DatacardGroup

SR200 & SR300 Card Printer
LM200 & LM300 Laminator

User Guide

November 2010

Part Number 535760-003, Rev D

Please note and heed the WARNING and CAUTION labels that have been placed on the equipment for your safety. Please do not attempt to operate or repair this equipment without adequate training. See “Safety” on page vi for the basic safety tips to ensure safe operation and maintenance of this equipment.

Regulatory compliance

These Datacard Group products conform to regulatory requirements as specified in North America, Europe, and Asia. See ““Regulatory compliance” on page 102 for more information.

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Names and logos on sample cards are fictitious. Any similarity to actual names, trademarks, or trade names in coincidental.

Proprietary Notice

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This product includes software developed for the OpenSSL Project for use in the OpenSSL Toolkit. (http://www.openssl.org/)

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com).

This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Revision Log:
SR200 & SR300 Printer and LM200 & LM300 Laminator User Guide

Revision	Date	Affected Pages	Description of Changes
A	November 2010	All	First Release of SR200 & SR300
B	July 2010	All	First Release of LM200 & LM300
C	September 2010	Page 8	Card orientation
D	October 2010	Chapters 2, 3, 4, 5, and 6	LM300 details

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Liability statement

This Datacard® product has been built to the high standards of DataCard Corporation Corporation (doing business as Datacard Group). Please note and heed the WARNING and CAUTION labels that have been placed on the equipment for your safety. PLEASE DO NOT ATTEMPT TO OPERATE OR REPAIR THIS EQUIPMENT WITHOUT ADEQUATE TRAINING. ANY USE, OPERATION OR REPAIR IN CONTRAVENTION OF THIS DOCUMENT IS AT YOUR OWN RISK. BY ACCEPTANCE OF THIS SYSTEM YOU HEREBY ASSUME ALL LIABILITY CONSEQUENT TO YOUR USE OR MISUSE OF THIS EQUIPMENT. DATACARD CORPORATION SHALL NOT BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGE OF ANY KIND. Equipment specifications, applications and options are subject to change at the sole discretion of DataCard Corporation without notice.

Safety

All Datacard® products are built to strict safety and reliability specifications in accordance with UL60950-1 and Canadian requirements, and the Low Voltage Directive 2006/95/EC. Therefore, safety issues pertaining to operation and repair of Datacard® equipment are primarily environmental and human interface.

The following basic safety tips are given to ensure safe installation, operation and maintenance of Datacard® equipment and are not to be considered as comprehensive on all matters of safety.

Safe environment

- Connect equipment to a grounded facility power source. Do not defeat or bypass the ground lead.
- Place the equipment on a stable surface (table) and ensure floors in the work area are dry and non-slip. Insulated rubber floor mats are preferred.
- Know the location of equipment branch circuit interrupters or circuit breakers and how to turn them on and off in case of emergency.
- Know the location of fire extinguishers and how to use them. Use only ABC type extinguishers on electrical fires.
- Know local procedures for first aid and emergency assistance at the customer facility.
- Use adequate lighting at the location of the equipment.
- Maintain the recommended range of temperature and humidity in equipment area.
- Do not use this product in an environment containing volatile or flammable compounds.
- Keep paper and foreign materials off the printer and optional laminator.
- Keep all dust, dirt, food, liquids, etc. away from the printer at all times.

Safe human interface

- Use proper lifting techniques when moving or installing the equipment.
- Use standard electrostatic discharge (ESD) precautions when working on or near electrical circuits.
- Do not defeat or disconnect safety interlocks.

Introduction 1

About this manual

This manual provides detailed information about the Datacard® SR200 & SR300 card printers and the optional Datacard® LM200 & LM300 card laminators. The first section provides operators with basic information about the printer and laminator including drawings and parts identification. The second section provides the information needed to use the printer, and the third section talks about viewing and changing printer settings including printing preferences and setting properties. Detailed error recovery information is provided in section five and includes LCD messages and how to recover from them. Printer supplies, storage information, and specifications are included in section six.

Who to call for assistance

If you work with a Datacard-authorized dealer, distributor, or value-added reseller, contact them for assistance. A value-added reseller provides the SR200 & SR300 printers and optional LM200 & LM300 laminator as part of an overall system.

If any contents of the box are missing, contact your Datacard-authorized dealer, distributor or reseller. If you purchased your printer directly from Datacard, contact the Datacard Customer Care Center in your region:

Americas	+1 800.328.3996 or 952.988.2316
Europe, Middle East and Africa	+44 1489555627
Asia Pacific	+852 2821 0121

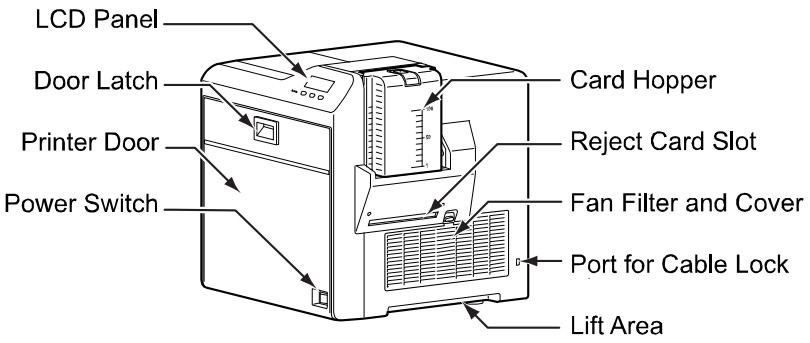
Make sure you have the printer serial number, located on the back of the printer, and optional laminator serial number, when you call.

About the printer

The Datacard® SR200 & SR300 card printers use retransfer printing technology to produce high-quality, edge-to-edge printing on a variety of PVC and non-PVC card surfaces, including contact and contactless smart cards. The retransfer printing process uses two ribbon types – a color ink ribbon and a retransfer film. The ink ribbon is available in YMCK (Yellow, Magenta, Cyan, and Black) or YMCKK format. The printer uses these colors to print images on the retransfer film, and a heat roller to transfer the image onto a card. An ink ribbon with a peel-off (PO) panel is available, to remove retransfer material in areas of the card with a magnetic stripe, hologram, or smart card chip.The printer can also use YMCK ribbon with a UV retransfer panel.

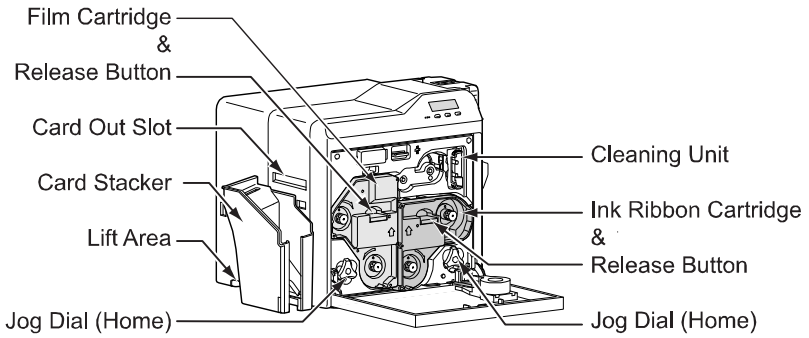
The SR200 printer can print on one side of a card and the SR300 printer can print on both sides of the card. The SR300 printer can be equipped with optional magnetic stripe and smart card capabilities.

The outside of the SR200 & SR300 printers



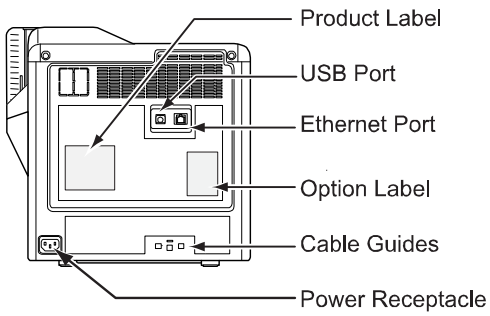
Printer LCD Panel	Shows the printer status and any messages. Use it to view printer settings. Use the driver Status Monitor to change most printer settings.
Door Latch	Slide the latch up to open the printer door.
Printer Door	Open the door to access the ink ribbon and retransfer film cartridges.
Power Switch	Press the switch to power on the printer.
Card Hopper	Load blank cards. Consists of hopper and hopper cover.
Card Reject Slot	Cards for which the printer issued an error are ejected here.
Fan Filter and Cover	Open to clean the fan filter and maintain card quality.
Port for Cable Lock	Attach an optional cable lock in this location.
Lift Area	Use this area to lift the printer when carrying.

The inside of the printer

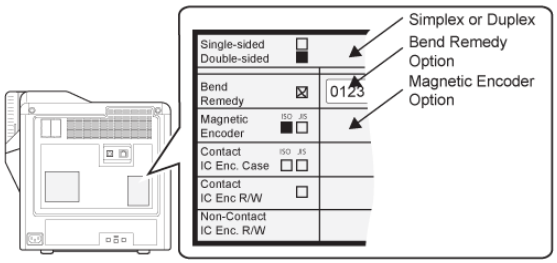


Film Cartridge	Holds the retransfer film.
Film Cartridge Release Button	Press to release and remove the retransfer film cartridge.
Card Out Slot	Cards removed from the print area exit here. If the optional LM200/LM300 laminator is installed, cards exit the printer and enter the laminator here.
Card Stacker	Attach the card stacker to the card stacker brackets.
Lift Area	Use this area to lift the printer when carrying.
Jog Dials (Home)	Use the dials when clearing a card jam. Return them to the positions shown after use.
Cleaning Unit	Removes dust or debris from the cards before printing.
Ink Ribbon Cartridge	Holds the ink ribbon.
Ink Ribbon Cartridge Release Button	Press to release and remove the ink ribbon cartridge.

The back of the printer



Product Label	Find the serial number model, and agency information.
USB Port	USB 2.0 printer port. Connect a USB printer data cable or a USB smart card cable.
Ethernet Port	Plug in the Network data cable.
Option Label	Find a list of the options installed in the printer. The following label shows Duplex, Bend Remedy and Magnetic Encoder options.



Cable Guides	Secure the data cable to prevent damage.
Power Receptacle	Plug in the power cord.

Use only one printer data cable–USB or Ethernet–not both. If using a smart card option, you can use both an Ethernet printer data cable and USB smart card cable.

Do not keep the power cord connected to facility power unless the printer is also connected to the power cord.

About the laminator

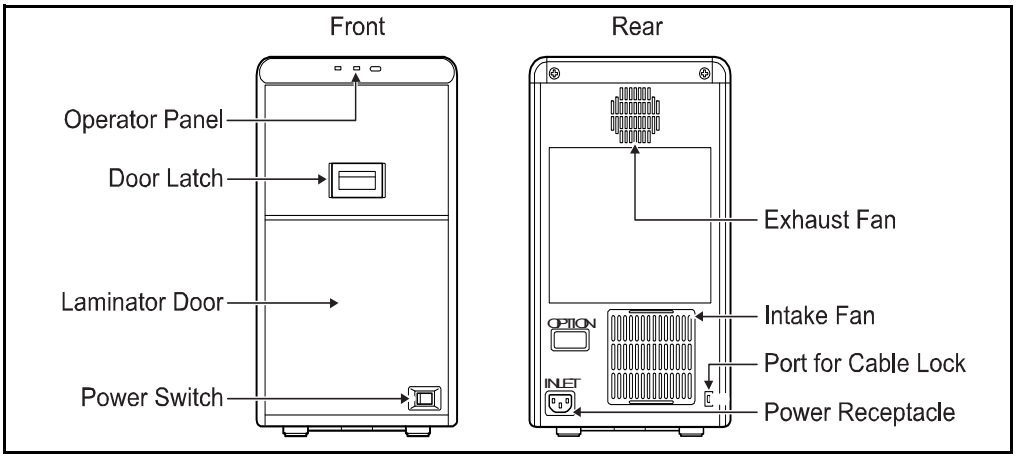
The Datacard® LM200 or LM300 card laminators are optional laminating modules that work with the SR200 & SR300 printers to add topcoat or patch material to printed cards. Holographic laminating material is available for added security and tamper resistance. A printed card can be laminated manually by simply inserting it into the laminator, or automatically by transferring the printed card from the printer to the laminator module.

The LM200 laminator can laminate on one side of a card and the LM300 laminator can laminate on both sides of the card. The LM300 selects the side of the card to be laminated by the presence of the film cartridge.

- To laminate on both sides of the card, load both cartridges.
- To laminate on the top side of the card, load the top side cartridge.
- To laminate on the bottom side of the card, load the bottom side cartridge.

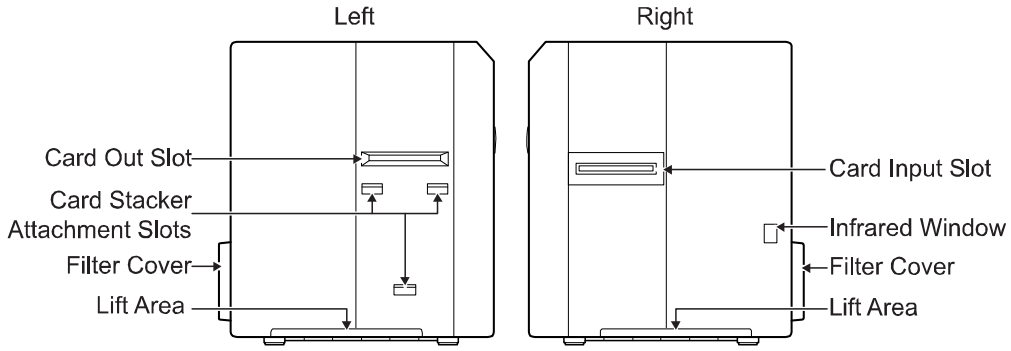
Messages and other information about the laminator are displayed on the printer LCD panel.

The front and rear of the laminator



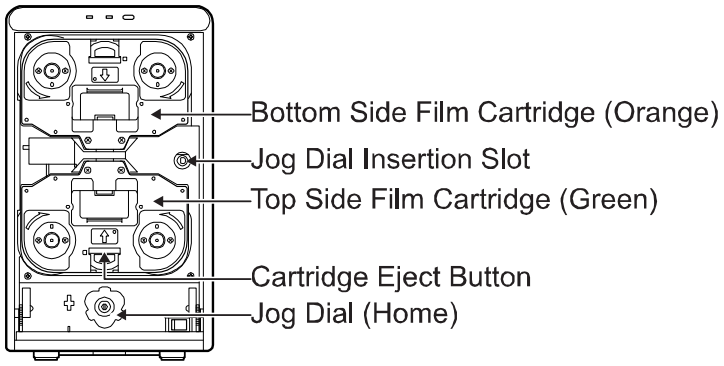
Operator Panel	Includes the red and blue status displays and the operator button.
Door Latch	Opens and closes the laminator door.
Laminator Door	Open the door to access the laminator cartridge(s).
Power Switch	Press the switch to power on the laminator.
Exhaust Fan	Discharges heat from inside the laminator.
Intake Fan	Air inlet for internal cooling.
Port for Cable Lock	Attach an optional cable lock in this location.
Power Receptacle	Plug in the power cord.

The left and right sides of the laminator



Card Out Slot	Cards exit the laminator here.
Card Stacker Attachment Slots	Attach the card stacker here.
Filter Cover	Filter for the air intake.
Lift Area	Use this area to lift the laminator when carrying.
Card Input Slot	Cards enter the laminator here.
Infrared Window	Sends or receives data via infrared communication to the card printer.

The inside of the LM300 laminator



Bottom Side Film Cartridge (Orange)	Holds the laminate film for the bottom side of the card. (Removable cover on LM200.)
Jog Dial Insertion Slot	Attach the jog dial here to clear a card jam.
Top Side Film Cartridge (Green)	Holds the laminate film for the top side of the card.
Cartridge Eject Button	Press the button to remove the film cartridge.
Jog Dial (Home)	Use the dials when clearing a card jam. Return them to the positions shown after use.

Using the printer

2

This section describes how to perform basic tasks required to operate the Datacard® SR200 & SR300 printer and the Datacard® LM200 & LM300 card laminator. It describes how to:

Load supplies

- "Load cards" on page 8
- "Load ink ribbon" on page 10
- "Load retransfer film" on page 11
- "Load top side laminate film" on page 12
- "Load bottom side laminate film" on page 13

Power on

- "Check the PC connection" on page 14
- "Optional laminator connection" on page 15
- "Power on the laminator" on page 15

Prepare to print cards

- "Initialize the ink ribbon and retransfer film" on page 17

Print cards

- "Print cards using ID software" on page 18
- "Print from a PC application" on page 18
- "Tips for Success" on page 19

Before You Begin

- Begin with the printer and laminator set up and the printer driver installed. This printer must be installed by Datacard authorized and trained personnel. If the printer is not set up, contact your service provider.
- Set up the card design(s) to use, and test before beginning production. Be sure to use production card stock, all data, and all processes. For example:
  - Encode and read magnetic stripe data.
  - Print and verify the colors and quality of printing.
  - Laminate cards, if used, and make sure it meets your requirements.
- Ask your service provider for assistance, if needed, to make your design work.

If the printer uses the Security Lock, see "Security Lock tab" on page 40. Unlock the printer before starting any of the tasks in this chapter.

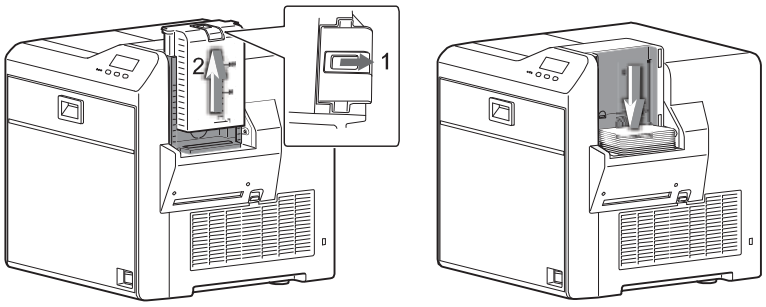
Load Supplies

Load cards

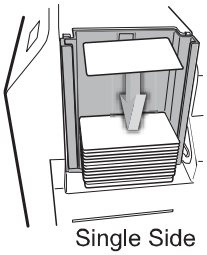
Tips: Handling cards

- Do not touch the surface of cards before printing them. (Oils on hands will reduce printing quality.)
- Handle cards by the edges or wear supplied cotton gloves.
- Cards can stick together. Slide or fan cards to separate the edges.
- Orient all cards the same way.
- Load up to100 cards.
- Do not use cards that are bent or otherwise damaged.
- See “Supplies” on page 87 for specific card information.

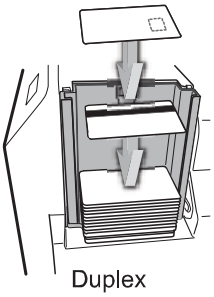
The card hopper can hold up to 100, .030” (.75mm) cards. The cards are held in position with a hopper cover. Make sure that magnetic stripe or smart cards are loaded in the proper orientation for processing.



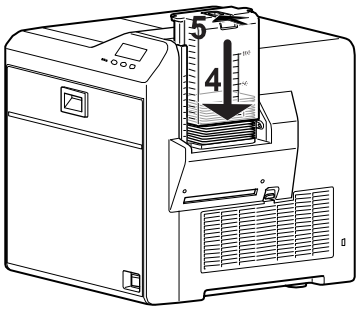
1. Slide the card hopper latch open (1).
2. Slide the card cover up (2).
3. Insert cards. See the illustrations for the correct card orientation.
   - For SR200 (single-side) printers, the top of landscape-oriented cards is away from the printer and the front of the card is down.


Single Side

   - For SR300 (duplex) printers:
     - Load ISO-1 magnetic stripe cards with the stripe up and toward the printer.
     - For most applications, load contact chip cards with the chip down and toward the back of the printer.
     - For custom applications, the card load orientation may be different.


Duplex

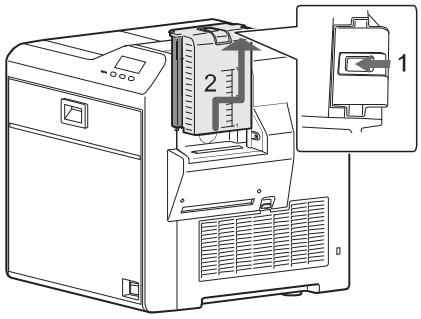
4. Slide the hopper cover over the cards (4).
5. Slide the card hopper latch closed (5).



Remove Hopper and Cards

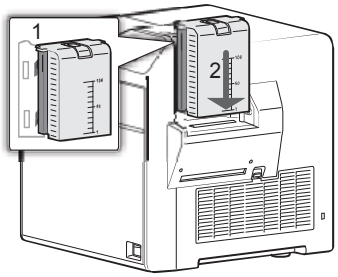
The card hopper can be removed from the printer for secure storage, to set card thickness, or for cleaning.

1. Slide the card hopper latch closed (1).
2. Lift the hopper up (2). The hopper cover and hopper are locked together and both are removed.



Replace the Hopper

1. Insert the hooks on the card hopper into the slots in the receptacle.
2. Slide the card hopper down until it clicks into place.



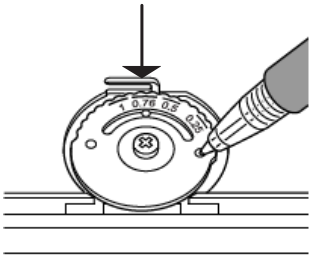
Adjust Card Thickness

Tips: Card thickness

- Cards with low heat resistance, such as PVC cards, are only supported for settings of 1.0mm and 0.75mm.

From the factory, the printer is set to use cards 0.030 in (0.75mm) thick. Follow these steps to set the printer to use cards of a different thickness.

1. Remove the card hopper, as described above.
2. Turn the hopper so the silver dial faces you.
3. Use a pointed item such as a pen. Slide the dial:
   - — Slide the dial counterclockwise (CCW) to print thinner cards.
   - — Slide the dial clockwise (CW) to print thicker cards.



- A setting of 1.0mm corresponds to cards 0.040in thick.
- A setting of 0.75mm corresponds to cards that are 0.030in thick.
- A setting of 0.5mm corresponds to cards that are 0.020in thick.
- A setting of 0.25mm corresponds to card that are 0.010in thick.

