AutoCAD®
2007

Driver & Peripheral Guide

Autodesk®

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Contents

Pointing Devices

You can control this program with a pointing device such as a mouse, digitizing puck, or stylus. A pointing device may have a number of buttons. The first 10 buttons are automatically assigned by the program, but you can reassign all but button 1, the pick button, by modifying the menu file. You can change how mouse buttons function by choosing the Mouse icon in the Windows Control Panel.

In this chapter

Pointing Device Buttons

The first 10 pointing device buttons are automatically assigned; you can reassign all except button 1, the pick button.

On a two-button mouse, the left button is the pick button used to

- Specify locations
- Select objects for editing
- Choose menu options and dialog box buttons and fields

The operation of the right button on a mouse depends on context; it can be used to

- End a command in progress
- Display a shortcut menu
- Display the Object Snap menu
- Display the Toolbars dialog box

Right-click operation can be modified in the Options dialog box (OPTIONS). The operation of additional buttons on a pointing device is defined in the menu file.

The Wheel Mouse

The wheel mouse has a small wheel between the buttons. The left and right buttons behave the same as they do on a standard mouse. You can rotate the wheel by discrete values. You can use the wheel to zoom and pan in your drawing without using any commands.

By default, the zoom factor is set to 10 percent; each increment in the wheel rotation changes the zoom level by 10 percent. The ZOOMFACTOR system variable controls the incremental change, whether forward or backward. The higher the number, the larger the change.

The following table lists the wheel mouse actions supported in this program.

To...	Do this...
Zoom in or out	Rotate the wheel forward to zoom in, backward to zoom out
Zoom to drawing extents	Double-click the wheel button

To...	Do this...
Pan	Hold down the wheel button and drag the mouse
Pan (joystick)	Hold down CTRL and the wheel button, and drag the mouse
Display the Object Snap menu	With the MBUTTONPAN system variable set to 0, click the wheel button

See also:

""Customize Buttons on a Pointing Device"" in the *Customization Guide*

To practice using several features of the mouse

1. Move your mouse and notice that the pointer on the screen changes from crosshairs while the pointer is in the drawing area, to an arrow when it's not over the drawing area, and to an I-beam when it's in the text window.
2. As you continue to move the mouse, notice that the numbers in the coordinate display on the status bar change. These numbers indicate the exact location, or coordinate, of the crosshairs on the screen. Click in the coordinate display to turn it off. Notice that the coordinates are updated only when you click in the drawing area.
3. Find the Snap button on the status bar and click it with the pick button on your mouse (usually the left button). Notice that the button darkens to indicate that Snap mode has been turned on.
4. Move the pointer around the screen and observe that it seems to adhere, or "snap," to points at predetermined and equivalent intervals on the screen. You can change the size of these intervals.
5. Click the Snap button again to turn Snap mode off.
6. Move the pointer over the Standard toolbar at the top of the drawing area. As you leave the pointer over a button for a few moments, notice a pop-up label, called a tooltip, that identifies the button.
7. Move the pointer over double bars at the end of a toolbar. Then, as you hold down the pick button, drag the toolbar around the screen to reposition it.
8. Dock the toolbar by dragging it to a docking location at the top, bottom, or either side of the drawing area. When the outline of the toolbar appears in the docking area, release the pick button.

To turn off all shortcut menus in the drawing area

1. Click Tools menu Options.
2. In the Options dialog box, User Preferences tab, under Windows Standard Behavior, clear Shortcut Menus in Drawing Area.
3. Click OK to record the current options settings in the system registry and close the Options dialog box.

Command line: OPTIONS

To turn off shortcut menus individually

1. Click Tools menu Options.
2. In the Options dialog box, User Preferences tab, select Shortcut Menus in Drawing Area, and then click Right-Click Customization.
3. In the Right-Click Customization dialog box, under Default Mode, Edit Mode, or Command Mode, select the options to control what happens when you right-click in the drawing area.
4. Click Apply & Close to close the dialog box.
5. Click OK to record the current options settings in the system registry and close the Options dialog box.

Command line: OPTIONS

Digitizing Tablets

You can use the puck or stylus of a digitizing tablet as a pointing device, or you can trace a paper drawing into a file.

A digitizing tablet, or digitizer, is a peripheral device that can be used to trace paper drawings into a drawing file or to choose commands from a digitizing tablet overlay. With the Wintab driver, the tablet pointer can also be used instead of a mouse as a system pointer to choose menu items and drawing objects or to interact with the operating system. The tablet pointer can be a *puck* or a *stylus*.

The digitizing tablet must first be configured and then can optionally be calibrated.

- When the tablet is *configured*, portions of the tablet surface are designated as menu areas and a screen-pointing area.

- When the tablet is *calibrated*, it can be used to trace geometry from an existing paper drawing or photograph into a drawing.

You can easily switch between using the tablet uncalibrated as a system pointer (Tablet mode off) or calibrated for digitizing a drawing (Tablet mode on). Click the Tablet button on the status bar. If a screen-pointing area has been designated, a Float button is displayed on the status bar and toggles the screen-pointing area on and off.

NOTE A sample digitizing tablet overlay, *tablet.dwg*, is included in the *Sample* folder, which is located in the product installation directory.

See also:

""Create Tablet Menus"" in the *Customization Guide*

Use Plotters and Printers

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You can produce hard copy output of your drawings using many different types of plotters and printers. You can send output to files using a variety of formats.

In this chapter

Supported Plotters

HDI (Heidi® Device Interface) drivers are used to communicate with hard copy devices. These drivers fall into three categories: file format drivers, HDI nonsystem drivers, and HDI system printer drivers.

NOTE It is highly recommended that you update your drivers regularly to avoid plotting problems.

Raster Formats

The following raster file formats are supported using the Raster HDI driver:

- CALS MIL-R-28002A Type 1 (CCITT G4 2D Compression)
- CALS Type 1 (CCITT G4 2D Compression)
- Independent JPEG Group JFIF (JPEG Compression)
- MS-Windows BMP (Uncompressed DIB)
- Portable Network Graphics PNG (LZH Compression)
- TIFF Version 6 (CCITT G4 2D Compression)
- TIFF Version 6 (Uncompressed)
- TrueVision TGA Version 2 (Uncompressed)
- ZSoft PC Paintbrush PCX (ZSOFT PACKBITS Compression)

PostScript Formats

The following PostScript output is supported using the Adobe PostScript HDI driver.

- Level 1
- Level 1Plus (Level 1 with color image support)
- Level 2

DXB Formats

The AutoCAD DXB file format is supported using the AutoCAD DXB file driver.

Hewlett-Packard Plotters

Hewlett-Packard pen plotters are supported using the HP-GL and HP-GL/2 HDI drivers. The following plotters are supported using the HP-GL and HP-GL/2 HDI driver

NOTE While it is possible to use the HP-GL and HP-GL/2 HDI drivers to plot to the HP DesignJet plotters, the recommended driver to use with these plotters is the HP Windows System printer driver that is optimized for CAD use.

- 7475A
- 7550A
- 7580B
- 7585B
- 7586B
- 7600 Series Model 240 D/A1
- 7600 Series Model 240 E/A0
- 7600 Series Model 250 E/A0
- 7600 Series Model 255 E/A0
- 7600 Series Model 355 E/A0
- HP DesignJet ColorPro CAD
- HP DesignJet 3500CP
- HP DesignJet 3000CP
- HP DesignJet 2500CP
- HP DesignJet 2000CP
- HP DesignJet 1055CM
- HP DesignJet 1050C
- HP DesignJet 755CM
- HP DesignJet 750C Plus
- HP DesignJet 750C
- HP DesignJet 700
- HP DesignJet 650C

- HP DesignJet 600
- HP DesignJet 488CA
- HP DesignJet 455CA
- HP DesignJet 450C
- HP DesignJet 430
- HP DesignJet 350C
- HP DesignJet 330
- HP DesignJet 250C
- HP DesignJet 230
- HP DesignJet 220
- HP DesignJet 200
- DraftMaster 1 (7595A)
- DraftMaster 2 (7596A)
- DraftMaster MX 7599
- DraftMaster Mx Plus 7599B
- DraftMaster RX 7596B
- DraftMaster RX Plus 7596C
- DraftMaster SX Plus Sheet Feed 7595C
- DraftPro (7570A)
- DraftPro Plus C3170A
- DraftPro Plus C3171A
- DraftPro-DXL (7575A)
- DraftPro-EXL (7576A)
- LaserJet 4
- LaserJet 4M
- LaserJet 4MV
- LaserJet 4Si
- LaserJet 4SiMx

- LaserJet 4V
- LaserJet 5
- LaserJet 5M
- LaserJet 5Si
- LaserJet 5Si Mopier
- LaserJet 5SiMX
- LaserJet III
- LaserJet IIID
- LaserJet IIISi
- Generic SHPGL
- Generic LHPGL

Xerox Plotters

The following Xerox plotters are supported by the device driver provided by Xerox.

- 6030 Wide Format
- 6050 Wide Format
- Wide Format Print System 510 Series
- Wide Format Print System 721p
- Wide Format Print System 8825 (1 Roll)
- Wide Format Print System 8825 (2 Roll)
- Wide Format Print System 8830
- Wide Format Print System 8850
- Wide Format Print System 8855

Océ Plotters

The following Océ plotters are supported by the device driver provided by Océ.

NOTE While it is possible to use the HP-GL and HP-GL/2 HDI drivers to plot to the Océ TDS/TCS plotters, the recommended driver to use with these plotters is the Océ Windows System printer driver that is optimized for CAD use.

- 5120 A1 (LZ_1.x) / 5120 (LZ_4.x)
- 5120 A0 (LZ_1.x) / 5120 (LZ_4.x)
- 5150 CC_2.x
- 5200 (MI_1.x)
- 5200 MI_4.x
- 5250 CG_1.x
- 9055-S/95xx-S (FR/FP1.x)
- 9300 LVI_1.x
- 9400(with Scanner) (LV_3.x)
- 9400 LV_3.x/4.x
- 9400-11 EPC-MI_1.x
- 9600
- 9700 (R1.0)
- 9800 (R3 & EPC R)
- TCS400 Colour HDI
- TCS500 Colour HDI
- TDS300 HDI
- TDS320 HDI
- TDS400 HDI
- TDS450 HDI
- TDS600 HDI
- TDS800 HDI
- TDS860 HDI

CalComp Plotters

The following CalComp plotters are supported by the device driver provided by CalComp.

- 52224 DrawingMaster Plus
- 52236 DrawingMaster Plus
- 52424 DrawingMaster Plus
- 52436 DrawingMaster Plug
- 54424 Solus LED Plotter
- 54436 Solus LED Plotter

Plotters that Are No Longer Supported

Autodesk will no longer test or fix problems with the following devices. They are still available, but are not supported in this release.

