Datacard® CR500™ Instant Issuance System

Installation and Administrator's Guide

January 2018

Part No. 527516-001, Rev. B

Notice

Please do not attempt to operate or repair this equipment without adequate training. Any use, operation or repair you perform that is not in accordance with the information contained in this documentation is at your own risk.

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Compliance Statements

Liability

The WARNING and CAUTION labels 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.

Safety

The following basic safety tips are given to ensure safe installation, operation, and maintenance of Entrust Datacard™ equipment.

- Connect equipment to a grounded 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.
- 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 location.
- Maintain the recommended temperature and humidity range in the equipment area.

Regulatory Compliance

EMC Compliance Notice

To ensure compliance of the model RX10 retransfer printer to the radiated emissions requirements for class “A” Information Technology Equipment, be sure to use a shielded Ethernet cable when connecting to your network

Notice for USA (FCC Notice)

This equipment has been tested and found to comply with the limits for Class A computing devices, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy. If this equipment is not installed and used in accordance with this instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice for Canada

Industry 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.

RSS-Gen, Issue 3, December 2010, Section 7.1.3 User Manual Notice

This Device complies with Industry Canada License-exempt RSS standard(s). Operation is subject to the following two conditions: 1) this device may not cause interference, and 2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme avec Industrie Canada RSS standard exemptes de licence(s). Son fonctionnement est soumis aux deux conditions suivantes: 1) ce dispositif ne peut causer des interférences, et 2) cet appareil doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement du dispositif.

Notice for Europe

The EU Declaration of Conformity can be found on **EntrustDatacard.com** under product compliance.

WARNING: This is a class A product. This equipment is compliant with class A of either CISPR32 or CISPR22. In a domestic/residential environment this equipment may cause radio interference, in which case the user may be required to take adequate measures.

WEEE: The model RX10 retransfer printer uses a lithium coin cell battery. Refer to the service manual for battery removal instructions.

Simplified EU Declaration of Conformity

Entrust Datacard Corporation declares that the following radio equipment: MXD, MX6000, MX6100, PB6500, MX2000, MX2100, SP55k, SP35, SP55, CP40, CP60, CP80, SP75, FP65, SR200, SR300, PX10, PX30, EX30, MPR3800, CR500f, MX1100, RX10, and PB1000 is in compliance with the Directive 2014/53/EU.

Intentional Radiator Information

Description/Model Number	FCC ID	Frequency	Effective Radiated Power (ERP) mW
PX10 Supplies RFID	GDI-Q20010	13.56MHz	9.16E-06
PX30 Supplies RFID	GDI-Q30030	13.56MHz	9.16E-06
Central Issuance Supplies RFID	GDI-SID004	13.56MHz	1.96E-07
LX30, RX10 Supplies RFID	GDI-506241001	13.56MHz	3.03E-05
EX30 Supplies RFID	GDI-Q30130	13.56MHz	9.16E-06
FP65 Supplies RFID	GDI-Q10055	13.56MHz	3.65E-05
Central Issuance Smartcard Coupler	GDI-50543001	13.56MHz	1.45E-05

EMC Compliance Notice:

For model RX10/Multi-hopper configurations, to ensure compliance with Conducted Immunity standard EN61000-4-6, use USB cables no longer than three meters in length.

Notice for Australia

This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

Notice for China (Simplified Chinese)

警告

此为 A 级产品，在生活环境中，
该产品可能会造成无线电干扰。
在这种情况下，可能需要用户
对干扰采取切实可行的措施。

Notice for Taiwan (Traditional Chinese)

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，在這种情況下，使用者會
被要求采用某些适當的對策。

Notice for Japan

Japanese Voluntary Control Council for Interference (VCCI) class A statement

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

Korea Communications Commission (KCC) statement

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California Proposition 65 Compliance

WARNING: This product contains chemicals, including lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. ***Wash hands after handling.***

Entrust Datacard believes that its products are not harmful when used as designed. However, the above warning is made in compliance with the State of California Safe Drinking Water and Toxic Enforcement Act of 1986, which requires warning labels on products that may contain elements that the State of California considers harmful.

California Lithium Perchlorate Warning

Perchlorate Material - special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate.

This notice is required by California Code of Regulations, Title 22, Division 4.5, Chapter 33: Best Management Practices for Perchlorate Materials. This product/part includes a battery that contains Perchlorate material.

Revision Log

Datacard® CR500 Instant Issuance System Installation and Administrator's Guide

Revision	Date	Description of Changes
A	June 2015	First release of this document
B	January 2018	Updated printer information

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Chapter 1: Introduction

1

This chapter provides information about this *Installation and Administrator's Guide*, and an introduction to the CR500 card printer.

About This Manual

This manual provides detailed instructions for installing the CR500 card printer and for performing setup and administration tasks for the card printer. The tasks described in this manual are not normally performed by the personnel who print cards.

Chapter 1: "Introduction" provides basic information about this manual and the CR500 card printer.

Chapter 2: "Plan the Installation" provides instructions for unpacking the printer and selecting a proper installation location.

Chapter 3: "Install the Printer" provides instructions for installing the hardware components, cables, and power cords of the printer, and for configuring and verifying the network connection to the printer.

Chapter 4: "Using Printer Manager" provides instructions for using the Printer Manager web interface to perform management tasks required to configure and operate the card printer.

Chapter 5: "Supplies and Parts" describes the supplies and replacement parts available for the CR500 printer.

Appendix A: "Print Unit Front Panel Menu and Messages" describes the print unit front panel menu options.

Appendix B: "Printer Specifications" provides information about operating specifications and the storage environment for the printer.

Related Documentation

Refer to the following for more information about the CR500 card printer:

- *CR500 Instant Issuance System Quick Install Guide* provides installation instructions to quickly set up the printer.
- *Datacard CR500 Instant Issuance System User's Guide* contains general information about the card printer, instructions for operating and maintaining the printer, and troubleshooting and error recovery information.
- *Datacard CR500 Instant Issuance System User Reference Guide* provides easy access to instructions for using and maintaining the CR500 card printer.

Intended Audience

This manual provides information for:

- The site manager responsible for setting up the CR500 printer and the system that uses the printer.
- The technical professionals who set up and maintain card printing for issuance sites.

If You Need Assistance

If you work with an Entrust Datacard-authorized dealer, distributor, or value-added reseller, contact them for assistance. A value-added reseller provides the CR500 card printer as part of an overall system.

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

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

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

For Datacard® CardWizard® issuance software support, call 1-800-568-4598.

The CR500 Card Printer

The Datacard CR500 card printer uses retransfer printing technology to produce high-quality, edge-to-edge printing on a variety of PVC and non-PVC card surfaces.

The retransfer printing process uses two types of ribbon: a YMCK-I color ink ribbon and a retransfer film. The printer uses the ink ribbon to print images on the retransfer film. A heated roller then transfers the image onto a card. The inhibitor panel on the ribbon removes retransfer material in areas of the card that have a magnetic stripe, signature panel, hologram, or smart card chip. The inhibitor panel also is called *peel-off*, and the ink ribbon can be identified as either YMCK-I or YMCK-PO.

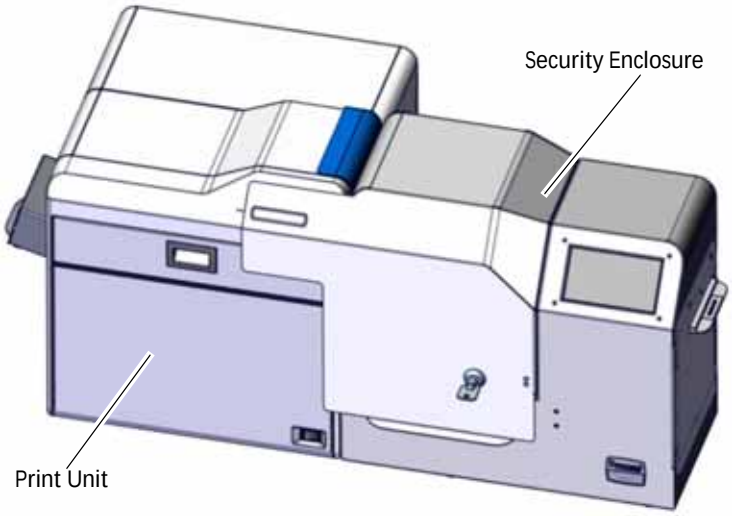
The printer includes a multi-hopper that can be loaded with three different card types, and an exception card slide for printing single cards.

The CR500 printer can print on one or both sides of the card. Magnetic stripe capability is standard, and the printer can be equipped with optional contact and contactless smart card capabilities.

Card Printer Components

The card printer consists of two connected components:

- **Print unit:** The part of the printer that applies images to cards.
- **Security enclosure:** This locked compartment feeds cards into the print unit. It contains the multi-hopper, the touch screen, the reject card area, and an exception card slide used to feed single cards into the printer.

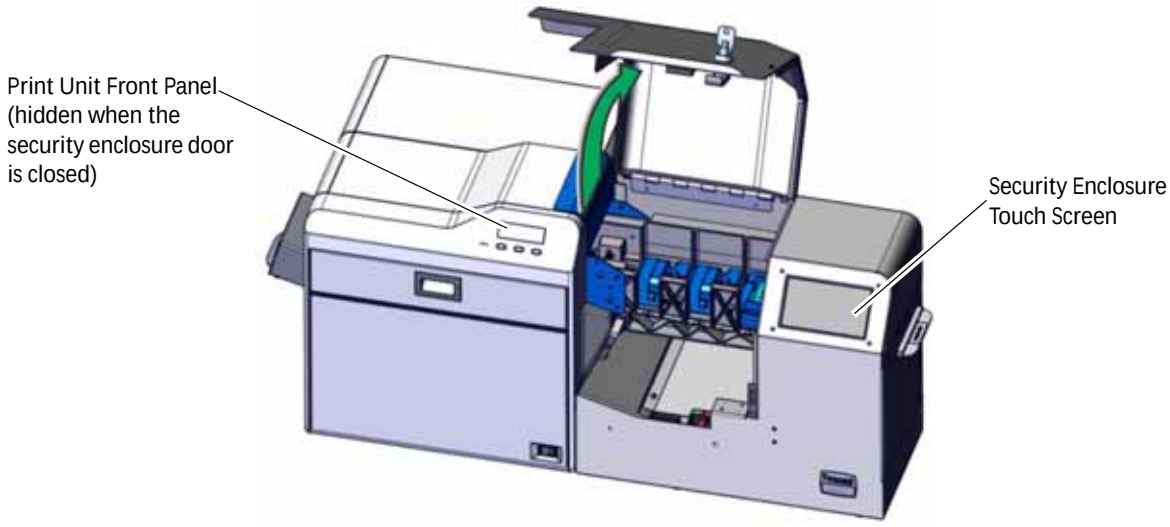


For more detailed information about the CR500 card printer components and operation, refer to the printer's *User's Guide*.

Security Enclosure Touch Screen and Print Unit Front Panel

During day-to-day operation, users interact with the card printer through the security enclosure touch screen. The touch screen displays printer status, information about the installed supplies, and system messages. The touch screen also is used to navigate the printer's menu system. Refer to the printer's *User's Guide* for complete information about the touch screen menu system.

When the security enclosure door is open, you have access to the print unit front panel. This LCD screen and buttons are used to perform some CR500 operations, but should not normally be used by personnel who print cards. Refer to Appendix A: "Print Unit Front Panel Menu and Messages".



Printer Door Locks

The security enclosure door has a mechanical lock that can be opened or locked using either of these methods:

- Insert the provided key into the lock and turn to lock or unlock the door.
- Use CardWizard Instant Issuance software to electronically unlock the door by entering one or more user names and passwords.

The physical key should be used only while installing the card printer. After the printer has been installed, the key should be stored in a secure location. Only users who can provide the proper authentication are able to unlock the security enclosure door and access the cards.

Caution: The print unit door contains a separate lock mechanism that could be locked or unlocked using the print unit front panel. **Do not use** this lock with the CR500 card printer. *Do not use the print unit front panel menu to create a security key and lock the print unit door.*

CardWizard Issuance Software

The CR500 card printer works with Datacard CardWizard issuance software to create and print cards. CardWizard software is a centralized application that processes card data and obtains the needed authorization from the financial system that manages customer accounts.

CardWizard software performs the following functions:

- Prepares card data
- Links to financial software, so that the cards issued are linked with customer accounts
- Manages security, including unlocking the printer's security enclosure

Refer to the following for more information about using CardWizard software:

Task	**Refer to:**
Define the CR500 printer to CardWizard software	*Datacard CardWizard Issuance Software and Card Printer Setup Guide*, 527792-001
Use CardWizard software to send cards to the printer	"Print Cards from CardWizard" in the printer's *User's Guide*
Set up and use CardWizard software	CardWizard documentation

Printer Manager

Printer Manager is a web-based interface that displays information about the card printer and allows you to manage printer settings and operation. System administrators and service providers can use Printer Manager to fine-tune card appearance, set advanced options, and troubleshoot printing problems. You access Printer Manager through your computer's web browser using the printer's IP address.

Refer to Chapter 4: "Using Printer Manager" for detailed instructions on how to access and use Printer Manager.

Printer Manager does not have to be running to use the card printer. During normal operation, site personnel should not use Printer Manager unless asked to do so.

Chapter 2: Plan the Installation

2

This chapter provides step-by-step instructions for unpacking and choosing a location for the CR500 card printer.

This chapter contains the following printer installation information and procedures:

- Packing List on page 8
- Unpack the Printer on page 9
- Site Requirements on page 10
- Network Security Requirements on page 13

Packing List

The shipping carton for the CR500 card printer contains the following items:

- CR500 Instant Issuance System
- *CR500 Printer Quick Install Guide*
- Security enclosure key (qty. 2)
- Card weights (qty. 3)
- Power cord for printer
- Concealed output stacker
- Power supply and cord for security enclosure
- *Owner's Library* CD for the CR500 system
- Cleaning card (single-sided for printer's internal rollers, part no. 506277-001) (qty. 1)
- Cleaning card (dual-sided for card cleaning rollers, part no. 508976-001) (qty. 1)
- Isopropanol cleaning cards (qty. 2)
- Cleaning swabs (qty. 5)
- White gloves (1 pair)
- Card jam removal tweezers
- Bolt-down spacer
- Bolt-down washer
- Warranty
- Installation report
- Declaration of conformity

You must provide the following items or order them separately:

- Network data cable
- Bolt (optional, for bolt-down feature)
- Ink ribbon
- Retransfer film
- Blank cards

Refer to Chapter 5: "Supplies and Parts" for part numbers and ordering information for ink ribbon, retransfer film, and cards.

Unpack the Printer

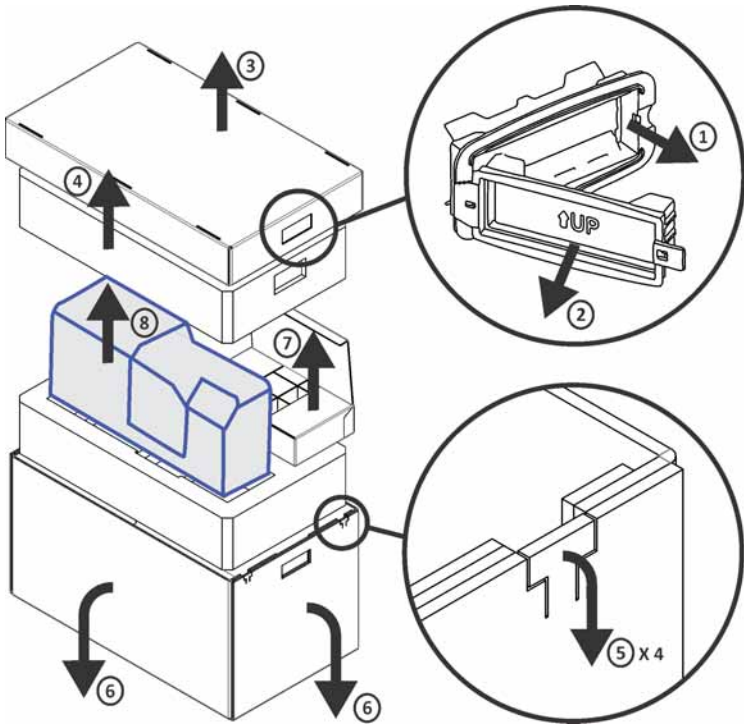
Do the following to open the shipping carton and remove the printer from the carton.

Caution: The CR500 card printer weighs approximately 47 pounds (21.3 kg). Use care when removing the printer from the shipping carton. Ask another person for assistance.

The printer is 29 inches (737 mm) wide, and 15 inches (381 mm) deep. Prepare a surface at least that large to hold the printer when it is removed from the carton. Refer to "Site Requirements" on page 10 for information on preparing a permanent location for the printer.

Do the following to open the shipping carton and unpack the printer

1. Unlatch the handle pullouts.
2. Open the handle pullouts.
3. Remove the top of the carton.
4. Remove the inner lining.
5. Pull the four cardboard corners outward.
6. Unfold the sides of the carton.
7. Remove the accessories box from lower cushion.
8. Lift the printer from the lower foam cushion and out of the carton.
9. The printer is enclosed in a plastic bag. Remove the bag from around the printer.
10. Remove all packing tape and foam from inside and around the printer.



