

# MODEL PDX-R PRINT RECORDER FOR PARALLEL INTERFACE

Model PDX-R print data recorder replaces physical printers. It stores print data from your computer parallel cable onto an inexpensive flash media card. Its use suits capturing of data for archiving where a hardcopy printout is not required. In many applications it can be left unattended for days and weeks as the memory card can store approximately 20 million print lines of text.

Just plug in your parallel print cable, then you are ready to capture print jobs onto popular flash memory cards.

### Use to:

- Archive print data for quality assurance or record keeping. (Example: FDA 21 CFR Part 11 Compliance).
- Eliminate redundant printers, eg. alarm printers.
- Capture databases from retiring legacy systems.
- Eliminate manual transcribing of printout data to other systems.

- Uses popular and inexpensive SD Memory Cards
- Record 20 million print lines @ 100 characters/line (2 GB card)
- Minimum operator knowledge required, - no controls on front panel.
- No software or setup is required, just plug in cable.
- Front panel LED's blink as heartbeat to confirm operation even at a distance.
- Small durable package downsizes printer footprints.
- Operation recovers automatically without user intervention after power outages.



Low volume printouts can be recorded for days and weeks without operator intervention using the 20 million print line capacity of the memory card. (at 100 characters/line).

File name created: RECORD.TXT

PASSTHRU TO THE PRINTER OR ELIMINATE THE PRINTER



### PRINTER REPLACEMENTS MAY INCLUDE:

- Desktop Dot Matrix ( eg. Okidata, Fujitsu, Epson, Roland, Panasonic).
- High Speed Lineprinters ( eg. 1,000 lines/minute)
- InkJet printers ( non GDI/Winprint style)
- Laser printers ( non GDI/Winprint style)
- Thermal Barcode Label Printers (eg. Datamax, Zebra)
- POS Printers (eg. Epson)
- Alarm Printers

### NATURE OF RECORDING

The data stream is recorded directly to the flash memory card without any formatting applied to the data. The memory card is recognized as a disk drive on the PC, example "F", or "G" drive. The recording file name is always: RECORD.TXT The user may use a USB/SD Card reader if a SD Media Card Reader doesn't already exist on the PC. Only RECORD.TXT file created by the Model PDX recorder is allowed on the memory card. The recorder will append print data to the file if the card is removed and returned to the recorder. The user may clear the data by deleting the file on a PC, then Model PDX-R automatically creates a new empty RECORD.TXT file.

### DISPLAYING THE RECORDED DATA

Many printers print plain text data. In that case, the recorded data will display in a wordprocessor such as MS Notepad or Word very well, without any data formatting applied. Such data may also open in spreadsheets if the print is columnar type, eg. alarm printer type data. If the printing system is "non-text" such as printing rich text or graphics using a printer emulation, eg. Epson Escape Commands, then the user can consider applying viewing software that is available from many suppliers, eg. use PCL viewing software when print stream is using PCL printer emulation. Another example is PCL to .PDF software converters. Some installations are prepared to develop their own software that will open large .TXT files and parse the data for specific use.

The RECORD.TXT file can also be dumped out of the PC back to a same printer for an exact reprint.

### SPECIFICATIONS

- Recording Capacity:** Approx. 2 Gigabytes (20 million print lines @ 100 characters/line).
- Flash Memory card:** SD Classic original style. 24mmx34mm size. not SDHD, not Mini SD. 2 GB minimum, 2 GB common compatibility. 4 GB maximum.
- Parallel Interface:** Common classic "Centronics", IEEE-1284 Centronics, Legacy Centronics types. 8 Bits
- Optional Interfaces:** Various inputs for legacy styles including Dataproducts, Digital Equipment, Tandem, Lockheed, Prime, Data General, MAI, NCR, Unisys, HP, NCR Parallel.
- Operating Modes:** Record when power is on. Pushbutton Start/Stop
- LED Indicators:** Front Panel unique dual HeartBeat blinking to help user confirm operation even at a distance. Power LED.
- Audible:** Beep at power up/power down to help confirm operation.
- Front Panel:** No operator controls. 2 heartbeat LED's, 1 Power LED
- Ports:** *Input:* Classic 36 Pin Centronics Female Connector with wire bail locks. Accepts parallel cables from PC's, legacy computer systems, and print servers. Eg. IEEE-1284 Centronics Mode
- Power:** 9 Volt DC 300ma to 500ma Wallmount Adapter: 2.1 x 5.5mm Type P5 Plug Center Contact Positive. UL/cUL Listed
- Physical:** Dimensions: 15x10x3cm Weight: 135grams Material: ABS Plastic

