

*User's Guide*

# Microsoft<sup>®</sup> Mouse



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# **Microsoft<sup>®</sup> Mouse User's Guide**

*for IBM<sup>®</sup> Personal Computers and Compatibles  
and for the IBM<sup>®</sup> Personal System/2<sup>®</sup> Series*

*Microsoft Corporation*

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# Introduction

The Microsoft® Mouse is a hand-held pointing device that helps you use your computer more easily and efficiently. With its speed, accuracy, and simplicity, the mouse will become an indispensable part of your work environment.

You can use the mouse with such popular products as Microsoft Windows™, all Windows-based applications, Microsoft Excel, Microsoft Word, Microsoft Works, Lotus 1-2-3, WordPerfect, and Aldus PageMaker. You can also use your mouse to paint a picture with Microsoft Paintbrush or to pilot your plane through turbulent skies with Microsoft Flight Simulator.

You can use your mouse to move or delete text in an instant, insert a value into a Microsoft Excel worksheet cell, or choose a command on a menu. All you do is point to an area on the screen, and then click a mouse button.

## About This Guide

In addition to this introductory material, this guide includes two parts: Part 1, "Installing the Mouse," and Part 2, "Using the Mouse." Appendixes and an index follow Part 2.

This user's guide explains the two types of Microsoft Mouse:

- Serial-PS/2 version
- Bus mouse (includes a Bus Interface board)

**Note** This guide assumes you are familiar with your computer hardware and with basic commands and procedures for your disk operating system (DOS). You may want to keep the user's guide that came with your computer and your DOS manuals at hand while you install the mouse.

## What You Should Read

First read "Connecting the Mouse Hardware" and "Installing the Mouse Software" in Part 1. If you have used a mouse before, you may want to skip most of "Moving the Mouse" in Part 2. Be sure, however, to read the section called "The Control Panel" also in Part 2.

Read "Other Sources of Information" if you are interested in prewritten mouse menus that allow you to use the mouse with applications that don't offer built-in mouse support (such as Lotus 1-2-3).

If you want to design your own mouse menus or add mouse support to programs you have written, the *Microsoft Mouse Programmer's Reference* can show you how. This guide, published by Microsoft Press, contains technical reference information on all Microsoft Mouse functions, sample interface programs in seven Microsoft languages, and sample mouse menus.

## Notational Conventions

To help you locate and interpret information easily, this guide uses specific typographic conventions and a standard syntax format and terminology. The following conventions are used in this guide:

Convention	Used for
<b>bold</b>	Words and characters you type, as well as operating-system commands. Unless told otherwise, you can type the characters or commands in either lowercase or uppercase letters or any combination of the two.  You should always press ENTER after typing a command. For example, if a procedure instructs you to type <b>msetup</b> to start the mouse setup program, you should type <b>msetup</b> in either lowercase or uppercase letters, then press ENTER.
<i>italic</i>	Placeholders that represent information you must provide.
ALL CAPITALS	Filenames. Filenames can be typed in either lowercase or uppercase letters.
KEY + KEY	Keynames appear in small capitals and are abbreviated (as they are on the keyboard). A plus sign (+) between keynames means that you must press the keys at the same time—for example, “Press CTRL+ALT” means that you press the CTRL key and hold it down while you press the ALT key.

The following list describes mouse actions used in this guide:

Action	Meaning
Point	Move the mouse pointer until the tip rests on a specific object or area on your screen.
Click	Press and release a mouse button.
Double-click	Press and release a mouse button twice in rapid succession.
Drag	Press a mouse button and hold it down while moving the mouse pointer.



## ***MREADME.DOC***

The Setup disk in your mouse package may include a file named MREADME.DOC. You should read this file for additional information that became available after this manual was printed.

### **To read this file on your screen:**

- 1 Start your computer.
- 2 Insert the Setup disk into drive A.
- 3 At the operating system prompt, type:  
**type a:mreadme.doc**

### **To print MREADME.DOC:**

- 1 Make sure your printer is turned on and ready to receive information from the computer. The “on-line” or “select” light should be on.
- 2 At the operating system prompt, type:  
**copy a:mreadme.doc prn**

## ***What You Need to Install and Use the Mouse***

Make sure you have the following software and hardware:

- DOS version 2.0 or later
- A personal computer and display (see “Compatible Hardware” below for a list of devices that you can use with the mouse)
- A screwdriver (Bus mouse only)

Make sure the following items are included in your mouse package:

- A Microsoft Mouse
- The Setup disk

**Note** The mouse driver uses approximately 30K of disk space, and approximately 12K of memory. The mouse Control Panel uses approximately 30K of disk space and 34K of memory.

## ***Compatible Hardware***

The Microsoft Mouse is designed to be used with the IBM PC family of computers (including the PC, PC/XT, PC/AT, and PS/2) or computers that are 100% compatible.

The Microsoft Mouse hardware and software support the following displays:

- IBM Monochrome Display
- IBM Color Display
- IBM Enhanced Color Display
- IBM Personal System/2 Displays
- A display that is 100% compatible with one of the displays listed above

The Microsoft Mouse hardware and software support the following display adapters:

- IBM Monochrome Adapter
- IBM Color/Graphics Adapter
- IBM Enhanced Graphics Adapter
- IBM Personal System/2 Display Adapter
- Hercules Graphics Card
- A display adapter that is 100% compatible with one of the adapters listed above

**Note** The IBM monochrome display adapters can be used only with character-based programs. To run graphics-based programs, you must have a graphics display adapter.

## ***Product Support***

If you have a question about the mouse and you can't find the answer in this guide, call Microsoft Product Support. The staff will be ready to give you the help you need in order to get the most from your mouse. Product Support can provide better service if you are at your computer when you call and if you have the following information and materials at hand:

- Mouse software version number
- Serial number of your mouse (found on the bottom of the mouse)
- The *Microsoft Mouse User's Guide*
- The make and model of your computer
- A list of the peripheral devices attached to your computer

## ***FCC Labeling Requirement***

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For more information, see "Radio and TV Interference" at the back of this guide.

