Replacement of Card

Replacement of card can be performed when the READY LED on the control panel, or when the CARD LED is illuminated.
Replacement of card is also possible when the power is off.
Replace card carefully to avoid interruptions during printing and printing errors caused by vibrations while opening and closing the card cassette.
Replacement of card can be performed during printing, but we advise it to be done when printing is not in progress as feeding without cover may result in jammed cards.

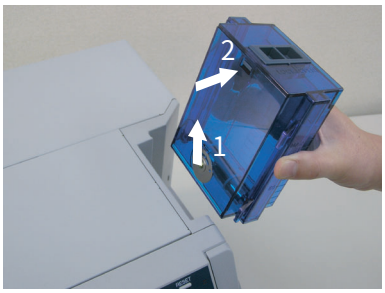
Adjusting Card Thickness

This printer can print cards with thickness between 0.25 mm to 1.00 mm. Default thickness is adjusted to 0.76mm.

1. Remove card cassette

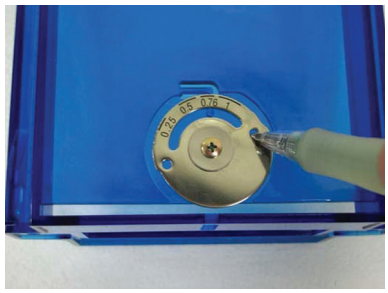
Lock the card cassette cover by moving the slider on the top of the card cassette to LOCK.

Lift the card cassette up by about 1cm and slide to the right to remove the cassette.



2. Adjust the gate

Insert the tip of a ball pen into the hole on the card cassette gate and turn the gate slowly to adjust to the thickness of your card.



During printing, when the card is not discharged from the card cassette, adjust the gate adjustment position clockwise, one scale at a time. If 2 cards are discharged, adjust the gate adjustment position anti-clockwise.

When cards of different thickness are used frequently, it is recommended that you purchase an additional card cassette based on the thickness of the card. Refer to Optional Items (see p.35) regarding purchase of card cassettes.

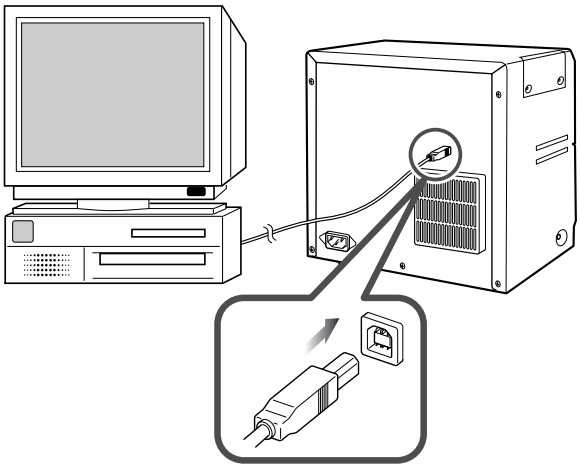
(to the next page)

Preparing and Connecting the USB Cable

USB cable is not supplied with this printer. Be sure to use the USB-IF certified Hi-Speed USB cable.

1. **Check to ensure that the power of both the printer and host computer are switched off.**

2. **Connect the printer and host computer with the USB cable.**



CAUTION

Insert the USB cable all the way in.

CAUTION

Consult your dealer on the cable connection if there are USB or serial cable slots on the printer's optional port.

CAUTION

- **The location of terminals varies with the host computer. Please refer to the instruction manual of the host computer.**
- **When there are multiple USB cable slots on the host computer, either one can be used.**
- **The USB cable terminal has a front and a rear side. Insert cable according to the shape of the slot.**
- **Do not connect to the USB terminal slot on the host computer's monitor or keyboard. It may not be recognized correctly.**
- **When using a USB hub, connect to the hub that is directly linked to the host computer.**

Installation of Software

Connecting to the Host Computer

Do not switch off the power of the host computer or use the suspend function on the host computer during printing.
If the power of the host computer is switched off during printing, or if the suspend function of the host computer is activated, cards printed halfway may remain in the printer. When this occurs, open the printer door and close it again. Cards remained in the printer will be ejected from the Rejected card exit.