PDXR.DOC REV4 JULY 2011



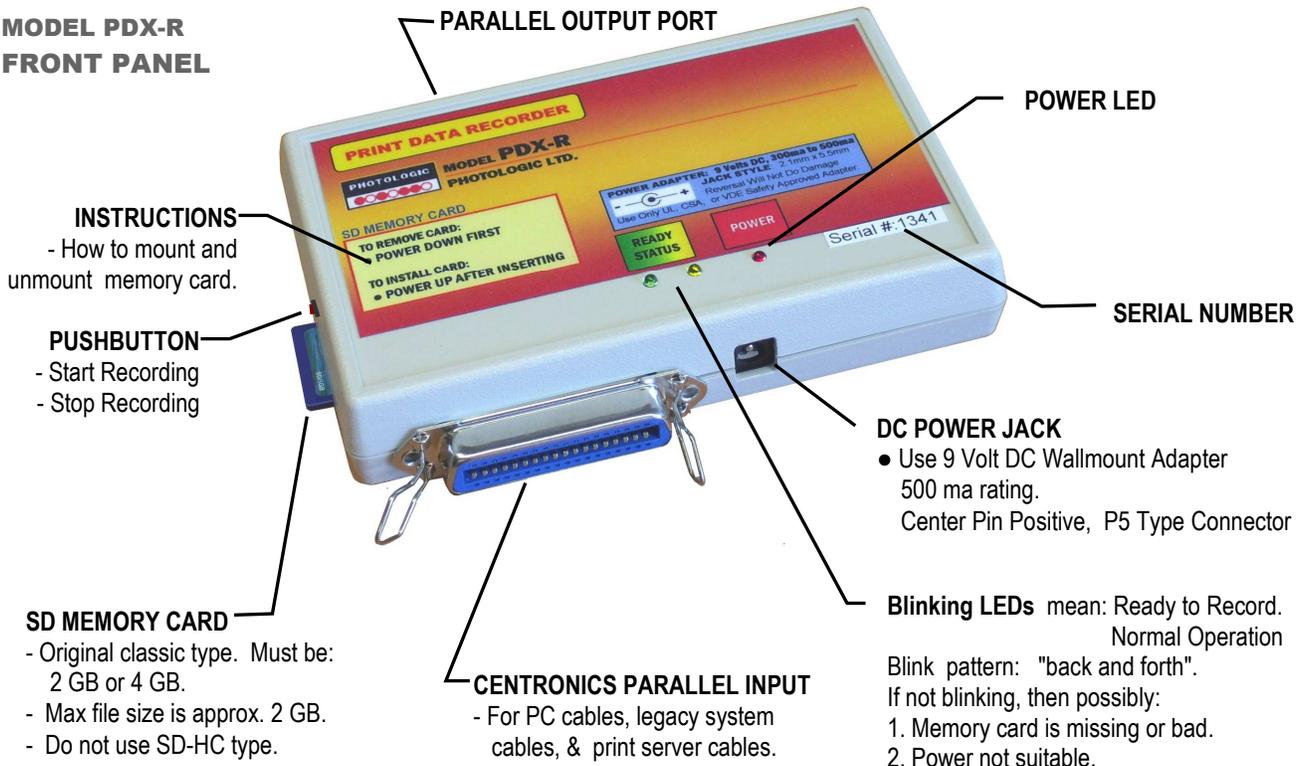
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# OPERATING INSTRUCTIONS

## MODEL PDX-R FRONT PANEL



### INSTRUCTIONS

- How to mount and unmount memory card.