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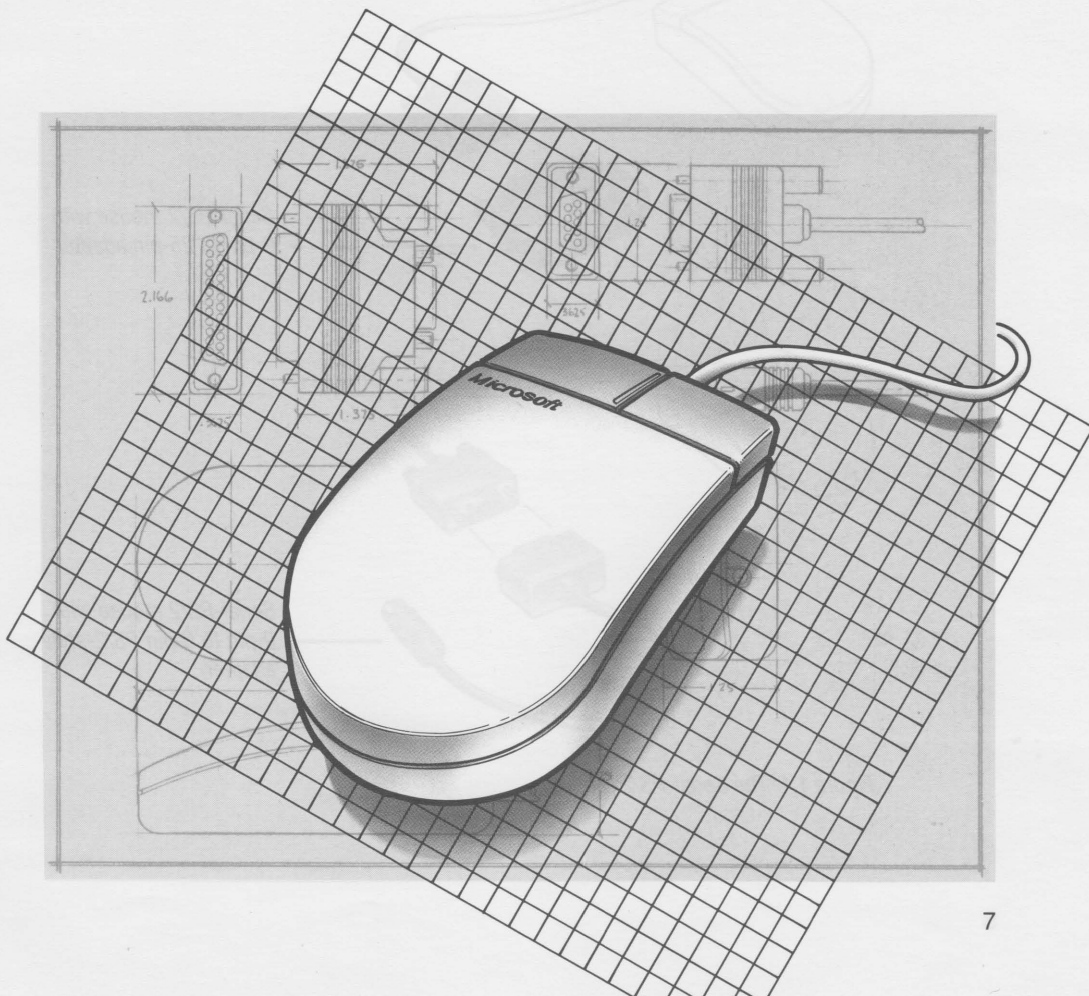
# Part One

## Installing the Mouse

This part explains how to install the Microsoft Mouse hardware and software.

“Connecting the Mouse Hardware” explains how to attach the mouse to your computer and, if you have purchased the Bus mouse, how to install the Bus Interface board.

“Installing the Mouse Software” explains how to install and set up the mouse software.



## Connecting the Mouse Hardware

Each type of Microsoft Mouse connects to your computer with an attached cable and a connector that mates with a connector on the back of your computer.

The Serial-PS/2 mouse has a 9-pin connector (also referred to as a DB-9 connector). If you're using the Serial-PS/2 mouse to connect to a serial port that has a 9-pin connector, then it will connect directly. If you're using the Serial-PS/2 mouse to connect to a serial port that has a 25-pin connector, then use the supplied 9-pin to 25-pin adapter to attach the cable to your computer. If you're using the Serial-PS/2 mouse to connect to a PS/2-compatible mouse port, then use the supplied 9-pin to 6-pin PS/2-style adapter to attach the cable to your computer.

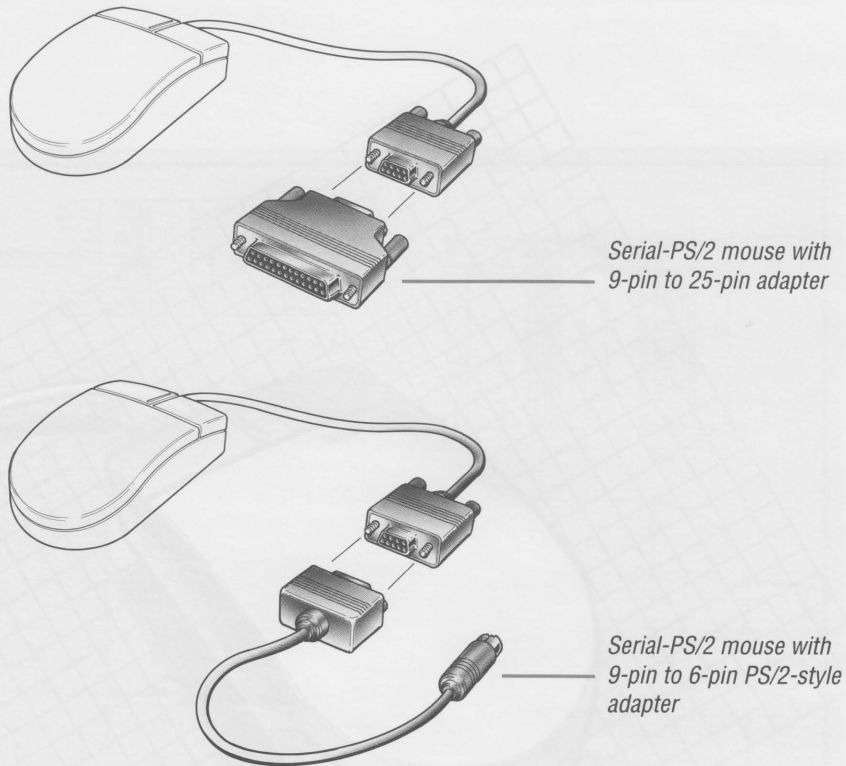


Figure 1.1 The Serial-PS/2 Mouse

The Bus mouse has a 9-pin round connector that mates with the connector on the back of the Bus Interface board.

