Startup Guide

Setup and Basic Usage of the Printer

Direct Dye Sublimation Printer

Model **CX-120**

Read Me First

- Notes for Safe Operation
- Before Using

See pages 5 to 8

Setup

- Setting Up the Printer

See pages 10 to 17

Installation of Software

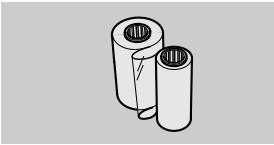
- Installation of USB driver
- Installation of status monitor

See pages 19 to 21

How to Read the Electronic Instruction Manual

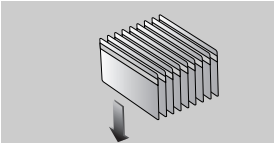
See page 23

Changing of Ink



See pages 11 to 13

Setting / Replacement of Card



See pages 14 to 16

Maintenance

See pages 24 to 27

Troubleshooting

See pages 28 to 35

- Thank for purchasing this product.
- **Please read this manual carefully** before use to ensure correct operation.
  It is particularly important to read the Notes for safe operation. After reading, retain this manual carefully for future reference.
- The product number is important for quality control. Upon purchase, check the back of the unit to make sure that the product number is correctly displayed.

Notes about this manual

(1) This manual may not be reprinted in any way without permission.
(2) The contents of this manual, as well as the specifications and design of this product, may change without notice.
(3) The illustrations used in this manual may differ slightly from the actual product.

KAT- T

Declaration of Conformity

Model Number: CX-120yyyyy(y=A-Z,0-9 or blank)

Product name: Card Printer

We herewith declare that the above mentioned product complies with the following council directives and harmonized standards.

Council Directives:

1999/5/EC	relating to radio equipment and telecommunications terminal equipment.
89/336/EEC	relating to electromagnetic compatibility.
73/23/EEC	relating to electrical equipment designed for use within certain voltage limits.

Harmonized Standards:

EN55022:1998+A1:2000 +A2:2003 Class B
EN55024:1998+A1:2001+A2:2003
EN61000-3-2:2000
EN61000-3-3:1995+A1:2001
EN60950-1:2001
EN50364:2001
EN300330-2:V1.1.1
EN301 489-03:V1.4.1

Manufacture:

Victor Data Systems Co., Ltd.
2969-2, Ishikawa-cho, Hachioji-shi, Tokyo, 192-8620, Japan

Importer and distributer:

Year to begin affixing CE Marking: 2005

T. Hisanaga

Hachioji-shi, March. , 2005
Place, Date

Tateki Hisanaga General Manager-Quality Control
Victor Data Systems Co., Ltd.

For USA only

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For Canada only

Operation is subject to the following two conditions:
(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

For EU only

Machine Noise
Sound power level: less than 70 dB (A) according to DIN45635 part 19 (EN27779).
The measurements are to be made according to DIN 45635 part 2019 or EN27779, respectively.

Contents

Notes for safe operation 5

Before use 7

Printer Characteristics 7
Checking Accessories 7
Content of Attached CD-ROM 7
Protection of Color Printing Unit 7
Handling the Ink Ribbon and Card 7
Cautions for Handling 7
Storage Method 7
Storage and Handling of Card After Printing..... 8
Purchase of Ink Ribbon and Card 8
After Maintenance 8

Part Names 9

(Front / Right) 9
(Rear / Left) 9
(When Printer Door is Open) 9

Setup 10

Location for Installation 10
Setting Up the Printer 10
Connecting the Laminating Unit 10
Connecting the Power Cord 11
Connecting Multiple Printers 11
Mounting the Card Stacker 12
Ejection of Card 12
Setting the Ink Ribbon 12
Setting the Card 14
When Using a Magnetic Card 15
When Using a Contact-type IC Card..... 15
Replacement of Card 16
Adjusting Card Thickness 16
Preparing and Connecting the USB Cable 17
Installation of Software 18
Connecting to the Host Computer..... 18
About software 18
Operation Environment 18
Installation of USB Driver - WindowsXP 19
Installation of USB Driver - Windows2000 20
Installation of Status Monitor 21

Checking Connection with the Host Computer 22

How to read the electronic manual 23
Content of the Instruction Manual (electronic manual) 23

Maintenance 24

Cleaning the Cleaning Roller 24
Cleaning the Thermal Head..... 25
Cleaning the Fan Filter 25
Cleaning the Card Transport Roller 26
Cleaning the Magnetic Head 27

Troubleshooting (Simplified Version) 28

Cause and Action for Error Code 28
Removing Jammed Card 29
Feed Jam 29
When there are frequent feed jams 29
Jam inside the printer..... 29
A. When card is at the right (near inverter) 30
B. When card is at the left (near printing unit) .. 31
C. When card can barely be seen from the encoding unit..... 31
Jam Inside Laminator..... 31
Procedures for Changing Thermal Head 32

Consumable/Optional Items 36

Notes for safe operation (to the next page)

Before you use

Read these notes on safety thoroughly before operating your printer in order to use the unit properly. Once you start using the unit, this manual should be put aside the unit, or at a convenient place where you can look up the manual any time as you need.