4. Replace the Card Hopper, as described above.
5. Set the card thickness on the Status Monitor. See“Media Setting tab” on page 36.
6. Test the new setting with several cards to make sure the printer picks only one card at a time.

Load ink ribbon

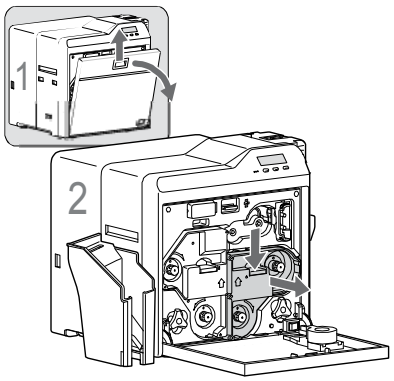
Tips: Handling ink ribbon

- Do not touch the printing surface of the ink ribbon. (Oils on hands will reduce printing quality.)
- Place the cartridge on a smooth level surface when loading or reloading.
- Do not place the cartridge on the printer door to prevent damage to the door.
- Keep unused ink ribbon in the original package until ready for use.
- Initialize the ink ribbon each time you remove and replace the ink ribbon cartridge. See "Initialize the ink ribbon and retransfer film" on page 17.
- See "Storage environment for supplies" on page 93 for information on storing ink ribbon.
- See "Ink ribbon" on page 88 for more information about ink ribbon supply.

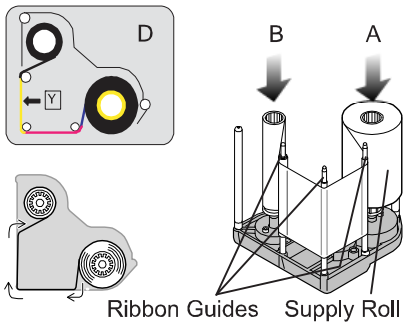
1 Slide the door latch up and open the printer door.

2 Press the ink ribbon cartridge eject button, and remove the orange cartridge.

3 Remove both used ribbon spools from the cartridge (if present).



4 Load the new roll of ink ribbon on the cartridge:



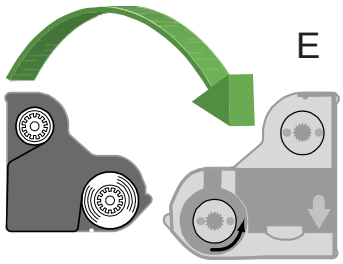
a Put the full spool of ribbon on the orange supply spindle (A).

b Put the empty take-up spool on the black take-up spindle (B).

c Align ribbon along the three ribbon guides.

d Make sure the ribbon panels match the colored diagram in the cartridge.

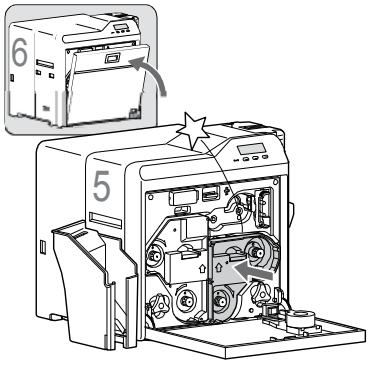
e Take up any slack by turning the supply knob counter-clockwise. Gently pull the take-up knob and turn. If slack cannot be removed, check that the supply and take-up spools are firmly seated on the spindles.



To ease inserting into the printer, the film must be tight along the film guides. Turning the supply and take-up knobs will help maintain the proper tension.

5 Replace the loaded ribbon cartridge in the printer until it clicks into position.

6 Close the printer door.



Load retransfer film

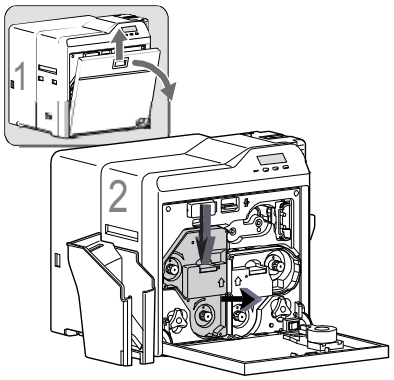
Tips: Handling retransfer film

- Place the cartridge on a smooth level surface when loading or reloading.
- Do not place the cartridge on the printer door to prevent damage to the door.
- Do not touch the printing surface of the retransfer film. (Oils on hands will reduce printing quality.)
- Always initialize the retransfer film after powering on the printer. See “Initialize the ink ribbon and retransfer film” on page 17 for more information.
- Keep unused film in the original package.
- Do not place film on a dusty or dirty surface — dirt can affect print quality.
- When the retransfer film has run out, “Media Run Out” appears on the LCD panel. After replacing it, press the Reset key and then the Enter key to initialize the film.
- The retransfer film cartridge cannot be replaced in a printer that is in Transport Mode. Power the printer on to cancel Transport Mode.
- See “Retransfer film” on page 88 for more information about retransfer film.

1 Slide the door latch up and open the printer door.

2 Press the retransfer film cartridge eject button and remove the green cartridge.

3 Remove both used film spools from the cartridge (if present).



4 Load the new roll of retransfer film on the cartridge:

a Put the full roll of film on the green supply spindle as shown (A).

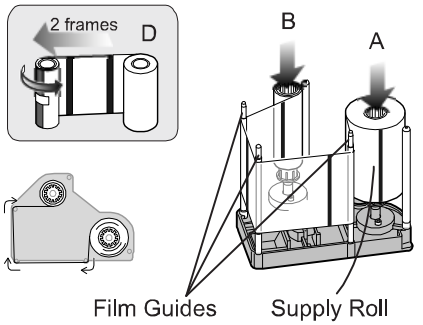
b Put the empty take-up spool on the black take-up spindle (B).

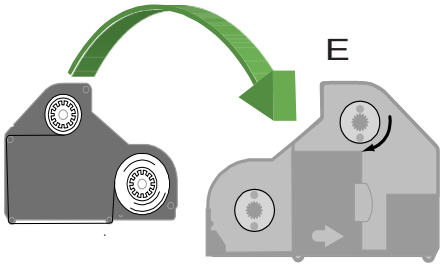
c Align the retransfer film along the three film guides.

d Wind two frames of film onto the take-up spool.

e Take up slack by turning the take-up knob clockwise. Gently pull the take-up knob and turn. If slack cannot be removed, check that the supply and take-up spools are firmly seated on the spindles.

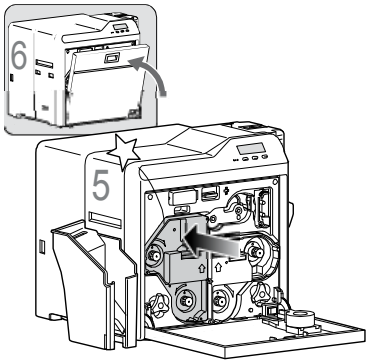
To ease inserting into the printer, the film must be tight along the film guides. Turning the supply and take-up knobs will help maintain the proper tension.





5 Replace the loaded retransfer film cartridge in the printer until it clicks into position.

6 Close the printer door.

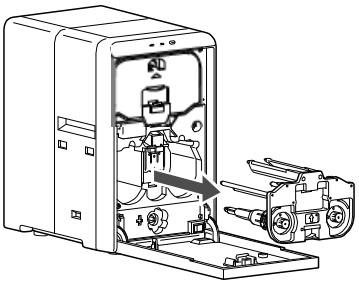


Load top side laminate film

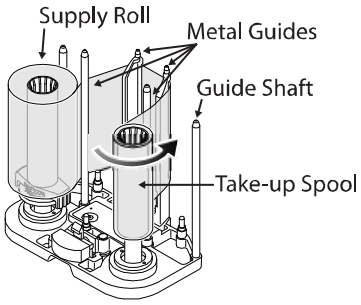
Tips: Handling patch or topcoat material

- When you power on the laminator, the patch or topcoat material initializes automatically.
- The inside of the laminator contains hot surfaces. Use care when working in these areas.
- Keep unused laminating material in the original package.
- If laminating on both the bottom and top sides of the card, use the same material in both cartridges. The performance of a combination of different types of laminate film is not guaranteed.
- Do not place material on a dirty surface. Dirt can affect card quality.
- During the laminating process, do not turn the power switch off, open the laminator door, or unplug the laminator.
- See "Laminator material" on page 89 for more information about laminating material.
- If laminate is loaded the wrong way, film detection errors or laminating defects can occur.
- Match the loaded laminate film with the Film Type setting. Detection errors can occur if these two do not match.
- During single sided lamination, remove the cartridge from the side you are not laminating or an error will occur.
- If a cartridge is inserted upside down, it will not click into place.

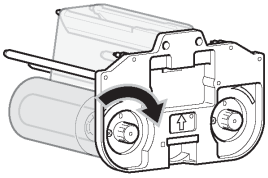
1. Open the laminator door by pulling the top of the door toward you.
2. Remove the top and bottom side film cartridges.
3. Press the laminator cartridge eject button and remove the laminator cartridge carefully. The material must be tight when removing the cartridge.



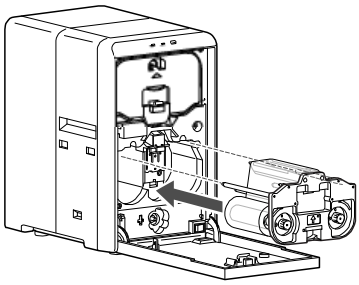
4. Remove the used material (if present).
5. Place the new roll of material and empty take-up spool side-by-side on a clean surface.
6. Remove the label from the patch or topcoat material and use it to secure the free end of the material to the empty take-up spool, making sure the edges are even.



7. Load the new roll of material on the cartridge:
   a. Put the full roll of material on the supply spindle.
   b. Put the empty take-up spool on the take-up spindle.
   c. Align the material along the four metal guides as shown on the cartridge label.



   d. Wind two or three rotations of film onto the take-up spool. Take up slack between the spools by turning the supply knob clockwise. If slack cannot be removed, check that the supply and take-up spools are firmly seated on the spindles.



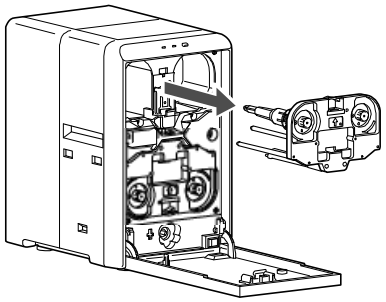
8. Replace the loaded laminator cartridges in the laminator until they click into position.
9. Close the laminator door.
   — If the loading status of the cartridge is changed when changing the side to be laminated, the laminator will not initialize when the laminator door is closed. Press the Operator button to initialize the laminator.

Load bottom side laminate film

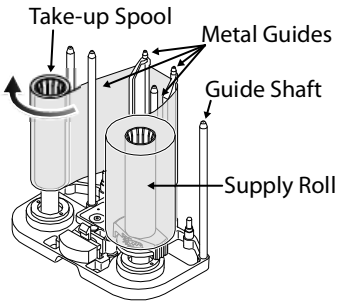
Tips: Handling patch or topcoat material

- When you power on the laminator, the patch or topcoat material initializes automatically.
- The inside of the laminator contains hot surfaces. Use care when working in these areas.
- Keep unused laminating material in the original package.
- If laminating on both the bottom and top sides of the card, use the same material in both cartridges. The performance of a combination of different types of laminate film is not guaranteed.
- Do not place material on a dirty surface. Dirt can affect card quality.
- During the laminating process, do not turn the power switch off, open the laminator door, or unplug the laminator.
- See "Laminator material" on page 89 for more information about laminating material.
- If laminate is loaded the wrong way, film detection errors or laminating defects can occur.
- Match the loaded laminate film with the Film Type setting. Detection errors can occur if these two do not match.
- During single sided lamination, remove the cartridge from the side you are not laminating or an error will occur.
- If a cartridge is inserted upside down, it will not click into place.

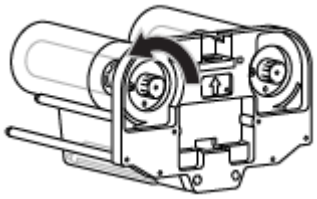
1. Open the laminator door by pulling the top of the door toward you.
2. Remove the top and bottom side film cartridges.
3. Press the laminator cartridge eject button and remove the laminator cartridge carefully. The material must be tight when removing the cartridge.



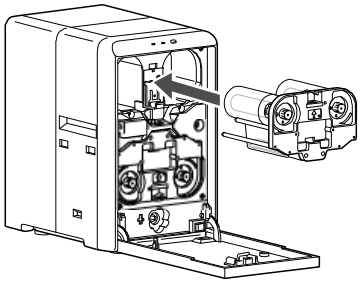
4. Remove the used material (if present).
5. Place the new roll of material and empty take-up spool side-by-side on a clean surface.
6. Remove the label from the patch or topcoat material and use it to secure the free end of the material to the empty take-up spool, making sure the edges are even.



7. Load the new roll of material on the cartridge:
   a. Put the full roll of material on the supply spindle.
   b. Put the empty take-up spool on the take-up spindle.
   c. Align the material along the four metal guides as shown on the cartridge label.



   d. Wind two or three rotations of film onto the take-up spool. Take up slack between the spools by turning the supply knob counter-clockwise. If slack cannot be removed, check that the supply and take-up spools are firmly seated on the spindles.



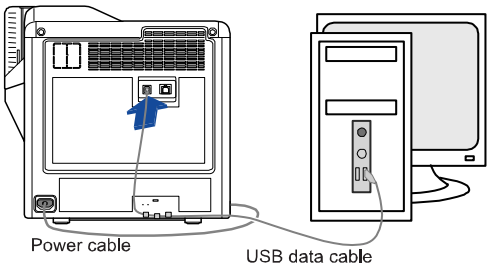
8. Replace the loaded laminator cartridges in the laminator until they click into position.
9. Close the laminator door.
   — If the loading status of the cartridge is changed when changing the side to be laminated, the laminator will not initialize when the laminator door is closed. Press the Operator button to initialize the laminator.

Power on

Check the PC connection

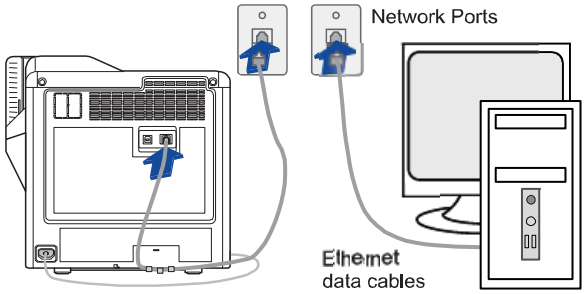
The printer and PC are connected when the printer is set up. To avoid receiving error messages on the LCD panel, make sure that all supplies are properly loaded and in position before powering on the printer. Before you begin processing cards, check the following:

- The card printer door and card hopper are closed securely.
- The USB data cable is securely connected to the printer and the PC.



OR

- The Network data cable is securely connected to the printer and to a network port.



- The power cable is securely connected to the printer and appropriate grounded power source.
- The card stacker is attached to the printer or to the optional laminator.
- Make sure cards and all other supplies are loaded. See “Load Supplies” on page 8 for more information.

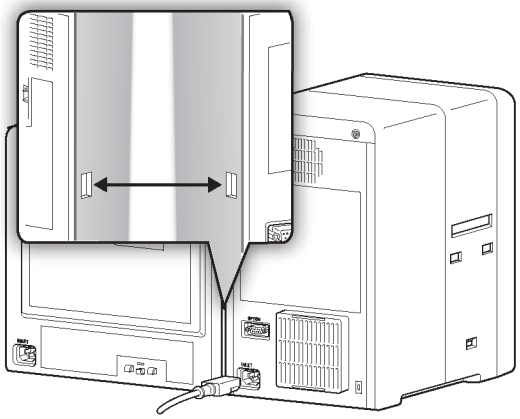
Optional laminator connection

Tips for printer power

- To avoid receiving errors on the LCD panel, make sure that all supplies are properly loaded and in position before powering on the printer.
- Wait while the printer initializes.
- Follow the guidelines for your organization about when to power the printer on and off.

When using the optional LM200 or LM300 laminator, check the following:

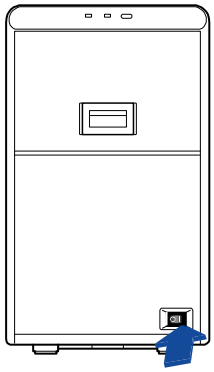
- The printer and laminator are aligned at the IR ports, using the joining plate.
- The power cord is connected to the laminator and appropriate grounded power source.
- Supplies are loaded and the laminator door is closed securely.



Power on the laminator

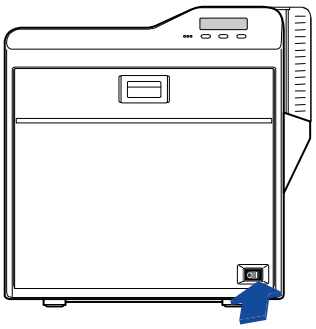
When the optional LM200 or LM300 laminator is installed, turn the laminator power on before powering on the printer.

When you power on the laminator, it begins initializing. The laminator searches for laminate and then starts preheating.



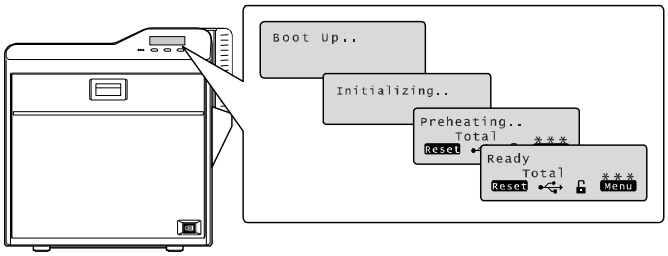
1. Press the “|" symbol on the laminator power switch.
2. The laminator powers on. The printer LCD panel displays "Initializing" and the blue status light blinks.
3. "Preheating" is displayed on the printer LCD panel for approximately four minutes while the heat roller warms to operating temperature.
4. The laminator material initalizes automatically.
5. The printer LCD panel shows "Ready" and the blue status light is lit when the laminator is ready to process cards.

Power on the printer



1. Press the “|" symbol on the power switch.
2. The printer powers on. The printer begins initializing. The LCD panel shows "Initializing" while the printer checks and positions the ink ribbon and retransfer film.
3. When operation checks are complete, "Preheating" is displayed on the LCD panel for approximately two minutes while the retransfer roller (and optional bend remedy roller) warm to their operating temperatures.
4. The LCD panel shows "Ready."
5. The first time you print cards, initialize the ink ribbon and retransfer film. See “Initialize the ink ribbon and retransfer film” on page 17.

LCD sequence on printer startup



The printer can require several minutes between power-on and the “Ready” status.

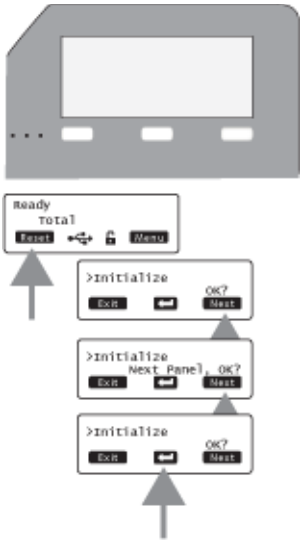
Prepare to print cards

Initialize the ink ribbon and retransfer film

Tips – Initialize supplies

- One initialize action moves both ink ribbon and retransfer film.
- To avoid dirt and dust particles that might adhere to the ink ribbon and retransfer film during loading, move (initialize) the supplies one panel set each time a cartridge is removed from the printer and replaced.
- The printer detects the type of ink ribbon and retransfer film installed.

1. Press the Reset key on the control panel.
2. The LCD display reads "Initialize OK?"
3. Use the Next key to select "2'nd Panel, OK?" or "Next Panel, OK?"
   - — Press the Enter key when "Initialize OK?" is displayed to initialize the printer without winding the ribbon.
   - — Press the Enter key when "2'nd panel, OK" is displayed and the printer winds the ribbon and film two panel sets.
   - — Press the Enter key when "Next Panel, OK?" is displayed and the printer winds the ribbon one panel set and the film one panel.



Printing cards

Tips – Printing

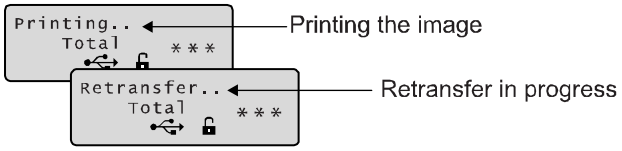
- The “Print” check box in the Print tab of Preferences must be checked to print cards.
- During the printing operation, do not open the printer or optional laminator door.
- Do not power off the printer, laminator, or PC during the printing or laminating process.
- Do not unplug the printer or optional laminator during printing or laminating.
- On the PC, do not use the hibernate or standby modes. If the PC powers down while a card is in the printer, it can stop processing and remain in the printer.

Print cards after installing the printer and driver, and after setting up your card design. See “Before You Begin” on page 7.

Cards can be sent from ID software such as Datacard® ID Works® identification software. ID software handles the types of information used on cards.

If you do not have ID software, you can use another PC application to format the information to print on cards; however, most PC applications do not support magnetic stripe encoding or smart card programming. With any application, test the card design to verify the results.

The printer’s LCD panel displays the following sequence when a card is sent to print:



Print cards using ID software

1 Follow the instructions for the ID software to capture, format, and save the data for the card.

2 In the software, send cards to the printer (usually, use the Print button).

3 The printer driver receives data for each card, prepares the card for printing, and sends each card to the printer.

Print from a PC application

1 Use the page setup feature in the application to set the following:

— Set paper or page size to CR80 card or 2.125" x 3.375"

— Set the orientation for the card design – either portrait or landscape.

— Set margins to zero for edge to edge printing.

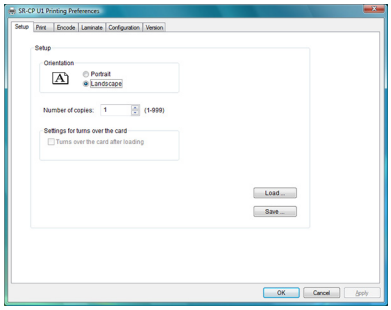
2 Format and save the card information.

3 Select the SR-CP U1 printer from the Print dialog box. SR-CP U1 is the default name of the printer. Your printer may have a different name.