Save the shipping carton and all packaging materials. They are required if you need to store, move, or return the printer for service. Replacements might not be available within the time you need.

Site Requirements

Select a suitable location for the printer using the following guidelines.

Site Guidelines

The performance of the CR500 printer is strongly influenced by the installation location. Install the unit in a location that meets the following criteria:

- Place the printer in a location that meets or exceeds ISO 14611-1 Class 8 cleanliness standards. Using the printer in dusty locations may cause print blurring and printhead malfunctions.
- Place the printer in a location that provides enough space to open the printer access doors. Refer to "Printer Dimensions" on page 12.
- Place the printer in a location that has access to two AC outlets and a network port.
- Avoid locations susceptible to strong vibration or shock.
- Avoid locations exposed to direct sunlight.
- Avoid locations exposed to direct fluorescent lighting.
- Avoid locations where there is a possibility of metal objects or other foreign material entering the printer.
- Avoid areas near walls with little ventilation. Refer to "Ventilation Clearance" on page 11.
- Avoid unstable locations and angled surfaces. Keep the printer off the floor.
- Avoid locations prone to static electricity, such as a carpeted room.
- Avoid areas near air conditioners, humidifiers, or heat sources that may cause condensation inside the printer.

Operating Environment

Install the printer in an environment with the following recommended temperature and humidity range:

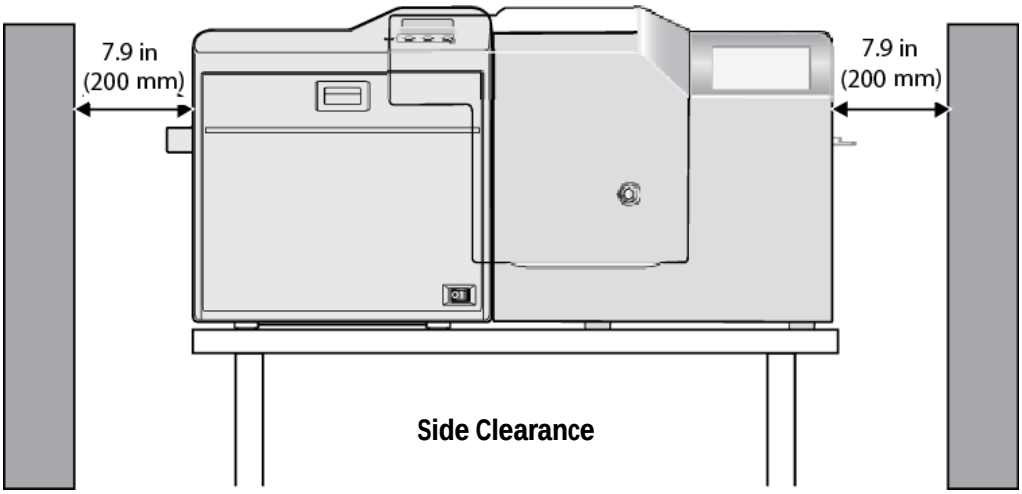
- Temperature: 63°–83°F (17°–28°C)
- Humidity: 35%–70%, non-condensing

Caution: Using the printer in an environment with temperatures that are cooler than the recommended range can cause retransfer errors. Using the printer in an environment with temperatures that are warmer than the recommended range can cause errors such as card warping and wrinkling of the film.

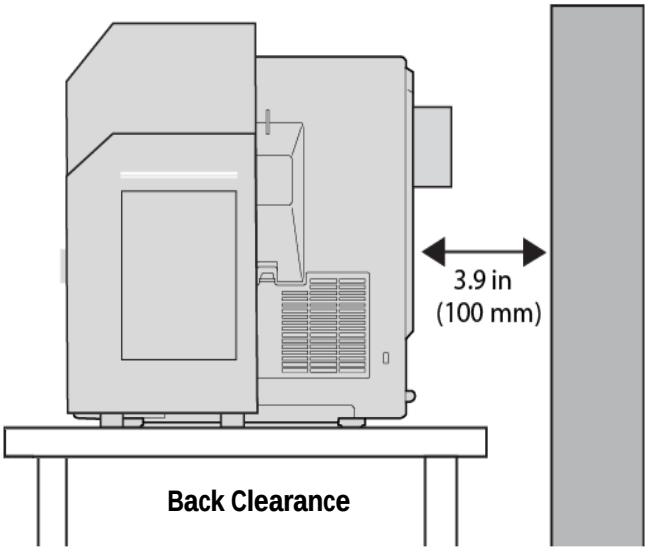
Ventilation Clearance

To ensure proper ventilation to the CR500 printer, maintain minimum clearance distances, as shown in the following illustrations.

Ventilation holes are provided for the cooling fans at the bottom and sides of the print unit. Install the printer so that the sides are at least 7.9 inches (200 mm) away from the surrounding wall. Keep the back of the printer at least 3.9 inches (100 mm) away from a wall. Do not place any objects on top of the printer.



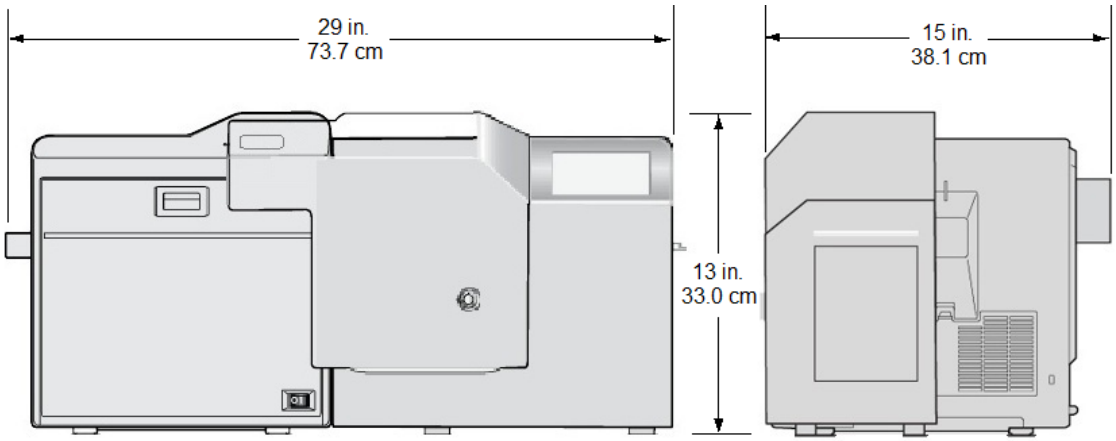
Side Clearance

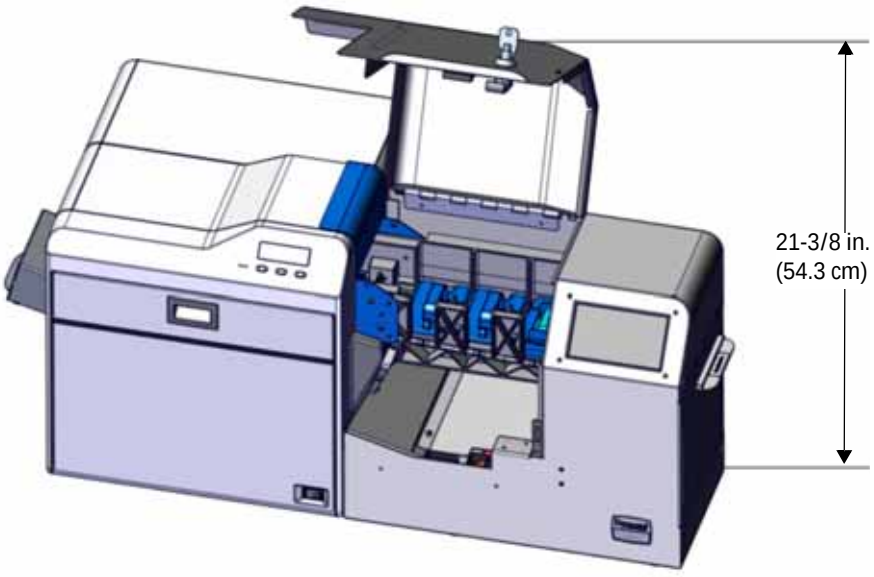


Back Clearance

Printer Dimensions

The external printer dimensions are shown in the following illustrations.





Work Surface

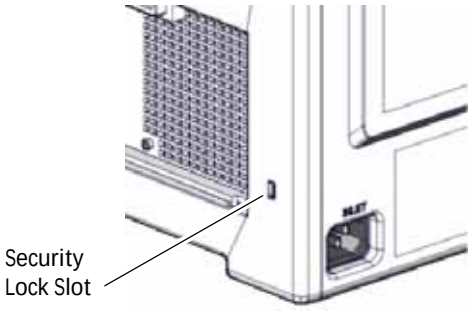
The printer requires a sturdy work surface at least 45 inches (1.143 m) wide and 19 inches (483 mm) deep.

If you plan to use the bolt-down feature, you must be able to drill a hole through the work surface and you must have access to the underside of the work surface. (Refer to "Use the Bolt-Down Feature" on page 16.)

Security Lock

The printer has a slot for a cable-type security lock. This slot is located on the side of the print unit, behind the security enclosure.

If you plan to use a cable lock, select a location that provides a secure place to fasten the cable.



Network Connection

You must be able to connect the back of the printer to your network using an Ethernet cable. Make sure that the installation location has an available network port for the printer.

The workstations for printer users must have access to the printer over the network and must have network permission to the printer.

Network Security Requirements

The CR500 printer requires use of the HTTPS protocol and does not recognize unsecured communications. If you are asked to specify a port, use port 9111 with browser access to Printer Manager. Refer to Chapter 4: "Using Printer Manager" for information about password security options in Printer Manager.

The CR500 printer provides encryption using HTTPS. The printer and CardWizard issuance software are designed to use this level of security.

This manual assumes that the HTTPS protocol provides adequate security for your site. If your organization requires additional security, you are responsible for setup and for procedures documenting its use.

Chapter 3: Install the Printer

3

This chapter provides step-by-step instructions for installing the CR500 card printer and connecting it to your network.

This chapter contains information that describes:

- Printer Installation on page 16
  - Use the Bolt-Down Feature on page 16
  - Connect the Power Cords on page 19
  - Connect the Data Cable on page 20
  - Power On the Printer on page 21
  - Clean the Print Unit on page 22
  - Install the Concealed Output Stacker on page 27
- Printer Configuration on page 28
  - Activate the Printer on page 29
  - Set or Retrieve the Printer IP Address on page 33
  - Set Up Network Access on page 40
  - Verify Network Communication on page 41
  - Set Up CardWizard Issuance Software on page 45
- Printer Use Guidelines on page 45

Printer Installation

To install the CR500 printer, place the printer on the selected work surface. Make sure that the work surface meets the requirements described in "Work Surface" on page 12. Then, perform the following procedures:

1. (Optional) Use the bolt-down feature to secure the printer to the work surface.
2. Plug in the power cords to the print unit and the security enclosure.
3. Connect the data network cable to the printer.
4. Power on the printer to verify it initializes correctly.
5. Run the appropriate single-sided cleaning card through the printer.
6. Install the concealed output stacker onto the printer.

Use the Bolt-Down Feature

Use the optional bolt-down feature to secure the printer to the work surface.

To use the printer's bolt-down feature, you must provide the following parts and tools:

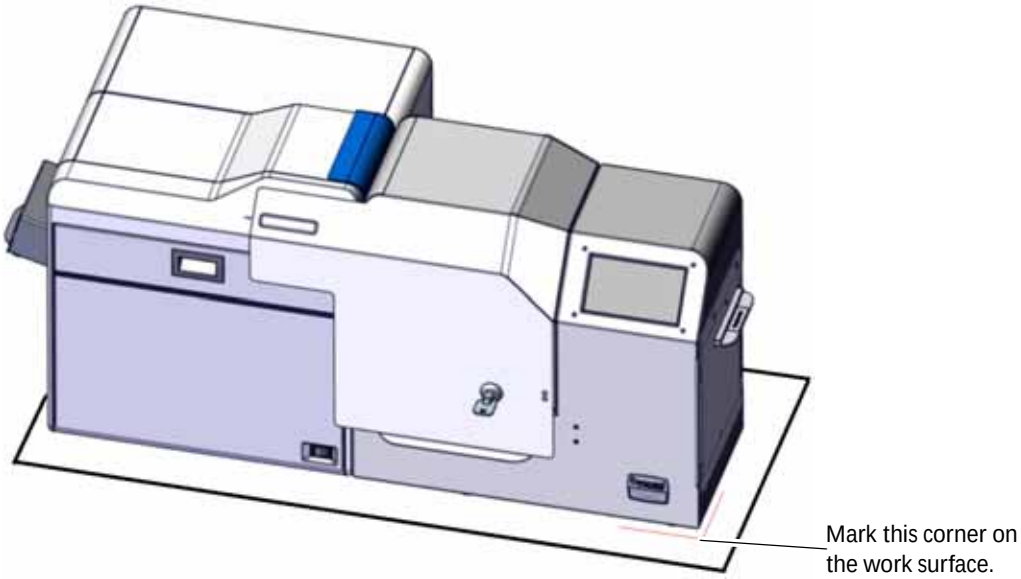
- A bolt that meets the following requirements:
  - The bolt size is 1/4-20 UNC: the diameter is 1/4 inch, with 20 threads per inch. Do not use a metric-sized bolt in place of the UNC bolt.
  - The bolt cannot intrude into the printer by more than 1 inch (25.4 mm).
  - The bolt length must be the thickness of the work surface, plus the thickness of the washer, plus the thickness of the spacer, plus 1/4 inch to 1 inch going into the rivet nut in the bottom of the printer.

    For example, if your printer's work surface is 1-1/2 inches thick, the bolt length can be from 2-3/8 to 3-1/8 inches, as shown in the following table:

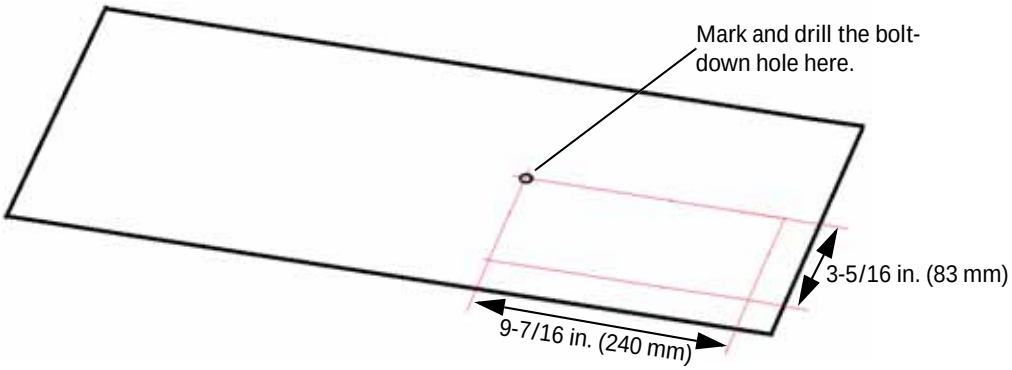
Work Surface (example)	+	Washer Thickness	+	Spacer Thickness	+	Rivet Nut Depth	=	Desired Bolt Length
1-1/2 inch	+	1/16 inch	+	9/16 inch	+	1/4 inch (minimum)	=	2-3/8 inch (minimum)
1-1/2 inch	+	1/16 inch	+	9/16 inch	+	1 inch (maximum)	=	3-1/8 inch (maximum)

- A drill with a bit the appropriate size for the bolt. The hole must be smaller than the 15/16 inch (23.8 mm) diameter of the provided washer.

1. Place the printer in the desired location on the work surface. Refer to "Ventilation Clearance" on page 11 for clearance requirements.
2. Mark the bolt-down hole location and drill the hole:
   a. Mark the front-right corner of the printer on the work surface.

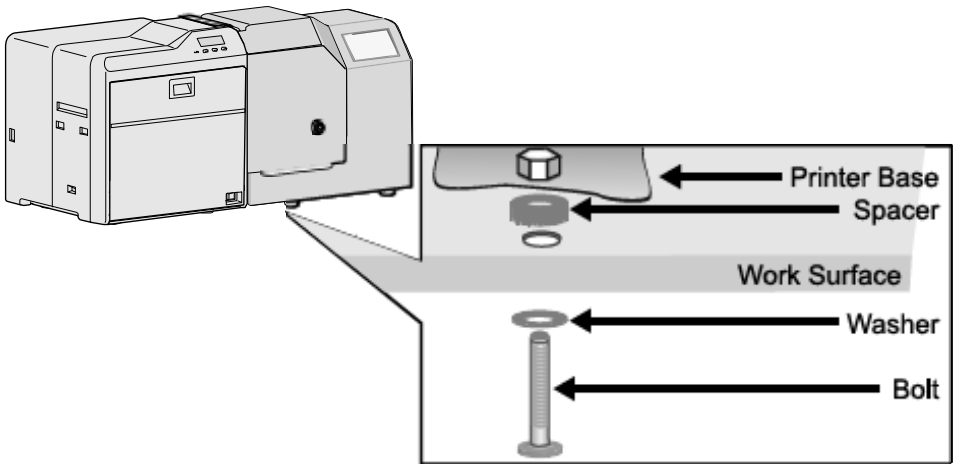


   b. Measure and mark the following points on the work surface:
      - Along the front of the printer, 9-7/16 inch (240 mm) from the front-right corner.
      - Along the right side of the printer, 3-5/16 inch (83 mm) from the front-right corner.
   c. Move the printer and use the marked points to locate the bolt hole position.



   d. Drill the bolt hole.
3. Place the printer over the drilled hole, aligning the front-right corner with the marked location from step 2a.

