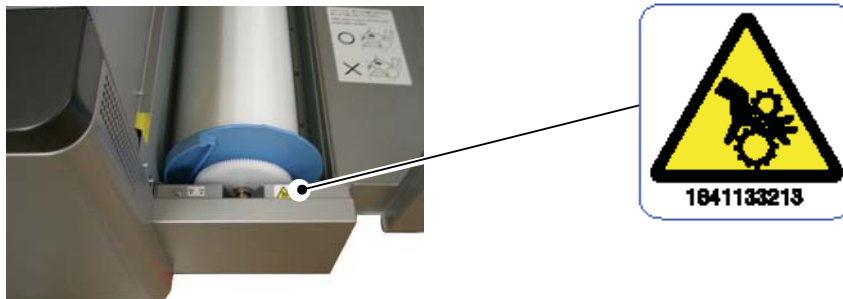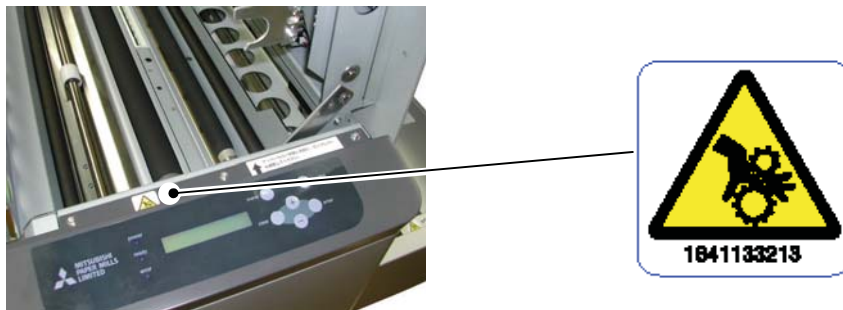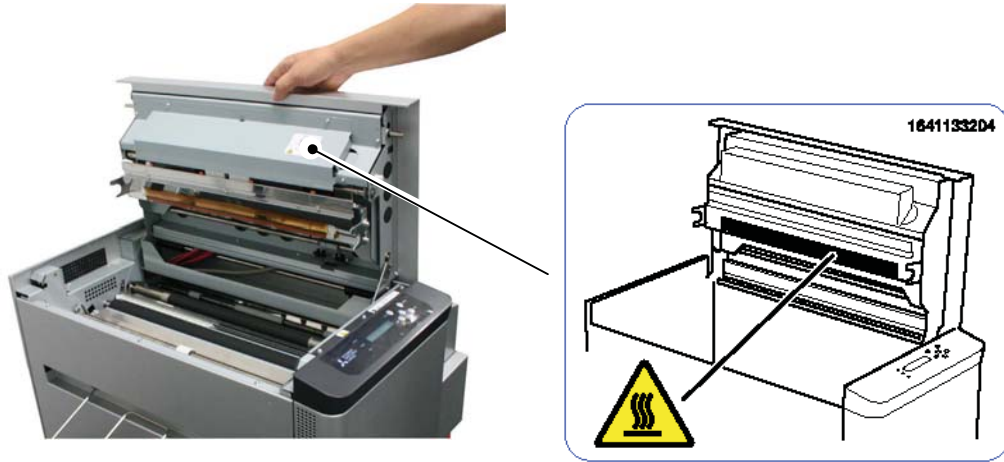
1.4   Handling plate before and after platemaking

When handling plate, observe the following instructions:

Note
When handling plate before platemaking: • **Use plate specified by Mitsubishi Paper Mills, Ltd.** • **Wrap the plate with the black polybag and avoid high temperature and high humidity, and store it in the cool and dark place.** **(at a temperature of 30℃(86°F) or lower and a humidity of 60% RH or less)** • **Do not touch the plate surface with your hand.** **Finger prints can deteriorate the printing quality.**

Note
When handling plate after platemaking: • **Store plates avoiding direct sunlight.** • **Store plates away from organic solvents such as benzine, thinner and alcohol. In addition, avoid direct contact with hands.** **If the printed images come into contact with hands or any of these substances, discoloration can occur to the plates.**

(MEMO)

Chapter 2 Installation and Setup

2.1 Unpacking and setup procedure

This chapter explains procedures from unpacking to setting up the Thermal Digiplater.
Be sure to read **Chapter 1   Safety Precautions** before proceeding to this chapter.

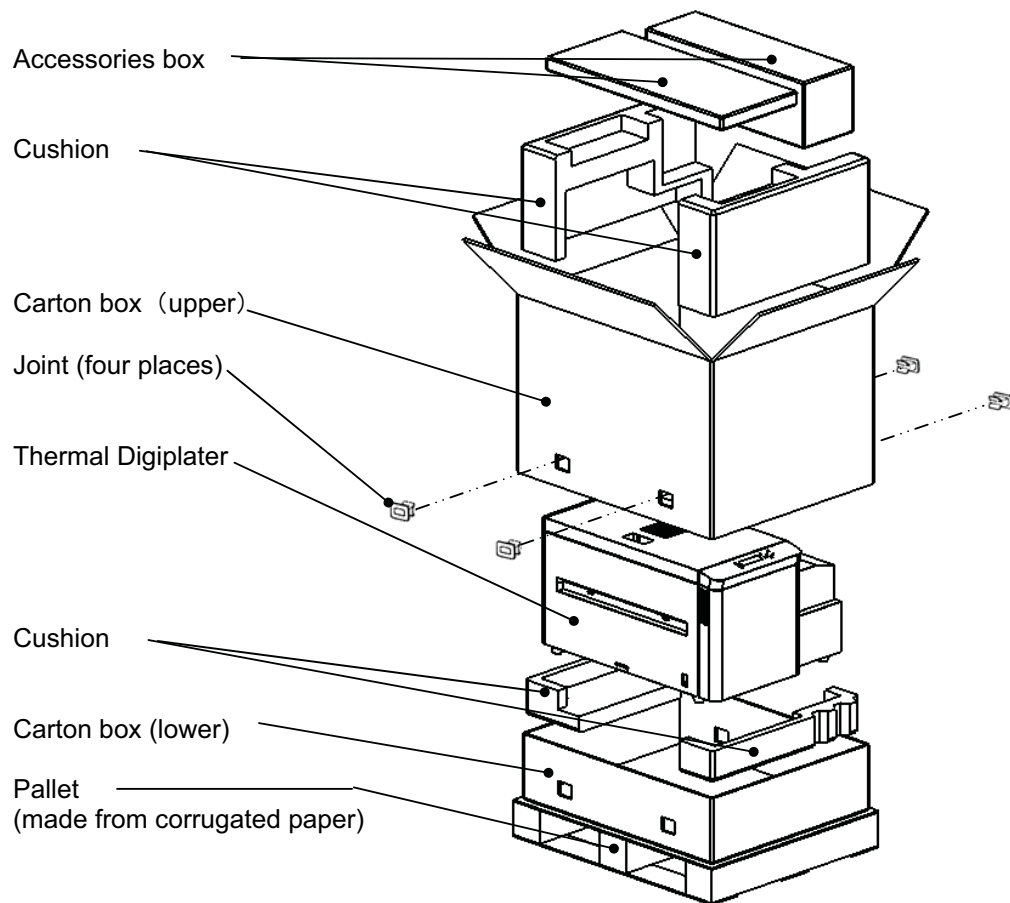Perform the following to unpack and install:

1. Open the box and take out the Thermal Digiplater and accessories.

2. Check the names and functions of the Thermal Digiplater's parts.

3. Take out the protective inserts.

4. Connect the power cable..

5. Connect the USB cable

6. Install the plate tray.

7. Turn on the power switch.

8. Set the spools to the plate and place the plate into the Thermal Digiplater.

2.2 Unpacking

First, unpack and check the contents.

The box contains the Thermal Digiplater, accessories and protective inserts.
The accessories are: Spool, Flange, power cable, USB cable, plate tray, users manual, the Windows driver CD-ROM with the users manual, the TDPController CD-ROM with the users manual, Technical Guide, and Product warranty.

Accessories box

Cushion

Carton box（upper）

Joint (four places)

Thermal Digiplater

Cushion

Carton box (lower)

Pallet
(made from corrugated paper)

⚠ CAUTION

This Thermal Digiplater weighs approx. 55 kg (121lbs). Take care when handling it. When taking out and carrying, securely hold it by its bottom.

Note

Do not discard the packaging materials. The box and protective inserts will be required to transfer or transport the Thermal Digiplater. Keep them in a safe place.
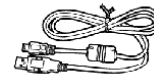

2.3   Checking the accessories

Take out the accessories from the box and from inside of the Thermal Digiplater. Check that the following items, as illustrated below, are present.

（Flange(gear side)）

（Spool shaft）

Spool
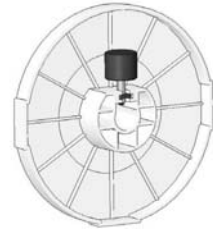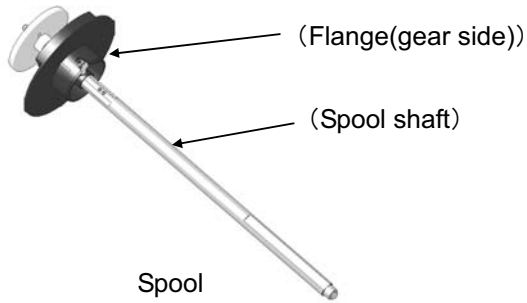
Flange(anti-gear side)

Power cable

USB cable
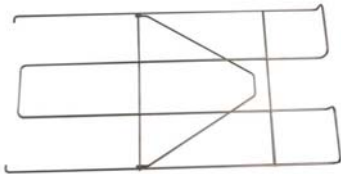
Plate tray

Users manual
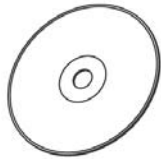
Windows driver CD-ROM
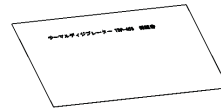
Product warranty
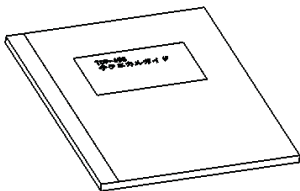
Technical guide
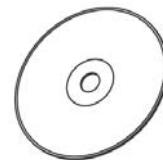
TDPController CD-ROM

Note
If an accessory is missing, contact the distributor immediately.

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2.4   Names and functions of parts

2.4.1   Names of parts

■ **Front**

Opening lever A

Upper cover

Operation panel

Plate tray

Power switch

■ **Rear**

Plate cover

Power input
terminal

USB terminal

Filters

■ Inside the Thermal Digiplater

Thermal head

Cleaning roller (entrance side)

Main pinch roller

Platen roller

Cleaning roller (discharge side)