4 Click the Properties button to open the Printing Preferences dialog box. Use the Setup, Print, and Encode tabs to set printer properties.

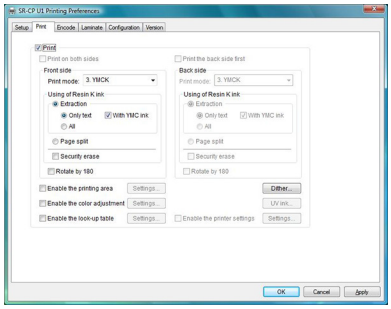
Setup tab

Use the Setup tab to set the card orientation, number of copies, and whether to reverse the card.



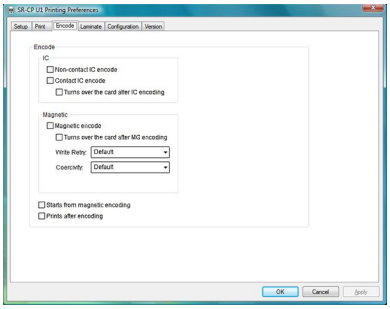
Print tab

Use the Print tab to set printing on one side or both sides, and rotation. The Print tab contains settings for using the color (YMC) and black (K) panels of the print ribbon. The tab also contains controls for color adjustment, setting up a look-up table, and specifying the print area for ribbon panels, including peel-off areas.



Encode tab

The Encode tab contains settings for using smart card (IC) and magnetic stripe encoding. You can also specify whether to rotate the card after an encoding step.



5 Print the card.

Tips for Success

- To restore the printer when it is in sleep mode, press Reset and then Enter on the printer LCD panel. The printer uses one set of panels.
- Handle unprinted cards by the edges to preserve print quality. Do not touch the print surface with your hands.

Viewing and changing printer settings

3

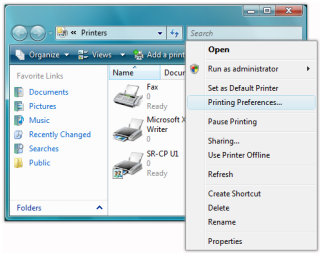
This section describes how to view and change printer and laminator settings. It describes:

- “Printing Preferences” on page 22
- “Printing Properties” on page 30
- “Status Monitor” on page 31
- “Using the LCD Menus” on page 49
  - — “About the Printer Display Panel” on page 49
  - — “Using the Printer LCD Panel” on page 51
  - — “About the Laminator Operator Panel” on page 58
  - — “Displaying Laminator Status on the Printer LCD Panel” on page 58

Printing Preferences

The Printing Preferences dialog box contains the Setup, Print, Encode, Laminate, Configuration, and Version tabs. To open Printing Preferences:

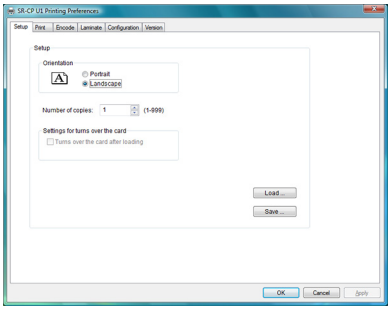
1. Choose Start from the Windows task bar.
2. Do one of the following:
   - — Windows XP and 2000, choose Settings and then Printers (and Faxes). The Printers (and Faxes) window opens.
   - — Windows Vista, choose Control Panel and then Printers.
3. Click once on the printer icon to select it.
   - — The driver must be installed for the printer icon to be present.
   - — The default name of the printer is SR-CP U1. The name of your printer might be different.
4. Right-click the icon and choose Preferences from the pop-up menu. The Printing Preferences dialog box opens.



Setup tab

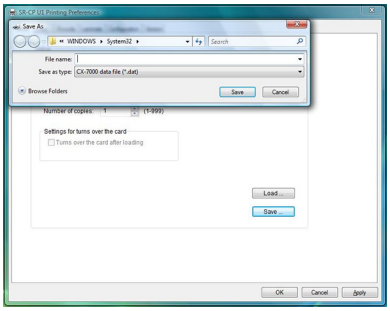
On the Setup tab, you can specify the card orientation and number of copies (your ID software might specify these settings, which override the Setup tab). You can also specify whether to reverse the card for printers with two-sided printing.

The Setup tab includes the Load and Save buttons.



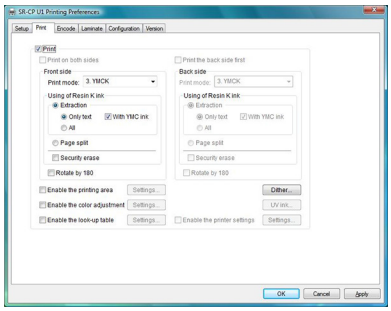
Load or Save Settings

If your location uses several printers that need the same settings, you can set up one printer and save settings to a .dat file. (Settings that can be shared are saved to the file. Settings include printer, Preferences, and Status Monitor settings.)



1. Set up one printer to meet the needs of the card program.
2. Open Printing Preferences and click the Save button on the Setup tab.
3. Save the settings to a ".dat" file. Choose a location to which you have permission to save settings. Choose a file name that reflects the program, printer serial number, or other significant information.
4. After installing the additional printers (with driver), make the .dat file available on each PC.
5. Open Printing Preferences, and click the Load button on the Setup tab.
6. Locate the file and open it. Click Yes and then Apply to use the settings.

Print tab



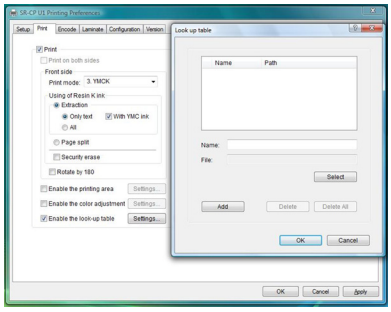
The Print tab contains settings for using the color (YMC), black (K) panels and additional panels of the print ribbon. The tab also contains controls for color adjustment, setting up a look-up table, setting up page split and dithering. See “Page Split” on page 26 for more information.

To print text, bar codes, or both using K ink on the side of a card using ink ribbon with YMCK panels, choose Extraction>Only Text. To print black areas of graphics with K ink ribbon, choose Extraction>All. If you print graphics with black (K) ink, you can set the darkness of Dithering by clicking the Dither... button.

If your printer includes a turn-over unit for two-sided printing, you can specify whether to print on both sides. For each side, you can choose the ribbon panels to use and whether to rotate the image (your ID software might specify these settings, which override the Print tab). Choose ribbon panels such as peel-off or UV only if the ribbon includes them and your ID software sends data for them. (Sending data for panels that are not present causes errors.)

Use the Printing area settings to block printer, or if using peel-off ribbon. Use the UV Ink settings if you use print ribbon with a UV panel.

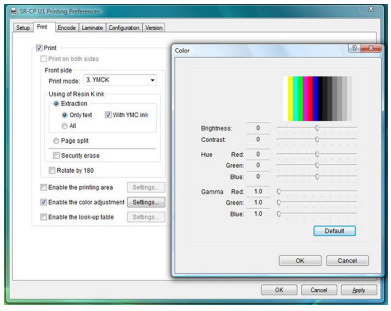
Look Up Table



The lookup table adjusts printing by substituting one color for another. It is sent to the printer, where the values are used as the card is printed.

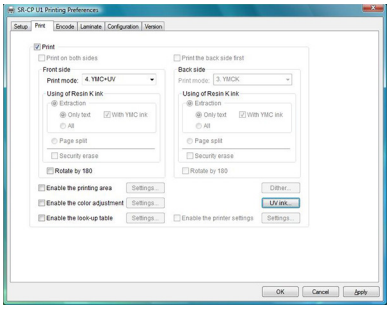
The look up table requires a file with a full set of 256 values (0-255) for each plane, in order, for Yellow, Magenta, Cyan, and Black (1024 values). Each field can have a value from 0 through 255. Data should be ASCII numeric values, separated by a comma or line feed.

Color Adjustment



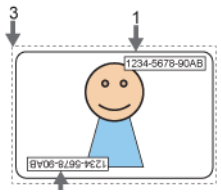
Use the Color dialog to adjust your images before sending them to the printer. The settings affect all parts of a card, including a color logo, color photo, and color backgrounds.

UV Ink

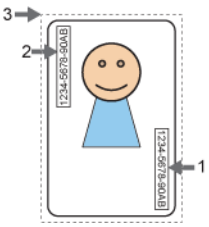


Use the UV Ink dialog to choose how to print the UV ink panel. You can:

- Use UV printing on the front of the card, the back of the card, or both.
- Extract text of a specific color, which you specify. (White–255, 255, 255 and black–0,0,0 are not allowed.)
  - — The text will be printed using the UV panel with full grayscale intensity (255).
  - — The text will not be printed with the color panels.
- Print the contents of a bitmap file, which you specify in the File Information area. The bitmap can be:
  - — Monochrome (one bit-per-pixel), where white is printed with full intensity (256). If White is the No-Printing color, black is printed with full intensity.
  - — 16 colors or 4 bit color, printed with 256 gradations.
  - — 256 colors or 8-bit color, printed with 256 gradations.
  - — 32K colors, or 16-bit color, printed with 256 gradations. Only the (MSB) GGGBBBBB-XRRRRRGG(LSB) format is supported.
  - — 24-bit and 32-bit color, printed with 256 gradations.
- Select a No printing color, which is not printed with the UV panel.
  - — This color becomes the unprinted background of the UV plane.
  - — Be careful to choose a color not contained in your images--it is extracted by the driver and color printing might show a void.
- Use a multi-page input document to print the YMC (color), black (K) and UV panels in that order. See “Page Split” on page 26 for more information.
- Specify the MAC Address position. When using the UV panel, the MAC address of the printer is always printed on the card using the UV panel.
  - — Choices are Upper Right (1) and Lower Left. (2), where 3 is the 0,0 point of the card image. The MAC Address block is 34 pixels high and 230 pixels long.



  - — Landscape: The upper right location starts at 764,18. The lower left location starts at 42, 611.
  - — Portrait: The upper right location starts at 612, 743. The lower left location starts at 19, 42.



- Specify the number of retransfer panels used to print one side of a card. UV and YMCK inks cannot be transferred in the same area on the same retransfer panel, so this setting determines what data will print. The following table shows the result for data outside the MAC address area and data overlapping the MAC address area.

	Printing Data	Setting for Number of Retransfer Film Panels to Use		
		1 Panel	Auto	2 Panels
Printing data that overlaps with the UV ink data outside the MAC address printing area	None	Print in 1 panel	Print in 1 panel	Print in 2 panels
	YMC Ink	Print in 1 panel (The YMC ink is not printed in areas where it overlaps with the UV ink.)	Print in 2 panels	Print in 2 panels
	K Ink	Print in 1 panel (The UV ink is not printed in areas where it overlaps with the K ink.)	Print in 2 panels	Print in 2 panels
Printing data inside the MAC address area	None	Print in 1 panel		Print in 2 panels
	YMC Ink	Print in 1 panel (Does not print using the YMCK ink.)	Print in 2 panels	Print in 2 panels
	K Ink		Print in 2 panels	Print in 2 panels
	UV Ink	Prints the MAC address only		

The driver compares printing data for each type of ink to determine whether there are any overlapping pixels. Priority is given to the “Print in 2 panels” setting.

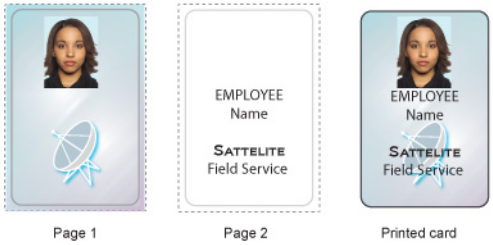
Priority of Data

- The MAC address data is always printed using the UV panel. The area can knock out other printing.
- Image files are processed in the order registered and shown in the File Information area. Newer data will replace older data if it overlaps.
- Extracted text has higher priority than an image file and prints on top of any image.
- Page Split overrides extracted data and any image files.

Page Split

Page Split informs the driver that you plan to use a multi-page input document: One page for YMC (color), another page for black (K), and (if you use UV ink) an additional page for a UV panel, in that order. You can specify Page Split for black (K) printing and for UV panel printing.

The following shows a 2-page document with YMC and K printing on one side of the card and Page Split chosen for K printing.



The following table shows how page split can be used for different combinations of YMC, K and UV printing. The Front side and Back side settings on the Print tab must also be set to support printing.

K Ink: Split?		UV Ink: Split?		Page Numbers					
Front	Back	Front	Back	1	2	3	4	5	6
—	—	—	—	YMC	K[B]				
—	—	—	—	YMCK	YMCK[B]				
Yes	—	—	—	YMC	K	YMCK[B]			
—	—	Yes	—	YMCK	UV	YMCK[B]			
Yes	—	Yes	—	YMC	K	UV	YMCK[B]		
—	Yes	—	Yes	YMC	K	YMCK[B]	UV[B]		
Yes	Yes	—	—	YMC	K	YMC[B]	K[B]		
—	—	Yes	Yes	YMCK	UV	YMCK[B]	UV[B]		
Yes	Yes	Yes	—	YMC	K	UV	YMC[B]	K[B]	
Yes	Yes	Yes	Yes	YMC	K	UV	YMC[B]	K[B]	UV[B]

[B] Printed on the back of the card.

Security Erase

To use the Security Erase feature, use a YMCK ink ribbon and choose “Security Erase.” Security erase prints a random pattern using the K panel onto the transfer ribbon.

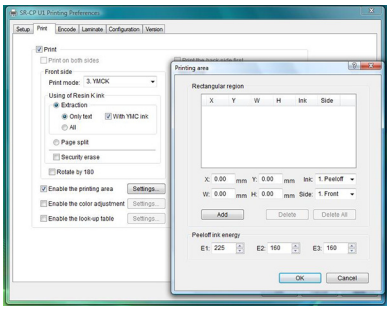
This illustration shows a printed card and the ink ribbon used to print it, without using the Security Erase feature.

This illustration shows the same printed card and the ink ribbon used to print it, after using the Security Erase feature.

This illustration shows the retransfer ribbon after using the Security Erase feature.

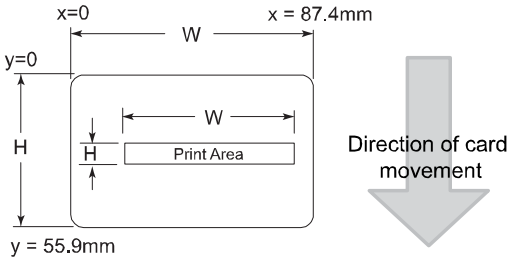
Printing Area Settings

On the Print tab, click “Enable the Print Area” and click the “Settings” button to define nonprinting areas of a card design. Also use with peel-off (YMCK-PO) ribbon.



You can block YMCK printing areas, but the protective layer from the retransfer material will be applied to the card. To maintain quality, use the peel-off feature and peel-off ribbon to remove the retransfer material in magnetic stripe, smart card chip, and hologram areas.

The Print Area window contains settings for x and y starting coordinates, height and width of print area, ink type, card side, and energy settings.



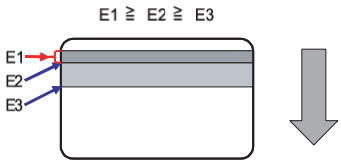
To define a non-printing area:

1. Enter the x and y coordinates of the start position and the height and width in millimeters.
2. Select “1. Peeloff” (or 2. YMCK) from the Ink list.
3. Choose “1. Front” or “2. Back” from the Side list.

   For ISO magnetic stripe, use the following values:

X start	Y start	Width	Height	Ink	Side
0	0	87.46	17.86	1 Peeloff	1. Front
0	0	87.46	21.42	2 YMCK	1. Front

4. The Peel-off Ink Energy settings affect the print density or strength of peel-off. For best results, use the default settings. The driver sets the width of each area.



5. Click the Add button to add the Print area. You can add up to eight print areas, but only one area per side, beginning at the 0,0 position, is supported.

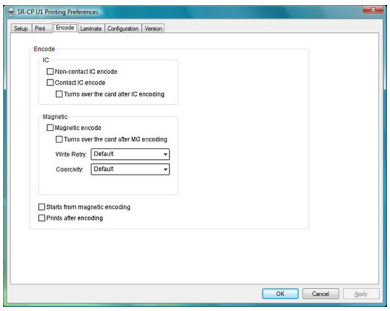
Printer Settings

On the Print tab, the “Enable printer settings” feature is available if run as an Administrator. See the “Configuration tab” on page 29 for more information about this setting. Click “Settings...” to open the Settings dialog box. The Settings dialog provides a convenient location to manage settings provided on several tabs in the Status Monitor. See the“Printer Setting tab” on page 34, the “Retransfer tab” on page 35, or the “Bend Remedy tab” on page 36 for more information about settings available.

Encode tab

The Encode tab contains settings for using smart card (IC) and magnetic stripe encoding (your ID software might specify these settings, which override the Encode tab). You can also specify whether to rotate the card after an encoding step.

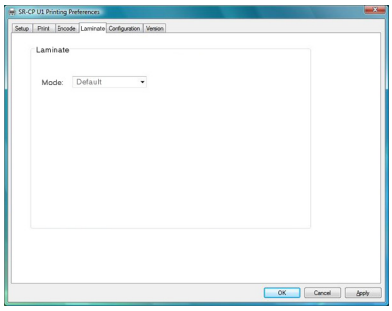
Only options installed in the printer appear in this tab. See “Magnetic Stripe Encoding” on page 97 for more information on encoding magnetic stripes.



Laminate tab

The Laminate tab contains settings for the Laminator. Three settings are available:

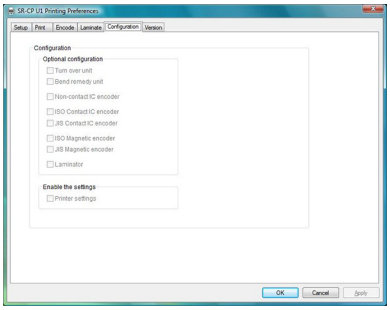
- Default: Operates using the settings defined in the Laminator tab of the Status Monitor.
- Pass Through: Does not laminate the card.
- Laminate: Laminates the card.



Configuration tab

The configuration tab shows options installed in the printer, if any.

The Enable the Settings area is available when opened as an administrator. Use this option to print a card using settings that are different from those saved in the printer. The changes made using this method are not saved in the printer. After printing this card is completed, the previous printer settings are restored.



To enable temporary printer settings:

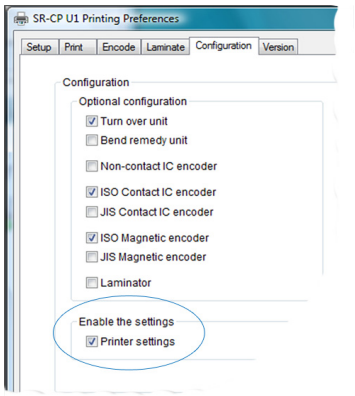
1. Choose Start from the Windows task bar.
2. Choose Settings and then Printers (and Faxes). The Printers (and Faxes) window opens.
3. Right click the SR-CP printer, and choose Run as Administrator.
4. Choose Properties.

5 In the General tab of the Properties dialog box, choose Printing Preferences.

6 Choose the Configuration tab.

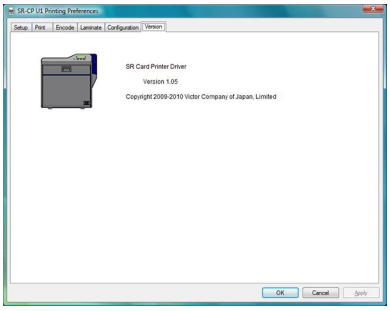
7 Click the box under Enable the Settings.

8 Go to the “Print tab” on page 23 and click the settings button to make settings for the next card.



Version tab

The Version tab shows the build version of the printer driver. Your service provider might ask you for this information.



Printing Properties

The Printing Properties dialog box options are set up when the printer is installed or by your system administrator.

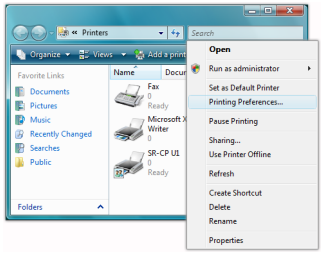
1 Choose Start from the Windows task bar.

2 Choose Settings and then Printers (and Faxes). The Printers (and Faxes) window opens.

3 Click once on the SR-CP printer icon to select it.

— The driver must be installed for the printer icon to be present.

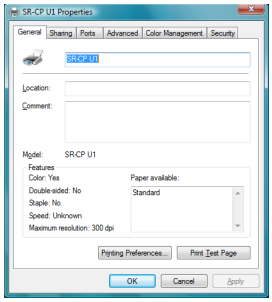
— SR-CP U1 is the default name of the printer. The name of your printer might be different.



4 From the File menu, choose Properties. The Properties window opens.

5 Use the tabs to set up Sharing, Ports, Color Management, Security, and Advanced options.

6 Choose OK to save and close, or choose Cancel to close without saving changes.



Status Monitor

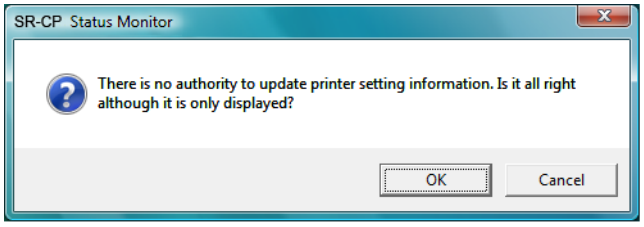
During the installation, the driver and Status Monitor are installed. The Status Monitor handles bidirectional communication between the printer and printer driver. Use the Status Monitor to view or change most settings.

Open the Status Monitor

To open the Status Monitor window:

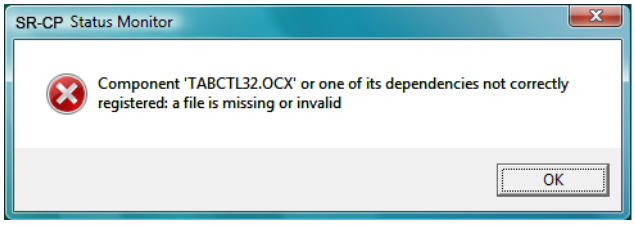
Tips for Success

- Users without administrator permissions can view settings but cannot change them. Start the Status Monitor with Administrator permissions if you want to change settings.
- The first time you open the Status Monitor on Windows Vista, you must open it as Administrator. If you do not, the Status Monitor will display the following message.