⚠ WARNING

● If you ignore the warning with this mark, and handle the unit in a wrong way, death or serious injuries may occur.

⚠ CAUTION

● If you ignore the caution with this mark, and handle the unit in a wrong way, injuries or damages to properties may occur.

⚠ WARNING

■ If the abnormal phenomena as listed below are seen, immediately stop operating the unit. Continuing operation may cause a fire or electric shock.

- Smoke or odd smell comes out from the machine.
- Water or metal went into the machine.
- The unit fell to the floor, or the cabinet was broken.
- The power cable is damaged (exposed lead, broken cable, etc.)

If you see these phenomena, turn off the power, pull out the power plug, and contact your dealer as soon as possible. Do not try to repair it by yourself. It is dangerous.

■ Do not remove the screws, or disassemble or alter the machine.

- High-voltage components are contained in the unit. Touching these areas may result in an electric shock.
- Ask your dealer if you want your printer inspected or repaired.
- Do not remove the external covers of the machine. You may get an electric shock.

■ Do not work on the power cable, or give excessive force on it. Do not put heavy objects such as furniture on the cable.

- The cable may be damaged, causing a fire or electric shock.
- When you find a defect on the power cable, such as exposed lead, stop using the unit, and consult your dealer.

■ Do not use the machine with the power plug inserted incompletely.

- The machine generates heat due to incomplete contact, causing a fire or electric shock.
- Do not put many cords on a single plug socket. The power cords also heats up.

■ Do not use the machine with dusts piled on the power plug. Do not put a metallic material adjacent to the power plug.

- Dusts and metal are conductive, causing a fire or electric shock.
- Pull out the power plug from the outlet every six months, and clean the dusts piled on the legs and body of the plug.

■ Do not use a line voltage other than instructed.

- Using a line voltage or power supply which is not specified may cause a fire or electric shock.

■ Do not put foreign materials from the openings of the machine (e.g., vents, card slots, cassette inlet, etc.)

- Metals, flammable things, and other foreign materials may cause a fire or electric shock if entering into the machine.
- If these things went into the machine, immediately turn off the power, pull out the power plug, and ask your dealer to repair. Do not try to repair it by yourself. It is dangerous.

■ Do not put a container with liquid in it, or small metal ornaments and the like on the machine.

- The liquid or metal entering into the machine acts as a conductor, causing a fire or electric shock.
- If liquid or metal went into the machine, immediately turn off the power, pull out the power plug, and ask your dealer to repair. Do not try to repair it by yourself. It is dangerous.

■ Do not place the machine on a rickety table or slanting places.

- The machine may fall out of the table or fall over, which may damage the machine or injure you.
- If the machine is damaged by falling or turnover, immediately turn off the power, pull out the power plug, and ask your dealer to repair. Do not try to repair it by yourself. It is dangerous.

■ Do not wet the machine with water.

- Using the machine at a place where water splashes on the machine, or wetting the machine with water (applying, throwing, or spilling water over the machine) may cause a fire or electric shock.
- If water entered into the machine, immediately turn off the power, pull out the power plug, and ask your dealer to repair. Do not try to repair it by yourself. It is dangerous.

■ Do not touch the machine with wet hands.

- Touching the machine with wet hands may cause an electric shock.

■ Do not touch the power plug during electrical storms.

- Lightning may cause an electric shock.

■ Ground the machine with the attached electric cord when connecting it to the utility outlet.
- Using a cord other than the one supplied for grounding may cause an electric shock when the machine fails.

■ Do not put your head or yourself into the packaging bag.
- Do not play with the packaging bag. You may suffocate yourself.
- Give close attention to small children who may want to play with the packaging bag.

■ Do not use the machine while it has a fault.
- Do not use the machine while it has a fault, as this may cause a fire or electric shock.
- Immediately turn off the power, pull out the power plug, and ask your dealer to repair. Do not try to repair it by yourself. It is dangerous.