Feeding pinch roller
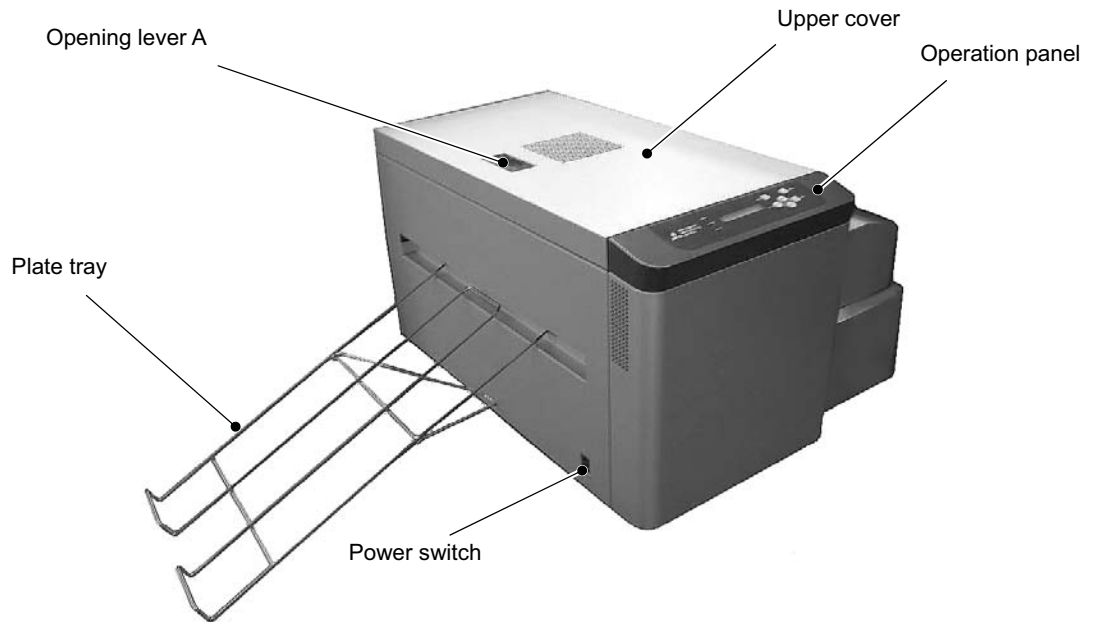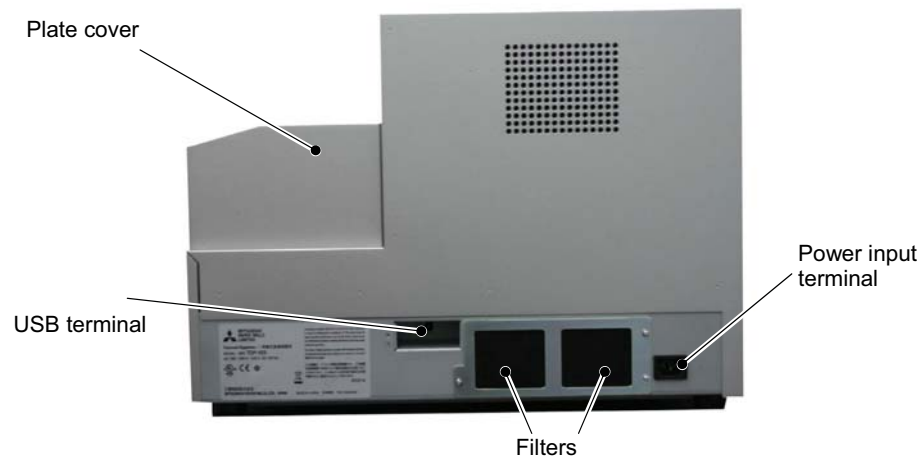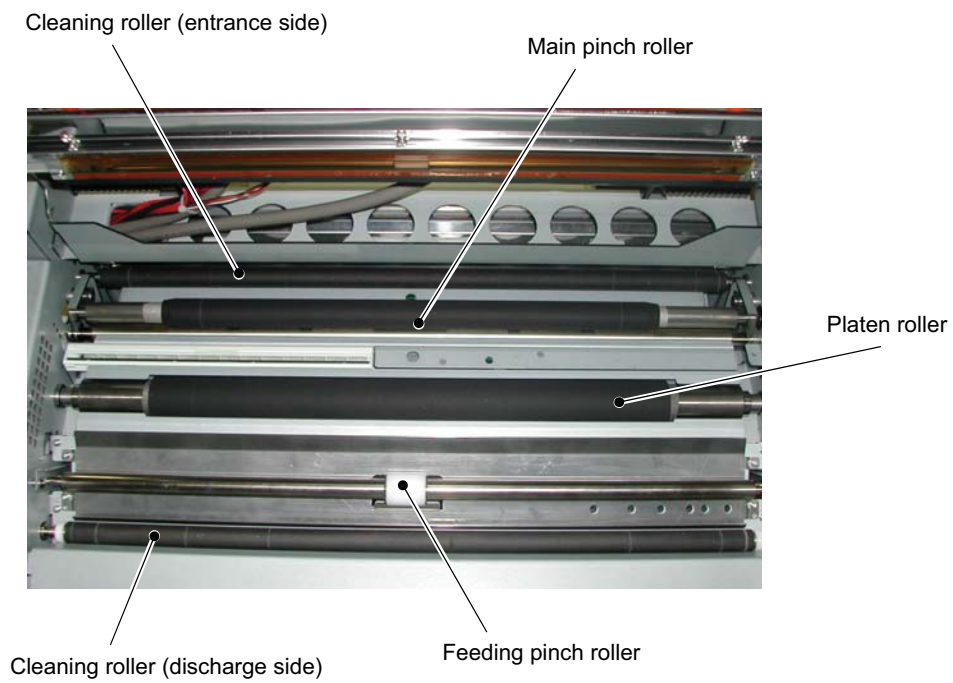
2.4.2   Functions of parts

| Name	Function/Description
Upper cover	Open this cover when inspecting and cleaning the thermal head and when removing a jammed plate portion.
Operation panel	The operation buttons, LCD display (referred to as the LCD below) and status lamps are located here.
Power switch	Switch to turn the power to the Thermal Digiplater on or off. Pressing "	" turns on the power while pressing "O" turns off the power. <Caution> After turning off the power, turn on the power after a lapse of 3 seconds or more.
Power input terminal	Connect the power cable.
USB terminal	Connect the USB cable.
Thermal head	Add the heat to the plate and print. <Caution> The head is heated to a high temperature while the Thermal Digiplater is operating. Do not touch. Touching it directly with your hand can cause failure.
Platen roller	Rubber roller to feed with plate.
Cleaning roller (Entrance and discharge sides)	Rubber rollers to remove dust and foreign matters from the plate surface. One installed at the entrance side and the other at the discharge side.
Filter	Prevent dust and foreign substances in air from entering inside the Thermal Digiplater.

2.5   Connecting the power cable

Connect the power cable by observing the following instructions:

1. Insert the power cable supplied into the power input terminal at the back of the Thermal Digiplater.
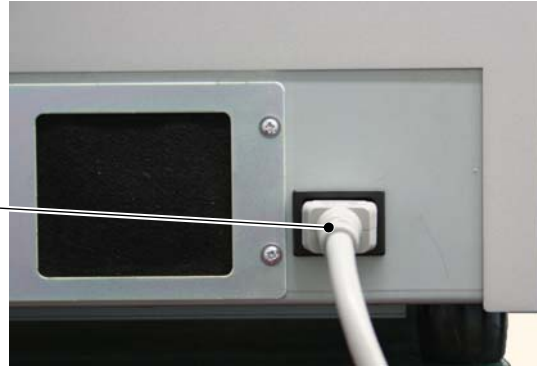
Power cable

⚠ **WARNING**

Before connecting the power cable, make sure that the power switch is off.

⚠ **WARNING**

Use only the power cable supplied with the product or a specified one.
Be sure to connect the power cable to the electric outlet to be grounded according to all relevant local regulations (resistance:less than 100 ohm)). If a short circuit occurs while the Thermal Digiplater is operating without being grounded, a fire or electric shock can occur. If the Thermal Digiplater cannot be grounded, consult the distributor.

⚠ **WARNING**

Plug the power cable all the way into the electric outlet.
Failure to do so can cause a fire or failure.

⚠ **WARNING**

Do not connect or disconnect the power cable with wet hands.
Doing so can cause an electric shock.

⚠ **WARNING**

Do not scratch, damage or rework the power cable.
Do not put a heavy article on the cable. Do not pull or forcibly bend it.
Doing so can damage the power cable and cause a fire or electric shock.

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⚠ **WARNING**

When moving the Thermal Digiplater, disconnect the power cable from the electric outlet and make sure that all external connecting lines have been disconnected.
If a cord is kept connected, it can be scratched, and a fire or electric shock can occur, or you can trip and be injured.

⚠ **WARNING**

If the Thermal Digiplater is not used for a long time, disconnect the power cable from the electric outlet for safety.

⚠ **WARNING**

Do not connect the power cable to an electric outlet to which other cords are connected. Requires a dedicated electric outlet.
Doing so can cause a fire or electric shock.

2.6   Connecting the USB cable

1. Connect the USB cable connected to your PC to the USB terminal at the back of the Thermal Digiplater.

USB cable
[Product compatible with USB 2.0 standard]

Thermal Digiplater side is a type B connector (square).

Note

Use only the USB cable supplied with the product or a specified one. If a cable other than the supplied cable is used, incorrect printing can result.
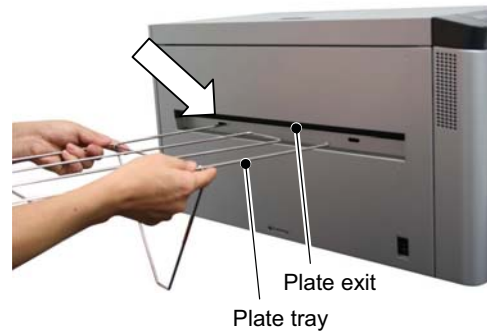
⚠ **CAUTION**

Before disconnecting the USB cable, make sure that the Thermal Digiplater is in the standby state. If disconnected during data transfer, the Thermal Digiplater can be damaged.

2.7   Installing the plate tray

> ⚠ **WARNING**
>
> **A plate cutter is installed inside the plate discharge port. Do not put fingers. Doing so can cause injure.**

1. Insert one of the claws of the plate tray into the corresponding mounting hole for the plate tray.

Plate exit

Plate tray

2. While slightly widening the plate tray, insert the other claw into the other mounting hole.

Stopper

3. Secure the tray by inserting the bottom of the stopper into the stopper slit.

> ⚠ **CAUTION**
>
> **Stacking quantity is up to 5 plates on the plate tray.**
> **Do not stack more than 5 plates on it.**

2.8   Setting the plate

1. Turn on the power to the Thermal Digiplater.

Power switch

2. Set the size of the plate to be installed on the operation panel. See **3.3.1 Changing the plate size.**

**3.** By holding the opening lever B, open the plate cover.

Note
Do not open the plate cover extremely quickly or forcibly 90 degrees or more.

Opening lever B

Plate cover

4. When there is any used plate, pull out the lead edge of the plate and lift up the plate with the spool, and take it out.

Plate roll

| ⚠ CAUTION |
| --- |
| **The plate weighs approx. 10 kg (22 lbs). Handle it carefully so as not to drop it. Dropping it is dangerous.** |
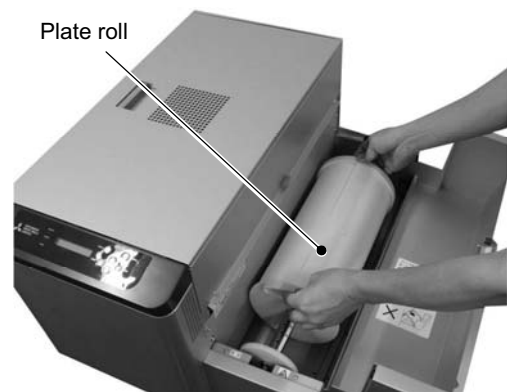
**5.** Take out the new plate from the black polybag.

> ⚠ CAUTION
>
> **The plate weighs approx. 10 kg (22 lbs). Handle it carefully so as not to drop it. Dropping it is dangerous.**

6. Change the flange (gear side) position of the spool according to the size of the plate to be used.

Please refer to "2.9 The change method of flange position."
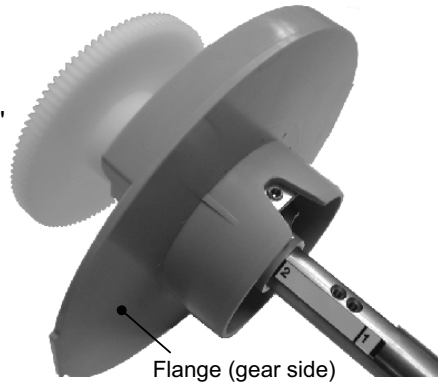
Flange (gear side)

7. Insert the shaft of the spool into the core of the plate and gently force the flange (gear side) of the spool on the side of the plate.

Spool
(Flange (gear side))

Plate

Work table
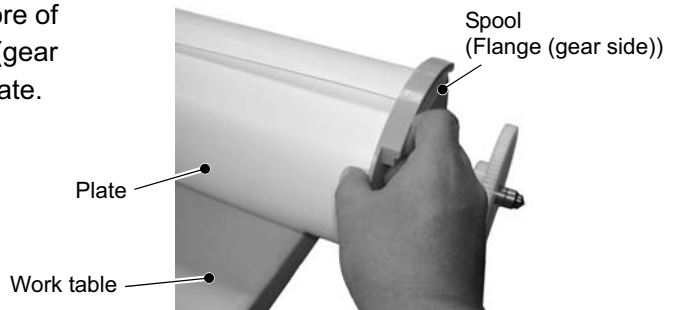
[Useful tip]

● When inserting the shaft of the spool into the core of the plate, place the plate so that the lead edge of the winding plate is upward. Then, insert the shaft of the spool from the right-hand side.