### PUSHBUTTON

- Start Recording
- Stop Recording

### SD MEMORY CARD

- Original classic type. Must be: 2 GB or 4 GB.
- Max file size is approx. 2 GB.
- Do not use SD-HC type.

### CENTRONICS PARALLEL INPUT

- For PC cables, legacy system cables, & print server cables.

### DC POWER JACK

- Use 9 Volt DC Wallmount Adapter 500 ma rating. Center Pin Positive, P5 Type Connector

### Blinking LEDs mean: Ready to Record. Normal Operation

- Blink pattern: "back and forth".  
If not blinking, then possibly:
1. Memory card is missing or bad.
  2. Power not suitable.

### NORMAL OPERATION

- Memory Card is installed.
- Ready Status LEDs blinking "left and right".

Attach the NUL PRINTER connector on the output port to eliminate a printer.



### TO BEGIN RECORDING:

- Plug in printer cable. With power removed, install blank memory card. Add power plug. Model PDX-R will format and create a file named RECORD.TXT. Send a print job, note that LED blinking pattern varies when data is received.

### TO STOP RECORDING:

- Press Pushbutton. You may then remove the memory card. The file RECORD.TXT is available on the memory card to be read on a PC.
- You may return the memory card and press Pushbutton to continue recording.
- Alternative method to stop recording: Unplug power and listen for audio beep.

### READING MEMORY CARD:

- Only RECORD.TXT file is allowed on the memory card. Use a PC Card Reader or USB/Card Reader to transfer RECORD.TXT to a PC folder.

### RETURNING MEMORY CARD TO MODEL PDX-R:

- You may return the memory card and press Pushbutton to continue recording.
- If Model PDX-R was powered down and you are returning the memory card, then insert memory card first before powering up.
- If memory card was not erased on the PC, then Model PDX-R will append print data to the RECORD.TXT file.
- If memory card was erased or renamed on the PC, then Model PDX-R will reformat the memory card and create a new RECORD.TXT

### FULL MEMORY CARD:

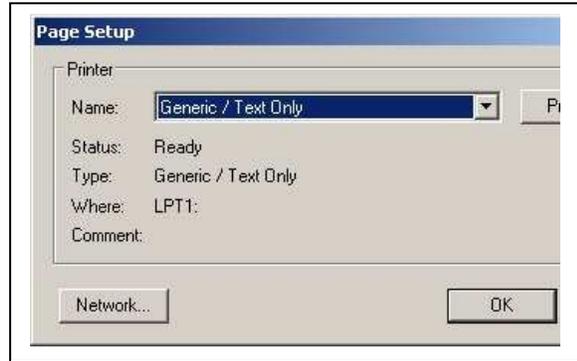
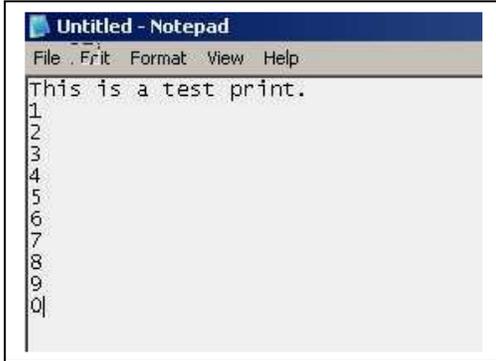
- If the memory card becomes full (2 Gigabytes), then recording stops. The computer sees "printer busy" as if printer was out of paper or offline. Therefore no data is lost from the computer. To continue, the card must be replaced, or erased.

