

More Information About Microsoft Windows for Workgroups Version 3.11

This document contains important information not available in the printed documentation or in online Help. For additional information about Microsoft® Windows™ for Workgroups, see "Other Online Documents" at the end of this document.

Note: If you plan to use a terminate-and-stay-resident (TSR) program with Windows for Workgroups, please read the SETUP.TXT online document first. It contains important information about running TSR programs with Windows for Workgroups and the Setup program.

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1.0 Running Windows for Workgroups with an Operating System Other Than the Microsoft MS-DOS Operating System

Microsoft Windows for Workgroups and MS-DOS work together as an integrated system. They were designed together and extensively tested together on a wide variety of computers and hardware configurations. Running Windows for Workgroups with an operating system other than MS-DOS could cause unexpected results or poor performance, and is not supported by Microsoft.

2.0 Preventing Stack Overflow

Stacks are temporary data structures that MS-DOS and applications use for processing hardware events. If, while setting up Windows for Workgroups, the Setup program detects hardware or software that requires a certain stack size, Setup places the following command line in your CONFIG.SYS file:

```
stacks=9,256
```

This should be sufficient most of the time. However, if you receive the "Internal Stack Overflow" message, first try increasing the second number on the **stacks=** command line. If that doesn't work, try increasing the first number. For more information about the **stacks** setting and modifying the CONFIG.SYS file, see your MS-DOS documentation.

3.0 Using 32-Bit Disk Access and File Access

This section includes information about using 32-bit disk access and file access with portable computers, Doublespace, and networks.

3.1 Using 32-Bit Disk Access with Portable Computers

By default, 32-bit disk access is turned off to prevent disk errors on some battery-powered portable computers. However, 32-bit disk access may run correctly with some battery-powered portable computers, such as the Zenith® MasterSport SL. If you want to try using 32-bit disk access, select the Use 32 Bit Disk Access check box in the expanded Virtual Memory dialog box (choose the Enhanced option in Control Panel). For more information, see Chapter 8, "Customizing Network Settings and Improving Performance," in the *Microsoft Workgroup Add-on User's Guide*.

Caution: Before you use 32-bit disk access on a battery-powered portable computer, it is highly recommended that you back up your hard disk. Because 32-bit disk access has not been fully tested on all battery-powered systems, you may receive disk errors while using it.

3.2 Using 32-Bit File Access with Doublespace

You cannot use 32-bit file access with MS-DOS version 6.0 if you have Doublespace enabled. To use 32-bit file access with Doublespace, use MS-DOS version 6.2.

3.3 Networks You Cannot Use 32-Bit File Access With

A driver that is necessary for 32-bit file access is incompatible with some networks, including Artisoft LANtastic and Microsoft LAN Manager.

If you are running one of these networks with Windows for Workgroups instead of the Microsoft Windows Network, remove the **device=c:\windows\ifshlp.sys** line from your CONFIG.SYS file. Then turn off 32-bit file access by using the Enhanced icon in Control Panel.

If you remove the IFSHLP.SYS device driver line from CONFIG.SYS, you will not be able to share files or printers. You may also not be able to use 32-bit disk access.

4.0 Using Memory Managers and Vshare

This section describes problems you may encounter while using memory managers and the VSHARE.386 file-sharing/file-locking program with Windows for Workgroups.

4.1 Using 386MAX

If you are running 386MAX® with Windows for Workgroups, note the following:

- Do not use options that limit the EMS swap region in the upper memory area. If you include **exclude=** options on the **386max** or **bluemax** command line or in the .PRO file (usually called 386MAX.PRO), make sure that the address range specified does not extend beyond A000. If the address range extends beyond A000, Windows for Workgroups may not run properly.

For example, the command **exclude=1800-A000** is acceptable, but the command **exclude=1800-B800** is not. If you must exclude an address range above A000, use the **RAM=** option instead. For more information about this and other options, see your 386MAX documentation.

- Do not load SMARTDrive when QCache is running.

Note: The 386MAX setup program does not detect SMARTDrive version 5.0 and may recommend that you install QCache.

- If you update an earlier version of 386MAX to version 6.0, the 386MAX version 6.0 setup program may not remove the **load=windows.lod** line

from your .PRO file. You can remove this line manually. It is not needed, and removing it will free a small amount of memory.

- If you remove the **net start** command line from your AUTOEXEC.BAT file, Windows may lock up during startup.

4.2 Turning On Sharing Popup with Vshare

VSHARE.386 is a file-sharing and file-locking program that is used when running Windows for Workgroups with file or print sharing enabled. With VSHARE, when a file-sharing violation occurs, you see an "Access denied" message, instead of the "Sharing violation on drive..." message used when file and print sharing are not enabled.

Some MS-DOS-based applications may need the sharing-violation message. If you need to turn on this message, add the following line to the [386Enh] section of your SYSTEM.INI file:

EnableSharingPopups=TRUE

For more information about modifying the SYSTEM.INI file, see the SYSINI.WRI online document.

4.3 If EMM386 Detects an Error in an Application

If EMM386 displays a message such as "EMM386 has detected error #12 in an application," this indicates that the processor has reported an exception error to EMM386. An exception error typically occurs when an application gives the processor an instruction under invalid or unexpected conditions. In most cases, these errors are related to a specific program. If you are receiving an error that does not occur with any particular application, the error might be caused by a device driver or a memory-resident (terminate-and-stay-resident) program.

To avoid these errors:

- Try to identify the program involved. One way to do this is to see if the error occurs when the program is not running. If you suspect a memory-resident program or device driver, try bypassing it when your computer starts.
- Try disabling EMM386. If a particular application is to blame, disabling EMM386 might allow that application to generate an error message. Disabling EMM386 might also change your memory configuration so that the error no longer occurs.

Since most of Windows for Workgroups version 3.11 and most Windows applications use protected-mode memory, and EMM386 manages conventional memory, EMM386 may not save any memory.