⚠ CAUTION

■ Pull out the power plug before cleaning the machine.
- This is for preventing electric shocks.

■ Pull out the power plug when you won't use the machine for a prolonged period of time to assure safety.
- Remove the power plug from the outlet for safety when you won't use the machine for a long time.

■ Do not move the machine with the power cable and other electric cables connected.
- The cables may be damaged while being moved, which may cause a fire or electric shock.
- You may stumble over the cable and get injured.

■ Do not move the machine with objects placed on it.
- They may fall on you and hurt you.

■ Do not put heavy objects on the machine.
- They may fall on you and hurt you.

■ Do not block the vents.
- Heat generated inside the machine cannot escape, which may cause a fire.

■ Inspection
- Ask you dealer or a qualified person to inspect the machine, typically once every two to three years. Operating the machine with dusts piling on the components for a prolonged period of time may cause a fire or a malfunction of the machine. It will be particularly effective to inspect the machine before wet rainy season. Consult your dealer on the costs of inspection.

■ Do not put the machine at a place where it will be wet with steam (e.g., from a humidifier), or at a excessively humid or dusty place.
- The oil, water and dusts act as conductors, which may cause a fire or electric shock.

■ Do not put the machine at a place where it becomes excessively hot.
- The surface and internal components may deteriorate. Also there is a danger of a fire. Special care should be taken for exposure to direct sunlight or a heater adjacent to the machine.

■ Hold the body of the power plug when pulling it out.
- Do not pull out the plug by holding the cable. The cable may be broken or damaged which may in turn cause a fire or electric shock.

■ Do not touch the power plug with a wet hand
- You may get an electric shock.

■ Do not lay the power cable near the heating equipment.
- The covering of the cable will melt due to heat from such equipment, which may cause a fire or electric shock.

■ Be careful of jamming your hand or fingers in the card cassette or printer door.
- Replace the ink ribbon or remove jammed cards with care not to jam your hand or fingers in the mechanism, which may cause an injury.

■ Do not use a power cable other than the specified cable for connection.
- If you use an unspecified power cable for connection or extension, heat may accumulate in the cable, causing a fire.

Before use

(to the next page)

Printer Characteristics

- This card printer prints high quality full-color images equivalent to photographs using dye sublimation printing on standard-size (ISO7810 compliant) PVC cards.
- Printing can be done on both sides of the card.
- Able to print maximum of 180 cards per hour. (For Standard mode and single-sided printing)
- Able to add on laminating function by connecting to an optional CL-500 unit (sole separately).

Checking Accessories

Check the accessories that come with this printer when unpacking.

- Startup Guide (this book) x 1
  *Besides this book, Instruction Manual (electronic instruction manual) is available on the attached CD-ROM.
- Attached CD-ROM ..... x 1
- Power Cord ..... x 1
  *The supplied power cord, instruction manual and attached CD-ROM vary depending on the shipment destination and product model.
- Cleaning Card (for card transport roller) · · · · x 1
- Card Stacker · x 1
- Ink Ribbon Cassette · · · · · · · · · · · · · · · · · · · x 1
- Card Cassette · x 1
- Cleaning Roller · x 1

Content of Attached CD-ROM

- Startup Guide (this book)
- Instruction Manual (Electronic)
- Printer Driver
- Status Monitor (Printer Setting Tool)

Protection of Color Printing Unit

Be sure to carry out protective layer (OP) printing or laminating in order to protect the unit of this printer that performs color (YMC ink) printing.

Handling the Ink Ribbon and Card

Cautions for Handling

Pay attention to the following when handling the ink ribbon and card.

- **Use of distorted or damaged card will result in card transport error.**
- **Touching the ink ribbon or printed surface of the card directly with your hand will result in uneven print density.**
- **Attachment of foreign objects to the printed surface may result in missing prints.**
  Change or replenish your ink ribbon and card in a clean environment.
- **Electrostatic discharge on the ink ribbon and card may result in errors. Refrain from activities that will generate static electricity, such as rubbing the cards.**
- **When replacing or replenishing old ink ribbons or cards with a new one that is stored under a low temperature, leave it for more than one hour in the ambient temperature where the printer is used. Using it directly will result in condensation, causing printing error and breakdown.**

Storage Method

The storage conditions of ink ribbon and card can greatly influence the print quality. Choose the following type of places for storage.

Storage environment

Temperature: 5 °C to 25 °C
Relative humidity: 40 % to 60 %

Storage Place

Avoid storing at the following places as it may result in print media degradation.