If you click Cancel, you can try to open it as an Administrator.

If you click OK, Windows Vista displays the error shown.

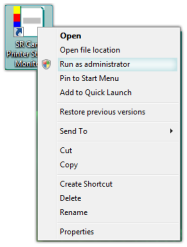


- When you receive the error, uninstall the Status Monitor, restart Windows Vista, and install the Status Monitor again.

1 Begin with the printer powered on and attached to the PC.

2 To start the Status Monitor with Administrator Permissions, do the following:

— Use the desktop icon if you installed it.
OR
From the Windows task bar, choose Start>Programs> Status Monitor.



— For Windows Vista, right-click the SR-CP Printer Status Monitor icon and choose Run As Administrator.

— For Windows XP and 2000, right-click the SR-CP Printer Status Monitor icon and choose Run As... In the Run As dialog box, enter the name and password for a user name with Administrator permissions.

— The first time you start the Status Monitor on PC with the Windows Firewall enabled, a Windows Security Alert dialog box will appear. Click **Unblock** to use the Status Monitor. If you choose **Keep Blocking** and decide that you want the Status Monitor to run, you must uninstall the Status Monitor, restart Windows, and install it again.

3 To start the Status Monitor without Administrator permissions, click the icon to open it. A prompt appears to tell you that you cannot change settings. Click **OK** to continue.

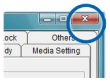
4 The Status Monitor window opens.

Close the Status Monitor

To close the Status Monitor:

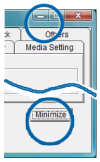
1 Click the red Close button.

2 A prompt asking if you want to close the Status Monitor appears. Click Yes.



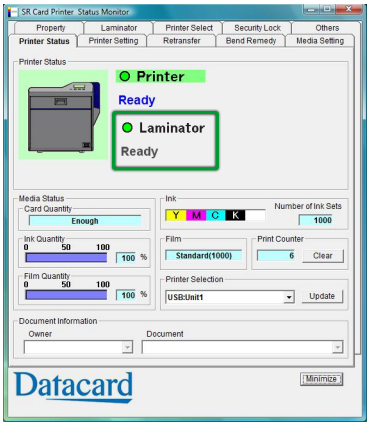
Tips for Success

- When you close the Status Monitor, communication between the printer and driver becomes one way, with the driver sending cards to the printer.
- To keep the Status Monitor running without viewing it, click the Minimize button.



Printer Status tab

The Status tab shows:



- The type of ink ribbon, the approximate percentage remaining, and the lot number.
- The type of retransfer film and the approximate percentage remaining.
- The resettable print count and a **Clear** button to set it to zero (0).
- If a laminator is attached, laminator status appears under the printer status (marked by the rectangle).
- The printer name. If more than one printer is installed, choose the printer to work with using the **Printer Selection Name** list. Click the **Update** button to search for additional SR200 & SR300 printers. The information changes automatically when you choose another printer. Only printers on the same subnet as the PC can be found.
- **Enough** is displayed when cards are present in the hopper. **None** is displayed when no cards are present.
- If the printer is processing a job, the name of the document and the name of the user appears in the Document Information area.
- When the printer requires cleaning, the printer image changes to:

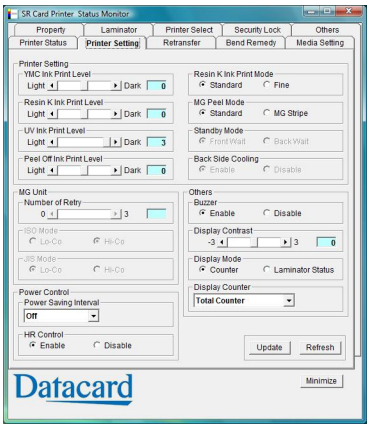
- The current state of the printer, such as ready. The icon changes with different states. See the table below.

Icon	Status	Icon Color	Meaning
	No Printer is found.	Yellow	The printer power is not switched on. or the host PC and printer are not connected correctly.
	Ready	Green	The printer is ready and able to start card printing.
	Initializing	Yellow	The printer is initializing. After the printer is initialized, it goes into Ready state.
	Offline Mode	Yellow	The printer is in Setting mode or it is being cleaned. When the process ends, it goes into Ready state.
	Preheating	Yellow	The heat roller is heating. When it reaches the correct temperature, the printer goes into Ready state.

	Heating	Yellow	The printer is adjusting the heat roller temperature.
	Card Loading Card Transporting Contact IC Encoding Non-Contact IC Encoding MG Encoding Printing Retransfer	Yellow	The printer is issuing cards. The operating status during card issuing is indicated. When the card is issued, the printer goes into Ready state.
	Power Saving	Yellow	The printer is in power save mode. To end Power Saving, press the Reset key on the printer and then press the Enter key to initialize the printer.
	Error	Red	See “Status monitor messages” on page 41.

Printer Setting tab

The Printer Setting tab shows:



- Controls for viewing or changing print settings:
  - — YMC Ink Print Level, which sets the print density for color printing. Choose from seven gradations from -3 (lighter) to +3 (darker).
  - — Resin K Ink Print Level, which sets the K resin ink print density.Choose from seven gradations from -3 (lighter) to +3 (darker).
  - — UV Ink Print Level. Choose from seven gradations from -3 (lighter) to +3 (darker).
  - — Peel Off Ink Print Level. Choose from seven gradations from -3 (lighter) to +3 (darker).
  - — Resin K Ink Print Mode which sets the K resin ink print quality. If Fine is selected, the print quality improves but the printing speed is slower. Change to Fine if thin lines or small black text is blurred (printing speed is slower).
  - — MG Peel Mode which sets the printer to use peel off ribbon in the magnetic stripe area (if installed).
  - — Standby Mode which pauses the card after printing and before transferring the card to the laminator.
  - — Back Side Cooling which pauses the card to cool it when printing on both sides of the card.
- Controls for viewing or changing magnetic stripe settings.

— Number of Retry, which sets the maximum number of retries when writing or reading magnetic stripe data fails. Default value is 1.

— ISO Mode, which sets the power used by the magnetic card encoder. The default is Hi-Co.

- A control to enable or disable the buzzer.
- A control to set the display contrast.
- A control to set the display mode.
- A control to change the display counter.
- Controls to set power saving, which reduces the temperature of the retransfer heat roller after the printer is not used for the chosen time. If a laminator is installed, this setting also affects the laminator heat roller. The roller returns to operating temperature when the next card is printed.

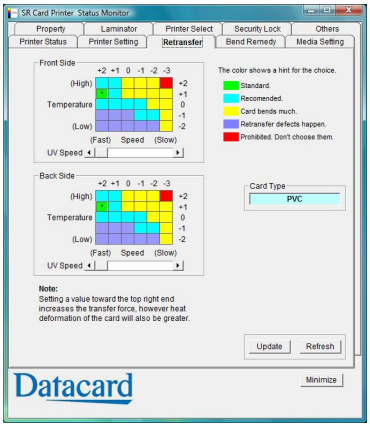
  — The interval to wait until power saving takes effect. Choose from OFF for network operation or select from 5 to 60 minutes in 5 to15 minute increments (for a USB connection). The default is OFF

  — Setting HR Control to Enable can add to the useful life of the retransfer heat roller. The default is Enable.

  — “Sleeping” appears on the LCD display. To cancel power save mode, press Reset and then the Enter key. The printer uses one set of supplies.
- The Update button updates the printer settings.
- The Refresh button displays the printer settings.

Retransfer tab

The Retransfer tab shows:



- A front-side matrix and a back-side matrix for setting the retransfer speed and temperature. Click a square to choose the setting. Click the Update button to send the settings to the printer.
- The card type, set on the Media Setting tab.
- The Refresh button which displays the current printer data.
- Speed settings for transferring UV ink to the card.

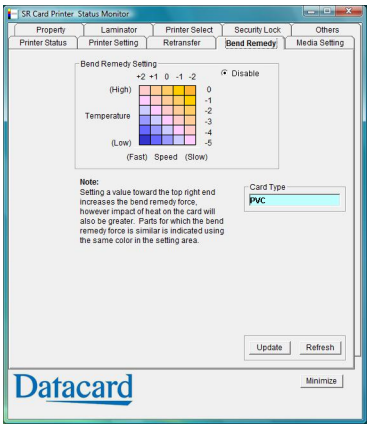
Tips for success

- The transfer power to the card gets stronger towards the upper right, but the card becomes more distorted due to the heat.
- Changing the retransfer temperature on one card side also affects the other side.
- The recommended range of values changes with the Card Type setting.
- Make sample cards to verify settings before using new settings.

Bend Remedy tab

The printer is available with a bend remedy option. Single-sided printing can cause the card to warp, depending on the type of cards you use.

If the option is installed, the tab shows:



- A matrix for setting the bend remedy time and temperature. Click a square to choose the setting. Click the Update button to send the settings to the printer.
- The card type, set on the Media Setting tab.

Tips for success

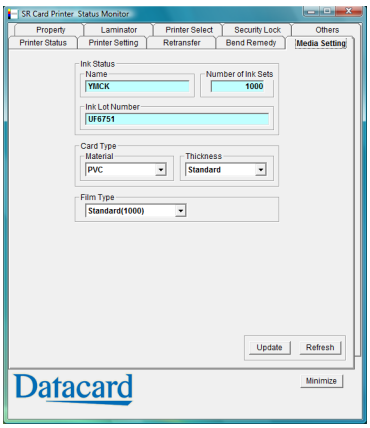
- The Card Type is blank if the Bend Remedy option is not installed in the printer.
- Bend remedy is effective for single side printing. For double side printing, choose the **Disable** button.
- When you change to Disable and the Bend Remedy option is installed, the printer goes into **Preheat** state for about 10 minutes while the roller temperature drops. Wait until the printer state changes to **Ready**.
- The side of the card where the bend remedy is performed can become faded.
- Make sample cards to verify settings before using the new settings.

Media Setting tab

The Media Setting tab shows:

- The type of Ink ribbon in the printer, the lot number of the ribbon, and the number of panel sets included in the ribbon. The printer provides this information and it cannot be changed. If the printer cannot recognize the type of ink ribbon, one of the following reasons is displayed:

Display	Reasons for ink recognition error and the solutions
252: Invalid TAG Data	The data for the ink ribbon is incorrect. Replace the ink ribbon and try again.
253: Defective TAG	The printer did not recognize the print ribbon data. Replace the ink ribbon and try again.
254: No TAG	The printer could not read the print ribbon data. Make sure the ink ribbon has been loaded correctly. See “Load ink ribbon” on page 10.
255: Defective R/W	The printer is defective. The printer must be repaired.



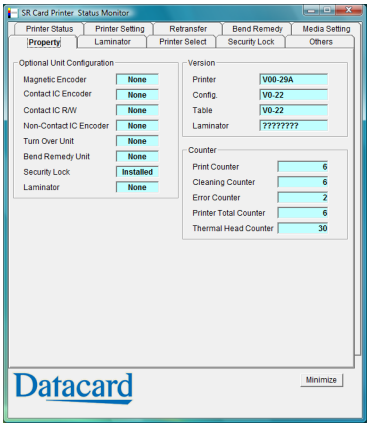
- Settings to view or change the type and thickness of cards being used.
  - For Material, choose PET-G, PVC, or PET (0.25mm). The recommended values for retransfer speed and temperature (on the "Retransfer tab" on page 35) change depending on the selected card type.
  - For Thickness, choose:
    - Standard for cards 0.76mm (0.030in) thick
    - Thin for cards 0.25mm (0.010in) thick
  - Click the Update button to send the settings to the printer.
- A setting to view the type of Retransfer film.

Tips for success

- Make sample cards to verify settings before using cards of a different thickness or material type.
- Print on one side of thin cards. Do not print on both sides.
- Set the input hopper for the card thickness. See "Adjust Card Thickness" on page 9.
- Thin PVC plastic cards (less than 0.030in) are not supported.

Property tab

The Property tab shows:

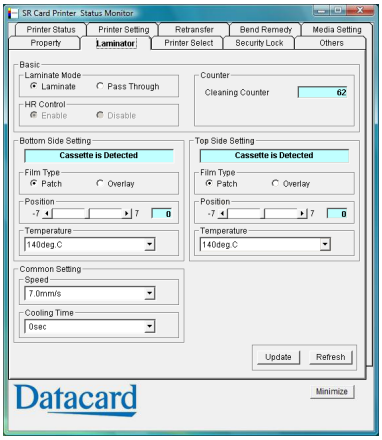


- The version of printer firmware, and firmware versions of any installed options such as a laminator. **None** or "**????**" means an option is not installed or connected. For smart card, the text shows what is supported, not what is installed.
- Configuration information for options installed.
- Counters:
  - The Printer Total Counter, which is the number of cards printed.
  - The Thermal Head Counter displays the total number of printed sides for the same head. The Head counter cannot be reset; however, it automatically resets itself when the print head is replaced.
  - Cleaning Counter displays the number of cards printed since the last cleaning card.
  - Printer Counter displays the number of cards that have printed correctly. The Free counter can be reset on the Status tab.
  - Error Counter displays the number of cards that were not printed correctly. The counter can be reset on the Status tab.

Laminator tab

The Laminator tab is enabled if a laminator is connected to the printer. Use the settings on this page to adjust lamination for best results. See “Laminator Settings” on page 60 for examples of settings for single-sided and double-sided lamination.

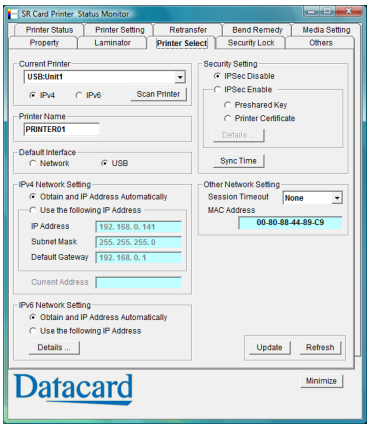
The Laminator tab shows:



- Basic Settings:
  - — Laminate Mode: Laminate or Pass Through.
    - — Choose Laminate to laminate a card.
    - — Choose Pass Through to skip lamination.
  - — HR Control: Enable or Disable.
    - — Sets power saving, which reduces the temperature of the laminator heat roller after the laminator is not used.
    - — This setting works with the card printer setting, described on page 33. This is always set to ‘On’ automatically when overlay film is selected. (The laminator should be put into standby if you will not be printing cards for a long time.)
  - — Cleaning Counter: Displays how many laminations have been performed since the last roller cleaning.
- Bottom and Top Side Settings:
  - — Cassette Status Display: Displays Cassette Detected or No Cassette.
  - — Film Type Selection: Patch or Overlay. See “Laminator material” on page 89 for more information.
  - — Patch position. See “Patch Position” on page 82 for more information.
  - — Heat roller temperature setting. Sets the temperature for the laminator heat roller.
- Common Settings:
  - — Speed: Sets the card speed during lamination.
  - — Cooling Time: Sets the standby time for cooling down the card before lamination starts.

Printer Select tab

The Printer Select tab shows:



- The currently selected printer.
- The unit number. (Use the LCD panel to set the unit number, described in "Using the Printer LCD Panel" on page 51.)
- If more than one SR-CP printer is installed on the PC, you can change the printer for which information is displayed by choosing it from the Current Printer list. The Status Monitor will communicate with the printer to update information.
- Use the **Scan** button to locate another printer if it is not displayed in the list. The printer and Status Monitor support IPV4 which is commonly used, and IPV6 which is a newer standard that uses longer addresses. The choice affects which printers are found when scanning. Only printers on the same subnet as the PC can be found.
- Use the **Sync Time** button to send the current time on the PC to the printer.
- Use the **Update** button to send changed values to the printer.
- Use the **Refresh** button to obtain current values from the printer.
- If the printer is set to use a LAN connection this tab displays the default settings (which cannot be changed). If the printer is connected using a USB connection, you can use this page to set the IP address and other network values. See *About Network Settings* in the *Installation Guide*.
- If scanning does not find a printer, you can register it by entering the IP address. Printers with IPSec enabled must be registered before information will be displayed.
- If you need to assign a printer name different from a choice provided by the printer, make sure the printer is installed with a USB connection and then enter the new printer name. The name can include only ASCII alphabetic or numeric characters, (other characters are not displayed at the printer). Your network administrator can provide information about allowed or required names on your network.
- Security settings, which can be set only when the printer is connected using a USB connection, are available. Use the **Details** button to open the IPSec Setting dialog box. See the *Installation Guide* for the steps to follow.

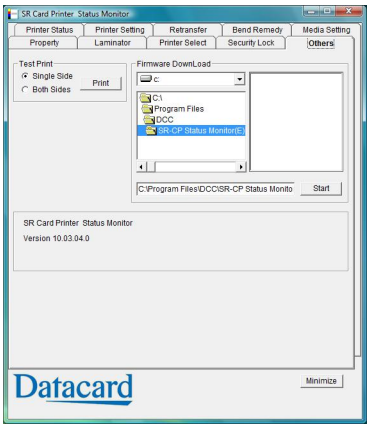
Others tab

The Others tab shows the following for a USB-connected printer:

- Controls for printing a test card. The printer will create one test card, using the internal test pattern.
- Controls for selecting a firmware file and sending it to the printer. Only update printer firmware when your service provider recommends it.

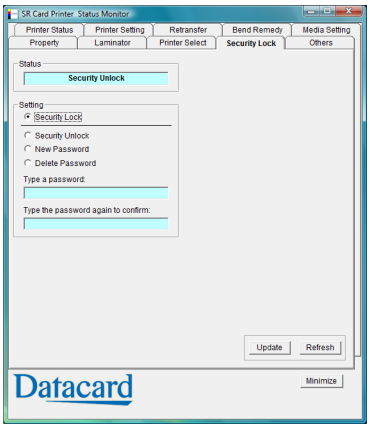
For both USB-connected and Ethernet-connected printers, the tab shows:

- Version information for the Status Monitor.



Security Lock tab

The Security Lock tab shows the current state of the electronic lock for the SR200 or SR300 printer. The printer is shipped unlocked.



Set up Security

1. Click “New Password” to enable the password area.
2. Enter the password in both areas.

   The password can be up to 8 alphanumeric characters.
3. Click the Update button to enable the new password.

Lock the Printer

1. Click "Security Lock."
2. Click the Update button to activate the security lock and prevent access to the supplies in the printer.

Access the Printer When the Status is “Security Lock”

1. Click “Security Unlock.”
2. Enter the password in the password box.
3. Click the Update button to unlock the printer.

Change the Password

1. Click “Delete Password.”
2. Enter the password in both areas.
3. Click the Update button to delete the password.
4. Click “New Password.”
5. Enter the password in both areas.

   The password can be up to 8 alphanumeric characters.

6 Click the Update button to activate the security lock and prevent access to the supplies in the printer.

Tips for Success

- Write down the password and store it in a safe place.
- Do not forget the password. You can ask your service provider for assistance, but this is not covered by the warranty.
- The Status Monitor password and the security number entered on the printer panel are not linked. You can use different values for these items.

Status monitor messages

The following messages are displayed in message boxes by the Status Monitor. See "Printer Status tab" on page 33.

Error Code	Displayed Message	Solution
0102D000	Cards have run out.	Load cards as described in "Load cards" on page 8.
0102D000	The card hopper is detached.	Close or replace the card hopper securely.
0102D100	Printer door is open.	1 Close the printer door. 2 Press Reset and then Enter to initialize the printer.
0102D100	The cleaning unit is detached.	1 Install the Cleaning Unit and then close the door. See "Cleaning the cleaning unit" on page 62, 2 Press Reset and then Enter to initialize the printer.
0102D300 0102D400 0102D500	The printer is busy.	—
0102DA00	Preheating is in progress.	Wait until preheating is complete.
0102DB00	Printer is initializing.	Wait until initialization is complete.
0102DC00	Offline testing is in progress.	Wait until the offline test is complete.
	Cleaning is in progress.	Wait until cleaning is complete.
0102DD00	Operator panel is currently in use.	—
	The printer is in the transport mode.	Cancel the transport mode.
0102DE00	The firmware cannot be downloaded.	Set the printer to the download mode.

Error Code	Displayed Message	Solution
0102FD00	The printer is in the Power Saving mode.	Resetting the printer temporarily cancels the Power Saving mode. The printer resets automatically when the printer driver is used to start printing.
0102FE00	Password authentication is not complete.	—
0102***	The printer is not ready.	—
01039000	Failure occurred during card loading.	1 Switch off the printer power. 2 See “Hopper jam” on page 72 to remove the card. 3 Switch on the printer power.
01039100	Card jam near the card turn over unit.	1 Switch off the printer power. 2 See “Turnover jam” on page 74 to remove the card. 3 Switch on the printer power.
01039200	Card jam near the magnetic encoder.	1 Switch off the printer power. 2 See “Turnover jam” on page 74 to remove the card. 3 Switch on the printer power.
01039300	Card jam near the card feed roller.	1 Switch off the printer power. 2 See “Retransfer section jam” on page 75 to remove the card. 3 Switch on the printer power.
01039400	Card jam near the card outlet.	1 Switch off the printer power. 2 See “Retransfer section jam” on page 75 to remove the card. 3 Switch on the printer power.
01039500	Card jam near the retransfer heating roller.	1 Switch off the printer power. 2 See “Retransfer section jam” on page 75 to remove the card. 3 Switch on the printer power.
0103A100	Retransfer film is broken.	1 Repair the ink ribbon as described in “Mending broken ink ribbon or retransfer film” on page 76. 2 Press Reset and then Enter to initialize the printer.
	Retransfer film is not detected.	Install the retransfer film correctly. See “Load retransfer film” on page 11.
0103A800	A writing error has occurred during magnetic encoder self-diagnosis.	Check the card specifications.