- Try changing the order in which you load device drivers and memory-resident programs. This might help because some errors occur only under specific memory conditions.
- If error 12 is occurring, this indicates that a stack is being used incorrectly. Try adding the following command to your CONFIG.SYS file:

STACKS=18,512

- If error 13 is occurring, the program may be trying to use protected mode without cooperating with EMM386. You may need to obtain a VCPI-compliant version of the program, or not load EMM386 when using this application.

5.0 Using Advanced Power Management (APM)

Windows for Workgroups includes support for Advanced Power Management (APM). This enables Windows to extend battery life, display power-status information, and work with the suspend features of battery-powered personal computers. To find out if your computer supports APM, contact your computer manufacturer.

To install APM on your system:

1. Quit Windows for Workgroups.
2. Run Windows for Workgroups Setup and select one of the following system types:
 - MS-DOS System with APM
 - Intel 386SL Based System with APM (if your computer has an Intel 386SL processor and supports the SL Enhanced Options for APM)
3. Restart Windows for Workgroups.

A Power icon appears in the Control Panel window.

4. Choose the Power icon to configure power-management settings.

For more information about the settings, choose the Help button or press F1 while using the Power Management dialog box.

6.0 Using SMARTDrive Version 5.0

This section describes some solutions to problems that you might encounter when using SMARTDrive version 5.0 (provided with Windows for Workgroups) with specific applications or hardware.

6.1 Accessing Floppy Disk Drives on Older COMPAQ DESKPROS

On some COMPAQ DESKPRO® 386/16 and 386/20 computers, you might experience problems accessing floppy disk drives when SMARTDrive version 5.0 is installed. To work around the problem, you can try one of the following solutions:

- Place the SMARTDrive buffer into low memory by adding the following option to the **smartdrv** command line in your AUTOEXEC.BAT file:

smartdrv /L

- Disable the caching on floppy disk drives by adding the following options to the **smartdrv** command line in your AUTOEXEC.BAT file:

smartdrv a- b-

For more information about these options, see "Managing Memory and Performance" in your Windows or Windows for Workgroups user's guide.

6.2 Using SMARTDrive with Double Buffering

Most expanded-memory emulators attempt to optimize SMARTDrive by configuring it to load into upper memory blocks (UMBs). This will cause problems if you are running Windows for Workgroups with double buffering. If you need to use double buffering with SMARTDrive, make sure that SMARTDrive is configured to load into low memory. The SMARTDrive command line in your CONFIG.SYS file should look like this:

device=smartdrv.exe /double_buffer

You do not need to change the references to SMARTDrive in your AUTOEXEC.BAT file.

If you're using a SCSI device, some vendors provide a driver (such as ASPI4DOS) that supplies double-buffering already. You should not use SMARTDrive double-buffering in this case. Check your SCSI device documentation, or contact your SCSI device vendor to determine whether your driver has its own double-buffering. If it does, use the following command line:

device=smartdrv.exe /double_buffer+

This command line should also be used if your system hangs when starting Windows, or if you are using a SCSI drive with a UNIX® partition.

For more information about using double buffering with SMARTDrive, see "Managing Memory and Performance" in your Windows or Windows for

Workgroups user's guide.

6.3 Using SMARTDrive with Norton Utilities® Version 6.0 Disk Monitor

Do not use the Disk Protect feature in Norton Utilities Version 6.0 Disk Monitor with SMARTDrive version 5.0. If you try to write to the protected drive, you will encounter an error and your system will fail. If you want to write to and cache a protected drive, add the drive letter to the **smartdrv** command line in your AUTOEXEC.BAT file. For example, if drive D is a protected drive, you would add the following:

```
smartdrv d
```

Or you can use the Norton cache program instead of SMARTDrive when you are using Disk Monitor.

6.4 Using SMARTDrive with SuperStor™ Disk-Compression Utility

- Do not use the Create Mountable Drive, Mount, and Dismount features of SuperStor after SMARTDrive is loaded. You must configure your SuperStor partitions before loading SMARTDrive. Windows for Workgroups Setup places the **smartdrv** command line first in your AUTOEXEC.BAT file. If your AUTOEXEC.BAT file includes "mount" configuration commands, make sure that the **smartdrv** command line follows the SuperStor configuration command lines.
- Also, you will receive read-write errors if you use SMARTDrive to cache a SuperStor compressed drive. To prevent SMARTDrive from caching the compressed drive, you must include the *drive letter-* option on the **smartdrv** command line.

For example, if drive C is the uncompressed drive, and drives E and F are the compressed SuperStor drives, you would include the following command line in your AUTOEXEC.BAT file:

```
smartdrv e- f-
```

6.5 Using SMARTDrive with Copy-Protected Games and Applications

When using SMARTDrive, you may encounter problems starting a copy-protected application that requires you to place the master disk in the floppy disk drive. To solve this problem, you need to disable caching on the floppy disk drive by using the *drive letter-* option when you load SMARTDrive. For example, if you load SMARTDrive from your AUTOEXEC.BAT file and you are using drive A, you need to include the following command line in your AUTOEXEC.BAT file:

smartdrv a-

7.0 Using Multimedia Extensions Version 1.0 with Windows for Workgroups

This section covers information that is specific to using the Multimedia Extensions version 1.0 with Windows for Workgroups. It also covers additional tasks you need to perform to configure your system properly for use with the Multimedia Extensions.

7.1 Upgrading to Windows for Workgroups

To use the Multimedia Extensions with Windows for Workgroups, first set up Windows with Multimedia Extensions version 1.0. Then upgrade to Windows for Workgroups by installing it into the same directory. If you set up Windows for Workgroups before setting up Multimedia Extensions, not all the files will be properly installed.

7.2 Configuring MIDI Setups

When you set up Windows for Workgroups, Setup does not overwrite an existing Multimedia Extensions MIDI-setup file MIDIMAP.CFG. If the port settings in your original setups refer to the Ad Lib or Sound Blaster™ ports and you are using different drivers, then you need to change the port settings to match the output ports used by your sound device. To do this, use the MIDI Mapper option in Control Panel.