### TO ERASE MEMORY CARD:

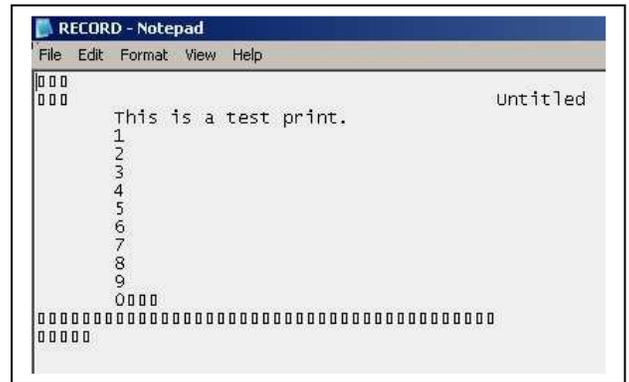
- Delete the RECORD.TXT file using a PC so the card has no files on it. Put the memory card back into the Model PDX. The Model PDX will create a new empty RECORD.TXT file.

## A TEST METHOD FOR MODEL PDX-R

1. Power Down Model PDX-R. Remove SD Card. Connect parallel cable to PC
2. Erase all files on the SD Card using a PC
3. Obtain a sample test print document: Open MS Notepad, and type a document. Set LPT printer driver to Generic Text.



4. Insert SD Card in Model PDX-R, while it is powered down.
5. Power Up Model PDX-R. A beep should be heard.
6. Notice Yellow LED comes on for 1 second to format memory card, then Left-Right blinking of Yellow/Green LED's occur.
7. Send the Notepad test print job from the PC, using Generic Text driver.
8. When the print job is done the Left-Right blinking of Yellow/Green LED's should continue.
9. While memory card remains in the Model PDX-R, press Pushbutton, or power down by unplugging DC plug or AC plug.
10. Wait for audio beep. Remove memory card. Now you may remove the card while power is on or off.
11. Read memory card on a PC and observe RECORD.TXT file. Open it and confirm that it is the document printout recorded.



12. Notice that rectangular characters in the RECORD.TXT opened in Notepad represent the carriage return and linefeed formatting codes that were sent to the printer. This is correct.

### Continue recording:

13. While Model PDX-R is still powered on, put the SD Card back into Model PDX.
14. After the memory card is inserted, press Pushbutton to start recording mode. Observe Left-Right blinking of Yellow/Green LED's
15. Send another print job, then when it is finished, press Pushbutton to stop recording mode. Remove the card and then read the card on the PC.
16. Observe that the RECORD.TXT file now contains the second print job sent, appended to the text of the first job.

### NOTES:

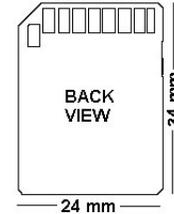
In an actual application, if a power outage occurs, and returns, then Model PDX will normally power up all ready to append data to the SD Card where it left off. No operator intervention should be required.

Model PDX is 8 Bits transparent, so this example is not limited to using text data. The RECORD.TXT file may represent any data, as it is 8 bits wide, eg. different printer emulations, with graphics and all possible control codes. Viewing such a RECORD.TXT file would then require conversion software, eg. PCL code to .pdf display.

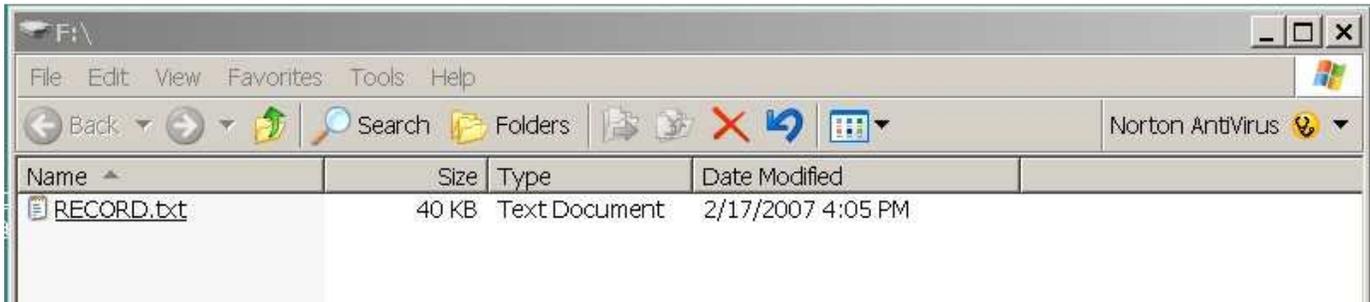
## MEMORY CARD:

### SPECIFICATION:

- SD Card "Standard Original Style"
- Standard Size: 34mm x 24mm
- not "Mini SD"
- not "Micro SD"
- not "SD-HD"
- choose 2 GB or 4 GB



### EXAMPLE SHOWING SD CARD ON PC:



### ABOUT SD CARD FILE:

1. Only one file should be allowed on the SD Card. The Model PDX will create RECORD.TXT automatically if the card is new or erased.
2. The maximum file size will be approximately 2 Gigabytes regardless of using a larger size card such as 4 GigaByte.
3. The RECORD .TXT file may be opened by any PC application that can open .txt files. The user may rename the file or extension in another PC folder to help it open in other applications. MS Word or Notepad, or Excel are possible applications that will open RECORD.TXT.
4. The data on the card is an exact image of the print data received. If the print data is not plain text, and is instead graphics, rich text, or photos, then it may display on the PC as an recognizable text.
5. If the data recorded is not plain text, then it may be possible to apply format conversion software to the file. Many types of conversion softwares can be identified through internet search. Example: Epson Emulation to Windows screen, or PCL Emulation to .PDF files.
6. As the RECORD.TXT file is an exact image of the print stream data, it may be possible to dump the card data from the PC to the same printer for an exact reprint.

### POWER OUTAGES:

Model PDX-R is design is meant to eliminatet operator inverntions after power outages. When an outage occurs, the Model PDX-R attempts to shut down organized. When the power returns, the Model PDX-R is expected to enter record mode again and continue recording on the memory card where it left off, so no operator intervention is required. Proper recovery is confirmed if the front panel Ready Status LEDs "left and right blinking" as in normal operation. During the outage, the memory card is readable on a PC.

**Exceptions:** Some instances of complex or unusual power down voltage patterns, eg. a double or multiple fall/rise of power, or partial fall/rise of power, may not allow the Model PDX-R to recover. In those cases, the resulting front panel LED's may be solid ON, or solid OFF, alerting the user for attention.

### LED PATTERNS:

**LEFT AND RIGHT BLINKING:** In record mode. Normal state.

**VARIED LEFT AND RIGHT BLINKING:** In record mode and data is being received. GRN LED is more dominant.

**BOTH LED's ON SOLID:** Memory Card is missing or defective., Power is not suitable.

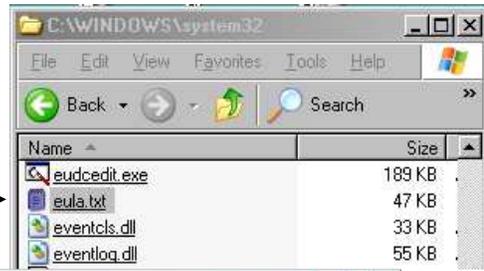
**YELLOW LED ON SOLID:** Model PDX-R is formatting the memory card. Duration: 2 seconds.

**BOTH LED's OFF SOLID:**

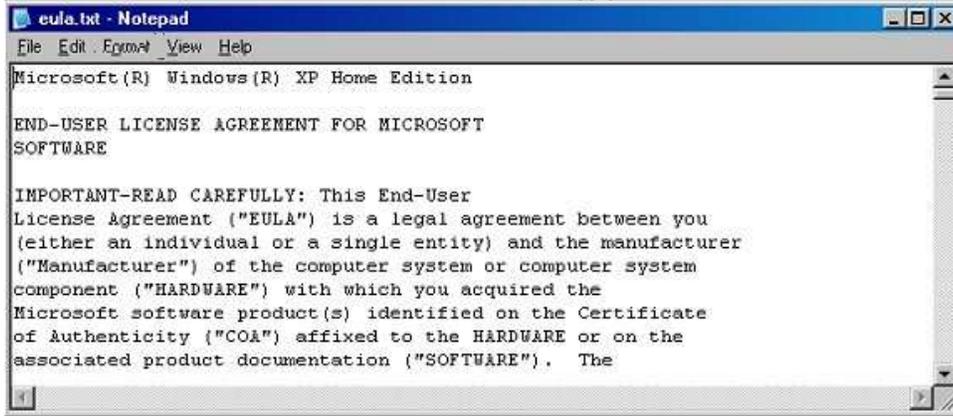
- The memory card may have been removed and re-inserted while power was on. The LED's will both go OFF SOLID as soon as print data is sent to Model PDX-R. The user must power down, then power up to regain proper recording mode with LEFT AND RIGHT BLINKING LED's. The original recording may now be unuseable.
- Memory card may be missing or defective.
- The printer may be offline when you try to send a print job.