Hewlett-Packard Plotters (No Longer Supported)

- 7600 Series model 240 D/A1
- 7600 Series model 240 D/A0
- 7600 Series model 250
- 7600 Series model 255
- 7600 Series model 355

CalComp Plotters (No Longer Supported)

- 1023 Artisan Pen Plotter
- 1025 Artisan Pen Plotter
- 1026 Artisan Pen Plotter
- 2024 PaceSetter Pen Plotter
- 2036 PaceSetter Pen Plotter
- 3024 DesignMate Pen Plotter
- 3036 DesignMate Pen Plotter
- 4036 PaceSetter Pen Plotter

- 5324 TechJet Color
- 5324GT TechJet Color
- 53336 DrawingMaster DM600
- 5336 TechJet Color
- 5336GT TechJet Color
- 5336i TechJet Color 175i
- 53436 Drawing Master DM800
- 5424 TechJet 720
- 5436 TechJet 720
- 5524 TechJet Color
- 5536 TechJet Color
- 5624 TechJet Color 720c
- 5636 TechJet Color 720c
- 57424 Monochrome Electrostatic
- 57436 Monochrome Electrostatic
- 57444 Monochrome Electrostatic
- 58424 Color Electrostatic
- 58436 Color Electrostatic
- 58444 Color Electrostatic
- 67436 Monochrome Electrostatic
- 68436 Color Electrostatic
- 68444 Color Electrostatic

Set Up Plotters and Printers

Each plotter configuration contains information such as the device driver and model, the output port to which the device is connected, and various device-specific settings.

AutoCAD lists printers or plotters configured for use with Windows in the Plot and Page Setup dialog boxes. You do not need to configure these devices

with the system printer driver unless the AutoCAD defaults differ from the Windows values.

NOTE Nonsystem devices are referred to as plotters and Windows system devices are referred to as printers.

If a plotter is supported by AutoCAD, but not by Windows, you can use one of the HDI nonsystem printer drivers. You can also use a nonsystem driver to create PostScript, raster, or Design Web format (DWF) files and Portable Document Format (PDF) files

You must configure local or network nonsystem plotters and Windows system printers with nondefault settings. You do not need to configure system printers if you change only the paper size.

AutoCAD stores information about the media and plotting device in configured plot (PC3) files. Plot configurations are portable and can be shared in an office or on a project as long as they are for the same driver, model, and driver version. Shared plot configurations for Windows system printers may also need to be for the same version of Windows. If you calibrate a plotter, the calibration information is stored in a plot model parameter (PMP) file that you can attach to any PC3 files you create for the calibrated plotter.

You can configure AutoCAD for many devices, and store multiple configurations for a single device. Each plotter configuration contains information such as the device driver and model, the output port to which the device is connected, and various device-specific settings. You can create several PC3 files with different output options for the same plotter. After you create a PC3 file, it's available in the list of plotter configuration names in the Plot dialog box.

To create these PC3 files, use the Add-a-Plotter wizard in the Autodesk Plotter Manager. The Plotter Manager is a Windows Explorer window. The Add-a-Plotter wizard is modeled after the Windows Add Printer wizard. Using the Add-a-Plotter wizard, you can specify whether you want to configure a nonsystem, local, or network plotter, or a system printer. You can create any number of plotter device configurations that use either the Windows system printer drivers or Autodesk nonsystem plotter drivers. Your configurations are stored in your user profile.

There are a number of ways to modify the default settings for a Windows system printer without creating a PC3 file. For example, you can modify the properties systemwide from the Control Panel. You can also choose Properties in the Plot dialog box and plot without saving the properties.

NOTE If you upgrade a driver, try using your existing PC3 file. If it does not work, then you need to create a new PC3 file. In many cases, it may be possible to copy

and paste some of the settings from the old PC3 file to a new one created with the new driver.

See also:

"Use the Plotter Configuration Editor" on page 18
"Calibrate Plotters and Work with Custom Paper Sizes" on page 25

To open the Autodesk Plotter Manager

You can also use any of the following methods to open the Autodesk Plotter Manager:

- From the File menu, choose Plotter Manager.
- On the command line, enter **plottermanager**.
- From the Tools menu, choose Options. On the Plot and Publish tab, choose Add or Configure Plotters.

To create a PC3 file for a Windows system printer

1. Open the Autodesk Plotter Manager.
2. In the Autodesk Plotter Manager, double-click the Add-a-Plotter Wizard shortcut icon.
3. In the Add-a-Plotter wizard, read the Introduction, and then choose Next to advance to the Add Plotter - Begin page.
4. On the Add Plotter - Begin page, choose System Printer. Choose Next.
5. On the Add Plotter - System Printer page, select the system printer that you want to configure.

   The list includes all printers known to the operating system. If you want to connect to a printer that is not in the list, you must first add the printer using the Windows Add Printer wizard in the Control Panel.

   (Optional)The Import PCP or PC2 screen enables you to use configuration information from a PCP or PC2 file created with an earlier version of AutoCAD.
6. On the Add Plotter - Plotter Name page, enter a name to identify the currently configured plotter. Choose Next.
7. When you reach the Add Plotter - Finish page, you can choose Finish to exit the Add-a-Plotter wizard.

   A PC3 file for the newly configured plotter appears in the Plotters window and the plotter is available for plotting in the list of devices.

At this time, you can change the default settings for the plotter by choosing Edit Plotter Configuration on the Add Plotter - Finish page. You can also perform a plot calibration test on your newly configured plotter by choosing Calibrate Plotter on the Add Plotter - Finish page.

To configure a local, nonsystem plotter

1. Open the Autodesk Plotter Manager.
2. In the Autodesk Plotter Manager, double-click the Add-a-Plotter Wizard shortcut.
3. In the Add-a-Plotter wizard, read the Introduction, and then choose Next to advance to the Add Plotter - Begin page.
4. On the Add Plotter - Begin page, choose My Computer. Choose Next.
5. On the Add Plotter - Plotter Model page, select a manufacturer and model. Choose Next.

   If you are configuring a PostScript device, select Adobe from the Manufacturers list.

   If your plotter is not in the list of available plotters, and you have a driver disk for your plotter, choose Have Disk to locate the HIF file on that driver disk, and install the driver supplied with your plotter.

   (Optional) The Import PCP or PC2 screen enables you to use configuration information from a PCP or PC2 file created with an earlier version of AutoCAD.
6. On the Add Plotter - Ports page, select the port to use when plotting. Choose Next. The ports available for the specified device are displayed.
7. On the Add Plotter - Plotter Name page, enter a name to identify the currently configured plotter. Choose Next.
8. When you reach the Add Plotter - Finish page, you can choose Finish to exit the Add-a-Plotter wizard.

   A PC3 file for the newly configured plotter appears in the Plotters window, and the plotter is available for plotting in the list of devices.

   At this time, you can change the default settings for the plotter by choosing Edit Plotter Configuration on the Add Plotter - Finish page. You can also perform a plot calibration test on your newly configured plotter by choosing Calibrate Plotter on the Add Plotter - Finish page.

To configure a network, nonsystem plotter

1. Open the Autodesk Plotter Manager.
2. Double-click the Add-a-Plotter Wizard shortcut icon.

3. In the Add-a-Plotter wizard, read the Introduction, and then choose Next to advance to the Add Plotter - Begin page.
4. On the Add Plotter - Begin page, choose Network Plotter Server. Choose Next.
5. On the Add Plotter - Network Plotter page, enter the share name of the network plotter server that you want to use.

   The server must already exist on the network. For more information, see your system administrator.

   You must use the universal naming convention (UNC). The correct format of a UNC path is *\\server name\share name*. You can select an existing share name on your network by choosing Browse.
6. On the Add Plotter - Plotter Model page, select a manufacturer and model. Choose Next.

   If you are configuring a PostScript device, select Adobe from the Manufacturers list.

   If your plotter isn't in the list of available plotters and you have a driver disk for your plotter, choose Have Disk to locate the HIF file on that driver disk, and install the driver supplied with your plotter.

   (Optional) The Import PCP or PC2 screen enables you to use configuration information from a PCP or PC2 file created with an earlier version of AutoCAD.
7. On the Add Plotter - Plotter Name page, enter a name to identify the currently configured plotter. Choose Next.
8. When you reach the Add Plotter - Finish page, you can choose Finish to exit the Add-a-Plotter wizard.

   A PC3 file for the newly configured plotter appears in the Plotters window and the plotter is available for plotting in the list of devices.

   At this time, you can change the default settings for the plotter by choosing Edit Plotter Configuration on the Add Plotter - Finish page. You can also perform a plot calibration test on your newly configured plotter by choosing Calibrate Plotter on the Add Plotter - Finish page.

Use the Plotter Configuration Editor

After you create a configured plotter (PC3) file using the Add-a-Plotter wizard, you can edit the file using the Plotter Configuration Editor.

The Plotter Configuration Editor provides options for modifying a plotter's port connections and output settings including media, graphics, physical pen configuration, custom properties, initialization strings, calibration, and

user-defined paper sizes. You can drag and drop these options from one PC3 file to another.

NOTE When dragging and dropping one leaf, the whole branch will come over with the leaf. If you drag from a Windows system driver, in most cases, the Custom branch will also be copied. For nonsystem drivers, the Custom leaf is copied only if it is explicitly selected.

The Plotter Configuration Editor contains three tabs. The General tab contains basic information about the configured plotter. The Ports tab contains information about the communication between the plotting device and your computer. The Device and Document Settings tab contains plotting options. Depending on your configured plotting device, additional options are available on the Device and Document Settings tab. For example, when you configure a nonsystem pen plotter you have the option to modify the physical pen characteristics.

You can edit the plotter configuration files for both nonsystem and system plotters. You can also modify the default settings for a Windows system printer without creating a PC3 file. For example, you can modify the properties systemwide in the Windows Control Panel. You can also choose Properties in the Plot dialog box and plot without saving the properties.

To start the Plotter Configuration Editor

Use one of the following methods:

- Double-click a PC3 file from Windows Explorer or right-click the file and choose Open. (By default, PC3 files are stored in the user profile folder.)
- Choose Edit Plotter Configuration on the Add Plotter - Finish page in the Add-a-Plotter wizard.
- On the File menu, click Plot. In the Plot dialog box, under Printer/Plotter select a device, and then click Properties.
- On the File menu, click Page Setup. In Page Setup Manager, select a page setup, and then click Modify. In the Page Setup dialog box, under Printer/Plotter select a device and then click Properties.

