Datacard®

User's Guide for Magna™ Printers

ImageCard® Color Printers
UltraGrafix® Monochrome Printers

May 2003

Part No. 539177-101

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.

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Revision Log: User’s Guide for Magna™ Platinum Series™ Printers

Revision	Date	Affected Pages	Description of Changes
A	Jan 2003	All	Initial release
B	May 2003	p. ii, Ch 1, Ch 3, Ch 5, Ch 7, Ap B, Ap D	Update phone number, driver information, supplies information, and smart card information.

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Contents

Section 1: Operating the Printer

Section 2: Installing the Printer

Section 3: Reference Information

Overview

1

This chapter presents the following:

- The purpose of this manual
- Who should use this manual
- The Datacard® Magna™ Platinum™ Series photo ID printer, including a description of the printer, the models available, and their components
- How information about optional features is identified in this manual

About this manual

This manual provides detailed information about the Datacard® Magna™ Platinum™ Series photo ID printer. The first section provides operators with information about the printer and how to use it. The second section provides installers with requirements for installation and installation procedures. The third section provides reference information.

This User Guide works with the online *e*-Guide, which you can see using the desktop icon installed with the printer driver. Figure 1-1 shows the *e*-Guide icon.

Figure 1-1: Desktop icon for the *e*-Guide

This guide describes the current printer driver. (At the time of printing, the current printer driver is the SmartDriver version 5.1.)

Audience

This manual is intended for persons using a Magna Platinum Series printer. To operate the printer, you must have the following skills:

- Ability to read and understand written and graphical instructions
- Ability to operate a personal computer (PC)
- Experience with Microsoft® Windows® 2000, Windows XP, Windows 98, Windows Me, or Windows NT®
- Ability to load supplies
- Ability to perform simple troubleshooting using written and graphical instructions

For the skills needed for installation, see “Installation audience” on page 6-2.

About the Magna printer

The Magna photo ID printer includes the printer and a printer driver which runs on a PC. The printer uses supplies when printing cards, including:

- Platinum™ Series print ribbon
- Replaceable cleaning sleeves
- Blank cards
- Optional topcoat or overlay supply material

The Magna printer prints full-color or monochrome images on one or both sides of PVC cards. The images printed can include photos, text, logos, barcodes and digitized signatures. The printer can perform additional personalization tasks, such as encoding magnetic stripe data and sending data to smart card chips. With the optional overlay module, the printer can apply a durable polyester patch (laminate) to one or both sides of the personalized card. With the optional topcoat module, the printer can

apply a protective clear topcoat or a secure holographic topcoat to the surface of the card. Magnetic stripe encoding, smart card programming, overlay, and topcoat are options that can be purchased as part of the printer. See “Printer models” on page 1-3 for details about which combinations are supported.

The printer driver receives digital information from a card creation application and processes the data to send to the printer. When the printer receives the data, it prints the card. The driver keeps track of the progress of the card in the printer and sends data for the next card as soon as the printer is ready and the data is available.

See “PC and software specifications” on page 6-5 for more information about the printer driver and the PC on which it runs.

The Datacard® Magna™ Platinum™ Series photo ID printer uses Advanced Imaging Technology™. Three features of the printer work together to provide the benefits of Advanced Imaging Technology:

Print ribbon: Platinum Series print ribbon must be used in the Magna Platinum Series printer

Printer unit: The printer includes enhancements to provide optimal color printing.

Printer driver: The printer driver includes color settings. “Using the Printer Toolbox” on page 3-10 provides more information about color settings.

Printer models

Several models of the printer are available. ImageCard printers can print full-color or monochrome images, while UltraGrafix printers can print only monochrome images. The printer label provides information about the options in your printer (see Figure 1-2). The label also includes the printer serial number.

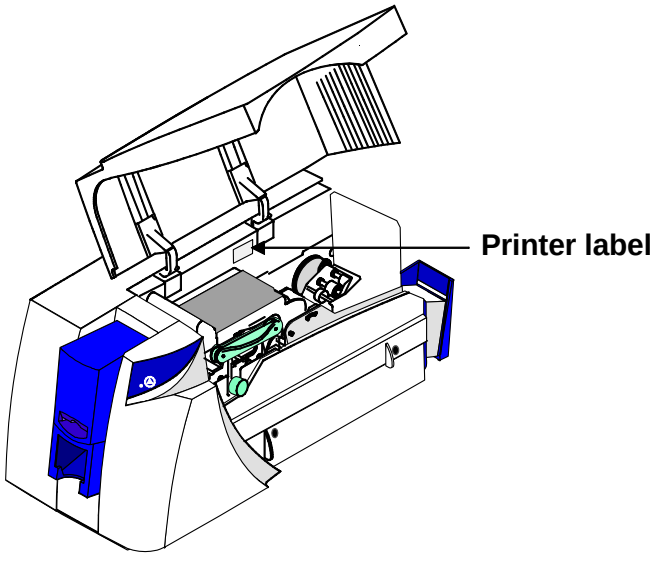


Figure 1-2: Printer label

A printer can be ordered with the following optional modules:

- Duplex module. The duplex module flips the card to automatically print on both sides of the card. The printer label includes the number “2” if the printer has a duplex module.
- Magnetic stripe module, for either 3-track (IAT) encoding or single-track NTT (J) encoding. The module is installed in-line with the print operation. It encodes data on the magnetic stripe and then verifies the data.
- Smart card module. The smart card module can have one of the following:
  - Contact coupler (SC4xx on the printer label)
  - Contactless (RF) coupler (SC680 on the printer label)
  - Proximity coupler (SC-x, where x represents the brand of coupler)
  - Both contact and contactless couplers (SC4/6 or SC4/SC-x on the printer label)
  - Contact station (SCCS on the printer label) with external coupler
  - Smart card ready (SCR on the printer label), which is shipped without a coupler installed

  A custom smart card application can use the module to initialize and program the smart card chip on a card.

- Optional overlay module (LO on the printer label). The optional overlay module applies a durable polyester patch (laminate) to one or both sides of the personalized card. The patch can be clear or have a holographic image on it.
- Optional topcoat module (LT on the printer label). The optional topcoat module applies a protective film to the card surface. The topcoat can be clear, which protects images, or have a tamper-evident holographic image on it.

Table 1-1 lists the models and their features.

Table 1-1: Magna printer features

Model name	Colors printed	Overlay module#†	Topcoat module#†	Duplex module†	Magnetic stripe module†	Smart card module†
ImageCard Magna	Full color or monochrome	Yes†	Yes†	Yes†	Yes†	Yes†
Ultragrafix Magna	Monochrome	No	No	Yes†	Yes†	No

#. Only one of these modules can be installed; the printer cannot have both topcoat and overlay modules.
†. Optional

Monochrome printing uses a ribbon with a single color, such as black. To optimize monochrome printing, use a monochrome printhead.

Figure 1-3 shows the Magna printer without a topcoat or overlay (laminator) module. All UltraGrafix Magna printers look like this.

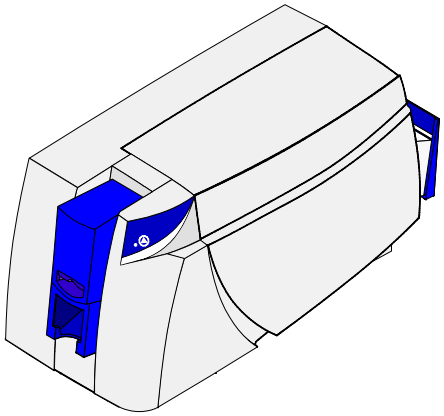


Figure 1-3: Magna printer without an optional laminator

Figure 1-4 shows the Magna printer with an optional topcoat or overlay (laminator) module.

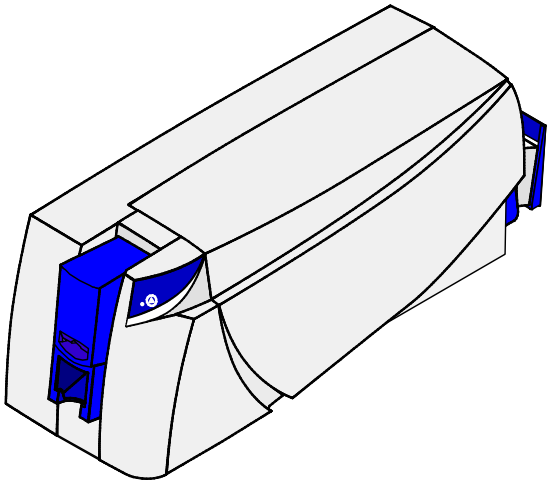


Figure 1-4: ImageCard Magna printer with an optional laminator

The ImageCard model of the printer can include the optional topcoat or overlay (laminator) module. The topcoat module applies clear or holographic topcoat to the printed card as part of processing. The overlay module applies a polyester patch to the printed card as part of processing.

Printer features

Use the information in this section to identify the features and controls you use on the printer.

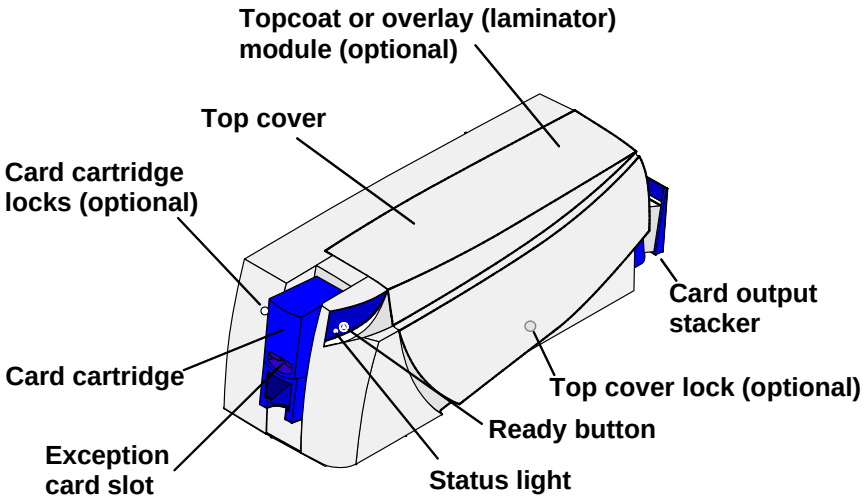


Figure 1-5: Front of the Magna printer

Front of the printer

Find the following on the outside of the printer:

Top cover

The cover protects the internal parts of the printer from dust and debris. It also lessens the sound from the printer.

Top cover lock (optional)

The optional top cover lock (near the duplex or pass-through module) allows you to lock the top cover closed, preventing access to the inside of the printer without authorization.

Status light

The status light indicates that the printer power is on, is processing data, is ready to receive data, or is in an error condition.

Card cartridge

The card cartridge holds blank cards to print. It holds about 100 cards (with a nominal thickness of 0.030 inches (0.76 mm)). At the bottom of the card cartridge, the **exception card slot** allows you to insert a single card that is different from the cards in the card cartridge.

Card cartridge lock (optional)

The optional card cartridge lock allows you to lock the card cartridge into position, preventing cards from being removed without authorization. Some printers have two locks to meet the security requirements of the organization.

Card output stacker

The card output stacker holds the cards after they have been processed. Both completed cards and rejected cards go to the card output stacker.

Optional laminator module

The optional laminator module applies a protective surface to the card. A printer can have a topcoat module or an overlay module, but not both. “Laminator” is the general term that describes the module that applies the protective surface.

Overlay module (optional)

The overlay module is available on ImageCard Magna printers. It applies a laminate (die-cut polyester patch) to one or both sides of the card after it has been personalized. You can choose the DuraGard™ protective laminate or a holographic laminate. Both provide a durable and long-lasting protective surface to the card. The holographic laminate includes a tamper-evident image.

Topcoat module (optional)

The topcoat module is available on ImageCard Magna printers. It applies a protective film to one or both sides of the card surface to protect card images. The topcoat applied can be clear or it can include a hologram or other images that make the card resistant to tampering.

Ready button

The Ready button allows you to pause the printer while printing a card, to clear an error condition, to cancel a print job and delete all data for the job, or to create a printer test card.

Inside the printer

Open the cover to find the following on the inside of the printer.

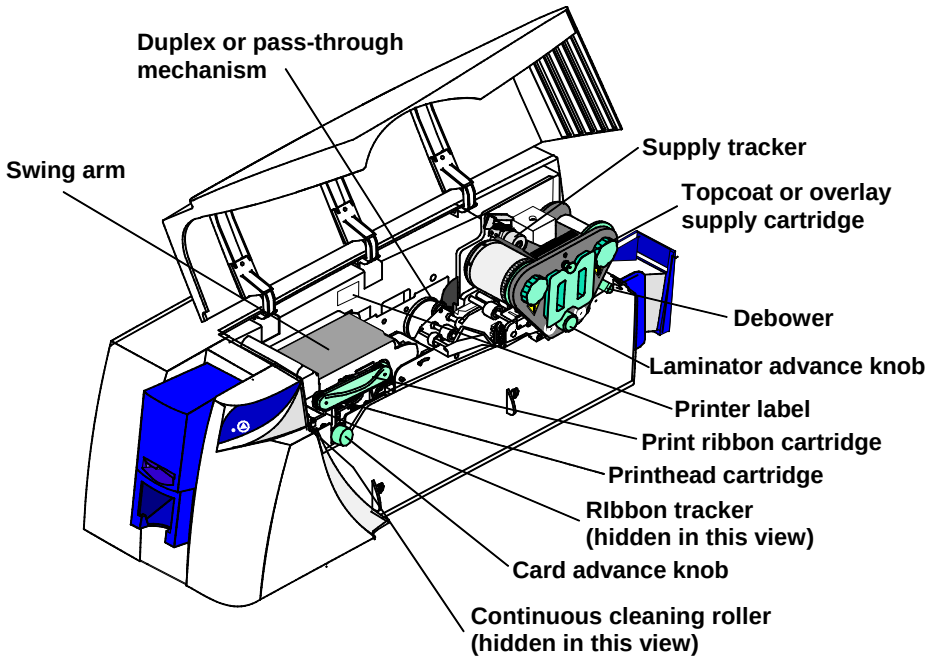


Figure 1-6: Internal parts of the Magna printer

Duplex module or pass-through mechanism

The optional duplex module flips the card to automatically print on both sides of the card. Magna printers that do not have a duplex mechanism will have a pass-through mechanism in this location. If the printer includes an optional smart card module, it is located between the print area and the duplex mechanism.

Swing arm

The swing arm opens to give you access to the print ribbon cartridge, continuous cleaning roller, and printhead cartridge. Push down on the raised end of the swing arm to unlatch it and then open it.

Ribbon tracker

The ribbon tracker measures the movement of the print ribbon as it moves from the supply spool during printing.

Overlay supply cartridge (optional)

This cartridge holds the overlay supply and can be removed for easy reloading.

Topcoat supply cartridge (optional)

This cartridge holds the topcoat supply and can be removed for easy reloading.

Laminator advance knob (optional)

The laminator advance knob turns to move a card along the card transport track in the topcoat or overlay module. Use it to release stuck cards in the topcoat or overlay module.

Debower (optional)

The debower is part of the optional laminator module and corrects for any change to the flatness of the card caused by heat applied by the laminator module.

Supply tracker (optional)

The supply tracker is part of the optional laminator module and measures the movement of the supply material as it moves from the supply spool.

Printhead cartridge

The printhead, contained in the printhead cartridge, applies heat and pressure, which transfers dye and other material from the print ribbon to the card. The printhead cartridge is operator-replaceable.

Printer label

The printer label includes the printer serial number and information about optional components of the printer.

Print ribbon cartridge

The print ribbon cartridge holds the print ribbon.

Card advance knob

The card advance knob turns to move a card along the card transport track. If a card remains in the printer, use this knob to move the card in the card track.

Continuous cleaning roller

The continuous cleaning roller includes a spindle and a replaceable cleaning sleeve. The spindle holds the roller in place. The replaceable cleaning sleeve removes dirt and debris from the permanent cleaning roller in the printer and should be changed regularly. (Hidden in this view.)

Back of the printer

Figure 1-7 shows the back of the Magna printer:

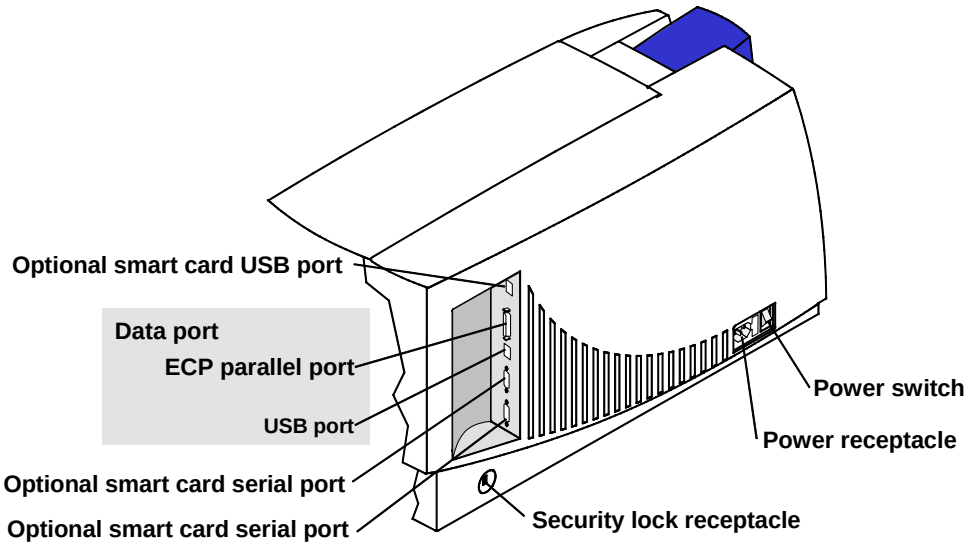


Figure 1-7: The back of the Magna printer

If the printer includes an optional laminator module, that module extends farther than the ports and receptacles area.

Find the following on the back of the printer:

Data Port

The printer includes two data ports. Select only one data port to use.

- ECP parallel port

  Use the ECP parallel port to connect the printer's data cable to the PC, if the printer was ordered with a parallel cable.

- USB data port

  Use the USB data port to connect the printer's data cable to the PC, if the printer was ordered with a USB cable.

Power switch

Use the Power switch to power on or power off the printer.

Power receptacle

This is the receptacle for connecting the power cable.

Smart card port(s)

On printers equipped with the smart card option, use one or more of these connectors for the cable from the PC or contact station that carries the data to encode on the smart card chip. If the printer does not have any smart card options, the ports will not be installed in the printer.

Security lock receptacle

Included on all printers, an optional printer security lock can be inserted in this receptacle to secure the printer to the work surface.

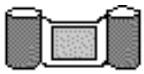
How options are identified in this manual

This manual describes all of the features of the Magna printer, including all the options. Because many printers do not have all options, the following method is used to help you identify information that applies to an option.

The icons for each option are:

Magnetic stripe encoding module

Smart card module



Overlay station or topcoat module

When you see the icon for an option, use the section or follow the step if you have the option installed in your printer. If your printer does not have the option, you can ignore the section or step.

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 Magna printer 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 Datacard. Contact the Datacard Customer Care Center at 1.800.328.3996 for service in the United Stated and Canada. For worldwide service, call the Datacard Customer Care Center directly at 952.988.2316. Make sure you have the serial number, located inside the printer, when you call (see Figure 1-2).

Using the printer

2

This section describes how to perform basic tasks required to operate the Datacard® Magna™ Platinum™ Series photo ID printer. It describes:

- Tips for success
- Loading cards
- Loading print ribbon
- Loading topcoat or overlay supply
- Powering on the printer and PC
- The ready button and status light on the printer
- Making cards
- Removing cards
- Responding to messages
- Powering off the printer and PC

Begin with the printer set up and the printer driver installed. If the printer is not set up, see “Before you install” on page 6-1 and “Install the printer” on page 7-1 to set up the printer and install the driver.

Tips for success

To achieve the best quality cards and to maintain optimum performance of your printer, follow these tips for success:

- Use the best quality cards available. Good quality cards have a smooth, glossy PVC surface (with no debris embedded in the surface), a mylar signature panel (optional), a flush magnetic stripe (optional), are not pre-punched, and are printed only once. See “Card quality guidelines” on page B-8.
- Match the card design, the supplies you use, and the printer to obtain the results you want.
  - Edge-to-edge printing requires high-quality cards and can require fine-tuning the printer and the card design.
  - Do not place an important image, such as a photo, on the front of the card in the same area as a magnetic stripe. Frequent use of a card in a magnetic stripe reader can wear away the image on the opposite side of the card. (Or, apply overlay to the front of the card to protect it from wear.)
  - Locate bar codes at least 0.25 inch (6.3 mm) from other printing and from the edge of the card. Make sure the color used to print the bar code works in your bar code readers. (Infrared readers require that the K panel be used to print the bar code.)
  - Do not print closer than 0.1 inch (2.5 mm) from a signature panel, magnetic stripe, or smart card chip.
  - Avoid placing a photo directly on the other side of a signature panel. Residue from the panel can cause printing problems on an adjacent card.
  - Avoid placing a photo or other critical information directly on the other side of a smart card chip. The card might not be as flat in that area and printing voids can occur.
  - Do not apply topcoat or overlay over a magnetic stripe or over a smart card chip.
- Follow instructions carefully when replacing supplies, correcting problems, cleaning the printer, and replacing parts.
- Use the correct cables, connect them correctly, and keep them out of the way. See “Connecting cables” on page 7-5 for information on connecting cables.
- Keep a stock of supplies on hand and store them safely. See “Supplies and cards” on page B-1.
- Keep the printer clean and keep the area around the printer clean.

Loading cards

Load cards when beginning work or when the card cartridge is low on cards or empty. You can load cards when the printer power is on or off. You can also load cards while the printer is printing.

To order more cards, contact your card vendor. For information on card requirements, see “Supplies and cards” on page B-1.

Load cards

If the printer has a locking card cartridge, unlock the cartridge before removing it.

1 Pull up on the lower edge of the card cartridge (step 1 in Figure 2-1). Lift the card cartridge up and out of the printer (step 2 in Figure 2-1).

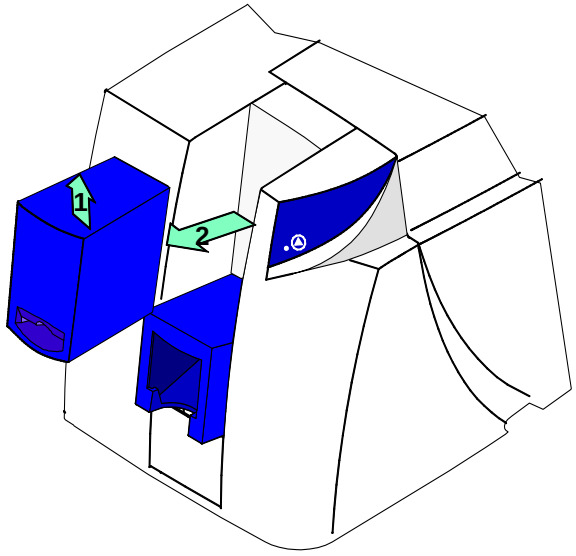


Figure 2-1: Remove the card cartridge

Do not touch the surface of cards before printing them. Oils on hands can cause discolored printing. Handle cards by the edges or wear gloves to protect cards.

2 Fan cards to separate the edges of the cards (see Figure 2-2).

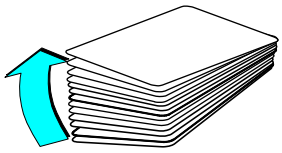


Figure 2-2: Fan cards

3 Place up to 100 blank cards into the card cartridge. (If cards are thicker or thinner than 0.030 inch (0.76 mm), the maximum number of cards you can load varies.)

For magnetic stripe cards, the magnetic stripe faces down and is positioned toward the side of the printer that opens (see Figure 2-3). (For some custom applications, you might receive instructions to place cards in a different orientation.)

For smart cards, position the card so the chip is up and toward the open end of the card cartridge.

⚠ If you use a topcoat or overlay module, use cards with a nominal thickness of at least 0.030 inch (0.76 mm).

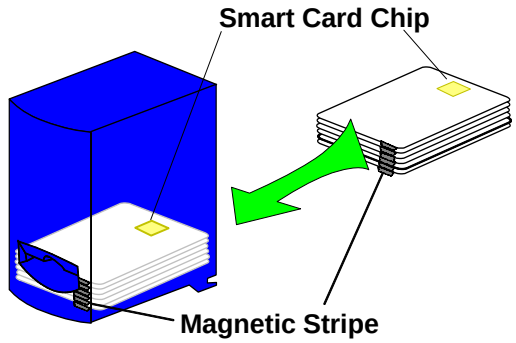


Figure 2-3: Load cards into the card cartridge

ⓘ Do not run the printer for an extended time without cards in the card cartridge. Load more cards as soon as you are prompted.

4 Replace the card cartridge in the cavity (step 1 in Figure 2-4). Push the bottom of the card cartridge toward the printer until it clicks into place (step 2 in Figure 2-4).

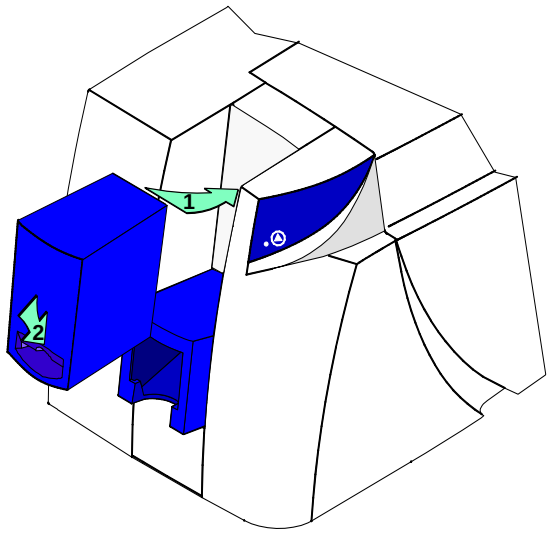


Figure 2-4: Replacing the card cartridge

ⓘ If the printer has a locking card cartridge, lock the cartridge after replacing it.

♦

Loading the print ribbon

The printer uses print ribbon with color panels, continuous color, or color and topcoat. Full-color ribbon (such as YMCKT) must be Platinum Series ribbon, which uses blue ribbon spools. Monochrome (one color) ribbon on teal-colored ribbon spools can also be used. (Full-color ribbon on teal-colored spools cannot be used.)

The type of ribbon in the printer must match the print ribbon setting in the driver.

To order new ribbon, contact your service provider. See “Supplies and cards” on page B-1 for information about ribbons available.

Remove the print ribbon cartridge

If the printer has a locking cover, unlock the cover before opening it.

1 Lift the top cover, as shown in Figure 2-5.

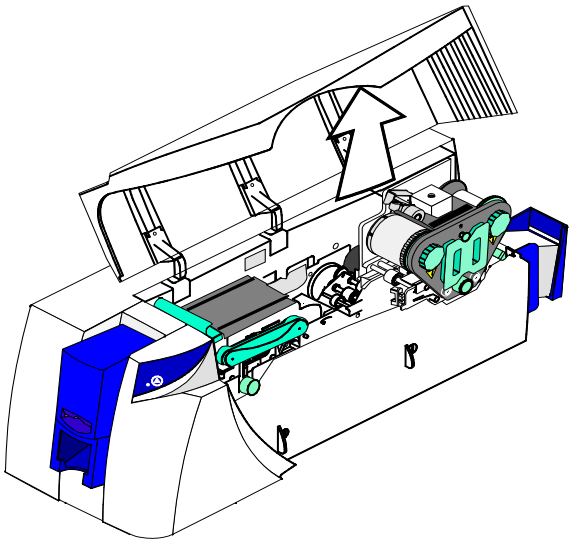


Figure 2-5: Open the cover

2 Press down on the swing arm until it clicks (step 1 in Figure 2-6). The push latch releases the swing arm. Lift the swing arm until it is fully open (step 2 in Figure 2-6).

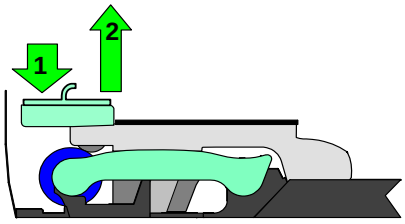


Figure 2-6: Open the swing arm

3 Grasp the ribbon cartridge handle, and lift up to remove the print ribbon cartridge (see Figure 2-7). Avoid touching the printhead cartridge and ribbon tracker.

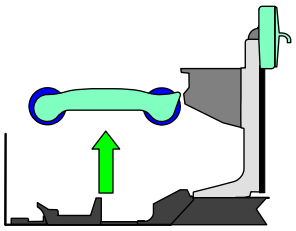


Figure 2-7: Remove the print ribbon cartridge

Some users run a cleaning cycle whenever the print ribbon is changed. If your site follows this policy, see "Running a cleaning cycle" on page 4-2 for the steps to follow, and then return to this section.

♦

Load the print ribbon

1 Remove the used ribbon and the used ribbon spools from the ribbon cartridge shafts.

The print ribbon has a negative image of the information printed on the card. Dispose of print ribbon according to your policy for protecting the data that might be visible on it.

2 Unwrap the new print ribbon.

3 Slide the full supply roll onto the left ribbon cartridge shaft (see Figure 2-8).

4 Slide the empty take-up ribbon spool onto the right ribbon cartridge shaft (which has a gear). Leave very little slack in the ribbon between the ribbon cartridge spools (see Figure 2-8).

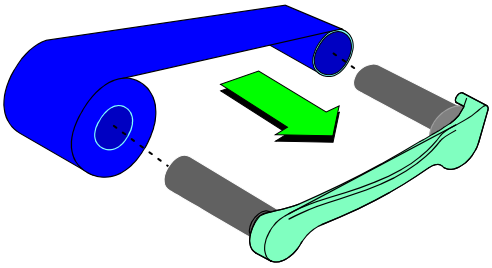


Figure 2-8: Load new print ribbon on the ribbon cartridge

5 If you use a monochrome (one-color) ribbon, tape the end of the new ribbon to the empty take-up spool.

6 Make sure print ribbon unwinds over the top of the print ribbon cartridge, not from the bottom.

♦

Replace the print ribbon cartridge

1 Place the ribbon cartridge onto the ribbon cartridge supports (see Figure 2-9). Make sure the cartridge is securely seated. Avoid touching the printhead cartridge and ribbon tracker.

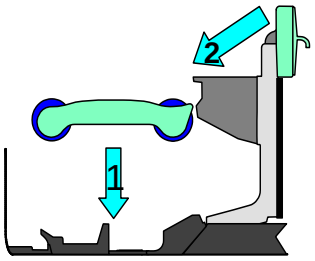


Figure 2-9: Replace the print ribbon cartridge

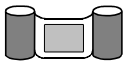
2 Close the swing arm, pressing it down until the push latch clicks into place.

3 Close the cover.

If the printer has a locking cover, lock the cover after closing it.

♦

Loading the overlay or topcoat material



If your printer includes an optional overlay or topcoat module, the module uses supply material. For information about material, see “Supplies and cards” on page B-1.

This section describes the three steps of changing the supply material:

- Remove the supply cartridge
- Load material in the cartridge
- Replace the supply cartridge

If you change the type of supply material you use, see the *e-Guide for ImageCard® Magna™ and UltraGrafix® Magna™ Printers* for more information.

Removing the supply cartridge

Remove the supply cartridge when a "Supply empty" message appears, or when setting up the printer.

Remove the supply cartridge

If the printer has a locking cover, unlock the cover before opening it.

1 Lift the top cover, as shown in Figure 2-5.

⚠ The module is HOT to the touch and remains HOT for up to 30 minutes after the printer is powered off.

2 Lift the supply tracker, and then push until it clicks into place (step 1 in Figure 2-10).

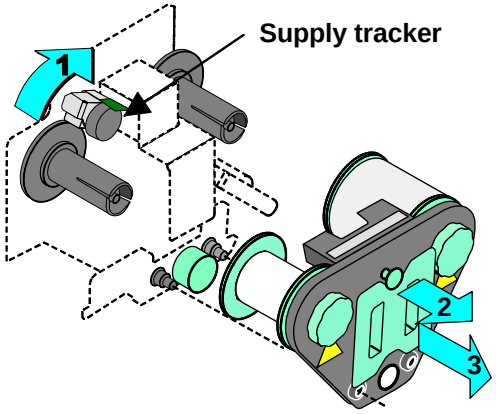


Figure 2-10: Remove the supply cartridge

3 Pull out on the cartridge lock to release the supply cartridge (step 2 in Figure 2-10).

4 Pull the supply cartridge out until the cartridge is out of the printer (step 3 in Figure 2-10).

♦

Loading supply in the cartridge

After removing the supply cartridge from the printer, remove the used material and load new material.