For more information about using MIDI Mapper to modify MIDI setups, see "Customizing Windows" or "Customizing Windows for Workgroups" in your Windows or Windows for Workgroups user's guide.

7.3 Configuring Your Display

The Multimedia Extensions Display icon in Control Panel is not available when you upgrade from Windows with Multimedia version 1.0 to Windows for Workgroups. If you need to change options for your display, run Windows Setup from the Main group in Program Manager to make these changes.

7.4 Sample MIDI File

The sample MIDI file CANYON.MID included with Windows for Workgroups, which you can play with Windows Media Player, is provided by Passport Designs, Inc.

7.5 Using HyperGuide

The information in HyperGuide refers to Windows version 3.0, not Windows for Workgroups. If you need to use Windows documentation, see the

Microsoft Workgroup Add-on User's Guide that comes with Windows for Workgroups.

7.6 Using Music Box

Music Box is not fully compatible with Windows for Workgroups. Although your compact discs will play correctly, you will encounter problems when using the Save Info button in the Program dialog box to save disc-title and track-title information. If you want to modify this information, you must do so manually by editing the MUSICBOX.INI file. To add a new disc to the file, you can determine the disc ID number by viewing the information in the About dialog box.

7.7 Using Alarm Clock

The Alarm Clock in the Multimedia Extensions version 1.0 is not fully compatible with Windows for Workgroups. If you are using the digital display, the time may appear slanted or a system error may occur, depending on the size of the Alarm Clock window.

8.0 Running Specific MS-DOS-Based Applications

This section provides information about running specific MS-DOS-based applications with Windows for Workgroups.

8.1 Creative Labs JukeBox

If you are using a Sound Blaster sound card, do not set up or use the JukeBox application included in your Sound Blaster package with Windows for Workgroups. JukeBox interferes with the Windows for Workgroups driver for the Ad Lib synthesizer and causes errors when you try to install the drivers for the Sound Blaster card.

8.2 Games or Timing-Sensitive Applications

Some games or applications that rely on the computer's timer may perform poorly in Windows for Workgroups. You can try increasing the performance by turning off the **TrapTimerPorts** setting in the [386Enh] section of the SYSTEM.INI file, as follows:

TrapTimerPorts=OFF

Note: The TrapTimerPorts setting is on by default. Turning it off may cause errors or a loss of data when you transfer files by using a communications application. It is recommended that you leave this setting turned on when using a communications application.

8.3 Third-Party Expanded-Memory Emulators with MS-DOS Version 5.0 and 6.0

Many expanded-memory emulators will cause problems if you use them to provide upper memory blocks (UMBs) for the MS-DOS version 5.0 or 6.0 **loadhigh** and **devicehigh** commands. If you want to use these MS-DOS commands to load drivers or applications high, use the Windows EMM386.EXE expanded-memory emulator to provide UMBs instead. If you must use a third-party expanded-memory emulator, use the load high feature provided with the emulator instead of using the MS-DOS commands.

8.4 PC Tools™ Applications

If you run a PC Tools MS-DOS–based application in a window, the display might be garbled, because PC Tools applications use a graphics font that is not displayed correctly. (This problem does not occur if you run the application in a full screen).

To correct the problem, start your PC Tools MS-DOS–based applications by using the **/NF** option. If these applications are included in a Program Manager group, use the Properties command to add the **/NF** option to the command line for each application. For more information about changing application properties, see Help for Program Manager.

You can also include the **/NF** option in the application's program information file (PIF) by typing it in the Optional Parameters text box in PIF Editor, or you can use the PC Tools PC Config program to specify that PC Tools applications should use the Text Font to display information. For more information about changing an application's PIF, see your Windows or Windows for Workgroups user's guide.

8.5 WordPerfect® Version 5.1

When you run WordPerfect version 5.1 in a window, the Windows mouse pointer and the WordPerfect mouse pointer do not appear in the same place.

To fix this problem, carry out the following procedure.

1. In WordPerfect, press SHIFT+F1.
2. Press M for Mouse and A for Acceleration Factor.
3. Set the Acceleration Factor to 1.
4. Press ENTER three times to return to your document.
5. Enlarge the WordPerfect window to fill the entire screen.
6. Move the Windows mouse pointer into the WordPerfect window, and then move it to the far-right edge of the window.
7. Move the mouse pointer to the far-left edge of the window.

8. Move the pointer back to the center of the window, and then move it down to the bottom edge.
9. Finally, move the pointer up to the upper-left corner of the window.

The Windows mouse pointer and the WordPerfect mouse pointer should now be in the same location.

8.6 3270-Emulation Applications

You may encounter problems using certain 3270-emulation applications with Windows for Workgroups. If you are using one of these applications, it is recommended that you purchase the *Microsoft Windows for Workgroups Resource Kit* (Version 3.1). For information about ordering the resource kits, see section 17 in this file.

8.7 C/C++ Version 7.0

If you are running Microsoft C/C++ Version 7.0 with Windows for Workgroups and your system locks up when compiling a file, add the following line to the [386Enh] section of your SYSTEM.INI file:

MAXBPS=400

This command increases the number of breakpoints the system uses.

For more information about this setting, see the *Microsoft Windows for Workgroups Resource Kit* (Version 3.1). For information about ordering resource kits, see section 17 of this file.

9.0 Running Communications Applications

This section provides information on using communications applications with Windows for Workgroups.

9.1 General Guidelines

The maximum baud rate possible when running your communications program with Windows is determined by your CPU speed in addition to your port and modem capabilities. RTS/CTS or hardware handshaking may also be required.

To communicate at 9600 baud or faster, follow these guidelines:

- Use Windows-based communications applications when possible.
- Use 16550AF-compatible serial ports and modems. To determine if your serial port is 16550AF-compatible, you can run the Microsoft Diagnostics

program (MSD.EXE) included with Windows for Workgroups. To run MSD, quit Windows, and then type **msd** at the command prompt (not from an MS-DOS prompt within Windows). Then press ENTER.