About software

The following softwares are required in order to use CX-120. These are kept in the attached CD-ROM.

① **USB Driver**
USB driver for Windows. First install into the host computer that is connected to CX-120. Method of installation is different between Windows 2000 and Windows XP. Refer to the respective chapters when installing.

② **CX-120 Status Monitor**
Software that carries out various settings and indicates the status of CX-120. Install into the host computer that connects to CX-120.

③ **CX-120 Printer Driver**
Install the printer driver from the CD-ROM when using standard printer drivers. Refer to the electronic file in the CD-ROM “XXXXX”for method to install. Refer to the respective guide books on the use of other printer drivers.

Operation Environment

Software in the attached CD-ROM operates in the following environment.

- Windows XP Professional and Home Edition
- Windows 2000 Professional

(to the next page)

Installation of USB Driver - WindowsXP

1. Start Windows and install attached CD-ROM into host computer.

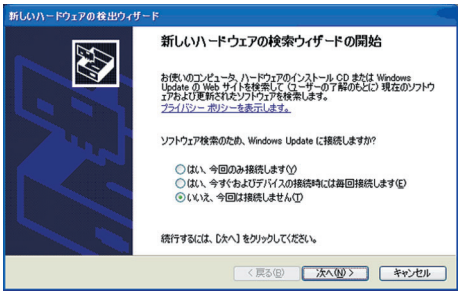
2. Check that the connection between host computer and printer is on.

3. Switch on the printer.

Search wizard for new hardware begins.

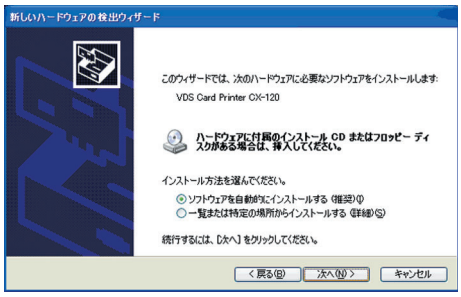
4. When the following screen appears,

① Select “No, I do not wish to connect this time” and
② click on the “next” button

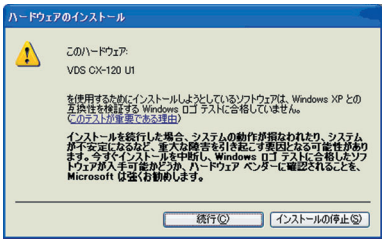


5. When the following screen appears,

① Select “Automatic installation of Software (recommended)” and
② click on the “next” button

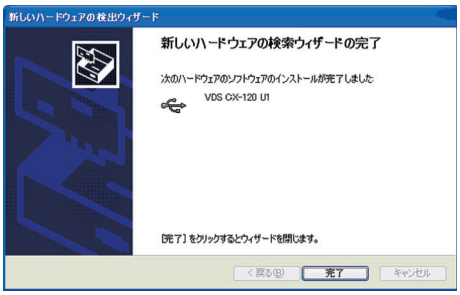


6. When the following screen appears, click on the “continue” button.



Installation of USB driver is now complete.

7. Open the card tray.



Installation of USB driver begins.

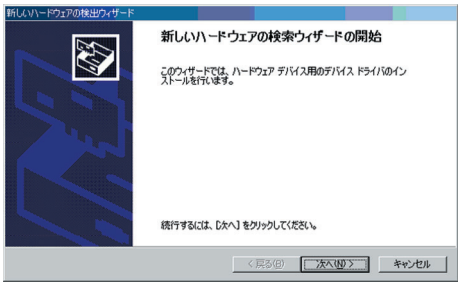
Installation of USB Driver - Windows2000

1. Start Windows and install attached CD-ROM into host computer.

2. Check that the connection between host computer and card printer is on.

3. Switch on the printer. Search wizard for new hardware begins.

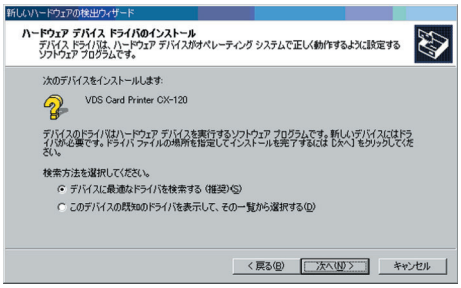
4. When the following screen appears, click on the "next" button.