Load supply in the cartridge

1 Place the supply cartridge upside down on a level surface, such as a table, with the wide side away from you.

2 Remove the spool caps (if used) from both spools.

3 Pull up firmly on the full take-up spool to remove it.

4 Remove the end of the supply material from the empty supply spool if needed. Dispose of the used supply according to your policy.

> On a regular basis, such as weekly, use the cleaning pen to clean deposits from the guides of the supply cartridge and clean the supply tracker.

5 Remove the empty spool from the holder and press it into place on the take-up holder (step 1 in Figure 2-11). Make sure the ribs inside the spool align with the grooves in the holder.

6 Press on the spool and turn it slightly (if needed) until the spool fully covers the ribs of the holder.

7 Unwrap the new supply material.

8 Place the full supply roll on the right holder as you face the open side of the cartridge (step 2 in Figure 2-11). Make sure the supply will unroll counterclockwise ↺, as shown.

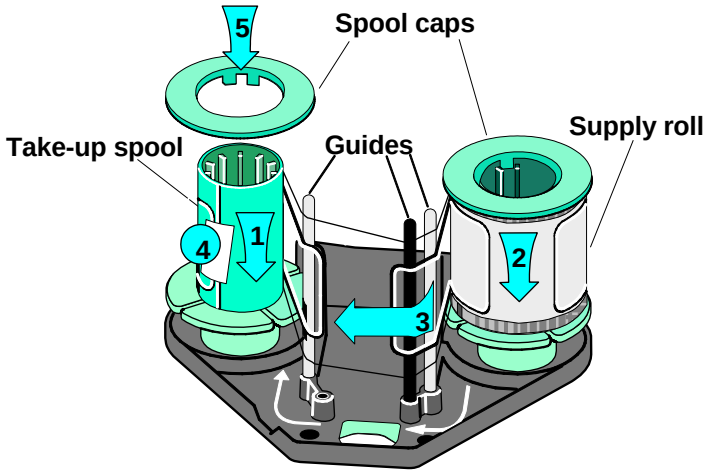


Figure 2-11: Load supply in the cartridge

9 Make sure the ribs inside the spool align with the grooves in the holder. Press on the spool and turn it slightly (if needed) until the spool fully covers the ribs.

10 Lift the label on the supply roll and unroll about 8 inches from the supply roll.

11 Wind the supply material in front of the guides and around the take-up spool (step 3 in Figure 2-11). Make sure that the material will wind counterclockwise ↺.

12 Press the label onto the take-up spool to secure the supply material (step 4 in Figure 2-11).

13 Press the spool caps back into position on the ends of the take-up spool and supply roll (step 5 in Figure 2-11).

> If you use an adjustable overlay cartridge, do not use spool caps. They interfere with the operation of the adjustable overlay cartridge.

14 Pick up the supply cartridge and turn it over. Turn the take-up knob clockwise to remove any slack in the supply material.

The supply cartridge is ready to be replaced in the printer.

Replacing the supply cartridge

When replacing the supply cartridge, begin with the top cover open.

Replace the supply cartridge

Make sure the supply tracker is raised and out of the way. See Figure 2-10.

1 Hold the loaded supply cartridge next to the module, with the cartridge handle toward you.

2 Align the supply cartridge so the spools in the cartridge are even with the spindles in the module.

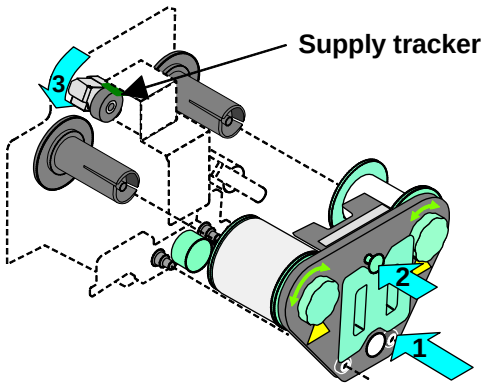


Figure 2-12: Replace the supply cartridge

3 Push the supply cartridge into the printer (step 1 in Figure 2-12). Make sure the supply material passes between the heated roller and the platen roller. Turn the supply knobs if needed to take up slack so the material does not wrinkle as the cartridge is pushed in place.

4 Hold the back of the printer and push firmly on the supply cartridge to seat it in the printer.

If the cartridge becomes stuck part of the way into the module, pull it out a few inches and then turn the supply and take-up knobs clockwise slightly so the spindle ribs fit between the ribs. Push the cartridge in again.

5 Press the cartridge lock to secure the supply cartridge in the printer (step 2 in Figure 2-12).

6 Lower the supply tracker until it rests on the supply material (step 3 in Figure 2-12).

7 Verify that the cartridge is replaced correctly by making sure the locating posts come through the locating holes in the cartridge (Figure 2-12).

If needed, release the cartridge lock and seat the cartridge completely. Press the cartridge lock again.

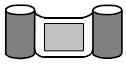
If you use an adjustable overlay cartridge, follow the steps provided with the cartridge to produce a patch placement that meets specifications.

8 Close the top cover.

If the printer has a locking cover, lock the cover after closing it.

♦

Verifying the debower position



The debower in the optional topcoat or overlay module should be set for the type of cards you print. The debower assures that the heat used to apply the topcoat or laminate does not leave cards bowed or curled.

Set the debower

Do not use the debower in the On position with proximity cards or smart cards.

Make sure power to the printer is off.

If the printer has a locking cover, unlock the cover before opening it.

1 Lift the top cover.

The overlay or topcoat module is HOT to the touch and remains HOT for up to 30 minutes after the printer is powered off.

2 Pull out the handle for the debower and move it to the desired position for the card type. Figure 2-13 shows the on and off positions for the debower.

Card or module type	Debower position
0.030 inch (0.76 mm) card	on
0.050 (1.27 mm) cards	off
Smart card	off
Proximity card	off
Topcoat module	off

If you use a topcoat or overlay module, you must use cards that are at least 0.030 inch or 0.760 mm thick.

Make sure the debower is seated in the latch.

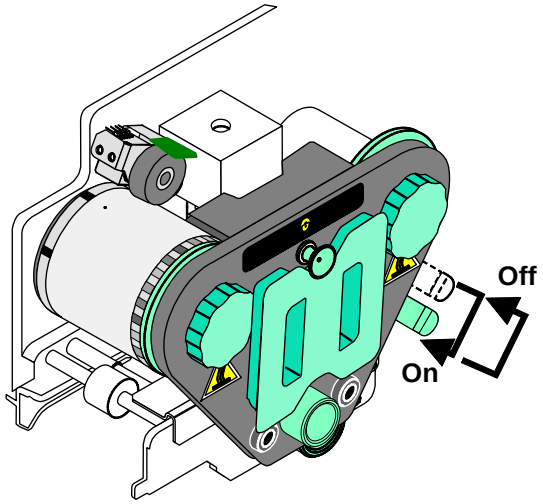


Figure 2-13: Lift the handle, move the debower, and lower it

3 Close the top cover.

If the printer has a locking cover, lock the cover after closing it.

If you are setting up the printer, check the bow on the test card when you make it. If you are changing this setting after running the printer with other cards, make several test or sample cards to be sure the setting produces the result you want.

If you are switching to proximity cards or use smart cards, be sure to test the function of the card after applying the overlay or topcoat.

♦

Powering on the printer and PC

Use the following procedure to power on the printer and attached PC.

Power on the printer and PC

If the printer is connected over a network using a print server, make sure the driver is installed and configured on the PC before using it.

1 Make sure cards and all other supplies are loaded. See other sections of this chapter for more information.

2 Remove any printed or rejected cards from the output stacker. See “Removing cards” on page 2-18 for more information.

3 Make sure the power cord and data cable are connected. If needed, see “Connecting cables” on page 7-5 for more information.

4 Press the printer Power switch to turn on power. Observe the printer status light which lights with a sequence of colors and then becomes steady green. See “Status light” on page 2-14 for more information. The printer initializes components and makes audible sounds.

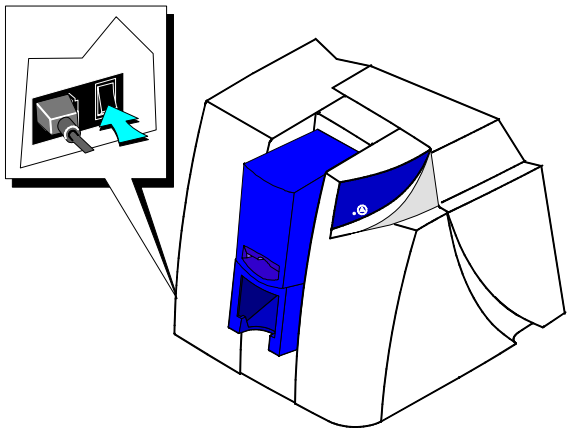


Figure 2-14: Power on the printer

The optional overlay or topcoat module in some Magna printers requires about 10 minutes to reach operating temperature before printing a card. If you send a card to print before the module is ready, a message appears on the PC and processing waits until the module is ready. If the printer power was on recently, warm-up time is shorter. The overlay or topcoat module makes a series of beeps while it is warming up.

5 Press the PC Power switch to turn on the power to the PC. Turn on power to any other equipment needed.

♦

Ready button

The Ready button allows you to pause the printer while printing a card, to clear an error condition, to cancel a print job and delete all data for the job, or to create a printer test card.

- To pause the printer, press and hold the Ready button for three seconds or less. Any cards being printed complete the current operation and stop. The status light continues to blink green while the printer is paused with jobs in the queue. The status light is amber when the printer is paused with no jobs in the print queue.

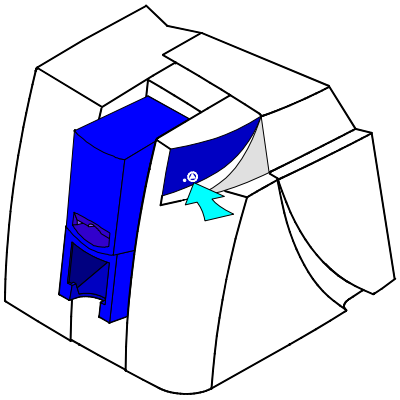


Figure 2-15: Ready button

If the printer is paused and a message box is displayed on the PC, use the buttons on the message box to clear the message. If you press the Ready button to clear a message, the current print job is cancelled. If you press the Ready button to clear a pause condition, the job is not cancelled.

- To cancel and clear the current print job, press and hold the Ready button for between three and ten seconds. When the sound changes tone, release the Ready button. The job is cleared from the printer memory and the card is ejected.
- You can verify that the printer is working correctly by making a printer test card. See “Making and evaluating test cards” on page 5-3.

Status light

The front corner of the printer has a light that provides information about the printer’s current state.

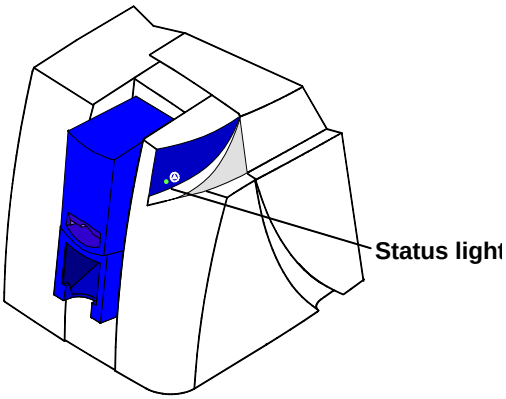


Figure 2-16: Status light

Status Light	Description
Red Amber Green	The printer is starting. The printer displays colors repeatedly while it initializes.
Steady green	The printer is ready and waiting to print cards. (The laminator might be heating.)
Blinking green	The printer is busy printing cards.
Steady amber	The printer is paused without an error. If the light remains steady amber during power-up, the printer has a problem that requires service.
Blinking amber	The printer has issued a message. See the PC for the message.#
Steady red	The printer has a problem that requires service.
Off	The printer power is off.

#. If the light blinks amber but no message appears on the PC, the following might have occurred:

* You used the Power-on/Ready sequence to print a test card. Messages are not reported.
* You changed the name of the printer driver. Power the PC off and on.

Making cards

This section describes several ways to make cards using the Magna printer.

- Usually, cards are sent from a card creation application such as Datacard's ID Works™ which captures, organizes, and formats the information on the card. A card creation application is special software that handles the types of information used on cards. See "Use a card creation application" for the steps to follow.
- If you do not have a card creation application, you can use another PC application to format the information to print on cards. If you are encoding magnetic stripe data, be sure to use an application in which you can save the result and edit it again, such as Windows WordPad™ or Word. See "Print from a PC application" for the steps to follow.

With any application, test your card design to verify the results.

Use a card creation application

1 Follow the instructions for the card creation application to capture, format, and save the data for the card.

2 In the card creation application, send cards to the printer (usually, use the Print button).

The printer driver receives data for each card, prepares the card for printing, and sends each card to the printer in the order received. The printer driver keeps cards in a queue if the printer is busy. For a directly networked printer, the print server manages jobs from any PCs that send jobs to the printer.

Developers can write card creation applications using the SmartDriver™ Software Developer's Kit. This kit can be found on the SmartDriver CD-ROM or downloaded from www.datacard.com.

♦

Print from a PC application

1 In the application, choose the SmartDriver as the current printer.

The default name for the Magna printer, when it is installed, is SmartDriver. Your printer might have a different name than SmartDriver.

2 Choose the printer settings that correspond to the cards to print. See "Working with Properties and other driver dialog boxes" on page 3-1 for more information. Settings might include the following:

- Enable two-sided printing if you plan to print the front and back of the card. The printer must have a duplex module to print on both sides of the card.
- Set the margins for the area to print on the card. A setting of Edge-to-Edge is the same as a margin of 0.
- Set the orientation for the card design—either portrait or landscape.
- Set the magnetic stripe format and coercivity if you plan to encode magnetic stripe data.

– Enable or disable topcoat or overlay, depending on the options in the printer and the features you want for this card.

– For a shared printer, choose the Ribbon Type to match the ribbon installed in the printer. (Do not use the autodetect setting.)

3 Using the application's page setup feature, set the following:

– Set the paper size to CR80 Card 2.13" x 3.38".

– Set all the margins to the same value as the driver. (You can set the margins in the application wider than the driver, if desired.)

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

4 Format the text to print using only a TrueType ( ) font. To print using the K (solid black) panel of the print ribbon, choose the Black color in the application. All other colors are printed using the color panels of the print ribbon (if you use a color print ribbon).

5 To print on the front of the card, keep data on one page. To print the front and back of the card, send a two-page document. (Make sure Print on Both Sides is set to Automatic.)

6 To encode magnetic stripe data, do one of the following:

– Also on the front of the card, enter the information to be encoded on the magnetic stripe and format the text using one of the following fonts:

- Track 1—Magnetic Stripe
- Track 2—Magnetic Stripe
- Track 3—Magnetic Stripe
- Track NTT—Magnetic Stripe (use only on a PC running a Japanese language Windows operating system)

– If your application does not allow you to select fonts, use magnetic stripe escapes to identify data. See “Magnetic stripe encoding” on page D-1 for details.

You must select the SmartDriver as the printer in the application for magnetic stripe fonts to be visible. In addition, Windows must be set to display all fonts. (Some PC’s are set to display TrueType fonts only.) See Windows help for more information.

The text should use a small type size to keep characters on the same line. In many applications, you can type a smaller value, such as 4 points, for the type size. To view the characters in a small type size, zoom in on the text. Also, follow these guidelines:

- Avoid formatting characters, such as tabs and returns, in the data for one magnetic stripe track. In some cases, these characters are converted to spaces, which might not be valid characters for the track.
- Do not use typographic features, such as letter spacing, on magnetic stripe text.
- The paragraph style must be Normal.

- The magnetic stripe text, along with graphics and text to print on the front of the card, must be on the first page.

7 When the card data is captured and formatted correctly, select the application's print function to send the card to print. The printer driver keeps cards in a queue if the printer is busy. For a directly networked printer, the print server manages jobs from any PCs that send jobs to the printer.

♦

Operating tips

- For the most current information about messages, see the online help for each message.
- Whenever you are encoding magnetic stripe data or programming smart cards, be sure to handle incomplete cards according to your policy for handling the confidential data that might be on the card.
- Used print ribbon contains negative images of data printed on cards. Be sure to handle used print ribbon according to your policy for handling the confidential data that might be on the card.

Removing cards

The card output stacker holds both completed cards and rejected cards. Remove completed cards from the output stacker to distribute printed cards. The output stacker holds up to 100 cards with a nominal thickness of 0.030 inch (0.76 mm).

Remove rejected cards as soon as they are ejected from the printer so you do not need to sort through all cards to locate them. Cards are rejected when a print job is cancelled or when a problem occurs while personalizing a card.

You can remove cards when the printer power is on or off, or while the printer is printing. Completed and rejected cards are removed in the same way.

Remove cards

1 Lift the cards from the card output stacker.

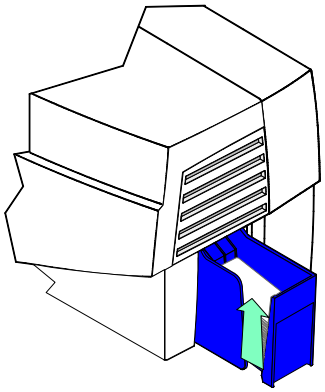


Figure 2-17: Remove cards

2 Dispose of partly processed cards according to your policies for handling the confidential data that might be on the cards.

♦

Responding to messages

The printer provides information to the printer driver about the status of cards being processed. If the printer is not able to process and print a card, the printer driver generates a message on the PC in response to this situation. In most cases, the message is displayed on the PC. Some applications manage printer driver messages, and those messages might be different than described in this section.

In some circumstances, the printer might beep and the status light blink amber without a message appearing on the PC. The most likely causes are:

- Renaming the printer (Restart Windows to fix the problem)
- Printing a test card in a printer with a magnetic stripe module, when the card does not have a magnetic stripe (use a card with a magnetic stripe and make sure the stripe is oriented correctly)

Messages issued by the printer at startup and some communication messages can be displayed on more than one directly networked PC with a SmartDriver installed. In most cases, a message appears on the PC that sent the card job that has a problem.

Messages include a Help button, where information about recovering from the situation is available. Typical messages might indicate that the print ribbon needs to be replaced or that a card is stuck. See the “Fix a printer problem” procedure that follows.

ⓘ When a message box appears, only use the buttons on the message box, so that both the printer driver and printer can return to normal operation.

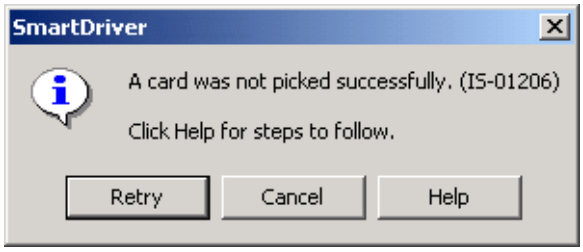


Figure 2-18: Typical message

If a message appears repeatedly and you cannot reliably correct the situation, service might be required.

Before you call your service representative, write down the following:

- The message and message number.
- The model of the printer, such as “Magna ImageCard Platinum Series.”
- The serial number of the printer, located on the inside panel. See “Printer label” on page 1-3.
- The driver version and firmware version, described in “Using the Printer Toolbox” on page 3-10.

For more information about obtaining service, see “Obtaining service” on page 5-22.

Fix a printer problem

1 When a message is displayed on the PC, follow the suggested action. Click the Help button to identify the likely cause of the problem and the possible solution.

2 From the help topic, click the “Click for error recovery procedures” link to view a list of printers. Click the link for the printer you are using and follow the procedure provided in the *e*-Guide to fix the problem.

Most parts of the printer designed to be used by the operator are colored green. These parts include knobs for clearing jams and handles of supply cartridges.

3 After fixing the problem, close the cover of the printer.

If the printer has a locking cover, lock the cover after closing it.

4 Depending on the situation, the message box might be removed automatically or you might need to respond. Cards still in the printer might be ejected.

The message box can have one or more of these buttons:

- Retry: Clears the card from the printer. The driver sends the card or cards to the printer again. If the problem is corrected, normal operation resumes.
- Cancel: Clears the card from the printer. The card is not sent to print again. If the problem is corrected, normal operation resumes.
- OK: Used for a message that occurs when no card was being printed, a status message, or an equipment failure message. If the problem is corrected,

normal operation resumes. (Power cycle the printer if operation does not resume.)

5 If the message box disappears automatically, decide whether to return to the card creation application to send the card to print again.

♦

Shutting down the printer and PC

Shut down the printer and the PC to which it is attached when you are done making cards for the day or will be away from the system for an extended period of time.The printer and PC can be left on during lunch time and other short breaks. Follow your security procedures when leaving the printer.

Shut down the printer and PC

1 Make sure all cards have completed processing before turning off the power. (Choose Suspend in the Printer Toolbox to stop communication between the printer and driver. See “Using the Printer Toolbox” on page 3-10.)

2 Press the Power switch to turn off power to the printer.

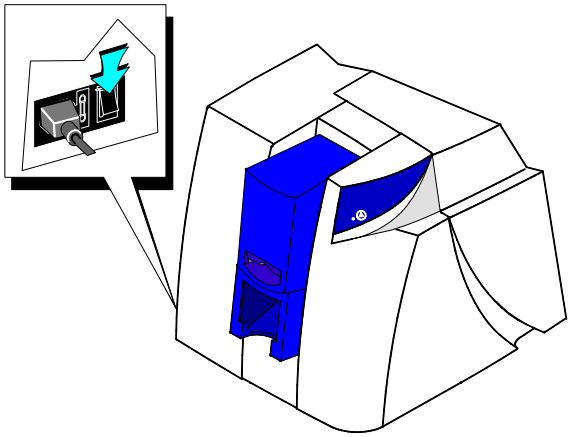


Figure 2-19: Press the power switch to power off the printer

3 Follow your policy to secure unprinted card stock, supplies, and printed cards.

4 Close PC applications and power off other equipment (including the PC) following your established procedure.

If you store the printer for several months, remove supplies before storing it. Supplies to remove include cards, print ribbon, topcoat or overlay supply, and the replaceable cleaning sleeve.

♦

Using the printer driver

3

This chapter provides information to help you use the printer driver for the Datacard® Magna™ Platinum™ Series photo ID printer effectively and efficiently. It describes:

- How to work with printer settings and data
- How to use the Printer Toolbox

Working with Properties and other driver dialog boxes

Printer driver settings and data are organized in a set of dialog boxes or pages where settings for the printer are displayed and can be changed. Printer driver settings and data are organized differently for Windows Me and 98, Windows 2000, Windows XP, and Windows NT. Use the section that applies to the operating system you use.

The printer driver allows you to connect one of the following printer types to the same port:

- Select Class with Advanced Imaging Technology (including Platinum™ series)
- Magna Class with Advanced Imaging Technology (including Platinum™ series)
- SP35 card printer
- ImageCard IV

The default printer name when the driver is installed is SmartDriver. References in this guide to the printer driver refer to the SmartDriver. For most installations, the driver detects the type of printer attached and displays a status icon that matches the printer type.

Tips for Properties, Printing Preferences, and Default Document Properties

When you use settings, consider the following for greatest success:

- When it is installed, the SmartDriver printer driver uses default settings for the printer. Make sure that driver settings match printer features and supplies used.
- For settings that affect the printer, such as print ribbon type, make sure that the printer and PC are connected so the value you select is sent to the printer and saved. (For printers used over a network, see the *e-Guide for ImageCard® Magna™ and UltraGrafix® Magna™ Printers*. For printers connected over a network using a print server, change settings from the Administrative PC first.)
- For settings that affect only the card format, such as landscape or portrait orientation, the printer does not need to be connected and powered on.
- The Printer Type affects the settings that are available. See the *e-Guide for ImageCard® Magna™ and UltraGrafix® Magna™ Printers* for more information about the printer type.
- Select the Print on Both Sides setting before selecting the Print Ribbon Type and Print Blocking Pattern. The choices available for Print Ribbon Type and Print Blocking Pattern depend on the Print on Both Sides setting.
- The card creation application might include settings that override driver settings. Also, you can access printer settings through the application's print feature. (Depending on the application and operating system, settings might apply only to the current document or session.)
- If you change the card design, review all settings and make changes as needed to reflect the new card design.

- When the printer is installed, the default spool setting is “Spool printing so program finishes printing faster.” Use this setting, not “Print directly to printer.”
- When the printer is installed, “Enable bi-directional support” is selected. This setting is required to display messages, print test cards, and for normal printer-driver communication. The printer or driver might stop operating if bi-directional communication is disabled.
- When the printer is directly networked to a PC, the Color Settings page can be used from all PCs. The Laminator Material page of the Printer Toolbox and Printhead and Laminator pages of Advanced Setup should be used only from the administrative PC.
- When the printer is networked to more than one PC, make sure to select the same ribbon type on all network-connected PCs.
- A user with Full Control permission on Windows NT, or a user with Allow permission for Print, Manage Printer, and Manage Documents (on Windows 2000 or XP) should use the Properties or Printing Preferences dialog boxes. A user with administrator rights also can use these dialog boxes. On the client PC when a printer is shared, a user with Print permission can use these dialog boxes.

Properties for Windows Me & 98

The Properties dialog box includes the following settings or data:

- Print on both sides (duplex printing)
- Print ribbon type
- Card design settings, such as landscape or portrait orientation
- Print blocking pattern
- Whether to apply topcoat or overlay material to the front of the card, back of the card, or both
- Magnetic stripe encoding formats and coercivity
- Printer type
- Port to which the printer is attached
- Cleaning interval

Use the Properties dialog box

Make sure the printer power is on and the printer is connected to the PC.

1 Select Start from the Windows taskbar.

2 From the Windows Start menu, select Settings and then Printers. The Printers window appears.

3 Click once on the SmartDriver icon.

4 Select File from the Printers menu bar, and then select Properties. The SmartDriver Properties dialog box appears.

If you have the Printer Toolbox open, you can click the Properties button on the Status page to open the Properties dialog box. The General, Details, Color Management and Sharing tabs are not displayed.

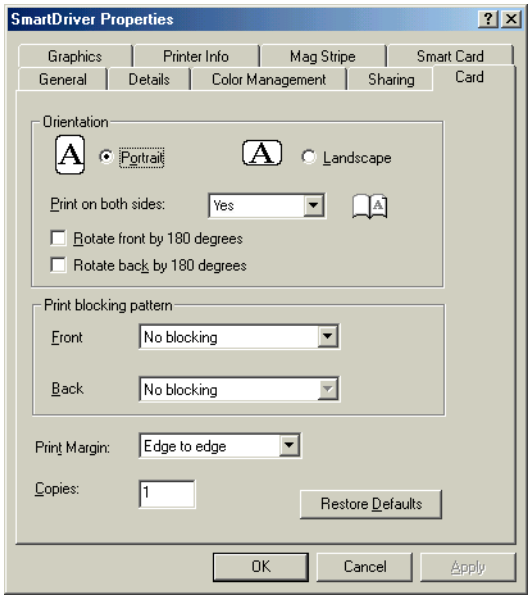


Figure 3-1: Properties dialog box, Windows Me and 98

5 Select the tab with the information to view or change.

To view help for settings, click on the What's This help button and then click a setting.

6 If you make changes, click Apply to save the settings. Click OK to close the dialog box. If you do not want to make changes, click Cancel to close the Properties dialog box.

♦

Properties & Printing Preferences for Windows 2000 & XP

The Printing Preferences dialog box includes the following settings or data:

- Card design settings, such as landscape or portrait orientation
- Printer type
- Print blocking pattern
- Cleaning interval
- Whether to apply topcoat or overlay material to the front of the card, back of the card, or both
- Magnetic stripe encoding formats, coercivity, and other settings

The Printing Preferences dialog box also provides access to the About dialog box, which shows the printer driver version.

Settings that control the non-printing operation of the printer are in the Properties dialog box for the printer. These settings include:

- Port to which the printer is attached
- Permissions for other users of the PC
- Printer sharing

The SmartDriver provides help for the Printing Preferences dialog box, and Windows 2000 or XP provides help for the Properties dialog box. Help provides information about specific settings of the printer driver. Help does not include step-by-step procedures or detailed conceptual information.

Use the Properties dialog box

Make sure the printer power is on and the printer is connected to the PC.

1 Select Start from the Windows 2000 or XP taskbar.

2 From the Windows Start menu, select Settings and then Printers (2000) or Printers and Faxes (XP). The Printers (and Faxes) window appears.

3 Click once on the SmartDriver icon.

4 Select File from the Printers menu bar, and then select Properties. The SmartDriver Properties dialog box appears.

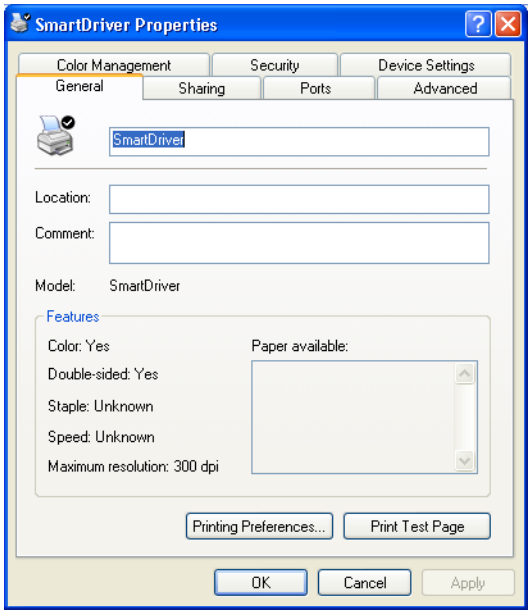


Figure 3-2: Properties dialog box, Windows 2000 and XP

5 Select the tab that contains the information you want to view or change.

6 If you make changes, click OK to save the settings and close the dialog box. If you do not want to make changes, click Cancel to close the Properties dialog box.

7 If you change the port, reboot the PC and power the printer off and on.

♦

Use the Printing Preferences dialog box

Make sure the printer power is on and the printer is connected to the PC.

1 Select Start from the Windows 2000 or XP taskbar.

2 From the Windows Start menu, select Settings and then Printers (2000) or Printers and Faxes (XP). The Printers (and Faxes) window appears.

3 Click once on the SmartDriver icon.

4 Select File from the Printers menu bar, and then select Printing Preferences. The SmartDriver Printing Preferences dialog box appears.

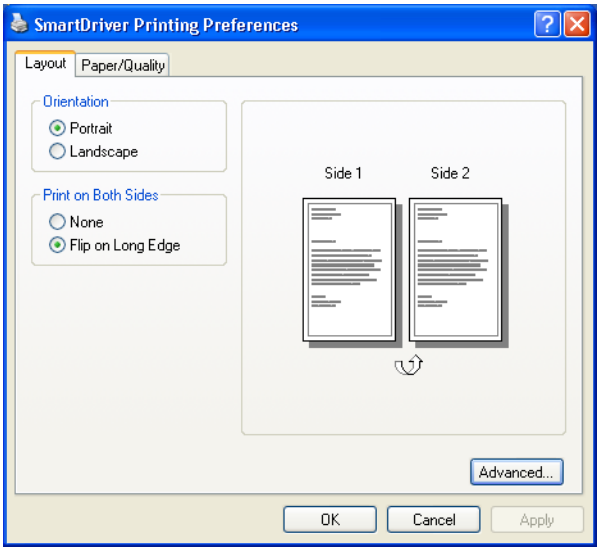


Figure 3-3: Printing Preferences dialog box, Windows 2000 and XP

5 If the setting you want to change appears, select the setting.

6 If the setting you want to change does not appear, click the Advanced button to display the Advanced Options dialog box (Figure 3-4). Click the plus sign (+) if needed to see all selections. When you click a selection, a list of choices appears next to the selection. Click the arrow on the box to see the selections available.

If you have the Printer Toolbox open, you can click the Printing Preferences button on the Status page to open the Printing Preferences Advanced dialog box.