- Avoid closing MS-DOS–based applications during a background download.
- Use a PIF file to run MS-DOS–based communications applications. Use the PIF Editor to select the "Background Execution" and "Lock Application Memory" check boxes.
- When you are running an MS-DOS–based communications application in the background, reduce it to an icon rather than running it in a window.
- SMARTDrive may cause download errors when it clears the write-behind cache. If this happens, disable the SMARTDrive write-behind cache during high-speed downloads. This can be done easily using the SmartMon utility included in the *Microsoft Windows for Workgroups Resource Kit* (Version 3.1), and in MS-DOS 6.0. For information about ordering resource kits, see section 17 of this file.

9.2 Using an Intel CAS Modem with 32-Bit File Access

You cannot use an Intel CAS modem with 32-bit file access. If you are using an Intel CAS modem, from Control Panel, select the 386 Enhanced icon, choose the Virtual Memory button, and then choose the Change button. Make sure the Use 32-Bit File Access check box is not checked, and select OK. If it was checked, you must exit and restart Windows.

10.0 Using Specific Display Adapters with Windows for Workgroups

This section describes some problems you might encounter when you use specific display adapters or drivers with Windows for Workgroups.

10.1 Installing Display Adapters by Following the Manufacturer's Instructions

The installation procedures that are provided by display-adapter manufacturers may require you to replace or modify the SETUP.INF file in the Windows SYSTEM directory. This will cause problems in Windows for Workgroups.

If your third-party display-adapter installation replaces or modifies the SETUP.INF file, use the following procedure instead.

To install the display-adapter drivers:

1. Rename the SETUP.INF file provided with your display-adapter package

to OEMSETUP.INF, and place it on the disk or in the directory containing the third-party display-driver files.

2. From the Main group, run Windows Setup.
3. Choose Change System Settings from the Options menu.
4. From the list of Display options, choose Other Display (Requires disk from OEM).
5. Insert the disk that contains the OEMSETUP.INF file and the driver files for your display adapter. Or, if these files are located on your hard disk, type the path to the directory that contains the files, and then choose the OK button.
6. Select the type of display adapter you want to use, and then choose the OK button.

Setup copies all necessary files from the driver disk and may request files from the Windows for Workgroups disks.

7. Insert any additional disks that are requested, and then choose the OK button.

If you accidentally overwrite the original SETUP.INF file, you can copy it from Windows for Workgroups version 3.11 Disk 1 back into your Windows SYSTEM directory.

10.2 Upgrading Display Drivers When Using Soft-Font Packages

If you are using certain soft-font packages, including Bitstream® Facelift™, Publisher PowerPak, and Hewlett-Packard® Intellifont, Setup may not update your display driver when you upgrade to Windows for Workgroups. In this case, you need to update your display driver after you have set up Windows for Workgroups.

To update your display driver after you have set up Windows for Workgroups:

1. From the Main group, run Windows Setup.
2. Choose Change System Settings from the Options menu.
3. From the list of Display options, select the display drivers you want to use.

For more information about using Setup after you have installed Windows, see "Configuring Hardware" in your Windows or Windows for Workgroups user's guide.

10.3 Using Self-Configuring Display Adapters

Some display adapters can change their configurations to match what an application tries to do. For example, if an application tries to use a video graphics adapter (VGA) configuration and your display adapter is currently configured as an enhanced graphics adapter (EGA), the adapter can switch from an EGA configuration to a VGA configuration. This type of display adapter makes use of nonmaskable interrupts (NMIs) to change its configuration while you work.

To use this type of display adapter, you must disable the NMI (also called self-configuring, auto-switching, or auto-emulating) option after you configure the display adapter. For more information, see your display-adapter documentation.

10.4 LCD

If you use an LCD screen, set it for white text on a black background instead of black text on a white background. When Windows is running, black text on a white background wears out LCD screens. See the documentation for your screen for instructions on how to do this.

10.5 Super VGA

If you are using a video card and monitor (NEC® MultiSync 3D/4D/5D or other multifrequency monitor) capable of 800x600, 16-color resolution with a third-party Super VGA driver, use the Super VGA (800x600, 16 colors) driver provided with Windows for Workgroups instead. If you do not update your driver, Windows may not work properly.

To install the Windows for Workgroups Super VGA driver, run Windows Setup from the Main group, and then select "Super VGA 800x600, 16 colors" from the list of Display options. For more information about using Setup after you have installed Windows for Workgroups, see your user's guide.

Super VGA VESA Mode 6Ah

Some Super VGA adapters support higher monitor-refresh rates at 800x600 resolution with a special VESA mode. If both your video adapter and monitor support a higher refresh rate and if you are using the Super VGA driver, you may be able to get better video results by including the following setting in the [display] section of the SYSTEM.INI file:

svgamode=106

If you encounter problems using this mode, delete this setting from the SYSTEM.INI file, and then restart Windows for Workgroups.

10.6 Third-Party Display Drivers: Running MS-DOS-Based

Applications

If you are using a display driver that is not provided with Windows for Workgroups and you receive one of the following messages while trying to run a MS-DOS-based application:

"Incorrect system version. Run the Windows Setup program again."
or
"386 System display type mismatch."

run Setup again, and if that doesn't work, contact your display manufacturer for an updated driver.

10.7 VGA-Compatible

Most VGA-compatible display-adapter cards and main-adapter chips use additional memory to enhance their performance. When Windows is configured for VGA, Windows detects most of these cards and automatically excludes the additional memory.

However, if you have an enhanced VGA that Windows does not recognize, you must exclude the additional memory yourself by adding the following line to the [386Enh] section of the SYSTEM.INI file:

emmexclude=C400-C7FF

For more information about modifying the SYSTEM.INI file, see the SYSINI.WRI online document.

10.8 Video Seven: Using 256-Color Support

Windows for Workgroups provides 256-color support at several resolutions for Video Seven display adapters that have at least 512K of video memory. The following table shows the Video Seven 256-color modes that are supported by the display drivers provided with Windows for Workgroups.