- **Locations with direct sunlight**
- **Locations with high temperature and humidity**
- **Locations near organic solvent and diazo copying machine**

Storage period

Use within one year

Storage and Handling of Card After Printing

Avoid storing at locations with direct sunlight, high temperature and humidity.
Contact with the following chemicals and stationery may also result in discoloration or fading of the card.

- **Organic solvents such as alcohol, film cleaner and diazo copier.**
- **Soft PVC file, document case, pass holder, eraser, etc.**
- **Hairdressing products, cosmetics, etc.**

Purchase of Ink Ribbon and Card

Consult your dealer for any queries regarding the ink ribbon and card.
Make sure to use parts as specified below.

Ink Ribbon

Use only ink ribbons specific to this printer.
Refer to the page 36 on “Optional Items” in this manual for the product names.

CAUTION **We do not bear any responsibility for problems occurred as a result of using ink ribbons other than the types specified.**

Card Specifications

JIS X 6301 (dimension)	:	Compatible item
JIS X 6302 (magnetic stripe)	:	Compatible item
JIS X 6303 (IC card)	:	Compatible item

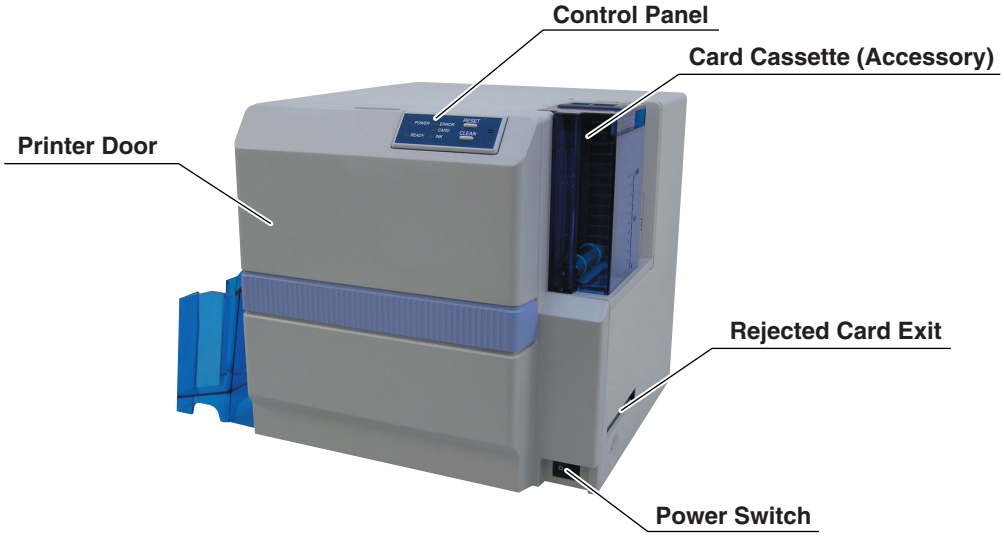
Depending on the material, some cards may not be suitable for printing.
The use of contact IC cards other than the type specified may result in breakdown of the thermal head.
Consult your dealer beforehand on the material and other specifications of card to be used.

After Maintenance

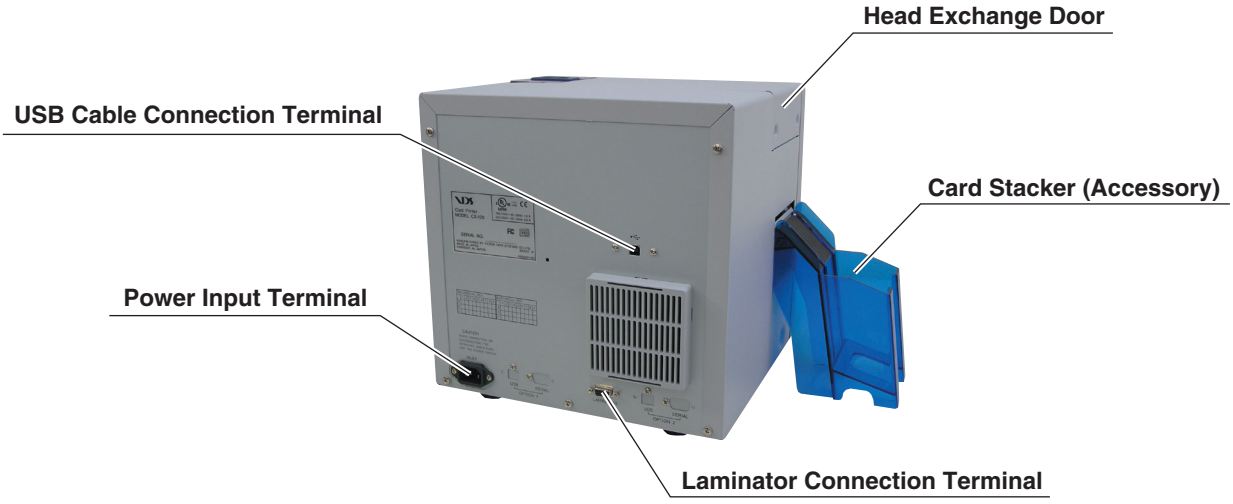
Ensure that all parts are properly put back in place after checking and cleaning.
If the parts are not put back properly, problems such as unable to turn on power or malfunction may occur.