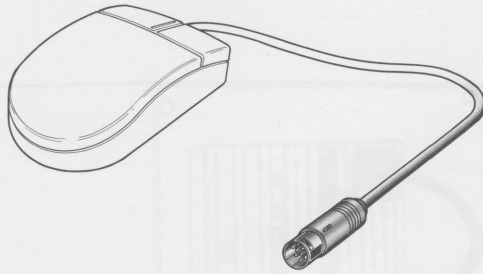
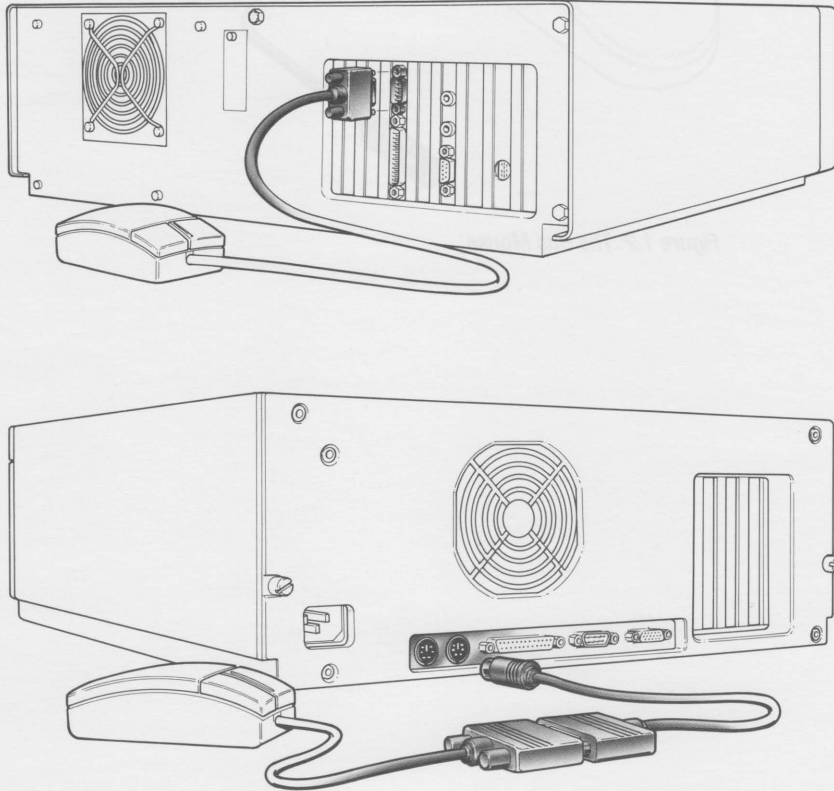


Figure 1.2 The Bus Mouse

The first illustration below shows the Serial-PS/2 mouse connected directly to a 9-pin serial port. The second illustration shows the Serial-PS/2 mouse connected to a PS/2-style mouse port using the 9-pin to 6-pin adapter.



*Figure 1.3 The Serial and PS/2-Style Mouse Connections*

If you have a Serial-PS/2 mouse, connect the mouse to your computer according to the instructions above, skip the rest of this section, and turn to “Installing the Mouse Software.”

If you are installing a Bus mouse, the following section describes how to install the Bus Interface board.

## ***Installing the Bus Interface Board***

Before you handle the Bus Interface board, discharge any static electricity from your body by touching any bare, grounded metal on the back of your computer’s system unit. As you work, you should avoid contact with materials that create static electricity, such as plastic, vinyl, and Styrofoam.

### ***The Bus Interface Board Jumpers***

The Bus Interface board is equipped with three jumpers. These jumpers must be set properly for the mouse to work correctly with your computer and the peripheral devices attached to it. You may not need to adjust the jumpers, but you should read this section carefully to determine how the jumpers are set and which jumpers affect which computer functions.

Each jumper is a plastic block with a small removable plastic hood that fits over a pair of pins on the block. The three jumpers on the Bus Interface board are labeled “J2”, “J3”, and “J4”. The following figure illustrates the position of each of these jumpers on the Bus Interface board that came with your mouse. The actual appearance of your board may vary slightly from this illustration, but it will work as described in this guide.



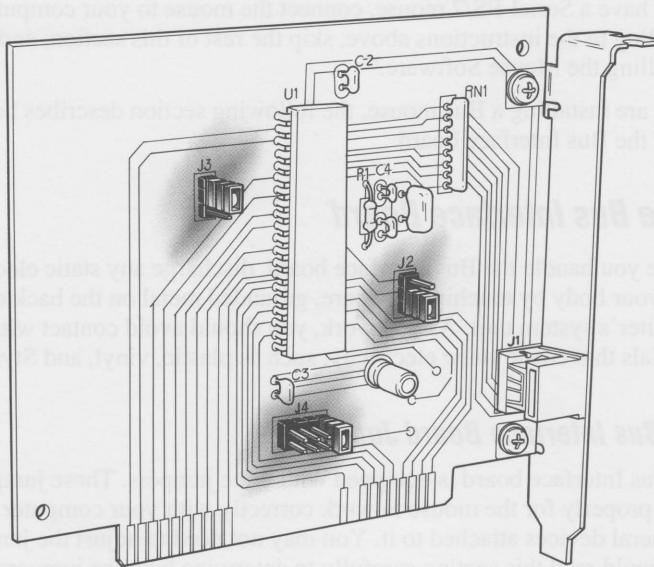


Figure 1.4 The Microsoft Bus Interface Board

### **Setting the Interrupt Jumper**

Interrupts are temporary breaks in the sequence of a program caused by various input/output devices such as keyboards, drawing devices, and printers. Generally, two devices connected to the same computer should not use the same interrupt level. You must specify a mouse interrupt that does not interfere with the other devices connected to your computer. The interrupt settings used by the mouse are controlled by jumper J4.

Jumper J4 has four positions labeled “2”, “3”, “4”, and “5”, from left to right. The jumper is preset with the removable hood covering position 2.

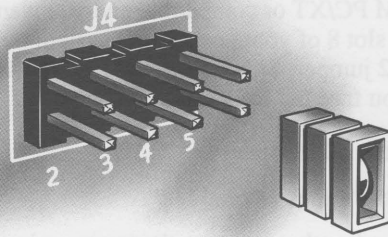


Figure 1.5 The J4 Jumper

Use the following list to determine how you should set jumper J4. Read the list and circle or cross out the positions you cannot use due to the type and/or configuration of your system. You can then position the removable plastic hood on any position not marked out on the list.

If you have	Do not use jumper position
IBM PC/AT	2
IBM PC with a fixed disk	5
IBM PC/XT	5
Asynchronous Communications Adapter: 1st serial port (COM1:)	4
Binary Synchronous Communications Adapter: 1st serial port (COM1:)	4 or 3
Synchronous Data Link Control Communications Adapter	3
Asynchronous Communications Adapter: 2nd serial port (COM2:)	3
IBM Enhanced Graphics Adapter	2
IBM Network Adapter	2

### ***Changing the Setting of the J2 Jumper***

If your computer is an IBM PC/XT or compatible and you want to install the Bus Interface board in slot 8 of your computer's system unit, you must change the setting of the J2 jumper. Slot 8 of an IBM PC/XT is the slot farthest to the left when you face the back of the system unit.

#### **To change the setting of the J2 jumper:**

- 1 Find the 2-position jumper block labeled "J2".
- 2 Move the removable hood so that it covers the top two pins (labeled "XT SLOT 8").

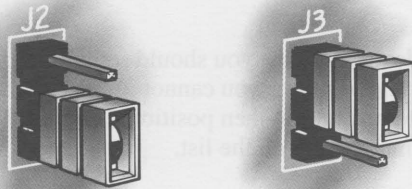


Figure 1.6 The J2 and J3 Jumpers in Default Positions

### ***Changing the Setting of the J3 Jumper***

If you have more than one InPort device installed in your computer, you must specify one InPort device as the primary InPort-device interface and the other as the secondary InPort-device interface. Jumper J3 is preset to specify the Bus Interface board as the primary InPort device interface. When the primary InPort jumper is set, the I/O address used is 23Ch-23Fh. This setting is correct for most systems. But if you need to make the Bus Interface board the secondary InPort, use the following procedure to change jumper J3.