To save a PC3 file under a new file name

1. From the File menu, choose Plotter Manager.
2. In the Autodesk Plotter Manager, double-click to open the PC3 file you want to use.

3. In the Plotter Configuration Editor, choose the Device and Document Settings tab.
4. Choose Save As.
5. In the Save As dialog box, enter a new file name for the PC3 file.
6. Choose Save.

Modify General PC3 File Information

The General tab of the Plotter Configuration Editor contains basic information about the PC3 file. You can add or modify the information in the Description area.

The rest of the tab is read-only. The information on the General tab includes

- Configured plotter file name
- Description or other information you want to include about the plotter
- Plotter driver type (system or nonsystem), name, model, and location
- HDI driver file version number (AutoCAD specialized driver files)
- UNC name of the network server (if the plotter is connected to a network server), the input/output port (if the plotter is connected locally), or the name of the system printer (if the configured plotter is the system printer)
- PMP file name and location (if a plotter calibration file [PMP] is attached to the PC3 file)

To add or modify the PC3 file description

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration (PC3) file whose settings you want to change.
3. In the Plotter Configuration Editor, choose the General tab.
4. Insert the cursor in the Description area.
5. Add a description or modify the existing description for the PC3 file.

Control PC3 File Device and Document Settings

In the Plotter Configuration Editor, on the Device and Document Settings tab, you can change many of the settings in the configured plot (PC3) file.

NOTE Only the settings available for the configured device are displayed in the tree view. In addition, you might not be able to edit some settings if the device handles the setting through the Custom Properties option or doesn't support the capability.

Adjust Media Settings (For Nonsystem Plotters Only)

Depending on the features supported by your configured plotter, you can modify the paper source, type, and size of your paper.

You can specify whether you want to print on both sides or just one side. If your printer supports cutting, collating, and stapling, you can specify your choice under the Media Destination option. For Windows system printers, you must configure the Media settings using the Custom Properties option.

To adjust media settings

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration (PC3) file whose media settings you want to change.
3. In the Plotter Configuration Editor, choose the Device and Document Settings tab.
4. Double-click Media to view the media settings.
5. Do one of the following:
   - **Select Source and Size.** Under Media Source and Size, select a paper source from the Source list. If appropriate, select a roll width from the Width list or a tray from the Tray Type list. Under Size, select the paper size you want to use. Select Automatic to tell the printer to select the appropriate paper source.
   - **Select Media Type.** Under Media Type, select one of the available media types.

- **Select Duplex Printing.** Under Print on Both Sides (Duplex Printing), select Short Side or Long Side. This setting may not be available for your plotter.
- **Select Media Destination.** Under Media Destination, specify one of the available options, for example, cutting. This setting may not be available for your plotter.

6 When finished, choose OK.

Command line: PLOTTERMANAGER

Specify Physical Pen Configuration (For Pen Plotters Only)

In the Plotter Configuration Editor, the Physical Pen Configuration setting controls the pens in the pen plotter.

You can specify pen swapping on a single pen plotter, adjust the polygon area for pen width, and set pen optimization if the configured plotter supports these features. The lower pane of the Device and Document Settings tab displays a table that describes the color, width, and speed of each pen in the plotter.

NOTE Physical pen information cannot be detected automatically. You must provide this information for your pen plotter under the Physical Pen Characteristics option.

You must specify the pen settings even if you don't plan to use plot style tables. If you choose not to create a plot style table, AutoCAD automatically assigns pens, using the pen color and width information you provide. AutoCAD uses the pen whose color is closest to the color assigned to the object. If more than one pen matches, then the pen with the closest width is used. If the best pen is narrower than the object's width, several strokes are used to draw the object. If you use a plot style table, you can assign a physical pen number to each plot style.

See also:

"Switch the Type of Plot Style Table" in the User's Guide

To configure pens

1 From the File menu, choose Plotter Manager.

2 Double-click the plotter configuration (PC3) file whose pen settings you want to change.

3 In the Plotter Configuration Editor, choose the Device and Document Settings tab.

4 Double-click Physical Pen Configuration to view the pen configuration settings.

5 Select Pen Configuration. Under Pen Configuration, do one of the following:

- If you use a single-pen plotter and want to use different pens when you plot, select Prompt for Pen Swapping.
- For greater accuracy when plotting filled areas and wide polylines, choose Area Fill Correction. AutoCAD moves the pen inward by half a pen width.
- Under Pen Optimization Level, select one of the available methods. Each method in the list includes the optimization methods preceding it in the list (except for No Optimization).

6 Select Physical Pen Characteristics. For each pen in your plotter, specify the color, speed, and width. This step is required.

NOTE Use the Plot Style Table Editor to assign specific colors and pen widths to your objects that correspond to the plotted colors and widths for your plotting device.

7 When finished, choose OK.

Command line: PLOTTERMANAGER

Specify Settings for Graphical Output

Depending on the capabilities of your configured plotter, you can modify the plotter's color depth, resolution, or dithering and specify whether the output is color or monochrome for vector drawings.

When printing raster images on a plotter with limited memory, you can specify some image-quality trade-offs to improve performance. If you use a nonsystem plotter that supports varying amounts of installed RAM, you can provide AutoCAD with that information to improve performance.

To specify graphics settings

1 From the File menu, choose Plotter Manager.

2 Double-click the plotter configuration (PC3) file whose pen settings you want to change.

3 In the Plotter Configuration Editor, choose the Device and Document Settings tab.

4 Double-click Graphics to view the graphical output settings.

5 Do one of the following:

- Select Installed Memory and enter the amount of memory available in the plotter.
- Select Vector Graphics and select color depth, resolution, and dithering.
- Select Raster Graphics and specify a balance between output quality and performance.
- Select TrueType Text and select the way you want to print TrueType text.
- Select Merge control and specify whether crossing lines should overwrite the lines beneath them or merge.

6 When finished, choose OK.

Command line: PLOTTERMANAGER

Adjust Custom Properties

In the Plotter Configuration Editor, you can modify the device-specific properties for the configured plotter by selecting Custom Properties from the tree view on the Device and Document Settings tab.

The settings for each plotter vary. If the plotter manufacturer has not included a Custom Properties dialog box for the device driver, the Custom Properties option is unavailable. For other drivers, the Customs Properties option is the only tree view option available. For Windows system printers, most of the device-specific settings are made in this dialog box.

For device-specific information, choose Help in the Custom Properties dialog box for the driver you have configured.

To specify custom properties

1 From the File menu, choose Plotter Manager.

2 Double-click the plotter configuration (PC3) file whose custom properties you want to change.

3 In the Plotter Configuration Editor, choose the Device and Document Settings tab.

4 In the tree view, select Custom Properties. Under Access Custom Dialog, choose the Custom Properties button.

5 Set the properties for the printer or plotter. The properties vary depending on the plotter and manufacturer.

6 Choose OK to exit each dialog box.

Command line: PLOTTERMANAGER

Use Initialization Strings

You can use ASCII text initialization strings to prepare the plotter for printing.

If you're plotting to an unsupported, nonsystem plotter in Emulation mode, you can use ASCII text initialization strings to prepare the plotter for printing, set device-specific options, and restore the plotter to its original state. Only advanced users should use initialization strings.

To set initialization strings

1 From the File menu, choose Plotter Manager.

2 Double-click the plotter configuration (PC3) file whose initialization string settings you want to change.

3 In the Plotter Configuration Editor, choose the Device and Document Settings tab.

4 In the tree view, select Initialization Strings to view the initialization string settings.

5 Enter a Pre-Initialization string, Post-Initialization string, and Termination string as required.

6 Choose OK.

Command line: PLOTTERMANAGER

Calibrate Plotters and Work with Custom Paper Sizes

You should perform a plotter calibration only if your drawings must be exactly to scale and your plotter or printer produces inaccurate plots.

You can adjust plotter calibration to correct scaling discrepancies, and you can add custom paper sizes for nonsystem plotters.

Calibration Files

Plotter calibration is an optional process. If your plotter meets the manufacturer's specifications for accuracy of scale, a 10-inch line in a drawing plotted at a scale of 1:1 should be exactly 10 inches long on paper. If you need to correct scaling discrepancies, you can adjust the plotter calibration. If your plotter provides a calibration utility, use that utility instead of the AutoCAD calibration utility so the calibration is available for all applications using the plotter.

To calibrate a plotter, you must specify the dimensions of a test rectangle, print the test rectangle, measure actual dimensions, and enter the actual measurements in the Calibrate Plotter wizard. AutoCAD calculates the necessary calibration for the plotter.

When you complete the Calibrate Plotter wizard, AutoCAD creates a plot model parameter (PMP) file to store the results of the calibration for each plot device. AutoCAD automatically attaches the resulting PMP file to the plotter configuration (PC3) file that you used to perform the calibration test.

Calibrating a plotter creates a plotter model parameter (PMP) file that contains calibration information. If the PMP file is not already attached to the plotter configuration file (PC3) you are editing, you must create that association so you can use the PMP file. If the plotter was calibrated from within the Add-a-Plotter wizard, the PMP file is already attached. You can use the Calibration and User Defined Paper Sizes option to add PMP files to and detach PMP files from the PC3 file. If you have more than one PC3 file for a device, you can attach the same PMP file to them using the Plotter Configuration Editor. Because PMP files are plotter specific, it's appropriate to attach only one PMP file to a PC3 file.

NOTE You should perform a plotter calibration only if your drawings must be exactly to scale and your plotter or printer produces inaccurate plots. Plotter calibration causes AutoCAD to rescale all plots sent to your plotter to correct errors in its hardware scaling. It is recommended that you use any calibration setting provided by your plotter instead of the AutoCAD setting.

Custom Paper Sizes

For a nonsystem plotter, you can choose the Add option to create a custom paper size or change the printable area of a standard or nonstandard paper size. Using the Custom Paper Size wizard, you can create a new paper size or select from a list of available paper sizes (from a PMP file). For a Windows system printer, use the Custom Properties option to adjust paper settings.

You can modify standard paper sizes to adjust the printable area to match a printer's capabilities. In the Plotter Configuration Editor, you cannot create custom paper sizes for Windows system printers, but you can correct errors in the printable area of standard paper sizes.

To calibrate a plotter

1. From the File menu, choose Plotter Manager.
2. Double-click the Add-a-Plotter wizard icon.
3. Start the Add-a-Plotter wizard and configure the device you want to add.
4. When you reach the Add Plotter - Finish page, choose Calibrate Plotter.