Error Code	Displayed Message	Solution
0103AD00	An error has occurred during magnetic encoding data writing.	Check the card specifications.
0103AE00	An error has occurred during magnetic encoding data reading.	Check the card specifications.
0103B000	An incorrect ink ribbon is installed.	Install a correct ink ribbon.
0103B000	An incorrect ink ribbon is installed.	Install a correct ink ribbon.
0103B100	Ink ribbon is broken.	1 Repair the ink ribbon as described in "Mending broken ink ribbon or retransfer film" on page 76. 2 Press Reset and then Enter to initialize the printer.
	Ink ribbon is not detected.	1 Load the Ink Ribbon Cartridge or Retransfer Film Cartridge and then close the printer door. 2 Press Reset and then Enter to initialize the printer.
0103****	A media error has occurred.	Check the card specifications.
01044400	A hardware error has occurred.	Turn the power off and on again. If the same problem recurs, turn off the power and contact your service provider.
0104AB00	An error has occurred in the mechanical component of the magnetic encoder.	
0104AC00	A hardware error has occurred in the magnetic encoder.	
0104C100	A heating roller operation error has occurred.	
0104C200	The temperature of the bend remedy heating roller or retransfer heating roller is too high.	
0104C300	An internal 24v instantaneous interruption is detected.	
0104D800	A hardware error has occurred during initialization.	

Error Code	Displayed Message	Solution
0104F000	The temperature of the retransfer heating roller is too high.	Turn the power off and on again. If the same problem recurs, turn off the power and contact your service provider.
0104F100	The retransfer heating roller is faulty.	
0104F200	The thermistor of the retransfer heating roller is faulty.	
0104F300	The temperature of the bend remedy heating roller is too high.	
0104F400	The bend remedy unit is faulty.	
0104F500	The thermistor of the bend remedy heating roller is faulty.	
0104F600	The operating ambient temperature of the printer is too low.	Check the temperature. If the same problem recurs within the range of operating ambient temperature, turn off the power and contact your service provider.
0104F800	The temperature of the thermal head is too high.	Turn the power off and on again. If the same problem recurs, turn off the power and contact your service provider.
0104****	A hardware error has occurred.	
01051A00	Printer command is incorrect.	Contact your service provider.
01052000		
01052100	A security key has already been set. A new security key cannot be specified.	—
01052200	Entry does not match the preset security key.	—
01052300	Security key has not been specified. The security lock function is not enabled.	—
01052400	Printer command is incorrect.	Contact your service provider.
01052600		
01052700	Ink ribbon specification is incorrect.	Ensure that the printer driver's ink setting matches the installed ink ribbon.
01052A00	Printer command is incorrect.	Contact your service provider.
01052B00	Magnetic encoding data is incorrect.	Check the card specifications.
01052C00	IC encoder is not installed.	—
01052D00	Magnetic encoder is not installed.	—
01052E00	Optional devices are not installed.	—
0105****	A command error has occurred.	Contact your service provider.
010B****		

Error Code	Displayed Message	Solution
0142A200	Retransfer film has run out.	1 Load the Retransfer Film (see “Load retransfer film” on page 11). 2 Press Reset and then Enter to initialize the printer.
0142B200	Ink ribbon has run out.	1 Load the Ink Ribbon (see “Load ink ribbon” on page 10). 2 Close the printer door and press Reset and then Enter to initialize the printer.
02******	Printer is not found.	• Make sure that the host PC and the printer are connected properly. • Make sure that the printer is switched on.
05000050	Failure occurred during card loading.	• Check to ensure that the laminator is properly connected to the card printer (see “Optional laminator connection” on page 15). • Remove the card.
05000051	Card jam near the card feed roller.	• The temperature of the heating roller may be too high, or the card transfer speed may be too slow. For details on adjusting optimum setting, please consult an authorized dealer. • Remove the jammed card.
05000052	Card jam near the card outlet.	
05000053	Top side film has run out.	• Replace the laminate film with a new one.
05000054	Bottom side film has run out.	• Replace the laminate film with a new one.
05000055	Top side film is broken or is not detected.	• Check to ensure that the laminate film is correctly set. • Check to ensure that the type of laminate film in use and the settings are appropriate.
05000056	Bottom side film is broken or is not detected.	• Check to ensure that the laminate film is correctly set. • Check to ensure that the type of laminate film in use and the settings are appropriate.
05000057	Mark on top side film is not detected.	• Check to ensure that the laminate film is correctly set.
05000058	Mark on bottom side film is not detected.	• Check to ensure that the laminate film is correctly set.
05000059	The laminator door is open.	• Close the laminator door.
0500005A	The film cartridge is detached.	• Insert the film cartridge.

Error Code	Displayed Message	Solution
05000060	Thermostat is broken.	• Turn off the power and turn it on again. If the same problem occurs, consult an authorized dealer or service personnel.
05000061	The temperature of the top side Heat Roller is too high.	
05000062	The temperature of the bottom side Heat Roller is too high.	
05000063	The internal temperature of the top side Heater is too high.	
05000064	The internal temperature of the bottom side Heater is too high.	
05000065	A hardware error has occurred in the top side Heat Roller.	
05000066	A hardware error has occurred in the bottom side Heat Roller.	
05000067	The thermistor of the top side Heat Roller is faulty.	
05000068	The thermistor of the bottom side Heat Roller is faulty.	
0500006B	A cam error has occurred in the top side Heat Roller.	
0500006C	A cam error has occurred in the bottom side Heat Roller.	
0500006D	The operating ambient temperature of the laminator is too low.	• User the laminator within the prescribed range. When starting up the laminator in a low temperature environment, the temperature of the interior may remain low even though the surrounding temperature has gone up. Turn on the power again after waiting about one hour.
0500006E	A hardware error has occurred in the top side Film Supply Encoder.	• Turn off the power and turn it on again. If the same problem occurs, consult an authorized dealer or service personnel.
0500006F	A hardware error has occurred in the bottom side Film Supply Encoder.	
05000070	A hardware error has occurred in the top side Film Take-up Encoder.	
05000071	A hardware error has occurred in the bottom side Film Take-up Encoder.	
0500007D	Other error is detected.	

The following errors are detected by the driver and displayed in a message box.

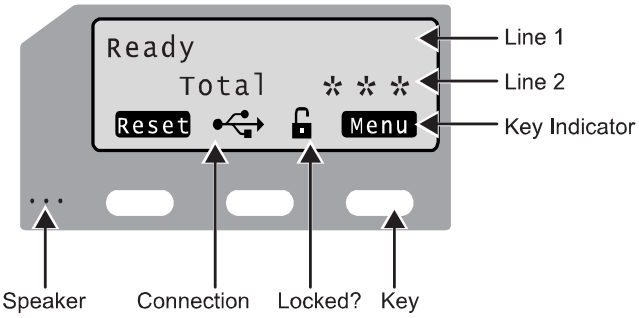
Error Code	Displayed Message	Solution
02******	Printer is not found.	• Make sure that the host PC and the printer are connected properly. • Make sure that the printer is switched on.
0300274D 0300374D	Printer is not found.	• Make sure that the host PC and the printer are connected properly. • Make sure that the printer is switched on. • If the printer is set to USB an you installed the network driver, remove it and install USB driver.
	Printing to a USB-connected printer is not possible using an Ethernet (LAN) connection.	To print using an Ethernet (LAN) connection, disconnect the USB cable from the printer.
03******	Printer is not found.	• Make sure that the host PC and the printer are connected properly. • Make sure that the printer is switched on.
	A communication error has occurred.	
04******	A communication error has occurred.	
09******	A command error has occurred,	Check the computer settings.
0x10000103	An error has occurred during magnetic encoding data writing.	Check the card specifications.
10000201	Contact IC encoding program is not found.	Contact your service provider or application provider.
10000202	Unable to establish communication with the contact IC encoder.	Contact your service provider.
10000203	An error has occurred during contact IC encoding data writing.	Check the card specifications.
10000301	Non-contact IC encoding program is not found.	Contact your service provider or application provider.
10000302	Unable to establish communication with the noncontact IC encoder.	Contact your service provider.
10000303	An error has occurred during non-contact IC encoding data writing.	Check the card specifications.
10000401	User program is not found.	Contact your service provider or application provider.
10000403	An error is returned for the user program.	Contact your service provider or application provider.
10000501	Magnetic encoding program is not found.	Contact your service provider or application provider.
10000503	An error has occurred during magnetic encoding data writing.	Check the card specifications.

Error Code	Displayed Message	Solution
10000504	An error has occurred during magnetic encoding data reading.	Check the card specifications.
10000505	A magnetic encoding command error has occurred.	Contact your service provider.
10000601	End notification program is not found.	Contact your service provider or application provider.
10000603	An error is returned for the end notification program.	Contact your service provider or application provider.
10001001	Ink ribbon cannot be recognized.	Make sure that the printer driver's ink setting matches the installed ink ribbon.
10001002	Ink ribbon specification is incorrect.	Make sure that the printer driver's ink setting matches the installed ink ribbon.
10001003	IC encoder is not installed.	—
10001004	Magnetic encoder is not installed.	—
10002000	Printer is not found.	• Make sure that the host PC and the printer are connected properly. • Make sure that the printer is switched on.
1000200*	The printer is not ready.	—

Using the LCD Menus

About the Printer Display Panel

The printer LCD panel has 2 lines of text, indicators for key functions, and symbols for connection type and lock status.



- Line one of the display shows the current printer status, such as Ready or Printing. It also shows the menu name when using menus.
- Line 2 shows card counts or choices available if you are using menus. It also shows the status of the laminator. See "Displaying Laminator Status on the Printer LCD Panel" on page 58 for more information.
- Line 3 presents key indicators, the connection symbol and the current lock state.

The display background color changes according to the printer's current state. You can change these colors using the Status Monitor. The background is:

- Bright green during power on
- Bright blue when the printer is operating normally, including during initialization, preheating, and printing cards
- Medium blue when recovering from errors.
- Red on printer error.

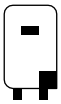
Connection and lock symbols:

The printer is connected through a USB cable. The printer does not have an IP address.

The printer is connected through a USB cable. It also has an IP Address. Printing data is sent using the USB cable.

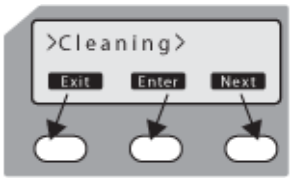
The printer is connected through a network connection. The printer does not have an IP address.

The printer is connected through a network connection. The printer has an IP address.

	The printer is unlocked.
	The printer is locked.
	The laminator is connected to the printer.

Keys:

The indicators for key functions are white text on a black rectangle. The Cleaning display shows how indicators describe the keys.



Keys can be:

Reset	Reset	Initializes the printer. Use the Reset key after loading supplies, to end Power Saving, or after an error occurs.
Menu	Menu	Press Menu to use the printer menus. Continue to press the Menu key to access the settings in the order listed in “Using the Printer LCD Panel” on page 51.
Enter	Enter	Displays the next, lower level of the menu.
Next	Next	View the next item in the menu.
Arrow Keys		Use the up and down arrow keys to display list items within a menu level.
Exit	Exit	Exits the current menu or menu selection and returns user to the previous menu selection.
Return		Confirms the user selection. The setting takes effect.
Change	Change	Make it possible to change settings. When “Change” is not displayed, use the Status Monitor to change the setting.
Scroll	Scroll	Make it possible to scroll through values for a setting.

Reset		Initializes the printer. Use the Reset key after loading supplies, to end Power Saving, or after an error occurs.
Scroll Right		Move the cursor one position to the right.
Scroll Left		Move the cursor one position to the left.

Speaker

Provides an electronic beep that indicates:

- An error has happened.
- Confirms that settings have been saved.

The speaker function can be turned on or off using the Status Monitor.

Using the Printer LCD Panel

Many printer settings can be changed using the Status Monitor. See “Status Monitor” on page 31. To use the menus:

- Press the Menu key when “Ready” is displayed to use the menus.
- Press the Menu key to display >Cleaning>, which is the first menu choice, on the LCD panel.
- The > symbol following a menu selection indicates that there are subcategories listed within the selection. Use the Next key to view these options.
- Press the Enter key when >Cleaning> is shown to view the Cleaning submenu. Press the Next key in the Cleaning submenu to view cleaning choices.
- Press the Exit key at any time to exit that level of the menu system. Continue to press Exit to "Ready" status.

Menu Display	Settings	Function
Cleaning	Rollers MG Head	Choose Rollers to start the cleaning function to clean the card feed rollers and heated rollers. See “Cleaning the card feed rollers and heat roller” on page 63. Choose MG Head to clean the magnetic (MG) head when using magnetic stripe cards. See “Cleaning the magnetic head” on page 64 for the steps to follow.
Counter Reset	OK?	Press Enter to reset the Free counter and Error counter.
Test Print	Test Pattern Printer Setting Network Setting Lami Setting	Choose what type of sample card to print. 1 Press the Change key to enter the list of choices. 2 Press the Down Arrow key to scroll the list. 3 Press the Return key to print the chosen test pattern. Test Print can be used with or without a host PC.

Menu Display	Settings	Function
Download		To prepare the printer for a firmware download, press the Enter key. The firmware must be downloaded from a USB-connected PC with the driver and Status Monitor installed. See “Others tab” on page 40 for the Status Monitor page. DO NOT power off the printer while the firmware is being downloaded.
Transport Mode	OK?	Set the Transport Mode when moving or shipping the printer. Press the Return key to use the transport mode. “Please, power off” is displayed on the LCD panel. The transport mode is cancelled when the printer is powered back on. See “Preparing the printer and laminator for transport” on page 66 for information on preparing the printer for transporting it.
Media	Ink Type YMCK YMCK-PO YMCKK YMCK-UV	Displays the types of ink ribbon and retransfer film that are loaded in the printer. Press the Next key to scroll to the next media type. Datacard supports YMCK, YMCKK and YMCK-PO ink ribbons. (The printer detects the type of ink ribbon; it cannot be set.) See your dealer regarding support for YMCKUV ink ribbon.
	Film Type 1000	Datacard retransfer film is available in 1000 frames per roll.
	Card Thickness Standard Thin	Displays the thickness set using the Status Monitor. Standard for 0.030 inch (0.76mm) thick cards or Thin for 0.010 inch (0.25mm) thick cards. Set the Card Hopper for this thickness also; see “Adjust Card Thickness” on page 9. Contact your dealer or service provider before using 0.010in (.0.25mm) thick cards.
Print	YMC Level	Displays the value set using the Status Monitor.
	Black level	Displays the value set using the Status Monitor.
	Black mode	Displays the value set using the Status Monitor.
	UV Level	Displays the value set using the Status Monitor.
	PO Level	Displays the value set using the Status Monitor.
Retransfer	Temp Level	Displays the value set using the Status Monitor.
	Speed (front)	Displays the value set using the Status Monitor.
	Speed Front (UV)	Displays the value set using the Status Monitor.
	Speed (back)	Displays the value set using the Status Monitor.
	Speed (B-UV)	Displays the value set using the Status Monitor.
	MG Peel Mode	Displays the value set using the Status Monitor.

Menu Display	Settings	Function
	Standby Front Wait Back Wait	Displays the value set using the Status Monitor.
	Backside Cool On Off	Displays the value set using the Status Monitor.
Bend Remedy	Temp Level	Displays the value set using the Status Monitor. See “Bend Remedy tab” on page 36 for more information.
	Speed	If installed, displays the value set using the Status Monitor. See “Bend Remedy tab” on page 36 for more information.
Heat Roller	HR Control Enable Disable	Displays the value set using the Status Monitor.
	Power Saving OFF or up to 60 minutes	Displays the value set using the Status Monitor.
Setting		
Display	Counter • Total Cnt • Head Cnt • Free Cnt • Cleaning Cnt • Error Cnt	Use the up and down arrow keys to select the card counter type: • **Total** is the default setting, and displays the number of cards printed. The Total counter cannot be reset. • **Head** displays the number of complete dye panels. The Head counter cannot be reset, however, it automatically resets itself when the print head is replaced. • The **Free** counter displays the number of cards that have printed. The Free counter can be reset by the user.
	Mode Counter Laminator Stat	Choose the information to display on the panel.
	Contrast 0	Displays the LCD panel contrast using 7 gradations from -3 (low contrast) to +3 (high contrast). The default setting is 0.
Buzzer	ON or OFF	Displays whether the electronic beep sound is ON or OFF. The sound can indicate an error, when fewer than 20 cards remain in the card hopper, or to confirm a menu selection.
Unit No	Choose from 1 to 10	Assign the unit number when more than one printer is connected to a PC. Each unit attached to a PC must have a unique number. After choosing the unit number, press the Enter key and then the Exit key. “Please, power off” is displayed on the LCD panel. Power the printer off and then back on.

Menu Display	Settings	Function
Option		
MG	None Lo-Co Hi-Co	Displays the coercivity for writing data to ISO magnetic stripe cards (if a magnetic stripe option is installed): Lo-Co: 238 x 10^2 [A/m] (300[Oe]) Hi-Co: 218 x 10^3 [A/m] (2750[Oe])
IC Antenna	None Installed	Displays whether the contactless card option is installed: • None for no antenna. • Installed when a smart card antenna is used.
IC Contact	None ISO Type	Displays whether the contact card option is installed: • None for no contact. • ISO type if a contact card option is installed.
Contact IC R/W	None Installed	Displays whether the contact card R/W option is installed: • None for no contact. • Installed when an internal contacts for external reader option is installed.
Bend Remedy HR	None Installed	Displays whether the bend remedy option is installed.
Turn Over	None Installed	Displays whether the turn-over (duplex) option is installed.
Laminator		
	Mode Laminate Pass	Displays whether the laminator applies material to the card or passes the card through the laminator.
	Cassette None Both Bottom Top	Displays which cartridges are loaded.
	Film-T Patch Overlay	Displays the type of film in the top cartridge.
	Film-B Patch Overlay	Displays the type of film in the bottom cartridge.
	Film-T Pos -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7	Displays the patch position setting for the top cartridge.
	Film-B Pos -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7	Displays the patch position setting for the bottom cartridge.

Menu Display	Settings	Function
	HR-T Temp 90 degC to 180 degC	Displays the set point temperature of the top heat roller. (The temperature may be 185 degC or higher depending on the firmware version of the card printer.)
	HR-B Temp 90 degC to 180 degC	Displays the set point temperature of the bottom heat roller. (The temperature may be 185 degC or higher depending on the firmware version of the card printer.)
	Speed 3.0 mm/s to 12.0 mm/s	Displays the card speed during lamination.
	Cooling Time 0sec, 5sec, 7sec, 10sec, 15sec, 20sec, 30sec	Displays the standby time for cooling down the card before lamination starts.
	HR Control Off On	Displays whether the laminator will enter low temperature standby mode. This setting works simultaneously with the card printer setting. This is always set to 'On' automatically when overlay film is selected. (Regardless of the setting, the laminator should be put into standby if you will not be printing cards for a long time.)
	Count	Displays the number of laminations performed after the last roller cleaning. This number is reset to 0 each time a roller cleaning is performed.
Network		
	Printer Name PRINTER01 to PRINTER09	Assign the Network Name of the printer. Change this name when more than one SR200 or SR300 printer is connected to the network. Choose from the names supplied. If you set up a network printer on the PC using a USB connection, this name can be assigned from the PC.
	Host IF USB LAN	View the connection method for the printer and PC, either USB or LAN (Ethernet). The setting defaults to USB when the printer is connected to a PC using a USB cable.
Network>IPv4	DHCP ON OFF	Dynamic Host Configuration Protocol (DHCP) is a network feature that assigns IP addresses to devices on the network. • ON uses DHCP to assign the printer IP address. The IP Address can change when you power off the printer and then power it on again. • OFF means that you must assign the IP Address of the printer and it will not change (Static IP). Use this setting if your network does not support DHCP. Ask your network administrator which setting to use.
	Setting: IP Address	The default IP address of the printer is 192.168.0.141, and is displayed when the printer is powered on for the first time or when DHCP is set to On. If you do not use DHCP, ask your network administrator for the IP Address to use.

Menu Display	Settings	Function
	Subnet Mask	The default Subnet Mask of the printer is 255.255.255.0. If you do not use DHCP, ask your network administrator for the Subnet mask.
	Gateway	The default Gateway of the printer is 192.168.0.1. If you do not use DHCP, ask your network administrator for the Subnet mask.
	Effective IP	The IP address the printer uses.
Network>IPv6		
	Adrs Config Auto Manual	Method to set the IP address if the network uses IPv6.
	Setting:	
	IP Address	The printer does not have an default IPv6 IP address. If Adrs Config is set to Auto and the printer is not connected to a network, None is displayed.
	Prefix Len	The default prefix length is 64.
	Gateway	The printer does not have a default IPv6 Gateway. If Adrs Config is set to Auto and the printer is not connected to a network, None is displayed.
	Session TimeOut OFF or up to 60 minutes	Shows how many minutes the driver should wait without using the printer to stop the network session between the PC and printer.
	MAC Address	The MAC Address is unique to each printer. The MAC Address is displayed and cannot be changed.
	IPSec Mode ON OFF	Displays whether Internet Protocol (IP) Security is On or Off. After setting up security using a PC and USB connection, this setting cannot be changed.
	IPSec Type not Setting Preshard Certificate	Displays the type of IP Security set using the Status Monitor. • Not Setting, no IP Security. • Preshard, using a preshared key for encryption. • Certificate, using a public key certificate for encryption.

Printer Security Number

The printer can have a security key (number) which can lock and unlock the printer using the LCD panel. If a laminator is installed, this setting also locks the laminator.

Set Up

1. Press the middle key for at least three seconds. When you release, “Set Sec-Key OK?” is displayed.
2. Press the Return key.
3. Enter the security number:
   - The number can be up to 8 digits.
   - The first digit entered is the left-most digit.
   - You can move to the right only.
   - For best results record the number as you enter it.

   a. Press the down-arrow to scroll to the value (0-9) for the left-most digit.

   b. Press the right-arrow to enter the next digit (00). The previous digit is replaced by a • symbol.

   c. Continue steps a and b until you have entered the number you want.
4. Press the Return key. The display shows “Re-enter.”
5. Enter the number again, as in step 3.
6. Press the Return key.
   - If the numbers match, the LCD panel shows Ready.
   - If the numbers do not match, the LCD panel shows “Set Sec-Key OK”? Return to step 2.

Tips for Success

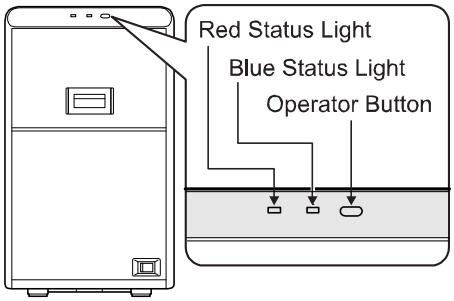
- To change the security key number, delete the number and enter a new one.