5. When the following screen appears,

① Select "Search for the most suitable driver for the device (recommended)" and

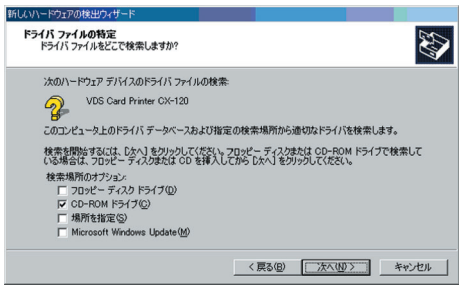
② click on the "next" button



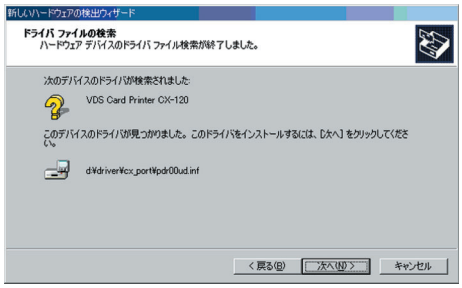
6. When the following screen appears,

① Select "CD-ROM Drive" and

② click on the "next" button

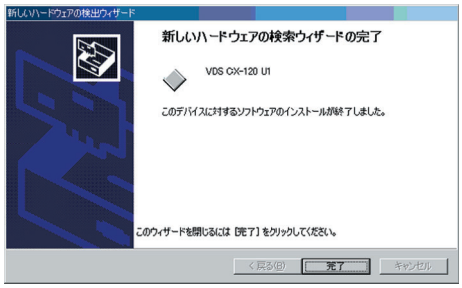


7. When the following screen appears, click on the "next" button



Installation of USB driver begins.

8. When the following screen appears, click on the "Finish" button.



Installation of USB driver is now complete.

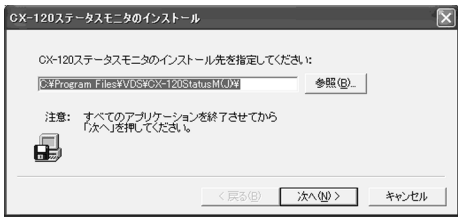
(to the next page)

Installation of Status Monitor

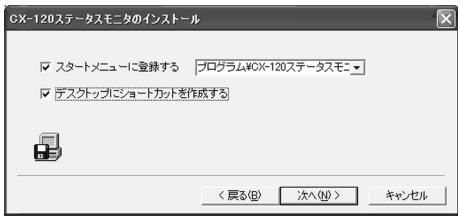
1. **Start Windows and place the "CX-120 Card Printer CD-ROM" into the computer.**

2. **Double-click "XXXXXXX" on the CD-ROM to launch the status monitor installer.**

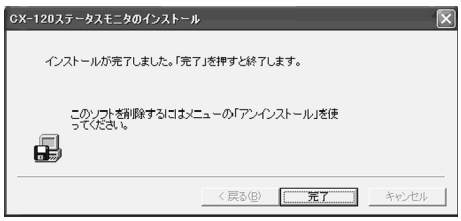
3. **An Installer screen will be displayed. Confirm the directory for installation and click on the "Next" button.**



4. **Confirm setting and click on the "Next" button. Installation begins.**

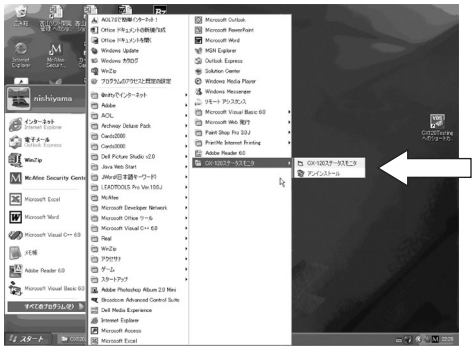


5. **5. A confirmation screen will be displayed upon completion. Click on the "Finish" button.**



6. **Click the "OK" button. Installation is now complete.**

Once installation is completed, the Status Monitor can be launched from the Start menu.



