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User's Manual

P100i

User's Manual No. 980497-0012

Rev. A

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FOREWORD

This manual contains installation and operation information for the Polaroid P100*i* Series card printers.

RETURN MATERIALS AUTHORIZATION

Before returning any equipment to Polaroid for in-warranty or out-of-warranty repair, contact Repair Administration for a Return Materials Authorization (RMA) number. Repack the equipment in the original packing material and mark the RMA number clearly on the outside. Ship the equipment, freight prepaid, to the address listed below:

Polaroid Digital ID Systems 4650 Executive Blvd. Ft. Wayne, IN 46808 www.polaroid-id.com

Toll Free Number: 1-866-484-0611

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PRODUCT WARRANTY STATEMENT

Printers

All Polaroid Card Printers are warranted against defects in material or workmanship for twelve (12) months from the purchase date.

Proof of purchase or shipment date is required to validate the warranty period. The warranty becomes void if the equipment is modified, improperly installed or used, damaged by accident or neglect, or if any parts are improperly installed or replaced by the user.

Note: Products returned must be packaged in the original or comparable packing and shipping container. In the event equipment is not so packaged, or if shipping damage is evident, it will not be accepted for service under warranty. Surface transportation charges for return to customers in the continental United States is paid by Polaroid. Otherwise, Polaroid pays CPT (carriage paid to) nearest airport, customer pays customers, duties, taxes, and freight from airport to destination. If Polaroid determines that the product returned for warranty service or replacement is not defective as herein defined, the customer will pay all handling and transportation costs.

Printheads

Since printhead wear is part of normal operation, the original printhead is covered by a twelve (12) month warranty. Warranty period begins on purchase date.

To qualify for this warranty, the printhead must be returned to the factory or to an authorized service center. Customers are not required to purchase Polaroid supplies (media and/or ribbons) for warranty qualification. However, if it is determined that the use of other manufacturer supplies has caused any defect in the printhead for which a warranty claim is made, the user is responsible for Polaroid's labor and material charges required to repair the defect. The warranty becomes void if the printhead is physically worn or damaged; also if it is determined that failure to follow the preventive maintenance schedule listed in the User's Guide has causes defect in the thermal printhead for which a warranty claim is made.

Spare Parts

All parts, maintenance kits, options kits, and accessories are warranted to be free of defects in material and workmanship for 90 days (except where otherwise denoted) from date of purchase. This warranty become void if the item is modified, improperly installed or used, or damaged by accident or neglect.

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89/336/EEC	EMC Directive	EN 55022 (1998)	RF Emissions control
modified by 92/31/EEC and	EMC Directive	EN 301489-3 V1.4.1	RF Emissions and immunity for radio equipment
93/68/EEC	EMC Directive	EN 55024 (2001)	Immunity to Electromagnetic Disturbances
73/23/EEC modified by 93/68/EEC	Low voltage Directive	EN 60950 (1992) and Amendments A1 to A11 (1997)	
1999/5/CE	R&TTE Directive	EN300330-2 V1.1.1	Radio frequency interferences

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For a formal Certificate, please contact Compliance Engineering at the Fort Wayne facility.

Model: P100*i* conforms to the following specification:

FCC Part 15, Subpart A, Section 15.107(a) and Section 15.109(a) Class B digital device.

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

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and the receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

The user may find the following booklet, prepared by the Federal Communications Commission, helpful:

How to identify and resolve Radio/TV Interference Problems. This booklet is available from the U.S. Government printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

Use of a shielded cable is required to comply within Class B limits of Part 15 of FCC Rules.

Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this equipment not expressly approved by Polaroid may cause, harmful interference and void the FCC authorization to operate this equipment.

INDUSTRY CANADA NOTICE

This device complies with Industry Canada ICS-003 class B requirements.

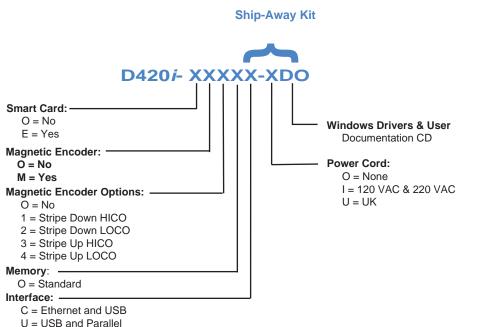
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Cleaning	Thank you for choosing the Polaroid P100 <i>i</i> Plastic Card Printer.
Troubleshooting	Thank you for choosing the Folatoid Froor Hastic Card Finiter.
Specifications	These printers produce cards ideal for personalized identification, access control,
Appendix A	visitor, membership, promotion and luggage card, badges and tags.
Appendix B	This manual guides you to an efficient start up and operation of your new Card Printer.
Appendix C	P100i PRINTER MODELS

The Product Number tells a story:

Here is a quick review of the Polaroid Card Printer Series numbering and lettering system to help you.

The P100*i* Plastic Card Printer employs Dye Sublimination and Resin Thermal Transfer Technologies. Model numbers include identifiers that specify options are shown using the following lettering conventions:



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ICONS

VS Throughout this manual, different icons highlight important information, as follows:



Important general information.



Mechanical hazard, such as one associated with moving parts, capable of resulting in equipment damage or personal injury.



Electrical hazard, such as an exposed voltage point, capable of causing electrical shock and personal injury.



An area where electrostatic discharge (ESD) can cause component damage. Use a grounding wrist band.



Elevated temperature hazard, capable of producing a burn.



Keep Card Printer clean by minimizing cover open time.

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GETTING STARTED

1•1 Unpacking your card printer

Your P100*i* printer ships in a carton and protective anti-static bag. Keep all packing material in case you need to move or reship the printer.