   You can also calibrate a plotter by running the Plotter Configuration Editor on an existing PC3 file for the device you want to calibrate.
5. In the Paper Size list, select a paper size for the test plot. Choose Next.
6. On the Calibrate Plotter - Rectangle Size page, in the Units list, select the measurement units.
7. In the Length and Width boxes, enter the dimensions of the test rectangle. Choose Next. AutoCAD plots the test rectangle.
8. Retrieve the plot and measure the test rectangle. On the Calibrate Plotter - Measured Plot page, in the Measured Length and Measured Width boxes, enter the actual dimensions of the plotted test rectangle. Choose Next.

   AutoCAD compares the actual plotted measurements to the size you specified in the preceding screen and computes the correction needed to accurately calibrate the plotter.
9. On the Calibrate Plotter - File name page, enter a file name. Choose Next.

   The resulting PMP file is stored in the AutoCAD *Drv* folder.
10. On the Calibrate Plotter - Finish page, choose Check Calibration.

    AutoCAD plots the text rectangle again. Measure the sides again to verify that the calibration is correct.
11. Choose Finish to return to the Add-a-Plotter wizard or Plotter Configuration Editor.

Command line: PLOTTERMANAGER

To attach a PMP file to a PC3 file

After you create a PMP file, that file is attached to the PC3 file from which you started the Calibrate Plotter wizard. You can attach an existing PMP file to a different PC3 file using the Plotter Configuration Editor.

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration to which you want to attach a PMP file.
3. On the Device and Document Settings tab, from User-Defined Paper Sizes & Calibration, select PMP File Name <*file name*>.

   If this PC3 file doesn't have an attached PMP file, the PMP File Name setting doesn't show an attached file. Choose Attach.
4. Locate the PMP file you want to attach to this PC3 file and choose Open.
5. Choose OK to close the Plotter Configuration Editor.

   The PMP File Name setting is updated.

Command line: PLOTTERMANAGER

To detach a PMP file from a PC3 file

After you create a PMP file, that file is attached to the PC3 file from which you started the Calibrate Plotter wizard. You can detach a PMP from a PC3 file using the Plotter Configuration Editor.

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration from which you want to detach a PMP file.
3. On the Device and Document Settings tab, select User-defined Paper Sizes & Calibration and then select the PMP File Name <*file name*>.
4. Choose Detach. (If this PC3 file doesn't have an attached PMP file, the Detach option is unavailable.)
5. Choose OK to close the Plotter Configuration Editor.

Command line: PLOTTERMANAGER

To save a PMP file to a new file name

After you create a PMP file, that file is attached to the PC3 file from which you started the Calibrate Plotter wizard. You can save the PMP file with a new file name using the Plotter Configuration Editor.

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration from which you want to save a PMP file.
3. In the Plotter Configuration Editor, choose the Device and Document Settings tab.
4. Double-click User-Defined Paper Sizes & Calibration to display the calibration and paper size options.
5. Under PMP File, choose Save PMP.
6. In the Save As dialog box, enter a new file name for the PMP file that's attached to the PC3 file you're editing.
7. Choose Save.

   The new file name is displayed in angle brackets beside the PMP File Name option in the tree view.
8. Choose OK to close the Plotter Configuration Editor.

Command line: PLOTTERMANAGER

To add a new custom paper size from scratch (nonsystem HDI drivers only)

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration you want to modify.
3. In the Plotter Configuration Editor, choose the Device and Document Settings tab.
4. Double-click User-Defined Paper Sizes & Calibration to display the calibration and paper size options. Then select Custom Paper Sizes.
5. Under Custom Paper Sizes, choose Add.
6. In the Custom Paper Size Wizard, on the Begin page, select Start from Scratch. Choose Next.
7. On the Media Bounds page, in the Units list, select either Inches or Millimeters for paper size.

   When you plot a nondimensional raster image, such as BMP or TIFF, the size of the plot is specified in pixels, not inches or millimeters.

8. From the Width and Length lists, select the paper width and length. Choose Next.

   Each plotter has a maximum printable area determined by where it grips the paper and how far the pen shuttle reaches. Verify that the plotter is capable of plotting the new dimensions.

9. On the Printable Area page, in the Top, Bottom, Left, and Right boxes, specify the printable area. Choose Next.

10. On the Paper Size Name page, enter a name for the paper size. Choose Next.

11. On the File Name page, enter a name for the PMP file.

12. On the Finish page, specify whether the paper source is Sheet-Fed or Roll-Fed. Choose Print Test Page to verify the custom size.

    AutoCAD prints a cross that defines the paper size and a rectangle that defines the printable area. If all four sides of the rectangle are not printed, increase the printable area.

13. Choose Finish to exit the Custom Paper Size wizard.

Command line: PLOTTERMANAGER

To add a new custom paper size from scratch (system printers only)

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration you want to modify.
3. In the Plotter Configuration Editor, choose the Device and Document Settings tab.
4. Select Custom Properties.
5. Choose Custom Properties in the Access Custom Dialog area.

   The device driver-specific user interface opens.
6. Follow the manufacturer's instructions to add a custom paper size.

   You may need to choose the Help button for more information.

Command line: PLOTTERMANAGER

To add a new custom paper size starting from an existing paper size

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration you want to modify.

3. In the Plotter Configuration Editor, choose the Device and Document Settings tab.
4. Double-click User-Defined Paper Sizes & Calibration to display the calibration and paper size options. Then select Custom Paper Sizes.
5. Under Custom Paper Sizes, choose Add.
6. In the Custom Paper Size wizard, on the Begin page, select Use Existing.
7. From the list of existing standard paper sizes, select a paper size on which to base the custom paper size you are creating.
8. On the Media Bounds page, select either Inches or Millimeters for paper size and specify the paper width and length. Choose Next.

   Each plotter has a maximum printable area determined by where it grips the paper and how far the pen shuttle reaches. Verify that the plotter is capable of plotting the new dimensions.
9. On the Printable Area page, in the Top, Bottom, Left, and Right boxes, specify the printable area. Choose Next.
10. On the Paper Size Name page, enter a name for the paper size. Choose Next.
11. On the File Name page, enter a name for the PMP file.
12. On the Finish page, specify whether the paper source is Sheet-Fed or Roll-Fed. Choose Print Test Page to verify the custom size.

    AutoCAD prints a cross that defines the paper size and a rectangle that defines the printable area. If all four sides of the rectangle are not printed, increase the printable area.
13. Choose Finish to exit the Custom Paper Size wizard.

Command line: PLOTTERMANAGER

To edit a custom paper size

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration you want to modify.
3. In the Plotter Configuration Editor, choose the Device and Document Settings tab.
4. Double-click User-Defined Paper Sizes & Calibration to display the calibration and paper size settings.
5. Select Custom Paper Sizes.
6. Under Custom Paper Sizes, select a paper size from the list. Choose Edit.

7 In the Custom Paper Size wizard, make changes to the paper size, printable area, custom paper size name, and source.

8 Choose Finish to exit the Custom Paper Size wizard.

9 Choose OK.

Command line: PLOTTERMANAGER

To delete a custom paper size

1 From the File menu, choose Plotter Manager.

2 Double-click the plotter configuration you want to modify.

3 In the Plotter Configuration Editor, choose the Device and Document Settings tab.

4 Double-click User-Defined Paper Sizes & Calibration to display the calibration and paper size settings.

5 Select Custom Paper Sizes.

6 Under Custom Paper Sizes, select a paper size from the list.

7 Choose Delete.

8 Choose OK.

Command line: PLOTTERMANAGER

To modify a standard paper size

1 From the File menu, choose Plotter Manager.

2 Double-click the plotter configuration you want to modify.

3 In the Plotter Configuration Editor, choose the Device and Document Settings tab.

4 Double-click User-Defined Paper Sizes & Calibration to display the calibration and paper size settings.

5 Select Modify Standard Paper Sizes.

6 Under Modify Standard Paper Sizes, select the paper size you want to adjust. Then choose Modify.

7 In the Custom Paper Size wizard, adjust the printable area as necessary. Then choose Finish to exit the Custom Paper Size wizard.

Command line: PLOTTERMANAGER

To filter paper sizes

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration you want to modify.
3. In the Plotter Configuration Editor, choose the Device and Document Settings tab.
4. Double-click User-Defined Paper Sizes & Calibration to display the calibration and paper size settings.
5. Select Filter Paper Sizes.
6. In the Size list in the Filter Paper Sizes area, check the paper sizes you want to appear in the Paper Size lists in the Plot and Page Setup dialog boxes.

Command line: PLOTTERMANAGER

Resolve Conflicts with the Windows Print Manager

You need to use the appropriate driver for a locally connected plotter.

If you configure an HDI hardcopy driver for a locally connected plotter and configure a Windows system printer for the same locally connected plotter, the HDI driver is unable to connect directly to the local port because the Windows system printer driver has control over it. The driver output is rerouted to the Windows print spooler.

If the plotter is connected to a serial port, make sure that the Windows Control Panel settings for that serial port are correct. The settings should match the settings of the plotter and should be appropriate for the cabling you have used. You can verify that these settings are correct by printing to the conflicting Windows system printer.

Plotting from an HDI driver through the spooler is similar to plotting to a file because there is only one-way communication with the plotter. Performance varies depending on the device.

Port Settings

The Ports tab in the Plotter Configuration Editor contains information about the plotter's port configuration.

Adjust Port Settings

There are three possible places to configure your computer's port settings, depending on how your plotter is connected.

The Ports tab in the Plotter Configuration Editor contains information about the plotter's port configuration. If you configure a local, nonsystem plotter, you must specify the port to which the device is connected. You can choose a serial (local), parallel (local), or network port. For parallel ports, the default is LPT1. For serial ports, the default is COM1. Change the port name if your device is connected to a different port.

If you use a serial port, the settings within AutoCAD must match the plotter settings. Choose Configure Ports to make the AutoCAD settings match your plotter settings. The available protocols for your plotter are displayed.

NOTE If you are using a device that emulates the configured device and has additional port options, select Show All Ports.

You can also change settings for communication between the PC3 file and your computer or network system. You can plot through a port, plot to a file, or use the AutoSpool feature to plot in the background while you continue working. If you plot through a parallel port, you can specify the timeout value. If you plot through a serial port, you can change the baud rate, protocol, flow control, and input and output timeout values.

There are three possible places to configure your computer's port settings, depending on how your plotter is connected.

Locally Connected Spooling

Your plotter is locally connected if it's plugged in to a port on the computer that's running AutoCAD. AutoCAD spools the plot (sends it through the Windows system spooler) if you also have configured a Windows system printer to print to the same plotter using the same local port. You are notified if your plot is being spooled due to a port conflict of this type, although you can use a setting on the Plot and Publish tab in the Options dialog box to turn off this warning.