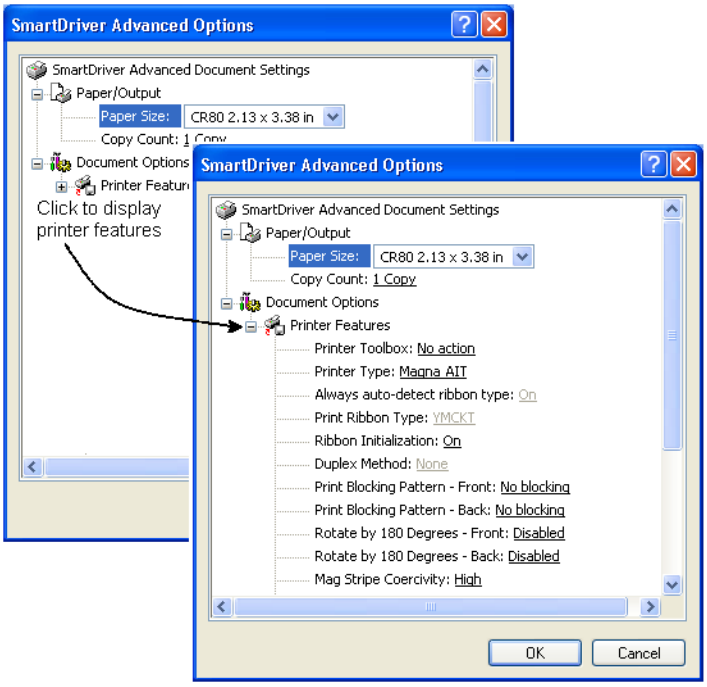


Figure 3-4: Advanced Options, Windows 2000 and XP

If the selections you want to use are not available (are grayed out), make sure the feature is available in the printer. Also make sure that the printer is powered on and connected to the PC, and then resume the Printer Toolbox. See "Opening and using the Printer Toolbox" on page 3-11. For a network-connected printer, see *e-Guide for ImageCard® Magna™ and UltraGrafix® Magna™ Printers*.

To view help for settings, click on the What's This help button and then click any setting in the Printer Features list. A list of settings is displayed. Select the setting for which you want help.

7 If you make changes, click OK on each dialog box to save the settings and close the dialog box.

♦

Properties and Default Document Properties for Windows NT

Settings that control the printing and personalization of the card are in the Default Document Properties dialog box for the printer. These settings include:

- Print on both sides (duplex printing)
- Print ribbon type
- Card design settings, such as landscape or portrait orientation
- Print blocking pattern
- Printer type

- Cleaning interval
- Whether to apply topcoat or overlay material to the front of the card, back of the card, or both
- Magnetic stripe encoding formats and coercivity

If you use a card creation application specifically designed to create cards, that application might include settings with cards that override driver settings.

Settings that control the non-printing operation of the printer are in the Properties dialog box for the printer. These settings include:

- Port to which the printer is attached
- Permissions for other users of the PC
- Printer sharing

The SmartDriver provides help for the Default Document Properties dialog box, and Windows NT provides help for the Properties dialog box. Help provides information about specific settings of the printer driver. Help does not include step-by-step procedures or detailed conceptual information.

Use the Properties dialog box

Make sure the printer power is on and the printer is connected to the PC.

1 Select Start from the Windows NT taskbar.

2 From the Windows NT Start menu, select Settings and then Printers. The Printers window appears.

3 Click once on the SmartDriver icon.

4 Select File from the Printers menu bar, and then select Properties. The SmartDriver Properties dialog box appears.

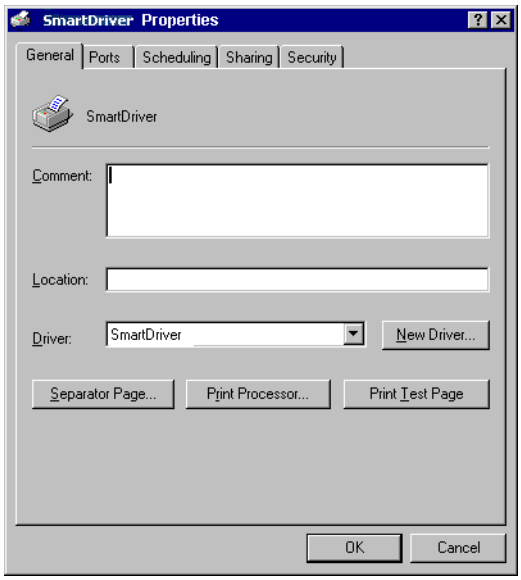


Figure 3-5: Properties dialog box, Windows NT

5 Select the tab that contains the information you want to view or change.

6 If you make changes, click OK to save the settings and close the dialog box. If you do not want to make changes, click Cancel to close the Properties dialog box.

7 If you change the port, restart Windows and power cycle the printer.

♦

Use the Default Document Properties dialog box

Make sure the printer power is on and the printer is connected to the PC.

1 Select Start from the Windows NT taskbar.

2 From the Windows NT Start menu, select Settings and then Printers. The Printers window appears.

3 Click once on the SmartDriver icon.

4 Select File from the Printers menu bar, and then select Document Defaults. The SmartDriver Default Document Properties dialog box appears.

If you have the Printer Toolbox open, you can click the Default Document Properties button on the Status page to open the Default Document Properties dialog box.

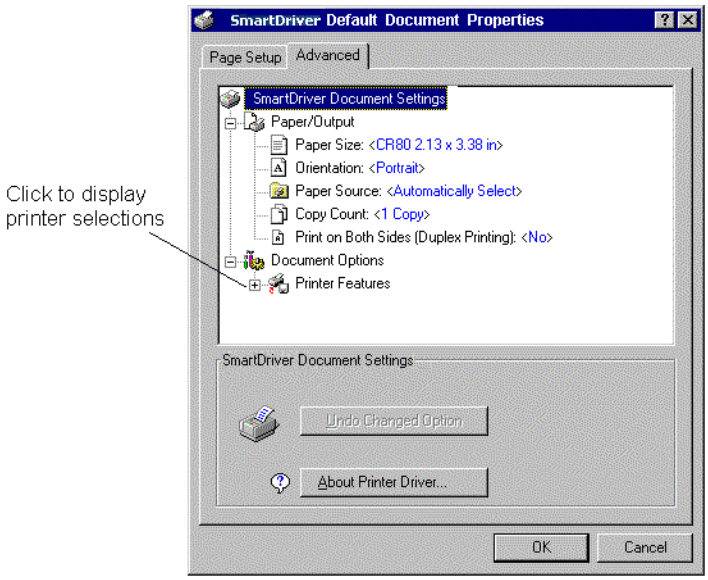


Figure 3-6: Default Document Properties dialog box, Windows NT

5 Select the tab that contains the information you want to view or change. On the Advanced tab, click the plus sign (+) if needed to see all selections available. When you click a selection, choices appear in the "Change**. . .** " box. Click the value you want.

If the selections you want to use are not available (are grayed out), make sure the feature is available in the printer. Also make sure that the printer is powered on and connected to the PC and resume communication using the Printer Toolbox.

To view help for settings, click on the What's This help button and then click any setting in the Printer Features list. A list of settings is displayed. Select the setting for which you want help.

6 If you make changes, click OK to save the settings and close the dialog box.

♦

Using the Printer Toolbox

The Status page of the Printer Toolbox tracks communication between the Magna printer and its printer driver. The Printer Toolbox icon is located in the lower right corner of the Windows desktop (see Figure 3-7).

Figure 3-7: Printer Toolbox icon

The Printer Toolbox starts as part of Windows startup and is displayed by default. If you exited the Printer Toolbox, it starts again after a card is printed or after the Properties, Printing Preferences, or Default Document Properties dialog box is opened.

The Printer icon shows the state of communication between the printer and driver, listed in the table below.

Icon	Description	Indicates
	This printer icon is white with a green dot.	The driver and printer are communicating. The printer and PC are connected using a USB or parallel cable.
	This printer icon is gray.	Communication between the driver and printer is suspended. The driver is not reporting printer information such as errors. The printer and PC are connected using a USB or parallel cable.
	This printer icon is white with a white exclamation point in a red circle.	The Printer Toolbox is active but is not communicating with the printer. The printer might be off, cables might be loose, or a problem might exist. The printer and PC are connected using a USB or parallel cable.
	This printer icon is white with a blue magnifying glass.	The Printer Toolbox is in advanced setup mode. Use advanced setup when changing printing intensity, the position of printing, or settings for laminator material.
	The printer icon is white, includes a PC, and has a green stripe on top.	The Printer Toolbox is running on a client PC using printer sharing over a network. The Printer Toolbox displays the client status and provides access to color settings.
	The printer icon is white with a green stripe and dot.	The driver and printer are communicating. The driver is installed on a PC that uses a direct network connection to the printer. The printer is not currently printing cards.
	The printer icon is white with a green stripe and yellow hourglass.	The driver is active but is not communicating with the printer. The driver is installed on a PC that uses a direct network connection to the printer.
	The printer icon is gray with a green stripe.	Communication between the driver and the network is temporarily suspended. The driver is installed on a PC that uses a direct network connection to the printer.

Use the Help button on the Printer Toolbox for more information about each window.

Opening and using the Printer Toolbox

You can use the Printer Toolbox to do the following:

- View information about the printer and driver
- Print sample cards
- Run a cleaning cycle (see “Maintaining the printer” on page 4-1)
- Suspend communication between the printer and driver
- Minimize the Printer Toolbox dialog box
- Use color settings
- Start or quit advanced setup

Open the Printer Toolbox

The Printer Toolbox dialog box is open by default when you start Windows. You can display the Printer Toolbox dialog box (if it is minimized) by double-clicking the icon in the system tray that looks like your printer.

If the Printer icon is not visible, do one of the following:

- Open Properties (Windows 98 and Me), select the Printer Info tab, and click the "Open Toolbox" button.
- Open Printing Preferences (Windows 2000 and XP), click the Advanced button, and select "Printer Toolbox:Open".
- Open Document Default Properties (Windows NT), and select "Printer Toolbox:Open".

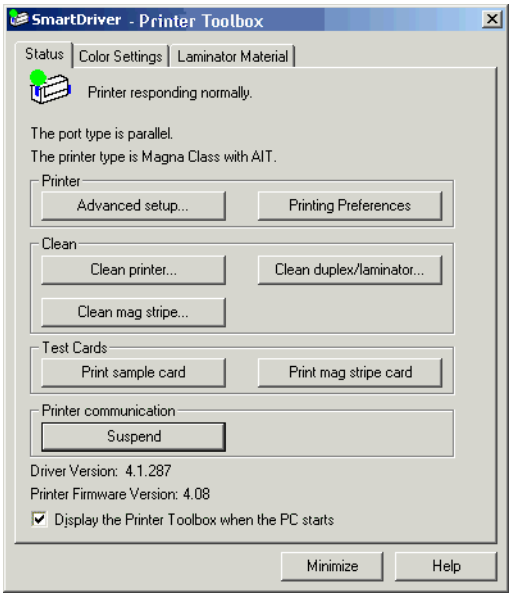


Figure 3-8: Printer Toolbox

Viewing Printer Toolbox information

The Printer Toolbox displays the following status information:

- The top line displays the current printer or driver status.
- If the printer is directly connected to this PC, the second line displays any messages. If the printer is shared through a network, this line indicates where to find information about messages. (This line is blank on a locally connected PC when there are no errors or when any message has been cleared and processing resumes.)
- The third line displays information about how the printer and PC are connected, which can be “parallel,” “USB,” “client PC,” or “directly networked.” If printer is connected using a parallel port that is not supported, the line also instructs you to change the port mode to ECP. See “Setting parallel port values” on page C-6.
- The fourth line displays the printer type.
- At the bottom of the dialog box, the Printer Toolbox displays the driver version and the printer firmware version.
- At the bottom of the dialog box, the “Display Printer Toolbox when the PC starts” checkbox allows you to determine whether the Printer Toolbox is displayed when Windows starts.

Suspending the Printer Toolbox

To suspend communication, do one of the following:

- Right-click on the printer icon in the lower right corner of the Windows desktop. From the pop-up menu, click Suspend.
- On the Printer Toolbox, click Suspend.

ⓘ You cannot suspend communication while printing a card.

Suspend communication before power off to avoid interrupted communication. Communication automatically resumes when you print a card, or when you open Properties, Document Default Properties, or Printing Preferences.

Exiting the Printer Toolbox

Exiting the Printer Toolbox stops the Printer Toolbox program and closes the dialog box. The icon does not appear in the lower right corner of the Windows desktop.

To exit or stop communication, right-click on the printer icon in the lower right corner of the Windows desktop. From the pop-up menu, select Exit. You should exit the Printer Toolbox when you receive instructions to do so.

ⓘ You cannot exit from the Printer Toolbox while printing a card.

The Printer Toolbox automatically restarts when you print a card, or when you open Properties, Document Default Properties, or Printing Preferences. If you need to restart the Printer Toolbox, open Properties, as described in “Working with Properties and other driver dialog boxes” on page 3-2.

Minimizing the Printer Toolbox

The Minimize button closes the Printer Toolbox dialog box. The program continues to run.

Starting or quitting Advanced Setup

The Advanced Setup button on the Printer Toolbox changes the printer driver from printing mode to Advanced Setup mode. After you start Advanced Setup, additional tabs appear on the Printer Toolbox where you can change printing intensity, position of printing, and laminator settings.

You cannot start Advanced Setup while printing a card. Wait until all cards are printed, and then click Advanced Setup.

For information about using the features available in Advanced Setup, see the *e-Guide for ImageCard® Magna™ and UltraGrafix® Magna™ Printers*.

While in Advanced Setup, the button on the Status page is named “Quit Advanced Setup.” Click the Quit Advanced Setup button to remove the additional tabs and return to printing mode.

For directly networked PCs, Datacard recommends that you use Advanced Setup only from an Administrative PC, and that you suspend communication at other PCs connected to the printer.

Color settings

The Color Settings tab is available from the Printer Toolbox at any time. Color settings (see Figure 3-9) are one of the features of Advanced Imaging Technology. For directly networked and shared PCs, color settings affect cards sent from the PC.

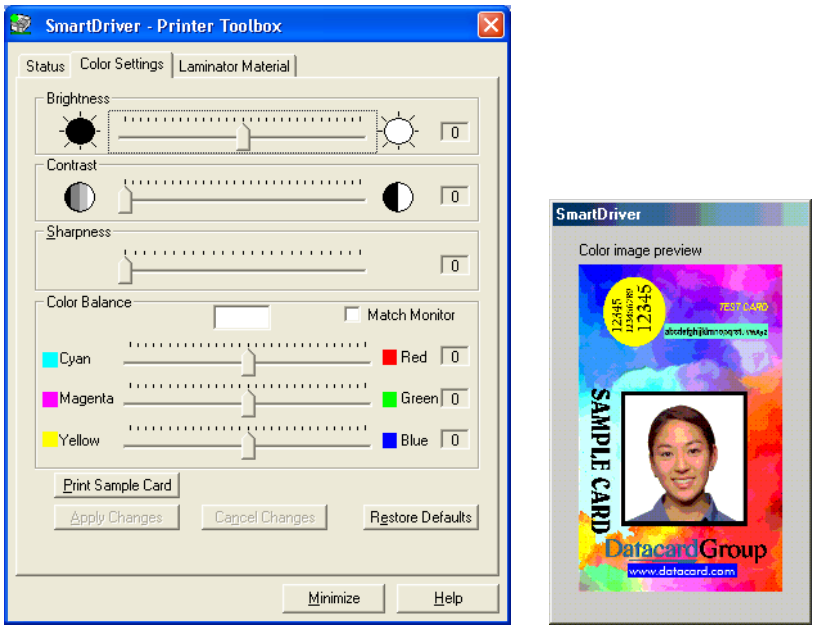


Figure 3-9: Color Settings page and preview

Maintaining the printer

4

This chapter provides information to help you maintain the Datacard® Magna™ Platinum™ Series photo ID printer for optimal performance. It describes:

- How to run a cleaning cycle, including the cleaning card and cleaning roller
- How to use the magnetic stripe cleaning card
- How to clean the rollers in the printer
- How to use the duplex/laminator cleaning card
- How to clean the supply tracker in the optional overlay or topcoat module
- How to clean the heated roller in the optional overlay or topcoat module
- How to clean the printhead
- How to replace the printhead cartridge

Running a cleaning cycle

A cleaning cycle includes replacing the sleeve of the continuous cleaning roller and running a cleaning card. Replace the cleaning roller first, and then run a cleaning card.

Select one of the following primary methods to make sure cleaning occurs regularly.

- You can set the cleaning interval in the driver to indicate when it is time to clean. The default “Cards between cleaning” value is 250 cards. You can change the number of cards between cleaning in the printer Properties, Printing Preferences, or Default Document Properties dialog box. See “Working with Properties and other driver dialog boxes” on page 3-1 for the steps to follow.
- You can clean the printer when you change the print ribbon, when you load cards in the card cartridge, or at another regular interval you determine.

You might want to run a cleaning cycle more often if:

- The cards, especially magnetic stripe cards or cards with signature panels, have particles on them
- A monochrome ribbon is used
- The printer is operated in a relatively dirty environment
- Printed cards have defects in the printing because of residue on the cards

Using the printer cleaning card

Use the printer cleaning card when prompted or according to schedule. You can run a printer cleaning card whenever you are not printing, whether or not you have been prompted. See “Supplies and cards” on page B-1 for information about ordering the printer cleaning card.

Run a printer cleaning card

If the printer has a locking card cartridge, unlock the cartridge before removing it.

1 Remove the card cartridge and set it aside.

If the print ribbon sticks to the printer cleaning card, remove the print ribbon and repeat this procedure with a new printer cleaning card.

2 Peel the protective paper backing from both sides of the printer cleaning card (see Figure 4-1).

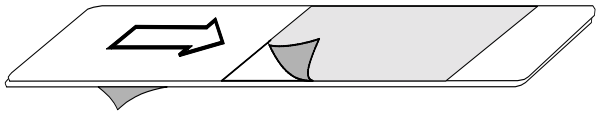


Figure 4-1: Printer cleaning card

3 Insert the printer cleaning card on the input rollers, which you can see after removing the card cartridge (see Figure 4-2).

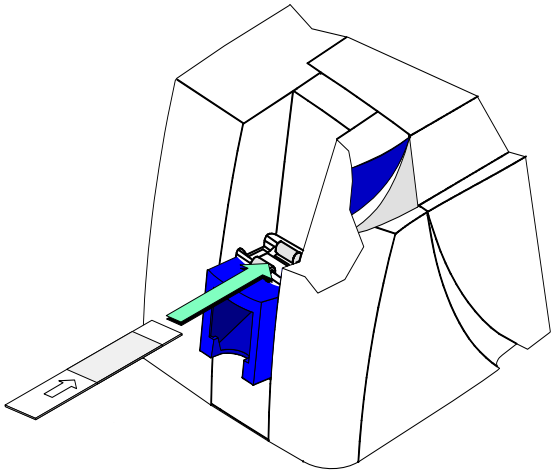


Figure 4-2: Insert the printer cleaning card

4 Start a cleaning cycle by doing one of the following:

– Click the OK button when the printer driver displays the “printer has reached the cleaning count” message. (If you do not click OK, the message appears each time you print a card, until you use the printer cleaning card.)

– Open the Printer Toolbox by double-clicking the icon. Click the Clean Printer button and then the OK button.

The printer pulls in the cleaning card and moves it back and forth to clean the print area.

5 The cleaning card is ejected on the left side of the printer directly under the card cartridge area.

6 Discard the used printer cleaning card.

7 Replace the card cartridge. Push the bottom of the card cartridge until it clicks into place. The printer module is cleaned and the printer is ready to resume normal operation.

If the printer has a locking card cartridge, lock the cartridge after replacing it.

♦

Replacing the cleaning roller sleeve

Replace the sleeve of the continuous cleaning roller when prompted or according to your schedule. You can change the replaceable cleaning sleeve at any time, whether or not you have been prompted. See “Supplies and cards” on page B-1 for information about ordering the replaceable cleaning sleeve.

Replace the cleaning roller

If the printer has a locking cover, unlock the cover before opening it.

1 Lift the top cover to open the printer.

The printer power can be on or off when you replace the cleaning roller.

2 Press down on the swing arm until it clicks (step 1 in Figure 4-3). The push latch releases the swing arm. Lift the swing arm by firmly grasping the handle and pulling up until it is fully open (step 2 in Figure 4-3).

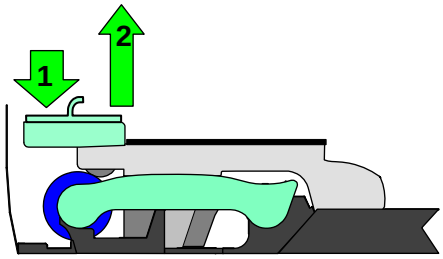


Figure 4-3: Open the swing arm

3 Remove the print ribbon cartridge.

4 Lift the continuous cleaning roller unit out of the printer (step 1 in Figure 4-4).

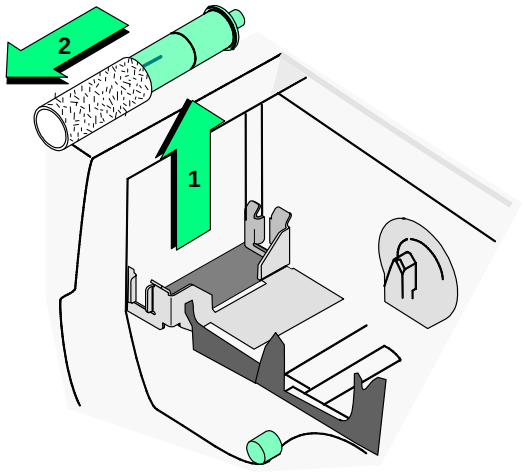


Figure 4-4: Lift the roller out of the printer

5 Slide the used sleeve off the cleaning roller spindle (step 2 in Figure 4-4). Discard the used sleeve.

6 Slide a new replaceable cleaning sleeve onto the spindle (step 1 in Figure 4-5).

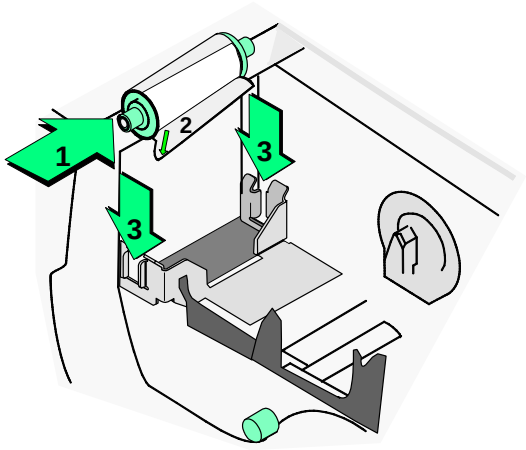


Figure 4-5: Replace the cleaning roller sleeve

7 Hold the replaceable cleaning roller spindle by the ends and remove the protective cover from the sleeve (step 2 in Figure 4-5). Discard the protective cover.

ⓘ Avoid touching the sticky surface of the replaceable sleeve. Oils from your fingers could reduce cleaning and could affect card quality.

8 Continue to hold the spindle by the ends. Replace the spindle with sleeve in the printer (step 3 in Figure 4-5).

9 Replace the print ribbon cartridge.

10 Close the swing arm, pressing it down until the push latch clicks into place.

11 Close the printer top cover.

ⓘ If the printer has a locking cover, lock the cover after closing it.

♦

Using the magnetic stripe cleaning card

The printer's magnetic stripe module should be cleaned when the printer has displayed several magnetic stripe errors that list running the magnetic stripe cleaning card as a solution. See "Supplies and cards" on page B-1 for information about ordering magnetic stripe cleaning cards.

⚠ Do not use the magnetic stripe cleaning card more than once every 2000 cards or excessive wear can result.

Run the magnetic stripe cleaning card

1 Insert a magnetic stripe cleaning card into the exception card slot. Make sure the arrow is on top and pointing into the printer (see Figure 4-6). (You can also remove the card cartridge and place the cleaning card on the card input rollers.)

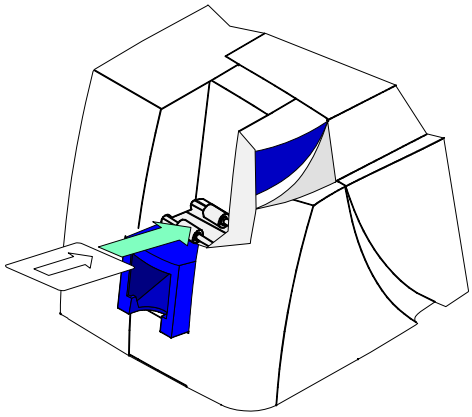


Figure 4-6: Insert the magnetic stripe cleaning card

⚠ Do not peel off the blue stripe on the back of the card.

2 Open the Printer Toolbox.

3 Click the Clean Mag Stripe button in the Clean area.

The printer automatically runs the magnetic stripe cleaning process and ejects the card in the output stacker when it is complete.

4 Remove the used magnetic stripe cleaning card. The card can be used again.

♦

Cleaning the printer rollers

The printer rollers move the card during printing or cleaning operations. Clean the rollers once a week or when problems occur such as repeated card jams or cards not being picked.

Clean printer rollers

1 Open the Printer Toolbox if needed. See “Opening and using the Printer Toolbox” on page 3-11.

ⓘ Make sure that printing of cards is complete before cleaning the rollers.

2 Clean the two pick rollers:

If the printer has a locking card cartridge, unlock the cartridge before removing it.

a Remove the card cartridge.

b Remove the cap from the cleaning pen. Hold the end of the cleaning pen against the first pick roller (step 1 in Figure 4-7).

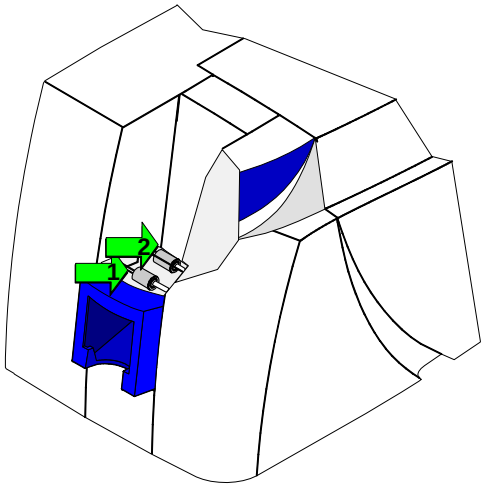


Figure 4-7: Clean the pick rollers

c Click the Clean Printer button in the Printer Toolbox. Click OK on the prompt that appears. Do not insert a cleaning card! The driver sends a command to the printer to run the printer cleaning card. The printer moves rollers when it attempts to pick the card.

d Slowly move the pen on the pick roller.

e Lightly wipe any dirt from the end of the cleaning pen onto a clean cloth or paper. Move the cleaning pen to another area of the roller.

f Repeat steps c through e until no more dirt appears on the pen.

g Repeat steps c through f, placing the cleaning pen on the second pick roller (step 2 in Figure 4-7).

3 Clean the transport area rollers:

If the printer has a locking cover, unlock the cover before opening it.

a Open the printer cover and remove the print ribbon cartridge. The card cartridge should stay out of the printer.

b Place the cleaning pen on top of the first transport roller (location 1 in Figure 4-8).

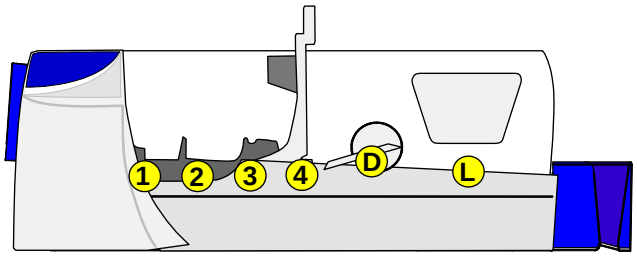


Figure 4-8: Roller locations in the card track

Do not place the pen next to the black transport base. The pen can get pinched between the roller and the transport base.

c Do one of the following to turn the rollers in the printer.

- Click the Clean Printer button in the Printer Toolbox. Click OK on the prompt that appears. Do not insert a cleaning card! The driver sends a command to the printer to run the printer cleaning card. The printer moves rollers when it attempts to pick the card.
- Turn the card advance knob to move rollers by hand.

d Move the pen on the roller.

e Lightly wipe any dirt from the end of the cleaning pen onto a clean cloth or paper. Move the cleaning pen to another area of the roller.

f Repeat steps c through e for the roller at location 1 until no more dirt appears on the pen or cloth.

g Move the cleaning pen to location 2 (in Figure 4-8). Repeat steps c through f.

h If the printer has a magnetic stripe module, move the cleaning pen to location 3 (in Figure 4-8). Repeat steps c through f.

i Replace the print ribbon cartridge and close the swing arm.

4 Clean the exit roller.

a Begin with the swing arm down and latched.

b Hold the end of the cleaning pen against the top of the lower exit roller (location 4 in Figure 4-8).

c Do one of the following to turn the rollers in the printer.

- Click the Clean Printer button in the Printer Toolbox. Click OK on the prompt that appears. Do not insert a cleaning card! The driver sends a command to the printer to run the printer cleaning card. The printer moves rollers when it attempts to pick the card.
- Turn the card advance knob to move rollers by hand.

d Move the pen on the roller.

e Lightly wipe any dirt from the end of the cleaning pen onto a clean cloth or paper. Move the cleaning pen to another area of the roller.

f Repeat steps c through e for the roller at location 4 until no more dirt appears on the pen or cloth.

You can also clean the rollers in the duplex or pass-through mechanism (location D in Figure 4-8), and in the laminator (location L in Figure 4-8). Turn the black duplex wheel to move rollers in the duplex or pass-through mechanism. Turn the laminator advance knob to turn the wheels in the laminator.

5 Close the printer cover.

If the printer has a locking top cover, lock the cover after closing it.

6 Replace the card cartridge.

If the printer has a locking card cartridge, lock the cartridge after replacing it.

7 Print a card to verify the quality of printing. You can print a printer test card, a sample card, or a card using your card creation application.

♦

Using the duplex/laminator cleaning card

If your printer includes a duplex module, a topcoat module, or an overlay module, use the duplex/laminator cleaning card to maintain card quality and reduce the likelihood of jammed cards in the duplex and laminator modules.

Use the duplex/laminator cleaning card once a month or when problems occur, such as repeated card jams in the overlay or topcoat module. See “Supplies and cards” on page B-1 for ordering information.

Use the duplex/laminator cleaning card

If the printer has a locking card cartridge, unlock the cartridge before removing it.

1 Remove the card cartridge and set it aside.

If the print ribbon sticks to the duplex/laminator cleaning card, remove the print ribbon and repeat this procedure with a new cleaning card.

2 Peel the middle strip of protective paper from both sides of the duplex/laminator cleaning card (see Figure 4-9).

The outside protective paper strips must stay on the card.

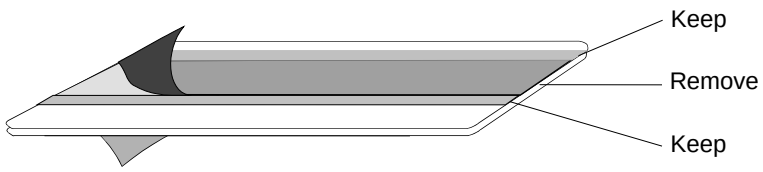


Figure 4-9: Duplex/laminator cleaning card

3 Insert the duplex/laminator cleaning card near the bottom of the card cartridge cavity (see Figure 4-10).

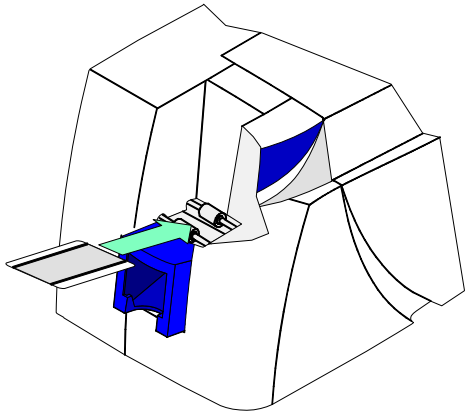


Figure 4-10: Insert the duplex/laminator cleaning card

4 Open the Printer Toolbox if needed.

5 Click the Clean Duplex/Laminator button in the Clean area.

The printer automatically runs the duplex/laminator cleaning process and ejects the card in the output stacker when it is complete.

6 Remove the used cleaning card and discard it.

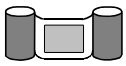
7 Replace the card cartridge. Push the bottom of the card cartridge until it clicks into place.

If the printer has a locking card cartridge, lock the cartridge after replacing it.

The duplex and laminator modules are clean and the printer is ready to resume normal operation.

♦

Cleaning the supply tracker



The supply tracker in the optional overlay or topcoat module can become slippery, which might cause messages to appear. Clean the supply tracker weekly or when needed.