4. From under the work surface, insert the bolt through the washer, through the work surface, and through the spacer.



5. Turn the bolt into the rivet nut on the printer base, turning until the bolt is snug but does not cause distortion.

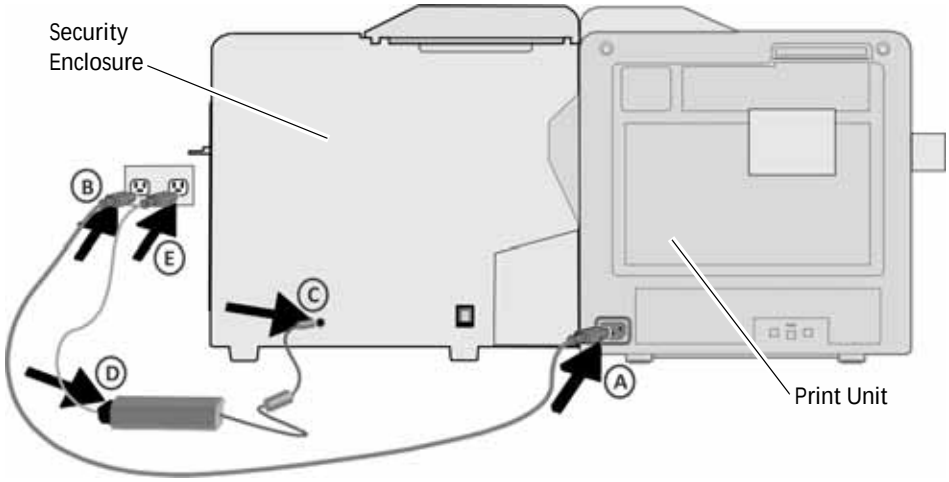
Connect the Power Cords

Use this procedure to connect the provided power cord to the print unit, and to connect the provided power supply and cord to the security enclosure.

Warning: Always use a grounded power outlet that is not shared with other electrical equipment.

1. Verify the plug type is correct for your installation. The power cords vary according to model and country of purchase.
2. Plug the power cord into the power receptacle on the back of the print unit (A).

Caution: Use an automatic voltage regulator (AVR) if there is a possibility of voltage fluctuations. Use an uninterruptible power supply (UPS) rather than an AVR if there is a possibility of frequent power loss.

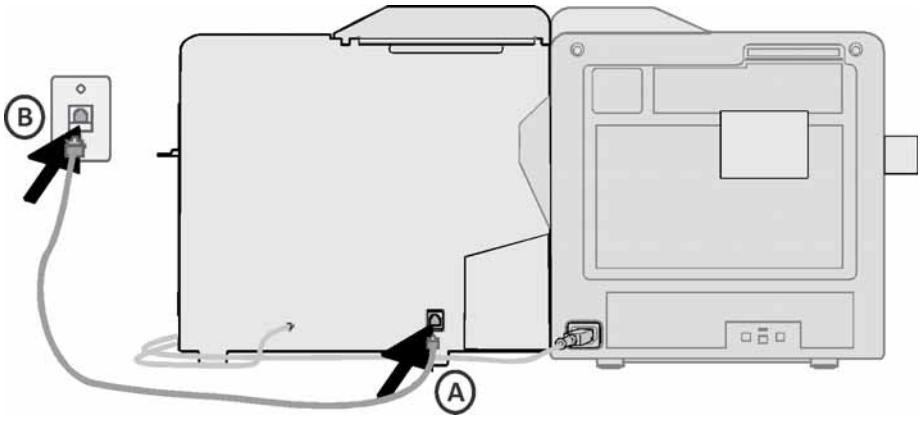


3. Connect the power cord from the print unit to the facility power source (B).
4. Connect the round connector from the power supply to the back of the security enclosure (C).
5. Connect the power cord to the power supply (D).
6. Connect the other end of the security enclosure power cord to the facility power source (E).

Connect the Data Cable

The data cable is an Ethernet cable that connects the card printer to your network. You must provide this cable.

1. Connect one end of the data cable to the network port (A) on the back of the security enclosure.



2. Connect the other end of the data cable to a network port (B).

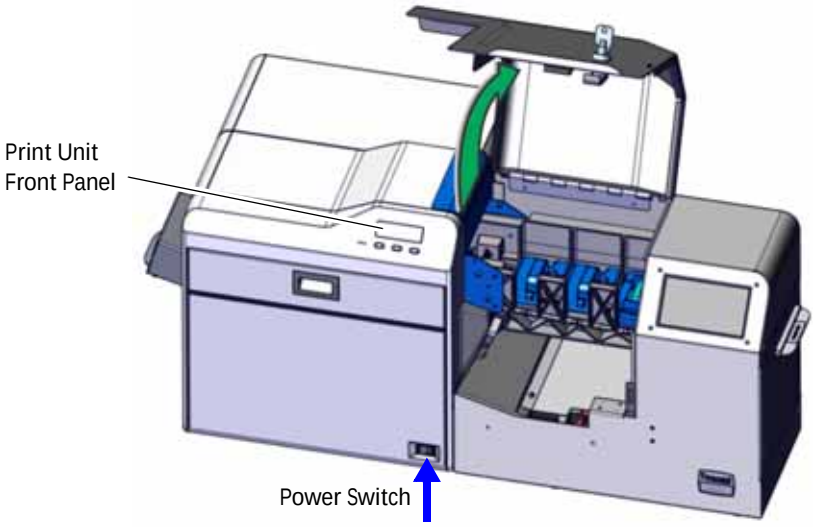
   Computers that send cards to the printer must be able to connect to the printer, and to the Internet, over the network.

Power On the Printer

The first time you set up the printer, power on the printer without installing supplies, to release transport mode. Keep the power on for about 30 seconds until a film search error displays on the print unit front panel, and then power off the printer.

The printer is shipped in transport mode. Retransfer film cannot be installed while the printer is in transport mode. Powering on the printer cancels transport mode.

1. Power on the printer.
   a. Open the security enclosure door, so you can see the print unit front panel.
   b. Press the "|" symbol on the power switch to power on the printer.



2. Follow the instructions in the printer's *User's Guide* to load the ink ribbon and retransfer film cartridges.
3. Install the ink ribbon cartridge in the printer. Do not install the retransfer film cartridge at this time.
4. Close the print unit door.

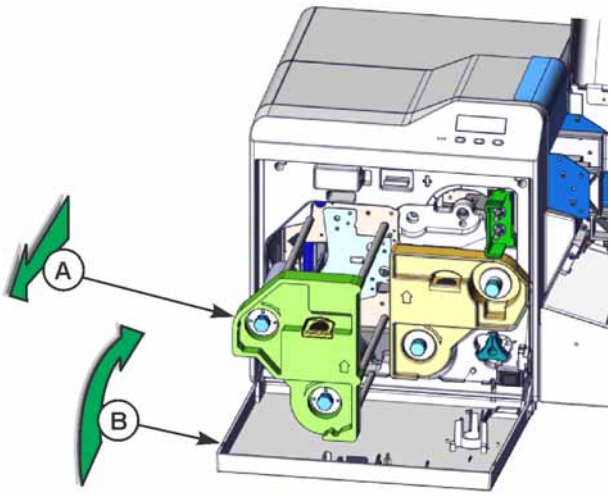
Continue with "Clean the Print Unit" on page 22.

Clean the Print Unit

Run the single-sided, adhesive cleaning card (part no. 506277-001) through the newly-installed printer. This helps to ensure that the print unit internal rollers are clean before you begin to print cards.

Do not clean the heated roller if it is hot. Allow the printer to cool, or run the cleaning card before the heated roller reaches operating temperature.

1. Power off the printer. If the printer is hot, wait 10 to 20 minutes for it to cool down.
2. Open the security enclosure door.
3. Open the print unit door.
4. Remove the green retransfer film cartridge (A), if it is installed in the print unit. Press the retransfer film cartridge release button to release it.



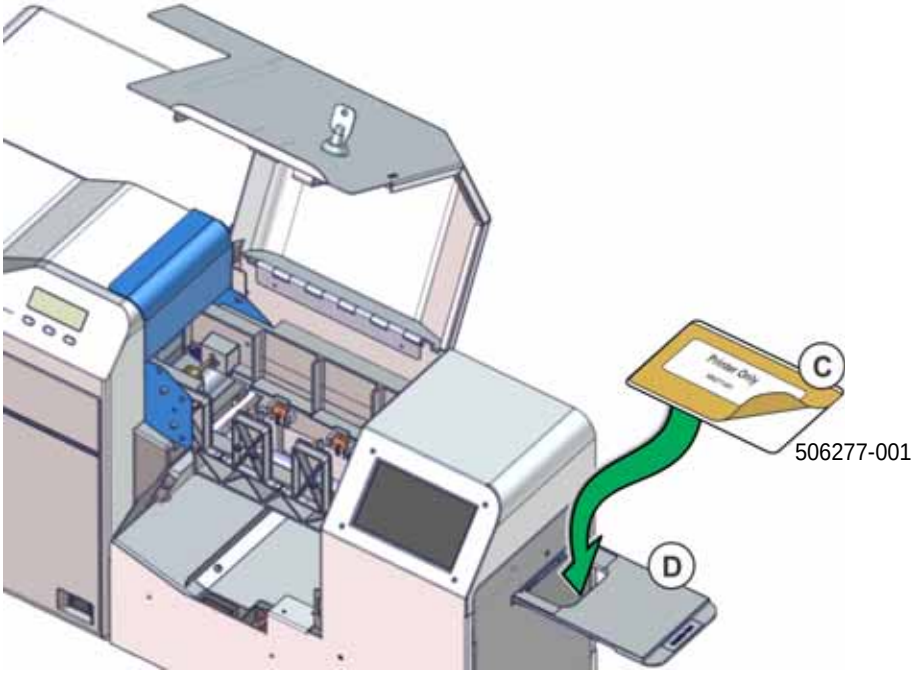
5. Close the print unit door (B).

6. Pull out the exception card slide.
7. Remove the protective paper from the single-sided cleaning card (C). Make sure to use the cleaning card with the part number 506277-001.

Caution: The CR500 uses two different cleaning cards.

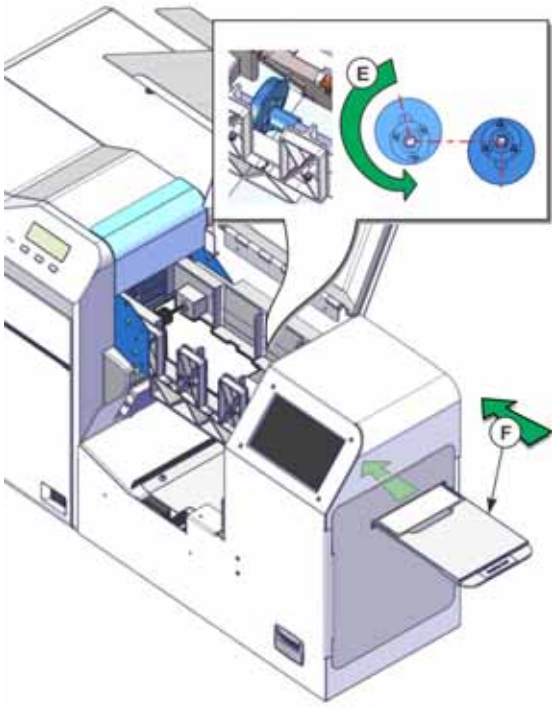
- Use the cleaning card with the label “Printer Only” and part number 506277-001 to clean the print unit (this procedure).
- Use the cleaning card with part number 508976-001 to manually clean the cleaning unit rollers only. Refer to the printer’s *User’s Guide* for complete information about cleaning the cleaning unit rollers.

Inserting the wrong cleaning card into the printer will damage the printer. **Do not use the card with the label “Cleaning Unit Only” to clean the print unit.**

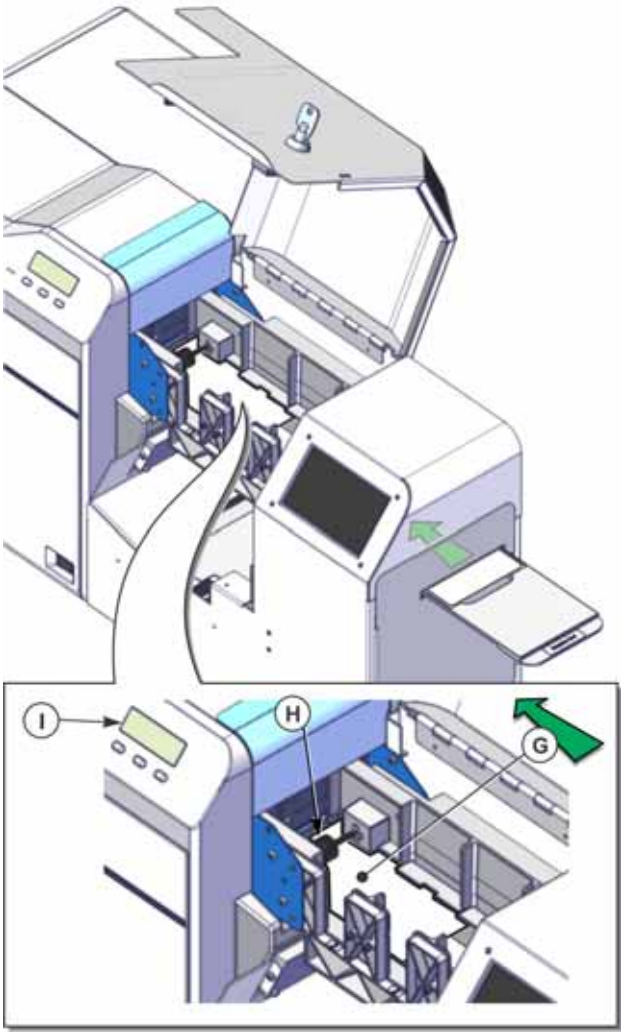


8. Insert the cleaning card into the exception card slide with the sticky side facing up. Push the card in until the end of the card rests in the slot (D).

9. If necessary, rotate the shuttle to the down position (E).
10. Push the exception card slide in, past the resistance until it reaches the stop position (F).

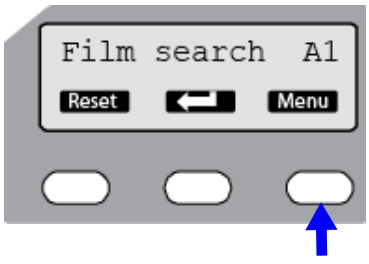


11. Manually slide the card (G) to the print unit card feed roller. Stop when the card is under the roller (H) and engages the print unit. (The card must be pushed toward the print unit far enough for the load roller to pull in the card when cleaning begins.)



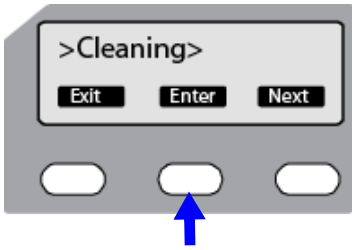
12. Power on the printer.

13. After initializing, the message **Film Search A1** displays on the print unit front panel (I). Press Menu to start the cleaning process.

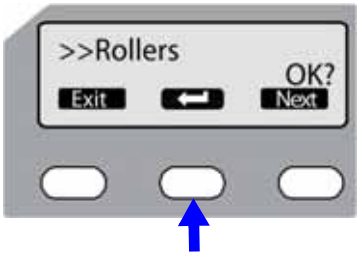


14. Use the print unit front panel to run the cleaning card.

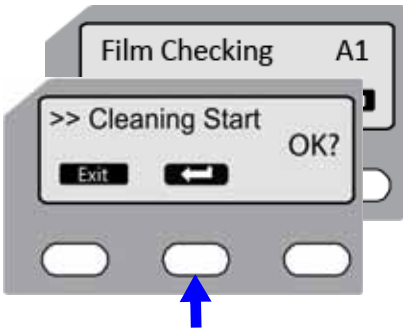
    a. The panel displays the **Cleaning** message. Press Enter.



    b. The **Rollers OK?** message displays. Press ↵ (Return).



    c. The **Film Checking** message displays, followed by **Cleaning Start OK?**. Press ↵ to start the cleaning process.



    The print unit pulls the cleaning card into the print unit. **Cleaning** displays, and cleaning begins.