**SAMPLE CAPTURE: Text Printout**

This example shows the result of printing text data using a file named **eula.txt** located in Windows XP: C:\WINDOWS\system32\eula.txt



Open eula.txt with Notepad



Print Notepad eula.txt to printer using Generic print driver

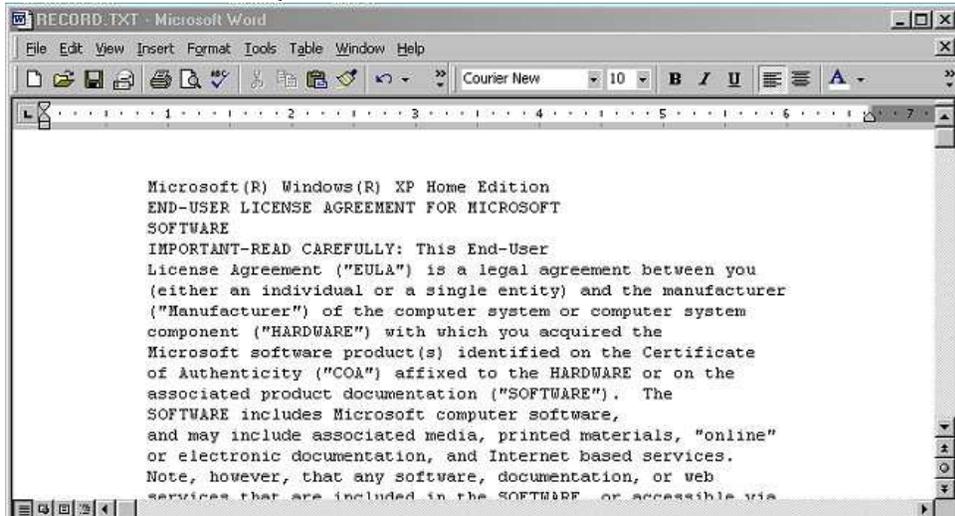


MEMORY CARD

- Example:
- Epson
  - Okidata
  - Panasonic
  - Genicom
  - Tally
  - Printronix
  - C Itoh
  - Fujitsu
  - Roland
  - Star
  - Proprietary
  - Texas Instruments



Open RECORD.TXT with Word



SAMPLE\_CAPTURE.DOC



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## USING AN AC POWER ADAPTER

Applies to Photologic Ltd interface adapter models: • CS-HP • SDX • NX-2 • TG • DC-2 • OP • FIFO • PDX

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Photologic Ltd. interface adapters use a commonly available AC Adapter. It is U.S. style 115v wall mount type.

### OUTPUT:

9 Volts DC, Choose 500ma current rating.

### JACK STYLE:



Barrel: 2.1mm x 5.5mm

### POLARITY:

Center contact is positive. Accidental reversal will not damage the interface adapter.



### SOURCE:

Photologic Ltd. Supplies this device with the interface adapter equipment. As this is a common style AC Adapter, substitutes may be obtained from Radio/Television departments in Home Entertainment stores in shopping malls, or "Radio Shack™" stores. **AC Adapter must be UL, cUL, CSA, or VDE safety approved.**

### FOR INTERNATIONAL INSTALLATIONS:

A substitute power supply for Euro AC mains may be used. Use the specifications above.

NOTE: If power supply is not rated at least 300 ma, then Model PDX-R operation may be unstable or erratic.