While unpacking, inspect the carton to ensure that no damage occurred during shipping.

Please ensure that you have a clean and nearly dust free environment for proper operation and storage of the printer.

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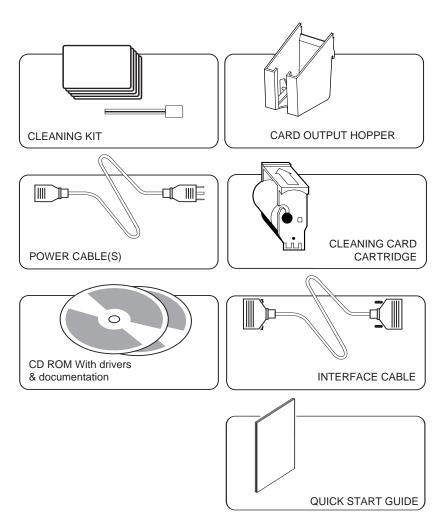
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In addition to user documentation, make sure the following items are included with your P100*i* printer:



If any items are missing, please contact your dealer.

To reorder, please refer to Appendix C of this manual.

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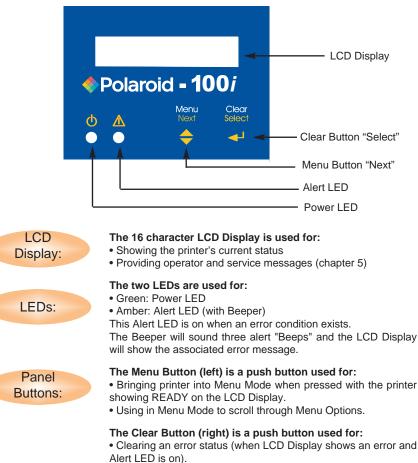
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1•2 Indicators and Control

Your P100*i* printer has an LCD Display, two LED's and two Panel Buttons.



- Invoking automatic retry of the operation which gave the error.
- Selecting a Menu Option when in Menu Mode.

Note: The buttons beep when pushed.

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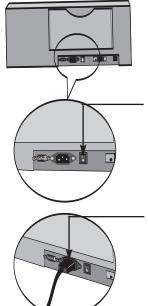
Appendix C

1•3 Printer Installation

The following will guide you through the installation of your P100*i* printer.



CAUTION: Limit AC power supplied to the P100*i* Printer to 110 - 230 V AC, 60 - 50 Hz for an associated 680 mA - 310 mA. Limit excess current draw to 16 amps or less, using an associated circuit breaker or other such device. Never operate the printer in a location where operator, computer, or printer can get wet. Personal injury could result. The printer must be connected to an earthed electrical power supply and properly protected against electrical surges and grounding faults.



1. Place the printer in a location that allows easy access to all sides. The printer should never be operated while resting on its side or upside down.

2. Place the power switch in the OFF (0) position.

3. Insert the power cable into the printer power socket and attach to grounded electrical socket of the proper voltage and type.

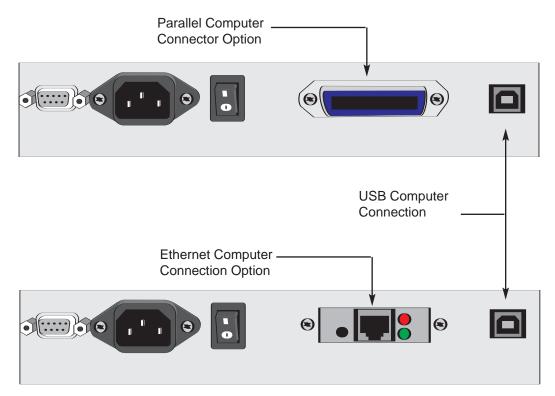
Continued on following page



CAUTION: Intermittent or unpredictable operation may occur from unsecured connectors. If damaged, the power cable must be replaced by an exact equivalent. Use only Parallel Cable under 3 Meters in length.

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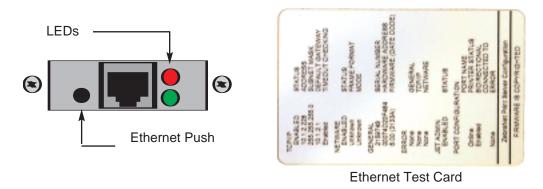
Appendix C

ETHERNET The following shows the function of the switch and indicators **INDICATORS** found on P100*i* Printers that use Ethernet Computer Interfaces.

LED	Action	Status Being Signaled
Red	Flashing	Power-On Self Testing
Red	Solid > 30 sec	Failure of Power-On Tests
Red/Green	Flashing Alternately	Firmware Download mode
Green	Solid > 30 sec	Proper Hardware Operation; Network Found
Green	Rapid Flashing (9/sec)	Network not Found
Green	Slowly Flashing (1/sec)	Print Job in Progress

ETHERNET Press the Ethernet Push button with the printer ON to to get a Test Card.

Press and hold the Switch while turning ON the Printer to perform a RESET.





You can refer to the ZebraNet® PrintServer II[™] for Ethernet Networks Installation and Operation Guide for details regarding this interface.

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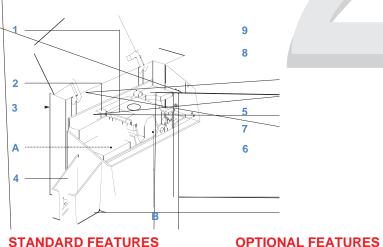


A. Magnetic Encoding Station

B. Smart Card Contact Station

2•1 Printer Features

The following shows the features found on your P100*i* Printer:



STANDARD FEATURES

- 1. Print Head
- 2. Print Head Unlock Lever
- 3. Manual Holder
- 4. Card Output Hopper
- 5. Card Cleaning Cartridge
- 6. Rejected Card Box
- 7. LCD Display & 2 Panel Buttons
- 8. Card Feeder + Cover
- 9. Card Thickness Control Lever

PLEASE NOTE: Any blue items inside the printer can be operated by the user.