Unlock the Printer

1. Press the middle key for at least three seconds. When you release, “Unlock Sec-Key OK?” is displayed.
2. Press the Return key.
3. Enter the security number.
4. Press the Return key.
   - If the numbers match, the LCD panel shows Ready and the printer door and hopper can be opened.
   - If the numbers do not match, the LCD panel shows “Unlock Sec-Key OK”? Return to step 2.

About the Laminator Operator Panel

The status of the laminator is displayed on the LCD panel of the card printer and the Status Monitor of the PC connected to the card printer.



Red Status Light

The red status light indicates an error when only the red light is blinking or lit.

Blue Status Light

The blue status light indicates that the laminator is functioning normally when only the blue status light is blinking or lit.

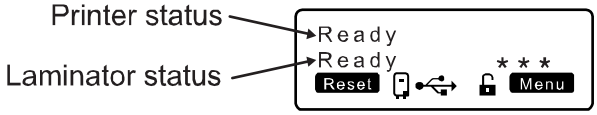
Operator Button

Press this button when the film is loaded to reset the laminator settings.

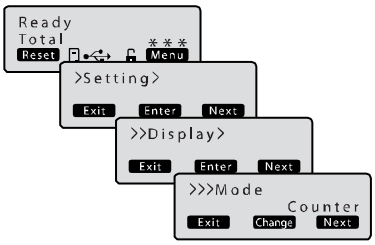
When no film cartridge is loaded, pressing the button for two seconds or longer starts the cleaning operation.

Displaying Laminator Status on the Printer LCD Panel

The printer LCD panel can display the status of the laminator.



Set up



1. Press the Menu key.
2. Press the Next key until “Settings” is displayed. Press Enter.
3. Press Enter to open the “Display” menu. “Mode - Counter” is displayed.
4. Press Change.
5. Use the Arrow key to change the mode to “Laminator State.” Press Return.
6. Press Exit. The Laminator status is now displayed on the printer LCD panel.

Laminator Status	Red Status Light	Blue Status Light	Card Printer LCD Panel	Description
Initializing	Off	Blinking (Slow)	Initializing...	Initializing in progress.
Preheating	Off	Blinking (Slow)	Preheating...	Adjusts the heating roller to the preset temperature.
Low temperature standby mode	Off	Blinking (Slow)	Standby	In HR control mode.
Power-saving mode	Off	Blinking (Slow)	Sleeping	Low power standby mode. Operates together with the card printer settings.
Ready	Off	On	Ready	The laminator is ready.
Laminating	Off	Blinking (Fast)	Laminating...	Lamination in progress.
Error mode	Blinking (Slow)	Off	Error message	Errors that do no require the laminator to power off and then on. See “Laminator LCD messages” on page 84.
	Blinking (Fast)	Off	Error message	Errors that require the laminator to power off and then on. See “Laminator LCD messages” on page 84.
Roller cleaning in progress	Blinking (Slow)	Blinking (Slow)	Cleaning...	Cleaning is in progress. Returns to the original state if a cleaning card is not inserted after a specific time interval.
Download mode	On	On	Download	Waiting for download data, or process has ended.
Downloading	Blinking (Fast)	Blinking (Fast)	Downloading...	Downloading data. (The blinking speed is faster than that when laminating is in progress.)

Laminator Settings

The Laminator settings to use change with the side of the card printed and the side of the card laminated. The following tables show examples of settings to use. The settings assume that you use heat-resistant PET-G cards, and operate the printer and laminator within the environmental specifications. Make changes in small steps and test results.

Double-sided printing and double-sided lamination

Film			1mil	0.6mil	Overlay
Laminator LM300	Temperature (Top Side)		150 deg C	135 deg C	120 deg C
	Temperature (Bottom Side)		140 deg C	125 deg C	110 deg C
	Speed		6.0 mm/s	7.0 mm/s	6.0 mm/s
	Cooling Time		0 sec	0 sec	0 sec
Card Printer SR300	Retransfer Settings	Temperature Level	+2	+2	+2
		Speed (Front)	0	0	0
		Speed (Back)	+2	+2	+2
	Bend Remedy	Temperature Level	Off	Off	Off

Single-sided printing and bottom-side lamination

Film			1mil	0.6mil	Overlay
Laminator LM300	Temperature (Top Side)		155 deg C	155 deg C	125 deg C
	Speed		5.0 mm/s	12.0 mm/s	5.0 mm/s
	Cooling Time		0 sec	0 sec	0 sec
Card Printer SR200/SR300	Retransfer Settings	Temperature Level	+2	+2	+2
		Speed (Front)	0	0	0
		Speed (Back)	+2	+2	+2
	Bend Remedy	Temperature Level	Off	Off	Off

Taking care of your printer

4

This chapter provides information to help you maintain the Datacard® SR200 & SR300 printer and the Datacard® LM200 & LM300 card laminator for optimal performance. It describes:

Cleaning the printer

- “Cleaning the cleaning unit” on page 62
- “Card load roller” on page 62
- “Cleaning the card feed rollers and heat roller” on page 63
- “Cleaning the magnetic head” on page 64
- “Cleaning the thermal head” on page 65
- “Cleaning printer fan filters” on page 65
- “Preparing the printer and laminator for transport” on page 66

Cleaning the laminator

- “Cleaning the card feed rollers and heat roller” on page 67
- “Cleaning the laminator internal components” on page 68
- “Cleaning the laminator cartridge” on page 69
- “Laminator fan filter” on page 69

If the printer uses the Security Lock, see “Security Lock tab” on page 40. Unlock the printer before starting any of the tasks in this chapter.

Cleaning the printer

This section provides information on proper care and cleaning of the SR200 & SR300 printer. It also includes recommendations on how often to clean and replace components.

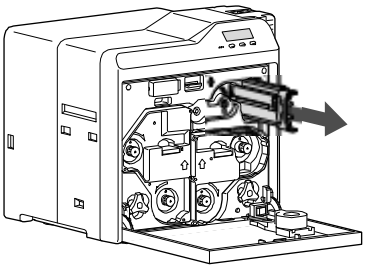
Cleaning the cleaning unit

Tips – Card cleaning roller

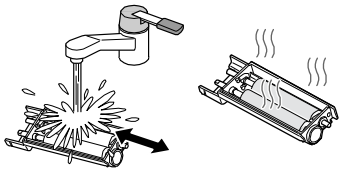
- Wash the card cleaning rollers regularly, such as every time you change the ink ribbon.
- More frequent cleaning may be required under heavy use conditions. Clean rollers every 200 cards to improve print quality.
- Allow the card cleaning rollers to dry thoroughly before reinstalling them in the printer.
- Replace the cleaning unit annually.

The cleaning unit is located inside the printer door and cleans lint and other debris from the cards before printing. To clean the unit:

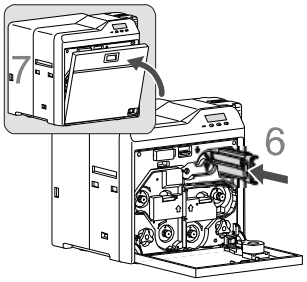
1. Open the printer door.
2. Pull the cleaning unit out.



3. Wash the blue cleaning rollers with water. Rub rollers gently under running water. Do not use isopropanol or detergents to clean the rollers.



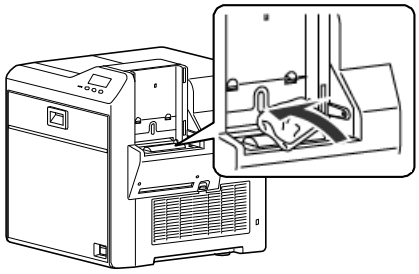
4. Allow the card cleaning rollers to dry thoroughly.
5. Reinstall the cleaning unit with the blue rollers facing to the right.
6. Close the printer door.



Card load roller

The card load roller is located under the card hopper, and picks cards before they are printed.

1. Remove the card hopper. See “Remove Hopper and Cards” on page 9.
2. Using a cleaning wipe with isopropanol, wipe the roller while pushing it toward the printer.
3. Replace the card hopper. See “Replace the Hopper” on page 9,



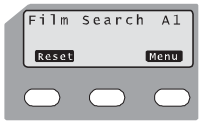
Cleaning the card feed rollers and heat roller

The heat roller provides the heat used during the retransfer process. The card feed rollers move the card inside the printer. See “Printer roller layout” on page 71 to find the location of the rollers.

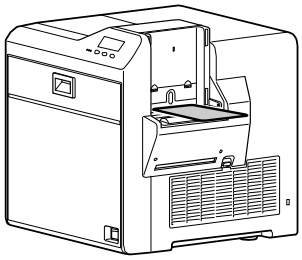
Tips – Cleaning card feed and heat rollers

- The heat roller cannot be cleaned while hot. Power the printer off and allow it to cool, or perform cleaning before the heat roller reaches operating temperature.
- Clean the card feed rollers and heat roller every 1,000 printed cards.
- Use the cleaning card one time only. Using a dirty cleaning card can cause damage to the rollers.
- For best results when using a laminator with the printer, separate them. See “Cleaning the laminator” on page 67.

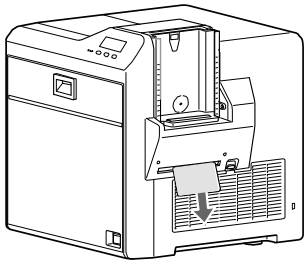
1. Clean the cleaning unit. See “Cleaning the cleaning unit” on page 62.
2. Clean the Card Load Roller. See “Card load roller” on page 62.
3. Begin with the printer (and optional laminator) powered off.
4. Move the LM200/LM300 laminator (if installed) away from the printer to avoid a card jam during the cleaning process.
5. Slide the door latch to the right and open the printer door.
6. Press the retransfer film cartridge eject button and remove the retransfer film cartridge. If the laminator is installed, remove the laminator film cartridges.
7. Close the printer door.
8. Remove the card hopper. See “Remove Hopper and Cards” on page 9.
9. Power on the printer. See “Power on the printer” on page 16.
10. The "Film search A1" message is displayed on the LCD display.



11. Remove the protective paper from a cleaning card.
12. Press the Menu key, "Cleaning" is displayed.
13. Press the Enter key.
14. "Rollers OK?" is displayed. Press the Return key.
15. “Film checking” is displayed, followed by “Cleaning Start OK?” Press the Return key.



16. Insert the cleaning card into the card slot located on the right side of the printer within 20 seconds. The card will be drawn into the printer by the rollers and cleaning will begin.
17. The card is discharged and “Cleaning Start OK?” is displayed. Press the Return key, turn the card over, and insert it again to complete the cleaning process.



18. Press Exit to end the cleaning process.
19. When the cleaning card is discharged, power off the printer, wait ten seconds, reinstall the retransfer film cartridge, card hopper and laminator film cartridges, and power back on.

Cleaning the magnetic head

When printing magnetic stripe cards, the magnetic head should be cleaned every 1,000 cards. If you are not using magnetic stripe cards, the magnetic head does not require cleaning.

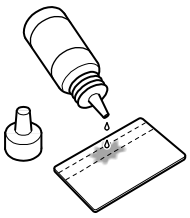
Tips –Magnetic head cleaning card

- Replace the magnetic head cleaning card when it becomes dirty. Using a dirty magnetic head cleaning card can damage the magnetic head.

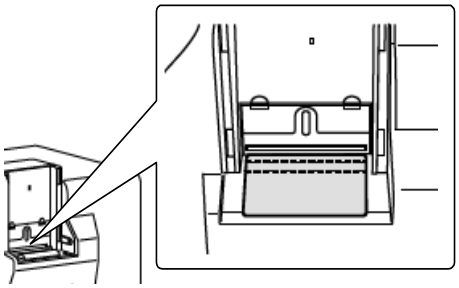
Begin with the printer (and optional laminator) powered off.

1. Power on the printer. See “Power on the printer” on page 16.
2. Move the LM200/LM300 laminator (if installed) away from the printer to avoid a card jam during the cleaning process.
3. Remove the card hopper and cards. See “Remove Hopper and Cards” on page 9.
4. Press the Menu key. "Cleaning" is displayed.
5. Press Enter and use the Next key to select "MG Head OK?"

6. Place three or four drops of isopropanol on the stripe of the magnetic head cleaning card.



7. Place the magnetic head cleaning card on the card load roller.
8. Press the Return key on the LCD panel.
9. When the cleaning card is discharged:
   a. Power off the printer.
   b. Replace the card hopper.
   c. Wait ten seconds.
   d. Power the printer on.



10. Replace the card hopper and cards. See “Replace the Hopper” on page 9

Cleaning the thermal head

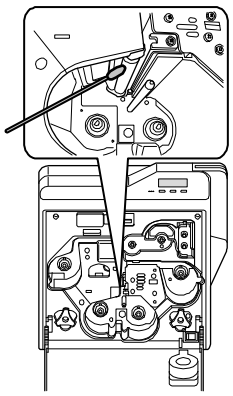
The thermal head assembly should be cleaned once every ten rolls of retransfer film.

Begin with the printer (and optional laminator) powered off.

Tips – Thermal head

- Do not use metal or other abrasive materials to clean the thermal head.
- The thermal head can be damaged by an electrostatic charge. Discharge yourself by touching the printer frame before cleaning the thermal head.

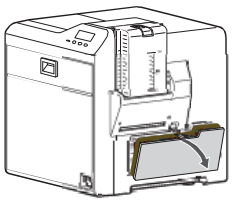
1. Open the printer door.
2. Press the ink ribbon cartridge eject button and remove the ink ribbon cartridge.
3. Press the retransfer film cartridge eject button and remove the retransfer film cartridge.
4. Wipe the thermal head with a large cotton swab dipped in ethanol.
5. Reinstall the ink ribbon cartridge and the retransfer film cartridge.
6. Close the printer door.
7. Power the printer on.



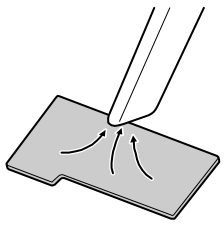
Cleaning printer fan filters

The printer has a fan filter to prevent airborne particles from entering the print area. Clean the filters regularly. Replace them every year, or when the foam begins to deteriorate.

1. Remove the external fan cover and filter.



2. Clean the filters carefully using a vacuum cleaner. Hold the foam filter in place to prevent it from being pulled into the vacuum.
3. Replace the fan filter and cover in the printer.



Preparing the printer and laminator for transport

Use saved packaging materials to prepare the printer and optional laminator for transport. Transport includes moving the printer from one location to another within the same facility.

1. Open the door to the printer. The “Door Open” error message is displayed.
2. Remove the printer ink ribbon cartridge and remove the ink ribbon from the cartridge. Replace the empty cartridge into the printer.
3. Remove the retransfer film cartridge and remove the retransfer film from the cartridge. Replace the empty cartridge into the printer.
4. If present, remove the top and bottom laminate cartridges from the laminator. Replace the empty cartridges into the laminator.
5. Close the doors to the printer and laminator. Push the Reset key.
6. The “Initialize OK?” message appears. Push the Enter key.
7. The “Film Search” error message is displayed.
8. Set the printer to transport mode using the LCD panel.
9. Power off the printer and laminator.
10. Disconnect the power and data cables from the printer and laminator.
11. Remove cards from the hopper.
12. Remove the output stacker.
13. Allow the unit to cool down before packaging it for transport.
14. Package the printer and laminator in their original shipping cartons.

Note:

When the printer is not in use, turn off the power and cover the printer with the plastic shipping bag to keep dust and other debris out of the printer.

Cleaning the laminator

Most card jams are caused by dirty rollers. Clean the laminator at the same time that you clean the printer. If you are using the laminator as a stand-alone unit, clean the laminator after every 1,000 cards.

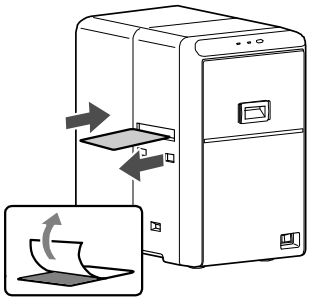
Cleaning the card feed rollers and heat roller

The heat roller provides the heat used during the retransfer process. The card feed rollers move the card inside the laminator. See “Laminator roller layout” on page 80 to find the location of the rollers.

Tips – Laminator cleaning card

- The heat roller cannot be cleaned while hot. Power the printer off and allow it to cool, or perform cleaning before the heat roller reaches operating temperature.
- Clean the card feed rollers and heat roller every 1,000 printed cards.
- Use the cleaning card one time only. Using a dirty cleaning card can cause damage to the rollers.

1. Begin with the printer and laminator powered off.
2. Open the laminator door.
3. Remove the laminator cartridge, remove patch or topcoat material, and replace the empty cartridge into the laminator.
4. Close the laminator door and turn on the power of the laminator. The red status light starts blinking.
5. Press the operator button for two seconds or longer. This starts the cleaning process.
6. Remove the protective paper from a cleaning card.
7. Insert the cleaning card into the card outlet of the laminator. The card is drawn in by the roller. Cleaning starts automatically and is discharged from the card outlet.



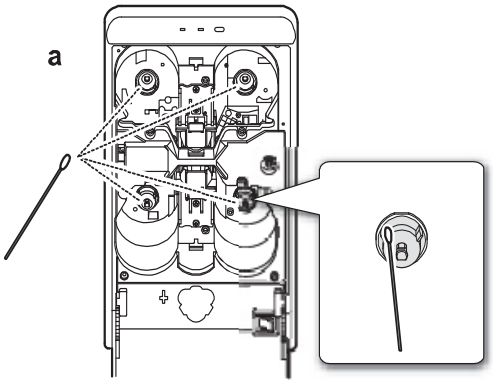
8. Press the operator button for two seconds or longer.
9. Reverse the adhesive face of the cleaning card and insert it into the card outlet. The cleaning card is discharged from the card outlet of the laminator.
10. Power off the laminator.
11. Open the laminator door and reinstall the film cartridge in the laminator.
12. Power the laminator on.

Cleaning the laminator internal components

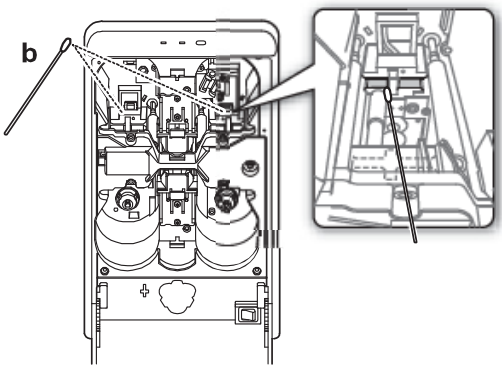
Dirt during card feed or burrs caused by friction between the bobbin holder and bobbin can adhere to the card or film, causing defections in card lamination.

Clean these components regularly to avoid lamination defects.

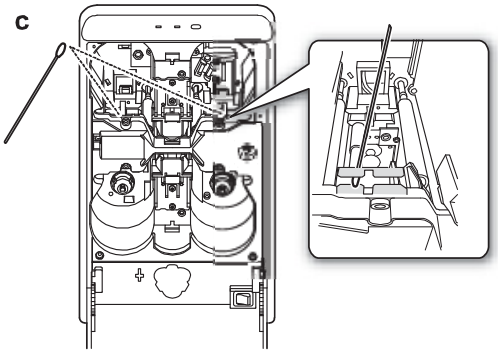
1. Begin with the laminator turned off.
2. Open the laminator door.
3. Remove the top laminate film cartridge and the upper cover or bottom laminate film cartridge.
4. Using a cotton swab and isopropanol, clean the following components:
   - **a** Bobbin holders; 2 for each laminator



   - **b** Rear guide rails, on each side of the heat roller. Clean upper and lower surfaces.



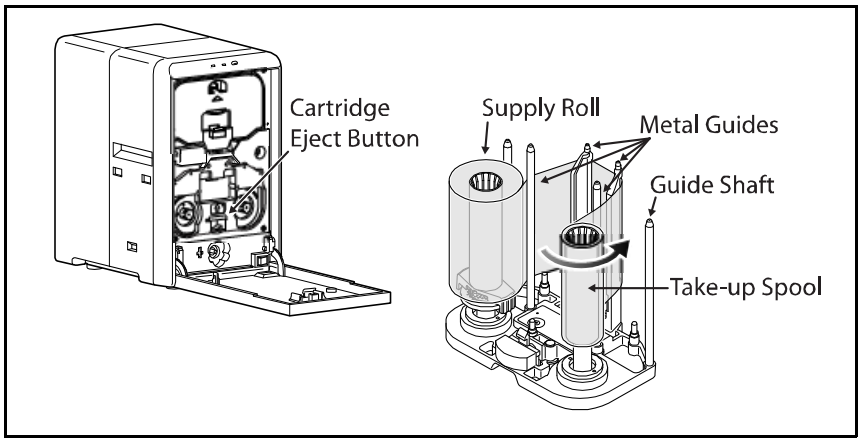
   - **c** Front guide rails, on each side of the heat roller. Clean upper and lower surfaces.



5. Remove any slack in the laminator cartridges.
6. Reinstall both the top and bottom laminate film cartridges in the laminator.
7. Close the laminator door.

Cleaning the laminator cartridge

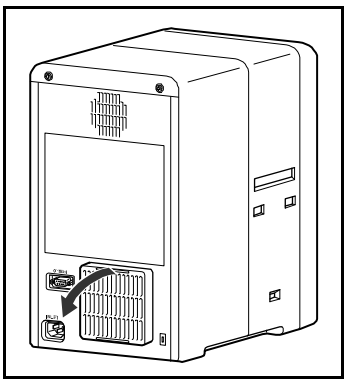
The laminator cartridge(s) can collect debris and dust during lamination and supply loading. Clean the cartridge(s) every 1,000 cards.



1. Open the laminator door by pulling the top of the door toward you.
2. Press and hold down the cartridge release button and pull out the film cartridge.
3. Remove the laminate film from the film cartridge.
4. Clean the four metal guides with a lint free cloth and isopropanol.
5. Replace the supply and take-up spools on the cartridge. See “Load top side laminate film” on page 12.
6. Replace the loaded laminator cartridge in the laminator until it clicks in position.
7. Close the laminator door.