Lead edge of the winding plate

The direction which inserts a shaft
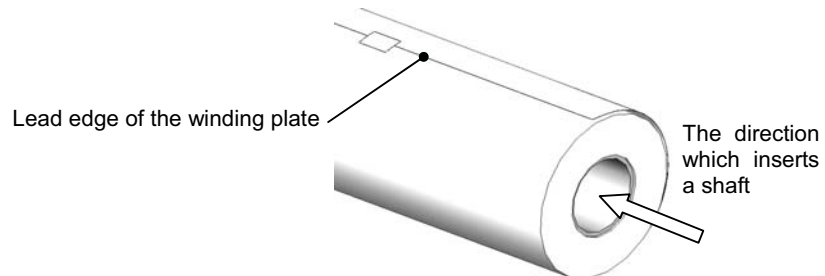
● As the outer diameter of the flange is larger than the outer diameter of the plate, it is recommended that this work is performed with the right-hand side of the plate protruding from the work table.

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8. Install and fit the flange (anti-gear side) to the end of the shaft on the opposite side of the plate.

stopper

Flange (anti-gear side)
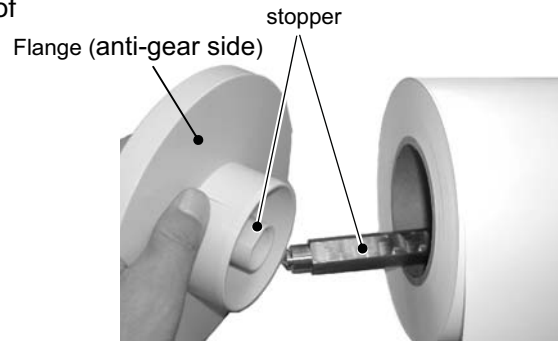
[Useful tip]

The flange (anti-gear side) has a stopper notch and the shaft has stopper notches to prevent empty rotation. Check the directions of the spool stopper notch and notches on the shaft to fit the spool correctly.

9. Tighten the screw to fix, forcing the flange (anti-gear side) on the side of the plate, and fix the flange (anti-gear side).

Screw to fix

10. Install the plate by placing the spool into the plate box.

⚠ CAUTION

The plate weighs approx. 10 kg (22 lbs). Handle it carefully so as not to drop it. Dropping it is dangerous.

11. Remove the seal fixing the end of the plate.

Fixing seal

⚠ **CAUTION**

Tear off and remove the seal completely. Entry of fragments of the seal into the feed path can cause trouble in feeding and/or printing.

12. Feed in the plate by hand, aligning the side edge of the plate with the line on the plate guiding seal.

Plate guiding seal

プレートの端を線に合わせて差し込んでください。
Align edge of plate with line.

LED

[Useful tip]

● When the end of the plate is inserted into the plate feeding port, the motor starts to operate to assist the feeding of the plate. The motor will stop when the plate setting is completed.

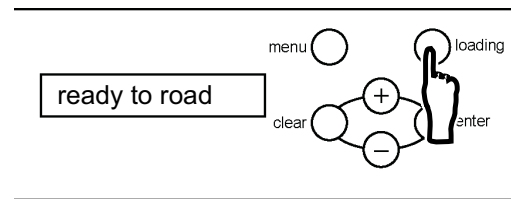● When the plate setting is completed, the "NG" LED lamp goes off and "OK" LED lamp turns on.

NG OK
○   ☀

13. Slowly close the plate cover.

> ⚠ **CAUTION**
>
> **Be careful not to catch fingers when closing the plate cover.**

Plate cover

14. Press the **loading** button on the operation panel.

ready to road

menu loading

clear enter

+

−

[Useful tip]

If the size of the plate placed in this machine does not match the plate size set, the loading will not be completed correctly. If an error occurs, check the size of the actual plate and the plate size set on this machine. Then install and set the correct plate.

15. Plate moves back and forth, and set the skew right.Then cut 2 plates with about 280mm and discharge them forcibly.

2.9 Change Method of Flange Position

Please change the flange position of a spool according to the size of the plate to be used.

1. Loosen the screw which secures the
flange.

> Turns in the direction of the illustration arrow,
>
> applying a finger to the knob part of the fixed screw.

2. Flange is set at the position
corresponding to plate size.

> ・Please confirm the relation between plate size
>   and a flange position using table on the right.
>
> ・Please unite the field of a flange inner side
>   with the line described at the spool shaft.

| Flange position	Plate size
5	**454 × 525**
4	**459 × 530**
3	**400 × 510** **410 × 510**
2	**400 × 510 ＊**
1	**324 × 492** **326 × 470** **335 × 492** **335 × 485** **340 × 505**
with no number	**310 × 492**

※.When using B*52 made from Hamada

Spool shaft
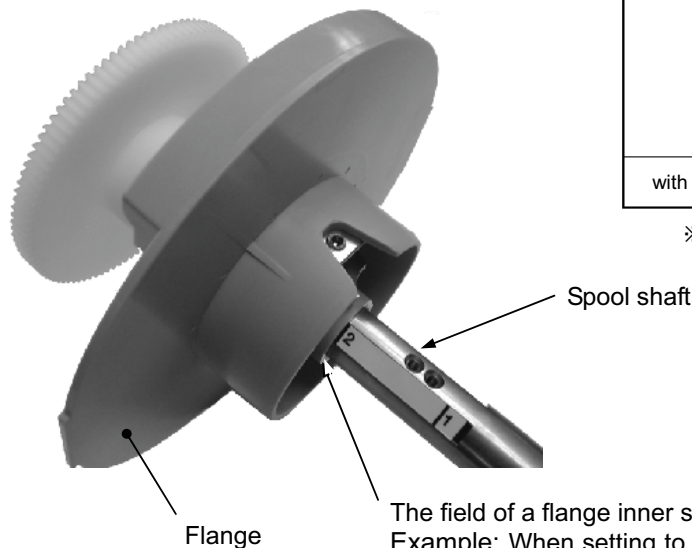
Flange

The field of a flange inner side meets with a line.
Example: When setting to flange position "2"   The line
         on the left-hand side of number "2" and the
         field of a flange inner side should line up.

3.   Tighten the screw and fix flange.

・Turn in the direction of the illustration arrow,

applying a finger to the knob part of the fixed screw.

・Please fasten securely, turning until the screw stops.
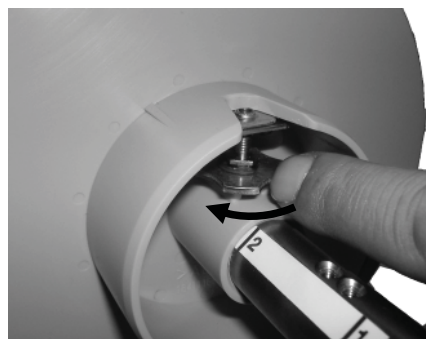
（Flange set position and the relation of the range which can be printed）

The relation of a flange set position and the range which can be printed is shown in the following figure.   When using custom-made size, it prints after confirming the range to a plate which can be printed.

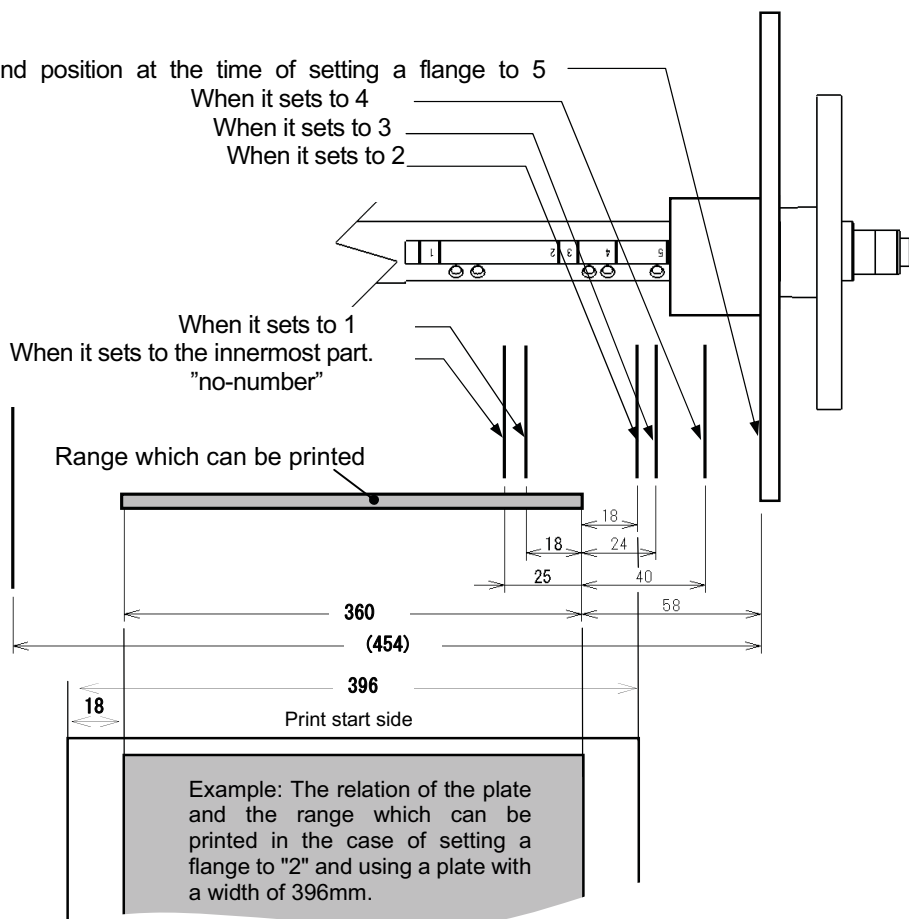The plate end position at the time of setting a flange to 5

When it sets to 4

When it sets to 3

When it sets to 2

When it sets to 1

When it sets to the innermost part.
"no-number"

Range which can be printed

18

18   24

25   40

58

360

(454)

396

18

Print start side

Example: The relation of the plate and the range which can be printed in the case of setting a flange to "2" and using a plate with a width of 396mm.

Chapter 3 Use of Operation Panel

3.1 Power switch

The power switch is located on the left side surface of this machine. Pressing the upper side ("I") turns on the power while pressing the lower side ("O") turns off the power.
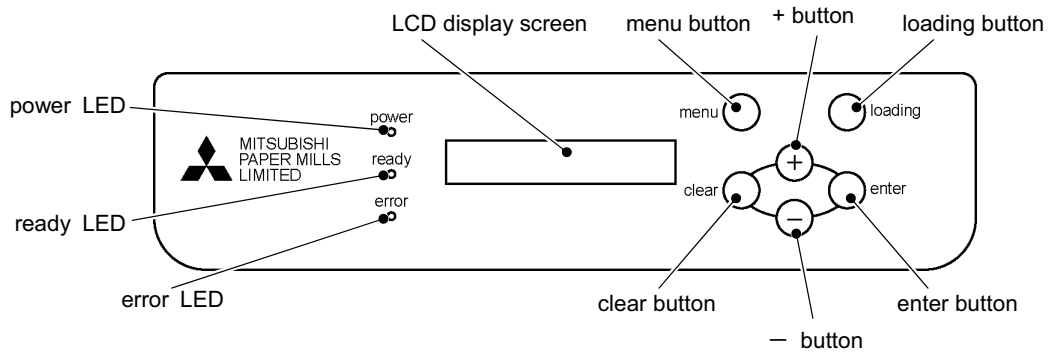
Power switch

⚠ CAUTION
Before disconnecting the USB cable, make sure that the Themal Digiplater is in the standby state. If disconnected during data transfer, incorrect printing can result.

3.2 Operation panel

The buttons, LED lamps and LCD on the operation panel are explained below.