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P100i SECURITY FEATURES

Your P100*i* Plastic Card Printer comes equipped with several security features. For information on the Passcode electronic lock or the TrueSecure Varnish Image Printing, please refer to the *i* Series Security Features supplement document.

Contact your management or authorized dealer for more details.

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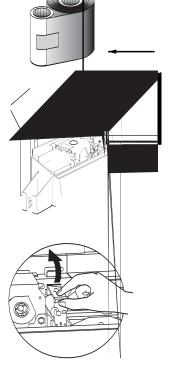
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2•2 Loading Ribbons

The P100*i* Printer requires approved ribbons (see Appendix C). The Resin Thermal Transfer and Dye Sublimation ribbons and Lamination are specifically designed for your P100*i* Printer. *i* Series printers require the use of *i* Series ribbons for full color printing.



DO NOT TOUCH the print head or the electronic components on the print head carriage. Discharges of electrostatic energy that accumulates on the surface of the human body or other surfaces can damage the print head and other electronic components used in the device.



1. Remove ribbon from packaging.

2. With printer power ON and READY status, open cover and press down on the Print Head Unlock Lever to open the print head carriage. The print head carriage will pop open.

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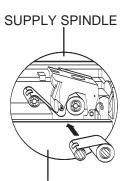
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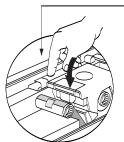
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3. Load ribbon onto the supply spindle (under print head carriage) and empty core (with tape attached) onto the take-up spindle. Make sure the ribbon comes off of the top of the supply spindle and feeds to the top of the take-up spindle.

TAKE-UP SPINDLE

'CLICK'



4. Push down on the Print Head Lock Lever until an audible 'click' signals the locked-down position.

5. Close Cover.





Please note that the ribbon automatically synchronizes whenever the print head lock down occurs.

With *i* Series ribbons, the printer automatically detects the ribbon type inserted.

The card flipper will not operate and an error will be indicated if you try to flip a card when the cover is open.

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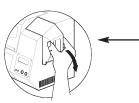
Appendix C

2•3 Loading Cards

To help you load, print, and collect cards, the P100*i* has the following items:

A - CARD FEEDER

This items is used for loading cards.



1.Open Card Feeder Cover by putting your fingers on both sides and rotating the cover in a clockwise direction to the open position.



2. Install cards into Feeder* as shown.



3.-Close Card Feeder Cover.



DO NOT bend cards or touch print surfaces as this can reduce print quality. The surface of the cards must remain clean and dust free. Always store cards in an enclosed container. Ideally, use cards as soon as possible. If cards stick together, carefully shuffle them.

* See Chapter 6, Technical Specifications, for card requirements and capacities.

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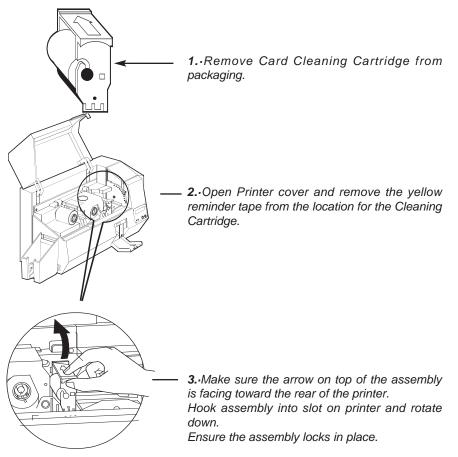
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B - CARD CLEANING CARTRIDGE

This item is used to clean the cards entering the printer.



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C - CARD THICKNESS CONTROL LEVER

This item is operated by the user to prevent more than one card feeding into the printer at the same time and causing a jam.



Open Cover, and adjust lever to correct position. Repeat for different card thickness.

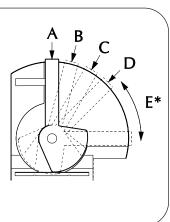
(Factory setting is for 30mil (0.762mm) card thickness). See diagram below:

Card Thickness:

- A -60mil (1.524mm) to 50mil
- (1.27mm)
- B 40mil (1.016mm)
- C 30mil (0.762mm)
- D 20mil (0.508mm)
- E* Less than 20 mil (0.508mm)

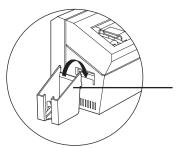
* Start at lowest position and move lever up to match card thickness.

For other card thickness, start lever at lowest position and move up until cards feed.



D - CARD OUTPUT HOPPER

This item is used for collecting printed cards.



Install Card Output Hopper onto printer by hooking over bottom edge of card exit aperture.

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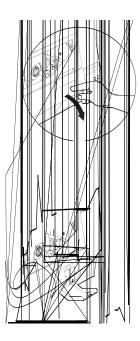
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2•4 Rejected Card Box

The P100*i* Printer is equipped with a Rejected Card Box. When an encoding can not be completed, the card is ejected into the Rejected Card Box. The P100*i* Printer counts the number of cards which go into the Rejected Card Box. After 20 cards the printer stops, the Amber LED Flashes and a LCD Message is displayed indicating the need to empty the reject box.