Plotting through the system spooler is quicker. However, this method puts the conflicting Windows system printer in control of the input/output port configuration. The AutoCAD-configured port settings are ignored in this case. To view or adjust the port settings, go to the Windows Print Manager in the Control Panel and activate the printer that is configured for your plotter. You can adjust port settings in the Windows system printer's Properties dialog box. You can print a test page from the Properties dialog box to verify that the plotter and computer are communicating correctly.

Locally Connected, But Not Spooling

If your plotter is locally connected and there is no conflicting system printer, AutoCAD can directly control the input/output port settings.

Across a Network

If you're running AutoCAD on one computer and plotting to a device connected to another computer on the network, the remote computer is in control of the port settings, and the AutoCAD configured port settings are ignored. A Windows system printer must be configured on the remote computer. (This is how the plotter was shared on the network and made available to you.) The remote system printer controls the port settings; you can view and change these settings in each system printer file's Properties dialog box, on the remote computer.

See also:

"Use AutoSpool" on page 36

To adjust port settings

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration (PC3) file whose port settings you want to change.
3. In the Plotter Configuration Editor, choose the Ports tab.
4. Select one of the following options:
   - **Plot to the Following Port.** Sends the drawing to the printer through the specified port.
   - **Plot to File.** Sends the drawing to the file name specified on the File tab in the Options dialog box.
   - **AutoSpool.** Uses the AutoSpool utility specified on the File tab in the Options dialog box to plot the drawing.
5. For a device that emulates the configured device and has additional port options, select Show All Ports.
6. To connect a nonsystem plotter to another instance of the device, choose Browse Network. In the Browse for Printer dialog box, select the device and choose OK.
7. Choose OK.

Command line: PLOTTERMANAGER

Use AutoSpool

With AutoSpool you can plot to an automatically generated file name in the folder you designate in the Options dialog box.

Once the file has been created, the spooler application specified in the Options dialog box is executed.

Although it is not necessary to use AutoSpool to print to Windows network printers and plotters, AutoSpool is available for users of other networks and for users who want to start another application at plot time using the AutoSpool mechanism.

When you add printers or plotters in the Add-a-Plotter wizard, select a network port, which meets most printer and plotter network connectivity requirements.

With AutoSpool, you can send a plot file to an assigned device for printing while you continue working. AutoSpool accommodates special plotting and printing requirements such as log files or nonstandard networks. You can also use most plotting routines developed for previous versions of AutoCAD.

When you run AutoSpool, AutoCAD writes the plot job to a random file name in a folder you specify. Next, AutoCAD runs a print queue submission program along with a user-specified parameter list. At a minimum, the parameter list must include the random file name AutoCAD assigned to the plot job. The parameter list is represented by the %s variable. Other parameters can be used, for example, to improve resolution at the destination device or generate log files.

To set up AutoSpool, you must provide the executable file AutoCAD invokes and specify that executable name and parameter list in the Options dialog box. The executable file is usually a batch program that you create, but it can also be a third-party program. If you use a third-party program, the setup is essentially the same. To determine the parameter variables required for the third-party program, refer to the documentation for that program.

You can use several methods for configuring plot spooling:

- A Windows system printer driver and the Print Manager to enable spooling
- An HDI driver and a Windows system printer driver configured for the same I/O port to force the HDI driver's output to the system spooler
- AutoSpool

If you configure AutoCAD for plot spooling using AutoSpool, you must configure your printer, specify the AutoSpool executable file, and specify the print file location.

Create a Batch File for AutoSpool

The following sample *plot.bat* file shows some of the functions that can be included in a batch file. This batch file determines the destination hard copy device, submits the print job via the operating system Copy command, and then deletes the temporary plot file created by AutoCAD.

This batch file requires two parameters to be passed from AutoCAD, %s and %c, which are referenced internally in the batch program as %1 and %2, respectively. The imaginary devices in this example are attached to the local workstation and two different network printer servers. See the following table for an explanation of the device names and connections. Note that the order in which parameters are passed to the AutoSpool executable file determines how the variable is referenced in the program or batch file. For example, the first variable becomes %1 and so forth.

Device names and connections

Description	Server	Network share name	AutoCAD configuration name
Local laser printer			*my_laser*
Network-attached plotter	milana	*milana**hp755cm*	*hp755cm*
Network-attached laser printer	kilo	*kilo**laser*	*net_laser*

```
Rem PLOT.BAT
@echo off
Rem determine the destination
if %2 == my_laser goto PlotA
if %2 == hp755cm goto PlotB
if %2 == net_laser goto PlotC
Rem trap for undefined devices
echo ******************Warning*********************
echo %2 is not defined to the Plot Script, PLOT.BAT
echo The plot job has been canceled.
echo ***********************************************
pause
goto END
Rem send the job
:PlotA
copy %1 /b LPT1
goto END
:PlotB
copy %1 /b \\milana\hp755cm
goto END
:PlotC
copy %1 /b \\kilo\laser
goto END
Rem clean up and exit
```

```
:END
erase %1
exit
```

NOTE Device names are case-sensitive. Make sure that the name configured for the device in AutoCAD exactly matches the name in your batch program.

To use AutoSpool

1. Start the Add-a-Plotter wizard.
2. On the Ports page, select AutoSpool.
3. From the Tools menu, choose Options. Then choose the Files tab.
4. Double-click Print file, Spooler, and Prolog Section Names to display the options in this section.
5. Double-click Print Spool Executable.
6. Double-click the arrow. In the Select a File dialog box, locate the program you want to execute when the plot file has been created. Add any command line arguments you want to use. For example, enter **myspool.bat %s.**

When AutoCAD plots to a file, it substitutes a unique plot file name for "%s" in the Print Spool Executable name and sends the generated command to DOS.

Print spool executable command line options

Option	Function
%d or %D	Specifies the AutoCAD drawing name, including the full path and -extension
%e or %E	Specifies the equal sign (=)
%h or %H	Returns the height of the plot area in the selected plotting units
%i or %I	Becomes the first letter of the plot units
%l or %L	Designates the login name; the login name is stored in the LOGINNAME system variable
%m or %M	Returns the AutoCAD plotter model; AutoCAD lists the model name during configuration
%n or %N	Becomes the plotter name; AutoCAD uses the plotter name to identify the manufacturer and type of plotter

Print spool executable command line options	
Option	**Function**
%p or %P	Designates the plotter number; AutoCAD assigns a number to a configured plotter and lists the plotters in this order
%s or %S	Specifies the plot spool file name, including the path and extension
%u or %U	Specifies the user name entered during installation
%w or %W	Returns the width of the plotter area in the selected units
%%	Specifies the percent sign (%)
%c or %C	Specifies the description for the device (This is the description entered on the General tab of the Plotter Configuration Editor. This description should not contain spaces if you want to use it with AutoSpool.)

To specify the location for AutoSpool print files

1. From the Tools menu, choose Options. Choose the Files tab.
2. Double-click Print Support File Path.
3. Double-click the Print Spooler File Location.
4. Double-click the arrow.
5. In the Select a File dialog box, enter the path to the directory where you want AutoSpool to send its print files.

Set the Timeout Value for Devices

Some plotters support a timeout value, which specifies how much time elapses while the plotter empties its buffer before more data is sent to the plotter.

After the plotter empties its buffer, it accepts more data from AutoCAD. Enter the amount of time you want to elapse before AutoCAD prompts you to abort the plot. If your drawings are complex or your pen speed is very slow, set the timeout value higher than the default (30 seconds). If you begin to receive numerous timeout messages, your timeout setting is probably too low. For plotters that support a timeout value, you can also set the timeout value by choosing Configure Port on the Ports page during the initial configuration in the Add-a-Plotter wizard.

To set the timeout value for a local, nonsystem plotter

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration (PC3) file whose timeout value you want to change.
3. In the Plotter Configuration Editor, choose the Ports tab.
4. On the Ports tab, select the port that you want to use.
5. Choose Configure Port and do one of the following:
   - For a parallel port, in the Transmission Retry box, enter the timeout value in milliseconds.
   - For a serial port, in the Input Timeout and Output Timeout boxes, enter the timeout values in milliseconds.
6. Choose OK.

Command line: PLOTTERMANAGER

To set the timeout value for network or Windows system printers

1. From the Start menu, choose Settings. Then choose Printers.
2. Right-click the printer you want, and then choose Properties.
3. In the Properties dialog box, choose the Ports tab.
4. On the Ports tab, select the LPT port that the printer uses, and then choose Configure Port.
5. In the Transmission Retry box, enter the number of seconds.
6. Choose OK to exit each dialog box.

Configure Serial Ports

You can adjust baud rate, protocol, flow control, and hardware handshaking for serial ports on devices that support these settings.

You should use the fastest available baud rate and the protocol recommended by your device manufacturer. See the documentation that accompanies your device.

NOTE The settings on your plotter must match the settings in AutoCAD or you will not be able to plot.

Flow Control and Handshaking

Your computer can produce a plot file faster than most plotters can process it. Plotters have a limited amount of memory and as this memory fills up, the plotter must be able to tell your computer to stop sending data temporarily. Then, when plotter memory is freed up as the plot is processed, the plotter must be able to tell the computer to resume sending the plot file. This communication is called *flow control* or *handshaking*.

There are two methods of handshaking: *hardware* and *software*. Hardware handshaking uses additional wires in the cable between the plotter and computer. These wires are dedicated to handshaking signals or *on/off voltages*. Software handshaking uses a single wire to send streams of commands that include start/stop handshaking signals. The most common type of software handshaking is XON/XOFF. You must provide different cables for hardware and software handshaking.

To adjust serial port settings

1. From the File menu, choose Plotter Manager.
2. Double-click the plotter configuration (PC3) file whose serial port settings you want to change.
3. In the Plotter Configuration Editor, choose the Ports tab and select the serial port that you want to use.
4. Choose Configure Port.
5. In the Settings for COM Port dialog box, select a baud rate and protocol for your device.

   The protocol settings available for the current device are displayed. You cannot set an invalid protocol.
6. Select a Flow Control method.

   The default flow control setting is XON/XOFF (software handshaking) for compatibility with previous versions of AutoCAD. If you select Hardware handshaking, you can specify additional settings by choosing Advanced.

   In the Advanced Settings for COM Port dialog box, the following settings correspond to different pins on the serial port:

   - **CTS.** Enables Clear to Send handshaking. This monitors pin 5 of a 25-pin serial port or pin 8 of a 9-pin serial port. CTS is an input bit, monitored for an output from the plotter or printer.
   - **DSR.** Enables Data Set Ready handshaking. This monitors pin 6 of a 25-pin serial port, or pin 6 of a 9-pin serial port. DSR is an input bit, monitored for an output from the printer or plotter.

