

Windows 3.1 and Serial Communications

(Part three)

Microsoft Product Support

This article provides information about serial communications in the Microsoft Windows version 3.1 operating system environment.

TROUBLESHOOTING COMMUNICATIONS PORT PROBLEMS

This section can help you to identify what is causing a problem and then point you to the appropriate section in this application note for an explanation of how to resolve the problem.

COMMUNICATIONS APPLICATION CANNOT ACCESS A SERIAL PORT

Are you using MS-DOS-based communications software? Refer to the "MS-DOS-Based Communications Software and Windows 3.1" section in this application note.

Related procedure:

"To set device contention options"

Is the serial device using an available IRQ? Refer to the "Resolving IRQ Conflicts" section in this application note.

Related procedures:

"To use MSD to determine available IRQs"
"To reassign the IRQ from Control Panel"

PC LOCKS UP WHEN ACCESSING SERIAL PORT

Is the serial device using a unique IRQ? Refer to the "Resolving IRQ Conflicts" section in this article.

Related procedures:

"To use MSD to determine available IRQs"
"To reassign the IRQ from Control Panel"

Is the serial device on COM4? Refer to the "Serial Devices on COM3 and COM4 Do Not Register" section.

Related procedure:

"To register a serial device"

MOUSE PROBLEMS

General Guidelines

The mouse uses a different driver for MS-DOS-based applications than it does for Windows-based applications. In general, all

mouse drivers should come from the same vendor. For example, do not use a Microsoft driver as the Windows mouse driver and a third-party driver as the MS-DOS mouse driver.

Do not install a modem on COM3 if you have a mouse on COM1, or a modem on COM4 if you have a mouse on COM2, unless your machine or serial I/O card supports IRQ sharing. Refer to the "Resolving IRQ Conflicts" section in this application note.

Mouse Doesn't Work in Enhanced Mode

If your PC has no COM1 or if you have disabled COM1 and you have a mouse installed on COM2, you may experience problems using the mouse in 386 enhanced mode. Refer to the "BIOS Data Area and Address Packing" section in this application note.

Logitech Mouse

The Logitech virtual mouse driver (LVMD.386) is hard coded for the standard base port addresses and IRQs. If you use the Logitech mouse with a nondefault port address or IRQ, it may fail to work in 386 enhanced mode.

100%- Microsoft- Compatible Mouse

Any "100% Microsoft compatible" mouse that you purchase from your dealer is not interchangeable with the Microsoft mouse. If your 100%-Microsoft-compatible mouse comes with a driver disk that contains both

Windows and MS-DOS mouse drivers, install these in place of the Microsoft mouse drivers. Installing such drivers places a new setting in the Mouse section of Windows Setup. After you install a 100%-Microsoft-

compatible mouse, use Windows Setup to select your mouse type.

Microsoft Mouse

If you are using the Microsoft Mouse with Windows 3.1, make sure each of the following is true:

- You are using version 8.2 or 8.2a of MOUSE.COM and MOUSE.SYS (the mouse drivers for MS-DOS-based applications). Version 8.2 or 8.2a of the driver is included with Windows 3.1. - MOUSE.DRV (the mouse driver for Windows-based applications) is in the Windows SYSTEM subdirectory, is the only copy of this file on your system, and is the most current version of the driver.

- The mouse is assigned a unique IRQ (unless the serial port supports IRQ sharing). For more information, see the "IRQ Sharing" section in this application note.

- The mouse is not installed on COM3 or COM4.

To see what version of the MS-DOS mouse driver you have

At the MS-DOS command line from the MS-DOS mouse directory (usually, MS-MOUSE), type:

mouse /?

To see what Windows mouse driver you are using

From the Main group, choose the Windows Setup icon. The mouse type should be "Microsoft, or IBM PS/2."

To change your Windows mouse driver

1. In the Main group, choose the Windows Setup icon.

2. From the Options menu, choose Change System Settings.

Continued from page 16

3. Open the Mouse list box and select the type of mouse that you are using.
4. Choose the OK button to close the dialog box.

COM4 PROBLEMS

If your communications software doesn't recognize a serial device on COM port 3 or 4, you may have a system BIOS that was manufactured before those COM ports became standard. Refer to the "Serial Devices on COM3 and COM4 Do Not Register" section earlier in this application note.

The COM4 default address of 02E8 conflicts with some peripheral devices, including the 8514/A, Ultra (ATI), and S3 (Orchid Fahrenheit 1280 STB WIND/X, Diamond Stealth VRAM) display adapters, and certain network adapters. Do not readdress COM4 in this situation. Contact your hardware manufacturer for information about how to reset the adapter's default address.

PROBLEMS

RUNNING

WINDOWS IN 386 ENHANCED MODE

Problems of this type may be related to a number of causes, including outdated driver files or IRQ conflicts. You can try the troubleshooting steps outlined below if you experience any of the following problems when trying to run Windows in 386 enhanced mode:

- Windows stops running or returns to the MS-DOS prompt
- General protection (GP) fault
- Windows defaults to standard mode

If the steps outlined below do not help, then the problem is probably not caused by a serial-communications conflict. Refer to the Windows Resource Kit for more information about problems running Windows in 386 enhanced mode.

To Check for Outdated Driver Files

Before starting Windows from the MS-DOS prompt, change to the Windows directory, and then start Windows.

If Windows runs in 386 enhanced mode only when you start it from the Windows directory, you may have an outdated driver file in some other directory. When Windows starts, it looks for the files it needs in the following order:

- The current directory
- The Windows directory
- The Windows SYSTEM subdirectory

All the directories listed in the PATH statement in the AUTOEXEC.BAT file.

基礎篇 NEW USERS

All the directories in a network path

If you suspect that you have outdated driver files, you need to delete them from your system.

To Delete Outdated Driver Files

1. Use File Manager to find all versions of the driver file(s) on your system. Compare each version by date.

2. Delete all other versions of the driver file(s) except the most current version. Re-

tain a single copy of the most current version in the Windows SYSTEM subdirectory.

To Identify an IRQ Conflict

1. Remove any serial hardware you have installed on your system (mouse, network card, fax board, modem, and so forth) and then restart Windows.

If Windows now runs in 386 enhanced mode with no problems, the problem may be caused by an IRQ conflict.

2. Reinstall each separate piece of serial hardware, one at a time, restarting Windows between each addition.

This isolates the hardware that is causing the IRQ conflict. When the problem recurs, you can assume it is caused by the hardware you have just reinstalled.

3. Reassign the IRQ for the piece of hardware in question. ⊕