Checking Connection with the Host Computer

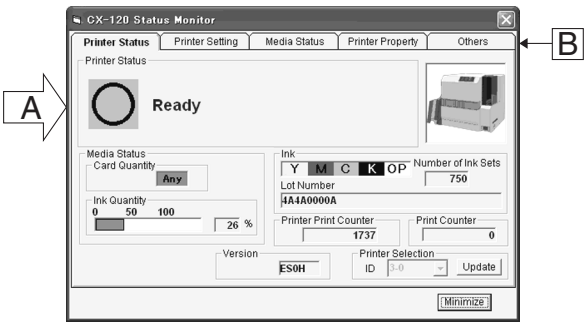
Check the printer and software operation after installing the USB driver and status monitor.

1. Check to ensure that the printer is connected to the host computer.

2. Switch on the power for the printer and host computer.

3. Start up the status monitor once the host computer is booted up.

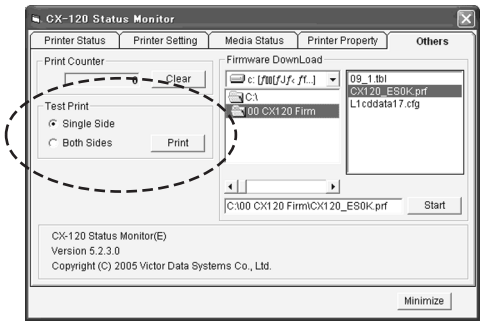
4. Check that the printer is ready from the printer status display (Diagram A) on the status monitor.



Status Display Screen

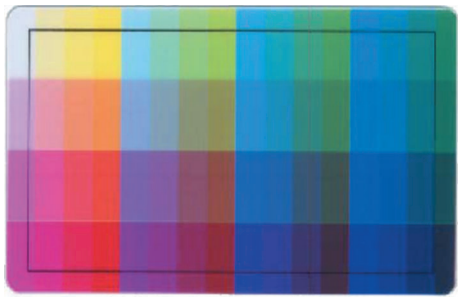
① Check the connection between the printer and host computer when the "Printer is not connected" message is displayed.
② If "Initializing mechanism" is displayed, wait till the "Ready" message appears.
③ Display of other messages indicates an abnormal status. Refer to "Cause and Action for Error Code" on page 28 of this manual.

5. Press B to display other screens and carry out test printing.



Other Screens

① Select "2-sided" for test printing and click on the enter button.
② Print a card with the picture below on both sides.



Operation check for the printer and installed software is now complete. For actual printing of cards, refer to the manual of the card issuance software or printer driver in use.

How to read the electronic manual

An instruction manual (electronic manual) is included in the attached CD-ROM. To view the manual, you need to install Adobe Reader (Ver6.0 and above) on the host computer. Adobe Reader can be downloaded free-of-charge from Adobe's website.
You can either open the instruction manual directly from the CD-ROM or copy it to the hard disc of the host computer.

Content of the Instruction Manual (electronic manual)

- Printer operation and display
  Names of each part on the control panel
  - Button operation
  - LED display
  - Printer initialization
  - Running of test print

- Differences between printing modes

- How to use the status monitor (printer setting tool)

- Updating and uninstalling software

- Troubleshooting (detailed version)
  Layout of internal mechanism
  Error code list
  When ink ribbon is torn

  Problems related to printing
  - Misalignment of printing position
  - Problems related to color printing
    - Dirt
    - Uneven color, alignment
    - Color shift (color bleeding)
    - Decolorization

  - Problems related to text printing
    - Blurred / crushed

  - Problems related to protective layer (OP)

  Actions to take when startup fails

- Version upgrade

- Specifications
  - Main specifications
  - Dimensional outline drawing

Maintenance

Ensure that maintenance is carried out when power switch of the printer is off.
(Clean the card transport roller and magnetic head when power is ON.)
To keep this unit in its best condition at all times, be sure to check each part before use and clean it whenever there is any dirt or dust.
In particular, dirt and dust on the thermal head, roller parts and cleaning roller will result in uneven print density or color shift.