Use a printer cleaning card to clean the supply tracker. You can also use a duplex/laminator cleaning card; however, with this card, it is more difficult to clean the full width of the supply tracker.

Clean the supply tracker

1 Power off the printer.

⚠ The heated roller in the overlay or topcoat module operates at 400° F (200° C). Wait 30 minutes or until the heated roller area is cool.

2 Lift the top cover.

ⓘ If your printer has a locking cover, unlock the cover before opening it.

3 Prepare a printer cleaning card.

– If you just used a printer cleaning card in the printer, you can use that card to complete this procedure.

– If you have not run a printer cleaning card, remove the protective paper from one side of the card.

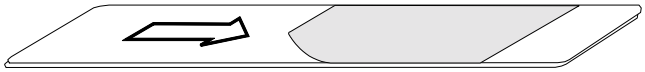


Figure 4-11: Remove the protective paper from the cleaning card

4 Lift the supply tracker until it stops and is held in place.

ⓘ Remove the supply cartridge for easier access to the supply tracker. See “Removing the supply cartridge” on page 2-7 for steps to follow.

5 Roll the sticky surface of the cleaning card against the supply tracker. Rotate the supply tracker to clean all sides.

⚠ Do not touch the surface of the supply tracker with your fingers. Oils from the skin can cause the supply tracker to slip or can affect card quality.

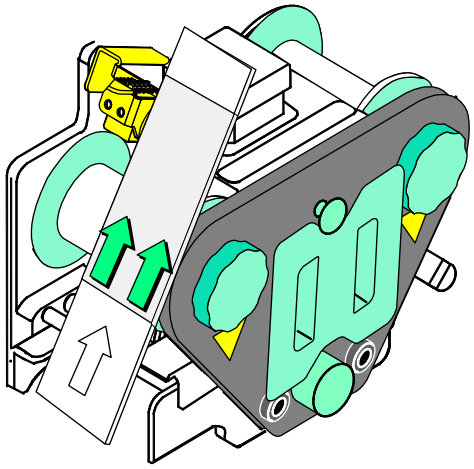


Figure 4-12: Clean the supply tracker

Replace the supply cartridge if it was removed. See “Replacing the supply cartridge” on page 2-10 for steps to follow.

6 Lower the supply tracker.

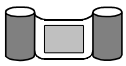
7 Close the cover.

If the printer has a locking cover, lock the cover after closing it.

8 Dispose of the used cleaning card.

♦

Cleaning the heated roller



At times, the heated roller in the optional overlay or topcoat module can have deposits that affect card appearance. Clean the heated roller to remove deposits and improve card appearance.

Clean the heated roller

1 Power off the printer. The heated roller in the overlay or topcoat module operates at 400° F (200° C). Wait 30 minutes or until the heated roller area is cool.

The cleaning stick can withstand the operating temperature of the heated roller. However, your hands will be close to the heated roller. Wait until the heated roller is cool to avoid burning your hands.

If your printer has a locking cover, unlock the cover before opening it.

2 Lift the top cover.

3 Remove the supply cartridge to access the heated roller. See “Removing the supply cartridge” on page 2-7.

Use only the cleaning stick on the heater roller. Tools and sharp objects can permanently scratch the heated roller and reduce card quality.

4 Use the cleaning stick to remove deposits from the heated roller.

a Push the cleaning stick back and forth on the heated roller (step 1 in Figure 4-13).

The heated roller is above the card track, mounted in a pivoting frame.

b Use the cleaning stick to move the heated roller and make another area available for cleaning (step 2 in Figure 4-13).

c Repeat steps a and b to clean the entire area of the heated roller.

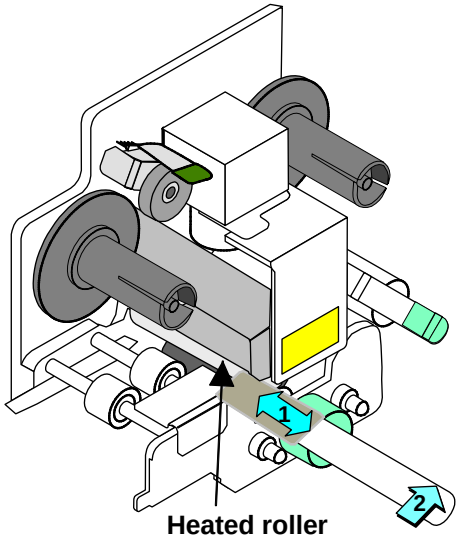


Figure 4-13: Clean the heated roller

5 Replace the supply cartridge. See “Replacing the supply cartridge” on page 2-10.

6 Close the printer cover.

If the printer has a locking cover, lock the cover after closing it.

7 Power on the printer to resume card production.

If these steps do not fix the problem, contact your service provider.

♦

Cleaning tips

Follow these tips to clean your printer effectively and maintain optimum operation.

- Clean the ribbon tracker using the printer cleaning pen. The ribbon tracker is located on the swing arm (see Figure 4-14).

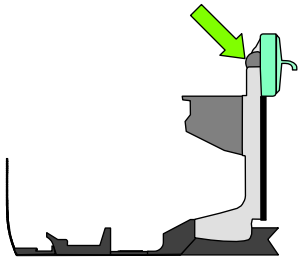


Figure 4-14: Clean the ribbon tracker

- Some card features can require more frequent cleaning of the printer, especially if the cards are not high quality. Signature panels and magnetic stripes can deposit

particles on rollers. Set the prompted cleaning cycle more often than the default of every 250 cards.

- Clean printer rollers regularly, such as weekly, or every 1000 cards. If your printer is connected over a network using a print server, the cleaning frequency set in the printer will apply to cards sent from all attached PCs.
- If you use StickiCards™, clean the card tracks after every 100 cards. Use the cleaning pen to reach most areas of the card track. Use an isopropyl alcohol swab (not included in the cleaning kit) to reach hidden areas of the card track.
- If the printer includes an optional topcoat or overlay module, use the cleaning pen to remove deposits from the guides of the supply cartridge. Clean the guides on a regular basis, such as weekly.

Cleaning the printhead

The printhead can have contamination stuck to it. You might notice it as unprinted lines on printed cards. Clean the printhead only when needed, such as:

- The printhead has been accidently touched, such as when changing supplies or clearing a card jam
- You have replaced the printhead
- Your observe problems with card appearance, as described in “Troubleshooting” on page 5-1.

⚠ Do not touch the printing edge of the printhead cartridge with your fingers. The oils on your fingers can reduce print quality.

⚠ Do not bump the printing edge of the printhead cartridge with any sharp objects. Sharp objects can permanently damage the printhead.

Use the cleaning pen to clean the printhead. Do not use a cotton swab. The fibers from the cotton can stick to the printhead.

Clean the printhead

1 Power off the printer and disconnect it from the power source.

ⓘ If your printer has a locking cover, unlock the cover before opening it.

2 Open the printer cover.

3 Press down on the swing arm. The push latch will release the swing arm. Using the handle, lift the swing arm until it is fully open.

4 Open the cleaning pen.

5 Using gentle pressure, move the cleaning pen back and forth along the full length of the printhead edge (see Figure 4-15). Be sure to clean the rounded edge of the printhead completely.

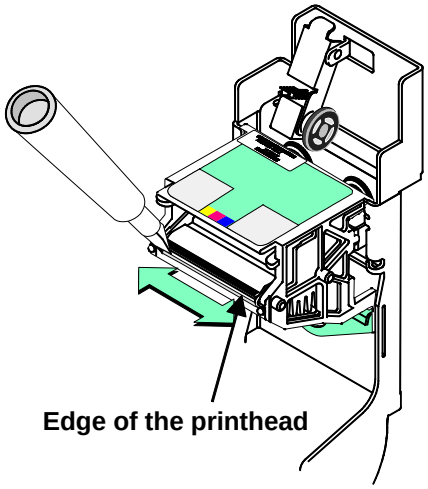


Figure 4-15: Clean the printing surface of the printhead

If the cleaning pen does not remove all contamination from the printhead, contact your service provider for additional assistance.

6 Close the swing arm by grasping the handle, lowering it into position, and pressing it down until the push latch clicks into place.

7 Close the printer cover.

If your printer has a locking cover, lock the cover after closing.

8 Connect the power cable to the power source and power on the printer.

Print a card to verify the quality of printing. You can print a Windows test page or a sample card. If card quality is still inadequate, see “Problems with card appearance” on page 5-8.

♦

Replacing the printhead cartridge

The printer uses an operator-replaceable printhead cartridge. For more information about printhead cartridges, see “Supplies and cards” on page B-1.

Remove the printhead cartridge

Do not touch the printing edge of the printhead cartridge. If you do, clean it using the cleaning pen, as described in “Cleaning the printhead” on page 4-14.

Do not bump the printing edge of the printhead cartridge with any sharp objects. Sharp objects can permanently damage the printhead.

1 Power off the printer.

If your printer has a locking cover, unlock the cover before opening it.

2 Open the top cover.

3 Push down on the swing arm. The push latch will release the swing arm. Grasp the handle and lift the swing arm up until it is fully open.

4 Press down on the green printhead cartridge latch to release the printhead (step 1 in Figure 4-16).

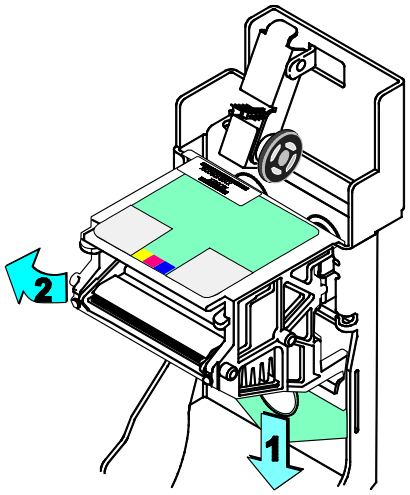


Figure 4-16: Printhead cartridge latch lever

5 Lift the printhead cartridge up and off the swing arm (step 2 in Figure 4-16).

6 Remove the printhead cables.

– Push the black locking tabs to the side. Remove the gray connector of the printhead data cable from the printhead cartridge (see Figure 4-17).

– Pull firmly on the white connector of the printhead power cable to remove it from the printhead cartridge. You can gently pull on the wires attached to the plug if needed to remove the cable.

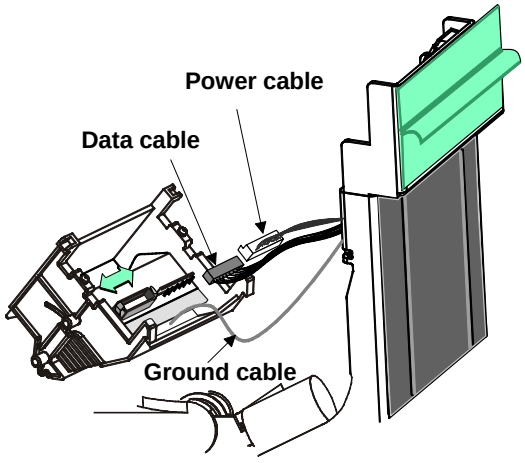


Figure 4-17: Printhead cables and connectors

7 Remove the ground cable connector from the ground tab of the swing arm by pulling on the red sleeve (see Figure 4-18).

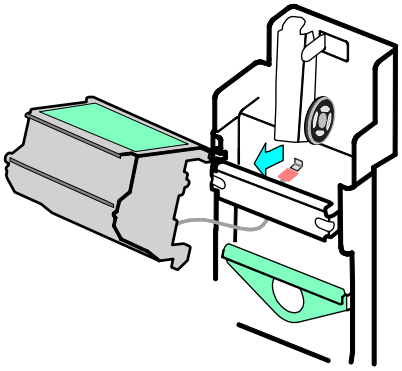


Figure 4-18: Printhead ground cable

♦

Replace the printhead cartridge

1 Carefully align the openings on the (white) power cable plug with the wires of the power receptacle on the printhead. Push the cable's plug all the way onto the receptacle (see Figure 4-17).

2 Push the (gray) data cable plug into the new printhead cartridge (see Figure 4-17). Make sure the locking tabs are in place.

⚠ Do not press on the wires of the printhead cables.

3 If the printhead has a ground cable, slide the ground cable connector onto the ground tab of the swing arm (see Figure 4-18).

4 Align the printhead cartridge pins with the printhead cartridge slots on the swing arm (see Figure 4-19).

5 Slide the new printhead cartridge onto the swing arm, so the pins slide into the slots (see Figure 4-19).

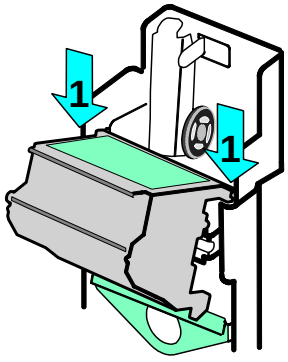


Figure 4-19: Align pins with slots on the swing arm

The notches on the printhead cartridge should align with the notches on the spring bar (A in Figure 4-20).

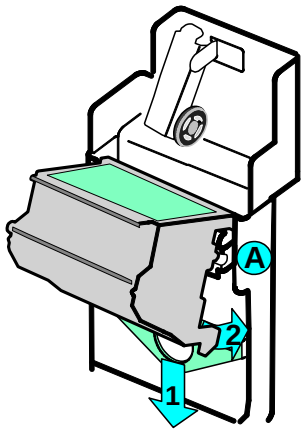


Figure 4-20: Secure the printhead cartridge

6 Hold the printhead cartridge latch lever down (step 1 in Figure 4-20) and pivot the printhead cartridge down toward the swing arm (step 2 in Figure 4-20). Release the latch lever when the printhead cartridge is in place.

7 Clean the printhead. Move the cleaning pen back and forth along the length of the printhead edge. (See Figure 4-15 on page 4-15.) Be sure to completely clean the rounded edge of the printhead.

8 Close the swing arm, pressing it down until the push latch clicks into place.

9 Close the printer cover.

If the printer has a locking cover, lock the cover after closing it.

10 Power on the printer.

11 Print a card to verify the quality of printing. You can print a sample card or a card using your card creation application. If card quality is still inadequate, see "Troubleshooting" on page 5-1.

♦

Troubleshooting

5

This chapter explains how to troubleshoot the Datacard® Magna™ Platinum™ Series photo ID printer and how to obtain service. It explains:

- What to do if you think the printer is not working
- How to make test cards
- Problems you might see in the appearance of cards
- How to obtain service
- How to package the printer to return for service

When you experience problems using the printer, follow these guidelines:

- Record the printer model and serial number. The model and configuration are displayed on a label that is visible when you open the top cover.
- Keep notes on the problem, including the message number and the solutions you attempt.
- Obtain information about the supplies used, including:
  - Card stock and type (such as composite or PVC, three-track magnetic stripe, manufacturer, and so on). This information is located on the packaging for cards.
  - Type of ribbon (such as YMCKT) and the lot number used for personalizing cards. This information is located on the package of the ribbon.
  - Lot number of the laminate (overlay) supply roll if used. This information is located on the package or label of the supply.

If you need to call for service, this information will help your service representative address your concerns.

Troubleshooting guide

Use the following to help you locate information about different types of problems.

Problem	Location
Printer beeps without a message displayed on the PC	See “Responding to messages” on page 2-19.
Installation problems	See “Install the printer” on page 7-1.
Appearance of printed cards	See “Problems with card appearance” on page 5-8.
Communication between PC and printer (parallel port)	See “Setup tips” on page 7-20.
Communication between PC and printer (USB)	See the *e-Guide for ImageCard® Magna™ and UltraGrafix® Magna™ Printers.*
Messages displayed on the PC	Click the Help button on the message box.
Printer beeps because of a problem and a message is displayed on the PC	Click the Help button on the message box.
Card did not print as expected	See “Working with Properties and other driver dialog boxes” on page 3-2 and the *e-Guide for ImageCard® Magna™ and UltraGrafix® Magna™ Printers*.

If you think the printer is not working

The printer, printer driver, and card creation application work together to produce cards. If the system is not working as you expect and does not display messages, follow these steps to isolate the source of the problem before contacting your service representative.

1 Make a printer test card, following the steps in “Making and evaluating test cards” on page 5-3.

If the printer does not make a test card, the printer is likely not working properly.

2 Print a sample card, following the steps in “Printing sample cards” on page 7-19. As an alternative, you can print a Windows test page, following the steps in “Windows test page” on page 5-6.

If the sample card or Windows test page does not print, but the printer test card prints, the printer driver or PC is likely not set or operating properly.

3 Check “Setup tips” on page 7-20 to make sure the PC and printer are set up correctly.

4 Make sure the printer is the selected printer in the card creation application.

5 Use the card creation application to print a card. See “Making cards” on page 2-15.

If the card creation application does not print the card as expected, but the test card and sample card print, the card creation application is likely not set or operating properly.

Making and evaluating test cards

You can make the following types of test cards.

- Printer test cards verify the function of the printer. You print them using controls on the printer. The personalization of the card is determined by the printer, the print ribbon, and modules (such as magnetic stripe, duplex, overlay, or topcoat) installed in the printer.
- The Windows test page, which you can print on a card, verifies that the PC and printer work together. You print them using the printer Properties dialog box on the PC. The appearance of the card is determined by Windows.
- Printer magnetic stripe test cards, which verify that the driver sends magnetic stripe information to the printer and verifies that it is encoded. Use controls in the Printer Toolbox to print magnetic stripe test cards.

ⓘ You can also make sample cards, using the driver sample card or your card creation application to test print quality and card design. Do not make sample cards until you are sure the printer and driver work properly (by printing a printer test card and Windows test page). See “Printing sample cards” on page 7-19.

Follow these steps to make printer test cards on all supported Windows operating systems.

Make a printer test card

The Magna printer does not need to be connected to a PC to print this card.

1 Power off the Magna printer.

2 Confirm that all supplies are loaded: cards, print ribbon, and optional overlay or topcoat material. See “Using the printer” on page 2-1 if needed.

If the printer has a magnetic stripe module, the cards for a printer test card must have a magnetic stripe. If it is a three-track module, be sure to use the high coercivity blank cards shipped in the supplies kit.

3 Press and hold the Ready button (1), and then power on the printer (2) as shown in Figure 5-1. Hold the Ready button until the printer sounds three tones, usually 5 to 10 seconds.

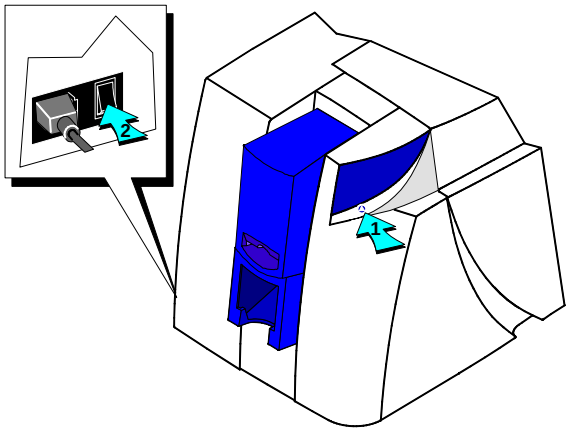


Figure 5-1: Press and hold Ready button (1) and then Press Power switch (2)

4 Release the Ready button. You hear the internal components initialize. Allow 30 to 60 seconds for the printer to begin printing the test card. The status light will flash green while the printer is processing the data.

If the printer includes a topcoat or overlay module, the module might require time to heat up. The card pauses and the module makes a series of beeps while it is warming up.

5 Remove the card from the card output stacker. A printer test card is shown in Figure 5-2.

If the printer test card did not print successfully, see if there are problems with the printer such as jammed cards or an out of ribbon condition. If needed, turn to “Troubleshooting” on page 5-1.

♦

Printer test card

The printer test card is designed to perform most functions available in the printer.

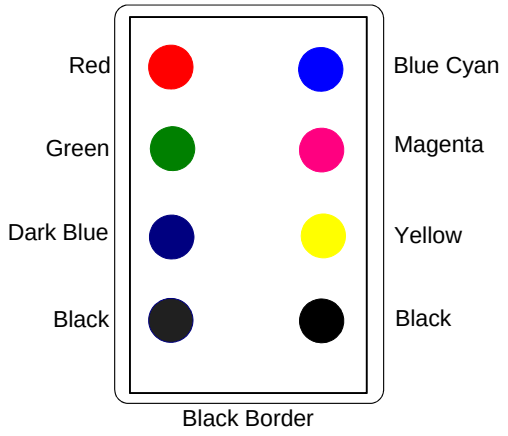


Figure 5-2: ImageCard printer test card (using color ribbon)

Your service provider might ask you to use a different procedure to make a printer test card. The card printed might have additional areas printed on it. For UltraGrafix printers, the test card is printed with one color, such as black.

Check the following:

- The test card has the pattern shown on the front of the card. The back of the card will be printed with a similar pattern if the printer includes a duplex module.
- If a magnetic stripe module is installed in the printer and enabled, the following data is encoded on the card:

Track	Format	Data
Track 1	(IATA)	TEST PATTERN IATA CHARACTER SUBSET 0123456789
Track 2	(ABA)	0123456780123456789O123456789
Track 3	(TTS)	0123456789=9876543210
Track 3	(NTT)	0123456789=9876543210

See “Magnetic stripe encoding” on page D-1 for more information about magnetic stripe tracks.

- The tracks available depend on the type of module installed.
- The magnetic stripe data on the printer test card is generated by the printer and does not test driver-to-printer communication.
- If a topcoat module is installed in the printer, topcoat is applied to the front of the card. If the printer includes a duplex module, topcoat is also applied to the back.

- If an overlay module is installed in the printer, an overlay patch is applied to the front of the card. If the printer includes a duplex module, an overlay patch is also applied to the back.

If you are not satisfied with the appearance of the test card, see “Problems with card appearance” on page 5-8 to identify the problem and possible solutions.

Windows test page

Follow these steps to print a Windows test page on all supported operating systems.

Print the Windows test page

The printer must be connected to the PC with the driver installed, and both printer and PC must be running.

1 Select Start from the Windows taskbar.

2 Select Settings and then Printers (Printers and Faxes on Windows XP) from the Windows Start menu. The Printers (and Faxes) window appears.

3 Click once on the printer icon.

4 Select File from the Printers menu bar, and then select Properties. The Properties dialog box appears.

5 Select the Print Test Page button on the General tab. Wait while Windows creates a test page image. The card will print when the PC and printer are connected, and the printer and driver are working together.

After you select the Print Test Page button, Windows displays a wizard asking if the page printed correctly. Click “Yes” on this dialog box to end the Wizard. The “Setup tips” on page 7-20 provide the information you need to address problems with PC to printer communication.

6 Remove the card from the card output stacker.

The card should look similar to the cards shown in Figure 5-3 and Figure 5-4. The exact appearance depends on the operating system and selections made on the PC (some cards have more characters printed while others have fewer characters).

If it does not print at all, see “Setup tips” on page 7-20.

Figure 5-3: Windows test page, portrait orientation

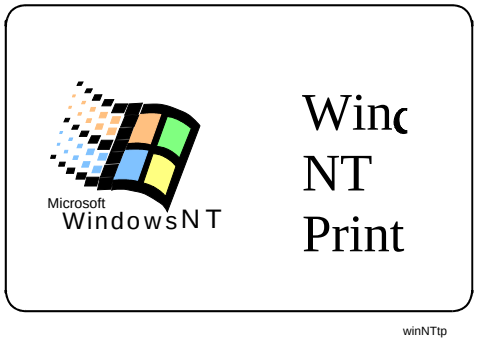


Figure 5-4: Windows test page, landscape orientation

The Windows test page can have a different appearance, depending on the operating system and how the printer is connected to the PC.

The Windows test page is generated by Microsoft Windows. The small size of the card, compared to printer paper, means that some of the text is not printed on the card.

♦

Magnetic stripe test card

If the printer includes a magnetic stripe module, you can print a magnetic stripe test card. The card uses the magnetic stripe settings in the Properties, Default Document Properties, or Printing Preferences dialog box.

Use this card to verify that the printer encodes a card correctly.

If the printer is set to print a custom magnetic stripe format, it will not print this test card successfully. The driver will display a message indicating that the data does not meet the requirements for the magnetic stripe track or that it cannot read the data.

Print a magnetic stripe test card

The printer must be connected to the PC with the driver installed, and both printer and PC must be running.

1 Open the Printer Toolbox if needed. “Opening and using the Printer Toolbox” on page 3-11.

2 Make sure that magnetic stripe cards are loaded in the card cartridge. (See “Loading cards” on page 2-3 for information on loading cards.)

3 Click once on the Print Mag Stripe Card button in the Printer Toolbox. The printer driver formats card data for the type of module installed, as follows:

   – Three-track: IAT formatted data (IATA data on track 1, ABA data on track 2, and TTS data on track 3). See “Magnetic stripe encoding” on page D-1 for more magnetic stripe information.

   – NTT track: NTT formatted data on the track.

4 Remove the card from the card output stacker.

5 Test the card by passing it through a card reader that will display the data encoded on the card. The encoded data should match the data printed on the test card.

♦

Problems with card appearance

Problems with card appearance can be the result of the following:

- Image capture tools, such as the camera
- Card creation application, which displays the image
- Limitations in technology, such as differences between how an image looks on the monitor and how it looks after it is printed
- Printer maintenance or PC settings

Magna Platinum Series printers include Datacard’s Advanced Imaging Technology™ (AIT). Cards printed with Advanced Imaging Technology have a different appearance than cards printed with earlier Magna printers, including those with Tru Image™.

This section describes possible problems you might observe with the quality of cards you produce with the Magna printer. To diagnose and fix card quality problems, find the symptom in the tables that follow. For each possible cause, attempt the solutions listed.

Problem	Troubleshooting
Print quality	Table 5-1 on page 5-9
Topcoat quality—print ribbon	Table 5-2 on page 5-15
Topcoat quality—optional topcoat module	Table 5-3 on page 5-17
Overlay quality—optional overlay module	Table 5-4 on page 5-19

Print module

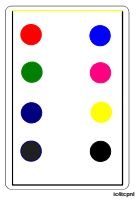
Table 5-1 describes problems that can originate in the print module.

Table 5-1: Print quality problems

What you see	Possible causes	Solutions
One or more unprinted lines run the entire length of the card. 	The printhead might be dirty or damaged.	Clean the printhead. See Chapter 4. Run a test card. See this chapter. If cleaning does not solve the problem, replace the printhead. See Chapter 4.[#]
Part of the printed card is blank. 	Cards might not meet specifications. Cards might be dirty. The printhead cartridge might not be installed properly.	Obtain and use a different supply of cards. See Appendix B. Increase the frequency of cleaning. See Chapter 3. Run a cleaning cycle. See Chapter 4. Remove and reinstall the printhead cartridge. See Chapter 4.

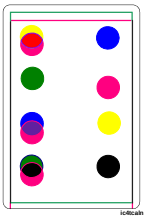
[#] Obtain guidance from service before performing this task.

Table 5-1: Print quality problems

What you see	Possible causes	Solutions
Text is not printed on the card. 	Text to print on the card was formatted using a non-TrueType font.	Format text to print using only TrueType fonts.
The leading or trailing edge of the printed card is not the expected color. 	Cards might be slipping in the card track.	Run a printer cleaning cycle, then clean the rollers. See Chapter 4.
	Two cards might have been picked.	Fan cards before inserting them in the card cartridge.
	The print ribbon might not be DatacardPlatinum Series ribbon.	Obtain and use Datacard Platinum Series print ribbon. See Appendix B.
	The ribbon registration might be incorrect.	Change the ribbon panel length. See the *e-Guide.*[#]
No image is printed on the card or the printing is very light. 	The ribbon is loaded incorrectly.	Remove and replace the ribbon. See Chapter 2.
	The printhead cartridge power cable might be loose.	Power off the printer. Make sure the printhead power cable is securely connected. See Chapter 4.
	The printhead cable or printhead cartridge might be damaged.	Replace the printhead. See Chapter 4.[#]
		If the problem persists, contact your service representative.

[#] Obtain guidance from service before performing this task.

Table 5-1: Print quality problems

What you see	Possible causes	Solutions
One color panel is not aligned correctly with other panels. 	Cards might be slipping in the card track. The card registration might be incorrect.	Run a printer cleaning cycle, then clean the rollers. See Chapter 4. Set the position of printing. See the *e-Guide*.# If the problem persists, contact your service representative.
Printed card images (photos) are blurry. Printed cards, including text, are blurry. 	The image capture system needs adjustment. The rollers may be dirty. The cards may not meet specifications. The printhead may be dirty.	See the information for the image capture system. Run a printer cleaning cycle, then clean the rollers. See Chapter 4. Obtain and use a different supply of cards. See Appendix B. Clean the printhead. See Chapter 4. If the problem persists, contact your service representative.
All card data is positioned unevenly on the card. 	The card registration might be incorrect.	Set the position of printing. See the *e-Guide*.# If the problem persists, contact your service representative.

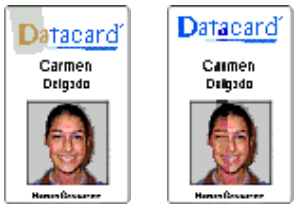
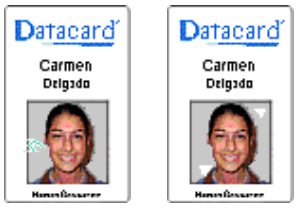
Obtain guidance from service before performing this task.

Table 5-1: Print quality problems

What you see	Possible causes	Solutions
Card is printed upside down (the image is rotated 180 degrees). 	The card creation application has rotated the card.	See the information for the card creation application.
	The card rotation setting might be incorrect.	Set the card rotation using the Properties (98), Printing Preferences (2000 or XP), or Default Document Properties (NT) dialog box. See Chapter 3.
Printed card images (photos) look faded. Printed cards, including text, look faded. 	The image capture system needs adjustment.	See the information for the image capture system.
	Print ribbon may have been stored improperly or damaged.	Change the print ribbon and then print a test card. See Chapter 2.
	Color settings might not be set for the card design.	Change color settings. See the *e-Guide*.
	The cards may not meet specifications.	Obtain and use a different supply of cards. See Appendix B.
	The printhead may be dirty.	Clean the printhead. See Chapter 4.
	The print ribbon is not Datacard-recommended Platinum Series ribbon.	Use only Datacard Platinum Series ribbon in the Magna printer.
		If the problem persists, contact your service representative.

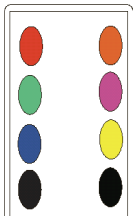
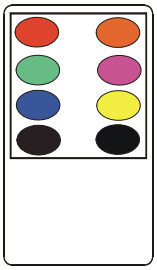
[#] Obtain guidance from service before performing this task.

Table 5-1: Print quality problems

What you see	Possible causes	Solutions
Part of the printed image is discolored. 	Cards might have fingerprints or other dirt on them.	Handle cards without touching the surface to be printed. Wear gloves when handling unprinted cards.
	The cards might be contaminated or otherwise not meet specifications.	Obtain and use a different supply of cards. See Appendix B.
	The rollers might be dirty.	Run a printer cleaning card, change the cleaning sleeve, then clean the rollers. See Chapter 4.
	A signature panel is located on the other side of the card.	Redesign the card to avoid printing photos over signature panel residue.
The printed card shows small unprinted spots. 	The card is scratched, the card surface is uneven, or the card edge has burrs.	If the problem occurs frequently, obtain and use a different supply of cards. See Appendix B.
	The replaceable cleaning sleeve might be dirty.	Run a printer cleaning card and then change the cleaning sleeve. See Chapter 4.
	The printer rollers might be dirty.	Run a printer cleaning card, change the cleaning sleeve, and then clean the rollers. See Chapter 4.
The printed card shows wavy lines along the length of the card (woodgrain). 	The print ribbon is not loaded correctly.	Load the print ribbon again. Make sure the cartridge is firmly seated. See Chapter 2.
	The printhead is not aligned correctly.	Contact your service representative.

Obtain guidance from service before performing this task.

Table 5-1: Print quality problems

What you see	Possible causes	Solutions
The card shows irregular lighter or darker spots. 	The printhead is not aligned correctly.	Contact your service representative.
The card shows wrinkles in dark areas of printing. 	The printhead intensity is too high. The printhead is not aligned correctly.	Decrease the printhead intensity setting. See the *e-Guide*.[#] Contact your service representative.
Part or all of the printed image is expanded. 	The printhead is not installed properly.	Remove and reinstall the printhead cartridge. See Chapter 4. If the problem persists, contact your service representative.
Part or all of the printed image is compressed. 	The card path may be obstructed. The rollers might be dirty. The cards might not meet specifications.	Check the card transport track for jams. or pass-through module (if present) for jams. Clear any card jams. Run a printer cleaning cycle, then clean the rollers. See Chapter 4. Obtain and use a different supply of cards. See Appendix B. If the problem persists, contact your service representative.