**To specify the primary and secondary InPort device interface:**

- 1 Find the 2-position jumper block labeled "J3".
- 2 Move the removable hood so that it covers the lower two pins (labeled "SEC.INPORT").

This setting indicates that the Bus Interface board is the secondary InPort device installed in your computer. When the secondary InPort-device jumper is set, the I/O address used is 238h-23Bh.

- 3 When you install the mouse driver, use the /i2 switch on the mouse command line.

For information on mouse command-line switches, see Appendix A, "Mouse Command-Line Switches."

***Installing the Bus Interface Board in Your Computer*****To install the Bus Interface board in your computer:**

- 1 Turn off your computer and all devices attached to your computer (for example, your printer and monitor).
- 2 Discharge static electricity from your body by touching any bare, grounded metal on the back of your computer's system unit.
- 3 Turn the system unit so that the back of the unit faces you. You may need to disconnect the power cord and any other cables from the back of your computer to gain access to the back panel.
- 4 Remove the system unit cover. If necessary, refer to the user's guide for your computer.
- 5 Locate the expansion slots at the rear of the system unit and choose any unused slot. Refer to the user's guide for your computer to determine how the expansion slots are numbered.

- 6 Remove the screw that secures the expansion slot cover to the system unit. Save the screw to secure the Bus Interface board's metal retaining bracket. Then remove the slot cover.

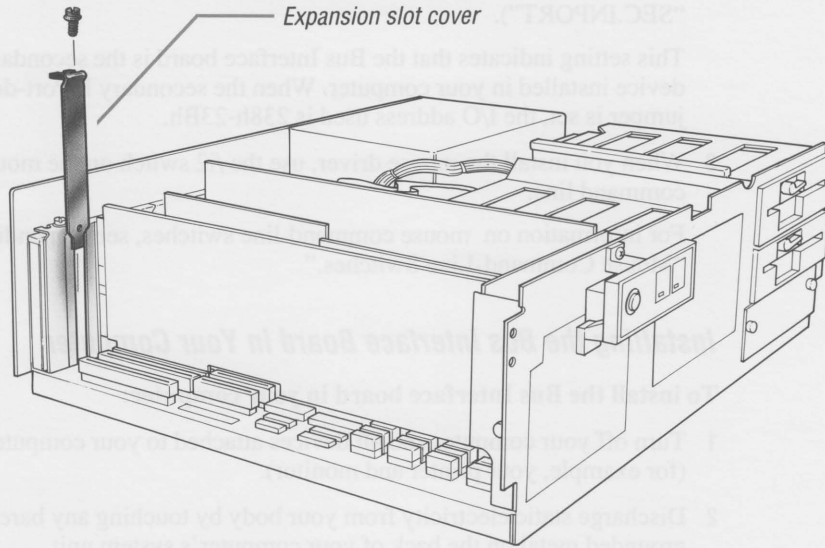


Figure 1.7 Removing the Expansion Slot Cover

- 7 Align the hole on the retaining bracket of the Bus Interface board with the hole on the top of the expansion slot, and align the gold-striped connector with the expansion slot socket. Press the board firmly into the socket.

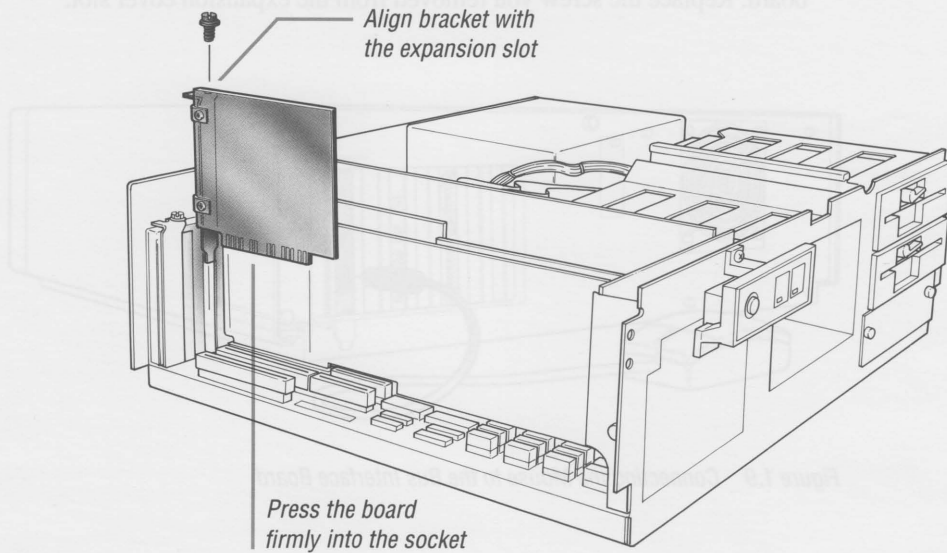
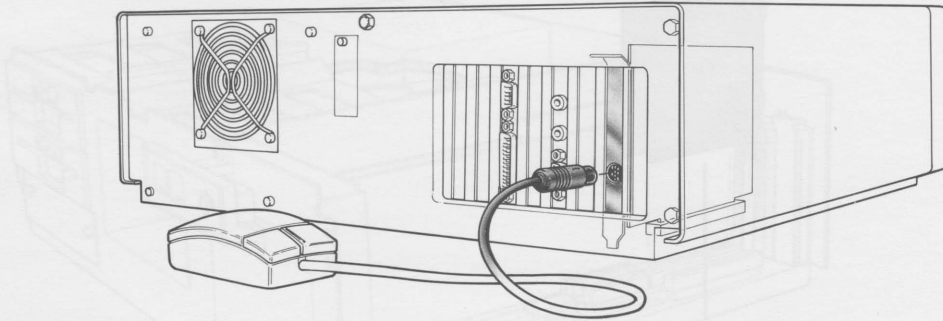


Figure 1.8 Installing the Bus Interface Board

- 8 Make sure the slot on the top of the metal retaining bracket lines up with the hole on the top of the expansion slot.
- 9 Attach the mouse connector to the circular port on the Bus Interface board. Replace the screw you removed from the expansion cover slot.



*Figure 1.9 Connecting the Mouse to the Bus Interface Board*

- 10 Replace the system-unit cover. Reconnect any cables you removed and turn on your computer and any peripheral devices connected to your computer.

You are now ready to install the mouse software as described in the section “Installing the Mouse Software,” later in this guide.

## **Connecting the Bus Mouse to an InPort Device**

When it is separated from the Bus Interface board, the Bus mouse is called an InPort mouse because it can be connected to the InPort device interface connector of certain hardware products. Follow the instructions in this section to connect the Microsoft InPort (Bus) Mouse to hardware products that support the Microsoft InPort® device interface.