WHEN TO MAINTAIN

REJECT BOX FULL



HOW TO MAINTAIN

1. Press the top of the Rejected Card Box Door as shown. Allow the door to swing down and open.

When the LCD screen reports message

2. Remove all cards from the Rejected Card Box.

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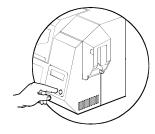
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3. Swing the Rejected Card Box Door and press the top. An audible "click" signals the locked position.



4. Press the Clear Button on the front panel to re-start the current printer job and to clear the rejected cards counter.

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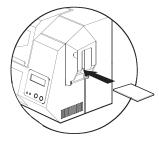
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2•5 Feeding one card at a time

A Manual Feed Slot is available on the side of the Card Feeder cover for feeding single cards. Cleaning Cards are fed manually through this slot. <u>The Feeder must be empty</u> for manual card feeding to work properly.



For one-at-a-time printing, feed cards through slot on side of Feeder.

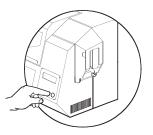
Do not feed more than one card at a time.

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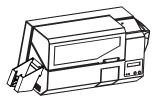
2•6 Printing a Test Card

With ribbon and cards loaded, your P100*i* printer is ready to print. To check the operation of the printer you should print a test card.



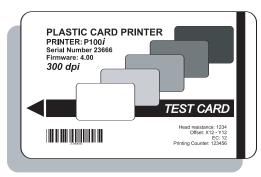
1. When the printer displays READY, press the "Next" button (left) on your Control Panel to "SELF TEST CARD MENU", then the "Select" button (right).

2. Press "Next" to the SELF TEST CARD Print parameters, and then "Select".



3. A test card will print after a few seconds. LCD display will show printing status.

Test Card is printed on both sides of the card.



This is an example of the test card.



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2•7 Printer Menu Information

The printer is equipped with a LCD Display and two key buttons which gives access to printer menus.

Press the Menu button to enter the Menu Mode



The top line display shows menu information. The second line of display clarifies the function of the two [NEXT] and [SELECT] key buttons relative to the current menu item.

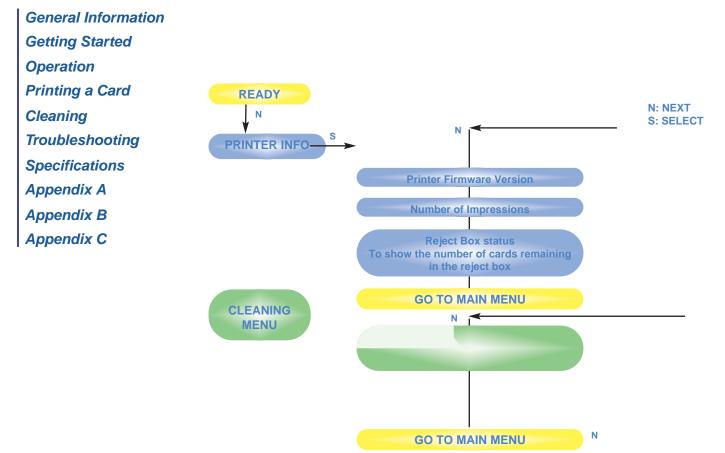
The printer will return to READY Mode if either of the two key Buttons is not pressed within ten seconds of entering Menu mode.

See next page:

P100*i* LCD Menu Tree

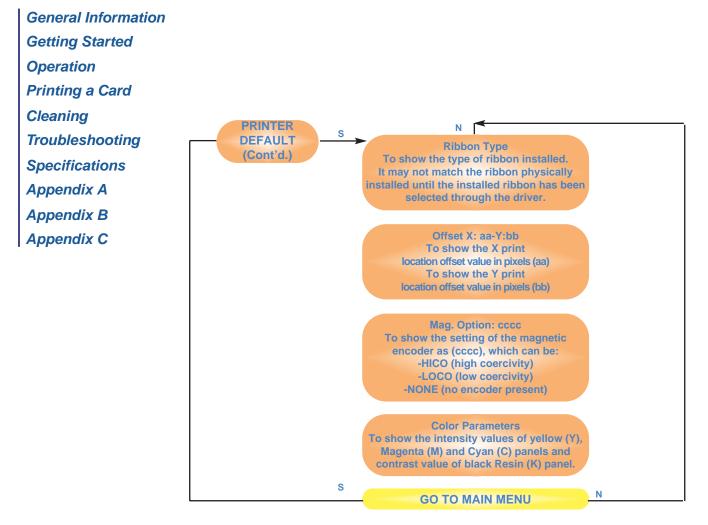
*If the printer is equiped with a Magnetic Stripe Encoder

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PRINTING A SAMPLE CARD

Printing with the P100*i* Printer requires the Windows Printer Driver, your card design/issuing Windows software or printer command level programming through the printer interface.

The P100*i* Card Printer can be used with any Windows 98/ME/XP/Win 2000, Windows NT 4.0 software application program, using the drivers provided on CD with the printer.

This section contains information on the printing of a dual-sided card in color (using the 6-Panel color ribbon YMCKOK) and the Windows Printer Driver.



BEFORE installing updated printer driver versions, always delete the existing printer driver version from your computer.

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3•1.To install the P100i Printer Driver automatically on all Operating systems, use the install wizard.

The wizard will:

- Automatically launch when the driver CD is inserted.
- Check to see which operating system you are using

Delete previous versions of the driver and clean up any necessary Registry entries.

- You must select "Remove" from the install options to remove any previous driver versions.
- Shut down of PC if necessary.
- Install the new driver files.

The install Wizard will walk you through the appropriate steps.



Do not power the printer with USB attached.

The driver will prompt you for USB installation.