[#] Obtain guidance from service before performing this task.

Table 5-1: Print quality problems

What you see	Possible causes	Solutions
Black-and-white images are poorly dithered. 	The image capture system needs adjustment. Brightness, contrast, or sharpness might not be set for the card design.	See the information for the image capture system. Change settings on the Color Settings tab of the Printer Toolbox. See the *e-Guide.*

Topcoat (T panel) applied using the print module

You might apply topcoat to the card using a T panel as part of the print ribbon or using an optional topcoat module. Holographic topcoat can be applied only in the topcoat module.

When you apply topcoat, you might see problems. See the appropriate table for the application method for the problem you observe. Use this table to address problems you see with topcoat (T panel) applied using the print ribbon.

Table 5-2: Topcoat (T panel) quality problems—print ribbon

What you see	Possible causes	Solutions
Random scratches appear in the topcoat of the printed card.	The inside of the printer might be dirty.	Run a printer cleaning cycle and a duplex/laminator cleaning card. Clean the rollers. See Chapter 4.
	Supplies were mishandled.	Store supplies in a clean environment. Keep supplies in their packaging until loaded in the cartridge.
The topcoat shows bands across the width of the card. 	The printhead intensity is too low.	Increase the printhead intensity setting for topcoat. See the *e-Guide*.[#]
	The printhead is not aligned correctly.	Contact your service representative.

[#] Obtain guidance from service before performing this task.

Table 5-2: Topcoat (T panel) quality problems—print ribbon

What you see	Possible causes	Solutions
The topcoat shows lines along the length of the card. 	The printhead intensity is too high. The printhead is not aligned correctly.	Lower the printhead intensity setting for topcoat. See the *e-Guide*.# Contact your service representative.
A short edge of the topcoat does not stick to the card. 	The printhead intensity is too low. The printhead is not aligned correctly.	Increase the printhead intensity setting for topcoat. See the *e-Guide*.# Contact your service representative.
The card shows irregular lighter or darker spots. 	The topcoat panel of print ribbon is wrinkling because the intensity setting is too high. The printhead is not aligned correctly.	Lower the printhead intensity setting for topcoat. See the *e-Guide*.# Contact your service representative.

Obtain guidance from service before performing this task.

Optional topcoat module

This section describes problems that might originate in the topcoat module.

Table 5-3: Topcoat quality problems—topcoat module

What you see	Possible causes	Solutions
Random scratches appear in the topcoat of the printed card.	The inside of the printer is dirty. Supplies were mishandled.	Run a printer cleaning cycle. See Chapter 4. Store supplies in a clean environment. Keep supplies in their packaging until loaded in the cartridge.
Repeating scratches or marks appear in the topcoat of the printed card.	The heated roller is dirty or damaged.	Clean the heated roller. See Chapter 4. In the problem persists, contact your service representative.
The topcoat shows one or more bands across the width of the card. 	The topcoat supply is not loaded correctly in the cartridge or the cartridge is not fully seated in the topcoat module.	Load the topcoat supply in the cartridge again. When replacing the topcoat cartridge, make sure it is fully seated in the module and locked. See Chapter 2.
The topcoat shows wavy lines along the length of the card (woodgrain). 	The guide bars in the cartridge are bent or misaligned. The topcoat module needs fine tuning.	Use a new topcoat cartridge. See Appendix B. Contact your authorized service representative.

Obtain guidance from service before performing this task.

Table 5-3: Topcoat quality problems—topcoat module

What you see	Possible causes	Solutions
The hologram of the topcoat does not appear on the card.	The Apply Material setting is No. Clear topcoat or laminate supply is installed in the topcoat cartridge. The topcoat supply is not loaded correctly in the cartridge.	Change the setting. See Chapter 3. Remove the topcoat cartridge and change the supply material to the desired type. See Chapter 2. Remove the topcoat cartridge. Load the supply in the cartridge again. See Chapter 2.
Particles of topcoat appear under the holographic topcoat or laminate. All topcoat materials release particles. Cleaning the inside of the printer can help control topcoat particles.	The inside of the printer contains topcoat particles. The supply is not a Datacard-approved supply material. The lot number of supply material produces particles excessively.	Run the duplex/ laminator cleaning card. See Chapter 4. Obtain Datacard-approved topcoat material. Contact your Datacard supplies vendor.
A long edge of the topcoat does not stick to the card. (It might have a gray appearance.) 	The temperature of the heated roller is too low. The card has a T-panel applied as part of the print ribbon. The heated roller is tilted and is prevented from pivoting.	Contact your service representative. Holographic topcoat is not designed to be applied to cards with a printed topcoat (T panel). Switch your ribbon type or stop using holographic topcoat. Contact your service representative.

Obtain guidance from service before performing this task.

Optional overlay module

This section describes problems originating in the optional overlay module. Holographic or clear laminate can be applied in the overlay module.

When you apply laminate, you might see problems. Use this table to address problems you see with laminate.

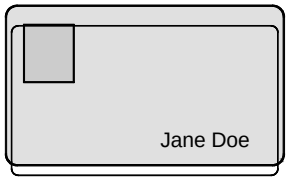
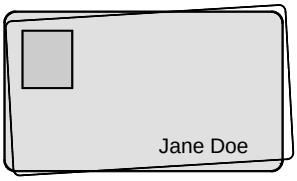
If your printer has the optional topcoat module, see Table 5-3.

Table 5-4: Overlay quality problems

What you see	Possible causes	Solutions
Supply material sticks to leading edge of the card.	Temperature is too high.	Decrease temperature for the overlay module. See the *e-Guide*. #
	The overlay station needs fine tuning.	Contact your service representative.
Supply material pulls the card from the track.	Supply is loaded incorrectly.	Load supply correctly. See Chapter 2.
	Temperature is too high.	Decrease temperature for the overlay module. See the *e-Guide*.#
	You have switched to a different card stock.	Change settings for the overlay module. See the *e-Guide*.#
	The overlay module needs adjustment.	Contact your service representative.
Proximity cards do not work after laminate is applied.	Debower is not set for the cards you are processing.	Set the debower to off. See Chapter 2.
Cards are bowed (curved) too much. 	Debower is not set for the cards you are processing.	Set the debower to on. See Chapter 2.
	Temperature is too high for the card stock.	Decrease temperature for the overlay module. See the *e-Guide*.#
		If the temperature is correct for the material, the material is 1.0 or 1.1-mil laminate, and you are using all-PVC cards, switch to composite cards.

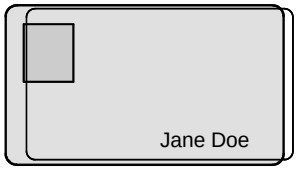
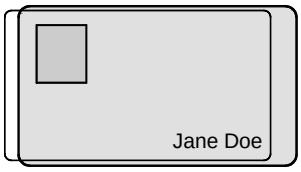
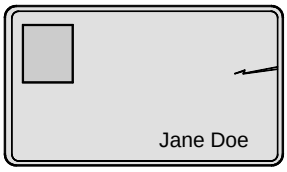
Obtain guidance from service before performing this task.

Table 5-4: Overlay quality problems

What you see	Possible causes	Solutions
Overlay patch comes off the card when it is flexed.	Temperature is too low for the overlay material.	Increase the temperature for the overlay module. See the *e*-Guide.[#]
Laminate patch is off a long edge of the card. 	Supply material is not loaded correctly in the cartridge.	Load the supply roll correctly. See Chapter 2.
	Supply material is wound loosely on supply roll, possibly because of hand winding.	Remove used supply from the take-up spool. Place spool caps on both supply and take-up spools. See Chapter 2. If the problem does not go away, change the supply roll. See Chapter 2.
Laminate patch is not parallel to card edges. 	Supply material is not loaded correctly in the cartridge, the spool caps are missing, or the cartridge is not firmly seated in the module.	Load the supply roll correctly using the spool caps. See Chapter 2. Make sure there are no obstructions when replacing the cartridge.
	Supply material is wound loosely on supply roll, possibly because of hand winding.	Remove used supply from the take-up spool. Place spool caps on both supply and take-up spools. See Chapter 2. If the problem does not go away, change the supply roll. See Chapter 2.
	The guide bars in the cartridge are bent or misaligned.	Use a new overlay cartridge.

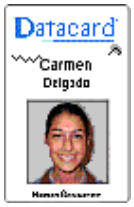
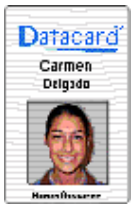
[#] Obtain guidance from service before performing this task.

Table 5-4: Overlay quality problems

What you see	Possible causes	Solutions
Laminate patch is off the trailing edge of the card. 	There was slack in the supply material.	Apply laminate on another card. If problem repeats, go to the next solution.
	The supply roll and machine settings do not match.	Change supply rolls. If that fixes the problem, request a new supply roll. If it does not, change the supply advance. See the *e*-Guide.#
	Supply material is upside down after hand winding.	Load the laminate supply correctly. See Chapter 2.
	Machine settings were changed during service.	Contact your service representative.
	The heated roller does not move.	Contact your service representative.
Laminate patch is off the leading edge of the card. 	An overlay patch is on the driver roller.	Use a duplex/laminator cleaning card. See Chapter 4.
	The rollers are dirty.	Use a duplex/laminator cleaning card. See Chapter 4.
	The supply tracker is slipping.	Clean the supply tracker. See Chapter 4. Be sure your hands and the materials used are clean and free of grease or oil.
	The supply roll and machine settings do not match.	Change supply rolls. If that does not fix the problem, adjust the supply advance. See Chapter 4.#
	Machine settings were changed during service.	Contact your service representative.
Laminate patch is wrinkled on the card. 	Supply roll is not pushed firmly onto supply spindle or take-up spool is not pushed firmly onto take-up spindle.	Load the laminate supply again. See Chapter 2.
	The supply spindle needs adjustment.	Contact your service representative.

Obtain guidance from service before performing this task.

Table 5-4: Overlay quality problems

What you see	Possible causes	Solutions
Particles appear between card and laminate patch. 	The inside of the printer is dirty.	Use a printer cleaning card and then use a duplex/ laminator cleaning card. See Chapter 4.
	The heated roller is dirty.	Clean the heated roller. See Chapter 4.
	The supplies were mishandled.	Store supplies in a clean environment. Keep supplies in packaging until loaded in the cartridge.
	The supplies are not Datacard-recommended.	Obtain and use Datacard-recommended supplies.
	The printer is being used in a dirty environment.	Move the printer to a clean environment or clean the environment.
The surface of the card or laminate appears uneven.	The temperature setting is too high.	Change the temperature setting. See the *e*-Guide.#
	The heated roller is damaged.	Turn off the power to the printer. Contact your service representative.
	The card stock is not compatible with the laminate material.	Obtain and use cards that meet specifications or stop using laminate.
The surface of the card has ridges, and the laminate is missing. The printer makes a sound when the card is processed. 	The supply was missing a laminate patch.	Remake the card. If the problem occurs frequently, contact your representative for supplies.

Obtaining service

For repair assistance, contact your service provider. Place the service call from a telephone close to the printer so that you can access the printer and the PC running the driver while talking to the service provider.

Before you call for service, make sure you have the information recorded during troubleshooting, as described on page 5-1. Also, make sure you have the serial number of the printer. It is located on a label that is visible when you open the top cover of the printer.

When to obtain service

Perform the steps at the beginning of this chapter before obtaining service. Call for service if:

- A troubleshooting process instructs you to call service
- A troubleshooting process does not produce the expected result
- You experience a problem repeatedly

Packing the printer for shipping

When service requests that you return the printer to a service center for repair, pack the printer for shipping. You might also need to pack the printer to send it to another location.

Pack the printer

1 Turn off power to the printer. If the printer includes a laminator module, allow the module to cool before packing.

2 Remove the power cord from the printer and power receptacle. Remove the data cable and any other cables attached to the printer.

   – If you are shipping the printer to use at another location, pack the power cord, data cable, and any other cables in the accessories box.

   – If you are shipping the printer for service, do not ship cables with the printer unless asked to do so.

3 Remove all cards from the card cartridge, card output stacker, and printer.

4 Remove the card output stacker (step 1 in Figure 5-5) and the replaceable cleaning sleeve (step 2 in Figure 5-5). Keep the cleaning spindle at your location or follow the instructions from your service provider. Discard the used cleaning sleeve.

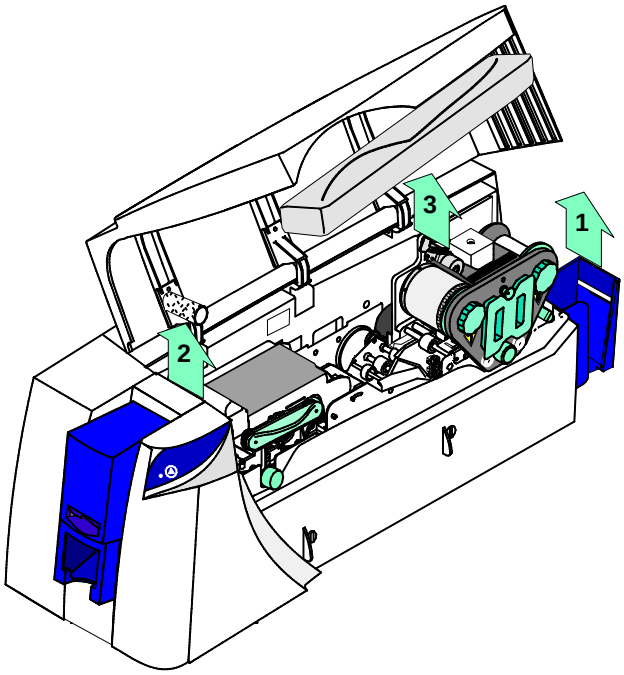


Figure 5-5: Prepare the printer for packaging

5 Secure the print ribbon cartridge. Leave the print ribbon cartridge in place or apply packing tape. See Figure 7-3 for the location of the tape. Avoid applying tape to labels in the printer.

6 Place the packaging support on the printer cover (step 3 in Figure 5-5). If the packaging support is not available, place bubble wrap or crumpled newspaper between the inside of the printer and cover, so that the cover will be slightly raised when you close it.

7 Make sure all other supply cartridges are secured in place.

8 Close the cover.

9 Use the original shipping carton, plastic bag, and shipping support wrap.

10 Place the plastic bag around the printer and close it.

11 Open the shipping support wrap. Place the printer in the wrap so the foam will touch three sides of the printer (step 1 in Figure 5-6). (The foam runners are on the outside of the wrap and under the printer.)

12 Close the shipping support wrap around the printer (steps 2 and 3 in Figure 5-6). The top flaps must be closed in the correct sequence. Tape the wrap in place.

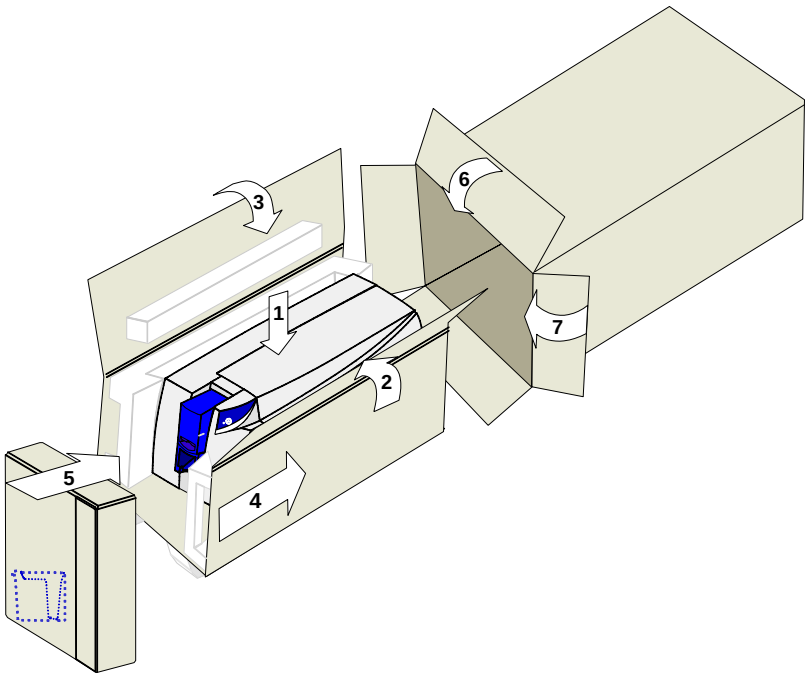


Figure 5-6: Pack a Magna printer for shipping

13 Slide the wrapped printer into the shipping carton (step 4 in Figure 5-6).

14 Place the accessories box along the end of the shipping cushion, near the front of the printer (step 5 in Figure 5-6).

If you are transporting the printer to another location for use, be sure to pack the User's Guide, card output stacker, cleaning spindle, data cable, power cord, any smart card serial cables, printer driver CD-ROM, cleaning pen, warranty, and declaration of conformity in the accessories box.

Your service provider might ask you to ship cards or additional samples of your current supplies. If service requests cards or supply samples, place them in an envelope, plastic bag, or in the accessory box to prevent damage to the printer.

15 Close the shipping carton (step 6 and 7 in Figure 5-6). Close the left and right side flaps first, and then the top and bottom flaps.

16 Secure the carton with shipping tape. Be sure to wrap around the shipping carton several times to secure it.

17 Put a shipping label on the carton. If you are returning the printer for service, use the address provided by service.

18 Ship the carton. If you are returning the printer for service, follow the instructions provided by service to ship the carton to a service center.

♦

Before you install

6

This chapter presents the following:

- Skills that installers need
- Physical, electrical, and other requirements for the site
- Requirements for the PC used with the Datacard® Magna™ Platinum™ Series photo ID printer
- The preferred sequence for installing this printer as part of an identification system

Installation audience

This manual is intended for persons using a Magna printer. To perform the procedures in the installation section of this guide, you need the following skills:

- Ability to read and understand written and graphical instructions
- Experience and comfort installing hardware (such as a printer, scanner, expansion card, etc.) in a personal computer (PC)
- Experience with configuring applications and ports
- Experience installing and using Microsoft® Windows® 98, Windows Me, Windows 2000, Windows XP, or Windows NT® (for Windows 2000, XP and NT the installer must have administrator access to the PC)
- Ability to perform simple troubleshooting using written and graphical instructions

If you do not feel comfortable with installing the printer, find a network support or other technical professional to install the printer. Datacard-authorized service personnel also install printers.

General requirements

When choosing a site for the Magna printer and its supplies, consider the following general requirements:

- Keep all dust, dirt, food, liquids, etc. away from the Magna printer at all times.
- Keep the top cover closed at all times, except when changing supplies, fixing problems, or performing maintenance.
- 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 Magna printer.
- Place the Magna printer on a stable platform; keep it off the floor.
- Place the Magna printer away from direct sunlight.
- Place the Magna printer away from heating ducts, blowers, or other air vents.
- Do not use the Magna printer for purposes other than its intended use.
- When cleaning around the Magna printer, prevent debris from entering the printer.
- Place the Magna printer in a clean office environment, protected from any type of construction.
- Store all supplies (ribbons, cards, etc.) in the original packaging until loaded in the cartridges. Keep the original packaging closed.
- Store all supplies in a clean, cool, dry location. See “Card storage specifications” on page B-9 and “Supply roll storage” on page B-5 for information about the storage environment for Magna supplies.

Selecting the site

After meeting general requirements, the site for the Magna printer should meet the electrical, physical, and environmental requirements of the printer.

Environmental requirements

The Magna printer requires the following environmental conditions for optimal operation:

- Operating relative humidity: 20% to 80% non-condensing
- Operating temperature range: 55° F to 95° F (13° C to 35° C)

The maximum operating temperature might be different from the recommended storage temperature.

If you store the Magna printer, provide an environment with the following conditions:

- Storage relative humidity: 20% to 80% non-condensing
- Storage temperature range: 0° F to 100° F (-17.8° C to 37.8° C)

Remove all supplies from the printer before storing.

Electrical requirements

The Magna printer requires the following electrical conditions for optimal performance:

- 100-230 VAC (+/- 10%) at 50/60 Hz (The Magna printer automatically adjusts to any power within this range.)
- Single phase, 3-wire grounded receptacle only

The rated input current for the Magna printer is 3 amps at 100 VAC applied.

Physical requirements

The Magna printer requires an environment that accommodates its physical dimensions and weight.

The printer weighs between 35 and 46 pounds or 15.9 and 20.9 kilograms. The weight varies depending on the options installed in the printer.

The surface holding the printer might also need to bear the weight of other equipment such as a PC and camera.

The dimensions are:

- Width of 29.5 inches (74.9 cm) for printers without a laminator module
- Width of 36.5 inches (92.7 cm) for printers with a laminator module
- Depth of 11 inches (27.9 cm)
- Height of 12 inches (30.5 cm)

Do not block the back, left- and right-side air vents or fan opening on the Magna printer.

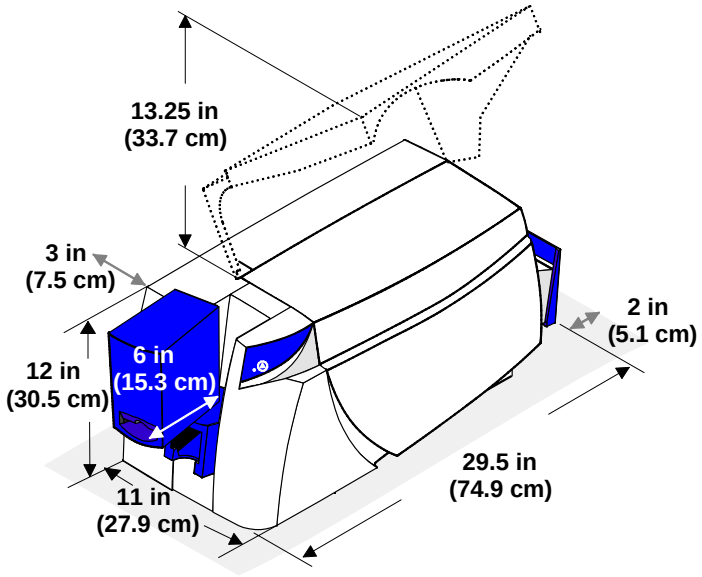


Figure 6-1: Magna printer without laminator, dimensions and clearance

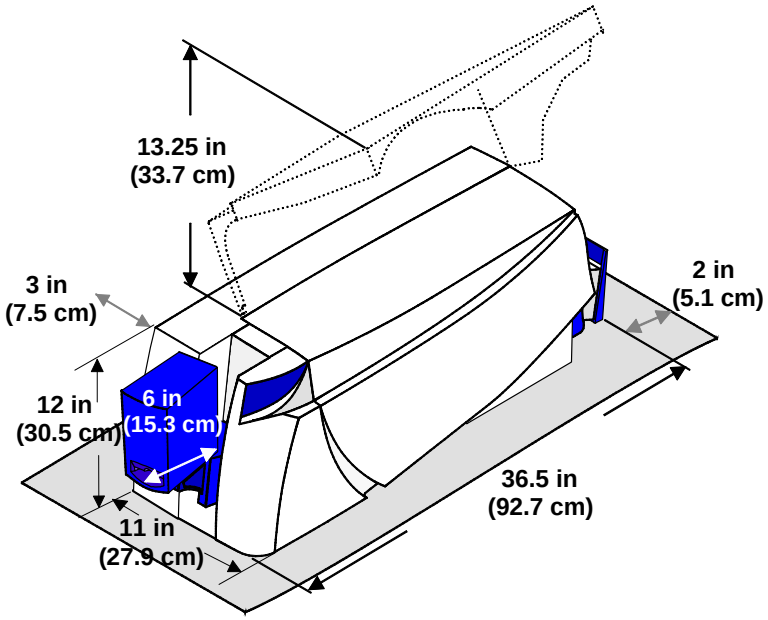


Figure 6-2: Magna printer with laminator, dimensions and clearance

The clearance required is:

- 3 inches (7.5 cm) at the back of the printer, for access to the power switch and for ventilation.
- 2 inches (5.1 cm) on the right side of the printer to remove the card output tray.
- 6 inches (15.3 cm) on the left side of the printer to remove and replace the card cartridge.

- 13.25 inches (33.7 cm) above the printer to allow the cover to open and to change supplies.
- If you plan to use the optional security lock, make sure the area includes a place for the cable to wrap around a table leg or other secure object.

PC and software specifications

The Magna printer must be used with a PC that runs the printer driver. The PC also runs a card creation application that captures and organizes the data to appear on each card.

To support the printing speed that the Magna printer can deliver, the PC must meet the following requirements:

- Have a 233 MHz (or faster) Pentium MMX-, Pentium II-, Pentium III-, or Pentium IV-compatible processor. Datacard recommends a 500 MHz (or faster) processor.
- Have at least 128 MB of memory (RAM). Datacard recommends 256 MB or more of memory.
- Have 60 MB or more of hard disk space available to store the printer driver and provide working space for preparing card data. (Additional components, such as Diagnostics, might require more space.) Datacard recommends at least 100 MB of hard disk space before installing the printer driver.

The PC, including processor speed, memory, operating system, applications running, and available hard disk space, can have a dramatic effect on card processing speed. The operating system or applications can require more or faster resources than the printer driver. Meet the most demanding requirements for the operating system, application, and drivers running on the PC.

- Have one of the following ports or connections:
  - An ECP parallel port (any operating system)
    - The port should be configured as an ECP port (using the PC's BIOS). If the existing parallel port is not ECP capable, obtain and install an ECP capable parallel port for printer use. For information on configuring the parallel port, “PC port settings” on page C-1.
    - If your card creation application uses a security key, put the security key on a different parallel port, if available. The security key can be on a compatible-mode (IBM AT-mode) port. The printer data cable must remain on the ECP parallel port (usually LPT1). You might receive “security key not found” messages, “parallel port data error” messages, or might notice that the card creation application operates slowly. If the security key requires a compatible-mode port, obtain and install a separate parallel port so you have a compatible-mode port for the security key and an ECP port for the printer.
    - Some parallel communication devices use a cable with a plug that allows another device to be attached, so that two parallel devices are attached to one PC parallel port, known as a pass-through or piggy-back plug. The printer and printer driver cannot communicate reliably through such a plug. Install a second parallel port in the PC if needed.

  - USB port (used with the Windows XP, Windows 2000, Windows Me, or Windows 98 operating system)
    - The PC might have more than one USB port, or USB devices already attached to the PC might provide USB ports to use.

  Datacard recommends using the Windows 2000 or XP operating systems if you plan to connect more than one printer to a PC using USB ports or using a USB port and other connection methods.

  - A network connection to support printer sharing or direct networking
- Have a CD-ROM drive to install the printer driver
- Have one of the following operating systems:
  - Windows Me (recommended)

  The Windows Me printer driver is also designed to work on Windows 98 or Windows 98 Second Edition.

  - Windows XP with service pack 1 (recommended)
  - Windows 2000 with service pack 3
  - Windows NT 4.0 with service pack 5 or higher

  The printer cannot be connected to a PC running Windows NT using a USB port.

The PC must also have a card creation application that formats and prepares the card data. For the PC requirements of your card creation application, see the application's documentation.

ID system installation sequence

You might use this printer as part of an identification system (with a camera) or you might use it with existing data and applications. When you set up this printer along with other system components, install the printer driver after setting up the PC and before installing the card creation application and capture software and devices. Verify the success of each installation step before continuing.

Install the printer

7

This section describes how to install and set up the Datacard® Magna™ Platinum™ Series photo ID printer . It describes:

- Unpacking the printer
- Connecting the cables
- Preparing for printer driver installation
- Installing the printer driver
- Changing required and optional settings
- Setup tips
- Printing sample cards

Unpacking the printer

Select a site that meets the requirements described in “Before you install” on page 6-1. Unpack the printer, following these steps.

You need scissors or another cutting device to unpack the printer.

Make sure you have one or more people to assist with unpacking the printer. One or two people can lift the printer while another person assists with removing packaging.

Unpack the printer

1 Place the shipping carton on a firm level surface.

2 Use a scissors to open the taped area on the end of the shipping carton.

3 Open the shipping carton (steps 1 and 2 in Figure 7-1).

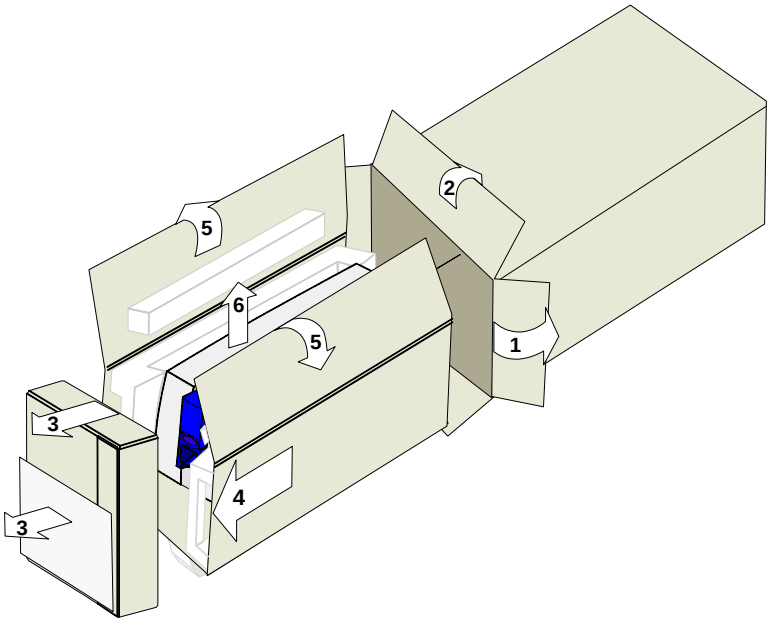


Figure 7-1: Unpack the printer

4 Remove the Quick Install Chart and the accessories box (step 3 in Figure 7-1). The options included with the printer are checked on the chart.

5 Slide the wrapped printer out of the shipping carton (step 4 in Figure 7-1).

6 Open the shipping support wrap (step 5 in figure Figure 7-1).

The printer weighs 35 to 46 pounds (15.9 to 20.9 kg.). Use proper lifting techniques. Make sure you have enough people to lift the printer comfortably.

7 Lift the printer (step 6 in Figure 7-1) and place it on a counter or other solid surface.

8 Remove the printer from the plastic bag.

Save all packing material, including the plastic bag, shipping carton, shipping support wrap, and accessories box.

9 Open the accessories box and remove the contents. The accessories box contains:

- Power cable
- Data cable
- Optional smart card cable(s)
- Cleaning kit with printer cleaning card and replaceable cleaning sleeve
- Card output stacker
- Continuous cleaning roller spindle
- Cleaning pen
- Optional spool caps if the printer has a topcoat or overlay module
- Warranty, declaration of conformity, and installation feedback report
- User's Guide
- Printer driver CD-ROM
- Supplies kit if one was ordered with this printer

10 Open the printer cover and then place the card output stacker on the right end of the printer (Figure 7-2). The card output stacker hooks into the printer.

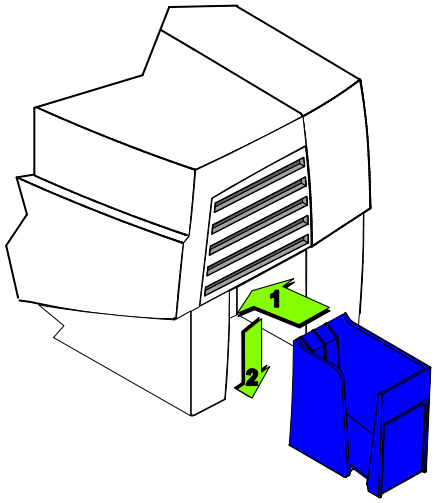


Figure 7-2: Place the card output stacker on the printer

11 Make sure the card cartridge is securely seated in the printer. If needed, move it gently to seat it.

12 Remove the packaging material and printhead packing tape.

a Lift the top cover.

b Slide the packaging material off the edge of the cover (step1 in Figure 7-3).