### **To connect the Bus mouse to an InPort device interface:**

- 1 Turn off your computer.
- 2 Locate the 9-pin circular port on one of the InPort adapters installed in your computer.

This port is the Microsoft InPort device interface connector. It is found on certain Microsoft products and products from other manufacturers.

- 3 Attach the mouse connector to the Microsoft InPort device interface connector.

Some other circular connectors may look similar to the Microsoft InPort device interface connector, but they may be incompatible with the connector on the mouse cable. If you can't connect the mouse cable easily, don't force it. Either locate the compatible circular port or contact your computer dealer for assistance.



## ***Installing the Mouse Software***

Like most hardware products you use with your computer, the mouse needs software to make it run. The Setup disk that came with your Microsoft Mouse includes the software you need to set up and use the mouse.

### ***Making Backup Copies of Your Disks***

Before you begin, make backup copies of your disks. You should use the backup disks as your working copies.

#### **To make backup copies of your disks:**

- 1 Copy each disk using your operating system's **diskcopy** command (see your DOS manual for detailed instructions on how to use this command).
- 2 Label each backup disk and store the originals in a safe place.

### ***The Setup Disk***

The Setup disk should be the first disk you use after you have installed the mouse hardware. The Setup disk includes:

- The Msetup program (used to set up the Microsoft Mouse software)
- Other mouse software (depending on the package you purchased)

#### ***What the Msetup Program Does***

The Msetup program copies the mouse driver and the Control Panel to your hard disk or to a floppy disk that contains the DOS system files. The mouse driver is the file that lets the mouse work with your computer. The Control Panel is a utility program that lets you adjust the way the mouse responds as you move it.

Msetup copies only the mouse driver and the Control Panel from the Setup disk. To use any of the other mouse software, you must have your working copy of the Setup disk in the current drive.

Msetup asks you if you want it to modify your AUTOEXEC.BAT file on your hard disk or floppy disk so that the mouse driver and the Control Panel load automatically every time you start your computer. If you answer "Yes," Msetup adds the lines "mouse" and "cpanel" to your AUTOEXEC.BAT file

- and, if you have installed the mouse software on a hard disk, adds the mouse directory to the path information. If Msetup cannot find your AUTOEXEC.BAT file, it creates the file and adds the appropriate commands.

If you answer “No,” Msetup does not modify your startup disk. To load the mouse driver, you must type **mouse** at the system prompt each time you start your computer.

### ***Hard Disk Users***

If you have a hard disk system, Msetup asks you to specify a subdirectory where you want the mouse files to be copied. If you press ENTER without specifying a subdirectory, Msetup automatically copies the mouse files to a directory named “MOUSE1”.

**Note** If you choose not to have Msetup modify your AUTOEXEC.BAT file, you should add the name of the mouse directory to the search path so that you can easily access the mouse driver later. For more information, see the explanation of the **path** command in your DOS manual.

### ***Floppy Disk Users***

If you have a floppy disk system, Msetup copies the mouse files onto a disk that includes the DOS system files. You will need:

- A DOS disk, version 2.0 or later
- A blank, formatted disk if you want to create a new DOS disk that includes the mouse driver (for information on formatting disks, see your DOS manual)
- Any disks, such as application disks, that already contain the DOS system files that you want to copy the mouse driver to

### ***Deleting Old Versions of the Microsoft Mouse Driver***

If you want to copy the new mouse driver onto an application disk that contains a previous version of the Microsoft mouse driver, you should use the DOS **erase** command to remove the old mouse driver (called MOUSE.COM) and the Control Panel (CPANEL.COM) from the application disk before running the Msetup program. For more information, see the explanation of the **erase** command in your DOS manual.

After you run the Msetup program, you must restart your computer to load the new version of the mouse driver if Msetup modified your AUTOEXEC.BAT file.

## **Running the Msetup Program**

### **To run the Msetup program:**

- 1 Start your computer's operating system.
- 2 Insert the Setup disk into drive A.
- 3 At the system prompt, type:  
**a:msetup**
- 4 Follow the instructions on your screen to install the mouse software.

If you decide to change your system configuration after you have installed the mouse software, you may need to run Msetup again to set up the mouse software for the new configuration.

If you see the message "Driver not installed—Microsoft Mouse not found" after running Msetup and restarting your system, you may have a problem with your system hardware or the mouse hardware. Check that you installed the mouse hardware correctly before continuing.

If you have a Serial-PS/2 mouse attached to a serial port, you should ensure that your serial port is configured correctly as specified in the computer manufacturer's installation guide. Make sure that non-IBM serial adapters are configured to be 100% compatible (COM1 uses IRQ4 and COM2 uses IRQ3).

If you have a Bus mouse, you should ensure that the Bus Interface card jumpers are set correctly and that no other peripheral boards use the same I/O address or interrupt.

If, after checking the mouse hardware installation and restarting your system, you still receive the error message, you may want to try connecting the mouse on another system or call Microsoft Product Support.

### ***Removing the Mouse Driver from Memory***

You can remove the mouse driver from memory if you run an application that needs more free memory. Before removing the mouse driver from memory, you must exit all mouse-menu programs you are using.

**Note** Before the following steps can be effective, you may need to remove any terminate-and-stay-resident programs that were loaded after the mouse driver and Control Panel programs.

#### **To remove the mouse driver from memory:**

- 1 If you are running a mouse menu program, type ***menu* off** at the system prompt (where *menu* is the name of the mouse-menu program).
- 2 If you have installed the Control Panel, type ***cpanel* off** to remove it from memory.
- 3 To remove the mouse driver, type:  
**mouse off**



