Using Plotters with Microsoft Project

This document contains information to help you set up a plotter and troubleshoot plotter problems. The following information is included:

Supported Plotters

Hewlett-Packard plotters using the HPPLOT driver and plotters that use the Micrografx MGXHPGL.DRV driver can be used to plot views and reports from Microsoft Project. Other plotters may be supported if they emulate Hewlett-Packard Graphics Language (HPGL) plotters.

Hewlett-Packard (HP) Plotters

The following Hewlett-Packard Graphics Language (HPGL) plotters are supported by version NVF27MAR90 (version 2.2) of the HPPLOT driver included with Windows 3.0:

Colorpro (7440A)
Colorpro with the Graphics Enhancement Cartridge (7440A and 17440A)
7470A
7475A
7550A
7580A
7585A
7580B*
7585B*
7586B
Draftpro (7570A/DXL/EXL)
Draftmaster I (7595A)
Draftmaster II (7596A)

*If you have a 7580B or 7585B plotter, and the serial number prefix is less than 2402, use the equivalent 7580A or 7585A driver

Hewlett-Packard also manufactures Draftmaster II RX, SX, and MX plotters that use an improved version of HPGL called HPGL-2. A Windows 3.0 driver is not available for HPGL-2 but the plotter can be configured to use HPGL as a Draftmaster II (7596A).

Many Hewlett-Packard (HP) plotters are shipped with two interfaces: a standard RS-232C interface and the HP-IB proprietary device interface based on the IEEE-488 standard. The HP-IB interface is not supported by Windows 3.0. If you print to the HP-IB interface, nothing will be printed nor will an error message appear.

Micrografx Plotter Driver MGXHPGL.DRV

This driver is not provided with Windows 3.0 but is available from Micrografx or your local software dealer. The driver is included with Micrografx DrawPlus, Carisma, and Designer. This driver supports the following plotters:

Rolands

- DXY 880, 885, 980, 990, 1100, 1200, 1300
- DPX 2000, 2200, 3300
- CAMM-1

Hewlett-Packard (HP)

- ColorPro, ColorPro with GEC
- DraftPro, DraftPro DXL, Draftpro EXL

IBM

- 6180, 6180 with GEC, 6182, 6184, 6186-1, 6186-2
- 7371, 7372, 7374, 7375-1, 7375-2

Bruning

- Zeta Series: 600, 900, 912, 924, 936

Mutoh

- IP-530, IP-530a, IP-530al, F-910

For additional information, contact Micrografx Technical Support at (214) 234-2694.

Other Plotters

Other plotter manufacturers, including IBM, Calcomp, and Houston Instruments, make plotters that can emulate HPGL plotters. You may be able to use the HPPLOT driver to produce plots for these HPGL compatible plotters. Contact your plotter manufacturer for additional information about emulating HPGL or the availability of Microsoft Windows 3.0 drivers for their plotters.

HP Plotter and Microsoft Windows 3.0 Settings

When using any serial device, you must configure the Microsoft Windows 3.0 serial ports to match the serial device. Hewlett-Packard plotters are configured differently depending on the model of the plotter. Some use dip switches and others have a control panel. Consult the plotter manual to determine the correct method of setting up your plotter. Set the plotter as follows, with all other options turned off:

Baud: 9600
Data Bits: 8
Parity: None
Stop Bits: 1
Handshake: Hardwire

Some models may not print correctly because the plotter is set up to use special features through its dip switch or Control Panel settings. Some of the special features that could cause problems are Eavesdrop, Pen Sort, and Expand settings. Make sure these features are turned off.

In the Microsoft Windows 3.0 Control Panel, double-click the Ports icon and set the serial port as follows:

Baud rate: 9600
Data Bits: 8
Parity: None
Stop Bits: 1
Flow Control: Hardware

AUTOEXEC.BAT Requirements

To print successfully from Microsoft Windows 3.0, you must have a valid "Set Temp=" line in your AUTOEXEC.BAT file. The directory that the "Set Temp=" line points to must be a valid directory to which you have Create, Write, and Delete access. There must also be adequate space on the drive. For a computer running Windows in 386 Enhanced Mode, the drive should have a minimum of 3-5 megabytes of free space.