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3•2 Set Printer Driver Options:

To open the P100*i* Printer screen, right mouse click on your driver icon and select **Properties**.

Change the options as follows:

1• On the **Device Settings** tab the magnetic encoder feature is automatically enabled. If you need to change settings for a Magnetic Encoder, select **Encoder** settings button.

2• On the General tab select card orientation:

Landscape or portrait - Select "Landscape".

(In Windows NT, this is located under Document Defaults when you right mouse click from your driver icon. In Windows 2000 and XP, it is located under Print preferences.)

3• In the **Ribbon section**, the ribbon type is automatically detected and enabled for you.

3a• You can click on "ribbon Info" and see how many panels are left.

4• In the same tab, go to Black Panel area and select Text Only. This option allows the text printing using the Black Resin Panel from the Color Ribbon.

5• Close the P100*i* Printer screen.

Now that you have loaded media and set up the printer driver, the P100*i* Printer is ready to print.

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3•3. Printing a Sample Card:

Follow the steps to print your first card

- Go to the Microsoft Word Software.
- If the printer was not selected as the default printer, go to the File menu and Select Printer and choose Polaroid P100*i* Card Printer or *i* Series parallel card printer in the printer names list. Then Close the print dialog box.
- Come back to File menu and choose Page Setup.
- Select **Paper Size** tab and in Paper Size choose **Card**. Then select the orientation: "landscape".
- Go to **Margins** tab, put the Top, Bottom, Left, and Right margins with O values.
- Press **OK** to close Page **Setup** window.
- The card appears on the screen.
- Design a card with 2 sides as follows:



Back Side

- Once you are ready to print, go to File and point Print.
- The printer will feed in a card and start printing (the data download time will vary depending on the complexity of the card design and the processing speed of your computer).

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CLEANING

PROTECT YOUR FACTORY WARRANTY!



The recommended maintenance procedures must be performed to maintain your factory warranty.

Other than the recommended cleaning procedures described in this manual, allow only Polaroid authorized technicians to service the P100*i* Printer.

NEVER loosen, tighten, adjust, or bend, etc. a part or cable inside the printer.

NEVER use a high pressure air compressor to remove particles in the printer.

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4•1 Cleaning System

Your P100*i* Printer includes a simple cleaning system using the Pre-Saturated Cleaning Cards provided. The regular use of these cards will clean and maintain important parts of your printer: including the Print Head, and Transport Rollers.

CLEAN PRINTER

WHEN TO CLEAN When LCD screen reports message.

HOW TO CLEAN

1. Leave power on. Open Cover and release Print Head Bracket to remove ribbon.

Close Print Head bracket.

Close Cover. Remove cards from Card Feeder.

 2. Insert one Pre-Saturated Cleaning Card (provided) through slot on the side of the Card Cartridge.

3. Press the right Panel Button for a few seconds. The card will feed into printer and carry out the cleaning process. Repeat the process with a new Cleaning Card if necessary.

Note: For a printer cleaning prior to the **WHEN TO CLEAN** signal, press the Left Panel Button until the LCD screen shows "*CLEANING MENU*". Press the right Panel Button to select and one more time again to run the cleaning process (Repeat first steps 1 & 2 above).



Although the CLEAN PRINTER message is displayed until the cleaning process has been performed, the printer will continue to operate.

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4•2 Cleaning the Print Head

A cleaning using the Cleaning System with cards usually suffices. However, a separate Print Head cleaning using swabs can remove more stubborn deposits when print anomalies persist. To avoid deposits, only use foam-tipped swabs.

1. Raise Print Head and remove the Ribbon.

2.-Clean Print Head by moving alcoholmoistened swab tip side-to-side across Print Head elements. Only use moderate force. (To reorder swabs see Appendix C).

3. Turn power ON . Allow two minutes for the print head components to dry before resuming printing.



Never use a sharp object to scrape deposits from the print head. Permanent damage will result.

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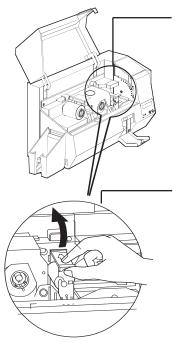
4•3 Card Cleaning Cartridge

Your P100*i* Printer also has a Card Cleaning Cartridge. This item cleans the cards entering the printer. To ensure print quality, the cleaning roller requires periodic replacements.



WHEN TO MAINTAIN

When LCD screen reports message. Run a printer cleaning first . (see 4.1 Cleaning System for more instructions.)



HOW TO MAINTAIN

1. Open Cover and locate Cleaning Cartridge.

2. Gently remove Cleaning Cartridge by rotating up and away from printer.

Continued on next page ...

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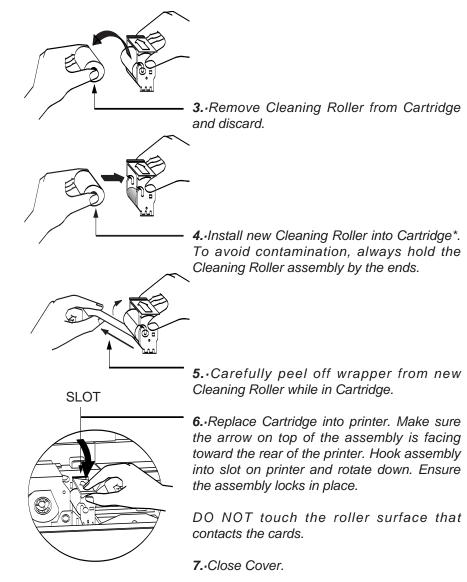
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* See Appendix C for replacement Cleaning Rollers.