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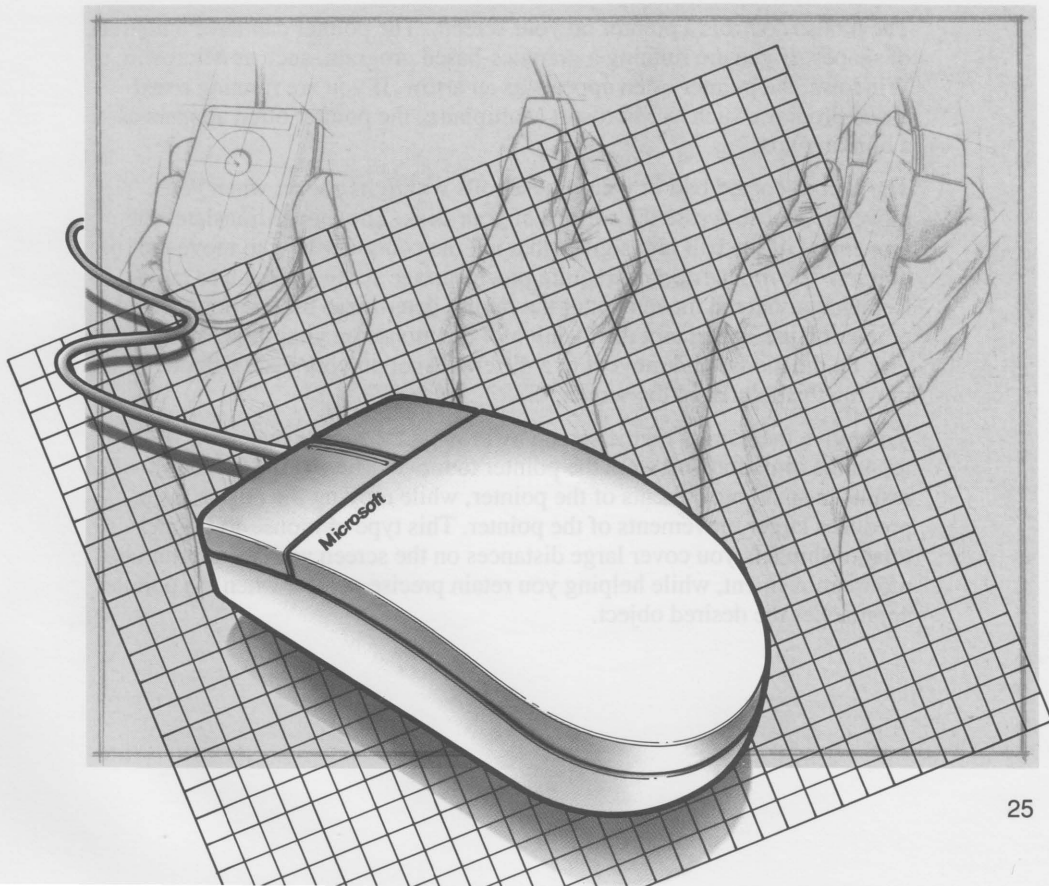
# Part Two

## Using the Mouse

This part explains how to use your Microsoft Mouse.

“Moving the Mouse” explains the basic mouse techniques you will use with applications that support the mouse. It also explains how to adjust mouse sensitivity and select different mouse movement profiles using the Control Panel.

“Other Sources of Information” tells you where to find information on prewritten mouse-menu programs. These programs let you use the mouse with applications that do not usually support the mouse. This section also explains where to find specific instructions on using the mouse with other Microsoft products and how to obtain the technical information necessary to design your own mouse-menu programs or mouse interface.



## ***Moving the Mouse***

This section describes the basic mouse techniques you will use with all applications that support the mouse. You will also learn how to adjust mouse sensitivity and select movement profiles using the Control Panel.

### ***Basic Mouse Movements***

You use four basic mouse techniques with most applications that support the mouse:

- Pointing
- Clicking
- Double-clicking
- Dragging

#### ***Pointing with the Mouse***

The mouse controls a pointer on your screen. The pointer can have a number of shapes. If you are running a graphics-based program, such as Microsoft Windows, the pointer often appears as an arrow. If you are running a text-based program, such as Microsoft Multiplan®, the pointer often appears as a blinking box.

The rubber-coated ball in your mouse rolls within its socket when you move the mouse across the surface of your desk. The mouse translates the movement of the ball into signals that tell the computer how to move the pointer. The mouse doesn't require much surface space in which to move. Remember that the movement of the mouse determines the movement of the pointer on the screen, not the location of the mouse on your desk. You can pick up the mouse and move it to a different spot on your desk without moving the pointer on the screen.

You move the pointer on the screen by moving the mouse over your desk top in the direction you want the pointer to move. Moving the mouse slowly results in small movements of the pointer, while moving the mouse faster produces larger movements of the pointer. This type of mouse-to-pointer relationship lets you cover large distances on the screen with a minimum of mouse movement, while helping you retain precise control when the pointer approaches the desired object.

### ***Clicking and Double-Clicking the Mouse Buttons***

Clicking means pressing and quickly releasing a mouse button. By pointing to something on your screen and then clicking a mouse button, you select what is underneath the pointer. Double-clicking means pointing to an object on the screen and quickly clicking a mouse button twice.

### ***Dragging Objects On Screen***

Dragging means holding down a mouse button and moving the pointer. Dragging lets you select a portion of your screen or move objects around your screen.

## ***The Control Panel***

The Control Panel allows you to adjust the sensitivity of the mouse and select movement profiles that are appropriate for the application program you are running.

The mouse sensitivity is the ratio of actual mouse movement to pointer movement. Different applications may require different sensitivities. As you become more familiar with your mouse, you may want to change the sensitivity so you can work more quickly. Different mouse profiles cause the pointer to move greater or lesser distances across the display when you move the mouse at different speeds across your desk.

### ***Loading the Control Panel***

When you set up the mouse software, the Msetup program asks if you want to install the Control Panel so that it loads automatically whenever you start your computer. If you answer "Yes," Msetup modifies your AUTOEXEC.BAT file accordingly.

If you chose not to have the Control Panel load automatically, switch to the drive or directory that contains the mouse program files and type **cpanel** at the system prompt to load the Control Panel.

If you want to remove the Control Panel from memory, switch to the drive or directory that contains the mouse program files and type **cpanel off** at the system prompt.



### ***Viewing the Control Panel***

Whenever you are using the mouse with the Control Panel loaded, you can view the Control Panel by pressing CTRL+ALT and either mouse button. The Control Panel appears on your screen. (See Appendix A, "Mouse Command-Line Switches," for information on how you can change key/mouse sequences.)

### ***Changing the Sensitivity Level***

The position of the marker and the number below the sensitivity bar indicate the current sensitivity level. The sensitivity level can vary from 5 to 100 in increments of 5. The default is 50.

#### **To change the mouse sensitivity level:**

- 1 With the Control Panel loaded, press CTRL+ALT and either mouse button to display the Control Panel.
- 2 Point to the left arrow on the sensitivity bar if you want to decrease the sensitivity level; point to the right arrow if you want to increase the sensitivity level.
- 3 Click the left mouse button to move the marker in increments of five in the direction indicated by the arrow, or press and hold down the left mouse button to move the marker continuously in the direction of the arrow.

The number representing the current sensitivity level changes to reflect the movement of the marker.

You also can change the sensitivity level by placing the pointer directly on top of the marker and, holding down the left mouse button, dragging the marker in the desired direction on the sensitivity bar.

- 4 Before you exit the Control Panel, test the changes you made by moving the pointer around your screen.
- 5 To put the new sensitivity level into effect and exit the Control Panel, point to OK and click the left mouse button.

If you don't want to save the change, point to Cancel and click the left mouse button.

The level you set remains in effect until you restart your computer or until you use the Control Panel to choose another profile.

### ***Changing the Mouse Acceleration***

The mouse acceleration, or mouse-movement profile, controls how far the pointer travels across your screen for a given speed of mouse movement. You can choose from among four supplied mouse profiles. The profiles are listed on the Control Panel. You can select a new mouse profile by using the Control Panel or by using command-line switches when you load the mouse driver.

When you use an accelerated mouse profile, for example, moving the mouse quickly, even only a small distance, moves the pointer farther across your screen than when you move the mouse slowly. A small, fast mouse movement can move the pointer completely across your screen, while a large, slow movement may move the pointer only an inch or two.