    If the print unit card feed roller is turning but the card is not pulled into the unit and no errors display, lightly push the card until the roller catches it and the card moves into the print unit.

    d. The card is discharged in the output area and **Cleaning Start OK?** displays again.

    e. Turn the cleaning card over and place it in the exception card slide with the sticky side facing down. Refer to step 9 through step 11 to position the cleaning card properly.

    f. Press ↵ to start the cleaning process.

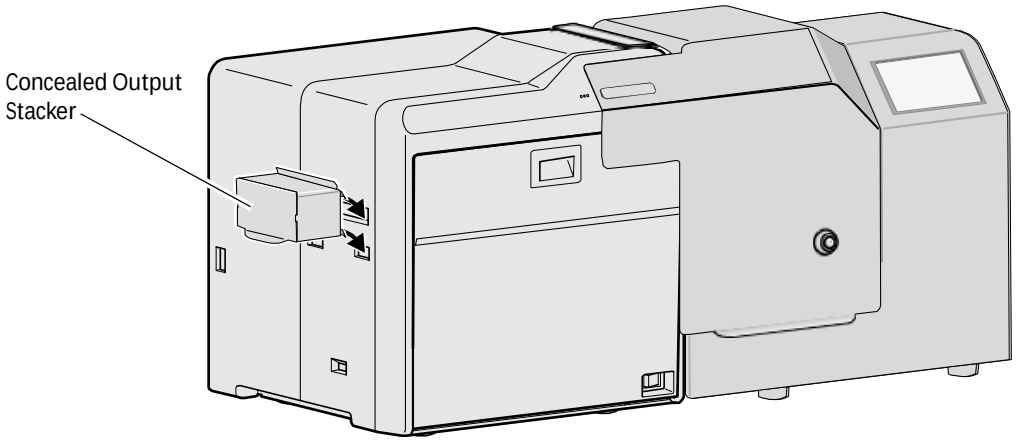
15. When the cleaning card is discharged, press **Exit** repeatedly to end the cleaning process and exit the menu system.
16. Remove the used cleaning card and discard it. Use a cleaning card one time only.
17. Open the print unit door and install the retransfer film cartridge.
18. Close the print unit door.
19. Load cards in the multi-hopper. Refer to the printer's *User's Guide* for complete information about loading cards.
20. Close the security enclosure door to lock the printer.

Continue with "Install the Concealed Output Stacker".

Install the Concealed Output Stacker

As cards exit the printer they are placed in the concealed output stacker, which holds completed cards (and the confidential data on them) until the operator retrieves them.

1. Hang the concealed output stacker with the upper hook on the card discharge slot, and the lower hooks on the card stacker receptacle.



2. To open the concealed output stacker, use the tab at the bottom of the card stacker and lift it up. Pull out the completed card(s).

Printer Configuration

This section describes the tasks you need to perform to set up the printer in your network environment. Some tasks must be directed by your network support personnel.

Perform these tasks in the order listed.

1. Activate the Printer on page 29
2. Set a Static Printer IP Address on page 33

   Or

   Retrieve the Printer IP Address on page 38
3. Set Up Network Access on page 40
4. Access Printer Manager on page 41
   a. Print a Test Card on page 42
   b. Additional Setup Tasks on page 44
5. Set Up CardWizard Issuance Software on page 45

Activate the Printer

To meet standard security requirements, the printer is shipped with printing disabled. You must obtain the printer activation code and activate the printer to continue setup.

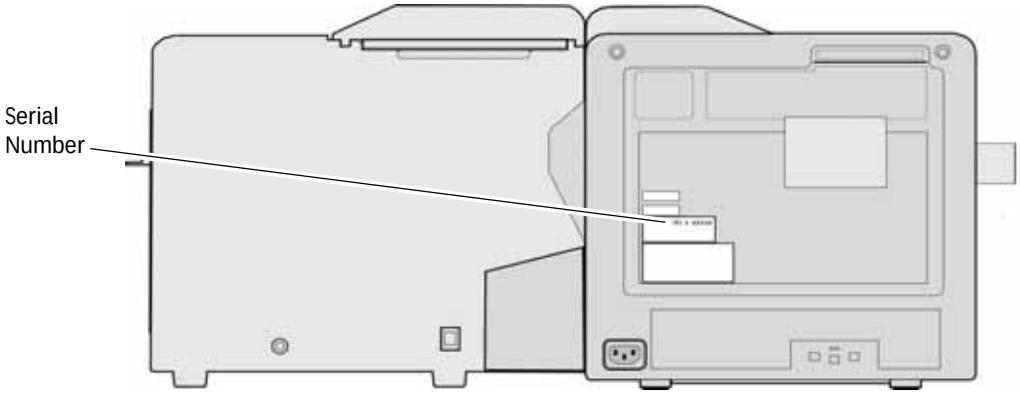
HINTS AND TIPS

- The factory-issued activation code is eight characters.
- The activation code can contain the numerals 0 through 9, uppercase and lowercase alphabetic characters (A–Z, a–z), and the special characters $ = / +.

You can create a printer activation code at other times, such as when shipping to a repair depot. Refer to the "Preparing the Printer for Transport" section in the printer's *User's Guide* for information about setting an activation code.

To activate the printer and enable printing:

1. Obtain the activation code:
   a. If this is a new installation, call Entrust Datacard Technical Phone Support at 1-800-328-3996 with the printer serial number to obtain the activation code. The printer serial number is located on the back of the printer. It is a seven-character code beginning with AA and followed by five numbers.



   b. If you are enabling the printer after it has been moved or serviced, contact the person who disabled the printer to obtain the activation code. Refer to "Set Job Queue State" on page 55 for more information about enabling the printer using Printer Manager.
2. Power on the printer.
3. If not already done, load and install a print ribbon cartridge and a retransfer ribbon cartridge in the print unit. Refer to the printer's *User's Guide* for the steps to follow.
4. Close the print unit door. Close the security enclosure door to lock the printer.

5. Enter the touch screen menus.

   a. Begin when **Print job queue is deactivated** displays on the touch screen. Press the USER button (a) to make the menu available.

   Deactivated displays on line 1 and **Menu available** displays on line 2.

   b. Press ENTER (b) to enter the menu system.

   Main Menu displays on line 1, and **Maintenance** displays on line 2.

6. Enter the Activate menu:

   a. Press the down arrow key (c) three times to display **Activate** on line 2.

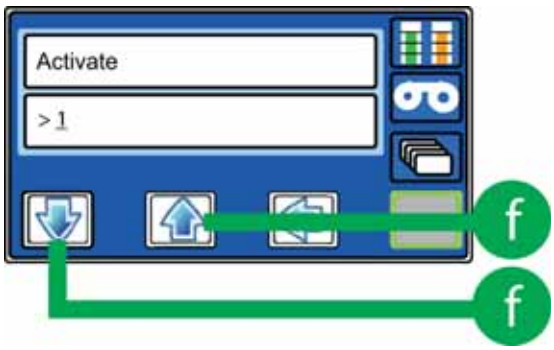
b. Press ENTER (d) to select **Activate**.

Activate displays on line 1 and **Enable** displays on line 2.

c. Press ENTER (e) to enter the **Enable** submenu.

7. Enter the activation code:

a. Beginning with the left-most place, press the up arrow or down arrow keys (f) to display the numbers and letters of the activation code at the cursor position.



b. Press ENTER (g) to select the character and move the cursor to the right.

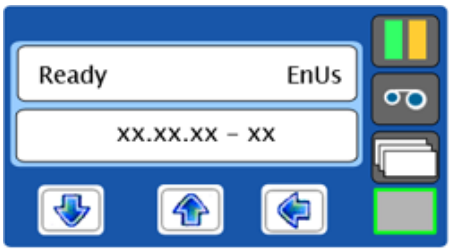
c. Repeat steps 7a and 7b until all characters are correct. The cursor should display to the right of the final digit.

8. Press ENTER (h) to submit the code.

- If **Request Success** displays on line 2 of the touch screen the printer is activated.
- If another message displays on line 2 of the touch screen, system activation failed. Repeat step 7. If activation fails again, contact Entrust Datacard Technical Phone Support at 1-800-328-3996.

9. Press the USER button (i) repeatedly until **Ready** displays on line 1 and the USER button glows steady green.

The printer is ready for additional setup and to print cards. Continue with "Set or Retrieve the Printer IP Address" on page 33.



Set or Retrieve the Printer IP Address

You need to know your printer's IP address to set up network access to the printer and to define the printer to CardWizard issuance software. You also use the printer's IP address to access Printer Manager from a browser window (refer to "Start and Stop Printer Manager" on page 48).

The printer can use either of the following network addressing methods:

- **DHCP (Dynamic Host Configuration Protocol)**—The network automatically assigns the IP address to the printer. The IP address of a printer that uses DHCP can change if the printer is powered off and back on.
- **Static IP**—You set the IP address, subnet mask, and gateway address, as provided by your network support personnel. A static IP address does not change when the printer is powered off.

  CardWizard issuance software requires that the printer use a static IP address. Refer to Set a Static Printer IP Address.

Set a Static Printer IP Address

CardWizard Instant Issuance Software requires that the printer have the same IP address at all times.

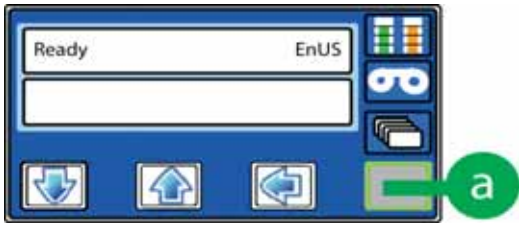
Because the printer is shipped with DHCP (Dynamic Host Configuration Protocol) addressing enabled, you must change the address method and assign a static IP address before you can set up CardWizard software to print cards. Use the printer touch screen to set the IP address.

You also can use Printer Manager to change the address method and assign a static IP address. Refer to "Communication" on page 56.

1. Obtain the following values from your network support personnel. Make sure you receive all three values:
   - IP address
   - Subnet mask
   - Gateway address
2. Power on the printer, if necessary.
3. Begin when **Ready** displays on line 1 of the touch screen.

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

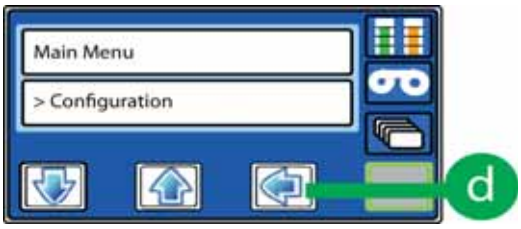
4. Press the USER button (a) to suspend the printer and make the menu system available.



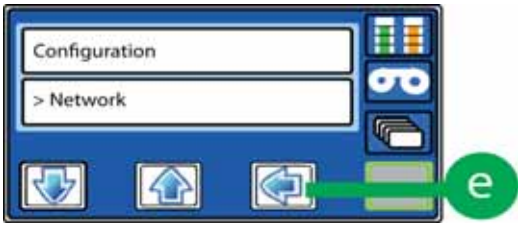
5. The USER button turns amber and **Menu available** displays on line 2. Press ENTER (b) to enter the menu system.

6. **Maintenance** displays on line 2. Press the down arrow key (c) twice.

7. **Configuration** displays on line 2. Press ENTER (d) to enter the Configuration menu.

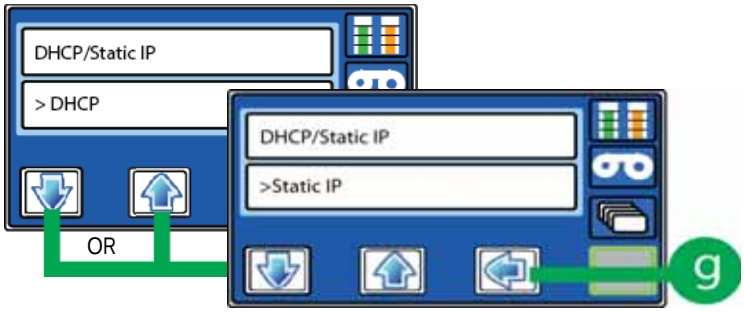


8. **Network** displays on line 2. Press ENTER (e) to enter the Network submenu.

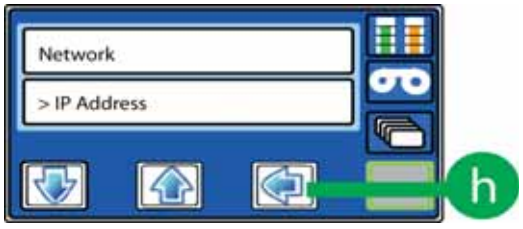


9. **DHCP/Static IP** displays on line 2. Press ENTER (f) to enter the DHCP/Static IP submenu.

10. The current address method (**DHCP or Static IP**) displays on line 2. Use the up arrow or down arrow keys, if needed, to display **Static IP** on line 2. Press ENTER (g).



11. **IP Address** displays on line 2. Press the **Enter** key (h).



12. Enter the assigned IP address obtained in step 1.

    The IP address has four bytes, separated by periods. The values shown in the illustration are an example. Use the address values supplied by your network support personnel.

    Begin with the 3-digit byte on the left.

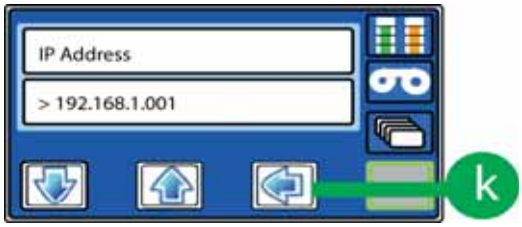
    a. Press the up arrow or down arrow keys (i) to enter the first byte.

    b. Press ENTER (j) to move to the next byte.

    The address byte displays three digits when it can be changed.

    c. Repeat step 12a and step 12b for the remaining address bytes.

    d. When all four bytes are updated, press ENTER (k).



13. **Subnet Mask** displays on line 2. Press ENTER (l) and enter the subnet mask, following the process in step 12.

14. When you finish entering the subnet mask, **Network** displays on line 1 and **Gateway Address** displays on line 2. Press ENTER (m) and enter the gateway address, following the process in step 12.

15. Press ENTER (n) to apply the static IP address, the subnet mask, and the gateway address.

16. Press the USER button twice to exit the menu system.

Continue with Set Up Network Access.

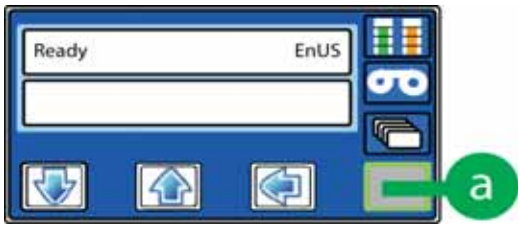
Retrieve the Printer IP Address

You need to know the printer's network IP address to access Printer Manager. If you need to retrieve the printer's IP address, do the following.

1. Power on the printer.
2. Begin when **Ready** displays on line 1 of the touch screen.

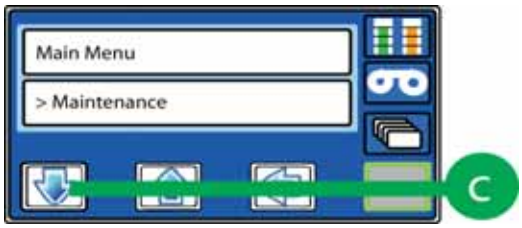
   The printer can require several minutes between power-on and the **Ready** status.

3. Press the USER button (a) to suspend the printer and make the menu system available.



4. The USER button turns amber and **Menu available** displays on line 2. Press ENTER (b) to enter the menu system.

5. **Maintenance** displays on line 2. Press the down arrow key (c).

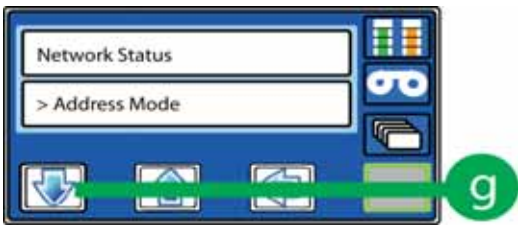


6. **Status** displays on line 2. Press ENTER (d) to enter the Status menu.

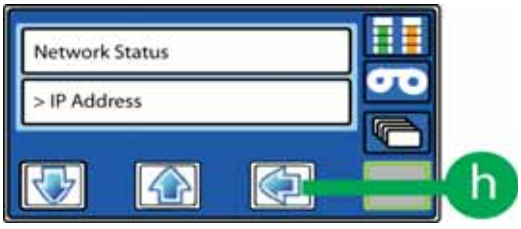
7. **Serial Number** displays on line 2. Press the down arrow key (e) three times.

8. **Network Status** displays on line 2. Press ENTER (f) to enter the Network Status submenu.