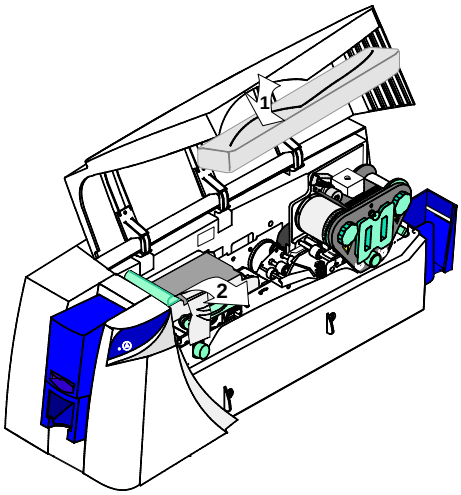


Figure 7-3: Remove internal packaging

c Lift an edge of the packing tape and pull it off the swing arm and chassis (step 2 in Figure 7-3). Discard the tape.

13 If you use the printer security lock, wrap the cable through a secure opening, insert the lock through the loop, and then insert the lock in the printer security lock receptacle.

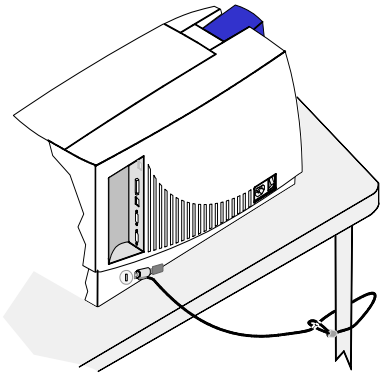


Figure 7-4: Connect the printer security lock

14 Turn the key one-quarter turn to engage the lock and remove the key.

♦

Who to call for assistance

If you work with a Datacard-authorized dealer, distributor, or value-added reseller, contact your reseller for assistance. A value-added reseller provides the Magna printer 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 Datacard. Contact the Datacard Customer Care Center at 1.800.328.3996 for service

in the United Stated and Canada. For worldwide service, call the Datacard Customer Care Center directly at 952.988.2316. Make sure you have the serial number, located on the inside of the printer, when you call.

Connecting cables

The printer requires a data cable and a power cable. The printer also uses one or more smart card cable(s) if a smart card module is installed. This section explains how to connect the printer cables.

If the printer is connected over a network using a print server, see *e-Guide for Magna™ Printers* for information about connecting and using the printer.

The printer panel has several ports, and some printers (with smart card modules) have ports installed in optional locations. Figure 7-5 shows the printer ports.

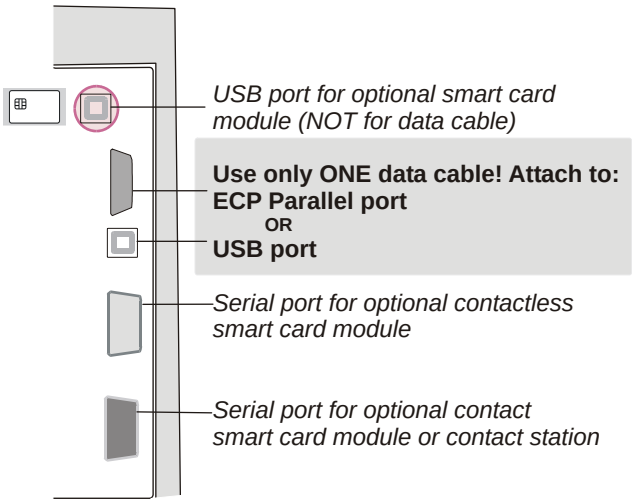


Figure 7-5: Ports on the printer

The data cable can be a USB cable or a parallel port cable. Use only one data cable to connect the printer and PC.

Connect a parallel port data cable

When using a parallel port data cable, make sure that no USB cables are connected between the printer and PC until after the driver is installed.

1 Attach the parallel port cable to the ECP parallel port on the printer.

The parallel port cable must be a shielded, Type C, IEEE 1284 parallel port cable, up to a maximum of 6.5 feet or 2 meters long. A longer cable might result in electrical interference.

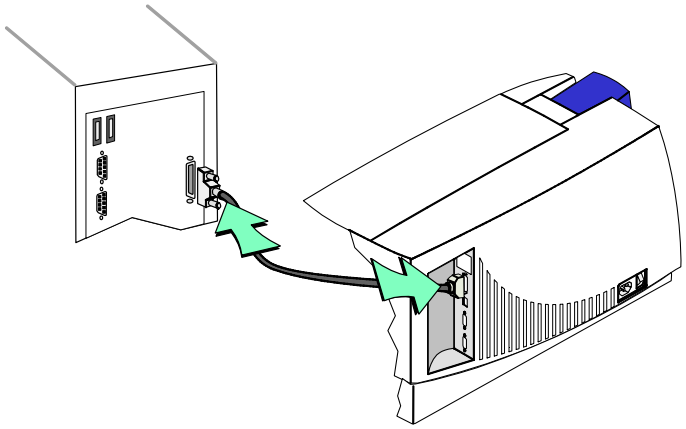


Figure 7-6: Connect the parallel port cable

2 Attach the other end of the cable to the parallel port on the PC (see Figure 7-6). Press the cable connector all the way onto the port, and then turn the posts to secure the cable to the PC.

Some parallel communication devices use a cable with a plug that allows another device to be attached, so that two parallel devices are attached to one PC parallel port, known as a pass-through or piggy-back plug. The printer and printer driver cannot communicate reliably through such a plug. Install an additional parallel port in the PC if needed.

♦

Connect a USB data cable

The USB cable must be a type CM 30V cable, up to a maximum of 6.5 feet or 2 meters long. A longer cable might result in electrical interference.

1 Attach the flat end of the USB cable to the USB port on the PC (see Figure 7-7) or to a device attached to the PC through a USB port.

If the printer has two USB ports, the upper USB port should be identified with a smart card label and pink plug. Do not use the upper USB port; use the USB port toward the center of the panel.

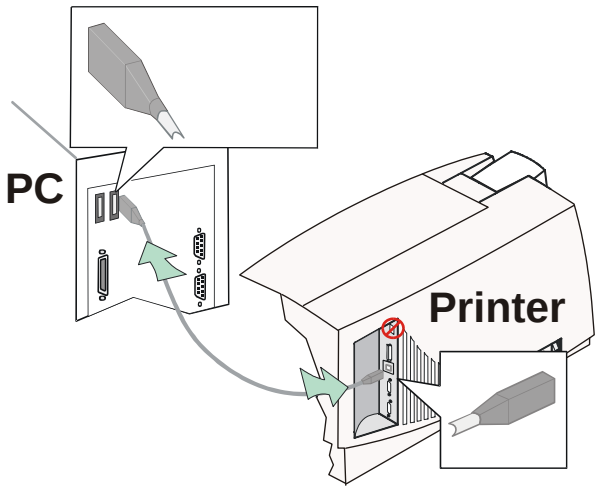


Figure 7-7: Connect the USB cable

– WAIT to attach the other end of the USB cable to the printer: Connect the printer to the PC after the printer is powered on and ready. (Using this method, Windows will keep track of the printer if you move the cable to another physical USB port on the PC.)

USB devices can be connected to the PC through another USB device (daisy-chained). USB hubs allow multiple USB devices (including other hubs) to be connected (cascaded). Up to five hubs can be used between the printer and the PC. (In a daisy chain, at least every other hub needs to be powered.) Datacard printers do not have ports to support daisy chaining. If you need to connect two Datacard printers to a PC with one USB port, obtain a USB hub to which both printers can be connected.

♦

Connecting an optional smart card cable

The ports available on the printer (Figure 7-5 on page 7-5) and the model information on the label (Figure 1-2 on page 1-3) are keys to what modules are installed. (If no smart card ports are installed in the printer, no cable is needed. Skip this procedure.) The following table lists the modules, codes, port type, and port location.

Module	Code (label)	Port type	Port position on back panel
Contact	SC410	Serial	Bottom port on panel
Contact	SC430	USB	Top of panel (pink plug)
Contactless/RF	SC680	Serial	Lower port
Contactless/RF	SC-xxx	USB	Top of panel (pink plug)
Contact station	SCCS	Serial	Lower port
Combination	SC4/6	Serial	Bottom two ports

Combination	SC4/SC-x	USB	Top of panel (pink plug) Hub inside printer

If the smart card module uses a USB cable, wait until the driver is installed and a sample card has been printed before setting up the smart card module.

If your printer has a smart card USB port, see the *e-Guide for Magna™ Printers* for information about the files you need before connecting the smart card USB port and the steps to follow. Use the following procedure if your printer has one or more serial ports.

Connect an optional smart card serial cable

1 Connect a serial cable to the upper smart card serial port (Figure 7-8) if a contactless smart card module is installed in the printer.

The smart card serial cable must be a shielded DB9 serial cable, up to a maximum of 9.8 feet or 3 meters long.

2 Connect a serial cable to the lower smart card serial port (Figure 7-8) if a contact module or a contact station is installed in the printer.

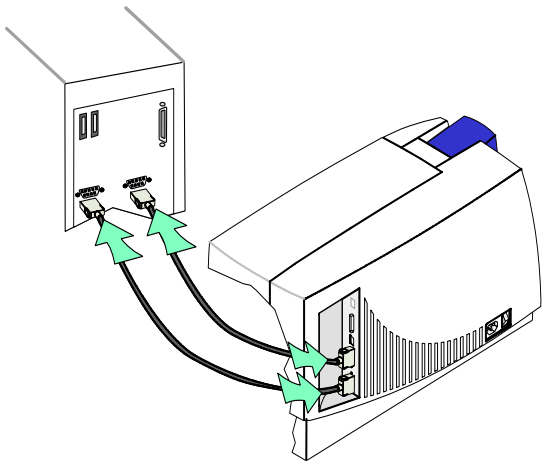


Figure 7-8: Connect the smart card serial cable

3 Use two smart card serial cables if both ports are installed on the printer. (The smart card module contains both contactless (upper port) and contact (lower port) couplers.)

4 Connect the other end of the smart card cable(s) to the appropriate port on the PC. See information for your smart card application for the correct PC port(s) to use.

5 Verify that port settings are correct. See “PC port settings” on page C-1.

♦

Connect the power cord

1 Attach the power cord to the power receptacle on the back of the printer (step 1 in Figure 7-9).

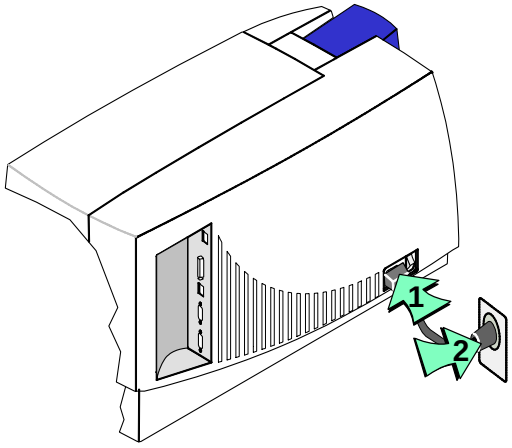


Figure 7-9: Connect the power cord

2 Plug the other end of the power cord into a single-phase, 3-wire grounded receptacle with 90-130V AC or 195-254V AC at 50 or 60 Hz (step 2 in Figure 7-9).

The printer power supply automatically adjusts to the voltage of the input power.

3 Do not power on the printer until supplies are loaded.

♦

Preparing the printer for driver installation

After connecting the printer and PC and before installing the driver, do the following:

- Load cards in the card cartridge. See “Loading cards” on page 2-3.
- Install the continuous cleaning roller in the printer. See “Replacing the cleaning roller sleeve” on page 4-3. There is no used sleeve to remove.
- Install the print ribbon. See “Loading the print ribbon” on page 2-5. When installing a new printer, there is no used ribbon to remove.
- If the printer includes an optional topcoat or overlay module, install the supply material. See “Loading the overlay or topcoat material” on page 2-7.
- Power on the printer and PC. See “Powering on the printer and PC” on page 2-13.
- The topcoat or overlay (laminator) module must warm up before printing a card. If you complete driver installation and print the sample card before the laminator is ready, a message box appears asking you to wait while the laminator warms up. The card will complete processing as soon as all modules in the printer are ready.

Installing the printer driver

The Magna printer includes a CD-ROM that contains the printer drivers for the supported Windows operating systems. The supported operating systems are:

- Windows Millennium Edition (Me) (recommended)
- Windows XP with Service Pack 1 (recommended)
- Windows 2000, with Service Pack 3
- Windows 98 Second Edition (SE)
- Windows NT 4.0, with Service Pack 5 or 6

See "PC and software specifications" on page 6-5 for details on operating system support and limitations.

Installation choices

- If the PC does not have a CD-ROM drive, request diskettes from your service provider. (Service providers can obtain the driver as diskette images from the partner page.) You also can download the printer driver from the Datacard Web site, at www.datacard.com. See the *e-Guide for Magna™ Printers* for instructions on installing from diskettes or a downloaded file.
- If you have installed the printer driver and want to update to the most recent driver, follow the steps in the *e-Guide for Magna™ Printers*.
- Several other connection methods are available, including printer sharing over a network, installing two printers on parallel ports on a PC, and installing multiple printers to a PC using the USB port. See the *e-Guide for Magna™ Printers* (located in the e-Guide folder of the driver CD-ROM, or through the e-Guide icon on the desktop) for information on these installation alternatives.
- You can also directly connect the printer to a network using a print server. See the *SmartDriver Direct Network Guide* for more information.
- See the *e-Guide for Magna™ Printers* for information on printer pooling on the Windows 2000 and XP operating systems.

Find the section that applies to the type of port and operating system on the PC:

- Parallel port and Windows 2000 or XP all operating system
  - "Install the printer driver to a parallel port on Windows XP/2000" on page 7-11
- Parallel port and Windows ME, 98 or NT operating system
  - "Install the printer driver to a parallel port on Windows ME, 98 or NT" on page 7-13
- USB port and Windows 2000 or XP operating system
  - "Install the printer driver to a USB port on Windows 2000 or XP" on page 7-15
- USB port and Windows ME or 98 operating system
  - "Install the printer driver to a USB port on Windows Me or 98" on page 7-17

Install the printer driver to a parallel port on Windows XP/2000

1 Close all applications. Do not close Windows.

2 Log in as the Administrator when you install the printer driver.

3 Make sure the printer is powered on and ready.

4 Make sure the printer is connected to the PC.

5 Insert the CD-ROM in the PC's drive.

6 If the operating system detects the printer and displays the Found/Detected New Hardware Wizard, go to step 12.

Figure 7-10: Datacard Group program

7 Click “To Install Driver.” The License Agreement page appears.

8 Click “Agree” to accept the license agreement. The “Connect the Printer and PC” page appears.

9 Click “Parallel Cable (LPT).” The “To use a Parallel Cable (LPT)” page appears.

10 Click “Add Printer” to start the Add Printer Wizard.

11 Click “Next” on the first page of the Add Printer Wizard.

12 Make sure the correct choices are checked on the Add Printer Wizard:

- For Windows 2000, check “Local printer” and “Automatically detect and install . . .”
- For Windows XP, check “Install the software automatically (recommended)”

13 Click “Next.” The PC searches the CD-ROM for files to install. For Windows XP, go to step 16.

14 Make sure that “Search for a suitable driver . . . “ is selected, and then click Next.

15 Make sure that “CD-ROM drives” is selected and then click Next.

16 When the wizard has found the dspnp.inf file, the Next button is enabled. Click Next.

17 A Windows message appears:

- For Windows 2000, the Digital Signature Not Found message appears. Click Yes to continue with installation. Security on the PC might be set to prevent installation without a digital signature. See Windows help for “digital signature” to change the security setting.
- For Windows XP, the Windows Logo Signing message appears. Click “Continue Anyway” to continue with installation. Security on the PC might be set to prevent installation without a digital signature. See Windows help for “Logo signing” to change the security setting.
- If installation is cancelled or cannot continue, see the *e-Guide for Magna™ Printers* for steps to follow.

18 The installation program copies files to the PC and updates entries for the printer. Click “Finish” to close the wizard.

19 Be sure to restart Windows before performing any other actions. If Windows does not restart automatically, do the following:

a Click “Start” to display the Windows Start menu.

b Click “Shut Down” to display the Shut Down Windows dialog box.

c Choose “Restart” from the list and click OK to restart Windows.

20 When Windows has restarted, remove and insert the CD-ROM in the PC's drive. The Datacard Group window opens automatically.

If the installation program does not start, make sure the CD-ROM is installed correctly. If needed, start the Demo32.exe application on the CD-ROM.

21 Click “User Information” to view the Release Notes (optional) and install information.

22 From the User Information page, click “View Release Notes” if you want to view detailed information about the printer driver installed. The WordPad application opens and displays the release notes. Click the Close or Exit button when you are done viewing release notes.

23 From the User Information page, click “e-Guide for Magna™ Printers.” The SmartDriver e-Guide Installation dialog box opens.

24 Click OK to start the self-extraction (zip) program. The WinZip . . . dialog box appears.

25 Use the default path to extract the files (or specify another location). Click Unzip to extract files and then click OK to start the e-Guide installation program.

26 The installation program detects whether the Adobe Acrobat Reader program is installed on the PC. If it is not, the installation program reminds you to install it. Continue with these steps and be sure to perform step 19.

Click OK to close the message box if it appears.

27 The program installs the files for the e-Guide for Magna™ Printers. Click Finish when it is complete.

28 If a message appeared as described in step 17, click “Acrobat Reader” on the User Information page. Follow the prompts to install Acrobat Reader.

29 If you will be using more than one type of printer on this PC, install e-Guides for each printer type, following steps 14 through 18.

The SmartDriver supports the Magna Platinum series printer, the SP35 card printer, Magna Class printer with AIT, the Select Class printer with AIT, the Select Platinum series printer, and the ImageCard IV printer.

30 Click Exit to close the Datacard Group program, and then remove the CD-ROM from the PC’s drive.

31 Driver installation is complete. Go to “Changing required printer settings” on page 7-19, and then print a sample card to verify driver installation. See “Printing sample cards” on page 7-20.

♦

Install the printer driver to a parallel port on Windows ME, 98 or NT

1 Close all applications. Do not close Windows.

2 Make sure the printer is connected to the PC.

3 Make sure the printer is powered on.

For Windows NT, log in as the Administrator when you install the printer driver.

4 With Windows running, insert the CD-ROM in the PC's drive. The Datacard Group window opens automatically.

If the installation program does not start, make sure the CD-ROM is installed correctly. If needed, start the Demo32.exe application on the CD-ROM.

Figure 7-11: Driver installation program

5 Click “Install Driver.” The SmartDriver installation program starts.

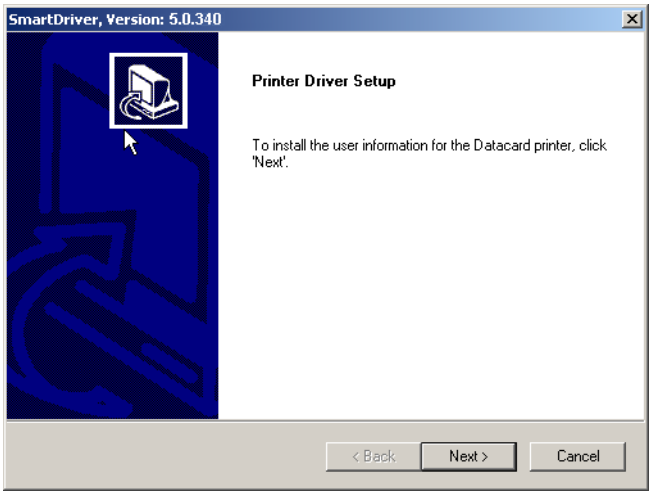


Figure 7-12: SmartDriver installation dialog box

6 Click Next on the first Printer Driver Setup dialog box.

The installation program automatically detects the operating system on your PC and selects the driver for that operating system.

7 Review the License Agreement and click Yes to continue.

If you used a different sequence to start installation, you might have a slightly different sequence of prompts.

8 The installation program displays a question asking whether you would like to view the Release Notes. Do one of the following:

– Click Next to continue.

– Click Yes and then Next to open the Release Notes in WordPad. Close the Release Notes when you have viewed the information.

9 Choose the e-Guides to install. You can choose the Magna e-Guide, the Select e-Guide, ImageCard IV e-Guide, or the SP35 e-Guide. Install the Magna e-Guide. (You can install additional e-Guides if you are likely to use more than one type of printer with this PC.) Click Next to install the e-Guide(s) you selected.

10 Use the default name for the printer or enter a name of your choice. Click Next.

11 Select the port to which the printer is connected and click Next.

ⓘ Select only one port for printer connection.

12 Select whether this printer should be the default printer.

ⓘ The small page size for cards might cause unexpected results with some applications if the Magna printer is the default.

13 Click Next to copy the files to the PC and update entries to enable the printer.

14 The installation program detects whether the Adobe Acrobat Reader program is installed on the PC. If it is not, the installation program asks if you want to install Acrobat Reader. If you see this prompt, make sure Yes is chosen and then click Next to install it.

15 Follow the prompts to install Acrobat Reader.

16 The Restart Windows dialog box appears after a moment.

17 Click Finish to close the installation. The installation program will restart Windows when you click Finish.

18 Driver installation is complete. Go to “Changing required printer settings” on page 7-19, and then print a sample card to verify installation. See “Printing sample cards” on page 7-20.

ⓘ On Windows Me and 98, the Add New Hardware Wizard can appear when you restart Windows. Windows will associate the printer and driver, and close the Add New Hardware Wizard automatically.

♦

Install the printer driver to a USB port on Windows 2000 or XP

ⓘ For Windows 2000 or XP, make sure you are logged in as the Administrator when you install the printer driver.

1 Close all applications. Do not close Windows.

2 Make sure printer is powered on.

3 Connect the printer to the PC using the USB data cable. The operating system detects the printer and displays the Found New Hardware Wizard.

4 With Windows running, insert the CD-ROM in the PC's drive.

- On Windows XP, the Windows Add New Hardware Wizard should read the CD-ROM and suppress the Datacard Group installation program. Use the Add New Hardware wizard to run the driver installation process. Do not use the Datacard Group installation program if it starts automatically. The wizard might perform several steps automatically. It will require your action at step 8.
- On Windows 2000, the Datacard Group installation program opens. Click on the Found New Hardware Wizard to use the Wizard.

5 Click Next. On the next page of the wizard, make sure that “Search for a suitable driver for my device (recommended).” is selected and click Next.

6 On the Locate Driver Files page, choose “CD-ROM drives” and then click Next to continue with installation.

If you specified a location, a dialog box in which you can browse appears. Browse to find the DsPnp.inf file. Click Open and OK.

7 The wizard searches for the file to start installation. When it has found the DsPnp.inf file, click Next to continue.

8 A Windows message appears.

- On Windows 2000, the Digital Signature Not Found message appears. Click Yes to continue with installation. Security on the PC might be set to prevent installation without a digital signature. See Windows help for “digital signature” to change the security setting.
- On Windows XP, the Windows Logo Signing message appears. Click Continue Anyway to continue with installation. Security on the PC might be set to prevent installation without a digital signature. See Windows help for “Logo signing” to change the security setting.
- If installation is cancelled or cannot continue, see the *e-Guide for Magna™ Printers* steps to follow.

9 The installation program copies files to the PC and updates entries to enable the printer.

10 A message appears telling you that installation is complete. It also reminds you of important tasks to perform. Click OK to restart Windows. If needed, click Finish on the Found New Hardware Wizard to close it.

11 After the PC restarts, the Printer Toolbox is displayed. You will use the Printer Toolbox when you follow the steps in “Print sample cards” on page 7-20.

12 Start the driver installation program to install information.

- Remove the CD-ROM from the PC drive, and then insert it again. The Datacard Group installation program appears.
- If the Datacard Group installation program does not start, locate the Demo32.exe file in the base directory of the CD-ROM.

13 Click “User Information” to view the Release Notes (optional) and install information.

14 From the User Information page, click “View Release Notes” if you want to view detailed information about the printer driver installed. The WordPad application opens and displays the release notes. Click the Close or Exit button when you are done viewing release notes.

15 From the User Information page, click “Magna Platinum Series e-Guide.” The SmartDriver e-Guide Installation dialog box opens.

16 Click OK to start the self-extraction (zip) program. The WinZip . . . dialog box appears.

17 Use the default path to extract the files (or specify another location). Click Unzip to extract files and then click OK to start the e-Guide installation program.

18 The installation program detects whether the Adobe Acrobat Reader program is installed on the PC. If it is not, the installation program reminds you to install it. Continue with these steps and be sure to perform step 19.

Click OK to close the message box if it appears.

19 The program installs the files for the Magna Platinum Series e-Guide. Click Finish when it is complete.

20 If a message appeared as described in step 17, click “Acrobat Reader” on the User Information page. Follow the prompts to install Acrobat Reader.

21 If you will be using more than one type of printer on this PC, install e-Guides for each printer type, following steps 15 through 19.

The SmartDriver supports the Magna Platinum series printer, the SP35 card printer, Magna Class printer with AIT, the Select Class printer with AIT, the Select Platinum series printer, and the ImageCard IV printer.

22 Click Exit to close the Datacard Group program, and then remove the CD-ROM from the PC’s drive.

23 Go to “Print sample cards” on page 7-20 to print a sample card and verify installation.

♦

Install the printer driver to a USB port on Windows Me or 98

1 Close all applications. Do not close Windows.

2 Make sure printer is powered on.

3 Connect the printer to the PC using the USB data cable. The operating system detects the printer and displays the Add New Hardware wizard.

4 With Windows running, insert the CD-ROM in the PC's drive.

- The Windows "Add New Hardware" wizard should read the CD-ROM and suppress the Datacard Group installation program. Use the Add New Hardware wizard to run the driver installation process. Do not use the Datacard Group installation program if it starts automatically.
- If you are using diskettes, extract the files to the PC’s hard drive.

5 On Windows Me, the Wizard might open the SmartDriver installation program and display the License Agreement. If it does, go to step 9.

6 On Windows 98, click Next on the Wizard and do one of the following:

– Make sure that “Search for a suitable driver for my device (recommended).” is selected if you are installing from CD-ROM.

– If you are installing from files on the hard drive, click “Specify the location of the driver.”

7 For Windows 98 on the next page, select “Search for the best driver for your device” and “Specify a location.” Browse to find the DsPnp.inf file and click OK. Click Next.

– Windows Me searches automatically.

For some Windows Me and 98 PCs, Windows finds USBPrint.inf and installs USB printer support. If this occurs, the Add New Hardware wizard appears again. Repeat these steps, beginning with step 4.

8 The wizard loads the installation program.

9 Click Yes to accept the software license.

10 The installation program displays a question asking whether you would like to view the Release Notes. Do one of the following:

– Click Next to continue.

– Click Yes and then Next to open the Release Notes in WordPad. Close the Release Notes when you have viewed the information.

11 Choose the e-Guides to install. You can choose the Magna Class e-Guide, the Select Class e-Guide, ImageCard IV e-Guide, or the SP35 e-Guide. Install the Magna Class e-Guide. (You can install additional e-Guides if you are likely to use a different type of printer attached to this PC.) Click Next to install the e-Guide(s) you selected.

12 The installation program copies files to the PC and updates entries to enable the printer.

13 The installation program detects whether the Adobe Acrobat Reader program is installed on the PC. If it is not, the installation program asks if you want to install Acrobat Reader. If you see this prompt, make sure Yes is chosen and then click Next to install it.

14 Follow the prompts to install Acrobat Reader.

15 You must restart the PC before the driver can work with the printer. Click Finish to close the installation and restart Windows.

If the Windows Add New Hardware wizard is open, click Finish to close it and restart the PC.

♦

Changing required printer settings

After installing the printer driver, there are several other tasks you might need to perform. The required tasks are:

- For Windows 2000, XP, and NT, set permissions to the printer for other users of the PC. See “Setting printer permissions” on page 7-22 for the steps to follow.
- For Windows 2000, XP, and NT, make sure that users of the printer have permission to write files to the temp file location specified in the PC configuration. If the temp file location is not specified, the driver uses the root location, such as Win2K or WINNT. See Windows help for more information.
- View and change settings in the Properties, Default Document Properties, or Printing Preferences dialog box. See “Working with Properties and other driver dialog boxes” on page 3-2 for steps to follow.

  Open the Properties, Printing Preferences, or Default Document Properties dialog box using the Printers window so the settings apply to all applications.

  – Select whether to print on both sides (duplex printing). Select and apply this setting before making other changes. A duplex module is required to print on two sides.
  – Select the print ribbon type. This setting is optional for a locally attached printer. This setting must be selected for a printer used over a network. See “Print ribbons” on page B-2 for information on supported print ribbons.
  – If the printer has a topcoat or overlay module, select whether to apply the material to the front of the card, the back of the card, or both.
  – If the printer has a magnetic stripe module, select the magnetic stripe coercivity and encoding format.
- For a networked printer, change settings first on the administrative or host PC and then on user or client PCs:
  – Printer type (for shared printers only)
  – Print on both sides (must correspond with the printer features)
  – Print ribbon type (must match ribbon in the printer)
  – If the printer has a topcoat or overlay module, select whether to apply the material to the front of the card, the back of the card, or both.
  – Mag stripe coercivity and encoding format can be set from the administrative or host PC. The client or user PCs can use the “Use printer settings” values if all cards will use the same encoding format. Make sure that mag stripe settings on all PCs result in readable cards.

  Optional settings, such as orientation and print margin, can also be changed.

♦

Printing sample cards

The printer is shipped with cards that are printed in the factory. You can also print a sample card, which looks like one of the factory-printed cards, using the Printer Toolbox.

Print sample cards

1 Begin with the printer powered on and connected to the PC, supplies loaded, the printer driver installed, and Windows running.

2 By default, the Printer Toolbox is open when Windows starts. If needed, double-click the icon for the Printer Toolbox. It is located in the lower right corner of the Windows desktop. See “Using the Printer Toolbox” on page 3-11 if needed.

3 Click the Sample Card button.

The driver identifies the type of printer, whether it prints color or monochrome images, and whether it has a duplex module, and then sends the appropriate sample card to print.

If the printer is a color printer and is using a monochrome (K) ribbon, the printed sample card will be mostly black, not full-color.

4 Compare the cards you printed with the cards shipped with the printer.

5 When you have printed the card and are satisfied that it matches the factory-printed card, you can minimize the Printer Toolbox.

6 Use the card to evaluate how well the printer is operating:

– If you have just completed installation, use the comparison to complete the Installation Report and mail or fax the report to Datacard.

– If you are checking the operation of the printer, see “Problems with card appearance” on page 5-8.

♦

Setup tips

Make sure that:

- The card cartridge is in place and contains cards.
- The data cable is connected to the parallel or USB port of the printer and the corresponding port of the PC. Make sure that the ports used for each printer are the same as were installed. (For example, a printer cannot be installed through a parallel port and then used through a USB port or through a different parallel port)
- If the PC has more than one port, the port to which the printer is assigned (such as LPT1) is the same as the port to which it is connected.
- The parallel port (if used) is configured as an ECP parallel port in the PC’s BIOS. See “PC port settings” on page C-1 for more information.

- The settings for the USB port (if used) are correct. See “PC port settings” on page C-1 for more information.
- Supplies are installed in all cartridges and cartridges are loaded correctly. “Using the printer” on page 2-1 for more information.
- The printer is ready to print. The status light on the printer should be steady green before you send a sample card. “Status light” on page 2-7 for more information.
- Use the driver sample card, not a card from a card creation application, to verify that the printer and driver are working together.
- For a directly networked printer, see the *SmartDriver Direct Network Guide* for guidance on setting up the printer and PC.
- For a shared printer, see the *e-Guide for Magna™ Printers*.

Changing optional settings

Depending on your card design and operating environment, you might change settings for optimal print quality. Print the sample cards before changing optional settings. The optional settings include:

- Set the print margin if needed. The printer has a default of Edge-to-Edge, which is the same as a margin of 0.
- Choose the cleaning interval in the printer driver. See “Working with Properties and other driver dialog boxes” on page 3-2 for steps to follow. You can use the default interval of cleaning after every 2500 cards, or select a longer or shorter interval. If you choose a value of 0, the printer driver will not prompt for cleaning. Make sure you clean the printer regularly, such as every time you change ribbon or each work day. For networked printing, the user who prints the most cards should set the cleaning interval (set the cleaning interval to 0 on other PCs).
- Dithering for monochrome (K) printing.
- Fine-tune black (K-panel) printing if you print barcodes or fine text. See the *e-Guide for Magna™ Printers* for steps to follow. For networked printers, perform this task from the host or administrative PC.
- Change color settings. After the card design is defined and other components of an identification system are set up, you might want to change color settings for maximum color quality. See the *e-Guide for Magna™ Printers* for steps to follow.
- For a networked printer, most optional settings on the administrative or host PC and the user or client PCs can be changed independently and should match the card design. Settings on the Laminator Settings, Printhead, and Laminator Advanced tabs should be changed only from the host or administrative PC.
- You might also want to change print registration. See the *e-Guide for Magna™ Printers* or contact your service provider for guidance.