Model	640x480	720x512	800x600	
	1024x768			
<hr/>				
FastWrite 512K		Yes		
1024i 512K		Yes		
VRAM 512K		Yes	Yes	
VRAM II 512K		Yes	Yes	
VRAM II 1MB		Yes	Yes	Yes
Yes				

If you are using a Video Seven display adapter that has at least 512K of video memory, you should use one of these display drivers. These drivers take full advantage of the performance improvements and mouse support in

MS-DOS-based applications. To install one of the drivers, run Windows Setup from the Main group, and then select the driver you want from the list of Display options. For more information about using Setup after you have installed Windows, see "Configuring Hardware" in your Windows or Windows for Workgroups user's guide.

Note: Windows for Workgroups does not include drivers for the new Video Seven display adapters that are based on Headland Technology/Video 7 HT216, HT216-32, or HT217. If you have one of these display adapters, Setup automatically installs a VGA driver. Your display-adapter package may include an updated driver, which you can install by using the instructions included in the package. If no updated driver is included, you can obtain one by contacting your display-adapter vendor.

10.9 WinSpeed

The WinSpeed version 1.0 installation program, INSTALL.EXE, does not work properly with Windows for Workgroups. It copies an incompatible version of the SETUP.INF file to your Windows directory. To install WinSpeed for use with Windows for Workgroups, you must get updated installation disks from Panacea.

If you have already used the INSTALL.EXE program to install the WinSpeed drivers on your system, the following message appears when you try to run Windows Setup from the Main group:

"The SETUP.INF file on your system is not valid for use with this version of Setup."

To correct this problem:

1. If there is a SETUP.INF file in your Windows directory, delete it. (The SETUP.INF file should never be in your Windows directory.)
2. Copy the SETUP.INF file on Windows for Workgroups version 3.11 Disk 1 to your Windows SYSTEM directory.
3. Contact Panacea, Inc. for updated WinSpeed installation disks that are compatible with Windows for Workgroups, and then use these to reinstall WinSpeed.

10.10 IBM® XGA®: Configuring Color and Resolution

Windows Setup automatically configures an IBM XGA for 16-color, 640x480 resolution. If your monitor can support 256 colors or higher resolutions, you can configure your XGA to use the color and resolution settings you want. To do this, run Windows Setup from the Main group, and then select one of the following drivers from the list of Display options:

- XGA (640x480, 16 colors)

This is the default setting and should not be changed if you are using the plasma screen on the PS/2® model 75.

- XGA (640x480, 256 colors)
- XGA (Small fonts)
- XGA (Large fonts)

Both the Small and Large fonts settings configure the XGA for 1024x786 resolution and 256 colors, if your monitor supports it. Otherwise, these settings configure your display for 640x480 resolution. Select Small Fonts if you have a large monitor (at least 16 inches) or want to fit more information on your screen. Select Large Fonts if you want to improve the readability of text.

Make sure that your monitor supports the XGA configuration you select. If it does not, you will return to the MS-DOS prompt when you try to start Windows for Workgroups.

For more information about using Setup after you have installed Windows, see "Configuring Hardware" in your Windows or Windows for Workgroups user's guide.

10.11 IBM XGA: Using EMM386

To use the IBM XGA display adapter successfully with the EMM386 expanded-memory emulator, you need to manually prevent EMM386 from using the memory address range used by the XGA display. A common range is C600-C7FF. To prevent the memory manager from using this range, include the **X=** option on the **device=EMM386.EXE** line in your CONFIG.SYS file, as follows:

```
device=EMM386.EXE X=C600-C7FF
```

To identify the exact range that your XGA display adapter uses, run the System Configuration Program on the System Reference Disk for your Personal System/2 (PS/2), and select "Display Memory Map."

With some PS/2 model 75 plasma screens, or with XGA display adapters configured for 640x480 resolution and 16 colors, you must also include the **NOEMS** or **RAM** option on the **device=EMM386.EXE** line in your CONFIG.SYS file. For example:

```
device=EMM386.EXE NOEMS X=C600-C7FF
```

Do not include the **i=B000-BE00** option on the **device=EMM386.EXE** line in your CONFIG.SYS file. This address range is used by the XGA when running Windows. Therefore, it cannot be used as upper memory area. Windows will not recognize XGA configurations if EMM386 is using this address range.

For more information about modifying your CONFIG.SYS file, see your MS-DOS documentation. For more information about installing the EMM386 expanded-memory emulator and configuring the way it uses memory, see "Managing Memory and Performance" in your Windows or Windows for Workgroups user's guide.

11.0 Using Specific Mice with Windows for Workgroups

This section describes some problems you may encounter using specific types of mice with Windows for Workgroups.

11.1 Microsoft Mouse

Windows for Workgroups includes version 8.20 of the Microsoft mouse drivers. If you have a Microsoft mouse, Setup installs the Windows mouse driver (MOUSE.DRV) in your Windows SYSTEM directory and an MS-DOS mouse driver (MOUSE.COM or MOUSE.SYS) in your Windows directory. If you have additional versions of the Microsoft mouse drivers on your system, make sure that you are using the mouse drivers provided with Windows for Workgroups.

If you use the Microsoft Mouse Control Panel version 8.0 or later, you need to set your MS-DOS **mouse** variable to the directory on your hard disk that contains the control-panel program files POINT.EXE and PANEL.COM. You can do this by modifying your AUTOEXEC.BAT file. For example, if the control-panel program files are located in the \MOUSE directory, you would add the following line to your AUTOEXEC.BAT file:

```
set mouse=c:\mouse
```

This ensures that the mouse settings are stored in the MOUSE.INI file located in the specified directory. If the **mouse** variable is not set correctly, you may experience problems with mouse acceleration and other mouse settings.

It is recommended that you use the mouse driver MOUSE.COM instead of MOUSE.SYS, and that you load MOUSE.COM from your AUTOEXEC.BAT file. If you use MOUSE.SYS, you may encounter problems saving MS-DOS mouse control-panel settings. If you must use MOUSE.SYS and you encounter problems saving mouse settings, make sure you load the driver from your mouse directory instead of from your Windows directory.