LCD display screen   menu button   + button   loading button

power LED

MITSUBISHI PAPER MILLS LIMITED

power
ready
error

menu   loading

clear   +   enter

ready LED

error LED   clear button   enter button

− button

3.2.1　LED indications

LED indications are shown in the following table.

Name	Indicated color	Description
power LED	Orange	This lamp is on when the power is on.
ready LED	Green	This lamp is on when the Thermal Digiplater is ready for printing.
error LED	Red	This lamp is on when an abnormality occurs in the Thermal Digiplater.

3.2.2　Operation button

The functions of the operation buttons are shown in the following table.

Name	Function
loading button	Use this button to set a plate. Pressing this button in ready state feeds a certain length of plate to be cut off to reset the plate to the set position.
menu button	Use this button to select from the menu.
enter button	Use this button to save an operation or a setting to be executed in the user mode.
clear button	Use this button to exit the currently selected menu item in the user mode.
+ button	Use this button to select an item from the menu in the user mode.
- button	Use this button to select an item from the menu in the user mode.

3.2.3　LCD indications

The LCD shows the Thermal Digiplater status as shown in the following table.

| Data shown on the LCD		Description
English	Japanese	
Initializing	ショキカチュウ	The Thermal Digiplater is being initialized.
Booting up	キドウチュウ	The firmware is being started.
In the case of the plate remaining switch on		The Thermal Digiplater is ready for printing. The name and the remaining length (m) of the plate set in the Thermal Digiplater are displayed. In case that custom size is set, C is attached to the head of the display for the plate size.（C□□□×□□□）
□□□×□□□　□□m	□□□×□□□□□m	
In the case of the plate remaining switch off		The Thermal Digiplater is ready for printing. The name of the plate set in the Thermal Digiplater are displayed. In case that custom size is set, C is attached to the head of the display for the plate size.（C□□□×□□□）
Ready　□□□×□□□	タイキチュウ　□□□×□□□	
ready to load	ローディング シテクダサイ	The Thermal Digiplater is ready for plate loading as the plate has been set.
Receiving	データ ジュシンチュウ	Data is being received.
Printing	プリント チュウ	The Thermal Digiplater is in printing operation.
Cooling Down	ヘッド レイキャクチュウ	The thermal head is being cooled. Printing is temporarily suspended until the thermal head has cooled down.
Warming Up	ヘッド カオンチュウ	The thermal head is being preheated. Printing is temporarily suspended until the thermal head has warmed up.
Plate Loading	プレート ロード チュウ	Plate is being loaded.
Plate Reloading	プレート サイロード チュウ	The end of the plate is being fed to the standby position.
Data Creating	データ テンカイチュウ	Test print data is being generated.

3.3   Explanation of the user mode

In the user mode, the following are possible:
⬩ Changing the plate size
⬩ Setting a customized plate size
⬩ Adjusting print density
⬩ Checking the version of the Thermal Digiplater controlling firmware
⬩ Setting the head cleaning mode and execution in head cleaning
⬩ Display of plate remains, and reset of plate remains counter
⬩ Display of print count, and reset of print counter

Items available in the user mode

Data shown on the LCD		Description
English	Japanese	
Plate Size	ﾌﾟﾚｰﾄ ｻｲｽﾞ	Sets the plate size.
Custom Size Set	ｶｽﾀﾑｻｲｽﾞ ｾｯﾃｲ	Sets a customized plate size.
Density	Density	Adjusts the density of print.(±20%, in increments of 1%)
Firmware Version	Firmware Version	The firmware version can be checked.
Head Cleaning	ﾍｯﾄﾞ ｸﾘｰﾆﾝｸﾞ	Executes thermal head cleaning. Sets thermal cleaning mode.
Plate	ﾌﾟﾚｰﾄ	Displays plate remains, and resets plate remains counter.
Counter	ｶｳﾝﾀ	Displays print count, and resets print counter.
Remains Sw	ｻﾞﾝﾘｮｳ ｽｲｯﾁ	Sets on or off for display of plate remains.

1. To switch to the user mode, press the **menu** button in the ready state.
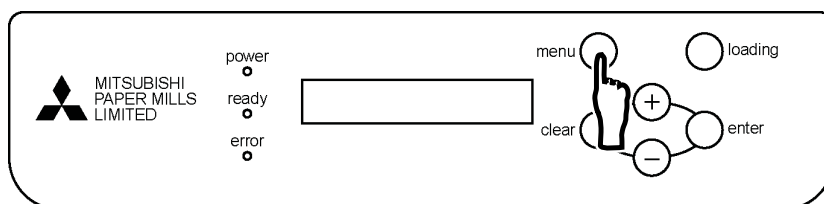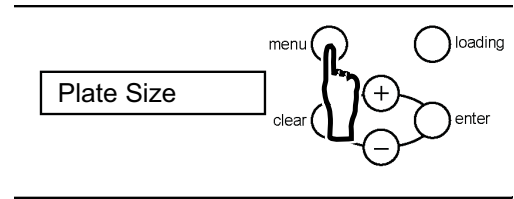

2. Pressing the **+** or **-** button repeatedly changes the menu item available.

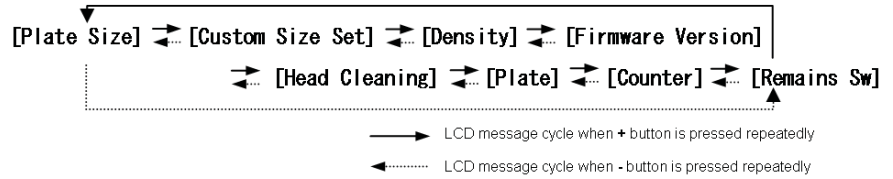The message shown on the LCD will change as shown below.
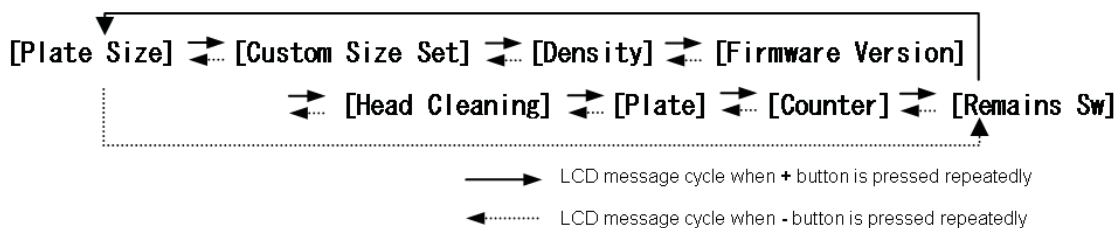
3.3.1   Changing the plate size

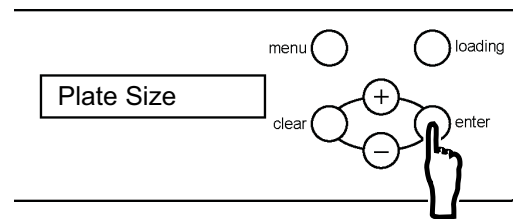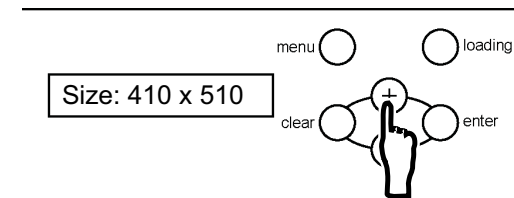**1.** In the ready state, press the **menu** button and display "Plate Size" on the LCD.

Plate Size

menu   loading
+
clear   enter
−

[Useful tip]

Pressing the **+** or **-** button repeatedly changes the message on the LCD as shown below.

[Plate Size] ⇄ [Custom Size Set] ⇄ [Density] ⇄ [Firmware Version]

[Head Cleaning] ⇄ [Plate] ⇄ [Counter] ⇄ [Remains Sw]

⟶   LCD message cycle when **+** button is pressed repeatedly

⟵········   LCD message cycle when **-** button is pressed repeatedly

2. Press the **enter** button to select the operation for changing the plate size.

Plate Size

menu   loading
+
clear   enter
−

3. Press the **+** or **-** button to display a different plate size.

Size: 410 x 510

menu   loading
+
clear   enter
−

4. Press the **enter** button to select the desired plate size.

Size: 410 x 510

menu   loading
+
clear   enter
−
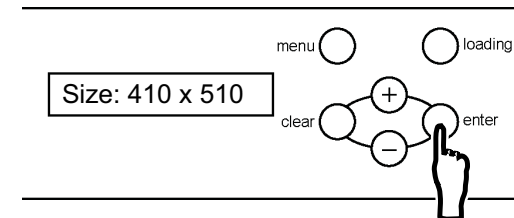
5. Press the **clear** button repeatedly until the ready state is displayed.
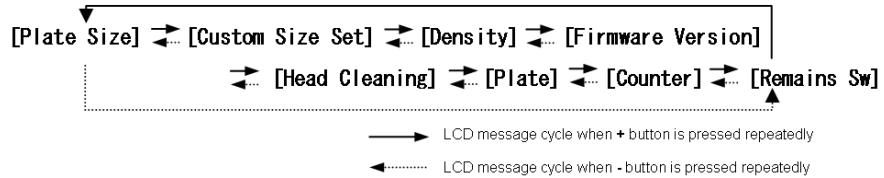
3.3.2   Setting a customized plate size

1. In the ready state, press the **menu** button once, press the **+** button once, and display "Custom Size Set" on the LCD.
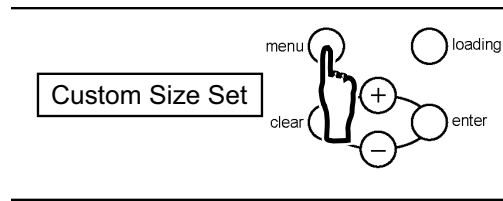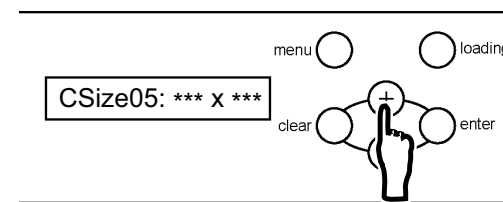
Custom Size Set

menu   loading
clear   enter

[Useful tip]

Pressing the **+** or **-** button repeatedly changes the message on the LCD as shown below.

[Plate Size] ⇄ [Custom Size Set] ⇄ [Density] ⇄ [Firmware Version]

⇄ [Head Cleaning] ⇄ [Plate] ⇄ [Counter] ⇄ [Remains Sw]

⟶ LCD message cycle when **+** button is pressed repeatedly

⟵ LCD message cycle when **-** button is pressed repeatedly

---

2. Press the **enter** button to select the operation for setting a customized plate size.

CSize01: *** x ***

menu   loading
clear   enter
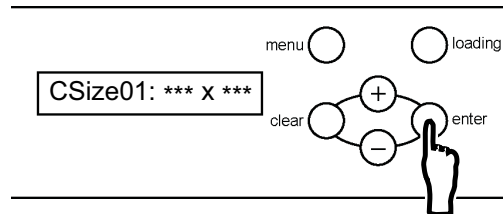
3. Press the **+** or **-** button to display a different customized plate size.

CSize05: *** x ***

menu   loading
clear   enter

4. Press the **enter** button to select the desired plate size.

CSize05: *** x ***

menu   loading
clear   enter

---
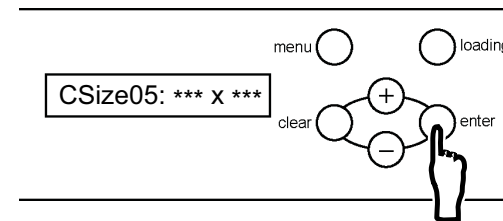
5. Press the **enter** button to set a plate width.

It can be set from 310mm to 459mm in increments of 1mm.
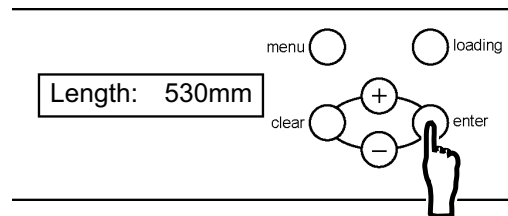
Width: 459mm
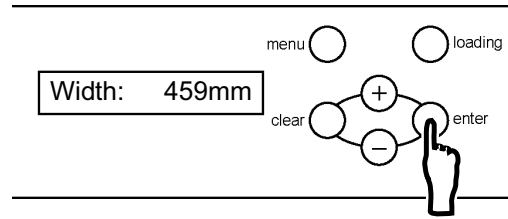
[Useful tip]

To change values, use the following buttons:
**menu** button: Increases the number by 10   **+** button: Increases the number by 1
loading button: Decreases the number by 10   **-** button: Decreases the number by 1

---

6. Press the **enter** button to confirm the width setting. Then, set a plate length.

It can be set from 150mm to 530mm in increments of 1mm.

