LW IINTX: Diablo 630 Emulation Mode

Article Created: 12 July 1988
Article Last Reviewed: 29 May 1991
Article Last Updated:

TOPIC ---

If you want to print from a PC to a LaserWriter IINTX set in Diablo 630 emulation mode, this article contains some suggestions.

DISCUSSION ---

Preliminary Note: You may experience a problem printing to the LaserWriter IINTX in Diablo mode when the emulation mode is set by the DIP switches. A communication problem appears when printing the upper 127 ASCII characters. The problem is related to the serial port DIP setting of 7 data bits. To attain full emulation, the serial port can be configured detailed in this article.

Currently, there is no method of software switching back to PostScript or to any other emulation mode once you have left the PostScript mode. The correct method is to change the DIP switch settings and wait 30 seconds. If you want to use PostScript, switch one should be set to DOWN. Wait 30 seconds and move the switch back to the UP position.

Step One: Connection

Connect an Apple 25-pin Serial cable (590-0037) to an Apple Modem Eliminator (590-0166). Take one end and connect it to the 25-pin serial port on the LaserWriter IINTX. Connect the other end to a serial port on the PC.

Note: Most serial ports for PCs use a male DB-25 connector. Because both ends of the Apple 25-pin serial cable are male, you need a female-to-female "gender mender" to connect to a PC serial port. Alternatively, you can use a straight, pin-to-pin, female-to-male, DB-25 cable.

Step Two: Switch Settings

While the LaserWriter IINTX is off, set these printer DIP switch settings:

- 1 UP
- 2 DOWN

- 3 UP
- 4 UP
- 5 UP
- 6 DOWN

These switch settings place the LaserWriter IINTX in:

- PostScript Batch Mode,
- RS-232 9600 Baud
- RS-422 9600 Baud
- 7 data bits, No parity check, 1 stop bit, with DTR/DSR handshake

Step Three: Power On

Turn on the LaserWriter IINTX and the PC. After a few seconds, the LaserWriter IINTX prints a test page containing its current settings (listed above).

Step Four: PostScript Code

The following PostScript code switches the LaserWriter II into LaserJet+ emulation mode. Note: The "%" characters and following comments are not necessary. You can omit them when typing in the program. For DTR/DSR, from the DOS prompt type:

```
COPY CON POST.TXT
serverdict begin 0 exitserver %This exits the printer server loop.
statusdict begin              %Start modifying stuff.
9 0 3 setsccbatch             %Turns off the RS-422 9600 Baud port.
25 9600 68 setsccbatch        %set the 25 pin RS-232 9600 Baud port-8 data
                               bits.
2 setsoftwareiomode           %Set printer to Diablo 630 emulation mode.
0 sethardwareiomode           %Set communications mode to serial.
end                           %This is the end of the mode switch routine.
systemdict/quit get exec      %Set the printer up for a fall.
30 400 moveto                 %Force an error to cause a system start test
                              %page.
(control z)                   %The keyboard control key and the z key
                              %together. This ends text editing and saves
                              %the file.
```

For XON/XOFF, from the DOS prompt type:

```
COPY CON POST.TXT
serverdict begin 0 exitserver %This exits the printer server loop.
statusdict begin              %Start modifying stuff.
9 0 3 setsccbatch             %Turns off the RS-422 9600 Baud port.
25 9600 64 setsccbatch        %set the 25 pin RS-232 9600 Baud port-8 data
                              %bits.
2 setsoftwareiomode           %Set printer to Diablo 630 emulation mode.
0 sethardwareiomode           %Set communications mode to serial.
end                           %This is the end of the mode switch routine.
systemdict/quit get exec      %Set the printer up for a fall.
```

```
30 400 moveto                  %Force an error to cause a system start test
                               %page.
(control z)                    %The keyboard control key and the z key
                               %together. This ends text editing and saves
                               %the file.
```

Step Five: Batch File

You need to create a batch file to set up the PC's communications port and to send the PostScript code to the printer.

1) From the DOS prompt, type:

```
COPY CON DIABLO.BAT
MODE COM1:96,N,8,1,P
MODE LPT1:=COM1
TYPE POST.TXT > LPT1
```

2) Press Control-Z to conclude.

Step Six: Change LaserWriter IINTX to Diablo 630 Emulation Mode
---

Type DIABLO from the DOS prompt to set the NTX to Diablo emulation. The printer switches internally from the PostScript Batch mode to Diablo 630 emulation. After a few seconds, it prints a test page displaying the new settings.

Your printer will now print graphics and text properly with the emulation provided by the Adobe PostScript ROMS. This solves the problem of losing the 8th data bit for special text and graphics, as well as the problem with the "print screen" keyboard command not functioning.

Troubleshooting: No test page

The LaserWriter IINTX will not print a test page to indicate Diablo emulation mode, follow these steps:

1) Check cable, connector box connections, and paper supply to the LaserWriter II.

2) Turn off any spooler commands that may be implemented on the PC.

3) Check the PostScript file (POST.TXT) and the batch file (DIABLO.BAT) for any typing errors. If none is apparent, we suggest re-typing the PostScript code from scratch. If the LaserWriter II does not get the PostScript code character-for-character, the mode change will not work.

4) Once the code has been retyped, send it to the LaserWriter IINTX. If the LaserWriter IINTX prints a test page, then all is well. If the LaserWriter IINTX prints out a page containing the PostScript code, it is in Diablo emulation mode, but a test page will not be printed. (There is an error in the PostScript code that instructs the LaserWriter IINTX to print a test page, but the mode switch was successful.)

5) If the LaserWriter II does nothing, then start over from step 1.

Troubleshooting: Not printing from an application

If the LaserWriter IINTX will not print from within an application, do these steps:

1) Check the applications print settings to ensure that it is sending output to LPT1 or COM1.

(Note: When printing from DOS, always follow the print command with a "Control D." A "Control D" tells the LaserWriter IINTX that the data transmission is completed and printing can now begin. The best method is to create another text file with a "Control D" inside.

Enter the following from the DOS prompt:

```
COPY CON D.TXT
(Control D)
(Control Z) or (F6)
```

Now, make a batch file to send the end-of-page marker to the printer.

From the DOS prompt, enter:

```
COPY CON END.BAT
TYPE D.TXT > LPT1
(Control Z) or (F6)
```

After doing a TYPE or Print Screen or DIR to the printer, just type END, and the printer will print any remaining data in the buffer.

If your print job does not have a Control-D (end of page) character, you will have to wait for a job time-out for your print job or until another job (that is longer than a page) is printed.

Keywords: <None>

==========

This information is from the Apple Technical Information Library.

19960215 11:05:19.00