For more information about installing the mouse drivers, see your Windows or Windows for Workgroups user's guide.

11.2 Genius Mouse

If you are using a Genius mouse and are running MS-DOS-based

applications, the mouse may not work properly, especially if you have several MS-DOS-based applications running at the same time.

To correct this problem, add the following line to the [386Enh] section of your SYSTEM.INI file:

local=PC\$MOUSE

For more information about changing settings in the SYSTEM.INI file, see the SYSINI.WRI online document.

11.3 Logitech™ Mouse

- Some Logitech mouse models are detected as "Microsoft or IBM PS/2" mouse models by the Setup program. In this case, Setup installs the mouse driver for the Microsoft or IBM PS/2 mouse. If you have a Logitech mouse, you should use the Logitech mouse driver instead.

To install the Logitech mouse driver, run Windows Setup from the Main group, and then select Logitech from the list of Mouse options. For more information about using Setup after you have installed Windows, see "Configuring Hardware" in your Windows or Windows for Workgroups user's guide.

- When installing the Logitech mouse driver, Windows Setup copies the LMOUSE.COM file to your Windows directory. This is the mouse driver that is required in order to use the Logitech mouse with MS-DOS-based applications. To use your mouse with MS-DOS-based applications, you need to load LMOUSE.COM before you start Windows. You can do this by adding it to your AUTOEXEC.BAT file. You also need to add the following line to the [386Enh] section of your SYSTEM.INI file:

local=PC\$MOUSE

11.4 Logitech Cordless Mouse

If you have a Logitech Cordless mouse, you may encounter problems, such as an unresponsive pointer, when you are running the MS-DOS Prompt or MS-DOS-based applications in a window.

To correct this problem:

1. Change the baud-rate setting for the mouse driver. To do this, add the following line to the [LogiMouse] section of the SYSTEM.INI file:

BaudRate=1200

2. Include the **1200** option in the command line that loads the MS-DOS Logitech mouse driver (which is provided with Windows for Workgroups) as follows:

LMOUSE 1200

3. Add the above line to your AUTOEXEC.BAT file to load the mouse driver each time you start your system. The next time you start Windows for Workgroups, your mouse should work correctly.

For more information about changing settings in the SYSTEM.INI file, see the SYSINI.WRI online document.

11.5 Logitech or Microsoft Ballpoint Mouse on a Toshiba® T2200SX

If you are using a Toshiba T2200SX computer with a BIOS version earlier than 1.20 and you have a Logitech or Microsoft ballpoint mouse connected to the PS/2 mouse port, you may have problems moving the mouse pointer. If the mouse does not respond, try connecting your mouse to the serial port instead, or contact Toshiba for an upgraded version of the BIOS.

11.6 Mouse Systems Mouse on PS/2 Ports

The "Mouse Systems" serial and bus mouse drivers provided with Windows do not support a Mouse Systems mouse when it is connected to a PS/2-style mouse port. If you are using a Mouse Systems mouse connected to a PS/2-style mouse port, Setup installs the "Microsoft or IBM PS/2" mouse driver for you. This is the correct driver. Do not change it.

12.0 Using Additional Hardware Configurations with Windows for Workgroups

This section contains information about using Windows for Workgroups with different types of computers and hardware configurations.

12.1 CD-ROM Drives

- If you are using a CD-ROM drive, you should use version 2.23 of Microsoft MS-DOS CD-ROM Extensions (MSCDEX), the version shipped with Windows for Workgroups version 3.11, with all configurations of CD-ROM drives.

If you have upgraded from Windows version 3.1 or Windows for Workgroups version 3.1, you must remove the following setting from the [386Enh] section of the SYSTEM.INI file:

device=LANMAN10.386

This setting can cause some CD-ROM drives to timeout and fail with versions later than 2.20 of MSCDEX. However, if you must use a version earlier than 2.20 of MSCDEX, the above setting is required in the

[386Enh] section of your SYSTEM.INI file.

For more information about changing settings in the SYSTEM.INI file, see the SYSINI.WRI online document.

- If a CD-ROM drive causes instability in your system or causes your system to fail, you may need to update the CD-ROM driver. Also, the MCI (Media Control Interface) driver MCICDA.DRV may not work properly with older CD-ROM drivers. Contact your CD-ROM-drive manufacturer about obtaining an updated driver.

12.2 EISA Systems with More Than 16 Megabytes of Extended Memory

On some EISA (Extended Industry Standard Architecture) computers, there may be more extended memory available than the system's Int 15h/88h BIOS call can detect. On these computers, HIMEM.SYS uses only the amount of extended memory detected. This can result in a large amount of unused memory.

You can have HIMEM.SYS use all available extended memory by using the **/EISA** option in the CONFIG.SYS file. For example, if HIMEM.SYS is located in your WINDOWS directory, you would use the following command line in the CONFIG.SYS file to take advantage of all available extended memory:

```
device=c:\windows\himem.sys /EISA
```

If you use the **/EISA** option, do not load any device drivers that use the Int 15h/88h BIOS call to allocate extended memory before loading HIMEM.SYS. If you do, your system may not work properly. If you must reserve some extended memory for device drivers or applications that use the Int 15h/88h BIOS call, you can specify the amount of memory in kilobytes that you want to reserve by using the **/INT15=** option. For example, if you want to reserve 128 kilobytes of extended memory, you would use the following command line in the CONFIG.SYS file:

```
device=c:\windows\himem.sys /EISA /INT15=128
```

HIMEM.SYS must still be loaded before other device drivers in the CONFIG.SYS file.

To determine if your device driver or application uses the Int15h/88h BIOS call, see the documentation for your device or contact your device dealer. For more information about using HIMEM.SYS with the **INT15** option, see "Managing Memory and Performance" in your Windows or Windows for Workgroups user's guide.

12.3 Epson® Screen Savers

Some Epson computers have screen-saver utilities that clear the screen after a specified period of inactivity. With Windows for Workgroups, the screen saver might detect that the system is idle when it is not. Windows will function properly even though the screen is blank, but nothing will be displayed until you quit Windows and then restart it.