Although the CLEAN PRINTER message is displayed until maintenance has been performed, the printer will continue to operate.

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TROUBLESHOOTING

This section offers solutions to potential problems you may experience with your P100*i* printer. The table below lists the screen messages that will be displayed on the printer's LCD, both during normal operation and to alert operator of any error conditions. There is also some additional information dealing with quality issues concerning printing onto cards.

5•1 Interpreting LCD Display Messages

SCREEN MESSAGE	MEANING	ACTION
INITIALIZING	The printer is performing an internal test before use	Wait for the ready message
READY	Ready for use	
WAIT TEMPERATURE	Print Head cool down mode Self test card printing	Wait for READY message
SELF TEST	The card data is being transmitted	Wait for test card
DOWNLOADING DATA	The card data is being transmitted	Wait for card printing to start
PRINTING YELLOW	The yellow panel is being printed	
PRINTING MAGENTA	The magenta panel is printing	
PRINTING CYAN	The cyan panel is printing	

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SCREEN MESSAGE	MEANING	ACTION
PRINTING BLACK	A monochrome panel is being printed.	
PRINTING VARNISH	The overlay is printing	
PRINT HOLOGRAM	A hologram overlay is being printed	
CLEAN PRINTER	The printing is prompting operator maintenance	Carry out the cleaning procedure as detailed in section 4 of this manual
CLEAN MAG HEAD	The printing is prompting operator maintenance	Carry out the cleaning procedure as detailed in section 4 of this manual
CLEANING	The printing is performing an internal cleaning routine	
REMOVE RIBBON	The ribbon has not been removed while the cleaning operation is in progress	Remove ribbon
OUT OF RIBBON	The printer ribbon has run out	Replace printer ribbon
MECHANICAL ERROR	The printer has an error moving the card internally	Remove the jammed card. Ensure the card is not out of specification
OUT OF CARD	The card feeder is empty	Add more cards or adjust the card feeder to accept the cards
COVER OPEN	The cover is open	Close the cover
HEAD OPEN	The print head is not locked into position	Lock the print head in its lower position
COMMAND ERROR	The data being sent from the host is not recognized	Check that the data is suitable for printing. Try reprinting a card from known "good" data
PARAMETERS ERROR	The features of the card are not recognized	Check the Windows driver options and printer type

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SCREEN MESSAGE	MEANING	ACTION
ENCODING ERROR	Data cannot be written or read from the card's magnetic stripe	Check that the cards are loaded with the magnetic stripe in the correct orien- tation. Check whether high or low coercivity cards have been specified. Check that the data conforms to ISO specifications. See Appendix A of this manual for further information.
READING ERROR	Data cannot be read from the card's magnetic stripe	Check that the cards are loaded with the magnetic stripe in the correct orien- tation. Check whether high or low coercivity cards have been specified. Check that the data conforms to ISO specifications. See Appendix A of this manual for further information.
REJECT BOX FULL	The reject box is full	Empty the reject card box and press the right panel button
MAGNETIC ERROR	The printer cannot detect a magnetic stripe on the card	Check the card orientation
FLASH ERROR		Contact your dealer for
NO ACCESS		technical support

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Ribbon Errors: Check that the print ribbon has not 'run out'. Lock and then unlock the print head assembly; this resynchronises the ribbon automatically. When using a color ribbon, it should advance automatically so that the leading edge of the Yellow panel is beneath the print head. Ensure that the correct ribbon type has been specified in the Windows driver.

Card Feed & Mechanical Errors: Ensure that the card thickness adjustment has been set-up correctly to allow one card to feed.

Magnetic Encoding Errors: Check that the cards are inserted correctly in the printer. Ensure that the cards are low or high coercivity as required, and are set-up correctly in the printer driver.

Cleaning Alert: The printer has counted the number of cards printed and has automatically flagged that a cleaning routine needs to be carried out. (See Chapter 4).

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5•2 Print Quality Issues

This section will help you resolve print quality problems. The print quality is dependent on several factors. The two most important factors that will increase your print quality are cleanliness and card stock. To diagnose and fix print quality problems, follow the troubleshooting procedure below:

(NOTE: The Polaroid *i* Series ribbon is specifically designed to be compatible with all Polaroid *i* Series printers. Use of a print ribbon other than the Polaroid *i* Series may result in poor print quality, which the following fixes may not correct. To ensure compatibility and print quality, always use Polaroid *i* Series ribbons.)

• Small spots appear on the printed card with a non-printed area or a different color.



Possible Cause

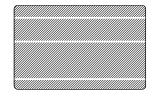
A • Contamination on the card surface.

B • Dust inside the printer and/or dirty Cleaning Roller.

>> Solution

- A1 Check that cards are stored in a dust free environment
- A2 Use a different supply of cards.
- B1 Perform a Cleaning of the printer (see Cleaning section).
- B2 Replace Cleaning Roller (see Cleaning section)

• There are non-printing horizontal lines (white) on the card surfaces.



Possible Cause

- **A** Ribbon is not correctly positioned.
- **B** Print Head may be dirty.

C • Print Head elements may have been damaged (e.g., scratched or burnt).

>> Solution

A1 • Open cover and press down the Print Head Unlock Lever to open the Print Head carriage. The Print Head will move up.

A2 • Check that the ribbon is properly rolled onto the ribbon cores and there are no wrinkles in the ribbon.

A3 • Push down on the Print Head Lock Lever until an audible "click" signals the locked-down position.

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- A4 Ribbon will automatically synchronize.
- A5 Print again.

B1 • Perform a Cleaning of the Print Head (see **4**•**2** Cleaning the Print Head).

