

Installing and Configuring MS-DOS Programs

By definition, all programs originally written for MS-DOS are 16-bit programs. As such, they run in a virtual machine alongside their 16-bit counterparts developed for Windows 3.x.

To control the behavior of MS-DOS-based programs, you use a properties dialog box whose design hasn't changed much since Windows 95. Custom property settings for each program are stored in a shortcut file called a program information file (PIF).

tip - Set global PIF options

Is the default MS-DOS environment not quite right? You can adjust the default settings that apply to all MS-DOS programs by editing the settings stored in %SystemRoot%_default.pif. When you double-click the icon for an MS-DOS-based program and Windows can't find a matching PIF, it uses the settings recorded here. Likewise, when you create a new PIF, it starts with these default settings. If you want an MS-DOS batch file to run each time any MS-DOS program starts up, save the file as %SystemRoot%_default.bat.

You can create multiple shortcuts (PIFs) for a single MS-DOS program, each with its own custom settings, such as a default data file or working directory. When you right-click the icon for an MS-DOS executable file and make any changes to its properties, Windows saves your changes in the same folder, creating or updating a file with the same name as the executable file and the extension .pif. You can change the name of the shortcut file or move it to another folder.

The PIF format is binary and can't be edited except through the properties dialog box. Right-click the icon for the MS-DOS program's executable file to display this dialog box, which adds four tabs containing options that are exclusively available to MS-DOS programs. Using the Misc tab, shown in Figure 5-4, for instance, you can disable Windows shortcut keys that conflict with shortcuts in the MS-DOS program. Other options on other tabs allow you to adjust the amount of memory allocated to a program, specify the program's initial display mode (full-screen or windowed), the icon associated with the program, and other options.

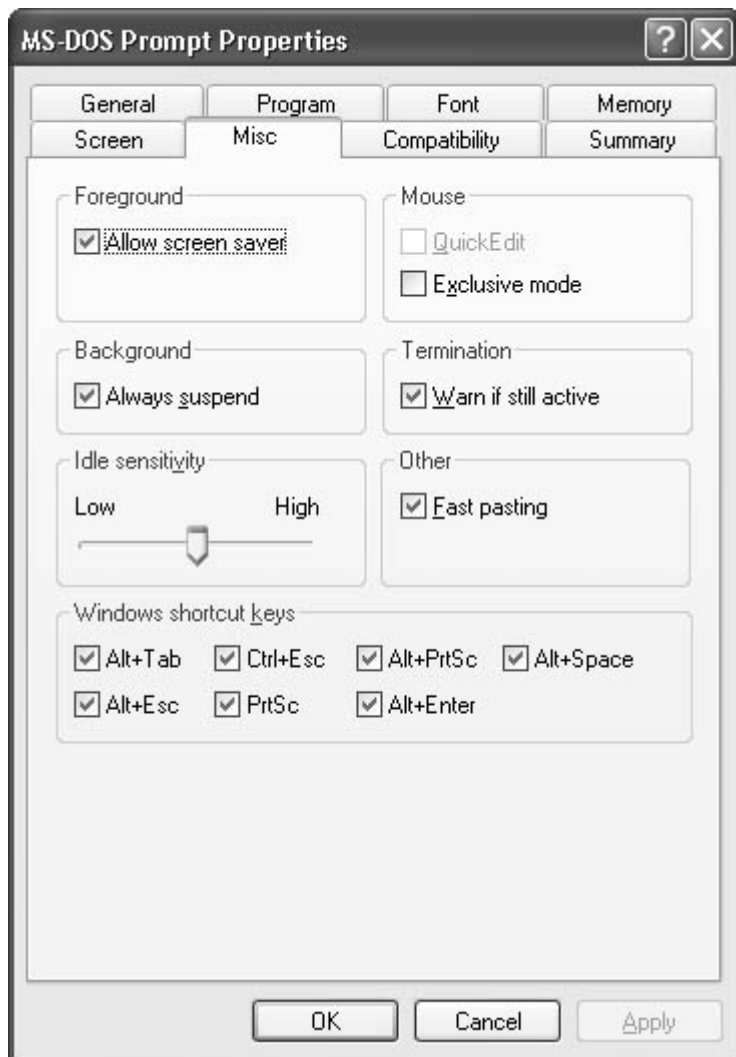


Figure 5-4. The Font, Memory, Screen, and Misc tabs in this dialog box control settings that are exclusive to MS-DOS programs.