- **RLSD.** Enables Received Line Signal Detector handshaking. This is sometimes called Data Carrier Detect or DCD. It's an input pin that can be monitored for an output from the plotter. It's on pin 8 of a 25-pin serial port and on pin 1 of a 9-pin serial port.
- **RTS.** Controls the Request to Send output bit. This sends a signal to the printer or plotter on pin 4 of a 25-pin serial port or on pin 7 of a 9-pin serial port.

  Disabled. Disables the RTS line when the device is opened.

  Enabled. Enables the RTS line when the device is opened.

  Handshake. Enables RTS handshaking. The driver raises the RTS line when the "type-ahead" (input) buffer is less than one-half full and lowers the RTS line when the buffer is more than three-quarters full.

  Toggle. Specifies that the RTS line will be high if bytes are available for transmission. After all buffered bytes have been sent, the RTS line will be low.
- **DTR.** Controls the Data Terminal Ready output pin. This sends a signal to the printer or plotter on pin 20 of a 25-pin serial port or on pin 4 of a 9-pin serial port.

  Disabled. Disables the DTR line when the device is opened.

  Enabled. Enables the DTR line when the device is opened.

  Handshake. Enables DTR handshaking.

7 Choose OK to close the Advanced Settings for COM Port dialog box. Choose OK to close the Settings for COM Port dialog box.

Set Device-Specific Configurations

3

You can set device-specific configurations in the Autodesk Plotter Manager.

In this chapter

Configure Hewlett-Packard DesignJets

Hewlett-Packard DesignJet plotters are supported by a Windows system printer driver developed by Hewlett-Packard. Visit *http://hp.com/go/designjet* to check for the latest HP DesignJet drivers.

Plotters from other manufacturers that emulate HP DesignJets are supported through the HP-GL/2 HDI driver.

AutoCAD® supports the Hewlett-Packard DesignJet plotter models through a serial or a parallel port. Using the parallel port is recommended. If you use a serial port, set the DesignJet at 9600 baud, with 8 data bits, 1 stop bit, no parity, and hardware handshaking XON/XOFF.

All DesignJet roll-feed models can produce long-axis plots. Both the 600 and 650C have an optional expanded mode for page formats and margins. You set the Expanded mode on the plotter's front panel.

NOTE If you experience plotting problems, such as resolution degradation for lines and shaded solids, when plotting to an Hewlett-Packard DesignJet plotter, contact Hewlett-Packard for support.

Configure Hewlett-Packard HP-GL Plotters

Hewlett-Packard HP-GL plotters are supported through an RS-232C serial I/O port.

Set the Hewlett-Packard plotters at 9600 baud with 7 data bits, 1 stop bit, and even parity.

For detailed cabling, switch setting, and other information related to using the HP-GL driver, see HP-GL Custom Properties Dialog Box.

For more information about using this driver, open the PC3 file for this device and choose Help in the Custom Properties dialog box in the Plotter Configuration Editor.

Hard Clip Limits

The 7580, 7585, 7586, DraftPro DXL/EXL, DraftMaster I, 7586B, and 7596A plotters return hard clip limits to AutoCAD. These limits require two-way communication between AutoCAD and the plotter. The plotter sends AutoCAD the installed paper's exact plot area so that AutoCAD can position the plot on the paper based on the actual sheet size. If you turn off the AutoCAD request for hard clip limits, AutoCAD positions the plot based on the configured paper size. In most cases, if you turn off hard clip limits, you must adjust the configured paper size to reflect the actual printable area of the device.

Otherwise, your plot may be clipped. You can adjust the location of the plot on the paper by changing the plot origin.

If your plot is sent through the Windows print spooler, the AutoCAD request for hard clip limits is turned off because of a conflict with a Windows system printer or because you're plotting to a network port. If you see a warning message, you may have to adjust your configured paper size and plot origin.

AutoCAD sends the plot to the currently configured port in the same manner that it sends the plot to a file. After the plot is sent, you can plot directly to plotter buffers or over networks.

HP-GL Long-Axis Plots

For roll-fed media, HP-GL devices limit the frame height. Frame height varies with roll width. You must perform a long-axis plot to plot more than the frame height.

AutoCAD determines whether a long-axis plot is necessary when you configure to use a long-axis paper size and when you create a long-axis plot paper size using the Add Paper Size wizard in the Plotter Configuration Editor.

The driver sends all vectors to the plotter buffer or hard disk. The pen plotters automatically advance the page to plot each frame.

Follow the instructions in the Hewlett-Packard user's guide. For long-axis, multiframe plotting, you need a black 0.3 mm fiber-tip pen (for plotter paper) or a 0.35 mm drafting pen (for vellum or polyester film) in pen stall 8. Only these pens enable the plotter to detect the registration marks used for frame-to-frame alignment.

When you create a long-axis plot with the 7586B roll-feed plotter, the Out of Limit light comes on occasionally. Generally this is a result of the interaction between AutoCAD and the plotter when plotting very large drawings.

To configure an HP-GL plotter driver

1. From the File menu, choose Plotter Manager.
2. Double-click the Add-a-Plotter Wizard shortcut icon.
3. On the Begin page, choose My Computer if the plotter is connected to your computer. Select Network Plotter Server if the plotter is available through a network. Choose Next.
4. On the Network Plotter page, enter the UNC name of the networked plotter. Choose Next. This page is not displayed if you selected My Computer in step 3.

5. On the Plotter Model page, under Manufacturers, select Hewlett-Packard. Under Model, select the type of Hewlett-Packard plotter that you are using or emulating. Choose Next.
6. On the Import PCP or PC2 page, select a PCP or PC2 file to import (optional). Choose Next.
7. On the Ports page, select the port that the printer is attached to. This page is not displayed if you selected Network Plotter Server in step 3. Choose Next.
8. On the Plotter Name page, enter a name for the plotter configuration file. Choose Next.
9. On the Finish page, choose Finish.

   A new plotter configuration file (PC3) is created.

Command line: PLOTTERMANAGER

To stop the long-axis plot after all vectors have been sent

- Press Cancel on the plotter Control Panel to clear the plotter memory.

To stop the long-axis plot while vectors are being sent to the plotter

- Press ESC. Read your Hewlett-Packard manual for information about canceling the plot and clearing its memory buffer.

You must reset your plotter after canceling a plot, otherwise portions of the plot may overlay the next plot.

Configure Hewlett-Packard HP-GL/2 Devices

The HP-GL/2 nonsystem driver supports a variety of HP-GL/2 pen plotters and ink jet plotters.

This is a generic HP-GL/2 driver; it is not optimized for a particular manufacturer's devices. This driver is intended to support obsolete pen plotters and newer devices made by manufacturers other than HP.

The DesignJet, DraftPro Plus, and the DraftMaster with roll feed can perform long-axis plots.

For more information about using this driver, open the PC3 file for this device and choose Help in the Custom Properties dialog box in the Plotter Configuration Editor.

To configure an HP-GL/2 plotter driver

1. From the File menu, choose Plotter Manager.
2. Double-click the Add-a-Plotter Wizard shortcut icon.
3. On the Begin page, select My Computer if the plotter is connected to your computer. Select Network Plotter Server if the plotter is available through a network. Choose Next.
4. On the Network Plotter page, enter the UNC name of the networked plotter. Choose Next. This page is not displayed if you selected My Computer in step 3.
5. On the Plotter Model page under Manufacturers, select Hewlett-Packard. Under Model, select the type of Hewlett-Packard plotter that you are using or emulating. Choose Next.
6. On the Import PCP or PC2 page, select a PCP or PC2 file to import (optional). Choose Next.
7. On the Ports page, select the port that the printer is attached to. This page is not displayed if you selected Network Plotter Server in step 3. Choose Next.
8. On the Plotter Name page, enter a name for the plotter configuration file. Choose Next.
9. On the Finish page, choose Finish.

   A new plotter configuration file (PC3) is created.

Command line: PLOTTERMANAGER

To perform a long plot

1. Plot in the normal manner. For best results, plot to extents, don't rotate the plot. Use an explicit one-to-one scale (not Scale to Fit).
2. To stop your plotter after AutoCAD has finished sending all the vectors, clear the plotter memory using the plotter Control Panel.
3. To stop a long-axis plot while AutoCAD is sending vectors to the plotter, press ESC.
4. Clear the plotter memory as indicated for the following devices:

   - **DraftMaster X series.** Press the Cancel button.
   - **HP 7600 240D/E.** Press the plotter Reset button.

- **HP 7600 250/255/355.** Press the Plot Management button. Select Queuing Operations, and then select the plot and delete it from the queue.
- **HP DesignJet Series.** Press the Cancel button.
- **HP DraftPro Plus.** Press the Cancel button.

Configure Oce Plotters

Although the primary configuration choice for Océ plotters is through a parallel port, Océ plotters can be supported through an RS-232C serial I/O port.

Set the Océ plotters at 9600 or 19,200 baud, with 8 data bits, 1 stop bit, and no parity. Serial port cabling instructions are available from your dealer or manufacturer.

For more information about using this driver, open the PC3 file for this device and choose Help in the Custom Properties dialog box in the Plotter Configuration Editor.

To configure an Océ plotter driver

1. From the File menu, choose Plotter Manager.
2. Double-click the Add-a-Plotter Wizard shortcut icon.
3. On the Begin page, select My Computer if the plotter is connected to your computer. Select Network Plotter Server if the plotter is available through a network. Choose Next.
4. On the Network Plotter page, enter the UNC name of the networked plotter. Choose Next. This page is not displayed if you selected My Computer in step 3.
5. On the Plotter Model page under Manufacturers, select Océ. Under Model, select the type of Océ plotter that you are using. Choose Next.
6. On the Import PCP or PC2 page, select a PCP or PC2 file to import (optional). Choose Next.
7. On the Ports page, select the port that the printer is attached to. This page is not displayed if you selected Network Plotter Server in step 3. Choose Next.
8. On the Plotter Name page, enter a name for the plotter configuration file. Choose Next.
9. On the Finish page, choose Finish.

A new plotter configuration file (PC3) is created.

Command line: PLOTTERMANAGER

Configure Xerox Devices

It is highly recommended that you use the Xerox HDI driver for AutoCAD. Along with improved performance, this new driver provides the same settings that now exist in the Windows system driver as well as the ability to get information from the printer in a bi-directional environment, such as roll status and what raster stamps are installed in the printer.

For more information on the latest Xerox devices and drivers, see the Xerox website.