Setting printer permissions

If the PC to which the printer is attached has other users, set permissions that:

- Make all features of the printer and driver available to users, including messages. (Messages inform users when they need to change the ribbon, load cards, and fix problems.)
- Prevent any access to the printer by unauthorized users.

Set printer permissions for Windows 2000 and XP

1 From the Windows taskbar select Start, then Settings, and then Printer. The Printers window appears.

2 Highlight the SmartDriver icon by clicking on it once.

3 From the menu bar, select File and then Properties. The Properties dialog box for the SmartDriver appears.

4 Choose the Security tab.

> If the Security tab is not visible, open any folder and choose Tools:Folder Options from the menu bar. In the Advanced Settings list, make sure "Use simply file-sharing" is not checked. Close the Properties dialog box and open it again to view the Security tab.

5 Review the Names list. If the names for which you want to specify permissions do not appear in the list, add the names.

   a Select the Add button to open the Users and Groups dialog box.

   b Click on the name and click Add. Repeat for each name to add.

   c When done adding names, click OK. The Users and Groups dialog box closes.

6 In the Names list, select the name for which you want to specify permissions.

7 From the Permissions list, select the access:

   – For a local user of a local printer and for a user of a directly networked printer:
      - To enable printing, select "Allow" for Print, Manage Printers, and Manage Documents.
      - For a user who should not print on the SmartDriver printer, select "Deny" for all permissions.
      - Single permissions, such as the Print permission, are not supported.
   – For a user of a shared printer:
      - For a local user of the printer on the PC connected to the printer, select Allow for Print, Manage Printers, and Manage Documents. The user will be able to see all messages. The user will also be able to perform other actions, such as deleting the printer driver. (Single permissions, such as Print, are not supported for local users of the printer driver.)
      - For a user who should not print on the printer, select Deny for all permissions.

- For a user connected through a network using Printer Sharing, select Allow only for the Print permission. (Select Deny for Manage Printers and Manage Documents.)

8 Select Apply to save the change. Save changes for each name.

9 Repeat steps 5 through 8 to add other users or groups.

10 Select OK to close the Properties dialog box.

♦

Set printer permissions for Windows NT

1 From the Windows taskbar select Start, Settings, and then Printers. The Printers window appears.

2 Highlight the SmartDriver icon by clicking on it once.

3 From the menu bar, select File and then Properties. The Properties window for the SmartDriver appears.

4 Select the Security tab.

5 Click the Permissions button to open the Printer Permissions dialog box.

6 Select the Add button to open the Add Users and Groups dialog box.

7 Select the Show Users button.

8 Select the name of the user (or group) to add and click the Add button.

9 From the Type of Access list, select the access:

– For a local user of a local printer or for a user of a directly networked printer:
  - For a user connected to a directly networked printer, select Full Control.
  - For a local user of a printer, select Full Control.
  - For a user who should not print on the printer, select No Access.

  ℹ Other user permissions, such as the Print permission, are not supported

– For a user of a shared printer:
  - For a user of the printer on the PC connected to the printer, select Full Control. The user will be able to see all messages. The user will also be able to perform other actions, such as deleting the printer driver. (Other user permissions, such as the Print permission, are not supported for local users of the printer driver.)
  - For a user who should not print on the printer, select No Access.
  - For a user connected through a network using Printer Sharing, select Print permission.

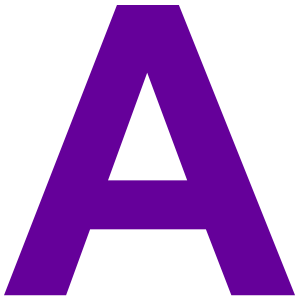
10 Select OK to save the change and close the Add Users and Groups window.

11 Repeat steps 6 through 10 to add other users or groups.

12 Select OK to save the changes and close the Printer Permissions window.

♦

Safety and compliance



This appendix presents:

- Regulatory compliance information
- Safety information
- Trademark acknowledgments

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.

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.

Notice for the European Union

We hereby certify that the Datacard® ImageCard® IV photo ID printer complies with EMC Directive 89/336/EEC and R&TTE Directive 1999/5/EC.This printer conforms to Class A of EN 55022 and to EN 301 489-5. 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 for Taiwan and China

警告使用者:
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干扰，在这种情况下，使用者會被要求采用某些适當的對策。

Notice for Japan

This equipment is in the Class A category of information technology equipment based on the rules of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). When used in a residential area, radio interference may be caused. In this case, the user may be required to take appropriate corrective actions.

この装置は，クラス A 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 **VCCI - A**

Notice to Users of Printers Equipped with Contactless Smart Card Coupler

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

Liability statement

This Datacard® product has been built to the high standards of DataCard 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 assumes no liability for incidental, 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 and Canadian requirements, and the Low Voltage Directive

73/23/EEC. 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. ABC type extinguishers may be used on electrical fires.
- Know local procedures for first aid and emergency assistance at the customer facility.
- Use adequate lighting at the equipment.
- Maintain the recommended range of temperature and humidity in equipment area.

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.
- Operate the printer with the cover closed.

Acknowledgments

Supplies and cards

B

This appendix describes specifications, part numbers, and handling for supplies and components used with the Datacard® Magna™ Platinum™ Series photo ID printer. It includes:

- Personalization supplies, including print ribbons, optional laminate material, and optional topcoat material
- Cards to print
- Cleaning supplies, including cleaning cards replaceable cleaning roller sleeve, and the printhead cleaning pen
- Printer driver CD-ROM
- Printer components, including cables, supply cartridges, and the replaceable printhead cartridge

Personalization supplies

Print ribbon and optional topcoat and laminate supplies are used to personalize cards. This section describes Datacard®-certified personalization supplies for the Datacard® Magna™ Platinum™ Series photo ID printer with Advanced Imaging Technology™ and how to store them.

Use Datacard-certified supplies in the Magna printer.

Print ribbons

You must use one of the following Platinum Series print ribbons in color (ImageCard) Magna™ Platinum Series printers:

Ribbon type	Part number	Panel description	Colors Printed	One panel set prints:
YMCK[#]	549081-202	Three colors and true black	Full color and true black	One side of a card
YMCKT	549081-204	Three colors, true black, and topcoat	Full color, true black, and topcoat	One side of a card
YMCKTKT	549081-206	Three colors, true black, topcoat, true black, and topcoat	Full color, true black, and topcoat	Front–full color, true black & topcoat; Back–true black & topcoat

#. Topcoat or overlay required.

Magna Platinum Series card printers feature Datacard proprietary Platinum Series ribbons which are designed specifically for Magna and Select Platinum Series printers. If another color ribbon is installed, the printer will continue to prompt the user to install Datacard's proprietary Platinum Series ribbons. The printer will only successfully print cards when Platinum Series ribbon are installed. Datacard is your exclusive source for Platinum Series ribbons.

For color or monochrome Magna printers, you can use the following single-color (monochrome) print ribbons:

Ribbon type	Part number	Images printed	Panel description	Colors	One panel set prints:
KT	806124-109		True black and topcoat	Black	One side of card
K black	596230-001	1,800	Continuous black	Black	Not applicable
K white[#]	596230-0103	1,800	Continuous white	White	Not applicable
K red[†]	596230-0104	1,800	Continuous red	Red	Not applicable

Ribbon type	Part number	Images printed	Panel description	Colors	One panel set prints:
K process blue†	596230-005	1,800	Continuous process (light) blue	Blue	Not applicable
K green	596230-006	1,800	Continuous green	Green	Not applicable
K scratch-off	548237-001	800	Continuous scratch-off panel	Scratch-off	Not applicable

#. This ribbon is larger than the printer capacity. Remove 7 yards (6.5 m) of ribbon before loading this roll in the printer.

†. For color printers, set ribbon type to K; do not use the Always Autodetect setting.

If you change the type of ribbon you use, be sure to make the appropriate changes to the printer driver. See “Changing the type of print ribbon” in the *e-Guide for ImageCard® Magna™ and UltraGrafix® Magna™ Printers*.

When you use a monochrome-only print ribbon, use a printhead cartridge designed for monochrome printing for optimum results. When you use a color ribbon that includes a K (monochrome or black) panel, use a color printhead cartridge. See “Printhead cartridge” on page B-14.

Laminate material

Use Datacard DuraGard® laminate material in the Magna printer if the printer includes an optional overlay module. (Laminate is also called overlay.) If you use 1.0 mil or 1.1 mil laminate, you must also use composite (not PVC) cards because of the heat required to apply 1.0 mil or 1.1 mil material.

If the printer has an optional topcoat module, see “Topcoat material” on page B-5.

The following describes the laminate materials you can use:

Name	Part number	Heater roller	Description
DuraGard 0.6 mil Holographic Laminate	547562-001	Either	Die-cut polyester patches on a carrier material with a tamper-evident image. About 300 uses.
DuraGard 0.6 mil Smart Card Holographic Laminate	547562-052	Either	Die-cut polyester patches on a carrier material with a tamper-evident image. Patch covers all of the card except the area of the smart card chip. About 300 uses.

Name	Part number	Heater roller	Description
DuraGard 1.0 mil Clear Laminate	553277-101	Metal only	Full-card die-cut polyester patches, 1 mil thick, on a carrier material. About 250 uses.
DuraGard Smart Card 1.0 mil Clear Laminate	553277-102	Metal only	Die-cut polyester patches, 1 mil thick, on a carrier material. Patch covers all of the card except the area of the smart card chip. About 250 uses.
DuraGard 0.5 mil Clear Laminate	557171-001	Either	Full-card die-cut polyester patches, 0.5 mil thick, on a carrier material. About 300 uses.
DuraGard Smart Card 0.5 mil Clear Laminate	557171-002	Either	Die-cut polyester patches, 0.5 mil thick, on a carrier material. Patch covers all of card except the area of the smart card chip. About 300 uses.

Datacard recommends that laminate patches not be applied over magnetic stripes or signature panels.

Full-card laminate can be applied to contactless (RF) smart cards.

Figure B-1: "Genuine Authentic" holographic laminate or topcoat

Custom material, including custom holograms, are available on topcoat or laminate material. Contact your Datacard representative for more information.

Topcoat material

Use Datacard-approved topcoat material in the Magna printer, if the printer includes an optional topcoat module. The following describes the topcoat supply to use:

If the printer has an optional overlay module, see “Laminate material” on page B-3.

Name	Part number	Description
"Genuine Authentic" holographic topcoat	557104-500	Single roll of continuous topcoat for about 625 cards.
Clear topcoat	557105-001	Single roll of continuous topcoat for about 625 cards.

Tips for success

- Topcoat material covers the full surface of the card. You cannot use the topcoat module to apply topcoat in selected areas of the card.
- Clear or holographic topcoat can be applied to contactless (RF) smart cards.
- To apply topcoat to selected areas of a card, such as around a magnetic stripe or contacted smart card, use a print ribbon with a topcoat (T) panel, such as YMCKT. Choose print blocking in the SmartDriver so topcoat is not applied over the magnetic stripe, smart card chip or other feature.

Supply roll storage

Follow these guidelines when storing supply rolls:

- The print ribbon, topcoat and laminate supply rolls maintain their quality for about a year. For optimal card quality, purchase and store quantities that you can use up in less than a year.
- The print ribbon, card stock, and laminator supply might require secure storage and tracking. Follow your policy for storing and tracking the supplies used to make cards.
- Select a location away from direct sunlight and heat sources, with a temperature between 32° F and 77° F or between 0° C and 25° C. A humidity range from 40% to 60% (non-condensing) is recommended.
- 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 your supplies inventory.

Cards

This section describes specifications and quality guidelines for card stock to use with the Magna printer. It also describes the environmental specifications for storage of card stock.

Card specifications

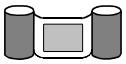
For best results with the Magna printer, use high-quality card stock that meets the specifications and recommendations described in this section.

Card size

Use CR-80 size cards with the following nominal dimensions:

Length	3.37 inches	85.60 mm
Width	2.125 inches	53.98 mm
Thickness with smart card chip	0.027 to 0.040 inches	0.685 to 1.016 mm
Thickness (all other cards)	0.020 to 0.050 inches	0.508 to 1.27 mm

Actual card thickness can vary by up to ten percent from the sizes listed. Smart card chips can be raised slightly from the printing surface.



If you use an overlay or topcoat module, you must use cards that are at least 0.030 inch or 0.76 mm thick. If you apply 1.0 mil or 1.1 mil laminate to cards, you must use composite cards with a PVC surface, not 100% PVC cards.

Card bow must be less than the thickness of the card.

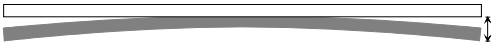


Figure B-2: Excessive card bow

Card material

Use cards made of the following types of material:

- Glossy PVC surface, either 100% PVC cards or composite cards with a PVC surface.
- Cards with a magnetic stripe on one side of the card.
- Cards with a smart card chip on the top of the card. Depending on the module installed in the printer, contact-type, contactless, or both types of smart card chips can be programmed.

Embossed cards cannot be processed in the Magna printer.

StickiCards

StickiCards™ adhesive-backed plastic cards, part number 597640-001, can be used. StickiCards are used to make personalized cards that can be adhered to proximity cards when the card surface is not flat enough to print. The printing surface of the StickiCard (white side) meets the material requirements for use in the printer.

When using StickiCards, follow these guidelines:

- Store cards in a cool place (such as a refrigerator) to avoid adhesive migration.
- Fan cards before loading them in the card cartridge.
- Clean the printer's card tracks often to remove any adhesive residue. The printhead cleaning pen or an isopropyl alcohol swab will remove the residue.
- Use a print margin of 0.1 or 0.05 inch with StickiCards.
- Do not apply material to StickiCards using a topcoat or overlay (laminator) module.

Contactless smart cards

Contactless smart cards are also called RF (radio frequency) cards and proximity cards. Contactless smart cards can have an irregular surface where the internal components of the card are located. You might modify the card design to avoid printing photos or other images over the internal components of the card.

Pre-punched cards

Datacard recommends that you punch cards after printing them. However, you can use pre-punched cards with the Magna printer as long as the hole is free of raised areas or burrs. Figure B-3 shows where punched areas are not allowed.

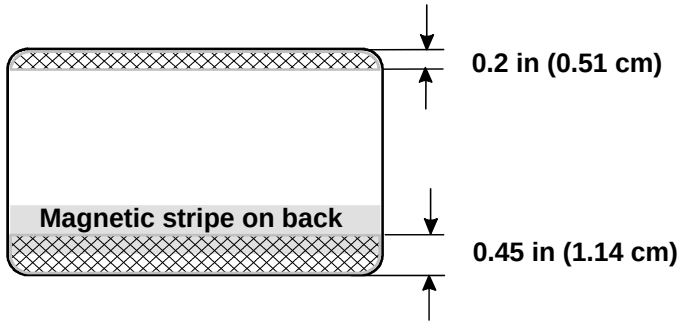


Figure B-3: Pre-punched card block-out areas

The dimensions show how far from the edge any punched areas must be (dimensions include any tolerance):

- The cards cannot have a punched area closer than 0.2 in (0.51 cm) from the left-hand edge (as loaded in the card cartridge).
- The cards cannot have a punched area closer than 0.45 in (1.14 cm) from the right edge (as loaded in the card cartridge).
- If the card has a magnetic stripe, the card cannot be punched anywhere in the stripe.

New cards preferred

The Magna printer is designed to print on new card stock. If you print on cards twice, be careful to avoid getting dirt, fingerprints, or other contamination on cards before the second printing. Printing on cards that have been issued might introduce substances that interfere with card printing or damage the printer. See “Problems with card appearance” on page 5-8 to address card appearance problems with pre-printed cards.

If a previously printed card has topcoat (from the T-panel of print ribbon or from the laminator) or laminate applied, the card cannot be printed a second time.

Card quality guidelines

Your cards must meet the following card quality guidelines for the Magna printer to print high quality graphics on them successfully.

Card surface

- The card must be free of irregularities such as particles embedded in the surface.
- The card surface must be smooth and even. Surface irregularities can cause loss of contact, resulting in printing voids.
- The printing surface must be glossy. It cannot have a matte finish (see other sections in this appendix for more information).
- Card edges must be free of raised burrs, which can cause unprinted areas on cards (printing voids). This is especially true when printing Edge-to-Edge. Raised burrs can also cause more than one card to be picked, resulting in card jams.

Card handling

These guidelines apply to unprinted cards. Any debris or particles on an unprinted card’s surface can reduce print quality and damage the printhead. Grease or oils, such as oils from your fingers, also reduce print quality.

- Keep cards completely clean.
- Do not touch the print surface of a card with your fingers or hands.
- Do not use a rubber band to bind blank cards together.
- If you drop a card on the floor, do not insert it into the Magna printer.

Card storage

These guidelines apply to both printed and unprinted cards.

- Cards must be stacked so that they will not shift and rub against each other.
- When storing cards, make sure that no two cards contain images or blocks of color that will come in contact with each other.
- Make sure that the magnetic stripe on one card does not come in contact with the magnetic stripe on another card.

- Make sure that cards with magnetic stripes are stored away from magnets and other magnetic objects.

Card storage specifications

The cards should be stored in a cool, dry, and dark place. Excessive light can cause yellowing of cards on exposed edges. Keep cards in their original packaging.

Cards should be at room temperature when they are installed in the printer and used. If cards are stored in a cooler environment than the printer, allow them to reach room temperature before using.

Cleaning supplies

The Magna printer uses the following cleaning supplies.

- Printer cleaning cards
- Replaceable cleaning sleeves
- Magnetic stripe cleaning card (only for printers with a magnetic stripe module)
- Printhead cleaning pen
- /laminator cleaning cards (if the printer includes an optional topcoat or overlay (laminator) module)
- Heated roller cleaning stick (if the printer includes an optional topcoat or overlay module)

Printer cleaning card

Use a printer cleaning card to remove particles left by printing supplies inside the Magna printer. Use a printer cleaning card at the interval you set, such as every 250 cards (see “Working with Properties and other driver dialog boxes” on page 3-1).

Printer cleaning cards are sold in packages of 10. The package part number is 557297-001. Printer cleaning cards are also sold as part of cleaning kits, described below.

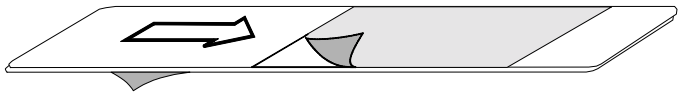


Figure B-4: Printer cleaning card

If the printer does not have a magnetic strip module, you can use cleaning card part number 548714-001.

Replaceable cleaning sleeve

Use a replaceable cleaning sleeve on the continuous cleaning roller. Change the replaceable cleaning sleeve before you run a printer cleaning card.

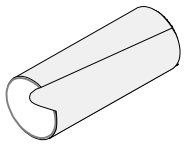


Figure B-5: Replaceable cleaning sleeve

The replaceable cleaning sleeve is sold in packages of 5. The package part number is 549716-001. The replaceable cleaning sleeve is also available as part of a cleaning kit, described below.

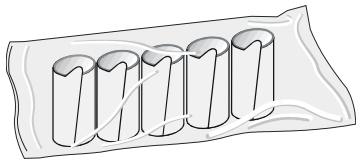


Figure B-6: Package of replaceable cleaning sleeves

Cleaning kits (optional)

Cleaning kits include 5 printer cleaning cards and 5 replaceable cleaning sleeves. The following cleaning kits are an available option:

Printer features	Part number
For printers with magnetic stripe modules[#]	549718-001
For printers without magnetic stripe modules	549717-001

#. The magnetic stripe cleaning card is required to clean the magnetic stripe module: the printer cleaning cards for printers with magnetic stripe modules are designed for the different features of the card track.

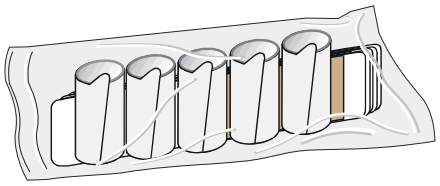


Figure B-7: Cleaning kit

Magnetic stripe cleaning card

Use the magnetic stripe cleaning card if the printer has a magnetic stripe module. The card is part number 590408-002. Do not use more than once every 2000 cards.

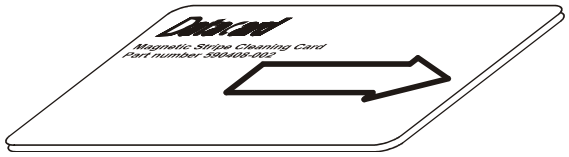


Figure B-8: Magnetic stripe cleaning card

Duplex/laminator cleaning card

Use the duplex/laminator cleaning card if the printer has automatic two-sided printing (duplex module) or an optional topcoat or overlay (laminator) module. The duplex/laminator cleaning card number is 557668-001.

Figure B-9: Duplex/laminator cleaning card

The automatic cleaning function uses cleaning tape. You set how often the automatic cleaning function runs in the printer driver. The printer also runs the automatic cleaning function each time you turn the printer power. If you use the default value (after every 20 cards) and keep the printer running, you use one roll of cleaning tape for every 1300 cards you print.

Cleaning pen

To maintain print quality and prolong the life of the printhead and other parts, use a cleaning pen. The cleaning pen is part number 557492-001. Each pen can be used up to eight times.

Heated roller cleaning stick

To correct quality problems with topcoat or laminate applied to cards, use the heated roller cleaning stick. The cleaning stick is part number 548369-001. The cleaning stick is reusable.

Printer driver CD-ROM

The Magna printer drivers are delivered on a CD-ROM. The CD-ROM also contains associated files and utilities you might need. The following table lists the contents of the CD-ROM, the path, and the purpose of the program, file, or utility:

	Path	Purpose
Datacard SmartDriver Printer Software CD-ROM	D:\DEMO32.EXE#	User-friendly access to all of the applications on the CD-ROM
Printer driver for Windows 2000 and XP	D:\DsPnp.inf#	Installation for Windows 2000 and XP that meets Microsoft Plug-and-Play requirements (Use the Add Printer wizard)
Printer driver for Windows Me and 98	D:\Me-98\SETUP.EXE#	Custom installation for Windows Me and Windows 98 (Use Demo32.exe)
Printer driver for Windows NT	D:\Nt\ SETUP.EXE#	Custom installation for Windows NT 4.0 (Use Demo32.exe)
Network port monitor installation	D:\XP-2000\Net Port Mon Install\ SETUP.EXE#	Network port monitor for use with a directly networked printer and Windows 2000 or XP (Use Demo32.exe)
e-Guide installation	D:\e-Guide\ IC4_e-Guide_*v*.exe#†	Installation program for ImageCard IV e-Guide.
e-Guide installation	D:\e-Guide\ Mag_e-Guide_*v*.exe#†	Installation program for Magna e-Guide.
e-Guide installation	D:\e-Guide\ Sel_e-Guide_*v*.exe#†	Installation program for Select e-Guide.
e-Guides (use the e-Guide(s) that match the printer(s) installed on the PC)	D:\e-Guide\ Magna Class with AIT\DM-e-Guide.pdf# and other files with names in the M_xxx.pdf format	Magna e-Guide files, which contains error recovery procedures linked to help.
	D:\e-Guide\ Select Class with AIT\DS-e-Guide.pdf# and other files with names in the S_xxx.pdf format	Select e-Guide files, which contains error recovery procedures linked to help.

#. Where D is the drive letter of the CD_ROM drive
†. Where *v* is the current version, such as B or 5.1

	Path	Purpose
	D:\e-Guide\ ImageCard IV D4-e-Guide.pdf[#] and other files with names in the 4_xxx.pdf format	ImageCard IV e-Guide, which contains error recovery procedures linked to help.
	D:\e-Guide\SP Series\ SP_Info_Central.chm and other files with names in the SP_xxxxx.chm format.	SP35 e-Guide and Info Central which contains advanced information for the printer.
Adobe Acrobat Reader installation	D:\Adobe\ AR*vvv*ENU.EXE[#†] (and files with other language designations such as jpn)	Installation program for Adobe Acrobat Reader, Version 5.00. The Reader (version 3 or higher) is required to view the e-Guides, part of the help system.
SmartDriver Diagnostics Utility	D:\Support\Diagnostics\ SD_Diagnostics*vvv*.EXE[#†]	Installation program for the SmartDriver Diagnostics Utility, used to identify or fix printer problems
Cleanup Utility	D:\Support\Diagnostics\ SD_CLEANUP*vvv*.EXE[#†]	Installation program for the Cleanup Utility, used after removing some versions of the driver or to correct problems.
Support files	D:\Support\color.prn D:\Support\mono.prn[#]	Files used at the direction of service for troubleshooting.
SmartDriver SDK	D:\Support\SDK\ SmartDriver SDK.exe#	Self-extracting file for the SmartDriver SDK which is used to write applications that work with the printer.

#. Where D is the drive letter of the CD-ROM drive

†. Where *v* is the current version, such as B or 5.1

The printer drivers are updated from time to time to provide optimal functionality. You can obtain the most recent printer driver for the PC operating system you use from the Datacard Web site at www.datacard.com. You also can request the newest release of the printer driver on CD-ROM. The part number changes with each release. The *e*-Guides are also updated from time to time and can be downloaded from the Datacard Web site at www.datacard.com.

Printer components

The Magna printer has a replaceable printhead cartridge. You can also order additional or replacement parts. This section describes the printer parts you can order.

Printhead cartridge

The Magna printer has a replaceable printhead cartridge. The printhead is subject to wear or damage and has a direct impact on print quality. The following printheads are available.

Printhead type	Printhead type label	Part number
Full color	Three colors	551953-999
Monochrome	All black	549284-999

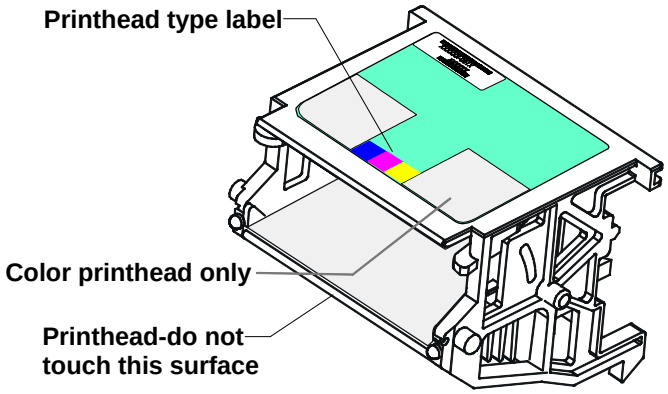


Figure B-10: Replaceable printhead cartridge

⚠ Do not touch the printing edge of the printhead in the printhead cartridge. If you do, use the cleaning pen to clean it. See “Cleaning the printhead” on page 4-14.

Print ribbon cartridge

The print ribbon cartridge is part number 555545-998.

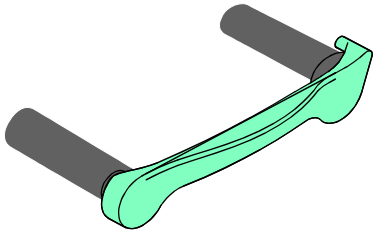


Figure B-11: Print ribbon cartridge

Card cartridge

The card cartridge is part number 549311-999. If you have a locking card cartridge, the part number is 549311-998.

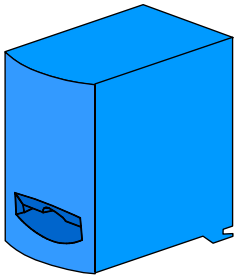


Figure B-12: Card cartridge

Cleaning roller spindle

The cleaning roller spindle holds the replaceable cleaning sleeve. The part number is 549130-001.

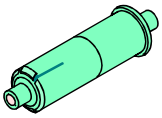


Figure B-13: Cleaning roller spindle

Card output stacker

The card output stacker part number is 550939-001.

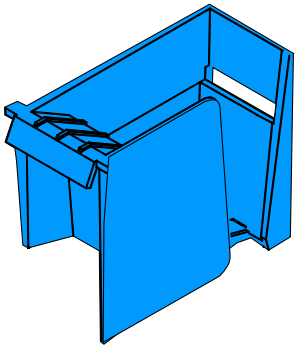


Figure B-14: Card output stacker

Data cable

The Magna printer uses a data cable to connect the printer to the PC. The data cable can be a parallel port cable or a USB cable.

Parallel port cable

The parallel port cable must be a shielded, Type C, IEEE 1284 parallel port cable, up to 2 meters long, maximum. The part number is 550093-001.

Figure B-15: Parallel port cable

USB cable

The USB cable must be a Type CM 30V, up to a maximum of 2 meters long. The part number is 807614-001.

Figure B-16: USB cable

Power cable

The Magna printer uses one of the following power cords:

- U.S. power cable (part number 804517-001)

Figure B-17: U.S. power cable

- European power cable (part number 806842-001)
- Australian power cable (part number 806842-002)
- United Kingdom power cable (part number 806842-003)
- Danish power cable (part number 806842-004)
- Indian power cable (part number 806842-005)
- Israeli power cable (part number 806842-006)
- Italian power cable (part number 806842-007)
- Swiss power cable (part number 806842-008)
- Japanese power cable (part number 806913-001)
- Chinese power cable (part number 806842-009)

Smart card cable

If the Magna printer has one or more smart card modules, it uses a smart card cable to connect the smart card port and the PC. Use a cable that matches the port installed in the printer. See “Connecting cables” on page 7-5 for information on ports.

Serial cable

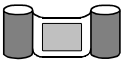
The smart card serial cable must be a DB9 serial cable, up to 2 feet (1.8 meters) long maximum. The smart card serial cable is part number 805815-004.

Figure B-18: Smart card serial cable

USB cable

Some smart card modules use a USB cable. See “USB cable” on page B-16 for USB cable details.

Overlay cartridge



The optional overlay module uses a replaceable overlay cartridge. Two cartridges are available:

- Datacard supported overlay materials are used with the standard overlay cartridge. The part number for the overlay cartridge is 551215-001.

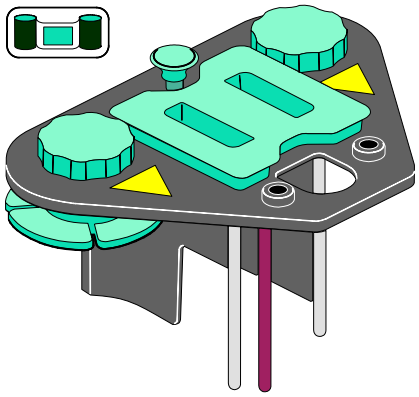


Figure B-19: Overlay cartridge

- If your service provider advises you to use an adjustable overlay cartridge, you can order a replacement adjustable overlay cartridge. The part number for the adjustable overlay cartridge kit is 553402-001. Follow instructions provided with the cartridge to use it.

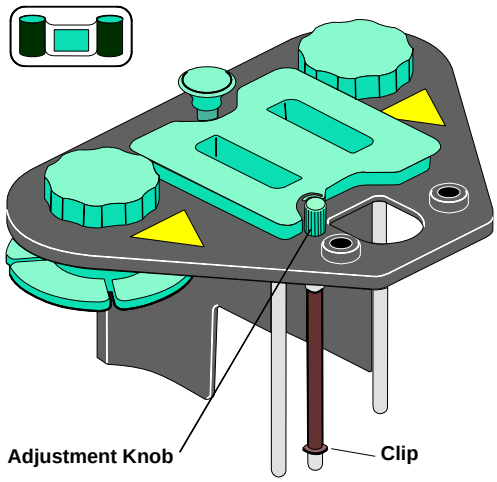


Figure B-20: Adjustable overlay cartridge

Topcoat cartridge

The optional topcoat module uses a replaceable topcoat cartridge. The part number of the topcoat cartridge is 551215-002.

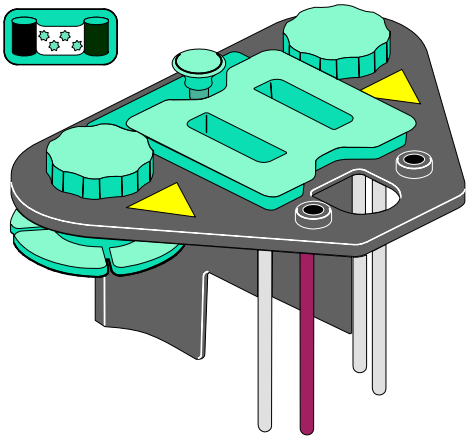


Figure B-21: Topcoat cartridge

Spool cap

The spool cap maintains alignment of the supply material in the optional overlay or topcoat cartridge. The spool cap is part number 556900-001.