- C1 Call service for Print Head replacement information.
- Printing shows very pale or inconsistent results.

Possible Cause

- A Ribbon may have been stored improperly or is damaged.
- **B** Cards may not meet specifications.
- **C** Contrast and/or intensity may be set to values which are too high.
- **D** Dust or embedded contamination on elements of the Print Head.

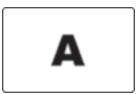
>> Solution

- A1 Change ribbon and print again.
- $\ensuremath{\textbf{B1}}$ \bullet Use a different supply of cards.
- C1 Adjust Contrast and/or Intensity values in software.

D1 • Perform a Cleaning of the Print Head (see 4•2 Cleaning the Print Head).

• Printing shows blurry printed image.

Possible Cause



- A Ribbon may not be correctly positioned.
- **B** Ribbon may not synchronized on the correct color panel position.
- C Cards may not meet specifications.
- D Dust inside the printer and/or dirty Cleaning Roller.

>> Solution

A1 • Open cover and press down the Print Head Unlock Lever to open the Print Head carriage. The Print Head will move up.

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A2 • Check that the ribbon is properly rolled onto the ribbon cores.

A3 • Push down on the Print Head Lock Lever until an audible "click" signals the locked-down position.

- A4 Ribbon will automatically synchronize.
- **A5** Print again.

B1 • Open cover and press down the Print Head Unlock Lever to open the Print Head carriage. The Print Head will move up.

B2 • Push down on the Print Head Unlock Lever until an audible "click" signals the locked-down position.

- **B3** Ribbon will automatically synchronize.
- **B4** Print again.

C1 • Use a different supply of cards.

D1 • Perform a cleaning of the Print Head (See **4**•**2** Cleaning the Print Head).

D2 • Replace Cleaning Roller (See 4•3 Cleaning Cartridge).

• No printing on the card.



Possible Cause

- A Ribbon may not be installed in the printer.
- **B** Cards may not meet specifications.
- **C** Cable on Print Head may be disconnected.
- D Print Head elements may be scratched or burnt.

>> Solution

A1 • Check for ribbon in the printer.

B1 • Use a different supply of cards.

C1 • Power off the printer and check the Print Head cable connections.



For optimum print quality, always keep cover of the printer closed except during ribbon loading and card thickness control procedures.

The card flipper will not operate and an error will be indicated if you try to flip a card with the cover open.

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General

General	 High speed printing, over 102 cards/hour dual sided edge to edge in full color (YMCKOK) throughput Windows Drivers for 98 and NT 4.0, Win2000, XP, ME One year printer warranty One year print head warranty
Color Printing	 Color dye sublimation or monochrome thermal transfer printing 35 seconds per card 2 sides (YMCKOK) throughput 300 dpi (11.8 dots/mm) print resolution Edge to edge printing standard
Bar Codes	 Code 39 Code 128 B & C with & without check digit 2 of 5 & 2 of 5 industrial UPCA EAN8 & EAN13 PDF 417 2D bar code and other symbologies available via WindCard Classic utility tool (option)

Fonts • True Type fonts available via Windows Driver



*Use only Polaroid-approved card and ribbon media. Using non-approved card or ribbon media can void your warranty.

Refer to the accessories section for more information about Card and Ribbon Media available from Polaroid.

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Environmental

- Operating Temperature: 60 to 86°F (15 to 30°C)
- Operating Humidity: 20 to 65% non condensing
- Storage Temperature: 23 to 158°F (-5 to 70°C)
- Storage Humidity: 20 to 70% non condensing
- Ventilation: Free air
- * Thermal transfer (Resin) ribbons offer more durability than dye sublimation, with greater resistance to scratches and UV-induced fading.

Dye sublimation printing requires dye sublimation ribbons,with either black or cyan, magenta, and yellow (plus black resin) panels.

†Measured without card output hopper.

Options

- Centronics Cable
- Smart Card Contact Station (0.76mm cards only)
- Magnetic Encoder (0.76mm cards only)
- Cleaning Supplies

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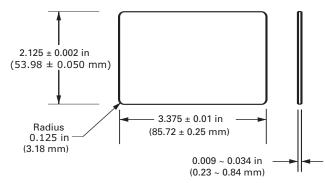
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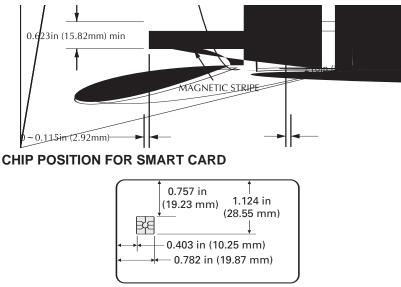
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CARD DIMENSIONS

ISO STANDARD DIMENSIONS FOR PLAIN CARD



ISO STANDARD DIMENSIONS FOR MAGNETIC STRIPE CARD



ISO 7816 Cards

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APPENDIX A

Magnetic Card Stripe Encoder

This section contains information on the additional operations of the P100*i* Printers with Magnetic Card Stripe Encoder. (See Chapter 2 for location.)

INTRODUCTION

Operation and maintenance requirements for the P100*i* Printer with the optional magnetic card stripe encoder. (See Chapter 2 for location.) The magnetic encoder can be set for either high or low coercivity.

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A. MEDIA LOADING ORIENTATION

The magnetic encoder is a factory installed item with the read/write head positioned below the card path, available with HICO encoding (P100*i* CM1 or P100*i* CEM1) or LOCO encoding (P100*i* CM2 or P100*i* CEM2).

STRIPE DOWN

When loading cards into the Card Cartridge, please ensure that the magnetic stripe is facing down and closest to the rear.