Laminator fan filter

The laminator fan filter is designed to keep airborne particles from entering the unit. Clean the filter regularly and replace it when the foam begins to deteriorate.



1. Remove the filter from the back of the laminator by pulling the filter cover off.
2. Clean the filter carefully using a vacuum cleaner. Hold the foam filter in place to prevent it from being drawn into the vacuum.
3. Reinstall the filter.

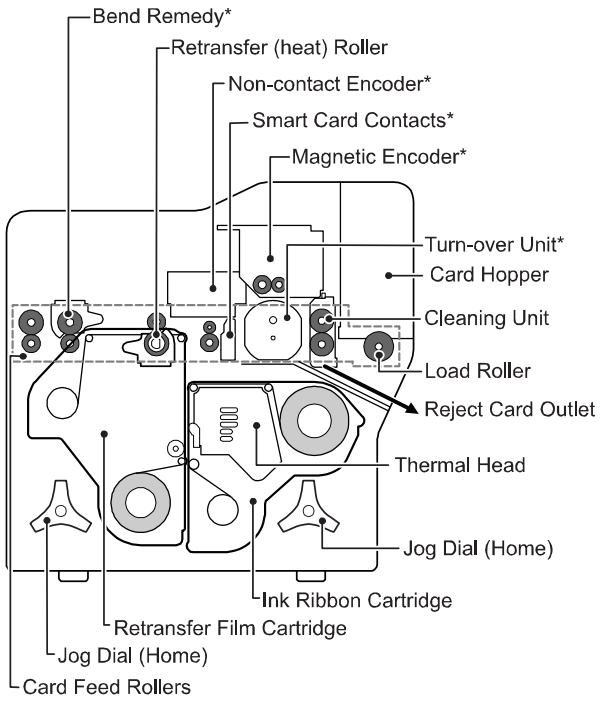
Messages and error recovery

5

This chapter provides information to help you respond to the printer and laminator messages and explains how to recover from an error. It describes:

- “Printer roller layout” on page 71
- “Printer error recovery” on page 72
- “Printer LCD messages” on page 77
- “Laminator roller layout” on page 80
- “Laminator LCD messages” on page 84

Printer roller layout



* Optional features

If the printer uses the Security Lock, see “Security Lock tab” on page 40. Unlock the printer before starting any of the tasks in this chapter.

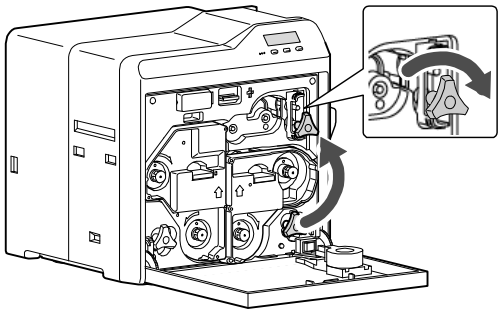
Printer error recovery

The printer's LCD panel background color changes to red when the printer has an error. The LCD panel displays text that describes the error.

Hopper jam

If a card jams in the card hopper section, "Jam (Hopper)" is displayed on the LCD panel. To remove the jammed card:

1. Slide the card hopper latch open.
2. Slide the card cover up and remove any cards.
3. Try the following in the order presented:
   a. If you can reach the jammed card, pull it out.
   b. On the printer front panel, press the Reset key and then the Return key. If possible, the printer moves the card and ejects it from the reject card outlet.
   c. If the printer does not eject the card:
      — Power off the printer.
      — Open the printer door.
      — Place a Jog Dial on the lower shaft of the cleaning unit.



      — Turn the Jog Dial clockwise to move the card unit you can see it in the hopper.
      — Remove the card, return the Jog Dial to the home location, and close the printer.
4. Replace cards and the card cover.
5. Press the Reset, Next and then Return to initialize the printer.

Tips – Hopper jam

- Some internal parts may be hot. Wear a glove when reaching into the printer.

Transfer jam

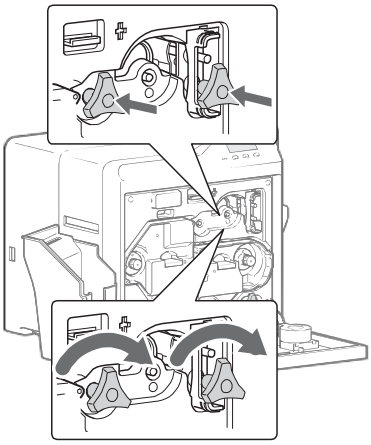
Tips – Transfer jam

- Some internal parts may be hot. Wear a glove when reaching into the printer.

If the card jams in the card feed rollers, “Jam (Transfer)” is displayed on the LCD panel. To remove the jammed card:

1. Power off the printer.
2. Remove the card hopper and cards. See “Remove Hopper and Cards” on page 9.
3. Locate the jammed card.
4. Place one Jog Dial on the cleaning unit shaft and the other Jog Dial on the card feed rollers shaft.
5. Turn both shafts clockwise, to move the card toward the hopper area.

   Do not force the card to move. Instead, ask your service provider for assistance.



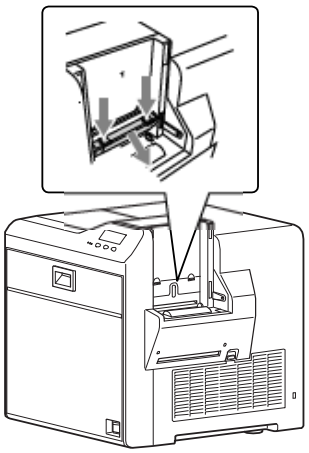
6. Remove the card from the hopper area or the reject card outlet.
7. If the printer has a turnover unit, make sure it is horizontal–in home position. See “Turnover jam” on page 74.
8. Return the Jog Dial(s) to the home location, and close the printer door.
9. Replace the card hopper. See “Replace the Hopper” on page 9.
10. Replace the ink ribbon or retransfer film cartridge if removed.
11. Power on the printer and initialize the supplies as described in “Initialize the ink ribbon and retransfer film” on page 17.

Turnover jam

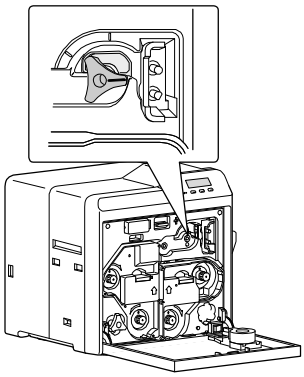
Tips – Turnover jam

- Some internal parts may be hot. Wear a glove when rotating the turnover unit.

If a card jams in the card turnover section, “Jam (TurnOver)” is displayed on the LCD panel. To remove the jammed card:



1. Power off the printer.
2. Remove the card hopper and cards. See “Remove Hopper and Cards” on page 9.
3. Remove the slot cover.
4. Open the printer door.
5. Remove the cleaning unit.
6. Remove the jammed card from the turn-over unit, through the slot in the input area.
   - — If you cannot remove it, go to step 11.
   - — If you have removed the card, continue with these steps.
7. Replace the cleaning unit.
8. Place a Jog Dial on the turnover unit shaft.



9. Turn the Jog Dial until the turnover unit is horizontal and the bar on the Dial points to the right. This is the home position for the turnover unit.
10. Using the Jog Dial on the cleaning unit, turn it to move the card back into the turn-over unit.
11. If the card is still stuck, place the second Jog Dial on the lower cleaning unit shaft.
12. Turn both the turnover unit and the cleaning roller shaft, so the card stays in the turnover unit, and set to the home position
13. Make sure the turnover unit is horizontal–in home position.
14. Return the Jog Dial(s) to the storage location, and close the printer door.
15. Replace cards and the card cover.
16. Replace the ink ribbon cartridge and initialize the supplies as described in “Initialize the ink ribbon and retransfer film” on page 17.

Retransfer section jam

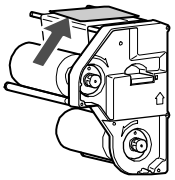
Tips – Retransfer jam

- Some internal parts may be hot. Be careful when removing a jammed card.
- The card might be very hot. Use the supplied tweezers to remove cards from the printer.
- Do not drop the card inside the printer.

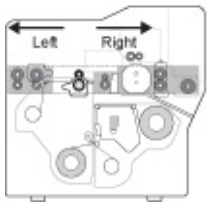
If a card jams in the retransfer section, “Jam (Retransfer)” is displayed on the LCD panel. To remove the jammed card:

1. Power off the printer.
2. Open the printer door.
3. Press the retransfer film cartridge eject button and remove the retransfer film cartridge.

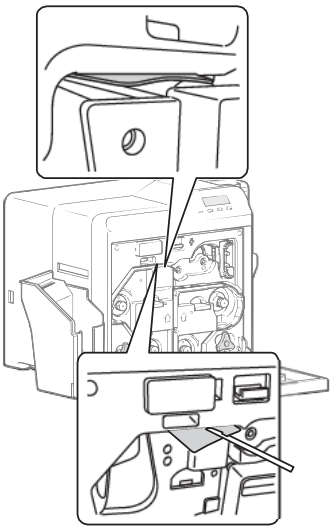
   The card might be stuck to the film. Watch carefully to avoid jamming the card when removing the retransfer film cartridge.

   If “Please Close Door” appears, the retransfer film cartridge is stuck. Push it back into the printer, close the door, and return to step 3.
4. Remove the card from the printer or from the retransfer film cartridge.
5. If the card is stuck to the right of the heat roller, see “Transfer jam” on page 73.

6. If the card is stuck near the Retransfer heat roller, use the supplied tweezers to remove the card, as shown.

   
7. Replace the retransfer film cartridge and close the printer door.
8. Power on the printer.
9. Press Reset. “Card Jam Removed?” appears on the printer LCD panel.

   Do not initialize the printer with the card inside.

   — Press Yes only if the card is removed.

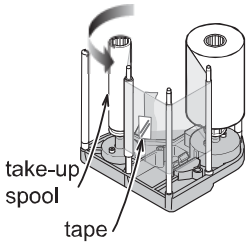
   — Press No if the card remains inside the printer.
10. Initialize the supplies as described in “Initialize the ink ribbon and retransfer film” on page 17.

Mending broken ink ribbon or retransfer film

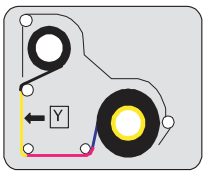
If the ink ribbon or retransfer film breaks, “Ink Search” or “Media Search” is displayed on the LCD panel. Broken ink ribbon is shown in the following example; repairing broken retransfer film uses the same steps.

1. Power off the printer.
2. Open the printer door.
3. Press the eject button for the appropriate cartridge and remove the cartridge.
4. Trim the ends of the broken portions evenly.

   Do not remove the used ink ribbon or film from the take-up spool.



5. Align the ends of the broken media evenly and apply tape to secure.
6. Turn the take-up spool counter-clockwise until the mended portion is wound onto the spool two or three turns.



7. Make sure the yellow panel aligns with the arrow on the cartridge.
8. Reinstall the cartridge into the printer until it clicks into position.
9. Close printer door.
10. Initialize the supplies as described in “Initialize the ink ribbon and retransfer film” on page 17.

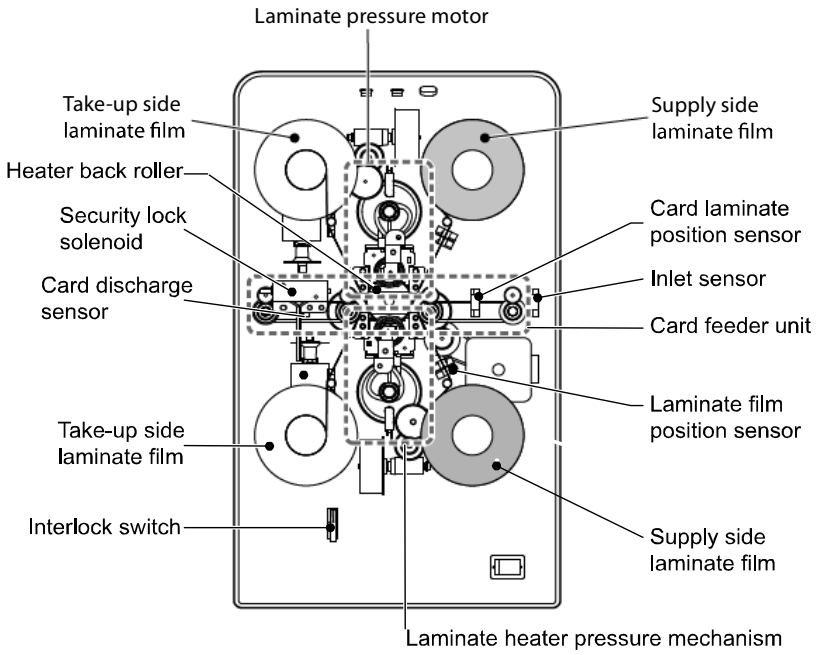
Printer LCD messages

LCD Message	Possible Cause	Solution
Please, Power Off	The power must be turned off to initialize the printer.	Turn the power switch off and then on again.
Please Remove Media Cassette	Cleaning cannot start when the retransfer film cartridge is in the printer.	1 Remove the retransfer film cartridge. 2 Press Reset and then Return to initialize the printer. 3 Start the cleaning cycle again.
HR is too hot	Cleaning cannot start because the temperature of the heat roller is too high.	1 Power off the printer and allow the heat roller to cool for about 20 minutes. 2 Power on the printer and start cleaning again. Make sure that the retransfer film cartridge has been removed. 3 See “Cleaning the card feed rollers and heat roller” on page 63 for instructions on how to clean the card feed and heat rollers. 4 Contact your service provider if “HR is too hot” appears on the LCD panel and you are not cleaning the printer.
Jam (Hopper)	There is a card jam in the hopper section.	1 Remove jammed card from the card hopper. 2 Press Reset, and then Return to initialize the printer. 3 See “Hopper jam” on page 72.
Jam (Turnover)	There is a card jam in the turnover section.	1 Remove jammed card from the turnover section. 2 Press Reset, and then Return to initialize the printer. 3 See “Turnover jam” on page 74.
Jam (MG)	There is a card jam in the magnetic stripe encode section.	1 Press Reset, and then Return to initialize the printer. If no card is discharged, remove the card from the encode section. 2 Press Reset, and then Return to initialize the printer.
Jam (Transfer)	There is a card jam in the card feed rollers.	1 Remove the jammed card. 2 Press Reset, and then Return to initialize the printer. 3 See “Transfer jam” on page 73.
Jam (Discharge)	There is a card jam in the card discharge section.	1 Press Reset, and then Return to initialize the printer. 2 Remove the jammed card from the retransfer section. 3 Check that the card stacker is securely attached to the stacker receptacle. An incorrectly mounted card stacker can cause discharge jams.

LCD Message	Possible Cause	Solution
Jam (Retrans)	There is a card jam near the retransfer rollers.	1 Remove the jammed card from the retransfer section. 2 Press Reset, and then Return to initialize the printer. 3 See “Retransfer section jam” on page 75.
Film Search	The retransfer film is broken or missing.	1 Repair the retransfer film as described in “Mending broken ink ribbon or retransfer film” on page 76. 2 Press Reset, Next, and then Return to initialize the film one panel.
Film Run Out	The retransfer film has run out.	1 Replace with new roll of retransfer film as described in “Load retransfer film” on page 11. 2 Initialize the new roll of film as described in “Initialize the ink ribbon and retransfer film” on page 17.
Ink Search	The ink ribbon is broken.	1 Repair the ink ribbon as described in “Mending broken ink ribbon or retransfer film” on page 76. 2 Press Reset, Next, and then Return to initialize the printer and supplies.
Ink Run Out	The ink ribbon has run out.	1 Replace with a new roll of ink ribbon as described in “Load ink ribbon” on page 10. 2 Press Reset, Next, and then Return to initialize the printer and supplies.
Ink Error	The ink ribbon is not installed or the ribbon installed is not supported.	1 Install a supported ink ribbon. 2 Press Reset, Next, and then Return to initialize the printer and supplies.
Please Adjust Turn Unit Pos!	The card turnover unit is not in the correct position.	1 Turn the unit to the home position using a Jog Dial, as described in “Turnover jam” on page 74. 2 Press Reset, and then Return to initialize the printer. Call for service if the problem persists.
Cam Error	Heat roller operation error.	1 Press Reset, and then Return to initialize the printer. 2 Call for service if the problem persists.
No Card	1 There are no cards in the card hopper. 2 The card hopper has been removed.	1 Load cards as described in “Load cards” on page 8. 2 Replace the card hopper securely as described in “Replace the Hopper” on page 9.
Door Open	The printer door is open, or a supply cartridge or cleaning unit is missing.	1 Insert all supply cartridges and the cleaning unit. 2 Close the printer door. 3 Press Reset, and then Return to initialize the printer.
Hardware	There is a hardware error.	Turn the power switch off and then on again. Call for service if the problem persists.

LCD Message	Possible Cause	Solution
HR Overheat	The retransfer or bend remedy roller is too hot.	Turn the power switch off and then on again. Call for service if the problem persists.
TR Heater	The retransfer roller is not working.	Turn the power switch off and then on again. Call for service if the problem persists.
TR Overheat	The retransfer roller is too hot.	Turn the power switch off and then on again. Call for service if the problem persists.
TR Thermister	The retransfer roller thermistor is not working.	Turn the power switch off and then on again. Call for service if the problem persists.
RR Overheat	The bend remedy roller is too hot.	Turn the power switch off and then on again. Call for service if the problem persists.
RR Heater	The bend remedy roller is not working.	Turn the power switch off and then on again. Call for service if the problem persists.
RR Thermister	The bend remedy roller thermistor is not working.	Turn the power switch off and then on again. Call for service if the problem persists.
Overcool	It is too cold for the printer to operate.	The temperature in the printer area is too low. Use at the recommended operating environment temperature as described in “Operating environment” on page 92.
Head Overheat	The thermal head is overheated.	Turn the power switch off and allow the printer to cool for approximately 10 minutes before turning power back on.
Power Intrpt	Power was interrupted for a short time.	Turn the power switch off and then on again. Call for service if the problem persists.
EEProm Broken	EEPROM malfunction	Turn the power switch off and then on again. Call for service if the problem persists.
MG Unconnected	Magnetic stripe module connection error	Turn the power switch off and then on again. Call for service if the problem persists.
MG Mechanical	Magnetic stripe mechanical error	Turn the power switch off and then on again. Call for service if the problem persists.
MG Hardware	Magnetic stripe hardware error	Turn the power switch off and then on again. Call for service if the problem persists.
MG Test Err	A write error occurred during self-test.	1 Check the type and orientation of magnetic cards in the card hopper as described in “Load cards” on page 8. 2 Press Reset, and then Return to initialize the printer.

Laminator roller layout

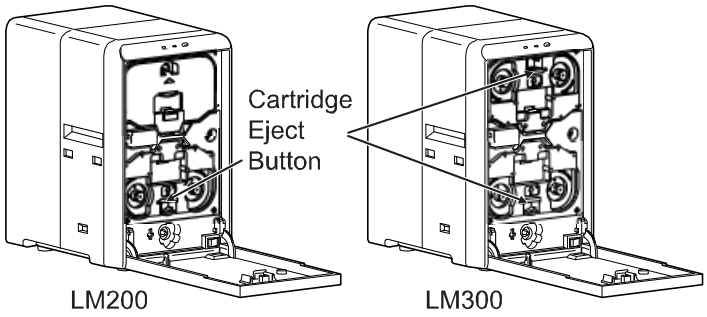


Laminator error recovery

The printer LCD panel and the Status Monitor displays laminator messages. See “Laminator LCD messages” on page 84 for a list of messages.

Card jam

The printer LCD panel displays the location of the card jam: Card Jam (In), Card Jam (Middle), or Card Jam (Out). Use the following steps to remove card jams.

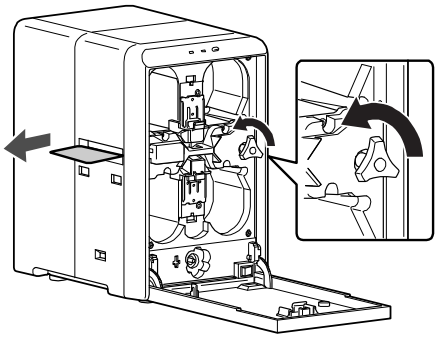


1. Open the laminator door.
2. Turn the take-up knob clockwise (bottom) or counterclockwise (top) to remove slack in the laminator material.
3. Press and hold down the cartridge button and pull out the film cartridge. The cartridge may be difficult to pull out if the card is

attached to the laminate film. Pull out the cartridge slowly to avoid dropping the laminate film from the cartridge. If the cartridge cannot be removed, call for service.

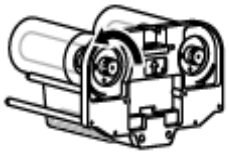
4 Remove the jog dial from the card printer and attach it to the jog dial insertion slot.

5 Turn the jog dial counter-clockwise to discharge the card from the card outlet.



6 Inspect the cartridge:

— If the material on the cartridge is in one piece:

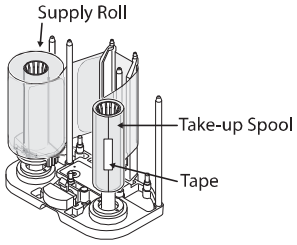


— Turn the bottom side cartridge take-up knob counter-clockwise until all damaged material is wound neatly on the take-up spool.

— Turn the top side cartridge take-up knob clockwise until all the damaged material is wound neatly on the take-up spool.

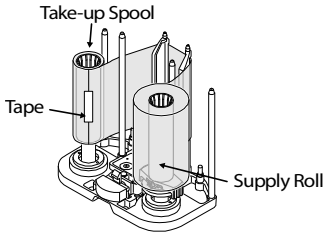
— If the material is split or broken:

— Trim the ends of the broken portions evenly.



— Align the end of the supply material with the take-up spool and apply tape to secure.

— Turn the material onto the take-up spool until the mended portion is wound two or three turns.