Cleaning the Cleaning Roller

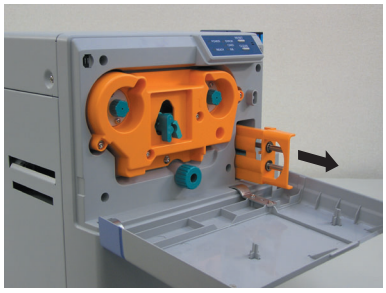
The cleaning roller is used to remove dust and dirt adhered to the card. It is recommended that you clean it after every use if you use it daily. In addition, it may be difficult to clean in some cases due to the large amount of dust and dirt depending on cards. In this case, clean them after every 100 ~ 200 pieces.
Do not clean when printer is running.

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

Open slowly while supporting with your hands

2. Remove the cleaning unit.

Pull it open as shown in picture below.



3. Wash the roller of cleaning unit with water.

Remove dirt on the roller surface with your fingers while pouring water on the roller. Allow it to dry naturally after washing.

CAUTION **Moisture remaining in the gap between rollers or behind a roller may result in printing errors. Do not set up the cleaning unit after washing until it is fully dry.**

4. Set the cleaning unit to the printer.

With the roller on the right side, push it all the way in.

5. Close the printer door.

CAUTION **The decline in cleaning unit's removal capability may result in defects in the printed card. In such a case, replace the cleaning unit with a new one.**
(Estimated interval for exchange is about 1 year)

(to the next page)

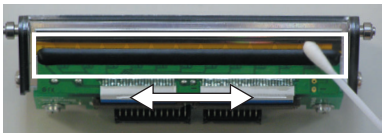
Cleaning the Thermal Head

Defects will occur such as lines appearing on the printed card if the thermal head is dirty. We recommend cleaning to be carried out after every 10,000 screen pages. The thermal head is a consumable item and has a limited life span.

1. Open printer door and remove the ink ribbon cassette. Refer to page 12 of this manual.

2. Dip the cotton swab (sold separately) with alcohol (sold separately) and wipe the thermal head.

Wipe the part indicated as ▭ carefully in a horizontal direction.



3. Insert ink ribbon cassette and close the printer door. Refer to pages 13 to 14 of this manual.

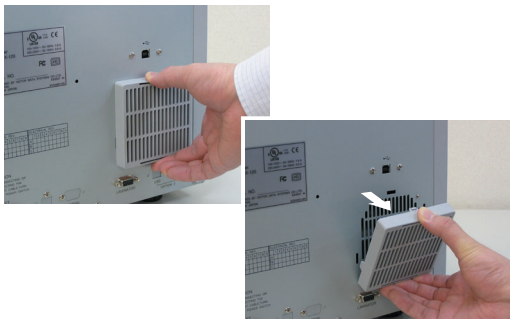
WARNING

- **The thermal head may be damaged upon contact with human bodies that carry static electricity. Be sure to touch the printer's frame (metal portion) before cleaning.**
- **Soak with absolute ethanol when cleaning. Be careful not to damage the thermal head by knocking against hard objects such as metal when cleaning.**

Cleaning the Fan Filter

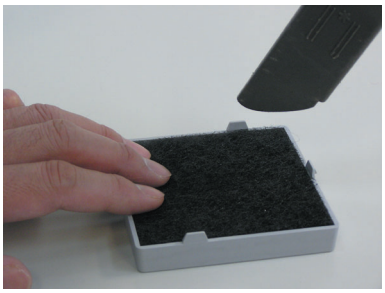
1. Remove the filter cover

Hold the upper and lower ends of the filter cover and pull one of these ends forward to remove the filter cover.



2. Clean the filter

Remove dirt attached to the filter with a vacuum cleaner. While cleaning, press down the filter to prevent it from being sucked into the vacuum cleaner.



Cleaning the Card Transport Roller

In most cases, card jams are caused by dirty rollers. It is recommended that you clean it after every 1,000 pieces.