Part Names

(Front / Right)



(Rear / Left)



(When Printer Door is Open)

Setup

Location for Installation

TThe performance of card printers is greatly influenced by the environment of the installation location.
Do not install at the following locations.

- **Dusty Location**
  The cleanliness level of location where the printer is used should be compliant with ISO14611-1 Class 8. Different from the common type of paper printers, dusty locations will result in uneven print density and breakdown of the dusty thermal head. Switch off the printer's power when no card is being printed. Fine dust will be collected inside the printer after leaving the power on for a long time, resulting in uneven or dirty print.
- **Locations with strong vibrations and shock**
- **Locations exposed to direct sunlight**
- **Locations where there is possibility of foreign objects such as metal pieces entering the printer**
- **Locations against the wall with poor ventilation**
- **Unstable and inclined locations**
- **Locations which easily give rise to static electricity such as carpeted rooms**
- **Locations which easily give rise to condensation inside the printer such as places near the cooler, humidifier or stove**

Temperature and humidity of room where printer is installed should be as follows.

Temperature : 15 °C to 30°C
Humidity : 35 % to 70 %

CAUTION **Using the printer in an environment beyond the above range may cause printing problems due to decrease in print density at low temperature and distorted card and creased ribbon at high temperature.**

There are ventilation holes for cooling at the back of the printer. Place back more than 10 cm away from the surrounding wall. Do not place any object above the printer.

Setting Up the Printer

Connecting the Laminating Unit

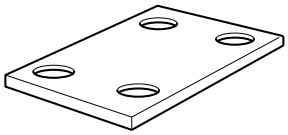
An optional Laminating Unit is available for this printer. A special connection cable is required to connect this unit. Consult your dealer for more details.

WARNING

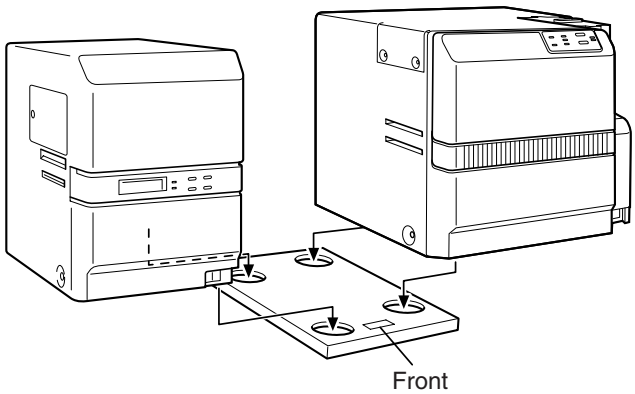
Electric shock

- Install and uninstall the laminating unit only after switching off the power of the printer as well as other devices that are connected to it and pulling out the plug from the power outlet. Failure to do so may result in danger of electric shock!
- Use the dedicated unit and cable when installing the laminating unit. Failure to do so may result in breakdown or electric shock and fire.

1. **Set up the unit coupler plate which comes with the laminating unit (optional).**



2. **Insert the printer and laminating unit into the hole.**

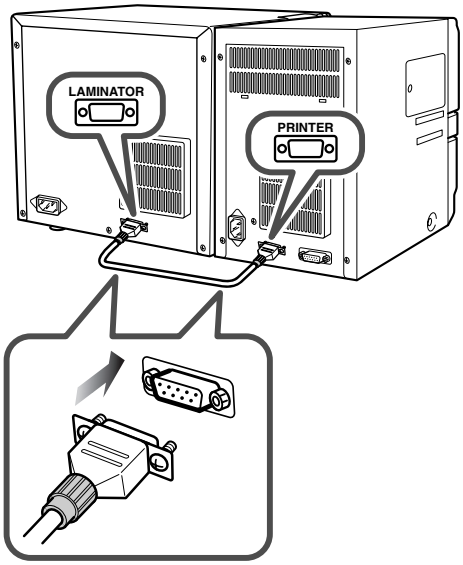


CAUTION **If the mounting is uneven, the card will not be transported smoothly. Be sure that the units fit in properly. Always install the unit at a horizontal and hard surface.**