When you select a different mouse profile, you change the ratio between the distance the pointer moves on your screen and the speed of mouse movement.

#### **To select a new mouse profile using the Control Panel:**

- 1 Press CTRL+ALT and either mouse button to display the Control Panel.
- 2 Point to the label corresponding to the desired mouse profile (Slow, Moderate, Fast, or Unaccelerated) and click the left mouse button.  
You can test the new profile by moving the pointer around your screen.
- 3 To put the new profile into effect and exit the Control Panel, point to OK and click the left mouse button.

To cancel the change and exit the Control Panel, click Cancel. To restore the original profile and leave the Control Panel on screen, click Reset.

The mouse profile you select remains in effect until you restart your computer or use the Control Panel to select another mouse profile.

### ***Creating Custom Mouse Profiles***

Your mouse comes with four profiles on the Control Panel—Slow, Moderate, Fast, and Unaccelerated. You can also create custom mouse profiles that might better suit your needs. For example, you may want to create a two-speed profile that moves the pointer across your entire screen when you move the mouse at medium speed, but only a small distance when you move the mouse very slowly.

If you want to select a mouse profile automatically when the mouse driver is loaded, you can use command-line switches to specify the profile you want to use, as well as a custom mouse-profile file.

You can also add command-line switches to the mouse command in your AUTOEXEC.BAT file so that they take effect each time you start your computer. For more information on creating mouse-movement profiles, see Appendix B, "Creating a Custom Mouse Profile."

## ***Cleaning Your Mouse***

After an extended period of use your mouse may pick up some dust or lint. If you notice that the pointer does not move smoothly or that the ball does not move freely, you should clean your mouse.

### **To clean your mouse:**

- 1 Turn off your computer.
- 2 Turn your mouse upside down.
- 3 Remove the mouse ball cover.
- 4 Turn your mouse right side up. The ball should drop into your hand. If it doesn't, gently shake the mouse until the ball drops out of its socket.
- 5 Once the ball is free, use adhesive tape to pick up any dust or lint on the surface of the ball. Wipe away dirt or lint inside the mouse socket. You can also blow gently to remove dirt and lint. If lint is trapped inside the socket or on the rollers, use a cotton swab dipped in alcohol to loosen it.
- 6 Return the ball to its socket and snap on the mouse ball cover.
- 7 Turn on your computer.

## ***Other Sources of Information***

### ***Optional Mouse-Menu Programs***

Microsoft offers optional mouse-menu programs that let you use the Microsoft Mouse with applications that do not normally support the mouse. Some optional menu programs may have been included on the disks you received with your mouse. You also can order mouse menus from Microsoft.

You should review the `MENUREAD.ME` file for more information on mouse-menu programs.

#### **To read the `MENUREAD.ME` file:**

- 1 Start your operating system.
- 2 Insert the Menu disk in drive A.
- 3 At the system prompt, type:  
**type a:menuread.me**
- 4 To print the file, type:  
**copy a:menuread.me prn**

Please let us know if you have suggestions for applications you think would be enhanced by using the mouse.

### ***Using the Mouse with Other Microsoft Products***

You can use the Microsoft Mouse with other Microsoft products, such as Microsoft Excel, Microsoft Windows and all Microsoft Windows applications, Microsoft Word, Microsoft Project (version 2.0 or higher), Microsoft Flight Simulator, Microsoft Works, and Microsoft Multiplan (version 2.0 or higher). You should read the documentation that came with each of these products for specific instructions on using the mouse with that program.

The mouse can be used with many applications. Please ask your dealer for information on using your mouse with other programs.

## ***Finding Technical Information***

If you want to design your own mouse menus or add mouse support to programs you have written, the *Microsoft Mouse Programmer's Reference* can show you how. This guide, published by Microsoft Press, contains technical reference information on all Microsoft Mouse functions, including:

- Instructions and sample code for creating your own mouse-menu programs
- A description of the interface between the mouse driver and application programs, such as screen modes, graphics and text highlights, and the virtual screen
- Instructions and sample code for making mouse system calls from the BASIC interpreter, assembly language programs, and high-level languages
- Mouse function descriptions
- A description of the Microsoft EGA Register Interface

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# Appendix A

## Mouse Command-Line Switches

Several command-line switches for the mouse driver and Control Panel allow you to customize the operation of the mouse. Once you have installed the mouse driver using the Msetup program, you can use command-line switches to change the way some mouse functions work. You can add these switches to the mouse command lines in your AUTOEXEC.BAT file. Or at your operating-system prompt you can type **mouse** along with the command-line switches you want to use (you can use just one switch, or several switches separated by spaces).

### Changing Mouse Sensitivity

The following command-line switches set the mouse sensitivity level:

Switch	Sets
/sn	Horizontal and vertical sensitivity
/hn	Horizontal sensitivity only
/vn	Vertical sensitivity only

The value of *n* is a number in the range 5 to 100 in increments of 5. It is interpreted as a Control Panel setting. For example, to set the horizontal and vertical sensitivities to 75, you would type **mouse /s75** at the system prompt.

### Bus (InPort) Interrupt Rate

The **/rn** command-line switch lets you set the interrupt rate for the Bus (InPort device) interface only where *n* is one of the following values:

- 30Hz
- 50Hz
- 100Hz
- 200Hz

The default setting is 1, for 30Hz. For example, to set the horizontal sensitivity level of 45 and the interrupt rate to 50Hz for an InPort mouse, you would type **mouse /h45 /r2** at the system prompt.

## ***Control Panel Button/Key Combinations***

You can use the following command-line switches to change the combination of mouse button and keys you use to display the Control Panel:

<b>Switch</b>	<b>Sets</b>
/k0	CTRL+ALT+mouse button (default)
/k1	CTRL+SHIFT+mouse button
/k2	CTRL+ALT+SHIFT+mouse button

For example, to use the CTRL+SHIFT+mouse button sequence to display the Control Panel, you would type **cpanel /k1** at the system prompt.

## ***Mouse Hardware Configuration Switches***

You can use the following switches to bypass the mouse driver's automatic hardware configuration search and instruct it to look for a particular type of Microsoft Mouse at a particular I/O port:

<b>Switch</b>	<b>Sets</b>
/i1	Mouse at primary InPort address
/i2	Mouse at secondary InPort address
/c1	Mouse at serial port 1 (COM1)
/c2	Mouse at serial port 2 (COM2)
/z	Mouse at PS/2-style port

For example, to specify that the mouse serial-interface cable is connected to COM2, you would type **mouse /c2** at the system prompt.

## ***Changing the Mouse-Movement Profile***

You can use the `/pn` command-line switch to load specific mouse-movement profiles where *n* is 1, 2, 3, or 4 and corresponds to one of the internal mouse-movement profiles listed on the Control Panel. For example, to specify the internal mouse-movement profile 2, you would type **mouse /p2** at the system prompt.