1. 1. Open printer door and remove the ink ribbon cassette. Refer to page 12 of this manual.

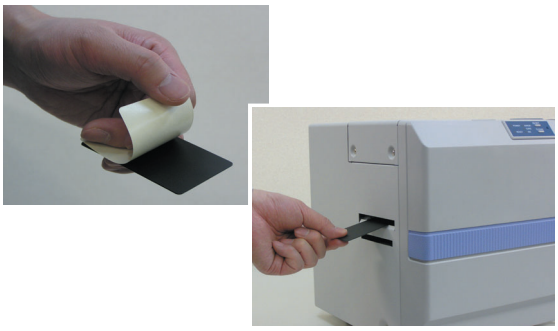
2. Close printer door and switch on power of the printer.

The unit will initialize and the INK LED will start blinking.

3. Start cleaning

Press the CLEAN button on the control panel for more than 1 second.

Roller of the card exit will rotate for about 20 seconds before cards can be drawn in.
Peel off the separator on the cleaning card supplied and insert card into the card exit.
Roller will draw the card in and cleaning will be performed automatically.



Roller at the card exit will stop if the cleaning card is not inserted within about 20 seconds.
In this case, press the CLEAN button again for over 1 second to start cleaning and roller will rotate for about 20 seconds before cards can be drawn in.

CAUTION **The cleaning card cannot be inserted through the Rejected Card exit on the right.**

4. Switch off the power after cleaning card is being ejected.

Wait for 10 seconds if you wish to switch on the power again.

CAUTION **Each cleaning card can only be used once. Using a dirty card over and over again will dirty the roller and result in breakdown.**
Consult your dealer for any queries regarding the cleaning card.

Memo **If the laminator unit is connected, cleaning can be done together by inserting the cleaning card into the card exit of the laminator unit.**

Cleaning the Magnetic Head

IDirty magnetic heads will result in writing / reading error. It is recommended that cleaning be performed after every 1,000 cards.
This is not required if you do not use magnetic stripe cards.

1. Set aside an ink ribbon cassette. Refer to pages 12 and 13 of this manual.

2. Close printer door and switch on the power.

Proceed to the next procedure when the READY LED lights up.

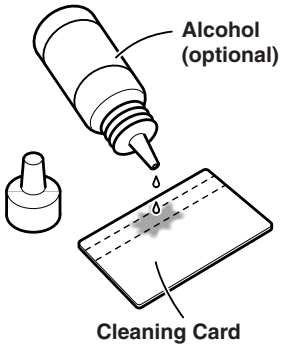
Light on

3. Removing card cassette

Refer to Page 16 of this manual. When CARD LED is lit, proceed to the next step.

4. Apply alcohol on the magnetic head cleaning card

Apply 3~4 drops of alcohol to where the magnetic stripe is located.



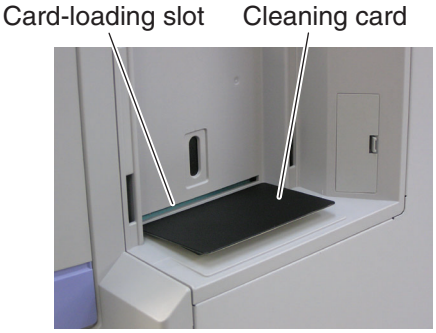
5. Start cleaning

Press the CLEAN button on the control panel for 1 second or longer.
The paper feed roller will rotate and the cleaning card is ready to be fed.

CAUTION **Cleaning cannot begin if the magnetic head cleaning card is first placed at the card-loading slot.**

6. Set the cleaning card into card-loading slot as shown in the picture below.

Be careful not to set in the wrong direction.
Cleaning card will be fed and cleaning will start automatically.
Push gently with your fingers if the card is not drawn in.
The card feed roller will stop moving if the cleaning card is not inserted within about 10 seconds.
In this case, press the CLEAN button again for 1 second or longer to start cleaning. The roller will rotate for about 10 seconds before the card can be drawn in.



7. Switch off the power after cleaning card is ejected from the Rejected Card exit.

Wait for about 10 seconds if you wish to switch on the power again.