Length: 530mm

7. Press the **enter** button to confirm the length setting. Then, set a name for the customized plate size.
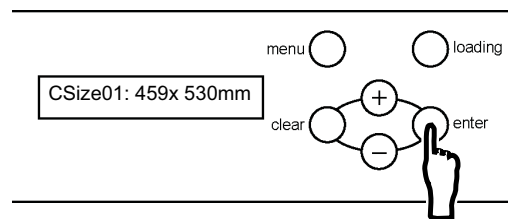
To set a customized plate size name, confirm width followed by length.

Name:459 x 530mm
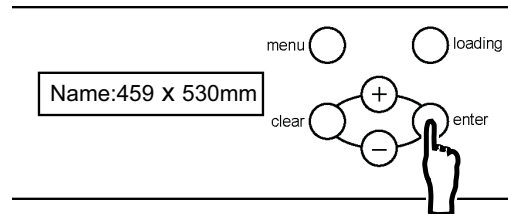
[Useful tip]

The Name is shown by "width x length (mm)." It is possible to specify any value as the width and length. Basically, it is recommended that the actual size of a plate is used as the name.
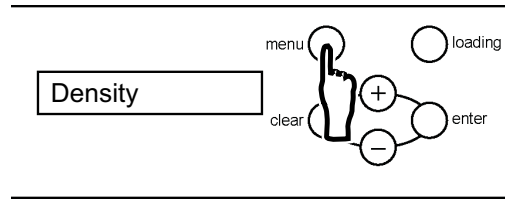
---

8. Press the **enter** button to confirm the customized plate size name.

CSize01: 459x 530mm

9. Press the **clear** button repeatedly until the ready state is displayed.
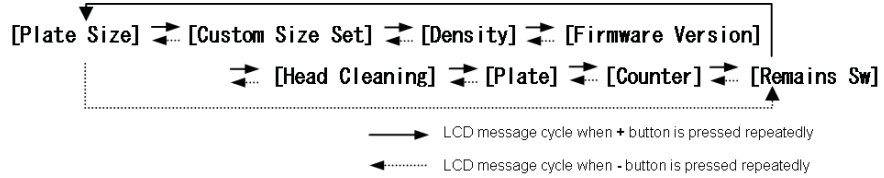
3.3.3   Adjusting the print density

1. In the ready state, press the **menu** button once, press the **+** button 2 times, and display "Density" on the LCD.
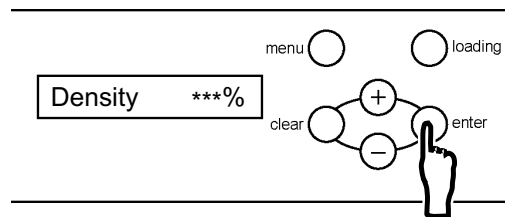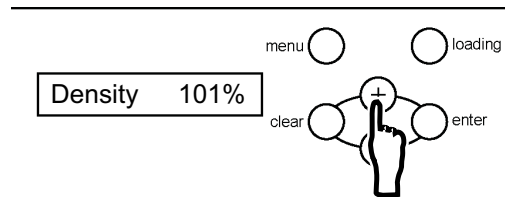
Density

menu   loading
clear   +   enter
            −

[Useful tip]

Pressing the **+** or **-** button repeatedly changes the message on the LCD as shown below.

[Plate Size] ⇄ [Custom Size Set] ⇄ [Density] ⇄ [Firmware Version]

⇄ [Head Cleaning] ⇄ [Plate] ⇄ [Counter] ⇄ [Remains Sw]

⟶   LCD message cycle when **+** button is pressed repeatedly

⟵   LCD message cycle when **-** button is pressed repeatedly

2. Press the **enter** button to select the operation for adjusting the print density.

Density   ***%

menu   loading
clear   +   enter
            −

3. Change the print density by pressing the **+** or **-** button.

Density   101%

menu   loading
clear   +   enter
            −

[Useful tip]

The density can be adjusted within ±20%, in increments of 1%.

4. Press the **enter** button to confirm the changed density.

Density   101%

menu   loading
clear   +   enter
            −
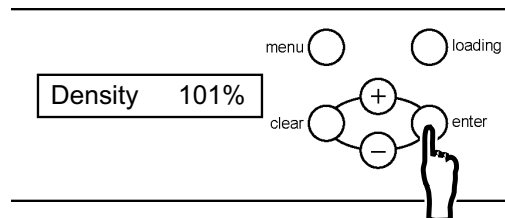
5. Press the **clear** button repeatedly until the ready state is displayed.
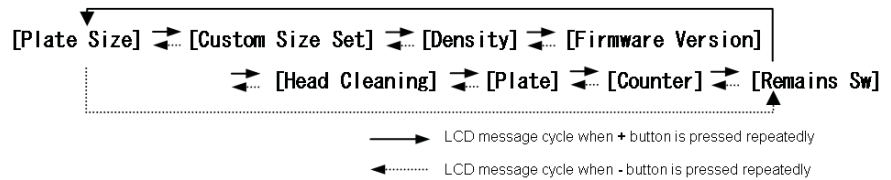
3.3.4   Checking the firmware versions

1. In the ready state, press the **menu** button once, press the **+** button 3 times, and display "Firmware Version" on the LCD.
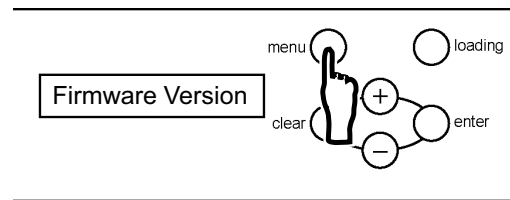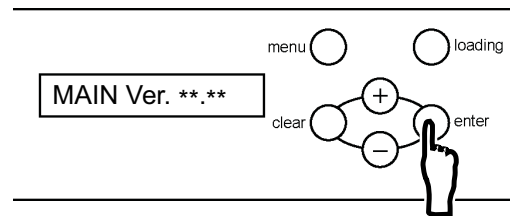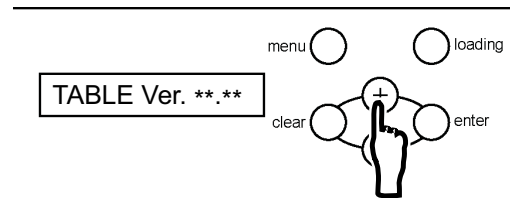
Firmware Version

menu   loading
clear   + enter
−

[Useful tip]

Pressing the **+** or **-** button repeatedly changes the message on the LCD as shown below.

[Plate Size] ⇄ [Custom Size Set] ⇄ [Density] ⇄ [Firmware Version]

⇄ [Head Cleaning] ⇄ [Plate] ⇄ [Counter] ⇄ [Remains Sw]

⟶   LCD message cycle when **+** button is pressed repeatedly

⟵ ⋯⋯   LCD message cycle when **-** button is pressed repeatedly

2. Press the **enter** button to select the operation for checking firmware versions.

MAIN Ver. **.**

menu   loading
clear   + enter
−

3. Press the **+** or **-** button to display another firmware version.

TABLE Ver. **.**

menu   loading
clear   + enter
−

4. Press the **clear** button repeatedly until the ready state is displayed.

3.3.5   Setting the Head Cleaning Mode and Execution in Head Cleaning

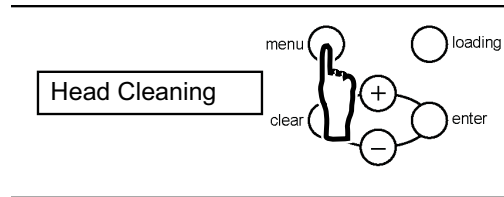■ **Setup of the automatic cleaning mode (ON/OFF)**

The automatic cleaning mode (ON/OFF) is set as follows.
When it is set at ON, the automatic head cleaning is executed every time before printing.
This mode is effective for only when extra mode* is selected. When standard mode* is selected, the automatic head cleaning is not executed, regardless of setting the head cleaning mode (ON/OFF)
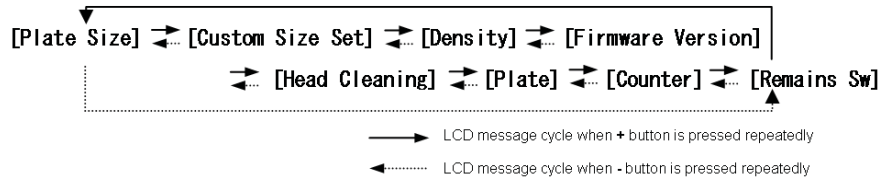 * Refer to the supplied instruction manual for Windows printer driver in the CD in this machine.

1. In the ready state, press the **menu** button once, press the **+** button 4 times, and display ”Head Cleaning” on the LCD.
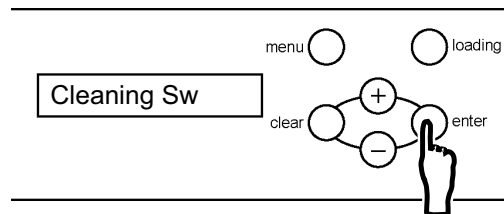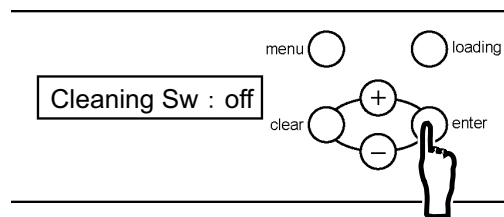
Head Cleaning

[Useful tip]
Pressing the **+** or **-** button repeatedly changes the message on the LCD as shown below.

[Plate Size] ⇄ [Custom Size Set] ⇄ [Density] ⇄ [Firmware Version]
⇄ [Head Cleaning] ⇄ [Plate] ⇄ [Counter] ⇄ [Remains Sw]

⟶ LCD message cycle when **+** button is pressed repeatedly
⟵ LCD message cycle when **-** button is pressed repeatedly
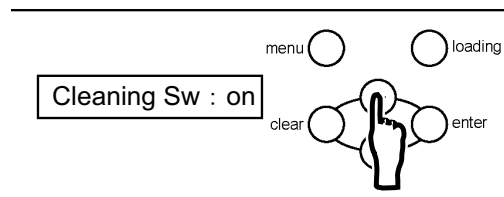
2. Press the **enter** button to select the operation for setting the Cleaning mode.
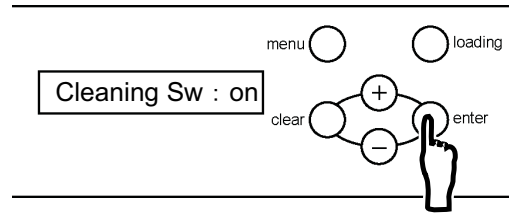
Cleaning Sw

3. Press the **enter** button, and display   the setting state (on/off) of head cleaning mode.

Cleaning Sw : off

4. Press the **+** or **-** button to change the setting (on/off) of head cleaning mode.

Cleaning Sw : on

5. Press the **enter** button to select the operation for setting the state (on/off) of head cleaning mode.

Cleaning Sw : on

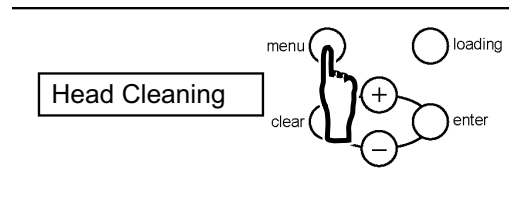menu ◯   ◯ loading

clear ◯   ⊕
          ⊖   ◯ enter

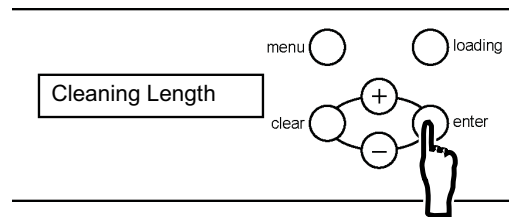**6.** Press the **clear** button repeatedly until the ready state is displayed.