Also available are Printer models with the Magnetic Read/Write head positioned above the card path, with HICO encoding (P100*i* CM3 or P100*i* CEM3) or LOCO encoding (P100*i* CM4 or P100*i* CEM4)



When loading cards, please ensure that there is a magnetic stripe.

NOTE: M1 = Stripe Down HICO M2 = Stripe Down LOCO

M3 = Stripe up HICO M4 = Stripe up LOCO

Approved HICO & LOCO PVC cards are available. (See Appendix C).



ONLY USE cards that comply with ISO 7810 & 7811 standards for magnetic stripe cards. The magnetic stripe must be flush to the surface of the card to work properly. Never use taped-on magnetic stripes.

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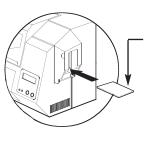
B.-MAGNETIC ENCODER CLEANING

There exists two different processes to clean the Magnetic Stripe Encoder.

The first process consists of a standard cleaning of the printer. This cleans the most important parts of the printer; including the Print head, Transport Roller and Magnetic Stripe Encoder (refer to chapter 4 "Cleaning" for more instructions).

The second process consists of a cleaning of the Magnetic Encoder using the Menu Button from the LCD Display.

To access the Magnetic Encoder Cleaning Menu proceed as below:



1.-Leave power on.

2. Remove cards from the Card Feeder

3.-Insert one Pre-Saturated Cleaning Card (provided) through slot on the side of the Card Cartridge.

4.•Press the Menu button until the LCD screen shows CLEANING MENU.

5.-Press the Select button to select.

6.•Press the Menu button again until the LCD screen shows CLEAN MAG HEAD.

7.•Run this operation by pressing the Select button.

ISO STANDARD ENCODING

Track #	Field Separator	Track Density	Valid Characters	# of Characters
1	٨	210 bpi*	Alphanumeric (ASCII 20~95†)	79‡
2	=	75 bpi*	Numeric (ASCII 48~62)	40‡
3	=	210 bpi*	Numeric (ASCII 48~62)	107‡

* Bits per inch

† Except the '?' character

‡ Including Start, Stop and LRC characters. Also note that these 3 characters are automatically managed by the magnetic encoder according to the ISO Standard Norms.

NOTE: Refer to the Card Printer Programmer's Manual for complete programming information.

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APPENDIX B

Smart Card Contact Station

This section contains information on the additional operations of the P100*i* Printers with Smart Card Contact Stations. (See Chapter 2 for location.)

INTRODUCTION

Smart Cards can have a built-in microcomputer and a battery. Card Memory can store fingerprints, voice recognition patterns, medical records and other such data. The P100*i* printer may be equipped with an optional contact station for programming Smart Cards (ISO 7816). This printer model responds to commands that position the cards at the contact station, where the printer connects to the contacts on the Smart Cards. All other printer operations remain the same as the standard P100*i* model.

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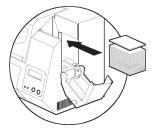
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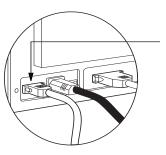
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A.-MEDIA LOADING ORIENTATION



Position the cards with the Smart Card Chip at the top of the card and towards the printer.

B.-SMART CARD CONTACT STATION INTERFACE



When a command to the parallel or USB printer interface sends a card to the Smart Card Contact Station, the printer connects the Smart Card Contact Station to the female DB-9 connector on the rear of the printer.

An attached external Smart Card Programmer can be used to program Smart card chips.

DB - 9 PINS	SMART CARD CONTACT POINTS	DB - 9 PINS	SMART CARD CONTACT POINTS
1	CI (VCC)	6	C6 (Vpp)
2	C2 (Reset)	7	C7 (I/O)
3	C3 (Clock)	8	C8 (RFU)
4	C4 (RFU)		
5	C5 (GND)	9	(GND when chip is at station)

Refer to the Card Printer Programmer's Manual for complete programming information.



DO NOT position printing over the Smart Card Chip.

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Accessories & supplies

Please contact your Polaroid authorized dealer to place an order for accessories and supplies.

RIBBONS

The following ribbons may be used in the P100*i* Printer:

Color Ribbons (Sold by the Roll)		
Part Number	Description	
3-156	6-Panel Color Ribbon (YMCKOK)	170 images
3-159	6-Panel Color Ribbon (YMCKOK)	170 images (bulk)
3-150	5-Panel Color Ribbon (YMCKO)	200 images
3-151	5-Panel Color Ribbon (YMCKO)	330 images
3-152	5-Panel Color Ribbon (YMCKO)	200 images (bulk)
3-158	5-Panel Color Ribbon (YMCKO)	330 images (bulk)
3-157	5-Panel Color Ribbon (YMCKK)	200 images
3-153	4-Panel Color Ribbon (YMCK)	250 images
3-154	2-Panel Resin Ribbon (K Resin + O)	500 images
3-155	2-Panel Color Ribbon (K Dye + O)	500 images

Note: Y = Yellow, M = Magenta, C = Cyan, K = Black, O = Overlay

ACCESSORIES

Accessories available for the P100*i* Printer appear below. Always refer to the part number when placing an order:

	Cleaning Supplies
Part Number	Description
3-300	Cleaning Card Kit (box of 100 cards)
3-301 3-302	Cleaning Swab Kit (box of 25 swabs) Premier Cleaning Kit (25 swabs, 50 cards)
3-303	Adhesive Cleaning Roller Kit (set of 5)
3-304	Cleaning Cartridge, complete

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World Wide Sales and Support:

Polaroid Digital ID Systems

4650 Executive Blvd. Ft.Wayne, IN 4680847