CAUTION **When cleaning the magnetic head, do not use the black adhesive card used for cleaning the roller. The adhesive card may stick to the head and cause the printer to malfunction.**

CAUTION **Change the magnetic head cleaning card when it is dirty. Using dirty cards may dirty the head and cause malfunctions.**
Consult your dealer for any queries regarding the alcohol and cleaning card.

Troubleshooting (Simplified Version)

Procedures for dealing with problems related to print quality and various problems not mentioned in this manual are described in the instruction manual recorded in the CD-ROM (electronic manual). Please read through the manual before making inquiries.

CAUTION **When removing jammed cards, do not insert any metallic items such as tweezers into the into the printer body while the power is on. Doing so may cause it to breakdown.**

CAUTION **There is a protruding part inside the printer body. Wear items such as hand gloves before inserting your hand during maintenance and be careful so as not to injure yourself.**

Cause and Action for Error Code

Below errors are the representative error messages and actions in the printer or laminating unit (laminator). Refer to Troubleshooting (detailed version) of the Setup Guide (electronic manual) for error messages that are not mentioned here.

Error Code	Message on the Status	MonitorAction
01020480	Printer door is open. Close printer door.	Close printer door.
01020481	Cleaning roller not attached. Attach cleaning roller.	Attach cleaning roller.
01023A00	Out of card. Replenish card in the card cassette.	Replenish card in the card cassette.
01023A80	Problem occurred in the laminator. Printed card cannot be laminated. Remove laminator problem. Laminating will start automatically once laminator is in the Ready mode.	Refer to instruction manual of the laminator unit and remove the laminator problem.
01033600	Unable to control ink. Open printer door and check the ink installation.	Check if ink ribbon is attached correctly.
01033B81	Feed jam. Take out the card cassette and remove jammed card.	Remove jammed card by referring to Troubleshooting (Feed Jam) in this book.
01033B82 – 01033B85 01033B88	Card jam in the printer. Open printer and remove card.	Remove jammed card by referring to Troubleshooting (Jam inside printer) in this book.
01033B86	Problem occurred in the laminator. Remove laminator problem and initialize printer.	Refer to instruction manual of the laminator unit and remove the laminator problem. When the laminator switches to the Ready mode, open and close the printer door to initialize the printer.
01043681	Cannot find ink mark. Open printer door to check the installation of ink.	Check if there is any problem with the ink ribbon.
01420081	Out of ink. Open printer door and change into new ink.	Change into new ink ribbon.
01420082	Laminator is out of film. Printed cards cannot be laminated. Open the front door and replace with a new film. Laminating will start automatically when the laminator switches to the Ready mode.	Change into new laminating film.

(to the next page)

Removing Jammed Card

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

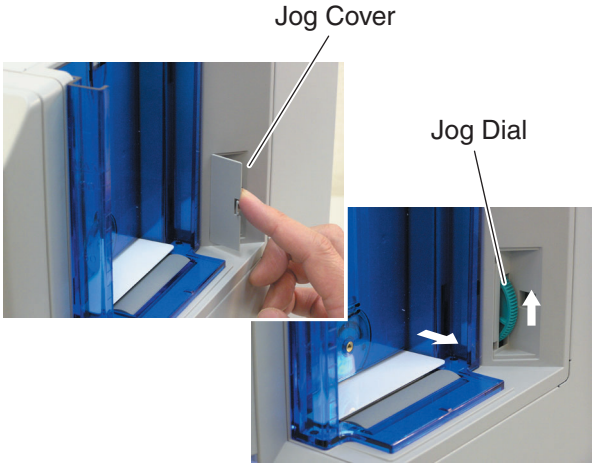
Feed Jam

1. Remove the card cassette cover.

Refer to page 14 of this manual for setting of cards.

2. Remove the jammed card.

Remove the cards in the cassette and remove the jammed card at the bottom.
If the card is jammed inside the printer and difficult to be removed, open the jog cover behind the card cassette. Turn the jog dial anti-clockwise (upward) and the card will come out. The jog cover can be removed by pulling the lock at the center right towards you while pushing it leftwards.



