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Zenith 386/25: Printing ASCII to LaserWriter IIg (3/93)

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TOPIC -----

We connected a LaserWriter IIg to our network via LocalTalk. We can successfully print PostScript files to it from both the Macintosh systems and PC systems (through Windows 3.1 to a Novell NetWare 386 print queue) over LocalTalk.

We also want to connect the LaserWriter IIg to the network serially so MS-DOS users (version 5.0) can issue a NetWare "NPRINT" or "CAPTURE" command and send text files over the network to the serial port of the LaserWriter. We would like serial printing to be at least 9600 baud.

So far, our serial print tests haven't been over the network, just by direct-connecting the PC to the printer using a serial cable. The Thumb Switch on the LaserWriter IIg is set to Position 1.

The pinouts on the Zenith 9-pin serial port are as follows:

- 1 - CD
- 2 - Receive Data
- 3 - Transmit Data
- 4 - DTR
- 5 - Ground
- 6 - DSR
- 7 - RTS
- 8 - CTS
- 9 - Ring Indicator

The test:

- 1) Direct-connect the serial ports of the PC and the printer via the serial cable.
- 2) On the PC, issue the DOS MODE command to redirect output from LPT1 to the COM port to which the cable is attached:

```
MODE LPT1=COM1
MODE COM1:9600,n,8,1,r
```

- 3) Do a DOS Print Screen (SHIFT PRTSCRN) in an attempt to send a screen dump from the PC to the LaserWriter. Result: The cursor on the PC jumps to the top left corner of the screen and hangs -- no flashing light on the LaserWriter, no printout, and the PC must be rebooted.
- 4) Do a DOS PRINT command to send a text file from the PC to the LaserWriter. We got the same result as above.

Which Thumb switch position should we use? What is the wiring diagram for the serial cable which will work between the Zenith 386/25 DB-9 port to the LaserWriter IIg?

An HP LaserJet IIP can print an ASCII text file, so shouldn't the LaserWriter IIg be able to print an ASCII text file if it's in HP LaserJet IIP emulation mode?

DISCUSSION -----

The cable has to be a NULL MODEM cable (also called a MODEM ELIMINATOR cable). Based on the Zenith DB-9 connector information you gave us, the serial cable should be wired as follows:

Zenith DB-9 Connector		LaserWriter IIg/IIg DB-25 Connector	
Signal	Pin#	Pin#	Signal
SGnd	5	1	SGnd
TxD	3	3	RxD
RxD	2	2	TxD
DSR	6	20	DTR
DTR	4	6	DSR

Since the PC compatible is using hardware hand shaking, it's necessary to set up the LaserWriter IIg or IIg to do hardware hand shaking as well. Switch position 1 will give you a HP LaserJet IIP emulation, 9600-baud connection with 8 data bits, 1 stop bit, no parity, and DTR flow control. The Owner's Manual for the LaserWriter IIg has a complete description of the thumb wheel settings.

The LaserWriter IIg or IIg, when in HP LaserJet IIP mode, does print ASCII text, just like the HP LaserJet IIP.

When setting up the serial port, type the following at the MS-DOS prompt:

```
MODE LPT1=COM1
MODE COM1:9600,n,8,1,p
```

The second line is the proper mode command for the serial port when using a printer.

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