To configure an HDI Xerox plotter driver

1. From the File menu, choose Plotter Manager.
2. Double-click the Add-a-Plotter Wizard shortcut icon.
3. On the Begin page, select My Computer if the plotter is connected to your computer. Select Network Plotter Server if the plotter is available through a network. Choose Next.
4. On the Network Plotter page, enter the UNC name of the networked plotter. Choose Next. This page is not displayed if you selected My Computer in step 3.
5. On the Plotter Model page under Manufacturers, select Xerox Engineering Systems. Under Model, select the type of Xerox plotter that you are using. Choose Next.
6. On the Import PCP or PC2 page, select a PCP or PC2 file to import (optional). Choose Next.
7. On the Ports page, select the port that the printer is attached to. This page is not displayed if you selected Network Plotter Server in step 3. Choose Next.
8. On the Plotter Name page, enter a name for the plotter configuration file. Choose Next.
9. On the Finish page, choose Finish.

   A new plotter configuration file (PC3) is created.

Command line: PLOTTERMANAGER

Configure CalComp Plotters

If you are using a CalComp plotter, you can use the Windows system printer.

If your plotter provides an HP-GL or HP-GL/2 emulation, you can use the HP-GL or HP-GL/2 HDI drivers.

For more information about using this driver, open the PC3 file for this device and choose Help in the Custom Properties dialog box in the Plotter Configuration Editor.

Configure Houston Instruments Plotters

If you are using a newer Houston Instruments plotter, use the generic HP-GL or HP-GL/2 HDI drivers and configure your plotter in HP-GL or HP-GL/2 emulation mode.

Use the Autodesk HDI System Printer Driver

With the HDI system printer driver, you can use the plotter or printer you have configured with Windows.

You can use any printing device supported by Windows (Windows system printer).

You can use the HDI system printer driver to choose printer defaults for AutoCAD that differ from the defaults for other Windows applications.

The Autodesk system printer driver supports raster output. However, the amount of memory in the printing device limits the ability of the device connected as the system printer to output raster and vector data sent by AutoCAD.

If you have multiple Windows system printers, you can select the device used to plot from AutoCAD. For example, you might use a LaserJet printer for word processing documents and a BubbleJet for AutoCAD drawings.

For best results, use the Windows system printer and AutoCAD plotter drivers as follows:

- Use the Autodesk HDI driver appropriate to your printer/plotter in preference to the Windows system printer, unless you have an Océ TDS/TCS printer or a Hewlett-Packard DesignJet plotter. Océ and HP have supplied system printer drivers optimized for AutoCAD use.
- Use the Windows system printer for output devices without pens, such as laser printers.

Setting up the Windows system printer for AutoCAD consists of two parts:

- Configuring the system printer in Windows (see the Microsoft documentation for your operating system)
- Configuring the system printer as the AutoCAD plotter using the Add-a-Plotter Wizard shortcut icon

To create a plotter configuration for the system printer

1. From the File menu, choose Plotter Manager.
2. Double-click the Add-a-Plotter Wizard shortcut icon.
3. On the Begin page, select System Printer. Choose Next.
4. On the System Printer page, select the system printer for which you want to create a plotter configuration file. Choose Next.
5. On the Import PCP or PC2 page, choose Import File and select a PCP or PC2 file to import (optional). Choose Import. Then choose Next.
6. On the Plotter Name page, enter a name for the plotter configuration file. Choose Next.
7. On the Finish page, choose Finish.

   A new plotter configuration file (PC3) is created.

Command line: PLOTTERMANAGER

Configure for File Output

4

AutoCAD® provides plotter drivers to create the following types of files:

- Autodesk ePlot (DWF)
- Adobe PDF
- Adobe PostScript
- DXB file format
- Raster file formats

Configure ePlot to Create DWF Files

With ePlot, you can generate electronic drawing files that are optimized for either plotting or viewing. The files you create are stored in Design Web Format (DWF). DWF files can be opened, viewed, and plotted by anyone using Autodesk DWF Viewer® or Autodesk DWF Composer®. With Autodesk DWF Viewer or Autodesk DWF Composer, you can also view DWF files in Microsoft® Internet Explorer 5.01 or later. DWF files support real-time panning and zooming and the display of layers and named views.

Configure the Adobe PDF Driver

If you configure a PDF driver in the Add-a-Plotter wizard, you can output your drawings in Portable Document Format (PDF). To configure the PDF driver, in the Add-a-Plotter wizard, select Autodesk ePlot (PDF) from the Manufacturers list, and select PDF from the Models list.

Configure the Adobe PostScript Driver

If you configure a PostScript driver in the Add-a-Plotter wizard, you can output your drawings in PostScript format. To configure the PostScript driver, in the Add-a-Plotter wizard, select Adobe from the Manufacturer list, and select a PostScript level from the Model list.

AutoCAD supports three levels of PostScript. Level 1 works with most devices but does not support color images and produces larger plot files than the newer PostScript levels. Level 1 Plus is for Level 1 devices that also support color images. Level 2 is for newer printers and produces smaller files and faster output on Level 2 devices.

AutoCAD supports PostScript printers and plotters using a Centronics-type parallel I/O port, an RS-232C serial I/O port, or plotting across a network. If you use a serial port, configure the printer to match the settings you select in the Configure Port dialog box in the Add-a-Plotter wizard, Ports page.

Configure DXB File Formats

DXB (drawing interchange binary) file formats are supported using the AutoCAD DXB nonsystem file driver.

The output is compatible with the DXBIN command and with the ADI DXB driver delivered with earlier releases. The DXB driver shares the following limitations of the ADI driver:

- The driver produces 16 bit integer DXB files containing only vectors.
- DXB output is monochrome; all vectors are color 7.
- Raster images and embedded OLE objects are not supported.
- The driver ignores object and plot style lineweights.

Configure Raster File Formats

AutoCAD can view drawings that contain raster images such as TIFF or JPEG.

With the raster file format driver, AutoCAD can also export raster files in the formats listed in the Add-a-Plotter wizard. To configure a raster format driver, select Raster File Formats from the Manufacturer list.

See also:

""Plot Files to Other Formats"" in the User's Guide

To configure a plotter driver for DWF file output

1. From the File menu, choose Plotter Manager.
2. Double-click the Add-a-Plotter Wizard shortcut icon.
3. On the Begin page, select My Computer. Choose Next.
4. On the Plotter Model page, under Manufacturers, select Autodesk ePlot (DWF). Under Model, select the type of DWF that you want to create. Choose Next.
5. On the Import PCP or PC2 page, choose Import File and select a PCP or PC2 file to import (optional). Choose Import. Then choose Next.
6. On the Ports page, select Plot to File. Choose Next.
7. On the Plotter Name page, enter a name for the plotter configuration file. Choose Next.
8. On the Finish page, choose Finish.

   A new plotter configuration file (PC3) is created.

Command line: PLOTTERMANAGER

To configure a plotter driver for PDF file output

1. From the File menu, choose Plotter Manager.
2. Double-click the Add-a-Plotter Wizard shortcut icon.
3. On the Begin page, select My Computer. Choose Next.
4. On the Plotter Model page, under Manufacturers, select Autodesk ePlot (PDF).
5. On the Import PCP or PC2 page, choose Import File and select a PCP or PC2 file to import (optional). Choose Import. Then choose Next.
6. On the Ports page, select Plot to File. Choose Next.
7. On the Plotter Name page, enter a name for the plotter configuration file. Choose Next.
8. On the Finish page, choose Finish.

   A new plotter configuration file (PC3) is created.

Command line: PLOTTERMANAGER

To configure a plotter driver for PostScript file output

1. From the File menu, choose Plotter Manager.
2. Double-click the Add-a-Plotter Wizard shortcut icon.
3. On the Begin page, select My Computer. Choose Next.
4. On the Plotter Model page under Manufacturers, select Adobe. Under Model, select the level of PostScript file that you want to create. Choose Next.
5. On the Import PCP or PC2 page, choose Import File and select a PCP or PC2 file to import (optional). Choose Import. Then choose Next.
6. On the Ports page, select Plot to File. Choose Next.
7. On the Plotter Name page, enter a name for the plotter configuration file. Choose Next.
8. On the Finish page, choose Finish.

   A new plotter configuration file (PC3) is created.

Command line: PLOTTERMANAGER

To configure a plotter driver for DXB file output

1. From the File menu, choose Plotter Manager.
2. Double-click the Add-a-Plotter Wizard shortcut icon.
3. On the Begin page, select My Computer. Choose Next.
4. On the Plotter Model page, under Manufacturers, select AutoCAD DXB File. Under Model, select DXB File. Choose Next.
5. On the Import PCP or PC2 page, choose Import File and select a PCP or PC2 file to import (optional). Choose Import. Then choose Next.
6. On the Ports page, select Plot to File. Choose Next.
7. On the Plotter Name page, enter a name for the plotter configuration file. Choose Next.
8. On the Finish page, choose Finish.

   A new plotter configuration file (PC3) is created.

Command line: PLOTTERMANAGER

To configure a plotter driver for raster file output

1. From the File menu, choose Plotter Manager.
2. Double-click the Add-a-Plotter Wizard shortcut icon.
3. On the Begin page, select My Computer. Choose Next.
4. On the Plotter Model page under Manufacturers, select Raster File Formats. Under Model, select the type of raster file that you want to create. Choose Next.
5. On the Import PCP or PC2 page, choose Import File and select a PCP or PC2 file to import (optional). Choose Import. Then choose Next.
6. On the Ports page, select Plot to File. Choose Next.
7. On the Plotter Name page, enter a name for the plotter configuration file. Choose Next.
8. On the Finish page, choose Finish.

   A new plotter configuration file (PC3) is created.

Command line: PLOTTERMANAGER

To view the custom properties Help

1. From the File menu, choose Plotter Manager.
2. In the Autodesk Plotter Manager, double-click to open the PC3 file whose custom properties help you want to view.
3. Choose the Device and Document Settings tab.
4. Select the Custom Properties node.
5. Choose Custom Properties.
6. In the Custom Properties dialog box for the configured device, choose Help.

   Help provides specific configuration information.

Command line: PLOTTERMANAGER

Configure External Databases

5

Once you have configured your databases, you can access their data from AutoCAD, even if you don't have the database system that created the data installed on your system. AutoCAD can access data from the following applications:

- Microsoft Access
- dBase
- Microsoft Excel
- Oracle
- Paradox
- Microsoft Visual FoxPro®
- SQL Server

NOTE With MDAC versions 2.1 and higher, you can't edit dBase files unless you have a Borland DataBase Engine (BDE) installed on your computer.

Once you have successfully configured a database to use with AutoCAD, a configuration file with the extension *.udl* is created. This configuration file contains the information AutoCAD needs to access the configured database. By default, *.udl* files are stored in the *Data Links* folder of AutoCAD. You can specify a different location for *.udl* files from the Options dialog box.

