

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:

- Plotter Driver Information
- HP Plotters and Microsoft Windows 3.1 Settings
- AUTOEXEC.BAT Requirements
- Setting Up the HP Plotter Driver
- Plotter Communication Test
- HP Plotter Cables
- Plotting to a File

Plotter Driver Information

Hewlett-Packard (HP-GL) Plotters

The following Hewlett-Packard Graphics Language (HP-GL) plotters are supported by version 2.30 of the HP PLOT driver included with Windows 3.1:

<u>Plotter Name</u>	<u>Model Number</u>
ColorPro	7440A
ColorPro w/Graphics Enhancement Cartridge (GEC) 17440A	7440A,
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.

Many Hewlett-Packard (HP) plotters are shipped with two interfaces: a standard RS-232-C interface and the HPIB proprietary device interface based on the IEEE 488 standard. The HPIB interface is not supported by Windows 3.1. If you print using the HPIB interface, nothing will print nor will an error message appear.

Hewlett-Packard (HP-GL/2) Plotters

The following Hewlett-Packard Graphics Language (HP-GL/2) plotters are supported by version 1.0 of the HP plotter driver (HP-GL/2 and HP RTL) for Microsoft Windows 3.0/3.1, which is available from Hewlett-Packard. This driver is also available on CompuServe in the HP Peripherals forum.

<u>Plotter Name</u>	<u>Model Number</u>
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DesignJet	C1633A, C1633B
DesignJet 600	C2847A, C2848A
DraftMaster SX Series	7595B, 7595C
DraftMaster RX/MX Series	7596B, 7596C/7599A, 7599B
7550B Graphics*	7550B
7600 Series*	240D, 240E, 250, 255, 355

*If you're using one of these plotters, choose "Hewlett-Packard HP-GL/2 Plotter" as your plotter during driver installation.

Installation instructions are contained in the document HPDRIVER.WRI that comes with the driver.

Houston Instruments Plotters

The following plotters are supported by a plotter driver for Microsoft Windows 3.0/3.1 that is available from Houston Instruments at (800) 776-9989:

Plotter

Image Maker
DMP 29
DMP 40/40/42
DMP 51/52 and Multipen 51/52
DMP 56A
DMP 61/62
DMP 161/162

CalComp Plotters

The following plotters are supported by a plotter driver for Microsoft Windows 3.0/3.1 that is available from CalComp. This driver can be downloaded from the CalComp BBS at (714) 821-2359 (2400 or 9600 baud and 8,N,1). For technical support from CalComp, call (800) 451-PLOT.

<u>Plotter Family Name</u>	<u>Model Number</u>
Artisan	1023, 1025, 1026
Desktop ColorMaster + ColorView	6603VRC, 6613VRC 5912, 5913
Direct Imaging Plotter - Drawing Master	52224, 52236, 52424, 52436
Electrostatic Plotters	5725, 5735, 5745, 5825, 5835, 5845, 57424, 57436, 57444, 58424, 58434, 58444, 67436, 68436, 68444
PaceSetter	2036, 2074
Color Printer - PlotMaster	5902A, 5902G
Pen Plotters	1040, 1041, 1042, 1043, 1044, 1075, 1076, 1077
DesignMate	3024

Other Plotters

Other plotter manufacturers, including IBM, Bruning, Mutoh, and Rolands, make plotters that can emulate Hewlett-Packard plotters. You may be able to use the Hewlett-Packard drivers to produce plots for these compatible plotters. Contact your plotter manufacturer for additional information about emulating a Hewlett-Packard plotter or the availability of Microsoft Windows 3.x drivers for their plotters.

HP Plotters and Microsoft Windows 3.1 Settings

When using any serial device, you must configure the Microsoft Windows 3.1 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: Hardware

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

In the Microsoft Windows 3.1 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 3.1, 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 permissions. There must also be adequate space on the drive. For a computer running Microsoft 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 3.1, 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 comx:9600,n,8,1,p**
MS-DOS version 4.x and 5.0: **mode comx:baud=9600 parity=n data=8 stop=1 retry=r**

Setting Up the HP Plotter Driver

This procedure is for the HP PLOT driver that is included with Microsoft Windows 3.1. 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 Device 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 from the Carousel menu.
7. If you want to redefine a pen in the carousel, select the pen and then use the PenColor, Type, and Options menus to redefine it.
8. Select the paper feed and page orientation.
9. Choose the OK button to close each dialog box.

Important: When printing to a plotter fitted with roll paper (7586B or DraftMaster II), limit the length of the plot to 85 inches or less. If this length is exceeded the computer will lock up.

Plotter Communication Test

To test whether a HP-GL plotter is properly connected to a computer running Microsoft Windows 3.1, 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 > comx:
```

This test activates the plotter, selects pen 1, and then draws a line the length of the page. If the test is not successful, 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 input channels. 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.

	<u>9-to-25 Pin Port</u>	<u>25-to-25 Pin Port</u>
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 print that file from a computer connected to a plotter. First, you'll need to set up a plotter that is installed in Windows to print to a file.

1. Double-click the Microsoft Windows 3.1 Control Panel icon.
2. Double-click the Printers icon.
3. In the Installed Printers box, select the driver for the plotter to which you'll print.
4. Choose the Connect button.
5. From the list of Ports, select File.
6. Choose the OK button to close each dialog box.
7. Close the Control Panel.

Next, you'll set the printing options.

1. Start Microsoft Project.
2. From the File menu, choose Print Setup.
3. In the Printer box, select the driver for the plotter to which you'll print.
4. Choose the Setup button.
5. Select the correct device, page size, and pen colors and types.
6. Choose the OK button to close each dialog box.

You'll create a plot file in Microsoft Project and then print that file to a plotter.

1. In Microsoft Project, choose Print from the File menu.
2. Select the options you want.
3. Choose the Print button.
4. In the File Name box, type a path and filename for the plot file (for example, **c:\plotter.plt**).
5. Choose the OK button.
6. Take the file to the computer connected to the plotter. Make sure the computer has a valid MODE statement.
7. 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.