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DOS Compatibility Card: Printing is Slow in MS-DOS (3/95)

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Security: Everyone

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TOPIC -----

I have the DOS Compatibility Card for the Power Macintosh 6100 connected using Ethernet to a LaserWriter Pro 630. When I am printing from within any Windows applications, it prints without any problems. However, when I use MS-DOS applications, specifically FoxPro, it is extremely slow printing. It can take up to 10 minutes for something I send to the printer to start printing. I have changed settings in the Macintosh PC Spooler application from PCL to Epson emulation, but that has not increased the printing speed.

I am also concerned about the typeface used when printing from MS-DOS applications. The font looks like Geneva, and I need the font to be in a mono-spaced font like courier. How can I change this?

DISCUSSION -----

There are two possible solutions to increase the speed; connect the LaserWriter Pro 630 directly to the DOS Compatibility Card using a custom serial cable, or print from MS-DOS using a utility from LaserTools. Printing from MS-DOS to the LaserWriter Pro 630 over a network can be extremely slow.

Hardware Configuration
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In order to print to a LaserWriter 630 connected to the DOS Compatibility Card, a serial cable like the one below needs to be built.

Cable Pinouts No Handshaking

.	DB9	Din-8
(LaserWriter Pro 630)		(Macintosh)

```

-----
.   DCD 1----|
.   DTR 4----|-----1 HSKo (DTR)
.   RTS 7----|-----2 HSKi (CTS)
.   CTS 8----|
.   TxD 3-----5 RxD-
.   RxD 2-----3 TxD-
.   SIG GND 5-----|----4 SIG GND
.                   |----7 GPi
.   DSR 6 - No Connection
.   RI  9 - No Connection

```

This cable is a straight through connection without handshaking. Pins 1,4,7, and 8 on the DB9 are connected to pins 1 and 2 on the Din-8. Pin 5 on the DB9 is connected to both pins 4 and 7 on the Din-8. On this cable everything is grounded except for transmit and receive. The HSKo and HSKi on the Macintosh are not used, so a more straight forward cable like the one below can be used instead.

Alternate Cable Pinouts

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-----
.           DB9                Din-8
.           ---                -----
DCD        1 No Connection      1 HSKo (DTR) No Connection
DTR        4 No Connection      2 HSKi (CTS) No Connection
RTS        7 No Connection
CTS        8 No Connection
TxD        3-----5 RxD-
RxD        2-----3 TxD-
SIG GND    5 No Connection      4 SIG GND No Connection
DSR        6 No Connection      7 GPi No Connection
RI         9 No Connection

```

Both of these cables work in Windows and MS-DOS. You can use these cables in Windows at either 19,200 or 9600 baud. However, you can only use 9600 baud when you are using MS-DOS.

Software Configuration
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Once the LaserWriter Pro 630 is connected to the Macintosh, you need to configure the printer port in the Macintosh OS as: COM1 for MS-DOS and Windows. Here is how to configure the printer port.

Mac Control Panel PC Setup

- 1) Open the PC Setup control panel
- 2) Change the Mapping for COM1 to Printer Port.

Note:

If you prefer you can use COM2 instead of COM1.

- 3) Click the Restart PC button
- 4) A dialog appears. Click OK to confirm you want to continue.
- 5) Close the PC Setup control panel

Printing From Windows

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- 1) In Windows, double-click the Main Group icon
 - 2) Double-click the Control Panels icon
 - 3) Double-click the Printers icon
 - 4) Install the appropriate driver for the LaserWriter Pro 630 printer. The printer drivers for Windows are provided with the LaserWriter Pro 630.

Note:

Consult the Windows or LaserWriter Pro 630 manual for driver installation.

- 5) After driver installation, click the "Connect" button in the Printers Control Panel.
- 6) Select the appropriate COM port, click the check box marked "Fast Printing Direct to Port"
- 7) Click the "Settings" button
- 8) Set the COM port parameters to:

- . Baud Rate: 19200
- . Data Bits: 8
- . Parity: None
- . Stop Bits: 1
- . Flow Control: Xon/Xoff

- 9) Click either "Set As Default Printer" or "Close" and Windows is setup to print to a DOS serial printer without having to go through emulation.

Printing in MS-DOS Using Printer Control Panel

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The best option printing in MS-DOS is to use a printer mode switching utility from LaserTools. The Printer Control Panel software was licensed and originally included in specific LaserWriters for Windows products. In LaserWriter printers not specifically marketed as Windows printers, this software was not included. If your LaserWriter Pro 630 did not come with the Printer Control Panel

software, you need to purchase a copy of it.

The product is a TSR (terminate and stay resident) called Printer Control Panel and works for both DOS and Windows environments. It supports the LaserWriter Pro 600 and 630, Personal LaserWriter NTR, and the LaserWriter Select 310.

The product checks all print jobs from the PC and downloads the appropriate emulation switching PostScript commands to the printer. Thus, the "automatic" emulation switching takes place at the PC-level and not at the LaserWriter, since the LaserWriter cannot automatically sense the type of jobs coming in.

Article Change History:

01 Mar 1995 - Corrected some of the pinout lables.

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