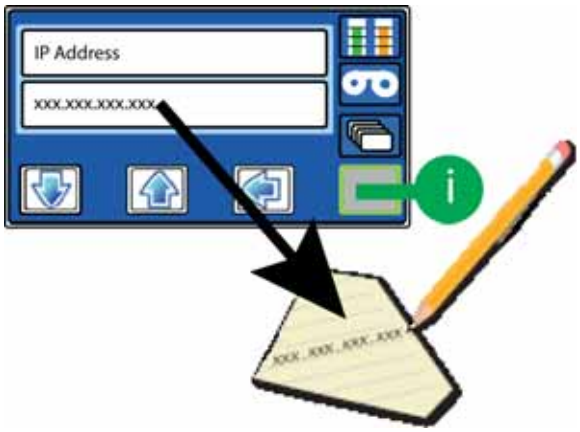
9. **Address Mode** displays on line 2. Press the down arrow key (g).



10. **IP Address** displays on line 2. Press ENTER (h) to select the IP Address menu item.



11. The printer's IP address displays. Write down the printer's IP address.



12. Press the USER button (i) repeatedly until **Ready** displays on line 1 and the USER button changes from amber to green.

Set Up Network Access

Work with your network support personnel to make sure the printer is set up within your organization.

The following tasks typically need to be performed:

- Have the IP address of the printer available.
- Set up network security. This includes setting up the https protocol for the printer, for users who communicate with the printer, and for CardWizard issuance software.
- Define network permissions to the printer and to CardWizard software.
- Define the printer to CardWizard issuance software. Refer to the *Datacard CardWizard Issuance Software and Card Printer Setup Guide* for more information.

Your organization is responsible for network setup and security.

Verify Network Communication

Access Printer Manager to verify that your workstation and the printer can communicate over the network. To further verify that the printer works as expected, print a test card. You also can use Printer Manager to perform other printer setup tasks, as necessary.

Access Printer Manager

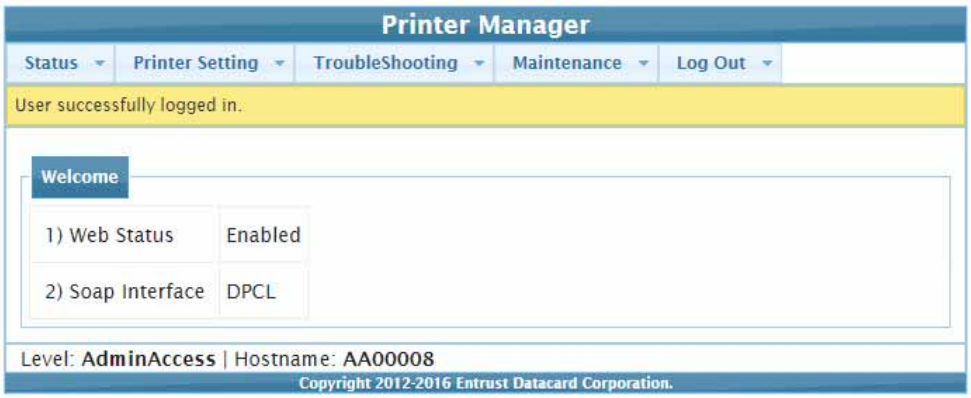
Printer Manager is a web interface that displays information about the printer and provides setup and troubleshooting tools. Printer Manager is available through a web browser. Use a current browser, such as Internet Explorer, Firefox, or Chrome.

During normal operation, site personnel should not use Printer Manager unless asked to do so.

1. Use your network-connected PC to start Print Manager and log in.

   Refer to "Start Printer Manager" on page 48 for information about starting and logging in to Printer Manager.

2. The Printer Manager Welcome page displays, indicating that your printer and PC are communicating successfully.



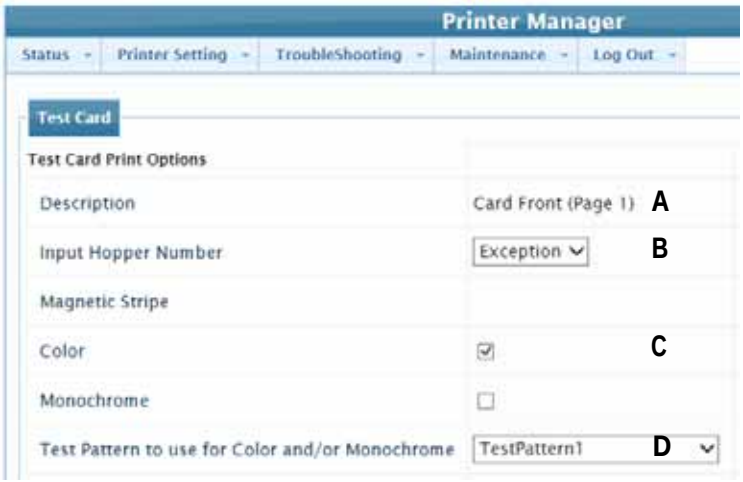
   Refer to Chapter 4: "Using Printer Manager" for complete information about using Printer Manager.

3. Continue with "Print a Test Card" on page 42.

Print a Test Card

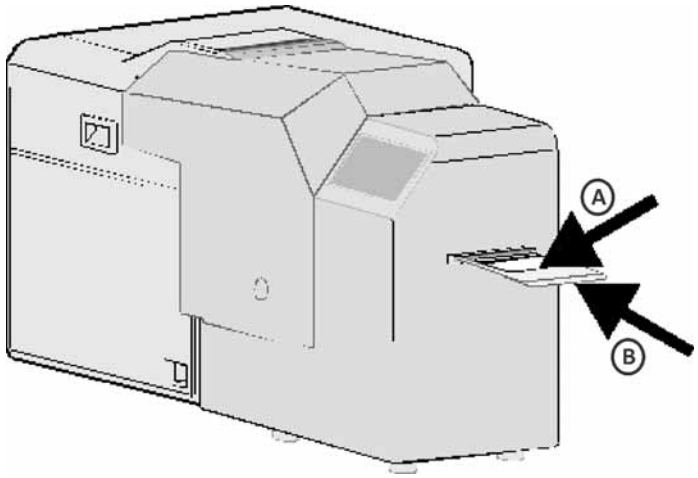
Print a test card to make sure that the printer is working properly.

1. Open Printer Manager and log in as a WebAdmin user.
2. Select **TroubleShooting > Test Card**.
3. For a simple single-side card, make the following selections:
   - For installation testing, use settings in the **Card Front (Page 1)** column (A).
   - Select **Exception** for the Input Hopper Number (B).
   - Select **Color** (C).
   - Select **TestPattern1** (D).



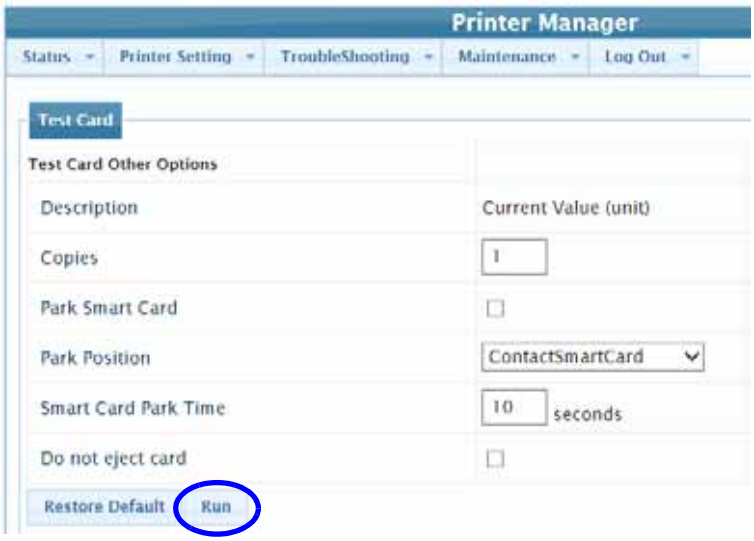
4. At the printer:
   a. Open the security enclosure door and make sure that a card weight is in each of the three hoppers. Refer to “Load Cards” in the printer’s *User’s Guide* for instructions on installing the card weights correctly.
   b. Close the security enclosure door to lock the printer.

c. Pull out the exception card slide and place a plain white card (A) in the tray.



d. Push the slide all the way in (B), past any resistance, until it reaches the stop position.

5. In Printer Manager, scroll to the bottom of the screen and click **Run**.

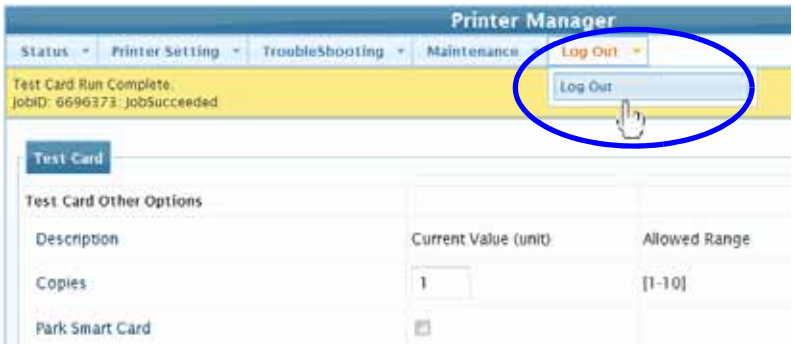


6. The printer touch screen changes from **Ready** to **Busy**. The printer processes the card and places the printed test card in the concealed output stacker.

   You can print additional test cards by selecting different options in Printer Manager. Refer to "Test Card" on page 71.

If a card does not print, and no messages display, contact your network support personnel for assistance.

7. When you finish using Printer Manager, select **Log Out > Log Out** from the menu. For security, close the browser window after you log out.



Additional Setup Tasks

You might need to set up additional card features in Printer Manager, including:

- Magnetic stripe format
- Bend Remedy
- K Power
- PeelOff Power
- Resin Black Mode
- Retransfer Roller Temp
- YMC Power

Follow the guidance of your system administrator, and make changes only if needed. Refer to "Printer Manager Settings" on page 50 for information about how to specify these settings in Printer Manager.

Set Up CardWizard Issuance Software

Refer to the *Datacard CardWizard Issuance Software and Card Printer Setup Guide* for complete information about how to define the CR500 card printer to CardWizard issuance software.

Printer Use Guidelines

With the card printer fully set up and operational, keep these guidelines in mind when using the printer:

- Keep the printer powered off and covered when not in use. Leaving power on for long periods without printing might allow fine dust to collect inside the printer. The dust can adhere to cards and cause print blurring.
- Store all supplies in a clean, cool, and dry location and in the original packaging until you load them in the printer. Keep the original packaging closed.
- Do not use supplies or cards that have been dropped on the floor or have otherwise become contaminated.
- Keep all food and liquids away from the printer.
- Keep paper and foreign materials off the printer.
- When cleaning around the printer, prevent debris from entering the printer.

Chapter 4: Using Printer Manager

4

This chapter describes how to use Print Manager to perform management tasks required to set up and operate the CR500 printer.

Refer to the following sections for information about using Printer Manager:

- Start and Stop Printer Manager on page 48
- Printer Manager Settings on page 50
- Status Menu on page 51
- Printer Setting Menu on page 53
- TroubleShooting Menu on page 70
- Maintenance Menu on page 73
- Log Out Menu on page 74
- Printer Manager Updates on page 74

Start and Stop Printer Manager

The CR500 printer includes Printer Manager, a web-based interface that displays information about the printer and provides setup and troubleshooting tools. Printer Manager is available through a web browser. Use a current browser, such as Internet Explorer, Firefox, or Chrome.

During normal operation, site personnel should not use Printer Manager unless asked to do so.

Printer Manager User Access Levels

The Username field controls the level of access to information and settings that correspond to the user's job responsibility.

WebUser

WebUser access allows users to view status information. A password is not required. The WebUser access level typically is used by the person responsible for printing cards. Other responsibilities can include cleaning the printer, ordering printer supplies, or printing a daily or weekly log of card production.

WebAdmin

WebAdmin access allows an administrator to make minor adjustments to the printer. The WebAdmin user has access to configuration options and the use of diagnostics tools for troubleshooting. The WebAdmin user also can specify a password (using the **Printer Settings > Update Password** option) for WebAdmin and WebUser access-level users.

In a card production environment, the WebAdmin access-level user typically sets up the card design, verifies communication with external data sources, and tracks printer activity and performance.

WebService

WebService access has all of the above adjustments with additional access to test and adjust motors, sensors, and other internal components.

The WebService user typically is an Entrust Datacard-trained service provider.

Start Printer Manager

1. Obtain the printer IP address. Refer to "Retrieve the Printer IP Address" on page 38.
2. Open a web browser on the PC.
3. In the address area of the browser, enter the IP address:

   https://*printer_IP_address*

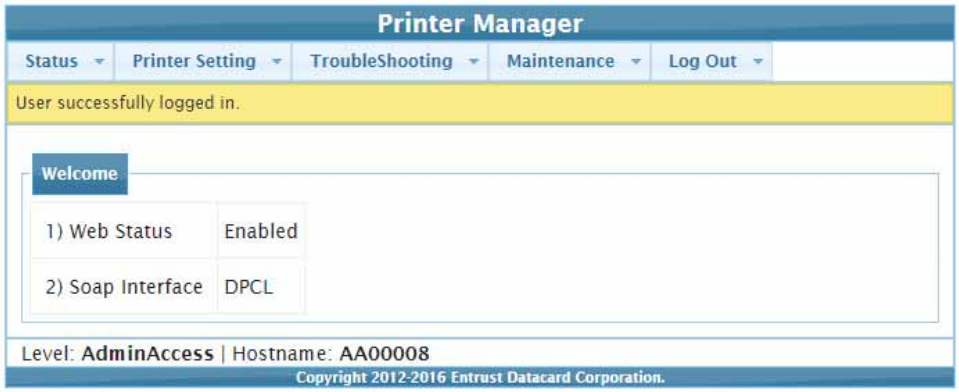
For example: https://123.12.3.123 where 123.12.3.123 represents the printer IP address.

When you use a secure protocol (https), the web browser may display a warning message indicating a problem with the website's security certificate. Continue to the website to access Printer Manager.

4. When the Printer Manager Log in screen displays, select a language for the Printer Manager session from the Select Language column.

5. In the Please Log In section, select a Username that matches your job responsibilities and enter a password, if one is required. Refer to "Printer Manager User Access Levels" on page 48 for a description of the user access levels.

6. Click **Log In** to display the Printer Manager Welcome page.



HINTS & TIPS

- The access level controls the information that displays and the changes that you can make.
- If the browser cannot connect to the printer, make sure that:
  - The printer touch screen displays **Ready**.
  - Another user does not have a Printer Manager session running.
  - A VPN (Virtual Private Network) client is not restricting your access to Printer Manager. Log out of the VPN client and reconnect to your local network, if needed.

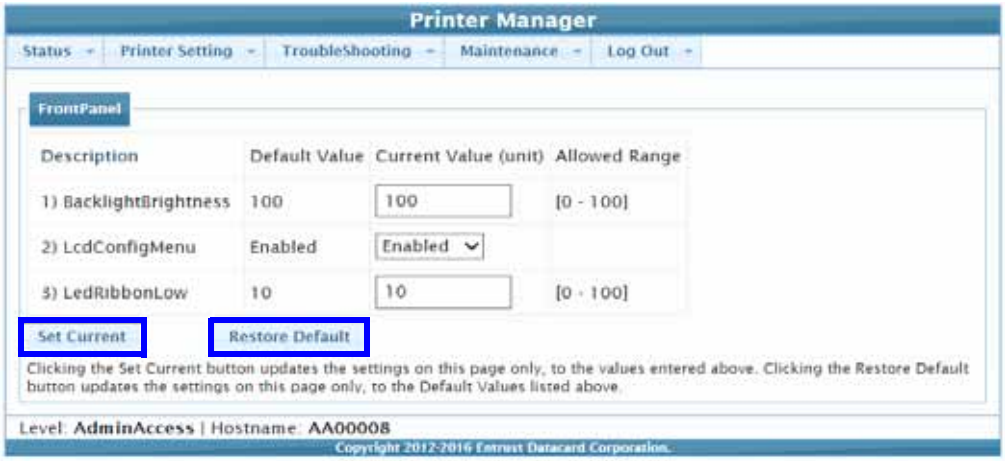
Stop Printer Manager

1. Select **Log Out** from the menu to end the current Printer Manager session.
2. For security, close the browser window after logging out.

Printer Manager Settings

The CR500 printer is shipped with recommended settings in Printer Manager. You may need to change these settings to customize the printer for your site. Printer Manager provides access to the printer settings.

Many of the Printer Manager menu options display the **Set Current** and **Restore Default** buttons.