(to the next page)

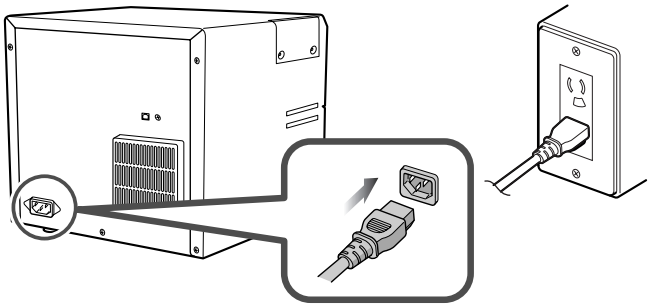
3. Connecting a cable (sold separately) between units

Insert the cable into the "LAMINATOR" external connection terminal at the printer and the "PRINTER" external connection terminal at the laminating unit, followed by fastening the cable with the screws provided.



Connecting the Power Cord

Connect the power cord supplied to the power input terminal of the printer.



Connect the power cord of the laminating unit in the same way when connecting the laminating unit.

CAUTION **Always use a dedicated power supply with earth terminal for the power outlet.**

Use AVR (stabilized power supply) when there is possibility of voltage variation. Use of permanent power supply instead of AVR is recommended when there is possibility of momentary power interruption.

AVR : Automatic Voltage Regulator

Connecting Multiple Printers

When connecting a host computer to multiple printers, set different ID Numbers from 1 to 7 for each printer. Setting can be done at the printer's control panel. ID number is not necessary when only 1 printer is being connected.

1. Set printer to ID Setting Mode

Switch on the power while pressing the CLEAN button on the control panel. READY LED and ERROR LED will be lighted.

Press the RESET button on the control panel. The green READY LED light will start to blink. 3 red lights (ERROR, CARD and INK) will also be blinking and the current ID number will appear.

LED Status and ID Numbers

ID No.	1	2	3	4	5	6	7
ERROR	■	■	■	☼	☼	☼	☼
CARD	■	☼	☼	■	■	☼	☼
INK	☼	■	☼	■	☼	■	☼

☼ Light on ■ Light off

CAUTION **In order to connect to multiple printers, setting will be required for the printer driver in use as well as for the card issuance software. Do so by referring to the respective manuals.**

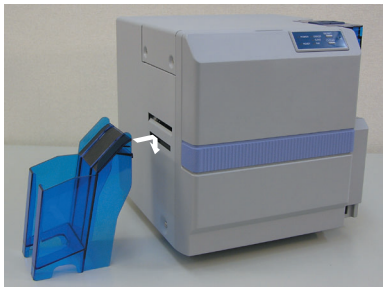
2. Set ID Number

1 new ID number will appear every time the RESET button on control panel is pressed. Press the CLEAN button to save the setting when the ID that you wish to set appears. The green READY LED will change from blinking to lit when it is saved. To change again, press the RESET button to return to the setting mode.

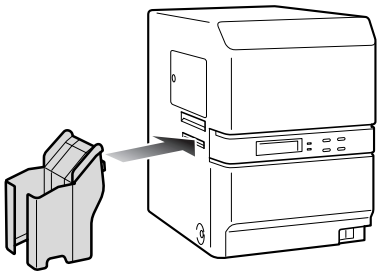
3. Switch off the power

Mounting the Card Stacker

Pull the tab of the stacker at the stacker mount.



When connecting the laminating unit, pull the tab of the unit stacker at the stacker mount of the laminating unit.



The stacker can hold about 100 cards that are 0.76mm in thickness.

Ejection of Card

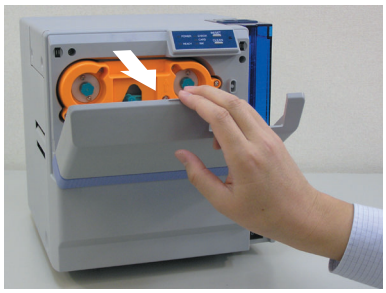
A properly printed card will be ejected from the card stacker.
Cards that remain inside the printer at the time when power is turned on or when printer is initialized, as well as cards with writing error on the magnetic stripe will be ejected through the Rejected Card Exit on the right side of the printer.