3. Return unused cards to the cassette and put on the card cassette cover. Refer to pages 14 and 15 of this manual for setting of cards.

4. Open and close the printer door

Printer will start to initialize and return to the Ready mode.

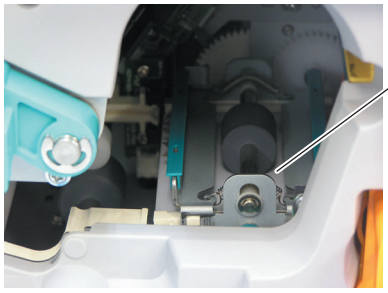
When there are frequent feed jams

There is possibility that adjustment of the card cassette does not fit the card that is being used. Refer to page 16 of this manual for adjustment of card thickness and gate adjustment of the card cassette.

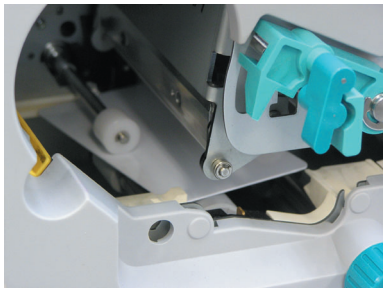
Jam inside the printer

Open the printer door and remove the ink cassette. Refer to page 12 of this manual for setting of ink ribbon.
Check the inside visually to find out where the jammed card is.
Use the corresponding method to remove the card according to the condition of the jam.

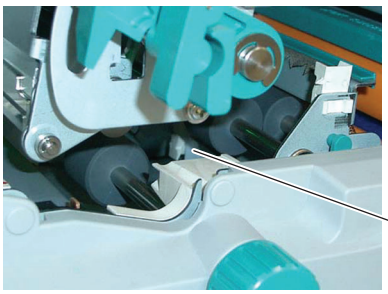
CAUTION
Do not touch inked surface with your hand.



A. When card is at the right (near inverter)



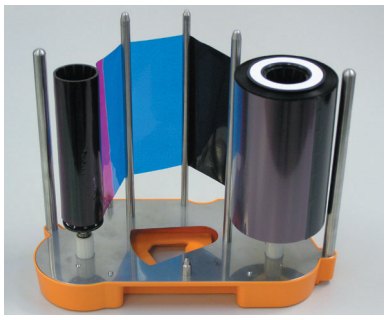
B. When card is at the left (near printing unit)



C. When card can barely be seen from the encoding unit

CAUTION **Be careful not to drop the ink ribbon into the interior of the printer when removing the ink cassette.**

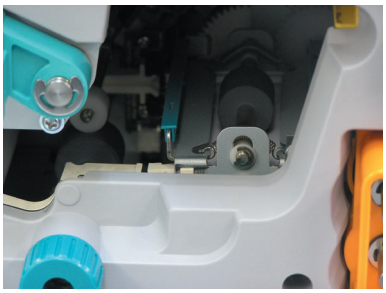
CAUTION **Stand the ink cassette after removing it. Allowing the inked surface to touch the ground will dirty the cassette and cause it to malfunction.**



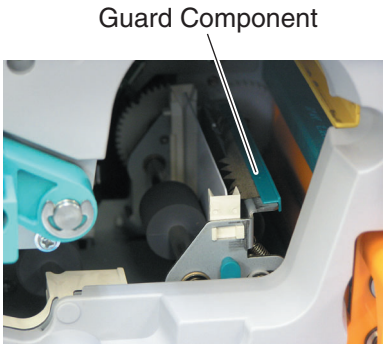
A. When card is at the right (near inverter)

1. Open the jog cover behind the card cassette, turn the JOG dial to move card to the center of the inverter. Refer to Feed Jam (page 29 of this manual) on how to open the jog cover.

Push with your hand if the card does not move.



2. With the guard component (green color) on your right, turn the inverter vertical with your hand. Turning the inverter will move the card away from its center. As such, turn the jog dial to return card to the center of the inverter while you are turning the inverter.



3. Turn the jog dial to move card to the top and remove with hand.

4. Install the ink cassette and close the printer door. Refer to pages 13 and 14 of this manual.

Printer will start to initialize and return to the Ready mode.