Tech Info Library

LaserWriter 16/600 PS: Supports HPGL/2 Through PCL5 (11/95)

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TOPIC ---

We have a Power Macintosh 6100/66 DOS Compatible Macintosh and are trying to
print to a LaserWriter 16/600 PS. The application we are using is DOS-based, and
outputs HPGL. I've heard that the LaserWriter 16/600 PS printer supports HPGL/2,
but I'm unable to get any output when I send HPGL to the printer. What's wrong?
Also, is HPGL/2 backward compatible with the original HPGL language?

DISCUSSION --

The LaserWriter 16/600 PS does support the HPGL printing language. This Support
for HPGL is provided though the PCL5 emulation, which inherently has HPGL/2
support. Tests on our LaserWriter 16/600 PS using HPGL/2 were successfully. Your
problem is likely with the initial escape sequences used by the MS-DOS-based
program to set the printer into HPGL/2 mode, or in the HPGL/2 drawing commands
themselves.

The problem you are seeing is not related to the DOS Compatibility Card or the
LaserWriter 16/600 PS printer since:

- Print jobs from the MS-DOS environment are sent without modification of the
output. All of the output data is sent directly to the printer.

- HPGL/2 data we downloaded to the LaserWriter 16/600 PS prints without
problem.

Depending on which input port, and mode it is set to: PCL, or PostScript, of the
LaserWriter 16/600 PS you are using, you may need to send a line of PostScript
code to the printer prior to all HPGL/2 and PCL5 print jobs. The following
command places the PostScript interpreter into PCL5 mode:

```
%=======================================================
% Begin PostScript code
%
```

```
currentfile /LaserJetIII statusdict /emulate get exec
%
% End PostScript code
%=========================================================
```

Once the printer is placed into the PCL5 emulation, you need to use the
following escape sequence to place the printer into the HPGL/2 mode:

To go from PCL5 to HPGL/2:   <esc>%#B

To return from PCL5 from HPGL/2:   <esc>%#A

HPGL/2 Compatibility
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Regarding the question about backward compatibility of HPGL/2 with the original
HPGL language, we contacted Hewlett-Packard technical support and they cited
only the following differences:

MISSING HPGL/2 COMMANDS

The HP LaserJet III, IIID, 4, 4Si, 4L, and 4P printers do not have every
command that is available in HPGL or HPGL/2. The following is a list of some of
the known commands that are not available with the printers mentioned.

• XT and YT (X-Tick and Y-Tick)
This command allows plotters to automatically print an x and y axis on printed
plots. This command is a HPGL command and is not found in HPGL/2.

• RP (Replot)
This command allows a plotter to automatically recreate a plot without having
to send new data to the plotter. When using the HP LaserJet III and 4, family
printers, the only method of obtaining multiple plots is to send the copy
command before entering HPGL/2 followed by the exit HPGL/2 command at the end of
the file.

• PG (Page Advance)
This command tells the plotter to eject a plot. This was disabled on the HP
LaserJet III and 4 printers so PCL and HPGL/2 could be mixed on the same page
without any page eject problems.

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