Setting the Ink Ribbon

CAUTION **Do not touch the inked surface with your hands.**

1. Place your fingers on top of the door and open towards you.

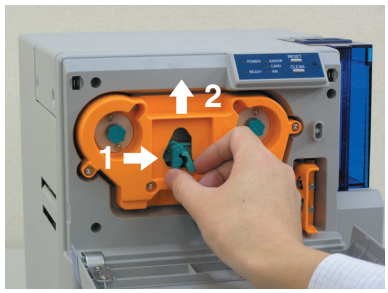
Open slowly while supporting with your hands.



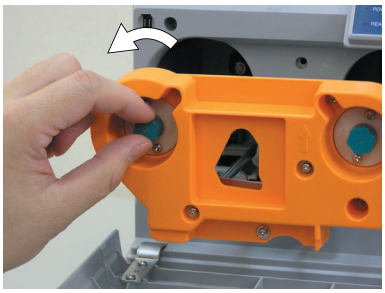
CAUTION **Do not install the ink ribbon on top of the door. Do not rest your elbow or place heavy objects on top. Doing so may damage the door.**

2. Remove the ink ribbon cassette

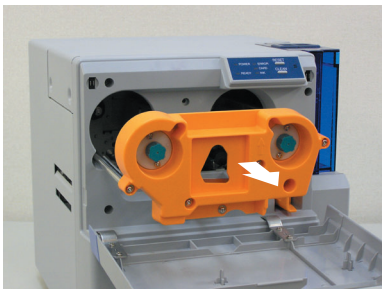
Unlock by lifting the lock lever with fingers.
When ink ribbon is installed, pull out the cassette by about 3cm and turn the knob on the cassette in the direction indicated by the arrow to tighten the ribbon sag.
Remove the cassette while supporting it with both hands.
Stand the cassette on a flat and firm surface. Remove any used ink ribbon.



Unlock



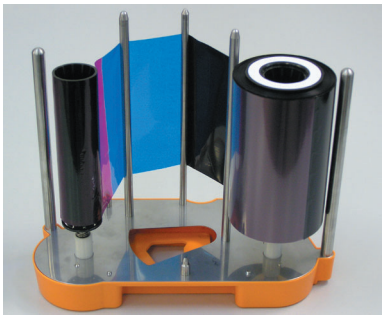
Remove ribbon sags



Remove cassette

CAUTION **When the ink ribbon is installed, be careful not to drop it into the inner section when pulling out the cassette.**

CAUTION **When removing the cassette for cleaning, always stand it as shown in the photo below. Allowing the inked surface to touch the ground will dirty the ink ribbon and cause it to malfunction.**

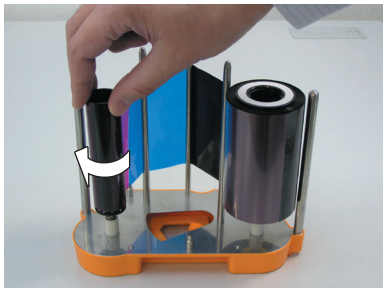


3. Insert ink ribbon into the cassette

With the inked surface facing the outside (inner side rolled into the bobbin holder), stretch along the 3 shafts and insert all the way into the bobbin holder.

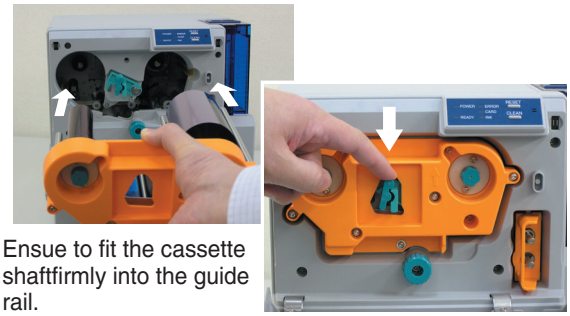
4. Remove ink ribbon sags

Turn the coiling bobbin in the direction of the arrow to remove any ink ribbon sag.



5. Insert cassette along the guide rail

While making sure that the ink ribbon does not sag, insert the cassette all the way in along the guide rail and push down the lever to lock the cassette.



Ensue to fit the cassette shaftfirmly into the guide rail.

CAUTION **If the ribbon sags, it will result in jammed ink ribbon and uneven color caused by wrinkles when the cassette is inserted.**

CAUTION **Inserting cassette by force when the guide shaft is not properly placed in the guide rail may damage the device.**

6. Close printer door.

Shut the printer door tightly by pressing on the top right section of the door indicated by the word “PUSH”.