■ **Setup of the cleaning length**
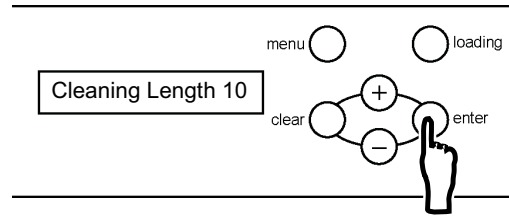The length of the black bar printed at the time of head cleaning execution is changed as follows.

1. In the ready state, press the **menu** button once, press the **+** button 4 times, and display ʺHead Cleaningʺ on the LCD.
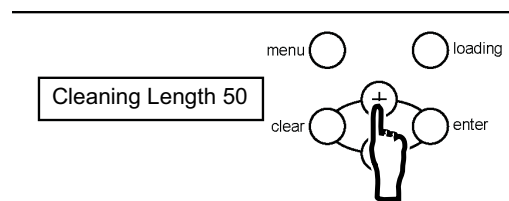
Head Cleaning

menu ◯   ◯ loading

clear ◯   ⊕
          ⊖   ◯ enter

2. Press the **enter** button once, press the **+** button once, and display ʺCleaning Lengthʺ on the LCD.

Cleaning Length

menu ◯   ◯ loading

clear ◯   ⊕
          ⊖   ◯ enter

3. Press the **enter** button, and display the setting state of cleaning length.

Cleaning Length 10

menu ◯   ◯ loading

clear ◯   ⊕
          ⊖   ◯ enter

4. Press the **+** or **-** button to change the setting of the cleaning length.

Cleaning Length 50

menu ◯   ◯ loading

clear ◯   ⊕
          ⊖   ◯ enter

【**Useful tip**】

It can be set from 10mm to 50mm **in increments of 1mm**.
When the setting value is enlarged, the effect of head cleaning becomes large, but cleaning time becomes long.

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5. Press the **enter** button to select the operation for setting " Cleaning Length".

menu ⃝   ⃝ loading

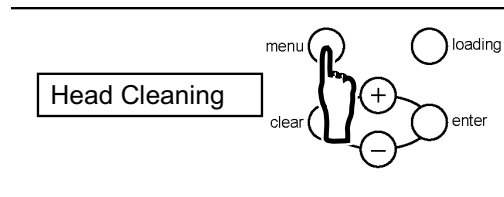Cleaning Length 50   ⊕

clear ⃝   ⃝ enter

⊖
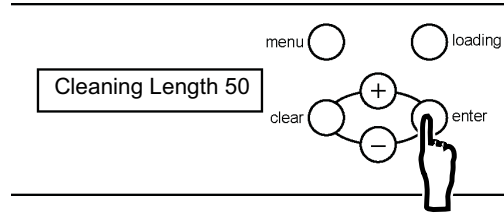
6. Press the **clear** button repeatedly until the ready state is displayed.
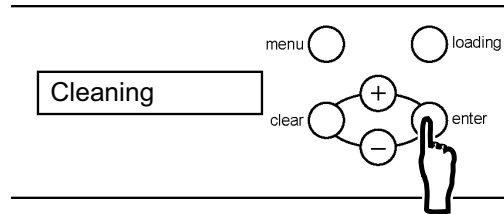
■ **Execution of head cleaning**
   Head cleaning is executed (black bar is printed and discharged) as follows.

1. In the ready state, press the **menu** button once, press the **+** button 4 times, and display "Head Cleaning" on the LCD.
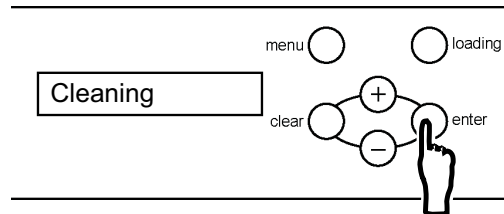
menu ⃝   ⃝ loading

Head Cleaning   ⊕

clear ⃝   ⃝ enter

⊖

2. Press the **enter** button once, press the **+** button 2 times, and display "Cleaning" on the LCD.

menu ⃝   ⃝ loading

Cleaning   ⊕

clear ⃝   ⃝ enter

⊖

3. Press the **enter** button to execute head cleaning.

※. Black bar is printed by the set-up length.

menu ⃝   ⃝ loading

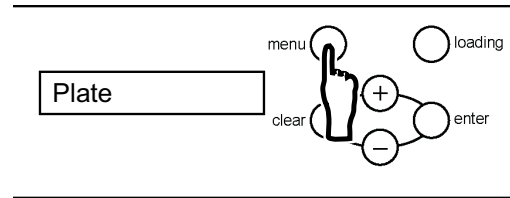Cleaning   ⊕

clear ⃝   ⃝ enter

⊖

4. Press the **clear** button repeatedly until the ready state is displayed.

3.3.6   Display of Plate Remains, and Reset of Plate Remains Counter

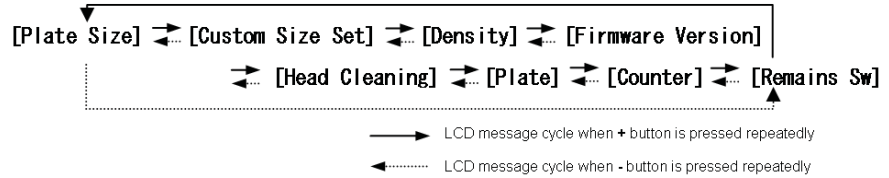Display of plate remains and reset of plate remains counter are executed as follows.
When reset is executed, plate remains counter is 75m at the time of brand-new plate, and printed length is subtracted in increments of 1m until reset is executed next time.

1. In the ready state, press the **menu** button once, press the **+** button 5 times, and display "Plate" on the LCD.
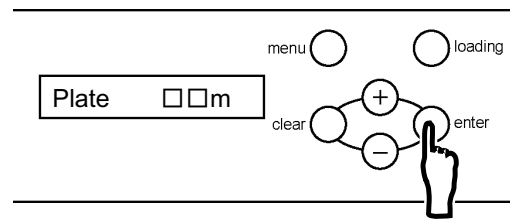
| Plate |

[Useful tip]

Pressing the **+** or **-** button repeatedly changes the message on the LCD as shown below.

[Plate Size] ⇄ [Custom Size Set] ⇄ [Density] ⇄ [Firmware Version]

⇄ [Head Cleaning] ⇄ [Plate] ⇄ [Counter] ⇄ [Remains Sw]

⟶ LCD message cycle when **+** button is pressed repeatedly
⟵ LCD message cycle when **-** button is pressed repeatedly

2. Press the **enter** button, and display the remains of the plate.

| Plate   □□m |

3. Press the **enter** button to come to the state which can reset remains of the plate.

| Reset? |

4. Press the **enter** button to reset remains of the plate.

※． Press the **clear** button when not resetting.

| Plate   75m |

5. Press the **clear** button repeatedly until the ready state is displayed.

3.3.7   Display of Print Count, and Reset of Print Counter

Display of print count and reset of print counter are executed as follows.
When reset is executed, print counter is 「0」, and the number of the printed plates is added until reset is executed next time.

1. In the ready state, press the **menu** button once, press the **+** button 6 times, and display ”Counter” on the LCD.
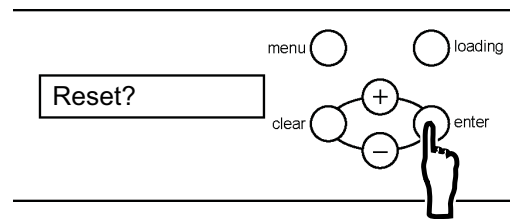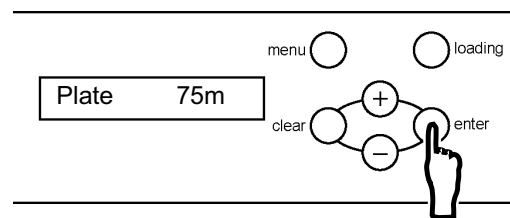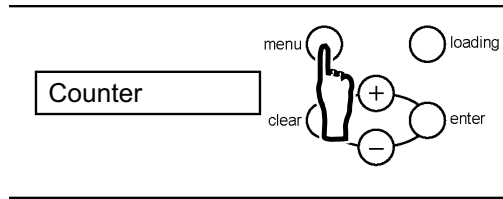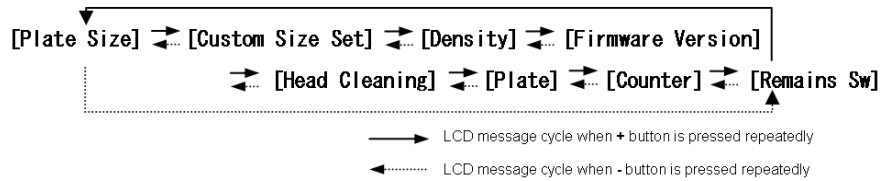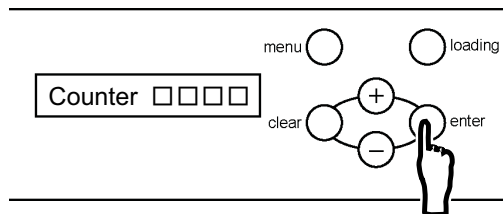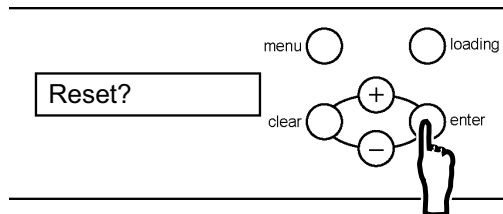
Counter

[Useful tip]

Pressing the **+** or **-** button repeatedly changes the message on the LCD as shown below.

[Plate Size] ⇄ [Custom Size Set] ⇄ [Density] ⇄ [Firmware Version]

⇄ [Head Cleaning] ⇄ [Plate] ⇄ [Counter] ⇄ [Remains Sw]

⟶ LCD message cycle when **+** button is pressed repeatedly

⟵ LCD message cycle when **-** button is pressed repeatedly
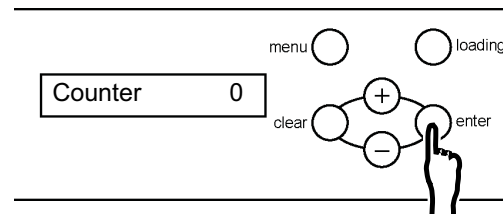
2. Press the **enter** button, and display the print counter.

Counter □□□□

3. Press the **enter** button to come to the state which can reset print counter.
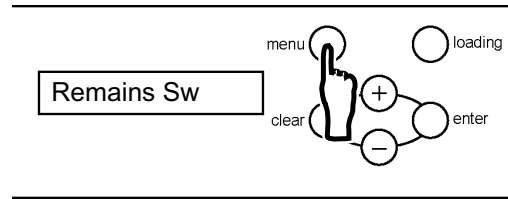
Reset?

4. Press the **enter** button to reset print counter.

※. Press the **clear** button when not resetting.

Counter   0

5. Press the **clear** button repeatedly until the ready state is displayed.
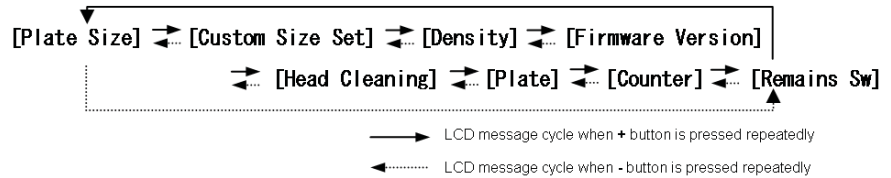
3.3.8   Setup of Plate Remains SW (on/off)

1. In the ready state, press the **menu** button once, press the **+** button 7 times, and display ”Remains Sw” on the LCD.
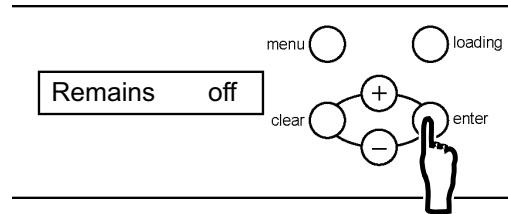
Remains Sw

menu   loading
clear   +   enter
        −

[Useful tip]

Pressing the **+** or **-** button repeatedly changes the message on the LCD as shown below.