## ***Changing the Mouse Language***

You can use the following switches to change the language in which mouse driver and Control Panel messages appear:

<b>Switch</b>	<b>Sets</b>
/l	English (default)
/ld	German
/le	Spanish
/lf	French
/li	Italian
/lnl	Dutch
/lp	Portuguese
/ls	Swedish
/lsf	Finnish

For example, to make messages appear in French, you would type **mouse /lf** at the system prompt.



## Changing the Mouse-Movement Profile

You can use the `ipm` command-line switch to load specific mouse-movement profiles where `n` is 1, 2, 3, or 4 and corresponds to one of the internal mouse-movement profiles listed on the Control Panel. For example, to specify the internal mouse-movement profile 2, you would type mouse `ip2` at the system prompt.

## Changing the Mouse Language

You can use the following switches to change the language in which mouse driver and Control Panel messages appear:

Switch	Set
/a	English (default)
/fr	French
/de	German
/es	Spanish
/it	Italian
/jp	Japanese
/nl	Dutch
/pt	Portuguese
/sv	Swedish
/fi	Finnish

For example, to make messages appear in French, you would type mouse `/fr` at the system prompt.

---

# ***Appendix B***

## ***Creating a Custom Mouse Profile***

The Setspeed program lets you set the acceleration of the mouse by loading your own customized mouse-movement profile. As discussed earlier in this guide, you can use the Control Panel to choose from four standard movement profiles—Slow, Moderate, Fast, or Unaccelerated. However, you can also create a custom mouse-profile file that contains values for speeds that better suit your needs.

### ***Understanding Mouse-Movement Values***

A mouse-movement profile determines the distance the pointer moves across your screen for a given movement of your mouse. The distance the mouse is moved is one factor that determines how far the pointer moves on screen. The speed at which the mouse is moved can also determine the overall travel of the pointer. The actual distance that the pointer moves for a given speed of mouse movement is determined by the mouse driver. The mouse driver contains the four preset movement profiles. However, when you use the Setspeed program with your custom mouse profile, you override the preset acceleration and replace it with your own.

### ***Creating a Mouse-Movement Profile File***

You can create your own profile file using any ASCII text-editing program. Just use the format of the sample file below and type in the values that you want. You can also modify the sample file called MOUSEPRO.FIL, included

with your mouse package. The following values appear in this sample file:

```

LABEL: Slow
MOVEMENT: 5 10 20 30 40 50 60 70 80 90 100 110 120 127
FACTOR: .1 .2 .3 .4 .5 .6 .7 .8 .9 .10 1.1 1.2 1.3 1.4

LABEL: Moderate
MOVEMENT: 5 10 20 30 40 50 60 70 80 90 100 110 120 127
FACTOR: 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6

LABEL: Fast
MOVEMENT: 5 10 20 30 40 50 60 70 80 90 100 110 120 127
FACTOR: 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5

LABEL: Unaccelerated
MOVEMENT: 64 127
FACTOR: 1.0 2.0
    
```

The top line of each entry is the label that defines the profile. In this sample file, the labels are the same as those appearing in the Control Panel—"Slow," "Moderate," "Fast," and "Unaccelerated." However, you can use any text label you want (up to 16 characters). When you run the Setspeed program, your labels are displayed in the Control Panel.

The numeric values in the lines labeled "MOVEMENT" and "FACTOR" are associated with one another. For example, in the "Slow" profile, the first value in the MOVEMENT line, 5, is associated with the value .1 below it. The value 5 represents the speed of your mouse—the distance it moves in a given period of time. The higher the number, the faster the mouse is being moved. The value of .1 in the FACTOR line is used to compute the pointer movement when the mouse is moved at a speed of 5. If you increase the value in the FACTOR line for a given value in the MOVEMENT line, you increase the sensitivity of the mouse at that speed, and vice versa.

## Editing the Sample File *MOUSEPRO.FIL*

You can change the values in either the MOVEMENT or FACTOR lines to change the way the pointer moves. For example, if you want a flat mouse-to-pointer relationship where the pointer movement is the same for any speed of mouse movement, the MOVEMENT/FACTOR entries would look like this (notice that the label has also been changed to "Flat"):

```
LABEL: Flat
MOVEMENT: 5 10 20 30 40 50 60 70 80 90 100 110 120 127
FACTOR: .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2
```

The same effect can be created by the following:

```
LABEL: Flat
MOVEMENT: 127
FACTOR: .2
```

To accelerate the pointer, you can increase the FACTOR value linearly as follows (again, notice the label has been changed to "Linear"):

```
LABEL: Linear
MOVEMENT: 5 10 20 30 40 50 60 70 80 90 100 110 120 127
FACTOR: .1 .2 .3 .4 .5 .6 .7 .8 .9 1.0 1.1 1.2 1.3 1.4
```

When creating or editing mouse profiles, the following rules apply:

- Do not exceed 32 values per row
- Separate the values with one or more spaces
- Use MOVEMENT values in the range of 1 to 127
- Use FACTOR values in the range of 0.1 to 16.0 (leading and trailing zeros optional)
- Every MOVEMENT value must have a corresponding FACTOR value
- Label names cannot exceed 16 characters

## Using Setspeed to Load Your Custom Mouse Profile

To use Setspeed with your own mouse-movement profile:

- 1 The mouse driver must be loaded before you use the Setspeed program.
- 2 At the system prompt, type:

**setspeed /pn /ffilename**

The value of *n* is the number of the mouse-movement profile you want (the number must be in the range 1–4); *filename* is the name of your customized mouse-profile file. You must include a value for *n* with the /p switch. If you leave off the /pn switch, all four profiles are loaded. If you want to use values in the current mouse-profile file, you do not need to include a *filename* with the /f switch.

For example, to load the second mouse-movement profile in a profile file called MOUSE1.FIL, you would type **setspeed /p2 /fmouse1.fil** at the system prompt.

## **Radio and TV Interference**

The Microsoft hardware device(s) described in this manual can radiate radio frequency (RF) energy. If not installed and used in strict accordance with the instructions given in this manual, the device may cause harmful interference with radio and TV reception. Any cable that is connected to the Microsoft Mouse connector must be a shielded cable that is properly grounded.

To determine if your hardware device is causing interference, disconnect the device from your computer. If the interference stops, it was probably caused by the device. If the interference continues, after you disconnect the hardware device, turn the computer off and then on again. If the interference stopped when the computer was off, check to see if one of the input/output (I/O) devices or one of the computer's internal accessory boards is causing the problem. Disconnect the I/O devices one at a time and see if the interference stops.

If your computer does cause interference, try the following measures to correct it:

- Relocate the radio or TV antenna until the interference stops.
- Move the computer farther away from the radio or TV, or move it to one side or the other of the radio or TV.
- Plug the computer into a different power outlet so that the computer and radio or TV are on different circuits controlled by different circuit breakers or fuses.

**Note** Any changes or modifications not expressly approved by Microsoft could void the user's authority to operate this device.

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