The following topics demonstrate how to set up a data source using ODBC, and how to configure data sources so that you can use them with AutoCAD. For detailed information about ODBC and OLE DB, refer to the following online Microsoft resources:

- OLE DB Help
- ODBC Help
- ODBC Microsoft Desktop Database Drivers

Bypass ODBC Using an OLE DB Direct Driver

Several database management systems supported by AutoCAD have direct drivers available for OLE DB. If you use these direct drivers, you don't need to set up configuration files from within both ODBC and OLE DB; you only need a single OLE DB configuration file.

Direct database drivers are available for the following database systems:

- Microsoft Access

- Oracle
- Microsoft SQL Server

Use ODBC to Create a Configuration File

ODBC is an intermediary program that makes data from one application available to other applications.

Configure a Data Source with OLE DB

You can use OLE DB to establish a UDL configuration file that points to an external database table.

To specify a new location for *.UDL* files

1. From the Tools menu, choose Options.
2. From the Files tab, select Data Source Location, and then choose Browse.
3. From the Browse for Folder dialog box, locate and select the folder you want, and then choose OK.
4. Choose OK.

Command line: OPTIONS

To set up a direct Microsoft Access configuration using OLE DB

1. From the dbConnect menu, choose Data Sources Configure.
2. In the Data Link Properties dialog box, the Provider tab, select Microsoft Jet 3.51 OLE DB Provider. Choose Next.
3. Enter the name and path to the database you want to configure in Select or Enter a Database Name.
4. Choose Test Connection to verify that your configuration is working properly.

   If the connection fails, verify that the settings are correct. For example, spelling errors and case sensitivity may be the cause of a failed connection.
5. In the Microsoft Data Link dialog box, choose OK.
6. Choose OK.

Command line: DBCONNECT

To set up a direct Oracle configuration using OLE DB

1. From the dbConnect menu, choose Data Sources Configure.
2. In the Data Link Properties dialog box, the Provider tab, select Microsoft OLE DB Provider for Oracle. Choose Next.
3. Enter the Oracle server name in Enter a Server Name.
4. Enter a valid user name and password.
5. Choose Test Connection to verify that the settings are correct. For example, spelling errors and case sensitivity may be the cause of a failed connection.
6. In the Microsoft Data Link dialog box, choose OK.
7. Choose OK.

Command line: DBCONNECT

To set up a direct SQL Server configuration using OLE DB

1. From the dbConnect menu, choose Data Sources Configure.
2. In the Data Link Properties dialog box, the Provider tab, select Microsoft OLE DB Provider for SQL Server. Choose Next.
3. Enter the server name in Select or Enter a Server Name.
4. Enter a valid user name and password.
5. Select the database to configure in Select the Database on the Server.
6. Choose Test Connection to verify that the settings are correct. For example, spelling errors and case sensitivity may be the cause of a failed connection.
7. In the Microsoft Data Link dialog box, choose OK.
8. Choose OK.

Command line: DBCONNECT

To set up a Microsoft Access data source using ODBC

1. From the Start menu (Windows), choose Settings Control Panel.
2. Double-click the ODBC icon.

3 In the ODBC Data Source Administrator dialog box, do one of the following:

- Choose the User DSN tab to create a data source that is visible only to you and can be used only on the computer you create it in.
- Choose the System DSN tab to create a data source that is visible to all users who have access rights to the computer.
- Choose the File DSN tab to create a data source that can be shared with other users who have the same ODBC drivers installed on their systems.

4 Choose Add.

5 Select the Microsoft Access Driver, and then choose Finish.

6 Enter a name for your data source in Data Source Name.

7 Choose Select, and then locate and select the database that you want to configure. Choose OK.

8 In the ODBC Microsoft Access dialog box, choose OK.

9 In the ODBC Data Source Administrator dialog box, choose OK.

To set up a dBase data source using ODBC

1 From the Start menu (Windows), choose Settings Control Panel.

2 Double-click the ODBC icon.

3 In the ODBC Data Source Administrator dialog box, do one of the following:

- Choose the User DSN tab to create a data source that is visible only to you and can be used only on the computer you create it in.
- Choose the System DSN tab to create a data source that is visible to all users who have access rights to the computer.
- Choose the File DSN tab to create a data source that can be shared with other users who have the same ODBC drivers installed on their systems.

4 Choose Add.

5 Select the Microsoft dBase Driver, and then choose Finish.

6 Enter a name for your data source in Data Source Name, and select the appropriate version of dBase from the Version list.

7 Make sure that Use Current Directory is cleared.

8 Choose Select Directory, and then locate and select the directory that contains the database tables you want to configure. Choose OK.

9 In the ODBC dBase Setup dialog box, choose OK.

10 In the ODBC Data Source Administrator dialog box, choose OK.

To set up a Microsoft Excel spreadsheet to use with AutoCAD

1 From Microsoft Excel, open the workbook or spreadsheet that you want to access from AutoCAD.

2 Select a range of cells to function as a database table.

3 Enter a name for the range of cells in the Name Box, then press ENTER.

4 Repeat steps 2 and 3, if desired, to specify additional database tables.

5 From the File menu (Microsoft Excel), choose Save.

NOTE Microsoft Excel is not a true database management system. In order to access Excel data from within AutoCAD, you must first specify at least one named range of Excel cells to function as a database table. Each named range of cells that you specify within a spreadsheet is treated as an individual table by AutoCAD.

To set up a Microsoft Excel data source using ODBC

1 From the Start menu (Windows), choose Settings Control Panel.

2 Double-click the ODBC icon.

3 In the ODBC Data Source Administrator dialog box, do one of the following:

- Choose the User DSN tab to create a data source that is visible only to you and can be used only on the computer you create it in.
- Choose the System DSN tab to create a data source that is visible to all users who have access rights to the computer.
- Choose the File DSN tab to create a data source that can be shared with other users who have the same ODBC drivers installed on their systems.

4 Choose Add.

5 Select the Microsoft Excel Driver, and then choose Finish.

6. Enter a name for your data source in Data Source Name, and select the appropriate version of Excel from the Version list.
7. Make sure that Use Current Directory is cleared.
8. Choose Select Workbook, and then locate and select the workbook or spreadsheet you want to configure. Choose OK.
9. In the ODBC Microsoft Excel dialog box, choose OK.
10. In the ODBC Data Source Administrator dialog box, choose OK.

To set up an Oracle data source using ODBC

1. From the Start menu (Windows), choose Settings Control Panel.
2. Double-click the ODBC icon.
3. In the ODBC Data Source Administrator dialog box, do one of the following:
   - Choose the User DSN tab to create a data source that is visible only to you and can be used only on the computer you create it in.
   - Choose the System DSN tab to create a data source that is visible to all users who have access rights to the computer.
   - Choose the File DSN tab to create a data source that can be shared with other users who have the same ODBC drivers installed on their systems.
4. Choose Add.
5. Select Microsoft ODBC for Oracle, and then choose Finish.
6. Enter a name for your data source in Data Source Name.
7. Enter your user name.
8. Enter the name of the Oracle Server in Server.
9. Choose OK.
10. In the ODBC Data Source Administrator dialog box, choose OK.

To set up a Paradox data source using ODBC

1. From the Start menu (Windows), choose Settings Control Panel.
2. Double-click the ODBC icon.

3. In the ODBC Data Source Administrator dialog box, do one of the following:
   - Choose the User DSN tab to create a data source that is visible only to you and can be used only on the computer you create it in.
   - Choose the System DSN tab to create a data source that is visible to all users who have access rights to the computer.
   - Choose the File DSN tab to create a data source that can be shared with other users who have the same ODBC drivers installed on their systems.
4. Choose Add.
5. Select the Paradox Driver, and then choose Finish.
6. Enter a name for your data source in Data Source Name, and select the appropriate version of Paradox from the Version list.
7. Make sure that User Current Directory is cleared.
8. Choose Select Directory, and then locate and select the database you want to configure. Choose OK.
9. In the ODBC Paradox Setup dialog box, choose OK.
10. In the ODBC Data Source Administrator dialog box, choose OK.

To set up a Microsoft Visual FoxPro data source using ODBC

1. From the Start menu (Windows), choose Settings Control Panel.
2. Double-click the ODBC icon.
3. In the ODBC Data Source Administrator dialog box, do one of the following:
   - Choose the User DSN tab to create a data source that is visible only to you and can be used only on the computer you create it in.
   - Choose the System DSN tab to create a data source that is visible to all users who have access rights to the computer.
   - Choose the File DSN tab to create a data source that can be shared with other users who have the same ODBC drivers installed on their systems.
4. Choose Add.
5. Select the Microsoft Visual FoxPro Driver, and then choose Finish.

6 Enter a name for your data source in Data Source Name, and select a type in Database Type.

7 Choose Browse, and then locate and select the database you want to configure. Choose Open.

8 In the ODBC Visual FoxPro Setup dialog box, choose OK.

9 In the ODBC Data Source Administrator dialog box, choose OK.

For additional information about setting up a Microsoft Visual FoxPro data source, see the Microsoft Visual FoxPro ODBC Driver documentation.

To set up an SQL Server data source using ODBC

1 From the Start menu (Windows), choose Settings Control Panel.

2 Double-click the ODBC icon.

3 In the ODBC Data Source Administrator dialog box, do one of the following:

- Choose the User DSN tab to create a data source that is visible only to you and can be used only on the computer you create it in.
- Choose the System DSN tab to create a data source that is visible to all users who have access rights to the computer.
- Choose the File DSN tab to create a data source that can be shared with other users who have the same ODBC drivers installed on their systems.

4 Choose Add.

5 Select SQL Server, and then choose Finish.

6 Follow the instructions in the wizard to complete the data source setup.

Microsoft provides additional Help topics describing the interface components of each page in the wizard. To view Help for a wizard page, choose Help.

7 In the ODBC Data Source Administrator dialog box, choose OK.

You can use OLE DB to establish a UDL configuration file that points to an external database table.

To configure a data source using OLE DB

1 Use Microsoft ODBC to set up a data source (see "Use ODBC to Create a Configuration File" on page 61).

2 From the dbConnect menu, choose Data Sources Configure.

3 In the Data Link Properties dialog box, the Provider tab, select Microsoft OLE DB Provider for ODBC Drivers. Choose Next.

4 Enter the name of the data source you want to configure in Use Data Source Name.

5 Choose Test Connection to verify that your configuration is working properly.

   If the connection fails, verify that the settings are correct. For example, spelling errors and case sensitivity may be the cause of a failed connection.

6 In the Microsoft Data Link dialog box, choose OK.

7 Choose OK.

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