[Plate Size] ⇄ [Custom Size Set] ⇄ [Density] ⇄ [Firmware Version]

⇄ [Head Cleaning] ⇄ [Plate] ⇄ [Counter] ⇄ [Remains Sw]

⟶ LCD message cycle when **+** button is pressed repeatedly

⟵ LCD message cycle when **-** button is pressed repeatedly

2. Press the **enter** button, and display the setting state (on/off) of "Remains SW" .

Remains   off

menu   loading
clear   +   enter
        −

3. Press the **+** or **-** button to change the state (on/off) of "Remains SW".

Remains   on

menu   loading
clear   enter
        −
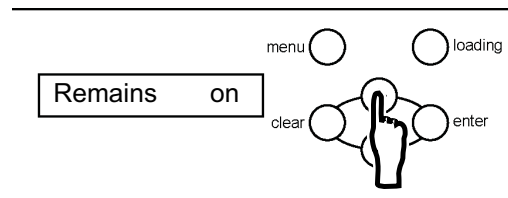
4. Press the **enter** button to select the operation for setting "Remains SW".

Remains   on

menu   loading
clear   +   enter
        −
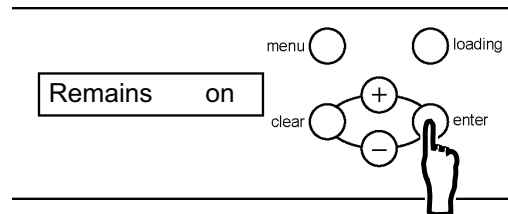
5. Press the **clear** button repeatedly until the ready state is displayed.

Chapter 4 Daily Maintenance

4.1   Cleaning the parts inside the Thermal Digiplater

To keep the best print quality, clean the thermal head, image sensor, head-position plate, platen roller, cleaning rollers and the main pinch roller by following the steps as instructed below.   Please clean at the following frequency.

  ・**Thermal head   --- 1 time / day (after finishing the print)**
     * **Image with many halftone dots is apt to get it dirty, and there sometimes needs to be cleaned several times a day.**
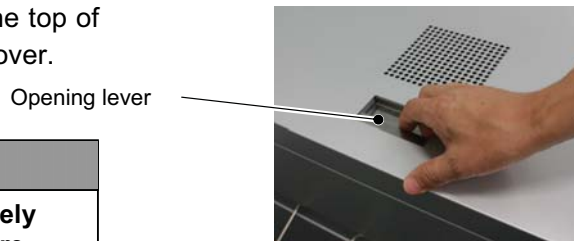 ・**Head-position plate, Cleaning roller, Main pinch roller   --- 1 time / week**
  ・**Image sensor, Platen roller   --- 1 time / day**

1. Turn off the power switch.

Power switch

2. When the plate is set, pull it out with your hands.

3. By holding the opening lever on the top of the upper cover, open the upper cover.

Opening lever

Note
Do not open the upper cover extremely quickly or forcibly 90 degrees or more.

Upper cover

Locking lever

[Useful tip]

A locking lever is provided to the upper cover to prevent the cover from closing down. When opening the upper cover, be sure to open it to the position where the locking lever locks effectively.

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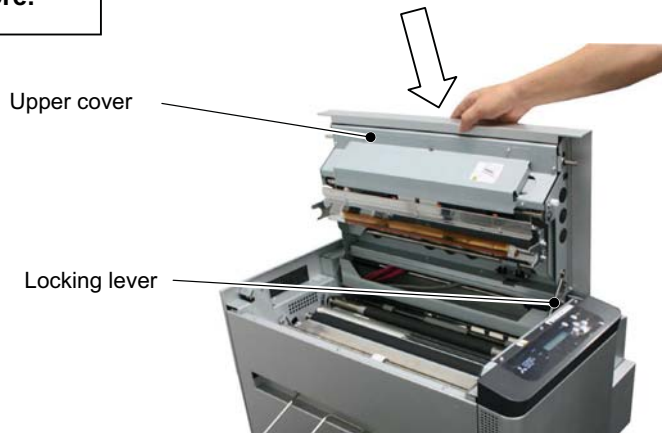
< Cleaning the thermal head>

4. Wipe the heating element (thin glassy band) of the thermal head with a recommended cleaning cloth soaked in the adequate amount of recommended cleaning fluid, applying it overall and uniformly, and moving it from side to side.
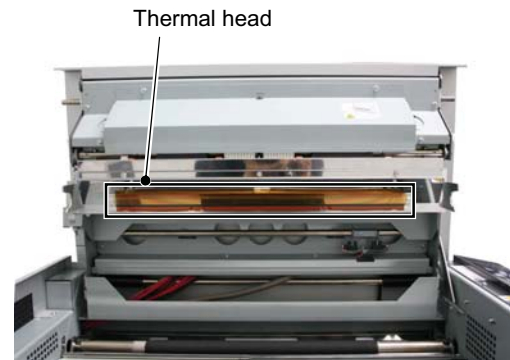
Thermal head

.

> ## ⚠ CAUTION
>
> ⬧ **The thermal head is hot just after printing. Do not touch it directly by hand.**
> ⬧ **Fingerprints on the thermal head heating element can cause the thermal head to fail. Do not touch it directly by hand.**
> ⬧ **Be careful not to be injured by protrusions in the Thermal Digiplater.**

< Cleaning the head-position plate>

5. Wipe the head-position plate with a recommended cleaning cloth soaked in the adequate amount of recommended cleaning fluid, applying it overall and uniformly, and moving it from side to side.

.

Head-position plate
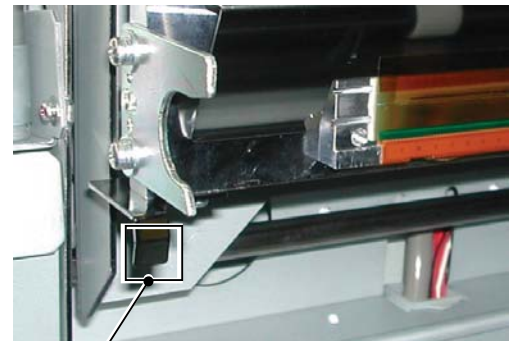
< Cleaning the cleaning rollers>

6. Wipe the cleaning rollers with a recommended cleaning cloth soaked in the adequate amount of recommended cleaning fluid.
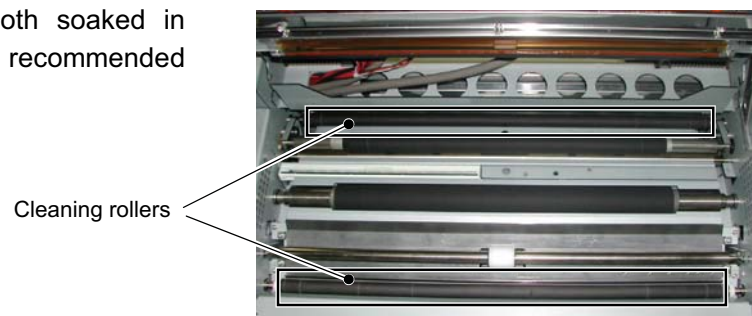
Cleaning rollers

[Useful tip]

Cleaning rollers are provided on the entrance and discharge sides.

< Cleaning the main pinch roller>

7. Wipe the main pinch roller with a recommended cleaning cloth soaked in the adequate amount of recommended cleaning fluid.

Main pinch roller

< Cleaning the image sensor>

8. Wipe the image sensor with a recommended cleaning cloth soaked in the adequate amount of recommended cleaning fluid.

Image sensor

< Cleaning the platen roller>

9. Wipe the rubber part of the platen roller with a recommended cleaning cloth soaked in the adequate amount of recommended cleaning fluid.

Platen roller

⚠ CAUTION
♦**Be careful not to scratch the rubber surface.** ♦**Contaminants on the platen roller can affect the print size accuracy.** ♦**After cleaning, wait until recommended cleaning fluid has evaporated sufficiently before starting printing. (It is recommended that the Thermal Digiplater be left for about 5 minutes after cleaning.**） ♦**Do not put your hand or cleaning cloth close to the inside of the Thermal Digiplater during the platen roller rotation.**

10. Release the locking lever to slowly close the upper cover.

⚠ CAUTION
Be careful not to catch fingers when closing the upper cover.

Upper cover

Locking lever

4.2   Cleaning the cover of the Thermal Digiplater

To remove dirt, wipe the cover of the Thermal Digiplater with a dry soft cloth.
If dirt cannot be removed by wiping with a dry cloth, lightly wipe the cover with a damped cloth which has been soaked in water or a little diluted neutral detergent.

> ### ⚠ WARNING
>
> **Should any foreign matter (metallic fragments, water or liquids) get into the Thermal Digiplater, turn off the power switch, disconnect the power cable from the electric outlet, and contact the distributor.**
> **Using the Thermal Digiplater without removing the foreign matter can cause a fire or electric shock.**

> ### ⚠ WARNING
>
> **Should the Thermal Digiplater be used in an abnormal state (generating heat, smoking or abnormal ordors), it can cause a fire or electric shock. Turn off the power switch immediately, disconnect the power cable from the electric outlet and contact the distributor.**

> ### ⚠ CAUTION
>
> **If the cover are wiped with a volatile liquid, such as benzine or thinner, or sprayed with insecticide, they can become discolored or cracked.**

4.3   Cleaning the filters

If dust has collected on the vent holes and filters, clean them with a vacuum cleaner.

Vent holes
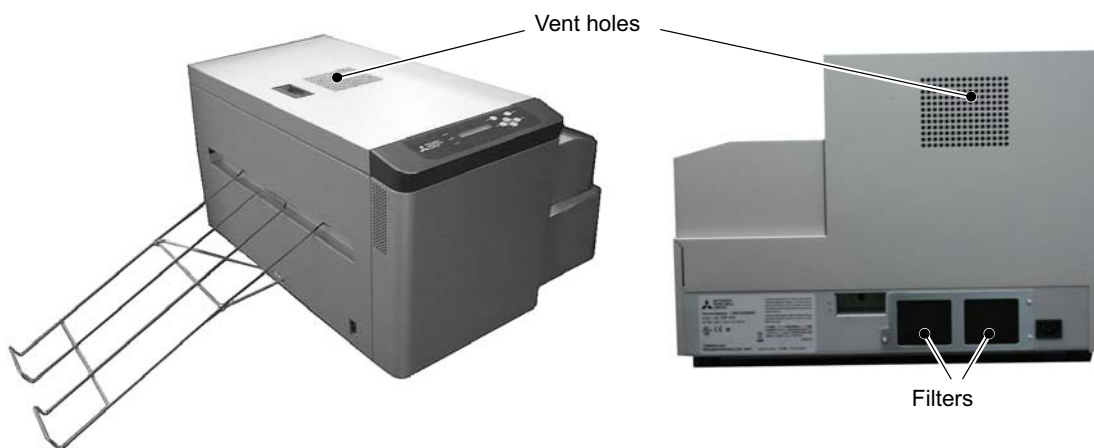
Filters

4.4 Consumable parts

Consumable parts for the Thermal Digiplater are shown on the following table.

No.	Name
1	Thermal head (Assembly)
2	Cleaning roller
3	Cutter unit
4	Filter

* Available supply period for consumable parts is 5 years after it is discontinued.
* It will be informed separately about discontinuing the product.

Chapter 5 Troubleshooting

5.1   When an error message is displayed

When an error occurs, an error message will be shown on the LCD on the operation panel.
The error messages shown on the LCD and the measures to be taken are explained below.