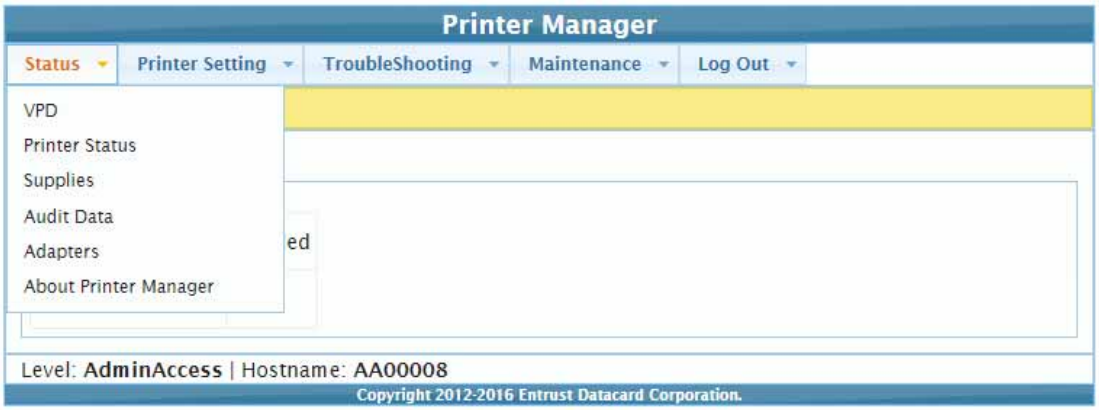
- **Set Current** saves any changed settings on the displayed page. When you change a value and click Set Current, the printer uses the new settings until additional changes are made or the default values are restored. Changes are not applied if you exit the page without clicking Set Current.
- **Restore Default** restores the factory-default settings to the values on the displayed page. Click **Set Current** to save the restored settings.

The following sections explain the Printer Manager menus and the adjustments that you can make.

Options with an (A) in the Printer Manager tables in the following sections are available only when logged in using the WebAdmin access level. Options without an (A) also are available to WebUser access level users.

Status Menu

The Status menu options display basic information about the printer and its status. The Status menu is display-only and cannot be changed.

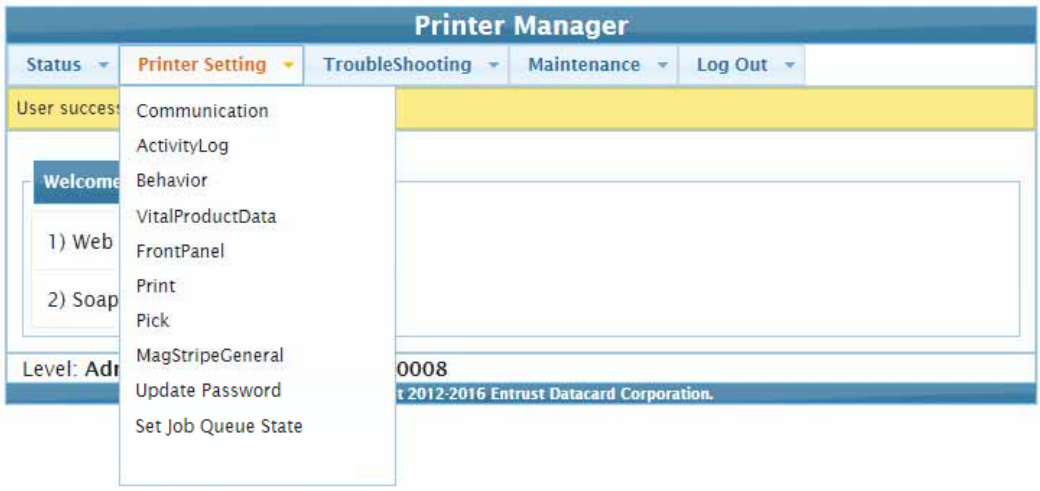


Menu Option	Description	Purpose
VPD	1. Manufacturer 2. Model 3. Agency Model 4. Options Installed 5. Serializations 6. Versions	Displays vital product data (VPD) information, including the manufacturer, model, options, and version information.
Printer Status	1. Printer State 2. Seconds On 3. Current Conditions 4. Job Status	Displays printer status information including the state, how long the printer has been on (in seconds), the current conditions of the printer, and recent job status.

Menu Option	Description	Purpose
Supplies	1. Ribbon Part Number 2. Ribbon Lot Code 3. Ribbon Remaining 4. Ribbon Max Length 5. Ribbon Serial Number 6. Ribbon Module 7. Ribbon Supported 8. Ribbon Action Sequence 9. Ribbon Supply Code 10. Ribbon Special Code 11. Ribbon Region Code 12. Ribbon Product Code	Displays detailed ribbon information including the type of ribbon; identifying information, such as part number; and percentage of ribbon remaining. The information displays for each ribbon module, such as retransfer film and ink ribbon.
Audit Data	1. CardsPickedInputHopper1 2. CardsPickedInputHopper2 3. CardsPickedInputHopper3 4. CardsPickedInputHopper Exception 5. GoodCards 6. LostCards 7. PrinterStartupCount 8. PrintJobCancels 9. PrintJobRecoveryAttempts 10. PrintJobRestarts 11. PrintJobResumes 12. PrintJobsFailed 13. PrintJobsReceived 14. PrintJobsRun 15. PrintJobsSucceeded 16 –30. Resettable counters 31. SameCardSecond SidePicks	Displays detailed card printer usage data. Entries with an ‘r” as the first letter of the name are resettable counters.
Adapters	Displays information about the IP address configured for the printer. The page shows the IP address, network mask, gateway address, and MAC address.	
About Printer Manager	Displays the Printer Manager software version and copyright information.	

Printer Setting Menu

The Printer Setting menu allows you to view and change printer settings.



Menu Option	Description	Purpose
Communication (A)	1. EthAddressMethod 2. EthDnsAddress1 3. EthDnsAddress2 4. EthDnsSearchSuffix 5. EthGatewayAddress 6. EthIpAddress 7. EthSubnetMask	Displays the default and current values of the communication method—DHCP (dynamic) or STATIC—and address information. Changes the current information or restores the default values. Refer to "Communication" on page 56 for more information on setting these values.
ActivityLog (A)	1. ExternalLog 2. ExternalLogServer 3. FilterCardActions 4. FilterConfigChanges 5. FilterJobStates 6. FilterSoapMsgs 7. FilterSystem 8. InternalLog	Allows you to enable or disable the internal and external logs and designate the external log server IP address. The activity log filters specify the severity level required to write information to the log, or turn off the filter. The filter severity levels include: Critical, Error, Warning, Notice, Information, Debug, and Disabled. Use this option to change the current values or restore the default values. Refer to "ActivityLog Example" on page 58 for an example of using the activity log.

Menu Option	Description	Purpose
Behavior (A)	1. ActivityLogExternal 2. ActivityLogInternal 3. ContactAutoDetect 4. ContactlessATRMode 5. DPCL 6. DPCL2 7. DPCL2Secure 8. DPCLSecure 9. Remake 10. RemakeMethod 11. RetrieveDataTimeout 12. SmartcardForceProtocol 13. SmartcardForceShareMode 14. PowerSaverMode 15. WebServerSecure	Displays the default and current status of printer operation and control methods. Use to change the current information or restore the default values. Refer to "Behavior" on page 59 for more information on specifying Behavior settings. **Caution:** Do not change the WebServerSecure option. If the web server is disabled, the printer is unable to receive communications.
VitalProductData	Available to WebService access level users only.	
FrontPanel (A)	1. BacklightBrightness 2. LcdConfigMenu 3. LedRibbonLow	Displays the default, current values, and allowed ranges for the security enclosure touch screen options. Use to change the current information or restore the default values. Refer to "FrontPanel" on page 61 for more information.
Print (A)	1. SettingsGroupPurpose 2. ApplyBendRemedy 3. BacksideCooling 4. BendRemedyRetransfer RollerTemp 5. KPower 6. OffsetCardX 7. OffsetPrtX 8. OffsetPrtY 9. OffsetTrfX 10. PeelOffPower 11. ResinBlackMode 12. RetranferRollerTemp 13. YMCPower	Displays the default, current values, and allowed ranges for the print options. Use to change the current information or restore the default values. Refer to "Print" on page 62 for more information on the Print options. Some items may not be available in the printer.

Menu Option	Description	Purpose
Pick (A)	1. ExceptionLinearOffset 2. ExceptionRotationOffset 3. Hopper1LinearOffset 4. Hopper1RotationOffset 5. Hopper2LinearOffset 6. Hopper2RotationOffset 7. Hopper3LinearOffset 8. Hopper3RotationOffset	Displays the default, current values, and allowed ranges for picking cards from the exception slot and multi-hopper and the movement of cards into the printer. Use the settings to change the current information or restore the default values. Refer to "Pick" on page 67 for more information.
MagStripeGeneral (A)	1. Coercivity 2. ISOHICOMode 3. Track1Format 4. Track2Format 5. Track3Format 6. RetryCount	Displays the default, current values, and limits for general magnetic stripe options. Use to change the current information or restore the default values. Refer to "MagStripeGeneral" on page 68 for more information.
Update Password (A)	Allows you to set, update, and confirm a new password for the Printer Manager access usernames.	
Set Job Queue State	CurrentPassword NextPassword ConfirmNextPassword State: • Online • Suspended • Offline	Use to secure the printer when performing troubleshooting, maintenance, and other procedures. Select a state from the following: • **Online:** The printer performs normally. • **Suspended:** Deactivates the printer but allows some exception jobs to start. • **Offline:** Disables the job queue to secure the printer before transporting it. To re-enable an offline printer and set it back to online, you must enter the same password that was used to set it to offline.

Communication

Use the Printer Setting menu Communication options to specify the communication method used by the printer.

Option	Description
EthAddressMethod	Specify the communication method used by the printer. Options are DHCP and STATIC.
EthDnsAddress1	These settings are not used at this time.
EthDnsAddress2	
EthDnsSearchSuffix	
EthGatewayAddress	When EthAddressMethod is STATIC, enter the gateway address for the network. If EthAddressMethod is DHCP, the DNS server controls this setting.
EthIpAddress	When EthAddressMethod is STATIC, enter the IP address for the network. If EthAddressMethod is DHCP, the DNS server controls this setting.
EthSubnetMask	When EthAddressMethod is STATIC, enter the subnet mask for the network. If EthAddressMethod is DHCP, the DNS server controls this setting.

ActivityLog

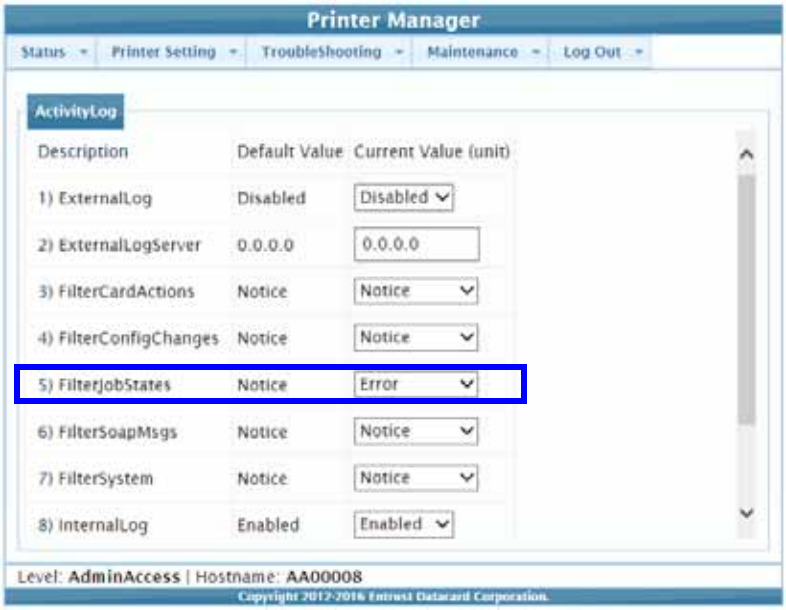
Use the Printer Setting menu **ActivityLog** options to enable or disable an internal or external activity log. When you specify an external log server, you can send the activity log to a syslog server monitored by a third-party application. You specify the types of actions to include in the logs and set the severity level for when the action should be written to the log. Filter severity level options are: Critical, Error, Warning, Notice, Information, Debug, and Disabled.

Option	Description
ExternalLog	Enable or disable writing the activity log to an external Syslog server.
ExternalLogServer	Specify the IP address of the external Syslog server, if ExternalLog is set to Enabled.
FilterCardActions	Write the start and completion of a card action with the specified severity, and higher, to the activity log. **Default:** Notice
FilterConfigChanges	Write configuration change actions with the specified severity, and higher, to the activity log. **Default:** Notice
FilterJobStates	Write changes to the state of a print or exception job with the specified severity, and higher, to the activity log. **Default:** Notice
FilterSoapMsgs	Write DPCL/Soap (Simple Object Access Protocol) messages from the printer with the specified severity, and higher, to the activity log. **Default:** Notice
FilterSystem	Write system information with the specified severity, and higher, to the activity log. A value of *Information* results in most events being written to the log. **Default:** Notice
InternalLog	Enable or disable the activity log on the printer. **Default:** Enabled

ActivityLog Example

The following example describes how to monitor the job state status to help troubleshoot a card production problem.

1. Select **ActivityLog** from the Printer Setting menu.
2. Set FilterJobStates to **Error**.
3. Click **Set Current** to save your changes.



Changes to the state of a job with this severity, or higher, will be written to the activity log.

Behavior

Use the Printer Setting menu **Behavior** options to control the printer operation.

Option	Description
ActivityLogExternal	Enable or disable writing the activity log to an external syslog server. **Default:** Enabled
ActivityLogInternal	Enable or disable the internal activity log. **Default:** Enabled
ContactAutoDetect	This setting supports legacy smart card clients. It overrides the smart card protocol sent by the client to the printer and uses SCARD_PROTOCOL_T0_OR_T1. **Default:** Disabled
ContactlessATRMode	Select the default ATR mode for the DUALi contactless smart card reader. The possible values are: • **Vendor**: Uses the ATR mode specified by the vendor. The generated ATR may not be compatible with all smart card applications or card types. • **PCSC**: Uses the PC/SC protocol to generate the ATR. • **CCID**: Uses the CCID protocol to generate the ATR. • **Legacy**: Uses the ATR mode currently in use by the reader. • **AppSpecifies**: Allows the smart card application to control the ATR mode. **Default:** Legacy **Note:** A smart card application may specify to receive the ATR in a different format regardless of this setting. However, when the printer restarts, the smart card reader returns to the setting specified here. Consider whether you want to specify the format on a job-by-job basis or modify the Printer Manager setting to use the desired ATR format.
DPCL	Enable or disable DPCL command access to the printer through the unsecured port. **Default:** Enabled
DPCL2	Enable or disable DPCL2 command access to the printer through the unsecured port. **Default:** Enabled

Option	Description
DPCL2Secure	Enable or disable DPCL2 command access to the printer through the secure port. **Default:** Enabled
DPCLSecure	Enable or disable DPCL command access to the printer through the secure port. **Default:** Enabled
Remake	Enable or disable card remakes. If Remake is enabled and a print request fails, the print request is tried again with a new card. A card is retried only once. **Default:** Enabled
RemakeMethod	Select the card remake method. Choices are PreserveOrder (reprint in queue order) or ConserveSupplies (reprint out of queue order). This setting is ignored if Remake is set to Disabled. **Default:** ConserveSupplies
RetrieveDataTimeout	Specify the time period during which card data can be retrieved. You can specify from 0 to 120 seconds. If the current value is 0, data is not retrieved.
SmartcardForceProtocol	The smart card reader normally auto-detects the protocol to use to communicate with the smart card chip. However, if a smart card application changes protocols, the smart card reader may continue to try to communicate using the previous protocol. Use this setting to override auto-detection of the communication protocol, if necessary. You can select from the following options: • **Disabled**: No override, the smart card reader auto-detects the protocol to use. • **T0**: Force the protocol to T=0 (asynchronous half-duplex byte transmission). • **T1**: Force the protocol to T=1 (asynchronous half-duplex block transmission protocol). **Default:** Disabled
SmartcardForceShareMode	Select from the following options: • Disabled • Exclusive • Shared • Direct **Default:** Direct

Option	Description
PowerSaverMode	Power off the retransfer roller in the print unit after the specified number of minutes of no activity. Power off requires a warm up period before the printer is ready to print cards again. A value of Off keeps the retransfer roller heated whenever the printer is on. However, keeping the roller on can keep supplies very warm. **Range:** Off, 5, 30, 60 minutes **Default:** 30 minutes
WebServerSecure	Allow access to Printer Manager (the web server) through the secure port. **Default:** Enabled **Caution:** Do not disable the web server. If the web server is disabled, the printer cannot receive communications. To reverse this action, you must contact Entrust Datacard for a DPCL application.

Vital Product Data

The **VitalProductData** settings allow WebService access level users to change information about the printer or system in specific circumstances. Contact your service provider should it become necessary to modify the VitalProductData settings.

FrontPanel

Use the Printer Setting menu **FrontPanel** options to customize the security enclosure touch screen.