See the documentation that you received with your Epson computer for instructions on how to turn off the screen saver.

12.4 NCR 925 with EMM386.EXE

If you are using an NCR 925 with EMM386.EXE, include the following option on the **device=EMM386.EXE** command line in your CONFIG.SYS file:

```
device=EMM386.EXE X=E000-EFFF
```

12.5 Non-US Keyboard Layouts: Using Application Shortcut Keys

Some non-US keyboards show two characters per alphabet key and three characters per alphanumeric key. To type the second or third character, you must press and hold down CTRL+ALT or ALTGR before pressing the key. If you are using such a keyboard layout, do not use keys that show two or three characters as application shortcut keys.

12.6 Plus Hardcard™

- To run Windows for Workgroups with a Hardcard, you must include the following line in the [386Enh] section in the SYSTEM.INI file:

```
VirtualHDIRQ=OFF
```

For information on how to modify the SYSTEM.INI file, see the SYSINI.WRI online document.

Note: This procedure is not necessary if you are using a Hardcard II or a Hardcard II XL.

- It is also recommended that you use SMARTDrive double-buffering with a Hardcard. For more information about using SMARTDrive, see "Managing Memory and Performance" in your Windows or Windows for Workgroups user's guide.

12.7 SCSI® Hard Disk Using DMA

If your computer has an SCSI hard disk that uses Direct Memory Access (DMA), you must include the following entry in the [386Enh] section of the SYSTEM.INI file:

VirtualHDIRQ=OFF

In addition, you must have SMARTDrive installed and you must NOT disable double-buffering by removing or remarking out the **\D** option in the CONFIG.SYS file.

For information on how to modify the SYSTEM.INI file, see the SYSINI.WRI online document.

12.8 Columbia Data Products SCSI Hard-Disk Controller

To use the Columbia Data Products SCSI hard-disk controller with Windows for Workgroups, you must update the Columbia Data Products SCSI driver to version 3.35 or higher.

12.9 Sound Blaster Audio Card

If you are using a Sound Blaster audio card that includes a Digital Signal Processor (DSP) chip earlier than version 2.0, you may want to upgrade to version 2.0 to improve audio performance. To find out which version of the DSP chip you currently have, run the TEST-SBC.EXE utility included in your Sound Blaster package. To receive version 2.0 of the DSP chip, contact Creative Technology Ltd.

12.10 Tandy® 2500 XL with MS-DOS in ROM

The Tandy 2500 XL can be configured to use MS-DOS in read-only memory (ROM). If you want to use this feature, after you run Windows Setup you must run the Tandy setup program (SETUPXL). Modify your configuration so that your AUTOEXEC.BAT and CONFIG.SYS files are read from drive C.

12.11 Wyse® Computers

If you are using a Wyse computer to run Windows, you might need to modify the **device=HIMEM.SYS** line in your CONFIG.SYS file to read:

```
device=[path]HIMEM.SYS /M:WYSE
```

13.0 Using Microsoft At Work PC Fax

This section contains information about using Microsoft At Work PC Fax to send and receive faxes.

13.1 Sending Faxes from Applications

If you are sending messages to a non-At Work recipient, the message format should be set to Facsimile Format or Email If Available in the send message Options dialog box. You must be running Mail in order for Microsoft At

Work PC Fax to create an image of the message being sent and its document attachments when facsimile format faxes are sent. Typically, messages are composed and sent using Mail, so this will not be a problem. However, some applications provide a File Send command that allows you to create messages outside of Mail. If Mail is not running, the delivery format option of these messages must be set to Email Format in the send message Options dialog box. Otherwise, you should start Mail before sending the fax.

You can also print from an application directly to the Microsoft At Work PC Fax printer driver. Use the Printer Setup command to specify printing to the Microsoft At Work Fax printer driver, and then use Print to send the Fax. If you use this method, you will need to start Mail to see if the message was transmitted. If the message was not able to be transmitted, an undeliverable message will appear in your Mail Inbox.

13.2 Cancelling a Fax

To cancel a fax transmission, use the Fax Queue command in Mail. To generate fax images for transmission, Microsoft At Work PC Fax causes applications to print the document attachments of the message to the Microsoft At Work Fax printer driver. Some applications display a dialog box that allows you to cancel printing the attachment. Never cancel the print job at this point. Choose OK to continue the print job, if needed.

Do not delete messages to fax recipients from the Outbox in Mail. This causes fax transmissions to remain in the fax queue until you delete them by using the Fax Queue command.

13.3 Different Fax Appearance

The Microsoft At Work PC Fax printer driver is used to create images of documents for transmission. This printer driver may support a different set of fonts than the printer driver you usually use. This can cause fonts, line breaks, and page breaks to be different in the transmitted document than appear when the document was created.

To help reduce this problem, it is best to use only True Type fonts in your document. You can also use the Printer Setup to change the default printer driver to the Microsoft At Work PC Fax printer driver before you send the document as a fax. This will cause the application to repaginate the document according to the fonts supported by the Microsoft At Work PC Fax printer driver.

13.4 Use Correct Image Quality When Sending Faxes

If you choose to send a fax using an image quality that isn't supported on the destination machine, the message will be returned as undeliverable mail in your Mail Inbox with the message, "Error: Resolution not supported by receiver. Transmission failed - Not all pages sent." To ensure that only resolutions supported by the destination fax machine will be sent, set the

image quality to Best available.

Faxes with 300 dpi resolution can be sent only to Microsoft At Work PC Fax recipients.

13.5 Working Offline When Fax Transport Can't Be Started

You may find that the fax transport can't be loaded when you start Mail or send a message from an application. This can be caused by problems such as being disconnected from the modem, or not being able to establish a network connection with a shared modem. When this occurs, you are given the option of working with Microsoft At Work PC Fax offline. This allows you to create and send faxes as usual, but the faxes will remain in the Outbox and won't be transmitted. To transmit the fax messages once the fax transport becomes available, select the Mode command from Mail's Fax menu and clear the Work Offline checkbox. The faxes will not be transmitted until the Work Offline checkbox is cleared.