Message on the LCD	Condition	Measures
Plate Empty	The plate has been used up or no plate has been installed.	If the plate has been used up, supply with a new plate.
No Plate	The plate is not set.	Please set the plate.
Unmatch Plate	The size of the plate placed in this machine does not match the plate size set.	Check the size of the actual plate and the plate size set on this machine. Then install and set the correct plate.
Plate Jam □□ *	Plate jam	Remove the jammed plate. If plate jams occur frequently, consult Service department.
Mecha Error □□ *	Problem in the mechanical system of the Thermal Digiplater	Turn the power to the Thermal Digiplater off and on. If the Thermal Digiplater cannot be restored by turning the power off and on, it may be necessary to repair the Thermal Digiplater. Consult Service department.
Control Error □□ *	Problem in the control board of the Thermal Digiplater	
Temp Sens Err □□ *	A temperature sensor of the Thermal Digiplater is defective.	
Sensor Error □□ *	Problem in the sensor system of the Thermal Digiplater	

* The messages on the LCD show a code number for service in the boxes (□□).
When consulting Service department, please quote a code number.

5.2   Plate jam

If a plate jam occurs, turn off the power and remove the jammed plate.
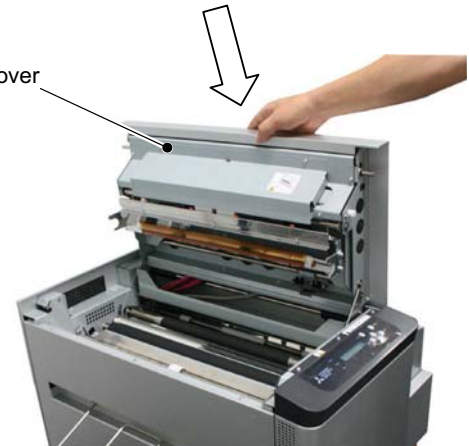
1.   Turn off the power switch.

Power switch

2.   By holding the opening lever on the top of the upper cover, open the upper cover to check the plate condition.
If there is no plate left,
go to ■ When there is no plate left (page 46).
If there is plate left,
go to ■ When there is plate left (page 47).

Opening lever
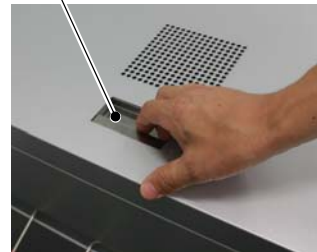
Upper cover

Note

Do not open the plate cover extremely quickly or forcibly 90 degrees or more.

⚠ CAUTION

- ♦ **The thermal head is hot just after printing. Do not touch it directly by hand.**
- ♦ **Fingerprints on the thermal head heating element can cause the thermal head to fail. Do not touch it directly by hand.**
- ♦ **Be careful not to be injured by protrusions in the Thermal Digiplater.**

■ **When there is no plate left**

1. Turn on the power switch.

Power switch

2. Reset the plate.
See **2.8 Setting the plate**.

■ **When there is plate left**

1. Open the plate cover and pull the plate out with your hands.

> **Note**
>
> **Do not open the plate cover extremely quickly or forcibly 90 degrees or more.**

Plate

2. If the plate cannot be pulled out, cut off the jammed and folded sections with scissors.

3. Reset the plate.
See **2.8 Setting the plate**.

5.3   When parts of image area are missing from the printed plate

■ **Incorrect print with straight streaky missing parts in the direction of plate feed**

⬧ This may have been caused by contamination on the thermal head. Clean it as instructed in Chapter 4   4.1 Cleaning the parts inside the Thermal Digiplater.
⬧ If this problem cannot be solved by cleaning, the head may be broken. Consult Service department.

■ **Incorrect print with dotted missing parts**

⬧ This may have been caused by contamination on the cleaning rollers. Clean them as instructed in Chapter 4   4.1 Cleaning the parts inside the Thermal Digiplater.

5.4 Plate is not correctly detected

⬧ The error message "Plate Empty" is displayed when the plate has not been used up.

Contaminated plate sensors may not have correctly detected the plate. Clean the plate sensors by following the steps as instructed below.
If this problem cannot be solved by cleaning, the sensors may be defective. Consult Service department.
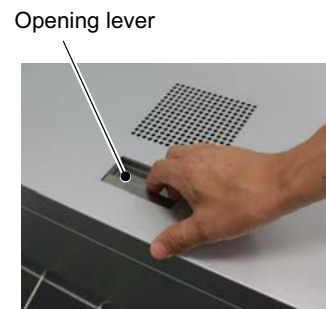
1. Turn off the power switch.

Power switch

2. By holding the opening lever on the top of the upper cover, open the upper cover.

Opening lever

Note

Do not open the upper cover extremely quickly or forcibly 90 degrees or more.

⚠ CAUTION

⬧ **The thermal head is hot just after printing. Do not touch it directly by hand.**
⬧ **Fingerprints on the thermal head heating element can cause the thermal head to fail. Do not touch it directly by hand.**
⬧ **Be careful not to be injured by protrusions in the Thermal Digiplater.**

Upper cover

[Useful tip]

A locking lever is provided to the upper cover to prevent the cover from closing down. When opening the upper cover, be sure to open it to the position where the locking lever locks effectively.

3. Wipe the plate sensors with a recommended cleaning cloth soaked in the adequate amount of recommended cleaning fluid.

[Useful tip]

Insert the cotton swab into each of the eight holes, as indicated in the circles in the above photo, and wipe off contamination by moving the cotton swab in a circular pattern in the hole.

4. Release the locking lever to slowly close the upper cover.

⚠ CAUTION
Be careful not to catch fingers when closing the upper cover.

Upper cover

Locking lever

5.5 When power is off during printing
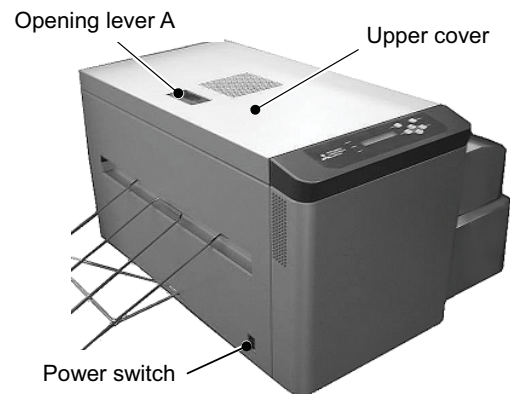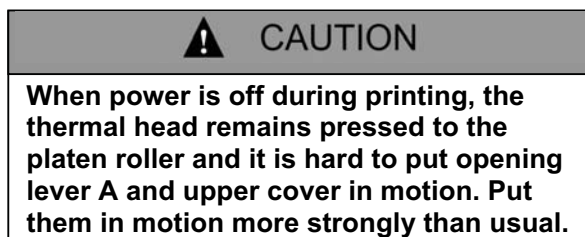
⬧ Power outage
⬧ Power cable accidentally disconnected

If power is off during printing, the thermal head remains pressed to the platen roller. Leaving this condition uncorrected for an extended period may cause deformation of the rubber on the platen roller. To prevent the rubber from being deformed, perform the following steps as instructed below.
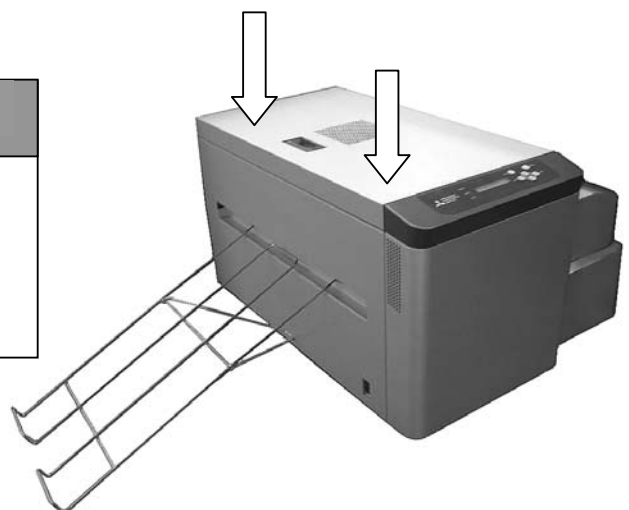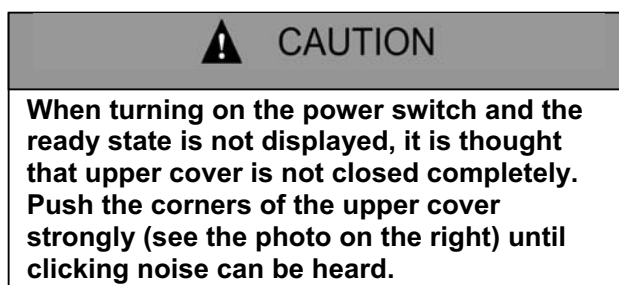
1. Turn off the power switch and restore the power supply.

> **[Useful tip]**
>
> In case of a power outage, wait until the power supply service is restored. If the power cable is disconnected, re-connect the power cable to the power supply terminal or the electric outlet.

Opening lever A   Upper cover

⚠ **CAUTION**

When power is off during printing, the thermal head remains pressed to the platen roller and it is hard to put opening lever A and upper cover in motion. Put them in motion more strongly than usual.

Power switch

2. Turn on the power switch.

⚠ **CAUTION**

When turning on the power switch and the ready state is not displayed, it is thought that upper cover is not closed completely. Push the corners of the upper cover strongly (see the photo on the right) until clicking noise can be heard.

3. If "Plate Jam" is displayed on the LCD on the operation panel, follow the instructions as described in **5.2 Plate jam**.

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Chapter 6 After-sales service

If you would like to inquire about the product or request a repair, please consult the distributor from whom you bought the product.
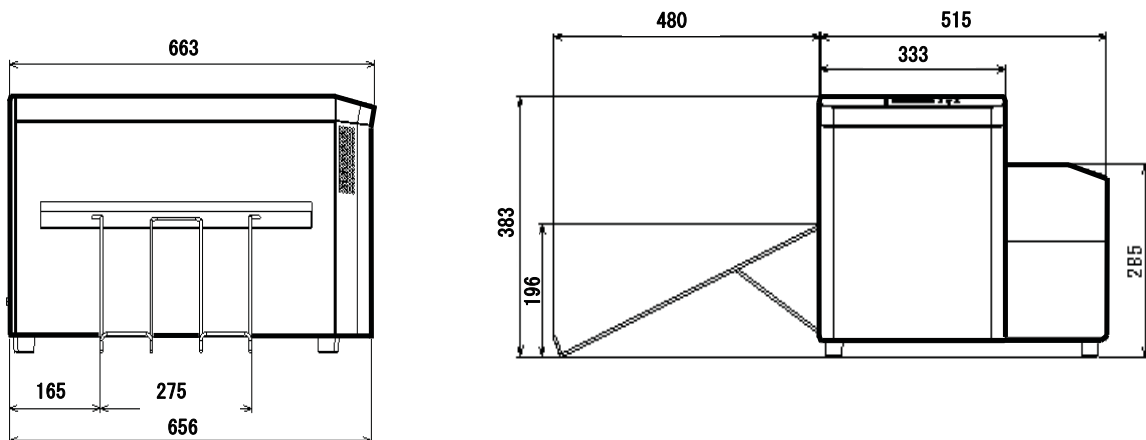
(MEMO)

Chapter 7 Specification

7.1 Basic specification

Item	Specification
Print system	Direct thermal system
Resolution	1203.8 DPI 　Dot pitch for crosswise direction：0.0211mm 　Dot pitch for lengthwise direction : 0.0211mm
Plate size	(Width x Length) 　310mm×150mm ~ 459mm×530mm
Maximum recording width	360mm
Print speed	Less than 60 seconds 　* Plate size：340mm x 505mm 　* In case of 20℃ with ambient temperature
Plate tray capacity	5 plates
Buffer memory capacity	64Mbyte (for 1 image)
Interface	USB2.0 (High speed)
Power supply	AC90～264V　automatic change
Power consumption	Maximum power consumption less than 675W
	Standby power consumption less than 35W
Use environment	Temperature　20~30℃,　Humidity　50~70% 　(No condensation)
Dimension	Height 385mm×Width 515mm×Depth 663mm 　(Body)
Weight	Approx 55kg (Body)

* Specification for this machine is subject to change without notice continual improvements.

7.2 Outline figure

(MEMO)

Thermal
Digiplater *TDP-459*

<08113HSG>