CAUTION **To prevent damage, the door is made in such a way that it cannot be closed properly when the ink ribbon cassette is not locked or when the cassette is not inserted. Closing the door by force in such a case may damage the device.**

7. Checking

When ink is changed with power on, the printer will automatically initialize once the printer door is closed. If printer power is off, it will start to initialize once it is switched on.
Check that initialization is carried out properly and the READY LED is illuminated on the printer control panel.

CAUTION **When the INK LED is blinking, check if the ink ribbon in the cassette is correctly installed. INK LED will start to blink if the printer is unable to recognize the ink ribbon correctly. In such a case, printing is still possible by pressing the RESET button on the control panel for 1 second or longer to initialize the ink ribbon. However, printing may not be carried out properly as the ink data may not recognized correctly. Consult your dealer if printing cannot be done properly even after initializing the ink ribbon.**

Setting the Card

Get ready the dedicated card from your dealer.

CAUTION **Stains such as fingerprints on the printed surface will result in printing error. Use lint-free gloves when handling the card.**

1. Removing card cassette cover

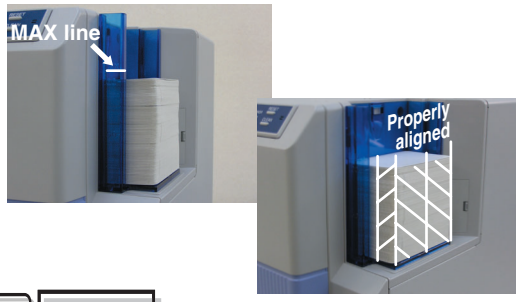
Unlock by moving the slider on the top of the card cassette to OPEN. Lift the cover.

2. Insert card

Card cassette can hold about 100 cards of 0.76mm in thickness.

CAUTION **Cover cannot be closed if too many cards are inserted. Check to ensure that they are kept below the MAX line.**

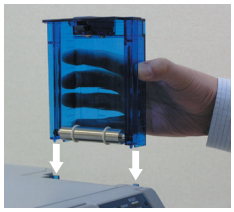
CAUTION **Cover cannot be closed properly if the cards are not properly aligned. Check to ensure that they are properly aligned.**

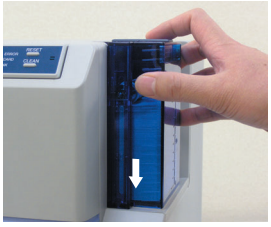


CAUTION **When using a new card from the box, the cards may stick together due to static electricity. In such a case, separate the cards piece by piece before setting them. Alternatively, operate while holding the edge of the card.**

3. Covering the card cassette cover

Mount from the top, following the cassette guide.





CAUTION **It will be difficult to close the cover if the cards are not properly aligned. Closing the cover by force in such a case may damage the device.**

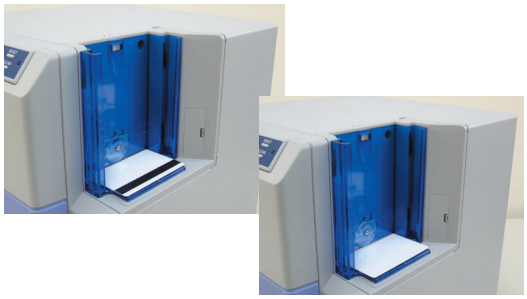
CAUTION **Feeding without closing the cover will result in jammed cards. Always feed with the cover closed.**

Memo

When using cards with printed designs, refer to the instruction manual of the host computer's operational software on procedures to insert the card.

When Using a Magnetic Card

When using a magnetic stripe card, set to any of the following according to the layout.

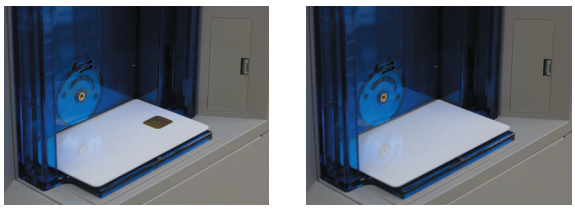


Set with magnetic stripe on the top right or bottom left.

CAUTION **We do not guarantee printing onto magnetic stripes.**
Do not print on the magnetic stripe as it will cause failure in reading and writing the magnetic data.

When Using a Contact-type IC Card

When using a contact-type IC card, set to any of the following according to the layout.



JIS MG Optional Model

Set IC terminal to printer's inner bottom or inner top.

ISO MG or IC Only Optional Model

Set IC terminal to printer's front bottom or front top.

CAUTION **When using a card with both magnetic stripe and contact-type IC, insert card by using the IC side as the reference side.**