7 Replace the loaded laminator cartridge in the printer until it clicks into position.

8 Close the laminator door. The laminator re-initializes automatically.

Patch Position

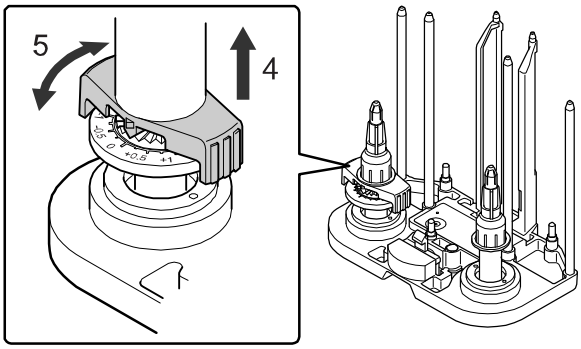
The position of the patch on the card can very slightly with a different lot of laminator supply material. You can change the left-to-right position or the top to bottom position.

Change the front-to-back position

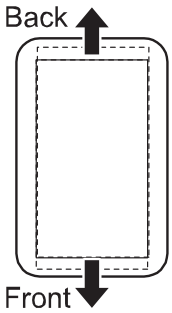
Turning the supply sprocket of the film cartridge enables you to adjust the patch position to the front or back by 1.0 mm.

Use the following steps to change the front-to-back patch position:

1. Power off the laminator and allow it to cool.
2. Open the laminator door and remove the laminator cartridge.
3. Remove the supply film from the cartridge.
4. Pull the sprocket up.
5. Turn the sprocket knob to move the patch:



   - — Turn the knob counter-clockwise (+) to move the patch position to the back.
   - — Turn the knob clockwise (-) to move the patch position to the front.



6. Release the sprocket.
7. Load the supply film onto the cartridge.
8. Insert the cartridge, close the door, and power on the laminator. The laminator initializes the supply material automatically.
9. Laminate a card to verify the new position.

Change the left-to-right position

Use the Status Monitor to change the left-to-right position of the patch on the card. See “Status Monitor” on page 31 to use the Film Position setting.

Use the following steps to change the left-to-right patch position:

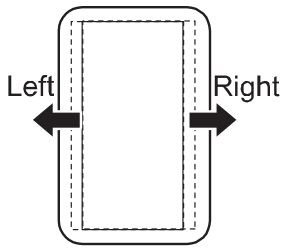
1. Open the Status Monitor and select the Laminator tab.
2. Move the slider in the Position box to adjust the patch position left or right.

— Moving the slider to the left moves the patch to the left side of the card.

— Moving the slider to the right moves the patch to the right side of the card.

3 Select Update to update the laminator settings.

4 Laminate a card to verify the new position.



Card warping

When the laminated card warps, the optional printer bend remedy can correct the problem. See “Bend Remedy tab” on page 36.

Lower the laminating temperature or increase the laminating speed to help reduce card warping, if a bend remedy option is not present. See “Laminator tab” on page 38 to change these settings using the Status Monitor.

Laminator LCD messages

LCD Message	Possible Cause	Solution
Jam (In)	There is a card jam in the entrance area.	Check that the laminator is properly connected to the printer as described in “Optional laminator connection” on page 15. See “Card jam” on page 80 to clear the jam.
Jam (Middle)	There is a card jam near the heating roller.	The laminating temperature is too high or the speed is too slow. Set the temperature or speed as described in “Laminator tab” on page 38. See “Card jam” on page 80 to clear the jam.
Jam (Out)	There is a card jam in the card discharge area.	The laminating temperature is too high or the speed is too slow. Set the temperature or speed as described in “Laminator tab” on page 38. See “Card jam” on page 80 to clear the jam.
Film-B RunOut	The end of the roll mark has been detected.	Replace the laminating material as described in “Load top side laminate film” on page 12
Film-B Search	The laminator is searching for laminate material.	Check that the laminating film is correctly loaded as described in “Load top side laminate film” on page 12. Check that the type of laminating film in use and the settings are appropriate.
Film-T RunOut	The end of the roll mark has been detected.	Replace the laminating material as described in “Load bottom side laminate film” on page 13
Film-T Search	The laminator is searching for laminate material.	Check that the laminating film is correctly loaded as described in “Load bottom side laminate film” on page 13. Check that the type of laminating film in use and the settings are appropriate.
Door Open	The laminator door is open.	Install the laminator cartridge as described in “Load top side laminate film” on page 12. Press the RESET/↑ and then the ENTER key to initialize the laminator.
No Cassette	The film cartridge is not inserted.	Insert the film cartridge.
Thermostat	The thermostat is not connected.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
HR-B Overheat	Heating roller temperature error (temperature is too high).	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Overheat-B	Internal temperature error (temperature is too high).	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.

LCD Message	Possible Cause	Solution
HR-T Overheat	Heating roller temperature error (temperature is too high).	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Overheat-T	Internal temperature error (temperature is too high).	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Heater-B	Heater error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Heater-T	Heater error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Thermistor-B	Heating roller sensor temperature error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Thermistor-T	Heating roller sensor temperature error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Cam-B	Heating roller pressing operation error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Cam-T	Heating roller pressing operation error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
HR-BTOverheat	Heating roller temperature error (temperature is too high).	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Overheat-T	Internal temperature error (temperature is too high).	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Heater-T	Heater error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Thermistor-T	Heating roller sensor temperature error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Cam-T	Heating roller pressing operation error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.

LCD Message	Possible Cause	Solution
Overcool	Internal temperature error (temperature is too low).	The ambient operating temperature is too low. Use the laminator within the prescribed range. When starting up the laminator in a low temperature environment, the temperature of the interior can remain low even though the surrounding temperature has gone up. Turn on the power again after waiting for about one hour.
Supply ENC-B	Supply side motor encoder (rotation detection) error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Wind ENC-B	Take-up side motor encoder (rotation detection) error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Supply ENC-T	Supply side motor encoder (rotation detection) error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Wind ENC-T	Take-up side motor encoder (rotation detection) error.	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
Other Error	Other errors	Turn the power switch off, and then back on. Contact your service provider if this does not correct the condition.
COM Error	A communication error has occurred between the printer and the laminator. The power of the laminator is off. There was a misalignment in the positions of the laminator and the card printer.	Turn on the power for the laminator. Fit the laminator and printer to the joining plate properly. See the Installation guide for more information.

Supplies

6

This section outlines the recommended supplies to use with the Datacard® SR200 & SR300 card printer and the Datacard® LM200 & LM300 card laminator.

- “Ink ribbon, and retransfer film, and laminator material” on page 88
- “Cards” on page 89
- “Cleaning supplies” on page 90

Ink ribbon, and retransfer film, and laminator material

Ink ribbon

Color print ribbons are designed for full-color card printing. The ribbons use the following color panels: Y=yellow, M=magenta, C=cyan, and K=black.

The following ink ribbons are available:

Type	Part number	Max cards/ roll	Purpose
YMCK	568971-001	1,000	Full color and black (K) on one side or Full color and black (K) on both sides
YMCKK	568971-002	750	Full color and black (K) on one side and black (K) only on the other side
YMCK-PO	568971-004	750	Full color with a non-printing (peel-off) area for magnetic stripe on one side or on both sides
YMCK-UV	568971-005	750	Full color and black (K) with UV printing on one side or on both sides

Retransfer film

The following retransfer film is available:

568971-103 (Prints up to 1,000 single-sided cards.)

Laminator material

Successful laminating depends on the type of card used and its construction. If you are interested in applying topcoat or patch on PVC cards, contact your dealer for guidance. Datacard® provides two types of materials for use in laminators:

- Topcoat, which is a continuous film.
- Patch, which has die-cut patches sized to fit on a card.

The LM200/LM300 laminator can apply any of the following types of laminator supply materials:

Patch material

0.5 mil clear patch	538619-002
1 mil clear patch	538619-001

Topcoat material

clear topcoat	565394-003

You might use custom materials similar to those listed above.

Cards

Card success depends on the manufacturer and card construction. This section describes specifications and quality guidelines for card stock to use with the SR200 & SR300 printer and the LM200 & LM300 laminator. For best results, use high-quality card stock that meets the specifications and recommendations described in this section.

Use cards that conform to the following specifications:

- ISO/IEC 7810 Type ID1
- ISO/IEC 7811-2 Magnetic stripe (optional)
- ISO/IEC 7816 Smart card (optional)

Specification ISO/IEC 7810 includes a requirement that cards have an optical density of 1.5 or greater. If you use a laminator, cards with an optical density lower than 1.5 do not work.

Contact your service provider before using a preprinted magnetic stripe card or smart card. Dark color preprinted cards can cause positioning errors during encoding.

Card size

Use ISO-1 (CR-80) size cards with the following nominal dimensions:

Length	3.375 inches	85.60 mm
Width	2.125 inches	53.98 mm
Thickness	0.010 to 0.040 inches	0.25 to 1.0 mm

The default card thickness is 0.030in (0,75mm). The card hopper and printer can be set for other supported thinknesses. Contact your service provider before using 0.010in (0.25mm) thick cards.

Tips for success

PVC cards less than 0.027 inches are not recommended.

Card material

For best results, use cards made from the following materials:

- PVC
- PET
- PET-G
- Polycarbonates
- ABS

Tips for success

- PVC cards less than 0.027 inches are not recommended.
- Cards with more heat resistance are recommended for use with an LM200 or LM300 laminator.

Cleaning supplies

The printer uses the following cleaning supplies. For best results, keep cleaning supplies on hand.

Cleaning card	564729-164, pack of 10 cards
Cleaning kit	564729-165, pack of 5 magnetic head cleaning cards, 5 large and 5 small cotton swabs, and 1 box cleaning wipes
Magnetic head cleaning card	564729-166, pack of 10 cards
Cleaning roller unit	534717-101
Printer fan filter	534717-134
Laminator fan filter	564731-133 and 564731-134, set of replacement filters

Site requirements

7

This section describes the operating environment recommended for your Datacard® SR200 & SR300 card printer and Datacard® LM200 & LM300 card laminator.

It describes

- "Site guidelines" on page 92
  - — "Operating environment" on page 92
  - — "Ventilation clearance" on page 93
  - — "Storage environment for supplies" on page 93
- "Printer specifications" on page 94
- "Laminator specifications" on page 95

Site guidelines

When choosing a site for the printer and its supplies, consider these guidelines:

- Keep all dust, dirt, food, liquids, etc. away from the printer at all times.
- Do not use supplies or cards that have been dropped on the floor or have otherwise become contaminated.
- Keep paper and foreign materials off the printer.
- Place the printer on a stable platform; keep it off the floor.
- Place the printer away from direct sunlight.
- Place the printer away from heating ducts, blowers, or other air vents.
- Do not use the printer for purposes other than its intended use.
- When cleaning around the printer, prevent debris from entering the printer.
- Place the printer in a clean office environment, protected from any type of construction.
- Store all supplies in the original packaging until you load them in the printer. Keep the original packaging closed.
- Store all supplies in a clean, cool, and dry location.
- Keep the printer powered off and covered when not in use.

Tips – Site selection

- Avoid locating the equipment in dirty or dusty environments.
- Do not place in areas susceptible to strong vibration or shock.
- Do not place the printer, optional laminator, or the supplies in direct sunlight.

Operating environment

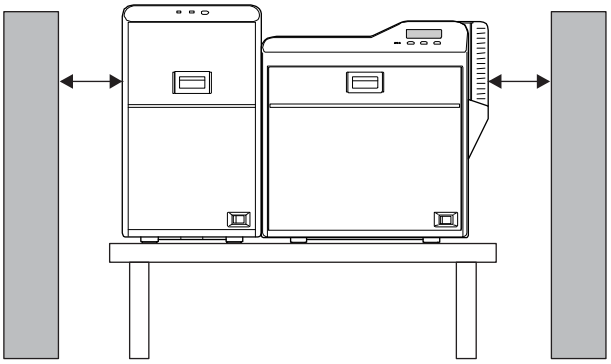
The performance of the printer and optional laminator is strongly influenced by the installation location. Using the printer in areas below the recommended temperatures can cause retransfer errors, while using the printer in areas above the recommended temperatures can cause errors such as deformation and retransfer film errors. Consider the following recommendations if you need to move or relocate your printer.

Relative humidity: 35% to 70%

Temperature: 59° F to 86° F (15° C to 30° C)

Ventilation clearance

To ensure proper ventilation to the printer and laminator, maintain minimum clearance distances as shown.



Sides: 8” (20cm)

Back: 4” (10cm)

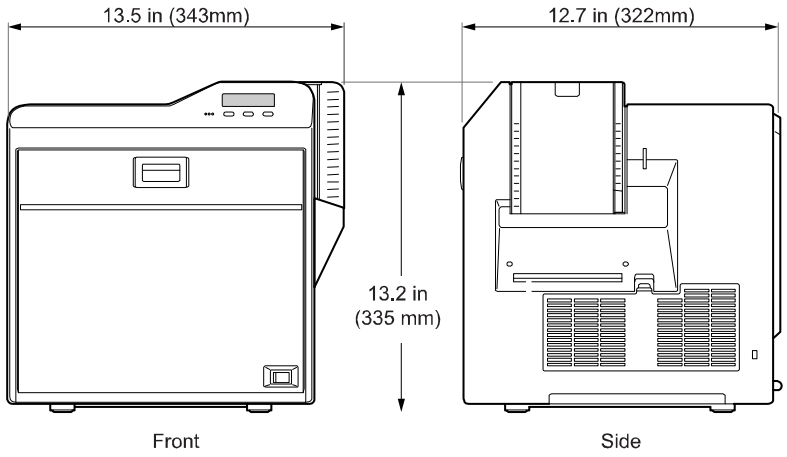
- Keep paper and foreign materials off the printer.
- Place the printer on a stable platform
- Do not place in areas susceptible to strong vibration or shock.
- Keep all dust, dirt, food, liquids, etc. away from the printer at all times.

Storage environment for supplies

Follow these guidelines when storing supply rolls:

- Store supplies in their original packaging until you are ready to use them.
- Choose a location away from direct sunlight, with a temperature between 41° F and 77° F (5° C and 25° C) with a maximum of 40% to 60% relative humidity.
- Do not store supplies in direct sunlight or high humidity locations.
- The print ribbon maintains its quality for about one year. For optimal card quality, purchase and store quantities that you can use up in less than a year.
- The print ribbon and card stock might require secure storage and tracking. Follow your policy for storing and tracking the supplies used to make cards.
- Supply rolls should be at room temperature when they are installed in the printer and used. If supplies are stored in a cooler environment than the printer, allow supplies to reach room temperature before using.
- If the printer will not be used for an extended period of time, remove supplies from the printer and store them with new supplies.

Printer specifications



Recording method: Dye Sublimation Retransfer

Feed format: Automatic feed

Recording density: 300 dpi

Reproduction gradations:
256 levels each yellow (Y), Magenta (M), & Cyan (C);
2 for Black (K)

Printing time: 29 sec. (single sided, excluding data transfer time)

Interface: USB 2.0 (High Speed/Full Speed)
Ethernet (100Base-Tx or 10Base-T)

Operating environment conditions

Temperature: Using YMCK panels only:59°F to 86°F (15°C to 30°C)
Using Peel-off or UV panels:
59°F to 86°F (15°C to 30°C)

Humidity: 35% to 70% (no condensation)

Storage environment conditions

Temperature: 5°F to 131°F (-15°C to 55°C)

Humidity: 20% - 80%

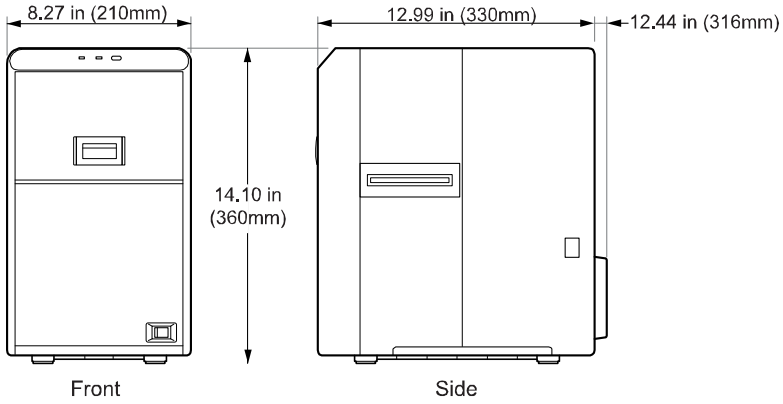
Power supply: 100-120VAC or 220-240VAC (±10%)

Current dissipation: 3.5A for 100V system and 1.6A for 200V system

Weight: 27.6 lbs (12.5kg) (without options)

Sound level: less than 70dB(A) according
to DIN45635, part 19 (EN27779).

Laminator specifications



Transfer method	Halogen lamp built-in heat roller method
Transfer time	About 20 seconds, depending on settings used.
Usage environment	
Temperature:	59° F to 86° F (15° C to 30° C)
Storage environment	
Temperature:	5° F to 131°F (-15° C to 55° C)
Humidity:	30% to 80% (without condensation)
Power supply:	100-120VAC or 220-240VAC (±10%)
Power consumption:	Approximately 190W
Weight:	20.9 lbs (9.5 kg)
Sound level:	Less than 70dB(A) according to DIN45635, part 19 (EN27779).

Magnetic Stripe Encoding

A

This section provides information about encoding magnetic stripe data. It includes:

- “Inline Encoding” on page 98
- “Character Code Table” on page 99

Inline Encoding

When the Magnetic Encode setting on the Printing Preferences Encode tab is checked, the magnetic stripe encoder can be enabled. The encoding data is sent to the card printer through the printer driver using the prefix characters described in this section. This function is called “inline encoding”.

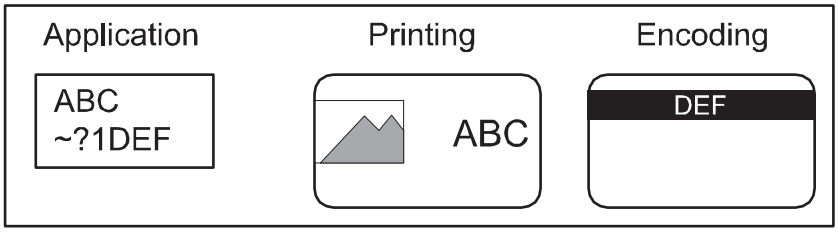
If the first three characters in a line are prefix characters (Tilde, “?” and numeral), the text that follow is recognized as encoding data. Encoding data is not printed on a card.

Prefix characters	Data format	character code table	Maximum Character Length
~?0	JIS type 2	7 unit (bit) code	69
~?1	ISO track 1 (International Air Transport Association — IATA)	6 unit (bit) code	76
~?2	ISO track 2 (American Bankers Association — ABA)	4 unit (bit) code	37
~?3	ISO track 3 (Thrift Third Standard — TTS)	4 unit (bit) code	104

Tip for success

- Data must be formatted with the same, continuous font.
- Only characters specified in the table on page 99 can be included. Using other characters will result in an error.
- The maximum number of characters does not include the three prefix characters, or the start and end sentinels. The Datacard ID Software Printer Plug-in used with the mag stripe plug-in adds the start and end sentinels.
- Make sure that the ID software or PC application does not process the encoding data as graphics.
- Magnetic stripe data must be on the first page of the card data.

Example



Character Code Table

The following table shows the usable ASCII character codes. The encoding data must use only allowed characters.

				b7	0	0	0	0	1	1	1	1
				b6	0	0	1	1	0	0	1	1
				b5	0	1	0	1	0	1	0	1
b4	b3	b2	b1		0	1	2	3	4	5	6	7
0	0	0	0	0				0	@	P	`	p
0	0	0	1	1			!	1	A	Q	a	q
0	0	1	0	2			“	2	B	R	b	r
0	0	1	1	3			#	3	C	S	c	s
0	1	0	0	4			$	4	D	T	d	t
0	1	0	1	5			% *	5	E	U	e	u
0	1	1	0	6			&	6	F	V	f	v
0	1	1	1	7			‘	7	G	W	g	w
1	0	0	0	8			(	8	H	X	h	x
1	0	0	1	9			)	9	I	Y	I	y
1	0	1	0	A	LF		*	:	J	Z	j	z
1	0	1	1	B			+	; *	K	[	k	{
1	1	0	0	C			,	<	L	\	l	|
1	1	0	1	D			-	=	M	]	m	}
1	1	1	0	E			.	>	N	^	n	~
1	1	1	1	F			/	? *	O	_	o	DEL*

4-unit code

6 unit code

7 unit code (except DEL)

* Do not use these characters as encoding data; They are reserved for use by the driver as start or end sentinels.

	Start Sentinel (Hexadecimal)	End Sentinel (Hexadecimal)
4 unit code (TTS & ABA)	; (3B)	? (3F)
6 unit code (IATA)	% (25)	? (3F)
7 unit code (JIS)	DEL (7F)	DEL (7F)

Compliance (FCC)

B

This section describes the regulatory compliance of the Datacard® SR200 & SR300 printer and the Datacard® LM200 or LM300 laminator. It includes the following:

- Regulatory compliance
  - — Notice for USA (FCC notice)
  - — Notice for Canada
  - — Notice for Europe
- Notice to Users of Printers Equipped with Contactless Smart Card

Regulatory compliance

Notice for USA (FCC notice)

This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with this instruction manual, it may interfere with radio communications. This equipment has been tested and found to be within the limits for Class A computing devices, pursuant to Subpart J of Part 15 of FCC rules, designed to provide reasonable protection against radio interference in a commercial environment. Operation of this equipment in a residential environment may possibly cause interference. In the event of interference, the user, at their own expense, will be required to take whatever measures are necessary to correct the problem.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Notice for Canada

This digital apparatus does not exceed the Class A limits for radio noise for digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

The term “IC:” before the radio certification number only signifies that Industry Canada Technical specifications were met.

Notice for Europe

We hereby certify that the Datacard® SR200 & SR300 Card Printers complies with EMC Directive 2004/108/EC and R&TTE Directive 1999/5/EC. This printer conforms to Class A of EN 55022 and to EN 301 489-3. Operation of this equipment in a residential environment may possibly cause interference. In the event of interference, the user, at their own expense, will be required to take whatever measures are necessary to correct the problem.

Notice to Users of Printers Equipped with Contactless Smart Card

The contactless smart card reader emits radio-frequency waves and must be used as installed and recommended by Datacard Group. You may not modify the reader or how it is used without the written permission of Datacard Group. You may not operate the printer after modifying the reader or its method of operation.

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