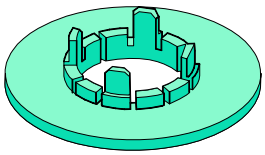


Figure B-22: Spool cap

Replacement keys for optional locks

The optional lock(s) for the card cartridge and/or cover use keys, for which replacements are available. Contact your service provider to obtain replacement keys. Be sure to have the model number of the printer, located on the printer label.

Optional security lock

The optional security lock is part number 807913-001.

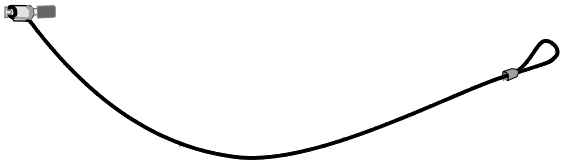


Figure B-23: Security lock

Related publications

This section describes publications for the Datacard® Magna™ Platinum™ Series photo ID printer.

- User's Guide for Magna™ Platinum Series™ Printers, Part Number 539177-101

  This manual provides basic information about using the printer and driver, and how to care for the printer. The index of this manual includes entries for both the User's Guide and the *e*-Guide.

- Quick Install Chart for the Magna™ ImageCard® and Magna™ UltraGrafix® Printer, Part Number 539176-101

  This sheet provides a streamlined installation process for typical one-printer-to-a-PC installation. It also shows supplies and equipment shipped with the printer.

- e-Guide for ImageCard® Magna™ and UltraGrafix® Magna™ Printers, Part Number 539178-001

  The online e-Guide provides information about how to fix problems. It also provides advanced information, such as how to connect two printers to one PC.

- SmartDriver API Software Developer's Manual, Part Number 526720-001

  This manual is part of the SmartDriver Software Developer's Kit (557214-001) and provides information to programmers who are developing applications to print to Datacard printers, including the Magna printer. This manual is available only as part of the kit, which is available on the Datacard Web site.

- ImageCard Magna Service Manual, Part number 539086-001

  This manual is delivered on CD-ROM and provides information to service providers who maintain or repair the Magna printer.

- SmartDriver Direct Network Guide, Part Number 539171-001

  This manual is part of the Direct Network Kit (550749-001) and is available on the Datacard Web site.

PC port settings

C

This appendix provides information about the PC on which the printer driver for the Datacard® Magna™ Platinum™ Series photo ID printer is installed. It describes:

- Configuring the ECP parallel port
- Setting port values
- Configuring the optional smart card serial port

This appendix includes a section for settings that are handled the same way in all operating systems and also includes sections for each PC operating system supported by the printer driver.

PC port settings for all operating systems

This section describes how to configure ports.

See the information that accompanies your PC for details about changing the BIOS settings.

Configuree the ECP parallel port

For most PCs, the parallel port is configured as an ECP parallel port in the PC's BIOS. The following applies to some PCs and to the Windows 2000, Windows XP, Windows Me, Windows 98, and Windows NT operating systems.

1 Close all open applications.

2 Reboot the PC. Observe the screen for instructions on entering Setup.

3 Enter Setup and follow the instructions that display early in the reboot sequence. The setup screen will appear.

4 In Setup, check to see that the Parallel Port Mode field is set to ECP. If it is not, set it to ECP.

If the PC has more than one parallel port, make sure you check the setting for the parallel port to which the printer is attached (LPT1 or LPT2).

An ECP port is required for the printer to operate at its maximum processing speed. The printer will operate in compatible or IBM AT mode; however, the printer might not operate as fast or communication messages might appear.

5 Save the setting and exit Setup, following the instructions in the Setup screen.

Continue with the “Set port values” procedure for your operating system.

♦

Set up two ECP parallel ports

1 Follow the instructions provided with the port to install it and set the jumpers. Record the jumper settings.

The jumper settings must match the settings you choose in the Resources tab.

2 Right-click on the My Computer icon on the desktop and then choose Properties from the popup menu. The System Properties dialog box appears.

3 Choose the Device Manager tab to view a list of devices. (On Windows 2000 and Windows XP, choose the Hardware tab and then click the Device Manager button.)

4 Choose “View devices by type” if needed.

5 Click the + next to Ports (COM and LPT) to display the port entries. Usually the second installed port is LPT2.

6 Click Printer Port (LPT2), or other entry for the installed port, and then choose the Properties button. The Printer Port (LPT2) Properties dialog box appears (see Figure C-1).

7 Click the Resources tab.

- Make sure that “Use automatic settings” is not chosen.
- The “Conflicting device list” should show No conflicts.
- If you are using a DMA channel for the second printer, the Resources settings list should show Direct Memory Access and its channel setting.

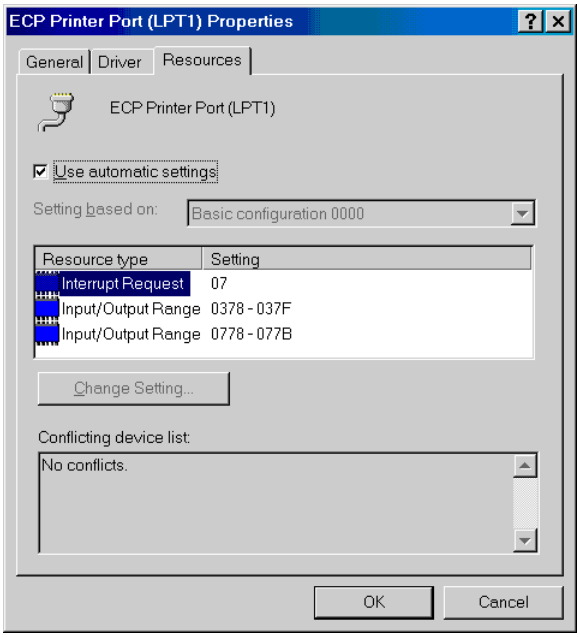


Figure C-1: Printer Port (LPT) Properties dialog box

If the Resources tab shows conflicts, choose another configuration or change the settings for the port, following port instructions.

8 Click OK on the Printer Port (LPT2) Properties dialog box and on the System Properties dialog box to save settings and close the dialog boxes.

If you install the second parallel port and receive Windows errors, or if the printer does not print reliably (without displaying errors), the port might have an unresolved hardware conflict. Contact the port manufacturer or the PC manufacturer if you need assistance.

♦

Set up a Universal Serial Bus (USB) port

These steps apply to the USB data port and to an optional smart card USB port. If the printer includes two USB ports, follow these steps for each port. The ports are not connected inside the printer, which preserves the data security of the smart card port.

1 Right-click on the My Computer icon on the desktop and then choose Properties from the popup menu. The System Properties dialog box appears.

2 Choose the Device Manager tab to view a list of devices. (On Windows 2000 and Windows XP, choose the Hardware tab and then click the Device Manager button.)

3 Choose “View devices by type” if needed.

4 Click the + next to Universal Serial Bus controllers to display the USB port controllers.

5 Click USB Root Hub, and then choose the Properties button. (On Windows 2000 and Windows XP, right-click USB Root Hub and then choose Properties from the pop-up menu.) The USB Root Hub Properties dialog box appears.

6 Make sure that the device is enabled.

- For Windows 2000, Me, and 98 make sure that “Disable in this hardware profile” is not chosen.
- On Windows XP, make sure that "Use this device (enable)" is chosen from the Device Usage drop-down menu.

7 Click OK to close the dialog box.

8 Click the other entry, which includes the name of the installed USB device and ends with “Host Controller,” and then choose the Properties button. (On Windows 2000 and Windows XP, right-click USB Host Controller and then choose Properties from the pop-up menu.) The Properties dialog box appears.

- Make sure that the device is enabled:
  - For Windows 2000, Me, and 98 make sure that “Disable this hardware profile” is not chosen.
  - On Windows XP, make sure that "Use this device (enable)" is chosen from the Device Usage drop-down menu.
- Click the Resources tab (see Figure C-2). The “Conflicting device list” should show "No conflicts."

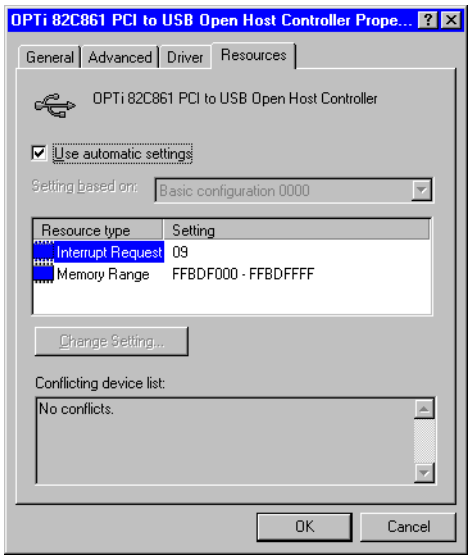


Figure C-2: USB Root Hub Properties dialog box

If the Resources tab shows conflicts, choose another configuration or change the settings for the port, following port instructions.

9 Click OK on the Properties dialog box and on the System Properties dialog box to save settings and close the dialog boxes.

♦

PC settings for Windows 2000, XP & NT 4.0

This section describes the following for PCs running Windows 2000, XP, or NT 4.0.

- Setting parallel port values
- Setting USB port values
- Setting serial port values

Setting parallel port values

Port values include the port to which the printer is assigned, the communication mode for the port, and printer spooling.

Set parallel port values for Windows 2000, XP & NT

1 From the Windows taskbar choose Start, Settings, and then Printers (Printers and Faxes for Windows XP). The Printers (and Faxes) window appears.

2 Highlight the SmartDriver icon by clicking on it once.

3 From the menu bar, choose File and then Properties. The Properties dialog box for the SmartDriver appears.

4 Choose the Ports tab.

5 Make sure the correct port (usually LPT1) is chosen in the Port list. “SmartDriver“ should appear in the Printer column for the checked port.

6 Make sure that "Enable Bidirectional Support" is checked.

> Do not choose "Enable Printer Pooling." To set up a printer pool on Windows 2000 or XP, see "Advanced Information" in the *e-Guide for ImageCard® Magna™ and UltraGrafix® Magna™ Printers*.

7 Choose OK to save the settings and close the Properties window.

8 Close the Printers window.

9 On Windows NT, settings are complete. On Windows 2000 and XP, continue with step 10.

10 Right-click on the My Computer icon on the desktop and then choose Properties from the popup menu. The System Properties dialog box appears.

11 Choose the Hardware tab and then click the Device Manager button.

12 Click the + next to Ports (COM and LPT) to display the port entries.

13 Right-click Printer Port (LPT1) (or the entry for the parallel port) and then choose the Properties button. The Printer Port (LPT1) Properties dialog box appears (see Figure C-1).

14 Click the Port Settings tab.

15 In the Filter Resource Method box, choose "Use any interrupt assigned to the port."

16 Click OK on the Printer Port (LPT1) Properties dialog box and on the System Properties dialog box to save settings and close the dialog boxes.

♦

Setting a smart card serial port—Windows 2000, XP, and NT

For some smart card applications, you connect the PC to the printer’s smart card serial port. The PC should be set to match the printer’s smart card serial port settings. This section describes how to set the PC serial port in the Windows 2000, Windows XP, or Windows NT 4.0 operating systems.

These settings apply to serial ports for both contact and contactless smart card modules. If you use a contact station with the printer, see the information about the contact station for port settings. If you use a USB port for smart card communication, see “Set up a Universal Serial Bus (USB) port” on page C-4.

Set the serial port on Windows 2000 and NT

1 From the Control Panel, choose Ports.

2 From the Ports dialog box, choose the port, such as COM1 or COM2 (Figure C-3).

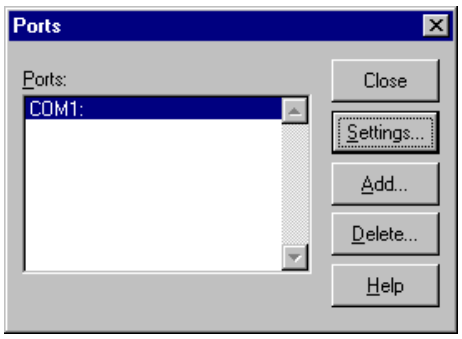


Figure C-3: Ports dialog box

3 Choose the Settings button to display the port settings.

If the PC has more than one serial port, make sure you view the settings for the serial port to which the smart card module is attached.

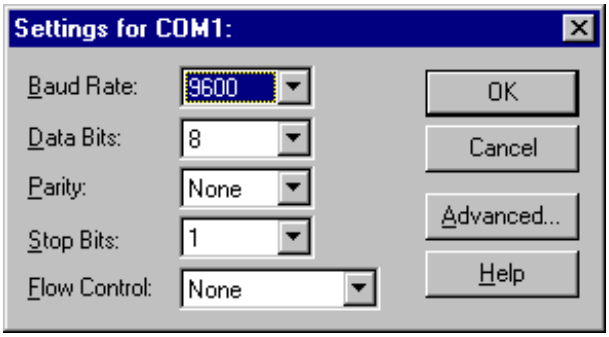


Figure C-4: Settings dialog box

4 Choose the following settings:

Setting	Value
Baud rate	9600
Data bits	8
Parity	None
Stop bits	1
Flow control	None

5 When the settings are correct, click OK to save settings and close the dialog box.

♦

Set the serial port on Windows XP

1 From the Start menu, choose Settings and then Control Panel.

2 From the Control Panel, choose the System icon.

3 Choose the Hardware tab, and then choose the Device Manager button.

4 Press the "+" next to Ports and double click the Communications Port to open the Communications Port Properties dialog box (Figure C-5).

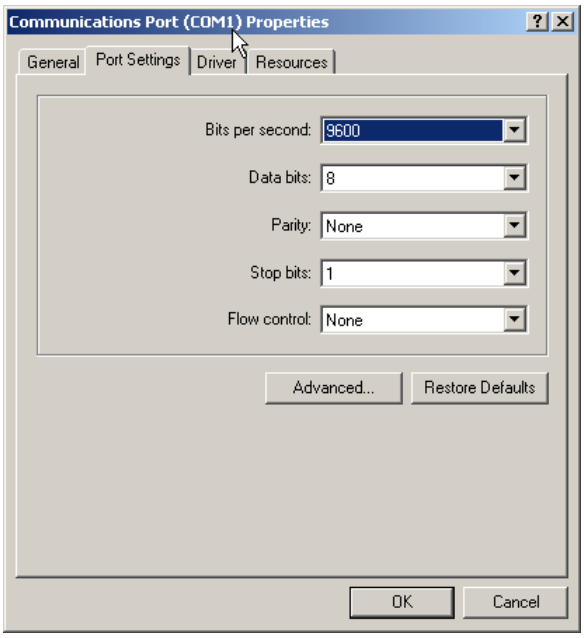


Figure C-5: Communications Port Properties dialog box

5 Choose the Port Settings tab.

If the PC has more than one serial port, make sure you view the settings for the serial port to which the smart card module is attached.

6 Choose the following settings:

Setting	Value
Baud rate	9600
Data bits	8
Parity	None
Stop bits	1
Flow control	None

7 When the settings are correct, click OK to save settings and close the dialog box.

♦

PC settings for Windows Me and 98

This section describes the following for PCs running Windows Me and 98.

- Setting parallel port values
- Setting USB port values
- Setting serial port values

Setting parallel port values—Windows Me and 98

Parallel port values include the port to which the printer is assigned, the communication mode for the port, and printer spooling.

Verify port assignment and settings

1 From the Windows taskbar choose Start, Settings, and then Printers. The Printers window appears.

2 Highlight the SmartDriver icon by clicking on it once.

3 From the menu bar, choose File and then Properties. The SmartDriver Properties window appears.

4 Choose the Details tab and view the port in the Print to the Following Port list.

Make sure this is the ECP parallel port.

5 Click Spool Settings to display the Spool Settings dialog.

6 Make sure that Enable Bidirectional Support is checked. Also make sure that Spool Print Jobs so Program Finishes Printing Faster is checked.

7 Choose OK to save the settings and close the Spool Settings dialog.

8 Choose OK to save the settings and close the Properties dialog box.

9 Close the Printers window.

♦

Verify the communication mode

1 From the Windows taskbar, choose Start, Settings, and then Control Panel. The Control Panel window appears.

2 Double-click the System icon. The System Properties dialog box appears.

3 Choose the Device Manager tab.

4 Make sure View Devices by Type is chosen.

5 Click the Plus sign + next to Ports (COM & LPT) to show the available ports. The list should include an entry such as "ECP Printer port (LPT1)."

6 Click the entry for the port to which the printer is assigned (such as LPT1 or LPT2).

7 Choose the Properties button to display the Properties dialog box.

8 Choose the Driver tab, and then Choose the Update Driver button to display the Select Device dialog box.

9 Make sure "Show all devices" is chosen.

10 In the Manufacturers list, choose (Standard port types). In the Models list, choose ECP Printer Port, if available.

11 Choose OK or Close on each window to select the choice and close the window. If the Version Conflict dialog box appears, choose Yes to keep the existing version.

12 Choose OK to close the System dialog box and make the changes take effect.

♦

Setting a smart card port for Windows Me & 98

For some smart card applications, you connect the PC to the serial port on the Magna printer. The PC should be set to match the printer serial port settings. This section describes how to set the PC serial port in the Windows 98 and Windows Me operating systems.

These settings apply to serial ports for both contact and contactless smart card modules. If you use a contact station with the printer, see the information about the contact station for port settings. If you use a USB port for smart card communication, see “Set up a Universal Serial Bus (USB) port” on page C-4.

Set the serial port on Windows Me & 98

1 From the Start menu, choose Settings and then Control Panel.

2 From the control panel, choose System.

3 On the system Properties dialog box, choose the Device Manager tab.

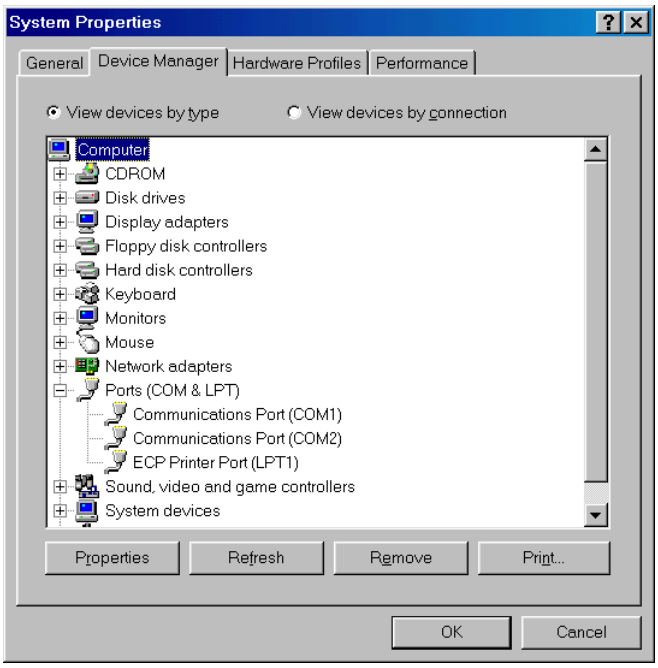


Figure C-6: Device Manager tab of System Properties dialog box

4 Click the Plus sign + next to Ports (COM & LPT) to display a list of ports.

5 From the Ports list, choose the port, such as COM1 or COM2 (Figure C-6).

6 Choose the Properties button to display the port settings.

If the PC has more than one serial port, make sure you view the settings for the serial port to which the smart card module is attached.

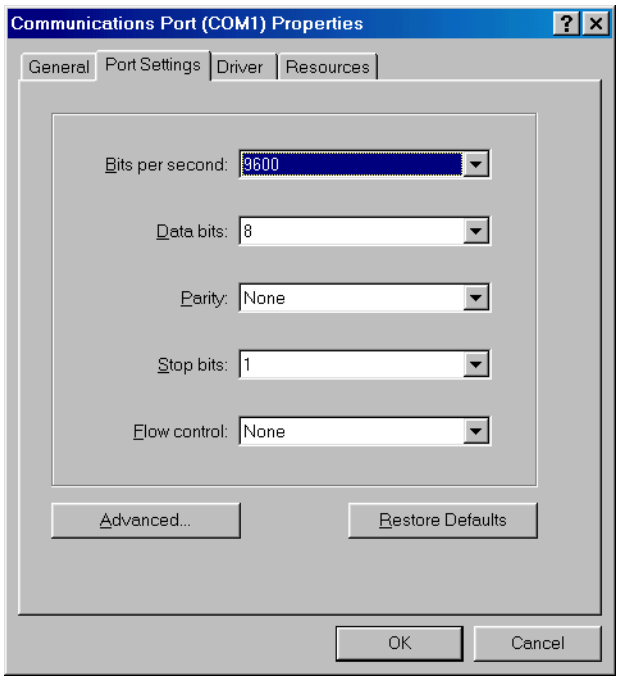


Figure C-7: Settings dialog box

7 Choose the Port Settings tab.

8 Choose the following settings:

Setting	Value
Bits per second	9600
Data bits	8
Parity	None
Stop bits	1
Flow control	None

9 When the settings are correct, click OK to save settings and close the dialog box.

♦

Magnetic stripe encoding

D

This appendix describes the specifications and characters you can encode on a magnetic stripe in the Datacard® Magna™ Platinum™ Series photo ID printer, including:

- IATA, ABA, and TTS character sets
- NTT character sets

This appendix also describes basic steps required to set up for magnetic stripe encoding.

To use custom magnetic stripe formats (frequently sent as binary data), contact your service provider for more information. To use custom magnetic stripe formats, such as IATA on track 1 and a proprietary format on tracks 2 and 3, your application must use the SmartDriver Software Developer's Kit (SDK). You can obtain the SDK from the SmartDriver CD-ROM or download the SDK from the Datacard Web site at www.datacard.com.

Magnetic stripe setup

Do the following to set up the printer and driver to encode magnetic stripes on cards:

- Use cards with magnetic stripes when making a printer test card.
- Identify the encoding format and how it will be formatted.
- Determine whether to send coercivity and encoding format data with each card or whether to set values in the printer. If you are using a custom format, you might want to set values in the printer and choose "Use printer settings" in the Properties, Printing Preferences, or Default Document Properties dialog box.
- Determine the coercivity to use. Usually, the coercivity is a system-wide decision: magnetic stripe readers which will read the cards encoded by the printer are likely to require a specific coercivity value. Card stock is purchased to match that coercivity value. Set the coercivity in the Properties, Printing Preferences, or Default Document Properties dialog box.
- Select the encoding format. If a custom format, such as triple-IATA, is used, select "Binary" or "Use Printer Coercivity" in the printer driver.
- Determine the order for encoding magnetic stripe and printing. Typically, the magnetic stripe is encoded first, and then the card is printed. In some cases, a card design works most efficiently when the magnetic stripe side of the card is printed, the magnetic stripe data is encoded, and then the reverse side of the card is printed. The "Print and Encode Sequence" choices allow you to choose which way to process cards. If you choose to encode first, be sure to load cards with the magnetic stripe up and toward the front of the printer.

- The following table lists formatting choices available and provides information about setup:

Format	Printer Magnetic stripe Module	Data can be formatted by:	Data is verified by:	Driver format setting	Use Diagnostics ?
IAT	IAT	ID Works	Driver	IAT	No
		Magnetic Stripe Fonts (includes Preface)	Printer	IAT	No
		Escape Codes	Printer	IAT	No
NTT	J (single track)	ID Works	Driver	NTT	Coercivity
		Magnetic Stripe Fonts (includes Preface)	Printer	NTT	Coercivity
Triple IATA	IAT (three-track)	ID Works	Driver	Use printer settings	Yes
		Magnetic Stripe Fonts (includes Preface)	Printer	Use printer settings	Yes
		Some Escape Code formats	Printer	Use printer settings	Yes
Proprietary	IAT (three track)	ID Works	Printer	Use printer settings	Yes
		Magnetic Stripe Fonts	Driver	Use printer settings	Yes
		Custom Application	Application	Use printer settings	Yes
Custom	IAT (three track) J (single track)	Custom Application	Application	Binary or Use printer settings	Optional
		Magnetic Stripe Fonts (includes Preface)	--	Binary or Use printer settings	Optional
Binary	IAT (three track) J (single track)	ID Works	ID Works	Binary	No
		Custom Application	Application	Binary	No

- If you plan to use a custom magnetic stripe format, your service provider or value-added reseller (VAR) must make changes to printer settings to set up a custom format. Follow the guidance of your service provider or VAR when using a custom magnetic stripe format.

- Proprietary formats, used for applications such as driver's licenses or hotels, can be used with the printer. Obtain the guidance of your service provider or VAR when using proprietary formats.
- See the Release Notes file for the operating system you use to identify any limitations that might apply to magnetic stripe encoding.
- On Windows 98 and Me, data formatted with magnetic stripe fonts or escape codes cannot be located in rotated fields.

Magnetic stripe escapes

Customers have the ability to use magnetic stripe escape codes with the SmartDriver, version 5.0 and higher, and the Magna printer. Magnetic stripe escape codes are used by card printers from several other manufacturers. To support existing custom applications, Datacard has implemented magnetic stripe escapes. To use magnetic stripe escapes with the SmartDriver, a custom application must send data to the driver, not directly to the printer. Magnetic stripe escapes can also be used when an application cannot format magnetic stripe data and when the application does not allow you to select the SmartDriver's magnetic stripe fonts for formatting magnetic stripe data.

Magnetic stripe escapes are most commonly used for the IAT format, which encodes IATA (International Air Transport Association) data on Track 1, ABA (American Banker's Association) data on Track 2, and TTS (Thrift Third Shift) data on Track 3. Other card printer manufacturers sometimes refer to this format as ISO format. Using information in this section, you can also use magnetic stripe escapes to encode variations to the AIT format.

Enabling magnetic stripe escapes

The SmartDriver includes a setting to enable magnetic stripe escapes. Enable magnetic stripe escapes on each PC that will use magnetic stripe escapes to send data to a printer. Also, enable magnetic stripe escapes for each printer attached to a PC if you will send magnetic stripe data to the printer.

To enable magnetic stripe escapes, do the following:

1 Make sure the printer power is on and the printer is connected to the PC. Also make sure the driver is installed on the PC and communicates with the printer.

2 Select Start from the Windows task bar.

3 From the Windows Start menu, select Settings and then Printers. The Printers window appears.

4 Click once on the SmartDriver icon.

5 Select File from the Printers menu bar, and then:

  – For Windows 9x, select Properties. The SmartDriver Properties dialog box appears.

- For Windows 2000 and XP, select Printing Preferences. On the Printing Preferences dialog box, click Advanced to display Advanced settings.
- For Windows NT, click Document Default Settings. Click the Advanced tab to display Advanced settings.
- If you have the Printer Toolbox open, you can click the Properties (9x), Printing Preferences (2000 and XP), or Default Document Properties (NT) button on the Status page to open the Properties or Advanced dialog box.

6 Locate the Mag Stripe Escape Compatibility setting.

- On Windows 9x, choose the Mag Stripe tab.
- On Windows 2000, XP, and NT, scroll through the settings list to locate the Mag Stripe Escape Compatibility setting.

7 Choose Enabled for the setting.

8 Locate the Mag Stripe Encoding Format setting.

- If you will encode IAT (ISO) format, choose IAT for the format.
- If you will encode a variation to IAT (ISO) format, choose "Use printer settings" for the format.

9 Click Apply or OK to save the settings and close the dialog box.

You do not need to specify which syntax or manufacturer's escape sequence you will use. When you enable Mag Stripe Escape Compatibility, the SmartDriver will recognize any of the escape character sequences listed on page D-5.

Using magnetic stripe escapes

To use magnetic stripe escapes, do the following:

- Use an application in which you can enter and save text, and then edit it after saving.
- Before the magnetic stripe data, provide the escape sequence (such as ~1 or ~1?). The rest of the line of text will be encoded, up to an End Sentinel (if the syntax uses one).
- Use a Return or Enter keystroke to end a line.
- Do not allow text to wrap to two lines. The text on the following line will print on the card.
- You might be able to send two lines of text to one track. Each line of text must begin with the escape sequence. Test cards made with this method to see whether the lines are encoded in the order in which the lines appear on the page. Some applications do not support this method or produce unpredictable results.
- Text to print can be on the same line as data to encode, but must be located before the escape sequence.
- Only one track can be encoded per line of text.
- Magnetic stripe data will be converted to uppercase (capital) letters if necessary.
- If you include not-allowed characters within the magnetic stripe data, the printer will beep and a message will be displayed on the PC.

- The driver does not check the data you send. (The printer checks the data.) This is the same behavior as magnetic stripe fonts.

On Windows 98, 98 SE, and Me, data formatted with escape codes cannot be located in rotated fields.

Printer Manufacturer	Encoding Format	Syntax	Example
Eltron®	IAT (ISO)	~<track#><data>	~1ENCODING WITH ESCAPES ~21234567890 ~31234567890
Atlantek	IAT (ISO)	~<track#>=<data>	~1=ENCODING WITH ESCAPES ~2=1234567890 ~3=1234567890
Fargo®	IAT (ISO)	~<track#>(Start Sentinel><Data> <End Sentinel>	~1%ENCODING WITH ESCAPES? ~2;1234567890? ~3;1234567890?
Datacard HiFX™	IAT (ISO)	~<track#>(Start Sentinel><Data> <End Sentinel>	~1%ENCODING WITH ESCAPES? ~2;1234567890? # ~3;1234567890? #
Victor Data Systems	IAT (ISO)	~<track#>(Start Sentinel><Data> <End Sentinel>	~1%ENCODING WITH ESCAPES? ~2;1234567890? # ~3;1234567890? #

#. Only the default start sentinel, a semicolon (;), is permitted.

- For information about the characters allowed for each track format, see the following section.
- For more information about requirements for using escapes, see the documentation for the non-Datacard printer.

IATA, ABA, and TTS character sets

The IAT encoding format selection for the Magna printer encodes IATA data on track 1, ABA data on track 2, and TTS data on track 3.

IATA (International Air Transport Association)

The maximum field length for IATA format is 76 characters. IATA allows spaces, upper case alphabetic characters, numeric characters, and the following special characters:

! # $ % ' ( ) * + , - . / ; : < @ > = ^] \ [" & _

ABA (American Bankers Association)

The maximum field length for ABA format is 37 characters. ABA allows numeric characters and the following special characters:

: ; < = >

TTS (Thrift Third Standard)

The maximum field length for TTS format is 104 characters. TTS allows numeric characters and the following special characters:

: ; < = >

NTT character set

The maximum field length for NTT (Nippon Telephone & Telegraph) format is 69 characters. NTT allows spaces, numeric characters, upper case alphabetic characters, lower case alphabetic characters, and special characters. From a PC running a Japanese edition of a supported Windows operating system, NTT also supports 55 Katakana characters.

The special characters include:

! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [ ] ^ _ ` { | } ~

and the following Japanese-language special characters: (a Japanese edition of a supported Windows operating system is required.)

。 『 』 、 ・ ー ゛ ゜

The 55 Katakana characters include the following 45 Katakana characters:

ア カ サ タ ナ ハ マ ヤ ラ ワ
イ キ シ チ ニ ヒ ミ リ
ウ ク ス ツ ヌ フ ム ユ ル
エ ケ セ テ ネ ヘ メ レ
オ コ ソ ト ノ ホ モ ヨ ロ ン

and the following 10 Katakana characters:

ヲ ァ ィ ゥ ェ ォ ャ ュ ョ ッ

Each time you start using Japanese-language characters, or stop using them, the driver adds a hidden character. Each hidden character reduces by one the number of characters you can encode.

Magnetic Stripe settings used by the Magna printer

The following table presents technical details that apply to encoding magnetic stripe data.

	IATA	ABA	TTS	NTT	Binary
Character Differential	32	48	48	0	0
Start Sentinel (SS) (ASCII character)	% (37)	; (59)	; (59)	127	None
End Sentinel (ES) (ASCII character)	? (63)	? (63)	? (63)	127	None
Lowest ASCII Character	space (32)	0 (48)	0 (48)	(1)	0
Highest ASCII Character	_ (95)	? (63)	? (63)	(126)	255
Character-level parity (VRC)	Odd	Odd	Odd	Even	None
Cumulative parity (LRC)	Even	Even	Even	Even	None
Density in bits per inch	210	75	210	210	210
Data bits per character	6	4	4	7	8
Maximum number of encodable characters (not including start and end sentinel or LRC)	76	37	104	69	33
Encoding direction	SS first	SS first	SS first	SS last	SS first
Start sentinel adjustment	310	320	310	450	310

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