note

For a concise explanation of each option in the properties dialog box for an MS-DOS program, right-click the option and then use the context-sensitive What's This? menu. Alternatively, click the title bar's question mark icon and then click the option that needs explanation.

You can run any character-based program written for MS-DOS either in full-screen mode or in a window. (Graphics-based programs run only in full-screen mode.) If you run a program in full-screen mode, it looks exactly like it does when you run it under MS-DOS. If you run it in a window, it has a title bar, a Control menu, and other familiar window management features.

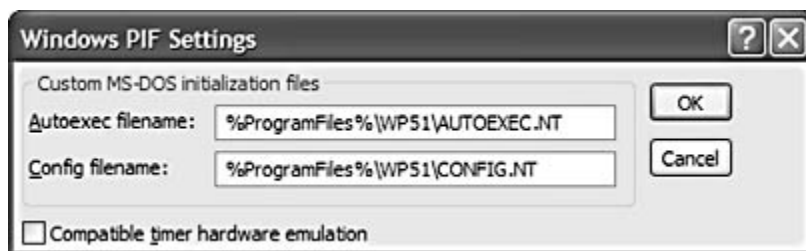
tip - Switch to full screen and back again

To switch an MS-DOS program window between full-screen and windowed views, use the keyboard shortcut Alt+Enter. If the Alt+Enter shortcut is disabled (because it's used for another purpose by the MS-DOS program) and the program is currently in full-screen view, press Alt+Tab

or Ctrl+Esc to switch to another program, or tap the Windows logo key to display the Start menu. Then right-click the taskbar button for the program you switched away from. Choose Properties from the shortcut menu, click the Options tab in the properties dialog box, and then select the Window option button.

Running some MS-DOS programs properly might require that you change the system configuration used by the MS-DOS virtual machine. Two files, Autoexec.nt and Config.nt, serve this function in Windows XP. These two files serve a purpose similar to that of Autoexec.bat and Config.sys in MS-DOS and Windows 95/98, with several important differences:

- I Autoexec.nt and Config.nt are located by default in the %SystemRoot% \System32 folder. (The corresponding files on an MS-DOS or Windows 95/98 machine are in the root folder of drive C.)
- I In Windows XP (as in Windows 2000), you can create custom versions of Autoexec.nt and Config.nt for specific applications. To associate your custom configuration files with a specific application, copy the default files to a separate location and edit them as needed. Next, open the properties dialog box for the MS-DOS program, click the Advanced button on the Program tab, and then enter the correct locations as shown below. (Note that this dialog box includes a Compatible Timer Hardware Emulation check box. This option imposes a performance penalty, so you should select it only if your application won't run with the box cleared.)



- I Commands you enter in these two files affect only the MS-DOS subsystem. Many commands, such as Buffers and Break, are ignored, although they can be entered for compatibility purposes when an MS-DOS program insists that they be present. Windows XP includes its own versions of Himem.sys, Ansi.sys, Country.sys, and Setver.exe. Avoid using the following unsupported and unnecessary Windows 95/98 drivers in Config.nt: Emm386.exe, Smartdrv.sys, Ramdrive.sys, and Dblspace.sys/Drvspace.sys. Windows XP ignores all entries in Autoexec.nt except those defined by Set or Path commands, which it adds to the startup environment for that MS-DOS virtual machine.