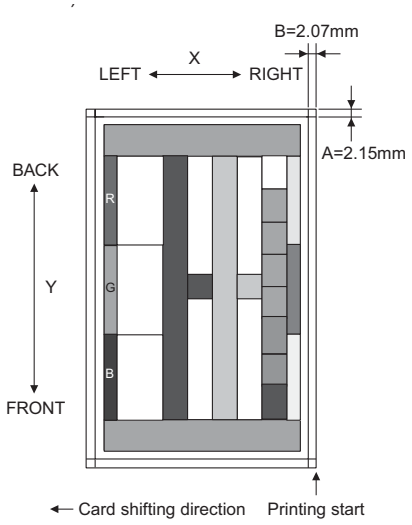
Option	Description
BacklightBrightness	Allows you to adjust the LCD front panel backlight brightness level. **Range:** 0 percent (no backlight) to 100 percent (bright) **Default:** 100 percent
LcdConfigMenu	Enable or disable the Configuration menu display on the LCD touch screen. **Default:** Enabled The Status and Maintenance menus cannot be disabled.
LedRibbonLow	Set the percentage of ribbon remaining before being notified that the ribbon is low and should be changed. **Range:** 0 to 100 **Default:** 10 percent

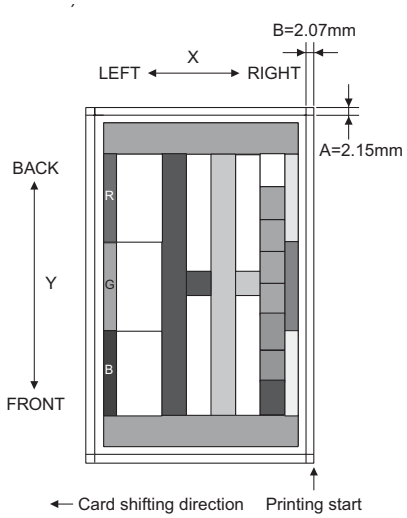
Print

Use the Printer Setting menu **Print** options to control the quality of the printing.

Option	Description
SettingsGroupPurpose	Describes the purpose of a settings group. Use it to state the reason for creating a settings group.
ApplyBendRemedy	Enable or disable the bend remedy. **Caution:** Do not enable if you are using smart cards. **Default:** Disabled Enable the bend remedy if completed cards are bowed. The card type material can affect the amount of bowing.
BacksideCooling	Allows the card to cool between transferring the image to the front side of the card and the back side of the card. This setting is valid only during double-sided printing. **Default:** Disabled • Enable BacksideCooling if cards are warped as they are ejected. • Disable BacksideCooling to improve print speed.
BendRemedyRetransfer RollerTemp	Increase or decrease the temperature of the bend remedy roller. **Range:** –5 to 0 special units **Default:** 0 special units • Increase the temperature value if using the bend remedy results in concave cards. • Decrease the temperature value if using the bend remedy results in convex cards. Determine the BendRemedyRetransferRollerTemp value to use based on the card type material and the BendRemedyVelocity. (Bend remedy velocity is a WebService setting. Contact your service provider for assistance.) Print sample cards to determine the appropriate settings for your card type.

Option	Description
KPower	Increase or decrease print intensity for the K panel of the ink ribbon. This adjustment controls the overall lightness or darkness of the K panel. **Range:** –3 to +3 special units **Default:** 0 special units • Increase KPower to make monochrome printing more intense. • Decrease KPower to reduce intensity (for crisp bar codes) or to prevent ribbon breaks while printing the K panel. **Example:** The first card has the KPower set too low, resulting in voids in the bar code. The second card may have the KPower set too high. To determine the best setting, reduce the KPower until there are voids in the bar code. Then, increase the KPower until they just fill in. The printing may look a little light to the eye, but this provides the best results for a bar code reader.
OffsetCardX	Sets the stop position of the card and changes the retransfer start position. Use this setting only if cards do not meet the ID-1 specification. **Range:** –7 to +7 special units (each unit moves the card about 0.17 mm.) **Default:** 0 special units

Option	Description
OffsetPrtX	Sets the position of printing on the card in the short direction. **Range:** –7 to +7 special units (each unit moves the card about 0.085 mm.) **Default:** 0 special units If the image is not centered on the card in the short direction, contact your service provider for assistance to change this setting.
OffsetPrtY	Sets the position of printing on the card in the long direction.  **Range:** –15 to +15 special units (each unit moves the card about 0.17 mm.) **Default:** 0 special units If the image is not centered on the card in the long direction, contact your service provider for assistance to change this setting.

Option	Description
OffsetTrfX	Sets the position of retransfer printing on the card in the long direction.  **Range:** –14 to +14 special units (each unit moves the card about 0.085 mm.) **Default:** 0 special units If the image is not centered on the card in the long direction, contact your service provider for assistance to change this setting.
PeelOffPower	Changes the intensity of printing for the peel-off ribbon panel. This adjustment controls the overall strength of peel-off. **Range:** –3 to +3 special units **Default:** 0 Decrease the PeelOffPower value to reduce wrinkling on the peel-off panel or to prevent ribbon breaks when you use a peel-off ribbon.
ResinBlackMode	Enable or disable to modify printing of the black (K) panel. **Default:** Disabled • Enable ResinBlackMode to improve print quality if thin lines or small black text is blurred. This slows the print speed. • Disable ResinBlackMode to improve print speed when fine black printing is not used.

Option	Description
RetransferRollerTemp	Increases or decreases the temperature of the retransfer roller. **Range:** –2 to +2 special units **Default:** 0 special units • Increase this setting if the retransfer results in concave cards. • Decrease the setting to reduce wrinkling of the retransfer film or to prevent film breaks while retransferring the image to the card. Determine the retransfer roller temperature to use based on the type of card material and the retransfer velocity. (Retransfer velocity is a WebService setting. Contact your service provider for assistance.) Print sample cards to determine the appropriate settings for your card type.
YMCPower	Changes the intensity of printing for the Y, M, and C ribbon panels. This adjustment controls the overall lightness or darkness of the YMC panels. **Range:** –3 to +3 special units **Default:** 0 special units • Increase the YMCPower to make color printing more intense. • Decrease the YMCPower to reduce intensity or to prevent ribbon breaks while printing colors.

Pick

The **Pick** settings control the pick motor and time frames for picking cards. These adjustments are all related to feeding a card into the printer.

Option	Description
ExceptionLinearOffset	Sets the linear offset to pick a card from the exception card slide. **Range:** –500 to 500 steps **Default:** 0
ExceptionRotationOffset	Sets the rotational movement offset to pick a card from the exception card slide. **Range:** –10 to 10 steps **Default:** 0
Hopper1LinearOffset	Sets the linear offset to pick a card from hopper 1. **Range:** –500 to 500 steps **Default:** 0
Hopper1RotationOffset	Sets the rotational movement offset to pick a card from hopper 1. **Range:** –10 to 10 steps **Default:** 0
Hopper2LinearOffset	Sets the linear offset to pick a card from hopper 2. **Range:** –500 to 500 steps **Default:** 0
Hopper2RotationOffset	Sets the rotational movement offset to pick a card from hopper 2. **Range:** –10 to 10 steps **Default:** 0
Hopper3LinearOffset	Sets the linear offset to pick a card from hopper 3. **Range:** –500 to 500 steps **Default:** 0
Hopper3RotationOffset	Sets the rotational movement offset to pick a card from hopper 3. **Range:** –10 to 10 steps **Default:** 0

MagStripeGeneral

Magnetic stripe settings are available for WebAdmin and WebService access-level users to set up basic magnetic stripe options.

Option	Description
Coercivity	Select the coercivity setting that matches the cards you are using. Coercivity measures the resistance of magnetic material to the removal of encoded data. High coercivity (HICO) requires more electrical force to encode data and the data is more resistant to magnetic interference. **Range:** HICO, LOCO **Default:** HICO
ISOHICOMode	Select the HICO mode for the magnetic stripe. **Range:** Standard, Super **Default:** Standard
Track1Format	Specify the data format for track 1, from the following: None — not used 6unit — alphanumeric, 76 characters 7unit — alphanumeric, 69 characters AAMVA6unit — AAMVA, 79 characters JIS2 — JIS2, 7 unit code, 69 characters **Default:** 6unit
Track2Format	Specify the data format for track 2, from the following: None — not used 4unit — numeric, 37 characters **Default:** 4unit
Track3Format	Specify the data format for track 3, from the following: None — not used 4unit — numeric 104 characters 7unit — alphanumeric, 69 characters AAMVA6unit — AAMVA, 79 characters **Default:** 4unit
RetryCount	Specify the number of attempts (automatic retries) the printer makes to encode (and read) the magnetic stripe data. **Range:** 0 to 3 **Default:** 2

Update Password

You can specify to password protect Printer Manager and limit access to the advanced settings. Adding password protection is the preferred method of restricting access to Printer Manager. If no password is assigned, a password is not needed to log on to Printer Manager.

Do the following to change the password:

1. Select the access level for which you want to assign a password. The WebAdmin access level can update the WebAdmin, WebUser, SnmpRwCommunity, and SnmpRoCommunity passwords.
2. Enter the current password. If a current password is not set, leave this field blank.
3. Enter the new password in the corresponding field. To remove a password, leave this field blank.
4. Enter the new password again to confirm it. Leave the field blank if you are removing the password.
5. Click **Update Password** to apply the changes.

HINTS & TIPS

- Passwords are hierarchical in the following order: WebService, WebAdmin, and WebUser. You can use a password that is higher in the hierarchy to log on to a specific role.
- Passwords may contain the following characters: a–z, A–Z, 0–9, +, and /.

Caution: Do not change the WebService password.

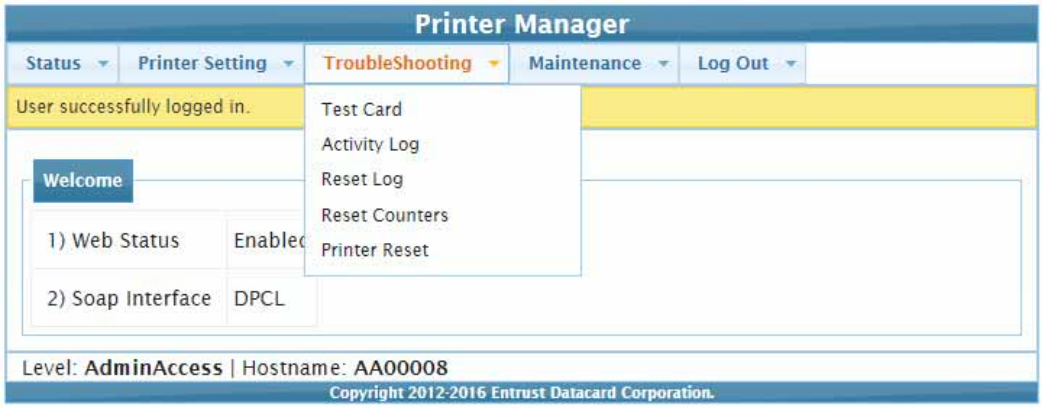
Set Job Queue State

Enter or select values prior to shipping the printer or system to or from repair facilities.

Refer to "Set Job Queue State" on page 55 for more information.

TroubleShooting Menu

The options on the **TroubleShooting** menu allow you to print test cards, manage the audit log, and reset card counts.



Menu Option	Description	Purpose
Test Card (A)	1. Input Hopper Number 2. Magnetic Stripe 3. Color 4. Monochrome 5. Test Pattern to use for Color and/or Monochrome 6. Copies 7. Park Smart Card 8. Park Position 9. Smart Card Park Time 10. Do not eject card	Select the options to print one or more test cards. Refer to "Test Card" on page 71 for more information.
Activity Log (A)	Download the activity log information and save it to a text file. Click **Download** (scroll to the bottom of the window) to save the file.	
Reset Log (A)	Reset the log. Click **Run** in the Reset Log submenu to remove all of the entries from the activity log.	
Reset Counters (A)	Reset the Current Count counters in the printer. Click **Run** in the Reset Counters submenu to reset the counters. Life counters or total card counts cannot be reset.	
Printer Reset (A)	Reset the card printer. Click **Run** in the Printer Reset submenu to perform a cold restart on the printer. This is the same as powering the printer off and on again. After the printer has reset, you can resume using Printer Manager without logging in again.	

Test Card

Use the TroubleShooting menu **Test Card** options to identify card production issues.

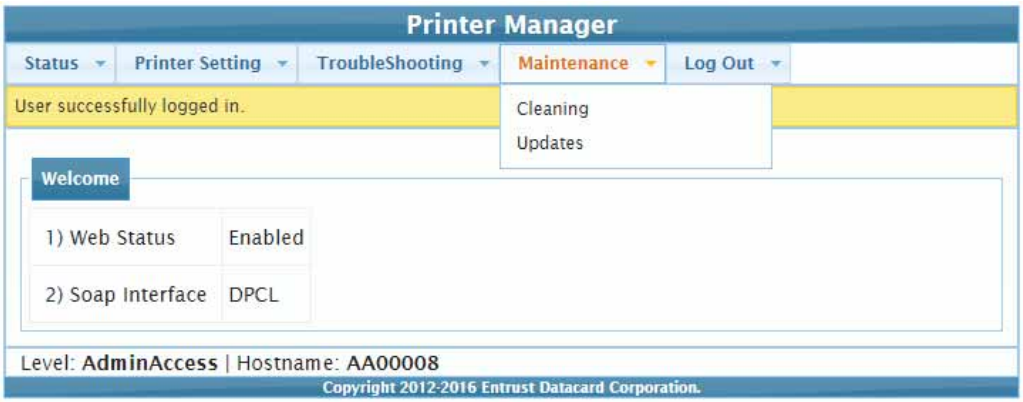
When printing test cards, make sure to keep track of the cards printed and their source. Due to the requirements of the financial card market, each card printed must be accounted for. Use your own blank cards to preserve the pre-printed customer card stock. Also provide counts of test cards and supplies for customer tracking.

Option	Description
Input Hopper Number	Select the input hopper number where the test card to be used is loaded.
Magnetic Stripe	Print the card with encoded magnetic stripe data.
Color	Print the test card using the YMCK panels of the print ribbon on the front or back.
Monochrome	Print the test card using a monochrome ribbon (or the K panel of a color ribbon) on the front or back.
Test Pattern to use for Color and/or Monochrome	Select a test pattern to use on the front or back of the test card, from the following: **TestPattern1:** Full color test card used to evaluate overall print quality using the YMCK panels of the print ribbon. **TestPattern2:** Half color test card used to evaluate overall print quality when using short-panel YMCKT ribbon. **TestPattern3:** Dense blue test card to test intensity issues that can appear as wrinkles on the printed card. **TestPattern4:** Color step test card (RGBK/YMC) that uses all panels of the print ribbon and displays the steps of each color from darkest to lightest. **TestPattern5:** Used to set up card registration. **TestPattern6:** Prints a marbles-image test card to evaluate general appearance. **TestPatternCheckered** and **TestPatternRegistration:** Used to check card registration mechanically. Side/side or lead/trailing issues may indicate a chassis, card guide, or roller problem. **TestPatternGrid:** Used to print a full K panel test card. **TestPatternManufactureA–E:** Used only during manufacturing setup.
Copies	Enter the number of test cards to print for each test, from 1 to 10. **Default:** 1

Option	Description
Park Smart Card	Parks the test card in the smart card bay. The test does not transmit any data, but is used to test the movement of the card into, and out of, the bay.
Park Position	Select the smart card park position from the following: ContactSmartCard or ContactlessSmartCard.
Smart Card Park Time	Enter the amount of time to hold the test card in the smart card bay, from 0 to 300 seconds. **Default:** 10 seconds
Do not eject card	Select this option to prevent the test card from being ejected from the printer.

Maintenance Menu

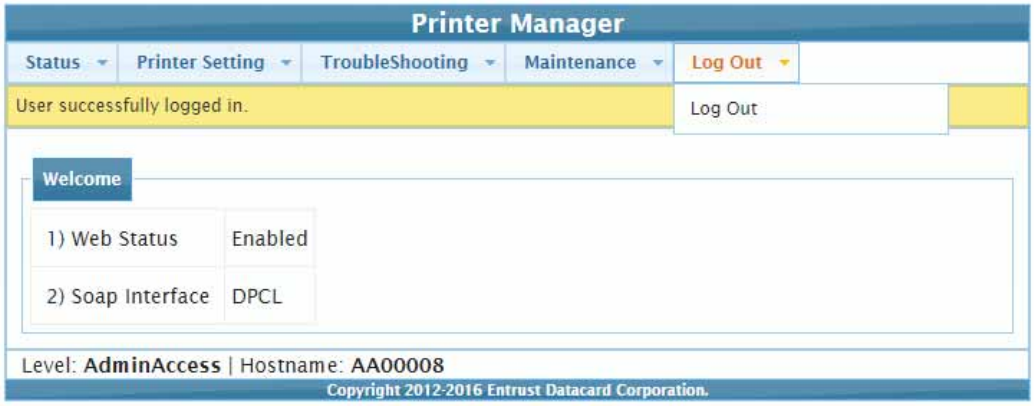
Use the **Maintenance** menu to clean the printer and upload Printer Manager settings following a repair. You must have WebService-level access to Printer Manager to download the settings prior to a repair.



Menu Item	Description
Cleaning	Use this option to clean the printer using a cleaning card. When you click **Run**, wait for the LCD prompt to insert the cleaning card, and then press the USER button.
Updates (A)	Use this option to browse to an external settings file and upload it to the printer. (You must be signed on with WebService-level access to download the printer settings used by Printer Manager. Contact your service provider for assistance.) 1. Click **Browse** and select the file to upload. 2. Click **Upload File**.

Log Out Menu

Use the **Log Out** option to end the current Printer Manager session and return to the Printer Manager Log In page. For security, close the browser window after you log out.