If you are going to print to the plotter from MS-DOS rather than from within Microsoft Windows 3.0, you need a valid MODE statement in your AUTOEXEC.BAT file. Use the format appropriate for the version of MS-DOS you are using, as follows. Replace the "x" in "comx" with the serial port number that you are using for the plotter, such as com2.

MS-DOS versions 3.x: **mode com*x*:9600,n,8,1,p**
MS-DOS version 4.x and 5.0: **mode com*x*:baud=9600 parity=n data=8 stop=1 retry=r**

Setting Up the HP Plotter Driver

You can set up the plotter driver from Microsoft Project using the Print Setup command on the File menu. The following procedure assumes that you have installed the driver for the plotter, either when you installed Microsoft Windows or by using the Control Panel.

1. From the File menu, choose Print Setup.
2. In the Printer box, select the HP Plotter driver.
3. Choose the Setup button.
4. From the Devices menu, choose the correct plotter.
5. From the Size menu, choose the paper size that you will be using.
6. If you have more than one carousel of plotter pens, choose the correct carousel.
7. If you want to redefine a pen in the carousel, select the pen and then use the Color, Type, and Options menus to redefine it.
8. Select the page orientation and paper feed.
9. Choose the OK button.

Important: If you want to plot a Gantt Chart or PERT Chart in landscape mode, and

you are using pen sizes other than P.3, do not include a legend. Including a legend will cause the computer to lock up. To remove the legend, choose the Legend button in the Page Setup dialog box, and then choose the No Legend option button.

Do not mix pen sizes in the definition of a carousel. This will also cause the computer to lock up. You can use different pen sizes in the carousel but not in the plotter set up.

Plotter Communication Test

To test whether a plotter is properly connected to a computer running Microsoft Windows 3.0, type the following at the MS-DOS prompt, where "x" is the number of the serial port you are using:

echo SP1 ;PD 1000,1000 ;PU > com*x*:

This test activates the plotter, selects pen 1, and then draws a line the length of the page. If the test is unsuccessful, check the following:

- Switch settings on the plotter
- MS-DOS mode settings
- Interrupt conflict with another hardware device
- Printer cable
- Serial connection

HP Plotter Cables

The HP 74- and 75-series plotters have 25-pin serial inputs. One of two cables should be used depending on the number of serial-port pins on the computer. These cables are specific to the HP plotters; third-party cables may perform improperly.

	9-to-25 Pin Port	25-to-25 Pin Port
HP part #:	HP24542G	HP17255D
7550A part #:	HP24542H	HP17255F

Note: The part numbers are different for the 7550A because, unlike all other plotters in the 74- and 75-series, it has a male input.

Plotting to a File

If your computer is not connected to a plotter, you can print to a file and then take the file to a computer connected to a plotter. Use the following steps to print to a file and then plot the file.

1. Start the Microsoft Windows 3.0 Control Panel.
2. Double-click the Printers icon.
3. Select the HP Plotter driver.
4. Choose the Configure button. In the Ports box, select File and then choose the OK button.
5. Select the Active option button and then choose the OK button.

6. Close the Control Panel.
7. Start Microsoft Project.
8. From the File menu, choose Print Setup.
9. In the Printer box, select the HP Plotter driver and then choose the Setup button.
10. Select the correct device, page size, and pen colors and types. Choose the OK button.
11. From the File menu, choose Print. Select the options you want and choose the OK button.
12. When the dialog box appears asking for a filename, type a path and filename for the plot file.
13. Take the file to the computer connected to the plotter. Make sure the computer has a valid MODE statement.
14. From the MS-DOS prompt, type the following command: **copy *filename port:* /b**

For example, type **copy plotter.plt com1: /b** to copy the file called PLOTTER.PLT to the device on com1. The /b indicates the file is a binary file.