13.6 CPU-Intensive Operations Can Cause Transmission Failures

Some operations during a fax transmission can cause the transmission to fail. This includes some MS-DOS operations, such as formatting a floppy disk, copying files, or making file transfers across a network. You should avoid CPU-intensive operations such as these when a fax transmission is occurring. The Microsoft At Work PC Fax icon displays information regarding fax transmissions that are currently in progress. To always display fax status, choose the Fax icon from the Control Panel group, and check the Always Display Fax Status checkbox.

13.7 Binary File Transfer

Only Class 1 fax modems can be used for binary file transfers.

13.8 Fax Modem Information

The following fax modems may not be compatible with Microsoft At Work PC Fax.

Manufacturer Location	Modem	Class
Cardinal internal	MB2296SR	Class 2
Practical Peripheral external	PM2400FXSA	Class 2
Zoom external	FX9624	Class 2
Zoom internal	FC96/24	Class 2
Macronix external	VOMAX 2000	Class 2
Macronix	MaxFax9624	Class 2

internal			
MegaHertz		Pocket Fax Modem®	
		2400 bps P224 FMV	Class 1
external			
National		TyIN 2000	Class 2
external			

The following international fax modems may not be compatible with Microsoft At Work PC Fax.

Country	Manufacturer Location	Modem	Class
UK	Cray Comm external	Quantum 144	Class 1
GER	Dr. Neuhaus internal	Fury 241	Class 2
GER	ELSA internal	Mikrolink 14.4PC	Class 2.0
SWE	Multitech external (US version OK)	Mt932Ba	Class 2
AUS	BIT Blitzer external	MX-6	Class 1
AUS	BIT Blitzer external	XM124S-RFAX	Class 2
AUS	Microfax external pocket		Class 2
FRA	Kortex internal	KX PRO 2400	CAS
FRA	La Commande Electronique external	LCE MiniFax	Class 1
ITA	Digicomm internal	SNM28 SR	Class 2
ITA	Sysnet internal	SMF 04FAX	Class 1

14.0 Security

An administrator configuration utility, ADMINCFG.EXE, is available to simplify the task of administering network security privileges. For more information and for this utility, see the *Windows for Workgroups Resource Kit Addendum*. For information about how to order the *Resource Kit Addendum*, see section 17 of this file.

15.0 Using the Real-Mode Redirector

You can connect to shared resources from MS-DOS by using the real-mode redirector. The real-mode redirector commands all begin with the word NET. For information about using NET commands, type NET HELP at an MS-DOS prompt.

If you are using a multi-network configuration, the NET commands may only work on other machines with the same network. See your *Workgroup Add-On User's Guide*, and the on-line document NETWORKS.WRI for more information about using multiple networks.

16.0 Quitting Windows for Workgroups When Microsoft Mail is Still Running

If you have Mail in your Startup group and it is set up to be minimized when it starts, you will experience a long delay when you quit Windows. In addition, you will see the following message:

This application was communicating on the network when you terminated it. Although Windows attempted to restore the state of the network, you may have problems with network communications until you restart your computer.

The same problem may occur if you have Mail running in a window (not minimized) when you quit Windows.

To correct this problem, edit your MSMAIL.INI file (located in your Windows directory). In the [Microsoft Mail] section, change the NetBios= entry to the following:

```
NetBios=0
```

After saving the change to the file, restart Windows.

17.0 Other Online Documents

The following table describes other online documents that contain important information about Windows for Workgroups that is not included in the printed documentation or in Help:

Document	Contains
SETUP.TXT	Information about problems that may occur when you set up Windows for Workgroups.
MAIL.WRI	Information about the MSMAIL.INI file and other Mail administration information.
PRINTERS.WRI	Information about specific printers and fonts.
NETWORKS.WRI	Information about running Windows for Workgroups with specific network configurations.

SYSINI.WRI	Information about the settings in the SYSTEM.INI file.
WININI.WRI	Information about the settings in the WIN.INI file.

18.0 Ordering the Resource Kits

Two resource kits are available:

- *Microsoft Windows for Workgroups 3.11 Resource Kit*

This kit provides complete technical information about Windows for Workgroups version 3.1 for the support professional. It includes a technical reference manual and a disk containing helpful utilities, system-resource viewers, drivers, and accessories.

- *Microsoft Windows for Workgroups Resource Kit Addendum for Version 3.11*

If you already have a copy of the *Windows for Workgroups 3.1 Resource Kit*, this addendum kit provides technical information about new features of Windows for Workgroups version 3.11. It includes a technical reference manual and a disk containing helpful utilities.

To order the resource kits within the United States, dial:

1-800-642-7676

To order outside of the United States, dial the phone number for your area. You can find this number on the International Subsidiary card.

19.0 Getting Drivers from the Windows Driver Library

If you need to get updated copies of drivers, or drivers that do not come with Windows for Workgroups version 3.11, you can get them from the Windows Driver Library (WDL).

If you have a modem, you can download files from the Windows Driver Library from network services, including CompuServe®, GENIE, Microsoft OnLine, or various user-group bulletin boards (such as the bulletin-board services on the Association of PC User Groups network). If you have a modem, you can download Windows Driver Library components from network services, including CompuServe®, GENIE, Microsoft OnLine, or various user-group bulletin boards (such as the bulletin-board services on the Association of PC User Groups network). Files from the Windows Driver Library is also available from Microsoft Download Service (MSDL), which you can reach by calling (206) 936-MSDL (936-6735) any time except

between 1:00 A.M. and 2:30 A.M. Pacific time. To use MSDL, use the following communications settings:

Baud rate	1200, 2400, or 9600
Data bits	8
Parity	None
Stop bits	1

People within the United States who do not have a modem can order individual files on disks from the Windows Driver Library by calling Microsoft Product Support Services at (206) 637-7098 or (206) 635-4948 (text telephone).