Printer Manager Updates

Printer Manager updates are included with firmware updates. A separate stand-alone utility, the Card Printer Firmware Update Utility Program, is used to update the printer firmware. The update utility is available as a separate download on the Entrust Datacard website.

Chapter 5: Supplies and Parts

5

This chapter describes the recommended supplies and replacement parts to use with the CR500 card printer.

You can order the following supplies and replacement parts:

- Ink Ribbon and Retransfer Film on page 76
- Cards on page 77
- Cleaning Supplies on page 79
- Replacement Parts on page 80

Ink Ribbon and Retransfer Film

You can order replacement ink ribbon and retransfer film.

Ink Ribbon

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

The following ink ribbon is available:

Type	Part Number	Panel Sets/Roll	Description
YMCKi (or YMCK-PO)	506276-003	750	Full color ribbon with a non-printing inhibitor (peel-off) area.

Retransfer Film

The following retransfer film (Intermediate Transfer Media, or InTM) is available:

Type	Part Number	Description
InTM Retransfer Film	568971-103	Prints up to 1000 single-sided cards

Supply Storage Guidelines

Follow these guidelines when storing ink ribbon or retransfer film rolls:

- Store supplies in their original packaging until you are ready to use them.
- Select a location away from direct sunlight, with a temperature between 41°F and 77°F (5°C and 25°C) with a maximum of 40%–60% relative humidity.
- Do not store supplies in direct sunlight or high humidity locations.
- Do not store supplies near heating ducts or blowers.
- The print ribbon maintains its quality for about one year. For optimal card quality, purchase and store quantities that you can use up in less than a year.
- The print ribbon and card stock might require secure storage and tracking. Follow your policy for storing and tracking the supplies used to make cards.
- Supply rolls must 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.

Cards

This section describes the specifications and quality guidelines for card stock to use with the CR500 printer. For best results, use high-quality card stock that meets the specifications and recommendations described in this section.

Card production success depends on the card manufacturer and card construction. Cards are available that meet the requirements listed in this section, but they might not perform as you expect.

Use cards that conform to the following specifications:

- ISO/IEC 7810 Type ID-1
- ISO/IEC 7811-2 Magnetic stripe (optional)
- ISO/IEC 7816 Smart card (optional)

Specification ISO/IEC 7810 includes a requirement that cards have an optical density of 1.5 or greater.

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

Card Size

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

Length	3.375 inches	85.60 mm
Width	2.125 inches	53.98 mm
Thickness	0.030 inches	0.75 mm

Card Material

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

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

Card Handling

These guidelines apply to unprinted cards.

- Any debris or particles on blank card stock can reduce card quality and damage the system.
- Grease or oils, such as oils from your fingers, also reduce card quality. Keep cards completely clean. Do not touch the print surface of a card with your fingers or hands. Handle blank card stock by the edges only.
- Do not use a rubber band to bind blank cards together.
- If you drop a card on the floor, clean it using a lint-free cloth before using it in the system.

Card Storage Guidelines

These guidelines apply to both blank card stock and processed cards.

- Use cards that are at room temperature. If cards are stored in a cooler environment than the printer, allow them to reach room temperature before using.
- Stack cards so that they will not shift and rub against 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 magnetic objects.
- Store cards in a cool, dry, and dark place. Excessive light can cause yellowing of cards on exposed edges.
- Keep cards in their original packaging.

Cleaning Supplies

For best results, keep additional cleaning supplies on hand. The following cleaning supplies are available.

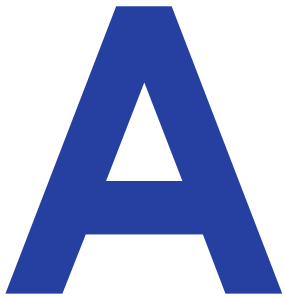
Supply	Part Number	Description
Cleaning kit–10-time use	509630-001	The 10-time use kit contains the following: • Pack of 10 double-sided cleaning cards for the print unit cleaning unit card cleaning rollers (508976-001) • Pack of 10 single-sided cleaning cards for cleaning the print unit internal rollers (506277-001) • Pack of 10 isopropanol cleaning cards (552141-002) • 2 packs of five isopropanol cleaning swabs (507377-001)
Cleaning kit–1-time use	509630-002	The 1-time use kit contains the following: • 1 double-sided cleaning card for the print unit cleaning unit card cleaning rollers • 1 single-sided cleaning card for cleaning the print unit internal rollers • 1 isopropanol cleaning swab
Double-sided cleaning cards	508976-001	Pack of 10 cards used to manually clean the print unit cleaning unit card cleaning rollers
Single-sided cleaning cards	506277-001	Pack of 10 cards used to clean the print unit internal rollers
Cleaning cards	552141-002	Pack of 10 double-sided, isopropanol-coated cleaning cards
Printhead cleaning swabs	507377-001	Pack of five isopropanol-saturated cleaning swabs for cleaning debris and dust from the printhead and from hard-to-reach internal printer areas
Cleaning roller unit	534717-101	Replacement cleaning roller unit
Printer fan filter	534717-134	Replacement printer fan filter
Gloves	510034-001	box of 100 ESD-safe nitrile disposable card inspection gloves

Replacement Parts

The following replacement parts are available:

Ink Ribbon Cartridge (orange)	534717-144
Retransfer Film Cartridge (green)	534717-145
Card Weight	504416-001
Power Supply	810499-002
Power Cords	Contact your local service provider for the correct power cord for your location.

Appendix A: Print Unit Front Panel Menu and Messages



This appendix describes the LCD menu system accessed through the print unit front panel, and the messages that may display on the front panel.

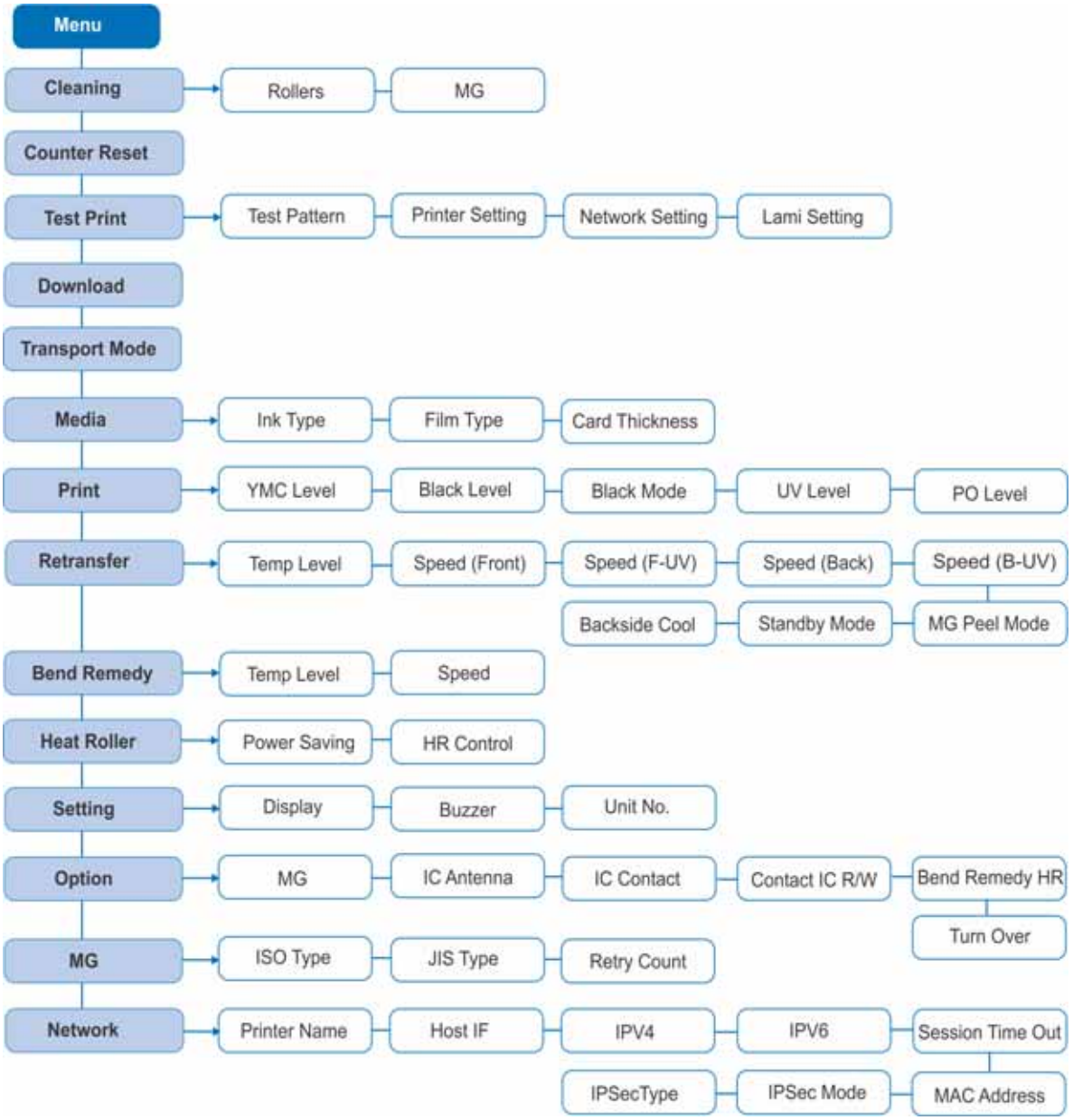
This appendix contains the:

- Front Panel Menu Structure on page A-2
- Front Panel Menu Description on page A-3

Front Panel Menu Structure

The following chart shows the structure of the print unit front panel menu. Some menu items may not display, depending on the options installed in your printer.

Do not use the print unit front panel menu to change printer settings unless instructed to do so.
Use the touch screen or Printer Manager to change printer settings.



Front Panel Menu Description

This table lists and describes all menu items, and their settings and functions, found on the print unit front panel.

The front panel menu system is not normally used, except for certain purposes. Use this menu system as directed in the printer's *User's Guide* for cleaning the print unit and to set the printer into transport mode. Other settings are made using Printer Manager or the security enclosure touch screen.

Menu Display	Settings	Function
Cleaning	Rollers	Select **Rollers** to start the cleaning function to clean the card feed rollers and heated rollers. Refer to "Clean the Print Unit in the printer's *User's Guide*.
	MG	Select **MG** to clean the magnetic (MG) head when using magnetic stripe cards. Refer to the printer's *User's Guide* for the steps to follow.
Counter Reset	OK?	Press **Enter** to reset the Free counter and Error counter.
Test Print	Test Pattern Printer Setting Network Setting Lami Setting	DO NOT USE. Use either the touch screen LCD menu or Printer Manager to print test cards. Refer to the printer's *User's Guide* to print cards from the touch screen, or "Test Card" on page 71) to print test cards from Printer Manager.
Download		Press the **Enter** key to prepare the printer for a firmware download. A separate firmware update utility is used to update the printer firmware. Refer to "Printer Manager Updates" on page 74 for more information. DO NOT power off the printer while the firmware is being downloaded.
Transport Mode	OK?	Place the printer in transport mode when moving or shipping the printer. Press **Return** ↵ to place the printer in Transport Mode. **Please, power off** displays on the print unit front panel. Transport mode is canceled when the printer is powered back on. Refer to the printer's *User's Guide* for information about preparing the printer for transport.

Menu Display	Settings	Function
Media	Ink Type: • YMCK • YMCK-PO • YMCKK • YMCK-UV	Displays the ink ribbon and retransfer film that are loaded in the printer. The CR500 printer supports only YMCK-PO ink ribbon. (The printer detects the type of ink ribbon; it cannot be set.)
	Film Type: • 1000	Retransfer film is available in 1000 frames per roll.
	Card Thickness: • Standard • Thin	Only standard ID-1 cards, 0.030 inch (0.76 mm) thick, are supported.
Print	YMC Level	Displays the value set using Printer Manager. Refer to "Print" on page 62 for more information on specifying Print settings.
	Black Level	
	Black Mode	
	UV Level	Not supported.
	PO Level	Displays the value set using Printer Manager. Refer to "Print" on page 62.

Menu Display	Settings	Function
Retransfer	Temp Level	Displays the value set using Printer Manager. Refer to "Print" on page 62 for more information on specifying Retransfer settings.
	Speed (Front)	Displays the value set using Printer Manager. You must have WebService-level access to set this value. Refer to "Start Printer Manager" on page 48.
	Speed (F-UV)	Not supported.
	Speed (Back)	Displays the value set using Printer Manager. You must have WebService-level access to set this value. Refer to "Start Printer Manager" on page 48.
	Speed (B-UV)	Not supported.
	MG Peel Mode • Standard • MG Stripe	Displays the value set using Printer Manager. Refer to "Print" on page 62.
	Standby: • Front Wait • Back Wait	Not supported.
	Backside Cool: • On • Off	Displays the value set using Printer Manager. Refer to "Print" on page 62.
Bend Remedy	Temp Level	Displays the value set using Printer Manager. Refer to "Print" on page 62 for more information on specifying Bend Remedy settings.
	Speed	Displays the value set using Printer Manager. You must have WebService-level access to set this value. Refer to "Start Printer Manager" on page 48.
Heat Roller	Power Saving: • Off • Up to 60 minutes	Displays the value set using Printer Manager. Refer to "Behavior" on page 59 for information on specifying the power saver mode.
	HR Control: • Off • On	Displays the value set using Printer Manager.

Menu Display	Settings	Function
Setting	Mode: • Counter • Laminator State	Displays printer settings. • DO NOT USE the Counter settings. Use the security enclosure touch screen menu or Printer Manager to display current card counts for the printer. • Laminator State is not supported.
	Counter: • Total Cnt • Head Cnt • Free Cnt • Cleaning Cnt • Error Cnt	
	Contrast	Displays the Front Panel contrast using seven gradations from –3 (low contrast) to +3 (high contrast). The default setting is 0.
	Buzzer: • On • Off	Displays whether the electronic beep sound is On or Off. The sound can indicate an error or can confirm a menu selection.
	Unit No.: • No. 1–No. 10	DO NOT USE. The Unit No defaults to 1 for the CR500 printer.

Menu Display	Settings	Function
Option	MG: None ISO	Displays the type of magnetic encoder installed.
	IC Antenna: None Installed	Displays whether the contactless card option is installed: • **None:** A contactless card option is not installed. • **Installed:** A contactless smart card option is used.
	IC Contact: None ISO Type	Displays whether the contact card option is installed: • **None:** A contact card option is not installed. • **ISO type:** The type of contact card option installed.
	Contact IC R/W: None Installed	Displays whether the contact card R/W option is installed: • **None:** The R/W option is not installed. • **Installed:** An Internal Contacts for External Reader option is installed.
	Bend Remedy HR: None Installed	Displays whether the bend remedy option is installed.
	Turn Over: None Installed	Displays whether the turnover (duplex) option is installed.
MG	ISO Type: Loco Hico JIS Type: Loco Hico	Displays the coercivity value set using Printer Manager for writing data to magnetic stripe cards (if the magnetic stripe option is installed): • Loco: 238 x 102 [A/m] (300[Oe]) • Hico: 218 x 103 [A/m] (2750[Oe]) Refer to "MagStripeGeneral" on page 68 for more information.
	Retry Count: 0, 1, 2, 3	Displays the value set using Printer Manager. Refer to "MagStripeGeneral" on page 68 for information on setting the retry value.

Menu Display	Settings	Function
Network	Printer Name	DO NOT USE
	Host IF: • USB • LAN	This must be set to USB.
	IPv4	DO NOT USE
	IPv6	DO NOT USE
	Session Time Out	DO NOT USE
	MAC Address	DO NOT USE
	IPSec Mode	DO NOT USE
	IPSec Type	DO NOT USE

Appendix B: Printer Specifications

B

This appendix describes the operating environment recommended for the CR500 card printer.

This appendix contains:

- Operating Specifications on page B-2
- Operating Environment on page B-2
- Storage Environment on page B-3

Operating Specifications

The CR500 printer operates under the following specifications.

Recording method	Dye sublimation retransfer
Feed format	Automatic feed
Recording density	300 dpi
Reproduction gradations	256 levels each yellow (Y), magenta (M), and cyan (C); two for black (K)
Printing time	29 seconds (single-sided, excluding data transfer time)
Interface	Ethernet (100Base-Tx or 10Base-T)
Power supply (2)	100–120VAC or 220–240VAC (±10%)
Current dissipation	3.5A for 100V system and 1.6A for 200V system
Weight	47 lbs (21.3 kg)
Sound level	Less than 70dB(A) according to DIN45635, part 19 (EN27779)

Operating Environment

Use the following environment guidelines when operating the printer.

Operating temperature	63°–83°F (17°–28°C)
Operating humidity	35%–60%, non-condensing

Storage Environment

If you are storing the CR500 card printer with no ink ribbon or retransfer film installed, use the following storage environment guidelines. For ink ribbon and retransfer film storage requirements, refer to "Supply Storage Guidelines" on page 76.

Storage temperature	5°–131°F (-15°–55°C)
Storage humidity	20%–80% (without condensation)